THE UNIVERSITY of ADELAIDE

FUTURE OF EMPLOYMENT AND SKILLS Research Centre

EVALUATION OF THE CASHLESS DEBIT CARD IN CEDUNA, EAST KIMBERLEY AND THE GOLDFIELDS REGION

QUANTITATIVE SUPPLEMENTARY REPORT

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JANUARY 2021

Acknowledgements

We would like to acknowledge the Department of Social Services and the data coordinators in Western Australia (WA) and South Australia (SA), whose background support has been invaluable.

We are deeply grateful to the local organisations, Shires CEOs, and Aboriginal Organisations for their unreserved support of the survey of Cashless Debit Card (CDC) participants. In each trial site, they gave us their time with abundant generosity, provided valuable insights about the best way to field the survey, and trusted us to accurately represent CDC participants' views about the CDC.

We are particularly thankful to the local survey assistants we were able to train and employ in each site. They carried out face-to-face survey completions along with the FES team with great professionalism and enthusiasm. They were instrumental in getting survey completions from hard to reach CDC participants, and guaranteed the cultural sensitivity of the fieldwork at all times. Without them, the response rates and quality of the survey responses would not have been successful.

Stéphane Mahuteau led the quantitative components of the CDC evaluation and had overall responsibility for the design, conduct, analysis and reporting of the quantitative components. Zhang Wei and Alison Goode contributed to the analysis of the data. Alison Goode was in charge of the survey data production and quality control. The Chief Investigator of the overall CDC evaluation was Kostas Mavromaras.

We would also like to state that the cover photos are purchased images and not images of CDC participants or people who participated in the evaluation.

The Supplementary Reports on the CDC Evaluation: An Outline and a Roadmap of the two Supplementary Reports

This Quantitative Supplementary Report is one of three inter-related documents. The head document is the Consolidated Report of the CDC evaluation which examines the CDC policy and its outcomes as a whole, by combining all findings of the evaluation, from all different sources of data and through the use of all methodologies. The emphasis is on the narrative of the policy and the overall message of the integrated evidence regarding the question of how well the CDC is perceived to be working as a policy, by whom and for whom. Primarily for practical reasons of space and readability, the Consolidated Report needed to be kept as short as could be achieved, given the complexity of the evidence and the many questions the evaluation is attempting to answer.

The full evaluation evidence is presented by two supplementary reports, the Qualitative Supplementary Report and the Quantitative Supplementary Report. These two supplementary reports serve a common purpose, namely, to provide the fullest possible information on the collection and the analyses based of the two respective methodologies. To this purpose the Qualitative Supplementary Report presents and discusses the full analysis of all in-depth interviews with stakeholders and participants. Similarly, the Quantitative Supplementary Report presents and discusses the full quantitative analysis, from all different sources of data, including administrative data, community data, and the full complement of the CDC participants' survey data.

This brief Roadmap is designed to assist the reader with using the supplementary reporting. It provides prospective readers with some guidance and tips on the way the three documents could be read most efficiently. It describes how the supplementary reporting relates with the Consolidated Report and explains the degree of repetition and duplication that may be encountered.

For whom is the supplementary reporting made? The purpose of the supplementary reporting is to provide a comprehensive account of the complete qualitative and quantitative evidence underpinning the evaluation. The Qualitative and Quantitative Supplementary Reports are made for the reader who is interested in a complete account of the evidence and its technical side, including a full list of the tables and the analysis of the interviews that informed the thinking and the assessment of the evaluation's evidence.

How is the supplementary reporting to be read? The Consolidated Report aims to convey the full narrative of the CDC policy and its implementation and impacts in a self-contained document which is designed to be read from start to end. In contrast, the supplementary reporting (both Qualitative and Quantitative Supplementary Reports) are designed to be read in the way the reader prefers. One reader may wish to read the full document from start to end. Another reader may wish to read one section at a time, in order to add detail and depth to a specific part or aspect of the Consolidated Report. The reader who seeks the full information either on the whole CDC evaluation or on a specific aspect of the CDC, would need to consult with both Supplementary Reports. The choice depends on the information needs of the reader.

Are there any differences in the results/numbers/quotes between the Consolidated Report and the Qualitative and Quantitative Supplementary Reports? The supplementary reporting provides

additional and not new information about the evaluation. The Qualitative Supplementary Report provides the full analysis of the qualitative evidence with extensive quotes and the Quantitative Supplementary Report provides many more tabulations, regression results and technical explanatory material.

As there are several instances in the evaluation where the evidence on the CDC impact is not pointing clearly towards one direction or another, the reader will find that the qualitative evidence and the quantitative evidence do not always agree. The reader will need to make their own judgement on such differences and the supplementary reporting will assist and guide in many instances. Another distinct use of the supplementary reporting is that the additional detail that it provides may explain better the confidence that we have placed on a finding and the reasoning behind doing so, in a way that may have appeared less obvious in the Consolidated Report.

Is there any duplication between the Consolidated and the Supplementary Reports? Yes, there is a lot of duplication and it is by design, because the supplementary material would become virtually unreadable without preserving the overall narrative of the evaluation, especially as this is presented in the Consolidated Report. There is only one evidence base that underpins all reporting in this evaluation. The Consolidated Report presents the whole narrative in the shortest possible format and focusses on what were considered to be the core findings at the time of writing these reports. Future developments and/or hindsight may prove other findings to have deserved equal if not more prominent consideration within the shorter Consolidated Report. By presenting the full evidence in the supplementary reporting, we preserve the complete evidence in its fullness without worrying about the length of each of the two documents or about instances of repetition. It is by design that the two supplementary reports repeat some of the more general aspects of the Consolidated Report, in order to enhance the readability of all three individual reports and in order to connect the three documents with one another and with the overall narrative of the evaluation.

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Table of Contents

List of Tables

List of Explanation Boxes

List of Figures

List of Appendix Tables

List of Appendix Figures

Glossary

(95% CI)	95 per cent Confidence Intervals
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
AUDIT	Alcohol Use Disorders Identification Test
Card	The cashless debit card
CDC	The Cashless Debit Card
CK	Coolgardie-Kalgoorlie
CI	Confidence interval
ED	Emergency Department
D.A.G	Drugs, alcohol and gambling
DiD	Difference in Difference (estimation technique)
DOMINO	Data Over Multiple INdividual Occurrences
DSS	Department of Social Services
DSP	Disability support payment
DUI	Driving under the influence
DV	Domestic violence
FES	Future of Employment and Skills Research Centre, University of Adelaide
FIFO	Fly in/fly out workforce
HILDA	Household Income and Labour Dynamics in Australia
IM	Income Management
Indue	Financial institution that is currently contracted as the CDC provider
IRSD	Index of Relative Socio-economic Disadvantage
ISP	Income Support Payments
KEQs	Key evaluation question
LF	Labour force
LLM	Laverton, Leonora and Menzies
MCS	Mental component summary
N	Number of observations
NDSHS	National Drug Strategy Household Survey
PCS	Physical component summary
SA	South Australia
WA	Western Australia

1 Introduction, policy logic and methodology of the quantitative data evidence

1.1 Introduction

In 2018, the Department of Social Services (DSS) commissioned the Future of Employment and Skills Research Centre (FES) at the University of Adelaide to undertake the independent collection of baseline data with CDC trial participants and other relevant stakeholders in the Goldfields region of Western Australia (WA). The baseline data activity was the first element of an evaluative approach designed to be modular in its form, flexible, adaptable and sufficiently generalisable to be able to be applied to other current and future CDC sites.

Subsequent to the collection of baseline data in the Goldfields region, DSS commissioned FES to undertake a formal independent evaluation of the CDC in the Goldfields region and of two additional trial sites of the CDC: the East Kimberley region in WA, and the Ceduna and surrounding region in South Australia (SA). The purpose of the CDC Evaluation is to measure the extent to which the CDC contributes to its intended outcomes as outlined in the second section of the consolidated report.

The Impact Evaluation which was subsequently undertaken is underpinned by three inter-connected core methodologies, the findings of which are then integrated and reported in the consolidated report:

- Stakeholder Engagement Strategy (SES)
- Collection and analysis of qualitative data
  - In-depth interviews with stakeholders
  - In-depth interviews with CDC participants
- Collection and analysis of quantitative data
  - Australian Government administrative and state government administrative data
  - Large-scale survey of CDC participants in the three trial sites

The present report focuses on the quantitative impact component of the evaluation. It complements the consolidated report of the evaluation of the CDC in the three sites where all sources of evidence and methodologies are combined, triangulated and integrated in order to provide answers to the key policy questions.

This report presents all the quantitative evidence produced for the evaluation. It also provides details on the methodologies and extended discussions on aspects of the quantitative component of the evaluation not addressed in the consolidated report. For example, this report discusses the community data collected at State level and assesses the usefulness of each dataset for an evaluation of the CDC. By contrast, the consolidated report only presents results on the subset of community data that allowed impact statements to be made.

The quantitative evidence base for the evaluation relies on four components presented in this report:

- A socioeconomic snapshot of the trial sites. This part gives general information about the socioeconomic and demographic make-up of the population in each CDC trial site. It uses a range of data such as the ABS Census data, information on vocational education and training (VET) enrolments and completions from the NCVER (National Centre for Vocational Education Research), and data from the Australian Early Development Census (AEDC). These provide a picture of the circumstances prevailing in each trial site in relation to a broad range of socioeconomic characteristics such as labour force participation, household characteristics, socioeconomic indicators, education and training and early childhood development indicators.
- An analysis of the CDC participants' individual administrative data using the DOMINO data (Data Over Multiple INdividual Occurrences). Here we focus on presenting the socioeconomic characteristics of the CDC participants within these areas. We provide comparisons to outline the relevant differences between CDC participants across sites. The DOMINO data also allows us to look at CDC participants' patterns of transactions and connect these with individual characteristics.
- An analysis of the State level community data. We assess the ability of each dataset to inform the evaluation. More specifically, we define the basic criteria that need to be fulfilled for community data to be able to be used to make impact statements. Based on these criteria, we provide preliminary estimates of the impact of the CDC on a subset of community level outcomes. For those datasets that do not allow a full analysis of impact, we provide some descriptive statistics illustrating over time changes.
- An individual survey of CDC participants. This survey focuses on individual and household outcomes and elicits information on how the CDC has contributed to change one's life outcomes. The design of the survey is such that it includes a set of longitudinal instruments so statistically robust impact statements can be made should a second wave of data collection be undertaken. It also include a set of instruments allowing the research to look at impact using a single wave of data collection.

We present the evidence gathered through these four steps of the quantitative component as if they were independent, with little reference to other parts of the evaluation. Yet, the process of gathering this evidence involved feedback loops between each components, including insights gained from the qualitative fieldwork. It is the task of the consolidated report to bring the evidence together along with the information gathered through the qualitative methodologies.

In the next subsection we provide a preliminary discussion about methodological issues surrounding each component of the quantitative evidence base and place them in the overall evaluation framework.

1.2 Policy logic of the CDC and the role of the quantitative evidence in the overall evaluation

The Quantitative component of the evaluation relies on a three pronged quantitative approach which consists of aggregate data collected by the States at the community level, administrative data at the individual level (held by DSS) and individual survey data which is independently collected by the evaluation team specifically for eliciting the views of CDC participants. These data sets have different attributes, strengths and weaknesses when applied to an evaluation, and they are designed to inform different aspects of the evaluation's evidence base.

In particular, this report should be read making the distinction between two main tasks facing the quantitative methodology in the evaluation. The first task is to identify and gather relevant sources of information already available through an analysis of the administrative data held by DSS and other community-based data collected by the States. The second task is to generate new sources of information through the individual survey of CDC participants where either relevant information is missing (or not adequately recorded) in the administrative data, or, individual and subjective outcomes need to be elicited in order to answer the key evaluation questions (KEQ) in a statistically representative way. This second task also aims to prepare the longitudinal environment needed to allow a formal impact evaluation in the future through additional waves of data collection.

In the following section, we provide a reminder of the evaluation framework outlined in the consolidated report so the reader can see where each of the quantitative and qualitative components sit in the overall framework.

1.2.1 Policy logic of the CDC and the quantitative component in the overall evaluation framework

The policy logic and related KEQs determined first, the relevant outcomes (or metrics) for the evaluation of the policy; second, the level at which they could be best observed (individual, family/household/community); and, finally, the appropriate time frame (short term, mid-term and long term) for each policy outcome.

Data availability, quality of the information recorded, level of aggregation of the data (individual vs community data), and subsequent data methodology determined the extent to which robust causal statements could be made as opposed to mere associations. After we have decided on all methodological evaluation requirements, the assessment of the effectiveness of the CDC policy becomes an empirical exercise which is clearly dependent on the data at hand. Some impacts may be detected through qualitative methodologies only[1]. Other impacts may be detected only through quantitative methodologies at the individual level through the individual survey answers. Other impacts may be detected at community level, provided this type of data allows it. We would expect that very strong impacts that are also of a short-run nature may be detected at several levels and through several methodologies. The objective of the evaluation is to apply triangulation of all results in order to achieve as refined a picture of the CDC impacts as possible by allowing each of the methodologies to feed into the other at various levels of aggregation.

It is useful to revisit the policy logic of the CDC in order to place the potential use of the various types of administrative data and survey data into the broader context of the evaluation. We highlight the

[1] i.e. Stakeholder perceptions of changes that may not be as yet discernible through quantitative analysis, but may be unambiguously manifested through the qualitative evidence.

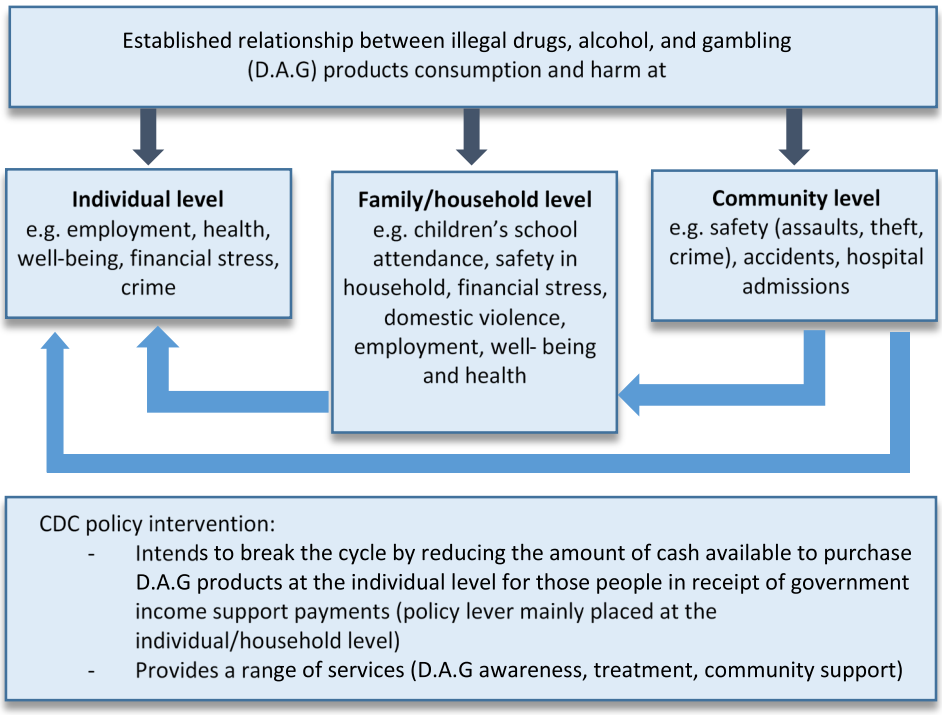
expected transmission mechanism of the policy and, subsequently, the level at which one may observe positive changes (or unintended consequences of the policy), the timeframe of such changes (short term vs. long term) and, more generally, whether it is at all possible to attribute observed changes to the CDC policy. Given the focus of this report on evidence found in administrative and survey data, we highlight a range of individual and community level outcomes/metrics which may be impacted by the policy and for which it would be desirable to try and obtain data. We identify the two sources of information that can be obtained through administrative data and delineate their specific use to serve the evaluation of the CDC and we highlight the crucial role of an individual survey of CDC participants.

The general principle of the CDC policy is summarized in the following figure (Figure 1-1). The thinking that underpins the CDC relies on the premise that excessive consumption of illegal drugs, alcohol and/or gambling products (D.A.G) is associated with negative outcomes, not only for individuals who engage in these behaviours, but also at the level of their families/households. It also relies on the premise that excessive consumption engenders a social cost that can be observed at the level of the community, for example, through increased crime and disturbances, accidents, use of health services and/or child protection services. We refer to these costs as social costs (or social harm) because the costs associated with excessive consumption of D.A.G products spread beyond the sphere of the individuals involved and potentially affect the outcomes of many people around them.[2]

Excessive consumption of D.A.G products is thought to be generating a vicious circle of individual harm whereby more general life-outcomes are affected by the behaviour. For example, the inability to actively participate in the labour force, or the negative impact on health and the financial stress these behaviours generate. At the family/household level, financial stress may influence all members of the household, especially if a significant part of the household's resources are diverted to those consumptions. This leaves less resources available for conventional household activities (e.g. to support school attendance, better nutrition, the consumption of cultural goods). Moreover, the academic literature suggests that there is a strong relationship between excessive consumption of D.A.G products, social status and domestic violence and crime (see notably Weatherburn 1992, 2001; Loxton et al. 2018, Rennison & Welchans 2000). It is also widely suggested that where we encounter excessive D.A.G consumptions we are more likely to encounter an intergenerational transmission of welfare dependence and marginal attachment to the labour force. This means that there is an increased likelihood that the children will reproduce the environment they were raised in when they become adults. As stated above, this vicious circle spreads to community outcomes as social harm puts increased pressure on community services such as the police and justice system, health systems and child protection services. The social harm at community level may be further compounded by agglomeration effects through people's geographical mobility thus generating suburbs/communities where social harm is more prevalent.

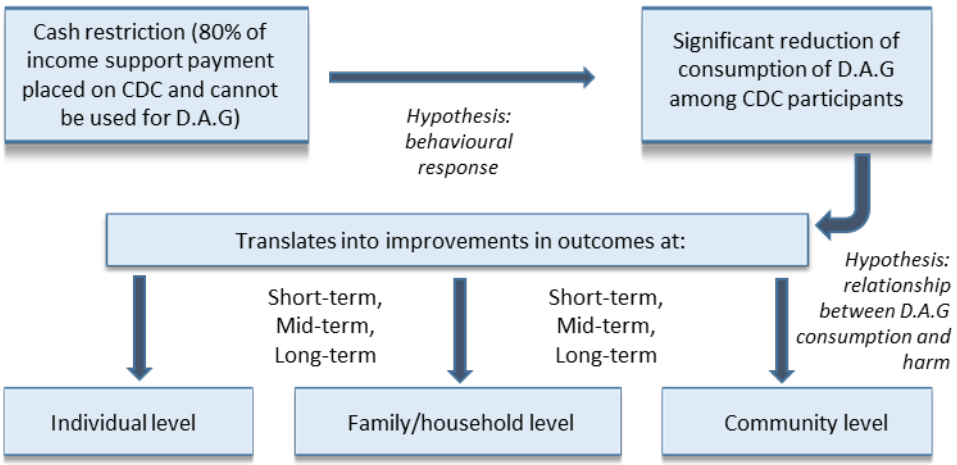
[2] In the discipline of Economics such outcomes are called externalities. They are formally defined as consumption of production activities that are generating costs or benefits to other economic agents but are not controlled by those other agents. A good example of a negative externality is passive smoking where the activity makes others worse off, but costs nothing to the smokers themselves.

Figure 1-1: CDC policy logic, general principle



The objective of the CDC is to disturb the vicious circle of social harm generated by excessive use of D.A.G products, mainly through restricting the availability of cash for people receiving certain government income support payments. The transmission mechanism of the policy assumes that such cash restrictions will induce a behavioural response from those individuals who engage in excessive consumption of D.A.G products in the form of lower consumption. It is argued that the subsequent decrease in the consumption of D.A.G products would eventually translate into significant improvements in social outcomes, which would spread at all levels, from the individuals to their families/households and to the community in general. The following figure summarises the expected transmission mechanism of the policy (see Figure 1-2).

Figure 1-2: Expected transmission mechanism of the CDC policy



1.2.2 The role of the data snapshot of the trial sites in the overall evaluation

In the first section of Chapter 2 (Section 2.1), we provide a snapshot of the socioeconomic and demographic conditions prevailing in each trial sites. Where possible, we provide these statistics with reference to broader benchmarks such as WA, SA and Australia as a whole. The purpose of this snapshot is to give some indication of the general conditions that prevail in these sites and how they differ from the broader benchmarks. It simply is a presentation of the sites themselves. The data presented remains contextual and is not used to look at the impact of the CDC in the trial sites, it merely allows the reader to get a grasp on the socioeconomic challenges that prevail in the trial sites.

1.2.3 The role of the CDC participants' individual administrative data in the evaluation of the CDC

In our work for the baseline data collection in the Goldfields region (2018) we have already investigated the Australian Government administrative data (DOMINO data) and produced a set of descriptive statistics of the CDC participants who had been rolled out from the beginning of the policy across all three trial sites. The objective of that investigation was to provide our view as to the general suitability of the DOMINO data for providing support to a broader evaluation of the CDC following the existing policy logic and theory of change provided by DSS.

An important aspect of the DOMINO data is that it records a lot of contextual information (e.g. demographics and geographical location), some information about processes (e.g. eligibility, card activation and card management) and some information about number, value and timing of transactions made by CDC participants. However, the DOMINO does not record any information that we considered as suitable outcome measures of the CDC policy. This said, it may be useful to monitor some aspects of the transactions part of the DOMINO data which could serve as (direct or indirect) indicators of how well the process of using the CDC may be working for CDC participants. For example, how patterns of transactions may vary over time or, for identifying regular and irregular card use patterns for specific groups of CDC participants.

Our view at the time of the baseline data collection was, and remains, that the DOMINO data is of high quality and should be used to its full capacity in an evaluation of the CDC.

We recommended that the DOMINO data be used at several stages of the Evaluation of the CDC and implemented these recommendations in the definition of our evaluation framework (workshopped at the Department of Social Services in November 2018).

The evaluation uses the DOMINO data in the following ways:

1. To provide broader information on CDC participants in order to highlight differences across trial sites both in terms of demographics but also with regards to processes and transaction patterns. This report provides selected relevant information gathered through this process (Chapter 3).

2. In the context of a staggered individual survey rollout, the DOMINO data is also used to specify the contacts and timing of survey participation approaches.

3. The DOMINO data is used in order to compute statistical weights allowing researchers to provide population representative statistics on the survey answers.

4. To decrease survey burden for the respondents, allowing the survey design to concentrate on the Key Evaluation Questions. Indeed, the DOMINO data is of sufficient quality to enable us to link it with the survey data, thus retrieving basic demographic information that no longer needs to be elicited through the survey. The caveat to this activity is that it only works if enough CDC participants consent to have their administrative records accessed and merged with their survey answers. With hindsight we know this to have been a very high proportion of respondents (84 per cent).

In Section 2.2, we focus on how the DOMINO can provide broader information on CDC participants. To this purpose, preliminary work on the DOMINO data was undertaken in order to equivalise and link the various datasets the DOMINO is comprised of, to produce descriptive statistics of the population of CDC participants and finally, providing comparisons across sites. This activity also consisted of preparing a harmonised file that was linked with the survey answers when they became available.

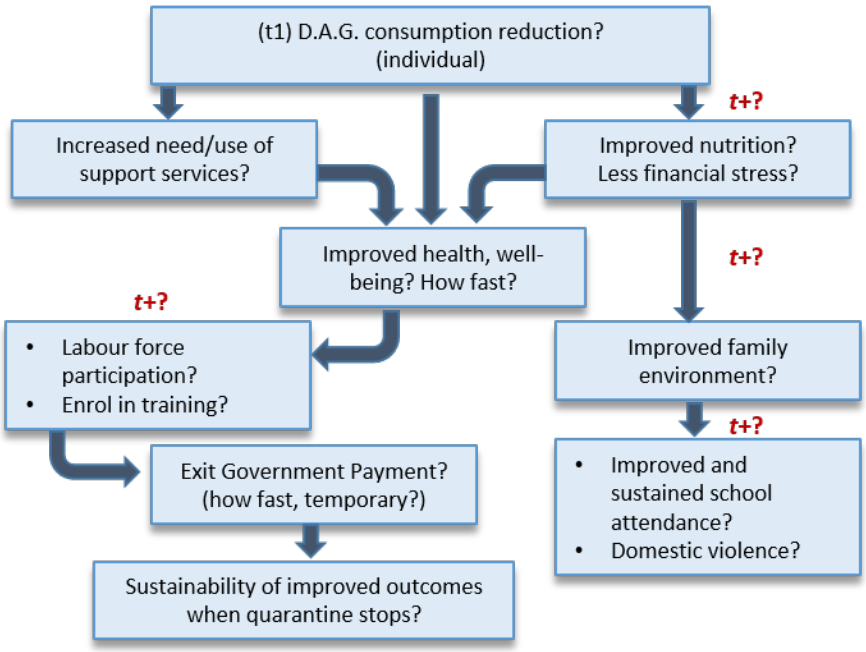
1.2.4 The role of the community level data in the evaluation of the CDC

In determining the range of community outcomes relevant to the present evaluation of the CDC we were mindful of the time frame of the policy, the availability of the data in a format that allows an impact analysis and the level of aggregation of the data at hand.

1.2.4.1 Identification of relevant community outcomes

The first rollout of the CDC was in March 2016 in the Ceduna region, closely followed by the East Kimberley region rollout in April 2016. The Goldfields trial site was rolled out two year later in March 2018. As a result, the window of observation of community data after the policy started is relatively narrow, especially for the Goldfields. Should there be positive outcomes of the policy, they would be likely to manifest themselves sequentially, starting with individual outcomes, spreading, over time first, to those who surround the individual and are affected by the social harm externality, and, subsequently, to the broader community level. There will be instances where outcomes of the CDC may take time to manifest themselves. One consequence may be that the current window of observation may be too short for one to observe any significant changes at individual or community level for a specific social outcome of interest. The following figure (Figure 1-3) illustrates the sequential nature of the changes in outcomes we may expect from the CDC.

Figure 1-3: Sequential nature of expected outcomes from the CDC policy



1.2.4.2 Measurement of behavioural responses using community level data

Part of the remit of the current evaluation was to analyse relevant state government administrative data, in order to assess whether we could make impact statements about the CDC using this community-level data.

The evaluation has considered several sources of community-level data collections. A selection is presented and discussed below.

Offences/crimes/domestic violence

Police data could be made useful in some instances for measuring short-term impacts, but measurement issues can lead to inaccurate or even misleading conclusions

The CDC aims to reduce the amount of welfare available to purchase alcohol, drugs and gambling products and therefore, reduce the social harm caused by alcohol and drug abuse and problem gambling. An example of social harm caused by alcohol and drug abuse and problem gambling is the types of behaviour that result in a variety of offences, including domestic violence, burglary, and crime in general. However, the actual mechanisms that may lead to crime reduction are not as clear, or as unidirectional, as sometimes assumed. Whilst making it harder to purchase D.A.G products by reducing cash transactions may appear to be a clear and straightforward way for reducing harmful behaviours, the exact behavioural mechanisms through which such a reduction may take place are often argued to be neither clear nor straightforward. There are many narratives that come from the qualitative research the evaluation team conducted that provide such examples. One such example suggests that the financial pressure applied on a CDC participant to reduce the consumption of D.A.G products may incite them to commit more offences (notably burglary, thefts) in order to find the financial means to maintain their consumption. Another such example suggests the possibility that the restriction of individual discretionary spending through the CDC may fuel frustration which under some circumstances may fuel further instances of domestic violence and/or assaults.

An important distinction to make is that these examples mostly refer to behavioural responses that happen in the short-term and are more likely to occur where there already exist negative behaviours or addiction. In contrast, the public health literature is very clear that people with lower D.A.G consumption present much better personal and social behaviours, including lower offences, crimes and domestic violence. It is worth noting that many of the public health measurements of consumption of D.A.G and associated behaviours focus on the longer term positive behavioural outcomes from reduced D.A.G consumption.

The distinction between short-term and longer-term behavioural outcomes is critical for the decision of how community data can be used for measuring the impact of the CDC policy. In the short-run crime data can be expected to measure the short-run increase in negative behaviours. In the medium- or longer-run crime data can be expected to measure the longer-term increase in positive behaviours. There are three questions that need to be answered in the context of how useful community data can be in measuring policy impact, all three of them of an empirical nature. First, if it occurs, how strong may a negative short run behaviour be? Second, how strong may be a positive longer-term impact? Third, when does the short run negative run out of steam (if it does) and when does the longer-term positive start appearing (if it does). Of the three questions, it is only the first one that could in principle be asked by using short-term data. The other two questions would require a very detailed and accurate longer-term data collection in order to even attempt an impact estimation. Such a data collection would, however suffer from the presence of concurrent policy impacts (which would make identification very hard, as explained elsewhere) and from serious measurement errors due to illicit and inadequately measured behaviours. It is the view of the evaluation team that whilst the use of relevant community data can be very valuable for understanding where problems lie and where policy as a whole ought to focus, community data is a very poor tool for measuring the impact of individual policies, such as the CDC. This is a caveat that must be seriously considered when relevant assessments are made. Although we will present the analysis of selected Police data on the trial sites and for the crimes that the data may be reliable, we do not argue that this analysis can show the impact of the CDC policy in these areas.

Children nutrition and school attendance

There are several ways to measure nutrition and school outcomes. The current community-level data collections are largely inadequate for impact analysis.

It is a stated objective of the CDC that the policy would contribute to significant improvements in the family/household dynamics which would translate into (via several drivers, including lower D.A.G consumption and improved ability to budget money) better nutrition; increased overall school attendance; and, increased safety and general well-being of children.

Data on nutrition can be collected in several ways. One of the most reliable ways would be in principle to collect data on food purchased by the CDC participants using their Card and compare them with data by otherwise similar non-CDC participants. Assuming that purchase translates faithfully into consumption, a nutrition index can be used to score the outcomes. This type of data has not been collected as yet, but could be if the nutrition outcomes of the CDC policy were to be more carefully evaluated. Qualitative research evidence, however, suggests that there are several potential workarounds in practice, one of which is that the CDC participant purchases food for a non-participant and exchanges the food for cash. Such a practice would by its very nature not be easy to trace and would also significantly disrupt the relevant data collection. Where such a workaround involves two consumers it may be traced if additional data were to be collected about the purchaser as they do

their shopping, especially in smaller communities where people are more likely to be known to the shopkeeper personally. In larger communities or in the anonymity of a city such practices would not be easy to detect. Also, if such a workaround were practiced jointly by a CDC participant and a shop keeper, this practice would be hard to detect. Notwithstanding these caveats, the idea of collecting community-level information on food purchases over a longer period of time and with sufficient locational granularity, and then scoring their nutritional value to create measurable outcomes is a good one that should remain in a plan for further evaluation and future monitoring of the CDC.

An additional source of information on nutrition can come from survey data collections, typically collected at the family level and self-reported by individual family members. There is a comprehensive literature in the disciplines of Health Economics and Public Health which assesses in detail the pros and cons of such data collections, so we will not discuss this here. Suffice it to say that, where there may be such data available, especially if it spans across a longer period of time and has the needed granularity and collection frequency, it should be considered very seriously as a very reliable source of evidence for measuring change. A final potential source of evidence for nutrition could be expenditure data collected by the supermarkets' data systems, but again, such information is not available. We note however, that information from the Card may be a useful future route for measuring and understanding different types of consumption, their differences across the population and their change over time.

In principle, community-level information on school attendance would allow the evaluation to monitor attendance as a core outcome. Data would have to be collected at the school level by the Departments of Education (in SA and WA) at considerable locational granularity and over a longer period of time for the information to be useable. It would also be necessary to collect the identical information for schools that are comparable to those in the trial sites in order to conduct a formal impact assessment by comparing schools within and without the CDC policy areas. Beyond these requirements, one practical difficulty with such school data is that school zones may overlap suburb boundaries. Practically, this would prevent one to match suburbs' characteristics with school outcomes so that the estimates of impact would become statistically unreliable. A solution to this issue would be if the school data included detailed characteristics of the students themselves so appropriate controls would be available for the estimation of the impact of the CDC on school attendance.

Health outcomes: Hospital (ER) separations/presentations

Health outcomes may be very hard to measure in the short run, however, health services utilisation may be a good route to identify and possibly measure impacts.

As already mentioned in Section 1.2.1, there is sufficient evidence of the potential of drug/alcohol abuse to generate negative direct health outcomes for individuals and negative indirect outcomes for their families and communities. Whilst the broader conceptual design of the CDC is based on the hypothesis and expectation that the CDC could contribute to improving health in general through a decrease in alcohol and drug consumption and better nutrition, the timeframe in which this impact could be reasonably expected to manifest itself is not stated explicitly. The reality is, as stated earlier, that different impacts will have different strength and happen at different times. Thus impacts will range from immediate and direct ones (e.g. accidents and A&E admissions that may follow within hours of a drug/alcohol consumption abuse) to longer-term and indirect ones (e.g. intergenerational transmissions influencing the longer-term educational and labour market outcomes of children with parents with high drug/alcohol consumption). This very broad range of the strength and timing of

potential impacts has been one of the major conceptual challenges for evaluating the impacts of social policy in general and the CDC evaluation is no exception to this challenge.

The timeframe of the CDC evaluation is likely to be too short for anything but the most immediate and direct changes in outcomes to be manifested and adequately observed and measured within that timeframe. Nevertheless, one possible immediate outcome related to health could be hospital presentations (A&E and other), notably presentations related to alcohol/drug abuse (intoxication, overdose, injuries indirectly caused by drug and alcohol use, etc.). Ideally, data for an evaluation should be available by hospital and should include the distinction between alcohol-related presentations and other reasons. It should also be available for comparable hospitals within non-CDC locations over the same period of time and with comparable locational and other detailed information.

Financial and related outcomes, including budgeting and housing debt

By design, the CDC causes financial disruption, some of which probably offers good quality impact measurement. However, community-level data may not be the best way to measure such impacts.

As the quarantining of government payments severely limits discretionary expenses for CDC participants, it is expected that household budgeting would improve and priority be given to the payment of bills (including rent) and food. Given that the cash restrictions are immediate with one's participation in the CDC and that automatic rental payment transfers can be easily organised, we could expect rental debt to decrease quite rapidly and be observable to the researcher in the short term.

Using the information on individual transactions from the Card provider, we can look at the issue of rent payments at the individual level. However the DOMINO/Indue individual level data provided does not cover periods prior to the CDC rollout. We could explore the possibility to complement the DOMINO/Indue information with community-level data from the Housing Authority on disruptive tenancies and debts accumulated so we would be able to look at changes over time, comparing with data before and after the rollout of the CDC.

1.2.4.3 Practical considerations related to the use of data collected at the community level by States

Community-level data are a useful descriptive tool in the overall effort of an evaluation, but its limitations for making impact statements and the caveats for interpreting them can be severe.

An important consideration when proposing the use of community-level data sets is that community data is collected by the States and Territories and their various organisations for their own diverse reporting purposes, in line with relevant legislation, and not with the perspective of an evaluation of the CDC in mind. As a result such data collections will follow business driven definitions which often need to change over time in order to remain relevant, or will be conducted at a geographical level that may not be fully compatible with the boundaries of the trial sites, leading to geographical overlapping or high level of geographical aggregation when different data collections need to be compared. Community-level data collections will often follow the relevant business time frequency (real time, monthly, quarterly, annually) and change as business needs require, both of which may limit the number of observations available for the analysis. These reasons, among others, imply that the

necessary standardisation of the way data is generated (over time and across different parts of the population and different locations) is often not achievable, thus severely limiting the broader statistical use of such data collections. Interestingly however, we need to make a fine distinction, namely, that the very fact that these data collections are made in a bespoke way, they often offer very useful descriptive information as they cover certain aspects in depth that broader standardised collections cannot do in a consistent manner. Thus, for the important purpose of defining the context of the CDC trial sites, community-level data can be a very useful tool for the comprehensive assessment of a policy.

It can be reasonably argued, and we do so in this report, that the time frame of the three CDC trial sites and their evaluation are too short for such impacts to be manifested and accurately measured by community data alone. Further, we note that the impacts we seek to identify and measure within an area will be harder to measure accurately, as they will pertain only to the sub-population of CDC participants. We discuss a selection of points that explain some of the inherent limitations that would stem from the extensive use of community-level data for the assessment of the CDC policy and its present evaluation.

a) Level of aggregation of the community data and dilution effect

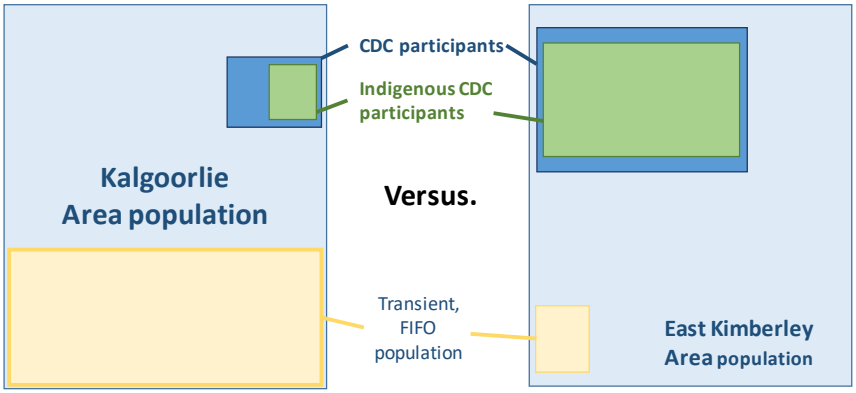
The smaller the proportion of CDC participants in the community, the more diluted the impact of the CDC policy will be in any community-level data, making it hard to measure policy impact.

The proportion of CDC participants in a given community may be relatively small. As a result, even if there is a large change in a given outcome for a large proportion of the CDC participants it may still be difficult to detect these changes when we look at the overall community data which is usually available at an aggregated level. This means that any impact that may have affected the CDC participants will be diluted within the broader community data to a point where changes become invisible to the researchers. This is further compounded by the fact that the geographical aggregation of the community data may not coincide with the boundaries of the trial sites. This increases further the dilution effect. The following figure (Figure 1-4) illustrates this issue contrasting the demographic make-up of two of the trial sites (the main population centre of Kalgoorlie, in the Goldfields trial site, versus the East Kimberley trial site as a whole).[3] In Kalgoorlie, the CDC participant population represents barely 10 per cent of the total population and about 50 per cent of the CDC participants identify as Indigenous. By contrast the CDC participant population represents nearly 20 per cent of the total population in the East Kimberley site with over 80 per cent identifying as Indigenous. . Given these proportions, it is naturally difficult to observe changes driven by the CDC participant population through community level data, even if those changes are important. By way of example, assume that a given outcome improves by 10 per cent for the CDC participants in Kalgoorlie but does not change for the rest of the local population. The outcome observed at the community level would show an improvement of 1 per cent. Likewise, if the outcome for the rest of the population of Kalgoorlie decreased by 1 per cent on average, the total change observed at community level would be 0.1 per cent. Given these relatively small proportions of CDC participants within the broader community

[3] The underlying data for this Figure can be found in the Australian Government administrative data analysis in the next chapter. At this stage, we use this data only as a realistic illustration that does not require reference to exact actual numbers.

population, it will be challenging for the researchers to detect any impact of the CDC by relying solely on community level outcomes. [4]

Figure 1-4: CDC population within the trial sites, the issue of data aggregation



b) Timeframe of an evaluation and the sequential nature of policy outcomes

The short timeframe of currently available community-level data sets combined with the longer-term nature of many of the important outcomes is a shortcoming for its potential use in the evaluation.

By nature any impacts of the CDC policy would start at the individual level (lower D.A.G consumption, improved health, financial capability, positive social behaviours), then flow through to the household/family level and then to the broader community level. The implication for deciding on the appropriate data use is that only a longer timeframe would be able to capture the sequence of all impacts we described. Similarly, the impacts on each of the elements of this sequence may not become apparent immediately. For instance, assuming that there are some improvements in personal health because of reduced alcohol consumption, these may become visible fairly quickly at the individual level (the GP of the person in question and their family are likely to notice quickly), but it may take longer for them to be detected within a collection of aggregated community-level data. The same implication that only a longer timeframe would be able to capture the development of the impacts we are interested in. Insofar as policies go, the CDC policy is relatively recent. As such, the range of community outcomes that could be usefully investigated will be limited.

[4] We have shown that, for each specific locality, the lower the proportion of CDC participants in the overall population (i.e. the higher the dilution) the less able we will be to trace and estimate the impact of the CDC on an outcome using community-level data. Using a fictitious locality and offence, but with realistic numbers, we build an example where 10 per cent of the population are on the Card, with a 20 per thousand population-wide offence rate. Let us assume that we know that the CDC impact is to halve the offence rate of CDC participants from 20 per thousand to 10 per thousand. The dilution effect will result in us observing the rate dropping from 20 per thousand down to 19 per thousand post-CDC offence rate for the whole of the locality. Although statistically tracing a 1 per thousand reduction is much harder than tracing a 10 per thousand reduction, given a sufficiently large and precisely constructed data set, it would be possible to try to extrapolate in order to find the true impact of the CDC. However, it is only if we made the assumption that the pre-CDC offence rate in the locality is the same for CDC participants and non-participants that the extrapolation would be right. Supposing this assumption did not hold and that CDC participants were more (or less) likely to offend. The impact of dilution on our ability to derive the right impact estimate would then reduce (or increase), but by how much? Extending the example, assume that the pre-CDC rate was 20 per thousand for non-CDC participants and, say, double at 40 per thousand for CDC participants. The whole-population offence rate would then be 22 per thousand (comprising 90 per cent non-CDC participants at 20 per thousand and 10 per cent CDC participants at 40 per thousand). Assuming the same impact of the CDC (halving the rate), we would end up with a post-CDC population rate of 20 per thousand, so the observed population drop would be 2 per thousand from 22 per thousand to 20 per thousand. Still a small proportion for statistical purposes.

c) Over time changes of definitions of outcomes and concurrent policy interventions

The advantages that could be gained by a longer timeframe may be curtailed or even completely lost by a lack of continuity of measurement.

As already mentioned, community-level data sets are designed to serve the purposes of the organisations that collect them, which are diverse across organisations and often change over time within organisations. Thus data collections may be limited due to differences across organisations or States and Territories, or due to changes in over time collections within organisations or States and Territories. It is important to focus on one core reason why such differences may emerge and their broader implications for the evaluation's data strategy and overall design, namely that changes in such data collections will often be done for a strong policy reason that may be relevant to an evaluation's overall data strategy. We use the example of Domestic Violence (DV) in the East Kimberley in the 2010s using some of the relevant documentation that is in the public domain. First, we note that we recognise that the problem of DV has been a chronic and severe problem and that this report does not attempt to provide an in-depth assessment, it only uses it as a clear example to illustrate a methodological issue. An aspiration of the CDC policy has been to reduce the amount of welfare available to be used to purchase alcohol, drugs or gambling products and reduce the social harm caused by alcohol and drug abuse and problem gambling. DV is one example of the social harm caused by alcohol and drug abuse and problem gambling. To measure directly if this objective is met or not, we must measure the rate of DV instances and make comparisons. First, between areas with and without the CDC at a point in time and second, between before and after the CDC introduction, within each of the CDC trial sites. The relevant documentation for DV in East Kimberley in the 2010s shows the difficulties that may emerge when attempting such comparisons in an environment where the way we record the outcome may be changing. The changes in the way DV is recorded and acted upon makes comparisons difficult. The presence of concurrent influences that cannot be distinguished from one another, suggests that given the evidence at hand such comparisons would be unsafe to make and that the impact of the CDC could not be isolated from the other influences that we have mentioned.[5] In such circumstances it is advisable that we note the problematic empirical surrounds and we do not attempt to make any causal statements about the impact of the CDC.

[5] There are several concurrent influences that are very hard to separate. The intensification of reporting by Police would likely increase the reported instances. Increased overall awareness may also increase the willingness of victims to report DV instances. The increased emphasis by Police on acting when an incident is reported would likely act as a deterrent. The introduction of the CDC could in the short run introduce pressures within families that may trigger violent behaviour, especially where addiction may be present. Later down the line we would expect that a lower consumption of D.A.G products may lead to less DV and more peaceful family life, but we do not know how much later. Whilst the net impact from all these factors would be clearly measurable and visible in community-level data on the number of DV instances, the attribution of the total number in to its constituents (changed measurement methods, changed reporting levels, changed policing methods and changed behaviour due to the CDC would be very difficult to make).

1.2.5 The role of the CDC participants' individual survey data in the evaluation of the CDC and survey instruments

Given the timeframe of the evaluation and the limitations associated with the use of administrative and community data in the context of an evaluation of the impact of the CDC (see discussion above), the bulk of the evidence needs to rely on an individual survey of CDC participants.

The survey is designed to elicit relevant information about changes that occurred since the rollout of the CDC at the individual and household level. The survey is designed to complement the other sources of information and to improve on previous data collection both with regards to the fieldwork strategy and survey instruments. The design of the survey is informed by the work undertaken for the Baseline data collection in the Goldfields where a first version of the survey was piloted and insights on a suitable fielding strategy were gained.

The questions included in the survey and the fielding methodology were determined by a range of factors, including the particular context of the trial sites, the evaluation methodology, and contractual obligations.[6] The key survey design features are as follows:

- The evaluation framework: the research team reviewed the policy logic of the CDC and related key evaluation questions and determined the relevant outcomes which would be best elicited through a survey of individual CDC participants. The main criteria of selection for the questions was to focus on topics that quantitative instruments are good at eliciting information on and where qualitative evidence suggests that these areas are topical for survey respondents.
- Insights from the Baseline data collection in the Goldfields trial site in 2018: A first version of the survey was cognitively tested in the Goldfields trial site and the fielding strategy was discussed with relevant stakeholder groups. This led to adaptations of some of the survey instruments and major revisions of the initial fielding strategy so as to maximise the yield of the survey and accommodate for survey respondents' heterogeneity.
- Complementarities between various methodologies used in the evaluation: the survey was designed so it would complement (and supplement) the evidence collected by the other components of the evaluation and was informed by both the stakeholder engagement strategy and the qualitative interviews. The design of the survey benefited strongly from information collected by the qualitative methodologies, notably the stakeholder engagement and the semi-structured interviews of CDC participants. Information gathered throughout the Baseline data collection in the Goldfields trial site in 2018 was also instrumental in establishing the design and the practical aspects of fielding a survey for potentially hard to reach CDC participants or where there could be potential barriers, such as language or participation.
- Opportunity to maximise the use of administrative sources of information: The rich administrative data held by DSS on CDC participants (DOMINO data) provided the evaluation with the opportunity to economise on survey questions eliciting basic demographics as this information could later be linked to the survey answers (conditional on the survey respondents consenting to such linking). This strategy allowed the survey to include a larger

[6] It was pertinent to the design of the survey that the remit of the evaluation included a single wave of survey data collection in the trial sites without a 'control' group of 'eligible CDC participants', that is, individuals in receipt of Government payments living outside of the trial areas who would be CDC participants if they were in the trial sites. The need for longitudinal information was acknowledged by requiring that the survey design and fieldwork could be extended to include further waves later.

set of instruments focused on the key evaluation questions while minimising survey burden for the respondents. Finally, the administrative data on CDC participants enabled the research team to compute population weights that could later be applied to the analysis of the survey answers (see Section 3.1).

- The requirement to maintain, where possible, the comparability of the current evaluation with past evaluations and evaluations of the income management in the Northern Territory[7] implied that a number of questions selected for the survey needed to be the same as those used in the previous evaluations, where they matched the aims of the current evaluation and served to answer some of its key evaluation questions.
- Following the recommendation made by the research team at the time of the Baseline data collection in the Goldfields trial site in 2018, FES was commissioned to produce an individual quantitative survey including instruments that were longitudinal in nature. Such instruments will potentially allow one to make impact statements about the CDC should a second wave of data collection occur. For the current report, which is based on one wave of survey data collection, these longitudinal survey instruments allow one to provide baseline information about a number of life outcomes but do not lend themselves to impact statements.
- The remit of the evaluation did not allow for a control group of government payment recipients not on the CDC to be sampled for the survey. Combined with only including one wave of data collection, this imposed important constraints on the structure of the survey and the type of survey questions used. It also limited the ability of the analysis of the survey to provide statistically robust impact statements about the CDC. For the current evaluation, relying on data collected only on CDC participants through a single wave means that we needed to rely on two types of instruments in order to allow us to compute early subjective outcomes of the CDC, pending the availability of a second wave of data. First, we used some 'retrospective' survey instruments whereby CDC participants were asked to reflect on their situation prior to being rolled onto the CDC. We then asked them the same questions relating to the more recent past when we know they have been on the CDC for some time. We then used the difference in outcomes between the two sets of questions in order to see whether significant changes have occurred since respondents were rolled onto the CDC. There are caveats attached to the use of such questions as recall biases and desirability effects may contaminate the data. Second, we used survey instruments that directly asked CDC participants their views as to whether a number of their life outcomes have changed as a direct result of being rolled onto the CDC. These instruments offer the opportunity for CDC participants to voice their views on what the CDC does for them (or does not). However, they give very subjective assessments which may contrast significantly with the objective impact of the CDC depending on whether a survey respondent strongly feels for or against the CDC. The quantitative analysis keeps these caveats in mind in the interpretation of the survey results and encourages the reader to keep those in mind as well. Nevertheless, the evaluation is based on a range of methodologies whose insights about the CDC are triangulated so the large number observations made from the survey can be combined with the more in-depth knowledge gathered through the qualitative methodologies for corroboration.

The quantitative survey of CDC participants included seven modules to which a last free text module was added in order to allow people to give additional feedback about what they find good or bad about the CDC and which has not been covered by the survey instruments. Free text boxes are also a

[7] Bray, J. R., Gray, M., Hand, K., & Katz, I. (2014). Evaluating New Income Management in the Northern Territory: Final Evaluation Report (SPRC Report 25/2014). Sydney: Social Policy Research Centre, UNSW Australia.

very useful cross fertilisation ground between the quantitative and qualitative analytical methodologies, able to yield knowledge that neither of the two methodologies manages by itself. The survey is composed as follows:

Survey Section A: Basic Demographic information and information on kids and school attendance:
As stated above, we restrict the demographic information to a minimum as the survey answers were later linked with the administrative data for those survey respondents who consented. As a precaution in case of a poor consent rate, basic demographics were elicited in the survey. It turned out that 84 per cent of the survey respondents consented to have their survey answers linked to their de-identified administrative information. The part dedicated to school attendance mostly used the previous evaluations' survey instruments (previous CDC evaluation and the evaluation of the Income Management in NT) so as to allow comparisons.

Survey Section B: Work and employment
This elicits information about people's employment. For those who are not in employment, information was elicited about the difficulties they report in looking for/finding a job. In a first wave of data collection, this provides baseline information from which changes can be observed should a second wave of data collection be undertaken.

Survey Section C: Financial position and financial stress
The question in this section allows for the assessment, in some depth, of the financial situation of the survey participant. They elicit the date (or when in less specific terms) when CDC participation commenced. It asks retrospective questions on financial stress referring to 12 months before becoming a CDC participant and repeats the same questions asking people to refer to a more recent time (within the last four weeks) with no reference to the CDC. These survey questions (referred to as 'instruments') were used in previous evaluations (the first evaluation of the CDC undertaken by ORIMA and the evaluation of Income Management in the Northern Territory).

Survey Section D: Behaviour and attitudes towards alcohol and drugs
We include the AUDIT (Alcohol Use Disorder Identification Test) questions to elicit in depth information on alcohol consumption and to enable the computation of an individual score for each participant. We also include a retrospective question referring directly to the CDC (question D13) which allows one to look at self-assessed changes in alcohol consumption since becoming a CDC participant. Retrospective questions will be taken as early indications of outcome before the information of a second wave has been collected, should it be undertaken. We also adapt and include some of the previous evaluations survey instruments (questions D15 and D16).

The second part of this section elicits information on perceptions about drugs using the validated survey questions from the National Drug Strategy Household Survey (NDSHS) conducted by the Australian Institute of Health and Welfare (AIHW). The answer to these questions allowed us to triangulate with the NDSHS survey and place our observations in the broader context of the States and Australia as a whole.

Survey Section E: Health and well-being
We use a set of validated questions about health and well-being so that comparisons can be drawn between survey participants and nationally representative surveys. We use the SF12-Version2 health questions (adapted for Australia) and the PWI (Personal Well-Being) well-being index questions. These instruments are, by nature, longitudinal. They will achieve their complete usefulness should a second wave of data collection occur.

Survey Section F: Feelings about being on the Card

This set of questions refer directly to being on the CDC, how participants feel about being on it and to what extent they feel a number of life outcomes has changed because of the CDC, notably perspectives about money management. We ask whether they would like to stay on the Card as they are now, whether they would like to stay but with a lower proportion of their welfare payment being restricted or whether they would rather get off the Card altogether.

Survey Section G: Feeling about the community

This set of questions ask participants about the community they live in as a whole, notably how safe they think they are at home or in the streets and whether they think the CDC has had an impact on these feelings of safety. Questions under G3 elicit information about how children have fared since the introduction of the CDC in the community. They ask about nutrition, health, safety, happiness, and participation in cultural and social activity.

The last question in Section G (G4) directly asks CDC participants whether they perceive some improvements have been brought about by the CDC on a number of outcomes of interest. The question broadens the scope of the reported improvements beyond oneself, it also asks whether improvements have been felt for CDC participants' family, friends, and where they live.

Survey Section H: Free text entry

This section allows the survey respondents to provide additional information about their experience of the CDC, both on the negative and positive side. The information collected was later categorized and used to supplement some of the quantitative findings.

The survey document used for the fieldwork in the trial areas is available in the appendices section.

The report now proceeds to presenting and discussion all the quantitative evidence from the data sources outlined above. The second chapter focuses on the evidence gathered from the official statistics and administrative data (including DOMINO and State community data). The third chapter presents all the evidence gathered from the individual survey of CDC participants.

2 Snapshot of the trial sites and evidence from administrative data

2.1 Socio-economic snapshot of the trial sites

This section provides an overview of key socio-economic indicators for each of the trial sites.

The evaluation primarily used three sources of publicly available data:

- Census of Population and Housing (2016) undertaken by the ABS.
- Total VET activity (TVA) 2016 collected by the National Provider Collection, National Centre for Vocational Education Research (NCVER). It contains information on vocational education and training, students and courses.
- Australian Early Development Census (AEDC)—undertaken by the Social Research Centre (SRC) on behalf of the Australian Government Department of Education, Skills and Employment—2012, 2015 and 2018. The AEDC provides a national measure of children's development as they enter their first year of full-time school. The AEDC provides a rich set of indicators across five key domains, which are closely linked to child health, education and social outcomes. The domains are:
    - physical health and well-being;
    - social competence;
    - emotional maturity;
    - language and cognitive skills (school-based); and,
    - communication skills and general knowledge.

For each domain, the AEDC defines risk categories (on track, at risk, vulnerable). This report condenses the information on child early development to a great extent, focusing on the main messages. We note, however, that for the sites of Ceduna and East Kimberley, the statistics are based on relatively small numbers of children. This means one should, when reading the report, not over-interpret them.

2.1.1 Ceduna and the surrounding region

2.1.1.1 Labour force participation and employment in Ceduna

The following table provides an overview of the labour force status of the population of Ceduna and surrounding areas and makes comparisons with the state of South Australia as a whole and Australia.

The labour force participation rate of the working age population is 76.9 per cent in the Ceduna CDC trial site, which is similar to the South Australian state and the national participation rates (at 75.3 and 76.4 per cent respectively). However, the unemployment rate is much lower in the Ceduna and surrounding region at 3.7 per cent against the state and national rates of 7.7 and 7.0 per cent. [8]

[8] Note that the unemployment rate is higher than the corresponding proportion of being unemployed because the unemployment rate is derived from the labour force (i.e. the denominator is those who are currently active in the labour market) while the proportion of being unemployed is derived from the working age population (i.e. the denominator is the working age population).

There is a similar proportion of people who are not in the labour force in the Ceduna and surrounding region (23.1 per cent) compared to that recorded for SA (24.7 per cent) and nationally (23.6 per cent).

The labour force participation rate of the youth (aged 15-24) population in the Ceduna and surrounding region is similar to the state and national rates, while the unemployment rate in the Ceduna and surrounding region is much lower than the state and national rates.

Table 2-1: Labour force status of the working age population and youth in 2016 (Ceduna vs. benchmarks)

Labour force status			
	Ceduna %	SA %	Australia %
WORKING AGE (15-64)			
Employed	74.1	69.5	71.0
Unemployed	2.9	5.8	5.4
Not in the labour force	23.1	24.7	23.6
Total	**100**	**100**	**100**
Labour force participation rate	76.9	75.3	76.4
Unemployment rate	3.7	7.7	7.0
YOUTH (15-24)			
Employed	58.9	52.6	54.4
Unemployed	3.3	10.4	9.5
Not in the labour force	37.8	37.0	36.1
Total	**100**	**100**	**100**
Labour force participation rate	62.2	63.0	63.9
Unemployment rate	5.2	16.5	14.9

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region. The labour force participation rate is calculated as the labour force (both employed and unemployed) divided by the total population. The unemployment rate is calculated as the unemployed divided by the labour force.
Cells may not add up to row/column totals due to rounding.

The following table highlights the large differences that exist between the Indigenous and non-Indigenous populations in Ceduna. The unemployment rate is more than twice as large for the Indigenous population compared to the non-Indigenous population. More than half of the Indigenous population in Ceduna is not in the labour force. The percentage of employed people among the Indigenous population is just above 40 per cent compared with 84 per cent for the non-Indigenous population. The unemployment rate is more than five times higher for Indigenous people.

There is a significant difference between Indigenous and non-Indigenous youth with regards to labour force status. The unemployment rate of young Indigenous people is six times higher than non-Indigenous youth and 73 per cent of them are not in the labour force.

Table 2-2: Labour force status of the working age population and youth in 2016 by Indigenous status, Ceduna

Labour force status		
	Non-Indigenous %	Indigenous %
WORKING AGE (15-64)		
Employed	84.2	40.7
Unemployed	1.3	3.7
Not in the labour force	14.5	55.6
Total	**100**	**100**
Labour force participation rate	85.5	44.4
Unemployment rate	1.6	8.4
YOUTH (15-24)		
Employed	74.3	24.3
Unemployed	1.4	2.7
Not in the labour force	24.3	73.0
Total	**100**	**100**
Labour force participation rate	75.7	27.0
Unemployment rate	1.8	10.0

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region. Cells may not add up to row/column totals due to rounding.

The following table provides information about the type of occupations people are employed in in the Ceduna trial site and make a comparison with SA and Australia. It also highlights differences between Indigenous and non-Indigenous workers in the trial site.

Table 2-3: Distribution of occupations (as a proportion of employed people) in 2016 (Ceduna vs. benchmarks), by Indigenous status

Distribution of occupations					
	Ceduna			SA	Australia
Occupation	Non-Indigenous %	Indigenous %	All %	%	%
Managers	21.5	10.8	20.3	12.8	13.2
Professionals	13.5	14	13.0	20.6	22.6
Technicians and trades	12.2	4.8	11.4	13.6	13.8
Community and personal service	12.1	36	14.7	12.2	11
Clerical and administrative	10.5	8.6	10.6	13.6	13.8
Sales	8.6	2.7	7.6	9.8	9.5
Machinery operators and drivers	7.9	10.8	8.6	6.2	6.4
Labourers	13.7	12.4	13.9	11.3	9.6
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region. Cells may not add up to row/column totals due to rounding.

In relation to higher skilled occupations, the distribution in the CDC site of the Ceduna and surrounding region shows a much higher proportion of 'managers' and a much lower proportion of 'professionals' than the state of South Australia as a whole and Australia. Regarding the low skilled occupation of 'labourers', the proportion in the Ceduna and surrounding region is modestly higher than the state and national proportions. We note the very high proportion of Indigenous workers employed as community and personal service (36 per cent) workers. This compares with only 12.1 per cent for the non-Indigenous workers. The proportion of technicians and trades workers is also much smaller among Indigenous workers compared with non-Indigenous workers.

The following table provides information about the distribution of employed people by industry in the Ceduna trial sites and compares it with SA and Australia.

Table 2-4: Distribution of employment by industry in 2016 (Ceduna vs. benchmarks)

Distribution of employment by industry			
Industry	**Ceduna %**	**SA %**	**Australia %**
Agriculture, forestry, and fishing	17.2	4.2	2.6
Mining	4.5	1.3	1.7
Manufacturing	1.8	8.3	6.7
Electricity, gas, water, and waste services	0.8	1.3	1.1
Construction	4.9	7.8	8.9
Wholesale trader	3.1	2.9	3.0
Retail trader	9.7	11.1	10.3
Accommodation and food services	6.6	6.9	7.2
Transport, postal and warehousing	6.4	4.3	4.9
Information media and telecommunications	0.2	1.3	1.8
Financial and insurance services	0.6	2.8	3.8
Rental, hiring and real estate services	0.6	1.4	1.8
Professional, scientific, and technical services	1.3	5.8	7.6
Administrative and support services	3.4	3.7	3.6
Public administration and safety	7.8	7.3	7.0
Education and training	10.4	8.9	9.1
Health care and social assistance	15.5	15.3	13.2
Arts and recreation services	0.5	1.4	1.7
Other services	4.5	4.0	3.9
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region. Cells may not add up to row/column totals due to rounding.

The leading industry of employment in the Ceduna trial site is 'agriculture, forestry and fishing', the proportion of which is much higher than that in the state of South Australia as a whole and Australia. The next prevalent industry in the Ceduna and surrounding region is 'health care and social assistance', which is similar to the proportion employed in this industry for the state of South Australia and Australia. 'Education and training' is the third most prevalent industry of employment in the region, with the proportion employed in this industry being higher than the proportion employed in SA and Australia.

2.1.1.2 Household characteristics in Ceduna

The following table shows that about a quarter of the households in the CDC site of the Ceduna and surrounding region are in the category of 'visitors only household', approximately fifteen times higher than that in the state of South Australia as a whole and nationally. This indicates that the household structure in the Ceduna and surrounding region is fundamentally different from household structures in SA and Australia broadly.

'Couple family with no children', 'couple family with children' and 'lone person household' each accounts for around 20 per cent of the households in the Ceduna and surrounding region, all lower than the corresponding proportion in the state and the nation.

Table 2-5: Distribution of household type (Ceduna vs. benchmarks)

Household type			
Household type	Ceduna %	SA %	Australia %
Couple family with no children	20.7	25.9	24.8
Couple family with children	18.8	27.3	30.3
One parent family	7.7	10.6	10.4
Other family	0.9	1.1	1.2
Lone person household	19.6	26.6	22.8
Group household	1.2	3.4	4.0
Visitor only household	25.5	1.5	1.7
Other (non-classifiable household)	5.6	3.7	4.8
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration (i.e. where people actually were on Census night). 'Ceduna' refers to the CDC site in the Ceduna and surrounding region. 'Other family' is defined as a group of related individuals residing in the same household, who cannot be categorised as belonging to a couple or one parent family. 'Visitors only household' is defined as a household containing only a visiting family (e.g. a family at a holiday home). 'Other non-classifiable household' is defined as a household that does not belong to any of the above categories.
Cells may not add up to row/column totals due to rounding

Table 2-6 shows there is a larger proportion of rented dwellings in the CDC site of the Ceduna and surrounding region than in the state of South Australia as a whole and Australia. This may be because of the large proportion of visitors (shown in Table 2-5) and the rent which is low relative to the median equivalised total household income in the CDC site (see Table 2-7 below). In contrast, the proportion of properties owned with a mortgage is much lower in Ceduna than in the state and the nation.

Table 2-6: Household: living in, owned or rented property (Ceduna vs. benchmarks)

Household property: mortgaged, owned or rented			
Owned or rented	Ceduna %	SA %	Australia %
Owned outright	34.1	33.1	32.0
Owned with a mortgage	22.2	35.8	35.0
Rented	37.3	28.4	30.8
Other tenure type	6.4	2.7	2.2
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, Table Builder.
Notes: Data are based on place of enumeration. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding

As mentioned above, the median equivalised total household income in the CDC site of Ceduna and surrounding region (Table 2-7) is higher than that in the state of South Australia as a whole but lower than in Australia.[9] The median mortgage repayment and median rent in the Ceduna and surrounding region are both substantially lower than the corresponding figures in the state and the nation.

Table 2-7: Household income and housing expense (Ceduna vs. benchmarks)

Median household income and housing expense			
	Ceduna	**SA**	**Australia**
Equivalised total household income (weekly)	$650-$999	$650-$799	$800-$999
Mortgage repayment (monthly)	$1,300	$1,473	$1,753
Rent (weekly)	$150	$260	$335

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. Ceduna refers to the CDC site in the Ceduna and surrounding region.

2.1.1.3 Socio-economic indicators in Ceduna

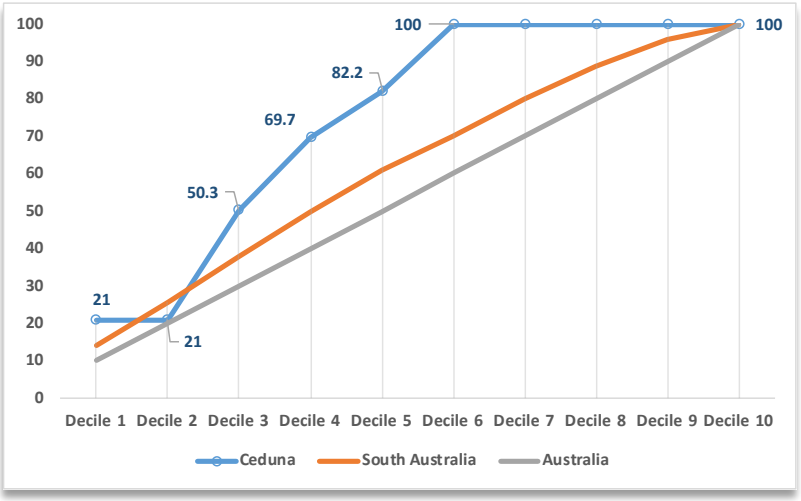
Socio-Economic Indexes for Areas (SEIFA) ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indices are based on information from the Census. The SEIFA 2016 is created from the Census 2016 data and consists of four indices. The index we use here is the population-based Index of Relative Socio-economic Disadvantage (IRSD).[10] The index is a general socio-economic index that measures relative disadvantage and its derivation is based on household income, qualifications, and job occupation. A low score (lower decile) indicates more relative disadvantage and a high score (higher decile) indicates less relative disadvantage.

We represent the distribution of this index for the Ceduna and surrounding region and compare with SA and Australia. The figure represents the cumulative distribution of the population according to the deciles of relative socio economic disadvantage so one can see the total proportion of the population that is at or below a given decile of the distribution. Since the deciles are computed according to the distribution at the national level, the national benchmark line corresponds to an even distribution, with each decile including 10 per cent of the population (45 degree line). If the cumulative distribution is located above the national line (in grey), it indicates that the local population of interest includes a proportion of disadvantaged people that is overrepresented compared to Australia as a whole. The figure shows that the whole of the Ceduna population is below or at the 6th decile of the national distribution of disadvantage. By comparison, about 30 per cent of the population of SA is among the least disadvantaged (top four deciles). Fifty per cent of the Ceduna population is at decile 3 or below. This cumulative distribution gives a clear picture of the relative socioeconomic disadvantage prevailing in the Ceduna area.

[9] 'Equivalised total household income is household income adjusted by the application of an equivalence scale to facilitate comparison of income levels between households of differing size and composition, reflecting that a larger household would normally need more income than a smaller household to achieve the same standard of living.' See the ABS website https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Chapter31502016 for further information.

[10] Area-based and population-based deciles are two different measures of SEIFA. Area-based deciles are calculated by dividing the areas, ordered by disadvantage, into 10 equally sized groups while population-based deciles are calculated by dividing SEIFA areas into 10 equal groups in such a way that the population in each group is approximately equal.

Figure 2-1: Cumulative distribution of the population according to the IRSD deciles, Ceduna vs. benchmarks



2.1.1.4 Education and training in Ceduna

In this subsection, we give an overview of education and training in the Ceduna area and compare with the benchmarks.

a) Highest level of educational attainment

The following table reports the levels of highest educational attainment observed in Ceduna for the population aged 15 and older. The education level of the population aged 15 years and over in Ceduna is substantially lower than in the state of South Australia as a whole and in Australia. Only 9.9 per cent of the population in Ceduna has completed a bachelor's degree or above, while the corresponding figures are 21.3 per cent in the state of South Australia and 25.5 per cent in Australia. We observe a much larger proportion of the Ceduna population that has not completed Year 12 (48.7 per cent), compared to 32.2 per cent in the state as a whole and 27.7 per cent in the nation.

Table 2-8: Level of highest educational attainment of people aged 15 and over in 2016 (Ceduna vs. benchmarks)

Level of highest educational attainment			
	Ceduna %	SA %	Australia %
Bachelor's degree and above	9.9	21.3	25.5
Diploma and Advanced Diploma	7.3	9.5	10.3
Certificate III/IV	19.8	19.2	18.3
Year 12	14.2	17.8	18.3
Year 10/11 and Certificate I/II	32.8	22.3	18.4
Year 9 and below	15.9	9.9	9.3
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Ceduna' refers to the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding.

b) Vocational education and training

To obtain a snapshot of vocational education and training, we use the NCVER 'total VET activity (TVA) 2016' database from the National VET Provider Collection and compare VET enrolment and completion statistics in the Ceduna trial site with the state of South Australia and Australia.

The following table reports the number of VET enrolments and completions in Ceduna.

Table 2-9: Number of VET enrolments, completions and proportion of the total population in 2016 (Ceduna vs. benchmarks)

VET enrolments and completions, 2016			
	Ceduna	SA	Australia
Number of enrolments	604	157,631	3,016,958
Proportion of the total population	**9.8%**	**9.4%**	**12.9%**
Number of completions	119	43,904	918,160
Proportion of the total population	**1.9%**	**2.6%**	**3.9%**
Proportion of completions as per cent of enrolments	**19.7%**	**27.9%**	**30.4%**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding.

The proportion of VET enrolments in Ceduna and surrounds as a proportion of the total population is similar to the state of South Australia and lower than in Australia wide. The proportion of VET completions in Ceduna and surrounds, however, is significantly lower than that recorded at both State and at the national level. Only one in five VET course enrolments transforms into a completed course. Note that the completion rates of VET courses are particularly low as depicted in the national figures where less than one in three enrolments lead to a completion.

As shown in Table 2-10, the proportion of enrolments in 'diploma or higher' is substantially lower in the CDC site of the Ceduna and surrounding region, compared to the state of South Australia as a whole and Australia. In contrast, the proportion of enrolments at the middle levels (Certificate III/IV) and lower levels (Certificate II or below) are similar.

Table 2-10: Enrolment level of VET training (percentage of total VET enrolments) in 2016 (Ceduna vs. benchmarks)

Enrolment level of VET training			
	Ceduna %	**SA %**	**Australia %**
Diploma or higher	14.3	23.8	20.5
Certificate IV	19.3	16.4	16.4
Certificate III	35.8	32.3	31.8
Certificate II	18.3	17.5	18.3
Certificate I	10.4	6.9	6.1
Statement of Attainment	1.8	3.2	7.0
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region. 'Statement of attainment' is a certificate that is issued when an individual has completed one or more accredited units and exits from a training program.

As shown in Table 2-11, the proportion of VET completions in 'diploma or higher' is modestly higher in the CDC site of the Ceduna and surrounding region, compared to the state of South Australia as a whole and Australia, which presents a different picture from the distribution of VET enrolments. The proportion of completions at the middle levels (Certificate III/IV) and lower levels (Certificate II or below) are similar.

Table 2-11: Completion level of VET training (percentage of total VET completions) in 2016 (Ceduna vs. benchmarks)

Completion level of VET training			
	Ceduna %	SA %	Australia %
Diploma or higher	21.8	17.6	16.2
Certificate IV	16.9	18.1	17.7
Certificate III	33.1	34.8	30.6
Certificate II	17.7	19.5	19.3
Certificate I	7.3	5.1	5.5
Statement of Attainment	3.2	5.0	10.8
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding.

The distribution of the fields of VET enrolments appears similar between students from the CDC site of the Ceduna and surrounding region, the state of South Australia as a whole and Australia. The three most prevalent fields are 'management and commerce', 'engineering and related technologies' and 'society and culture'.

Table 2-12: Enrolment field of VET training (percentage of total VET enrolments) in 2016 (Ceduna vs. benchmarks)

Enrolment field of VET training			
	Ceduna %	SA %	Australia %
Natural and Physical Sciences	0.0	0.7	0.5
Information technology	2.3	3.1	2.8
Engineering and related technologies	13.1	12.6	15.0
Architecture and building	6.2	6.1	7.9
Agriculture, Environmental and related studies	6.5	4.0	2.8
Health	8.3	8.2	7.0
Education	5.8	5.8	5.6
Management and Commerce	25.2	24.2	23.6
Society and Culture	20.9	17.6	16.1
Creative Arts	0.2	2.6	2.7
Food, Hospitality, and Personal Services	5.2	6.8	8.4
Mixed field programmes	6.3	8.3	7.7
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding.

The distribution of the fields of VET completions appears similar between students from the CDC site of the Ceduna and surrounding region, the state of South Australia as a whole and Australia. The three most prevalent fields are 'management and commerce', 'engineering and related technologies' and 'society and culture'. This presents a consistent picture with the fields of VET enrolments in Ceduna.

Table 2-13: Completion field of VET training (percentage of total VET completions) in 2016 (Ceduna vs. benchmarks)

Completion field of VET training			
	Ceduna %	**SA %**	**Australia %**
Natural and Physical Sciences	0.0	0.9	0.7
Information technology	0.0	1.7	2.5
Engineering and related technologies	19.4	13.4	13.5
Architecture and building	3.2	4.9	5.4
Agriculture, Environmental and related studies	8.9	3.1	2.3
Health	8.9	9.9	9.2
Education	2.4	6.5	5.6
Management and Commerce	16.9	20.8	23.2
Society and Culture	33.9	24.2	19.5
Creative Arts	0.0	2.8	3.1
Food, Hospitality, and Personal Services	5.6	6.8	7.9
Mixed field programmes	0.8	4.9	7.2
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.
Cells may not add up to row/column totals due to rounding.

2.1.1.5 Child early development in Ceduna

In this section, we use data from the Australian Early Development Census (AEDC) (2012, 2015 and 2018) to compare several child development outcomes across five key domains, which are closely linked to child health, education and social outcomes.

The domains are:

1. physical health and well-being;
2. social competence;
3. emotional maturity;
4. language and cognitive skills (school-based); and
5. communication skills and general knowledge.

For each domain, there is a description of how being in the category of children at risk or in the more concerning category of children that are vulnerable may be manifested and measured. These are listed below as we present the relevant statistics.

Note that for this trial site, the statistics are based on a relatively small numbers of children, namely 67 in 2012, 88 in 2015, and 93 in 2018. As a result, we focus on the proportions of children considered to be on track as the statistics are based on the largest numbers. We do not discuss the proportion of children at risk or vulnerable because small number changes would lead to misleading changes in proportions.

The overall picture in Ceduna about children early development is that of a decrease of the proportion of children who can be considered to be on track on most of the five domains elicited in the AEDC survey between 2012 and 2018. This decrease occurred in an environment where we observe a general stability and modest increases of these proportions in the benchmark areas over the same period.

a) Physical health and well-being

This domain measures children's physical readiness for the school day, physical independence, and gross and fine motor skills. The characterisation of a child being either at risk or vulnerable on this domain is as follows:

- At risk: Experience some challenges that interfere with their ability to physically cope with the school day. These may include being dressed inappropriately, being frequently late, hungry or tired. Children may also show poor coordination skills, have poor fine and gross motor skills, or show poor to average energy levels during the school day.
- Vulnerable: Experience a number of challenges that interfere with their ability to physically cope with the school day. These may include being dressed inappropriately, frequently late, hungry or tired. Children are usually clumsy and may have fading energy levels.[11]

With regards to the domain of physical health and well-being (Table 2-14), the proportion of children considered to be on track has decreased by 15 per cent in Ceduna over the period 2012-2018. Most of this decrease occurred between 2015 and 2018. In the meantime, these proportions have increased in SA by 3 per cent and in Australia as a whole by 1 per cent.

Table 2-14: Child development outcomes on the physical health and wellbeing domain (Ceduna vs. benchmarks)

Child development outcomes: Physical health and wellbeing								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	**Ceduna**	45	**67.2**	9	**13.4**	13	**19.4**	67
	SA	13,125	**75.2**	2,537	**14.5**	1,783	**10.2**	17,445
	Australia	211,806	**77.3**	36,637	**13.4**	25,479	**9.3**	273,922
2015	**Ceduna**	60	**68.2**	16	**18.2**	12	**13.6**	88
	SA	14,081	**76.0**	2,456	**13.3**	1,993	**10.8**	18,530
	Australia	221,855	**77.3**	37,347	**13.0**	27,711	**9.7**	286,913
2018	**Ceduna**	53	**57.0**	24	**25.8**	16	**17.2**	93
	SA	14,924	**77.8**	2,188	**11.4**	2,072	**10.8**	19,184
	Australia	229,542	**78.1**	36,105	**12.3**	28,247	**9.6**	293,894

Source: AEDC (2012, 2015, 2018). Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.

[11] Source: AEDC National Report 2018.

b) Social competence

This domain measures children's overall social competence, responsibility and respect, approaches to learning, and readiness to explore new things. The characterisation of being at risk or vulnerable on this domain is as follows:

- At risk: Experience some challenges in the following areas: getting along with other children and teachers, playing with a variety of children in a cooperative manner, showing respect for others and for property, following instructions and class routines, taking responsibility for their actions, working independently, and exhibiting self-control and self-confidence.
- Vulnerable: Experience a number of challenges with poor overall social skills. For example, children who do not get along with other children on a regular basis, do not accept responsibility for their own actions and have difficulties following rules and class routines. Children may be disrespectful of adults, children, and others' property; have low self-confidence and self-control, do not adjust well to change; and are usually unable to work independently.[12]

On the domain of social competence, we observe a slight decrease in the proportion of children who are on track in the benchmark areas between 2012 and 2018. Over the same period, this proportion decreased by 17 per cent in Ceduna. This decrease intervened in the period 2012-2015 (-19 per cent), a small increase (+3 per cent) occurring between 2015 and 2018.

Table 2-15: Child development outcomes on the physical health and wellbeing domain (Ceduna vs. benchmarks)

Child development outcomes: Social competence								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	Ceduna	44	**65.7**	11	**16.4**	12	**17.9**	67
	SA	12,812	**73.6**	2,641	**15.2**	1,965	**11.3**	17,418
	Australia	209,149	**76.5**	39,018	**14.3**	25,367	**9.3**	273,534
2015	Ceduna	47	**53.4**	27	**30.7**	14	**15.9**	88
	SA	13,490	**72.8**	3,034	**16.4**	2,004	**10.8**	18,528
	Australia	215,605	**75.2**	42,892	**15.0**	28,351	**9.9**	286,848
2018	Ceduna	51	**54.8**	29	**31.2**	13	**14.0**	93
	SA	13,947	**72.7**	3,034	**15.8**	2,200	**11.5**	19,181
	Australia	222,771	**75.8**	42,434	**14.4**	28,673	**9.8**	293,878

Source: AEDC (2012, 2015, 2018).
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.

c) Emotional maturity

The third domain measures children's pro-social and helping behaviour, anxious and fearful behaviour, aggressive behaviour and hyperactivity and inattention. The characterisation of being at risk or vulnerable on this domain is as follows:

[12] Source: AEDC National Report 2018.

- At risk: Experience some challenges in the following areas: helping other children who are hurt, sick or upset, inviting other children to join in activities, being kind to other children, and waiting their turn in activities. They will sometimes experience problems with anxious behaviours, aggressive behaviour, temper tantrums, or problems with inattention or hyperactivity.
- Vulnerable: Experience a number of challenges related to emotional regulation. For example, problems managing aggressive behaviour, being prone to disobedience and/or easily distracted, inattentive, and impulsive. Children will usually not help others and are sometimes upset when left by their caregiver.[13]

With regards to emotional maturity, the proportion of children who are on track has increased significantly in Ceduna (+10 per cent between 2012 and 2018). This increase occurred in a context where one observes a decrease in the benchmark areas (-3 per cent in SA and -1 per cent in Australia).

Table 2-16: Child development outcomes on the emotional maturity domain (Ceduna vs. benchmarks)

Child development outcomes: emotional maturity								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	**Ceduna**	45	**67.2**	11	**16.4**	11	**16.4**	67
	SA	13,075	**75.3**	2,685	**15.5**	1,610	**9.3**	17,370
	Australia	213,059	**78.1**	38,778	**14.2**	20,845	**7.6**	272,682
2015	**Ceduna**	56	**63.6**	22	**25.0**	10	**11.4**	88
	SA	13,461	**72.9**	3,218	**17.4**	1,793	**9.7**	18,472
	Australia	218,341	**76.4**	43,594	**15.3**	23,866	**8.4**	285,801
2018	**Ceduna**	69	**74.2**	18	**19.4**	6	**6.5**	93
	SA	13,966	**73.1**	3,084	**16.1**	2,064	**10.8**	19,114
	Australia	225,739	**77.1**	42,390	**14.5**	24,677	**8.4**	292,806

Source: AEDC (2012, 2015, 2018).
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.

d) Language and cognitive skills

The fourth domain measures children's basic literacy, advanced literacy, basic numeracy, and interest in literacy, numeracy and memory. The characterisation of being at risk or vulnerable on this domain is as follows:

- At risk: Have mastered some but not all of the following literacy and numeracy skills: being able to identify some letters and attach sounds to some letters, show awareness of rhyming words, know writing directions, being able to write their own name, count to 20, recognise shapes and numbers, compare numbers, sort and classify, and understand simple time concepts. Children may have difficulty remembering things, and show a lack of interest in books, reading, maths and numbers, and may not have mastered more advanced literacy skills such as reading and writing simple words or sentences.

[13] Source: AEDC National Report 2018.

- Vulnerable: Experience a number of challenges in reading/writing and with numbers; unable to read and write simple words, will be uninterested in trying, and often unable to attach sounds to letters. Children will have difficulty remembering things, counting to 20, and recognising and comparing numbers; and are usually not interested in numbers.[14]

The domain of language and cognitive skills shows a large decrease of the proportion of children considered to be on track over the 2012–2018 period (-18 per cent). Most of this decrease occurred between 2012 and 2015, suggesting that the situation is improving slightly since 2015. Through this time period, the proportion of children considered to be on track has remained constant in SA and has modestly increased in Australia (+2 per cent).

Table 2-17: Child development outcomes on the language and cognitive skills (school-based) domain (Ceduna vs. benchmarks)

Child development outcomes: Language and cognitive skills								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	**Ceduna**	58	**87.9**	6	**9.1**	2	**3.0**	66
	SA	14,440	**82.8**	1,804	**10.3**	1,188	**6.8**	17,432
	Australia	226,260	**82.6**	29,072	**10.6**	18,564	**6.8**	273,896
2015	**Ceduna**	64	**72.7**	11	**12.5**	13	**14.8**	88
	SA	15,433	**83.6**	1,770	**9.6**	1,263	**6.8**	18,466
	Australia	242,518	**84.6**	25,597	**8.9**	18,533	**6.5**	286,648
2018	**Ceduna**	67	**72.0**	14	**15.1**	12	**12.9**	93
	SA	15,805	**82.7**	1,928	**10.1**	1,375	**7.2**	19,108
	Australia	247,870	**84.4**	26,291	**9.0**	19,417	**6.6**	293,578

Source: AEDC (2012, 2015, 2018).
Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.

e) Communication skills and general knowledge

This domain measures children's communication skills and general knowledge based on broad developmental competencies and skills measured in the school context. The characterisation of being at risk or vulnerable on this domain is as follows:

- At risk: Have mastered some but not all of the following communication skills: listening, understanding and speaking effectively in English, being able to articulate clearly, being able to tell a story and to take part in imaginative play. Children may not know some basic general knowledge about the world such as knowing that leaves fall in autumn, apple is fruit, and dogs bark.
- Vulnerable: Children will have poor communication skills and articulation; have limited command of English (or the language of instruction), have difficulties talking to others, understanding, and being understood; and have poor general knowledge.[15]

[14] Source: AEDC National Report 2018.
[15] Source: AEDC National Report 2018.

With regards to the domain of communication skills and general knowledge, we observe a small increase (+1 per cent) of the proportion of 'on track' children between 2012 and 2018. However, this increase is smaller than that observed for SA (+6 per cent) and Australia (+3 per cent).

Table 2-18: Child development outcomes on the communication skills and general knowledge domain (Ceduna vs. benchmarks)

Child development outcomes: Communication skills and general knowledge								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	Ceduna	41	**61.2**	18	**26.9**	8	**11.9**	67
	SA	12,849	**73.7**	3,038	**17.4**	1,552	**8.9**	17,439
	Australia	204,702	**74.7**	44,633	**16.3**	24,520	**9.0**	273,855
2015	Ceduna	56	**63.6**	18	**20.5**	14	**15.9**	88
	SA	14,265	**77.0**	2,744	**14.8**	1,518	**8.2**	18,527
	Australia	219,023	**76.3**	43,415	**15.1**	24,475	**8.5**	286,913
2018	Ceduna	58	**62.4**	20	**21.5**	15	**16.1**	93
	SA	14,919	**77.8**	2,642	**13.8**	1,620	**8.4**	19,181
	Australia	227,163	**77.3**	42,473	**14.5**	24,232	**8.2**	293,868

Source: AEDC (2012, 2015, 2018). Note: 'Ceduna' refers to Ceduna, West Coast and Western at the SA2 level added together, which is a proxy of the CDC site in the Ceduna and surrounding region.

2.1.2 East Kimberley

2.1.2.1 Labour force participation and employment in East Kimberley

The following table provides an overview of the labour force status of the population of East Kimberley and makes comparisons with the state of Western Australia as a whole and Australia.

Table 2-19: Labour force status of the working age population and youth in 2016 (East Kimberley vs. benchmarks)

Labour force status			
	East Kimberley %	WA %	Australia %
WORKING AGE (15-64)			
Employed	75.4	72.2	71.0
Unemployed	3.8	6.3	5.4
Not in the labour force	20.9	21.6	23.6
Total	**100**	**100**	**100**
Labour force participation rate	79.1	78.4	76.4
Unemployment rate	4.8	8.0	7.0
YOUTH (15-24)			
Employed	57.0	56.1	54.4
Unemployed	6.0	10.4	9.5
Not in the labour force	37.0	33.4	36.1
Total	**100**	**100**	**100**
Labour force participation rate	63.0	66.6	63.9
Unemployment rate	9.4	15.7	14.9

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'East Kimberley' refers to the CDC site in the East Kimberley region. The labour force participation rate is calculated as the labour force (both employed and unemployed) divided by the total population. The unemployment rate is calculated as the unemployed divided by the labour force.
Cells may not add up to row/column totals due to rounding.

The labour force participation rate of the working age population is 79.1 per cent in the East Kimberley, which is similar to that recorded for WA (78.4 per cent) and marginally higher than the national rate (76.4 per cent). Like in Ceduna, the unemployment rate in East Kimberley (4.8 per cent) is also lower than the state and national rates of 8.0 and 7.0 per cent, respectively.

The labour force participation rate of the youth population in East Kimberley is modestly lower than the rate recorded for WA and similar to the national rate, while the unemployment rate in East Kimberley is much lower than the WA and national rates. Yet, these figures hide important differences by Indigenous status. The following table shows the labour force status of the people living in East Kimberley according to whether they are Indigenous or not. We make a similar observation as previously for the Ceduna site. More than half of the Indigenous population of working age in East Kimberley is not in the labour force. Note that this difference has little to do with the distribution of age within the East Kimberley between the two groups since we are looking at people of working age. The proportion of indigenous people of working age who are unemployed is 7.8 per cent, compared to 2.1 per cent for non-Indigenous people. The proportion of Indigenous people of working age who are employed is less than half of that of non-Indigenous people and the unemployment rate is more than 7 times that of the non-Indigenous population. With regards to the youth, young Indigenous people's unemployment rate is above 20 per cent compared with 4.1 per cent for non-Indigenous youth.

Table 2-20: Labour force status of the working age population and youth in 2016, by Indigenous status, East Kimberley

Labour force status by Indigenous status		
	Non-Indigenous %	**Indigenous %**
WORKING AGE (15-64)		
Employed	87.5	39.7
Unemployed	2.1	7.8
Not in the labour force	10.4	52.5
Total	**100**	**100**
Labour force participation rate	89.6	47.5
Unemployment rate	2.3	16.4
YOUTH (15-24)		
Employed	78.3	30.2
Unemployed	3.3	8.5
Not in the labour force	18.4	61.3
Total	**100**	**100**
Labour force participation rate	81.6	38.7
Unemployment rate	4.1	21.9

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'East Kimberley' refers to the CDC site in the East Kimberley region. The labour force participation rate is calculated as the labour force (both employed and unemployed) divided by the total population. The unemployment rate is calculated as the unemployed divided by the labour force.
Cells may not add up to row/column totals due to rounding.

The following table provides information about the type of occupation of people who are employed in East Kimberly compared to WA and Australia. It also shows the distributions for both Indigenous and non-Indigenous workers and highlights important differences.

In relation to the high-skilled occupations, the distribution in the CDC site of East Kimberley is similar to the distribution observed in the broader state of Western Australia, with the exception of Community and personal services workers where the proportion is larger (14.3 per cent compared with 10.8 per cent) and sales workers where the proportion is smaller (6.4 per cent compared with 9 per cent). The low skilled occupation of 'labourers' is also similar to the proportion observed nationally and in WA. The proportion of Indigenous workers in the 'manager' category is less than half of that observed for non-Indigenous workers. Like in Ceduna, the proportion of community and personal service workers is much larger among Indigenous workers than among the non-Indigenous workers (30.5 per cent compared with 12 per cent). Also like in Ceduna, the proportion of technicians and trades workers is a lot smaller (9.5 per cent compared with 15.5 among non-Indigenous workers).

Table 2-21: Distribution of occupations (as a proportion of employed people) in 2016 (East Kimberley vs. benchmarks), by Indigenous status

Distribution of occupations of employed people					
	East Kimberley			WA	Australia
	Non-Indigenous	Indigenous	All		
Occupation	**%**	**%**	**%**	**%**	**%**
Managers	15.5	6.6	14.2	12.2	13.2
Professionals	19.7	17.5	19.7	20.8	22.6
Technicians and trades	15.5	9.5	14.8	16.5	13.8
Community and personal service	12.0	30.5	14.3	10.8	11
Clerical and administrative	13.5	14.1	13.3	13.2	13.8
Sales	7.0	2.3	6.4	9.0	9.5
Machinery operators and drivers	6.9	10.3	7.3	7.6	6.4
Labourers	9.9	9.2	10.1	9.9	9.6
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'East Kimberley' refers to the CDC site in the East Kimberley region. Cells may not add up to row/column totals due to rounding.

The following table shows the industry people are employed in East Kimberley, compared to the distribution of WA and the whole of Australia.

Table 2-22: Distribution of employment by industry in 2016 (East Kimberley vs. benchmarks)

Distribution of employment by industry			
	East Kimberley	WA	Australia
Industry	**%**	**%**	**%**
Agriculture, forestry, and fishing	8.5	2.6	2.6
Mining	3.9	6.6	1.7
Manufacturing	2.1	5.8	6.7
Electricity, gas, water, and waste services	1.5	1.2	1.1
Construction	8.2	10.3	8.9
Wholesale trader	1.4	2.7	3.0
Retail trader	8.0	10.0	10.3
Accommodation and food services	6.6	6.8	7.2
Transport, postal and warehousing	6.2	4.8	4.9
Information media and telecommunications	1.0	1.0	1.8
Financial and insurance services	0.7	2.5	3.8
Rental, hiring and real estate services	1.6	1.8	1.8
Professional, scientific, and technical services	3.4	6.7	7.6
Administrative and support services	4.8	3.4	3.6
Public administration and safety	10.7	6.5	7.0
Education and training	10.7	9.1	9.1
Health care and social assistance	14.8	12.3	13.2
Arts and recreation services	2.3	1.7	1.7
Other services	3.7	4.2	3.9
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'East Kimberley' refers to the CDC site in the East Kimberley region. Cells may not add up to row/column totals due to rounding.

The leading industry of employment in the CDC site of East Kimberly is 'health care and social assistance', which is also the most prevalent industry in the state of Western Australia and in Australia. The next two prevalent industries in East Kimberly are 'public administration and safety' and 'education and training'. The proportion of workers in these two industries is moderately higher than that in the state and the nation.

2.1.2.2 Household characteristics in East Kimberley

As shown in Table 2-23, the CDC site of East Kimberley is also characterised with a large proportion of the 'visitors only household', which account for 24.3 per cent of the households. Further, 'couple family with no children', 'couple family with children' and 'lone person household' each accounts for just under 20 per cent of the households, all lower than the corresponding proportion in the state of Western Australia and Australia. In other words, the household structure in East Kimberley appears similar to the Ceduna and surrounding region.

Table 2-23: Distribution of household type (East Kimberley vs. benchmarks)

Household type			
Household type	East Kimberley %	WA %	Australia %
Couple family with no children	18.7	25.6	24.8
Couple family with children	18.3	30.9	30.3
One parent family	7.9	9.6	10.4
Other family	1.4	1.2	1.2
Lone person household	17.6	21.8	22.8
Group household	3.7	3.5	4.0
Visitor only household	24.3	2.4	1.7
Other (non-classifiable household)	8.1	5.2	4.8
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. 'East Kimberley' refers to the CDC site in the East Kimberley region.
Cells may not add up to row/column totals due to rounding.

Table 2-24 shows a substantially higher proportion of dwellings rented and a lower proportion owned with a mortgage in the CDC site of East Kimberley than in the state of Western Australia as a whole and Australia. This may also be explained by the large proportion of visitors (shown in Table 2-23) and the relatively low rent (shown in Table 2-25) in East Kimberley.

Table 2-24: Household: Living in, owned or rented property (East Kimberley vs. benchmarks)

Household property: mortgaged, owned or rented			
Owned or rented	East Kimberley %	WA %	Australia %
Owned outright	28.5	29.6	32.0
Owned with a mortgage	15.9	39.7	35.0
Rented	51.1	27.8	30.8
Other tenure type	4.6	2.8	2.2
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. 'East Kimberley' refers to the CDC site in the East Kimberley region.
Cells may not add up to row/column totals due to rounding.

The median equivalised total household income and median mortgage repayment in the CDC site of East Kimberly (Table 2-25) are both higher than the corresponding figures in the state of Western Australia as a whole and Australia. In contrast, the median rent in East Kimberley is considerably lower than that in the state and the nation.

Table 2-25: Household income and housing expense (East Kimberley vs. benchmarks)

Median household income and housing expense			
	East Kimberley	**WA**	**Australia**
Equivalised total household income (weekly)	$1,000-$1,249	$800-$999	$800-$999
Mortgage repayment (monthly)	$2,167	$1,993	$1,753
Rent (weekly)	$216	$345	$335

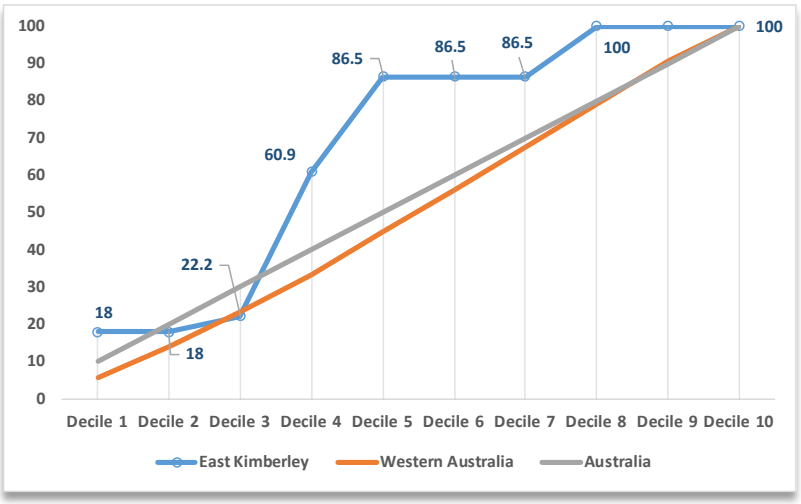
Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. East Kimberley refers to the CDC site in the East Kimberley region.

2.1.2.3 Socio-economic indicators in East Kimberley

Like for Ceduna, we present the cumulative distribution of the local East Kimberley population according to the deciles of economic disadvantage (IRSD index) computed at national level whose distribution is characterised by a uniform distribution of the population in each of the deciles (10 per cent of the population in each decile). The distributions are represented in the following figure.

The distribution in the East Kimberley site offers a slightly different picture compared with Ceduna (see Figure 2-1 and compare with Figure 2-1). Compared to the national benchmark, we observe that less than 30 per cent of the population is within the lowest 3 deciles. Yet, 18 per cent of the population is at the very lowest (a larger proportion than what is observed nationally or at state level). The population in East Kimberley suggests a bimodal distribution in terms of socioeconomic disadvantage, with almost 20 per cent of the population in the lowest decile and a further 60 per cent of the population within decile 4 and 5. The least disadvantaged part of the population, representing 13.5 per cent of the total population, is between the 7th and 8th decile.

Figure 2-2: Cumulative distribution of the population according to the IRSD deciles, Ceduna vs. benchmarks



2.1.2.4 Education and training in East Kimberley

As stated above in the subsection on Ceduna, we restrict the overview of education and training to the highest level of educational attainment and enrolments and completions of VET training.

a) Level of highest educational attainment

The following table reports the levels of highest educational attainment observed in the East Kimberley for the population aged 15 and older.

Table 2-26: Level of highest educational attainment of people aged 15 and over (per cent) in 2016, (East Kimberley vs. benchmarks)

Level of highest educational attainment			
	East Kimberley	**WA**	**Australia**
	%	**%**	**%**
Bachelor's degree and above	19.7	24.0	25.5
Diploma and Advanced Diploma	9.4	10.4	10.3
Certificate III/IV	22.4	20.0	18.3
Year 12	16.2	18.6	18.3
Year 10/11 and Certificate I/II	23.7	20.1	18.4
Year 9 and below	8.6	6.9	9.3
Total	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'East Kimberley' refers to the CDC site in the East Kimberley region. Cells may not add up to row/column totals due to rounding.

The picture we observe in East Kimberley differs from that of Ceduna. The proportion of people who have not completed year 12 is a lot smaller and the proportion of people having completed a bachelor degree or higher is larger than in Ceduna (see Table 2-8). Yet, the education level of the population aged 15 and over in East Kimberley is lower than in the state of Western Australia and Australia. In East Kimberley, 19.7 per cent of the population has completed a bachelor's degree or above, while the corresponding figures are 24.0 per cent in WA and 25.5 per cent nationally. In contrast, we observe a larger proportion of the population in East Kimberley that has not completed Year 12 (32.3 per cent), compared to 27.0 per cent in WA and 27.7 per cent in Australia. The proportion of Certificate III/IV completers is slightly larger in East Kimberley compared with both the State and national figures.

b) Vocational education and training

We use the NCVER 'total VET activity (TVA) 2016' database from the National VET Provider Collection and compare VET enrolment and completion statistics in the East Kimberley trial site with the state of Western Australia and Australia.

The following table shows the number of VET enrolments in the East Kimberley area and compares WA and Australia as a whole. It also shows the number of VET enrolments as a proportion of the population.

Table 2-27: Number of VET enrolments, completions and proportion of the total population in 2016 (East Kimberley vs. benchmarks)

VET enrolments and completions, 2016			
	East Kimberley	**WA**	**Australia**
Number of program enrolments	1,961	315,267	3,016,958
Proportion of the total population	**27.4%**	**12.7%**	**12.9%**
Number of program completions	285	96,709	918,160
Proportion of the total population	**4.0%**	**3.9%**	**3.9%**
Proportion of completions as per cent of enrolments	**14.5%**	**30.7%**	**30.4%**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

The proportion of VET enrolments in the CDC site of East Kimberley is substantially higher than that in the state of Western Australia and in Australia but the proportion of VET completions as a proportion of the total population is similar between the trial site and the benchmark. However, it is much smaller (less than half) if we look at the completion rate as a proportion of the number of enrolments.

The proportion of enrolments in 'diploma or higher' is also substantially lower in the CDC site of East Kimberly (Table 2-28), compared to the state of Western Australia as a whole and Australia. In contrast, the proportion at the lower levels (Certificate II or below) are substantially higher. The proportion at the middle levels (Certificate III/IV) is similar between East Kimberley, the state as a whole and the nation.

Table 2-28: Enrolment level of VET training (percentage of total VET enrolments) in 2016 (East Kimberley vs. benchmarks)

Enrolment level of VET training			
	East Kimberley %	**WA %**	**Australia %**
Diploma or higher	6.6	14.5	20.5
Certificate IV	9.2	15.9	16.4
Certificate III	28.9	31.6	31.8
Certificate II	37.4	26.1	18.3
Certificate I	14.1	6.5	6.1
Statement of Attainment	3.8	5.5	7.0
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.
Cells may not add up to row/column totals due to rounding.

The proportion of completions in 'diploma or higher' is lower in the CDC site of East Kimberly (Table 2-29), compared to the state of Western Australia as a whole and Australia. In contrast, the proportion at the lower levels (Certificate II or Statement of attainment) are substantially higher. The proportion at the middle levels (Certificate III/IV) is similar between East Kimberley, the state as a whole and the nation. This presents a similar picture as the distribution of VET enrolments in East Kimberley.

Table 2-29: Completion level of VET training (percentage of total VET completions) in 2016 (East Kimberley vs. benchmarks)

Completion level of VET training			
	East Kimberley %	WA %	Australia %
Diploma or higher	7.9	11.5	16.2
Certificate IV	14.0	17.6	17.7
Certificate III	28.1	27.3	30.6
Certificate II	44.6	34.9	19.3
Certificate I	2.2	5.5	5.5
Statement of Attainment	3.2	3.3	10.8
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley. Cells may not add up to row/column totals due to rounding.

Three of the four most prevalent fields of VET enrolments in the CDC site of East Kimberley coincide with the three most prevalent fields in WA as a whole and Australia. These fields are 'management and commerce', 'engineering and related technologies' and 'society and culture'. In addition, we see a substantially larger proportion of students in East Kimberley undertaking training in 'agriculture, environmental and related studies', compared with the state as a whole and the nation.

Table 2-30: Enrolment field of VET training (percentage of total VET enrolments) in 2016 (East Kimberley vs. benchmarks)

Enrolment field of VET training			
	East Kimberley	**WA**	**Australia**
	%	**%**	**%**
Natural and Physical Sciences	0.5	0.6	0.5
Information technology	0.0	2.8	2.8
Engineering and related technologies	20.4	17.3	15.0
Architecture and building	7.8	7.6	7.9
Agriculture, Environmental and related studies	12.7	3.3	2.8
Health	1.5	5.6	7.0
Education	6.9	7.0	5.6
Management and Commerce	11.8	22.3	23.6
Society and Culture	15.9	16.1	16.1
Creative Arts	6.7	4.5	2.7
Food, Hospitality, and Personal Services	4.8	6.7	8.4
Mixed field programmes	11.0	6.3	7.7
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley. Cells may not add up to row/column totals due to rounding.

Three of the four most prevalent fields of VET completions coincide with the three most prevalent fields in WA as a whole and Australia, including 'management and commerce', 'engineering and related technologies' and 'society and culture'. We also see a substantially larger proportion of students in East Kimberley completing training in 'agriculture, environmental and related studies', compared with the state as a whole and the state. This finding is consistent with the fields of VET enrolments in East Kimberley.

Table 2-31: Completion field of VET training (percentage of total vet completions) in 2016 (East Kimberley vs. benchmarks)

Completion field of VET training			
	East Kimberley %	WA %	Australia %
Natural and Physical Sciences	2.2	0.8	0.7
Information technology	0.0	3.0	2.5
Engineering and related technologies	20.2	15.7	13.5
Architecture and building	2.6	4.1	5.4
Agriculture, Environmental and related studies	17.3	2.6	2.3
Health	3.3	6.2	9.2
Education	5.9	5.3	5.6
Management and Commerce	15.8	23.4	23.2
Society and Culture	25.4	21.1	19.5
Creative Arts	3.3	6.0	3.1
Food, Hospitality, and Personal Services	3.3	6.9	7.9
Mixed field programmes	0.7	4.9	7.2
Total	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.
Cells may not add up to row/column totals due to rounding.

2.1.2.5 Child early development in East Kimberley

Like for Ceduna and surrounds, we use data from the Australian Early Development Census (AEDC) (2012, 2015 and 2018) to compare several child development outcomes across the five key domains of (i) physical health and well-being, (ii) social competence, (iii) emotional maturity, (iv) language and cognitive skills (school-based), and (v) communication skills and general knowledge.

Given the small sample sizes for the East Kimberley site, we do not discuss the proportions of children considered at risk or vulnerable, as small changes in numbers would lead to misleadingly large changes in proportions.

The overall picture in East Kimberley about children's early development is that of a modest increase of the proportion of children who can be considered on track on most of the five domains elicited in the AEDC survey between 2012 and 2018. This contrasts with the situation observed in Ceduna where those proportions decreased on most of the five domains.

We briefly review the statistics by domain elicited in the survey. The description of the risk categories associated to each domain is explained earlier in the subsection dedicated to Ceduna and surrounds (see Section 2.1.1.5).

a) Physical health and well-being

With regards to the domain of physical health and well-being, the proportion of children considered to be on track has decreased by 1 per cent in East Kimberley over the period 2012-2018. In the

meantime, these proportions have increased in WA by 3 per cent and in Australia, as a whole by 1 per cent. In 2018, 66 per cent of the children in East Kimberley were considered to be on track.

Table 2-32: Child development outcomes on the physical health and well-being domain (East Kimberley vs. benchmarks)

Child development outcomes: Physical health and wellbeing								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	East Kimberley	84	**66.7**	14	**11.1**	28	**22.2**	126
	WA	24,045	**78.0**	3,777	**12.2**	3,012	**9.8**	30,834
	Australia	211,806	**77.3**	36,637	**13.4**	25,479	**9.3**	273,922
2015	East Kimberley	81	**65.9**	10	**8.1**	32	**26.0**	123
	WA	25,620	**78.8**	3,676	**11.3**	3,206	**9.9**	32,502
	Australia	221,855	**77.3**	37,347	**13**	27,711	**9.7**	286,913
2018	East Kimberley	81	**65.9**	12	**9.8**	30	**24.4**	123
	WA	26,546	**80.7**	3,424	**10.4**	2,929	**8.9**	32,899
	Australia	229,542	**78.1**	36,105	**12.3**	28,247	**9.6**	293,894

Source: AEDC (2012, 2015, 2018).
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

b) Social competence

On the domain of social competence, we observe an increase in the proportion of children who are on track in the benchmark areas between 2012 and 2018 in East Kimberley by 6 per cent. After a large decrease between 2012 and 2015 (-14 per cent), the situation seems to have improved a lot between 2015 and 2018 (+22 per cent)[16]. These changes occurred in a context of a smaller increase at the State level (+4 per cent) and a small decrease nationally (-1 per cent).

[16] Note that the number of observations are very small. These numbers should not be over-interpreted.

Table 2-33: Child development outcomes on the social competence domain (East Kimberley vs. benchmarks)

Child development outcomes: Social competence								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	East Kimberley	84	**67.7**	18	**14.5**	22	**17.7**	124
	WA	23,689	**76.9**	4,521	**14.7**	2,589	**8.4**	30,799
	Australia	209,149	**76.5**	39,018	**14.3**	25,367	**9.3**	273,534
2015	East Kimberley	72	**58.5**	29	**23.6**	22	**17.9**	123
	WA	25,051	**77.1**	4,724	**14.5**	2,721	**8.4**	32,496
	Australia	215,605	**75.2**	42,892	**15.0**	28,351	**9.9**	286,848
2018	East Kimberley	88	**71.5**	14	**11.4**	21	**17.1**	123
	WA	26,171	**79.6**	4,292	**13.0**	2,431	**7.4**	32,894
	Australia	222,771	**75.8**	42,434	**14.4**	28,673	**9.8**	293,878

Source: AEDC (2012, 2015, 2018).
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

c) Emotional maturity

With regards to emotional maturity, we observe a similar evolution of the proportion of children who are on track as for the previous domain. It has increased significantly following a period of sharp decrease from 2012 to 2015. The overall increase (+4 per cent) over the 2012-2018 period is larger than that observed for the benchmarks (+3 per cent in WA and -1 per cent in Australia).

Table 2-34: Child development outcomes on the emotional maturity domain (East Kimberley vs. benchmarks)

Child development outcomes: Emotional maturity								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	East Kimberley	86	**69.4**	26	**21.0**	12	**9.7**	124
	WA	23,147	**75.5**	4,972	**16.2**	2,559	**8.3**	30,678
	Australia	213,059	**78.1**	38,778	**14.2**	20,845	**7.6**	272,682
2015	East Kimberley	77	**62.6**	25	**20.3**	21	**17.1**	123
	WA	24,401	**75.3**	5,241	**16.2**	2751	**8.5**	32,393
	Australia	218,341	**76.4**	43,594	**15.3**	23,866	**8.4**	285,801
2018	East Kimberley	89	**72.4**	16	**13.0**	18	**14.6**	123
	WA	25,488	**77.7**	4,792	**14.6**	2518	**7.7**	32,798
	Australia	225,739	**77.1**	42,390	**14.5**	24,677	**8.4**	292,806

Source: AEDC (2012, 2015, 2018).
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

d) Language and cognitive skills

The domain of language and cognitive skills shows a relatively large decrease of the proportion of children considered to be on track over the 2012–2018 period (-8 per cent). This evolution occurs in a context where this proportion has increased significantly in WA (+10 per cent) and more modestly in Australia (+2 per cent).

Table 2-35: Child development outcomes on the language and cognitive skills (school-based) domain (East Kimberley vs. benchmarks)

Child development outcomes: Language and cognitive skills								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	East Kimberley	77	**61.6**	22	**17.6**	26	**20.8**	125
	WA	23,346	**75.8**	4,816	**15.6**	2,636	**8.6**	30,798
	Australia	226,260	**82.6**	29,072	**10.6**	18,564	**6.8**	273,896
2015	East Kimberley	66	**54.1**	26	**21.3**	30	**24.6**	122
	WA	26,857	**82.7**	3,449	**10.6**	2,153	**6.6**	32,459
	Australia	242,518	**84.6**	25,597	**8.9**	18,533	**6.5**	286,648
2018	East Kimberley	70	**56.9**	22	**17.9**	31	**25.2**	123
	WA	27,418	**83.4**	3,284	**10.0**	2,158	**6.6**	32,860
	Australia	247,870	**84.4**	26,291	**9.0**	19,417	**6.6**	293,578

Source: AEDC (2012, 2015, 2018).
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

e) Communication skills and general knowledge

With regards to the domain of communication skills and general knowledge, we observe a decrease of the proportion of 'on track' children between 2012 and 2018 (-6.6 per cent). By contrast, the proportions have increased for SA (+6 per cent) and Australia (+3 per cent).

Table 2-36: Child development outcomes on the communication skills and general knowledge domain (East Kimberley vs. benchmarks)

Child development outcomes: Communication skills and general knowledge								
		On track		At risk		Vulnerable		Total
Year		N	%	N	%	N	%	N
2012	East Kimberley	89	**70.6**	18	**14.3**	19	**15.1**	126
	WA	23,643	**76.7**	4,397	**14.3**	2,797	**9.1**	30,837
	Australia	204,702	**74.7**	44,633	**16.3**	24,520	**9.0**	273,855
2015	East Kimberley	74	**60.2**	25	**20.3**	24	**19.5**	123
	WA	25,811	**79.4**	4,082	**12.6**	2,612	**8.0**	32,505
	Australia	219,023	**76.3**	43,415	**15.1**	24,475	**8.5**	286,913
2018	East Kimberley	81	**65.9**	18	**14.6**	24	**19.5**	123
	WA	26,749	**81.3**	3,837	**11.7**	2,311	**7.0**	32,897
	Australia	227,163	**77.3**	42,473	**14.5**	24,232	**8.2**	293,868

Source: AEDC (2012, 2015, 2018).
Note: 'East Kimberley' refers to Kununurra at the SA2 level, which is a proxy of the CDC site in East Kimberley.

2.1.3 Goldfields

2.1.3.1 Labour force participation and employment in the Goldfields

The following table provides information about the labour force status of the Goldfields population. Given the relative heterogeneity of the population within this broad area, we distinguish between Coolgardie-Kalgoorlie-Boulder ('CK' in the tables) and the northern part including Laverton, Leonora and Menzies ('LLM' in the tables). We also report the statistics for the whole of the Goldfields and provide comparisons with WA and Australia.

Table 2-37: Labour force status of the working age population and youth in 2016 (Goldfields vs. benchmarks)

Labour force status					
	CK %	LLM %	Goldfields %	WA %	Australia %
WORKING AGE (15-64)					
Employed	75.4	76.6	75.5	72.2	71.0
Unemployed	5.0	3.0	4.9	6.3	5.4
Not in the labour force	19.6	20.4	19.7	21.6	23.6
Total	**100**	**100**	**100**	**100**	**100**
Labour force participation rate	80.4	79.6	80.3	78.4	76.4
Unemployment rate	6.2	3.8	6.0	8.0	7.0
YOUTH (15-24)					
Employed	60.1	58.3	60.0	56.1	54.4
Unemployed	8.3	2.7	8.0	10.4	9.5
Not in the labour force	31.7	39.0	32.1	33.4	36.1
Total	**100**	**100**	**100**	**100**	**100**
Labour force participation rate	68.3	61.0	67.9	66.6	63.9
Unemployment rate	12.1	4.4	11.7	15.7	14.9

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfield's refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies. The labour force participation rate is calculated as the labour force (both employed and unemployed) divided by the total population. The unemployment rate is calculated as the unemployed divided by the labour force.
Cells may not add up to row/column totals due to rounding.

The labour force participation rate is 80.3 per cent in the Goldfields, which is modestly higher than the WA (78.4 per cent) and the national rate (76.4 per cent). The unemployment rate in Goldfields (6.0 per cent) is also modestly lower than the state and national rates of 8.0 and 7.0 per cent, respectively.

The youth labour force status (aged 15-24) in Goldfields has a similar pattern as the working age population, when compared with the state of the national figures. The labour force participation rate of the youth population in Goldfields is modestly higher than the state and the national rates, while the unemployment rate in Goldfields is modestly lower than the state and national rates.

Within the CDC site of Goldfields, the labour force participation rate of the working age population in Coolgardie and Kalgoorlie is similar to Laverton, Leonora and Menzies, while the rate of the youth population in Coolgardie and Kalgoorlie is substantially higher than that in Laverton, Leonora and Menzies. In contrast, the unemployment rate in Coolgardie and Kalgoorlie is higher than Laverton Leonora and Menzies, for both working age and youth population.

The following table highlights the large differences in terms of labour force participation between the Indigenous and the non-Indigenous population of the trial site. Of all three trial sites, the unemployment rate observed for Indigenous people is by far the highest in the Goldfields. In the broad Goldfields area, it is near 25 per cent (almost 36 per cent for youth). It goes up to 36.7 per cent in the

northern areas of Laverton, Leonora and Menzies and goes as high as 56 per cent for the Indigenous youth in this area.

Table 2-38: Labour force status of the working age population and youth by Indigenous status in 2016, Goldfields

Labour force status by Indigenous status						
	CK		LLM		Goldfields	
	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous
	%	%	%	%	%	%
WORKING AGE (15-64)						
Employed	78.3	36.7	91.6	22.0	79.2	33.7
Unemployed	4.6	10.6	1.1	12.7	4.3	11.0
Not in the labour force	17.1	52.8	7.3	65.3	16.4	55.3
Total	**100**	**100**	**100**	**100**	**100**	**100**
Labour force participation rate	82.9	47.2	92.7	34.7	83.6	44.7
Unemployment rate	5.5	22.4	1.2	36.7	5.2	24.7
YOUTH (15-24)						
Employed	64.7	23.5	89.5	8.8	65.5	21.2
Unemployed	7.9	12.0	0.0	11.3	7.7	11.9
Not in the labour force	27.4	64.5	10.5	80.0	26.8	66.9
Total	**100**	**100**	**100**	**100**	**100**	**100**
Labour force participation rate	72.6	35.5	89.5	20.0	73.2	33.1
Unemployment rate	10.9	33.8	0.0	56.3	10.5	35.9

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfield's refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies. The labour force participation rate is calculated as the labour force (both employed and unemployed) divided by the total population. The unemployment rate is calculated as the unemployed divided by the labour force.
Cells may not add up to row/column totals due to rounding.

The following table looks at the occupational distribution of those who are employed in the Goldfields region (ANZSCO 1 digit).

Table 2-39: Distribution of occupation as a proportion of employed people in 2016 (Goldfields vs. benchmarks)

Distribution of occupations of employed people					
	CK %	LLM %	Goldfields %	WA %	Australia %
Managers	8.7	8.1	8.6	12.2	13.2
Professionals	14.1	12.0	13.9	20.8	22.6
Technicians and trades	21.7	23.7	21.9	16.5	13.8
Community and personal service	9.3	7.0	9.1	10.8	11.0
Clerical and administrative	10.7	6.8	10.4	13.2	13.8
Sales	7.8	1.6	7.3	9.0	9.5
Machinery operators and drivers	18.7	29.6	19.6	7.6	6.4
Labourers	9.0	11.3	9.2	9.9	9.6
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfields' refers to the CDC site in the Goldfields region. CK refers to Coolgardie and Kalgoorlie. LLM refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The proportion of 'technicians and trades workers' as well as 'machinery operators and drivers' is considerably higher in Goldfields compared to the state of Western Australia as a whole and Australia. In contrast, the proportion of managers and professionals is lower in Goldfields than the state as a whole and the nation.

Within the Goldfields, the region of Laverton, Leonora and Menzies composes a higher proportion of workers in the technical and equipment related occupations than the region of Coolgardie and Kalgoorlie. In particular, about 30 per cent of workers in Laverton, Leonora and Menzies are 'machinery operators and drivers'.

A comparison between Indigenous and non-Indigenous workers leads to the following observations (see Table 2-40 below). First, like in the other sites, we observe a larger proportion of Indigenous workers whose occupation is in community and personal services. However, the proportions are much smaller than what we observed in the previous sites. The proportion is about 15 per cent to 16 per cent (depending on which area of the Goldfields one looks at) while it is 30 per cent in East Kimberley and 36 per cent in Ceduna. The gaps between Indigenous workers and non-Indigenous workers for other types of occupations are not as large as those observed for the other two trial sites. There still is a significant gap in the technician/trade occupations (15.6 per cent of Indigenous workers against 22.2 per cent for non-Indigenous). Given the much higher unemployment rate of Indigenous people in the Goldfields area (and the comparatively large proportion of Indigenous people not in the labour force), it seems that for those who overcome the hurdle of getting employed, the distribution of occupation approaches that of the non-Indigenous workers (with the notable differences highlighted above).

Table 2-40: Percentage of occupation types (as a proportion of employed people) in Goldfields in 2016 by Indigenous status

Labour force status by Indigenous status						
	CK		LLM		Goldfields	
	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous
	%	%	%	%	%	%
Managers	8.8	6.5	9.0	3.4	8.8	5.9
Professionals	14.1	12.6	12.0	17.6	13.9	13.5
Technicians and trades workers	21.9	16.9	25.3	10.1	22.2	15.6
Community and personal service workers	9.0	15.6	5.4	16.0	8.7	15.6
Clerical and administrative workers	10.8	11.1	5.8	23.5	10.4	13.4
Sales workers	7.9	5.2	1.7	0.0	7.4	4.2
Machinery operators and drivers	18.7	19.6	30.1	29.4	19.6	21.4
Labourers	8.9	12.6	10.7	0.0	9.0	10.3
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfields' refers to the CDC site in the Goldfields region. CK refers to Coolgardie and Kalgoorlie. LLM refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The following table displays the industry distribution of employed people in the Goldfields area at the time of the 2016 Census. Mining is the dominant industry, which accounts for over 30 per cent of the workforce, much higher than the state of Western Australia as a whole and Australia. Within the Goldfields, Laverton, Leonora and Menzies have a relatively higher proportion of workers in the mining industry (over 50 per cent) than Coolgardie and Kalgoorlie' (just under 30 per cent).

Table 2-41: Distribution of employment by industry in 2016 (Goldfields vs. benchmarks)

Distribution of employment by industry					
	CK	LLM	Goldfields	WA	Australia
	%	%	%	%	%
Agriculture, forestry, and fishing	0.4	1.2	8.5	2.6	2.6
Mining	28.4	55.5	3.9	6.6	1.7
Manufacturing	4.4	2.9	2.1	5.8	6.7
Electricity, gas, water, and waste services	0.9	0.8	1.5	1.2	1.1
Construction	6.6	4.7	8.2	10.3	8.9
Wholesale trader	2.2	0.8	1.4	2.7	3.0
Retail trader	8.5	2.5	8.0	10.0	10.3
Accommodation and food services	6.1	5.3	6.6	6.8	7.2
Transport, postal and warehousing	5.8	2.3	6.2	4.8	4.9
Information media and telecommunications	0.6	0.0	1.0	1.0	1.8
Financial and insurance services	1.0	0.0	0.7	2.5	3.8
Rental, hiring and real estate services	1.8	0.3	1.6	1.8	1.8
Professional, scientific, and technical services	2.8	0.9	3.4	6.7	7.6
Administrative and support services	2.9	4.1	4.8	3.4	3.6
Public administration and safety	5.7	7.0	10.7	6.5	7.0
Education and training	7.5	5.1	10.7	9.1	9.1
Health care and social assistance	8.3	3.3	14.8	12.3	13.2
Arts and recreation services	1.1	0.0	2.3	1.7	1.7
Other services	5.0	3.4	3.7	4.2	3.9
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfields' refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

2.1.3.2 Household characteristics in the Goldfields

The household structure in the CDC site of Goldfields is relatively analogous with that in the state as a whole and the nation, as shown in in Table 2-41. Compared with the state of Western Australia as a whole and Australia, the CDC site of Goldfields has a modestly smaller proportion of the 'couple family with no children' and the 'one parent family', while the proportion of the 'couple family with children' and the 'lone person household' is similar across Goldfields, WA and Australia.

Within the CDC site of Goldfields, the region of Laverton, Leonora and Menzies has a significantly higher proportion of the 'visitors only household' (18.0 per cent) than the region of Coolgardie and Kalgoorlie (3.7 per cent).

Table 2-42: Distribution of household type (Goldfields vs. benchmarks)

Household type	CK %	LLM %	Goldfields %	WA %	Australia %
Couple family with no children	21.6	16.7	21.3	25.6	24.8
Couple family with children	31.2	16.6	30.3	30.9	30.3
One parent family	8.5	9.4	8.6	9.6	10.4
Other family	0.9	0.9	0.9	1.2	1.2
Lone person household	21.9	24.8	22.1	21.8	22.8
Group household	3.5	1.6	3.3	3.5	4.0
Visitor only household	3.7	18.0	4.5	2.4	1.7
Other (non-classifiable household)	8.7	12.1	8.9	5.2	4.8
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. 'Goldfields' refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

Table 2-43 indicates that a high proportion of rented dwellings occurs in the CDC site of Goldfields, which account for about 40 per cent of the properties in the region and is higher than that in WA as a whole and Australia. In contrast, the proportion of properties owned outright is much lower in Goldfields than in the state and the nation. The relatively low rent in Goldfields may contribute to this observation.

Within the CDC site of Goldfields, the region of Laverton, Leonora and Menzies has a relatively higher proportion of rented dwellings than the region of Coolgardie and Kalgoorlie. Also, we notice that about a quarter of the properties in Laverton, Leonora and Menzies belong to the 'other tenure type'.

Table 2-43: Household: living in, owned or rented property (Goldfields vs. benchmarks)

Household type: Mortgaged, owned or rented	CK %	LLM %	Goldfields %	WA %	Australia %
Owned outright	18.2	20.9	18.4	29.6	32.0
Owned with a mortgage	41.5	8.0	39.6	39.7	35.0
Rented	38.5	47.9	39.0	27.8	30.8
Other tenure type	1.8	23.3	3.0	2.8	2.2
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. 'Goldfields' refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The median equivalised total household income in the CDC site of Goldfields (Table 2-44) is higher than the corresponding figures in the state of Western Australia as a whole and Australia. In contrast,

the median mortgage repayment and the median rent in Goldfields are both lower than that in the state and the nation.

Within the CDC site of Goldfields, the median equivalised total household income in the region of Coolgardie and Kalgoorlie is higher than the region of Laverton, Leonora and Menzies. The median mortgage repayment and median rent are not available for Laverton, Leonora and Menzies due to the small number of observations.

Table 2-44: Household income and housing expense (Goldfields vs. benchmarks)

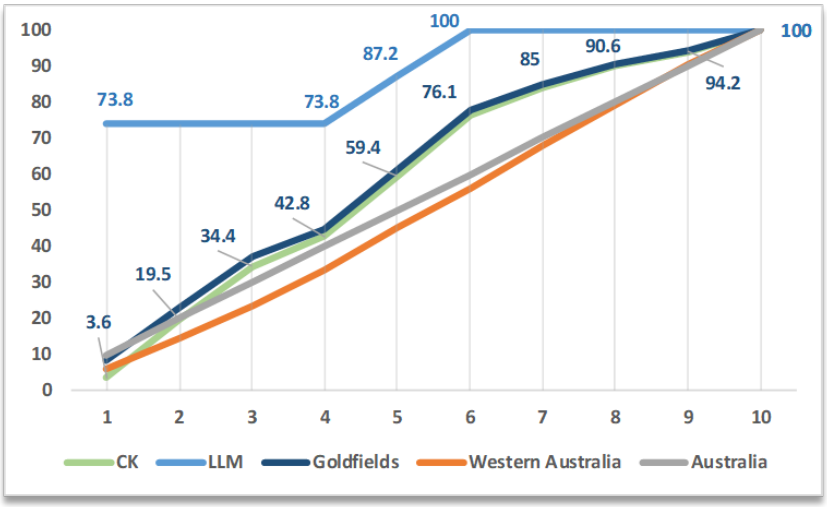
Median household income and housing expense					
	CK	**LLM**	**Goldfields**	**WA**	**Australia**
Equivalised total household income	$1,000-$1,249	$800-$999	$1,000-$1,249	$800-$999	$800-$999
Mortgage repayment (monthly)	$1,733	N/A	$1,733	$1,993	$1,753
Rent (weekly)	$280	N/A	$260	$345	$335

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of enumeration. Goldfields refers to the CDC site in the Goldfields region. CK refers to Coolgardie and Kalgoorlie. LLM refers to Laverton, Leonora and Menzies.

2.1.3.3 Socio-economic indicators in the Goldfields

As with the other two trial sites, we present the cumulative distribution of the population within the Goldfields area according to the deciles of relative socioeconomic disadvantage computed at the national level (whose uniform distribution is illustrated by the grey line). We present the distributions for the whole of the Goldfields and also for two areas within the trial site, namely Coolgardie and Kalgoorlie (the Shire of Coolgardie including Kambalda and Kalgoorlie-Boulder), and the Shires of Laverton, Leonora and Menzies (LLM).

Figure 2-3: Cumulative distribution of the population according to the IRSD deciles, Goldfields vs. benchmarks



The figure highlights the large differences between, on the one hand the more populous Shires of Coolgardie and Kalgoorlie (CK) and, on the other hand, Laverton, Leonora and Menzies (LLM). The population in the latter area includes almost three quarter of its population in the lowest decile of socioeconomic disadvantage. Only 26.2 per cent of the population is above that first decile and is contained within the 4th and the 6th decile. By comparison, the distribution of socioeconomic disadvantage within Coolgardie and Kalgoorlie is a lot more evenly distributed. Almost 43 per cent of the population is in the lowest 40 per cent of the national distribution. It still varies significantly compared with the state of Western Australia which is characterised by a smaller proportion of its population within the lowest deciles compared with the national figures.

2.1.3.4 Education and training in the Goldfields

a) Highest level of educational attainment

The following table reports the levels of highest educational attainment observed in the Goldfields area for the population aged 15 and older. Like for all other statistics presented in this snapshot, we make the distinction between Coolgardie/Kalgoorlie and Menzies, Leonora and Laverton.

Table 2-45: Level of highest educational attainment of people aged 15 and over (per cent) in 2016 (Goldfields vs. benchmarks)

Level of highest educational attainment					
	CK	**LLM**	**Goldfields**	**WA**	**Australia**
	%	**%**	**%**	**%**	**%**
Bachelor's degree and above	13.8	12.0	13.7	24.0	25.5
Diploma and Advanced Diploma	7.5	6.5	7.4	10.4	10.3
Certificate III/IV	25.9	27.3	26.0	20.0	18.3
Year 12	17.4	16.9	17.3	18.6	18.3
Year 10/11 and Certificate I/II	27.6	26.3	27.5	20.1	18.4
Year 9 and below	7.8	11.0	8.1	6.9	9.3
Total	**100**	**100**	**100**	**100**	**100**

Source: Census of Population and Housing, 2016, TableBuilder.
Notes: Data are based on place of usual residence. 'Goldfields' refers to the CDC site in the Goldfields region. 'CK' refers to Coolgardie and Kalgoorlie. 'LLM' refers to Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The education level of the population aged 15 and over in the Goldfields is substantially lower than in the state of Western Australia and Australia. Only 13.7 per cent of the population in the Goldfields had completed a bachelor's degree or above, much lower than the 24.0 per cent in the State and 25.5 per cent in the nation. A much larger proportion of the population in the Goldfields has not completed Year 12 (35.6 per cent), compared to 27.0 per cent in the State and 27.7 per cent nationally. However, the proportion of the population that has completed a Certificate III or IV is significantly larger in the Goldfields compared with the State and Australia.

Within the CDC site of Goldfields, the distribution of educational attainment is similar between the Coolgardie and Kalgoorlie and Laverton, Leonora and Menzies except for a relatively larger proportion of people having left school at year 9 and below (11 per cent).

b) Vocational education and training

We use the NCVER 'total VET activity (TVA) 2016' database from the National VET Provider Collection and compare VET enrolment and completion statistics in the Goldfields region with the state of Western Australia and Australia.

The following table displays information about the number of enrolments at VET and subsequent completions.

Table 2-46: Number of VET enrolments and completions in 2016 (Goldfields vs. benchmarks)

VET enrolments and completions, 2016					
	CK	**LLM**	**Goldfields**	**WA**	**Australia**
Number of program enrolments	5,445	264	5,709	315,267	3,016,958
Proportion of the total population	**15.8%**	**5.7%**	**14.6%**	**12.7%**	**12.9%**
Number of program completions	1,568	67	1,635	96,709	918,160
Proportion of the total population	**4.6%**	**1.4%**	**4.2%**	**3.9%**	**3.9%**
Proportion of completions as per cent of enrolments	**28.8%**	**25.4%**	**28.6%**	**30.7%**	**30.4%**

Source: NCVER Total VET activity (TVA), TableBuilder.
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

The proportion of VET enrolments and completions in the Goldfields is similar as compared with the state of Western Australia and Australia. Within the Goldfields, the region of Coolgardie and Kalgoorlie has a relatively higher proportions of VET enrolments and completions than the northern areas of Laverton, Leonora and Menzies. The numbers of enrolments as a proportion of the local population is much lower in this latter area with 5.7 per cent (it is 15.8 per cent in the CK area).

The proportion of enrolments at the high level (diploma or higher) and middle levels (Certificate III/IV) is lower in the CDC site of Goldfields, compared to the state of Western Australia as a whole and Australia. In contrast, the proportion at the lower levels (Certificate II or below) are higher in Goldfields.

Within the CDC site of Goldfields, the level of VET enrolments is relatively higher in the region of Laverton, Leonora and Menzies than the region of the Coolgardie and Kalgoorlie.

Table 2-47: Enrolment level of VET training (percentage of total VET enrolments) in 2016 (Goldfields vs. benchmarks)

Enrolment level of VET training					
	CK %	LLM %	Goldfields %	WA %	Australia %
Diploma or higher	11.9	21.1	12.4	14.5	20.5
Certificate IV	15.3	14.6	15.3	15.9	16.4
Certificate III	29.4	21.5	29.0	31.6	31.8
Certificate II	27.6	23.0	27.4	26.1	18.3
Certificate I	6.4	9.2	6.6	6.5	6.1
Statement of Attainment	9.3	10.7	9.4	5.5	7.0
Total	**100**	**100**	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The proportion of VET completions at the high level (diploma or higher) and middle levels (Certificate III/IV) is slightly lower in the CDC site of Goldfields (Table 2-47), compared to the state of Western Australia as a whole and Australia. In contrast, the proportion at the lower levels (Certificate II or below) are relatively higher in Goldfields. This picture is consistent with the distribution of VET enrolments in Goldfields.

Within the CDC site of Goldfields, the level of VET completions is relatively lower in the region of Laverton, Leonora and Menzies than the region of the Coolgardie and Kalgoorlie, showing a different picture as the distribution of VET enrolments.

Table 2-48: Completion level of VET training (percentage of total VET completions) in 2016 (Goldfields vs. benchmarks)

Completion level of VET training					
	CK %	LLM %	Goldfields %	WA %	Australia %
Diploma or higher	10.3	6.8	10.1	11.5	16.2
Certificate IV	12.5	5.1	12.2	17.6	17.7
Certificate III	28.4	25.4	28.3	27.3	30.6
Certificate II	43.3	59.3	43.8	34.9	19.3
Certificate I	2.0	1.7	2.0	5.5	5.5
Statement of Attainment	3.6	1.7	3.5	3.3	10.8
Total	**100**	**100**	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), TableBuilder.
Notes: Goldfields refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. CK refers to Boulder,

Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. LLM refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The leading field of VET enrolments in Goldfields is 'engineering and related technologies', with over a quarter of participants in this field. The second and third most prevalent field in Goldfields are 'management and commerce' and 'society and culture', which are also among the three most prevalent field of enrolments in the state of Western Australia as a whole and Australia. In addition, we see a larger proportion of students in Goldfields undertaking training in 'education', compared with the state and the nation.

Within the CDC site of Goldfields, 'engineering and related technologies' is the most prevalent field of enrolments in the region of Coolgardie and Kalgoorlie and 'management and commerce' in the region of Laverton, Leonora and Menzies, each composing about a quarter of total enrolments.

Table 2-49: Enrolment field of VET training (percentage of total VET enrolments) in 2016 (Goldfields vs. benchmarks)

Enrolment field of VET training					
	CK	**LLM**	**Goldfields**	**WA**	**Australia**
	%	**%**	**%**	**%**	**%**
Natural and Physical Sciences	1.0	0.0	1.0	0.6	0.5
Information technology	0.7	1.8	0.7	2.8	2.8
Engineering and related technologies	26.8	12.7	26.1	17.3	15.0
Architecture and building	5.2	4.4	5.1	7.6	7.9
Agriculture, Environmental and related studies	2.2	4.4	2.3	3.3	2.8
Health	5.7	14.5	6.2	5.6	7.0
Education	12.0	12.0	12.0	7.0	5.6
Management and Commerce	19.6	26.5	19.9	22.3	23.6
Society and Culture	14.2	6.2	13.8	16.1	16.1
Creative Arts	0.9	0.7	0.8	4.5	2.7
Food, Hospitality, and Personal Services	6.5	8.4	6.6	6.7	8.4
Mixed field programmes	5.3	8.4	5.4	6.3	7.7
Total	**100**	**100**	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Notes: Goldfields refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. CK refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. LLM refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

The leading field of VET completions in Goldfields is 'engineering and related technologies', with over a third of completions in this field. The second and third most prevalent field in Goldfields are 'management and commerce' and 'society and culture'. These three fields are also the three most prevalent field of completions in the state of Western Australia as a whole and Australia. This appears a similar picture as the fields of VET enrolments in Goldfields.

Within the CDC site of Goldfields, 'engineering and related technologies' is the leading field of completions in the region of Coolgardie and Kalgoorlie, accounting for one third of all the completions. In contrast, 'health' is the most prevalent field of completions in the region of Laverton, Leonora and Menzies, composing a quarter of total completions.

Table 2-50: Completion field of VET training (percentage of total VET completions) in 2016 (Goldfields vs. benchmarks)

Completion field of VET training					
	CK %	LLM %	Goldfields %	WA %	Australia %
Natural and Physical Sciences	0.3	0.0	0.3	0.8	0.7
Information technology	0.6	0.0	0.6	3.0	2.5
Engineering and related technologies	33.8	19.6	33.3	15.7	13.5
Architecture and building	2.3	5.4	2.4	4.1	5.4
Agriculture, Environmental and related studies	1.1	3.6	1.2	2.6	2.3
Health	8.1	25.0	8.7	6.2	9.2
Education	5.5	5.4	5.5	5.3	5.6
Management and Commerce	20.3	19.6	20.3	23.4	23.2
Society and Culture	13.0	7.1	12.8	21.1	19.5
Creative Arts	0.2	3.6	0.3	6.0	3.1
Food, Hospitality, and Personal Services	6.5	7.1	6.5	6.9	7.9
Mixed field programmes	8.3	3.6	8.2	4.9	7.2
Total	**100**	**100**	**100**	**100**	**100**

Source: NCVER Total VET activity (TVA), Table Builder.
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.
Cells may not add up to row/column totals due to rounding.

2.1.3.5 Child early development in the Goldfields

As for the other two sites, we use data from the Australian Early Development Census (AEDC) (2012, 2015 and 2018) to compare several child development outcomes across the five key domains of (i) physical health and well-being, (ii) social competence, (iii) emotional maturity, (iv) language and cognitive skills (school-based), and (v) communication skills and general knowledge.

The overall picture in the Goldfields is one that applies to all domains of child early development. We observe that the proportion of children who are on track in the Goldfields in 2018 is larger than that observed in both WA and Australia as a whole (except for language and cognitive skills where the proportion is 75 per cent, against 83 per cent for the two benchmarks). Depending on the domain considered, the proportion of children who are on track in 2018 is between 75 per cent and 83 per cent. There has been large improvements since 2012, from a situation where this proportion was lower than that observed in the benchmark areas. Yet, at the same time, there are large discrepancies

within the Goldfields trial site with the northern area (Laverton, Leonora, Menzies) struggling to show any improvements over time and with rates of children who are on track being very low (less than half of the local children population). Note that this observation is made from small number of observations in the LLM area. Moreover, the data is not available in 2018 for this area.

a) Physical health and well-being

The proportion of children considered to be on track, in terms of physical health and well-being for the Goldfields site, as a whole, has improved by 19 per cent over the period 2012-2018 while these proportions have only increased by 3 per cent in WA and by 1 per cent in Australia as a whole. In 2018, 80.6 per cent of children were considered to be on track[17]. Although full information is not available for both groups by splitting the Goldfields into "urban" (CK) versus "rural/remote"(LLM) we can see that, children in the CK area being on track has significantly improved by 13 per cent over the period 2012–2018. Figures for the LLM area suggests the majority of children in this group were at risk or vulnerable in 2012 (64 per cent) while figures from 2015 suggest there has been an improvement with 15 per cent increase in those being on track, at a higher rate than for those children in the CK (9.8 per cent).

[17] It should be noted here that this figure only applies to those children living in the CK area and applies to each of the domains reported on.

Table 2-51: Child development outcomes on the physical health and well-being domain (Goldfields vs. benchmarks)

Child development outcomes: Physical health and wellbeing								
		On track		At risk		Vulnerable		
Year		N	%	N	%	N	%	Total
2012	CK	420	**71.2**	91	**15.4**	79	**13.4**	590
	LLM	23	**35.9**	12	**18.8**	29	**45.3**	64
	Goldfields	443	**67.7**	103	**15.7**	108	**16.5**	654
	WA	24,045	**78.0**	3,777	**12.2**	3,012	**9.8**	30,834
	Australia	211,806	**77.3**	36,637	**13.4**	25,479	**9.3**	273,922
2015	CK	469	**78.2**	75	**12.5**	56	**9.3**	600
	LLM	19	**41.3**	7	**15.2**	20	**43.5**	46
	Goldfields	488	**75.5**	82	**12.7**	76	**11.8**	646
	WA	25,620	**78.8**	3,676	**11.3**	3,206	**9.9**	32,502
	Australia	221,855	**77.3**	37,347	**13.0**	27,711	**9.7**	286,913
2018	CK	410	**80.6**	46	**9.0**	53	**10.4**	509
	LLM	-	**-**	-	**-**	-	**-**	-
	Goldfields	410	**80.6**	46	**9.0**	53	**10.4**	509
	WA	26,546	**80.7**	3,424	**10.4**	2,929	**8.9**	32,899
	Australia	229,542	**78.1**	36,105	**12.3**	28,247	**9.6**	293,894

Source: AEDC (2012, 2015, 2018).
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

b) Social competence

The proportion of children considered to be on track, in terms of the social competence domain for the Goldfields site, as a whole, has improved by 18.6 per cent over the period 2012–2018 while these proportions have increased by just over 3.5 per cent in WA and decreased by just under 1 per cent in Australia as a whole. In 2018, 81.1 per cent of children are considered to be on track in the Goldfields. Again, by splitting the Goldfields into "urban" (CK) versus "rural/remote"(LLM) we can see that, children in the CK area being on track has improved by 14.7 per cent over the period 2012–2018. Figures for the LLM group suggest a much higher proportion of children in this group were at risk or vulnerable in 2012 than those in the CK area, and, unlike those children in the CK group, the figures from 2015 indicate that the situation got slightly worse with less children being on track in 2015 than in 2012.

Table 2-52: Child development outcomes on the social competence domain (Goldfields vs. benchmarks)

Child development outcomes: Social competence								
		On track		At risk		Vulnerable		
Year		N	%	N	%	N	%	Total
2012	CK	417	**70.7**	108	**18.3**	65	**11.0**	590
	LLM	31	**47.7**	20	**30.8**	14	**21.5**	65
	Goldfields	448	**68.4**	128	**19.5**	79	**12.1**	655
	WA	23,689	**76.9**	4,521	**14.7**	2,589	**8.4**	30,799
	Australia	209,149	**76.5**	39,018	**14.3**	25,367	**9.3**	273,534
2015	CK	453	**75.5**	98	**16.3**	49	**8.2**	600
	LLM	21	**45.7**	7	**15.2**	18	**39.1**	46
	Goldfields	474	**73.4**	105	**16.3**	67	**10.4**	646
	WA	25,051	**77.1**	4,724	**14.5**	2,721	**8.4**	32,496
	Australia	215,605	**75.2**	42,892	**15.0**	28,351	**9.9**	286,848
2018	CK	413	**81.1**	67	**13.2**	29	**5.7**	509
	LLM	-	**-**	-	**-**	-	**-**	-
	Goldfields	413	**81.1**	67	**13.2**	29	**5.7**	509
	WA	26,171	**79.6**	4,292	**13.0**	2,431	**7.4**	32,894
	Australia	222,771	**75.8**	42,434	**14.4**	28,673	**9.8**	293,878

Source: AEDC (2012, 2015, 2018).
Notes: Goldfields refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. CK refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. LLM refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

c) Emotional maturity

The proportion of children considered to be on track, in terms of the emotional maturity domain for the Goldfields site, as a whole, has improved by 7.6 per cent over the period 2012–2018 while these proportions have increased by just over 2 per cent in WA and decreased by 1 per cent in Australia as a whole. In 2018, 78.2 per cent of children are considered to be on track in the Goldfields. Again, by splitting the Goldfields we can see that, children in the CK area being on track has improved by 3 per cent over the period 2012–2018. Figures for the LLM group suggests a much higher proportion of children in this group were at risk or vulnerable in 2012 and the figures from 2015 indicate that the situation had improved but at a slightly lower rate of improvement than the improvement in the CK area for the same period.

Table 2-53: Child development outcomes on the emotional maturity domain (Goldfields vs. benchmarks)

Child development outcomes: Emotional maturity								
		On track		At risk		Vulnerable		
Year		N	%	N	%	N	%	Total
2012	CK	446	**75.9**	100	**17.0**	42	**7.1**	588
	LLM	28	**43.8**	16	**25.0**	20	**31.3**	64
	Goldfields	474	**72.7**	116	**17.8**	62	**9.5**	652
	WA	23,147	**75.5**	4,972	**16.2**	2,559	**8.3**	30,678
	Australia	213,059	**78.1**	38,778	**14.2**	20,845	**7.6**	272,682
2015	CK	481	**80.3**	77	**12.9**	41	**6.8**	599
	LLM	21	**45.7**	5	**10.9**	20	**43.5**	46
	Goldfields	502	**77.8**	82	**12.7**	61	**9.5**	645
	WA	24,401	**75.3**	5,241	**16.2**	2,751	**8.5**	32,393
	Australia	218,341	**76.4**	43,594	**15.3**	23,866	**8.4**	285,801
2018	CK	395	**78.2**	74	**14.7**	36	**7.1**	505
	LLM	-	**-**	-	**-**	-	**-**	-
	Goldfields	395	**78.2**	74	**14.7**	36	**7.1**	505
	WA	25,488	**77.7**	4,792	**14.6**	2,518	**7.7**	32,798
	Australia	225,739	**77.1**	42,390	**14.5**	24,677	**8.4**	292,806

Source: AEDC (2012, 2015, 2018).
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

d) Language and cognitive skills

The proportion of children considered to be on track, in terms of the language and cognitive skills for the Goldfields site, as a whole, has improved by 16.7 per cent over the period 2012-2018 while these proportions have increased by 10 per cent in WA and by 2.2 per cent in Australia as a whole. In 2018, 74.6 per cent of children are considered to be on track in the Goldfields. The proportion of children in the CK area being on track has improved by 10.7 cent over the period 2012–2018. Figures for the LLM group suggests a much higher proportion of children in this group were at risk or vulnerable in 2012 and the figures from 2015 indicate that the situation had improved but at a slightly lower rate of improvement than the improvement in the CK area for the same period.

Table 2-54: Child development outcomes on the language and cognitive skills (school-based) domain (Goldfields vs. benchmarks)

Child development outcomes: Language and cognitive skills								
		On track		At risk		Vulnerable		
Year		N	%	N	%	N	%	Total
2012	CK	397	**67.4**	129	**21.9**	63	**10.7**	589
	LLM	21	**32.3**	17	**26.2**	27	**41.5**	65
	Goldfields	418	**63.9**	146	**22.3**	90	**13.8**	654
	WA	23,346	**75.8**	4,816	**15.6**	2,636	**8.6**	30,798
	Australia	226,260	**82.6**	29,072	**10.6**	18,564	**6.8**	273,896
2015	CK	455	**75.8**	98	**16.3**	47	**7.8**	600
	LLM	18	**39.1**	9	**19.6**	19	**41.3**	46
	Goldfields	473	**73.2**	107	**16.6**	66	**10.2**	646
	WA	26,857	**82.7**	3,449	**10.6**	2,153	**6.6**	32,459
	Australia	242,518	**84.6**	25,597	**8.9**	18,533	**6.5**	286,648
2018	CK	379	**74.6**	76	**15.0**	53	**10.4**	508
	LLM	-	**-**	-	**-**	-	**-**	-
	Goldfields	379	**74.6**	76	**15.0**	53	**10.4**	508
	WA	27,418	**83.4**	3,284	**10.0**	2,158	**6.6**	32,860
	Australia	247,870	**84.4**	26,291	**9.0**	19,417	**6.6**	293,578

Source: AEDC (2012, 2015, 2018).
Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

e) Communication skills and general knowledge

The proportion of children considered to be on track in communication skills and general knowledge for the Goldfields site, as a whole, has improved by 21.4 per cent over the period 2012–2018 while these proportions have increased by 6 per cent in WA and by 3.5 per cent in Australia as a whole. In 2018, 82.7 per cent of children are considered to be on track in the Goldfields. The proportion of children in the CK area being on track has improved by 16.6 per cent over the period 2012–2018. Figures for the LLM group suggests a much higher proportion of children in this group were at risk or vulnerable in 2012 and the figures from 2015 indicate that the situation had improved by 8.3 per cent. This improvement is more modest than that observed for CK where the proportion of children at risk or vulnerable has decreased by 27 per cent for the same period.

Table 2-55: Child development outcomes on the communication skills and general knowledge domain (Goldfields vs. benchmarks)

Child development outcomes: Communication skills and general knowledge								
		On track		At risk		Vulnerable		
Year		N	%	N	%	N	%	Total
2012	CK	419	**70.9**	114	**19.3**	58	**9.8**	591
	LLM	28	**43.1**	13	**20.0**	24	**36.9**	65
	Goldfields	447	**68.1**	127	**19.4**	82	**12.5**	656
	WA	23,643	**76.7**	4,397	**14.3**	2,797	**9.1**	30,837
	Australia	204,702	**74.7**	44,633	**16.3**	24,520	**9**	273,855
2015	CK	463	**77.2**	92	**15.3**	45	**7.5**	600
	LLM	22	**47.8**	12	**26.1**	12	**26.1**	46
	Goldfields	485	**75.1**	104	**16.1**	57	**8.8**	646
	WA	25,811	**79.4**	4,082	**12.6**	2612	**8.0**	32,505
	Australia	219,023	**76.3**	43,415	**15.1**	24,475	**8.5**	286,913
2018	CK	421	**82.7**	49	**9.6**	39	**7.7**	509
	LLM	-	**-**	-	**-**	-	**-**	-
	Goldfields	421	**82.7**	49	**9.6**	39	**7.7**	509
	WA	26,749	**81.3**	3,837	**11.7**	2,311	**7.0**	32,897
	Australia	227,163	**77.3**	42,473	**14.5**	24,232	**8.2**	293,868

Source: AEDC (2012, 2015, 2018).

Notes: 'Goldfields' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport, Kambalda-Coolgardie-Norseman and Leinster-Leonora at the SA2 level added together, which is a proxy of the CDC site in the Goldfields region. 'CK' refers to Boulder, Kalgoorlie, Kalgoorlie-North, Kalgoorlie Airport and Kambalda-Coolgardie-Norseman at the SA2 level added together, which is a proxy of the CDC site in Coolgardie and Kalgoorlie. 'LLM' refers to Leinster-Leonora at the SA2 level, which is a proxy of the CDC site in Laverton, Leonora and Menzies.

2.2 Description of the CDC participants in the three trial sites using the DOMINO data

The DOMINO data made available for the evaluation is composed of a number of files, including files recording the demographic characteristics of the CDC participants, the type of government benefits received and relevant information on Card and transaction activity collected by Indue, the Card provider. The backbone of the data, which is called the *CDC listing file* was merged into all other datasets in order to link them and perform the required analyses. The evaluation analysis was performed using the update of the DOMINO data that was extracted at the time when the fieldwork for the individual survey of CDC participants was about to start, early September 2019. As a result, the description of the CDC participants in the DOMINO data closely corresponds to the survey participants.

The original *CDC listing file* included 17,343 individual records for all trial sites (including Bundaberg and Hervey Bay). For the purpose of this report, we did not use the Bundaberg and Hervey Bay (BHB) records, as they are not within the scope of the evaluation. The report of the baseline data collection in the BHB trial site includes a description of the CDC participants in that area. Focusing on the three original CDC trial sites (East Kimberley, Ceduna and surrounds and Goldfields), the *CDC listings file* includes a total of 11,123 records (based on the current location of CDC participants). We applied a number of filters in order to focus on individuals who (i) were actually rolled out in the CDC, and, (ii) were active participants in September 2019. While there is a formula that can be used in order to filter those who are 'active' CDC participants, the linking of the data with the accounts and transactions information from the Card provider showed that this formula was not sufficient for evaluation purposes. Practically, we first used the formula to remove people present in the datasets but who were never triggered on the CDC along with those who were not eligible (and those whose original trigger site was BHB). Applying this filter left a total of 5,791 CDC participants in the three original sites. We then used the information on accounts and transactions and removed people who never activated an account or a Card and whose record shows no transactions at all (either credit or debit). We also removed the CDC participants who were deceased by September 2019. After this final filter was applied we were left with 5,716 CDC participants, including 1,355 individuals currently recorded as living 'out of area'. All descriptive statistics of CDC participants in the report uses these 5,716 people[18].

Furthermore, using the 2018 Goldfields Baseline data collection (July-August), we identified the CDC participants who remained active CDC participant (as of September 2019) and compared them with those who were triggered on the CDC more recently. We did this in order to check whether the CDC participant population had changed since 2018. Out of the 5,716 currently active participants, 3,912 were already a CDC participant from mid-2018 while 1,804 new CDC participants were rolled out in the three original sites. We observed some noticeable differences. Notably, the proportion of people

[18] For practical and unavoidable reasons that are explained in Chapter 3 (section 3.2), the evaluation's "census" date of 27 September 2019 for commencement of the fieldwork, was not adhered to exactly. Between 27 September 2019 and the date when fieldwork was completed, a small number of new CDC participants (that is participants who had been triggered after 27 September 2019) presented themselves to the CDC survey completion research team in the trial areas and (as legitimate CDC participants) completed the survey. Given the strict confidentiality rules governing the data collection, they could not have been identified at the time of completion and for ethical reasons their contributions were included in the analysis. Their presence has been reflected in the calculation of the population weights in the survey and a statistical examination of their responses suggested that they are not systematically different than those participants who had already been triggered by 27 September 2019 and were already in the sample. The adjustment brings the total of active CDC participants to 6,039, which corresponds to the active CDC participants population at the end of fieldwork. Given that we found these additional CDC participants to not significantly differ from those identified at the Census date, there was no need to update the present section describing the active CDC population.

on the Disability Support Pension (DSP) is much smaller among the 'new' CDC participants (8 per cent, compared to 22 per cent in the other group). The proportion of people on Newstart Allowance is larger (driven mostly by an increase in the Goldfields area) and the proportion of people on Parenting Payment (single) is significantly smaller.

2.2.1 Summary of characteristics of CDC participants and use of the Card

Before we introduce the contents of the DOMINO data and its information, Sections 2.2.1.1 and 2.2.1.2 provide two summaries of the main attributes of the DOMINO to facilitate the reader who wishes to have a fast overview. The first one focuses on *demographic and geographic characteristics* and the second one on *CDC transaction patterns*. Following these two summaries, further detail is provided in the next subsection.

2.2.1.1 DOMINO/Indue data sets: Summary of core demographic and geographic characteristics

- **Number of currently active CDC participants:** the Goldfields has the largest number with 2,663 people (47 per cent), followed by East Kimberley with 1,032 active participants (18 per cent) and Ceduna and surrounds with 666 active participants (12 per cent). The remaining 1,355 people (24 per cent) live outside of the trial sites.
- '**Out of area' CDC participants**: The majority of the 'out of area' CDC participants live in 'suburbs' that are near the trial sites and differ significantly from those who currently live in a trial site, being much younger, more likely to be single and receive Newstart Allowance and less likely to receive Disability Support Pension or Parenting Payments.
- **Demographic homogeneity**: Overall, Ceduna and East Kimberley are homogenous, while the Goldfields site is internally diverse. Demographic differences are reflected in different Card transaction patterns.
- **Indigenous populations**: Indigenous CDC participants account for below 50 per cent overall in the Goldfields compared to above 75 per cent in both Ceduna and surrounds and East Kimberley. Within the Goldfields, itself, there are considerable differences. Over 80 per cent of CDC participants in places such as Laverton and Leonora and Menzies (LLM) are Indigenous.
- **Remoteness classification**: Ceduna and surrounds and East Kimberley are classified by the ABS as very remote compared to 82 per cent of all Goldfields being classified an outer regional area with only 18 per cent being very remote.
- **Gender**: There are more women than men on the CDC in the three trial sites (overall 58 per cent women).
- **Age distribution**: There is little variation between trial sites.
- **Marital status:** Varies across trial sites (see below).
- **Government benefits:** Around 50 per cent of CDC participants in the Goldfields and Ceduna are on Newstart Allowance and East Kimberley has fewer participants on Newstart Allowance (43 per cent) and more on DSP (23 per cent). The three most frequently received benefits are Newstart Allowance, Parenting payment single and DSP and they represent over 85 per cent of the CDC population in all sites.

- **Home Ownership**: Around 6 per cent of CDC participants are homeowners (or are currently purchasing a home) and the large majority of those who do own their home are located in the Goldfields (77 per cent).
- **Housing**: The most common type of accommodation for CDC participants who do not own their home is public housing (52 per cent in East Kimberley, 38 per cent in Ceduna, 31 per cent in the Goldfields and 21 per cent of those living out of a trial site). Renting is the second most common type of accommodation (7 per cent in East Kimberley, 18 per cent in Ceduna and 30 per cent in the Goldfields). There is a high proportion of CDC participants who are boarding (either free or not).

2.2.1.2 DOMINO/Indue data sets: Summary of transaction patterns

- **Number of daily purchases per person:** This is, on average, greater in the Goldfields compared to the other two sites. CDC participants on Parenting Payment (Single and Partnered) make more transactions daily (about 1.3 on average), which is about twice as many as those on Youth Allowance (0.6 on average).
- **Number of daily purchases per person and amounts spent:** Contrary to the hypothesis that more transactions daily mean that people are spending smaller amounts on each transaction and that those who have fewer transactions make bigger purchases, this is not the case. The more often people make a transaction the more they spend for each transaction on average.
- **Overall expenditure:** CDC participants in the Goldfields spend more (on average $43 daily) and more often than in the other two trial sites. Participants in East Kimberley spend $3 less daily (on average $37) and those in Ceduna spend $5 less daily (on average $35) than CDC participants in the Goldfields.
- **Expenditure by Indigenous CDC participants:** they spend, on average significantly less daily ($39 and even less if they are female) than non-Indigenous participants ($42). The gap between Indigenous and non-Indigenous participants remains at all points of the distribution of daily expenses.
- **Expenditure and Government benefit type**: CDC participants on Youth allowance spend the least (on average $22 daily), while those on Parenting Payment (single) spend, on average $63 daily. The largest group of CDC participants, namely those in receipt of Newstart Allowance, spend, on average $31 daily[19].
- **Main reasons for Card declined:** 'Insufficient funds' (daily limit exceeded, failed direct debit) accounts for 57 per cent of all the declined transactions. About 14 per cent of failed transactions are due to other reasons, for example, attempts at buying (or withdrawing) from blacklisted merchants or 'excluded terminal' and 28 per cent are card-related (people forgetting their PIN or trying to use an expired card).

[19] Note that the basic payment rates vary for each of the benefit types. Thus patterns of transactions are naturally expected to reflect these different amounts.

2.2.2 Description of CDC participants using the DOMINO data

This section provides a detailed description of the CDC participants. We highlight differences across trial sites with respect to both participants' demographics and their usage of the Card through an analysis of their transactions.

2.2.2.1 CDC participants' demographic characteristics by trial site

The following table (Table 2-56) shows the distribution of the 5,716 active CDC participants by trial site. The DOMINO data includes two location indicators: (i) the 'original site' or location where CDC participants lived when they were triggered on the Card; (ii) the location where they currently live (at the time of the data extraction). The distinction is useful in the sense that some individuals who do not habitually live in a trial site were triggered on the Card because they resided there for some time. Now they are back in their usual place of residence as captured by the second location indicator (denoted 'current site'). For instance, several people habitually living in Warburton were triggered while residing in Laverton, most likely a result of spending a few weeks there during school holidays. These 'out of area' CDC participants in this situation may be facing challenges using the Card because the place they live in is not within the trial site. There may be less places where the Card can be used and there may be less terminals accepting the Card. The individual survey, along with the joint analysis of transactions and declined transactions enable us to determine whether it is the case or not.

Altogether, we observe that 24 per cent of the CDC participants triggered in one of the trial sites now live outside those trial sites. A cursory analysis of the locations where this 'out of area' group lives shows that the majority lives in a 'suburb' which is neighbouring or quite close to a trial site[20]. A small proportion of CDC participants has moved further away to larger, more urban, areas such as Perth, Melbourne, or Sydney. The composition of the active participants according to their current location is as follows: 12 per cent are in Ceduna and surrounds, 18 per cent live in East Kimberley, 47 per cent live in the Goldfields.

[20] The term 'neighbouring' must be understood in the context of these remote areas. A neighbouring 'suburb' will probably share its physical boundaries with a trial site but may be quite distant in terms of kilometres. There are often strong familial connections between these different areas and different areas have different attractions (such as the availability of shops or getting out of a dry community). Examples of this are: Halls Creek can be considered as a neighbouring community of Kununurra though it is 380 kilometres away; and Laverton attracts people from Warburton (out of area) which is 550 kilometres away.

Table 2-56: Distribution of active CDC participants in the trial sites

Active CDC participants				
	Original site		Current site	
Site	N	%	N	%
Ceduna and surrounds	929	**16**	666	**12**
East Kimberley	1,488	**26**	1,032	**18**
Goldfields	3,299	**58**	2,663	**47**
Out of area	---	**---**	1,355	**24**
Total	**5,716**	**100**	**5,716**	**100**

The following table (Table 2-57) shows transitions between the location where the individuals were triggered and their current location. The column 'Out of Area' shows the proportions of original CDC participants from each site who are now located out of area. The analysis we performed in 2018 during the baseline data collection in the Goldfields showed that the group living out of area is significantly different than the CDC participants living in the trial site. Notably we showed that the 'out of area' participants tend to be younger, are more likely to be on the Newstart Allowance, less likely to be on Parenting Payments and more likely to be single. These observations still held in 2019 for the three trial sites.

Table 2-57: Transition between original trigger site and current location

Transitions						
		Current site				
Original site		Ceduna and surrounds	East Kimberley	Goldfields	Out of area	Total
Ceduna and surrounds	**N**	666	0	4	259	929
	%	**72**	**0**	**0**	**28**	**100**
East Kimberley	**N**	0	1,032	0	456	1,488
	%	**0**	**69**	**0**	**31**	**100**
Goldfields	**N**	0	0	2,659	640	3,299
	%	**0**	**0**	**81**	**19**	**100**
Total	**N**	666	1,032	2,663	1,355	5,716
	%	**12**	**18**	**47**	**24**	**100**

In the descriptive statistics that follow, we opt to provide descriptions of the CDC participants according to their current location rather than according to the location where they were when they got triggered. On the point of view of the analysis, it makes more sense to use this location information for several reasons. First, the remit of the evaluation is to assess the CDC policy in the trial sites. Therefore we are mostly interested in the active CDC participants who do live in the area. Second, the statistics provide a more contemporary picture of what is happening in the trial sites.

The following table (Table 2-58) displays the gender composition of CDC participants in the three trial sites. On average, the proportion of females is larger in each of the trial sites. The proportion of female participants is slightly lower in Ceduna and surrounds.

Table 2-58: Gender distribution by trial site

Gender						
	Male		Female		Total	
Current Site	N	%	N	%	N	%
Ceduna and surrounds	313	**47**	353	**53**	666	**100**
East Kimberley	408	**40**	624	**60**	1,032	**100**
Goldfields	1,114	**42**	1,549	**58**	2,663	**100**
Out of area	590	**44**	765	**56**	1,355	**100**
Total	**2,425**	**42**	**3,291**	**58**	**5,716**	**100**

Concerning the proportion of Indigenous CDC participants across each trial site, the Goldfields has a much smaller proportion of Indigenous CDC participants (46 per cent), compared with 82 per cent in East Kimberley and 74 per cent in Ceduna and surrounds. Note that there are a number of people who prefer not to indicate their Indigenous status in the administrative data. This information is displayed in the third set of columns of the table (Table 2-59).

Table 2-59: Distribution of Indigenous status by trial site

Indigenous status								
	Non-Indigenous		Indigenous		Prefer not to say		Total	
Current Site	N	%	N	%	N	%	N	%
Ceduna and surrounds	156	**23**	496	**74**	14	**2**	666	**100**
East Kimberley	162	**16**	849	**82**	21	**2**	1,032	**100**
Goldfields	1,322	**50**	1,221	**46**	120	**5**	2,663	**100**
Out of area	432	**32**	895	**66**	28	**2**	1,355	**100**
Total	**2,072**	**36**	**3,461**	**61**	**183**	**3**	**5,716**	**100**

Marital status varies across trial sites, as pictured in the following figure (Figure 2-4). There is a slightly larger proportion of CDC participants who are single in the Goldfields and a significantly smaller proportion of De facto/Married people (17 per cent). Comparatively, 30 per cent of the CDC participants in Ceduna are in a De facto/Married marital relationship. There are a few small differences according to Indigenous status but they are limited (Figure 2-5).

Figure 2-4: Marital status distribution by trial site

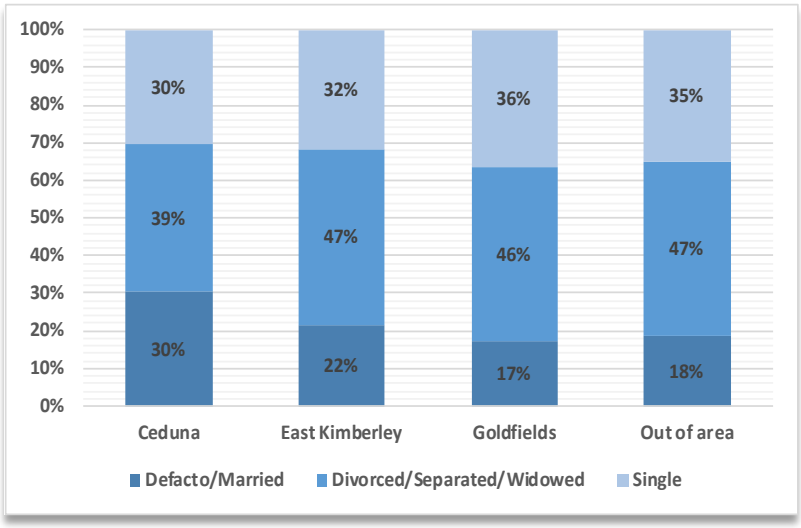
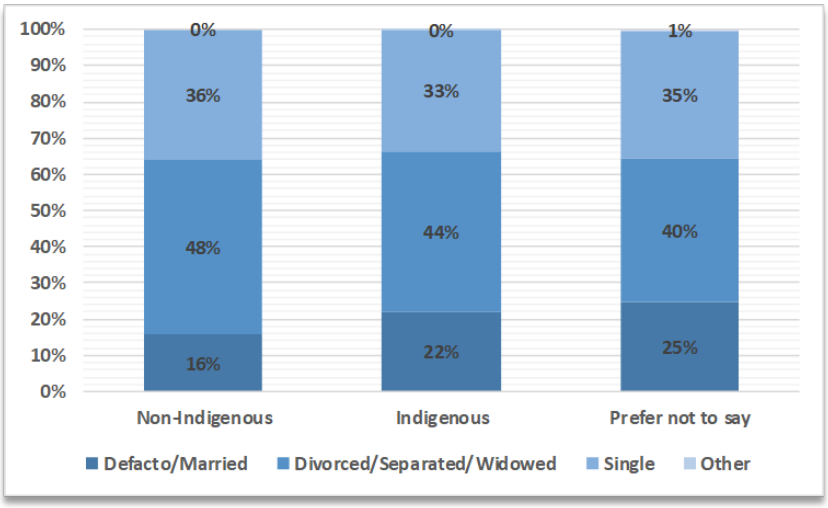
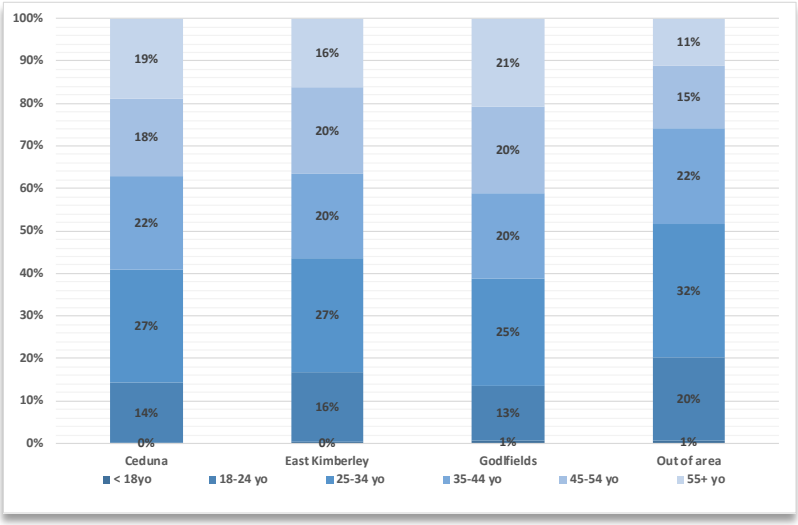


Figure 2-5: Marital status by Indigenous status



Concerning the age profiles of the active CDC participants, we observe that the distributions are similar across the three sites. However, those recorded as currently living out of area have a slightly different distribution. Overall, CDC participants in this group are significantly younger with 52 per cent being aged 34 or younger and only 11 per cent aged 55 or older (against 16 per cent in East Kimberley, 19 per cent in Ceduna and 21 per cent in the Goldfields).

Figure 2-6: Age profile of the CDC participants in each trial site



2.2.2.2 Geographical characteristics of CDC participants' location

Beside information at various levels of geographical disaggregation, the DOMINO data includes some broader indicators of remoteness. The following table (Table 2-60) highlights another difference between the Goldfields area and the other two areas. East Kimberley and Ceduna CDC participants are all in areas classified by the ABS as Very Remote. By contrast, the statistics highlight the heterogeneous nature of the Goldfields area which includes urban/semi urban areas like Kalgoorlie/Boulder, more remote areas but which are close to an urban centre (Coolgardie, Kambalda), and very remote places like Leonora or Laverton. We extended the analysis within the Goldfields area in order to highlight the sources of heterogeneity within this area (see Section 2.2.2.5).

Table 2-60: CDC participants' geographical location within the trial sites

Geographical location within trial sites								
	Ceduna and surrounds		East Kimberley		Goldfields		Out of area	
Location	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Inner regional	0	**0**	0	**0**	0	**0**	117	**9**
Major cities	0	**0**	0	**0**	0	**0**	410	**30**
Outer regional	0	**0**	0	**0**	2,172	**82**	258	**19**
Remote	0	**0**	0	**0**	0	**0**	208	**15**
Very remote	666	**100**	1,032	**100**	491	**18**	361	**27**
Missing information	0	**0**	0	**0**	0	**0**	1	**0**
Total	**666**	**100**	**1,032**	**100**	**2,663**	**100**	**1,355**	**100**

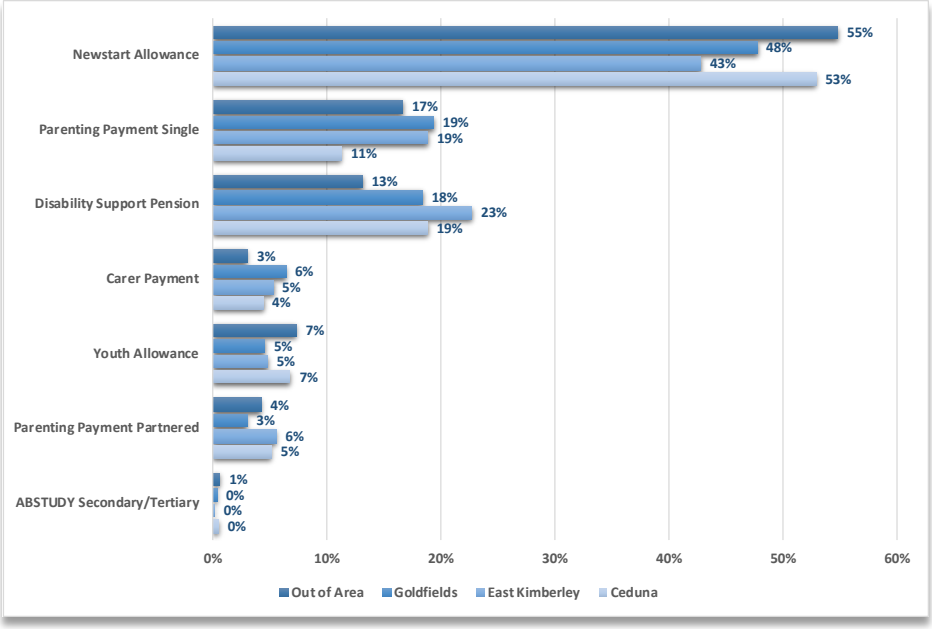
2.2.2.3 Type of government benefits received by the CDC participants

The DOMINO data shows variations with regards to the type of benefits received by CDC participants by trial sites. The following table highlights these variations across trial sites. About half of all active

CDC participants receive Newstart Allowance. It is the type of government benefit that includes the most CDC participants in each site with about 49 per cent. Parenting Payment (single) and Disability Support Pension are the next types of benefits in terms of proportion (about 18 per cent of the CDC participants receive each of these benefits). There are variations across trial sites as the following figure suggests (Figure 2-7).

As stated previously, the 'out of area' CDC participants are more likely to be on Newstart Allowance and much less likely to be on the Disability Support Pension (DSP). We note that the proportion of CDC participants on DSP is larger in the East Kimberley trial site.

Figure 2-7: Distribution of CDC participants' benefit types by trial site



2.2.2.4 Home ownership and type of accommodation.

We observe that 93 per cent of the active CDC participants do not own their dwelling, nor are they currently purchasing a home. About 6 per cent of the active CDC participants do own their home. We looked at whether the distribution of benefit types for the home-owner group significantly differs from the broader population of CDC participants who do not own their home. We did not find any significant differences between these two groups. However, we observe large differences across each site. In the Goldfields, about 10.6 per cent of the active CDC participants currently own a home or are currently purchasing it. In contrast, the proportion is 2.3 per cent for those currently living in East Kimberley, 5.6 per cent in Ceduna and surrounds and 1.6 per cent for those recorded as living out of area.

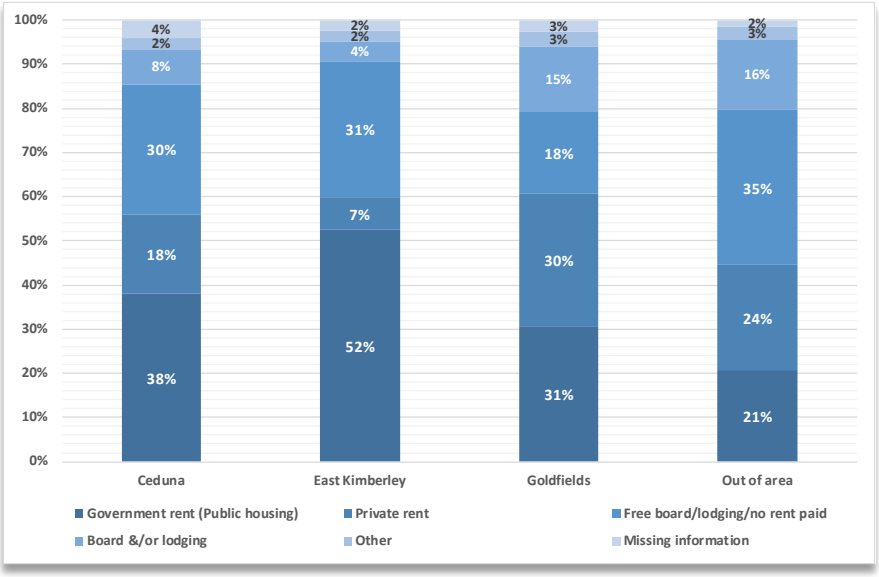
The following table (Table 2-61) further illustrates the observation that the CDC participants who own their home (or currently purchasing it) are over represented in the Goldfields area as opposed to the other areas. It shows the geographical distribution of the homeowners across each site (based on the CDC participants' current location).

Table 2-61: Geographic distribution of the home owners across trial sites

Home owners/purchasing home		
Current Site	**N**	**%**
Ceduna and surrounds	37	**10**
East Kimberley	24	**7**
Goldfields	282	**77**
Out of area	22	**6**
Total	**365**	**100**

For those who do not own a home CDC participants living arrangements differ noticeably across the trial sites. For instance, 31 per cent of those living in the Goldfields are in public housing, whereas the proportion is much higher in East Kimberley with 52 per cent. In Ceduna, the proportion is 38 per cent. The proportion of CDC participants renting their dwelling privately also varies markedly across each trial sites. The proportion is only 7 per cent in East Kimberley, while it is more than double in Ceduna (18 per cent), and much higher in the Goldfields (30 per cent). Combined with the previous observations about home ownership, we see clearly see that the Goldfields is very different from the other two trial sites. Indeed, CDC participants in the Goldfields are more reliant on the private market for their accommodation and both the proportions of home owners and people renting privately is much higher when compared to the other two trial sites. The proportion of people relying on free boarding is also smaller than in the other two areas at 18 per cent compared to 30 per cent in Ceduna and 31 per cent in East Kimberley. Those recorded as living 'out of area' are also different from all three other areas. The proportion of boarding and free boarding is significantly higher for this group, these two categories representing more than 50 per cent of the active CDC participants. The proportion in public housing is also the smallest in this group.

Figure 2-8: Type of accommodation for CDC who do not own their home, by trial site



The following table (Table 2-62) shows the distribution of participants' type of accommodation according to the government benefits they currently receive (we display these distributions for the 6 most prevalent types of payment). These statistics highlight some differences among CDC participants

depending on the type of payments they receive. The majority of those on Newstart Allowance either live in free accommodation (30 per cent) or are in public housing (28 per cent). Not surprisingly, a large proportion of those on Youth Allowance live in free lodgings (48 per cent), probably due to their age. If we combine board and free board, we observe that 68 per cent of the CDC participants on Youth Allowance have this type of living arrangement. We observe larger proportions of public housing and private rent among those who are on Parenting payment (both types) or DSP/Carer Payment. For these payments, the proportion of CDC participants who are either in public housing or rent privately range from 61 per cent (DSP) to 75 per cent (Parenting payment single).

Table 2-62: Distribution of accommodation types by type of government benefits

Accommodation type						
	Board &/or lodging	Free board /no rent paid	Public housing	Private rent	Other	Missing info.
Benefit type	%	%	%	%	%	%
Newstart Allowance	15	30	28	21	3	3
Parenting Payment (single)	8	14	39	36	2	0
Disability Support Pension	9	25	43	18	3	2
Youth Allowance	20	48	10	10	2	9
Carer Payment	8	17	44	27	3	2
Parenting Payment (partnered)	6	21	48	21	2	0

2.2.2.5 Heterogeneous population of CDC participants in the Goldfields area

As already noted, Ceduna and surrounds and East Kimberley are relatively homogenous with regards to their demographic characteristics, but this is not the case for the Goldfields area. As such, it is worth looking at the Goldfields in more detail, distinguishing between the Kalgoorlie broad area, the Shire of Coolgardie (including Coolgardie and Kambalda), Menzies & Leonora areas, and, Laverton & its' surrounds. We group together the areas surrounding Menzies and those surrounding Leonora so we reduce the risk of having small numbers of observations for some characteristics, which would cause issues of identifications of individual CDC participants.

The following table (Table 2-63) shows the distribution of the active CDC participants in the Goldfields area. Of these, 75 per cent of them are located in the more urban area of Kalgoorlie/Boulder. Leonora and Laverton areas include about 13 per cent of the Goldfields CDC participants.

Table 2-63: Geographical distribution of CDC participants within the Goldfields site

Active CDC participants		
Active CDC participants	**N**	**%**
Kalgoorlie-Boulder and surrounds	1,987	**75**
Coolgardie-Kambalda	337	**13**
Menzies, Leonora, and surrounds	211	**8**
Laverton and surrounds	128	**5**
Total	**2,663**	**100**

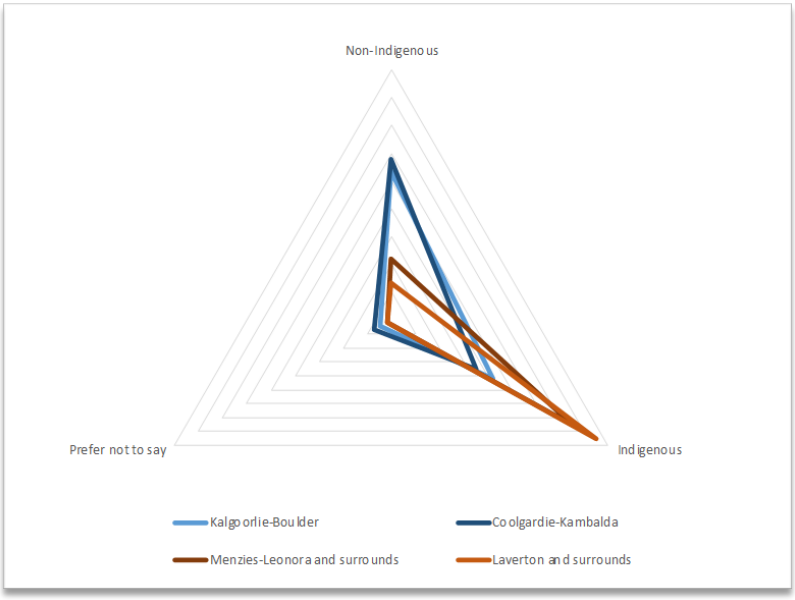
The following table (Table 2-64) shows the distribution of active CDC participants according to Indigenous status within the Goldfields area. The proportion of active CDC participants who identify as Indigenous is much smaller in Kalgoorlie-Boulder and Coolgardie-Kambalda compared with the other two areas.

Table 2-64: Indigenous status within the Goldfields site

Indigenous status within the Goldfields site								
	Kalgoorlie-Boulder & surrounds		**Coolgardie-Kambalda**		**Menzies, Leonora & surrounds**		**Laverton & surrounds**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Non-Indigenous	1,063	**53**	195	**58**	47	**22**	17	**13**
Indigenous	834	**42**	118	**35**	160	**76**	109	**85**
Prefer not to say	90	**5**	24	**7**	4	**2**	2	**2**
Total	**1,987**	**100**	**337**	**100**	**211**	**100**	**128**	**100**

The following radar graph (Figure 2-9) illustrates further that the Goldfields area can be divided into two distinct subareas with regards to the proportion of participants who identify as Indigenous.

Figure 2-9: Indigenous status within the Goldfields site



We observe some slight differences within the Goldfields area about the types of benefits received by the participants. The following table (Table 2-65) shows the distribution of the CDC participants by types of benefits received (restricted to the six types of benefits with the largest frequencies) by sub areas. We observe that the Goldfields area can be divided in two subareas, Kalgoorlie/Boulder and Coolgardie/Kambalda on the one hand and Menzies/Leonora and Laverton on the other hand. In the latter subarea, we observe a higher proportion of CDC participants receiving the Newstart Allowance compared to the Kalgoorlie/Coolgardie areas.

Table 2-65: Distribution of CDC participants' benefit types within the Goldfields site

	Benefit types within Goldfields site				
	Kalgoorlie-Boulder & surrounds	Coolgardie-Kambalda	Menzies- Leonora & surrounds	Laverton & surrounds	Total
Benefit type	**%**	**%**	**%**	**%**	**%**
Newstart Allowance	45	49	61	56	48
Parenting Payment Single	20	17	15	15	19
Disability Support Pension	19	18	14	13	18
Carer Payment	5	4	3	4	5
Youth Allowance	6	9	4	2	6
Parenting Payment Partnered	3	2	3	9	3

2.2.2.6 Cohort effects in the CDC participants' characteristics

We used the information made available to us in July 2018 at the time of the baseline data collection in order to see whether those who currently remain CDC participants significantly differ from the new CDC participants who were rolled out after July 2018. In July 2018 we analysed the active CDC population in all three original sites. Using unique identification numbers, we can trace those who remained CDC participants by September 2019. We observe that 3,912 CDC participants who were active in July 2018 remain active CDC participants in September 2019 and 1,097 are no longer active. The data also shows that since July 2018, 1,804 individuals who were not active in July 2018 are now active CDC participants (as of September 2019).

The following table (Table 2-66) shows the composition of the two groups of CDC participants according to the location they currently live in. The first group ('active in both') is composed by those who are both currently active and were active in July 2018. The second group are the 'new' active CDC participants (so-called 'Sept 2019 only') and is composed by the 1,804 active participants who were not present in the July 2018 data. We observe that the second group includes a higher proportion of CDC participants living in the Goldfields and 'out of area' compared to the first group.

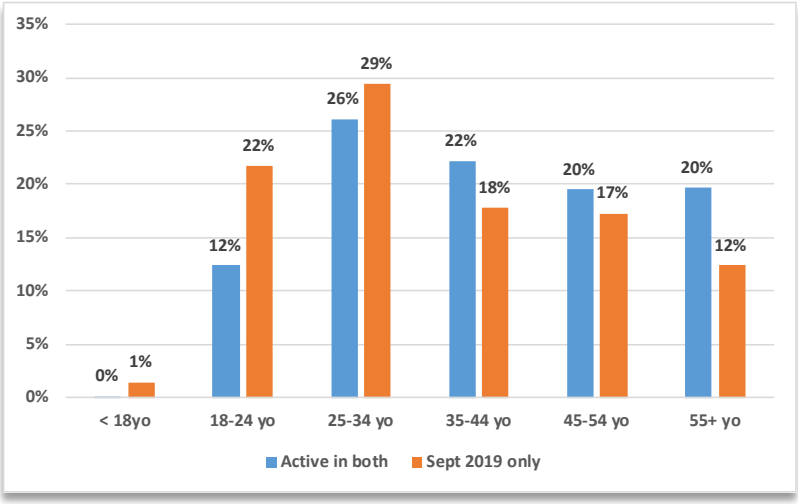
Table 2-66: Cohorts of CDC participants and location

CDC participants active in 2018 (July) and/or 2019 (September)						
	Active in both		Sept 2019 only		All	
Trial site	**N**	**%**	**N**	**%**	**N**	**%**
Ceduna and surrounds	525	**13**	141	**8**	666	**12**
East Kimberley	759	**19**	273	**15**	1,032	**18**
Goldfields	1,762	**45**	901	**50**	2,663	**47**
Out of area	866	**22**	489	**27**	1355	**24**
Total	**3912**	**100**	**1,804**	**100**	**5,716**	**100**

Concerning Indigenous status, we observe very little differences between the two groups, indicating that the composition of the more recent active CDC participants does not significantly change the overall composition.

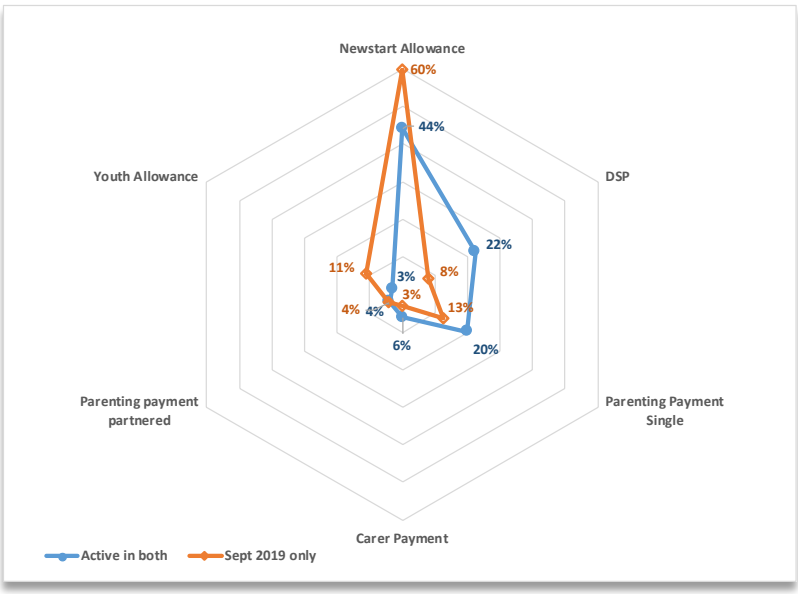
The following figure (Figure 2-10) compares the two groups according to the CDC participants' age categories. Comparatively, the second group of 'new' CDC participants includes younger people with more than half of the 'new' CDC participants aged 35 or less.

Figure 2-10: Cohorts of CDC participants and age distribution



The following radar graph (Figure 2-11) shows the distribution of the types of benefits received by the two groups of CDC participants top six benefits only). While the proportion of people on Newstart Allowance is highest in both groups, we observe some important differences. Notably, the proportion of CDC participants on DSP is much smaller in the 'Sept 2019 only' group (8 per cent, against 22 per cent for those present at both data extract dates), while the proportion of people on youth allowance is larger (11 per cent as opposed to 3 per cent among those 'active in both'). The proportion of people on Parenting Payment (single) is also smaller in the 'new group' (13 per cent against 20 per cent). We also looked at the distribution of benefit types for these two groups by location and noticed a significant increase in the proportion of people on Newstart Allowance in the Goldfields. We discuss this further in the analysis of the transaction patterns below.

Figure 2-11: Distribution of benefit types between 'new' CDC participants and 'active in both' participants



2.2.2.7 Percentage of government benefits placed on the Card

The percentage of government benefits that is placed on the Card is 80 per cent. However, CDC participants may apply to have this percentage reduced[21]. The following table shows the distribution of the percentages of government benefits placed on the Card among the active CDC participants observed early September 2019. We observe that the vast majority is on 80 per cent. However, about 2 per cent of the CDC participants are on a lower percentage.

Table 2-67: Percentage of government benefits placed on the Card

Government benefits		
Per cent placed on the Card	**N**	**%**
50%	7	**0**
60%	57	**1**
70%	40	**1**
80%	5,612	**98**
Total	**5,716**	**100**

We find that the majority of those who had a lower percentage of their benefits placed on the Card were triggered in the Ceduna and surrounds trial site as shown in the following table (Table 2-68).

Table 2-68: Trial site (original assessment site) and proportion of benefits placed on the Card

Proportion of government benefits placed on the Card					
	50%	**60%**	**70%**	**80%**	**Total**
Original assessment site	**N**	**N**	**N**	**N**	**N**
Ceduna and surrounds	7	57	33	832	929
East Kimberley	0	0	7	1,481	1,488
Goldfields	0	0	0	3,299	3,299
Total	**7**	**57**	**40**	**5,612**	**5,716**

The following table and radar graph illustration (Table 2-69 and Figure 2-12) show that the distribution of government benefits differ slightly between the small group of people with a lower percentage of their benefits being placed on the Card and the broader population of active CDC participants. The main difference between the two groups is the proportion of people on Disability Support Pension, which is much higher in the small group with a lower percentage of their benefits being placed on the Card (33 per cent versus 18 per cent of the broader population).

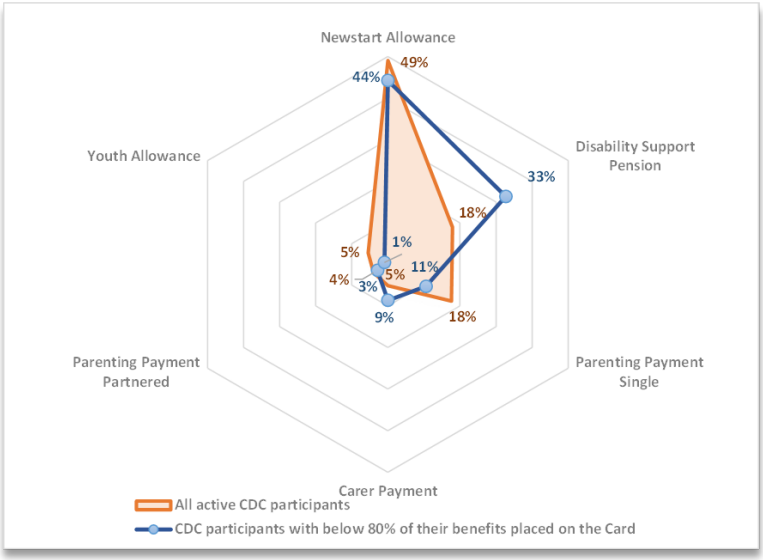
[21] Only in the Ceduna and East Kimberley sites, via an application to a Community Panel.

Table 2-69: Benefit types, comparison between all active participants and participants below 80 per cent

Comparison between all active participants and participants below 80 per cent		
	CDC participants below 80%	% among all active participants
Benefit type	%	%
Carer Payment	9	5
Disability Support Pension	33	18
Newstart Allowance	44	49
Parenting Payment Partnered	3	4
Parenting Payment Single	11	18
Youth Allowance	1	5
Total	**100**	**99**

Note: The total for the broader CDC population does not sum up to 100 per cent because there is another 1 per cent of the active participants who receive another type of benefits.

Figure 2-12: Benefit types, comparison between all active participants and participants below 80 per cent



2.2.3 Analysis of CDC participants' transactions

There is a notable difference between the Goldfields site and the other sites with regards to how much experience people have on the Card. The 'experience on the Card' element may partly explain some of the broader differences we observe in terms of transaction patterns across sites. This has to do with the way people were rolled out in the three sites. In Ceduna and East Kimberley, the majority of the CDC participants were rolled out within the first month of the implementation of the policy. After that the number of new CDC participants being rolled out in these two sites, post July 2018, is quite small. As such, these CDC participants have, on average, a longer experience using the Card compared to the Goldfields. Also the Goldfields trial site started two years later. In the Goldfields, CDC participants

were not only rolled out progressively over some months but a large proportion of the new CDC participants also live in this area. As a result, CDC participants within the Goldfield area have, on average, a shorter experience of using the Card. We expect that this could explain some of the differences we see between each site with regards to the analysis of transaction patterns as the 'newer' CDC participants are different from the 'older ones' as stated above.

2.2.3.1 Analysis of active participants' transactions

The 5,716 active participants described within this section have 3,506,885 transactions recorded in total. These recorded transactions are either debits (2,928,251 records), credits (458,250 records) or balance inquiries (120,384 records).

- Number of debit transactions

We find that the CDC participants in the Goldfields tend to use their Card more often than CDC participants in the other two trial sites. The following table (Table 2-70) illustrates this observation. The daily number of transactions in the Goldfields varies from zero to 6, with a mean of 0.89, which is statistically larger than in the other two trial sites (though not significantly different from participants living out of area).

Table 2-70: Average number of individual debit transactions by location

Individual debit transactions by trial site			
Current site	**Average number of daily debits**	**Min**	**Max**
Ceduna and surrounds	0.79	0	4
East Kimberley	0.76	0	3
Goldfields	0.89	0	6
Out of area	0.87	0	4
Total	**0.85**	**0**	**6**

The following table (Table 2-71) reports the average number of daily debit transactions by payment types and shows that CDC participants on parenting payments (single and partnered) make a larger number of purchases on average compared to people on other types of benefits. Note that with an average of 0.6, people on youth allowance make one purchase every second day on average. It is less than half of the purchasing pattern of those on parenting payments.

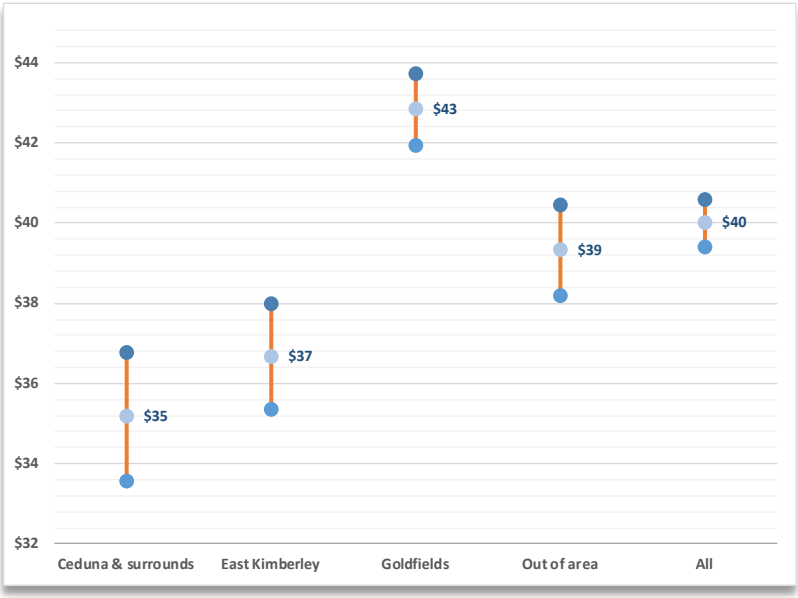
Table 2-71: Average number of individual debit transactions by benefit type

Individual debit transactions by benefit type			
Benefit Type	**Average number of daily debits**	**Min**	**Max**
Newstart Allowance	0.7	0	6
Parenting Payment (single)	1.3	0	4
Parenting Payment (partnered)	1.0	0	4
Disability Support Pension	0.8	0	4
Youth Allowance	0.6	0	2
Other benefits	0.9	0	3

- Dollar value of the transactions

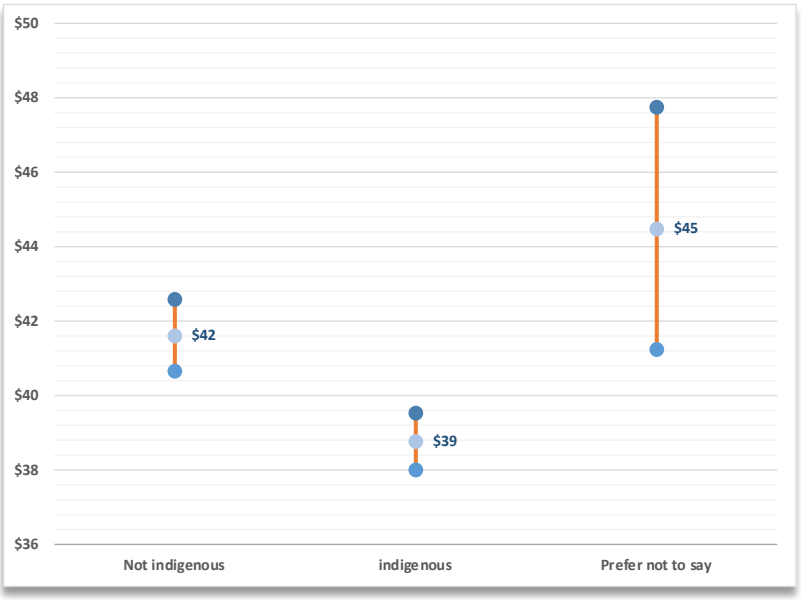
The following figure (Figure 2-13) represents the dollar amounts of CDC participants' expenses (average debits) according to where they currently live. The figure displays the mean of individuals' daily debits as well as the 95 per cent confidence interval around these means. The figure highlights, once more, that the Goldfields area is different from the other two areas, with significantly larger amounts spent daily ($43 on average compared to respectively $35 and $37 in Ceduna and East Kimberley). Those who live out of area spend, on average, $39 daily, which is in-between the Goldfields and the other two trial sites.

Figure 2-13: Average daily expenses (debit) by trial site



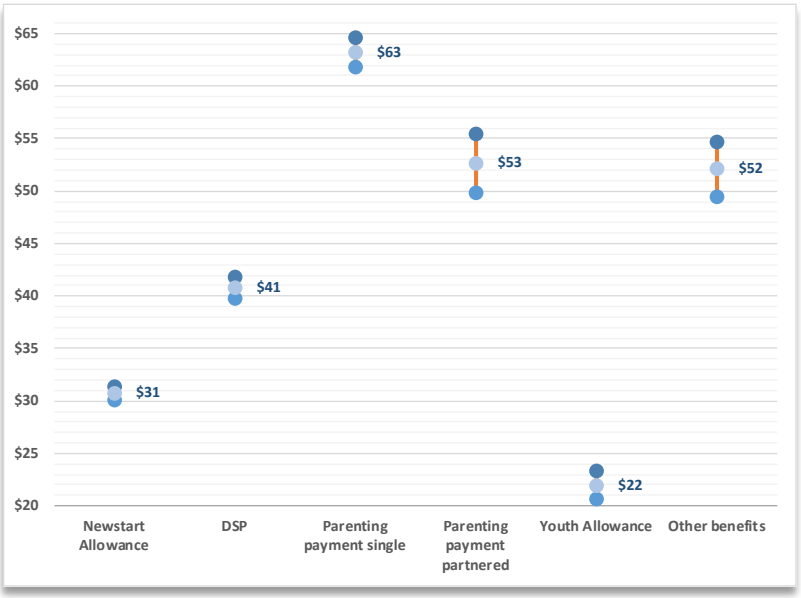
The following figure (Figure 2-14) displays the same type of information by Indigenous status. It shows that, on average, Indigenous participants spend significantly less than non-Indigenous participants. Non-Indigenous participants spend $42 daily on average while Indigenous participants spend $39.

Figure 2-14: Average daily expenses by Indigenous status



The mean dollar value of CDC participants' daily debits shows some important variations depending on the type of benefits received, as highlighted by the following figure (Figure 2-15). CDC participants on Youth allowance spend significantly less than any other participants ($22). By comparison, CDC participants on Parenting Payment (single) spend an average $63 daily. Both Parenting payments (Single and Partnered) are associated with the largest amounts spent daily. As observed in Figure 2-7, the largest category of CDC participants receive Newstart Allowance. Their daily debit is on average $31. As for CDC participants who receive the Disability Support Pension, their daily expense is, on average, $41. Since the payment rates differ across benefit types, it is quite natural to observe differences in the daily transaction amounts.

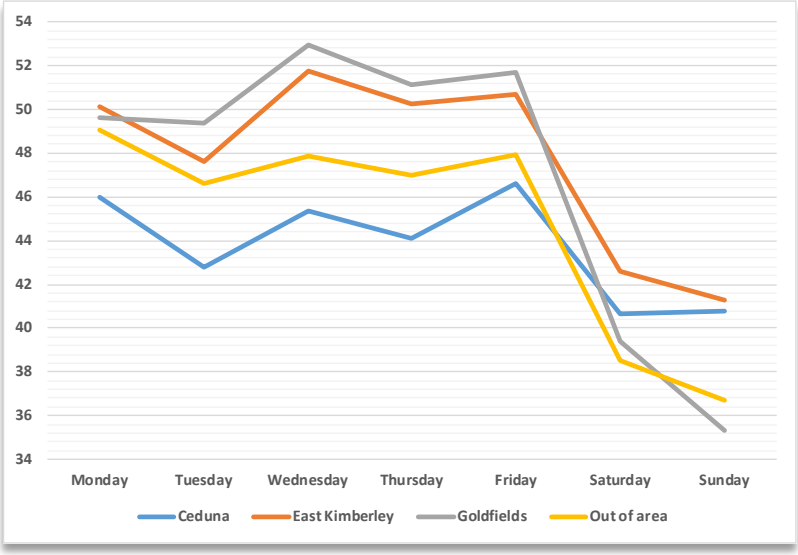
Figure 2-15: Average daily expenses by type of benefits



In the following figure (Figure 2-16) we display the dollar value of transactions by day of the week in order to see whether there are any differences across trial sites and throughout the week. We observe

that the average expense is smaller during the weekend (between $35 and $41 on Sunday). Expenses seem to reach a maximum on Wednesday in East Kimberley and the Goldfields area while the largest amounts are spent on Friday in Ceduna. We also notice that the mean amount spent in Ceduna is consistently smaller than in the other areas throughout the week, with the exception of Saturday.

Figure 2-16: Dollar value of debit transactions by day of the week



- Time of the days of the transactions

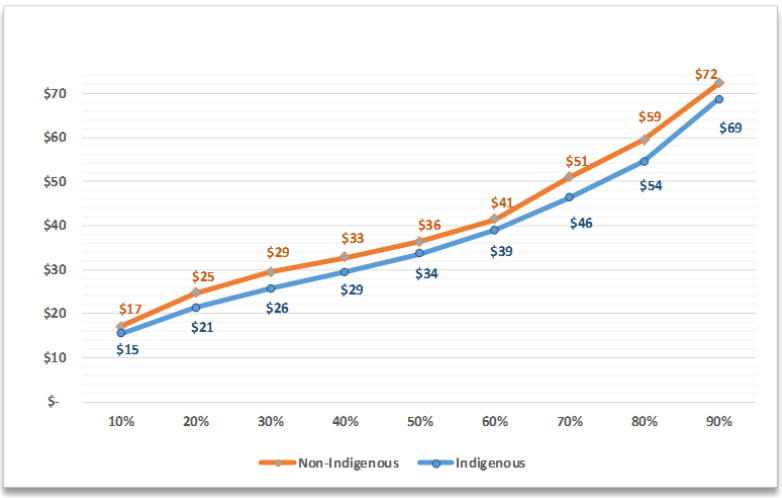
The DOMINO data allows one to observe the time of the day when transactions are made by the CDC participants. It could potentially be used to highlight unusual patterns of consumption among CDC participants.

It is interesting to observe once more that transaction patterns in the Goldfields are different from those in Ceduna and East Kimberley. The proportion of transactions recorded late at night and early hours of the morning is much higher in Ceduna and East Kimberley compared to the Goldfields. It may be due to merchant transaction reporting or may represent a larger proportion of online purchases. It may also be due to the recording method of the transactions in the data, allowing a lag between the time the expense has actually occurred and the time recorded in the data. A cursory look at the expenses made at night shows a large number of expenses occurring through the internet but also some expenses made at shops that are closed at the time of the expense. For those transactions, it seems that the information recorded in the data does not reflect the actual time of the day of the transactions accurately. If at all possible, it would be useful to have accurate time information about CDC participants' transactions.

Figure 2-17: Time of the days of the transactions, by trial site

The following figures (Figures 2-18 and 2-19), look at the daily purchases in more detail, focusing on the actual distribution of CDC participants' debit transactions. The first figure displays the quantiles of the distribution distinguishing between Indigenous and non-Indigenous CDC participants. It shows that Indigenous CDC participants spend less throughout the distribution. Fifty per cent of the Indigenous CDC participants spend less than $34 a day while only 40 per cent of the non-Indigenous participants spend around the same amount ($33). The 10 per cent of the CDC participants who spend the most daily, spend at least $72 if they are non-Indigenous and $69 if they are Indigenous.

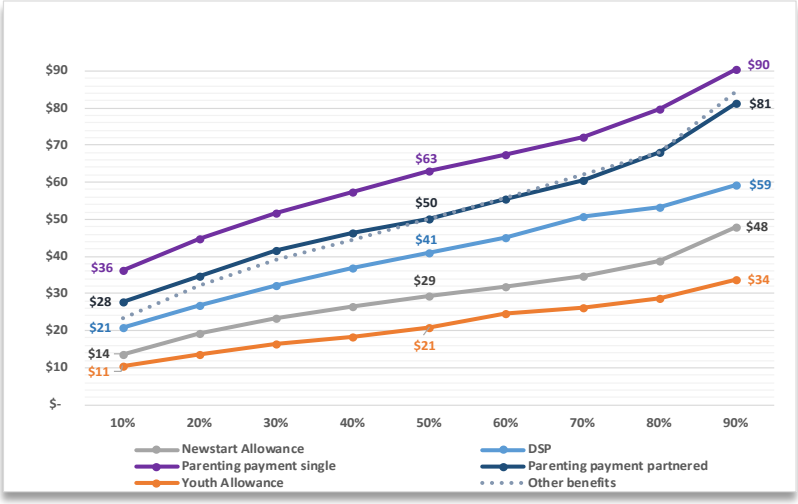
Figure 2-18: Value of daily purchases, quantile distribution by Indigenous status



The following figure (Figure 2-19) looks at the distribution of daily debits by type of benefits received by the CDC participants. As noticed above, CDC participants on Parenting payments (single and

partnered) spent significantly more daily in all parts of the distribution. For comparison, only 10 per cent of those on Parenting Payment (single) spend less than $36 while 90 per cent of those on Youth allowance spend less than $34.90 per cent of those on Newstart Allowance spend less than $48 a day while only 50 per cent of those on Parenting payment (partnered) spend less than that amount.

Figure 2-19: Value of daily purchases, quantile distribution by payment type



We further explored the patterns of individual purchases through a number of multivariate models in order to look at the determinants of the amounts spent daily by the CDC participants. The results are reported in Table A 4-1 in the appendices. The first column displays the estimated coefficients obtained for the determinants of daily purchases through a basic model which looks at the mean daily purchases (in dollars). The next three columns report the quantile regression estimates for the 25th, 50th and 75th percentiles of the distribution. Looking at the first column, we corroborate a previous observation that the value of daily purchases is positively associated with the number of daily purchases. In other words, those who spend the most are also those who make more daily purchases. On average, CDC participants who identify as Indigenous, spend $4 less than non-Indigenous participants (everything else held constant) and female Indigenous CDC participants spend a further $2.30 less. Overall, Indigenous females spend, on average, the least: $6.5 less than non-Indigenous males and almost $10 less than non-Indigenous females Interestingly, non-Indigenous females spend, on average $3.5 more than non-Indigenous males. Clearly, there are very different patterns of transactions by gender and by Indigenous and non-Indigenous CDC participants. Note that this is not due to the distributions of benefits types being different between the two groups since the regression controls for benefit types.

The estimated coefficients for the benefit types are given with reference to Newstart Allowance. Hence, the estimates show that CDC participants on DSP spend, on average, $7 more than people on Newstart Allowance. Likewise, those on Parenting payment spend, respectively, $16 and $15 more when they are on 'single' and 'partnered' benefits. CDC participants on Youth Allowance spend significantly less than CDC participants on Newstart Allowance.

The results also show that daily purchases appear to decrease with one's experience on the CDC. Every month experience on the CDC is associated with a 10 cents decrease in one's daily purchase. Yet, this effect is partly offset by the positive relationship between age and the value of ones' expenses. We tested a specification of the model including indicators of the CDC participants' current location. We find that once these controls are included, there is no longer a significant difference between the

Goldfields area and the other two areas. In other words, the larger daily expenses observed for the Goldfields in the statistics reported above is fully explained by the controls included in the model. Our interpretation is that once the differences with regards to Indigenous status and types of benefits are taken into account, there is no longer any residual effect of being a Goldfields CDC participant.

The quantile estimates results (last three columns of the table) go in the same direction as what we observe in the basic model. Differences associated with Indigenous status are exacerbated at the higher end of the distribution of daily debits: at the 75th percentile the estimated coefficient implies that male Indigenous CDC participants spend $6.5 less than non-Indigenous participants. At the bottom end of the distribution (25th quantile), Indigenous CDC participants spend, on average, $1.6 less than non-Indigenous participants. Note that non-Indigenous females daily spend, on average $2 to $2.50 more than males at all points of the distribution while Indigenous females spend $2 less. At the 75th percentile of the distribution the gap is no longer statistically significant. Those on Parenting payment (single) in the higher end of the distribution spend up to $21 more daily than someone on Newstart Allowance.

2.2.3.2 Declined transactions

The DOMINO data records the instances when CDC participants tried to perform a purchase but the transaction was declined. The date and time of the failed transactions are recorded, as well as the reason why they were declined. Merchant details are also recorded but in a way that makes a statistical analysis difficult. From the start of the CDC rollout until the date of the data extraction (3rd September 2019) we observe 891,417 declined transactions incurred by 13,367 CDC participants. Since all descriptive statistics in the present report are computed for the currently active CDC participants (as of 3 September 2019), we focus on the analysis of declined transactions for this group of CDC participants only. Among the 5,716 active participants, we observe that 151 have no declined transactions, leaving 5,565 individuals represented in the data. Altogether, the analysis is based on 661,951 declined transactions.

Declined transactions are observed for the whole timespan of the CDC up to the first week of September 2019, that is throughout 43 months. On average, there are 15,533 declined transactions per month and 120 declined transactions per active CDC participant throughout the 43 months period.

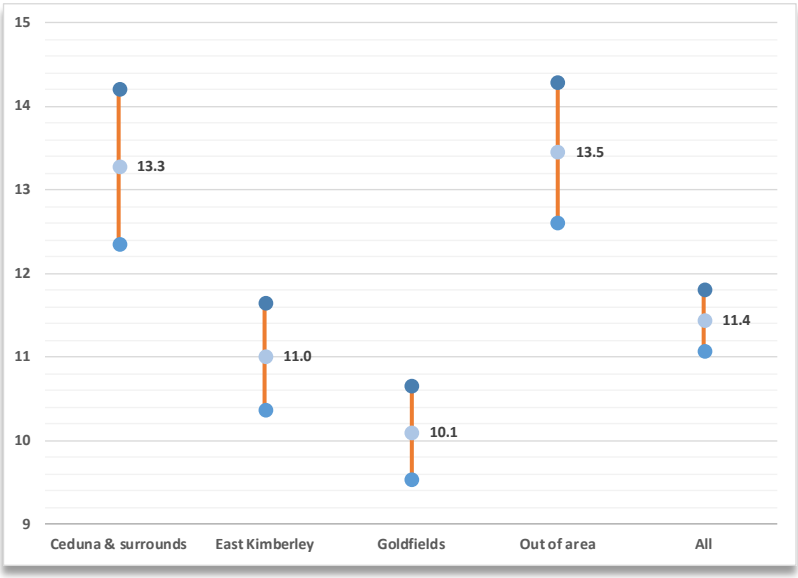
There are differences across trial sites since the Goldfields area was rolled out two years after the other two sites, hence the smaller numbers observed for this area (73 declined transactions on average per person). However, in the other two areas, which have been rolled out for the same amount of time, we observe a larger number of declined transactions in Ceduna and surrounds (see the last two columns of Table 2-72 below). It should be noted that the average number of declined transactions per person over this period masks a lot of variation with some CDC participants incurring over a thousand declined transactions over the period while others incurred far less.

Table 2-72: Average number of declined transactions per participant since CDC rollout, by trial site

Average number of declined transactions per participant					
Current site	**Mean**	**Min**	**Max**	**Lower bound 95% CI**	**Upper bound 95% CI**
Ceduna and surrounds	198	1	1,366	184	212
East Kimberley	161	1	1,167	152	169
Goldfields	73	1	1,761	70	77
Out of area	140	1	1,174	132	148
Total	**120**	**1**	**1,761**	**116**	**124**

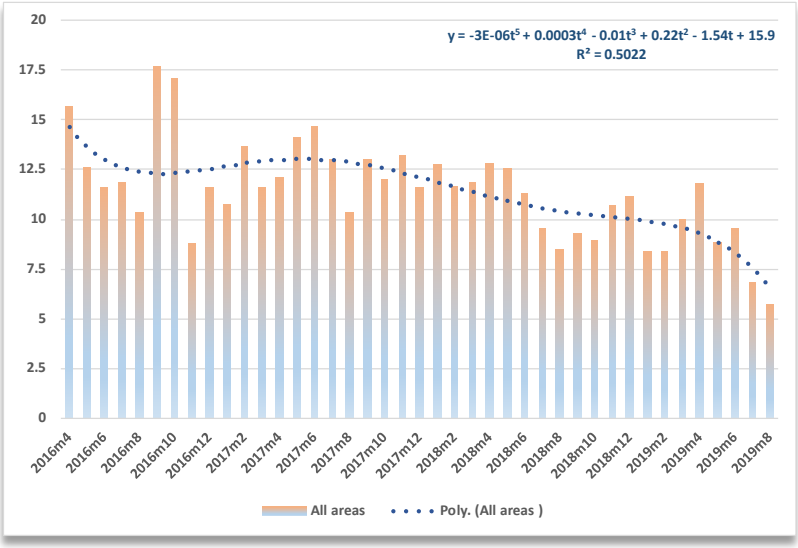
Since there are differences regarding the dates when the trial sites were rolled out, we computed the average monthly number of declined transactions per individual for each site. The following figure (Figure 2-20) displays this information by trial site and highlights the 95 per cent confidence intervals around these means in order to illustrate areas that significantly differ from each other. Based on this measure, we see that the average monthly number of declined transactions per individual remains significantly larger in Ceduna and surrounds compared to the other two areas.

Figure 2-20: Average monthly number of declined transactions, by trial site



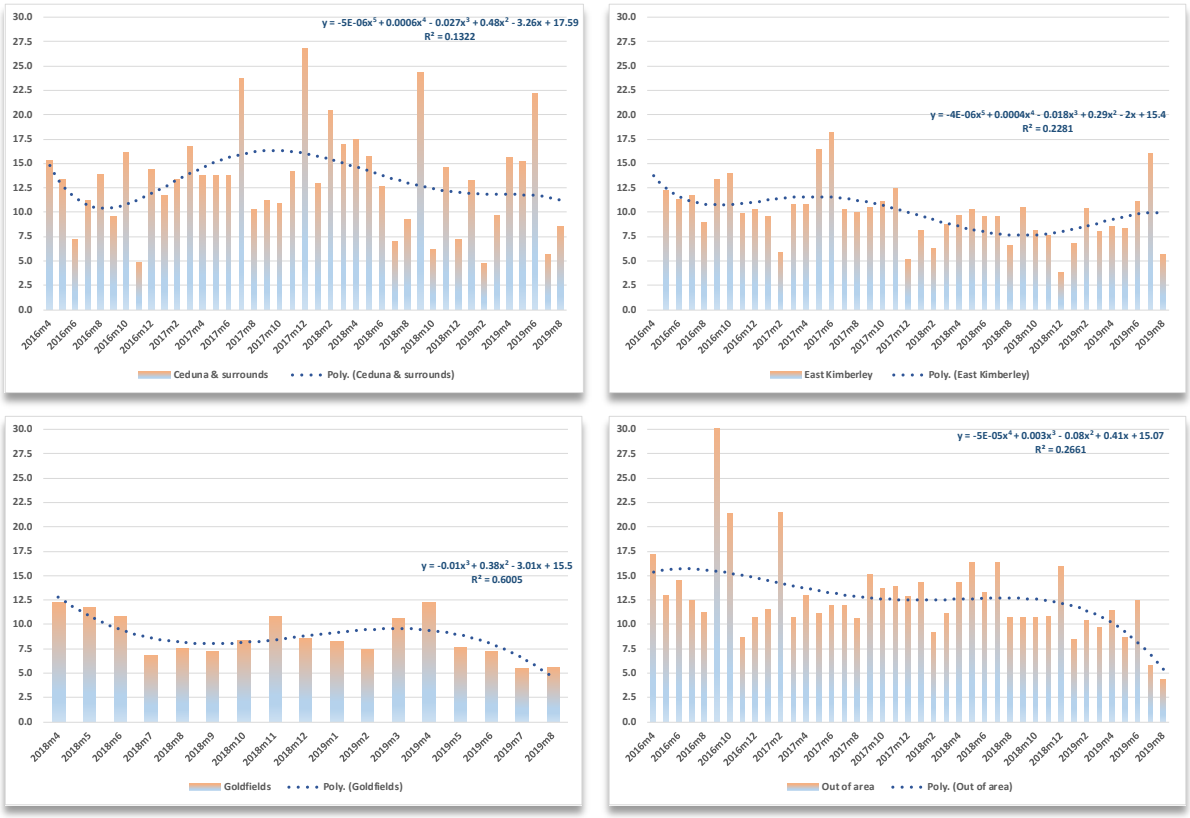
The issue as to whether the number of declined transactions increases or decreases over time is worth investigating in the sense that they may be indicators of how the CDC participants settle in to the use of the Card. It may also give warnings of difficulties encountered in the daily use of the Card by CDC participants. A thorough analysis of these declined transactions and how they evolve over time may also give some 'proxy' information about individuals' attempts at circumventing the restrictions imposed by the Card. Most importantly we want to know whether there is a downward trend over time. The following figure shows the average monthly number of declined transactions every month since the rollout of the CDC (background histograms) and the corresponding estimated trend, which summarises/simplifies the information contained in those histograms. While the monthly number of declined transactions shows some time variation, the trend line suggests a decrease over time.

Figure 2-21: Average monthly number of declined transactions since CDC rollout, all sites



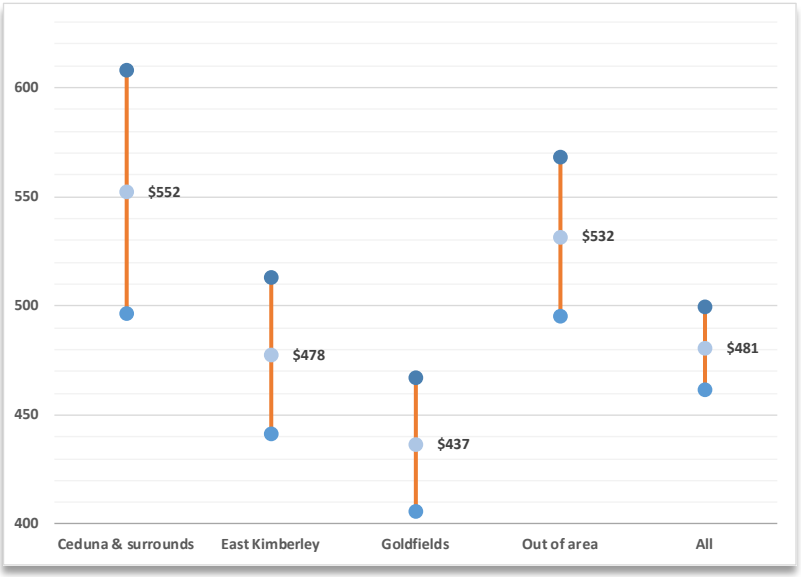
The next set of figures provide the same information, distinguishing between each trial site in order to determine whether trial sites specific trends can be identified or whether the general trend applies to all. Concerning Ceduna and surrounds and East Kimberley, the trend is not obvious and explains little of the variation of the number of declined transactions. For these two sites we cannot conclude whether the average (monthly) number of declined transactions per participant actually decreases or not. For CDC participants currently living in the Goldfields area or out of the trial sites (last figure), the trend indicates a significant decrease over time of the average (monthly) number of declined transactions per individual.

Figure 2-22: Average monthly number of declined transactions since CDC rollout by trial site



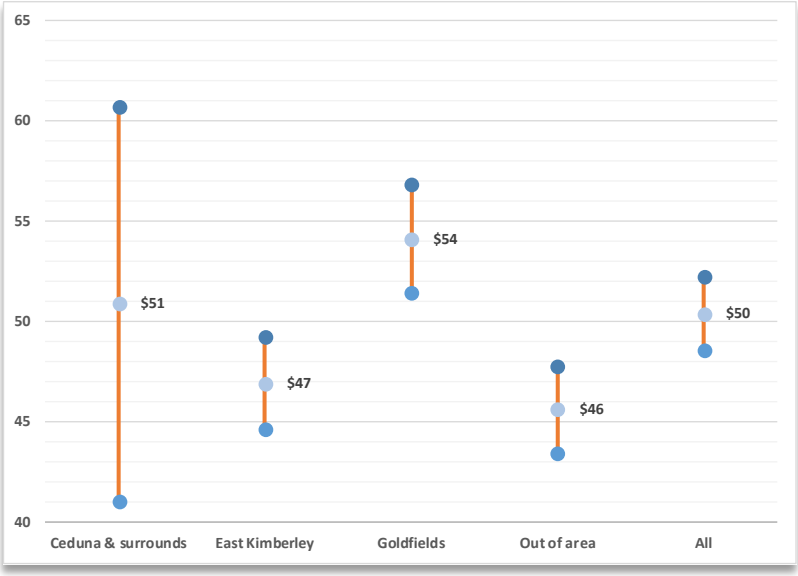
The following figure (Figure 2-23) shows the dollar value of the declined transactions a typical CDC participant incurs in a month. On average, we find the mean dollar value of declined transaction per individual to be $481. We observe differences by trial site with CDC participants in the Goldfields having a significantly lower monthly dollar value ($437) compared to Ceduna ($552), as well as with CDC participants living 'out of area' ($532). However, Goldfields is not significantly different from East Kimberley.

Figure 2-23: Average monthly value of declined transactions per participants, by trial site



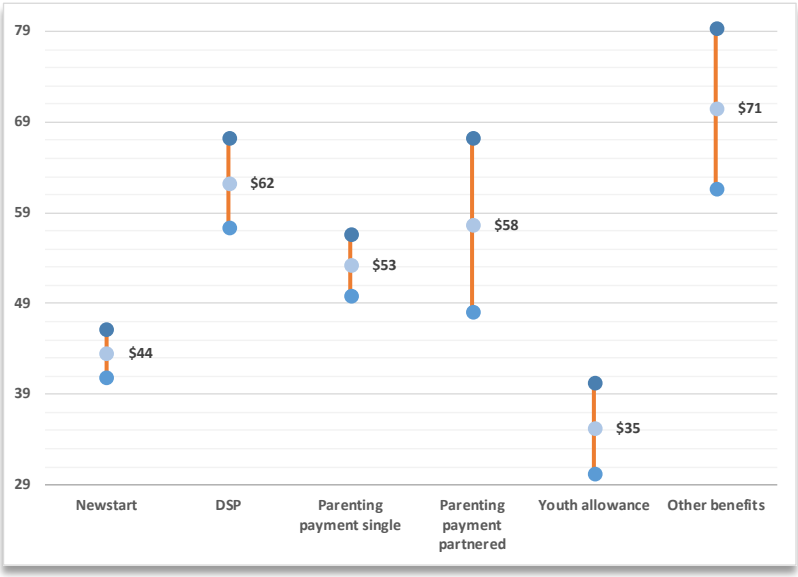
The following figure displays the average dollar value of each failed transaction. We no longer observe a significant difference between CDC participants living in the Goldfields and those living in Ceduna or 'out of area'. This suggests that the difference previously highlighted is due to the fact that the average number of declined transactions (per individual per month) in Ceduna is larger than in the Goldfields (13.3 in Ceduna compared to 10.1 in the Goldfields, see Figure 2-20 above).

Figure 2-24: Average dollar value of each declined transaction, by trial site



The following figure highlights variations in the dollar value of a declined transaction according to the type of benefits received by the CDC participants. The value of declined transactions incurred by CDC participants on Newstart Allowance and Youth allowance are significantly lower with amount ranging from $35 to $44. The value for CDC participants on the other types of benefits are all above $50.

Figure 2-25: Average dollar value of each declined transaction, by benefit type



- Reason for declined transactions

The data also records the reason why a given transaction was declined. The following table summarises the information contained in the data through four major reasons corresponding to, (i) attempted purchase/withdrawal from an excluded or black listed merchant (or merchant not on the white list), (ii) attempted transactions exceeding the daily limit or insufficient funds being present on the account (including failed direct debit transactions), (iii) card-related issues (for example, a wrong PIN being entered, an expired card), and (iv) merchant related. The largest proportion of failed transactions is due to the CDC participant having insufficient funds in their account to either draw on, or, to honour direct debits. These failed transactions represent 57 per cent of the total number of declined transactions. Attempted purchases/withdrawals from unauthorised outlets represents 14 per cent of the total number of declined transactions.

We find that the distribution is similar in the Goldfields and East Kimberley. However, in Ceduna and surrounds we observe a slightly larger proportion of 'insufficient funds' as the reason for the transaction being declined (62 per cent) and a smaller proportion of 'card-related' reasons. There are no differences between Indigenous and non-Indigenous CDC participants in terms of the reasons for a Card being declined.

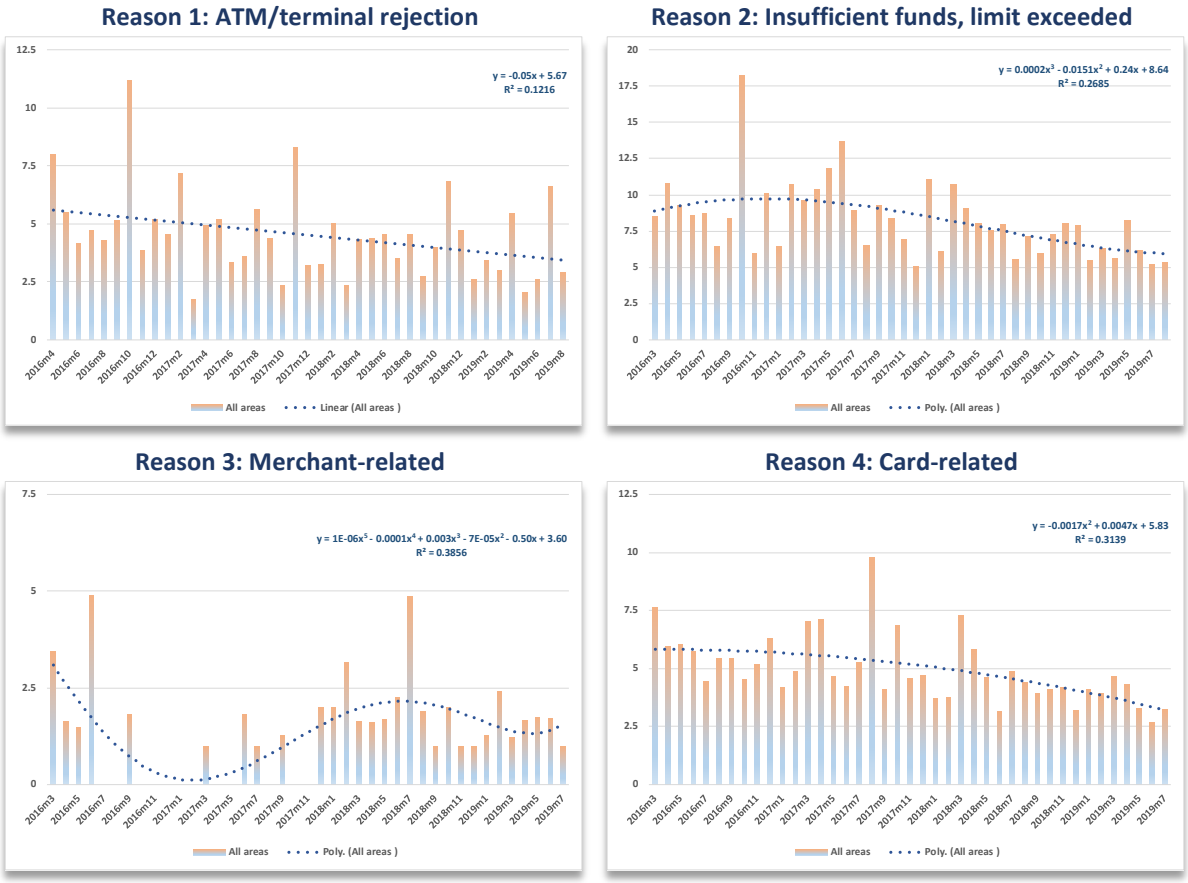
Table 2-73: Reason for declined transactions

Declined transactions		
Reason for declined transactions	**N**	**%**
ATM/terminal rejection (excluded, blacklisted, not on white list….)	92,928	**14**
Insufficient funds, limit exceeded, direct debit	378,891	**57**
Merchant related: restricted, direct debit stopped or not allowed	7,484	**1**
Card related: expired, wrong pin…	188,626	**28**
Total	**667,929**	**100**

While we have already observed a general trend toward a decrease of the number of these declined transactions, it is worth looking at whether we can see differences according to the reasons why they were declined.

The following set of figures (Figure 2-26) shows how the number of declined transactions changes over time according to the reason of the declined transactions. What these figures show is that, over time, declined transactions for Reasons 1, 2 and 4, see a general downward. That is, the number of declined transactions is decreasing. The same downward trend applies for Reason 3. However, there are fairly large variations from month to month.

Figure 2-26: Reasons for declined transactions, time trends



2.3 Evidence from community level data

2.3.1 Community data requirements for an impact evaluation

Community data can provide valuable context to guide a policy all the way from the design stage to its full implementation stage. Community data can be very diverse and can allow the policy maker to use many different and useful lenses to put the policy in the *right* context. However, this evaluation stresses the limitations of community data to produce formal impact evaluation estimates. Community data is generated for a variety of purposes which do not always require data that can fulfil the necessities for a formal impact evaluation. In this section we introduce a list of pertinent criteria according to which we can judge if a data collection is more or less likely to be useful as part of the overall evidence base needed for a formal impact evaluation. We note that the usefulness of a data set according to these criteria is not an either-or matter, it should be interpreted as a matter of degree. We note that our thinking is focused and specific, in that these criteria are the ones that we expect to be the most important ones for the purposes of evaluating the impact of the CDC. We present five such criteria, but there were also other considerations that needed to be made and each data set was judged by its own individual merits for the specific question we needed to address.

Criterion 1: Data granularity. The data must offer sufficient granularity to identify change at several critical levels of analysis. For example, for this evaluation it is highly desirable that the data be available at *suburb level*[22] at least (so-called SSC level). Estimates based on data taken at the broader *postcode level* will provide a much less granular picture of the impact of the CDC as they will not capture variation within the postcodes themselves. Whilst it is possible to implement an evaluation methodology to some extent at the broader postcode level, the lack of suburb level information will affect the granularity of the results. In the case of Ceduna a postcode aggregation will be critical, as all CDC trial suburbs in 'Ceduna and surrounds' are in the same postcode (5690). Yet, Ceduna and surrounds includes several suburbs whose characteristics are very different from the main town of Ceduna, notably in terms of population size, remoteness, etc. These are characteristics that are expected to be related to the outcomes of the CDC, so they should be part of our analysis.

Criterion 2: Data availability outside the CDC areas covered by this impact evaluation. The data should be available for comparable non-CDC areas. In the present case, data should be available for suburbs that are within the CDC trial sites as well as outside trial sites (henceforth 'non-CDC suburbs'). These non-CDC suburbs can be used as a 'comparison group'. Comparison groups should be formally comparable with the trial groups and to that purpose appropriate statistical methodologies are used to establish this. In the examples we provide below, we will be using Census data in order to control (whenever needed and feasible) for differences across suburbs, in a way that will guarantee to us that they are comparable with non-CDC suburbs. For an impact evaluation to be conducted in a statistically robust way, the data should include a large number of non-CDC suburbs. The fewer comparison suburbs in the data, the less likely it will be that an impact evaluation will manage to detect any impacts that may be present in the data.

Criterion 3: Data availability before the CDC rollout. The data should include observations before and after the rollout of the CDC and the timespan of the data should be long enough to allow time variation to be identified. Other things equal, the longer the timespan, the more robust the estimation of any impact. We note here, however, that the importance of this criterion is sensitive to the impact we are trying to identify. There are two main issues for consideration. First, the policy impact may be

[22] Throughout this section we use the term 'suburb' to designate the various localities we use in the analysis, following the SSC classification which stands for State Suburb classification.

manifested through short- mid- or long-term outcomes. Second, the policy impact may change between the short-term and the long-term. We take these two considerations in turn. For outcomes that are expected to emerge soon after the CDC rollout (e.g. the possibility of a reduction in legal sales of alcohol or an increase in purchases of food for children) short-term data and short-term analysis would be sufficient for the evaluation. In contrast, for outcomes that are not expected to be observed soon after the CDC rollout (e.g. an improvement in housing and subsequent employment circumstances, a reduction in alcohol addiction or post-school outcomes for children) we would need longer-term data *and* longer-term analysis. For outcomes that can be expected to change with time, we need longer-term data *and* longer term analysis. The distinction is critical as there may be cases where a short-term impact may be the opposite from a longer term impact. Using the previous example of legal alcohol sales, an immediate reduction may be followed by an increase in other illegal activities conducted in order to obtain alcohol by circumventing the CDC-imposed restrictions. In this hypothetical scenario, an apparent initial positive impact may be followed by a future negative impact. Using the previous example of housing circumstances, people used to paying rent with cash may experience short-term difficulties when forced to pay rent using the CDC, but once the debit payment has been put in place it may help with their longer-term housing circumstances. In this second scenario, an apparent initial negative impact may be followed by for a future positive impact.

Criterion 4: Data collection frequency. The data should be available at least quarterly so there are enough observations over time, especially after the rollout of the CDC in each of the trial sites. Note that even with quarterly data, the estimation of impact for the Goldfields area remains difficult because of the small number of observations post-CDC rollout. Similar to the need for lengthy periods of data explained in the previous criterion, the use of frequently collected data will depend on the specific impact and the outcomes that can measure it. Frequently occurring events need frequently collected data.

Criterion 5: National coverage. Separate to the CDC there were and are other policies aiming to address the problem of harmful behaviours like excessive alcohol consumption, gambling and illicit drug use. Some of these policies were defined and implemented differently, in different locations and over different periods of time. Some of them may be continuing after the implementation of the CDC and some may not. From an evaluation perspective, the challenge with having several policies aiming at a single target is that even if we observe an outcome, it becomes difficult to identify which of the policy interventions has caused it. With a larger national coverage where other non-CDC policies may be implemented differentially, the local variation in other policies may allow us to better identify empirically the impact of the CDC.

Methodology and data:

To the degree that the five criteria we presented would be fulfilled for a set of data, it is possible the research would be able to implement methodologies compatible with what is known as Difference-in-Difference (DiD), in order to estimate the impact of the CDC in the trial sites. More specifically, the DiD methodology entails the statistical comparison of how outcomes change over time before and after the rollout of the CDC in CDC trial sites, with how outcomes change over time in the same period in statistically 'comparable' suburbs where the CDC has not been implemented. The more the 'comparison suburbs' can be made statistically comparable, the more the research will be able to attribute the estimated differences in outcomes to the rollout of the CDC. A range of methodologies can be implemented to suit the extent and the type of information available, to account for the degree to which the five criteria are fulfilled and to test and correct for a number of potential statistical biases that may be present in the data. As will become apparent later on in the report, the suitability of the sourced community data is questionable for this evaluation and it is our view that the implementation of a formal evaluation methodology based exclusively on community data would yield limited insights.

It was part of the remit of the evaluation to determine the usefulness of this source of information. After investigating the available community data, our view is that it is mainly useful to provide context information about various outcomes observed for the broader population of the trial sites. It complemented the other methodologies used in the evaluation, notably when we triangulated the results from both qualitative and quantitative methodologies.

2.3.2 Assessment of the usefulness of the community data provided by the States of WA and SA

The following Table 2-74 summarises the community data the evaluation team was given access to from SA and WA governments in the light of the five criteria presented earlier. The last column of the table provides our assessment of the suitability of the specific dataset. The reader must note that receiving and sorting this data was a continual process during the evaluation project and that some of the later data was not incorporated in the analysis due to its late arrival. It is best that this section considers the data as an initial sorting of potentially available and useable data sets.

The table suggests that estimation of impact may be possible using crime statistics for both states (excluding Domestic violence and drink/drug driving for SA). The rest of the South Australian data does not allow one to estimate impact, although it allowed us to produce basic statistics looking at the time variation of the various outcomes pre- and post-CDC rollout. Using community-wide data, we were not able to attribute any observed changes to the rollout of the CDC as we were not able to apportion what is due to the CDC rollout and what is due to other, more widespread, factors. The evidence was however triangulated with the other methodologies of the Evaluation, along with the associated caveats that we have described in the Consolidated Report and in Chapter 1 (Section 1.2.4).

Table 2-74 below shows that the WA data was able to be used to estimate the impact of the CDC for all police data, including domestic violence and drink/drug driving.

Table 2-74: Data sources against their suitability for impact estimation

State	Data set	Criterion fulfilled?				Could this dataset support a formal quantitative impact estimation? (limitations and other uses)
		1	2	3&4	5	
SA	Police data: Crime	Yes	Yes	Yes	Limited	Estimation of impact may be possible at suburb level (only for crimes other than DV or driving under the influence of alcohol or drugs)
SA	Police data: domestic violence/drink/ drug driving	Yes	Limited	Yes	Limited	Estimation of impact is not possible: only one postcode (5/6 suburbs) is available as non-CDC comparison group. Some descriptive statistics will be possible
SA	Poker machine revenue	No	No	Yes	Limited	Monthly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	DASSA[23] outpatient counselling	No	No	Yes	Limited	Monthly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	DASSA life without barriers	No	No	Yes	Limited	Quarterly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	DASSA Yalata community referrals to health services	No	No	Yes	Limited	Quarterly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	Ceduna Hospital: alcohol related separations	No	No	Yes	Limited	Monthly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	Ceduna district health services: alcohol related ED presentations	No	No	Yes	Limited	Monthly data, CDC only, overall CDC area (no suburb level). Very limited descriptive statistics possible
SA	Housing: disruptive tenancies and debt	Limited	Limited	Yes	Limited	Ceduna plus 2 comparison (postcode level: Coober Pedy + Port Augusta), quarterly data. Very limited possibilities to examine impact: only basic descriptive statistics comparing both non-CDC and CDC

[23] DASSA: Drug & Alcohol Services South Australia.

State	Data set	Criterion fulfilled?				Could this dataset support a formal quantitative impact estimation? (limitations and other uses)
		1	2	3&4	5	
WA	Police data: crime, offences, including DV and drink/alcohol driving	Yes	Yes	Yes	Limited	Estimation of impact may be possible at suburb level. Limitations: short timespan after rollout of the CDC in the Goldfields (will limit the estimation of impact in that area). Changes of definition of DV in July 2017.
WA	Police data: crime, offences, including DV and drink/alcohol driving	Yes	Yes	Yes	Limited	Estimation of impact may be possible at suburb level. Limitation: short timespan after rollout of the CDC in the Goldfields (will limit the estimation of impact in that area)
WA	School attendance /exclusions	Yes	Yes	Yes	Limited	Estimation of impact may be possible. Limitation: small number of schools included in the data, issues of catchment area and proportion of children from CDC households, and no ability to control for a number of suburbs (and student body) characteristics.
WA	WA child protection (interactions, mandatory reports…)	No	Limited	Yes	Limited	No suburb information; broad regions EK and Goldfields with one broad region comparison: West Kimberley. Limited ability to provide descriptive statistics comparing CDC with one non-CDC region
WA	Housing behavioural data	No	No	Yes	Limited	Broad regions: EK and Goldfields; monthly data. Limited time variation descriptive statistics
WA	Housing debt accrued data	No	No	Yes	Limited	Broad regions: EK and Goldfields; monthly data. Limited time variation descriptive statistics
WA	Justice	No	No	Yes	Limited	Broad regions: EK and Goldfields; monthly data. Limited time variation descriptive statistics

In conclusion, some of the data sets provided by SA and WA were compatible with estimating the impact of the CDC, in that they fulfil the five criteria described above.[24] Other data sets which did not fulfil all five criteria were still of limited use, in an illustrative way, to display changes over time (pre- and post-CDC rollout) without allowing us to examine whether the observed changes were due to the CDC or due to other factors. The analysis and the report, makes the distinction between a causal impact statement, (where the CDC rollout can be proven to be causing a specific social outcome), and

[24]Those datasets that fulfil the five necessary criteria are in principle ready for further examination about using them for impact analysis, but they are not necessarily sufficient for conducting impact estimations. A further case-by-case examination was needed to determine if the dataset was adequate for formal impact estimation purposes for the specific questions we had in mind.

a mere association between the CDC rollout and a social outcome (where no causal relationship can be proven to exist).

We do not expect any single community/administrative data set to provide a definitive answer about the impact of the CDC. Instead, where the criteria described above are fulfilled, the community data was further examined to determine if it allowed us to make more successful statistical statements about the potential impact of the CDC. These statements were built into the broader evaluation analysis. The evaluation findings were based on all three methodologies and data sources, (we remind the reader that these are: (i) qualitative data interviews, (ii) quantitative data of CDC participants; and (iii) community and admin data) which were analysed jointly to determine the impact of the CDC. The premise is that the more of these methodologies and their sources of information agree with an impact statement, the stronger our confidence on this impact statement is.

In the following section we provide analyses of data that allowed a limited number of impact estimations to be conducted, using the Police data from WA and SA.

2.3.3 Some early impact analysis using the Police data

We identified the Police data as being suitable for an analysis of the early impact of the CDC (and accompanying measures) on the communities that implemented it. However, some caveats remain with this data. First, the data is available per quarter. This reduces the ability of the data to detect over time changes, especially for the Goldfields area because there are not many data points after the CDC rollout in this area. We have more data points post-rollout in Ceduna and East Kimberley but the number of observations is still limited. As pointed out above, quarterly data is the bare minimum for one to analyse overtime changes in the outcomes of interest. The fact that the data is available per quarter implies, in these remote areas, that we may observe large variations from quarter to quarter once we look at specific types of offences/crimes. Statistically, very little can be done to correct these issues and the reader will need to keep these caveats in mind when looking at the results.

We note that there are a few discrepancies in the way information on domestic violence is recorded between WA and SA. In WA we can directly observe information on domestic violence at suburb level, while this is not practically possible for SA (see below). The 'categories' of offences/crimes also differ between the two States. This may be due to the fact that we had to download the publicly available data for SA while the WA data was more 'custom made' for the evaluation team. Having less detail in the SA data makes comparisons between WA and SA sites more difficult.

Also, we were made aware by the Police in WA that the method for recording domestic violence was changed at the end of July 2017, a few months after the CDC rollout in the East Kimberley site (and prior to the rollout in the Goldfields). As a result of this, we may (and we do) observe increases in the number of domestic violence incidents which are probably due to the change of reporting method rather than to an actual increase of the number of incidents. Also comparisons between pre- and post-July 2017 for domestic violence become difficult as the data does not contain information that would allow us to harmonise the data within a single definition.

It is important to keep in mind that, along with the implementation of the CDC, a number of additional measures were being implemented concurrently in the trial sites, including increased government services, more policing of offences related to the consumption of D.A.G products and added public/media scrutiny. The statistical analysis cannot distinguish between all these factors that may have influenced community outcomes post-CDC rollout. If an 'impact' is detected for a given offence/crime post-CDC rollout we still cannot conclude that it is due to the implementation of the Card itself. Only at the stage where we triangulate the results obtained through various methodologies

as described in Chapter 1 could the research team infer a possible impact of the CDC itself on such community outcomes. Therefore, for the remainder of this report where we implement some estimations of impact, we will refer to 'impact of the CDC' on a given community outcome in a broader sense meaning 'impact of the CDC and related measures implemented at the same time as the rollout'.

Another caveat comes from the Police outcomes themselves, which, combined with the geographical make-up of the trial sites, make it challenging to observe change over time. Indeed, records of offences refer to the actual location where the offence occurred, not the place of residence of the person who committed the offence. Each trial site has a number of locations that can be considered as 'attractors' in that they have a denser population and hence more businesses and shops. They attract people who visit from neighbouring suburbs, some of them in the trial sites themselves. Some would have travelled from non CDC areas. It is likely that a proportion of the offences/crimes are committed by this transient population. It is also possible that the CDC policy may have affected people's temporary movements towards these 'attractive' areas. Those habitually living in non-CDC areas may have increased the frequency of their visits but also decreased the length of time they spend in each visit. This would be due to the fact that upon staying over two weeks in a CDC area, one could get automatically triggered on the Card. Therefore, it is very likely that the CDC has affected people's temporary movements in and out of CDC areas, and more so in and out of these areas that typically attract more traffic. It follows that it is possible that these changed movements may have affected the rate of offences/crimes. This potentially constitutes an unintended consequence of the CDC policy at the community level. Yet the community data did not allow us to account for this since the Police data does not state, for a given offence, the perpetrators' usual place of residence.

Notwithstanding the caveats mentioned above, after we examined the criteria outlined in the previous section, the Police data proved adequate for implementing an analysis of impact of the CDC. Importantly, the data allowed us to construct a sample of suburbs that we used as control. Also, we were able to observe Police outcomes pre- and post-CDC rollout in both CDC sites and control suburbs. Moreover, the data was available at suburb level, giving us enough granularity to implement our methodologies.

The remainder of this section highlights the methodology used to conduct these analyses of impact and reports the results we obtained in each site.

2.3.3.1 Police outcomes by trial site and definition of 'control suburbs'

a) Police outcomes by trial sites

The data comes from two sources, namely Western Australia Police for the East Kimberley and Goldfields trial sites and, Southern Australia Police for the Ceduna trial sites. The data differs slightly between the two sources, probably because the reporting of Police outcomes is different across each state. One important difference between the two sources of data, which somewhat hindered the analysis, stems from the way in which domestic violence incidents are recorded. In the WA data, we could use a flag which indicated, for a given offence/crime, whether domestic violence was involved. For a given offence/crime, say 'assault' or 'property damage', we could tell whether there was a domestic violence component to it. Also, the WA data records on domestic violence incidents were available at the suburb level (SSC level) like all other offences/crimes. The SA data was different in the sense that domestic violence information is recorded at a more aggregate level (Postcode) which prevented us from extending the analysis to that type of Police outcome for the trial site of Ceduna and surrounds. Since the entire trial site of Ceduna and surrounds is within the same postcode we could not use any variations within the trial sites in order to estimate impact. In order to remedy this

issue, we were given access to additional data on Domestic Violence by SAPOL. However, the information on possible comparison sites was not sufficient for us to conduct robust difference in difference estimations.

Another point of difference between the two sources of data is that the WA data was purposefully put together by Western Australia Police (and the manager of Data, Modelling and Performance Analytics at the Western Australia Department of Communities) for the Evaluation. As such it included more granular information compared to what can be found in the public domain. This was not possible for the SA data (excluding domestic violence information), where we downloaded and used publicly available SA Police data which was less granular.

Western Australia Police provided the research team with historical data on offences and crimes for 125 suburbs (SSC geographical classification). These included records for all suburbs that were rolled out into the CDC, neighbouring suburbs (where a significant proportion of CDC participants live, the so-called 'out of area' group highlighted in the analysis of the DOMINO data above) and a set of other suburbs that were suitable to be used as 'comparison' suburbs.

The SA data we downloaded is reported at Postcode level. However, a field called 'suburb POA' gave more information than the name of the actual Postcode a given offence referred to. This text field actually recorded the place where the offences/crimes took place with more detail, most of the time using the name of the suburb (or a locality within a suburb). As a result, we managed to assign suburb codes (SSC codes) to most of the records. Doing so, we were able to get a level of granularity of the information within the trial site area that was comparable with what the WA data allowed us to use. The downloaded SA data included the offence/crime records for the whole of SA, contrary to the WA data which included 125 selected suburbs. Hence, we selected a number of suburbs around Ceduna that we could use as a 'comparison' group and which shared some common characteristics.

Altogether, our analysis relied on the following number of suburbs, distinguished between a 'trial' group (suburbs where the CDC was rolled out) and a 'comparison' group (set of suburbs sharing some relevant characteristics with the CDC suburbs):

Table 2-75: Number of trial and control suburbs used in the analysis

Trial and Control suburbs used in analysis				
Location	**Data source**	**CDC suburbs N**	**Control suburbs N**	**Total N**
East Kimberley	WA Police	3	33	**36**
Goldfields	WA Police	49	40	**89**
Ceduna and surrounds	SA Police	15	153	**168**

The Police outcomes are reported according to various hierarchical levels of report, from a more general set of categories to more detailed (including many categories). Given that the data is available on a quarterly basis and that we are looking at many suburbs whose main characteristics is their remoteness and small population, we need enough non-zero observations in each category for the statistics to provide us with useful information. For this reason we mainly used the second level of reporting of offences/crimes. Also, we focused on the categories including enough occurrences of a given offence/crime. For instance, in WA, we did not conduct an analysis of 'Deprivation of Liberty' because hardly any cases could be observed in the trial and control areas. There are instances where we grouped together several categories because it not only helped the statistical analysis but also, on

the point of view of general policy discussion, these categories included fairly similar types of offences (if not in the view of the Law). For instance, in WA, we provided some analysis for 'Stealing' separately, but we also looked at statistics which grouped 'stealing' and 'stealing a motor vehicle'.

We also provided an analysis grouping together all offences/crimes relating to robbing or stealing, creating a broader category called 'robbery, stealing, burglary, stealing motor vehicle'. These aggregated categories include more observations and may help us detect significant changes over time with more statistical significance than through the use of smaller categories that have 'holes' for many suburbs and in some quarters. Aggregating some of the more detailed categories in WA helped us create some comparability with SA whose level 2 classification includes fewer categories.

The following table indicates the categories of offences/crimes recorded at level 2 in WA and SA Police data and illustrates the different reporting in the two States which reduces our ability to compare both States' Police outcomes and generalise our findings. We also note that the WA data includes a separate flag which allows one to compute the number of domestic violence related offences. Therefore, the statistical analysis for WA is augmented with an analysis of occurrences of domestic violence.

Table 2-76: Categories of offences/crimes analysed

Offences/crimes reporting at level 2 in WA and SA	
WAPOL Level 2 reporting:	**SAPOL Level 2 reporting:**
Arson	Acts Intended To Cause Injury
Assault (Family)	Fraud Deception And Related Offences
Assault (Non-Family)	Homicide And Related Offences
Breach of Violence Restraint Order	Other Offences Against The Person
Burglary	Property Damage And Environmental
Deprivation of Liberty	Robbery And Related Offences
Drug Offences	Serious Criminal Trespass
Fraud & Related Offences	Sexual Assault And Related Offences
Graffiti	Theft And Related Offences
Historical Sexual Offences	
Homicide	
Property Damage	
Receiving and Possession of Stolen Property	
Recent Sexual Offences	
Regulated Weapons Offences	
Robbery	
Stealing	
Stealing of Motor Vehicle	
Threatening Behaviour (Family)	
Threatening Behaviour (Non-Family)	

b) Definition of 'comparison' suburbs

General principle

As mentioned above, an estimation of the impact of the CDC at the level of the community requires that we compare communities within the CDC area with communities that have not been rolled out. Changes in outcomes over time that we may observe after the rollout in the trial sites may be partly due to the actual CDC rollout as a manifestation of the behavioural responses that are expected from the policy. However, part (or all) of the changes observed may simply be due to a range of other factors that affected all communities after the rollout, namely a general trend. For instance, general macroeconomic conditions may have changed after the CDC. Other State or Federal policies may have been implemented, or, business rules around Policing or reporting of offences/crimes may have changed in the whole State after the rollout. Many things may have changed over time and many of those things may have actually changed right after the rollout of the CDC and may have impacted on the outcomes of interest here, namely Police-related outcomes. It is possible that these extraneous factors may have impacted those outcomes in the opposite direction compared to the effect of the CDC. If this happens, we may very well see no changes in outcomes or even a degradation while, in reality, the policy produced a positive impact. In that case, had the policy not been implemented, we

would have observed even worse changes in outcomes. This can go the other way round. We may have a policy that actually produces harm on those outcomes but its impact may be hidden by other general changes that had a positive impact. Choosing a set of other suburbs that we can use to compare with the trial sites before and after the policy, helps cancel out the impact of these extraneous factors and concentrates on what could be the actual impact of the CDC on the outcomes investigated.

These more 'statistical' issues are compounded with all other caveats we have already highlighted throughout this report, noticeably with the fact that the CDC participants' population only represents a limited proportion of the whole population of each trial sites, making our ability to detect over time changes all the more limited.

The choice of the suburbs that can be used as control is made in accordance with a number of estimation rules, necessary for making statistically robust statements as to the impact of the CDC at community level. In the particular case of the investigation of Police outcomes in such sparsely populated remote areas using suburb level data collected quarterly, the research team had to adapt to whatever information was available in order to provide the best possible estimation of the impact of the CDC.

One challenge in picking up the group of suburbs that we would use as control is that they must form a group that is comparable with each trial site. Also, Police outcomes information must be available for them pre- and post-CDC rollout. We also need enough suburbs so their composition reflects that of the trial sites which themselves are somewhat heterogeneous both within themselves and across each other. For instance, in the Goldfields area, the analysis of the DOMINO data has shown large discrepancies in the composition of the CDC participants' population between the more 'urban' setting of Kalgoorlie/Boulder and areas situated further north like Leonora and Laverton. We have also shown that the proportion of CDC participants who identify as Indigenous varies substantially within the area.

Our strategy for picking up the right group of suburbs as a control group was to link the suburbs records found in the Police data with detailed information about their demographic composition, the state of their labour market and industry of employment, the value of their socioeconomic indices, and so on. To do that we merged the Police data with ABS Census data information on all the suburbs recorded. We designed the group of control suburbs so the overall characteristics would be as balanced as possible with that of each trial site. We made up as many control groups as there are trial sites that is one control group for East Kimberley, one for the Goldfields area and one for Ceduna and surrounds. Also, since the Police data was available at suburb level (SSC level) we asked DSS to flag those suburbs that are included in the CDC trial sites as it was not always straightforward to know exactly where the boundaries were (especially in the Goldfields).

CDC and 'comparison' suburbs in each site

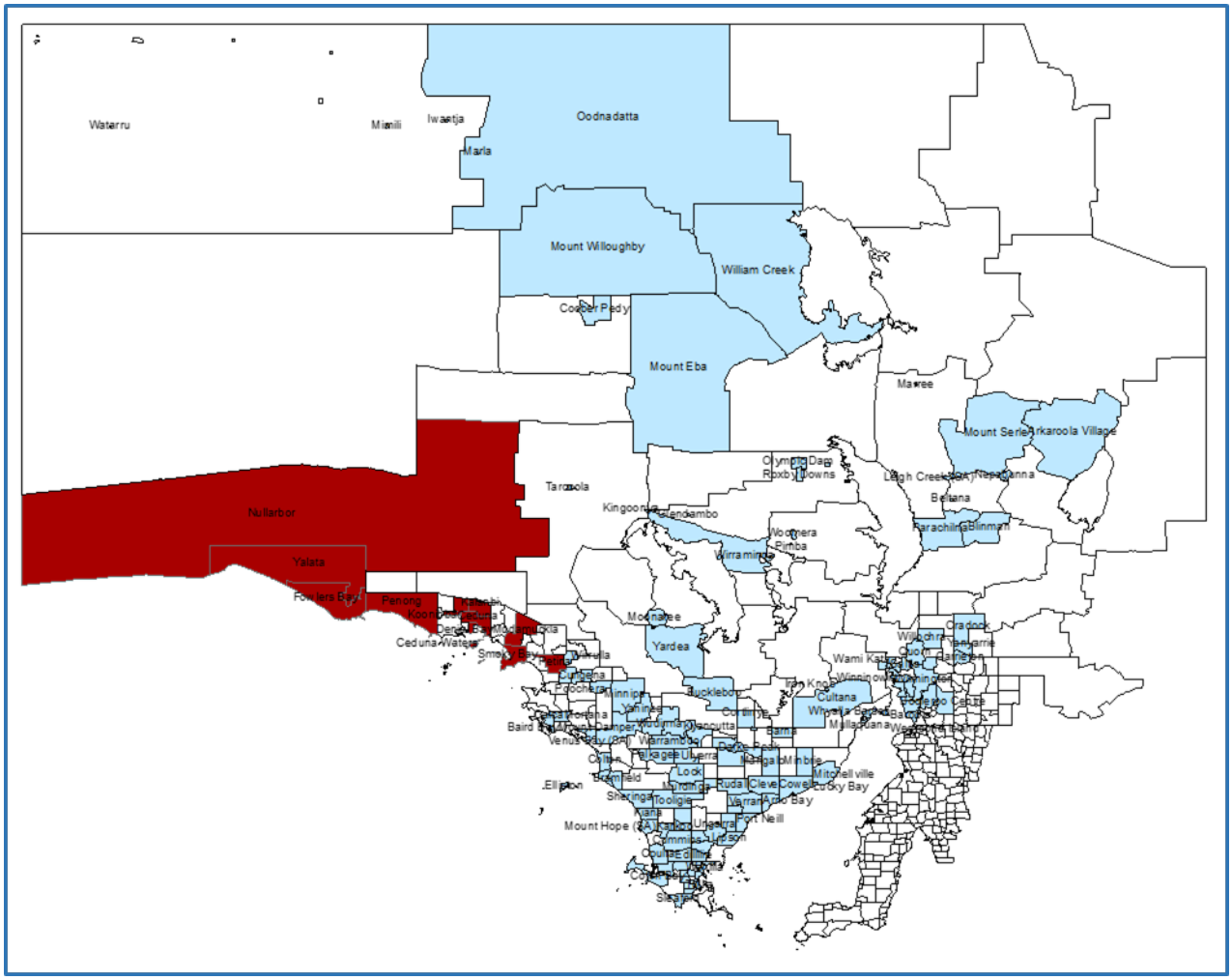
The following three maps give an illustration of the suburbs included in the analysis of the impact of the CDC on Police outcomes. They highlight, in red, the suburbs that are included in the CDC, and, in blue, those that we used as controls in the analysis. Note that it was not always possible to select neighbouring suburbs because the population in these remote areas are very small and/or their inclusion would affect the balancing of the characteristics.

Throughout the analysis we varied the number of control suburbs we included in the analysis and repeated the estimations (while maintaining the balancing of characteristics between control and trial suburbs) in order to check for the stability of the results.

For all maps presented below, the suburbs highlighted in red correspond to the suburbs within the CDC area for which we have Police data. The suburbs highlighted in blue are those that made the basis of the definition of a control group of suburbs. The following map (Figure 2-27) shows the suburbs included in the analysis for Ceduna and surrounds. It includes some very remote, sparsely populated areas that are as comparable as possible with places like Yalata, Scotdesco or Oak Valley. It also includes areas that are more densely populated (in relative terms) and that act as local 'attractors' in order to have comparators to places like Ceduna itself. At this stage, we point out that our estimation methodologies included a number of models that explicitly control for some observed differences between the two groups so as to improve the robustness of the results beyond the basic Difference-in-Difference estimator. We discuss this in the next section.

As stated above, the statistical analysis for SA included 15 suburbs within the trial site and about 150 suburbs composing the control group.

Figure 2-27: Mapping of the trial and control suburbs in South Australia

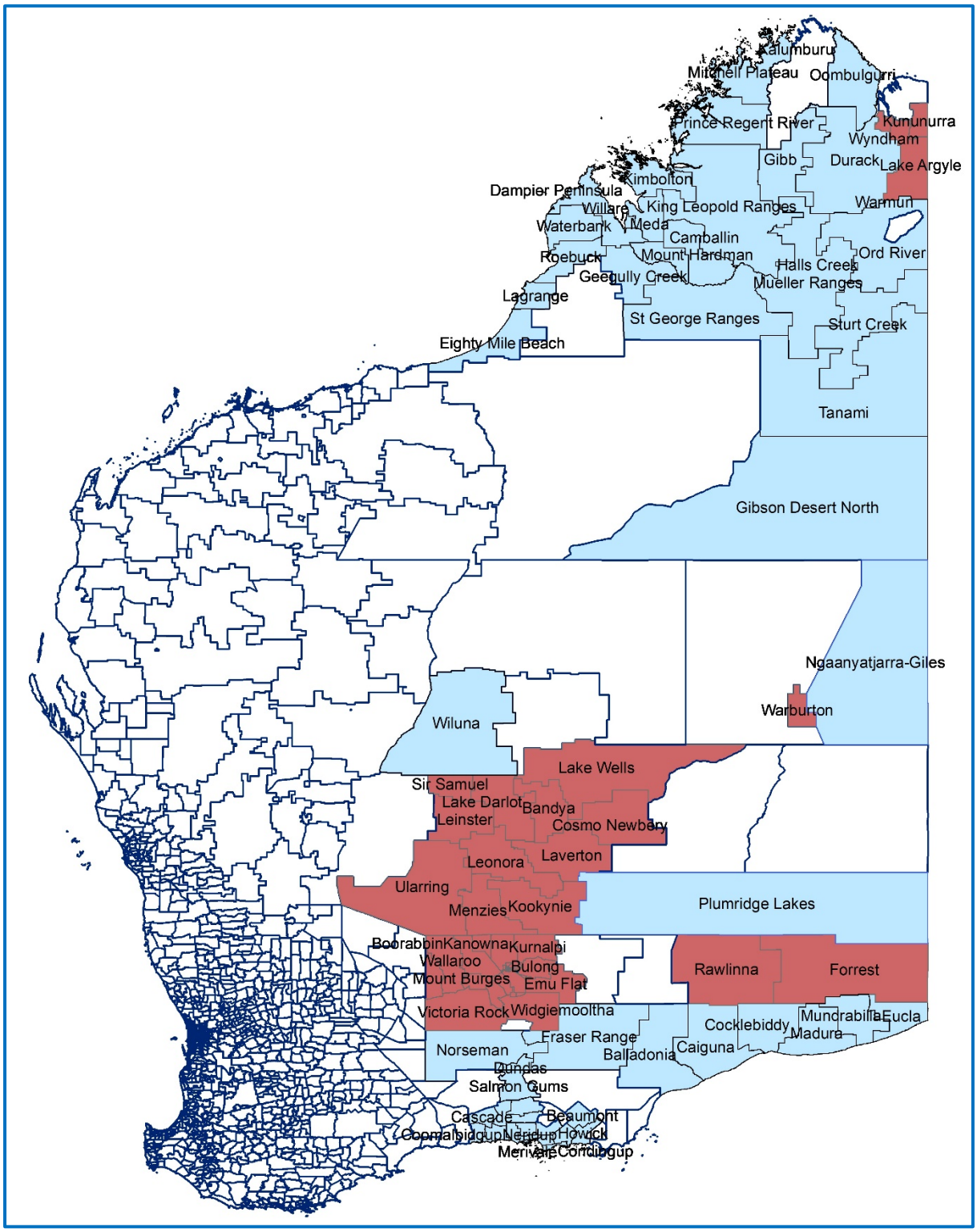


The following figure (Figure 2-28) shows a zoomed out map of WA with both trial sites represented, along with the control suburbs that were used in the analysis. From this map we zoom in separately onto each trial sites, East Kimberley and Goldfields so more detail can be seen.

Note that some suburbs extend through a very large geographical area but have an extremely small population. For instance, Gibson Desert (right hand side of the map) has a population of about 60

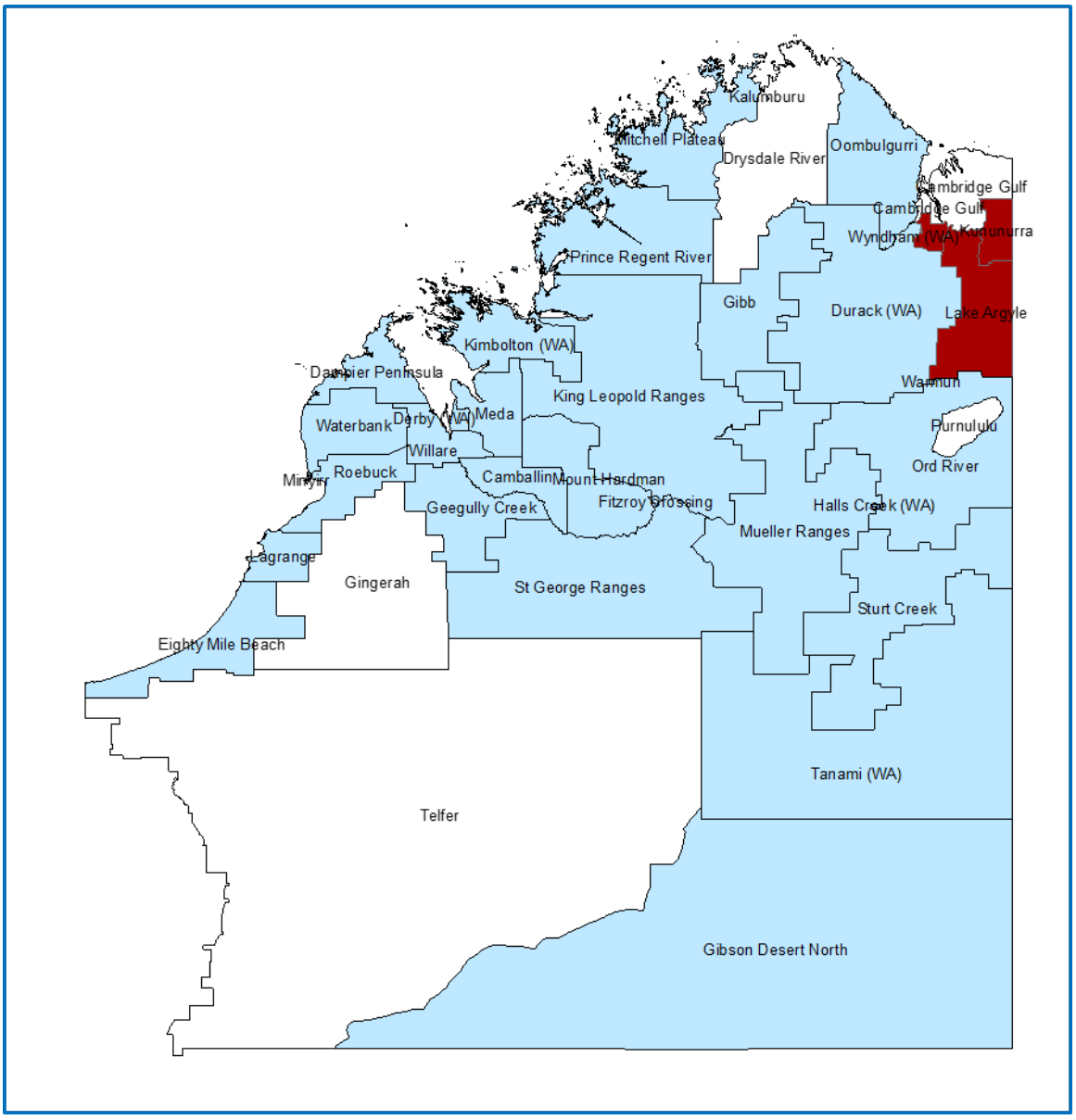
people. Also some of the areas we see in the maps are so-called ‘dry areas’ where alcohol is not sold nor is it permitted to be privately brought. The presence of dry areas contribute to the ‘attraction’ effect some other suburbs may exert which we pointed out above. It is at the origin of increased population temporary movements, especially around the times of school holidays.

Figure 2-28: Mapping of the trial and control suburbs in Western Australia



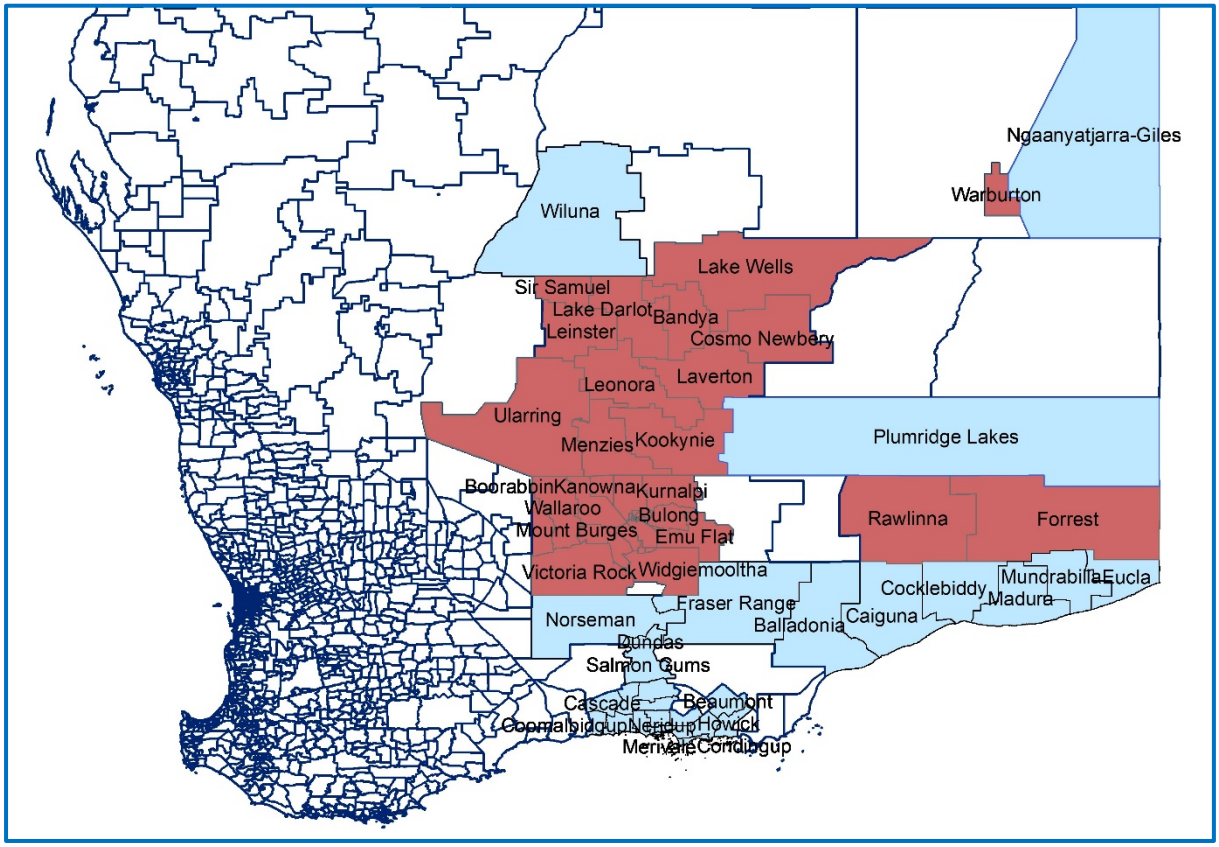
The following map (Figure 2-29) presents the geographical distribution of the trial and control suburbs used in the analysis of the impact of the CDC in East Kimberley. There are only three suburbs included in the East Kimberley trial site. We were able to make up a group of 33 suburbs to use as a control group. Among the control group suburbs, we used Derby and Broome as two places that can be compared, to some extent, with Kununurra. All three places act as what we defined above as 'attractors'. While Broome is much larger than Kununurra (around 14,000 residents compared to about 6,000), both are characterised by large variations in population numbers due to the seasonality of tourism and the presence of a large proportion of seasonal jobs involving the presence of young foreign manpower (backpackers). Derby and Kununurra are very similar with regards to the proportion of Indigenous people living there, even though Derby's population is about half that of Kununurra. Altogether, we find that the control and trial groups of suburbs are satisfactorily comparable.

Figure 2-29: Mapping of the trial and control suburbs in the Kimberleys



Finally, the following map (Figure 2-30) presents the Goldfields area with the trial and control areas being highlighted as in the previous maps. The Police data did not include any suburbs that are comparable to Kalgoorlie in size but we used other, less populated places, like Esperance and neighbouring Castletown, which also have the characteristics of being 'attractors' for people living in a number of neighbouring areas. Altogether, we are satisfied that the control group for the Goldfields area is satisfactory for us to estimate the impact of the CDC for this area.

Figure 2-30: Mapping of the trial and control suburbs in the Goldfields



2.3.3.2 Practical issues associated with the Police data and empirical strategies

The analysis of Police data in the context of the three trial sites faces practical challenges over and above those reported earlier in the report about the use of community data. On the one hand, the outcomes of interest are the number of offences reported by the Police in the localities making up the control and trial groups. The research question requires as much disaggregation of the data as possible. It is important for us to be able to look at types of offences separately rather than just looking at the total number of offences recorded. This means that, for some types of offences, the numbers reported are rather small in comparison to the total population in each locality, making those offences 'rare events' whose time variation is harder to quantify statistically. On the other hand, while the aim is to compare a control and a trial group of localities, the unit of analysis remains the localities. Given that many have a very small population, it is frequent that the Police data does not record any offences (or offences of a given type) for several quarters covered by the data. When they do, it is often a very small number of offences.

These practical issues affect the methodology we adopt in order to find statistical evidence of an impact of the CDC on Police outcomes.

One important consequence of these practical issues is of a more theoretical nature and has to do with what information we are actually trying to tease out of the Police data given the fact that *many localities have no records of offences in some quarters covered by the data* (some localities having more quarters with no records than with records).To overcome this problem, two strategies can be adopted. They are as follows:

Using an unbalanced dataset

We can use the data as it is, using all the available data and using the number of offences as recorded in the Police data. For instance, if locality A has 3 recorded offences in the second quarter of 2016 and 5 on the fourth quarter of 2018 but has no records in all other quarters in the period covered by the data (from 3rd quarter 2014 to the 2nd quarter of 2019), then only two data points will be used in the analysis for this locality. In terms of data structure, the resulting dataset will be an unbalanced panel data set where each locality is present only to the extent of the quarters in which at least one offence is recorded. The underlying assumption from this strategy is that the outcome of interest is the number of offences recorded, not the number of offences that may have actually occurred. In quarters where no offences are recorded for a locality, we implicitly assume that no offence occurred in that quarter there.

Using a balanced dataset

An alternative strategy is to focus the analysis on the number of offences that occurred in the localities included in the data and consider this information as 'latent' that is, not observed by the researchers. What is observed is the number of offences attended by the Police, which we consider to be correlated with the number of offences that actually occurred. Following this strategy, we would consider the absence of a recorded offence in a given locality for some quarter as informative and needing to be explicitly incorporated into the analysis of the impact of the CDC on Police outcomes. The implementation of this strategy would change the structure of the data. Indeed, for quarters where no offences are recorded, the outcome would become 0 and be an integral part of the analysis. The structure of the data would become a balanced panel dataset with 20 observations (the number of quarters available in the Police data) for each localities. Going back to the previous example, locality A's records would include two rows where positive numbers of offences are recorded (for 2016 q2 and 2018 q2) and eighteen rows where a 0 would appear instead. In quarters where no offences are recorded, the statistical model could come up with positive estimates, reflecting the fact that, even though no offences were detected by the Police, some have actually happened.

Pros and cons of the two types of data structures

Methodologically, this second strategy (using a balanced data set) is usually preferable to the first one (using the raw unbalanced data set) since it does not make any a priori assumptions about the number of offences that actually occurred in places and times when none where recorded by the Police. Since both strategies address slightly different questions, we implemented both.

What do we measure exactly?

Given the heterogeneity in terms of population numbers between the localities included in the data, it would make sense to focus the analysis (especially the multivariate analysis) on rates of offences (per thousand of population in each locality, given the small number of offences relative to the population) rather than on the actual number of offences recorded. Yet, because of the small populations observed in some localities, the rates become very spiky even when the number of offences varies little. This greater variability makes the statistical analysis less robust. When we

compared the two possibilities, we did not see a clear preferred option and we chose to implement our analysis using both levels (number of offences in the locality) and rates (per 1,000 population) of offences.

As there is no clear "winner" among the possibilities we have mentioned, we have opted to conduct the full analysis of Police data using all four possible strategies and examine all results that emerge. The four strategies were:

Estimation strategies

(i) *Unbalanced data with number of offences*: We took the Police data as it is (ignoring instances where no offences are recorded for some localities in some quarters) and took the number of offences as the unit of analysis;

(ii) *Balanced data with number of offences*: We transformed the original data into a balanced panel, accounting for instances where localities recorded no offences for some quarters and we took the number of offences as the unity of analysis;

(iii) *Unbalanced data with rate of offences*: implementing the first strategy taking the rate of offences per thousand as the unit of analysis;

(iv) *Balanced data with rate of offence*: implementing the second strategy using the rate of offences per thousand as the unit of analysis.

2.3.3.3 Estimation methodologies

We implemented all four strategies described above for the structure of the data (balanced vs. unbalanced) and the functional form of the dependent variable (in levels vs. in rates per thousand) separately for each offence and for each of the three trial sites. We estimated a number of specifications for the multivariate analysis, each accounting for various issues that may be present in the data. As we show below, we used several econometric models which we know to have more robust properties when encountering data with specific limitations or properties. Again, we do not see a priori a model that would be clearly preferred on all grounds we could think of. Hence, we have estimated several models and assessed and compared their results, primarily in terms of their statistical performance.

In the multivariate analyses we conducted, the estimate of interest was the interaction between the indicator variable identifying localities that are in the trial group (as opposed to being in the control group) and the indicator variable identifying observations that are post-CDC rollout (as opposed to pre-CDC). An indicator variable takes the value 1 for yes and 0 for no (the direction of the question makes no difference for the estimation) and the interaction between two indicator variables is the product of two indicator variables. In the table below, the interaction variable is defined to take the value of zero (not treated) in all cases where the CDC was not present and the value one (treated) in all cases where the CDC is operational. This is the standard definition for this type of estimation.

Table 2-77: Interaction variable: "Treated" versus "Not treated", 'before' vs. 'after' CDC

Treated versus not treated		
	Trial Area (1)	**Control area (0)**
Before the CDC (0)	Not treated (0×1 = 0)	Not treated (0×0 = 0)
After the CDC (1)	Treated (1×1 = 1)	Not treated (1×0 = 0)

Note: The interaction variables and the indicators are part of the explanatory regression variables

For each offence type (distinguishing by trial site), we use a typical z-test to test the hypothesis that the estimation coefficient for this variable is not significantly different from 0. If it is the case (that is the hypothesis cannot be rejected), the result suggests that there no statistical grounds for suggesting that there is a discernible impact of the CDC in the Trial area for a given offence type. In plain speak, "we cannot argue that the CDC influences offence rates". If the coefficient is statistically significant and negative, this suggests that the CDC (and related measures occurring at the same time as the CDC) had a reducing impact on the given offence type as we see a significant decrease in the numbers (or rates) in the trial area, over and above whatever happened at the same time in the control areas. If the coefficient is statistically significant and positive, this suggests that the CDC had an increasing impact of the given offence type as we see a significant increase in the numbers (or rates) in the trial area, over and above whatever happens in the control area.

By implementing all of the 4 strategies described above, we end up with four distinct coefficients of the impact of the CDC (that is four values for the interaction variable) for each offence type and in each trial site. Two other coefficients in the models are interesting to look at, namely (i) the estimated coefficients for the indicator variable identifying the observations that belong to localities within the trial group, and, (ii) the estimated coefficients for the indicator variable that identify observations that are post-CDC rollout. The first one, tests whether, everything else held constant, the number of offences (or rate depending on the strategy) was significantly larger in the trial areas prior to the rollout of the CDC. The second tests, in general, whether there is a 'break' post-CDC rollout. It indicates whether there is a difference between the pre-CDC and the post-CDC rollout years (common to both trial and control areas).

What estimation model?

As mentioned above, we implemented a number of specifications, which aimed at testing and correcting for potential statistical biases that may 'pollute' the estimates of the coefficients of interest. Some of these specifications explicitly account for observed (and unobserved, time invariant) differences across localities so we can make relevant comparisons between two groups that have been made statistically comparable. Other specifications aim to account for specific practical issues related to the data and raised in our reporting. For instance, in the 'balanced' strategy, we test an alternative specification that corrects for the potential biases posed by the large number of 0 offences observed for some localities in some quarters (so called 'negative binomial' specification, see below). Other specifications are grounded in the empirical testing of the policy and relate to the question of when we should expect to observe change. Namely, we may expect that people (including potential offenders, Police force, and other stakeholders) anticipate the rollout of the CDC and modify behaviours prior the actual rollout. In that case we would observe a 'break' in the 'equivalised' data prior to the rollout. Alternatively, we may expect that it may take time after the rollout of the CDC, for some changes to take place (behavioural change, increased Policing, etc.). In the case of this type of delayed response to the policy, we would observe a 'break' in the data some time post-CDC but not

during the CDC rollout quarter. This is what we call an 'adaptation effect'. We implement specifications which are known to work well for testing for anticipation and adaptation effects.

Listing the types of models we used

Altogether, for each offence type in each site (East Kimberley plus control; Goldfields plus control; Ceduna plus control), we implemented the following specifications:

(i) Basic Difference-in-difference model (without controls): Simplest specification, whereby we pool the data (ignoring the panel structure of the data) and estimate a basic model with three variables on the right hand side: CDC (indicates localities that belong to the trial group), POSTCDC (indicates observations that are post-CDC), and the variable of most interest, IMPACT (corresponding to CDC x POSTCDC). Given the basic structure of this estimation and the fact that we do not control for any differences between localities, this specification reverts to a basic descriptive exercise where we look at whether differences exist between the two groups pre- and post-CDC and whether the differences observed post-CDC significantly differ from the differences observed pre- CDC. In general, these estimates are potentially heavily biased so we do not over interpret them. They just tell us whether the lay person would infer an impact from just looking at the data in a univariate way.

(ii) Difference-in Difference (with controls): In this specification, we still ignore the panel structure of the data by pooling all observations. However, in addition to the 3 variables of interest (CDC, POSTCDC, IMPACT), we add a number of 'controls' which aim to make the localities composing each group more comparable. We account for differences such as the population size, the age composition of the population, the rate of employment, the proportion of people identifying as indigenous, the proportion of the population whose income is around the poverty level, the distribution of the employed population across industries, etc. We also account for time 'shocks' that may be observed throughout the observation window of the data. This specification remains very basic but tell us where significant differences exist between the localities composing each group about their socio-demographic observable characteristics.

(iii) Fixed effects with time dummies: This specification is the first one that explicitly accounts for the panel structure of the data and uses it in order to control for additional differences that may exist between the localities composing each group but which cannot be observed by the researcher. In this basic specification, we use what we call a fixed effect in order to 'cancel out' all time invariant differences between localities composing each group (whether observed or non-observed). Doing so, we do not try to see where the differences across localities stem from, we only concentrate on the three estimates of interest. In this specification, we include 'time effects' in order to account for 'time shocks' in the data, like we do in the previous specification.

(iv) Random-effects with time dummies: This specification is an alternative to the previous one whereby we model the 'unobserved' differences across localities in a slightly different way. Without entering into the technical detail of the method, this specification allows us to re-introduce in the regression the socio-demographic variables which allows us to control explicitly for the observed differences between localities. It is potentially a more interesting specification from the point of view of the richness of the estimation results. This is because, by including the socio-demographic variables, we can see which characteristics are significantly different across the two groups given the offence type we focus on. At the same time, the random effect allows us to control for time invariant 'unobserved' characteristics between localities. In this specification and throughout all others (unless otherwise stated) we include time dummies to control for 'time shocks or trends'. This specification, would potentially be the preferred specification from which we would interpret the estimates of

impact. However, there is a particular assumption that we need to make in order to estimate this model. In a nutshell, we need to assume that the random effect is exogenous (as in uncorrelated with the right hand side variables we include in the model). Without going into details, this assumption can be problematic if it does not hold. Therefore we implement the next specification and implement a number of additional tests aimed at telling us whether this fourth specification is acceptable or not.

(v) Random-effects with time dummies and Mundlak correction terms: This specification allows us to estimate a random effects model while correcting for the potential bias that specification 'iv' may have due to the non-fulfilment of the hypothesis mentioned above. We estimate this specification and test for the significance of the Mundlak correction terms. If we find that these Mundlak correction terms are not significant, then this specification does not significantly improve on 'iv', meaning that we can potentially prefer the previous (more parsimonious and, thus preferred on many grounds) specification. Further we perform a number of additional tests in order to determine whether it is preferable to use fixed or random effects specifications (Hausman tests).

(vi) Random effects with leads and lags: We used this specification in order to explore if there are either anticipation or adaptation effects that can be captured by the impact estimates. Results for all offences considered and in each trial site, do not report the presence of such effects in the Police outcomes.

(vii) Dynamic Arellano-Bond estimator: we used this specification in order exploit time patterns within the window of observation of the data so as to estimate the response to the CDC rollout while, at the same time, controlling for permanent unobserved confounding variation. This specification controls for unobserved time invariant differences across localities and for time variant unobserved heterogeneity. In practice, this method is more data 'hungry' and we found that the limitations in the Police data at hand made its implementation challenging, with results being less trustworthy than from the previous specifications. Over time, as the number of observations increase (especially post-CDC), this specification may be worth implementing in order to get new impact estimates.

(viii) Negative Binomial: As stated above, we implemented this specification for the two 'balanced panel' strategies in order to cope with potential biases that may arise due to the large number of zero offences observed in some localities for some quarters. It is known in the technical literature that this type of specification generates biased estimates when the sample is relatively small. Our observation with the Police data was that the sample was too small for us to trust the results obtained through this specification.

Estimations output

Altogether, we estimated using four strategies and eight model specifications (3×8 = 32) for all nine offences recorded in the WA Police data for the two WA sites (32×9 = 288 for East Kimberley and 32×9 = 288 for the Goldfields) and for all six offences recorded in the SA Police data (32×6 = 192 for SA) making for a total of 288 + 288 + 192 = 768 estimates on which our results are based.

After careful consideration of these results we concluded that given the research questions addressed, the types of offences considered, and the available data, the preferred specifications from which the impact estimates were reported for each strategy were specifications (iv) or (v).

2.3.3.4 Results: do we find an impact of the CDC rollout onto Police outcomes?

An overview of our results

- Strategy (i), *Unbalanced data with number of offences,* worked best. Our experience with the Police data showed that, on balance, more robust estimates of the impact of the CDC on Police outcomes are obtained with the first strategy (i) compared with the other three.
- Globally, we note that each strategy provides different level of significance about the impact of the CDC on Police outcomes. Indeed, we may find a significant impact when the unit of analysis is the number of offences but not when we move the focus to the rates per thousands (and vice versa). Likewise, we may find some significant impacts when we ignore the instances where localities do not have any records of offences for some quarters (unbalanced panel), while we do not when we relax this assumption (thus using balanced panel) and vice versa.
- With the exception of domestic violence in the East Kimberley site where all strategies provide us with consistent estimates, the lack of consistency between each strategy suggest that one should not over-interpret the results of the analysis of Police data. For each strategy, we implement a number of model specifications and report the results from the 'preferred' specification (see appendix for results derived from alternative strategies).

a) Domestic Violence

In East Kimberley, we find that the number of offences related to domestic violence has significantly increased in the Trial area since the rollout of the CDC. This result is consistent across all strategies used for the analysis. Looking at the offences in level, we find that the number of domestic violence offences has significantly increased in both control and trial areas. Yet, we find that the increase is significantly larger in the trial localities compared to the control localities (an extra 42 offences post-CDC in the trial area, compared to an extra 23 in the control area). We observe that the number of domestic violence offences were not significantly different between control and trial areas prior to the CDC rollout, the patterns started to diverge right after the implementation of the CDC.

The following figures (Figure 2-31 and Figure 2-32) show the mean number of offences (converted per thousand) by quarter for each group. The first figure (Figure 2-31) shows the means per quarter as it is available in the Police data. The second figure (Figure 2-32) shows how these means change as we account for differences across localities composing each group that is after the localities have been equivalised using the estimates obtained through the preferred model specification.

Figure 2-31: Observed mean offences (per thousand) per quarter, Domestic Violence, control vs. trial localities, East Kimberley

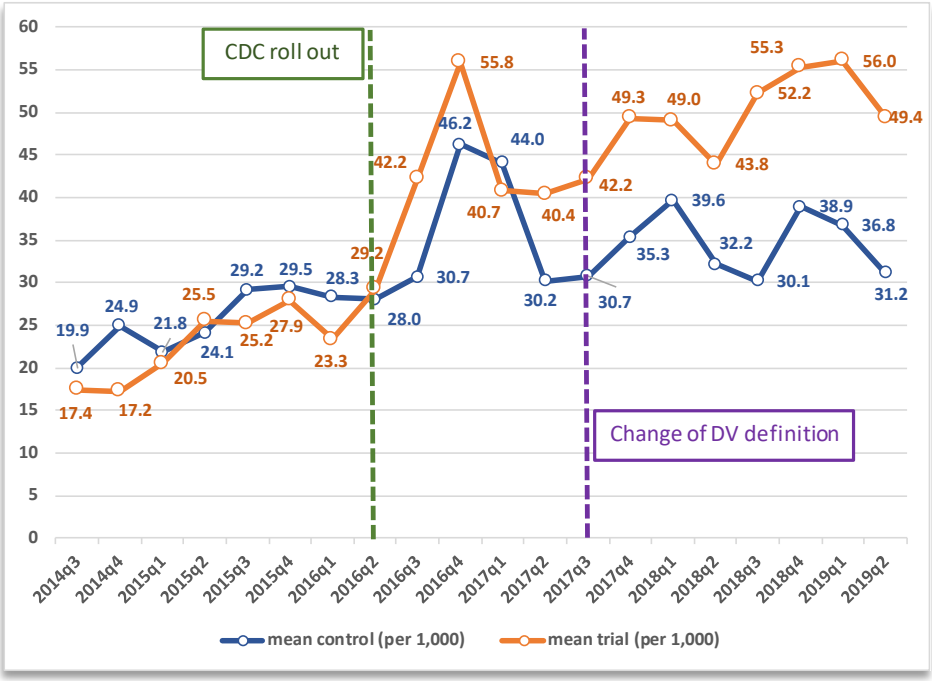
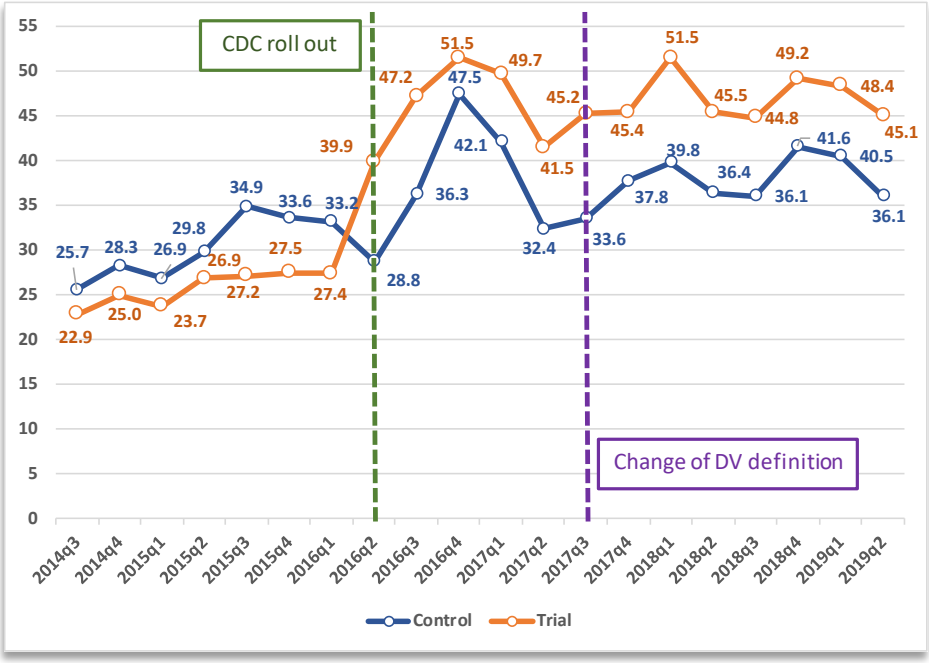


Figure 2-32: Equivalised mean offences (per thousand) per quarter, Domestic Violence, control vs. trial localities, East Kimberley



The following table summarises the results by displaying the mean number of offences (per thousand) pre- and post-CDC rollout for the control and trial localities in East Kimberley. We display both the raw data as available in the original Police dataset and the means computed after equivalising localities composing each group. The equivalised means clearly show an increase in the rate of domestic violence (per thousand) post-CDC rollout both in the control and trial localities, but more so in the trial areas.

Table 2-78: Mean domestic violence (per thousand) pre- and post-CDC roll out, control vs. trial, East Kimberley

	Mean domestic violence offences (per thousand) – East Kimberley			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	25.4	22.4	30.3	25.8
Mean post-CDC	34.9	46.6	37.6	46.5

In the Goldfields, the results are more contrasted. Looking at offences in levels using the unbalanced strategy (ignoring localities with zero offences recorded in some quarters) we find a significant and small impact estimate of the CDC on the trial areas. According to these estimates, the number of domestic violence offences pre-CDC rollout was not significantly different between the control and trial areas (see second, equivalised means, figure, Figure 2-34). Post-CDC the number of offences per thousand is larger in the trial area compared to the control area by about three offences per thousand. We note that the estimates of impact are smaller and not statistically significant using the other three estimation strategies. This weakens the results reported for the Goldfields.

The following figure (Figure 2-33) shows the descriptive statistics by quarter for the control and trial areas. It is followed by the figure representing the equivalised mean rate of offences per thousand (Figure 2-34), which account for observed and unobserved differences across the localities composing each group. The second figure illustrates clearly the finding that no significant differences were present between the two groups pre-CDC rollout and highlights the small significant differences that appears post-CDC.

Figure 2-33: Observed mean offences (per thousand) per quarter, Domestic Violence, control vs. trial localities, Goldfields

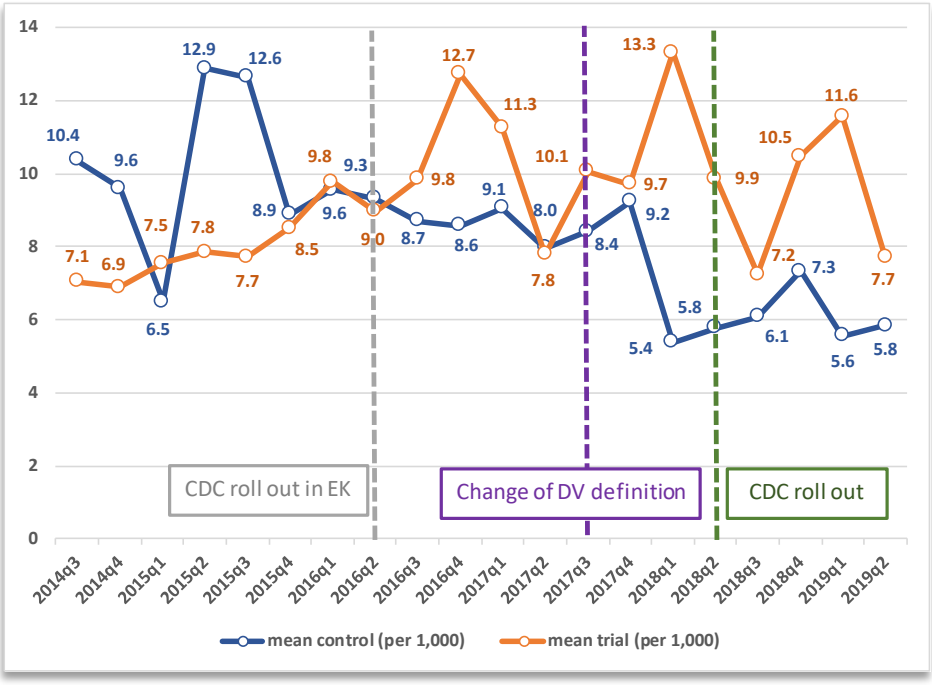
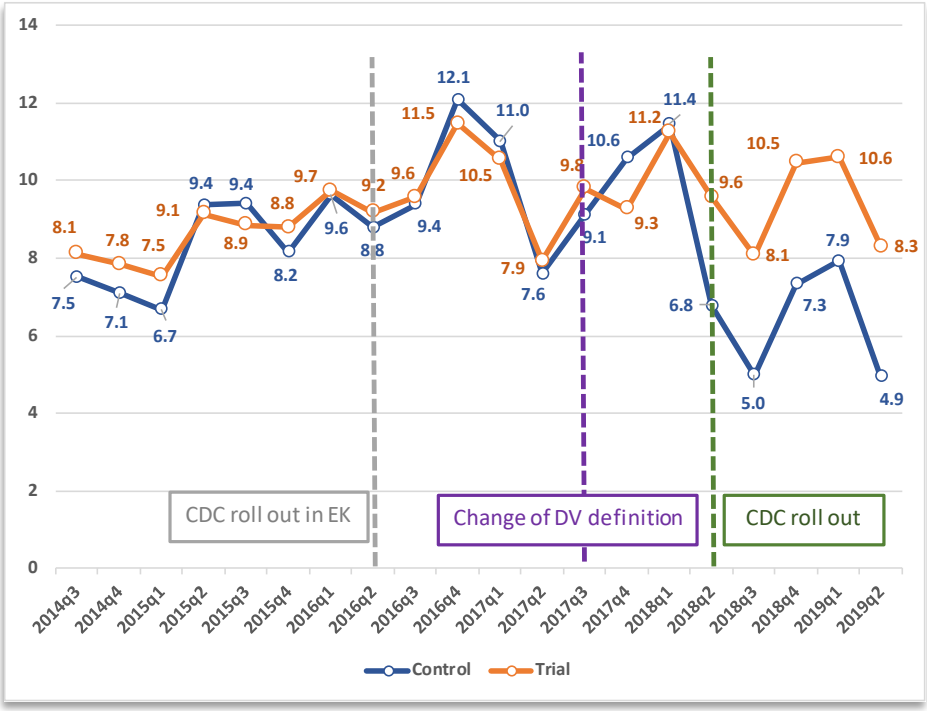


Figure 2-34: Equivalised mean offences (per thousand) per quarter, Domestic Violence, control vs. trial localities, Goldfields



The following table summarises the results for the Goldfields by displaying the mean number of offences (per thousand) pre- and post-CDC rollout for the control and trial localities. We display both the raw data as available in the original Police dataset and the means computed after equivalising localities composing each group.

Table 2-79: Mean domestic violence (per thousand) pre- and post-CDC roll out, control vs. trial, Goldfields

	Mean domestic violence offences (per thousand) – Goldfields			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	9.1	9.3	9.2	9.3
Mean post-CDC	6.1	9.4	6.4	9.4

The information about domestic violence was not available in the suitable format for us to conduct a thorough analysis for SA, as explained above so we cannot make any statement for Ceduna and surrounds.

b) Drug offences

The analysis of drug offences observed at community level did not allow us to find any impact of the CDC (and accompanying measures) in East Kimberley one way or the other. Whichever strategy used for the estimations, the coefficient associated with the impact is not statistically significant. What the multivariate analysis (using the number of offences in levels) tells us is that the number of drug offences (per thousand) is significantly smaller in the trial areas compared to the control areas both pre- and post-CDC rollout without showing discernible changes over time post-CDC. This observation is consistent with insights provided by the individual survey participants in the East Kimberley site where alcohol is identified as the drug causing the most problems in the communities rather than other types of drugs (at odds with survey respondents living in the Goldfields).

For reference, the following figure displays the mean number of offences (converted in per thousand) per quarter for both control and trials areas as it is available in the 'raw' Police data. It is followed by the 'equivalised' estimated means computed from the preferred model and highlights with greater clarity the differences between control and trial areas throughout the window of observation of the Police data.

Figure 2-35: Observed mean offences (per thousand) per quarter, Drug Offences, control vs. trial localities, East Kimberley

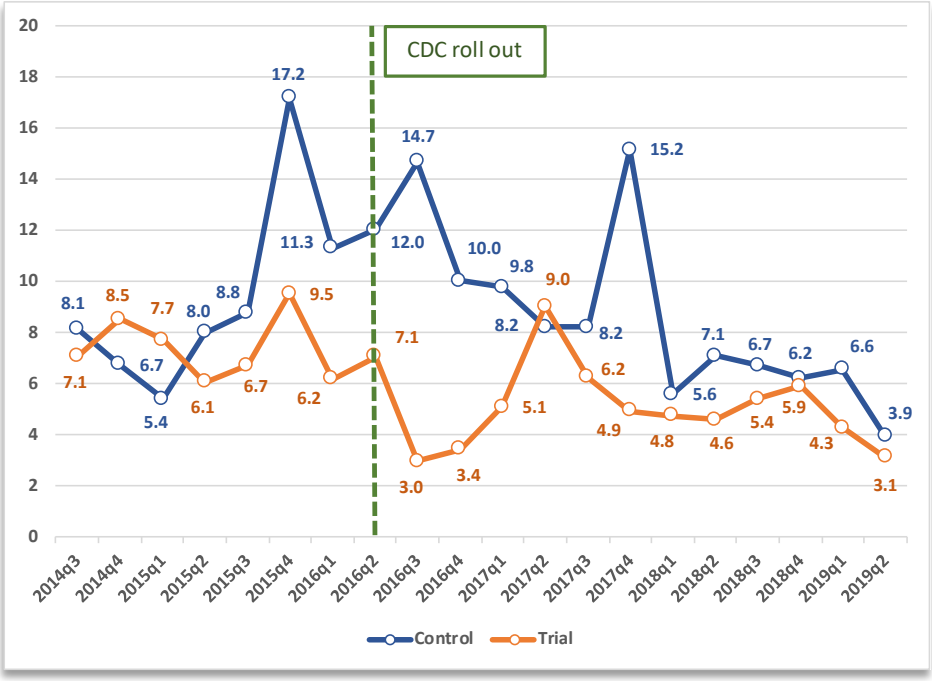
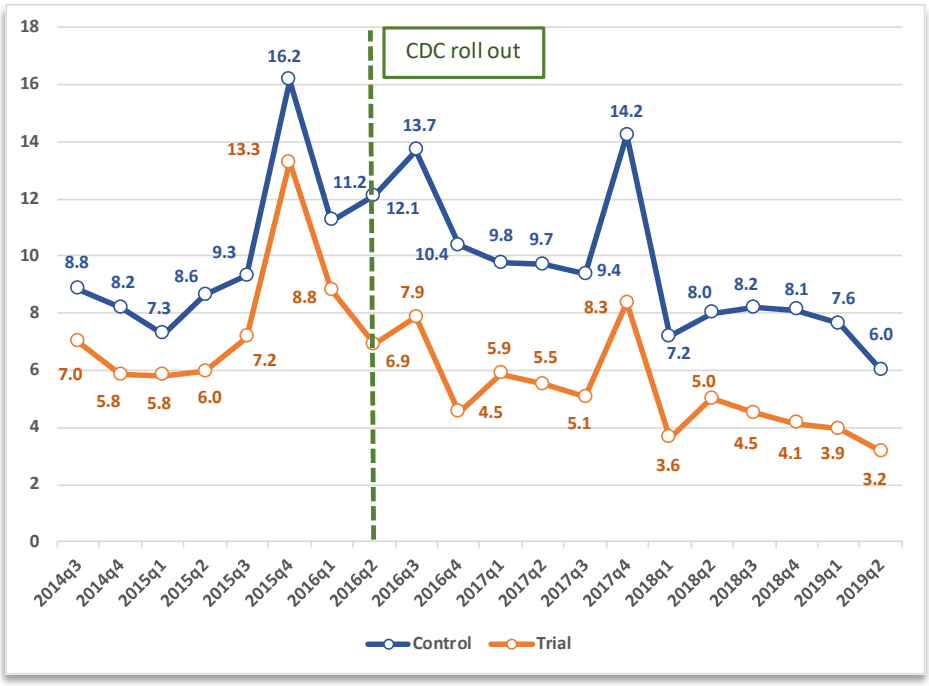


Figure 2-36: Equivalised mean offences (per thousand) per quarter, Drug Offences, control vs. trial localities, East Kimberley



The following table provides summary information about the differences between the control and trial areas about drug offences pre- and post-CDC rollout both based on the raw data and the equivalised data based on the data in levels. It highlights the lower rates in the trial area pre-CDC rollout and also shows the comparatively larger decrease in the trial area post-CDC. Nevertheless, these differences do not show a significant impact in our multivariate analysis, no matter which estimation strategy is implemented.

Table 2-80: Mean drug offences (per thousand) pre- and post-CDC roll out, control vs. trial, East Kimberley

	Mean drug offences (per thousand) – East Kimberley			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	9.4	7.4	9.9	7.7
Mean post-CDC	8.8	5.1	9.6	5.3

The analysis of drug offences for the Goldfields trial site provides contradicting results depending on the strategy implemented. When the analysis is conducted on data in levels (both balanced and unbalanced data), we fail to find a statistically significant impact of the CDC on this type of offences. In contrast, when the analysis is conducted using the rates per thousand as the unity of analysis, we find a positive impact, suggesting that the rate of offence has increased in the trial areas post-CDC more so than in the control area. Yet, our interpretation of these results is that they should be taken with caution as the rates per thousand display much greater variability due to the nature of the data (as stated above). Given that the profiles of the observed rates of offence shows a spike in 2015 in the

control area, we also conducted the analysis restricting the observations to be after the second quarter of 2016. The results remain unchanged.

We note that the window of observation beyond the CDC rollout is rather limited for all Goldfields Police outcomes. Monitoring these outcomes over time will potentially bring more robust insights as to whether drug offences are reducing post-CDC in the trial areas or not.

The following figure displays the mean number of offences (converted in per thousand) per quarter for both control and trials areas as it is available in the 'raw' Police data. It is followed by the 'equivalised' estimated means computed from the preferred model.

Figure 2-37: Observed mean offences (per thousand) per quarter, Drug Offences, control vs. trial localities, Goldfields

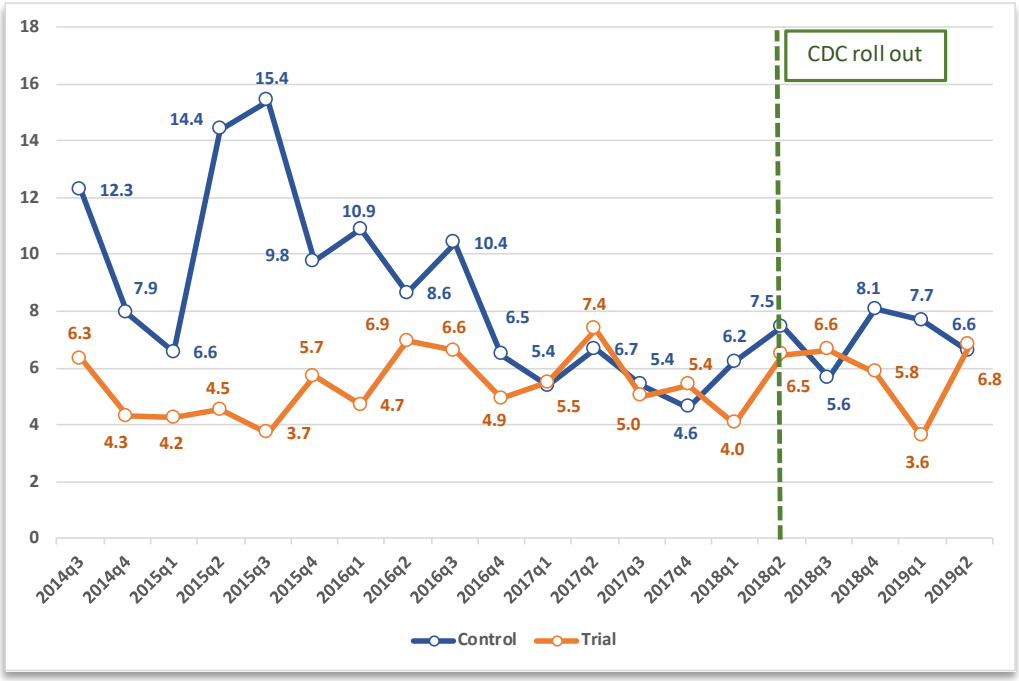
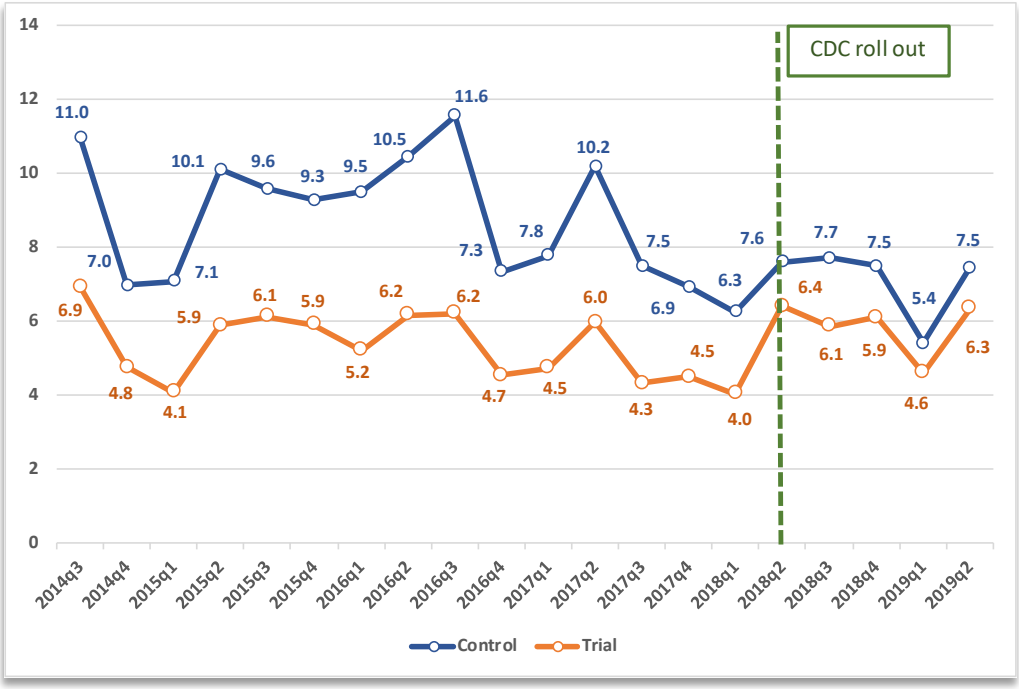


Figure 2-38: Equivalised mean offences (per thousand) per quarter, Drug Offences, control vs. trial localities, Goldfields



The following table provides a summary of the above figures. It highlights the comparatively lower mean rates per thousand in the trial area and shows the slight decrease in the control areas post-CDC and a small increase in the trial area. Nonetheless, these estimations do not indicate a significant impact of the CDC (and related measures).

Table 2-81: Mean drug offences (per thousand) pre- and post-CDC roll out, control vs. trial, Goldfields

	Mean drug offences (per thousand) – Goldfields			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	8.7	5.3	8.8	5.3
Mean post-CDC	7.1	5.9	7.1	5.9

The South Australian Police data as was available to the research team did not allow any analysis of drug offences separately. Hence no impact estimation can be provided for Ceduna and surrounds.

c) Other types of offences: Property Damage, Stealing, Robbery and Burglary

Regarding other offence types, the analysis is inconclusive in the Goldfields trial site. Estimations of impact on offences that relate to (i) Assault, (ii) Disorderly and Threatening behaviour, (iii) Burglary & Robbery, (iv) Stealing (all types), and (v) Property damage, do not provide us with any statistically significant impact of the CDC (and accompanying measures) for any of the empirical strategy used in the Goldfields. Moreover, for these offence types, we do not observe significant changes overtime pre- and post-CDC rollout, nor does it appear that the offence rate significantly differ between control and trial areas.

The picture is slightly different in the East Kimberley where the analysis of offences related to Property Damage and Stealing seems to provide us with possible impact of the CDC. We review these outcomes for East Kimberley below.

Property Damage in East Kimberley

The following table (Table 2-82) summarises the differences between control and trial areas in East Kimberley relating to property damage offences. The first set of columns shows the 'raw' differences observed in the data and the second provides the same information after the localities composing each group are equivalised through the multivariate analysis. The descriptive statistics show that the rate of offence is larger in the trial area both pre- and post-CDC rollout. Furthermore, while the rates seem to have decreased in the control area after the rollout of the CDC, the rates seem to have increased slightly in the trial area. After we equivalise the localities composing each group (right hand side of the table) the differences are smaller but remain. According to the multivariate analysis the remaining differences post-CDC are significant suggesting an impact of the CDC and related measures on this Police outcome. Yet the impact is quite small with an estimated additional nine property damage offences per quarter in the Trial area (1.5 per thousand). Also, the estimate of the impact is significant at the 10 per cent threshold (p value of 0.064). We note that the impact is not statistically significant when the unit of analysis is the rate of offences per thousand.

Table 2-82: Mean property damage offences (per thousand) pre- and post-CDC roll out, control vs. trial, East Kimberley

	Mean Property damage (per thousand) – East Kimberley			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	8.7	5.3	8.8	5.3
Mean post-CDC	7.1	5.9	7.1	5.9

The following figures (Figure 2-39 and Figure 2-40) illustrate the profiles of the property damage offences by quarter for each group, first as given by the raw data, and, second, after time invariant differences across localities are taken into account.

Figure 2-39: Observed mean offences (per thousand) per quarter, Property damage, control vs. trial localities, East Kimberley

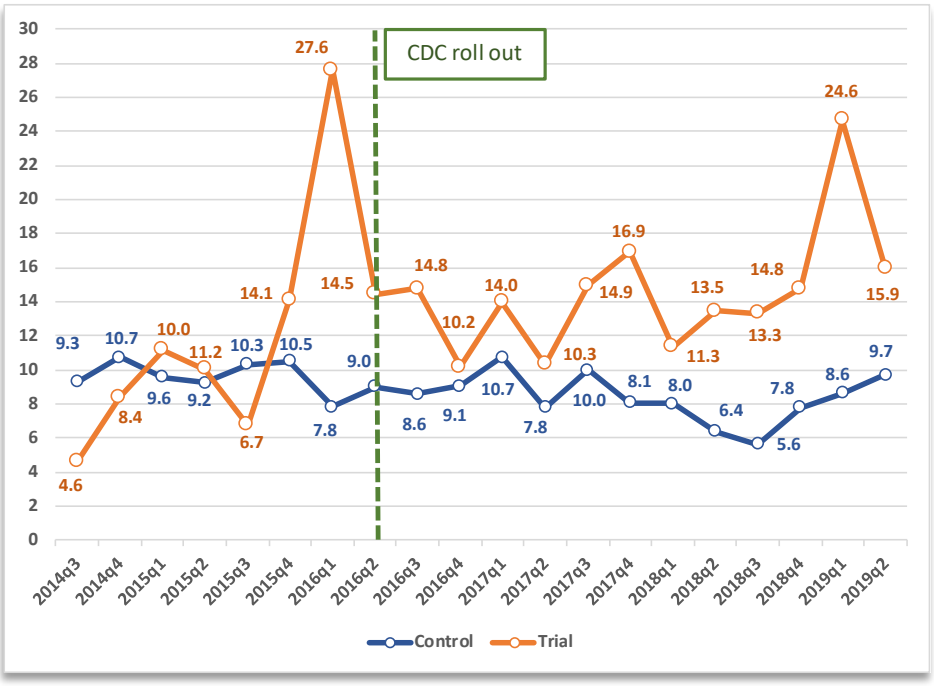
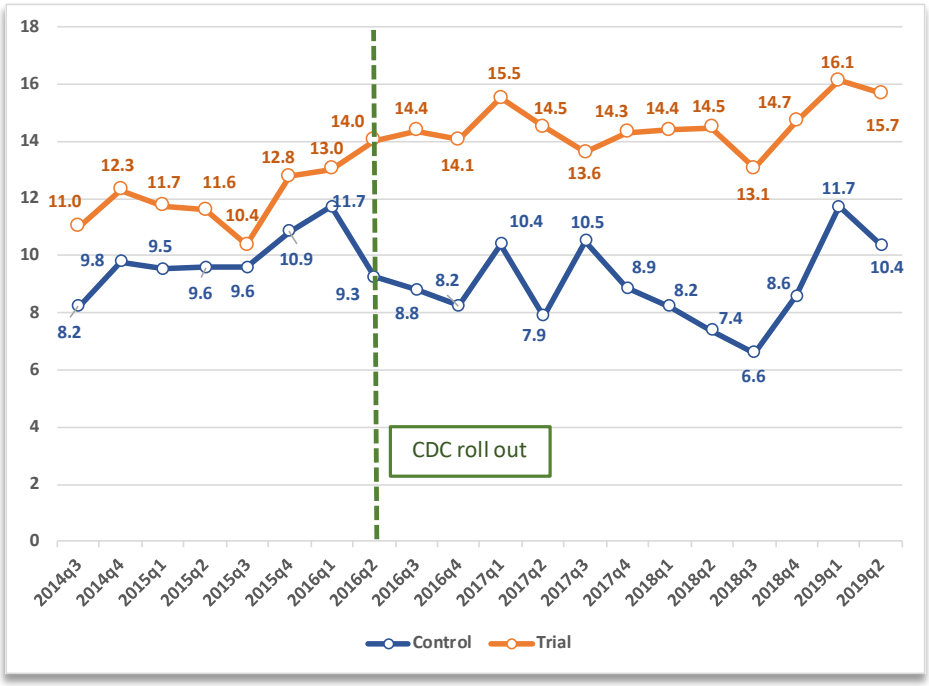


Figure 2-40: Equivalised mean offences (per thousand) per quarter, Property damage, control vs. trial localities, East Kimberley



Property Damage in Ceduna and surrounds

The South Australian Police data allowed us to estimate the impact of the CDC (and related measures) on offences related to property damage. However, the results do not indicate that there is a significant impact to report. The following summarises the differences between control and trial areas relating to property damages offences in Ceduna and surrounds and corresponding control areas using the offences in levels (and converted in rates per thousand). It shows that the mean rates of offence are larger in the trial area both pre- and post-CDC rollout. In both groups of localities, the mean rates slightly decrease. No significant impact of the CDC was detected through the multivariate analysis.

Table 2-83: Mean property damage offences (per thousand) pre- and post-CDC roll out, control vs. trial, Ceduna and surrounds

	Mean Property damage (per thousand) – Ceduna and surrounds			
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	7.7	10.2	7.7	10.4
Mean post-CDC	7.2	10.0	7.3	9.6

All Stealing: including Burglary, Robbery, Stealing, and Stealing of Motor Vehicle in East Kimberley

In the following table we summarise the differences between control and trial areas in East Kimberley relating to Stealing offences defined broadly to include both stealing, burglary and robbery. The first set of columns shows the 'raw' differences observed in the data and the second provides the same information after the localities composing each group are equivalised through the multivariate analysis. The descriptive statistics show that the rate of offence was comparable between control and trial localities prior to the rollout of the CDC. Post-CDC rollout, the number of offences has significantly increased in both areas, more so in the trial localities. This observation remains after the time invariant differences between localities have been explicitly controlled for in the multivariate analysis. We note, as it is illustrated in the following figure, that there is an unexpected spike in the number of offences in the trial site on the first quarter of 2019. The presence of such a spike was taken into account in the multivariate analysis. Still the observation that the number of offences has significantly increased post-CDC more in the trial area than in the control localities remains. Like for Property Damage, the estimated impact of the CDC is significant at the 10 per cent level (pvalue: 0.059). The estimate suggests that the number of offences has increased in the trial area by around 20 offences (3.3 per thousand). However, we only find evidence of an impact through the analysis of offences in levels. The estimates are not significant when we focus on the rate per thousand as the unit of analysis.

Table 2-84: Mean stealing offences (broad definition, per thousand) pre- and post-CDC roll out, control vs. trial, East Kimberley

Mean Stealing offences (broad definition, per thousand) – East Kimberley				
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	22.7	20.8	25.4	21.8
Mean post-CDC	26.2	30.8	28.1	30.9

The following figures (Figure 2-41 and Figure 2-42) illustrate the profiles of the stealing offences by quarter for each group, first as given by the raw data, and, second, after time invariant differences across localities are taken into account. The latter figure shows the transition that occurs one quarter prior to the rollout of the CDC whereby the mean rates become larger in the trial area compared to the control localities and remains slightly higher post-CDC rollout.

Figure 2-41: Observed mean offences (per thousand) per quarter, Stealing (broad definition), control vs. trial localities, East Kimberley

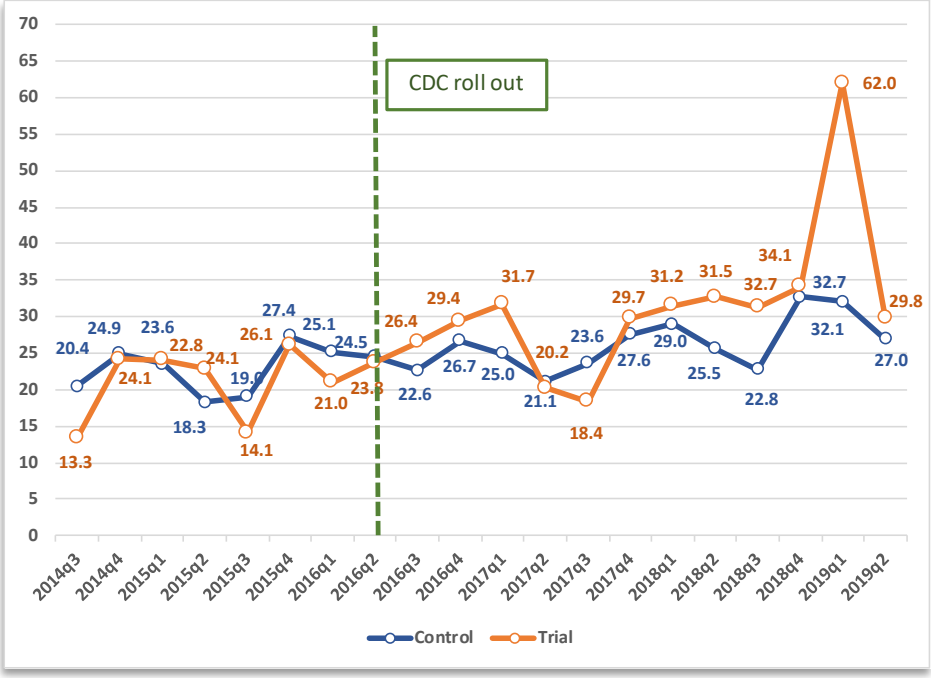
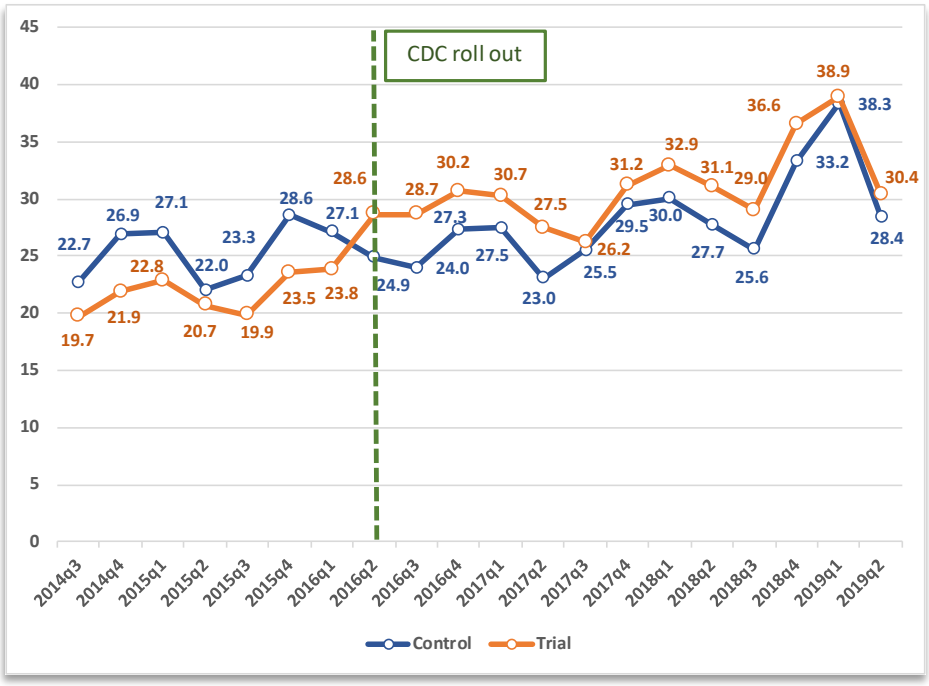


Figure 2-42: Equivalised mean offences (per thousand) per quarter, Stealing (broad definition), control vs. trial localities, East Kimberley



Theft offences in Ceduna and surrounds

In SA, the SAPOL level 2 reporting allows one to analyse offences related to theft, which is the rough equivalent of the stealing offences analysed previously for East Kimberley. The multivariate analysis shows that there is a small negative impact of the CDC (and related measures) on this police outcome, suggesting that the number of theft offences has slightly decreased in the trial area as a result of the implementation of the CDC (and other measure). We find this significant impact in the two strategies using offences in level (both balanced and unbalanced panel). However, when the theft offences are analysed in rates per thousand we do not find a significant impact of the CDC, which slightly weakens the results.

In the following table (Table 2-85) we summarise the differences between control and trial areas in Ceduna and surrounds relating to theft offences. The first set of columns shows the 'raw' differences observed in the data and the second provides the same information after the localities composing each group are equivalised through the multivariate analysis. The descriptive statistics show that the rate of offence was larger in the trial localities prior to the rollout of the CDC. Post-CDC rollout, the number of offences has significantly decreased in the trial area while it has remained relatively constant in the control areas. This observation remains after the time invariant differences between localities have been explicitly controlled for in the multivariate analysis (right hand side columns). The estimated impact of the CDC is significant at the 5 per cent level. The estimated coefficient for the interaction term between CDC and POSTCDC which we denoted IMPACT (see Section 2.3.3.3 above) is -2.06, suggesting a modest decrease in the number of theft offences in the trial areas by an average of 2 offences. Given the population of Ceduna and surround, this represents a small impact of 0.3 theft offences per thousand less due to the CDC (and related measures).

Table 2-85: Mean theft offences (per thousand) pre- and post-CDC roll out, control vs. trial, Ceduna and surrounds

Mean Stealing offences (broad definition, per thousand) – Ceduna and surrounds				
	Observed ('raw')		Estimated (equivalised)	
	Control	Trial	Control	Trial
Mean pre-CDC	6.6	9.8	6.5	9.5
Mean post-CDC	6.3	6.0	6.3	6.3

The following figures (Figure 2-43 and Figure 2-44) illustrate the profiles of the theft offences by quarter for each group, first as given by the raw data, and, second, after time invariant differences across localities are taken into account. We note that the data in the trial areas shows some spikes throughout the period of observation (Figure 2-43), even after equivalising for differences across localities that make up each group (Figure 2-44). Immediately after the CDC rollout, the profile of the rate of offences (per thousand) in the trial area becomes similar to that of the control, with less spikes and a rate around 6.5 per thousand. Yet, we observe two more spikes in the third quarter of 2017 and 2018. We are not aware of any circumstances that may have occurred during these quarters for the rates to spike in the trial area. We note that the specification of our model accounts for time effects, including for those quarters. These estimates tell us that, everything else held constant, the number of offences significantly increased by about 2.3 offences in these two quarters. Nevertheless, the overall impact of the CDC (and related measures) on theft in Ceduna and surrounds is one where the mean rate of offences has decreased slightly.

Figure 2-43: Observed mean offences (per thousand) per quarter, Theft, control vs. trial localities, Ceduna and surrounds

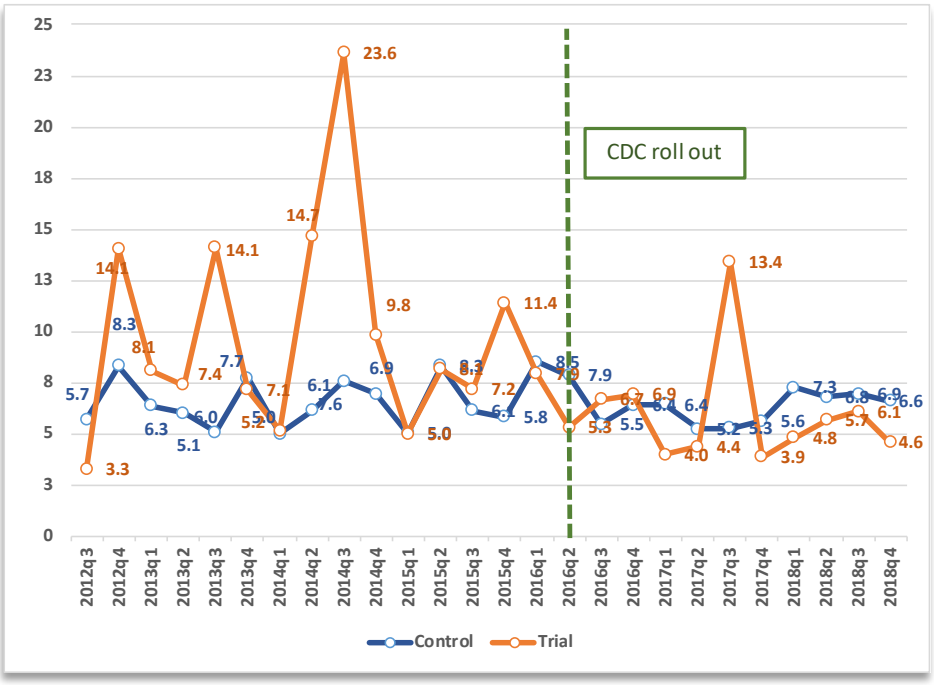
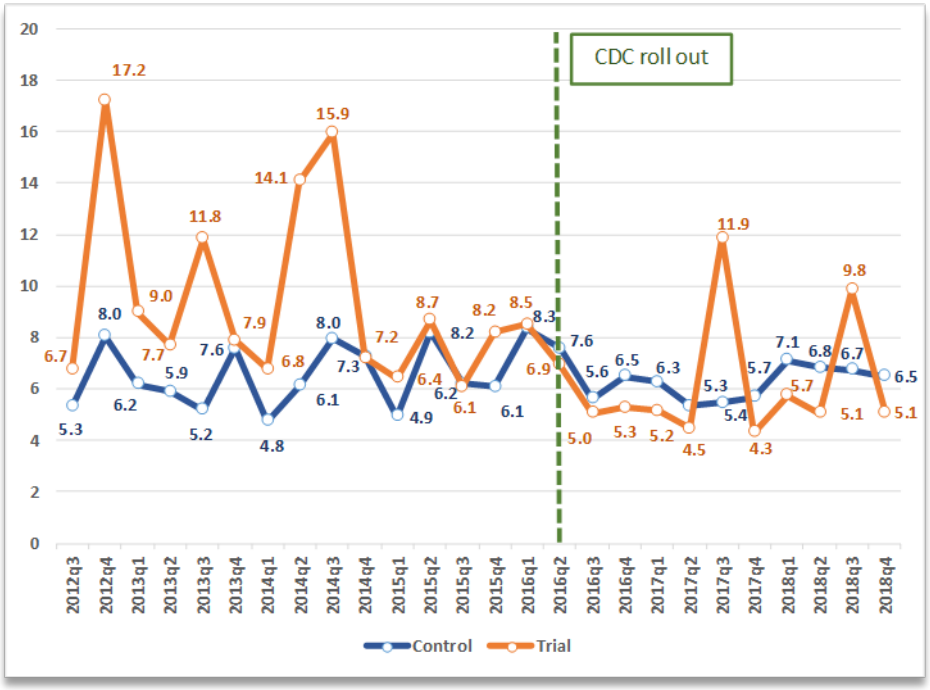


Figure 2-44: Equivalised mean offences (per thousand) per quarter, Theft, control vs. trial localities, Ceduna and surrounds



d) Summary of the estimation results on the impact of the CDC on Police outcomes

In this subsection, we summarise the results we obtained using the Police data in the three trial areas by displaying summary tables similar to the one reported in the Consolidated report (see Table 5.16 in the Consolidated report). These summary tables report, for each type of offence analysed and for each trial site, the estimate of the so called 'IMPACT' coefficients which indicate the extent to which the CDC (and related measures) impacted on each type of offence. Where the estimate is significant, we translate the estimated coefficient into a change in terms of rate per thousand. We display these results through two tables, distinguishing between WA and SA because of the differences in terms of the Police reporting of offences in the two states (see Section 2.3.3.1).

The following table (Table 2-86) displays the estimates for Goldfields and East Kimberley. The estimates reported correspond to those obtained through using the first strategy that is using the unbalanced panel (ignoring the instances where no offences are observed in some localities) and taking the offences in levels. The appendices provide the same tables for all three other estimation strategies (see Table A 4-2 to Table A 4-4). Note that only the estimates for Domestic Violence in East Kimberley consistently show an impact of the CDC (and related measures) across all four estimation strategies. For the other estimates that are significant in the table, we do not find a significant impact with the two strategies using the rates per thousand as the dependent variable, which weakens the results.

Table 2-86: Estimated impact of the CDC on police outcomes, East Kimberley and Goldfields trial sites

Estimated impact of the CDC on police outcomes in the Goldfields and East Kimberley				
	Goldfields		East Kimberley	
Type of offence	**Estimate**	**(per 1,000)**	**Estimate**	**(per 1,000)**
Domestic violence	3.14*	**0.09**	42.46***	**6.73**
Assault	-0.54		0.53	
Burglary, robbery	0.34		6.18	
Disorderly conduct/threatening behaviour	-1.05		0.32	
Drug offences	1.67		-6.75	
Property damage	-1.39		9.30*	**1.47**
Stealing	0.09		10.27*	**1.63**
All stealing (incl. burglary, robbery, motor vehicles)	-0.60		19.93*	**3.16**

*Note: The significance level of the impact estimates is denoted by *** for p<0.01, ** for p<0.05 and * for p<0.10.*

Table 2-87: Estimated impact of the CDC on police outcomes, Ceduna and surrounds trial site

Estimated impact of the CDC on police outcomes in Ceduna and surrounds		
Type of offence	**Estimate**	**(per 1,000)**
Fraud, deception and related offences	-0.07	
Acts intended to cause injury	0.158	
Offences against the person	0.669	
Property damage and environmental	-0.575	
Robbery, Theft and related offences	-2.060**	**0.27**
Serious criminal trespass	-1.935*	**0.26**

*Note: The significance level of the impact estimates is denoted by *** for p<0.01, ** for p<0.05 and * for p<0.10.*

2.3.4 Descriptive statistics of other community outcomes

This section provides a selection of community outcomes that could potentially be useful for an impact evaluation of the CDC, should the data eventually become useable for such an exercise.

At the moment, the data made available to us does not allow any impact estimation to be conducted for the reason highlighted previously, namely:

- It does not fulfil the criteria highlighted in Section 2.3.1. Notably because the data is only available for the trial sites (no control suburbs available),
- The window of observation of the data is not adequate. For instance, some outcomes are available starting only at the time of the rollout in the trial sites and therefore lack of historical information allowing one to see trends pre- and post-rollout.
- The frequency of the data collection is not adapted to a statistical analysis. For instance some data is only available yearly.

- Some outcomes are intrinsically long to very long term outcomes. As such no changes could possibly be detected at this stage of the CDC though this evaluation. However, they should be monitored regularly as they could be relevant for later evaluations.

Nevertheless we investigated all the information sent to us by the States in order to determine which outcomes could be relevant for an evaluation of the CDC. This section gives a selection of some of them which we found to be relevant and worth monitoring. When relevant, we give suggestions as to how the data could be improved so the corresponding outcomes become part of a later evaluation.

2.3.4.1 Drink driving and drug and alcohol services

Since one of major objective of the CDC policy is to reduce social harm associated with the consumption of drugs and alcohol, the number of drink driving charges from the Police is an obvious candidate as an outcome that should be monitored. Also, Drugs and Alcohol Services in various locations collect information that could be useful. This latter source of information is unlikely to ever fulfil the four criteria established above to be used independently for an impact analysis because the data collection is not generalised and harmonised throughout each locality in each state. However, the information can be triangulated with other sources coming from either the qualitative or quantitative methodologies of the evaluation, providing context insights about alcohol abuse in the trial sites.

2.3.4.2 Drink driving

We have already established that the Police data is very useful in the context of the evaluation because the data is collected and made available in such a way that informative statistics, and possibly impact estimations, can be implemented. However, we have also established that the three trial sites are characterised by their remoteness. As such, it is difficult to conduct such analyses due to the small number of observations in many suburbs for some quarters. Because of this remoteness characteristics, we have already struggled to conduct statistically robust analyses of broader categories of offences. Drink driving is too specific for us to conduct the same type of analysis as we did in the previous subsection. In more 'urban' trial sites where the population is larger, such decomposition of broad categories of offences into more specific ones would be possible. In the meantime, it is worth monitoring the general trend of drink driving in the trial site as a whole (no decomposition into suburbs), keeping in mind that, whether increasing or decreasing, the trend will not inform us about any impact of the CDC.

The following figure illustrates such trend in the number of drink driving charges in the Kimberleys and in the Goldfields-Esperance area. Both graphs are displayed on the same scale in order to illustrate the differences in the number of those charges between the two areas.

Figure 2-45: Drink driving charges Kimberley

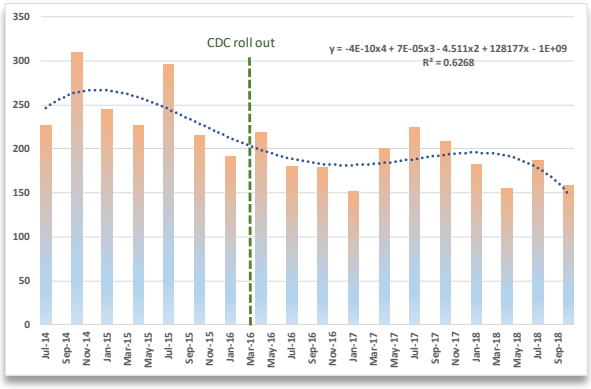
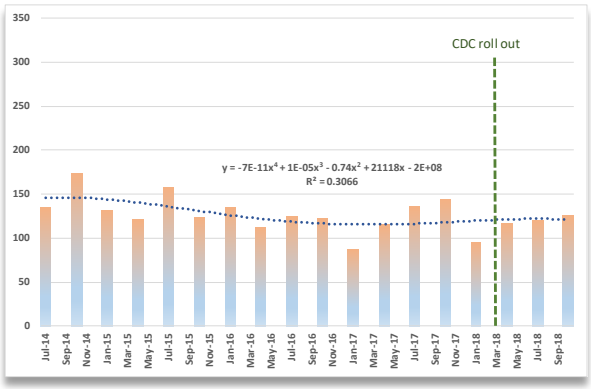


Figure 2-46: Drink driving charges Goldfields-Esperance



2.3.4.3 Drug & Alcohol services data

The monitoring of drug and alcohol abuse in the trial sites is one very important source of information about how things are changing over time in these respects. A number of government and non-government agencies such as the Kimberley Alcohol & Drug Services, the Goldfields Alcohol & Drug Services (at HOPE), Drug & Alcohol Services South Australia (DASSA) or the Aboriginal Drug & Alcohol Council (SA) Aboriginal Corporation, are sources where information can be gathered. In the course of their operations, these agencies collect quantitative information which can be used to look at trends. Also, some of this data is collected at very disaggregated geographical level. For instance the SA data included information on the Yalata community referrals to health services. However we could not display this information because there were very small number of observations in some quarters and it could potentially lead to individuals being identified.

It is unlikely that one could harmonise and equivalise this information to make comparisons across sites and between each site and a set of areas that could be used as control.

It would be most useful when triangulated with insights gained from other methodologies, notably qualitative interviews of local stakeholders. An improvement in the data collection for these agencies would be useful. For instance, when looking at referrals or use of rehabilitation services, it would be useful to know how many of these outcomes come from individuals who are on the Card versus non-CDC participants. The following figures (Figure 2-47 and Figure 2-48) illustrates some information that we extracted from the DASSA for Ceduna and surrounds.

Figure 2-47: Number of attendances, and attendances where alcohol was the principal drug of concern, Ceduna and surrounds

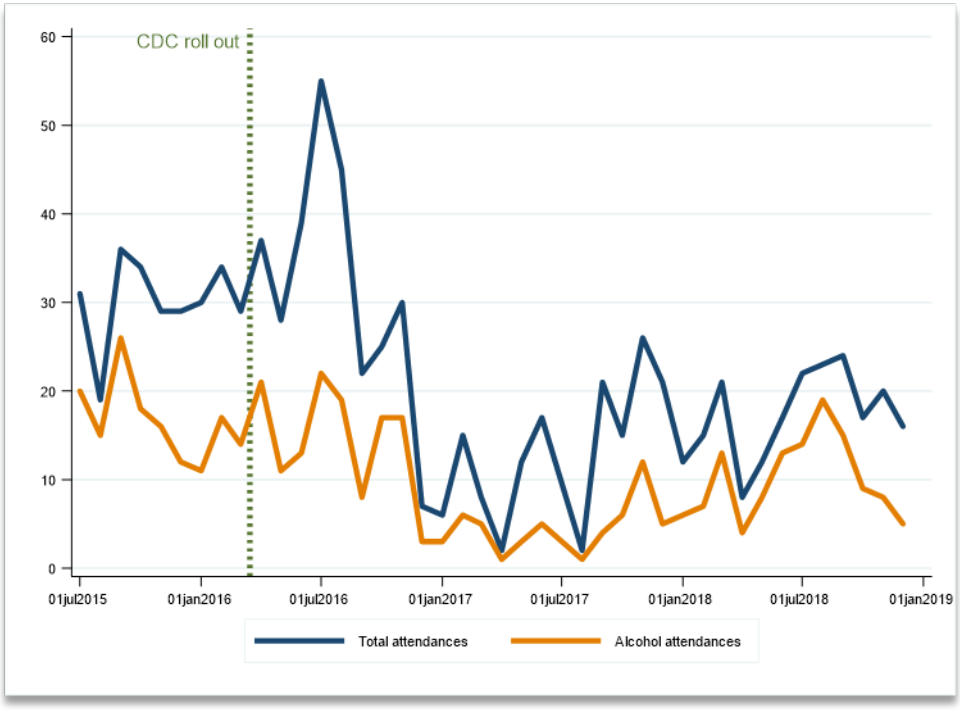
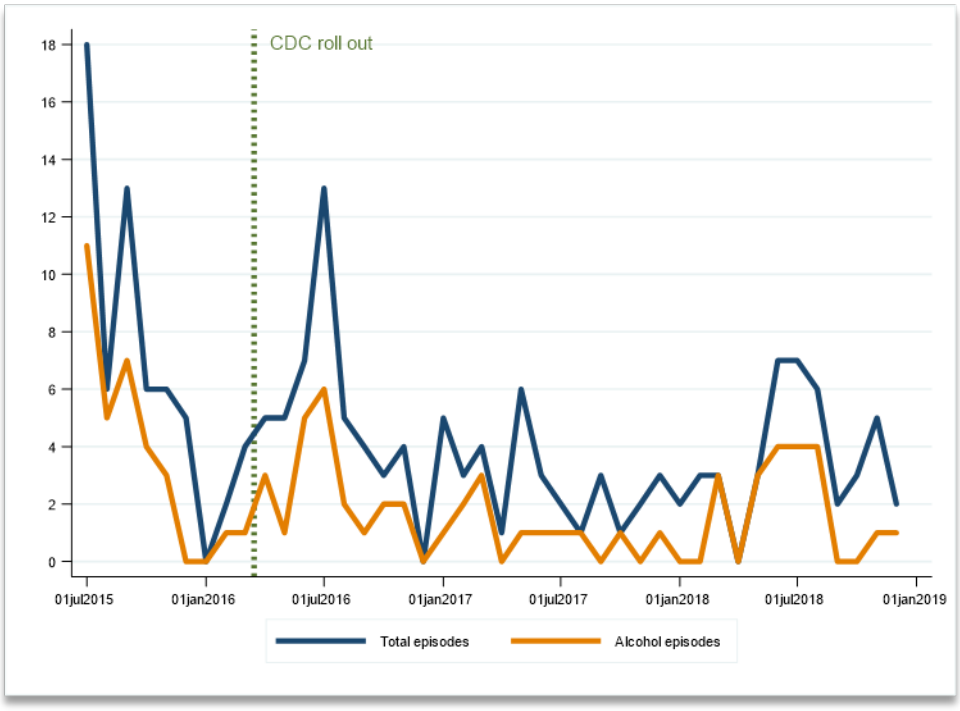
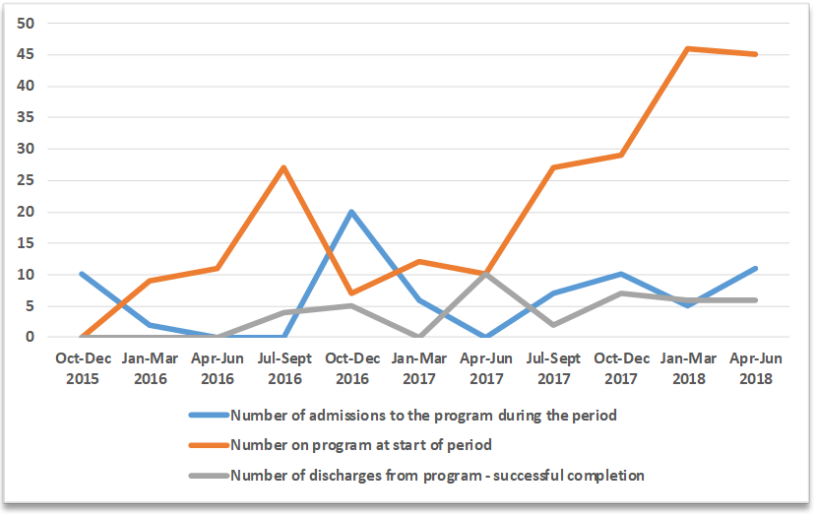


Figure 2-48: Number of treatment episodes, and episodes where alcohol was the principal drug of concern, Ceduna and surrounds



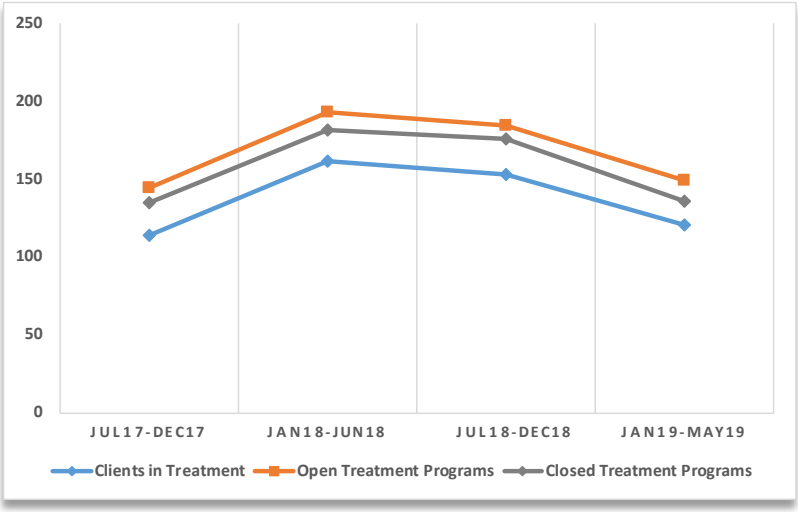
DASSA also collects some information from its 'Life Without Barriers' program. It records the number of people joining the program and the number of discharges, including the number of successful completions of the program. Like the previous information, this source of data does not provide a whole lot of useable insights when analysed independently, but when triangulated with other sources, notably qualitative, it may give some quantitative context to statements made by stakeholders. On a pure quantitative analysis point of view, this data is of limited use at this stage.

Figure 2-49: "Life Without Barriers", outpatient counselling, Ceduna



A final illustration of the type of information recorded in relation with drug and alcohol services is that of residential rehabilitation services. We give such an illustration with the Goldfields in the figure below (Figure 2-50). There are a few issues with this type of data, beyond the obvious limitation in terms of statistics that we have discussed at length in this report. With regards to residential rehabilitation services, it is known that the number of beds available in an area is usually a lot smaller than the potential demand for the service. In such a context of under-supply, one may wonder how one should interpret an increase or a decrease of the number of admissions and what makes an improved outcome in this context. An increase may reflect the fact that social harm due to alcohol and drug abuse has worsened. It may mean the opposite and that more people are willing to seek help, making an observed increase a somewhat positive outcome. More resources may have been added, increasing the number of beds available and thus an increase would just be reflecting the ability of the service to resorb some of the over-demand. Altogether, this kind of data can be misleading if it is not combined with more quantitative and qualitative information that would help determine whether a change in the numbers actually represents an improvement or a worsening of the situation.

Figure 2-50: Goldfields Rehabilitation Service Residential



2.3.4.4 Housing

The Department of Housing in WA (and the corresponding SA Housing Authority for SA) collect data that could also be useful in order to provide some context information on several topics which add up to a better understanding of how community outcomes are changing over time. Here again, while the information is interesting, there is no handle for one to attribute any observed changes to the establishment of the Card in the trial sites. We note that some of the data from these two authorities includes some data for some suburbs that could be used as control. Unfortunately, only two potential control suburbs' information was added in the data. While those two suburbs would actually be relevant to belong in a control group, an attempt at estimating the impact of the CDC on housing outcomes would require many more than two control suburbs. Moreover, the choice of suburbs to include in a control group would need to be made by the research team because it needs to fulfil a number of statistical criteria so the control group is comparable with the trial sites.

Nevertheless, a number of topics covered by the data from the WA Housing Department and SA Housing Authority provide useful context information on several topics that could be associated with outcomes of interest to determine whether the CDC works or not:

- Information on accumulated tenancy debt. One of the intents of the CDC is to improve participants' ability to manage their income and be able to pay their bills. In the DOMINO data and through our observations in the field (notably through survey activity), we have observed that many CDC participants have set up direct debit arrangements for their rent. This means that the CDC may have potentially had a positive impact on the prioritising one's expenses towards paying bills and rent. We could expect a reduction in the tenancy debts accrued. However, the data does not distinguish tenancy debts between CDC participants and non-CDC participants. So it is unlikely that one could detect any impact of the CDC on such outcomes.
- Information on disruptive tenancies. The Housing authorities record instances where complaints were made and substantiated about tenants' behaviour. The SA housing data also includes some detail about the reasons for these complaints, such as abusive behaviour, violent acts, property damage, noise, domestic disputes and so on. Here too we cannot distinguish between CDC participants and non-participants so the data, at best, gives us some general background information at community level. We note that there are very few

instances recorded in many quarters (many have actually none). Even if the information were available for a large group of control suburbs, it would be difficult to estimate an impact of the CDC on that type of outcomes.

- Some interesting and useful information is recorded in the SA data about Specialist Homeless Services (SHS). The SHS provides places where people can live temporarily when they cannot live in their residence. The data records the number of clients (and support period counts) but it also flags the instances where the service was provided to clients who were escaping from domestic violence or where drug or alcohol issues were identified. This information provides a useful indicator of social harm at the level of the community. Now the data has the usual weakness for the purpose of an evaluation that we cannot identify CDC participants. Nevertheless the information can give us some more clues as to whether improvements are observed with regards to social harm in the communities where the CDC was rolled out. We note that the transient population is eligible for SHS and the data does not allow one to distinguish between the local clients and those that are transient. If this information is collected, it would be useful for the evaluation. The following set of figures illustrate the information contained in the SA Housing authority data for the SHS. It compares Ceduna with Port Augusta with regards to the number of clients' intakes throughout the period where the data is available (Left hand side figures: Figure 2-51 and Figure 2-53). Numbers are larger in Port Augusta naturally since the population is larger than in Ceduna. The histograms show the seasonal nature of those intakes in both locations. An interesting observation can be made from comparing both suburbs with regard to the proportion of clients' intakes where domestic violence was identified. The time profiles are very different with a large increase post-CDC in Ceduna while the profile is decreasing in Port Augusta post-CDC. We cannot say much more about these profiles as many reasons may explain such differences between two suburbs. If the data became available for a greater range of suburbs, some mean difference comparisons could be made like for the Police data, and possibly some more elaborate estimations that would allow us to determine the impact of the CDC in those post-CDC changes.

Figure 2-51: Number of clients' intake, SHS, Ceduna

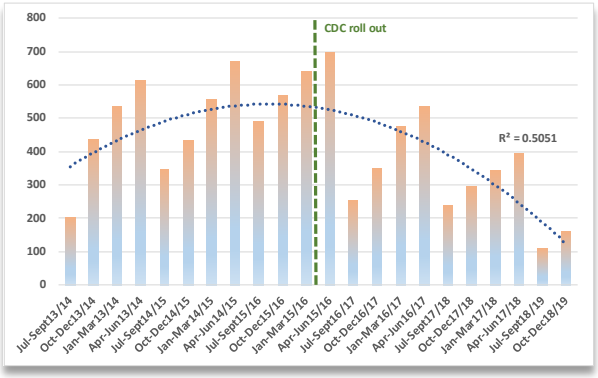


Figure 2-52: Per cent of clients where domestic violence was identified, SHS, Ceduna

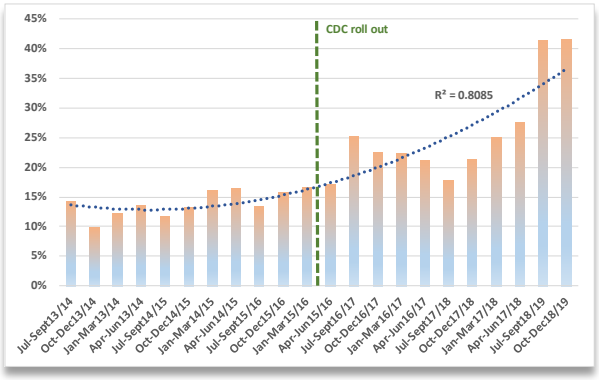


Figure 2-53: Number of clients' intake, SHS, Port Augusta

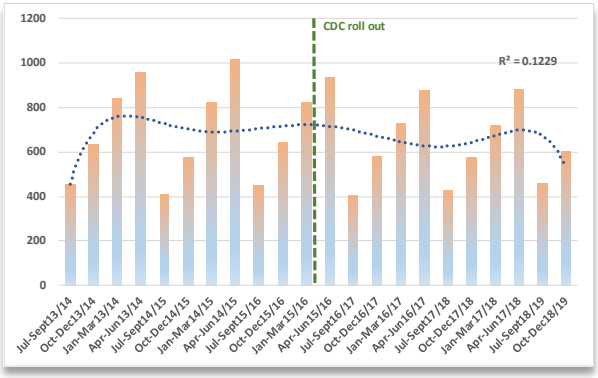
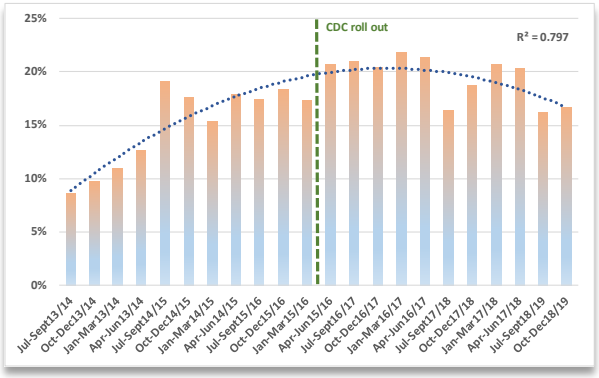


Figure 2-54: Per cent of clients were domestic violence was identified, SHS, Port Augusta



2.3.4.5 Justice outcomes

Outcomes from the Departments in charge of Justice (WA Department of Justice and Attorney General Department in SA) could possibly be useful as another set of proxies that could capture changes in social harm at the level of the community. The usual caveats apply in the sense that none of the community data explicitly identifies CDC participants in the statistics. Changes in economic conditions in an area are known to be strongly associated with changes in crime rates and social harm (see notably Weatherburn, 1992[25] and Weatherburn et al., 2001[26]). Given the relatively small proportion of CDC participants in the total population (especially in the Goldfields), the link between CDC and Justice outcomes is a tenuous one, even though we would expect CDC participants to be over represented in the population being recorded in the Justice data. We do not expect this data can be improved to allow for impact estimates. The information it includes should be combined with the

[25] Weatherburn D., Lind, B., Ku, S., (2001), "The Short-run Effect of Economic Adversity on Property Crime: an Australian Case Study", The Australian and New Zealand Journal of Criminology, vol34(2), pp 134-148.
[26] Weatherburn, D. (1992), "Economic Adversity and Crime", Australian Institute of Criminology, trends and issues in crime and criminal justice, no 40, Canberra, Australia.

other contextual data and be used to provide some quantitative background to insights gained through the other methodologies of the evaluation.

The WA Department of Justice provides a number of statistics which can be used to look at general trends. It would be useful to have the same type of information for SA from the Attorney General's Department. Among the useable information, it records (every quarter) the number of commencements of community orders[27] and custodial stays both for adults and young people. The number are for people whose last known address was in one of the CDC trial sites. The following set of figures (Figure 2-55 to Figure 2-58) give an illustration of how these numbers change over time before and after the CDC rollout. As already pointed out, the window of observation post-CDC in the Goldfields is quite narrow. More time needs to pass for one to be able to discern a trend from the quarterly variations in the figures.

Figure 2-55: Number of community orders (commencements), East Kimberley

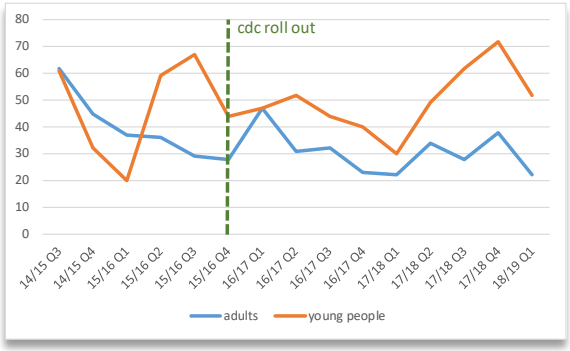


Figure 2-56: Number of custodial stays (commencements), East Kimberley

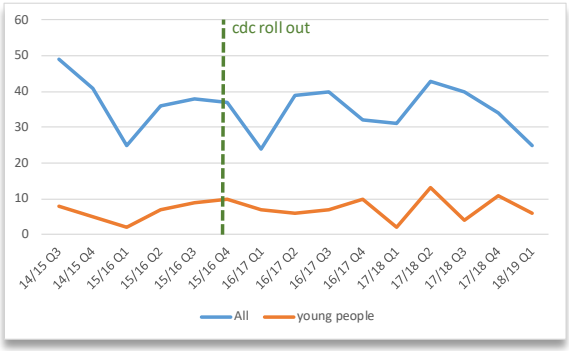


Figure 2-57: Number of community orders (commencements), Goldfields

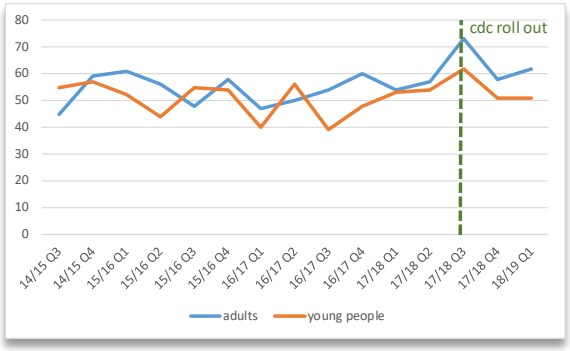
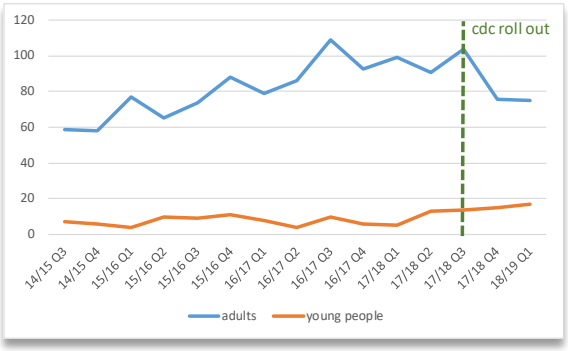


Figure 2-58: Number of custodial stays (commencements), Goldfields



2.3.4.6 Hospital admissions

Information collected in the various hospitals located in the trial sites (and possibly outside the trial sites for the purpose of comparisons) is another source allowing one to monitor several types of health outcomes, some being short term outcomes, other, more long term. Among the short term outcomes, one can monitor the number of emergency department presentations where alcohol was involved or

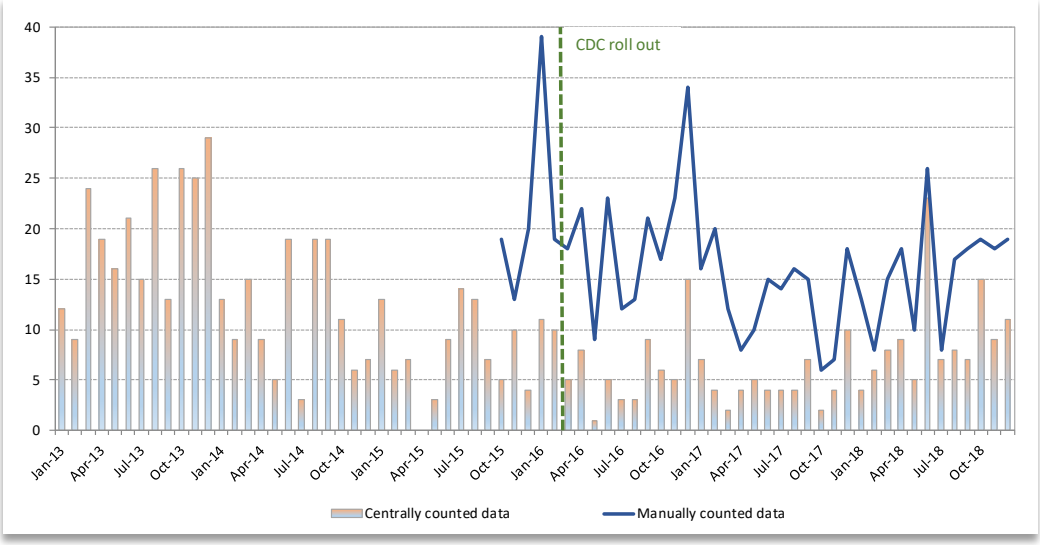
[27] In Western Australia, community orders may be issued instead of a custodial sentence for offences that are not so serious that "custodial sentences would be considered the best way to protect the community"

the number of presentations caused by violent acts. Referring to the policy logic of the CDC which was discussed in Chapter 1, the CDC aims to improve participants' life outcomes, including improving their health through reduced consumption of D.A.G products and better nutrition. Hospital data should be able to provide some information as to whether health outcomes are eventually improving. These longer term outcomes could manifest themselves, for instance, through significant decreases of patients suffering from diseases that are commonly associated with the long term abuse of D.A.G products.

Given the timing of the evaluation of the CDC, we expect that ED presentations may give us some relevant information about shorter term outcomes associated with the CDC.

The SA data includes some information about ED presentations in Ceduna. The information includes two modes of recording of presentations that are associated with alcohol abuse. The 'centrally coded' data includes the monthly number of ED presentations where the primary diagnosis identifies alcohol as the cause of the presentation. For the trial site, the information is complemented with a 'manually counted data', adding to the count the cases where the secondary cause of presentation includes a reference to alcohol. The information is depicted in the following figure (Figure 2-59). One difficulty with this type of data is that the trial site is characterised by big monthly variations mostly due to cultural events taking place (including funerals) which involve a large transient population staying in the area for a while. It would be helpful if the data could distinguish between habitual residents and transients. It would also be useful, like for the other data in the section if one could identify CDC participants in the data. Using the data contained in the figure below (using the centrally coded data), we performed a statistical test comparing the mean number of presentations before and after the CDC. We find the mean monthly number of alcohol-related presentations in Ceduna is significantly smaller after the CDC rollout.

Figure 2-59: Number of alcohol-related ED presentations at Ceduna district Health Services



2.3.4.7 Child protection data

Child protection data can also provide some insights as to changes occurring at the level of family/households with regards to the well-being of children. If the CDC does affect the consumption of D.A.G products, one would expect that alcohol or drug fuelled violence within households would decrease too. Depending on the proportion of incidents recorded by Child Protection Services that is

generated by those people who became CDC participants after the rollout, we should eventually observe changes in the statistics.

We obtained Child Protection information from the state of Western Australia. The data included records of (i) number of interactions, (ii) number of mandatory reports, (iii) number of notifications, (iv) number of investigations and substantiations, and, (v) the number of children in care (or exiting care). The information was recorded quarterly from 2015 for East Kimberley, West Kimberley and the Goldfields. As one looks at the data, the number of observations decreases sharply as the categories corresponding to serious interventions from Child Protection Services. The number of children placed in care is too small for us to display any statistics without risking individuals to be potentially identifiable. At the other end of the spectrum, we observe much larger numbers in the interactions or investigations. The data being recorded quarterly makes it difficult to conduct a robust statistical analysis as the time dimension of the data is not large enough. We conducted a very simple analysis, comparing the means before and after the CDC rollout. For instance we looked at whether the mean number of interactions was significantly different before the CDC rollout compared to after in both trial sites. We were unable to find significant differences, suggesting that no real changes has yet shown up with regards to these outcomes. Though, as noted, the number of time observations is small so the statistics are very weak.

While having information on children well-being is important and relevant as an indicator of how well the CDC works, we assess that the Child Protection data was not very useful for the present evaluation, even as a context information. We have not detected enough variation in the information recorded.

3 Evidence from the individual survey of CDC participants

3.1 Survey Instruments, survey fielding and population weights

This section provides information about the individual survey of CDC participants carried out by the FES research team for the purpose of the evaluation. The contents of the survey was discussed in the first chapter where we placed each data source in the context of the overall evaluation. In this first section, we give some information about the fielding of the survey. Then, we discuss the methodology that was used in order to construct population weights, allowing us to display statistics representing the whole trial population.

3.1.1 Fielding of the individual survey of CDC participants

3.1.1.1 Fieldwork dates and survey yield

The original survey design was for a hardcopy delivery with a mix of postal and face-to-face completions. However, early consultations with stakeholders and information gained from the qualitative fieldwork highlighted the importance of using a face-to-face survey completion as the main survey method, with a universal postal approach as a secondary method.

While the survey was set out to commence in mid-February 2019, delays in obtaining the necessary authorisations to get potential survey participants' contact details meant that the fieldwork did not commence until October 2019. The fielding of the survey was staggered. The survey fieldwork commenced in the East Kimberley from 11 October until 25 October 2019. The survey was then fielded in the Goldfields trial site from 18 November 2019 to 2 December 2019. The fieldwork in Ceduna and surrounds was split into two periods in order to accommodate for cultural business and for the Christmas break. The fieldwork in Ceduna commenced on 9 December until 18 December 2019 and continued for a second period from 9 February 2020 to 14 February 2020. Separate mailing was organised for 227 CDC participants whose contact details were through nominees. We note that a number of CDC participants in receipt of DSP and who were recorded as being contactable through nominees actually presented themselves personally to fill out the survey during fieldwork. Thus they were not contacted again via nominees[28].

A large-scale survey of CDC participants was conducted in all three trial sites. The survey fieldwork yielded 1,963 useable survey responses overall. The following table displays the number of CDC participants contacted for the survey in each site and the number of those CDC participants who responded.

[28] There were 35 such instances.

Table 3-1: Survey of CDC participants, numbers contacted and yield

Trial site	CDC participants contacted	Total responses	(Postal responses)	Valid responses
East Kimberley	956	456	(24)	444
Goldfields	2,760 (193 via nominees)	1,213	(177)	1,158
Ceduna & surrounds	708 (34 via nominees)	372	(36)	361
Total	**4,424**	**2,041**	**(237)**	**1,963**

3.1.1.2 Notes on the sampling frame

The present evaluation of the Cashless Debit Card is focused on the trial sites, namely East Kimberley, Goldfields and Ceduna and surrounds. Therefore, the sampling frame was to be restricted to the CDC participants who currently lived within these areas at the time we started fieldwork.

At the outset, it was known that the target respondents for the survey were potentially hard-to-get and hard-to-survey people, living in remote or very remote areas for the most part. Consequently, the traditional techniques used to work out how many people one needs to contact in order to guarantee a given number of survey respondents were inadequate in the environment faced by the evaluation team. Moreover, it was agreed with the Department of Social Services that the evaluation should aim to get at least 1,300 survey responses over the three sites and be such that they give a representative picture of the current CDC participants' population. Given this relatively large required number and the uncertainty surrounding the fielding of the survey, we opted to contact all CDC participants who were currently active and living in the trial sites[29]. We contacted 4,424 CDC participants (see Table 3-1).

3.1.1.3 Fielding strategy

The fielding strategy of the survey needed to be sensitive to the broad range and complexity of the questions that we needed to ask CDC participants, in addition to needing to be as inclusive as possible with a very heterogeneous population to be surveyed.

An initial design of the survey was widely circulated to stakeholders in the Goldfields area and DSS. It was cognitively tested with a number of CDC participants who were selected to provide a representative sample and feedback was sought to ensure that the survey instruments were culturally sensitive. We tested this aspect with local stakeholders and used the language centres in order to get the opinions from specialists and elders. Following this initial feedback, some adjustments were made to the survey instruments, the survey was shortened, and, where appropriate, we redesigned some of the questions into 'plain English' rather than keeping the validated survey questions as they were originally labelled.

The cognitive testing phase of the survey identified that a hard copy survey without support would suit some participants while supported completion through trusted third parties would support participants with English as a second language. Therefore there was the need for supported

[29] A further filter was implemented by DSS who removed people who had indicated in their administrative data that they do not wish to be contacted for research purposes. Also people known to be in detention had their contacts details removed from the list. We also performed due diligence, checking that no survey packages would be sent to persons known in the administrative data to be deceased.

completion through trusted third party individuals and organisations and there was a potential need for an '*Easy English*' pictorial version of the survey instruments to be used by the support staff. In addition there was a need for the research team to actively involve local stakeholders to facilitate participation in the survey and provide support.

As a result, the fielding methodology was updated in order to increase the inclusiveness of the survey and produce a good yield while maintaining the breadth of the questions asked in the survey. All survey participants who were in scope[30] as of the first week of September 2019 were sent a survey pack containing a cover letter, instructions on how to complete the survey, the survey document itself, and, a reply paid envelope. In the cover letter, CDC participants were given a number of addresses where they could seek assistance with completing the survey and were encouraged to seek assistance.

With the assistance of the lead of the qualitative research, intensive engagement was undertaken with local stakeholder groups in the weeks leading to the fielding of the survey to identify organisations and individuals who could help support the survey at various levels. Some organisations and individuals actively promoted the survey by distributing posters and flyers (all translated in language), others were directly engaged by the research team to help support a face-to face delivery for those who required it. These people were known and trusted by the CDC participants and were able, as the need arose, to translate some of the questions into language[31].

In each trial site, the head of the quantitative research team, along with a minimum of three fellow researchers from the University of Adelaide (reinforced, when possible by the lead of the qualitative team) remained in the trial sites for the whole duration of the fieldwork in order to train, supervise and conduct surveys. Local people who were hired casually in order to provide support for the survey completions were trained by the lead of both the quantitative and qualitative research teams. The training sessions lasted for half a day and then survey assistants were buddied with a University of Adelaide researcher to undertake survey completions. The local individuals supporting the survey completions were trained to deliver surveys in a culturally and ethically appropriate manner, respecting the answers given by the CDC participants without trying to influence answers one way or the other. In order to further guarantee that interviewer bias was minimised, these hired researchers were given an ID code that was to be written on each survey document they assisted completing. They were told explicitly that the codes would be used to statistically check for interviewer bias. Moreover, the hired researchers were accompanied by researchers from the University of Adelaide who were conducting survey activities alongside them. Most of the survey activity was conducted at a few locations hired by the research team so everyone could possibly be heard by the University of Adelaide researchers. Finally, at the end of each day, the head of the quantitative research team reviewed all completed survey documents and daily morning briefing were organised so all rules and adequate behaviours could be reinforced. The locally hired researchers provided an invaluable contribution to the success of the survey and allowed us to get completions from hard to reach and hard to survey CDC participants. The University of Adelaide researchers are very thankful for their assistance.

[30] In scope CDC participants were defined as those who were identified as active as of September 2019, who had activated their Card and undertaken at least one transaction (debit or credit) and identified in the administrative data as living within the trial areas.

[31] This term is how local people refer to Aboriginal language in use in their areas. They use 'language' because more than one usually applies to where they are, depending on the people they talk to. They are also proficient in more than one language

3.1.2 CDC participants population weights

3.1.2.1 Definition of CDC participants' population weights

Weights are typically used in sample surveys to ensure that estimates based on the respondents' answers reflect the population from which the respondents come. In the case of the Cashless Debit Card Participants Survey all individuals who were 'active' (benefit recipients who were on Cashless Debit Cards) in September 2019 were invited to take part in the survey. If all had accepted the invitation and taken part in the survey then weights would not be necessary. However, not all took part in the survey and hence weights are needed to account for non-response, so that we can obtain plausible estimates for the entire 'active' population.

Weights allow us to rebalance the sample of respondents and account that:

- the proportion of individuals taking part in the survey is likely to vary across different groups.
- individuals from different groups are likely to answer questions differently.

If the same proportion took part in the survey across different groups then the sample weights would all be the same, and weighting would not be necessary. Similarly, if the different groups answered the questions in an identical manner then weighting of estimates would not be necessary. However, there is every reason to believe that there is considerable differential non-response and that individuals with different characteristics are likely to have different responses to the various questions in the survey.

Our weighting approach begins with identifying demographic characteristics which are available for both the initial 'active' population and the respondents:

- Age
- Sex
- Region
- Whether Indigenous or not

These characteristics formed the basis of the post-stratification which is employed to create the weights. A very detailed post-stratification has the advantage that the strata will be relatively homogenous (i.e. individuals are similar within the cells). On the other hand, there will be great variation in the weights if the strata are very small in which case the population estimates may be unstable. As a rule of thumb around 20 is the usual minimum number of respondents that is desirable within a stratum.

Our starting position was a post-stratification based on sex (male/female) by age (16-24/25-34/45-54/55+) by region (Ceduna and surrounds, East Kimberly, Goldfields) by Indigeneity (identified as Indigenous/ other). However, such a stratification led to too many cells with small sample numbers. Therefore, we needed a way of collapsing cells to increase sample numbers within cells.

The way we did this was to establish which of the characteristics were the most important in explaining the variation in the answers to a number of policy questions, which captured the focus of the survey. The idea was that less important characteristics could be collapsed because the variability in answers was relatively low across those characteristics.

The policy variables we considered were:

- Whether the respondent wished to get off the CDC (question F3, yes or no)
- Number of events in the 12 months before being on the CDC (question C7, values 0-13)
- Number of events in the last four weeks (question C8, values 0-13)

- The change in the number of events between the last four weeks and the 12 months before being on CDC (the difference between questions C7 and C8), values -13 to +13).

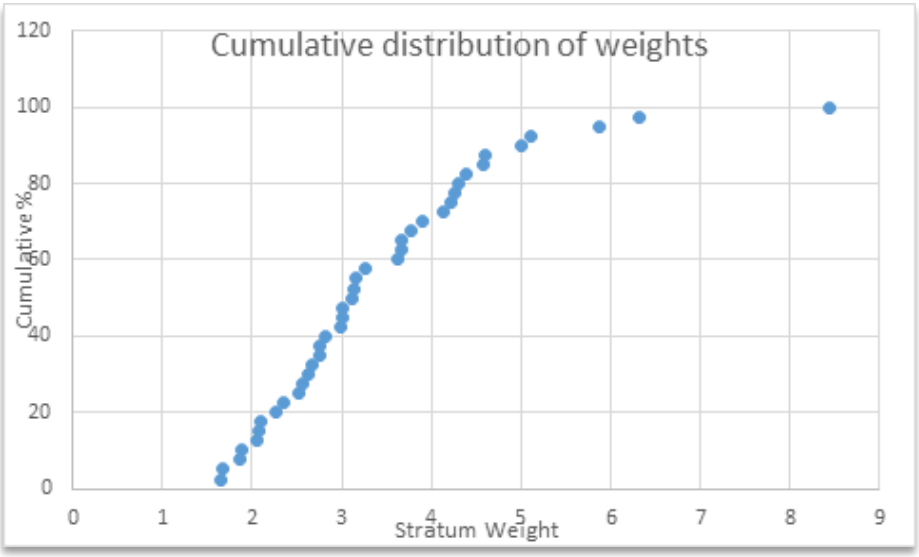
While the results varied somewhat across the four characteristics, the overall conclusion was that the variability was greatest across region, followed by (in order) age, Indigenous status and sex (note the analysis was based on a probit regression for the first variable and simple linear regressions for the other variables).

Based on these results, we collapsed the stratification so that Indigeneity featured only for the Goldfields region. The resulting weights are shown in the table displayed in the appendices (see Table A 4-5).

The stratification is quite detailed, and quite straightforward. The only area where sample sizes are a little low are in the 16-24 year old age group where the stratum 'males, Ceduna' has 12 respondents and 'Goldfields, not-Indigenous, males' has 9 respondents. While the response rates in these cells are low (and hence weights high) collapsing the cells would not ameliorate the high weights (since the strata—the corresponding female strata—which would have been merged have relatively low response rates as well). In the interest of simplicity and maintaining as much detail as possible in the stratification, we decided not to merge these cells.

The figure (Figure 3-1) below shows the variation in strata weights. The maximum is 8.4 and the minimum is 1.65. Half of the weights are less than three while half are between three and 8.4. Only a handful are over five. While the variation is not extreme it does show the importance of adjusting for differential response in estimates of population totals or proportions.

Figure 3-1: Cumulative distribution of population weights



3.1.2.2 Staggered fieldwork, confidentiality and ethical considerations, and population weights

The population weights account for the staggered way in which the survey had to be conducted. As discussed above, the fieldwork for the survey took place between October 2019 and January 2020.

At the Census date of September 2019, when the list of active CDC participants was compiled, we had 5,716 active CDC participants currently living either in East Kimberley, the Goldfields, Ceduna and

surrounds, or, 'out of area'. As reported above, 4,424 'in scope' participants were formally contacted to participate in the survey through the sending of the survey documents.

In practice, the 4,424 'in-scope' CDC participants was not strictly adhered to for two reasons:

- The fieldwork needed to be staggered because of the intensification of the survey activity. The University of Adelaide research team, including the lead of the quantitative team, needed to be physically present in the trial sites during fieldwork in order to undertake the tasks described in the subsection above and guarantee all methodological aspects of the survey fieldwork be respected at all times.
- There were strict confidentiality rules imposed by Ethics and DSS processes governing the data collection. In effect, it materialised through a clear disconnect between the research team collecting survey data—who had no access to any contact details and names of potential survey participants, only random ID numbers—and the survey administration team who had access to this information but could not connect it to any survey information collected in the field. Practically this meant that the research team in the field could not immediately determine whether a CDC participant seeking assistance for survey completion belonged to the 'in-scope' group or not as there were no 'live' list of CDC participants' names researchers could refer to. What the fieldwork team could do was control that the person seeking assistance was a genuine CDC participant, entitled to complete the survey. Only at the end of each day of fieldwork could records of survey completions by the 'in-scope' group be updated by the survey administration team and communicated to the fieldwork team through a list of ID numbers.

These practical reasons meant that some CDC participants who had recently been rolled out into the CDC (triggered after the Census date of September 2019) and/or lived in a neighbouring locality considered as 'out of area' presented themselves to the CDC survey completion team in the trial areas as legitimate CDC participants and completed the survey. Given the strict confidentiality rules governing the data collection, they could not be identified at the time of completion and, for ethical reasons their contributions had to be included in the analysis. At the end of fieldwork, it made sense that the population weights should be computed so the survey answers become representative of the active population of CDC participants as of the end of January 2020. The presence of this small additional group has been reflected in the calculation of the population weights described above and a statistical examination of their responses suggested that they were not systematically different than those participants who had already been triggered by 27 September 2019 and were already in the sample. The adjustment brings the total of active CDC participants to 6,039, which corresponds to the active CDC participants population at the end of fieldwork. Given that we found these additional CDC participants to not significantly differ from those identified at the Census date, there was no need to update Section 2.2 describing the active CDC population. In the analysis that follows, the population weighted statistics presented are representative of the population of CDC participants who was active as of end of January 2020. Unless otherwise stated in this chapter, all statistics (in tables and figures) are population weighted.

3.2 Financial outcomes experienced by the CDC participants

3.2.1 Introductory comments

The CDC aims to reduce socially harmful behaviours by introducing a new approach to the management of individual finances through the Card. By placing 80 per cent of the person's income support payment onto the Card which cannot be used to purchase alcohol, gambling products, cash-like gift cards or to withdraw cash. This is expected to generate behavioural changes in terms of management of one's own finances through the Card. Those who dedicated more than 20 per cent of their budget to D.A.G products would presumably be directly and most severely impacted by the policy, having to reduce these expenses drastically. It is expected that this reduction of the budget for D.A.G products would translate into more money being available to pay bills on time, improve nutrition and overall financial management, thus eventually leading to improved life outcomes, less dependence on D.A.G products, and a significant reduction in social harm due to the excessive consumption of these products. For those who did not belong to the population at risk of social harm through excessive consumption of D.A.G products, the Card is expected to bring about improvements in one's budgeting and overall financial management.

The CDC touches on the financial position of a very diverse group of people in ways that can be highly complex. The outcomes depend a lot on the starting (pre-CDC) individual family and community circumstances of participants and their families. As will become apparent upon reading this section of the report, the complexity and diversity of circumstances and outcomes that give rise to our findings will require especially careful reading. We apologise to the reader for this, but it is necessary in order to preserve the narrative that emerges.

The quantitative survey collected information on several aspects of the financial impact of the CDC on its participants. This information falls into three main categories.

First, we derived direct measures of the impact of the CDC on measures of financial hardship.

Second, we examined whether the change experienced by CDC participants since the rollout has made life easier or harder regarding matters to do with money management.

Finally, we examined how broadly potential improvements have been felt, by the individual CDC participant, by their family, by their friends, and within the area they live.[32]

3.2.2 CDC clients' financial situation pre- and post-CDC rollout: overall observations

3.2.2.1 Measures of CDC participants' financial situation pre- and post-CDC rollout and over time changes

Information on specific outcomes of the CDC was collected with reference to two specific points in time. The survey asked all respondents first about specific experiences "In the 12 months before being on the Cashless Debit Card" and subsequently in a separate question about the same experiences "In the last four weeks". Respondents were asked to answer the following questions on outcomes with a yes/no/not applicable/do not know. Our analysis focuses on the yes/no answers at these two points in time on the following dimensions:

[32] Quantitative survey questions C7 and C8, F2 and G4 are the direct focus of this section.

"Did any of these things happen to you?

- Ran out of money to buy food
- Ran out of money to buy clothes
- Ran out of money to buy medicines
- Unable to pay rent on time
- Unable to save up bond money
- Unable to pay water and electricity bills on time
- Able to save money
- Gave money to others causing financial problems for you
- Asked for money from others because you could not buy essential things (e.g. food, clothes, medicine, bills)
- Asked for emergency relief
- Unable to afford to travel to visit family/friends
- Unable to pay for things that your child/children needed for school, like books
- Unable to pay for school activities/trips or sports for children."

Adjusting for the content of the question, the answers about 12 months prior to the CDC were contrasted with those about the last four weeks for each financial domain and pairs of data were constructed. The impact analysis is based on the following before-after template and the comparisons that can be made using it.

3.2.2.2 Financial situation pre- and post-CDC

Table 3-2 presents the overall picture that emerges when we put together all pairs of before-after comparisons provided by respondents, to all domains of financial information in the survey. This provides the highest possible aggregation of the data about financial domains and how they changed during the investigation period. The survey recorded a total of 59,580 before-after comparisons provided by 6,039 individual CDC participants, using population weighted data.

Table 3-2: Change in financial circumstances after the introduction of the CDC, all trial sites

Reported change in financial circumstances, all domains				
No change reported		**Change reported**		**Total**
No-No (No change)	**Yes-Yes (No change)**	**Yes-No (Better)**	**No-Yes (Worse)**	**N**
No problem before and no problem after	A problem was present before and still is after	A problem was present but has now been resolved	A new problem has emerged since the CDC introduction	Responses (100%)
53.6%	**22.3%**	**8.5%**	**15.6%**	**59,580**

Note: Based on the comparison of questions C7 ("before" which refers to the last 12 months before the CDC was introduced) and C8 ("after", which refers to the last four weeks prior to completion of the survey) in the survey of CDC participants. Total number of respondents 6,039 over a total of thirteen financial domains. The four categories of answers are used extensively below. Table reports population weighted data.

Two main messages emerge from Table 3-2. First, a large majority of CDC participants' answers (three out of four) reported that they are in a similar financial position to the one they were in the 12 months prior to the CDC introduction. Second, of the remaining one quarter of CDC participants' answers that

who reported a change, two thirds reported a change to the worse and one third a change to the better. Table 3-3 below disaggregates the data to show each of the different financial domains for all trial sites put together.

Table 3-3: Change in financial circumstances after the introduction of the CDC, all trial sites by financial domain

Reported change in financial circumstances, by domain				
Domains and Change	**No change %**		**Change %**	
	No-No (No problems)	**Yes-Yes** (Problems)	**Yes-No** (Better)	**No-Yes** (Worse)
Buying food	48	25	8	18
Clothing	49	26	8	18
Medicines	62	17	6	15
Paying rent	59	17	9	16
Saving for bond	57	18	9	16
Paying bills	56	19	8	16
Saving money	27	40	12	21
Giving money	62	18	9	10
Asking for money	49	25	10	16
Emergency relief	63	16	9	12
Travel and visit	47	28	8	17
Kids' school needs	64	17	5	14
Kids' school activities	62	17	5	15

Note: The four categories of answers are the same as in Table 3.2. Percentages add up horizontally. Rounding makes some percentages to not add up to exactly 100 per cent.

The proportions reported for individual domains in Table 3-3 are not very different to the highly aggregated averages reported in Table 3-2. With the exception of "Saving money", which was a clear outlier, Table 3-3 shows that reporting the continuing absence of a problem ranged from 47 to 64 per cent between the different financial domains and from 17 to 28 per cent for those reporting a continuing problem. Of those who reported change, 5 to 12 per cent reported the removal of an old problem and 10 to 18 per cent reported the emergence of a new problem. Largely we would say the majority of no change consisted of those who reported no problems both before and after, and the majority of change consisted of those who reported things getting worse.

The following figures (Figure 3-2 to Figure 3-14) below illustrate, for each dimension of CDC participants' financial situation, the proportion of individuals who answered yes to the question (indicating that they experienced an issue with that dimension of their finances[33]) pre- and post-CDC rollout. We display these proportions by trial site and with the 95 per cent confidence interval around these proportions.

These figures highlight significant differences across trial sites both with regards to the pre- and post-CDC rollout situation. For instance, looking at the first dimension (Figure 3-2), CDC participants in East

[33] Except for the 'able to save money' dimension where a 'yes' indicates a positive outcome.

Kimberley and the Goldfields had a significantly lower proportion of people who reported running out of money to buy food compared with Ceduna and surrounds (respectively 32 per cent and 33 per cent compared with 41 per cent in Ceduna). Post-CDC rollout, the proportions have increased in the three trial sites. However, the magnitude of the increase was much larger in East Kimberley. We see that, post-CDC rollout the proportions are statistically equivalent across all sites (yet, slightly lower in the Goldfields). For all dimensions of CDC participants' financial situation, we observe a relatively larger increase of the proportion reporting a problem in East Kimberley post-CDC. We also note that, for all dimensions, the proportions pre- and post-CDC rollout in Ceduna and surrounds are not significantly different, indicating little change. It is also the case, for this site, that the proportion of CDC participants indicating that they were experiencing problems as comparatively high compared to the other sites for most dimensions of financial situation. As for the Goldfields site, we observe that the proportion indicating that they experience a problem has increased post-CDC for many dimensions, including 'food', 'clothes', 'medicine', 'bills', 'travel', 'things that children need for school', and 'school activities/trips/sport for children'.

Figure 3-2: Pre- vs. post-CDC "run out of money to buy food", by trial site (95% CI)

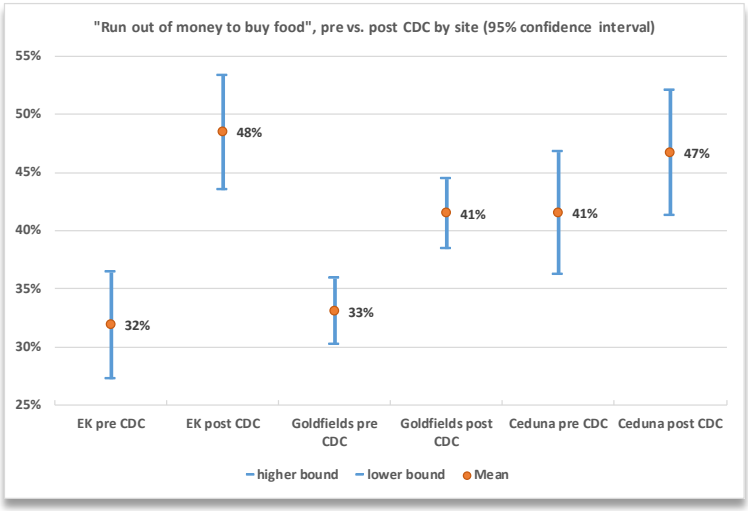


Figure 3-3: Pre- vs. post-CDC "run out of money to buy clothes", by trial site (95% CI)

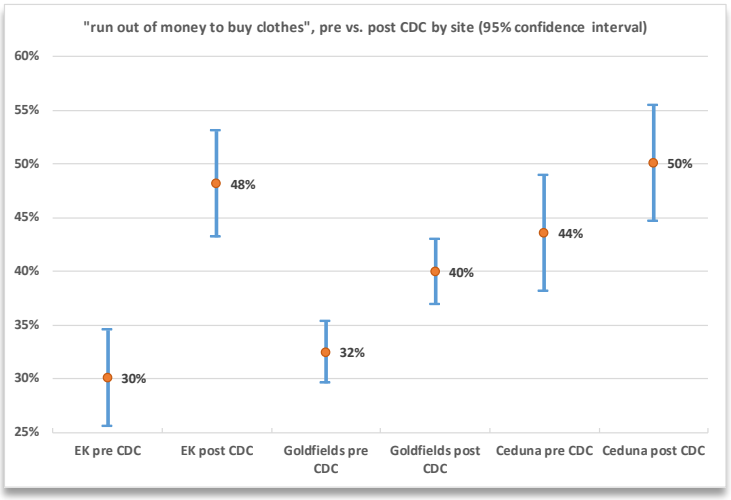


Figure 3-4: Pre- vs. post-CDC “run out of money to buy medicine”, by trial site (95% CI)

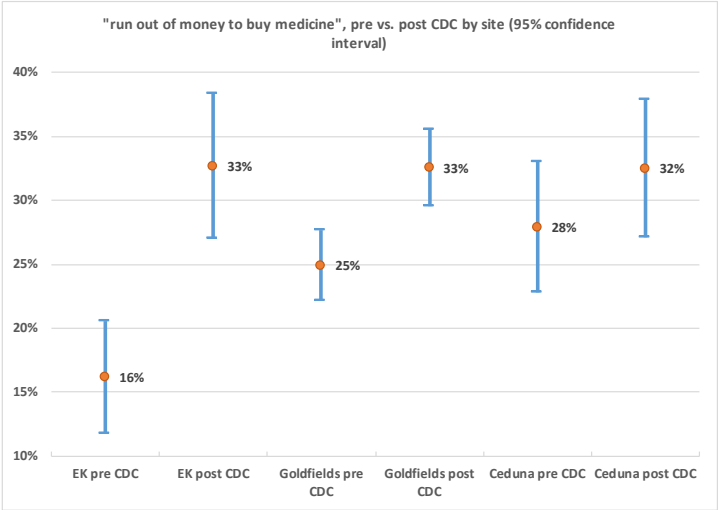


Figure 3-5: Pre- vs. post-CDC “unable to pay rent on time”, by trial site (95% CI)

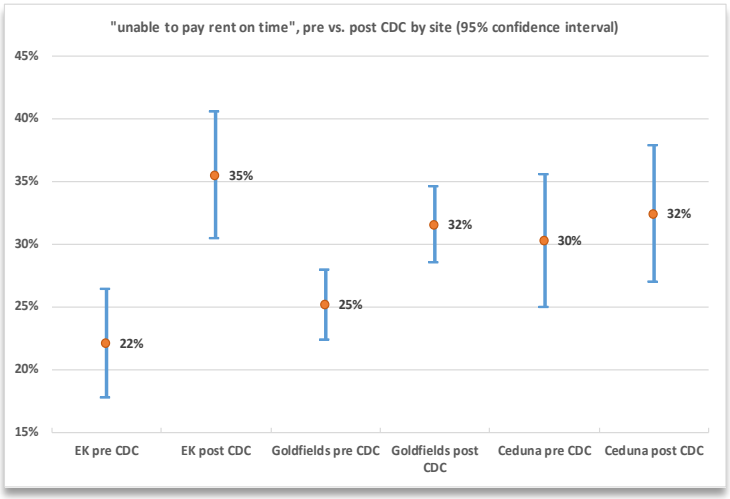


Figure 3-6: Pre- vs. post-CDC “unable to save up bond money”, by trial site (95% CI)

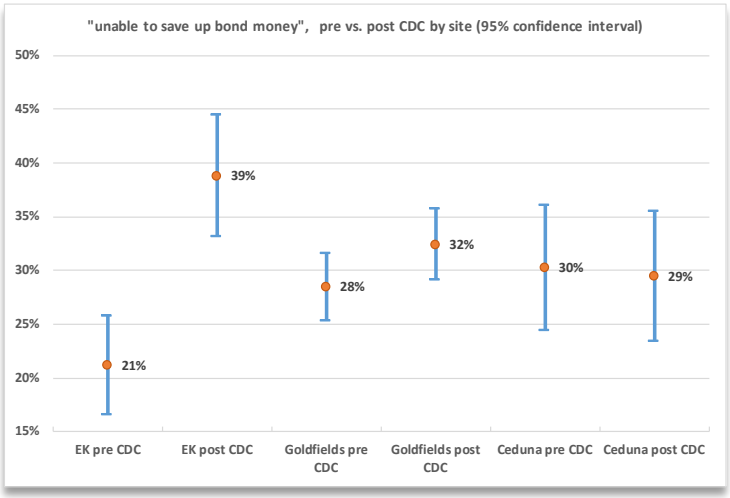


Figure 3-7: Pre- vs. post-CDC “unable to pay water/electricity bills on time”, by trial site (95% CI)

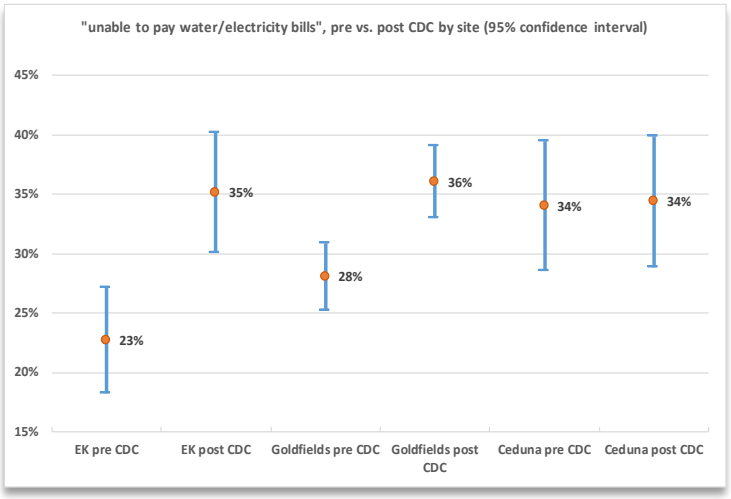


Figure 3-8: Pre- vs. post-CDC “able to save money”, by trial site (95% CI)

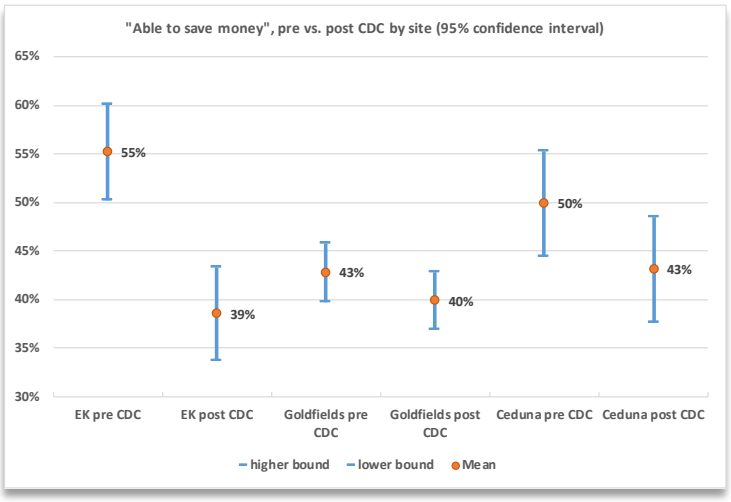


Figure 3-9: Pre- vs. post-CDC “give money to others, causing financial problems”, by trial site (95% CI)

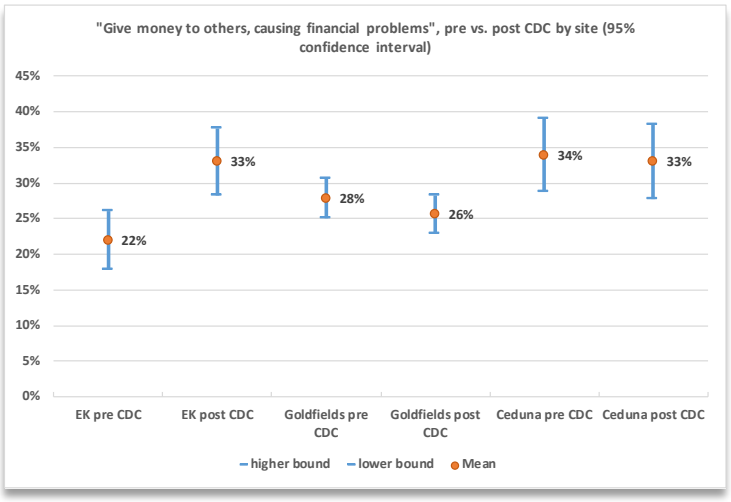


Figure 3-10: Pre- vs. post-CDC “ask for money from others”, by trial site (95% CI)

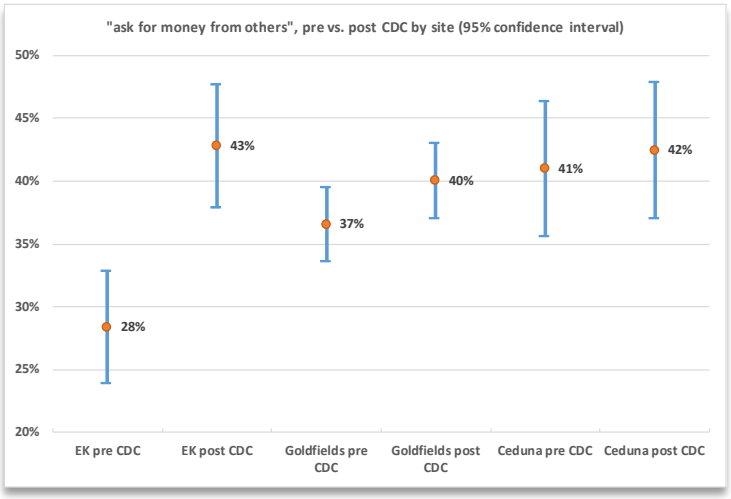


Figure 3-11: Pre- vs. post-CDC “asked for emergency relief”, by trial site (95% CI)

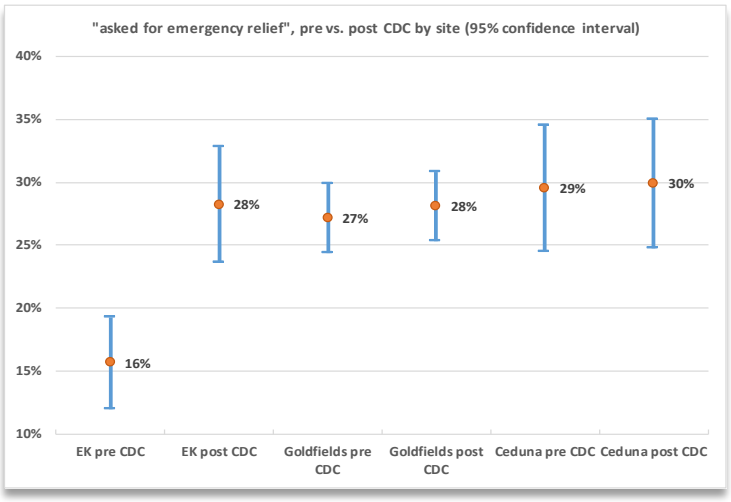


Figure 3-12: Pre- vs. post-CDC “unable to afford to travel to visit family/friends”, by trial site (95% CI)

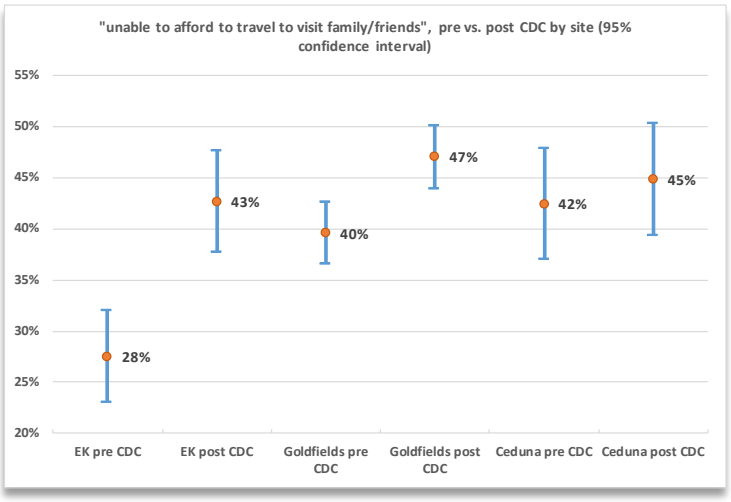


Figure 3-13: Pre- vs. post-CDC “unable to pay for things that children need for school”, by trial site (95% CI)

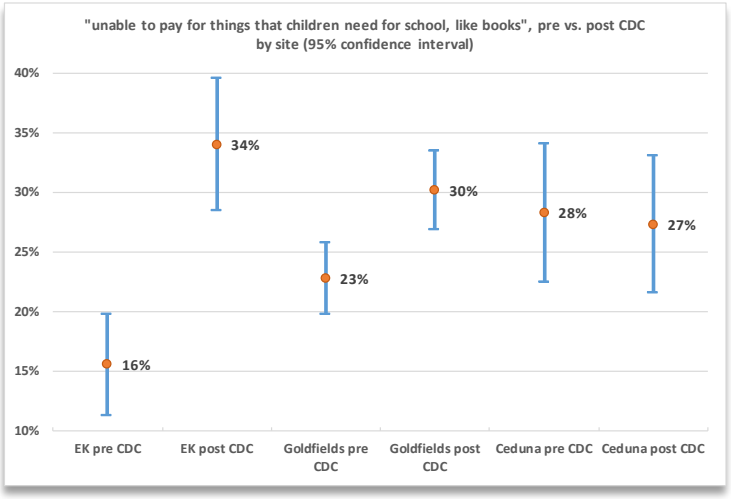
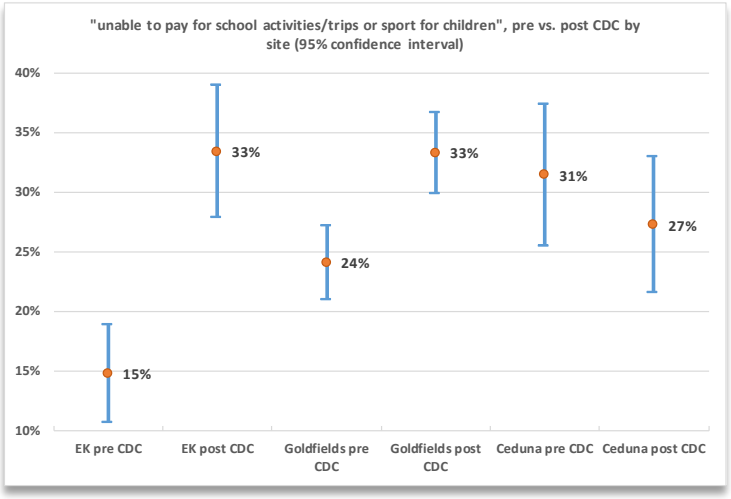


Figure 3-14: Pre- vs. post-CDC “unable to pay for school activities/trips”, by trial site (95% CI)



In order to examine further both wanted and unwanted financial change since the introduction of the CDC, Figure 3-15 below focusses on where change happened, distinguishing between changes resulting in improved or worse outcomes. This is achieved by showing the percentages of CDC participants who reported their financial situation has improved (blue histograms) and the percentage of CDC participants who reported their financial situation has worsened over each of the financial domains elicited in the survey (orange histograms). For example, Figure 3-15 shows that 34 per cent of the CDC participants who reported they were “Unable to pay rent on time” prior to the CDC, have reported they are now able to do so. At the same time it shows that 21 per cent of those CDC participants who reported they were able to pay their rent on time prior to the CDC, have reported they were no longer able to do so in the last four weeks before the survey.

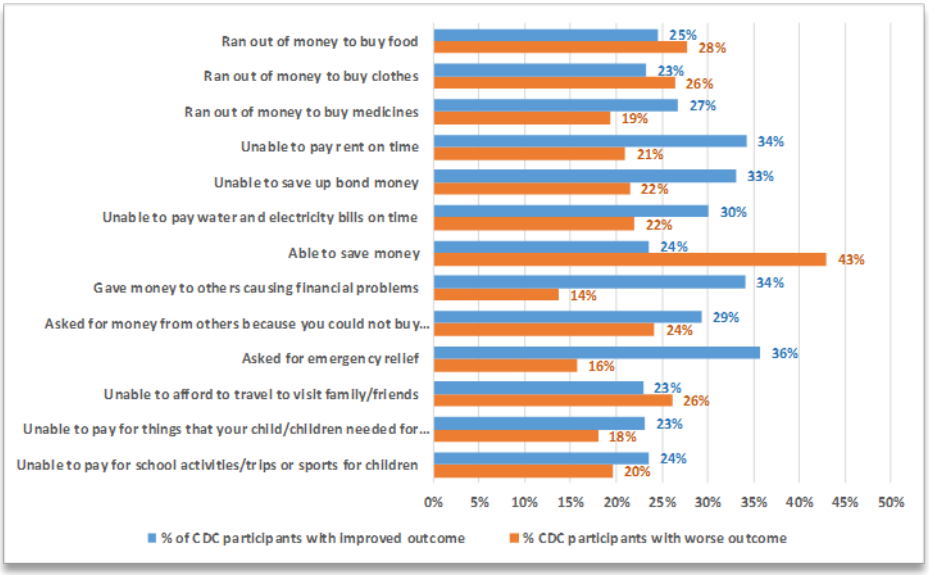
Box 3-1: How to read the 'conditional' distribution histograms

How to read the following figures: Figure 3-15 to Figure 3-18

Table 3-3 and Figure 3-15 show the same data from a different angle. Table 3-3 shows that *prior to the CDC* 75 per cent (=59+16) of our sample who reported they could pay their rent and 26 per cent (=17+9) could not. Figure 3-15 translates the 16 out of 75 (=21 per cent) and the 9 out of 26 (=35 per cent) into percentage points and, in technical terms, makes a conditional statement, while Table 3-3 simply presents the full before and after data jointly. Both angles are useful for understanding the stocks and the flows involved in the description of the data.

Note that the two percentages presented in Figure 3-15 for each domain are not comparable with one another, as they are percentages of a different part of the sample as explained above. The blue histogram is about those who had a problem prior to the CDC and uses them as the denominator for calculating the percentage. The orange histogram is about those who did not have a problem prior to the CDC. From Table 3-3 we know that for all domains the number of those *with* a specific problem is smaller than the number of those *without* that specific problem. This difference must be borne in mind when we interpret findings.

Figure 3-15: CDC participants whose financial situation improved/worsened since the CDC, by financial domain, all trial sites



The overall proportion of CDC participants reporting "No change without a problem" was similar in all trial sites (lowest in East Kimberley and highest in Ceduna). The overall proportion experiencing "No change with a problem remaining unresolved" was clearly the lowest in East Kimberley, a bit above average in the Goldfields and above average in Ceduna. "Change towards getting better" also appeared to be happening at a similar overall pace in all sites (probably highest in Ceduna). The most pronounced regularity in Table 3-4 was the clearly negative net change in East Kimberley, where the proportion of reported negative change was much higher than that proportion of reported positive change. In contrast, Ceduna appeared to have several domains where a small positive net change was reported.

Table 3-4: Change in financial circumstances after the introduction of the CDC, by trial site and financial domain

Reported change in financial circumstances, by domain and trial site												
	East Kimberley				Goldfields				Ceduna & surrounds			
Domains and Change	No Change		Change		No Change		Change		No Change		Change	
	N-N %	Y-Y %	B %	W %	N-N %	Y-Y %	B %	W %	N-N %	Y-Y %	B %	W %
Buying food	43	22	10	26	52	25	7	16	43	31	11	15
Clothing	45	23	8	25	53	25	7	15	41	34	10	15
Medicines	62	10	6	22	62	19	6	13	60	20	8	12
Paying rent	55	12	10	23	61	18	7	13	57	19	12	13
Saving for bond	56	15	6	24	58	19	10	13	60	18	11	11
Paying bills	55	12	10	23	58	22	7	14	54	23	11	12
Saving money	27	35	10	28	26	43	14	17	31	36	12	21
Giving money	61	15	7	16	64	18	10	7	57	25	10	8
Asking for money	49	19	10	22	50	26	10	14	47	30	11	11
Emergency relief	64	7	9	20	64	18	9	9	61	21	9	8
Travel and visit	51	19	8	22	44	31	8	16	48	34	8	10
Kids' school needs	63	11	4	22	65	18	4	12	63	20	9	7
Kids' school activities	63	9	5	24	62	19	5	14	62	24	9	5

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. The categories of answers are the same as in Tables 3.2 and 3.3

As previously, we also looked at where both negative and positive changes happen. Figure 3-16, Figure 3-17, and Figure 3-18 below show East Kimberley, Goldfields and Ceduna respectively.

The domains where we observed the largest percentage of CDC participants experiencing an improvement are similar to those highlighted above in Figure 3-5. In East Kimberley (Figure 3-16) 44 per cent of the CDC participants who could not pay their rent on time, could now do so; 46 per cent were now able to pay bills on time, while they stated they could not before the CDC; 55 per cent of the CDC participants no longer asked for emergency relief where they used to. However, we see the CDC participants' ability to save money deteriorated with about 50 per cent of those who used to be able to save money, reporting that they could not do so anymore.

Figure 3-16: CDC participants whose financial situation improved/worsened since the CDC, by financial domain, East Kimberley

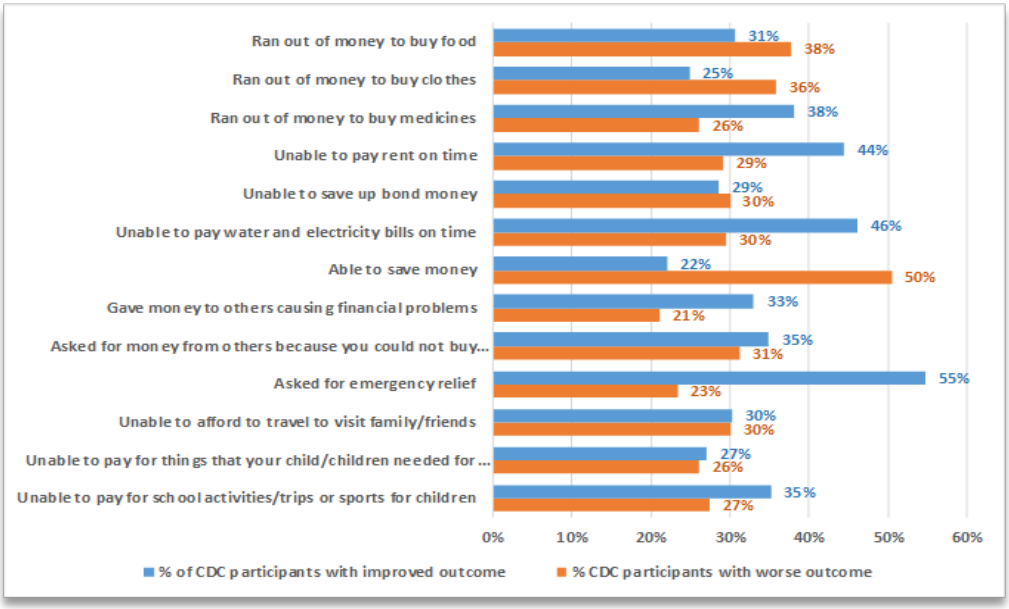
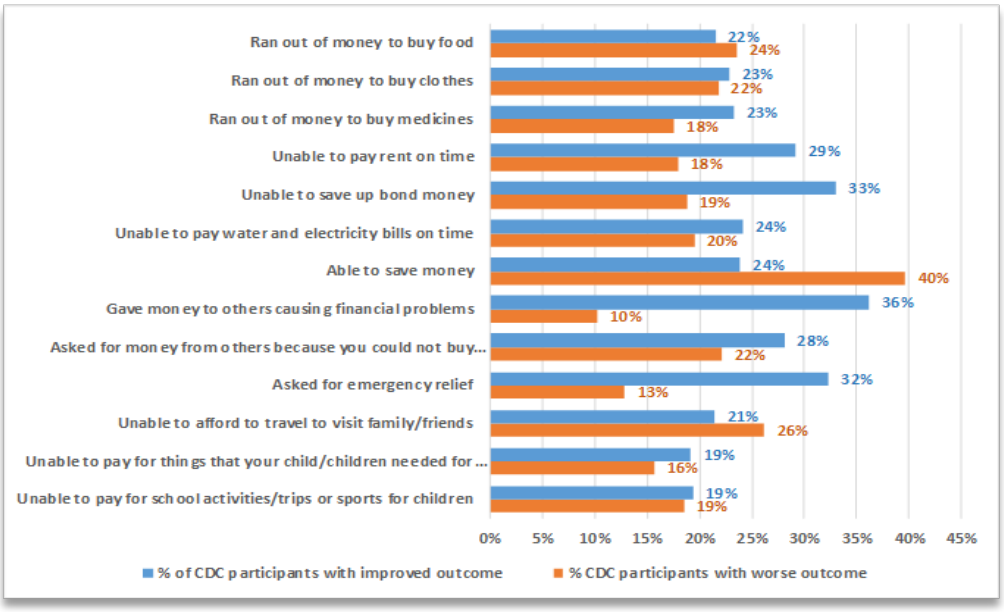


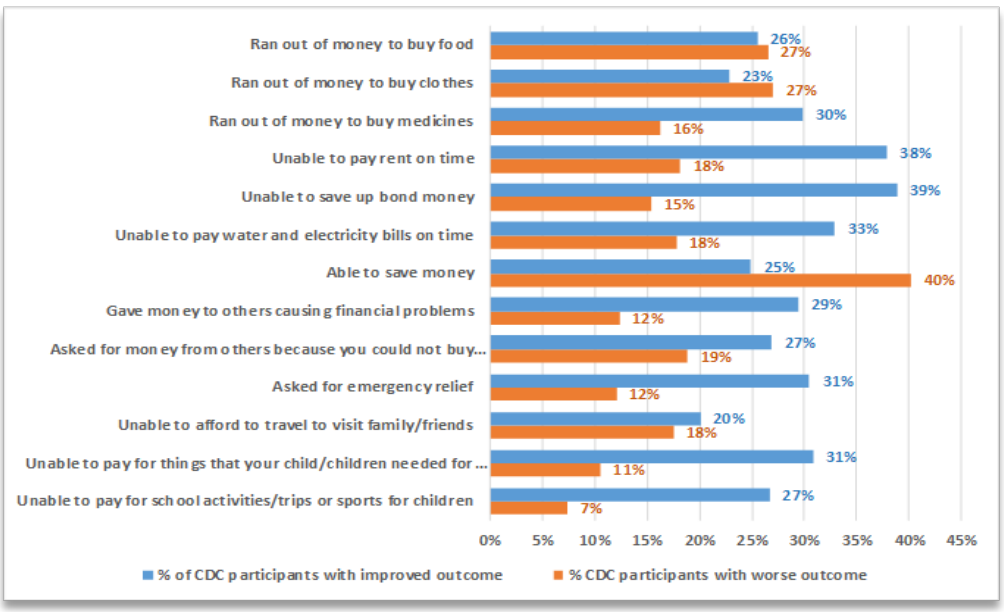
Figure 3-17 shows the same information for the Goldfields. We observed similar improvements in the ability to pay the rent on time, being able to save up for bond money, and being able to pay bills on time. We also note the same issue with CDC participants who did not have these problems prior to the CDC, especially relating to running out of money to buy food post-CDC and showing a decreased capacity to save money. Corroborating qualitative evidence suggests the possibility that these observations are partly due to CDC participants needing to use direct debit arrangements more than they did prior to the CDC. Setting up direct debit payments means rent and bills are more likely to get paid on time, but it also means less flexibility for making money available for discretionary expenses like clothes and food.

Figure 3-17: CDC participants whose financial situation improved/worsened since the CDC, by financial domain, Goldfields



The following Figure 3-18 displays the information on the percentage of CDC participants improving/worsening of their financial situation for Ceduna and surrounds. In essence, the results are similar to those highlighted in the previous two sites. A notable exception is with the last two items concerning expenses related to the needs of children, which show a larger proportion of CDC participants reporting improvement in these domains than in the other sites.

Figure 3-18: CDC participants whose financial situation improved/worsened since the CDC, by financial domain, Ceduna & surrounds



In conclusion, we see that the examination of different domains of the financial position of CDC participants (before the CDC was introduced and in the last months of 2019, when the survey was completed) reveals a complicated and diverse picture. First, looking at the overall picture emerging

from Tables 3-2 and 3-3, which reported the present position of CDC participants, we see very clearly about three in four reported having experienced no change (two in four without a problem and one in four with a problem) and the remaining one in four have experienced change (two thirds being change to the worse and one third to the better). Table 3-4 looked at that evidence by trial site and found East Kimberley experienced the most change overall and the most change to the worse. Ceduna was the opposite, experiencing the least overall change and the most change to the better. The Goldfields were somewhere in the middle, but we noted a very diverse picture that requires further analysis for systematic differences within the Goldfields trial site. The overall picture is thus one of net change to the worse in the financial situation of CDC participants.

However, the findings in Figures 3-15 to 3-18 look at the evidence from a different angle, namely, how the CDC may have changed the reporting of those who started prior to the CDC with a (financial) problem and how the CDC may have changed the reporting of those who started prior to the CDC without a (financial) problem. Ideally, for all relevant financial domains, one would want a policy that helps out those with a problem and at the same time does not impact negatively those without a problem. However, as the policy was applied universally to all CDC participants, the financial position of every participant can potentially be impacted upon (either positively or negatively). The important finding is that the degree of impact is different depending on the financial starting (pre-CDC) position of CDC participants. The finding suggests that the CDC appeared to improve most of the financial domains in question in higher proportions for those with an existing problem (the intended beneficiaries of the policy) than worsening the situation for those previously without a problem (these are people who did not need the policy intervention to improve the specific domains). Figures 3-15 to 3-18 reveal that in most domains the proportion of those who experienced improvement (as a proportion of all who could improve, not as a proportion of the total population of CDC participants) is higher than the proportion of those who experienced negative change (as a proportion of all those whose situation could potentially worsen). However, given the number of those whose financial situation could improve is much lower than the number of those whose situation could worsen, we end up with the finding in Tables 3-2 to 3-4, namely that for every *one* CDC participant with an improved financial domain response there were *two* with a worse financial domain response.

3.2.2.3 Indices of financial stress pre- and post-CDC

a) Defining indices of financial stress

We complement our analysis of the individual domains of CDC participants' financial situation by constructing a simple synthetic index of 'financial stress' faced by CDC participants pre- and post-CDC. The aim of this index is to summarise CDC participants' responses to the 11 first questions in order to form an overall picture of one's financial position over all domains. We did not include the last two domains because they are about expenses related to children. As such, they only applied to those respondents who care for children. We computed one index pre-CDC rollout, giving an indication of how much financial stress CDC participants were in in the twelve months prior to the CDC rollout. We then computed another one for CDC participants financial situation post-CDC rollout (four weeks leading to the survey). The indices are simply the sum of the answers to each of the 11 domains. If a CDC client answers yes to one of the domains (for instance, "Did you run out of money to buy food") we attribute a score of 1 for the question. If the answer is no, then the score is 0 for the question. We sum up these scores over the 11 domains elicited in the survey. Note that we reverse the coding of the answers to the question about whether people are able to save some money (score of 1 if the answer is no and 0 if yes). By construction, the higher the value of these indices for a given CDC participant, the more financial stress that individual was/is experiencing. A score of 11 identifies

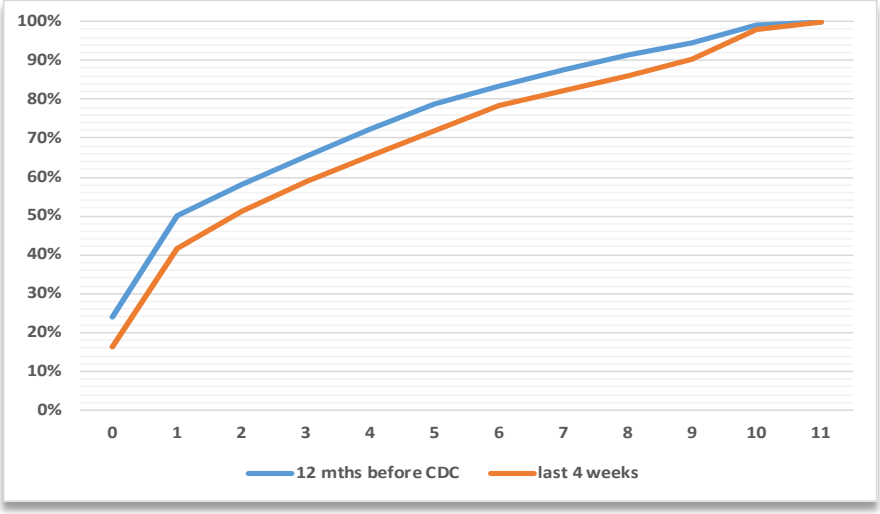
someone who answered yes to each question (and no to ability to save money), thus someone reporting a very dire financial situation. Since these indices are constructed as the sum of each domain, we implicitly assume that each domain are of equal importance in the scoring. In other words, running out of money to buy food scores the same as running out of money to travel and visit family and friends. This may be a strong assumption in the sense that running out of money to buy food may be viewed as the epitome of financial stress, more so than running out of money to travel. However, introducing weights for each domain would equally induce assumptions as to which domain is more important than another. For instance, being able to afford to travel long distances to attend cultural events or a funeral is likely viewed by Indigenous respondents as extremely important, probably more so than for non-Indigenous respondents. Assigning an arbitrary weight to each domain in the context of such a survey where the sample is far from being representative of the Australian population, as a whole would be methodologically unsound. Therefore, our strategy was to assign equal weight to each domain. We only need to keep this in mind when interpreting the values of these indices.

These indices are used at several levels. First we complement the analysis above, looking at changes over time since the rollout of the CDC, by trial site and comparing other relevant groups. The mean value of these indices tells us, on average, how many domains of one's financial situation CDC participants are experiencing problems with. This information was not available in the previous subsection where we mostly looked at individual domains separately. Second, we use these indices in the multivariate analyses conducted on other life outcomes relevant to the study of the impact of the CDC. We use those indices to control for current and past financial stress in the profiling of those who report better/worse outcomes. As such, these indices are an integral part of the profiling of CDC participants and help determine whether better improvements are observed for those who struggled more financially prior to the CDC rollout or not.

b) Indices of financial stress pre- and post-CDC rollout in each trial sites

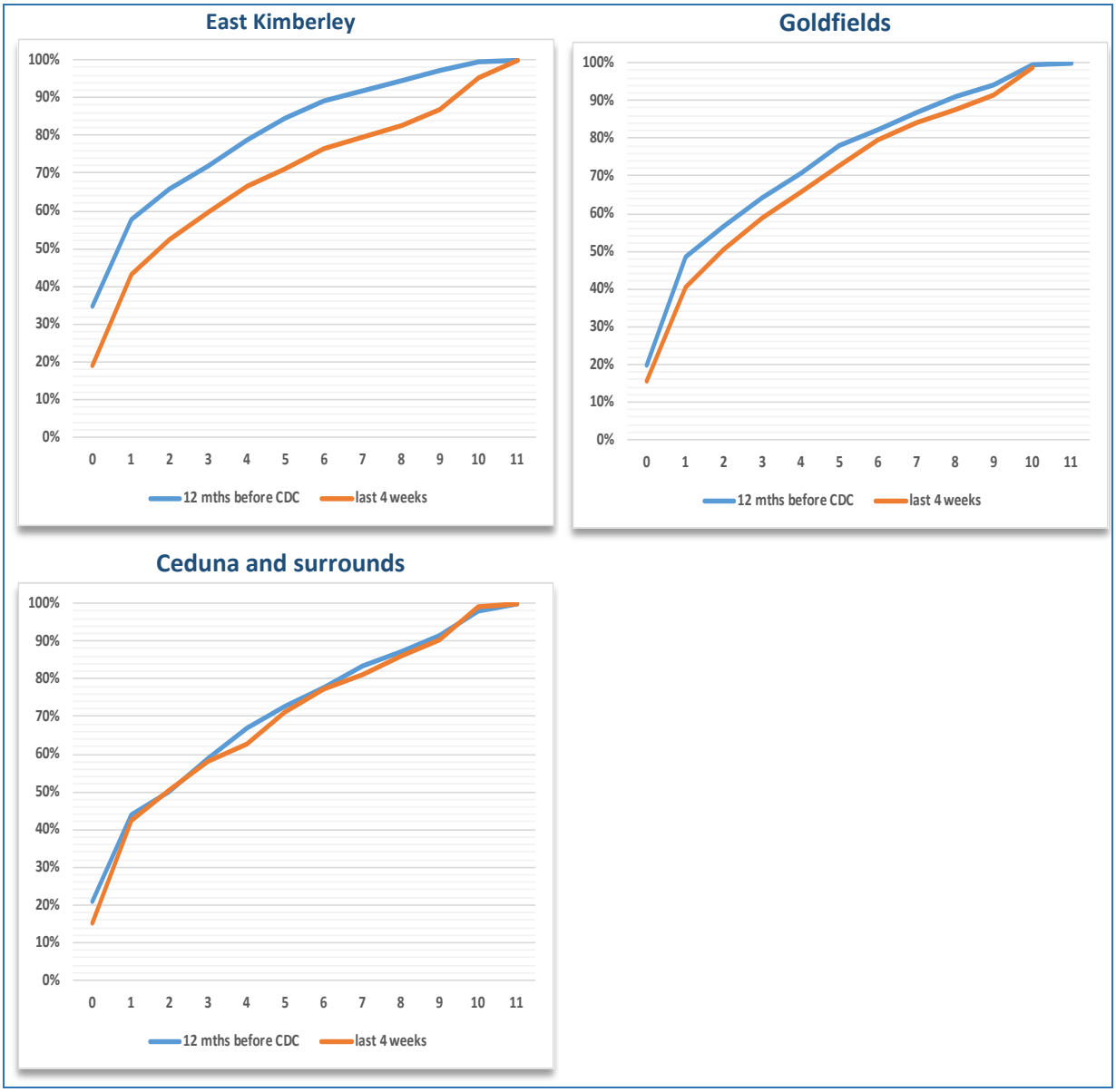
Figure 3-19 shows the cumulative distribution of both indices of financial stress (population weighted). The blue line shows the distribution 12 months prior to the CDC rollout as reported by the respondents. The orange line shows the distribution in the four weeks preceding the survey. The fact that the whole orange distribution is below the blue one means that, of those participants who reported a change, survey respondents report that their financial situation has worsened compared to their situation pre-CDC rollout, which is what we observed previously.

Figure 3-19: Index of financial stress pre- and post-CDC rollout, all trial sites



The following three figures (Figure 3-20) unpack the same information by trial site. These figures indicate that the distribution of the CDC clients with regards to how financial stress has changed over time since the CDC rollout differs markedly by trial site. In the East Kimberley trial site, there seems to the largest difference between the two distributions indicating that financial stress has gotten much worse post-CDC. We observe some differences pre- and post-CDC in the Goldfields trial site, indicating, also, a reported worsening of the CDC participants' financial stress. However, this seems to be happening on a much lower scale. By contrast, it seems that reported financial stress remains similar to what it was pre-CDC rollout in the Ceduna and surrounds area.

Figure 3-20: Index of financial stress pre- and post-CDC rollout, by trial site



We performed some statistical tests to determine whether significant differences exist pre- and post-CDC rollout with regards to financial stress by trial site. We compared the mean values of the financial index pre- and post-rollout of the CDC and statistically tested whether the difference is 0 (no difference between pre- and post-CDC) and whether the difference is positive (suggesting that financial stress has significantly increased post-CDC). The results are reported in the following table. In East Kimberley, the statistical tests show that CDC participants are experiencing a significant increase in financial stress since the CDC rollout. Likewise, the results show that financial stress has increased for CDC participants located in the Goldfields. At odds with the other two trial sites, financial stress has not significantly changed for CDC participants in the Ceduna and surrounds trial site.

These results raise the question as to whether what we observe for Ceduna partly reflects important differences across sites with regards to how much financial stress CDC clients originally experienced in each site to start with. The table suggests that there were important differences. The mean value of the financial stress index prior to the CDC rollout is greater in Ceduna and surrounds than in the other two sites with a mean of 3.757, compared with 3.13 in the Goldfields and 2.43 in East Kimberley.

The mean financial stress index in East Kimberley prior to the CDC rollout is the lowest among the three sites, and significantly so. This corroborates the observations we made in the figures reporting the changes over time by trial site for each domain (see Figure 3-2 to Figure 3-14).

Table 3-5: Financial stress pre- and post-CDC by trial site

Financial stress pre- and post-CDC by trial site					
Trial site	**12 months pre-CDC**	**Last 4 weeks**	**Mean Difference**	**P-Value (Diff=0)**	**P-Value (Diff>0)**
All trial sites	3.05	3.59	0.54	0.0000***	0.0000***
East Kimberley	2.43	3.64	1.21	0.0000***	0.0000***
Goldfields	3.13	3.52	0.39	0.0033***	0.0016***
Ceduna and surrounds	3.57	3.77	0.43	0.4331	0.2165

The following table looks at differences over time by Indigenous status and household types. For all these subgroups we find that the index of financial stress has significantly increased since the CDC rollout (less so for couples without children). We also compared these subgroup two by two in order to see whether the mean financial stress indices significantly differed pre- and post-CDC rollout. We find that the value of the indices were not significantly different between Indigenous and non-Indigenous CDC participants both pre- and post-CDC. With respect to household type, we find that the mean value of the indices do not differ significantly between CDC participants living alone and couple (with or without children). However, we find significant differences both pre- and post-CDC between people living alone and single parents, the latter group reporting significantly less financial stress than the former.

Table 3-6: Financial stress pre- and post-CDC by Indigenous status and household type

Financial stress pre- and post-CDC by trial site					
	12 months pre-CDC	**Last 4 weeks**	**Mean Difference**	**P-Value (Diff=0)**	**P-Value (Diff>0)**
Indigenous status:					
Indigenous	3.10	3.65	0.55	0.0000***	0.0000***
Non-Indigenous	2.95	3.48	0.52	0.0037***	0.0018***
Household type:					
Living alone	3.14	3.80	0.66	0.0013***	0.0007***
Couple without children (or unrelated adults living together)	3.18	3.56	0.38	0.1542	0.0771*
Couple with children (dependent or not)	3.21	3.74	0.53	0.0506*	0.0253**
Single parent	2.77	3.29	0.53	0.0064***	0.0032***
Other household type	3.22	3.71	0.49	0.0933*	0.0467**

Looking at financial stress through these simple indices corroborates the earlier observations made through the analysis of CDC participants' reported financial situation by individual domains.

With regards to transitions between pre- and post-CDC using the indices, the following table identifies three groups of CDC clients according to whether their reported financial situation post-CDC rollout has either remained the same, improved or worsened compared to their situation pre-CDC (population weighted figures). On average, about 41 per cent of the CDC participants show no changes in their financial situation, reporting the same number of issues pre- and post-CDC. Thirty-three per cent see their financial situation worsen, suggesting that their financial stress score has increased post-CDC. Twenty-six per cent of the CDC participants have improved their financial situation after the rollout of the CDC. These figures somewhat differ from Table 3-2 because we are now comparing the value of the financial stress indices whereas Table 3-2 looked at all pairs before-after comparisons of the number of CDC participants reporting a problem (answering yes to the question) or not. In the table below we count as an improvement in one's financial situation ('less financial stress') any cases where the value of the index post-CDC is smaller than the value of the index pre-CDC. Someone who used to score say 10 pre-CDC and now scores 9 is counted as an improvement even though the post-CDC situation still describes someone experiencing significant financial hardship.

Table 3-7: Change in financial situation since the CDC, group identification

Change in financial situation since the CDC		
	N	**%**
Same financial stress as before the CDC	2,447	**41**
Less financial stress as before the CDC	1,582	**26**
More financial stress as before the CDC	2,010	**33**
Total	6,039	100

3.2.2.4 How prevalent was humbugging and has it changed over time?

An issue that may weigh on one's financial situation in the CDC trial sites is that of humbugging. The qualitative analysis suggests that this issue is prevalent in the trial sites. However, evidence is mixed as to whether the CDC has led to a decrease of these practices. In theory, by limiting the amount of cash available to the CDC participants, it is possible that humbugging would be reduced post-rollout. Yet, as the qualitative analysis shows, humbugging also evolved post-CDC whereby Cards are being borrowed or lent.

The survey instruments eliciting CDC participants' financial situation pre- and post-CDC include two questions asking whether people had to give money to others (causing financial issues for them) and whether they had to ask for money from others to buy essential things. These were used to look at the issue of humbugging, at least to the extent that these practices cause financial issues to the CDC participants who responded to the survey.

Figure 3-21: Proportion of CDC clients 'giving money to others', comparison pre- vs. post-CDC

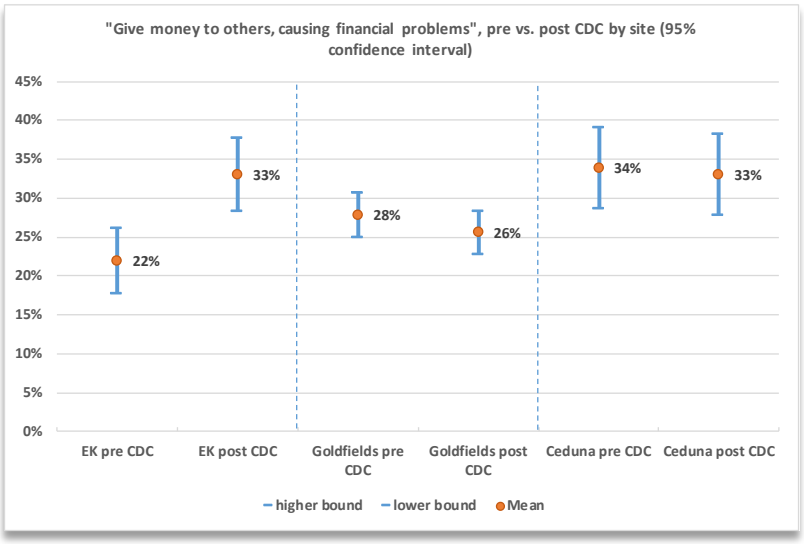


Figure 3-22: Proportion of CDC clients 'asking money from others', comparison pre- vs. post-CDC

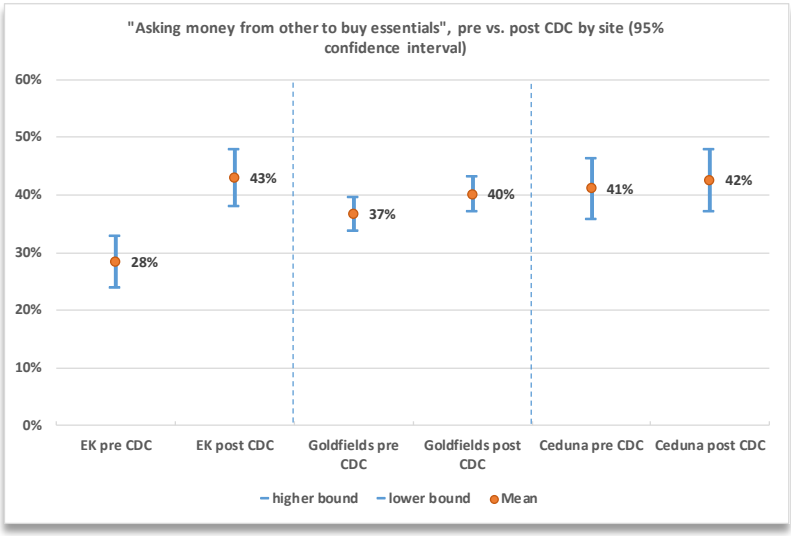


Figure 3-21 and Figure 3-22 above display the proportion of CDC participants who answered yes to the questions about whether they gave money to others or asked money from others. These proportions are computed for each trial site and compare the situation pre- and post-CDC rollout and include the 95 per cent confidence interval around those proportions. We find that, for both instruments, the proportions do not vary significantly over time in the Goldfields and Ceduna trial sites. We find that both the proportions of CDC participants who reported giving out money or asking for money has significantly increased in the East Kimberley site. In this site, the proportion of CDC participants who reported that they gave money to others (cause financial problems) has increased from 22 per cent pre- CDC to 33 per cent post-CDC, while the proportion of CDC participants indicating that they had to ask for money from others has increased from 28 per cent to 43 per cent. On both counts these represent increases of the proportion by over 50 per cent over time.

3.2.3 CDC participants' reported changes in their financial situation post-CDC

3.2.3.1 CDC participants' perceptions of change

The survey includes a number of questions that directly ask CDC participants whether their financial situation has improved since the CDC (questions in Section F2 of the survey). The survey asks whether CDC participants consider that it is now easier, harder or if they have observed no change at all on the following items:

- Managing money
- Saving money
- Having enough money for food
- Having enough money to pay rent
- Knowing how much money they have
- Looking after family obligation

Unlike the previously examined domain questions, here we have a more general set of questions. They are designed to convey a broad opinion about the change the CDC has caused and some of the answers will need to be interpreted more widely, so that we should not expect a precise correspondence between this question and the previously examined questions on specific financial domains of the CDC. For example, answering about "Knowing how much money you have" will require a reflection jointly upon a group of financial domains and the answer will probably include some consideration of aspects of implementation.

We look at CDC participants' responses to these questions and highlight characteristics of those who report positively/negatively on each of these items. The following set of figures (in Figure 3-23) shows the proportion of people who report they find it easier, harder or find no change at all since the CDC with regards to the items above (see Section 2 in the Appendices for the same information by trial site).

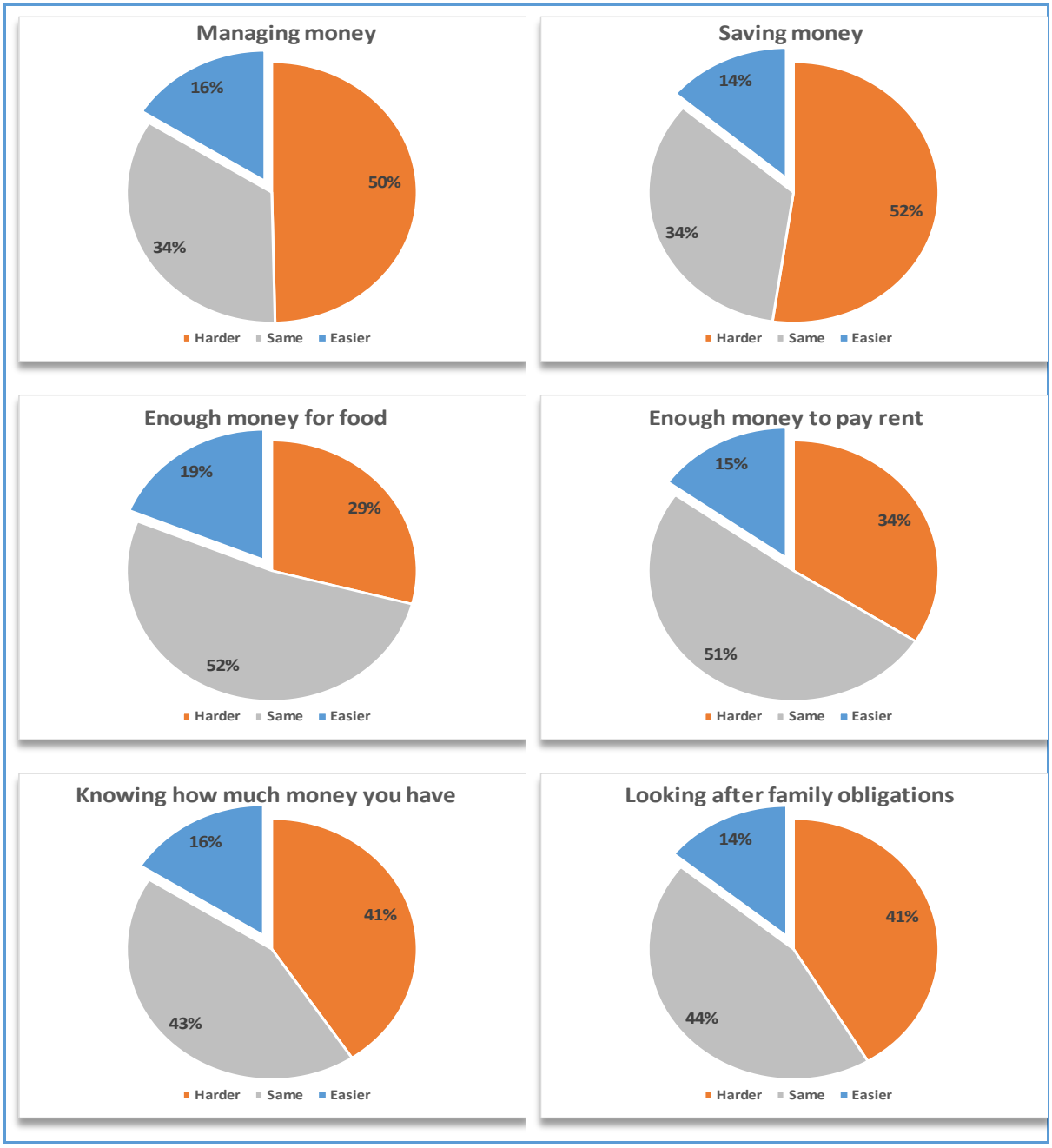
The overall observation from these questions is that there is a lot of inertia as it is for the other financial stress question items. For most items, the proportion of CDC participants reporting that their situation has not changed since the CDC is between 40 and 50 per cent.

The responses to these questions highlight that a large proportion of CDC participants reported they keep experiencing money issues in some aspects and that they are finding it harder since they have been rolled out into the CDC (pictured by the orange slices in the figures below). For instance, with respect to managing money, 50 per cent of the CDC participants report that it is now harder after the

CDC, more so if they live in the Goldfields (the proportions are 43 per cent in East Kimberley, 54 per cent in the Goldfields, and, 44 per cent in Ceduna). With regards to one's ability to save money, we make similar observations compared to those made about financial stress indicators. More than half of the CDC participants report that it is now harder for them to save money.

We note that the answers to these items are highly correlated (between 70 and 80 per cent for all items). This suggests that those who report that it is now harder do so on most items. Most of those who say that they find it easier on one item are also those who say that it is easier for the other items.

Figure 3-23: Subjective impact of the CDC on participants' financial situation



In spite of the general observation that the majority of CDC participants either report no change or a worsening of their financial situation (based on the multidimensional index of financial stress) or state that they find it harder to cope with financial issues since the CDC (as described above), there is around

20 per cent of the CDC clients who report positive outcomes following the CDC. We now look at whether these people share some characteristics that would be relevant from a policy perspective.

3.2.3.2 Characteristics of those who find things have become easier/harder since the CDC

We used multivariate regressions in order to present the individual characteristics of those who report finding things easier and those who report finding things harder.

We estimated a model for each dimensions of money management, namely:

- 'managing money'
- 'saving money'
- 'having enough money for food'
- 'having enough money for rent'
- 'knowing how much money one has'
- 'looking after family obligations'

The models are based on an Ordered Probit specification, allowing us to estimate the probabilities of each possible outcomes of the questions ('harder', 'unchanged', 'easier') and look at the association between individual characteristics and these probabilities. As is customary with these type of models, we compute so-called marginal *effects* associated with each characteristics used in the models so as to quantify the association between each characteristics and the estimated probabilities. Because we have three possible outcomes in the estimated models ('harder', 'unchanged', 'easier'), we compute three marginal effects per individual characteristics. Further explanations about *marginal* effects are given in the box below. Note that we display these marginal effects as histograms in order to make the results more intuitive and reader friendly.

Box 3-2: How to interpret the results of multivariate probabilistic models and the definition of 'marginal effects'

Estimated marginal effects in the probabilistic models

In conventional linear estimation it is customary to report a coefficient to represent the estimated association between each independent variable and the dependent variable. The sign of each coefficient has a ready intuitive interpretation; a positive sign suggests a positive association while aa negative sign suggests a negative association. Therefore, a positive coefficient would suggest that subjects with high values of the independent variable are more likely to have high values of the dependent variable. An example of a positive association is that between education and income: if we pick a person at random from our sample and they happen to have a university degree, we are more likely also to have picked someone with an above average income. (Note that this is a probability statement. It is indeed possible that we may pick someone with a degree and a very low income, as there are people with degrees who have below average incomes. However, we can be sure that if we keep on repeatedly looking at people with degrees, we will end up with people who have a higher than average income.) However, the linear estimation model lends itself to further interpretation. If both dependent and independent variables are measured in clearly understood units and have a relationship that we believe to be constant across the range of values of these variables, then the coefficient has a clear quantitative interpretation: a one unit increase in the independent variable is associated with an increase in the dependent variable that equals the value of the coefficient. Simply put, if the coefficient of experience in the workforce measured in years (i.e. the number of years entered as the independent variable in the right hand side) in the estimation of

hourly wage (measured in AUD) is estimated to be 1.5, the result at hand says that if we pick a group of workers from our data with 10 years' experience and another group with 11 years' experience, the latter will be paid AUD1.5 more per hour on average. Where the variables have been measured in logs, as is often the case, the coefficients can be interpreted as elasticities (i.e. the relationship between two percentage changes).

A probabilistic model was used to look at the characteristics of those CDC participants who are most likely to report improvement in their finances. This is a non-liner model and therefore, unlike linear regression models, the estimated coefficients associated with each variable do not provide us with a number that can be readily interpreted in terms of the units in which the two variables are measured. The size of the coefficient and its association with the dependent variable actually changes, depending on the value of the independent variable. The estimates themselves have little interpretative value beyond their sign.

To overcome this problem we calculate the so called 'marginal effects' for each of the estimated coefficients. Note that this is a calculation that contains no new information over and above what has been used to derive the original set of coefficients; it just translates these coefficients into a metric that has an intuitive interpretation. In the context of the present analysis, when we estimate the probability that someone reports that the CDC has improved/worsened his or her financial situation, the marginal effect of each independent variable states how the estimated probability changes per a unit change in the independent variable. Similarly, for categorical variables, the marginal effect measures the difference in the estimated probability due to the categorical variable changing from the value of 0 to the value of 1. Also, whenever the model includes a set of categorical variables with more than levels, we keep one level as the reference and include the remaining levels as indicator variables. As a result, the interpretation of the estimated coefficients and marginal effects obtained for this set of variables is made with reference to the missing level. For instance, when we want to test whether there are differences between trial sites, we include only two indicator variables, say Goldfields (1 if the observation is from the Goldfields and 0 otherwise) and Ceduna (1 if the observation is from the Ceduna and 0 otherwise) and we omit the East Kimberley variable. The coefficients and marginal effects obtained for Goldfields and Ceduna tell us whether (and by how much) the estimated probability change in these two trial sites compared to East Kimberley. For instance, if we find a marginal effect of 0.056 for Goldfields for the estimated probability that CDC participants now find it harder to save money, we would interpret that estimate as: 'compared to East Kimberley CDC participants, Goldfields CDC participants are 5.6 percentage points more likely to report that it is now harder to save money, everything else held constant'.

However, the values of marginal effects associated to a variable depend on the actual value of this variable (and all other variables used in the estimation). It is not constant like in linear models. In general, when we derive marginal effects we set the value of all variables in the model to their sample means and vary only the value of the variable in question. But we can also compute these marginal effects assuming different values for the other characteristics that would describe a particular group of people we are interested in. For instance, we could set the age of the CDC participants to be say 20 instead of using the sample mean of 39 and look at the estimated marginal effect computed for Indigenous status. We would find a different number compared to the one assuming an age of 39. This means that the difference between Indigenous and non-Indigenous CDC participants in terms of the estimated probability would be different between younger and older people. Comparing the two marginal effects would allow us to quantify this difference. Whenever the analysis requires it, we will report marginal effects estimated for particular scenarios of CDC participants' individual characteristics rather than those computed at the sample means of these characteristics.

Finally, as noted above, in probabilistic models involving more than two alternatives (yes/no) like for the models on CDC participants' views about the impact of the CDC on money management (three alternatives: harder, unchanged, easier), we compute as many marginal effects for a given characteristic as there are alternatives. For instance, when looking at the association between Indigenous status and

whether it is easier or harder to save money post-CDC, we compute three marginal effects. Looking at the sign and value of these three estimates, we can tell whether Indigenous status is associated with a higher probability to report that it is easier, harder to save money or whether things have not changed. As an illustration, we report these three estimated marginal effects for Indigenous CDC participants in the 'saving money' model below. From that table we see that Indigenous CDC participants are 13 percentage points (on average) less likely to report that it is harder to save money compared to non-Indigenous CDC participants. They are comparatively 7.6 percentage points more likely to state that things have not changed and are 5.4 percentage points more likely to report that it is easier to save money post-CDC (compared to non-Indigenous CDC participants). Note that, by construction, the sum of all three marginal effects is zero.

	Saving money		
	Harder	Same	Easier
Indigenous	- 0.13***	0.076***	0.054***
	(0.017)	(0.010)	(0.0068)

We compiled the results from the six models (one per dimension of money management) and drew conclusions as to CDC participants' individual characteristics that are most likely to be associated with reporting that things have become harder/easier or have not changed since the CDC rollout.

The full tables of results are available in the appendices (Table A 4-6 to Table A 4-8). Below the summary boxes, we display the marginal effects and discuss.

The two following boxes summarise the results and highlight CDC participants' individual characteristics that are associated with greater probabilities to report that things have become harder versus easier.

Box 3-3 shows the most likely characteristics of CDC participants who found financial matters easier after the CDC. The emerging profiles suggest those who are most affected by harmful behaviours of others, such as Indigenous participants and female participants, found the CDC improved their financial situation. Also, those in the most severe financial hardship, such as single mothers and those unable to work, were more likely to find the CDC made things easier for them. We note that the categories above include some of the most vulnerable CDC participants. Finally, those who had support in managing the practical aspects of the Card, typically from other family members, also tended to report improvements to their finances.

Box 3-3: Who is most likely to state that their financial situation has become easier since the CDC

Financial situation is now easier for the following groups of CDC participants:

- Ceduna CDC participants (followed by East Kimberley) on most dimensions (i.e. managing money, enough money for rent, knowing how much money they have, looking after family obligations).
- Females.
- Indigenous CDC participants.
- CDC participants who stated they have not experienced issues using the Card.

- CDC participants who live with someone else who is also on the Card.
- CDC participants who were in receipt of Parenting payments (single and partnered) and FTB.
- CDC participants who were in receipt of DSP (except for the dimension related to 'looking after family obligations').
- Older CDC participants: the older the CDC participants the more likely they are to state that things are now easier.
- CDC participants who experienced more financial hardship prior to the CDC.

In contrast, Box 3-4 suggests that those who can least handle the complexity of the Card felt that the CDC has made things harder financially for them. These are people with fewer informal supports (e.g. singles) and people who state they find the Card difficult to use. Those reporting their financial situation has worsened also includes people who believe they are least likely to need the Card or believe they should not be on the Card. Typically, these are more likely to be people who suffered the least (relative) financial hardship prior to the CDC, including younger people and those with the strongest labour market attachment. It can also be people whose behaviours are more likely to be targeted by the CDC, such as younger males and males in general. CDC participants within the Goldfields trial site were also more likely to report that their financial situation had become harder since the introduction of the Card. These estimations provide useful insights about how and why opinions about the Card are developed.

Box 3-4: Who is most likely to state that their financial situation has become harder since the CDC

Financial situation is now harder for the following groups of CDC participants:

- Goldfields CDC participants (on most dimensions).
- Males.
- Non-Indigenous CDC participants.
- CDC participants who stated they experienced issues using the Card (on all dimensions except for looking after family obligations).
- CDC participants who do not live with someone else who is on the Card.
- CDC participants who were in receipt of Newstart Allowance.
- CDC participants who were in receipt of DSP payment (only with regards to 'looking after family obligations).
- Younger CDC participants.
- CDC participants who experienced the least amount of financial hardship prior to the CDC were more likely to state that things have become harder.

To sum up the multivariate results, we found that those who need the Card the most and/or can handle its complexity best (and are thus more likely to feel some benefits from the CDC) report that it makes things easier for them financially. In contrast, those who need it least and/or can least handle its complexity (and are thus least likely to feel any benefits from the CDC) report that it makes their financial situation harder for them. As in the previous section, the emphasis is on both impact and targeting of the CDC policy. We note that the proportion of those who made the more general statement of financial matters being harder for them because of the CDC, was larger than the proportion reporting a detrimental impact due to any individual financial domain examined in the previous section.

The following set of figures display the estimated marginal effects for all six models for some selected individual characteristics of interest.

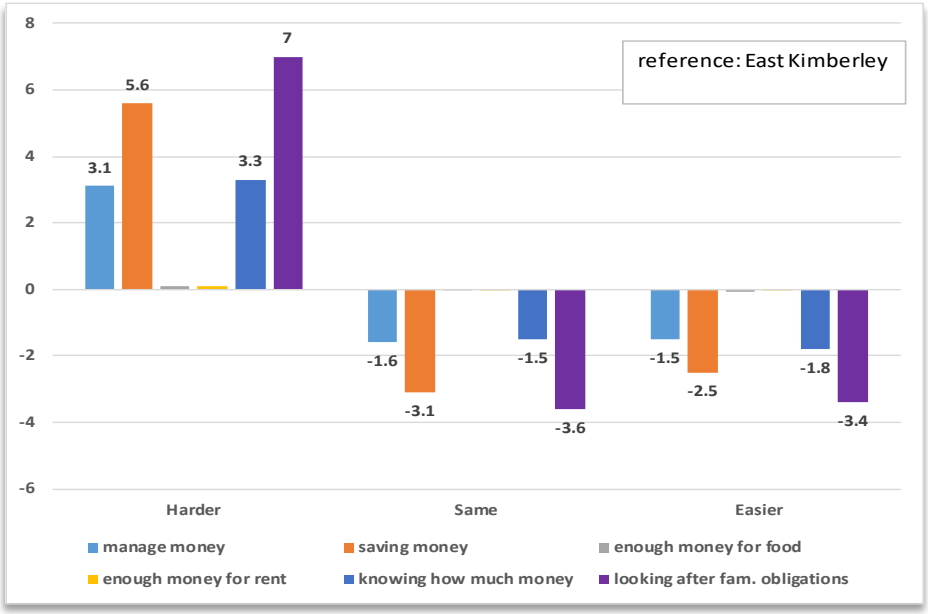
The following figure (Figure 3-24) shows the estimated marginal effects for each of the six questions for Goldfields.

It shows that CDC participants in the Goldfields are more likely to state that things have become harder compared to CDC participants in East Kimberley on the following dimensions:

- Manage money (+3.1 percentage points (pp))
- Saving money (+5.6 pp)
- Knowing how much money one has (+3.3 pp)
- Looking after family obligations (+7 pp)

For the other two dimensions (enough money for food and enough money for rent) CDC participants' responses in the Goldfields are not significantly different from East Kimberley.

Figure 3-24: Estimated marginal effects for Goldfields' CDC participants, probability to report money management is harder/same/easier



The following figure (Figure 3-25) shows the marginal effects computed for Ceduna and surrounds showing whether (and by how much) CDC participants' responses significantly differ from East Kimberley.

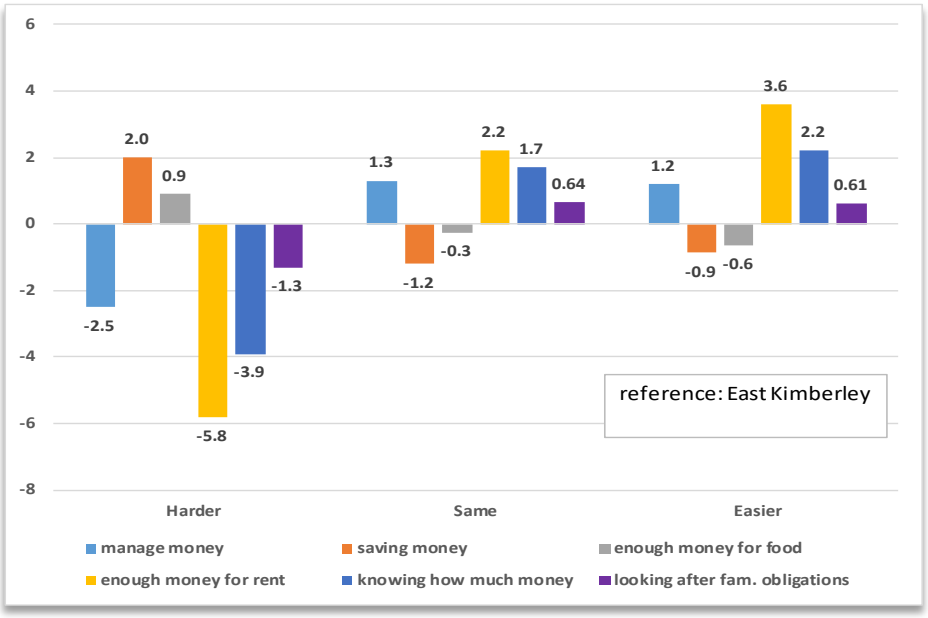
The figures show that CDC participants in Ceduna are more likely to state that things have become **easier** than in EK for the following dimensions:

- Managing money (1.2 pp) (small difference)
- Enough money for rent (+3.6pp)
- Knowing how much money they have (+2.2pp)

CDC participants In Ceduna are more likely to state that things have become **harder** than in EK for the following dimensions:

- Saving money (+2 pp)
- Enough money for food (0.9pp) (small difference)

Figure 3-25: Estimated marginal effects for Ceduna's CDC participants, probability to report money management is harder/same/easier



The following figure (Figure 3-26) shows the estimated marginal effects computed for female CDC participants. The overall picture is consistent across all dimensions elicited by the F2 questions. Females CDC participants are more likely than males to state that things have become easier since the CDC. One exception is with 'family obligations' where females are slightly more likely than males to state that things have become harder. The largest difference between males and females is observed for the 'managing money item' where females are 3 percentage points more likely than males to state that things have become easier.

Figure 3-26: Estimated marginal effects for female CDC participants, probability to report money management is harder/same/easier

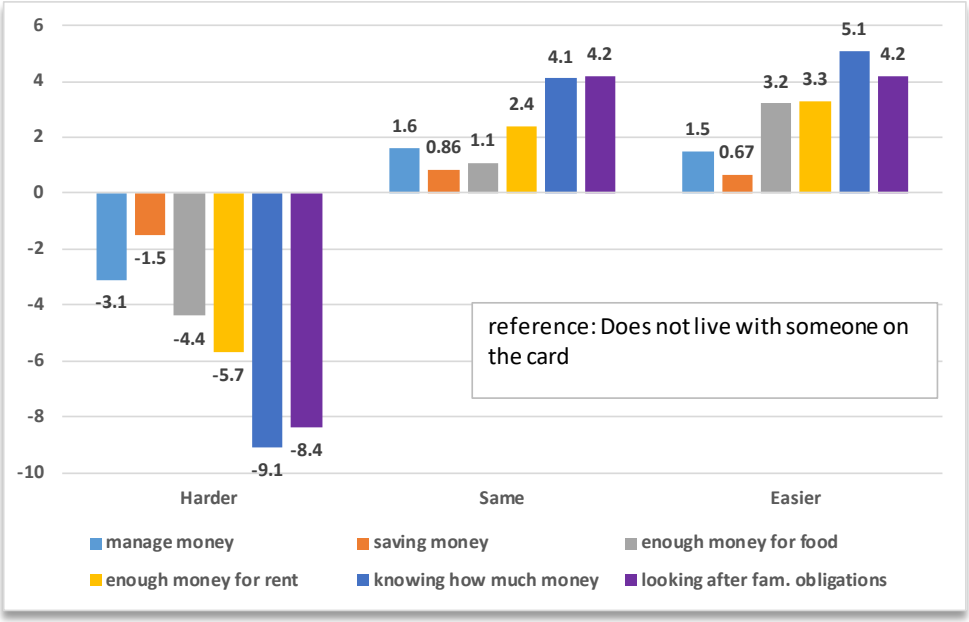
The following figure (Figure 3-27) displays the same information for Indigenous CDC participants. We see that on all dimensions elicited by the F2 questions, Indigenous CDC participants state that things have become easier. With regards to 'saving money', 'managing money' and 'looking after family obligations', Indigenous CDC participants are most likely to state that things have not changed since the CDC.

Figure 3-27: Estimated marginal effects for Indigenous CDC participants, probability to report money management is harder/same/easier

In the next figure (Figure 3-28), we compare between those who live with someone else who is on the Card and those who don't. We see, for all dimensions elicited by the F2 questions, that people living with someone else who is on the Card are more likely to state that things have become easier. Notably,

those who live with someone who is on the Card are 5.1 percentage points more likely to state that it is easier to know how much money they have compared to CDC participants who do not live with someone else who is on the Card. They are also 3 percentage points more likely to state that it is now easier to have enough money for food and enough money for rent.

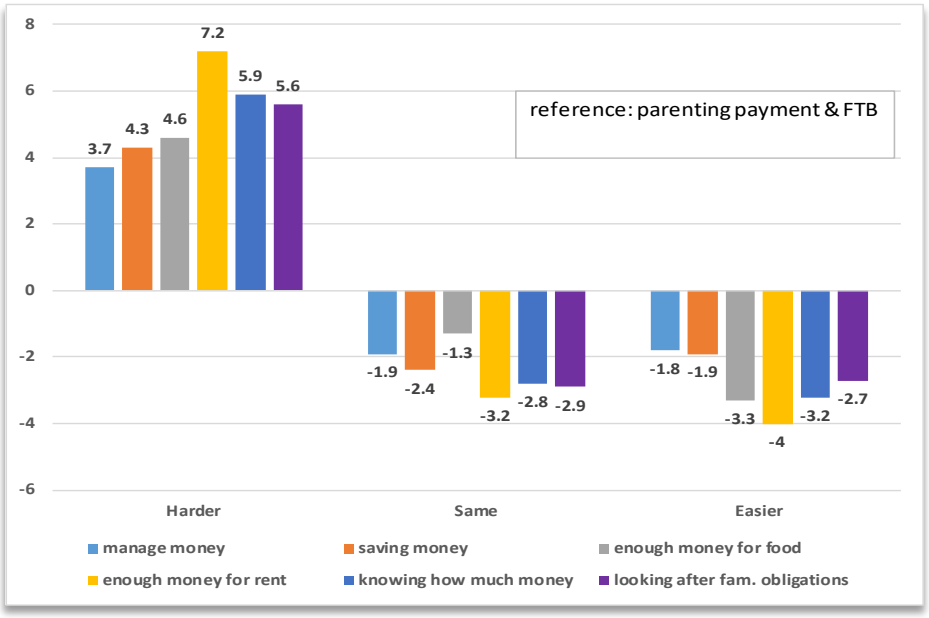
Figure 3-28: Estimated marginal effects for CDC participants living with someone else on the Card, probability to report money management is harder/same/easier



The following figure (Figure 3-29) displays the marginal effects computed for CDC participants who are in receipt of the Newstart Allowance. The reference category includes CDC participants who are on Parenting Payments (single and partnered) and family tax benefit part B.

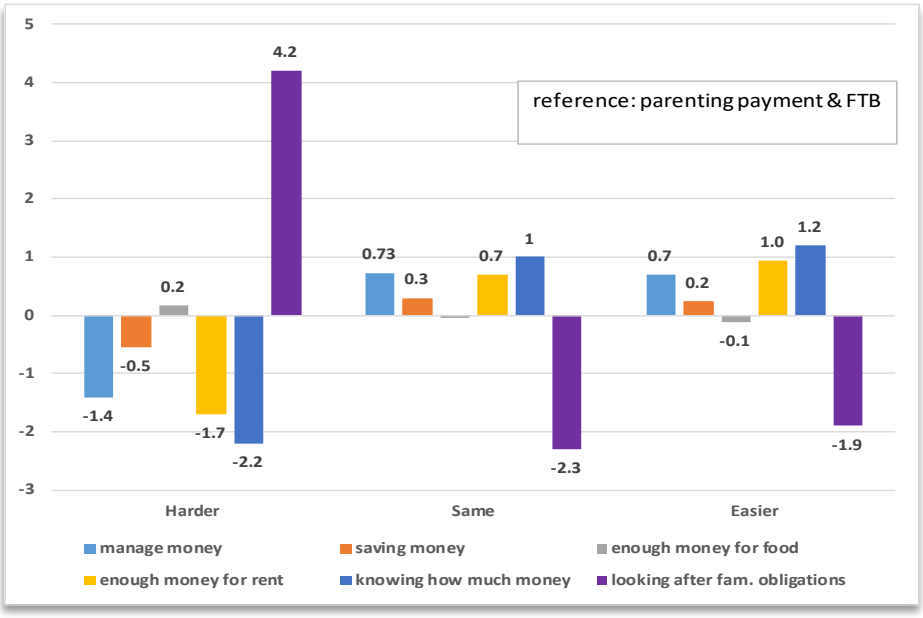
On all dimensions elicited by the questions F2, CDC participants on Newstart Allowance state that it is now harder. The largest effect is observed for 'having enough money for rent' where Newstart Allowance recipients are 7.2 percentage points more likely to state that it is now harder since the CDC.

Figure 3-29: Estimated marginal effects for CDC participants in receipt of Newstart Allowance, probability to report money management is harder/same/easier



The following figure (Figure 3-30) displays the same information for those who are in receipt of DSP. The results are in sharp contrasts with that obtained for the CDC participants in receipt of the Newstart Allowance. For most dimensions elicited by F2, they tend to state that things have become easier compared to people who are in receipt of parenting payments. For one dimension, that of 'looking after family obligations', DSP recipients are more likely to find that things have become harder.

Figure 3-30: Estimated marginal effects for CDC participants in receipt of DSP, probability to report money management is harder/same/easier



3.2.3.3 Has the CDC helped money management?

Another way to view the potential impact of the CDC on individual finances is a survey question that asks about money management. The question does not ask *whether* there is an improvement, but *where* any improvements could be reported. It is as such a question that cannot assess fully the impact of the CDC on money management, but it can inform how widely spread such an improvement may be within families, social circles and broader communities. The question asks directly whether the respondent believes that the CDC has improved money management, allowing the answer to distinguish between: You; Your family; Your friends; and Where you live.[34]

This is presented in Table 3-8 below. We draw on the main distinction (Panel A) being those who reported that they saw a positive difference in money management (24.5 per cent for all trial sites), those who reported that they saw no difference (44.7 per cent for all trial sites) and those who either reported they did not know or did not answer at all (30.9 per cent for all trial sites).

Table 3-8 also shows that the reported difference the CDC made regarding money management use varied by trial site. In the Goldfields, a larger 'positive difference' was reported by Indigenous (30.1 per cent) than by non-Indigenous CDC participants who reported the lowest incidence of 14.2 per cent. Similar proportions of CDC participants in East Kimberley (30.2 per cent) and Ceduna (24.9 per cent) reported a positive difference in money management. Two further numbers are noteworthy from Panel A in Table 3-8. First, a much smaller proportion of 'no difference' was reported by Indigenous CDC participants in the Goldfields (32.8 per cent), with Goldfields non-Indigenous, Ceduna and East Kimberley CDC participants reporting higher proportions (49.5, 43.2 and 52.3 per cent, respectively). Second, a much lower proportion of 'don't know or missing' was reported by CDC participants in East Kimberley (17.5 per cent), with those in the Goldfields (Indigenous and non-Indigenous) and Ceduna reporting higher proportions of this view (37.1, 36.3 and 32 per cent, respectively).

Further examination of the data presented in Table 3-8, Panel B, shows interesting patterns in reporting, with several prominent patterns emerging. First, in East Kimberley, we observed the strongest reported impacts especially regarding an improvement in the respondent's own (72.3 per cent) and their family's money management (58.5 per cent). A large proportion of non-Indigenous CDC participants in the Goldfields reported an improvement in their own money management (47.6 per cent) and 'where they live' (52.7 per cent) with much lower proportion of improvement for their family (13.3 per cent) and their friends (9.3 per cent). Most of these findings on the perceptions of CDC respondents about how money management may have been helped by the introduction of the CDC follow the pattern we have discovered for the other important CDC outcomes where this question was asked.

[34] Question G4 in the CDC participants survey.

Table 3-8: Has the CDC improved money management, by trial site

The CDC helps improve money management										
Panel A (full sample who were asked the question)										
	All sites		**East Kimberley**		**Goldfields Indigenous**		**Goldfields Non-Indigenous**		**Ceduna & surrounds**	
The CDC has made a:	**%**		**%**		**%**		**%**		**%**	
Positive difference	24.5		30.2		30.1		14.2		24.9	
No difference	44.7		52.3		32.8		49.5		43.2	
Don't know/missing	30.9		17.5		37.1		36.3		32.0	
Total sample (N)	**6,039**		**1,597**		**1,655**		**1,848**		**939**	
Panel B (sub-sample of 24.5% who saw at least one positive difference)										
For:	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
You	826	**55.9**	249	**72.3**	228	**45.8**	125	**47.6**	124	**53.0**
Your family	636	**43.1**	282	**58.5**	207	**41.5**	35	**13.3**	113	**48.2**
Your friends	507	**34.3**	239	**49.6**	164	**33.0**	25	**9.3**	79	**33.8**
Where you live	708	**47.9**	236	**49.0**	227	**45.5**	139	**52.7**	106	**45.5**
Total respondents	**1477**	**100**	**482**	**100**	**498**	**100**	**263**	**100**	**234**	**100**
Total responses	2,677		1,106		826		323		422	
Responses per person	1.76		2.31		1.64		1.17		1.70	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

We estimated a multivariate probabilistic model, looking at the individual characteristics that are associated with higher probabilities that CDC participants report improvements in money management resulting from the CDC. The table of results is available in the appendices (Table A 4-9).

We find that CDC participants in the Goldfields are 6.3 percentage points less likely to report that the CDC has improved money management (at any level) compared to those living in the East Kimberley trial site. We do not find significant differences between CDC participants living in the East Kimberley area and those living in Ceduna and surrounds.

Indigenous CDC participants are, on average, 15 percentage points more likely to indicate that the CDC has improved their money management. We do not find significant differences between males and females, nor do we detect any relationship with age. Older or younger CDC participants are not more likely to report improvements. We detect a slight negative relationship between the estimated probability to report improvements and CDC participants experience on the CDC. Those who have been rolled out for longer are, on average, less likely to report improvement. The magnitude of the effect is quite small though.

Compared with CDC participants who live alone, all other household types are more likely to report improvements in money management. Couples with children (or unrelated adults living together) are 11 percentage points more likely to see improvements at, at least, one level (own, family, friends, community). Couples with children (dependent or not) are 10 percentage points more likely and single parents 5 percentage points more likely to report improvements.

We also observe that CDC participants in receipt of DSP have a higher estimated probability to report improvements by 8.9 percentage points compared to CDC participants on parenting payments but we do not find significant differences for those who are in receipt of the Newstart Allowance.

We detect that the CDC seems to have a levelling effect in the sense that those who reported experiencing greater financial hardship prior to the CDC rollout are more likely to report improvements in money management.

As we typically observe throughout the analysis, we find that those who indicated that they experienced problems with the Card are also less likely to report positive outcomes in terms of money management. They are 10 percentage points less likely to say that the CDC has improved money management compared to those who did not report experiencing practical issues with the Card.

3.3 Gambling

3.3.1 Measures of gambling behaviour in the survey

Problem gambling, like harmful alcohol and drug consumption are the primary target of the CDC. It is expected that by placing 80 per cent of one's government benefits onto the CDC, this will limit one's ability to dedicate substantial amounts of money to gambling. As stated previously, the link between quarantining government benefits and reductions in gambling is conditioned on there being limited avenues for individuals to circumvent those restrictions.

The quantitative survey collected information through direct questions on gambling incidence and intensity. Any survey eliciting respondents' consumptions of alcohol, drug, gambling or other types of sensitive information potentially faces under-reporting from the respondents. This has been widely observed in many studies (on Gambling one can refer notably to Volberg, 1996[35]; Woods & Williams, 2007[36]; Abbott & Volberg, 2000[37]; Productivity Commission, 1999[38]). Some contributions like that of Van Der Heijden (2000)[39] show that Random Response (RR) procedures perform better than other techniques for the elicitation of sensitive subject matter. Yet, they also show that these more demanding techniques also result in serious under-reporting from survey participants. Since the survey of CDC participants needs to elicit a whole range of life outcomes such as health, well-being, alcohol consumption, attitude towards the Card and others, it would have placed too much burden on respondents to try and implement highly elaborate techniques to elicit gambling behaviour. The strategy consisted in using the survey instruments that had already been implemented by the evaluation of the Income Management in the Northern Territory. Using the same instruments allows, should the need arise, to make comparison between the current trial site survey answers and those of the Income Management evaluation.

Three sets of instruments elicited information about gambling. The first two sets asked the CDC participants how often they (i) gambled, (ii) spent more than $50 a day gambling, (iii) borrowed money or sold things to have money to gamble. In the first set, these questions were asked referring to the 12 months prior to being rolled out into the CDC. The second set asked the same question referring to the current situation. This allowed us to see whether some changes have occurred post-CDC rollout compared to before. The third set of instruments asked CDC participants whether the CDC has helped with reducing gambling problems for themselves, their family, friends or the community where they live.

3.3.2 Gambling behaviour pre- and post-CDC and stated impact of the CDC

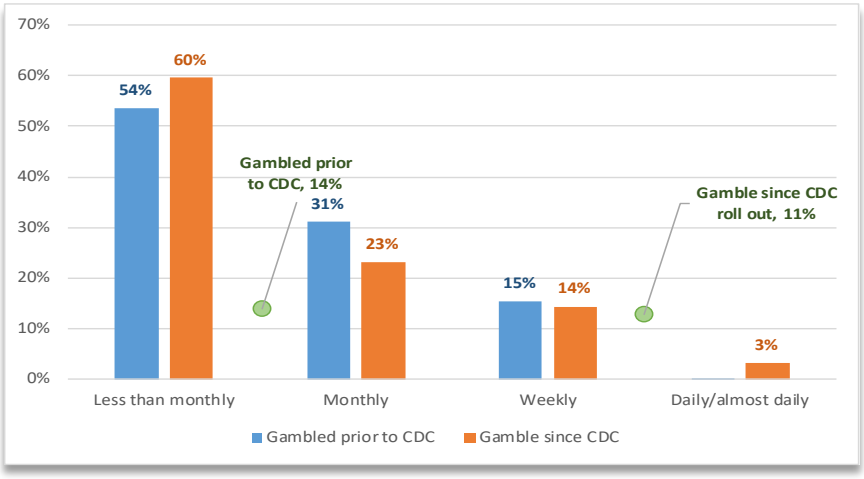
Reporting is suggestive of several findings. First, incidence, as measured by CDC participants who reported that they gamble, is low and differs by trial site. Ceduna appears to be the site with the

[35] Volberg, R.A., (1996), "Prevalence studies of problem gambling in the United States", *Journal of Gambling Studies*, vol 12(2).
[36] Woods, R.T., Williams, R.J., (2007), "How much money do you spend on gambling? The comparative validity of question wordings used to assess gambling expenditure", *International Journal of Social Research Methodology,* vol 10(1).
[37] Abbott, M.W., Volberg, R.A., (2000), *Taking the pulse on gambling and problem gambling in New-Zealand: Phase one of the 1999 National Prevalence Survey,* Report number three of the New-Zealand Gaming Survey. Wellington, Department of Internal Affairs.
[38] Productivity Commission (1999), *Australia's gambling industries,* Report no 10, Canberra: Ausinfo.
[39] Van der Heijden, P.G.M, Van Gils, G., Bouts, J., Hox, J.J., (2000), "A comparison of randomized response, computer-assisted self-interview, and face-to-face direct questioning: eliciting sensitive information in the context of welfare and unemployment benefit", *Sociological Methods & Research, vol 28(4).*

highest self-reported per capita incidence, followed by the Goldfields with a much lower incidence and East Kimberley just a bit lower than the Goldfields. Second, the data suggests a modest reduction in incidence of gambling in all sites since the introduction of the CDC. Third, the overwhelming majority of those who reported gambling, said they did so once a month or less often (more than 80 per cent), with only a small proportion of CDC participants (less than 20 per cent) reporting they were gambling regularly (defined as once a week or more often).

The following figure (Figure 3-31) displays statistics on CDC participants' reported gambling behaviour elicited through the first two sets of instruments. Two sets of information are displayed in this figure. The dots show the proportion (population weighted) of all CDC participants who reported that they used to gamble prior to the CDC rollout (14 per cent)[40] and post-CDC rollout (11 per cent). The histograms display the frequency of gambling of those who reported they gambled. The blue histograms show the proportions prior to the CDC rollout and the orange ones show the proportions post-CDC rollout. Prior to the CDC, 54 per cent of those who gambled did so less than monthly, 31 per cent monthly, 15 per cent weekly and 3 per cent gambled daily. Post-CDC we observe that the proportion of people reporting they gamble was slightly smaller (11 per cent) and that those who still did, seem to have slightly decreased the frequency with which they gamble. The proportion of people who gambled less than monthly have increased. Statistical tests show that the proportion of people who reported that they gamble since the CDC rollout (11 per cent) was significantly lower than the proportion of people who reported they gambled prior to the CDC (14 per cent).

Figure 3-31: Reported gambling behaviour pre- and post-CDC rollout, all CDC participants



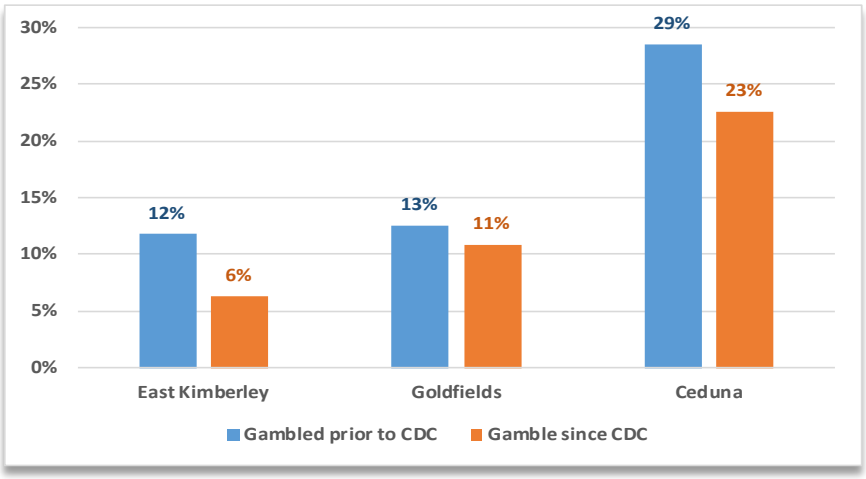
The survey responses show some significant differences across sites. The following figure (Figure 3-32) shows the proportions of CDC participants who reported that they gambled prior to the CDC (blue histograms) and since the CDC (orange histograms) by trial site. The proportion of CDC participants reporting that they have (or currently) gambled is significantly larger in Ceduna and surrounds with 29 per cent of the CDC participants reporting that they were gambling prior to the CDC rollout. The situation pre- rollout in the other two sites was very similar at 12 per cent to 13 per cent of the CDC participants reporting that they used to gamble.

[40] We note that there are some minor differences between the proportions reported here and those reported in the Consolidated report. This is due to the fact that we account for the small number of missing information (item non-response) in the proportions reported in the supplementary report, whereas we opted to ignore them in the Consolidated report. Altogether, the differences are so minor that the observations are unchanged.

Comparing the situation pre- and post-CDC, we tested whether the proportions have decreased over time and found that the proportion of CDC participants who report that they gamble has significantly decreased in both the East Kimberley site and the Ceduna trial site (though the significance level is slightly higher with a p-value of 0.0231). As for the Goldfields, the decrease is significant but it is not as robust (p-value=0.08).

The main message of these statistics though is the large difference between Ceduna and the other two sites.

Figure 3-32: Reported gambling behaviour by trial site



The following table shows the transitions between pre- and post-CDC rollout with regards to gambling. Note that this table shows conditional distributions like those discussed in the previous section (see Box 3-1 for explanations on how to interpret the numbers). We observe that 98 per cent of those who reported they did not gamble before still do not gamble. Of those who indicated that they gambled less than monthly prior to the CDC, 38 per cent reported no longer gambling after the CDC and 58 per cent reported still gambling with the same frequency. A very small proportion reported increasing the frequency with which they gamble. Of those who reported they used to gamble monthly, the majority (55 per cent) have reported either reducing the frequency (18 per cent) or reported stopping altogether (37 per cent). Among those who reported that they gambled weekly, the majority have reported not changing their pattern (55 per cent), 19 per cent have reported stopping altogether and the rest have reported decreasing the frequency of their gambling. Finally those who reported that they gambled daily or almost daily (a relatively small number of people), almost 40 per cent of them have reported stopping gambling, 24 per cent have reported decreasing the frequency, and the rest (38 per cent) have not reported changing their pattern.

Table 3-9: Reported gambling behaviour, transitions pre- and post-CDC rollout

	Transistions in gambling behaviour					
	Gambled post CDC					
	Not at all	Less than monthly	Monthly	Weekly	Daily/almost daily	Total
Gambled prior to CDC	%	%	%	%	%	%
Not at all	98	1	0	0	0	**100**
Less than monthly	38	59	2	2	0	**100**
Monthly	37	18	44	0	0	**100**
Weekly	19	11	12	55	2	**100**
Daily/almost daily	39	0	15	9	37	**100**
Total	**89**	**7**	**3**	**2**	**0**	**100**

Looking at participants' reported expenses on gambling prior to the CDC, two patterns emerge. Most of those who reported gambling less than monthly state that they never spent more than $50 gambling each time they do (about 63 per cent). The majority of those who reported gambling more frequently said they spent more than $50 each time with the same frequency and about a third did not. For instance, of those who reported gambling monthly, 57 per cent said they spent $50 each time they gambled and 32 per cent said they spent less each time they gambled. The figures are similar with those who reported gambling weekly. For the small number of people who reported gambling daily, more than 90 per cent indicated that they used to spend $50 daily. Post-CDC rollout, we observe the same patterns.

The survey also asked CDC clients whether (and with what frequency) they have gambled more than they could afford. The proportion of CDC clients who report that this happened (or currently happens) is very low. Prior to the CDC rollout, 5 per cent of the CDC clients indicated that they gambled more than they could afford. The proportion is down to 3.2 per cent post-CDC and reflects the decrease in the reported occurrence and frequency of gambling post-CDC.

Altogether, most of the reported change since the introduction of the CDC came from those who belonged to the "once a month or less" very low frequency gambling category, who reported that they typically shifted from gambling very infrequently to not gambling at all. We believe the numbers on reported gambling activity lack in statistical significance, probably due to under-reporting by those who gamble more regularly.

The remaining sections are based on survey evidence provided by CDC participants when asked to report about the impact of the CDC introduction on gambling activity. The specific survey question we have used was not about frequency of the respondents' own gambling behaviour but asked about whether the CDC has made any difference in reducing gambling. Being indirect and broader, the question is less likely to have given rise to response biases.

3.3.3 Reported impact of the CDC on gambling problems

The quantitative survey asked CDC participants if they thought that the CDC helped with reducing gambling problems for (i) CDC participants themselves; (ii) their family members; (iii) their friends; and (iv) where they live. There were two more options: No change at all and Don't know. The quantitative survey provides two main results, which we present in Table 3-10. Panel A of Table 3-10 shows that of

all 6,039 CDC participants, 21 per cent for all trial sites reported a positive difference, 44.2 per cent for all trial sites reported no difference and 34.9 per cent reported they did not know or did not answer at all. The second part of the table (Panel B) focuses only on those participants who saw a positive difference and shows the type of difference (You, Your family, Your friends, and Where you live), noting that the question allowed multiple responses. Using the whole of the trial sites in the leftmost column of Table 3-10, Panel B, we see that 34.8 per cent saw a positive difference for themselves, 43 per cent for their families, 38.4 per cent for their friends and 59.7 per cent for where they live.

Table 3-10: Has the CDC helped reduce gambling problems, by trial site

The CDC helps reduce gambling problems										
Panel A (full sample who were asked the question)										
	All sites		**East Kimberley**		**Goldfields Indigenous**		**Goldfields Non-Indigenous**		**Ceduna & surrounds**	
The CDC has made a:	**%**		**%**		**%**		**%**		**%**	
Positive difference	21.0		22.9		27.3		12.2		23.8	
No difference	44.2		54.1		32.2		46.0		44.7	
Don't know/missing	34.9		23.0		40.5		41.8		31.5	
Total sample (N)	**6,039**		**1,597**		**1,655**		**1,848**		**939**	
Panel B (sub-sample of 21.0% who saw at least one positive difference)										
For:	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
You	441	**34.8**	195	**53.3**	127	**28.0**	47	**20.7**	73	**32.4**
Your family	544	**43.0**	207	**56.5**	201	**44.4**	23	**10.3**	114	**50.8**
Your friends	487	**38.4**	211	**57.5**	175	**38.7**	24	**10.5**	78	**34.8**
Where you live	757	**59.7**	232	**63.4**	238	**52.6**	171	**75.8**	116	**52.0**
Total respondents	**1,267**	**100**	**366**	**100**	**452**	**100**	**225**	**100**	**224**	**100**
Total responses	2,229		844		740		264		381	
Responses per person	1.76		2.31		1.64		1.17		1.70	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Table 3-10 also shows that the reported difference the CDC made regarding gambling varied by trial site. In the Goldfields, a larger 'positive difference' was reported by Indigenous (27.3 per cent) than by non-Indigenous CDC participants who reported the lowest incidence of 12.2 per cent. Similar proportions of CDC participants in East Kimberley (22.9 per cent) and Ceduna (23.8 per cent) reported a positive difference. Two further numbers are noteworthy from Panel A in Table 3-10. First, a much smaller proportion of 'no difference' was reported by Indigenous CDC participants in the Goldfields (32.2 per cent), with Goldfields non-Indigenous participants, and those in Ceduna and East Kimberley reporting higher proportions (46, 44.7 and 54.1 per cent, respectively). Second, a much lower proportion of 'don't know or missing' was reported by CDC participants in East Kimberley (23 per cent), with Goldfields (Indigenous and non-Indigenous) and Ceduna reporting higher proportions of this view (40.5, 41.8 and 31.5 per cent, respectively).

Further examination of the data (presented in Table 3-10, Panel B) shows interesting patterns in reporting, with several prominent patterns emerging. First, in East Kimberley, we observe the

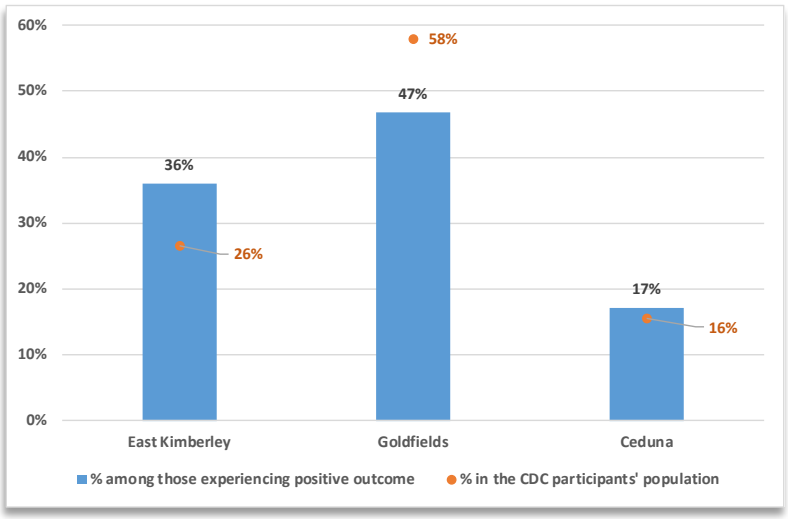
strongest reported impact and the most evenly spread impact across the reporting categories. The impact is clearly widely and evenly spread between the respondent, their family, their friends and where they live. Second, the most prominently perceived improvement is about community-level gambling reductions ('where you live' responses range from 52 to 76 per cent). Third, the difference between gambling within one's own circle (taking this to include 'you', 'your family' and 'your friends') and the rest of the community (represented by 'where you live') is most prominent among the non-Indigenous CDC participants in the Goldfields (ranging from 20.7 to 10.3 per cent for the 'own circle' and 75.8 per cent for all others, 'where you live'). It is clear that whilst a large majority of non-Indigenous CDC participants report an improvement in gambling behaviour since the CDC where they live, far fewer of them report that this helped them personally (20.7 per cent), their family (10.3 per cent), or their friends (10.5 per cent).

3.3.4 Characteristics of CDC participants who report a positive impact of the CDC on gambling problems.

We focus on the CDC participants who have reported that the CDC has helped with gambling problems either at personal level, for their family, friends, or, community. We highlight which characteristics these people are more likely to have by comparing with the distribution in the broader CDC clients' population. By doing this we can look at whether a given characteristic is over/underrepresented within the subgroup of those who report an improvement due to the CDC.

Starting with trial sites, we note that CDC clients living in the East Kimberley and Ceduna sites are more likely to report that the CDC has helped with gambling problems, as opposed to those who live in the Goldfields. The following figure (Figure 3-33) illustrates this observation. In this figure and the following ones, if the blue histogram (representing, for a given characteristics, the proportion of CDC clients within the group that reports improvements) is above the orange dot (representing the proportion of the CDC clients having the characteristics considered), it means that this type of characteristic is over-represented among those who report an improvement.

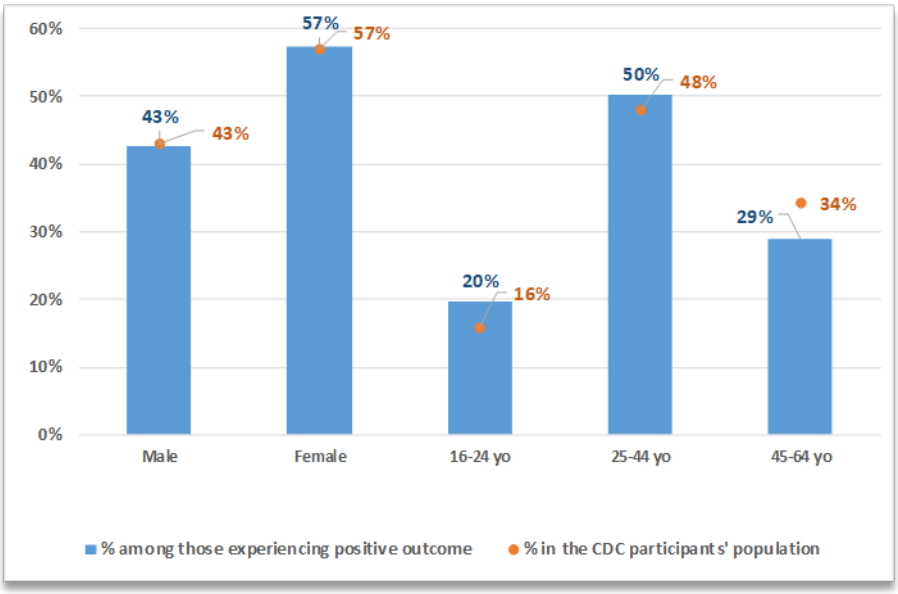
Figure 3-33: Composition of the group of CDC participants who report improvements with gambling problems, by trial site



The following figure (Figure 3-34) first looks at gender and age groupings. Females or males are not more likely to report an improvement on gambling problems. However, with regards to age groups,

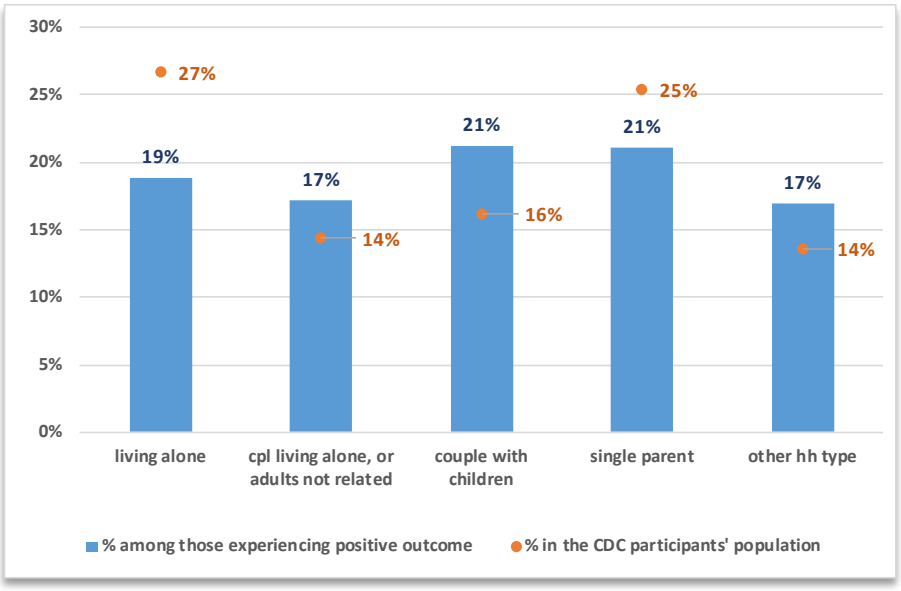
we observe that younger groups are more likely to report an improvement. The 16-24 years old group represents 16 per cent of the CDC clients' population represented in the survey while they represent 20 per cent of those who report an improvement. To a smaller extent, the 25-44 years old group is also over-represented. In contrast, the older age group is under-represented among those who report improvements due to the CDC.

Figure 3-34: Composition of the group of CDC participants who report improvements with gambling problems, by age and gender



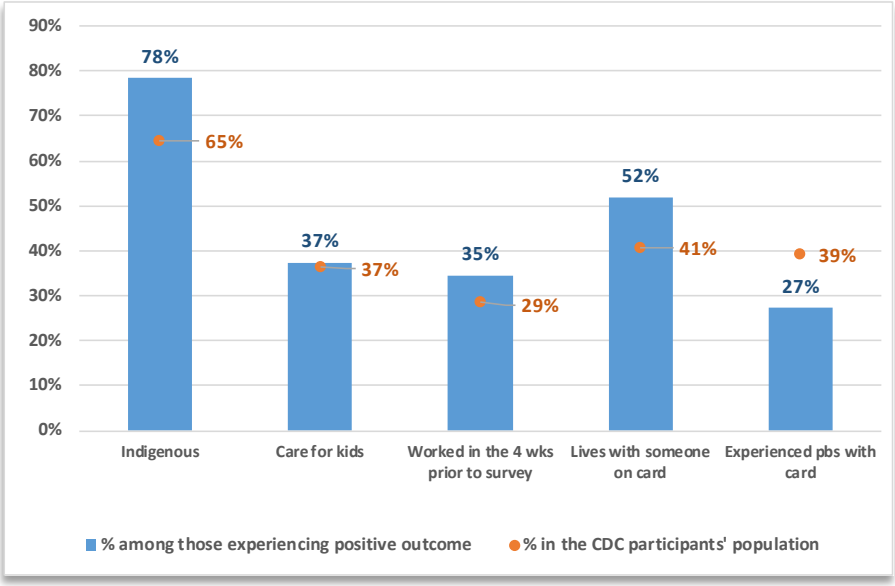
The following figure (Figure 3-35) displays the same type of information related to CDC clients' household types. Couples living alone, couples living with children (dependent or not) are more likely to report improvements with regards to gambling problems as opposed to people living alone and single parents. Couples with children represent 16 per cent of the overall CDC clients population observed in the survey while they represent 21 per cent of those who report such improvements as a result of the CDC. By contrast, people living alone represent 27 per cent of the CDC clients' population while they only represent 19 per cent of those who report improvements with gambling problems.

Figure 3-35: Composition of the group of CDC participants who report improvements with gambling problems, by household type



We looked at whether other CDC clients' characteristics were over represented among those reporting improvements. The following figure (Figure 3-36) summarises the information. Indigenous CDC clients are more likely to report that the CDC has helped improve gambling problems at one level at least. They represent 65 per cent of the CDC clients population observed in the survey while they represent 78 per cent of those who acknowledge the positive impact of the CDC on gambling. We also observe that those who worked in the four weeks prior to the survey and those who live with someone else who is on the CDC are more likely to report improvements on gambling problems.

Figure 3-36: Composition of the group of CDC participants who report improvements with gambling problems, by other individual characteristics



We looked at whether CDC participants on particular types of government benefits were more likely to report improvements on gambling problems. No clear cut result came out of the statistics, except

for the Newstart Allowance. CDC clients on that type of payment are slightly over represented among those who find that the CDC has helped with gambling problems (they represent 47 per cent of the CDC clients' population, against 52 per cent among those reporting improvements).

Going further into the analysis of the characteristics of CDC participants who are likely to report that the CDC has helped reducing gambling problems at any level (own, family, friend, community), we estimated a probabilistic model, looking at the determinants of the probability to report such improvements. The table of results is available in the appendices (Table A 4-10).

Once we control for CDC participants' characteristics, we no longer observe significant differences across sites. It appears that, everything else held constant, CDC participants in the Goldfields are no longer significantly less likely to report that the CDC has helped with gambling problems. This means that the site differences we originally noticed above are fully explained by the differences in the individual characteristics across sites included in the model, there is no residual site effect. Where the site differences remain is with the fact that a comparatively larger proportion of CDC participants in Ceduna and East Kimberley report improvements at own, family and friends level, while the proportion of those reporting improvements at community level is equivalent across all three sites.

The multivariate results show that Indigenous CDC participants are about 13 percentage points more likely to say that the CDC has helped with gambling problems for either themselves, their family, friends or where they live. Couples living alone or with children are respectively 12.8 and 16 percentage points more likely than people living alone to indicate improvements following the CDC. Single parents have an estimated probability, on average, 7 percentage points higher than people living alone. We do not find significant differences across gender. Age does not seem to be a factor either. We find that experience on the CDC tends to have a small negative effect on the probability to report improvements with gambling. Those on Newstart Allowance and those on DSP are more likely to report improvements, respectively 7 and 9 percentage points higher than those on parenting payments.

3.4 Alcohol use and misuse

3.4.1 Survey methodology about eliciting alcohol consumption and current situation in the CDC trial sites

The survey of CDC participants includes a number of questions aimed at eliciting (i) CDC participants' current consumption of alcohol, (ii) the extent to which CDC participants' own alcohol consumption has changed following the implementation of the Cashless Debit Card policy, the reason(s) for these changes, and, (iii) whether CDC participants observe changes in their family, friends and community as a whole in relation to alcohol consumption which they can attribute to the CDC.

Since one of the stated objectives of the CDC policy is to tackle social harm resulting from excessive consumption of alcohol, it is crucial that the survey elicits enough information on that topic so nuances of alcohol consumption behaviour can be looked at. For instance, for the purpose of the evaluation, it may be worthwhile to distinguish CDC participants through the whole spectrum of alcohol consumption, from those who never indulge, who are occasional drinkers, those who often drink, and those who exhibit signs of problematic drinking or high alcohol dependence. Moreover, when relevant and practical, it may be useful to compare observations made in the survey on CDC participants with information on alcohol consumption drawn from nationally representative surveys. While we will acknowledge that a nationally representative survey describes a population that is starkly different from that of the original trial sites of the CDC[41], it remains useful to have a benchmark from which we can appraise the current situation in the CDC sites.

In order to achieve the above aims, we used the questions from the 'Alcohol Use Disorder Identification Test' (AUDIT) which is a 10-item screening tool developed by the World Health Organisation (WHO). The test elicits information on how often and how much one consumes alcohol as well as subjective information on one's alcohol related problems (dependence and social harm). This test has been validated across a wide range of countries and racial/ethnic/minority groups and across gender. It was found suitable for the evaluation of the CDC participant individual survey through cognitive testing throughout the Baseline data collection undertaken by the research team in 2018 which involved both CDC participants and stakeholders. CDC participants' responses to the AUDIT questions allows us—aside from looking at answers to individual questions—to compute a number of indicators of dependence on alcohol or hazardous or harmful alcohol use. This information can be compared with national benchmarks that were elicited by the NDSHS (National Drug Strategy Household Survey) in Australia, in order to give perspective to the observed alcohol consumption within the CDC trial sites.

The survey includes two sets of instruments that elicit respondents' views about whether the Cashless Debit Card is having an impact on their own consumption of alcohol. The first instrument asks whether the survey respondent has decreased his/her consumption of alcohol since the Cashless Debit Card was rolled out. The question asks whether the respondent (i) decreased the amount he/she drinks at any one time, (ii) decreased the number of times he/she drinks each week, (iii) swapped to more low-alcohol drinks, (iv) stopped drinking alcohol altogether. Respondents can tick all that applies and may also indicate that none of the above statements (i) to (iv) applies to them, suggesting that their behaviour was not altered after the rollout of the CDC.

[41] As we discuss below, a large proportion of the sample of respondents in the NDSHS survey live in one of the large metropoles of Australia. Moreover, the proportion of survey respondents who identify as Indigenous is, by nature, much smaller in the NDSHS than in the survey of CDC participants in the original three trial sites.

The next survey instrument elicits the reasons for the respondents' change of behaviour towards alcohol consumption, when applicable. A range of possible reasons are given to the respondents who may tick any that applies to their situation. Among the possible choices to this question we notably find financial reasons which may indicate, for those who tick it, that the restrictions imposed by the CDC may have played a part in one's behavioural change.

Another set of instruments asks directly of the respondents whether they think the CDC has had an impact on their own consumption of alcohol, that of their family, friends, at the level of their community, or none at all.

In this section we report the respondents' answers to these survey instruments. First, we look at the current situation in the trial sites in relation to alcohol consumption. Where relevant, we compare the situation in the trial sites with a set of benchmarks derived from the National Drug Strategy Household Survey (NDSHS). We then look at CDC participants' statements about whether alcohol consumption has significantly changed following the implementation of the CDC policy.

3.4.2 Current situation related to alcohol consumption in the CDC trial sites

Even though the AUDIT questions are best used as a whole in order to compute scores, a number of individual questions are worth looking at separately, notably the first one eliciting whether and how often individuals consume alcohol and the second one which elicits the amount of alcohol consumed on a usual drinking day. We report on the information gathered on these two questions in the next subsections. Using these first two instruments also allows us to look at the relationship between frequency of alcohol consumption and amount of alcohol consumed. The question is whether those who report consuming alcohol more frequently also indicated they consume more alcohol each time they drink.

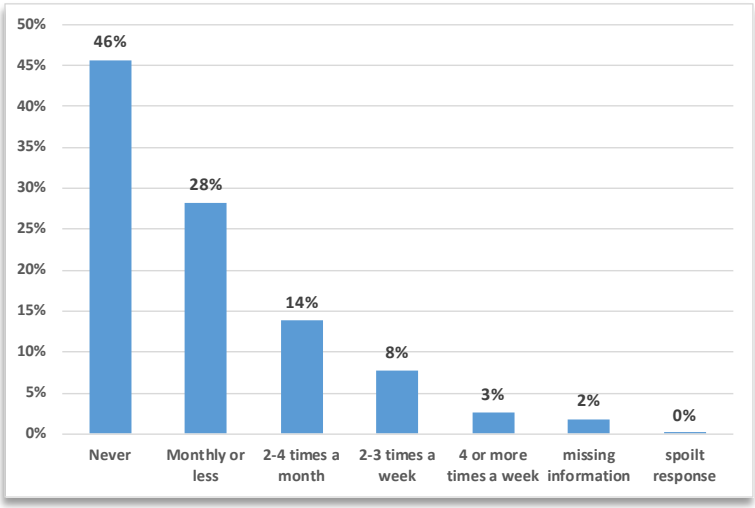
Next, for those CDC participants who indicated that they consume alcohol, we look at the individual circumstances surrounding this consumption (how do they usually obtain the alcohol they consume), and the social context in which they drink (where do they usually drink).

3.4.2.1 Frequency of alcohol consumption in the CDC trial sites

The following figure (Figure 3-37) shows the proportions of all CDC participants (population weighted) who reported never consuming alcohol as well as the frequency of alcohol consumption for those who reported they do. Forty-six per cent of the CDC participants reported that they never consume alcohol. Fifty-three per cent of the survey respondents reported consuming alcohol at various levels of frequency (2 per cent did not answer the question)[42]. Twenty-eight per cent of the CDC participants (representing 54 per cent of those who reported consuming alcohol) reported that they drink monthly or less; 14 per cent (or 26 per cent of those who reported consuming alcohol) drink two to four times a month. Eleven per cent (15 per cent of those who reported consuming alcohol) consume alcohol several times a week.

[42] The total is 101 per cent due to the rounding of the figures.

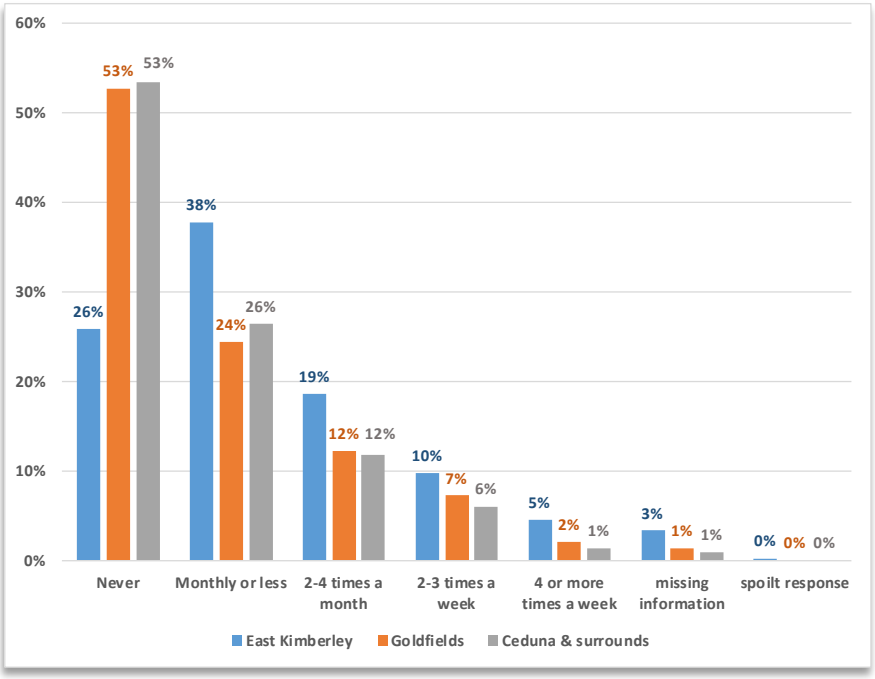
Figure 3-37: Frequency of alcohol consumption, all trial sites



Note 1: 'spoilt response' are instances where survey respondents tick more than one choice for the survey question while they were asked to answer only one.
Note 2: 'missing information' are instances where survey respondents did not answer the question while the question applied to them.

There are notable variations across trial sites with respect to the frequency of alcohol consumption. The following two figures illustrate where the differences are. In Figure 3-38 we observe that the proportion of CDC participants who reported that they never drink was significantly smaller in the East Kimberley trial site with 26 per cent. In contrast, the proportion was 53 per cent in the other two sites. Given such differences between the East Kimberley site and the other two, it is worth looking at frequencies of alcohol consumption for the restricted sample of CDC participants who reported they drink alcohol. This will allow one to highlight whether or not we observe differences across sites for this subsample.

Figure 3-38: Frequency of alcohol consumption, by trial site

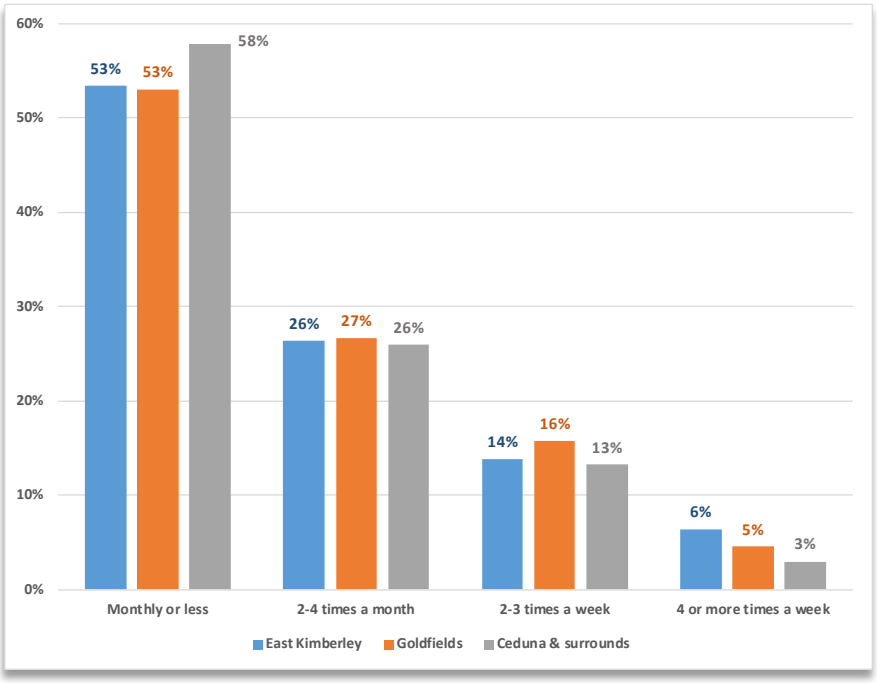


Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Responses are considered as 'spoilt' where respondents tick more than one choice to a question that requires only one answer and as 'missing' when an answer is required but not provided.

Figure 3-39 displays the distributions of the frequency of alcohol consumption by trial site for the subsample of CDC participants who indicate they consume alcohol. Once we have accounted for the differences related to the number of CDC participants who never drink alcohol across site, we observed that the frequency of alcohol consumption varied little within this sub-sample across sites. Between 53 per cent and 58 per cent (58 per cent in Ceduna) of those who consume alcohol reported that they drink monthly or less. The proportions in each of the other categories were not statistically different across sites.

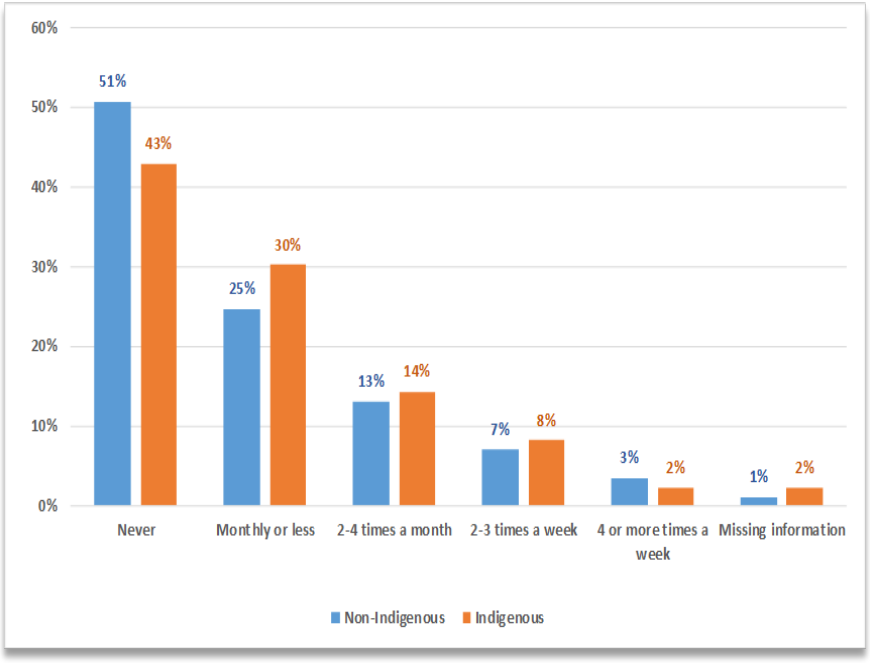
The two figures suggest that the difference observed across the three sites is mainly with regards to the proportion of CDC participants who consume alcohol (with a much larger proportion observed in East Kimberley). How often the drinkers actually drink alcohol varies very little across sites.

Figure 3-39: Frequency of alcohol consumption among CDC participants reporting they consume alcohol, by trial site



The following figure (Figure 3-40) highlights some slight differences related to alcohol consumption by Indigenous status. A larger proportion of non-Indigenous CDC participants reported that they consume alcohol (51 per cent indicated that they never consume alcohol, compared to 43 per cent among Indigenous CDC participants). Among those who reported consuming alcohol, however, a slightly larger proportion of Indigenous CDC participants indicated they drink infrequently (monthly or less) with 30 per cent of the total number of Indigenous CDC participants (53 per cent of those who reported consuming alcohol). The proportion is 25 per cent among non-Indigenous CDC participants (50 per cent of those who reported consuming alcohol). We observe equivalent proportions of CDC participants by Indigenous status consuming alcohol two to four times a month with 14 per cent (between 25 and 27 per cent of those who consume alcohol).

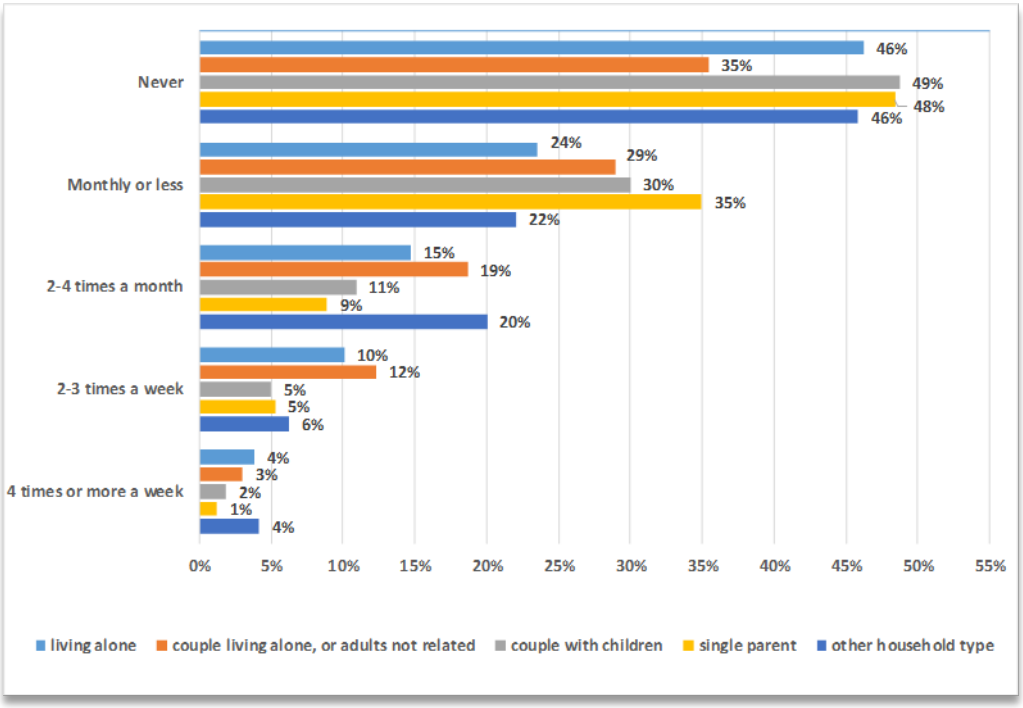
Figure 3-40: Frequency of alcohol consumption, by Indigenous status



Note 1: 'spoilt response' are instances where survey respondents tick more than one choice for the survey question while they were asked to answer only one.
Note 2: 'missing information' are instances where survey respondents did not answer the question while the question applied to them.

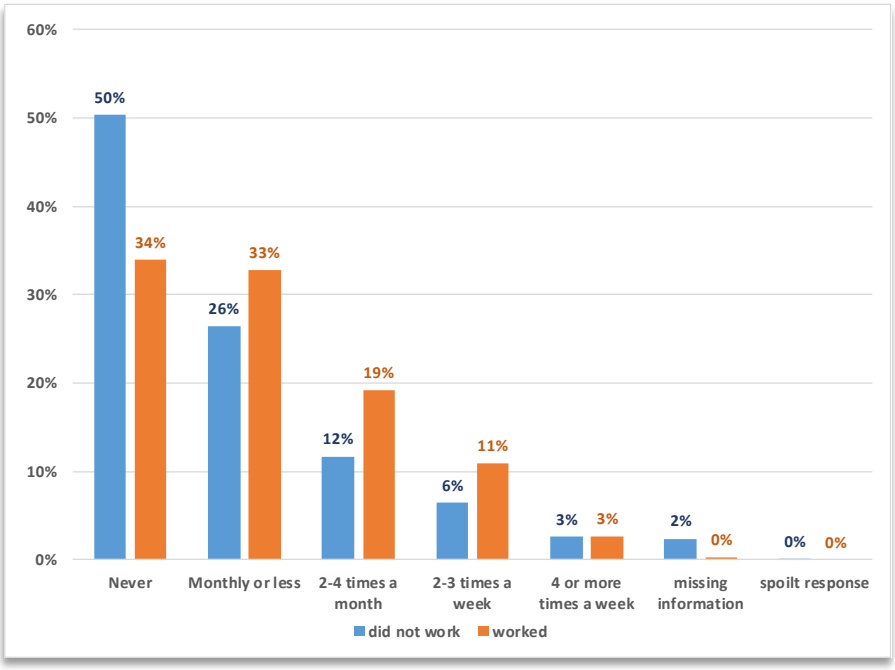
The following figure (Figure 3-41) looks at the distributions of alcohol consumption by household type. It shows some significant differences, with the largest proportions of CDC participants reporting that they never drink found for couples with children (both dependent and non-dependent) at 49 per cent and single parents at 48 per cent. The lowest proportion is found for those who live as a couple (without children) or non-related adults living together where we observe only 35 per cent reporting that they never drink. Also, this type of household reported higher frequencies of alcohol consumption with 12 per cent of them drinking two to three times a week and 19 per cent drinking two to four times a month. People living alone who reported that they consume alcohol also reported higher frequency of alcohol consumption (even though the proportion of those reporting that they never drink was on par with the single parents, with 46 per cent).

Figure 3-41: Frequency of alcohol consumption, by household type



The following figure (Figure 3-42) shows CDC participants' alcohol consumption according to whether they had a paying job (including the Work for the Dole program) within the four weeks of the survey. Those who stated that they did not work are more likely to report that they never drink (50 per cent compared to 34 per cent for those who worked). The frequency of alcohol consumption was also greater for those who had a paying job in the four weeks preceding the survey compared to those who did not. In the latter group, 76 per cent of the CDC participants reported either 'never drink' or 'drink monthly or less'. Only 67 per cent of those who worked were in either one of these categories, with a third (33 per cent) reporting that they consumed alcohol at least two to four times a month.

Figure 3-42: Frequency of alcohol consumption according to whether CDC participants held a job in the 4 weeks preceding the survey



Note 1: 'spoilt response' are instances where survey respondents tick more than one choice for the survey question while they were asked to answer only one.
Note 2: 'missing information' are instances where survey respondents did not answer the question while the question applied to them.

3.4.2.2 Amount of alcohol consumed on a usual drinking day

The second survey instrument making up the AUDIT questionnaire elicits the amount of alcohol consumed on a usual day of alcohol drinking. The following table (Table 3-11) reports the distributions by trial site. Those distributions exhibit notable differences across site. Indeed, we observe that the proportion of CDC participants who reported that they have 10 or more drinks on a usual day of drinking was much larger in the East Kimberley site (50 per cent of the CDC participants who reported they consume alcohol[43]) compared to the other sites (respectively 14 per cent in the Goldfields and 17 per cent in Ceduna and surrounds). Conversely, the portion of CDC participants who indicated they have one to two drinks each time they consume alcohol was significantly smaller in the East Kimberley site (7 per cent compared to, respectively 26 per cent in the Goldfields and 21 per cent in Ceduna and surrounds).

Of the 54 per cent who reported drinking, there are notable differences between East Kimberley and the other trial sites in the amount of alcohol consumed "on a usual drinking day", shown in Table 3-11, with East Kimberley reporting greater frequency of high levels of drinking. Amongst those who consumed alcohol, 36 per cent reported consuming seven drinks or more at any one time. Around a

[43] In this subsection, we look at the subsample of CDC participants who indicated that they consume alcohol that is those who did not state 'never' to the first survey instrument eliciting whether and how often CDC participants consumed alcohol. According to the survey answers to this question, we remind the reader that 26 per cent of the CDC participants in East Kimberley reported they never drink. The proportion is 53 per cent in the other two sites. As a result, all tables and figures which report information on alcohol consumption—such as how much alcohol is consumed on a typical day of drinking—are based on, respectively, 74 per cent of the total sample in East Kimberley and 47 per cent of the total sample in the other two trial sites. The total number of CDC participants composing this subsample of people who consume alcohol is large enough for one to provide population weighted statistics.

fifth of the CDC population in the three trial sites considered by this evaluation have reported high level problem drinking behaviours that the CDC aims to reduce.

Table 3-11: Amount of alcohol consumed on a usual drinking day, by trial site

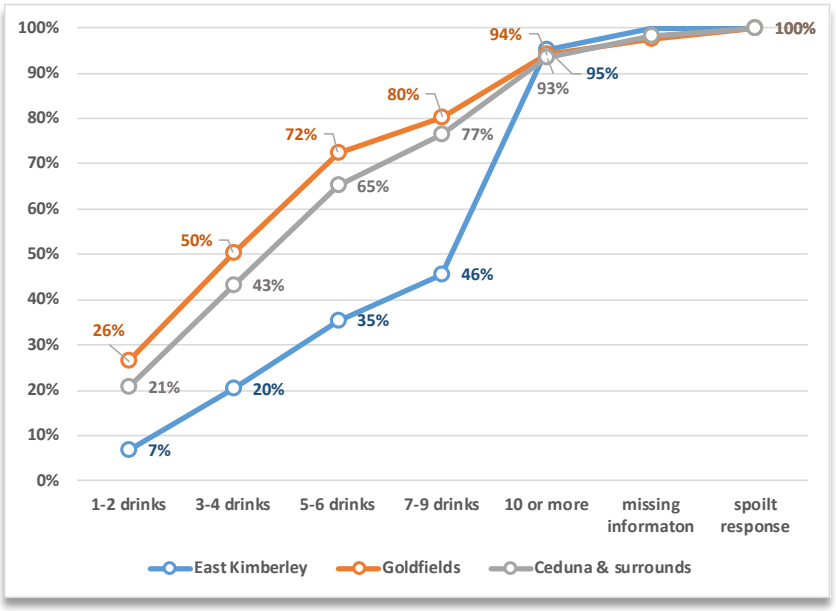
Amount of alcohol consumed on a usual drinking day								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
	N	%	N	%	N	%	N	%
1-2 Drinks	610	**19**	80	**7**	438	**26**	91	**21**
3-4 Drinks	654	**20**	160	**13**	396	**24**	98	**22**
5-6 Drinks	643	**20**	179	**15**	367	**22**	96	**22**
7-9 Drinks	302	**9**	121	**10**	130	**8**	51	**12**
10 or more	889	**27**	588	**50**	228	**14**	74	**17**
Missing information	135	**4**	56	**5**	58	**4**	21	**5**
Spoilt response	48	**1**	0	**0**	40	**2**	8	**2**
Total	**3,280**	**100**	**1,185**	**100**	**1,658**	**100**	**438**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Responses are considered as 'spoilt' where respondents tick more than one choice to a question that requires only one answer and as 'missing' when an answer is required but not provided.

The following figure (Figure 3-43) illustrates the differences between the East Kimberley trial site and the other two sites with respect to the amount of alcohol that is consumed on a typical drinking day by the CDC participants. It plots the cumulative distribution of the proportions reported in Table 3-11. Comparing each site, we can see that 50 per cent of the subsample of CDC participants who consume alcohol, typically have 4 drinks or less on a usual drinking day in the Goldfields. By comparison, only 20 per cent of the CDC participants in East Kimberley have four drinks or less, the rest of the distribution is above that number. The figure also illustrates very clearly the similarities between the Goldfields and the Ceduna and surrounds trial sites.

One may be tempted to attribute these differences across sites to issues of under-reporting of alcohol use in the Goldfields and Ceduna and surrounds sites. While under-reporting of alcohol and drug use is recognised as fairly common in studies on this topic (see the discussion in the section on Gambling), and may also apply to the present evaluation, there is no reason to believe that under-reporting would differ across trial sites. Indeed, the same survey fielding methodology was used in each of the trial sites and the same research team members from the FES research centre were in charge of fieldwork in each of the trial sites. The same daily quality monitoring procedures were in place no matter which site. As a result we consider these differences across sites as highlighting genuine differences with regards to alcohol consumption behaviour. These differences may be related to the differences in terms of characteristics between trial sites as we have highlighted in the statistics looking at the frequencies of alcohol consumption in the previous subsection. Part of these differences may also reveal a different attitude towards alcohol consumption depending on the sites or may be due to external factors, notably the ease with which one may find substitutes to alcohol depending on one's location. In order to look at this issue in more depth, we estimated a multivariate model and reported the results in the second part of this subsection.

Figure 3-43: Amount of alcohol consumed on a usual drinking day, cumulative distributions by trial site



We conducted a multivariate analysis on the reported amount of alcohol consumed in order to determine (i) whether one could associate individual characteristics with the reported amount of alcohol consumed, and, (ii) the extent to which (if at all) reported frequency of drinking was related to the reported amount of drinking. For the second point, we want to know whether those who report larger amounts of alcohol consumed on any usual occasion were also those who reported drinking more frequently or not. The multivariate analysis is based on the estimation of an 'Ordered Probit' model whose dependent variable is the categorical variable recording the amount of drinking. We made one adjustment to that variable compared to the categories reported in the figures and tables (Table 3-11 and Figure 3-43) above. Indeed, in order to improve the robustness of the results, we merged two categories of that survey instrument so that we have four categories rather than five. The amount of alcohol consumed on a usual drinking day in that model is then expressed as follows: (i) one to two drinks, (ii) three to four drinks), (iii) five to nine drinks, and, (iv) 10 or more.

The results are reported in a table in the appendices (see Table A 4-11). For non-technical readers, we discuss the results around a simplified set of figures which display the relative contributions of selected characteristics (those that are found statistically significant) on the probability that a CDC participant reports a given amount of alcohol consumed. More specifically, we display the relationship between given characteristics (like age, Indigenous status, location, etc.) and the probability to report a small/medium/large amount of alcohol consumed in a usual drinking day.

The interpretation of the numbers (marginal effects) in the following set of figures (Figure 3-44 below) is the same as the previous models where probabilistic models were estimated. The reader may refer to Box 3-2 for more details on how to read the figures.

The analysis shows that, everything else held constant, older CDC participants (35 to 44 years old and 55 years and older) can be identified as reporting significantly lower amounts of alcohol consumed on a usual drinking day. They are 11 percentage points more likely to report they have one or two drinks compared to the age reference group aged 25-34 years. They are also 5 percentage points more likely to report moderate (low) drinking of three to four drinks compared with the age reference group. Conversely, they are, respectively 4 and 11 percentage points less likely to report moderate high (five to nine drinks) to high amounts ('10 and over') than the reference group. We observe that the 35-44

years old group somewhat exhibits a similar pattern to the older CDC participants but to a lower extent. Indeed, they are respectively 5 and 2 percentage points more likely to report low to moderate (low) amount of alcohol consumed on a usual drinking day compared with the age reference group. The group of 45-54 years old CDC participants distinguishes itself in the sense that its drinking pattern resembles that of the reference group 25-34 years old for all but the 'moderate (low) category. Altogether, everything else held constant, there seems to be two distinct drinking patterns by age groups. The 25-34 and the 45-54 years old groups seem to correspond, on average, to the age groups where one finds CDC participants who have the most drinks per usual drinking day. The 35-44 years old group, and, to a larger extent, the 55 and over comparatively drink less per usual drinking day.

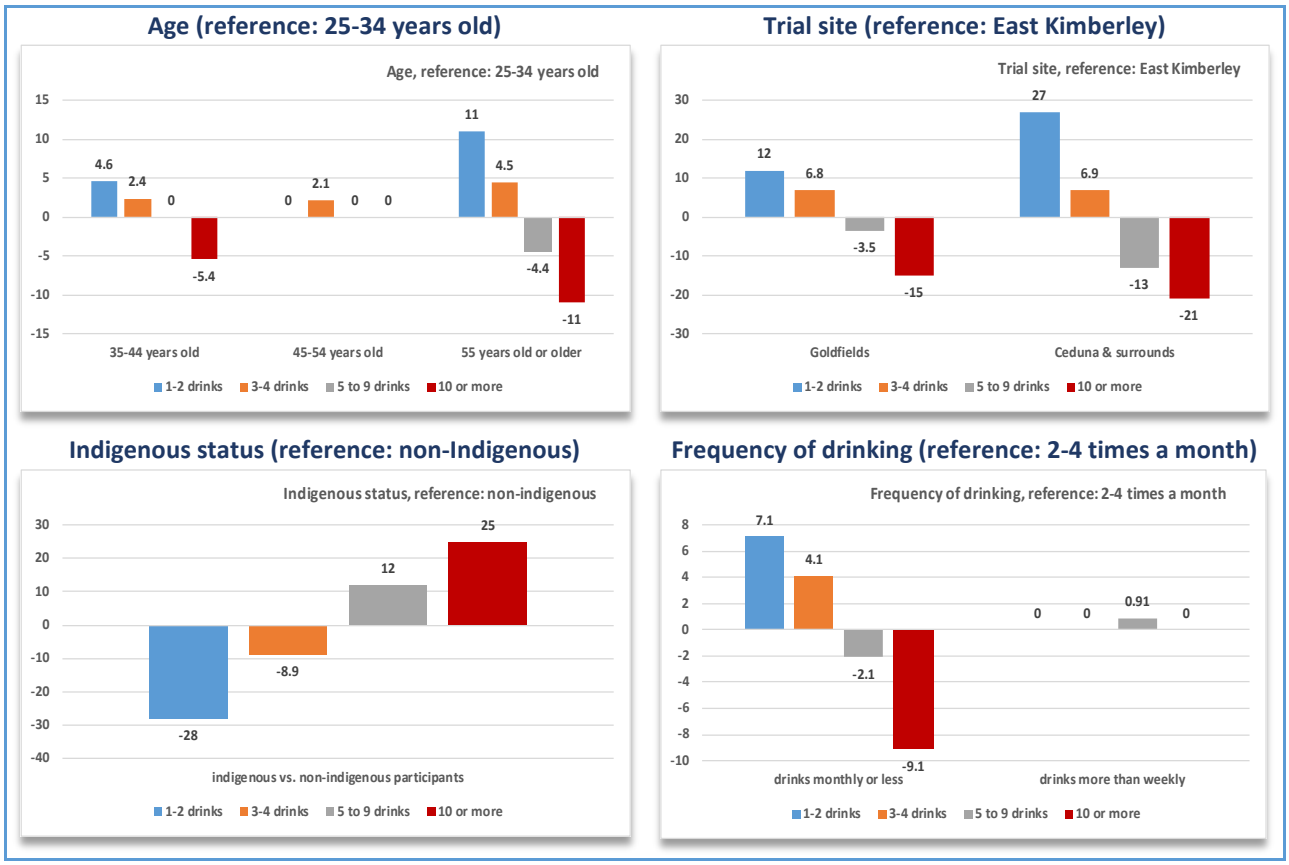
Compared with the East Kimberley site, the CDC participants in the Goldfields are, on average, 15 percentage points less likely to report having 10 or more drinks per usual drinking day but are 12 percentage points more likely to report that they drink one or two instead. Likewise, CDC participants in Ceduna and surrounds are 27 percentage points more likely to report they have only one or two drinks than CDC participants in the East Kimberley site. They are 21 percentage points less likely to report that they have 10 or more drinks than CDC participants in the East Kimberley site, everything else held constant.

With regards to Indigenous status, the multivariate analysis shows that Indigenous CDC participants are 25 percentage points more likely to report they have 10 or more drinks compared to non-Indigenous CDC participants. They are also 12 percentage points more likely to report moderate (high) alcohol consumption compared to non-Indigenous CDC participants.

The results show that those who consume alcohol infrequently (monthly or less) are less likely to report high amounts of alcohol consumed on a usual drinking day. They are 9 percentage points less likely to report '10 or more' compared to those who drink alcohol at least two to four times a month. Interestingly, those who consume alcohol weekly (several times a week) are not significantly different with respect to the amount of alcohol consumed compared to those who consume alcohol two to four times a month (with a small exception for moderate (high) consumption).

Several specifications of the multivariate model including additional characteristics were tested. We did not find any significant relationship between the amount of alcohol consumed by the CDC participants on a given drinking day and the type of government payment they receive. We did not detect any significant relationship with CDC participants' household type after controlling for the other factors like age, location and Indigenous status.

Figure 3-44: Multivariate analysis, determinants of the amount of alcohol consumed on a usual drinking day, graphic summary



3.4.2.3 Individual circumstances surrounding alcohol consumption in the trial sites (how and where alcohol is obtained and consumed)

The survey of CDC participants includes two instruments in addition to the 10 basic AUDIT instruments. These two instruments elicit information about (i) where individuals usually consume alcohol, and, (ii) how they usually get the alcohol they consume (own purchase, through third parties, etc.). For the first instrument eliciting where people usually drink alcohol, survey respondents are asked to indicate all that applies among a set of choices. The second instrument asks respondents to nominate their main source to obtain alcohol. As such the answer is limited to one item only.

In this subsection we report on these two instruments.

a) Where do CDC participants usually drink alcohol?

Drinking at one's home (or spouse's) seems to be the most popular place for CDC participants (see Figure 3-45). Fifty-six per cent of them indicated that they consume alcohol at home. Forty per cent indicated that they drink at friends' houses. A relatively low proportion of CDC participants (18 per cent) drink at licensed premises and even less (6 per cent) at restaurants and cafes. We observe some differences across trial sites in relation to where CDC participants consume alcohol. These differences are highlighted in Figure 3-45. For instance, 64 per cent of the CDC participants located in the Goldfields indicated that they drink at home. The proportion was only 44 per cent in East Kimberley. The proportions were very similar across sites in relation to drinking at friends' places with around 40 per cent. Licensed premises are reported to be used by 20 to 21 per cent of the CDC participants in

East Kimberley and the Goldfields but by only 11 per cent of the CDC participants in Ceduna. This difference could be explained by the fact that the number of licensed premises is small in the Ceduna and surrounds trial site and mainly situated in Ceduna itself (for instance, Yalata is a dry area). By comparison, the Goldfields trial site contains fewer/no dry areas, and, especially in Kalgoorlie-Boulder, there are numerous pubs and other licensed premises. This may also explain the relatively larger proportion of CDC participants indicating that they consume alcohol at restaurants or cafes (11 per cent compared with 1 per cent in Ceduna and surrounds and only three per cent in East Kimberley). Interestingly, the proportion of CDC participants consuming alcohol in public places such as parks is larger in East Kimberley and Ceduna and surrounds (respectively 11 per cent and 8 per cent) compared with the Goldfields (3 per cent).

Figure 3-45: Where CDC participants usually drink alcohol, all CDC trial sites (population weighted)

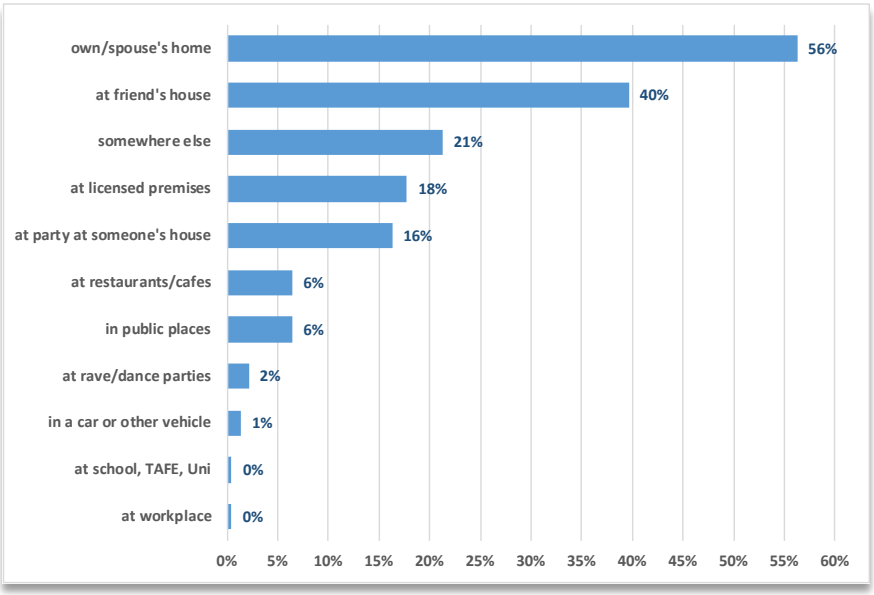
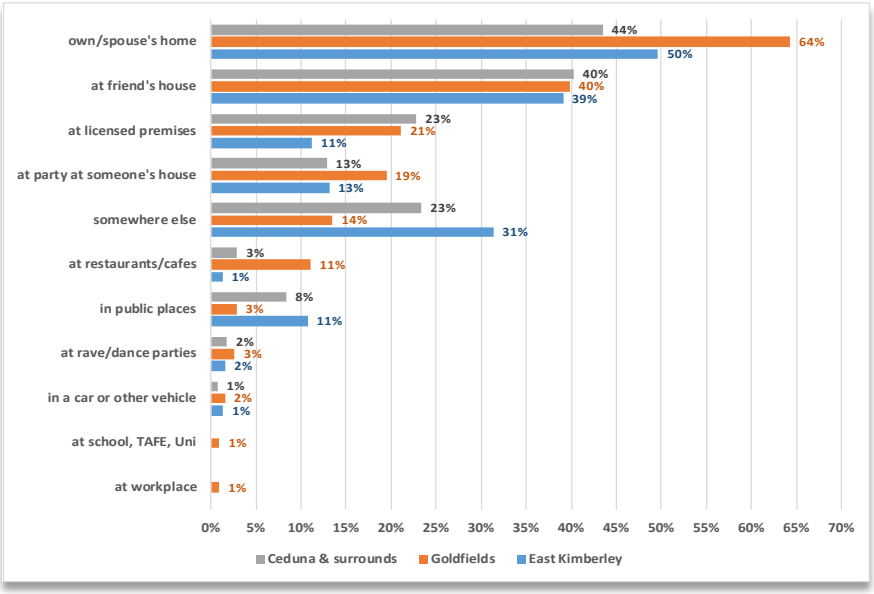


Figure 3-46: Where CDC participants usually drink alcohol, by CDC trial site (population weighted)

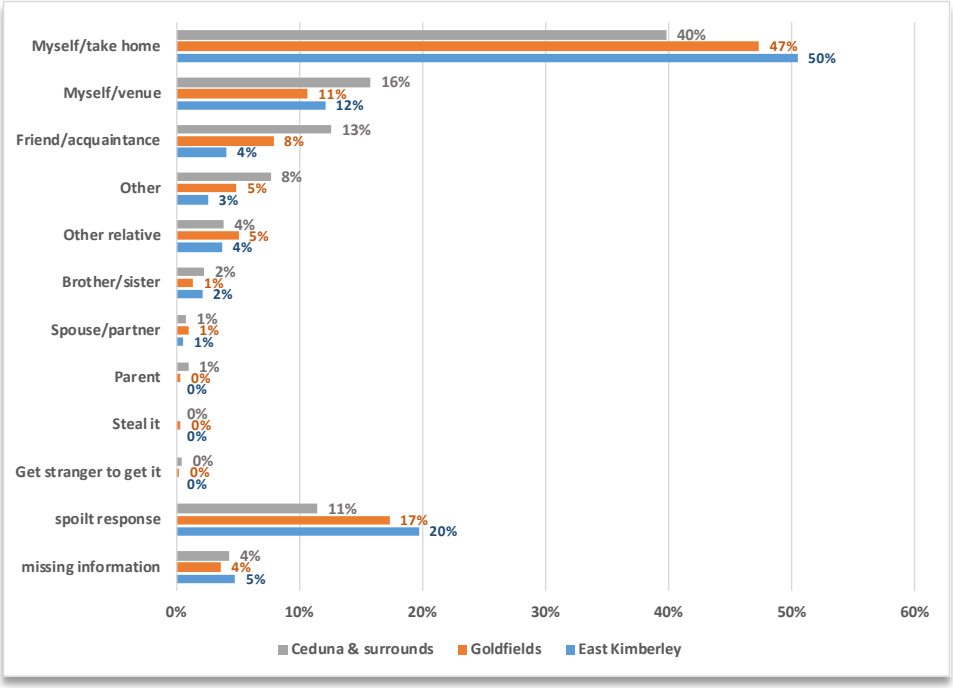


b) Where do CDC participants usually get alcohol?

The survey instrument that elicits where CDC participants get the alcohol they consume allows for only one response, contrary to the previous instrument about where they can select several places where they consume alcohol. As a result, the proportions reported in the following figure sum up to 100 per cent for each trial site (see Figure 3-45). We note that we have some CDC participants who did select several answers and, as a result, their answer ended being classified as 'spoilt'. The proportion of spoilt answers is 20 per cent in East Kimberley, 17 per cent in Goldfields, and, 11 per cent in Ceduna. The majority of CDC participants in the three trial sites reported getting their alcohol themselves, either purchasing it to take home or buying it at venues.

The proportion of CDC participants buying their alcohol themselves was 56 per cent in Ceduna and surrounds (40 per cent + 16 per cent), 58 per cent in the Goldfields, and, 62 per cent in East Kimberley. We observe that the proportion of CDC participants who relied on a friend or acquaintance to buy alcohol is significantly larger in Ceduna and surrounds compared to the other two sites (13 per cent). The proportion observed in the Goldfields (8 per cent) was also significantly different from that reported in East Kimberley (4 per cent).

Figure 3-47: Where CDC participants usually get alcohol, by CDC trial site (population weighted)



The scores that can be computed with the AUDIT test questionnaire used in the survey are presented in the next subsection where we also make comparisons with the NDSHS in order to provide benchmark National and State information for the trial sites.

3.4.3 Current consumption of alcohol in the trial sites, AUDIT scores and benchmarking

As stated in the introduction of the section on alcohol consumption, the survey includes the AUDIT (Alcohol Use Disorder Identification Test) questions developed by the World Health Organisation (WHO). The aim of these questions for the survey is to allow one to look at alcohol consumption

through a broad spectrum, from 'non-problematic' consumption that is within the guidelines of the WHO (28 standard drinks per week for males and 14 for females) to risky and potentially hazardous and harmful drinking behaviour, including issues of alcohol dependence. The ability of the survey to identify risky and high risk drinking is crucial for the evaluation in the sense that the CDC policy explicitly sets out to impact on social harm related to alcohol and drug use through restricting the availability of cash, hence decreasing one's consumption of the products. In this section we establish the extent of the issue of risky alcohol consumption in each site, further distinguishing between social alcohol consumption, which is unlikely to be linked with social harm, and more risky behaviour.

From the AUDIT questions asked of the survey respondents, scores/indicators can be computed and used in order to determine the extent to which one's relationship with alcohol is a potentially harmful or risky one (what one could qualify as problematic drinking) through several thresholds:

- **Total AUDIT score**: includes the scoring of all 10 questions of the AUDIT (questions D1 and D4 to D12 in the survey document). The maximum possible total score is 40. A score beyond a threshold of 8 may indicate a hazardous or harmful pattern of drinking. Note that a smaller total score of 6 or 7 obtained from scoring the questions 1 to 3 only may also indicate a risky consumption of alcohol.
- **Consumption score**: this score is based on the scoring of questions 1 to 3 of the AUDIT instruments (frequency of alcohol consumption, amount consumed on a typical drinking day, and, how often one has six or more drinks at any one time). The maximum possible score is 12. The relevant threshold for this score is 6 to 7. Beyond this threshold, one's consumption may indicate potential harm, especially for more vulnerable groups who are more susceptible to the effects of alcohol such as the elderly, young people, people with mental health problems or on medication.
- **Dependence score**: this score is based on the scoring of questions 4 to 6 of the AUDIT instruments. The maximum score is 12. In addition to the consumption score, a secondary dependence score of 4 or more indicates the possibility of alcohol dependence.

In addition to the scoring of the questions 1 to 6 which allows one to compute the above indicators, any score (a non-zero score) to any of the questions 7 to 10 suggests that one's relationship with alcohol consumption is potentially risky or harmful. In the Consolidated report, we refer to a more general term of 'problematic drinking' in order to identify the groups of individuals whose AUDIT scores are the higher bands of the thresholds defined above, indicating a hazardous or harmful pattern of drinking and, possibly a situation of alcohol dependence.

In this subsection, we display the scores based on the CDC participants' responses and provide some comparisons with scores computed from the NDSHS survey for a range of relevant locations. For trial sites located in WA (East Kimberley and Goldfields), we computed population weighted scores for WA, Perth and surrounds, and, WA excluding Perth and surrounds. For Ceduna and surrounds, we computed the population weighted scores for SA, Adelaide and surrounds, and SA excluding Adelaide. For the three trial sites we also computed the population weighted scores for Australia. We remind the reader that one should not over-interpret the comparisons with the various benchmarks since the trial sites include a population that is quite different from that of the survey respondents of the NDSHS (CDC participants mostly live in remote areas and the proportion of Indigenous people is also much larger than in the sample surveyed in the NDSHS). The figures displayed below contrast the scores obtained on the CDC participants with the non-metropolitan areas of both States (WA excluding Perth and SA excluding Adelaide), which are possibly the closest in terms of demographics compared with the CDC trial sites, and, hence, the most comparable.

Box 3-5: Harmonising the AUDIT information collected by the NDSHS and the definition used by the survey (based on the WHO definition)

Comparison between NDSHS data and CDC participants' survey data with regards to the AUDIT scores:

The categorisation of answers in the NDSHS 2016 survey differs slightly from the standard ones used by the WHO and implemented in the survey. As a result, we needed to harmonise the NDSHS coding. For a number of questions, there is no immediate equivalence between the category labels where one category in a question from the NDSHS could possibly morph into two possible categories on the WHO definitions. Rather than arbitrarily decide on an attribution rule, we opted to implement two rules and thus compute two sets of NDSHS scores corresponding to a lower and a higher bound which we called 'Low score' and 'High score'. Therefore, whenever a benchmark score from the NDSHS survey is used, we display two figures for the benchmark. Details on how the low and high bounds of the scores are computed are given in the appendices (see Table A 4-12).

The set of figures displayed in Figure 3-48 report the AUDIT scores computed for the East Kimberley site and compares with WA (excluding Perth). The distribution of scores for the East Kimberley site is represented by orange dots while the benchmark is displayed with two histograms representing the low and high bounds of the scores (see box above). Comparisons between each trial site and all benchmarks (for each AUDIT scores) are reported in the appendices (Table A 4-13 to Table A 4-21).

With regards to total scores, the category 0 to 7 represents scores that puts individuals into a 'low risk' alcohol consumption behaviour. The next categories are defined as 'moderate risk' (score between 8 and 15), 'high risk' (score between 16 and 19), and 'very high risk' (score above 20).

Fifty-five per cent of the East Kimberley CDC participants who indicated they drink alcohol (question D1 of the survey) have a score that placed them in the low risk social drinkers category. Seventeen per cent of the CDC participants who indicated they drink alcohol have a score that places them in the high to very high risk categories (respectively 8 per cent and 9 per cent). For this group of people, the scoring suggests that their alcohol consumption is potentially hazardous and harmful and may have some negative impact on those around them.

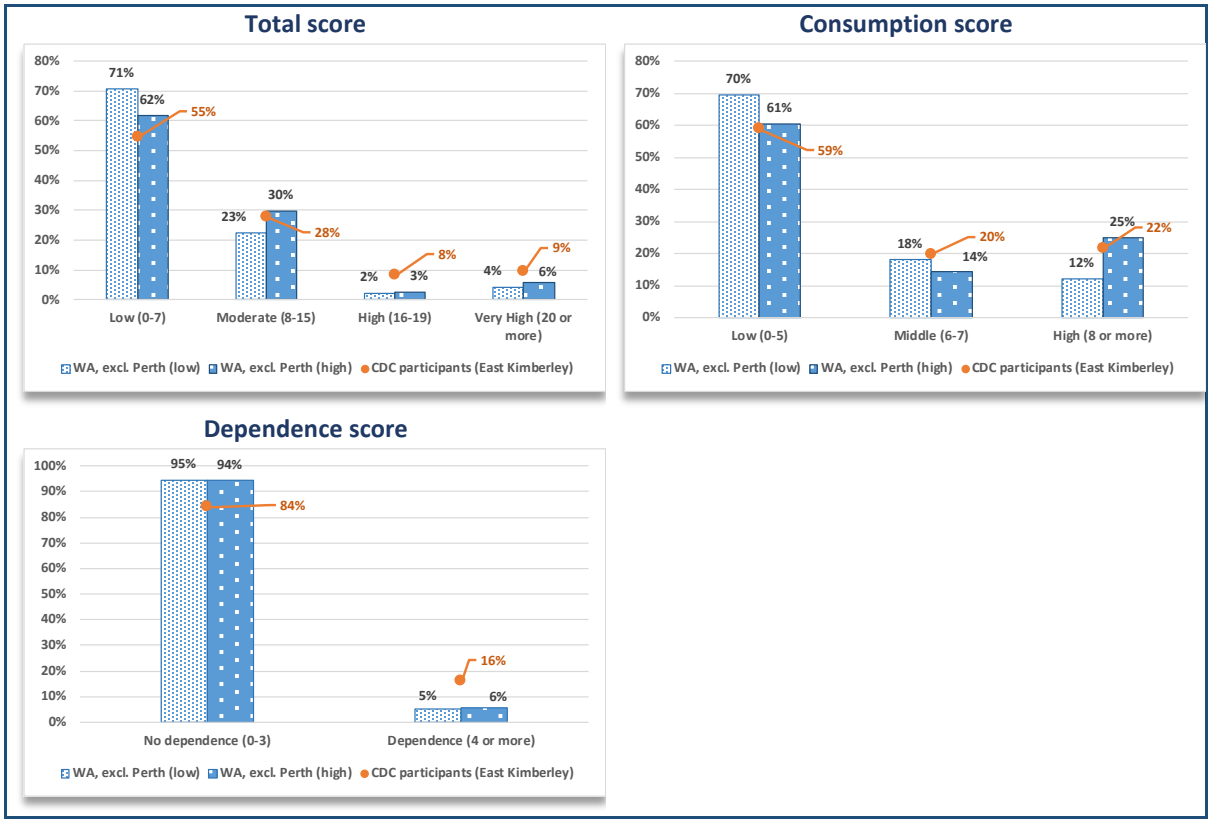
Translating these figures to the broader population of CDC participants in the East Kimberley area, that is including those who indicated they do not drink (see Figure 3-38), the proportion of 17 per cent of people at risk among drinkers, translates into 12.6 per cent of the overall CDC participants population in the East Kimberley trial site (100-26 per cent)*17 per cent=12.6 per cent). Twenty-eight per cent of those drinking alcohol (21 per cent of the overall CDC participants in EK) are in the moderate risk category with a score between 8 and 15. By comparison with the benchmark, the proportion of CDC participants in the high and very high risk categories is significantly larger (respectively 8 per cent compared with 2 per cent to 3 per cent, and, 9 per cent compared with 4 per cent to 6 per cent). The proportion of CDC participants in the moderate risk category is similar to that of the benchmark.

Interestingly, the computations of the Consumption scores show that the distribution observed among CDC participants in the East Kimberley site is very similar to that computed from the NDSHS for WA (excluding Perth) using the higher bound (darker histograms).Twenty-two per cent of the CDC participants score high on the consumption score (8 or more out of a possible total of 12), 20 per cent are in the middle range (6 to 7), and 59 per cent score in the low category.

Since the Consumption score is based on a subset of instruments that generates the Total score, the variations observed between the two figures suggest that the differences between the CDC participants in the East Kimberley and the benchmark mainly stem from differences in the responses to questions 4 to 6 of the AUDIT (questions D6 to D8 in the survey document). These questions elicit how often people (i) are unable to stop drinking once they start, (ii) have not done what was expected of them because of drinking, and (iii) need a drink in the morning to get oneself started after a heavy drinking session. These questions make up the dependence score whose distributions are displayed in the bottom figure. The dependence scores suggest that about 16 per cent of the CDC participants who indicated they drink (12 per cent of the overall CDC participants' population in the East Kimberley site) exhibit signs of alcohol dependence. The difference observed between the CDC participants and the benchmark on this last figure illustrates the differences we have observed between the two previous figures.

In summary, the AUDIT survey instruments enable us to identify that 17 per cent of the CDC participants in the East Kimberley trial site answering those questions are identified as engaging in high risk or very high risk alcohol consumption. Sixteen per cent are identified as showing signs of dependence on alcohol.

Figure 3-48: AUDIT scores in the East Kimberley site (benchmark: WA excluding Perth)



The following set of figures (Figure 3-49) provide the AUDIT scores information for CDC participants in the Goldfields area. The picture is slightly different from the East Kimberley trial site. Indeed, the proportion of CDC participants who are identified as high or very high risk is very similar to that of the benchmark.

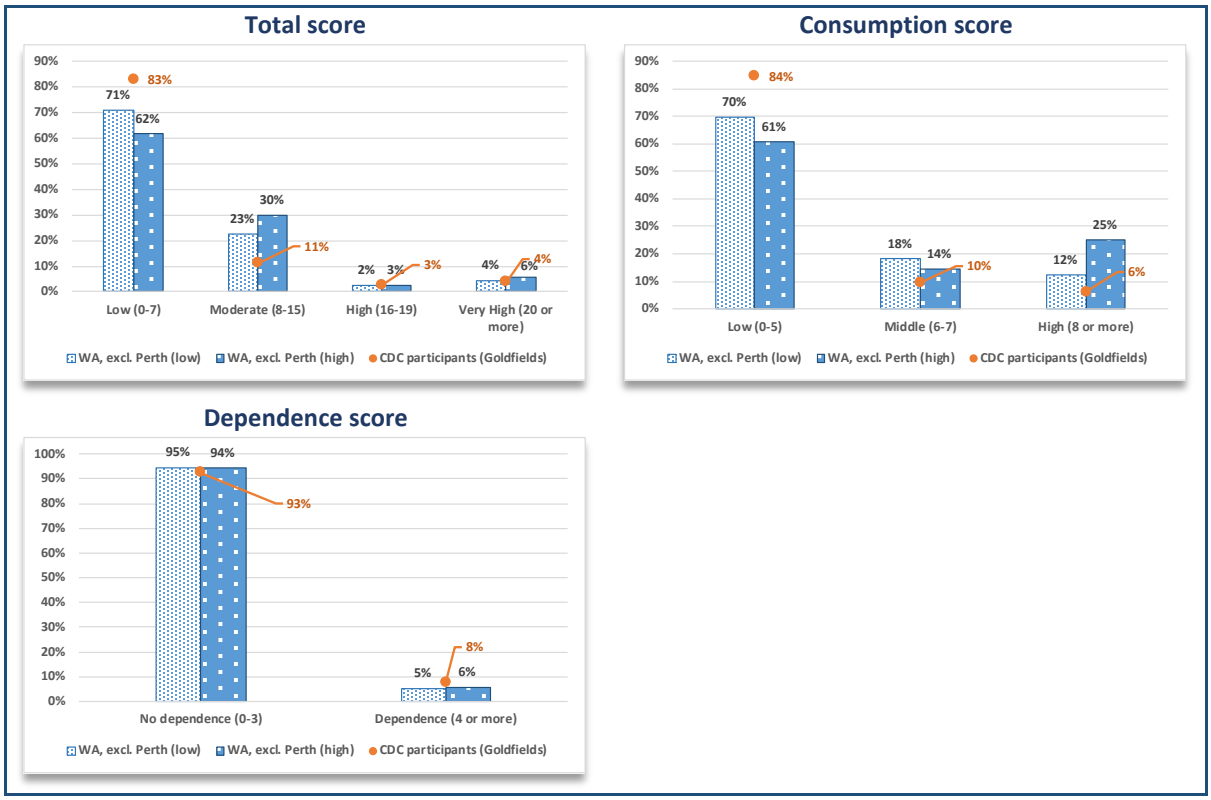
The survey responses in this site suggest that 3 per cent of the CDC participants who indicated they drink alcohol (1.4 per cent of the whole CDC participants' population in that site) can be identified as

high risk. Four per cent (1.9 per cent of the overall CDC participants in the Goldfields) can be identified as very high risk. These proportions contrast with those observed for the East Kimberley site, which are significantly larger. The figure displaying the Total score also shows that 11 per cent of the CDC participants who drink alcohol in the Goldfields are identified as moderate risk of harmful alcohol consumption while 83 per cent are in the low risk category, based on the survey responses.

With regards to the Consumption score (based on the first three questions of the AUDIT), 6 per cent of the CDC participants exhibit high risk consumption behaviour and 10 per cent are in the middle range. These proportions are significantly lower than those observed for the benchmark (WA excluding Perth).

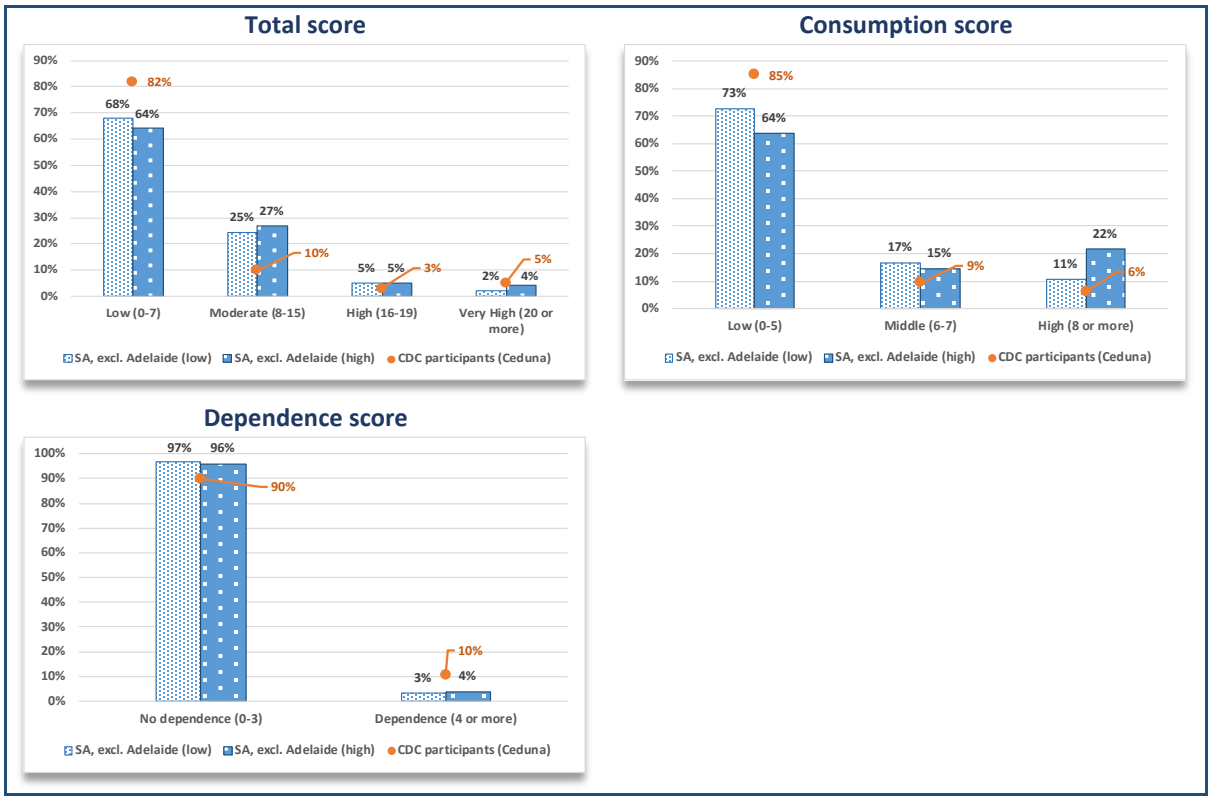
The Dependence scores suggest that 8 per cent of the CDC participants who indicated they drink alcohol exhibit dependence on alcohol.

Figure 3-49: AUDIT scores in the Goldfields site (benchmark: WA excluding Perth)



The distributions of AUDIT scores in the Ceduna and surrounds site are very similar compared with the Goldfields. Respectively 3 per cent and 5 per cent of the respondents (1.4 per cent and 2.4 per cent of the overall CDC population in this site) reported they consume alcohol to an extent that puts them in the high or very high risk category according to the Total score. Based on the Consumption score, 15 per cent (9 per cent plus 6 per cent) of the drinkers among the CDC participants can be classified in either the middle or high risk categories. Ten per cent of the drinkers exhibit signs of alcohol dependence in that site (4.7 per cent of the total CDC population).

Figure 3-50: AUDIT scores in the Ceduna and surrounds site (benchmark: SA excluding Adelaide)



The AUDIT survey instruments enabled us to provide a picture of the current situation with regards to alcohol consumption in each of the trial sites. Notably they allowed us to quantify the proportion of CDC participants who reported alcohol consumption as a level that can be considered hazardous or harmful and potentially leading to social harm. It also allowed us to quantify the issue of alcohol dependence among CDC participants and contrast all this information with a number of relevant benchmarks. We now use the instruments available in the survey in order to analyse what the impact of the CDC has been on alcohol consumption and who it has benefited to.

3.4.4 Changes in alcohol consumption since the introduction of the CDC

As stated above the survey includes two sets of instruments which allow CDC participants to report whether their consumption of alcohol has been altered by the CDC. We start with the first instrument which elicits whether CDC participants have decreased the amount and/or frequency of their alcohol consumption, whether they have moved on to consuming more low alcohol drinks, or, whether they have stopped drinking altogether. The table below (Table 3-12) shows the number of CDC participants who report changes (or no changes) to their alcohol consumption since the CDC rollout. The table figures apply to the sub-population of CDC participants who indicated that they consume alcohol. In terms of CDC population, the figures below apply to the 3,280 CDC participants who reported that they consume alcohol.

Overall, reduction in alcohol consumption is considerable. Twenty-five per cent of all those who drink reported that they have reduced the amount they drink at any one time since the introduction of the CDC. Twenty-two per cent reduced the number of times they drink, 8 per cent consumed more low-alcohol drinks and 6 per cent stopped drinking altogether since the introduction of the CDC. This means that, notwithstanding the important interpretation caveat about the potential impacts of concurrent policies, at the time of the survey between a third and a half of the total CDC participant

population surveyed and who consumed alcohol, have reported a change in their drinking patterns the way they do this.

We observe that 25 per cent have reduced the amount of alcohol they drink at any one time. Twenty-two per cent report that they have reduced the number of times they drink each week. A lower percentage of 8 per cent indicate that they now drink more low-alcohol drinks. Six per cent of the CDC participants report that they quit drinking altogether.

Table 3-12: Since being on the CDC, change in alcohol consumption of those who reported they drink alcohol, all trial sites

Since being on the CDC, changes in alcohol consumption			
	No	**Yes**	**%**
Reduced amount of alcohol	2,458	**822**	**25**
Reduced frequency of drinking	2,552	**728**	**22**
Consumed more low-alcohol drinks	3,029	**251**	**8**
Stopped drinking all together	3,093	**187**	**6**
None of the above	1,488	**1,792**	**55**

Note 1: The percentages reported apply to the subsample of CDC participants who previously indicated they consumed alcohol.
Note 2: It is critical to read this table noting that the percentages refer to those who reported that they drink alcohol and not to the whole population. Percentages add to 116, which is more than 100 because survey respondents were allowed to select all categories that applied to them and 16 per cent of them did so.

A critical aspect of the change is the degree to which the reduction in the amount and the reduction in the frequency of alcohol consumption may work with or against each other in practice. This is important to consider as, in order to address the social harm caused by alcohol misuse, the CDC aims to reduce both the amount and frequency of alcohol consumption.

Looking at the total instances where CDC participants reported that they drink alcohol, Table 3-13 shows three combinations of reduction:

- 14 per cent of cases indicated a reduction in the amount but not the frequency;
- 11 per cent of cases indicated a reduction in the frequency but not the amount; and
- 11 per cent of cases indicated a reduction in both the amount and the frequency.

These estimates suggest that there is substantial interaction between the two potential responses to the CDC. Of the 22 per cent who drink less frequently, half (11 per cent) also drink a lesser amount each time they drink. Of the 25 per cent who reduced the amount they drink, just less than half (11 per cent) also drink less frequently. Thus, there appears to be a synergy in whatever it is that makes for these reductions, as we observed a sizeable proportion of CDC participants who experienced a reduction in both the frequency and the amount of alcohol consumption. This is a noteworthy finding, as it shows that a reduction is reported in both the amount and the frequency of alcohol consumption since the introduction of the CDC, but that the two outcomes are not one and the same.

Table 3-13: Since being on the CDC, change in frequency and amount of alcohol consumption (joint distribution), all trial sites

Since being on the CDC, change in frequency and amount of alcohol consumption						
	Reduced frequency of drinking					
	No		Yes		Total	
Reduced amount of alcohol consumed	N	%	N	%	N	%
No	2,084	**85**	375	**15**	2,458	100
Yes	468	**57**	353	**43**	822	100
Total	**2,552**	**78**	**728**	**22**	**3,280**	100

Note 1: the percentages reported apply to the subsample of CDC participants who previously indicated they consumed alcohol.
Note 2: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies

Going further, we look at the extent to which those who reported they drink less at any one time also indicate that they have decreased the frequency of their consumption of alcohol (how many times a week they drink alcohol). The table below (Table 3-14) summarises the information. It highlights some trade-offs between amount of alcohol consumption and frequency of consumption Indeed, only 43 per cent of those who indicated they reduced the amount of alcohol at any one time also reported reducing the number of times they drink in a week. Fifty-seven per cent of them reported they have not reduced their frequency of alcohol consumption. We also note that among those who have not reduced the amount of alcohol consumed, 15 per cent have reduced the number of times they consume alcohol each week. Note that the percentages reported in the table below correspond to the conditional distributions as we look at whether trade-offs occur for those who reported they drink less at any one time (see Box 3-1 for an explanation of the differences between joint and conditional distributions).

Table 3-14: Since being on the CDC, change in frequency and amount of alcohol consumption (conditional distributions), all trial sites

Since being on the CDC, change in frequency and amount of alcohol consumption						
	Reduced frequency of drinking					
	No		Yes		Total	
Reduced amount of alcohol consumed	N	%	N	%	N	%
No	2,084	**64**	375	**11**	2,458	**75**
Yes	468	**14**	353	**11**	822	**25**
Total	**2,552**	**78**	**728**	**22**	**3,280**	**100**

The figures computed for the whole CDC population hide some differences across trial sites. The following table (Table 3-15) provides the population weighted answers to the survey question about changes in alcohol consumption after the CDC for each site. We observe the largest proportions of change in both frequency and amount of alcohol consumed in the East Kimberley site. Twenty-nine per cent of the CDC participants indicating they drink alcohol reported that they have reduced the amount of alcohol they consume at any one time and 24 per cent have reduced the number of times they drink (frequency). For the East Kimberley site, the changes mostly happen at these two levels as the proportion of people who stopped drinking altogether is the lowest of the three sites with 3 per

cent (7 per cent in the Goldfields and 9 per cent in Ceduna and surrounds). In the Goldfields, 23 per cent of the CDC participants who indicated they drink reduced the amount they drink at any one time, 21 per cent reduced the frequency and 7 per cent stopped drinking. For the Ceduna & surrounds site, the proportions are respectively 22 per cent, 22 per cent and 9 per cent. The largest proportion of CDC participants reporting they stopped drinking was in this latter site. Regarding shifting one's consumption to more low-alcohol drinks, the observed proportions show that this is not a very popular strategy to handle the restrictions imposed by the CDC and is likely due to shifting to lower alcohol content drinks does not make a large difference financially.

Table 3-15: Changes in alcohol consumption of those who reported they drink alcohol, by trial site

Changes in alcohol consumption, since being on the CDC				
	East Kimberley	Goldfields	Ceduna & surrounds	Total
	%	%	%	%
Reduced amount of alcohol at any one time	29	23	22	**25**
Reduced frequency of drinking	24	21	22	**22**
Consumed more low-alcohol drinks	9	7	6	**8**
Stopped drinking all together	3	7	9	**6**
None of the above	52	57	52	**55**

The next table (Table 3-16) looks at the extent to which trade-offs are made by CDC participants between reducing the amount of alcohol they drink at any one time and the number of times they drink each week (frequency). We provide the information for each trial site. This table is constructed like Table 3-13 and is based on the conditional distributions. It displays, for each site, the distribution of changes in the frequency of drinking conditioned on changes in the amount of alcohol consumed at any one time. For instance, it tells us, among the CDC participants who have reported reducing the amount they drink at any one time what is the proportion who have also reported reducing the frequency of drinking. The interesting information that comes up from these computations is that the patterns of trade-offs is similar for East Kimberley and the Goldfields and it is similar to the proportions observed in Table 3-14: 43 per cent to 45 per cent of those who have reported reducing the amount they drink have also reported reducing the number of times they drink while 55 per cent to 57 per cent have not. Also, among those who have not reported reducing the amount they drink at any one time in these two sites, between 13 per cent (Goldfields) and 17 per cent (East Kimberley) have reported reducing the frequency of their alcohol consumption. In contrast, CDC participants in Ceduna and surrounds exhibit slightly different patterns of trade-offs between amounts and frequency. Only 32 per cent of those who have reported reducing the amount of alcohol consumed at any one time have also reported decreasing the number of times they drink every week. We observe a slightly higher proportion of CDC participants who have not reported reducing the amount consumed but who have reported decreasing the frequency (19 per cent) instead.

Table 3-16: Change in frequency of alcohol consumption among those who reported reducing the amount of alcohol consumed at any one time following their participation into the CDC (conditional proportions), by trial site

Reduction in amount of and frequency of alcohol consumed				
		Reduced frequency of drinking		
Trial site	Reduced amount of alcohol at any one time	No %	Yes %	Total %
East Kimberley	No	83	17	100
	Yes	57	43	100
	Total	**76**	**24**	**100**
Goldfields	No	87	13	100
	Yes	55	45	100
	Total	**79**	**21**	**100**
Ceduna and surrounds	No	81	19	100
	Yes	68	32	100
	Total	**78**	**22**	**100**

The next table (Table 3-17) provides information on the joint distribution of the CDC participants who reported reducing the frequency and/or amount of alcohol consumed after the CDC (as in Table 3-14) in order to highlight, in each site, the net overall proportion of CDC participants for whom the CDC has had an impact on their consumption of alcohol. The observations are as follows:

- **In the East Kimberley site**: 13 per cent of the CDC participants who indicated they consume alcohol reported reducing both amount and frequency, 12 per cent reduced the frequency of alcohol consumption only, and, 16 per cent reduced the amount they drink at any one time. Altogether, 41 per cent of the CDC participants who consume alcohol reduced their intake of alcohol somehow. In addition, 3 per cent have stopped drinking altogether.
- **In the Goldfields site:** 10 per cent of the CDC participants who indicated they consume alcohol reduced both amount and frequency, 10 per cent reduced the frequency of alcohol consumption only, and, 13 per cent reduced the amount they drink at any one time. Altogether, 33 per cent of the CDC participants who consume alcohol reported reducing their intake of alcohol. In addition, 7 per cent reported stopping drinking altogether.
- **In the Ceduna and surrounds site:** 7 per cent of the CDC participants who indicated they consume alcohol reported reducing both amount and frequency, 15 per cent reported reducing the frequency of alcohol consumption only, and, 15 per cent reported reducing the amount they drink at any one time. Altogether, 37 per cent of the CDC participants who consume alcohol reported reducing they intake of alcohol. In addition, 9 per cent reported stopping drinking altogether.

Table 3-17: Change in frequency and amount of alcohol consumption at any one time following participation into the CDC (joint distribution), by trial site

Reduction in amount of and frequency of alcohol consumed				
		Reduced frequency of drinking		
Trial site	Reduced amount of alcohol at any one time	No %	Yes %	Total %
East Kimberley	No	59	12	71
	Yes	16	13	29
	Total	**76**	**24**	**100**
Goldfields	No	67	10	77
	Yes	13	10	23
	Total	**79**	**21**	**100**
Ceduna and surrounds	No	63	15	78
	Yes	15	7	22
	Total	**78**	**22**	**100**

Altogether, according to the survey instrument used for these computations, alcohol consumption has been affected most in the Ceduna and surrounds site (including through a larger proportion of CDC participants who stopped drinking), followed by the East Kimberley site. For the latter site, the AUDIT instruments showed us that there is room for additional reductions in alcohol consumption given the proportions of CDC participants whose alcohol consumption is identified as hazardous and harmful and showing signs of dependence.

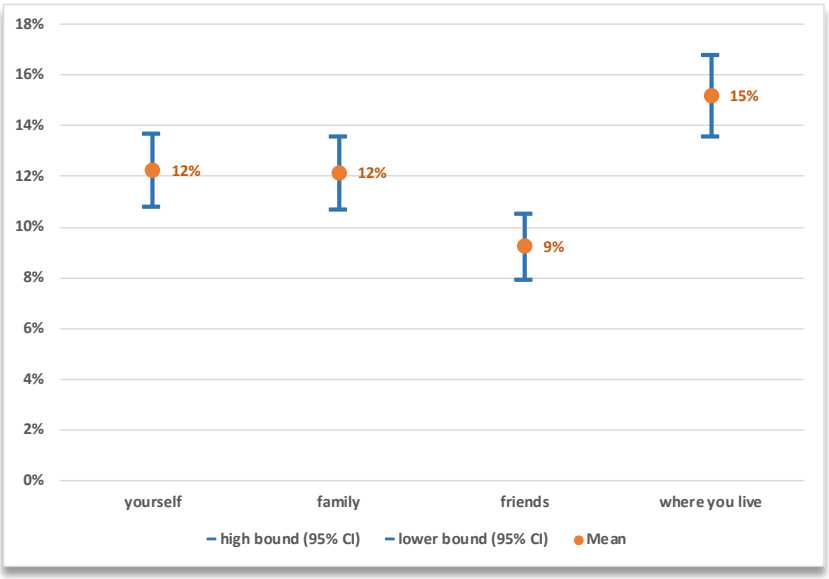
Another survey instrument asks CDC participants whether the CDC has helped decrease alcohol consumption not only for themselves but also for their family, friends, or, where they live. This instrument is asked to all CDC participants who responded to the survey, including those who do not consume alcohol. Unlike the previous survey instrument which asks whether CDC participants made any change to their own alcohol consumption since being on the Card, this second survey instrument directly ask whether the CDC has led to any changes, thus directly asking CDC participants to assess the impact of the CDC not only on their own consumption of alcohol but also their family's, friends' and the area in which they live. We can expect some individuals may have reported they changed their consumption of alcohol through the first survey instrument but they may indicate that the CDC had no impact. As a result of different sample sizes answering the two survey instruments and the meaning of each questions being slightly different, we expect to observe different proportions of CDC participants indicating the CDC had an impact on alcohol consumption.

The following figure (Figure 3-51) shows the proportions of CDC participants who reported that the CDC has helped decrease alcohol consumption at each level.[44] We also display the 95 per cent confidence interval around these average proportions. Twelve per cent of the CDC participants indicated that the CDC helped them reduce their own alcohol consumption. Twelve per cent reported that it impacted their family favourably. Nine per cent reported that it has also helped their friends

[44] Figure 3-51 present percentages of the total weighted population of 6,039. As such they differ slightly from those presented in the Consolidated report.

decrease their alcohol consumption. Finally, 15 per cent indicated that the CDC has helped reduce alcohol consumption where they live.

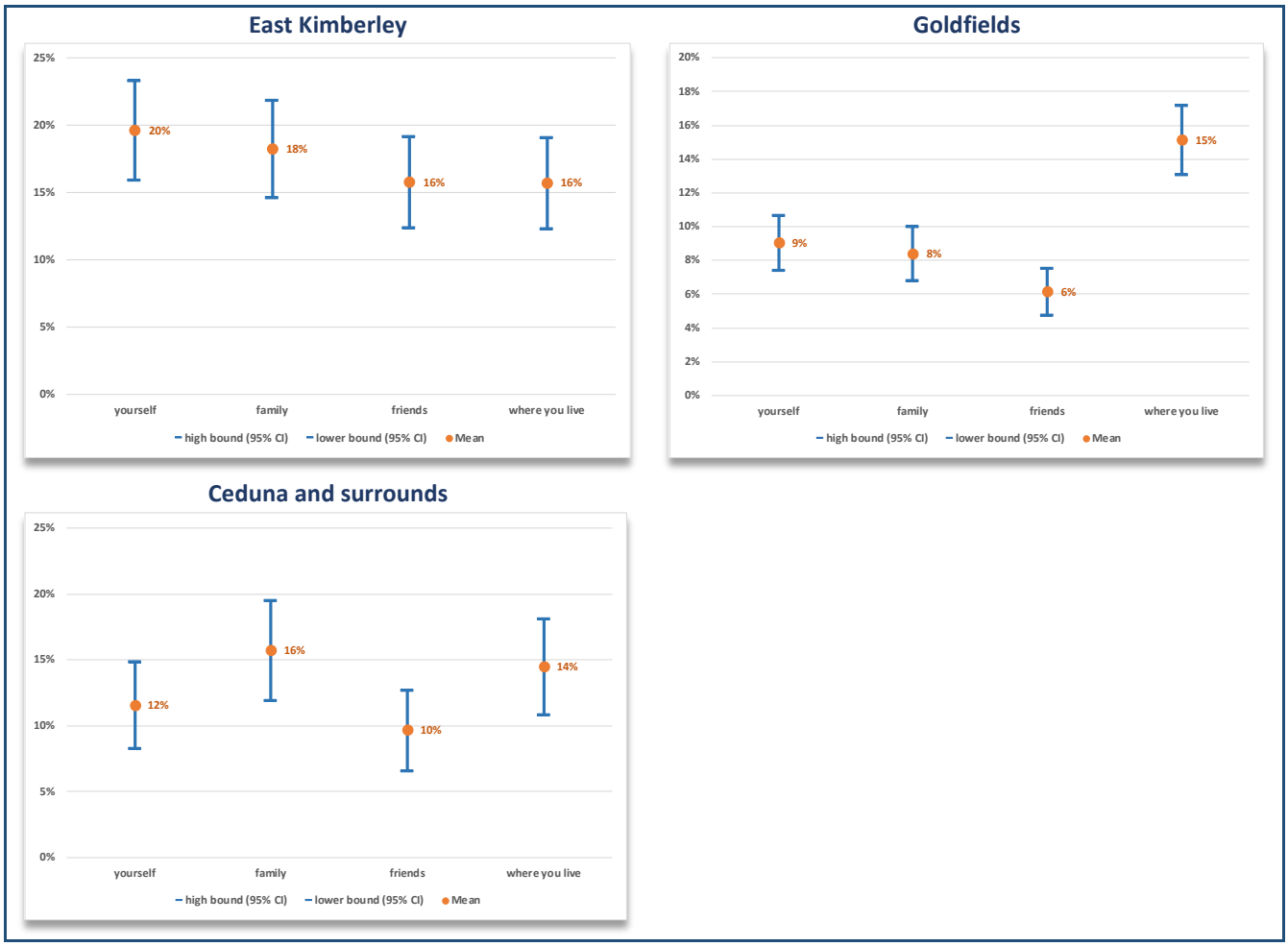
Figure 3-51: CDC participants' perceived impact of the CDC on alcohol consumption for themselves, their family, friends and community



There are differences across trial sites in relation to the perceived impact of the CDC on alcohol consumption. The following three figures (in Figure 3-52) display the same information for each site.[45] A larger proportion of CDC participants in the East Kimberley site report a positive impact of the CDC on alcohol consumption for themselves, their family, and, friends (see left-hand side figure). Twenty per cent of the CDC participants in East Kimberley said that the CDC has helped them decrease their alcohol consumption. Eighteen per cent indicated that the CDC has helped their family and 16 per cent think that their friends have reduced their drinking because of the CDC. The proportions are much smaller in the Goldfields site where only 9 per cent of the CDC participants thought that the CDC has helped decrease their own alcohol consumption, 8 per cent reported that it has helped their family and 6 per cent their friends. In Ceduna and surrounds, the proportions were respectively 12 per cent, 16 per cent and 10 per cent. With regards to the impact of the CDC on participants' community they live in, the proportions were very similar across site; between 14 per cent and 16 per cent reporting that the CDC has helped decrease alcohol consumption where they live.

[45] Figure 3-52 present percentages of the total weighted population of 6,039. As such they differ slightly from those presented in the Consolidated report.

Figure 3-52: CDC participants' perceived impact of the CDC on alcohol consumption for themselves, their family, friends and community, by trial site



Since the survey instrument eliciting the impact of the CDC on alcohol consumption at each level implies that CDC participants can tick all that applies, we can have many combinations of responses. For instance, some survey respondents may indicate that the CDC has impacted their alcohol consumption only, not that of their family and friends. Others, possibly non-drinkers, may indicate that the CDC has helped their family or friends or both. The total number of CDC participants who have been impacted by the CDC at any of the levels proposed by the survey instrument is not the sum of the proportions displayed in the previous figures. One needs to compute the number of individuals reporting a positive impact of the CDC separately, taking the numbers above and removing the double counts. Table 3-18 displays the proportions of CDC participants (by trial site) who report that the CDC has helped with decreasing alcohol consumption at, at least one level: personal, family, friend, or community. Including all levels, the table shows that the proportion of CDC participants who reported a positive impact of the CDC on alcohol consumption was around 27 per cent. The proportions varied little by trial site (between 26 per cent in the Goldfields and 29 per cent in the other two trial sites)[46].

[46] Given the figures displayed above (Figure 3-52), we expect that the 26 per cent observed in the Goldfields comes from the fact that more survey respondents in this site ticked a limited number of levels in the survey instrument. Less survey respondents ticked several levels in the other two sites.

Table 3-18: CDC participants' perceived impact of the CDC on alcohol consumption on either themselves, their family, friends and community, by trial site

Participants' perceived impact of the CDC on alcohol consumption				
	Impact of the CDC on alcohol consumption			
	No		Yes	
Trial site	N	%	N	%
East Kimberley	1,128	71	469	29
Goldfields	2,588	74	915	26
Ceduna and surrounds	665	71	274	29
Total	**4,381**	**73**	**1,658**	**27**

We now use the information provided by this table in order to analyse the characteristics of the CDC participants who report that the CDC impacted on alcohol consumption to investigate whether the CDC impacts some CDC participants more than others and whether there are differences by trial site

3.4.5 Characteristics of CDC participants who report a positive impact of the CDC on alcohol consumption

3.4.5.1 Relationship between risky and harmful alcohol consumption and impact of the CDC

Before going further into the investigation of the characteristics of the CDC participants who report a positive impact of the CDC on alcohol consumption, it is important to determine whether the impact is reported by CDC participants whose consumption of alcohol has been identified as being potentially hazardous and harmful and who exhibit signs of alcohol dependence.

The cash restrictions imposed on CDC participants with regards to purchasing alcohol is expected to have two effects. The first effect is an 'income effect' in the sense that the CDC participants' budget constraint for such consumptions of goods that are targeted by the policy shifts back. Less income can be dedicated to these consumptions. This potentially affects all CDC participants. The second effect is a 'price effect'. This effect is likely to impact heavy drinkers to a larger extent. Indeed, it is likely that the 'real' price of alcohol has increased in the trial sites. Those wanting (or needing) to spend beyond the amount allowed by the policy need to resort to alternative ways to get alcohol. These alternative ways (workarounds) can be through a 'black market' or through circumventing behaviours such as bartering alcohol for groceries or petrol (this is documented by the qualitative methodology of the evaluation). The real price of alcohol obtained through these means is bound to be higher than the typical market price as there usually is a price to pay for the intermediation of someone else to obtain alcohol.

The nature of the elasticities (both price and income elasticities) of the demand for alcohol is crucial for one to determine what the impact of the CDC could be on the consumption of alcohol, especially for those drinking at risky or harmful levels. It is possible that those identified as dependent on alcohol will reduce their consumption of other goods in order to avoid or limit a reduction in alcohol purchase due to the financial constraints imposed by the CDC. That would be the case for people whose demand is price and income inelastic. The dedicated literature typically finds that the price elasticity of the

demand for alcohol is larger in the long run than in the short run (see, notably Grossman & al., 1998[47], and Gallet, 2007[48]). Research shows, also, that heavy drinkers are less responsive to price changes (see, Wagenaar, 2009[49]; Keng & Huffman, 2007[50]; Chaloupka & Wechsler, 1996[51]) compared to lighter drinkers. Studies also show that the price elasticities vary according to the types of drinks (see Fogarty, 2009[52] and Nelson, 2014[53]). In the literature, the price elasticity of beer is around -0.2 (-0.34 in Australia according to Fogarty's 2009 study), while it is around -0.55 for spirits. Likewise, the income elasticity of beer is estimated to be around 0.5 (inelastic, making beer a 'necessity good') while it is around 1 for spirit (considered as a 'luxury good'). Beer seems to be the alcoholic beverage of choice in most areas of the trial sites which means that a large part of the CDC participants' demand is both price and income inelastic. A price increase of 1 per cent is expected to lead to a decrease in demand by around 0.34 per cent. A reduction of income by 1 per cent implies a decrease of demand by 0.5 per cent which means that the relative expenditure in beers in CDC participants' budget would increase. If we combine the insights from the literature on the elasticities of demand for alcohol we would expect that:

- Beer drinkers' demand should be less sensitive to CDC policy than spirit drinkers. It is possible that spirit drinkers make substitutions towards more beer (according to question D13 of the survey, some do shift to lower alcohol drinks but in a limited proportion).
- Lighter drinkers; those whose alcohol purchase did not usually amount to more than 20 per cent of the value of their government benefits before the CDC are not expected to face significant price increases beyond variations of the market price as they do not need to find circumventing ways to get alcohol. However, the 'income' effect would represent an additional constraint in the sense that alcohol consumption would compete with other. Nevertheless, light drinkers should see their demand for alcohol vary little after the CDC.
- Heavy drinkers would be most affected by the CDC policy as they are expected to incur a significant increase of the 'real' price of the alcohol they consume beyond the 'income' effect. However, the extent to which this translates into a large decrease of one's consumption depends on how expensive it has become to spend beyond the 20 per cent threshold (change in 'real price'), the actual 'price elasticity' of their demand (expected to be lower) and that heavy drinkers generally consider alcohol as a 'necessity good' (low income elasticity).

Altogether, using the previous literature on price and income elasticity of the demand for alcohol, we would expect that heavier drinkers should report significant changes to their consumption after the CDC. We also expect that they would maintain some level of consumption, not quit altogether (at least in the short run horizon covered by the survey). Likewise, we should see relatively small reported

[47] Grossman M., Chaloupka F.J., Sirtalan I., (1998),"An empirical analysis of alcohol addiction: Results from the Monitoring the Future panels", *Economic Inquiry*; 36(1), pp.39–48.
[48] Gallet C.A., (2007), "The demand for alcohol: A meta-analysis of elasticities", *Australian Journal of Agricultural and Resource Economics*, 51, pp.121–135.
[49] Wagenaar A.C., Salois M.J., Komro K.A., (2009), "Effects of beverage alcohol price and tax levels on drinking: A meta-analysis of 1003 estimates from 112 studies", *Addiction*, 104(2), pp.179–190.
[50] Keng S., Huffman W.E., (2007), "Binge drinking and labor market success: A longitudinal study on young people", *Journal of Population Economics*, 20, pp.35–54.
[51] Chaloupka F.J., Wechsler H., (1996), "Binge drinking in college: The impact of price, availability, and alcohol control policies", *Contemporary Economic Policy*, 14(4), pp.112–124.
[52] Fogarty J., (2009), "The demand for beer, wine and spirits: a survey of the literature", *Journal of Economic Surveys*, 24, pp. 428-78.
[53] Nelson J.P., (2014), "Estimating the price elasticity of beer: Meta-analysis of data with heterogeneity, dependence and publication bias", *Journal of Health Economics, 33, pp 180-187.*

changes among the light drinkers as the CDC policy would have little effect onto their ability to purchase the amounts of alcohol they usually consume.

The following two figures (Figure 3-53 and Figure 3-54) use the two instruments at our disposal to look at changes in alcohol consumption (survey question D13 and G4) following the implementation of the CDC and relates these changes to the AUDIT scores (risk categories computed from the Total scores).

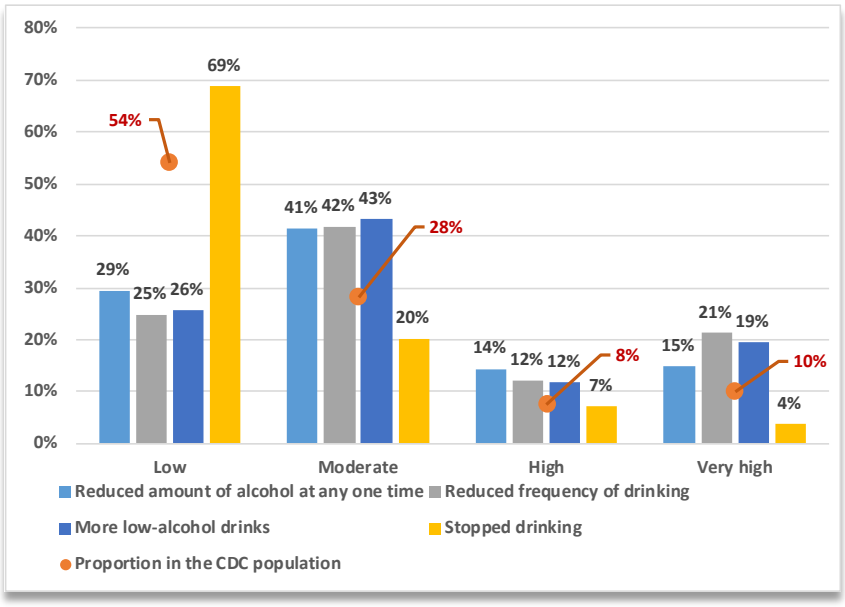
Figure 3-53 looks at CDC participants who stated that their alcohol consumption has changed since the CDC was rolled out and looks at the nature of the change that occurred according to the AUDIT risk category they have been identified to belong to. For each type of changes that occurred, it shows the proportion of CDC participants who reported that change for each risk category. The figure includes another piece of information, namely the actual proportion of CDC participants who are identified in each risk category (represented by the orange dots). Using both information displayed in the figure, one can see whether a given change (decreased frequency, lower amount at any one time, etc.) is relatively over or underrepresented for CDC participants in each risk category compared to their actual proportion in the population of alcohol drinkers. If a histogram stands above the corresponding dot, it indicates that the CDC participants in that risk category are comparatively over-represented among those who report that change. Conversely, if the histogram is below the dot, the corresponding risk category is under-represented. By way of an example, the light blue histogram shows how the CDC participants who stated they have reduced the amount they drink at any one time are distributed according to the risk category they belong to. Twenty-nine per cent of those who reported that type of change were identified as low risk, 41 per cent were classified as moderate risk, and so on. According to the figure, low risk CDC participants are under represented among those who reported they reduced the amount and the frequency at which they drink. What the figure also shows is that one would mostly find 'low risk' people among those who opted to quit drinking[54].

As stated in the introductory comments to this section, the CDC is unlikely to have imposed additional constraints on the low risk alcohol consumers' budget constraint. Thus, it is not surprising to observe that they are under-represented among those who decreased frequency and amount of alcohol consumption. More generally, according to the literature we presented above, we should observe the histograms to be above the dots for those identified as belonging to the high or very high risk categories and below the dots for the light drinkers.

We observe that those identified in higher risk categories are over-represented among those who reported all type of changes except quitting altogether. As the budget that can be dedicated to alcohol consumption reduced due to the CDC, those in higher risk categories have responded by reducing both frequency and amounts consumed (and to some extent shifted to lower alcohol content drinks). We note that those in the highest risk category seem to decrease the frequency to a larger extent than the amount. While they represent 10 per cent of the CDC population, they represent 21 per cent of those who have reduced the frequency of alcohol intake.

[54] Note that the overall proportion of those who quit drinking is relatively small (6 per cent) so the figures are not as statistically robust as for the other types of change following the CDC.

Figure 3-53: Stated changes in alcohol consumption after the rollout of the CDC according to one's Total AUDIT score, (population weighted)



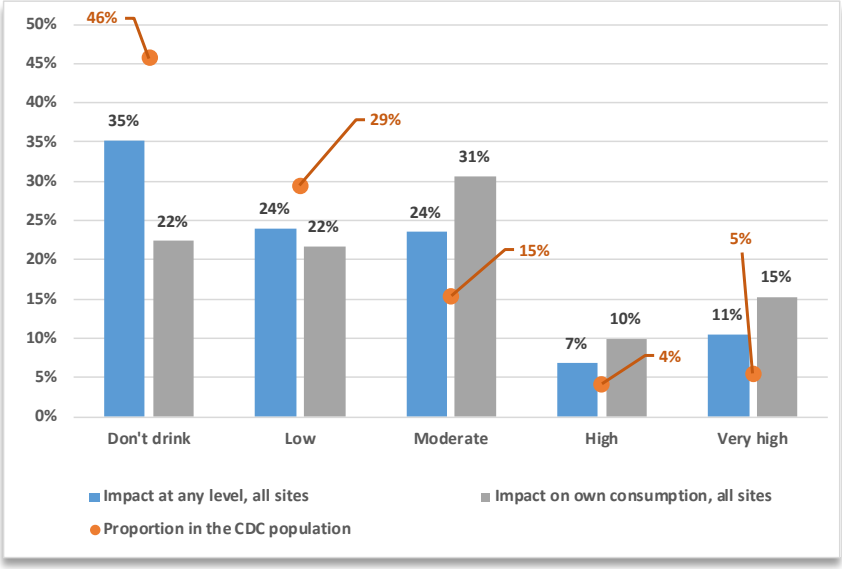
We computed the same figures for each site (displayed in Figure A 4-7 to Figure A 4-9). The observations are qualitatively similar to those just discussed. The moderate, high and very high risk individuals tend to be over-represented among those who report changes in their consumption of alcohol. Some notable differences are there though. For instance, in the East Kimberley site, the high and very high risk individuals are also over-represented within the group of those who reported they stopped drinking (Figure A 4-7). Also, we observe a relatively larger proportion of high/very high risk individuals among those who report changes in their consumption in the East Kimberley site compared with the other sites. In the other two sites we observe that the proportion of light drinkers among those who report changes is larger than in the East Kimberley site. For instance, 49 per cent of those who reported they reduced the amount of alcohol they drink at any one time are low risk drinkers in Ceduna (see Figure A 4-9).

The next figure (Figure 3-54) looks at the same relationship between change in alcohol consumption and alcohol use disorder, using the second instrument which directly asks whether the CDC impacted on alcohol consumption. We display the distributions for two scenarios, (i) those who reported that the CDC has impacted alcohol consumption at, at least, one level, be it on themselves, their family, friends, or, where they live (blue histograms), and, (ii) those who reported that the CDC had a positive impact on their own alcohol consumption[55].

In this figure, we find corroborative evidence that those identified in the high or very high risk of harmful alcohol consumption are over-represented among those who report a positive impact of the CDC on alcohol consumption, both for their own and at any level (family, friends, where they live). Conversely, those who are light drinkers or do not drink are under-represented among those who report a positive impact of the CDC. Separate figures for each site are presented in the appendix (Figure A 4-10 to Figure A 4-12).

[55] Note that the survey instrument which elicited the impact of the CDC on the participants is asked of everyone, including those who indicated that they never drink (at question D1 of the survey). Therefore, we display an extra set of histograms compared to the previous figure.

Figure 3-54: Subjective impact of the CDC on alcohol consumption according to one's Total AUDIT score (population weighted)



In the following subsection, we look at the characteristics of CDC participants who have reported a positive impact of the CDC on the consumption of alcohol.

3.4.5.2 Characteristics of CDC participants who report a positive impact of the CDC on alcohol consumption

We conducted a multivariate analysis, looking whether some individual characteristics are statistically related to those CDC participants who report that the CDC had a positive impact on alcohol consumption. Specifically, we estimate two models which correspond to two types of CDC participants groups:

i) The first model estimates the probability that a CDC participant reports that the CDC had a positive impact at any level on either their own consumption, that of their family, their friends, or, at the level of their community. This definition of the group of CDC participants who subjectively report an impact of the CDC is the least restrictive as, for instance, we count CDC participants who would report a positive impact where they live in general (community) while they don't report any changes for themselves, their family or friends.

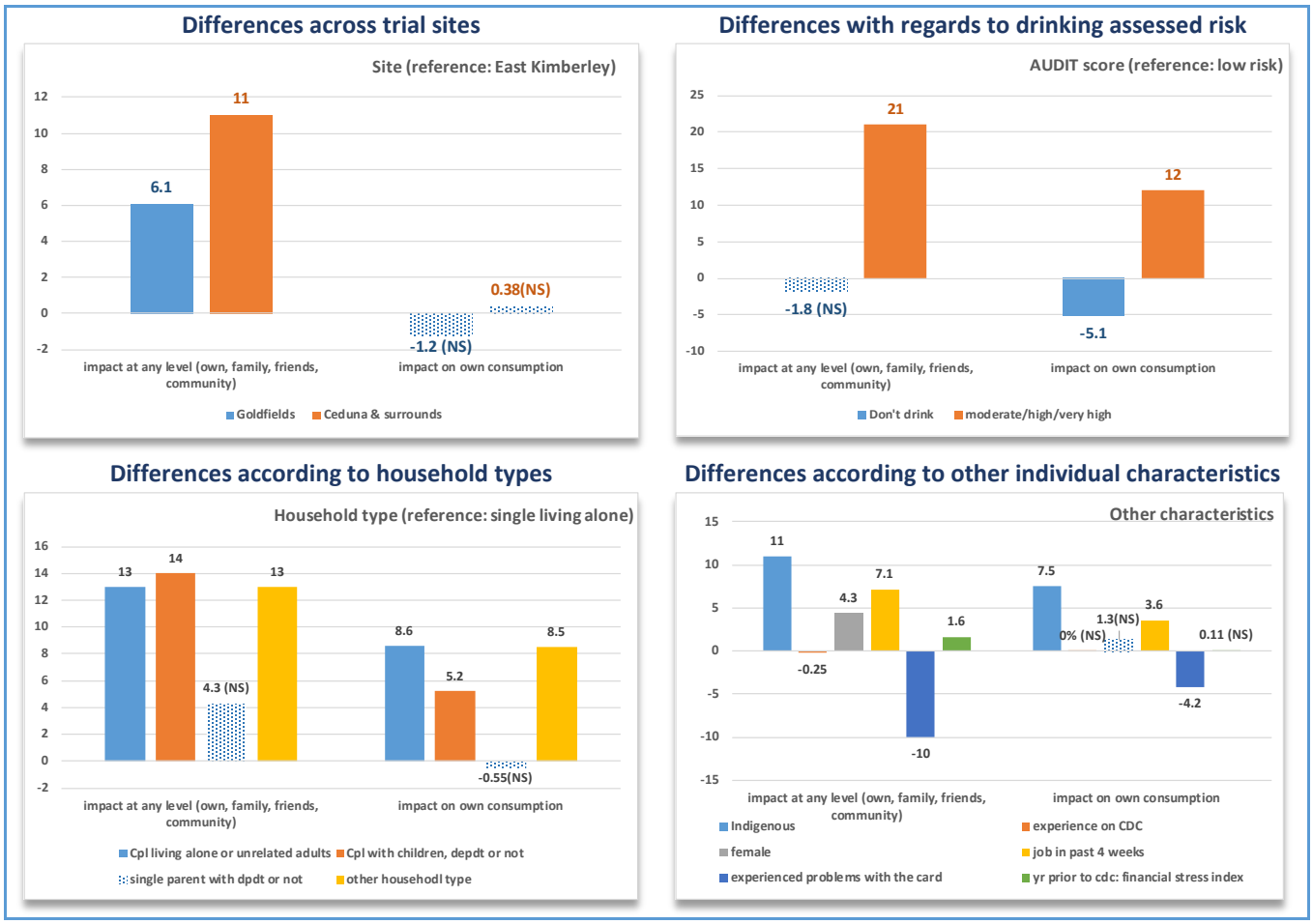
ii) The second model restricts the definition of the group of people who report a positive change. It looks at the probability that a CDC participant reports a positive impact of the CDC on their own alcohol consumption.

For both probabilities, we estimate an Ordered Probit model and test several specifications, looking at whether some observable individual characteristics may be related to reporting a positive impact. The models also attempt to quantify these relationships through the computation of marginal effects[56]. The table of results is displayed in the appendices (see Table A 4-22). It includes two columns for each model, the first and third column display both models' estimated coefficients while the second and fourth columns give the estimated marginal effects (computed at the sample means) for each model. In order to make the results easier to understand for non-technical readers, the following

[56] Refer to Box 3-2 for explanations on how to interpret marginal effects in probabilistic models.

set of figures represent, in the form of histograms, the estimated marginal effects (broken down by relevant sets of individual characteristics) for each model, along with our interpretation of these results. Note that for characteristics that are discrete in nature (such as household types, trial site, etc.) the marginal effects are expressed with reference to a given value of these characteristics which acts as a benchmark. For instance, in the figure below (Figure 3-55), we see that the marginal effect is 0.06 for CDC participants in the Goldfields in the first model and that the reference is East Kimberley. This means that a CDC participant living in the Goldfields is 6 percentage points more likely to report a positive impact of the CDC at any one of the levels (own, family, friend, community) compared to the exact same individual (a statistical twin) who would live in East Kimberley. Some of those marginal effects are not statistically significant. In order to identify those easily in the figure, we removed the solid fill of the histogram and replace it with a light blue pattern and flagged them in the label with "(NS)" following the estimated value of the marginal effect.

Figure 3-55: Relationship between reported subjective impact of the CDC on alcohol consumption and CDC participants' individual characteristics, multivariate analysis



Altogether, the results suggest that:

CDC participants in the Goldfields and Ceduna are more likely to report a positive impact of the CDC on alcohol consumption at any level (top left hand side figure, left hand side histograms) compared to similar CDC participants who are in East Kimberley. CDC participants in the Goldfields are 6 percentage points more likely to report a positive impact than CDC participants in East Kimberley, while those living in Ceduna and surrounds are 11 percentage points more likely to report a positive impact.

When we restrict the definition of the subjective impact on one's own consumption only, the results suggest that there are no longer significant differences across sites. In other words, CDC participants who live in the Goldfields or in Ceduna are not significantly more likely to say that the CDC has impacted on their own consumption of alcohol, compared to similar CDC participants who live in the East Kimberley site. The results suggest that the CDC participants in the Goldfields and Ceduna sites are more likely to report a positive impact of the CDC on either their family, friends or community (not on their own consumption).

CDC participants who have been identified as having a potentially risky or harmful alcohol consumption are more likely to report a positive impact of the CDC on alcohol consumption (compared to people who are identified as low risk). The results suggest that this is the case for both definitions of impact. The marginal effects indicate that, on average, CDC participants who are in the higher risk categories are 21 percentage points more likely than a 'low' risk person to report a positive impact of the CDC on alcohol consumption (broad definition). In addition, the right-hand side histograms suggest that they are 12 percentage points more likely to report a positive impact on their own alcohol consumption.

The models highlight differences across CDC participants with regards to household type. Here the marginal effects are compared with CDC participants who are single and living alone. The overall result is that CDC participants who live alone are less likely than CDC participants in any other household type (with the exception of single parents living with children who are dependent or not) to report improvements in relation to alcohol consumption. Looking at the broader definition of impact, we estimate that couples living alone or with unrelated adults are 13 percentage points more likely to report a positive impact compared with people living alone. The estimated probabilities for couples living with children (dependent or not) are, on average, 14 percentage points larger. The marginal effects are about 13 for other household types. Using the more restrictive definition, the marginal effects are respectively, 9 percentage points for couples living alone, 5 percentage points for couples living with children, and, 9 percentage points for other household types compared with those living alone.

The last figure (bottom right) suggests that Indigenous CDC participants are, on average, 11 percentage points more likely than non-Indigenous participants to report a decrease in alcohol consumption at any level (and 8 percentage points more likely to report a positive impact of the CDC for their own consumption).

Females tend to report positive impacts on alcohol consumption for their families, friends and community to a larger extent than their male counterparts (4 percentage points on average) but they are not significantly more likely to report that the CDC has helped decrease their own alcohol consumption.

The results of these models do not show significant relationships between the probability to report a positive impact and age. Younger CDC participants do not significantly differ from older ones with regards to how they respond to the questions about the impact of the CDC on drinking, whichever level is considered.

Those who had a job in the four weeks preceding the survey (including work for the dole) are more likely to report a positive impact on both definitions of impact compared to those who did not (respectively 7 and 4 percentage points).

CDC participants who experienced issues using their Card at the beginning of their rollout into the CDC are less likely to report positive impacts compared with those who did not experience these issues (respectively 10 percentage points lower probability to report an improvement at various levels and

4 percentage points less likely to indicate that the CDC helped decrease their own alcohol consumption.

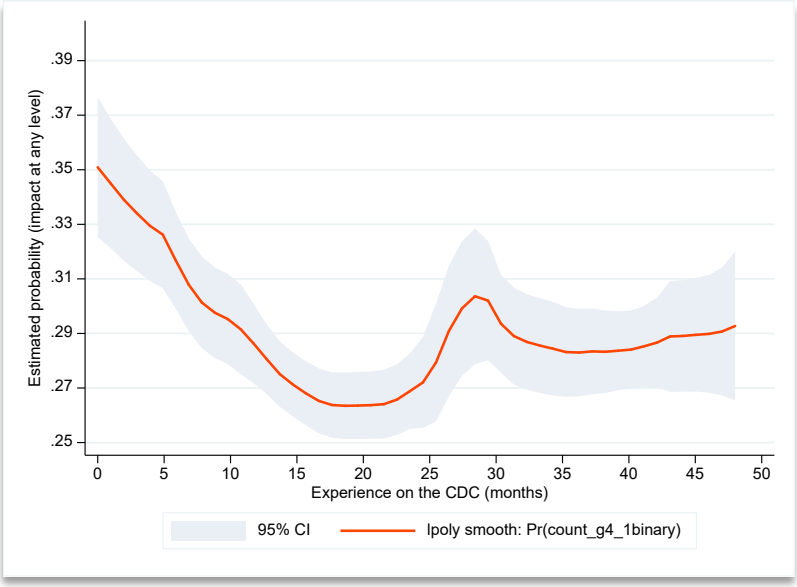
We also see that the higher financial stress experienced by the CDC participants prior to the rollout of the CDC the larger the probability to report a positive impact of the CDC at any level. Since this variable is not significant in the more restrictive definition, we conclude that those who reported experiencing financial stress prior to the CDC are more likely to report an improvement regarding alcohol consumption at the level of their family, friends or community. Since the financial stress variable is continuous, the marginal effect displayed in the figure tells us that between two CDC participants whose reported financial stress was 1 unit apart, the one with the higher financial stress index is 2 per cent more likely to report a positive impact. Between two CDC participants who are 2 percentage points apart, the difference is, on average 4 per cent, and so on. Hence, this estimated marginal effect of 2 per cent is large[57].

Likewise, the marginal effect estimated for the continuous variable which captures the number of months people have been on the CDC (so called 'experience on CDC') is relatively large in spite of the displayed figure of -0.3 per cent. The fact that the estimate is negative and significant (at least for the broader definition of impact) means that as CDC participants ease into the CDC, they become less likely to report significant impacts of the CDC on drinking (at the level of their family, friends and community). Note that the marginal effect is not significant in the more restrictive definition of impact, suggesting that the subjective probability that the CDC helped decrease one's own alcohol consumption is relatively invariant with how long people have been placed on the CDC. Given the value of the marginal effect in the broader definition, two CDC participants who are, say, 10 months apart with regards to how long they have been on the CDC are, on average 3 per cent apart with respect to the probability they report a positive impact: the CDC participants who has been placed on the CDC the longest would experience the lowest probability.

Analysing further the relationship between experience on the CDC and probability to report an impact of the CDC on drinking, the following figure (Figure 3-56) represents the estimated probabilities according to how long individuals have been on the Card. The estimated probability (solid line) is assorted with the 95 per cent confidence intervals around the estimates (shaded area around the line). The figure highlights notable variations in the estimated probabilities as CDC participants gain experience with the CDC. While the estimated marginal effect suggested an average 0.3 per cent decrease in the probability for every month spent on the CDC, the figure shows that most of the decrease in the probability seems to be occurring within the first 15 months of CDC participants being rolled out into the CDC. Past this period, the probability levels off, exhibits between the 20th and 30th month. It plateaus after that. It will be interesting to know, in the longer run, as we observe more cohorts of individuals being on the CDC for longer periods, whether the estimated probability keeps increasing.

[57] Note that since the financial stress variable is continuous, the estimated marginal effect represents an actual percentage change.

Figure 3-56: Estimated probability to report a positive impact of the CDC on alcohol consumption at any level (own, family, friends, community) according to one's experience on the CDC



3.5 Drug use and misuse

3.5.1 Elicitation of substance abuse–methodological issues

Eliciting individuals' consumption of prohibited substances such as drugs through a survey is notoriously difficult and inaccurate. Indeed, the dedicated literature highlights that survey respondents systematically under-report the level of their involvement with, and consumption of drugs.

Being aware of these issues and expecting that trying to elicit drug consumption from the CDC participants may potentially antagonise respondents and prevent us from getting responses on the many domains covered by the survey, we opted for an indirect strategy. The survey includes a range of questions about how CDC participants feel about drugs. They include some survey instruments which try to draw out some information about which drug CDC participants consider as being the most widespread in their community and the drug that causes the most problem where they live. A range of other instruments elicit their general views about drugs, whether they consider it acceptable for adults to consume a range of drugs, whether some of the drugs should be legalised, and, whether they think the existing penalties around dealing with drugs in Australia are adequate. These survey instruments were selected to be the same as those used in the NDSHS survey so comparisons can be made with this nationally representative survey, by state or for Australia as a whole. The NDSHS survey, which not only elicits respondents' views about drugs but also tries to gather information on consumption, offers an opportunity for our survey to exploit the relationship between perception and consumption observed in the NDSHS survey and obtain a rough estimate of drug consumption in the trial sites. However, such an estimate, in itself, would become meaningful once we are able to exploit the longitudinal nature of the survey through a second wave, should it be undertaken. Indeed, an estimate of CDC participants' consumption based on what is observed in the NDSHS would, by nature, provide very rough figures of drug consumption in the trial sites (notably because the trial sites differ significantly from the overall Australian population). Nevertheless, computing these estimates through the first wave of survey and undertaking the same estimation, using the same technique, through a second wave, would allow us to use the time variation in order to determine whether drug consumption is likely to have decreased in the trial site. We would be using the variation in the estimates rather than the estimates themselves.

Since we only have one wave of survey data collection at this stage, we refrain from providing the estimates of drug consumption in this report. Should a second wave be conducted, we recommend an estimation on both waves be undertaken to try to determine whether substantial changes have occurred between the first and second wave of data collection.

In this section we report CDC participants' feelings about drugs and use some of the survey questions which ask CDC participants whether they think the CDC had an impact on drug consumption. We also determine whether there are differences with respect to the type of drugs that cause the most problem in each trial site.

3.5.2 Perceptions about illicit drugs within the trial sites

3.5.2.1 Illicit drugs that cause the most problems

The quantitative survey presented the following list of drugs to CDC participants and asked them to choose the one category that causes the most problems in the area where they live: Alcohol; Tobacco;

Marijuana/Cannabis; Meth/amphetamine; Cocaine; Ecstasy; Heroin; Pain-relievers and Opioids; Methadone/Buprenorphine; Steroids, or None of these.[58] Table 3-19 below shows the drugs that are reported to cause the most problems, first for the whole of CDC participants, then by Indigenous status and gender.

Table 3-19: Most problematic drug in the area you live, by Indigenous status and gender

Most problematic drug in the area					
	All	Indigenous	Non-Indigenous	Male	Female
	%	%	%	%	%
Excessive drinking of alcohol	28.4	29.3	26.8	30.4	26.9
Tobacco smoking	4.1	5.3	1.9	3.7	4.4
Marijuana/Cannabis	7.8	9.5	4.7	7.1	8.2
Meth/Amphetamine	17.7	11.8	28.2	18.7	16.9
Other listed drugs	2.3	1.6	3.6	2.4	2.2
None stated	39.8	42.6	34.9	37.6	41.5
Total (N)	**6,039**	**3,898**	**2,141**	**2,589**	**3,450**

Note 1: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Only one answer was allowed per respondent.
Note 2: None Stated includes CDC participants who stated 'None of these' and, observations with missing answers (not answered at all and spoilt answers (i.e. multiple options were ticked when only one was required) [59]

Throughout the trial sites, alcohol was considered by most people as the drug that causes the most problems with 28.4 per cent of all CDC participants naming it as their top choice. Meth/amphetamines are second (17.7 per cent), followed by Cannabis (7.8 per cent), Tobacco (4.1 per cent) and all other drugs together last (2.3 per cent)[60]. We note that the views on alcohol were relatively evenly spread across Indigenous and non-Indigenous, as well as across male and female CDC participants. We note the substantially higher concentration of negative meth/amphetamine views among the non-Indigenous CDC participants.

A more informative way to look at these statistics is by including (temporarily) in the sample only those who expressed a view and reported what they thought was the most problematic drug. Table 3-20 below presents these numbers and percentages (however, the bottom row shows the total number of observations in brackets, for complete transparency of the calculations). The two main drugs of concern remained alcohol and meth/amphetamines, with cannabis being ranked by a small minority as the top problematic drug. There were large differences between the trial sites and by Indigenous

[58] The inclusion of alcohol and tobacco was considered appropriate after broad consultation with stakeholders and in recognition of their interdependence. It was also the appropriate choice for retaining comparability with the NDSHS.
[59] Over 90 per cent of those with missing answers were spoilt answers. Their answer was recoded as 'None stated' following the usual rule that applies when survey respondents do not follow the instructions.
[60] Having used the NDSHS listing, we think that some specific practices, such as petrol sniffing and similar, are not covered by this question. We cannot know if these were included in "None stated/Not answered" responses. A definitive answer will need to wait until a second wave of the survey makes the explicit distinction, should such data collection be undertaken.

status. The ubiquitous supply of alcohol is well known, but the obvious widespread concern about the use of meth/amphetamines in some trial areas is noteworthy.[61]

Of those who expressed a view, just under half (47.2 per cent) considered alcohol as the worst problem and just under one third (29.3 per cent) meth/amphetamines. Clearly, cannabis can be a major problem according to a sizable minority of 12.9 per cent of CDC participants. It is not clear why and how tobacco is the top choice of problematic drug for almost 7 per cent of the respondents.[62]

Differences by trial site are pronounced in Table 3-20, reflecting and in line with differences observed in other aspects of the CDC. East Kimberley has by far the highest problem with alcohol and the Goldfields, especially the non-Indigenous CDC population, has the lowest problem with alcohol. The exact opposite holds with meth/amphetamines, which were considered highly problematic by the non-Indigenous Goldfields CDC population and far less so in East Kimberley. The fact that the Indigenous CDC participants reported meth/amphetamines to be seriously problematic (33 per cent respondents rank them the highest) suggests that meth/amphetamine use was considered to be a bigger problem in the Goldfields than elsewhere. It is of concern to see that Ceduna CDC participants reported such a high problem of meth/amphetamines (19 per cent respondents rank it the highest) whilst still having a strong problem with alcohol.

Table 3-20: Most problematic drug in the area you live, those with an opinion, by trial site

Most problematic drug in the area you live, those with an opinion					
Most problematic:	All sites %	East Kimberley %	Goldfields Indigenous %	Goldfields Non-Indigenous %	Ceduna & surrounds %
Excessive drinking of alcohol	47	67	43	37	48
Tobacco smoking	7	7	7	3	14
Marijuana/Cannabis	13	19	14	7	14
Meth/Amphetamine	29	7	33	47	19
Other listed drugs	4	1	3	6	6
With an opinion (N)	**3,634**	**854**	**978**	**1,212**	**589**
Total sample (N)	6,039	1,597	1,655	1,848	939

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Goldfields is presented by Indigenous status. Percentages refer to only those who stated an opinion for the drug that causes the most problems (the difference between 6,039 and 3,634, which can be seen in Table 3-20 are the 39.8 per cent who did not state a drug). Similarly, we can calculate the number of those without an opinion in each area.

The following set of figures provides comparisons between the CDC participants' survey answers and the relevant benchmarks computed from the NDSHS survey on broader populations. Note that while the NDSHS survey has a relatively large proportion of survey non-response, the proportion of item non-response on the question of interest is between 1 per cent and 2 per cent. By comparison, the item non-response rate (including spoilt answers where CDC participants ticked several answers while only one was required) was, respectively, 41 per cent in East Kimberley and 24 per cent in the other

[61] As the question refers specifically to the area where people live, the reported problematic drugs will depend on all people and not only on CDC participants, including in some of the Goldfields areas fly-in, fly-out workers.

[62] It is possible that the health implications of tobacco are better understood and more personally relevant to these respondents or someone close to them.

two sites. For these comparisons we use the information contained in Table 3-20 for each site (including Goldfields as a whole) as camembert style figures and provide the equivalent information for two benchmarks. Note that the percentages differ slightly because the reference population used for the computation of the proportions (the denominator) accounts for the CDC participants who answered the question and the spoilt answers. The first benchmark is WA (excluding Perth) for the two sites situated in WA and SA (excluding Adelaide) for Ceduna and surrounds. The second benchmark is Australia as a whole. Like the statistics comparing the CDC participants with the benchmarks for alcohol consumption, one needs to keep in mind that the populations are very different when making comparisons.

Figure 3-57 compares East Kimberley CDC participants' survey answers to the two benchmarks. We observe that the distribution of answers vary significantly when one compares East Kimberley with the rest of WA (excluding Perth), where Meth is, by far, the drug that is recorded to cause the most problems (60 per cent). The proportions of people who considered Cannabis as the most problematic drug also differ markedly. It is cited only by 4 per cent of the NDSHS survey respondents in WA (excluding Perth) compared with 17 per cent among the East Kimberley CDC participants. The comparison with Australia as a whole (Figure 3-58) gives qualitatively similar comparisons. The proportions for other drugs like Heroin and Cocaine were larger than East Kimberley and the first benchmark and reflects the wider population and associated circumstances that apply to the whole of Australia. The proportion stating that Meth is the main issue is down to 42 per cent in Australia, still much larger than the 6 per cent stated in East Kimberley.

Figure 3-57: Type of drugs causing the most problems, comparison between East Kimberley CDC participants and Western Australia (excluding Perth) from the NDSHS

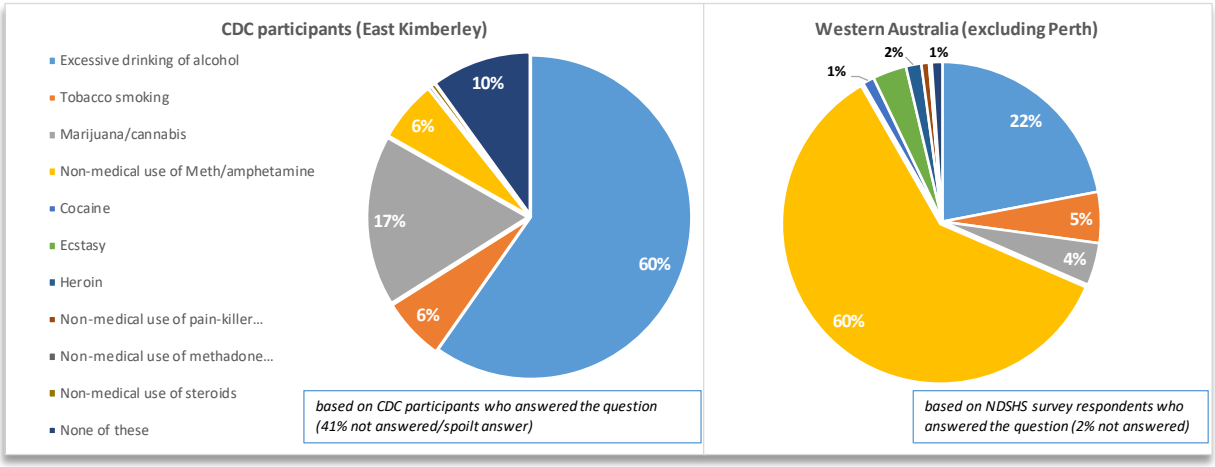
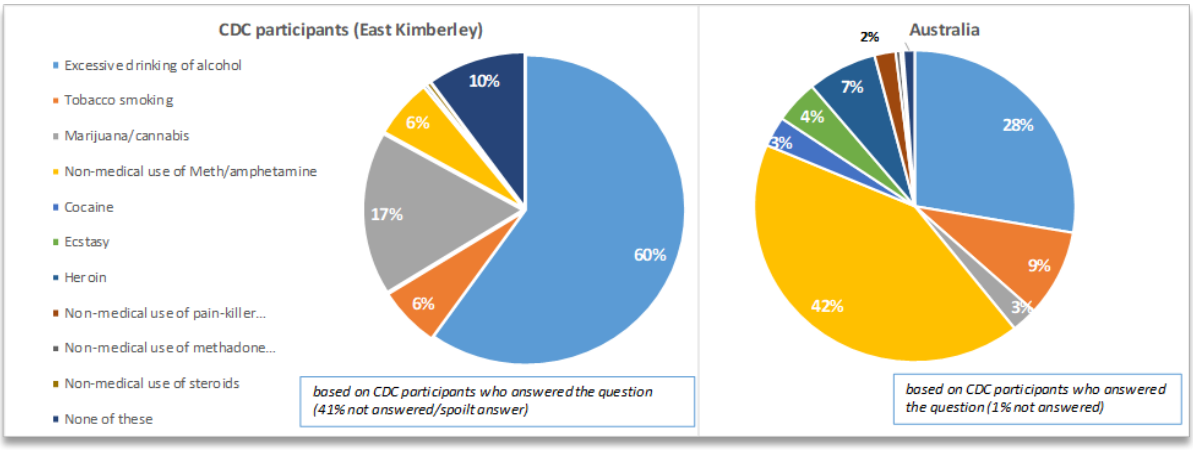


Figure 3-58: Type of drugs causing the most problems, comparison between East Kimberley CDC participants and Australia from the NDSHS



The next two figures (Figure 3-59 and Figure 3-60) show that the distribution in the Goldfields is a lot closer to that of WA, especially if one focuses on the non-Indigenous population (see Table 3-22). In both areas Meth was considered the most problematic with 34 per cent in the Goldfields (40 per cent among non-Indigenous) and in WA (excluding Perth) with 60 per cent. The proportion of those who reported excessive consumption of alcohol as the main issue in the Goldfields was larger than in the first benchmark. For the Goldfields, we also note that the proportion of those who stated 'none of the drugs listed' is relatively large (18 per cent) compared with both benchmarks.

Figure 3-59: Type of drugs causing the most problems, comparison between Goldfields CDC participants and Western Australia (excluding Perth) from the NDSHS

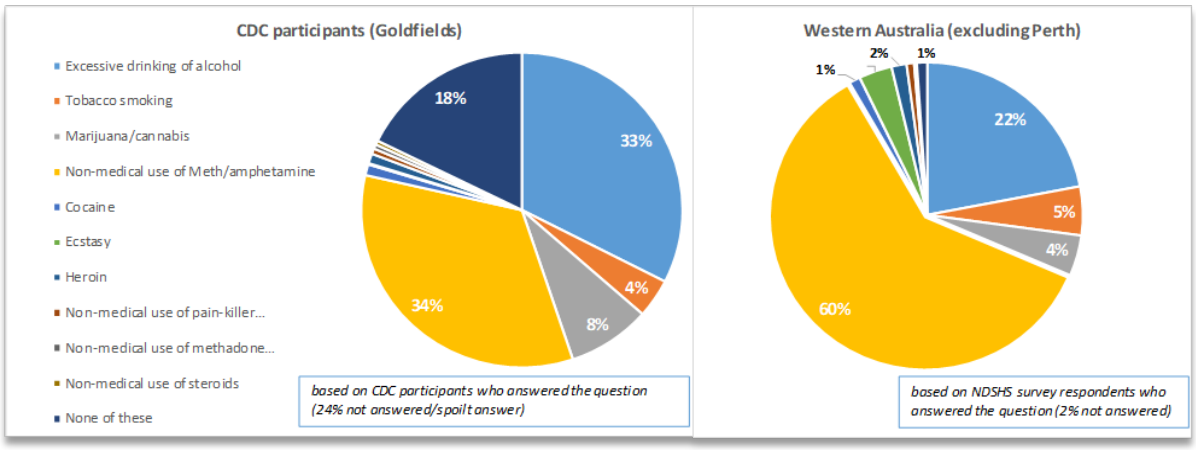
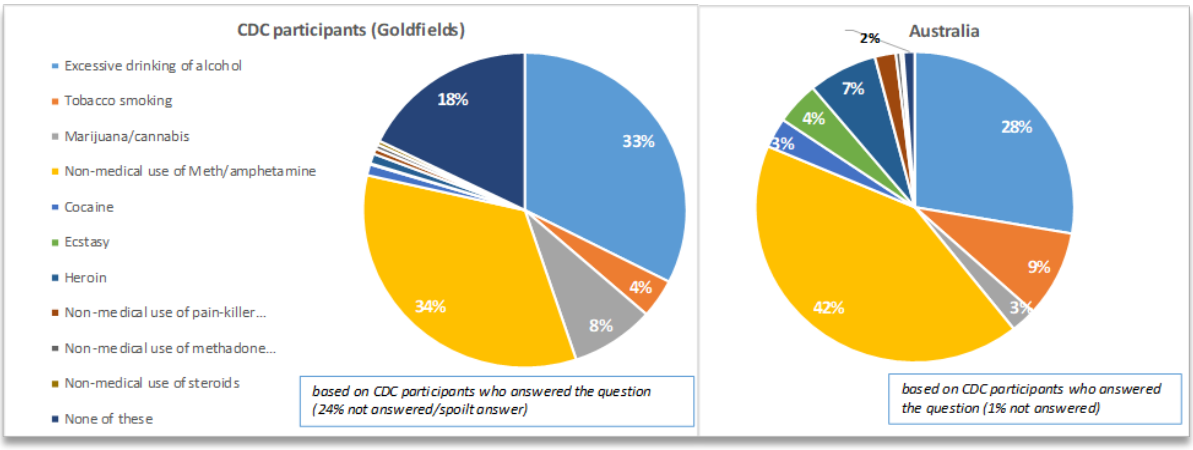


Figure 3-60: Type of drugs causing the most problems, comparison between Goldfields CDC participants and Australia from the NDSHS



The next two figures (Figure 3-61 and Figure 3-62) provide the same type of information for Ceduna and surrounds. The first benchmark is now SA (excluding Adelaide). The largest proportion in the SA benchmark considered Meth to be the most problematic drug (59 per cent) while it was excessive consumption of alcohol in Ceduna and surrounds (with 39 per cent). Meth was only reported as the most problematic drug by 15 per cent of the CDC participants in Ceduna and surrounds. By contrast, the proportions for Cannabis was higher in the trial site (12 per cent) compared to both benchmarks.

Figure 3-61: Type of drugs causing the most problems, comparison between Ceduna and surrounds CDC participants and SA (excluding Adelaide) from the NDSHS

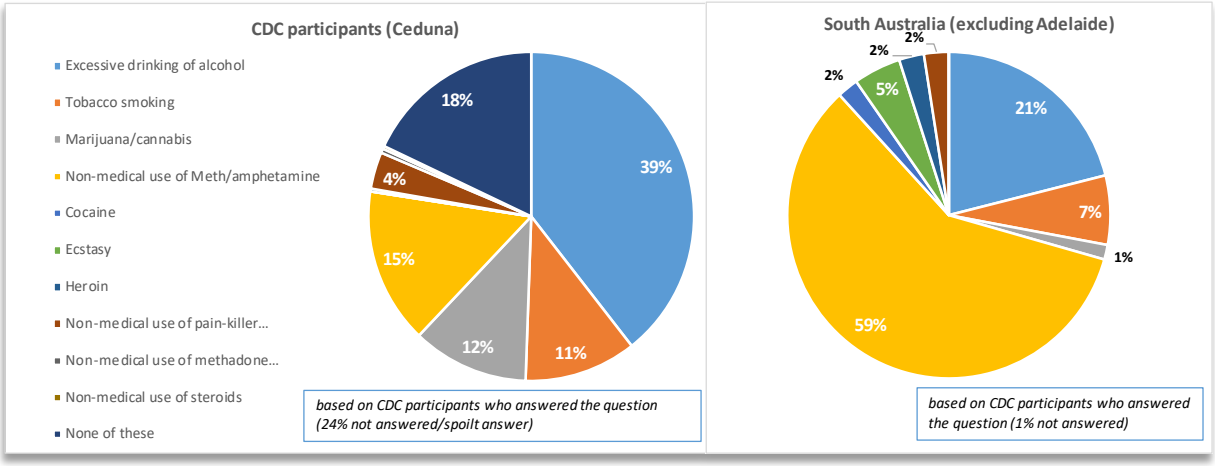
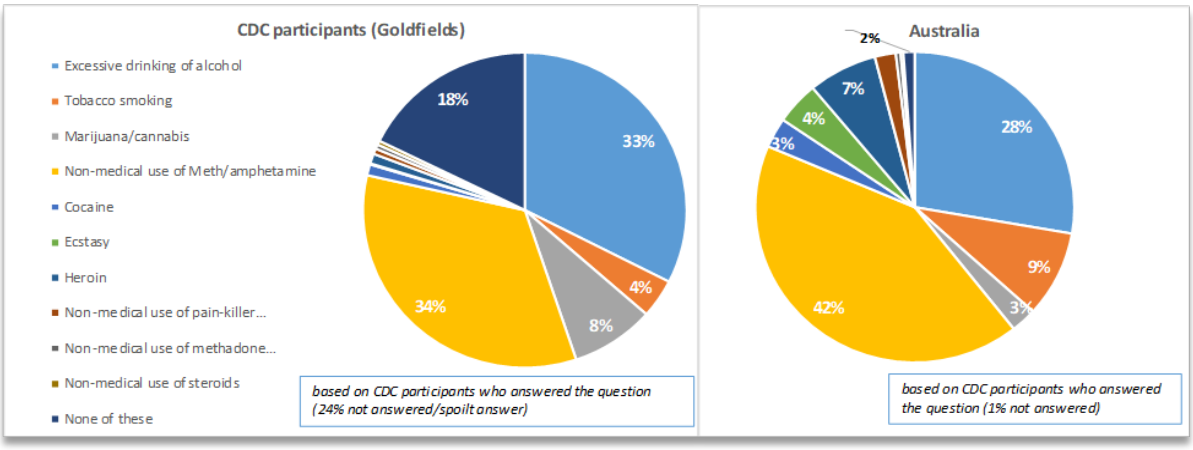


Figure 3-62: Type of drugs causing the most problems, comparison between Ceduna and surrounds CDC participants and Australia from the NDSHS



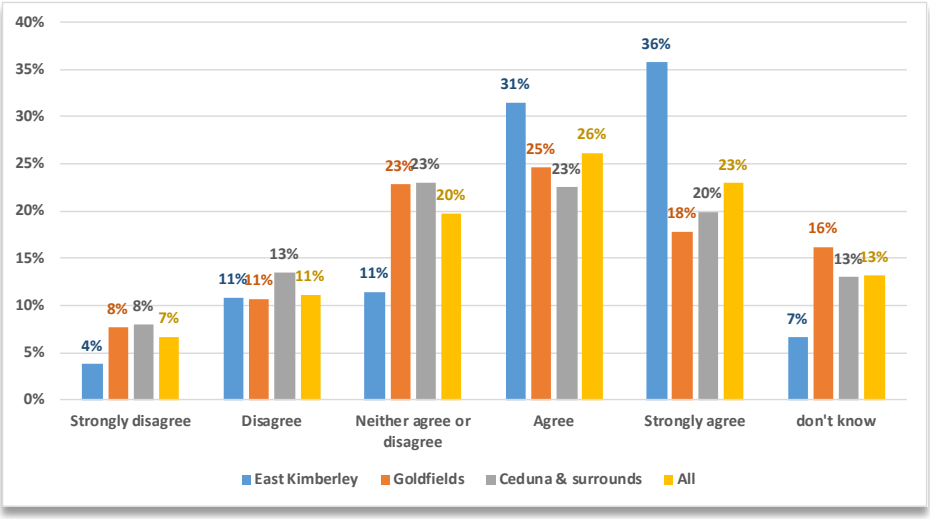
The comparison between each trial site and the corresponding benchmarks extracted from the NDSHS survey highlights the specificity of the context prevailing with regards to drug issues in the areas chosen to trial the CDC. The large demographic and socioeconomic differences that exist between the trial sites and the broader areas covered by the benchmarks imply that the issues with drugs are also specific to these areas. More populated regional areas like the Goldfields show more similarities with the local benchmark. Yet important differences remain. Altogether, the drug issue we are principally talking about in the trial site of the CDC is excessive alcohol consumption and, to some extent (especially in the Goldfields) Meth. The obvious widespread concern about the use of meth/amphetamines in some trial sites despite the CDC financial constraints is noteworthy.

3.5.2.2 How do CDC participants feel about drugs?

a) Attitudes towards regular use of drugs by an adult

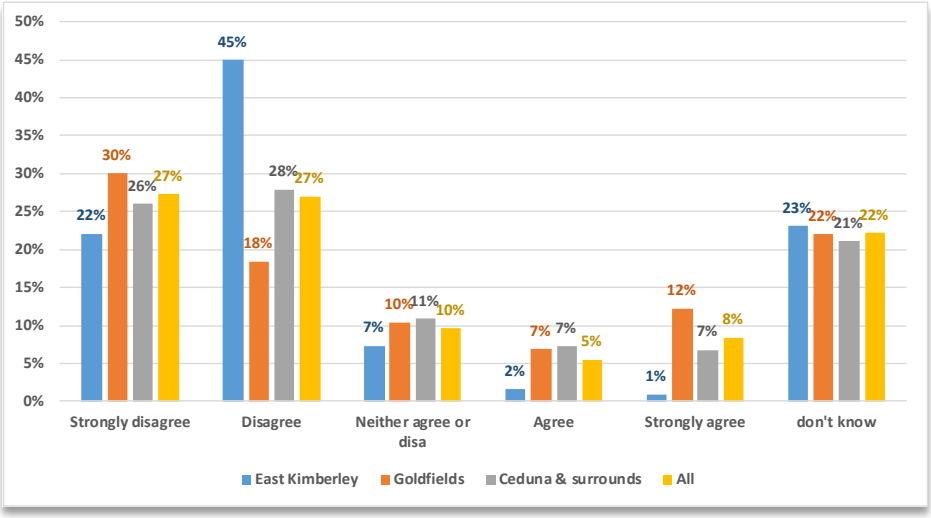
The following set of figures (Figure 3-63 to Figure 3-66) shows CDC participants' attitudes towards the regular use of some drugs by adults. We restrict the figures to the drugs that are of particular interest for the trial sites as highlighted in the previous subsection. While excessive consumption of alcohol is highlighted as the drug causing the most problems in East Kimberley, Figure 3-63 shows the majority of CDC participants in that area agreed (or strongly agreed) with the statement that alcohol be regularly used by adults (67 per cent). This figure contrasts with the other sites where under 50 per cent of the CDC participants approved of alcohol being regularly used by adults (see Figure 3-63).

Figure 3-63: How many CDC participants agree with alcohol being regularly used by adults, by trial site



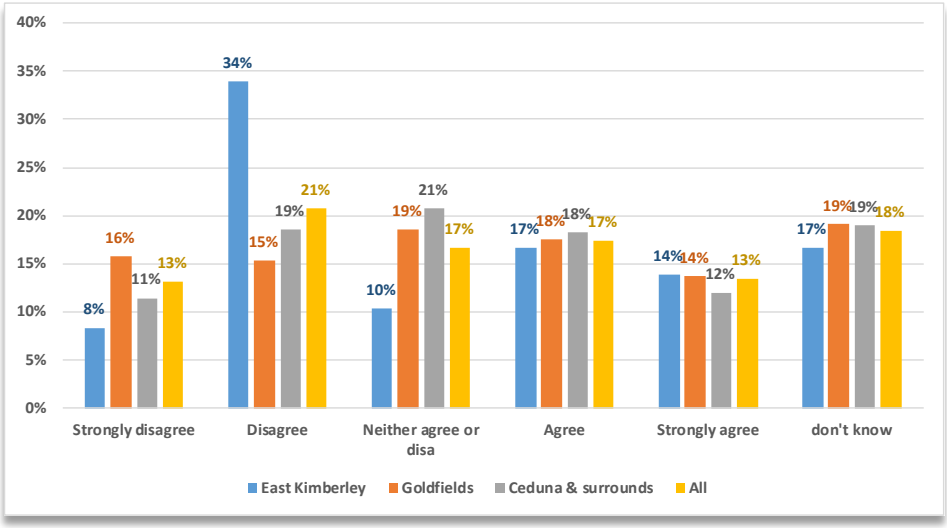
For all other drugs (except Marijuana/Cannabis discussed below) the 'approval rating' was very low. For instance, only 3 per cent of the CDC participants considered that is ok for an adult to regularly use Meth in East Kimberley (Figure 3-64) but approval was larger in the Goldfields where we have already established that a larger proportion identified this drug as being the main source of problems in that area. Nineteen per cent of the CDC participants in the Goldfields agreed (or strongly agreed) with Meth being regularly used by an adult (these proportions varied little by Indigenous status in that area). The proportion who agreed (or strongly agreed) was slightly lower in Ceduna and surrounds at 14 per cent.

Figure 3-64: How many CDC participants agree with Meth/amphetamines being regularly used by adults, by trial site



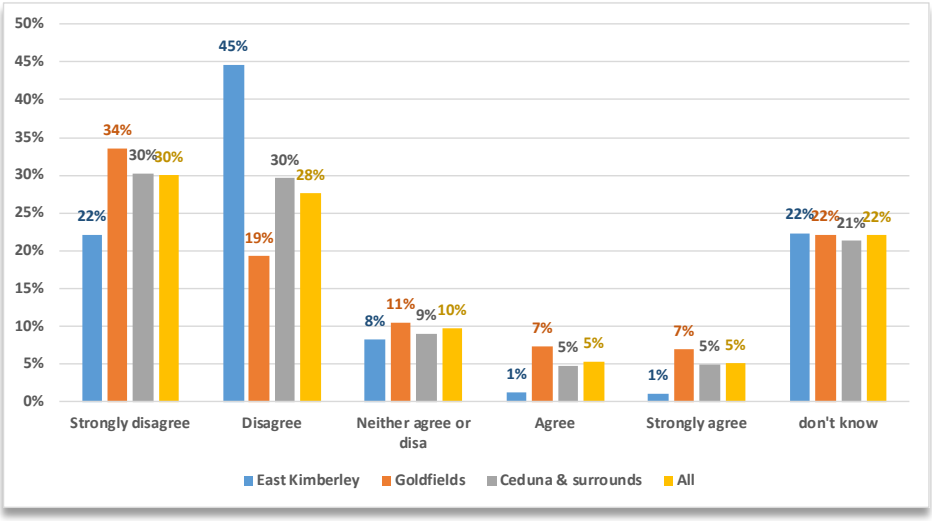
The proportion of CDC participants who agreed (or strongly agreed) that Marijuana/Cannabis be regularly used by an adult was similar across all trial sites with a proportion of around 30-32 per cent (Figure 3-65). This and alcohol are the only two types of drugs where one observed a relatively large proportion of people approving regular use by an adult.

Figure 3-65: How many CDC participants agree with marijuana/cannabis being regularly used by adults, by trial site



With regards to sniffing (petrol, glue or aerosols), the overwhelming majority of CDC participants disapproved of adults engaging in this activity. Only 2 per cent of the CDC participants in the East Kimberley agreed or strongly agreed it is acceptable to regularly sniff substances. In the Goldfields, the proportion was larger with 14 per cent and slightly less in Ceduna and surrounds at 10 per cent (Figure 3-66).

Figure 3-66: How many CDC participants agree with petrol/glue/aerosol sniffing being regularly used by adults, by trial site



The variations observed across site with regards to the social acceptance of the use of various drugs, along with the information about what drug causes the most issue in the community gives us an indication of which drugs are more prevalent in each trial site.

b) Attitudes towards Cannabis being legalised

The survey includes two instruments which elicit CDC participants' views as to whether Cannabis should be legalised. The first of these two survey instruments focuses on Cannabis itself and the second instrument follows up by asking how legalisation would alter CDC participants' own consumption. A third instrument asks CDC participants how much they agree about legalising a number of drugs, including Cannabis, Heroin, Meth, Cocaine, and Ecstasy. Purposely, the first question asks whether using cannabis should be illegal while the third instrument asks about how much people approve of each drug being legal. Comparing the responses of the first and third instruments for Cannabis, we observe that CDC participants are consistent with their responses in spite of the inversion of the question label. This highlights the quality of the information elicited in this survey and the level of commitment of the respondents to provide us with truthful answers to our questions.

The survey answers regarding the legalisation of Cannabis are consistent with the observations made in the previous subsection that a large proportion (about a third) of CDC participants in all trial areas agree or strongly agree with adults regularly using Cannabis. Indeed, we observe that 30 per cent of the CDC participants who answered this question in the East Kimberley considered that Cannabis should be legal. In the Goldfields, the proportion is higher at 41 per cent and in Ceduna and surrounds it is 36 per cent.

Table 3-21: Attitude towards marijuana/cannabis by trial site

Should using marijuana/cannabis be illegal				
	East Kimberley	Goldfields	Ceduna and surrounds	All sites
	%	%	%	%
No	30	41	36	37
Yes	44	30	33	34
Don't know	27	29	31	29
Total	**100**	**100**	**100**	**100**

Table 3-22: Attitude towards marijuana/cannabis being legalised, by Indigenous status

Should using marijuana/cannabis be illegal				
	Non-Indigenous	Indigenous	Status Unknown	All
	%	%	%	%
No	47	33	34	37
Yes	32	36	28	34
Don't know	21	31	37	29
Total	**100**	**100**	**100**	**100**

The survey asks CDC participants what they would do if Cannabis were legalised. The responses are reported in Table 3-23. If one is to believe CDC participants' responses to this question, they give us an insight as to the extent of cannabis use in the trial sites. Indeed, the question is labelled so that CDC participants are asked whether they would consume as much, less or more than they currently do. All those alternatives suggest that CDC participants are currently using cannabis. Therefore,

summing up the proportions of these three alternatives gives us a ballpark idea of the current use in each site. It would be 17 per cent in East Kimberley, 11 per cent in the Goldfields, and 13 per cent in Ceduna and surrounds.

We note that there is a relatively large proportion of the CDC participants who indicated they would not know what they would do if Cannabis were legalised. There are some notable differences across sites with 52 per cent of the CDC participants in the Goldfields indicating that they would not use Cannabis if it were legal. The proportion was much lower in East Kimberley with 35 per cent. As often the case, Ceduna sits in between the two sites with 49 per cent of the CDC participants indicating they would not use it. The proportion of CDC participants who indicated they would try Cannabis if it were legal is similar across all sites, between 8 and 9 per cent.

Table 3-23: How would one respond to marijuana/cannabis being legalised, by trial site

Change in marijuana/cannabis use if legalised				
	East Kimberley	Goldfields	Ceduna and surrounds	All sites
Use	%	%	%	%
Not use it, even if legal	35	52	49	47
Try it	8	8	9	8
As often as now	12	8	11	9
More often than now	1	2	1	2
Less often than now	4	1	1	2
Don't know	39	28	29	31
Total	**100**	**100**	**100**	**100**

Table 3-24 looks at the same question, distinguishing CDC participants by Indigenous status. We observe that a larger proportion of Indigenous CDC participants are reluctant to give a definitive answer to the question and prefer to say they don't know. The proportion of those who said they would not use cannabis is significantly larger among the non-Indigenous CDC participants (55 per cent of the respondents against 43 per cent for Indigenous CDC participants). As for the total proportion of those who would alter their current consumption, the proportion is slightly larger among non-Indigenous CDC participants (15 per cent against 13 per cent for Indigenous).

Table 3-24: How would one respond to marijuana/cannabis being legalised, by Indigenous status

Change in marijuana/cannabis use if legalised				
Use	East Kimberley %	Goldfields %	Ceduna and surrounds %	All sites %
Not use it, even if legal	35	52	49	47
Try it	8	8	9	8
As often as now	12	8	11	9
More often than now	1	2	1	2
Less often than now	4	1	1	2
Don't know	39	28	29	31
Total	**100**	**100**	**100**	**100**

3.5.2.3 Personal use of illicit drugs

The reported incidence of personal drug use (as measured by CDC participants who reported that they used an illegal drug or prescription medicine for non-medical reasons in the 12 months before being on the CDC and since being on the CDC) was very low, both overall and across trial sites.[63] Overall, about 6 per cent of CDC participants reported using illicit drugs in the 12 months before being on the CDC and about 11 per cent reported using illicit drugs since being on the CDC. Of the 6 per cent who reported using illicit drugs in the 12 months before being on the CDC, about 60 per cent *were not* and 40 per cent *were* using since being on the CDC. Of the 11 per cent who were using since being on the CDC, about 80 per cent *were not* using and about 20 per cent *were* using before the CDC. Although the absolute numbers may be small, these percentages indicate a strong fluidity in behaviours when we contrast the 12 months prior to the CDC and the months after being on the CDC.[64]

The survey also asked all CDC participants to report their use of illicit drug, including the frequency of their use. A majority of those CDC respondents using illicit drugs reported using monthly or less than once a month (56 per cent in the 12 months before being on the CDC and 59 per cent since). Of those reporting using drugs, weekly, users accounted for 22 per cent of drug users in the 12 months before

[63] The reader must keep in mind the small numbers in the case of drug use, which limit the precision of descriptive analysis and any figures reported should be interpreted with appropriate caution. We note that the percentages presented are an approximation of the broader picture. The reason is that some respondents who did (did not) answer the pre-CDC question did not (did) answer the post-CDC question, which allows for different statistics depending on how these cases of non-response to the specific question are treated. We can present numbers with, or without, these cases included. Here we have chosen to include them. Given the very small number of these cases the difference between the two ways to present the data are of no practical importance.

[64] A relatively consistent picture emerged from what was reported by those who answered the questions, however we note the possibility of under-reporting, as the reported drug use prevalence is well below any potentially comparable estimates for a 12-month period (e.g. both NDSHS and the HILDA survey data sets which report that 12.6 and 12 per cent of respondents respectively reported having used drugs at least once in the last 12 months). If one assumes that if CDC respondents reported that the CDC helps with decreasing their own illicit drug use, they had used illicit drugs at some time, this information, combined with the information reported by CDC participants as to personal drug use in the 12 months before the CDC and since the CDC, allowed us to approximate that around 13 per cent of the total population had used illicit drugs at some time. This approximation is more consistent with findings from both NDSHS and the HILDA survey data (see https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0009/2944080/hdps118.pdf). However, the reader should note that all figures presented in this report refer to only the evidence as reported by CDC participants in the survey.

being on the CDC and 20 per cent since being on the CDC. Twenty-two per cent reported being daily or almost daily users in the 12 months before being on the CDC and since being on the CDC.

In the 12 months before being on the CDC, incidence of illicit drug use was reported to be just under 5 per cent in East Kimberley, just under 6 per cent in Goldfields and just under 7 per cent in Ceduna. Similarly, since being on the CDC, Goldfields and Ceduna appear to have the highest incidence of illicit drug use (at just under 6 per cent) and East Kimberley the lowest at just under 4 per cent.

Of the small percentage of CDC participants who reported using illicit drugs throughout (that is, in the 12 months before being on the CDC *and* subsequently during their time on the CDC), the proportion of those who reported daily/almost daily use is indicative of the differences between the trial sites. In East Kimberley nobody reported daily/almost daily use.[65] In Ceduna and surrounds 19 per cent reported daily/almost daily use and in the Goldfields 30 per cent reported daily/almost daily use (the split being 19 per cent among Indigenous and 39 per cent among non-Indigenous CDC participants).[66]

3.5.3 Change in the use of illicit drugs since the CDC

The quantitative survey put forward a direct question about whether the CDC is helping reduce drug use. This was asked of all participants irrespective of their own drug taking status or opinions about how problematic drugs are. It started with the question "Is the Cashless Debit Card making a difference for you, your family, your friends, and the area where you live?" and asking whether "The Cashless Debit Card helps decrease the use of illicit drugs".

Responses are shown in Table 3-25 below. Panel A presents those who reported that they saw a positive difference (20.8 per cent for all trial sites), those who reported that they saw no difference (47.6 per cent for all trial sites) and those who either reported they did not know or did not answer at all (31.6 per cent for all trial sites).

The second part of the table (Panel B) focuses only on those participants who saw a positive difference and shows the type of difference (You, Your family, Your friends, and Where you live), noting that the question allowed multiple responses. Using the whole of the trial sites in the leftmost column of Table 3-25, Panel B, we see that 35.8 per cent saw a positive difference for themselves, 39.1 per cent for their families, 35.8 per cent for their friends and 56.1 per cent for where they live.

[65] This finding cannot be interpreted to imply that there is no such use in East Kimberley. It means that the use is uncommon enough to not have been captured by the data.

[66] The pattern of incidence and intensity of illicit drug use in the different trial sites is presented further in the Quantitative Supplementary Report. This evidence suggests that where meth/amphetamines are reported to be the worst problem we also find the highest percentage of people CDC participants who are using 'daily/almost daily' and are more likely to be subject to addiction.

Table 3-25: Has the CDC helped decrease use of illicit drugs, by trial site

The CDC helps decrease use of illicit drugs										
Panel A (full sample who were asked the question)										
The CDC has made a:	**All sites**		**East Kimberley**		**Goldfields Indigenous**		**Goldfields Non-Indigenous**		**Ceduna & surrounds**	
	%		**%**		**%**		**%**		**%**	
Positive difference	20.8		21.4		27.5		13.1		23.2	
No difference	47.6		56.1		34.4		52.7		46.0	
Don't know/missing	31.6		22.5		38.1		34.2		30.8	
Total sample (N)	**6,039**		**1,597**		**1,655**		**1,848**		**939**	
Panel B (sub-sample of 20.8% who saw at least one positive difference)										
For:	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
You	450	**35.8**	184	**53.8**	131	**28.9**	65	**26.9**	70	**31.9**
Your family	492	**39.1**	194	**56.7**	179	**42.7**	194	**80.0**	99	**42.2**
Your friends	450	**35.8**	184	**53.9**	161	**40.5**	184	**76.0**	75	**34.2**
Where you live	705	**56.1**	198	**58.0**	246	**43.6**	198	**81.8**	109	**49.8**
Total respondents	**1,257**	**100**	**342**	**100**	**455**	**100**	**242**	**100**	**218**	**100**
Total responses	2,097		760		708		641		351	
Responses per person	1.67		2.22		1.56		2.65		1.61	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

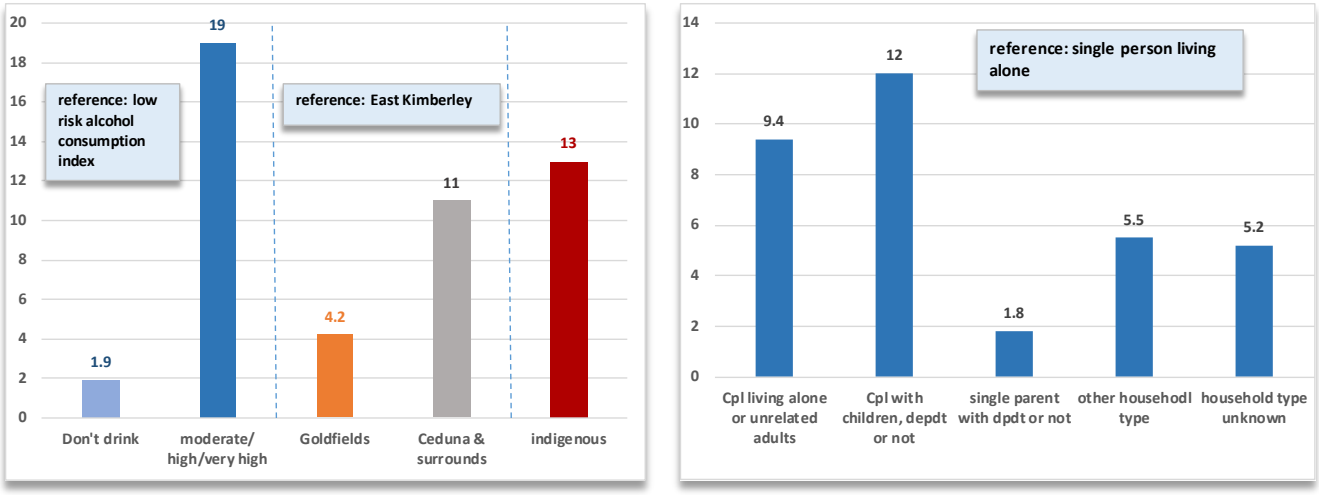
Table 3-25 also shows that the reported difference the CDC made regarding illicit drug use varied by trial site. In the Goldfields, a larger positive difference was reported by Indigenous (27.5 per cent) than by non-Indigenous CDC participants who reported the lowest incidence of 13.1 per cent. Similar proportions of CDC participants in East Kimberley (21.4 per cent) and Ceduna (23.2 per cent) reported a positive difference. Further examination of the data (presented in Panel B) shows interesting patterns in reporting. The proportions reported for each of the four options are relatively evenly distributed in East Kimberley, suggesting that the decrease in illicit drug use was perceived to be a general finding. In contrast, there was more variation in the reporting by Indigenous CDC participants living in the Goldfields and Ceduna. However, non-Indigenous CDC participants in the Goldfields reported a considerably higher positive difference for their family, friends and where they live relative to a positive but lower difference for themselves than do CDC participants in East Kimberley, Ceduna and their Indigenous Goldfields counterparts. Further analysis of this question was therefore conducted using multivariate regression and is reported in the next subsection.

3.5.4 Characteristics of CDC participants who report a positive impact of the CDC on illicit drug use

We conducted a multivariate analysis in order to investigate the characteristics of those CDC participants who are most likely to report a positive impact of the CDC on illicit drugs. We use the survey question which asks whether the CDC has helped decrease drug use at individual level, family, friends or community. For each CDC participant, we record that the CDC has positively impacted drug

use if the CDC participant answered yes to at least one level elicited in the question. The table of results including both estimated coefficients and marginal effects (estimated at the sample mean) is available in the appendices (Table A 4-23). The following set of figures extracts the estimated marginal effects from the model for a set of relevant individual characteristics in a more user-friendly format.

Figure 3-67: Probability to report a positive impact of the CDC on alcohol consumption, marginal effects of CDC participants' individual characteristics



After controlling for individual characteristics, we find that CDC participants living in Ceduna and surrounds are more likely to report a positive impact of the CDC with regards to drug consumption by 11 percentage points compared to CDC participants living in East Kimberley. Those living in the Goldfields are 4 percentage points more likely to report improvements on drug consumption.

Indigenous CDC participants are more likely to state that the CDC has helped decrease the use of illicit drugs compared to non-Indigenous CDC participants (by 13 percentage points on average).

We find that any household type is more likely to report improvement due to the CDC compared with single people living alone. Couples with children (dependent or not) are 12 percentage points more likely to report a positive impact compared to a single person; couples living alone (or unrelated adults) are 9.4 percentage points more likely to report improvement. The difference is somewhat smaller for single parents (with dependents or not). They are only 1.8 percentage points more likely to report a positive impact of the CDC on drug consumption compared with single people.

Aside from the marginal effects displayed in the set of figures above, we find that CDC participants who are on the Newstart Allowance are more likely to report a positive impact compared to people on other types of payments (notably parenting payments). The magnitude of the difference is 4.4 percentage points.

In the following two figures (Figure 3-68 and Figure 3-69) we display the estimated relationship between the probability to report a positive impact of the CDC on drug use and the two individual characteristics that are continuous by nature, namely CDC participants' age and experience on the Card (in months). Everything else held constant, we observe an inverse relationship between CDC participants' time spent on the CDC and how likely they are to report a positive impact of the CDC on illicit drug use (Figure 3-68). We observe the same inverse relationship on the probability to report improvements on alcohol consumption and a similar magnitude (Figure 3-69).

At odds with the estimations on alcohol consumption, we find that the probability to report a positive impact of the CDC on drug consumption is related to the CDC participants' age (everything else held constant). This relationship is inverted, which means that the older the CDC participants the less likely to report a positive impact of the CDC.

Figure 3-68: Probability to report a positive impact of the CDC on illicit drug use and time spent on the CDC, by trial site

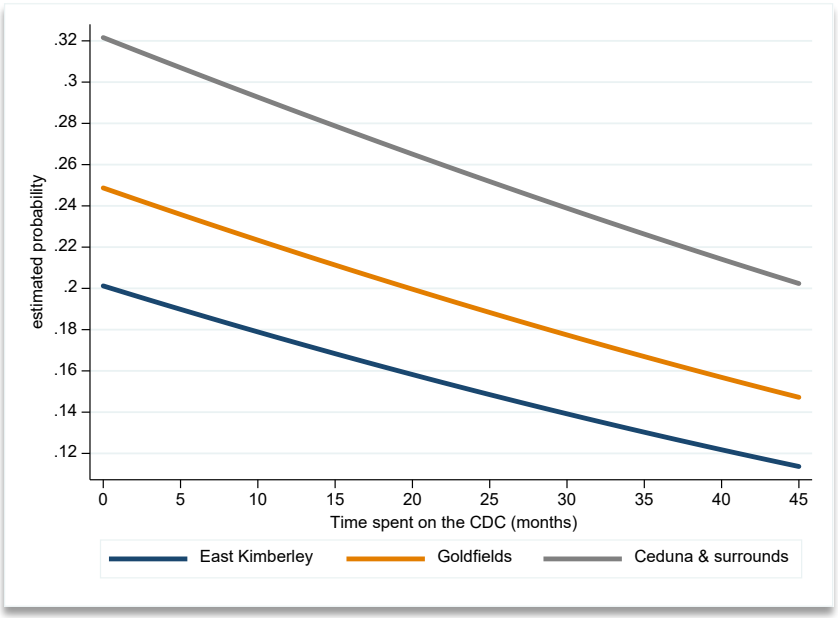
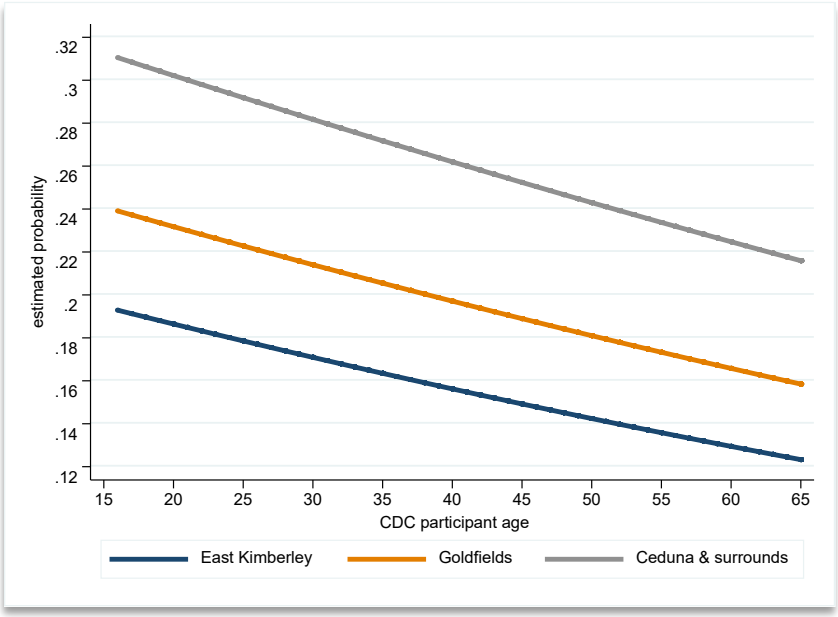


Figure 3-69: Probability to report a positive impact of the CDC on illicit drug use and CDC participant's age, by trial site



3.6 Quality of Life, Employment, Social and Community outcomes

Throughout this section, we use the quantitative survey of CDC participants in order to look at outcomes that can be considered as second or third round outcomes in the sense that they are expected to manifest themselves following positive impacts of the CDC on the first round outcomes, namely the reduction of D.A.G products' consumption and improvements in one's financial situation due to the quarantining of 80 per cent of the government benefits onto the Card. We look at CDC participants' health and well-being, their quality of life, outcomes around employment and training, safety, and children's well-being. Whenever possible we provide inferences about the impact the CDC may be having on those outcomes. Yet, we stress that the timeframe of the evaluation may not be compatible with being able to detect significant changes in these second and third round outcomes. Using the longitudinal abilities of the survey through a second wave of data collection would greatly improve our ability to detect changes for these longer term outcomes.

3.6.1 Health and well-being

The quantitative survey of CDC participants included a number of questions which aimed to assess the impact the CDC has had on health, well-being and the quality of life of CDC participants and those around them. Some survey questions are longitudinal in nature, designed to help estimating impacts of the CDC should a second wave of data collection occur. They are used in this report in order to provide a snapshot of the self-assessed health and well-being of CDC participants. Other survey questions provide further information about potential direct and indirect impacts of the CDC on health well-being and life quality.

We use the 12-item Short Form Health Survey (SF-12 v2) to look at CDC participants' health. Using a set of weights, the SF-12 allows one to compute two indicators, namely the PCS (Physical Component Summary) and the MCS (Mental Component Summary) scores. The standardised PCS and MCS scores have a mean of 50 and standard deviation of 10 in Australia. The thresholds are as follows:

- Score greater or equal to 50: No disability
- Score between 40 and 49: Mild disability
- Score between 30 and 39: Moderate disability
- Score below 30: Severe disability

In addition to the SF-12, we ask a further set of questions aimed at eliciting CDC participants well-being. We use the Australian Unity Well-being Index (PWI).

As a benchmark, the average PWI score for Australia has remained very stable for the past decade, within the range of 73.9 to 76.8 points. The literature on subjective well-being also highlights the fact that Indigenous people tend to report higher levels of well-being. The underlying theory of subjective well-being and the reasons why the scores are higher among Indigenous people are documented in Tomyn et al. (2017)[67].

[67] Tomyn A.J., Mellor D., Fuller-Tyskiewicz M., Cummins R.A., Tanton R., (2017), "Geographic differences in subjective well-being among indigenous and non-indigenous Australian adolescents and adults", *Journal of Community Psychology* vol. 45(1), pp 81-99.

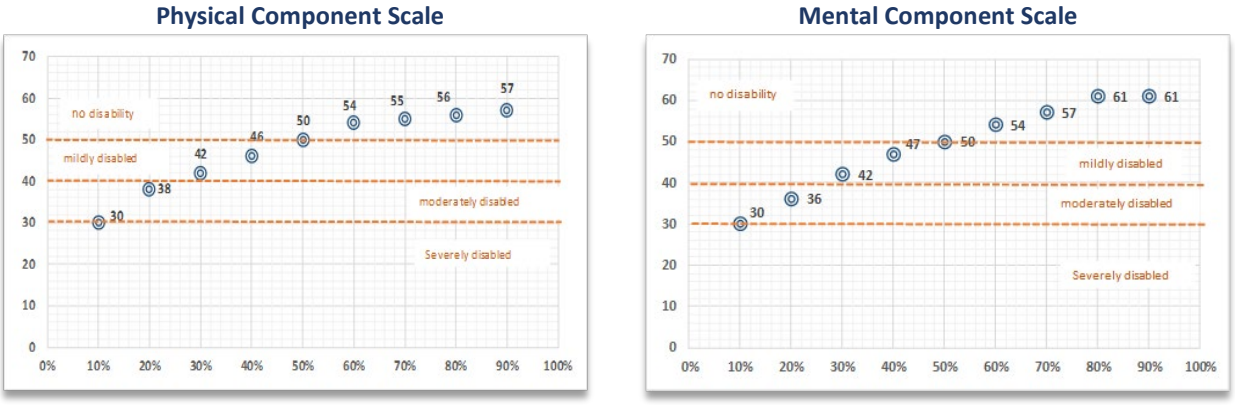
3.6.1.1 Self-assessed health: Current situation in the trial sites

a) Indicators of CDC participants' self-assessed health using the SF-12 instruments

This subsection looks at CDC participants' self-assessed health using the SF-12 short scale of health. Self-assessed health instruments are recognised by the literature as giving very accurate information of individuals' actual health as people appear to have a pretty good idea of their health status. In Australia, the literature using the HILDA survey has shown a strong causal relationship between self-assessed health at time t and reported health issues in later periods.

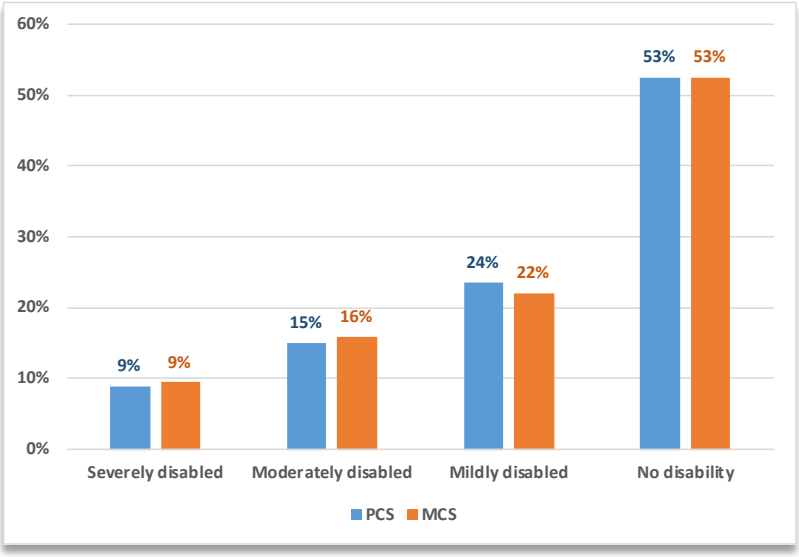
The SF-12 short version of health self-assessment allows one to compute the PCS and the MCS. The following two figures report the deciles of PCS and MCS among the whole population of CDC participants. The Mental Component (right hand side figure) shows a distribution that gives a mean of 48, a median of 50, and a standard deviation of 12.3. The mean is slightly lower than that of Australia, the variation is also larger. The figure shows that on the MCS, a bit less than 20 per cent of the CDC participants are within the category of moderate disability, another 30 per cent are in the 'mild disability' range, and the remaining 50 per cent are in the no disability category. The distribution of the Physical Component scale is very similar to the MCS. The mean of the PCS distribution is 47, and a standard deviation of 10.8. The median is the same as for the MCS at 50.

Figure 3-70: Distribution of PCS and MCS scores among CDC participants by deciles



Using the relevant threshold, we assigned CDC participants into the various levels of 'disability' determined by their score on the SF-12. The following figure shows the distribution of the CDC participants according to the PCS and MCS scales. A small majority of CDC participants (53 per cent) are identified as having no disability whatsoever. Another 22 per cent to 24 per cent are identified as having a mild disability according to their answers to the questions of the SF-12. That leaves about a quarter of the CDC participants whose current health status suggests they have a significant disability.

Figure 3-71: Distribution of the PCS and MCS thresholds among CDC participants



b) Indicators of CDC participants' self-assessed health by individual characteristics

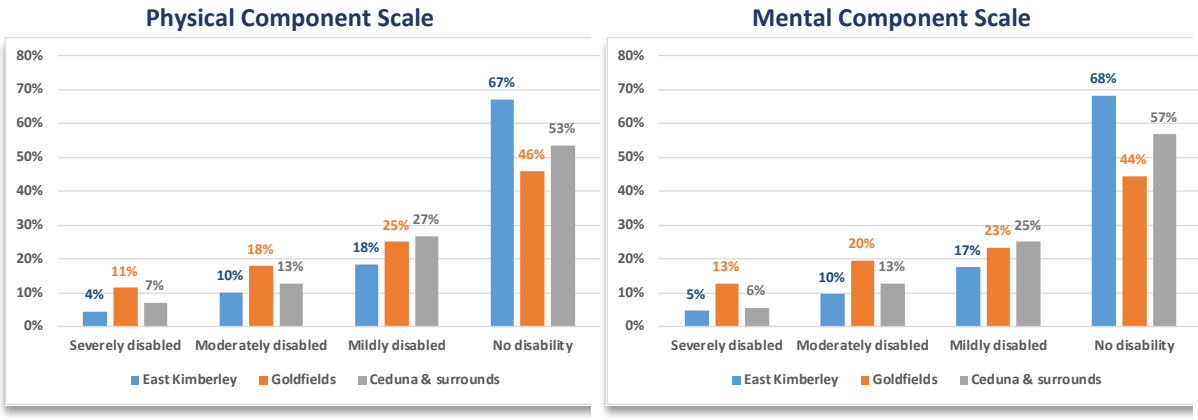
Table 3-26 shows the mean PCS and MCS by Indigenous status and displays the result of a test of the mean differences across each group of CDC participants. The test shows that both the mean MCS and PCS scores for Indigenous CDC participants are larger than that of the non-Indigenous CDC participants. This suggests that the mean PCS and MCS scores are significantly lower for non-Indigenous CDC participants.

Table 3-26: SF-12 MCS and PCS mean differences between Indigenous and non-Indigenous CDC participants

SF-12 MCS and PCS by Indigenous status				
	MCS		PCS	
	Mean	Difference	Mean	Difference
Non-Indigenous	43.3	-4.7***	43.7	-5.9***
Indigenous	48.1		49.6	

The following two figures show the distribution of CDC participants according to the categories defined by the PCS and MCS by trial site. On both measures, the proportion of CDC participants who are above the 50 threshold is larger in East Kimberley (67 per cent for PCS and 68 per cent for MCS) than in the other two sites. 18 per cent of the CDC participants in East Kimberley can be identified as being mildly disabled on the physical scale (17 per cent on the mental scale). 10 per cent are moderately disabled (on both scales), and 4 per cent to 5 per cent are assessed to be severely disabled. The smallest proportion of CDC participants who assess their health to be in the no-disability category is observed in the Goldfields trial site with 46 per cent on the PCS measure and 44 per cent on the MCS measure. About 25 per cent of the CDC participants in the Goldfields can be classified as having a mild disability. About one in five CDC participants in the Goldfields can be classified as moderately disabled and more than one in ten is severely disabled. The distribution in Ceduna is between the other two distributions with the proportion of no disability ranging between 53 per cent (PCS measure) and 57 per cent (MCS measure).

Figure 3-72: Distribution of the CDC participants among the categories defined by the SF-12 MCS and PCS, by trial site



The following table (Table 3-27) shows the results of statistical tests comparing the mean PCS and MCS scores across groups of CDC participants defined by some of their demographic characteristics. As already observed above, CDC participants in the East Kimberley site score higher for both PCS and MCS compared to the other two sites. CDC participants in the Goldfields score, on average, 4.3 points less on the PCS scale and 6.2 on the MCS scale. The three asterisks reported near the mean differences indicate that the difference is significant at the 1 per cent level or less (two asterisks indicate the mean difference is significant at the 5 per cent level. All tests are one-sided). The PCS and MCS scores are also significantly lower in Ceduna compared with East Kimberley.

Looking at gender, we observe that the mean PCS score is significantly lower for males (1.4 points on average) but the MCS score is not significantly different.

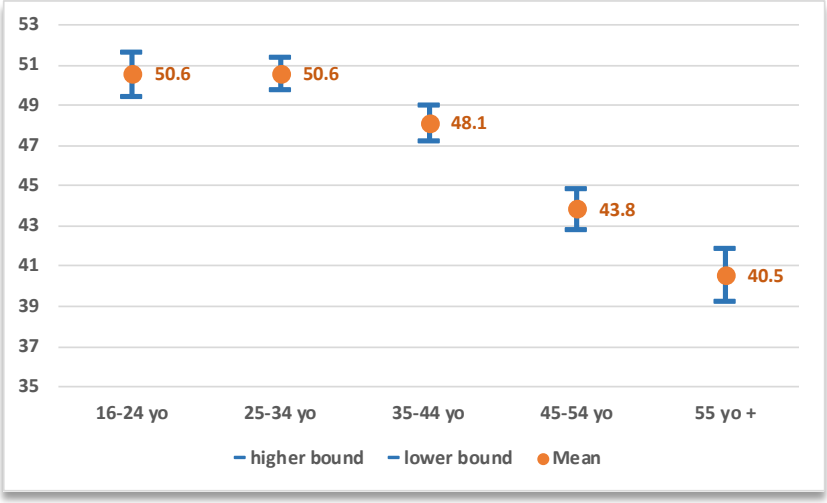
With regards to household type, CDC participants living alone score significantly lower on both scales compared to couples living with children (dependent or not). Couples living alone (or with unrelated adults) also score significantly lower than couples with children. Single parents, however, score higher on both scales than couples with children. Note that this difference is probably not due to age differences between the two groups since couple with children are aged, on average 37.5 years while single parents are 36 years old on average (same standard deviation). The CDC participants who indicated that they had a paid job in the past four weeks (including work for the dole) score higher on both scales than CDC participants who did not work.

Table 3-27: Mean PCS and MCS scores and mean differences from reference category by individual characteristics

Comparison of PCS and MCS scores across groups of CDC participants					
	Group (*Reference*)	**Mean PCS score**	**Difference**	**Mean MCS score**	**Difference**
Site	***East Kimberley***	49.6		52.1	
	Goldfields	45.3	4.3***	45.9	6.2***
	Ceduna & surrounds	47.4	2.2***	48.7	3.4***
Indigenous status	Non-Indigenous	43.3	4.7***	43.7	5.9***
	Indigenous	48.1		49.6	
Gender	Male	45.8	1.4***	47.8	0.1 (ns)
	Female	47.2		47.8	
Household type	Living alone	44.9	1.9***	46.6	2.9***
	Couple with children	46.7		49.5	
	Couple living alone	45.0	1.7**	47.7	1.8**
	Single parent	48.9	-2.2***	48.0	-1.5**
	Other	47.0	-0.3 (ns)	47.0	2.5***
Worked 4 weeks prior to survey	No	45.8	-3.2***	46.9	-3.4***
	Yes	48.9		50.3	

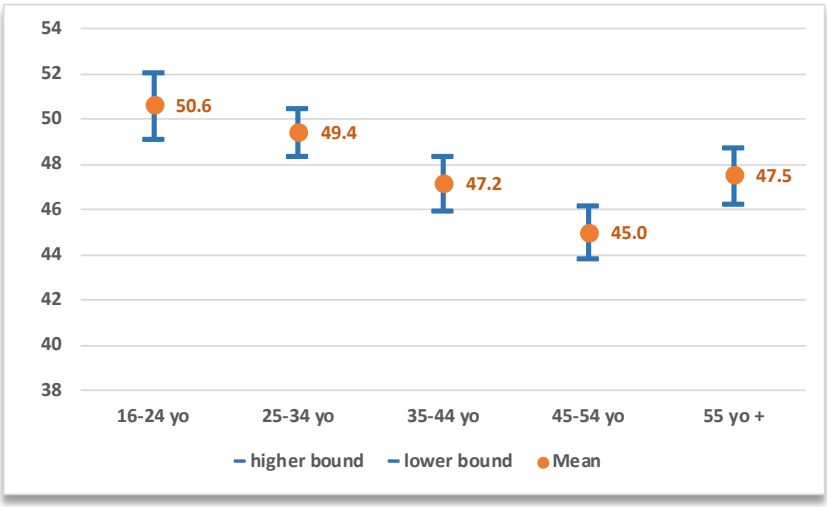
The following two figures show the mean PCS and MCS scores (with the 95 per cent confidence interval around the mean) by CDC participants' age group. Looking at the first figure, the overall observation is that the PCS score decreases with age. There is no significant differences between the 16-24 and 25-34 years old groups. The PCS score is significantly lower for those aged between 35 and 44 years old and for each groups beyond that. The last group's mean score places the 55 years old and older very close to the threshold of moderate disability.

Figure 3-73: Mean Physical Component Scale scores by age group (95 per cent CI)



The following figure displays the same information using the MCS scale instead. Compared with the previous scale, we see that the distribution is less spread out with the means ranging from 50.6 for the 16 to 24 years old to 45 for the 45-54 years old. The 55 plus group actually scores higher than the previous age group. This observation is compatible with most studies on well-being which find that the older cohorts (60 years old and more) usually report higher levels of well-being than those up to a decade younger.

Figure 3-74: Mean Mental Component Scale scores by age group (95 per cent CI)



3.6.1.2 Self-assessed well-being: current situation in the trial sites

The survey of CDC participants includes the Personal Well-Being Index (PWI) instruments developed in Australia (Australian Unity Well-being index). These instruments are used to elicit CDC participants' self-assessed subjective well-being. The subjective well-being section of the survey includes eight instruments. The first one asks CDC participants how happy they are with their life as a whole. This instrument can be used individually as a summary of CDC participants' overall well-being, though it is less reliable than multi-items scales (see, notably Cummins, 2013[68]). The next set of seven instruments elicit CDC participants' satisfaction with various domains of quality of life and can be used in order to compute a PWI index (each instrument can also be used individually[69] in order to focus on a particular domain of well-being). The recommendation for reporting data on the well-being index by those who developed the instruments is to ignore the observations for which CDC participants have systematically answered the bottom or top score for all survey instruments. In the data, no one has answered the minimum for all instruments but 428 have answered all top scores. They are removed from the statistics presented below.

Table 3-28 reports the mean and standard deviation of the overall PWI scores and the mean score for the first question on how happy CDC participants are with their life as a whole. These statistics are displayed for each trial site.

[68] International Wellbeing Group (2013), *Personal Wellbeing Index,* 5th Edition. Melbourne: Australian Centre on Quality of Life, Deakin University.

[69] For information on the psychometric characteristics of the PWI in Australia, see Cummins R.A., Eckersley R., Pallant J., Van Vugt J., Misajon R., (2003), "Developing a national index of subjective wellbeing: The Australian Unity Wellbeing Index", *Social Indicators Research,* 64, pp 159-190.

A striking observation from this table is the low score observed in the Goldfields compared with the other two sites. Indeed, the mean score for the first instrument eliciting life satisfaction in general has a mean of 64.9 in the Goldfields compared with, respectively 84.3 in East Kimberley, and 78.9 in Ceduna. The mean PWI score in the Goldfields is only 58.6, compared with 72.3 in East Kimberley and 73.2 in Ceduna. These scores in the Goldfields are significantly lower than those observed in the whole of Australia (with a mean of 75.9 for the first instrument and 75.5 for the PWI score). Note that the scores computed for the whole of Australia by the Australian Centre on the Quality of Life (2017) rely on a sample size of about 1,900, which is sensibly the same sample size for the 'all CDC participants' means reported in the fourth row of the table. We also note that the standard deviations (especially for the 'all CDC participants' relying on the same sample size) are much larger compared with the whole of Australia.

Table 3-28: Means and standard deviations of PWI scores by trial site

PWI scores by trial site				
	Happiness with life as a whole		PWI Score	
Trial site	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**
East Kimberley	84.3	24.1	72.3	21.0
Goldfields	64.9	29.7	58.6	23.9
Ceduna and surrounds	78.9	24.6	73.2	19.6
All CDC participants	72.2	28.9	63.5	23.7
Australia*	75.9	18.3	75.5	13.9

** Source for Australia: Australian Centre on Quality of Life, 2017, Australian Unity Wellbeing Index, Survey 34: summary report. Deakin University, Melbourne, Australia.*

Table 3-29 shows the large differences between Indigenous and non-Indigenous CDC participants in each trial site for these two measures of well-being. On both scores, there is well over 10 points difference between Indigenous and non-Indigenous CDC participants in all sites. Among non-Indigenous CDC participants we observe significant differences across sites (note that the numbers are comparatively small in East Kimberley and Ceduna) with higher scores observed in East Kimberley and Ceduna (the differences are not significant between these two sites for non-Indigenous CDC participants). Likewise, we observe that Indigenous CDC participants in the Goldfields have significantly lower scores than Indigenous CDC participants in the other two sites. Altogether, this table suggests that the differences observed between the Goldfields and the other sites is not just due to the fact that there is a larger proportion of non-Indigenous people among the CDC participants in this site since even Indigenous CDC participants in this site are scoring lower. We looked at the possibility that the relatively low scores in the Goldfields may be related to CDC participants' feelings about being on the CDC. While we found that well-being scores were indeed related to CDC participants' feelings about being on the CDC (F1 instruments in the survey), only 4 per cent of the variance of the PWI score is explained by these instruments.

Table 3-29: Means and standard deviations of PWI scores by trial site and Indigenous status

PWI Score by trial site and Indigenous status						
	Happiness with life as a whole			PWI Score		
CDC participants	**N**	**Mean**	**STD**	**N**	**Mean**	**STD**
NON-INDIGENOUS						
East Kimberley	142	68.2	25.0	128	61.8	20.2
Goldfields	1,825	56.5	28.4	1,691	53.1	23.1
Ceduna and surrounds	146	67.6	25.8	126	62.5	23.2
Total	**2,113**	**56.9**	**27.5**	**1,945**	**53.2**	**23.0**
INDIGENOUS						
East Kimberley	1,431	85.9	23.4	712	74.2	20.6
Goldfields	1,612	74.4	28.2	1,226	66.2	23.0
Ceduna and surrounds	782	80.9	23.8	583	75.5	17.9
Total	**3,825**	**80.0**	**26.2**	**2,521**	**70.6**	**21.7**

We find that the PWI scores are not significantly different by gender, except in the Goldfields where females have larger scores as shown in the following table (Table 3-30). We observe significant differences across household types where couples with children (dependent or not) report significantly higher levels of well-being than any other type of household. This result is typically observed in all studies of well-being. Couple living together with children tend to have higher levels of well-being (71.8) but are still below the Australian average. What is striking in the present survey, however, is the size of the differences across groups of CDC participants. CDC participants living alone report a level of well-being that places them at the bottom of the range that one would consider normal. Single parents report significantly lower levels of well-being on average than couples with children (63.9).

Table 3-30: PWI scores, mean differences by groups of CDC participants

Comparison of PWI across groups of CDC participants			
	Group (*Reference category*)	**Mean PWI**	**Difference**
Gender (excl. Goldfields)	Male	71.6	-1.1
	Female	72.7	
Gender (excl. Goldfields	Male	57.9	-3.5***
	Female	61.4	
Household type	Living alone	57.5	-14.3***
	Couple with children	71.8	
	Couple living alone	68.3	-3.5**
	Single parent	63.9	-7.8***
	Other household type	64.4	-7.4***
Worked 4 weeks prior to survey	No	62.0	-9.1***
	Yes	71.1	

The PWI scores show some variation by age groups as pictured in the next three figures (Figure 3-75 to Figure 3-77). However, the observed differences are not statistically significant as suggested by the confidence intervals in blue.

Figure 3-75: Mean PWI scores by age group, East Kimberley (95%CI)

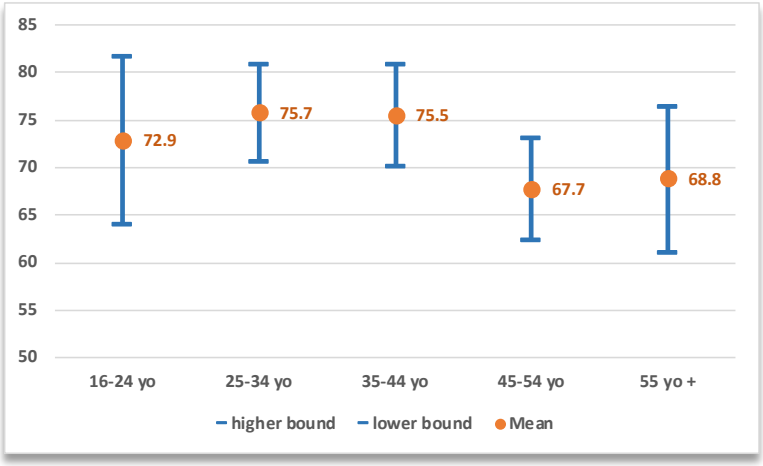


Figure 3-76: Mean PWI scores by age group, Goldfields (95%CI)

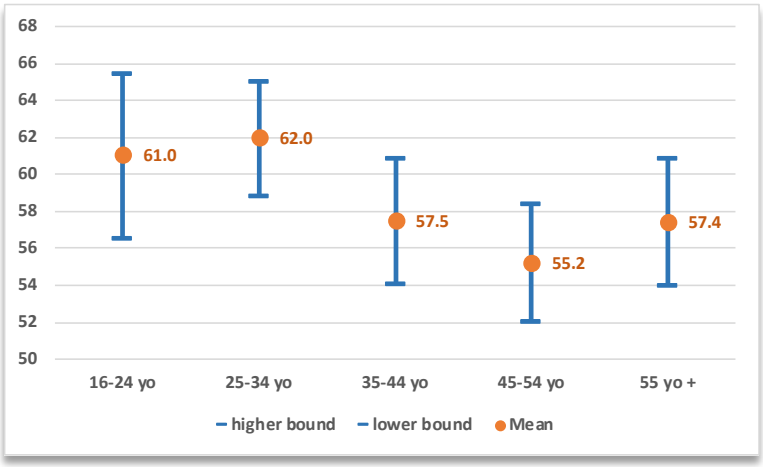
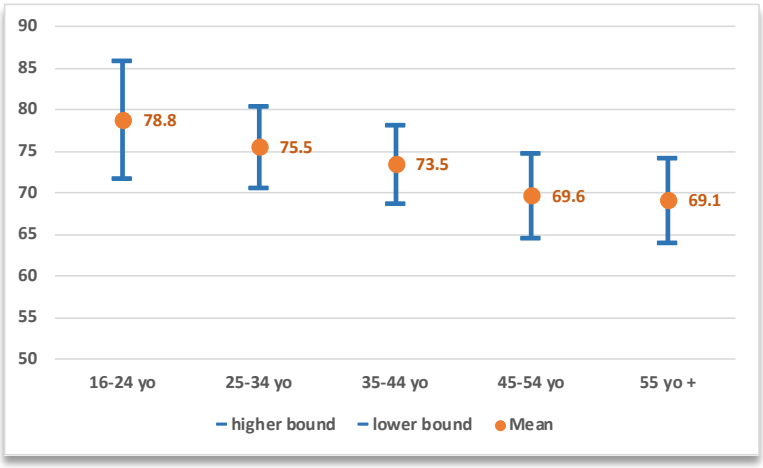


Figure 3-77: Mean PWI scores by age group, Ceduna and surrounds (95%CI)



3.6.2 Quality of life: has the CDC made life better?

The survey includes two questions that ask each CDC participant about the perceived impact of the CDC on their lives. The first is a broad question that asks whether the CDC has made life better or worse for the CDC participant. The second question narrows down the impact by asking only for potential improvements, but broadens the scope of the impact by asking whether the CDC has improved the quality of life for one's self, for their family, for their friends, and finally in the area where they live. This question allows for the response that no change has occurred. Respondents are invited to answer all categories that apply to them.

3.6.2.1 Evidence from descriptive analysis

a) Has the CDC made one's life better or worse?

The following figures and tables show CDC participants' views as to whether the CDC has made their life better, worse, or, if it has not changed anything for them. Note that the figures and tables in this subsection use all the information elicited in the survey. The consolidated report somewhat summarises this information by aggregating the categories into 'Worse', 'No different' and 'Better'.

Figure 3-78 shows that a majority of CDC participants indicated that the CDC has made their life worse[70]. Depending on the trial site, between 12 per cent (Goldfields and Ceduna) and 22 per cent (East Kimberley) of the CDC participants reported that the CDC has made their life better or a lot better. About one in five CDC participants feel that their life was no different after the CDC.

Figure 3-78: Has the CDC made one's life better or worse, all sites

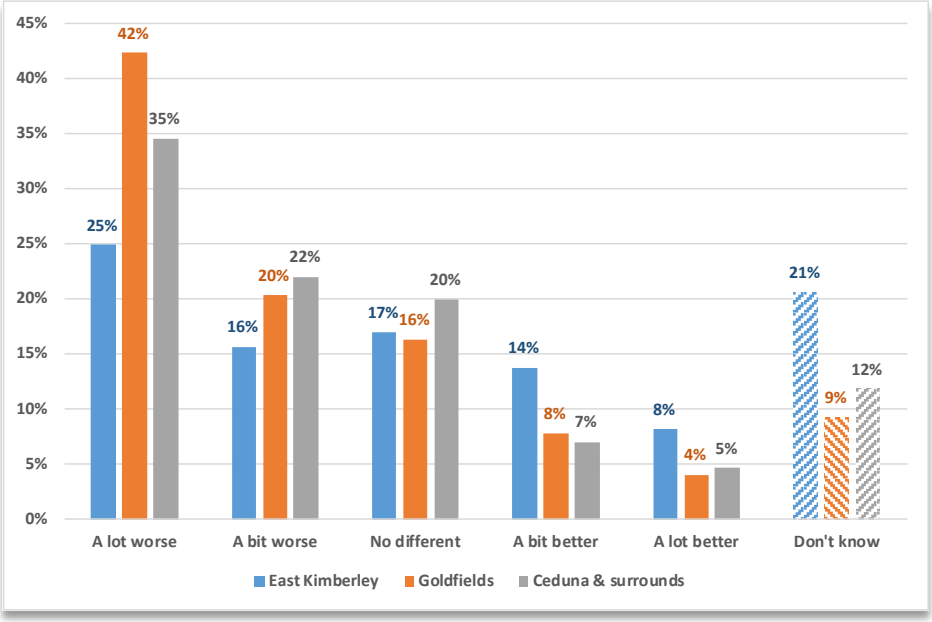


Table 3-31 shows large differences exist between Indigenous and non-Indigenous CDC participants. Seventeen per cent of Indigenous CDC participants reported that their life has improved (a bit better or a lot better), compared to only 9 per cent among non-Indigenous CDC participants. The distribution by gender varied little.

Table 3-31: Has the CDC made one's life better or worse, by Indigenous status and gender

The CDC has made life…										
	All		Indigenous		Non-Indigenous		Male		Female	
	N	%	N	%	N	%	N	%	N	%
A lot worse	2,128	**37**	1,201	**32**	926	**45**	954	**38**	1,173	**35**
A bit worse	1,126	**19**	620	**17**	507	**24**	489	**20**	638	**19**
No different	994	**17**	655	**17**	339	**16**	391	**16**	602	**18**
A bit better	539	**9**	416	**11**	123	**6**	249	**10**	290	**9**
A lot better	305	**5**	239	**6**	66	**3**	110	**4**	195	**6**
Don't know	736	**13**	625	**17**	111	**5**	311	**12**	425	**13**
Total (N)	**5,827**	**100**	**3,756**	**100**	**2,072**	**100**	**2,504**	**100**	**3,323**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Respondents who did not answer the question (3.5 per cent) are excluded.

[70] Note that the Consolidated report (see figure 5-20) displays slightly different histograms because it simplifies the categories into 'worse', 'no different', better', 'don't know' rather than displaying the full range.

Table 3-32 provides the same information restricted to Indigenous CDC participants and compares the responses by trial site. The table shows that Indigenous CDC participants in the Goldfields reported worse outcomes than Indigenous CDC participants living in the other two sites. The larger proportion of reported bad outcomes ('worse' or 'a lot worse') observed initially for the Goldfields does not come only from the non-Indigenous CDC participants who are in larger proportion in this site.

Table 3-32: Has the CDC made one's life better or worse, Indigenous CDC participants by trial site

The CDC has made life…								
	All sites		East Kimberley		Goldfields		Ceduna and surrounds	
	N	%	N	%	N	%	N	%
A lot worse	1201	**32**	362	**26**	602	**38**	237	**31**
A bit worse	620	**17**	214	**15**	236	**15**	170	**23**
No different	655	**17**	225	**16**	269	**17**	162	**21**
A bit better	416	**11**	199	**14**	160	**10**	57	**8**
A lot better	239	**6**	109	**8**	95	**6**	35	**5**
Don't know	625	**17**	303	**21**	227	**14**	94	**12**
Total (N)	**3,756**	**100**	**1,411**	**100**	**1,589**	**100**	**756**	**100**

b) Has the CDC improved the quality of life for CDC participants, their family, friends and community?

Another way to view the impact of the CDC on one's quality of life is to look at where such perceived impacts may be manifesting themselves. The next survey question, presented in Table 3-33, looks at whether the CDC has improved the quality of life not just at the individual level but also in one's broader circle, namely, their family, friends, and community.

Panel A (first column) shows that, of the total population, 21.3 per cent reported that they saw a positive difference, 47.8 per cent reported no difference and 30.9 per cent either reported they did not know or did not answer at all. The second part of the table (Panel B) focuses only on those participants who saw a positive difference and shows the type of difference (You, Your family, Your friends, and Where you live), noting that the question allowed multiple responses. For all trial sites in the leftmost column of Table 3-33, Panel B, we see that 53.1 per cent saw a positive difference for themselves, 47 per cent for their families, 36.5 per cent for their friends and 56.1 per cent for where they live.

Table 3-33: Has the CDC improved quality of life, by trial site

The CDC helps improve quality of life, by trial site										
Panel A (full sample who were asked the question)										
The CDC has made a:	**All sites**		**East Kimberley**		**Goldfields Indigenous**		**Goldfields Non-Indigenous**		**Ceduna & surrounds**	
	%		**%**		**%**		**%**		**%**	
Positive difference	21.3		25.1		26.6		12.4		23.1	
No difference	47.8		56.4		34.4		53.7		45.1	
Don't know/missing	30.9		18.5		39.0		33.8		31.8	
Total sample (N)	**6,039**		**1,597**		**1,655**		**1,848**		**939**	
Panel B (sub-sample of 21.3% who saw at least one positive difference)										
For:	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
You	683	**53.1**	305	**76.1**	192	**43.6**	86	**37.4**	101	**46.4**
Your family	606	**47.0**	262	**65.3**	207	**47.0**	25	**10.7**	112	**51.8**
Your friends	470	**36.5**	227	**56.5**	157	**35.6**	27	**12.0**	59	**27.3**
Where you live	723	**56.1**	254	**63.5**	223	**50.6**	147	**63.9**	99	**45.6**
Total respondents	**1287**	**100**	**401**	**100**	**440**	**100**	**230**	**100**	**217**	**100**
Total responses	2481		1048		778		285		371	
Responses per person	1.93		2.61		1.77		1.24		1.71	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

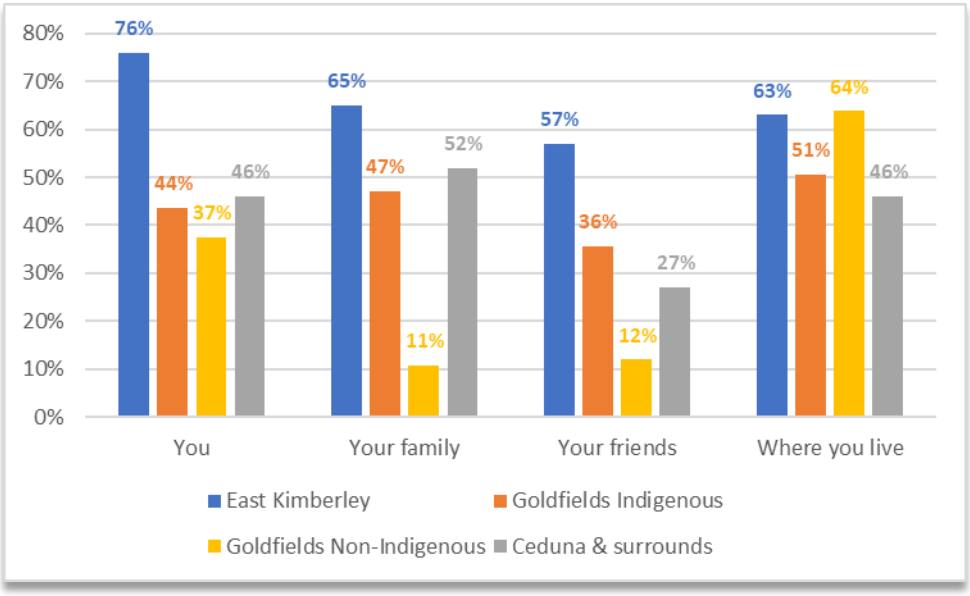
Table 3-33 also shows that the reported difference the CDC made regarding quality of life varied by trial site. In the Goldfields, a larger 'positive difference' was reported by Indigenous (26.6 per cent) than by non-Indigenous CDC participants who reported the lowest incidence of 12.4 per cent. Similar proportions of CDC participants in East Kimberley (25.1 per cent) and Ceduna (23.1 per cent) reported a positive difference. Two further numbers are noteworthy from Panel A in Table 3-33. First, a much smaller proportion of 'no difference' was reported by Indigenous CDC participants in the Goldfields (34.4 per cent), with Goldfields non-Indigenous, Ceduna and East Kimberley reporting higher proportions (53.7, 45.1 and 56.4 per cent, respectively). Second, a much lower proportion of 'don't know or missing' was reported by CDC participants in East Kimberley (18.5 per cent), with Goldfields (Indigenous and non-Indigenous) and Ceduna reporting higher proportions of this view (39, 33.8 and 31.8 per cent, respectively).

Further examination of the data presented in Table 3-33, Panel B, shows interesting patterns in reporting, with several prominent patterns emerging. First, in East Kimberley, we observe the strongest reported impacts especially regarding own (76.1 per cent) and family (65.3 per cent) life quality improvements. Non-Indigenous CDC participants in the Goldfields reported the highest difference between the life quality within one's own circle (taking this to include 'you', 'your family' and 'your friends') and the rest of the community (represented by 'where you live'). This finding followed the pattern we have discovered for other important CDC outcomes.

The following Figure 3-79 highlights these differences between trial sites with respect to the impact of the CDC on quality of life. The proportion of CDC participants who reported a positive impact was highest in the East Kimberley site for all levels and lowest in the Goldfields, with the exception of the

area in which the CDC participants' live. Similar proportions of non-Indigenous in the Goldfields and CDC participants in East Kimberley reported a change in where they live, much higher than either the non-Indigenous in the Goldfields or participants in Ceduna and surrounds. Ceduna and surrounds reported the least change in the area in which they live.

Figure 3-79: Has the CDC improved quality of life for own, family, friends or community, by trial site (CDC participants who reported a positive impact)



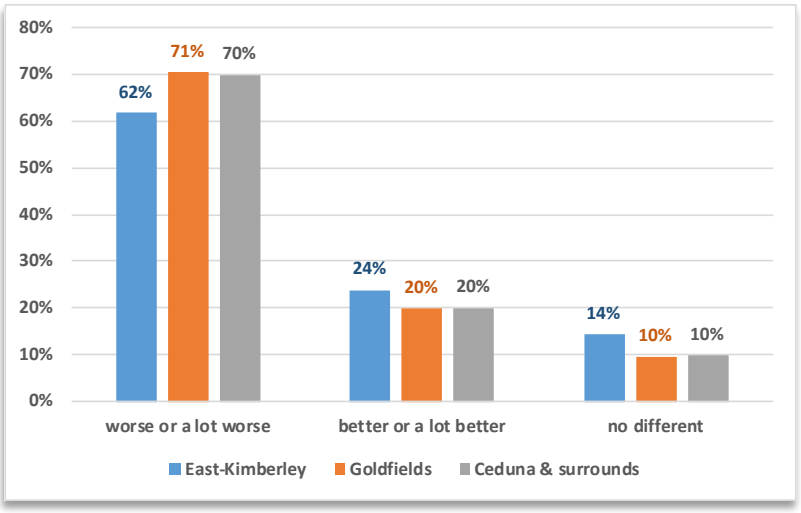
3.6.2.2 Characteristics of CDC participants who report that their life has improved after the CDC

Like we did for the other outcomes, we now focus on those CDC participants who indicated that the CDC is making their life better (or a lot better). We estimated multivariate models (ordered Probit) to investigate the characteristics of those who are most likely to report an improvement in quality of life associated with or attributed to the introduction of the CDC. Note that the dependent variable has three possible outcomes, (i) life is worse or a lot worse, (ii) life is no different, and (iii) life is better or a lot better. As such, we estimated three sets of marginal effects, one set for each alternative. The results are displayed in Table A 4-24 in the appendices.

The results show that, everything else held constant, the estimated probability that CDC participants in East Kimberley report that the CDC has made their life worse is 61.7 per cent. By comparison, the same CDC participants living in the Goldfields are 8.7 percentage points more likely to report that the CDC has made their life worse (an estimated probability of 70.5 per cent on average). The same CDC participants in Ceduna are 7.7 percentage points more likely to report the CDC has made their life worse (with an estimate probability, on average of 70 per cent).

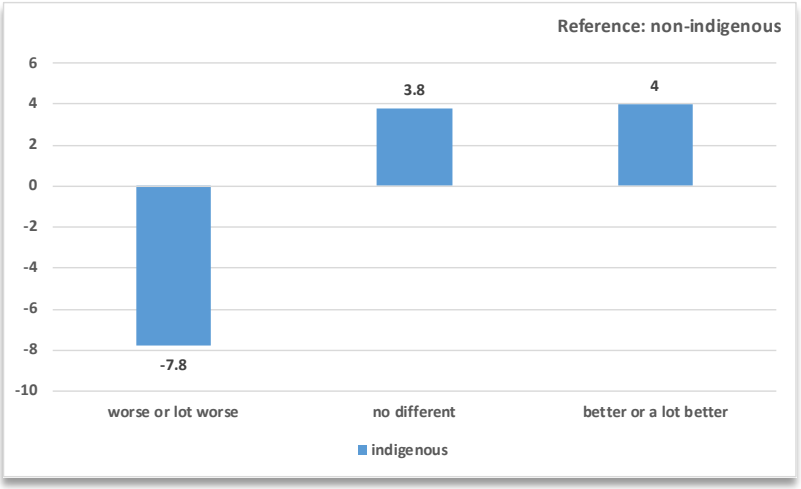
Conversely, CDC participants in East Kimberley have an estimated probability to report that the CDC has made their life better of 24 per cent, everything else held constant. In the Goldfields this probability is, on average, 4.6 percentage points lower. It is 3.6 percentage points lower for CDC participants in Ceduna and surrounds. These estimated probabilities are reported in the Figure 3-80 below.

Figure 3-80: Estimated probability that the CDC has made CDC participants' life better or worse, by trial site



In Figure 3-81 below, we display the estimated marginal effects for Indigenous CDC participants (by reference to non-Indigenous CDC participants). On average, Indigenous CDC participants are more likely to report that the CDC has made their life better and less likely to report that the CDC has made their life worse. The estimated probability that Indigenous CDC participants report the CDC has made their life worse is 65.2 per cent, which is, on average 7.8 percentage points less than non-Indigenous CDC participants.

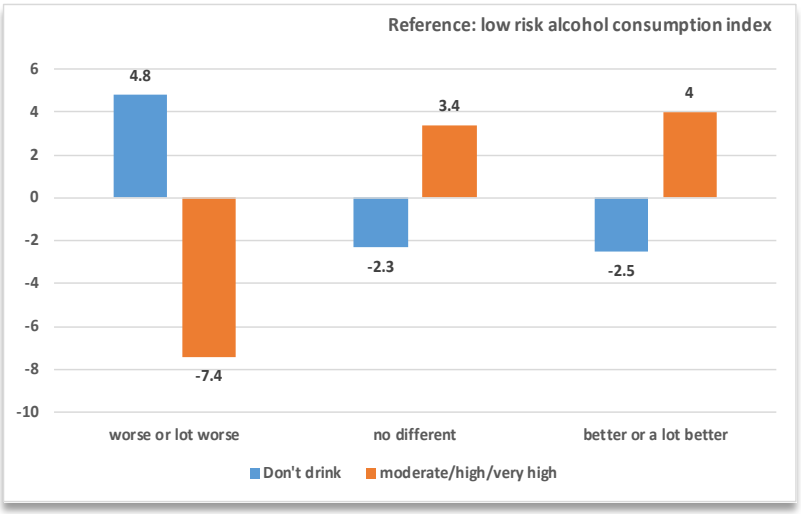
Figure 3-81: Estimated probability that the CDC has made CDC participants' life better or worse; estimated marginal effects for Indigenous CDC participants



We find a relationship between CDC participants' view about whether the CDC has made their life better or worse and their AUDIT scores, distinguishing between the non-drinker and those qualified as low risk versus those whose alcohol use is considered moderate to high risk. The figure below displays the estimated marginal effects associated with each type of alcohol drinkers (the reference category is CDC participants identified as low risk drinkers). The figure shows that the non-drinkers are 4.8 percentage points more likely to state that the CDC has made their life worse and 2.5 percentage points less likely to say that it has made their life better compared to low risk drinkers. By contrast, those who have been identified as moderate to high risk drinkers are 4 percentage points

more likely to say that the CDC has made their life better and 7.4 percentage points less likely to state that it has made their life worse.

Figure 3-82: Estimated probability that the CDC has made CDC participants' life better or worse; estimated marginal effects according to CDC participants' AUDIT scores



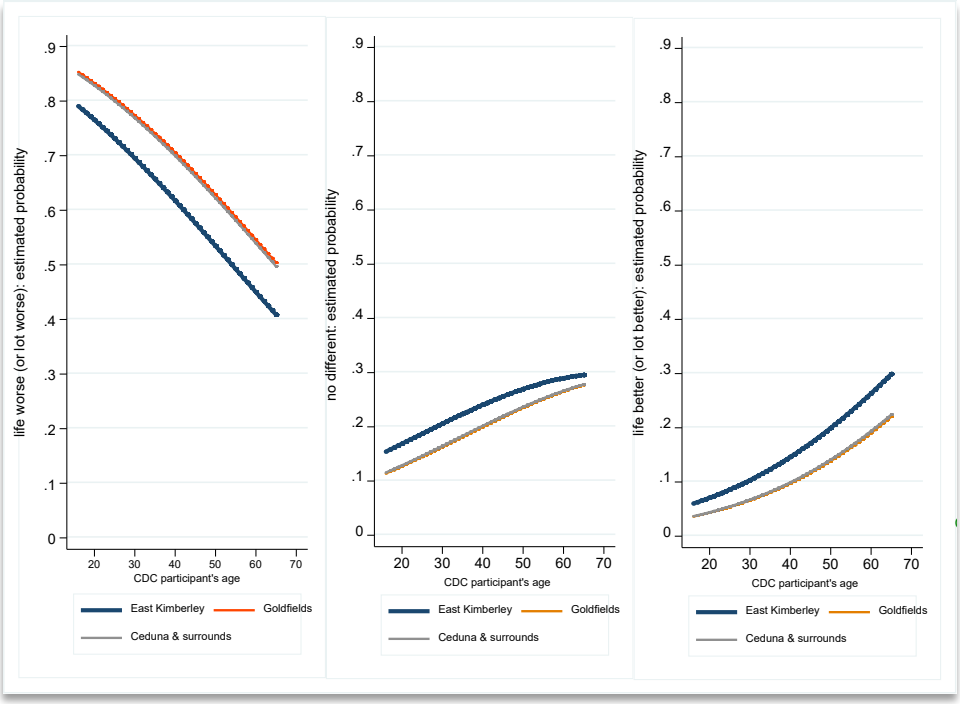
Note: estimated probabilities for the reference (low risk alcohol consumption) are: 68 per cent (worse or a lot worse), 21 per cent (no different), 11 per cent (better or a lot better)

The multivariate analysis shows that single individuals living alone are most likely to report that the CDC has made their life worse. The estimated probability is, on average, 72.9 per cent. By comparison, couples living alone (or with unrelated adults) and couples living with children are, respectively 8.2 and 8.8 percentage points less likely to report the CDC has made their life worse. We note that there is no significant difference between single people living alone and single parents with regards to the estimated probabilities of reporting a worsening of their life because of the CDC. These two types of household exhibit the highest probabilities to state their life has worsened.

Females are more likely to find the CDC has improved their life. On average, they are almost 3 percentage points more likely than men to report that the CDC has made their life better (with an estimated probability of 12 per cent compared to 9 per cent for males). Nevertheless, the majority of females still report that the CDC has made their life worse (with an estimated 65.9 per cent probability).

We find a relationship between CDC participants' age, and their assessment about how their life has changed. The older the CDC participants, the more likely they report that the CDC has made their life better (controlling for the household type). The relationship between the estimated probability associated to each possible outcome (worse, no different, better) and age is displayed in the following figure. These relationship are displayed for each trial site.

Figure 3-83: Estimated probability that the CDC has made CDC participants' life better or worse, relationship with CDC participants' age, by trial site



Note: In all three figures, the estimated probabilities are not statistically differences between Ceduna and Goldfields. Therefore, both lines are on top of each other.

Finally, we find that CDC participants who experienced more financial stress before the CDC are more likely to report that the CDC has made their life better whereas those who currently experience higher financial stress are more likely to report the CDC has made their life worse.

Those who experienced problems using the Card are 29 percentage points more likely to report the CDC has made their life worse.

3.6.2.3 Characteristics of CDC participants who report that the CDC has improved the quality of life for themselves, their family, friends and community.

We used the second survey instrument which asks CDC participants whether the CDC is having an impact on quality of life for themselves, their family, friends and community. We estimated two models. In the first model we restrict the scope to the CDC participants who state that the CDC has improved their own quality of life. In the second model, we extend the scope to family, friends and community. The table of results is available in the appendices, Table A 4-25.

When broadening the scope beyond oneself, we find that CDC participants in the Goldfields no longer differ from those living in the East Kimberley. However, when we only look at the probability to report an improvement at one's own level the difference between the Goldfields and East Kimberley remains as we had already noticed in the previous estimation. This result shows that when CDC participants in the Goldfields report improvements in life quality, they do so for the broader circle of family, friends or community but less so for themselves.

The estimates of the two models are consistent with what we have observed in the multivariate analysis in the previous subsection on the more general question as to whether the CDC has improved one's life. Indigenous CDC participants are more likely to report improvements both for themselves

and for the broader circle and so too are couples with or without children. Those who reported experiencing issues with the Card are also less likely to say that the CDC has improved their quality of life or that of their family, friends or community. Those who reported being employed within the four weeks preceding the survey (including working for the dole) are also more likely to report improvements at all levels.

One point of difference with the previous analysis is found with the relationship between the probabilities and age. While we found some positive relationship in the previous subsection on the broader question, the estimated probabilities to report an impact of the CDC on the quality of life beyond oneself do not seem to be significantly larger for older CDC participants.

3.6.3 Employment and barriers to employment

Although the quantitative survey was not designed with the study of employment as one of its primary objectives, it examined whether CDC participants work and what type of work they do. It also examined the barriers to employment that CDC participants encounter in their lives, especially for those who do not work.

Most CDC participants were not in any form of employment (Table 3-34). Ceduna and East Kimberley had the highest employment rate, primarily because reported employment included Work for the Dole.

Table 3-34: Employment status of CDC participants, by trial site

Not working - Working								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
Status	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Not working	4,317	**71**	1,048	**66**	2,663	**76**	606	**65**
Working	1,722	**29**	549	**34**	840	**24**	333	**35**
Total	**6,039**	**100**	**1,597**	**100**	**3,503**	**100**	**939**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

3.6.3.1 Had a job in the last four weeks – Hours worked and length of time in job

Analyses of those CDC participants who reported having a job in the last four weeks is limited due to the fact that (i) only a small percentage, overall, reported working (see Table 3-34 above), and (ii) the majority of employment was Work for the Dole (see Table 3-35 below). Overall, 61.5 per cent reported Working for the dole compared to 38.5 per cent of CDC participants who had another type of employment. Table 3-35 also shows that there are considerable differences between the Goldfields and the other two trial sites. The Goldfields reported the lowest proportion of CDC participants working for the dole at 48 per cent. This is compared to 77.3 per cent of CDC participants in East Kimberley and 69.4 per cent in Ceduna.

Table 3-35: Working – work for the dole or other type of work, by trial site

Working: Work for the dole – Other work								
	All sites		East Kimberley		Goldfields		Ceduna and surrounds	
Status	N	%	N	%	N	%	N	%
Work for the dole	1,059	**61.5**	425	**77.3**	403	**48.0**	231	**69.4**
Other work	663	**38.5**	124	**22.7**	436	**52.0**	102	**30.6**
Total working	1,722	**100**	549	**100**	840	**100**	333	**100**

Table 3-36 below highlights that there are also considerable differences in the composition of those working for the dole. While the majority of Indigenous CDC participants reported working for the dole, the opposite is true for the non-Indigenous CDC participants.

Table 3-36: Working – work for the dole or other type of work, by Indigenous status

Working: Work for the dole – Other work by Indigenous status						
	All		Indigenous		Non-Indigenous	
Status	N	%	N	%	N	%
Work for the dole	1,059	**61.5**	888	**78.0**	171	**29.3**
Other work	663	**38.5**	251	**22.0**	412	**70.7**
Total working	1,722	**100**	1,139	**100**	583	**100**

Those who reported having had a job in the last four weeks were asked to state how long they had had that job for. Table 3-37 below presents the length of time CDC participants reported that they have been doing that job. The most notable message coming from this table are the proportions of Indigenous CDC participants who reported work for the dole for over 12 months (48 per cent) compared to just 15.7 per cent of non-Indigenous CDC participants.

Table 3-37: Working: Length of time in that job by work for the dole or other type of work and Indigenous status

Length of time in that job by Work for the dole – Other work and Indigenous status								
	Indigenous				Non-Indigenous			
	Work for the dole		Other work		Work for the dole		Other work	
Status	N	%	N	%	N	%	N	%
Up to 12 months	358	**40.3**	138	**54.9**	98	**57.6**	246	**59.7**
Over 12 to 60 months	292	**32.9**	74	**29.4**	14	**8.5**	114	**27.7**
More than 60 months	134	**15.1**	19	**7.8**	12	**7.2**	30	**7.3**
No information	104	**11.7**	20	**7.9**	46	**26.7**	22	**5.3**
Total working	888	**100**	251	**100**	171	**100**	412	**100**

The majority (63 per cent) of those CDC participants who reported having had a job in the last four weeks also reported working part-time (less than 37 hours per week); the highest proportion being Indigenous CDC participants in the Goldfields (74 per cent), followed by non-Indigenous CDC participants in the Goldfields (66 per cent), East Kimberley (59 per cent) and Ceduna (53 per cent).[71] Of those CDC participants who reported having had a job in the last four weeks, 49 per cent reported having been in that job for 12 months or less. More non-Indigenous CDC participants in the Goldfields reported having been in that job for 12 months or less (60 per cent) than either Indigenous CDC participants in the Goldfields (49 per cent), East Kimberley (44 per cent) or Ceduna (38 per cent).

3.6.3.2 Perceived barriers to employment by trial site

The survey asked the group who were not working to identify the reasons why they were not in employment, by selecting from a large list of options all reasons that applied to them. The reasons fell into three main categories: (i) own disability or short term illness or because they were carers of someone else; (ii) employment related reasons; and (iii) all other reasons (including study, holidays, travel and other).

The most cited reason for not working (see Table 3-38) was own disability, own illness or care of another person. Around 80 per cent of the CDC participants stated this as one of their reasons for not being in employment. Work-related limitations were not as prevalent in East Kimberley (18 per cent) but acted as a considerable barrier to employment for CDC participants in the Goldfields (45 per cent) and Ceduna (35 per cent).

Table 3-38: Reasons for not working at the moment, by trial site

Reasons for not working at the moment						
	East Kimberley		Goldfields		Ceduna & surrounds	
Reason:	**N**	**%**	**N**	**%**	**N**	**%**
Own health	80	**8**	377	**14**	62	**10**
Own disability	287	**27**	665	**25**	152	**25**
Caring (children; ill; disabled; elderly)	491	**47**	1150	**43**	258	**43**
Skills and jobs related	186	**18**	1192	**45**	212	**35**
Miscellaneous	85	**8**	260	**10**	96	**16**
Total responses (N)	1129		3644		780	
Total respondents (N)	**1,048**		**2,663**		**606**	

Note: As people were allowed to pick more than one reason, the total of the percentages add up to more than 100 measuring the extent to which more than one reason was provided.

Skills- and jobs-related reasons were distinguished between those CDC participants who stated their own lack of skills, training and work experience as the prime impediment (deficient supply of labour:

[71] A small proportion of those working reported that they work 37 hours or more. They are distributed as follows: a much higher proportion of non-Indigenous CDC participants in the Goldfields reported working in jobs for 37 hours or more per week (17 per cent) compared to their Indigenous counterparts in the Goldfields (7 per cent), East Kimberley (6 per cent and Ceduna (5 per cent). Percentages do not add up to 100 in this calculation as there were several respondents (28 per cent on average) who reported that they work but did not answer the hours worked question. We note that the numbers are very small for meaningful further investigation on the topic of type of employment.

lack of skills) and those who stated their skills were adequate but for various reasons the jobs were not there (deficient demand for labour: lack of jobs). The split between 'lack of skills'/'lack of jobs' for not working was 30/70 for both Ceduna and East Kimberley and 41/59 for the Goldfields. Clearly, employment opportunities were poor for CDC participants and especially so in East Kimberley and Ceduna.

Health/Disability/Care reasons were distinguished between those CDC participants who stated their own disability or ill health as the reason and those who stated care responsibilities as the reason. These were almost evenly split in all three trial sites. The split between own disability or ill health and care reasons for not working was 43/57 for East Kimberley, 45/55 for Ceduna and 48/52 for the Goldfields.

This suggests that there is a relatively small pool of CDC participants not working for a reason other than a disability/health reason or a caring role of 30 per cent: East Kimberley 21 per cent; the Goldfields 32 per cent and Ceduna 27 per cent.

3.6.3.3 Looking for work

All CDC participants were asked if they were looking for work and, if they were not looking for work, if they would like a job. Overall, 66 per cent of those not working reported they were not looking for work, 76 per cent of whom were those who reported own disability or a caring role as the reason for not working. Of the 30 per cent who said they were looking for work, 72 per cent were those who did not report either their own disability or a caring role as the reasons for not working.

Of the 66 per cent not looking for work, 56 per cent also reported not wanting to a job, 82 per cent of whom were those who reported their own disability or a caring role as the reason for not working. Of those reporting wanting a job, 33 per cent were those reporting no disability or caring role, 21 per cent with own disability and 46 per cent having a caring role (with or without an own disability).

These figures combined suggest the scope for improving labour market opportunities for CDC participants would be at its lowest in East Kimberley, would have some more scope in Ceduna and more so again in the Goldfields.

3.6.4 Safety, crime and family violence

The quantitative survey of CDC participants included a number of measures which aimed to assess the impact the CDC has had on safety. Respondents were asked three questions.

First, we asked whether individuals felt safer on the CDC. This is a direct question about the impact of the CDC on safety, asking about a general feeling of safety without going into any specifics.

Second, we asked how safe CDC participants feel about their current safety levels in the area the respondents live, making the distinction between home and street safety and day and night safety and not asking specifically about the CDC. This question gives us four combinations: *Home in the day*, *Street in the day*, *Home in the night* and *Street in the night*. Although not directly asked, it is easy to see how each of these combinations would place more emphasis on the different outcomes of safety, crime and family violence.

Third, we asked how these four combinations of safety are perceived to have changed since the CDC was introduced, again in the area where respondents live.[72] A similar question was asked regarding changes in the safety of children since the CDC introduction, which is reported in the section on Child Welfare and Family Well-being and is also briefly mentioned here in the general safety context.

3.6.4.1 Feeling safer after the introduction of the CDC?

Table 3-39 below shows that about 63 per cent of respondents said they "never" or "hardly ever" felt safer on the CDC, about 18 per cent said they felt safer "sometimes" and about 20 per cent that they felt safer "most" or "all" of the time. Overall, the picture is one where most people reported no improvement in safety and a large minority (in the case of Ceduna almost half) reported an improvement in safety. The most polarised picture emerged in East Kimberley, the most positive in Ceduna and by far the most negative picture in the non-Indigenous CDC participants in the Goldfields.

Table 3-39: Feeling safer on the CDC by trial site

Feeling safer on the CDC					
	All sites %	East Kimberley %	Goldfields Indigenous %	Goldfields Non-Indigenous %	Ceduna & surrounds %
Never	50.9	48.4	45.1	64.1	38.7
Hardly ever	11.7	7.1	12.1	14.2	13.7
Sometimes	17.9	16.0	21.3	12.7	25.8
Most of the time	5.9	6.5	6.8	3.5	7.9
All of the time	13.6	22.0	14.7	5.5	13.9
Total (N)	**5,713**	**1,509**	**1,549**	**1,770**	**885**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. The total of all sites will be below 6,039 when we do not report the missing observations explicitly.

Alongside the strong differences between Indigenous and non-Indigenous CDC participants showcased within the Goldfields trial site (43 per cent of Indigenous CDC participants in the Goldfields reported improved safety, compared with 22 per cent among their non-Indigenous counterparts), differences in perceptions of safety were also found for male and female participants in some trial sites. Fewer females (42 per cent) than males (48 per cent) reported improved safety in East Kimberley, while more females (53 per cent) than males (42 per cent) reported improved safety in Ceduna.

3.6.4.2 Current levels of safety comparing day/night and streets/home by site

We now move to the second question about *current levels of safety*, where respondents are asked to make a clear distinction between feeling unsafe and feeling safe.[73] Figure 3-84 to Figure 3-87 show

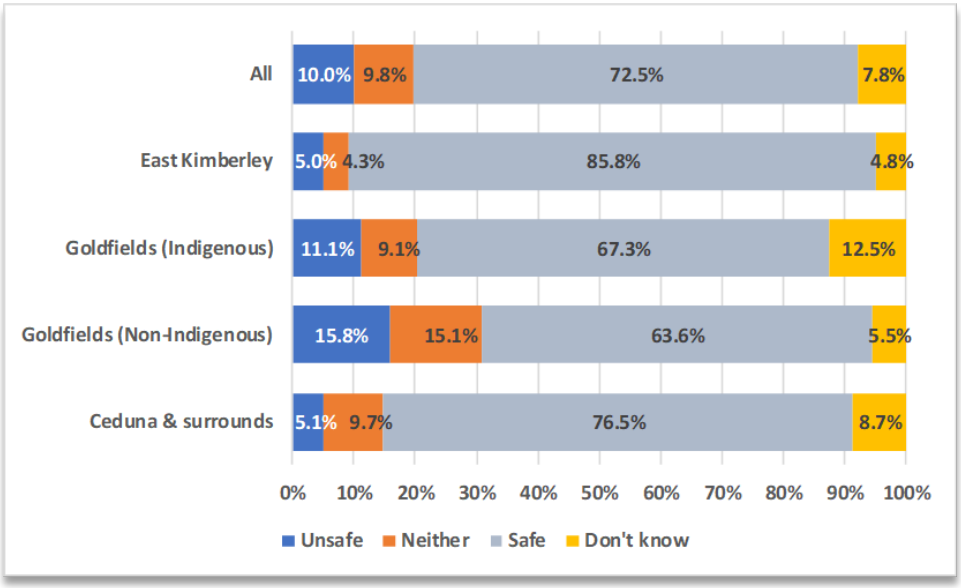
[72] This is the clearest direct question about a CDC impact on safety. We note that the question does not ask about changes that were caused by the CDC, it simply asks for change that happened "since the CDC was introduced".

[73] We present these percentages in a group of four Figures, noting that the relevant sample sizes are very similar to the ones reported in Table 3-38 above. We combine the categories "very unsafe" and "unsafe" into one, labelled as "unsafe", and the categories "safe" and "very safe", into one, labelled as "safe". Category "neither safe, nor unsafe" is labelled as "same".

safety “in the streets in the day”, “in the streets at night”, “in the home in the day”, and “in the home at night” respectively.

Figure 3-84 shows *safety in the streets during day time*. East Kimberley is considered to be the safest trial site with 85.8 per cent of respondents reporting they currently feel safe and only 5 per cent feeling unsafe. A similar picture emerges from Ceduna where 5.1 per cent reported that they feel unsafe. In the Goldfields this proportion is reported to be more than three times the East Kimberley and Ceduna size (15.8 per cent) by non-Indigenous CDC participants and more than twice the size (11.1 per cent) by the Indigenous CDC participants in the Goldfields. It is clear the more positive picture presented in East Kimberley and Ceduna is far less prevalent in the Goldfields.

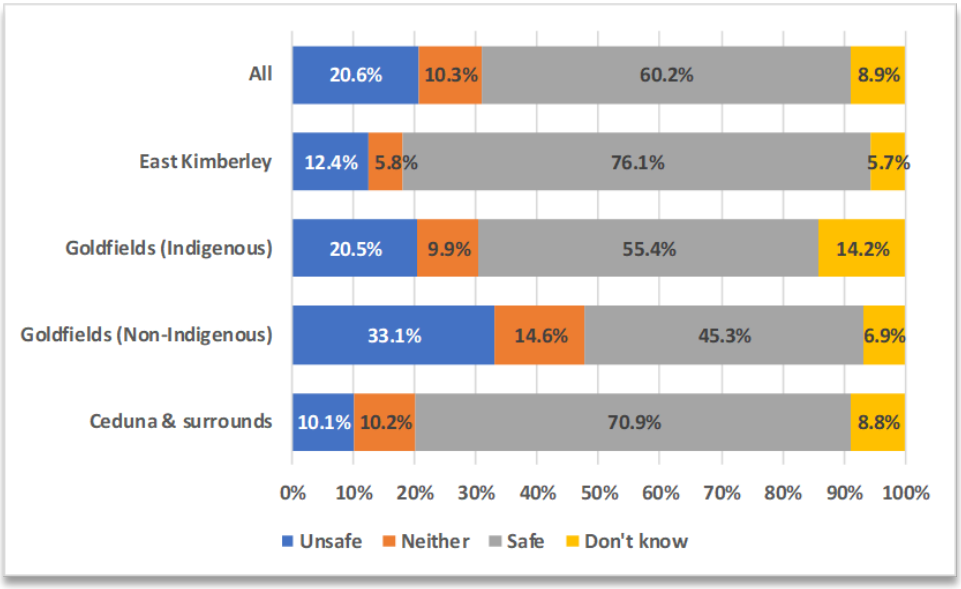
Figure 3-84: How safe do you currently feel (Streets-Days), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Category “same” refers to people who report they feel neither safe nor unsafe.

Figure 3-85 shows *safety in the streets at night* and also allows us to see the differences between day and night safety in the streets. East Kimberley retained the largest proportion of respondents who felt safe at night in the streets of the area they live (76.1 per cent) which is similar to the Ceduna proportion (70.9 per cent), but much larger than the Indigenous Goldfields proportion (55.4 per cent), and especially the non-Indigenous Goldfields proportion (45.3 per cent).

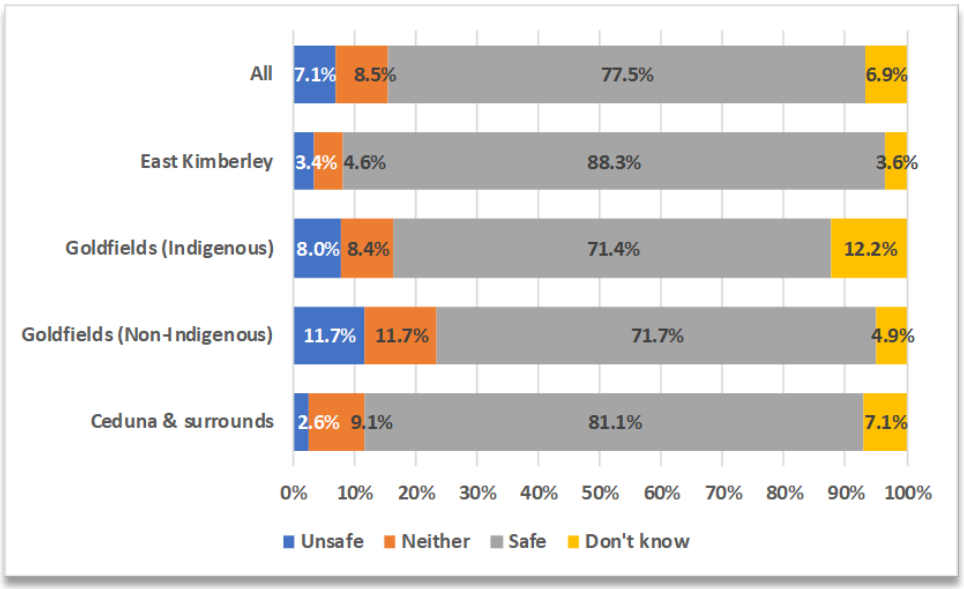
Figure 3-85: How safe do you currently feel (Streets-Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Figure 3-86 below shows *safety in the home during day time*. Similar to street safety, East Kimberley and Ceduna reported the highest proportions of CDC participants feeling safe in their homes during the day time (88.3 and 81.1 per cent respectively) and a much lower proportion of people feeling unsafe (3.4 and 2.6 per cent respectively). Interestingly, the Goldfields respondents reported a high proportion of participants feeling safe (almost identical for Indigenous and non-Indigenous at 71.4 and 71.7 per cent). However, compared to the other two trial sites, the Goldfields again had a higher proportion of CDC participants who reported feeling unsafe (at 11.7 per cent for non-Indigenous and 8.0 per cent for Indigenous CDC participants).

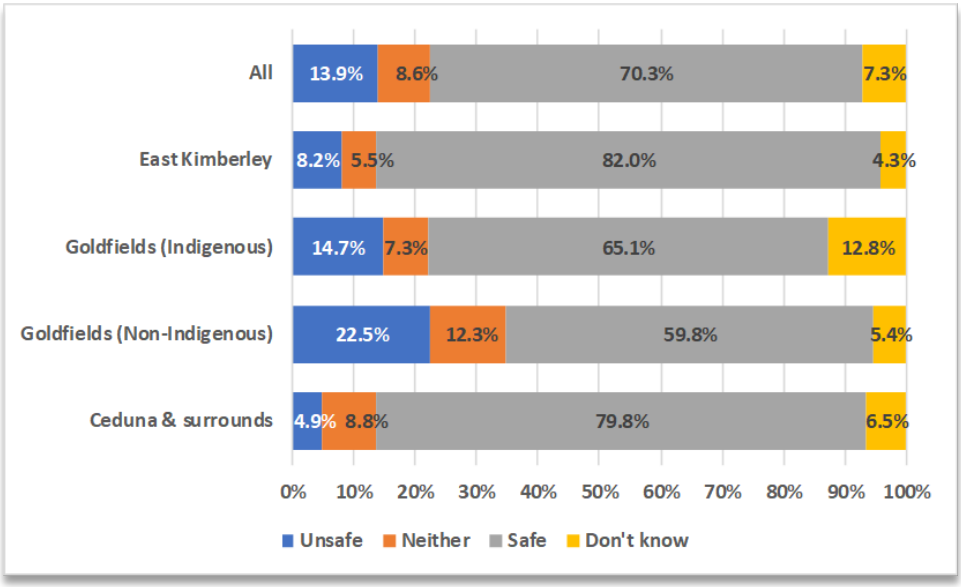
Figure 3-86: How safe do you currently feel (Home-Days), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Figure 3-87 below shows *safety in the home during night time* and allows us to examine the difference between Day and Night. This difference was not very prominent for East Kimberley and for Ceduna as shown by the modestly smaller proportion of participants who reported they felt safe at night than during day time (from 88.3 down to 82 per cent for East Kimberley and 81.1 to 79.8 per cent for Ceduna). The proportions of respondents who felt unsafe at night was much larger, but it still remained small in size (it rose from 3.4 to 8.2 per cent in East Kimberley and from 2.6 to 4.9 per cent in Ceduna).

Figure 3-87: How safe do you currently feel (Home-Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

The largest difference that emerged in the night versus day safety comparison was in the Goldfields, especially among the non-Indigenous CDC participants of whom 22.5 per cent reported feeling unsafe in the night in their homes. The suggestion is that safety is a multifaceted concept in both its causes and outcomes and cannot be easily explained by any single narrative. To sum up the evidence on current safety levels and their specifics, while the first and more general question we asked provided a picture of low levels of safety, the more specific safety questions suggested generally high levels of safety, that were also present in the night.[74]

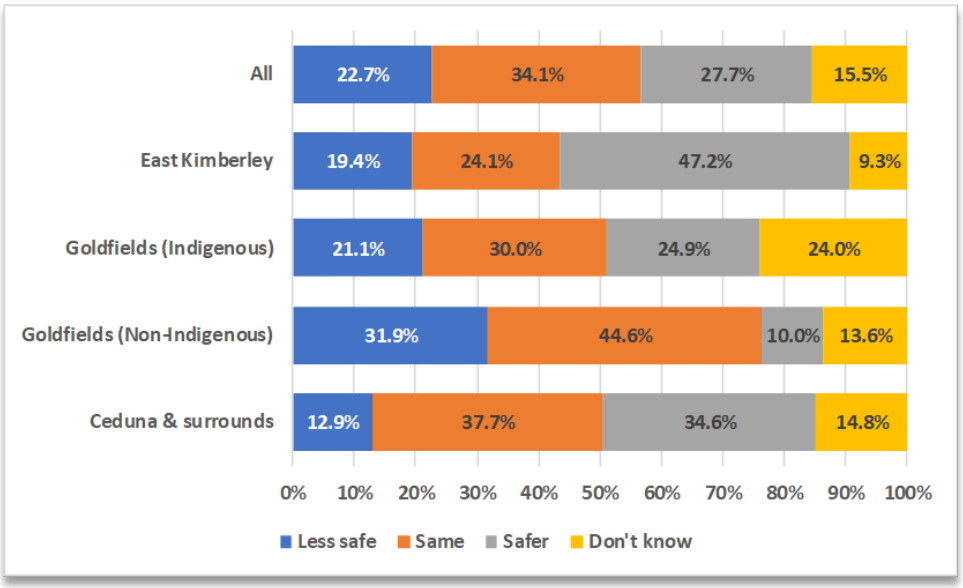
[74] We asked CDC participants how safe they are now and whether they feel safer or not since the CDC. From the answer about what safety is like now and the answer to the second question we get an idea about what safety was like before. This is evidence from a one wave data collection and is subject the usual reservations about recall bias. The longitudinal aspect of the outcomes elicited in the survey is thus limited by definition. However, a second wave that asked how safe these same people currently feel would allow a much finer analysis by looking at the differences overtime and correct for observed and unobserved heterogeneity. This is the case for most of the outcomes elicited in the survey because of the single wave of data collection. In the meantime, these is the best information that one can get given the circumstances.

3.6.4.3 Changes in safety since the introduction of the CDC

We now move to the examination of how CDC participants perceived safety to have changed since the introduction of the CDC.[75]

Figure 3-88 below shows the change in safety in the streets during day time. The aggregation in the first row (all sites) concealed strong site differences. If we calculate the simplest of all indicators of improvement by subtracting the proportion of those who felt less safe from the proportion of those who felt safer, the "net" impact of the CDC for all trial sites (top row in Figure 3-88) would be a modest 5 per cent improvement in safety.[76] The highest such improvement appeared in East Kimberley (a net of +27.8 per cent) with Ceduna following close (a net of +21.7 per cent).

Figure 3-88: Do you feel more or less safe since the introduction of the CDC (Streets-Days), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Indigenous CDC participants in the Goldfields emerged with a net improvement of +3.8 per cent followed by non-Indigenous CDC participants in the Goldfields with a perceived reduction in safety (net of -21.9 per cent) since the CDC introduction. Figure 3-88 therefore suggested large differences in the perceptions of safety in the different CDC sites.[77]

[75] We use a very similar tool for exposition, namely Figures 3-88 to 3-91 below. They are identical to Figures 3-84 to 3-87 with the only difference that they present how safety changed since the CDC introduction. The answers now are all about change and are colour coded as follows:

- "A lot less safe" and "Less safe" (blue);
- "Neither" (orange);
- "Safer" or "A lot safer" (grey); and
- With the remainder "Do not know" in yellow.

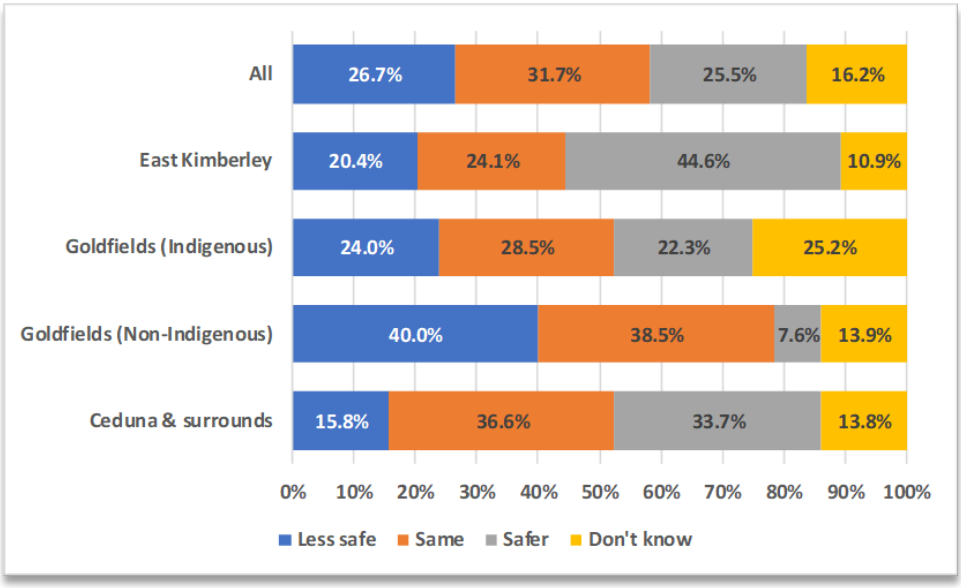
Otherwise the presentation is the same as in the previous section. The change questions are always cognitively more demanding and burdensome, which is manifested by the larger proportion of respondents picking the "Don't know" option.

[76] 27.7 per cent reported "safer" and 22.7 per cent "less safe", providing a net of 5 per cent improvement. This calculation is an oversimplification for pure illustrative purposes. All indices of this type need to make interpersonal comparisons that may be anything from the best given the evidence to totally unsuitable for the job. We do not claim that the simple indicator used here can have any more value than to provide a qualitative illustration about improvement.

[77] We note that this large "net" number of -21.9 per cent is the result of the largest proportion of CDC participants feeling less safe since the CDC (31.9 per cent) accompanied by the largest proportion who felt no change (44.6 per cent) and the smallest proportion feeling safer (only 10 per cent).

A very similar picture emerges in Figure 3-89 below about safety in the street during night time: it is just considered less safe all round at night. The reduction in safety reported by the 40 per cent of non-Indigenous CDC participants in the Goldfields is particularly large with a net deterioration of -32.4 per cent.

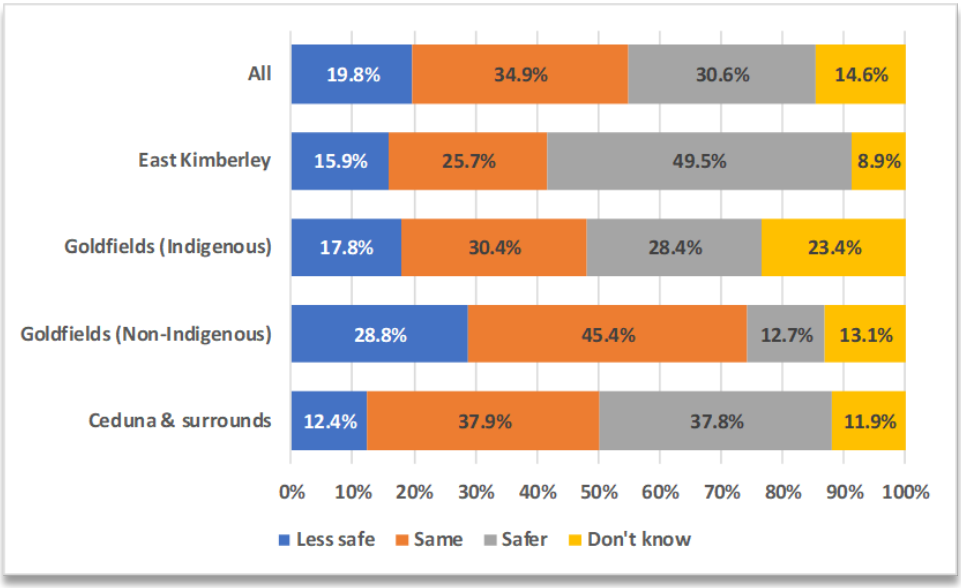
Figure 3-89: Do you feel more or less safe since the introduction of the CDC (Streets-Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Figure 3-90 shows reported safety changes in the home during day time since the introduction of the CDC. A similar pattern to that found for street safety emerged, with East Kimberley reporting the largest improvement in safety in the home during the day (49.5 per cent), with Ceduna following close with sizeable improvements. A modest improvement was reported in the Goldfields by Indigenous CDC participants and a sizeable deterioration by their non-Indigenous counterparts.

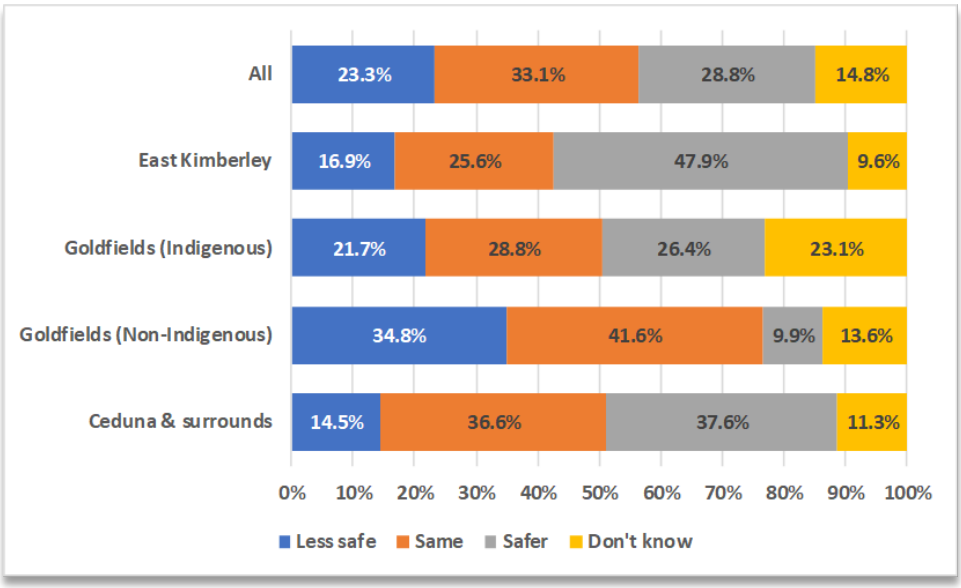
Figure 3-90: Do you feel more or less safe since the introduction of the CDC (Home-Days), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Figure 3-91 reports safety in the home during the night since the introduction of the CDC. Both East Kimberley and Ceduna CDC participants reported very similar safety changes in the night at home as they did for daytime home safety, with East Kimberley reporting more cases of improvement than Ceduna. Following the established general pattern, the Goldfields non-indigenous participants reported a net reduction in safety that was worse at night with more than one in three CDC non-indigenous participants reporting worse safety and only one in ten improved safety.

Figure 3-91: Do you feel more or less safe since the introduction of the CDC (Home-Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

3.6.4.4 Type of change in safety since the introduction of the CDC

The quantitative survey provided information for a more detailed assessment of the impact of the CDC on the safety of its participants in the areas they live. This section reports on two such investigations, both based on the capacity of the data to examine *change at the individual level*, first by combining the information on the *type of change* and second, by conducting multivariate analysis on the *type of person* who experienced different types of change.

The first investigation focused on the nature of the reported change in safety since the CDC introduction and combined it with the current safety status of individual CDC participants. Intuitively put, we asked those who reported having experienced a change for the better or for the worse, about their reported current safety status. The distinction that can be made in this context is that, from a personal point of view, change in safety does not only matter in and by itself, it also matters in regard to the person's current perceptions of safety. Specifically, this first investigation cross-analysed participants reports of current perceptions of safety with their perceptions of how their safety had changed post the CDC (did safety improve or not) with the level of current safety (is the respondent feeling safe or unsafe) *at the individual level*. This combination allowed us to examine the current safety status of individual CDC respondents alongside the change in safety they experienced since the introduction of the CDC.

Simply put, this section makes the distinction between being made safer to the degree that you feel safe and being made safer to the degree of still feeling unsafe. Similarly, one can feel less safe, but still in absolute terms report that they feel safe, which is very different from someone who reports that

they were made less safe to the degree of feeling unsafe. As the data does not provide pure longitudinal information as yet, this type of investigation can provide a second best until such data is generated.

We begin by distinguishing between those CDC participants who reported that, since the CDC introduction:

- their safety had got worse or a lot worse
- their safety had stayed the same; and
- their safety had got better or a lot better.

For each one of these three categories we then examine the individual reported current safety status, in the following three categories:

- Those who currently feel safe or very safe
- Those who currently feel neither safe nor unsafe
- Those who currently feel unsafe or very unsafe.

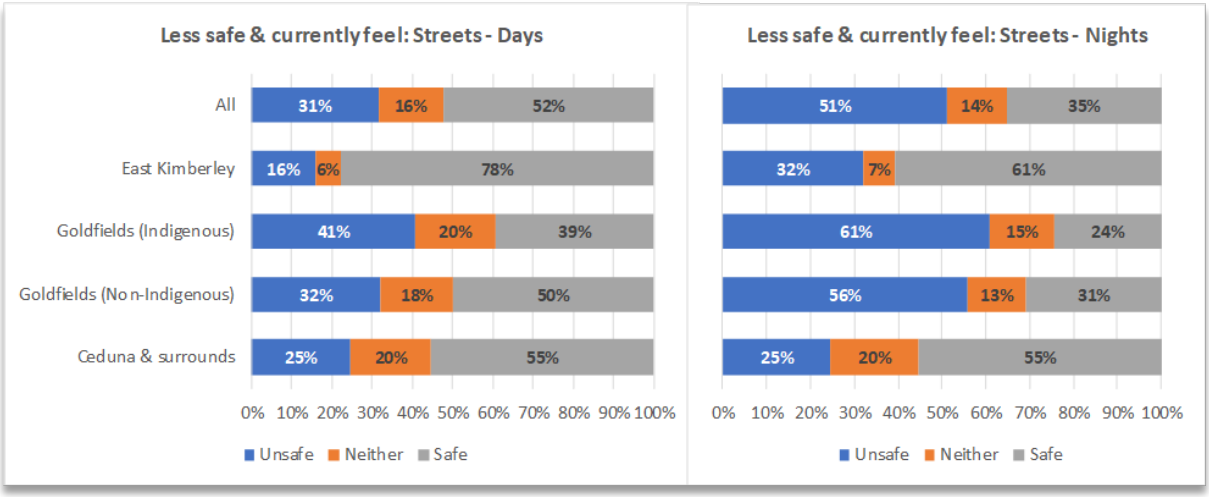
We then combine the data at the individual level and examine the four safety outcomes (Street/Home and Day/Night) for the whole CDC population and by each trial site, with Goldfields split between Indigenous and non-Indigenous CDC participants.

a) Group who reported that their safety reduced since the introduction of the CDC

This subsection explores the evidence collected for the subset of CDC participants who reported that their safety was reduced since the introduction of the CDC. Figures 3-92 and 3-93 show the current safety status of the 28 per cent of CDC participants who reported that their safety had reduced (less safe or a lot less safe) since the introduction of the CDC in any one of the four domains (street-day, streets-nights, home-day and/or home-nights).[78] Three current safety outcomes are presented, colour-coded in: blue for 'unsafe or very unsafe'; orange for 'neither safe or unsafe'; grey for 'safe or very safe'. In Figure 3-92 street safety reduction is associated with about one third of all CDC respondents feeling unsafe during day time (31.5 per cent) and more than half feeling unsafe during the night (51.1 per cent).

[78] Of the 28 per cent reporting a reduction in their safety since the CDC was introduced, those who did not report valid information for both how safe they currently feel and since the CDC was introduced were excluded from the analysis presented in the figures below. This excluded less than 1 per cent of the whole sample.

Figure 3-92: Current level of safety for those who reported that their safety was reduced since the CDC was introduced (Streets-Days; -Nights), by trial site

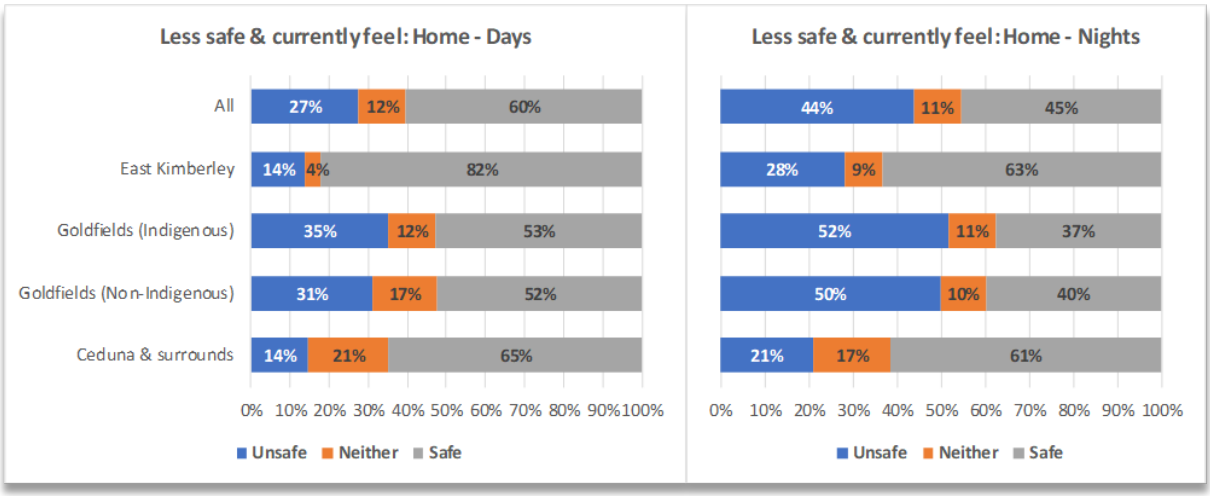


Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Sample size for Street Days Safety reduced is 1,323 and for Street Nights Safety reduced is 1,547. The sample used for this table excludes those who stated 'Do not Know' in either of the two questions and those who did not answer both questions.

The reverse proportions are reported for those who, notwithstanding their safety having become worse, still reported that they currently felt safe (52.3 per cent for day and 35.2 per cent for night safety). Only a small proportion of those who experienced a reduction in safety reported that they currently felt neither safe nor unsafe (16.2 and 13.6 per cent for day and night safety respectively). There were large differences between the three sites, the most notable one being that the reported reduction in safety in the Goldfields was associated with high levels of CDC participants feeling unsafe, more so among the non-Indigenous participants and a lot more in the night than in the day. This finding identified safety as a major concern of CDC participants in the Goldfields trial site.

Figure 3-93 presents current safety in the home for those who experienced a reduction in safety since the CDC introduction. Qualitatively, the picture of safety in the home was very similar to that in the streets, it just appeared to be that the home was overall a safer place to be than the streets. The differences by trial site followed the same pattern with the Goldfields reporting low levels of current safety and more so at night, but with differences found between Indigenous and non-Indigenous reporting.

Figure 3-93: Current level of safety for those who reported that their safety was reduced since the CDC was introduced (Home-Days; -Nights), by trial site



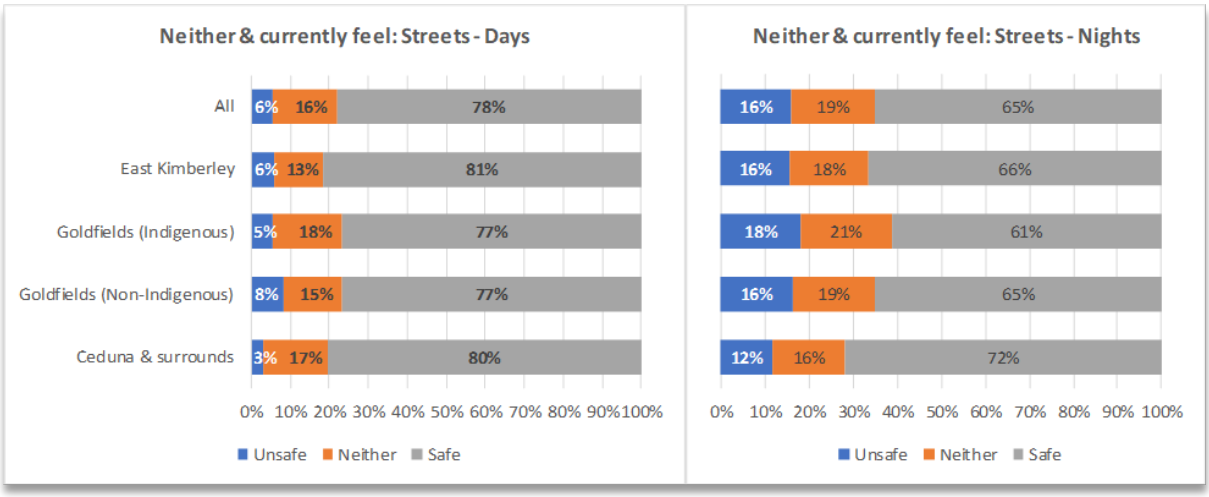
Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Sample size for Home Days Safety reduced is 1,173 and for Home Nights Safety reduced is 1,387.

The conclusion from Figure 3-92 and Figure 3-93 is that there is an identifiable sub-group among the CDC participants who have reported their safety became worse since the introduction of the CDC *and* they currently felt either unsafe or very unsafe (shown by the blue marked parts in these figures). These participants were mostly located in the Goldfields trial site, but not exclusively. Our analyses indicated that a sizeable minority of CDC participants were in a worse safety position, especially with regard to perceptions of street safety.

b) Group who reported that their safety has remained unchanged since the introduction of the CDC

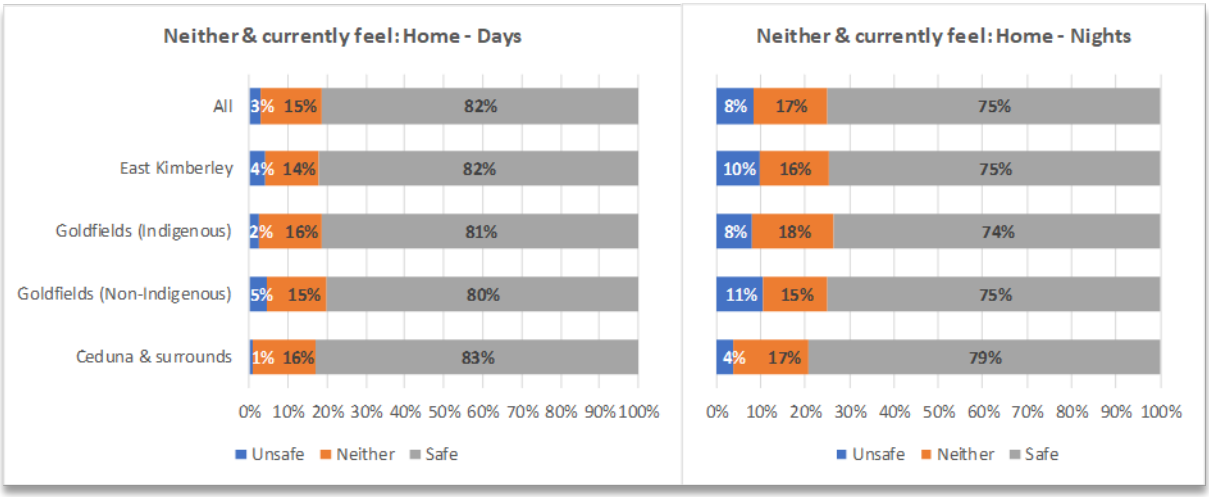
This subsection explores the evidence collected for the subset of CDC participants who reported that their safety remained unchanged since the introduction of the CDC. For those who have reported their safety on the streets and at home remained the same since the introduction of the CDC (as presented in Figure 3-94 and Figure 3-95), only very small proportions reported they currently felt unsafe (between 5 and 16 per cent for all trial sites combined). Unlike in the previous subsection Figure 3-92 and Figure 3-93), there were no major differences between the three trial sites. Night safety remained considerably lower both in the streets and the home, but in a background of high levels of overall safety, this difference was not as pronounced in the absolute numbers.

Figure 3-94: Current level of safety for those who reported that their safety was not changed since the CDC was introduced (Streets-Days; -Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Sample size for Street Days Safety remaining the same is 2,043 and for Street Nights Safety remaining the same is 1,882.

Figure 3-95: Current level of safety for those who reported that their safety was not changed since the CDC was introduced (Home-Days; -Nights), by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies. Sample size for Home Days Safety remaining the same is 2,092 and for Home Nights Safety remaining the same is 1,968.

c) Group who reported that their safety improved since the introduction of the CDC

The group of CDC participants who reported their safety had improved since the introduction of the CDC reported overwhelmingly that they currently felt safe in proportions that are close to 100 per cent, so there is little need to present the relevant figures.

We note that the group who reported improved safety are a sizeable part of the CDC participants' population. For comparability the sample sizes for deriving these statistics were: for Street Days Safety 1,617; for Street Nights Safety 1,507; for Home Days Safety 1,824; and for Home Nights Safety 1,709.

3.6.4.5 Characteristics of CDC participants who experienced change in safety since the introduction of the CDC

We conducted multivariate analysis, looking at the characteristics of those CDC participants who were more likely to report respectively that it is now less safe or safer since the introduction of the CDC. We estimated a series of models looking at each dimension of safety: In the street (day and night) and at home (day and night). In all models we controlled for CDC participants' views about their current safety.

The full results are reported in Table A 4-26 and Table A 4-27 in the appendices.

The following box identifies and quantifies the characteristics of the participants who were more likely to report that it is less safe since the CDC.

Box 3-6: Characteristics of the CDC participants who reported that it is less safe since the introduction of the CDC

These characteristics were very similar for street and home safety:

- **Males:** males were more likely to report that it was less safe in the streets (about 4 percentage points more likely than females, both for safety during the day and at night).
- **CDC participants living in the Goldfields:** CDC participants in the Goldfields were 7.2 percentage points more likely to report that it was less safe in the streets during the day than CDC participants in East Kimberley. They were 9.3 percentage points more likely to state that it was less safe during the night.
- **CDC participants living in Ceduna:** CDC participants living in Ceduna were 4.2 percentage points more likely to say that it was less safe at night but no difference was found for daytime street safety (reference category is East Kimberley).
- **Non-Indigenous CDC participants:** were 14 percentage points more likely to report it was less safe (both during the day and at night) in the streets than Indigenous CDC participants.
- **CDC participants with less experience on the CDC:** while the effect is relatively small, those who had been rolled onto the CDC more recently were more likely to state it was less safe in the streets. The probability that CDC participants reported it was less safe in the street during the day since the CDC decreased by 1.2 per cent per 10 months after being on the CDC (2 per cent in the streets at night). For instance, comparing someone who had just been triggered onto the CDC with someone who had been rolled out two years ago, the former was 2.8 per cent more likely to report it was less safe in the streets during the day (and 4.8 per cent at night) after the CDC.
- **Experienced issues with using the Card:** were 10 percentage points more likely to say it was less safe in the streets.
- **Single parents (and other types of households):** were more likely than persons living alone to find safety had worsened in the street (5 and 4.7 percentage points for day and night respectively). Couples (with or without children) did not significantly differ from people living alone in their appraisal of how safety has changed over time.
- **Those currently experiencing higher financial stress.**

- **Those who did not hold a paying job within the four weeks of the survey:** were 5.6 percentage points more likely to report safety had worsened (both during the day and night).
- **Those identified as being high/very high risk in terms of their alcohol consumption:** compared to those who were low risk, they were 7 percentage points more likely to say the streets were less safe during the day (8.2 percentage points more likely to say that streets were less safe at night).
- **Those who stated they do not drink:** compared with the low risk individuals, they were slightly more likely to report streets were less safe (2.3 and 5.1 percentage points respectively for 'during the day' and 'at night').

We conducted a similar set of estimations about those CDC participants who reported they feel safer since the introduction of the CDC. The following box identifies and quantifies the characteristics of the participants who are more likely to report it is safer now since the introduction of the CDC.

Box 3-7: Characteristics of the CDC participants who report it is safer since the introduction of the CDC (day and night)

- **Females:** Females were more likely than males to report that safety had improved both in the streets and at home (both day and night). The magnitude of the gender differences ranged from 3.3 percentage points (safety at home at night) to 4.5 percentage points (safety in the streets during the day). No evidence of interaction effects were found between trial site and gender.
- **CDC participants in East Kimberley:** compared with CDC participants in the Goldfields, CDC participants in East Kimberley were between 8.3 percentage points ('in the streets during the day') and 10 percentage points ('at home at night') more likely to report that safety had improved.
- **East Kimberley CDC participants:** were also more likely to report that safety had improved in the streets at night and at home (both day and night). The magnitude of the difference ranged from 3.9 percentage points ('in the streets at night') to 6.7 percentage points ('home at night').
- **Indigenous CDC participants:** differed greatly from non-Indigenous participants. They were about 14 percentage points more likely to report that safety had improved across all dimensions of safety.
- **Longer experience on the CDC:** the longer CDC participants had been on the CDC, the more likely they were to report improvements in safety across all dimensions.
- **CDC participants living alone or as couples (with or without children):** were more likely to report safety improvements than single parents.
- **CDC participants in receipt of DSP:** they were between 3.9 ('in the streets during the day') and 4.7 ('at home at night') percentage points more likely to report safety improvements than other benefit recipients.
- **CDC participants who experienced more financial stress in the year leading to the CDC rollout.**
- **CDC participants who had a paying job within the four weeks of the survey:** they were between 3.4 ('at home at night') and 6.6 ('in the streets during the day') percentage points more likely to report that safety had improved since the CDC compared to those who did not hold a job.

3.6.5 Children well-being

The CDC aims to reduce social harm associated with drug and alcohol misuse and problem gambling and ensuring funds are directed to meet essential needs. One outcome to measure for the assessment of the policy is the degree to which it manages to improve the welfare of the children of CDC participant families and carers.

The quantitative survey of CDC participants included a number of measures which aimed to assess the perceived impact the CDC has had on children's welfare and well-being. The survey asked CDC participants if change had been experienced since the start of the CDC across several domains—children's health, the amount of food children had access to, children's safety, school attendance, children's happiness, and children's participation in cultural and social activities. Table 3-37 shows that CDC participants were most likely to report that change had not occurred in these domains as a result of the CDC.

Table 3-40: Perceived CDC impact on children in your area (all domains), by trial site

Perceived CDC impact on children in your area: all domains								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
	N	%	N	%	N	%	N	%
Worse	6,370	**22.5**	2,333	**29.5**	3,395	**21.5**	642	**13.9**
Same	16,913	**59.7**	3,803	**48.1**	9,990	**63.1**	3,120	**67.6**
Better	5,053	**17.8**	1,767	**22.4**	2,434	**15.4**	852	**18.5**
Total	**28,336**	**100**	**7,904**	**100**	**15,819**	**100**	**4,613**	**100**

The highly aggregated numbers in the leftmost column in Table 3-40 show that 59.7 per cent of all answers reported that things were the same since the introduction of the CDC, with 22.5 per cent reporting that things got worse and 17.8 per cent reporting that things got better. There is much granularity and diversity when the three trial sites are presented separately in the rest of Table 3-40. East Kimberley showed the most polarised picture with the highest proportion of answers in the "worse" category (with an average count of 29.5 per cent) alongside the highest proportion of answers in the "better" category (with an average of 22.4 per cent). In contrast, Ceduna showed the lowest "worse" proportion of answers in all domains (13.9 per cent), the highest "same" category (67.6 per cent) and was the only trial site with a positive net change (4.6 per cent with 18.5 per cent better against 13.9 per cent worse). The Goldfields site was somewhere in the middle in making these comparisons, but we note that the diversity of responses in that trial site was very high, making these highly aggregated averages less informative.

The following two tables Table 3-41 and Table 3-42 show each of the child domains by trial site and briefly discuss their main findings. Table 3-41 shows Health, Food, Safety and School Attendance and Table 3-42 shows Happiness, Cultural Activities and Social Activities. We discuss these two tables together, beginning with the leftmost columns, which refer to the seven domains as these appear for all three trial sites together.

By a substantial margin, children's health is the domain where the least change was reported (65.2 per cent of all answers reported no change). Given the long-term nature of health changes, this difference from the other domains was not unexpected. Table 3-41 presents the four domains where

opinions as to the direction of change (positive or negative) appeared to be the least polarised, namely, Health, Food, Safety and School Attendance. Health and Food were the two domains where we saw a modestly sized net positive in the responses with more respondents in the "better" category than in the "worse" one (the difference being 1.7 and 2.6 percentage points respectively). Safety and School Attendance were the two domains where we saw a modestly sized net negative in the responses with fewer respondents in the "better" category than in the "worse" one (the difference being -5.2 and -3.3 percentage points respectively).

We continue with the leftmost columns in Table 3-41, which present the remaining three domains of Happiness, participation in Social Activities and participation in Cultural Activities. The responses to these domains were strongly more negative than positive, with a net negative of 7.1, -10.7 and -10.6 respectively. These net positive or negative estimates represented a percentage that refers to the overall population of CDC participants.

Given that, in the case of children, the views of those who experience change or those who are carers of children may be of particular interest, there can be different statistics that we may wish to use in order to assess the policy under examination.[79] As an illustration, Table A 4-28 and Table A 4-29 in the appendices highlight the differences between carers and non-carers (Table A 4-28) and CDC participants who are single or live as a couple (Table A 4-28) with regards to how they perceive things have changed for the children in the community.

The next step was to examine the variation between the three trial sites for each individual domain of potential impact of the CDC. These are presented in the right-hand side columns of Table 3-41 and Table 3-42.

[79] One can view these percentages and their differences as a proportion of the total of CDC participants, in which case there will be instances where the differences in percentages may appear to be small. For example, the net positive response in Food amounted to only 2.6 per cent of the relevant population, which in our sample would amount to a net difference of 106 people. The net negative response for School Attendance would be similar, at -3.3 per cent amounting to 131 people. The net negative response to Cultural Activities would, at -10.7 per cent, amount to 429 people. If we wish to know the headcount of people of one or the other opinion on the CDC, this would be the most appropriate count. Such a count would include all those who responded that they see no change. If, however, we want to examine where change is happening and its direction, we may wish to focus only on those who report change and leave the rest out of our calculations. In the case of changes to children's welfare there may be an added reason for such an exercise, namely that many people who do not have any caring responsibilities for children and are not impacted on this front by the policy may not have as strong, informed or relevant views for informing policy. In practical terms, using this alternative way to calculate the net difference reported since the CDC was introduced, would make a fair difference. Following this logic, the percentages for Food, School and Cultural Activities would increase (from 2.6 to 6.2; -3.3 to -8.3; and -10.7 to -27, respectively). These would be the percentage of net change within the group that experienced any change. In concrete number terms this type of estimate would suggest that the people who experienced change in Food, School Attendance, and Cultural Activities were split between Worse/Better by 46.9/53.1, 54.2/45.9 and 63.5/36.5, respectively. Similarly, we may wish to focus on the subgroup of main carers when we examine the data.

Table 3-41: Perceived CDC impact on children in your area (health, food, safety, school attendance), by trial site

Perceived changes for children in your area since the introduction of the CDC								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
Perceived impact on	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
HEALTH:								
Less healthy	666	**16.5**	279	**24.8**	311	**13.9**	76	**11.6**
About the same	2,626	**65.2**	573	**51.0**	1,591	**70.8**	462	**70.2**
Healthier	735	**18.2**	271	**24.2**	344	**15.3**	120	**18.2**
Total responses	**4,026**	**100**	**1,123**	**100**	**2,245**	**100**	**658**	**100**
FOOD:								
Less food	801	**19.7**	296	**25.9**	426	**18.8**	79	**12.0**
About the same	2,365	**58.1**	515	**45.1**	1,409	**62.1**	441	**66.5**
More food	907	**22.3**	330	**29.0**	434	**19.1**	143	**21.5**
Total responses	**4,073**	**100**	**1,141**	**100**	**2,268**	**100**	**664**	**100**
SAFETY:								
Less safe	955	**23.3**	316	**27.8**	545	**23.7**	94	**14.3**
About the same	2,396	**58.6**	529	**46.5**	1,429	**62.1**	438	**66.9**
Safer	741	**18.1**	292	**25.7**	326	**14.2**	123	**18.8**
Total responses	**4,092**	**100**	**1,137**	**100**	**2,300**	**100**	**655**	**100**
SCHOOL ATTENDANCE:								
Going to school less	858	**21.4**	352	**31.0**	423	**18.8**	84	**13.3**
About the same	2,430	**60.5**	542	**47.7**	1,476	**65.7**	412	**65.1**
Going to school more	727	**18.1**	243	**21.4**	348	**15.5**	137	**21.6**
Total responses	**4,015**	**100**	**1,136**	**100**	**2,247**	**100**	**633**	**100**
Total respondents	**6,039**		**1,597**		**3,503**		**939**	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Table 3-42: Perceived CDC impact on children in your area (happiness, cultural activities, social activities), by trial site

Perceived changes for children in your area since the introduction of the CDC								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
Perceived impact on	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
HAPPINESS:								
Less happy	998	**24.6**	358	**31.7**	552	24.5	88	13.0
About the same	2,353	**57.9**	523	**46.3**	1,384	61.3	446	66.3
Happier	710	**17.5**	249	**22.0**	322	14.3	139	20.7
Total responses	**4,061**	**100**	**1,131**	**100**	**2,258**	**100**	**673**	**100**
CULTURAL ACTIVITIES:								
Fewer activities	1,009	**25.1**	361	**32.3**	549	**24.5**	98	**14.9**
About the same	2,435	**60.5**	594	**53.0**	1,380	**61.4**	462	**69.9**
More activities	580	**14.4**	164	**14.6**	316	**14.1**	100	**15.2**
Total responses	**4,024**	**100**	**1,119**	**100**	**2,245**	**100**	**660**	**100**
SOCIAL ACTIVITIES:								
Fewer activities	1,083	**26.8**	371	**33.2**	589	**26.1**	122	**18.2**
About the same	2,308	**57.1**	528	**47.3**	1,321	**58.6**	459	**68.3**
More activities	653	**16.2**	217	**19.5**	346	**15.3**	90	**13.4**
Total responses	**4,044**	**100**	**1,117**	**100**	**2,256**	**100**	**671**	**100**
Total respondents	**6,039**		**1,597**		**3,503**		**939**	

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

The first major observation was that change in children's welfare was reported to be the strongest in East Kimberley than in the Goldfields or Ceduna. This holds for all domains. In all domains the proportion of those who reported no change is approximately 20 per cent higher in the Goldfields and Ceduna than in East Kimberley. The direction of the change is very diverse and needs further detailed examination.

East Kimberley presented a particularly polarised picture with no consensus on how children's welfare has been changing since the introduction of the CDC. For example, 29 per cent of all respondents reported that children have access to more food after the introduction of the CDC, but also 26 per cent reported the opposite, with only 45 per cent reporting no change. Similarly, 28 per cent reported that children are less safe and 25 per cent that they are less healthy, while 26 per cent reported that that they are safer and 24 per cent that they are healthier. In the remaining domains of School Attendance, Happiness, Cultural Activities and Social Activities, the CDC is reported to have made things worse by 31 per cent, 32 per cent, 32 per cent and 33 per cent of all CDC participants respectively. A sizeable minority of 21 per cent, 22 per cent, 15 per cent and 20 per cent respectively, reported an improvement.

A different picture emerged from the Ceduna data, with two main findings. First, a lot less change was reported, and it was mostly for the better. Second, with the exception of participation in Social and Cultural Activities, Ceduna CDC participants were considerably more likely to report a positive than a

negative change in children's welfare after the introduction of the CDC. Reporting on Cultural Activities was evenly balanced (15 per cent reported that things got better and 15 per cent that things got worse) while participation in Social Activities was reported to have got worse by 18 per cent and better by 13 per cent of CDC participants.

Finally, the Goldfields picture in the tables above concealed very different reporting within the trial site. Health, Food, Safety and Schooling of children was reported by Indigenous CDC participants to have improved considerably since the introduction of the CDC. In contrast, non-Indigenous CDC participants in the Goldfields painted a very negative overall picture. They reported, in relatively large numbers, a deterioration and, in very small numbers, an improvement. The differences between Indigenous and non-Indigenous CDC participants within the Goldfields trial site was large and not clearly regular. In total for all domains, Indigenous CDC participants reported 22 per cent positively and 20 per cent negatively, compared with 8 per cent and 23 per cent respectively by non-Indigenous CDC participants. These differences are presented in Table 3-43 below.

Table 3-43: Perceived CDC impact on children in your area, all domains, Goldfields trial site

Perceived CDC impact on children in your area, all domains			
		Goldfields	
		Indigenous	Non-Indigenous
Change in:		%	%
Health	Less healthy	14.3	13.4
	About the same	63.1	79.0
	Healthier	22.6	7.7
Food	Less food	18.0	19.6
	About the same	56.4	68.1
	More food	25.6	12.3
Safety	Less safe	18.0	29.5
	About the same	60.1	64.2
	Safer	21.9	6.3
Going to school	More	18.0	19.7
	About the same	58.7	72.9
	Less	23.3	7.5
Happiness	Less happy	23.8	25.2
	About the same	55.1	67.9
	Happier	21.1	6.9
Cultural activities	Fewer activities	24.2	24.8
	About the same	54.9	68.5
	More activities	20.9	6.7
Social activities	Fewer activities	24.5	27.8
	About the same	54.7	62.7
	More activities	20.8	9.5

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.
Note: Each domain for Indigenous and for non-Indigenous adds up to 100 per cent.

The quantitative survey also included further and broader information that could be indirectly related to the welfare of children and the family. This included the question "Since being on the CDC, how have the following things changed for you?" which referred to the capacity of the CDC participants to manage financially and it asked explicitly about "Looking after family obligations". Responses were 35.5 per cent "Harder", 38 per cent "About the same" and 12.1 per cent "Easier". The main variation by trial site was in the Goldfields where there were above average negative responses (40 per cent "Harder") and below average positive responses (9 per cent "Easier"). This question provided an indirect indication that the CDC may be introducing new financial hurdles to its participants in a way that impacted on the welfare of children.

Finally, CDC participants responding to the survey were asked whether the CDC had led to any improvements for themselves and their family. Overall, 45 per cent of CDC participants indicated that the CDC had improved things for themselves and their family (either sometimes, most of the time or all of the time). The most prevalent reporting of improvements was among CDC participants in Ceduna

at 57 per cent, followed by East Kimberley at 50 per cent. The lowest reported improvements were in the Goldfields at 40 per cent. The detailed analysis of these survey instruments is available in the next section.

Further, unstructured information was provided through the survey's free text boxes which provide insights on several possible impacts of the CDC relating directly or indirectly to the welfare of children. Although evidence on these impacts cannot be usefully quantified in percentage terms, it is useful for setting the right context. The most commonly suggested positive impact of the CDC was that it increased the amount of money left over for putting food on the table and the availability of money to do family activities at weekends. At the same time, the most commonly suggested negative impact of the CDC was that, in its effort to take cash away from harmful activities, it also took cash away from participants performing their parental roles. In circumstances of an overall low income, restrictions on cash flow were reported by some survey respondents who wrote in the survey's free text boxes. Such cash flow restrictions were reported to be acting as a hurdle regarding the need to always find the lowest cost avenue for family spending. This finding provides a powerful context for the interpretation of the negative impact of the CDC on both social and cultural activities of children, which was similarly reported across all trial sites.

3.7 Attitudes towards the Cashless Debit Card

3.7.1 Introductory comments about the elicitation of CDC participants' attitude towards the Card

The survey allows CDC participants' to express their feelings about being on the CDC, beyond the more objective outcomes. This set of questions provide 'large-number' supporting information to the more granular qualitative study of CDC participants' views about the Card. They give us some insights as to the degree to which CDC participants individually support the Card, independently from whether they report improvements in their situation based on the other (more objective) outcomes. It also gives insights about areas of the policy that could be improved so as to gain wider support among those who are most affected by the policy.

Getting a grasp of people's feelings about being on the Card and of the practical issues they may encounter while using the Card is crucial in assessing the CDC policy. It relates to a dimension of the 'success' of public policies which goes beyond the traditional assessment of whether their objectives are being fulfilled (effectiveness) and their cost-efficiency. The relevant literature on Public Policy identifies this dimension as 'Legitimacy' (see, for instance, Peters, 1986[80]; Wallner, 2008[81]). It stresses the importance of engaging stakeholders and gaining public support, especially of those most affected by a policy change. It argues that 'legitimacy' is instrumental in the long run performance of the policy. Lack of community support may compromise the long run goals of the policy. As an illustration of the importance of this dimension, Wallner (2008) compares an educational reform that was undertaken in two provinces of Canada, Alberta and Ontario. While the policy was identical in each province and succeeded in Alberta, it failed in Ontario due to the loss of support from stakeholders and the public. Lack of individual support for the CDC policy may impact directly on CDC participants' well-being as they may feel targeted and resentful. It may also encourage circumventing behaviours aimed at remedying what they consider as illegitimate restrictions imposed by the CDC. These types of behaviour would reduce the potential positive impact of the policy.

The survey contains a set of quantitative instruments which elicit information on CDC participants' feeling about being on the Card (see question F1 in the survey). They are asked whether they ever feel that:

(i) they are discriminated against;
(ii) embarrassed to be on the Card; and
(iii) it is not fair for them to be on the Card.

In addition, this survey instrument includes more positive statements, asking whether CDC participants ever feel that:

(iv) they are more in control of their life since being on the CDC;
(v) things are better for them and their family;
(vi) they have more control over their money; and
(vii) they feel safer on the CDC.

[80] Peters, B.G., (1986), *American Public Policy: Promise and Performance,* 2nd Ed., Chatham, N.J.: Chatham House Publishers, Inc.
[81] Wallner, J., (2008), "Legitimacy and public policy: Seeing beyond effectiveness, efficiency and performance", *The Policy Studies Journal,* vol 36(3), pp. 421-443.

For all these dimensions we ask CDC participants whether they feel this way all the time, most of the time, sometimes, hardly ever, or, never.

The survey also asks CDC participants whether they have (or still are) experiencing issues using the Card. We provided text boxes in order to allow them to specify what those issues were. Since the CDC participants typically make up the most vulnerable group in the trial sites communities, issues experienced with the Card (even small ones) may have dramatic consequences in terms of CDC participants' ability to fulfil their financial responsibilities and afford the bare necessities. Experiencing such issues and seeing them recurring is likely to contribute greatly to one's negative feeling about being on the Card. An illustration of such issues encountered by CDC participants is that of the misalignment between the date when government benefits become available on their Card account and the dates of some direct debit expenses (anecdotal evidence gathered during fieldwork). Some of these discrepancies resulted in fees being charged to the CDC participants[82].

In the subsections that follow, we start by looking at the proportion of CDC participants who stated that they experienced issues using the Card. We then exploit the free text information in order to highlight the main issues encountered by the CDC participants as they expressed it. Using a subset of the F1 survey questions mentioned above, we then look at the extent to which the CDC participants feel that they have gained more (or less) control over their lives (or money) since the CDC rollout.

We then analyse CDC participants' responses to the survey instruments aimed at eliciting their feelings about being on the Card in their totality. We identify the characteristics of CDC participants who express negative/positive feelings about being on the Card. Specifically, we look at the extent to which CDC participants may feel stigmatised and embarrassed to be on the Card. Given the observation we make about CDC participants' feelings about being on the Card, we then look at whether the answers to these questions may have something to do with how well people feel they are doing on the CDC. In other words, we look at whether positive/negative feelings towards being on the CDC relate to CDC participants who also reported that the CDC has positively impacted their life outcomes or not.

Finally, we look at the extent to which CDC participants would like to either remain on the Card as it is currently set up; or remain on the Card with a different percentage of their benefits placed on the Card; or leave the Card altogether. We look at the characteristics of those who express the wish to stay on the Card versus those who want to leave.

[82] At the time of this report, DSS has informed us that such issues have been addressed.

3.7.2 Practical aspects of the Cashless Debit Card: issues encountered

3.7.2.1 Reported problems using the Card: quantitative evidence

The quantitative survey of CDC participants allowed us to quantify the proportion of survey respondents who reported experiencing problems using their Card. The question "Have you had any problems using your Cashless Debit Card?" was asked in the survey section that was "About Money" and the answers are presented in Table 3-40. Overall, 57 per cent of all survey respondents said that they had had no problems using the Card and 37 per cent that they had experienced problems. The incidence differed by trial site, with a yes/no split of 75/21 per cent in East Kimberley, 51/43 per cent in the Goldfields and 50/42 per cent in Ceduna and surrounds.

Table 3-44: Problems using the Card, by trial site

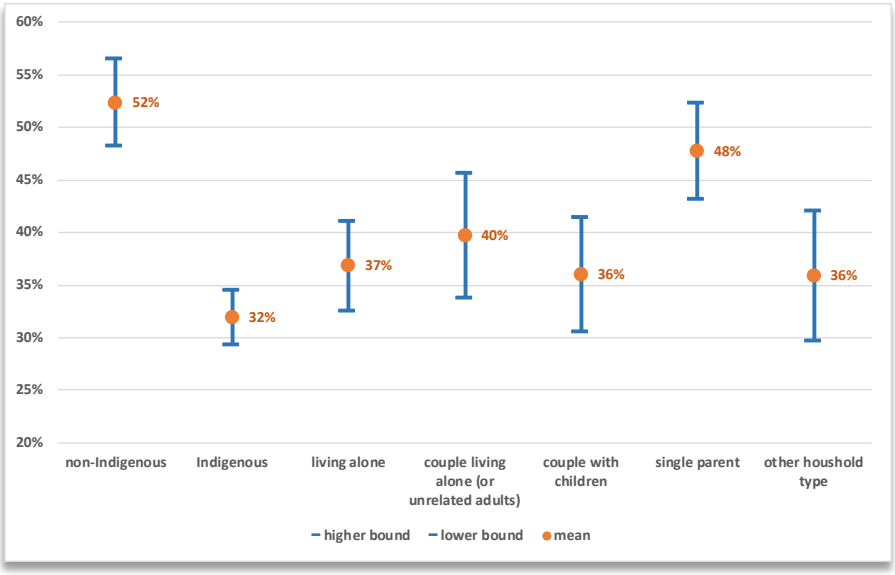
Problems with using the card								
	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
	N	%	N	%	N	%	N	%
No	3,446	**57**	1,204	**75**	1,776	**51**	466	**50**
Yes	2,230	**37**	342	**21**	1,492	**43**	395	**42**
Missing	349	**6**	38	**2**	235	**7**	76	**8**
Spoilt	14	**0**	13	**1**	0	**0**	2	**0**
Total	**6,039**	**100**	**1,597**	**100**	**3,503**	**100**	**939**	**100**

Note: Due to the use of population weighted data and rounding, the sum of frequencies and percentages may not always coincide with the figures displayed in the 'Total' row.

Figure 3-96 shows the mean proportion of people reporting that they had experienced problems with the use of their Card, first by Indigenous status and second by family and household type, for all trial sites.[83] The proportion of non-Indigenous CDC participants who reported having had problems using their Card was significantly larger than for Indigenous CDC participants (52 compared to 32 per cent). With the exception of single parents (48 per cent of whom reported having had problems with the use of their Card), all other types of family/household reported a proportion of 37 per cent.

[83] For each sub-group of CDC participants, Figure 3-96 also displays the 95 per cent confidence intervals around each mean.

Figure 3-96: Proportion of CDC participants reporting having at least one problem with the Card



3.7.2.2 Types of problems reported with the Card encountered by the CDC participants

Through the use of free text entries, the quantitative survey allowed CDC participants to elaborate further than what is reported in Table 3-44 on specific problems they had experienced with both the use of their Card and the CDC overall. Table 3-45 below lists the problems mentioned by CDC participants in any of the five free-text boxes by broad categories from the most to the least common problem.[84] The most common problem (identified by 41 per cent of those who mentioned a problem) related to the proportion of income support payments placed in the participant's normal bank account. The second most commonly reported problem (30 per cent) was that the Card was too limited in where and how participants could use it. Other problems included budgeting (28 per cent), money transfers (26 per cent), being excluded from the cash economy (23 per cent), the inability to purchase items online (15 per cent of respondents), and problems with using the Card to pay bills/utilities (15 per cent). It is noted that all of these problems were similarly reported and discussed at length in the qualitative interviews.

[84] Table 3-45 was constructed using the answers in all of the free text boxes in the survey of CDC participants. Using the field 'Not enough cash component' as an example, every time a survey respondent mentioned in a free text box that they thought there was not enough of a cash component or that they did not have enough cash, the field 'Not enough cash component' was coded as a Yes. Where there was more than one mention of cash, or cash was mentioned in more than one box the field was still coded as a Yes. Where there was no mention of cash in any of the free text boxes, the field 'Not enough cash component' was coded as a No. Thus, for the field of 'Not enough cash component' there were 1,522 people who mentioned cash at least once out of the total 3,684 respondents who mentioned at least one of the problems included in the table. In total, Table 3-45 reports the composition of 8,627 instances where a problem was mentioned (the sum of the leftmost column of numbers (starting from 1,522 and finishing with 187), suggesting that on average each person who has written in a free text box mentioned 2.34 problems. The problems have been ordered in the order of their frequency starting from the most common and finishing with the least common.

Table 3-45: Specifically mentioned problems about the use of the Card and with the CDC overall (survey free text boxes), by trial site

Free text boxes: problems mentioned about the Card and the CDC overall	All sites		East Kimberley		Goldfields		Ceduna & surrounds	
	N	%	N	%	N	%	N	%
Not enough cash component	1,522	**41**	358	**44**	1,008	**43**	157	**31**
Limited where/how the card can be used	1,095	**30**	200	**25**	745	**32**	150	**29**
Budgeting; saving; couples having to cope with 2 cards; used to using cash; families used to pool income but no longer possible	1,019	**28**	225	**28**	666	**28**	127	**25**
Issue with transfer limits; time taken to do transfers; transfer system faults	969	**26**	155	**19**	677	**29**	138	**27**
Being excluded from the cash economy (impacting ability to pay for school events; kids' activities; emergencies; choices of where to buy	845	**23**	177	**22**	581	**25**	86	**17**
Being excluded from buying on-line (second hand or cheap goods via Facebook, Gumtree)	544	**15**	92	**11**	357	**15**	94	**18**
Paying bills; utilities; insurance	558	**15**	41	**5**	458	**19**	59	**11**
Paying rent or mortgage	442	**12**	36	**5**	358	**15**	48	**9**
Money inexplicably taken out; unable to obtain explanations; transaction errors	285	**8**	80	**10**	120	**5**	85	**17**
Card being declined; no means to pay when eftpos not available	300	**8**	56	**7**	183	**8**	60	**12**
Getting or paying back loans, debts, fines	267	**7**	62	**8**	184	**8**	21	**4**
Paying for travel	200	**5**	50	**6**	130	**5**	21	**4**
Worsened/same crime problems	175	**5**	38	**5**	123	**5**	15	**3**
Worsened or same humbugging & 'gaming the system' issues	118	**3**	24	**3**	84	**4**	10	**2**
Losing the card or forgetting pin numbers	96	**3**	26	**3**	42	**2**	28	**5**
Worsened or same alcohol problems	95	**3**	19	**2**	64	**3**	12	**2**
Worsened or same drug problems	79	**2**	4	**1**	62	**3**	14	**3**
Worsened or same gambling problems	18	**0**	9	**1**	3	**0**	7	**1**
Number who mentioned at least one problem in the free text boxes (N)	**3,684**		**810**		**2361**		**512**	

Note: Percentages add to more than 100 as respondents were allowed to report multiple problems. For the same reason, total observations for all CDC participants are fewer than the total number of responses, for example, 3,684 respondents reported a total of 8,627 problems.

3.7.3 Feelings of control over one's life and money

The quantitative survey asked CDC participants whether they felt more in control of their lives and their money since the rollout of the CDC.

3.7.3.1 Control over life

Overall, Table 3-46 shows that a small majority of CDC participants (51 per cent) reported that they 'never' or 'hardly ever' felt more in control of their lives since the introduction of the CDC. In contrast a large minority (42 per cent) reported that they 'sometimes', 'most of the time' and 'all of the time' felt more in control of their lives since the CDC. Table 3-46 shows a considerable difference between Indigenous and non-Indigenous CDC participants, with Indigenous participants reporting substantially higher gains in the control they felt over their lives than non-Indigenous CDC participants. We did not detect a difference between men and women.

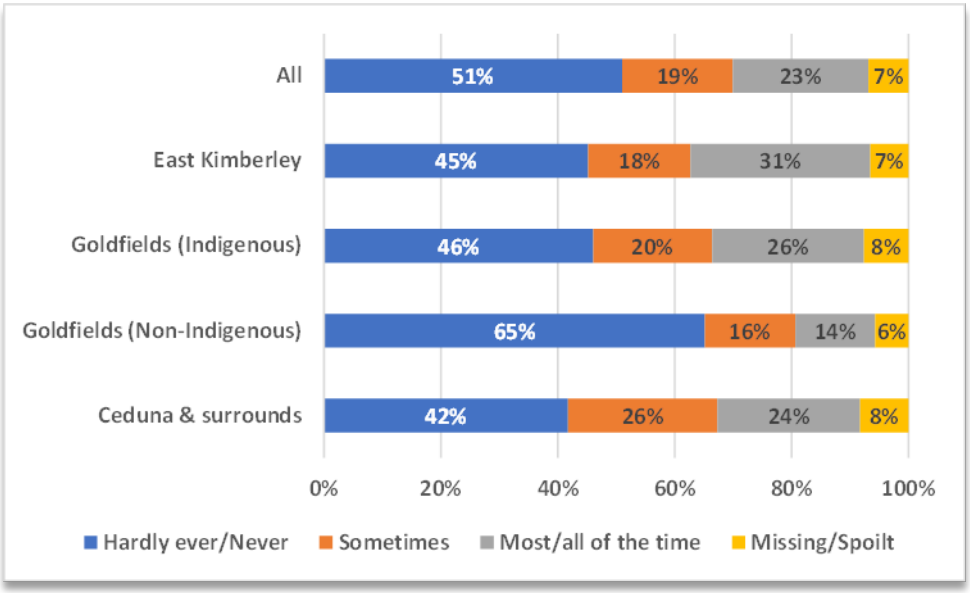
Table 3-46: Being on the Card, how often do you feel more in control of your life, by Indigenous status and gender

Being on the card, how often feel more in control of life…										
	All		Indigenous		Non-Indigenous		Male		Female	
	N	%	N	%	N	%	N	%	N	%
Never	2,277	**38**	1,269	**33**	1,008	**47**	944	**36**	1,333	**39**
Hardly ever	803	**13**	444	**11**	359	**17**	370	**14**	429	**12**
Sometimes	1,143	**19**	829	**21**	314	**15**	484	**19**	660	**19**
Most of the time	488	**8**	337	**9**	151	**7**	205	**8**	283	**8**
All the time	914	**15**	732	**19**	181	**8**	457	**18**	457	**13**
Missing	380	**6**	261	**7**	120	**6**	116	**4**	265	**8**
Spoilt	34	**1**	26	**1**	7	**0**	13	**1**	20	**1**
Total (N)	**6,039**	**100**	**3,898**	**100**	**2,141**	**100**	**2,589**	**100**	**3,450**	**100**

As we show below, there were large differences in opinion about changes of control over life due to the CDC, clearly visible by location and by other personal characteristics and circumstances. For ease of illustration and discussion, Figure 3-97 and all similar figures in this section combine the categories 'never' and 'hardly ever' and the categories 'most of the time' and 'all of the time'. Figure 3-97 below shows that negative feelings about reduced control due to the CDC were more prevalent among the non-Indigenous CDC participants in the Goldfields (65 per cent) than any other CDC participants. In comparison, Indigenous Goldfields participants and those in East Kimberley and Ceduna were less likely to report having reduced control (46 per cent, 45 per cent and 42 per cent respectively).

Among the Indigenous CDC participants in all three trial sites we saw an approximate half/half split in reporting more or less control of one's life if we count the response 'sometimes' as indicating that CDC participants feel more in control (49 against 45 per cent in East Kimberley, 46 against 46 per cent in the Goldfields and 50 against 42 per cent in Ceduna). A very different split of one third/two thirds between more (30 per cent) or less (65 per cent) control was found among the non-Indigenous CDC participants in the Goldfields.

Figure 3-97: Being on the Card, how often do you feel more in control of your life, by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies

3.7.3.2 Control over money

A similar picture emerged when we looked at the question of whether CDC participants felt more in control of money since the introduction of the CDC. For the whole of the population, Table 3-47 shows that overall, 55 per cent of CDC participants reported less control ('never' or 'hardly ever') and 41 per cent reported more control over their money since the introduction of the CDC (sometimes', 'most of the times' and 'all of the times'). As with life control, the non-Indigenous CDC participants reported far less control (68 per cent reported 'never' or 'hardly ever') than more control (27 per cent reported 'sometimes', 'most of the times' and 'all of the times'), with an almost equal split among the Indigenous CDC participants (48 per cent less and 47 per cent more control). There was no discernible difference between what men and women reported.

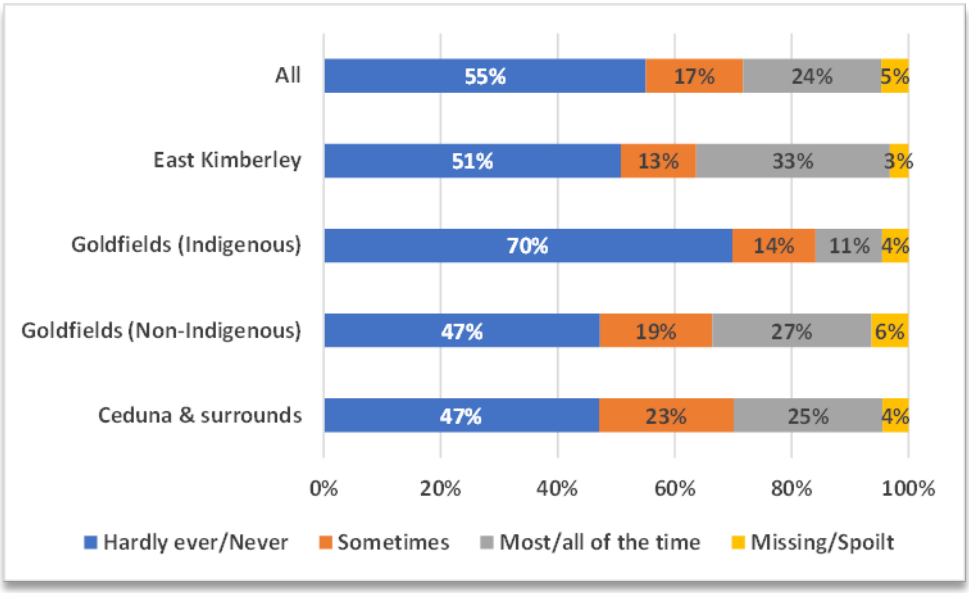
Table 3-47: Being on the Card, how often do you feel more in control of your money, by Indigenous status and gender

Being on the card, how often feel more in control of money…	All		Indigenous		Non-Indigenous		Male		Female	
	N	%	N	%	N	%	N	%	N	%
Never	2,583	**43**	1,431	**37**	1,152	**54**	1,082	**42**	1,501	**44**
Hardly ever	744	**12**	434	**11**	310	**14**	334	**13**	410	**12**
Sometimes	1,002	**17**	713	**18**	289	**13**	415	**16**	587	**17**
Most of the time	419	**7**	305	**8**	114	**5**	192	**7**	227	**7**
All the time	1,012	**17**	828	**21**	183	**9**	463	**18**	549	**16**
Missing	262	**4**	169	**4**	93	**4**	100	**4**	161	**5**
Spoilt	17	**0**	17	**0**	0	**0**	3	**0**	14	**0**
Total (N)	**6,039**	**100**	**3,898**	**100**	**2,141**	**100**	**2,589**	**100**	**3,450**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

Figure 3-98 below confirms the differences between trial sites. The difference between the non-Indigenous CDC participants who reported more or less control over their money was clearly apparent in the Goldfields compared to anywhere else. Among the Indigenous CDC participants in the Goldfields and the whole of the East Kimberley and Ceduna populations, the split was around half/half, as it was in the case for life control.

Figure 3-98: Being on the Card, how often do you feel more in control of your money, by trial site



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

While the interpretation of control over one's life is more general than control over one's money, the two indicators do not differ greatly from one another.

3.7.3.3 Who reported they feel more in control since the introduction of the CDC?

We used multivariate regression to estimate the most likely individual characteristics of CDC participants who reported their control over their life and their control over their money improved with the introduction of the CDC. We estimated one model for control over life (Box 3-8) and one for control over money (Box 3-9). Each model examined a large number of individual characteristics and circumstances, including age, gender, location, type of income support payment, household type. The tables of results are available in the appendices, Table A 4-30 and Table A 4-31. The following boxes highlight the main findings from the multivariate analysis.

Box 3-8: Who is more likely to report feeling more in control over their life since being on the CDC?

A CDC participant who reported they felt more in control of their life since the introduction of the CDC was:

- more likely to be in Ceduna and surrounds (5.5 percentage points larger probability of feeling more in control over their lives than CDC participants from the East Kimberley, which was the reference category)[85];
- more likely to be an Indigenous CDC participant (11 percentage points more likely to report feeling more control over their lives compared to non-Indigenous CDC participants);
- more likely to be in receipt of DSP payments (5.3 percentage points more likely to report feeling more control over their lives than CDC participants on other benefits);
- more likely to have been worse off financially before the CDC: a one percentage point higher level of financial stress prior to the CDC (based on the index of financial stress) was associated with a 2.1 per cent higher probability of reporting feeling more control over their lives;
- more likely to be better off financially now: a higher level of current financial stress was associated with a 2.2 per cent lower probability that the CDC participants were more in control of their lives.
- Age and length of time on the CDC did not seem to be associated with reported feelings of having more control over their lives.

Once we controlled for location, Indigenous status, pre-CDC and current financial status and support status, some of the common indicators like age and time on the CDC appeared to not be associated with reported feelings of control.

We conducted the same type of multivariate analysis as in Box 3-8 above on CDC participants who felt more in control over their money since being on the CDC. Box 3-9 sums up our findings on control over one's money, which were qualitatively similar to the findings on control over one's life, with two possible differences. First, the negative attitudes reporting loss of control appear to be stronger over money control than they are over life control. Second, the finding that DSP recipients were more likely to report increased control over their life, does not apply to control over one's money: DSP recipients were not more likely to report improved control over their money.

[85] However, once we control for CDC participants' financial situation pre- and post-CDC, no significant differences across sites were detected any longer. This suggests that the effect associated with Ceduna was due to variation in the composition of the CDC participants with regards to financial situation.

Box 3-9: Who is more likely to report feeling more in control over their money since being on the CDC?

A CDC participant who reported they felt more in control of their money since the introduction of the CDC was:

- more likely to be an Indigenous CDC participant (13 percentage points more likely to report gaining more control over money since being on the CDC compared to non-Indigenous CDC participants);
- more likely to be in a couple with children relationship (5.6 percentage points more likely to state they had improved control over money compared to people living alone);
- more likely to be living with others (6.7 percentage points more likely to state improved control over money compared to people living alone);
- more likely to have been worse off financially before the CDC (a one percentage point higher level of financial stress before the CDC was associated with a 2.2 per cent higher probability of improved control over money);
- more likely to be better off financially now: a higher level of current financial stress was associated with a 2.5 per cent lower probability that the CDC participants have more control over their money.
- Age and length of time on the CDC did not seem to affect CDC participants' feelings of having control over their money.

Note: After controlling for the demographic makeup of the trial sites, we do not find significant differences across sites with respect to the probability that CDC participants reporting that they have now more control over their money. DSP recipients are not more likely to report improved control over their money in spite of being more likely to report increased control over their life.

Finally, we note a commonality in one finding for both types of control. Namely, those who started from a less favourable financial position before the CDC, appeared to have an improved sense of control over both money and life.[86] The implication of this finding is that this beneficial outcome of the policy (i.e. experiencing increased control) impacted more on those who were more in need of it when they were introduced to the CDC. At the same time, we found those who were currently in a favourable financial position, appeared to also have reported higher levels of improvement in the way they control their money and their life. Put together, these two findings suggest that the policy is having a "levelling up" impact as manifested by those who were in a bad place prior to the CDC, but is not having a "levelling down" impact as manifested by those who are currently in a good place.

[86] As this is another continuous indicator variable, the strength of this improvement can best be understood by examining the Quantitative Supplementary Report's multivariate regression results.

3.7.4 Discrimination, Stigma, Shame, Embarrassment and Fairness

As indicated in Section 3.7.1, the survey of CDC participants includes a number of questions (F1 questions in the survey document) asking CDC participants about their feelings about being on the Card. The questions are labelled so they include both positive and negative statements about being on the Card and elicit how often CDC participants feel this way about the Card. As one of the unintended consequences of the CDC is that being on the Card may result in feelings of discrimination, stigma, shame, embarrassment and unfairness, among the statements posed, there are some instruments that elicit CDC participants' feelings of discrimination, embarrassment, and unfairness about being on the Card.

On the positive side, we ask CDC participants how often they feel that things are better for them since they have been put on the Card, whether they have gained more control over their life and money and whether they feel safer on the CDC. These latter statements have already been presented. We do not focus on these in this section aside from developing an index summarising CDC participants' feelings about the Card in general, which we then use in the multivariate analysis in order to look at the relationship between these feelings and reported outcomes. In the first subsection, we show some descriptive statistics on the questions that are related to the feelings of unfairness, embarrassment, and discrimination. In the second subsection we define a simple index summarising CDC participants' feelings about being on the Card and provide some descriptive statistics according to a set of individual characteristics of interest. This work prepares the grounds for the final section that focuses on the extent to which CDC participants want to remain on the Card or leave it altogether.

3.7.4.1 CDC participants' feelings of discrimination, embarrassment and unfairness about being on the CDC

Table 3-48 displays the answers provided by CDC participants about their feelings of discrimination, embarrassment and fairness of being on the Card.

A large majority of CDC participants (75 per cent) reported that they felt discriminated against (either 'sometimes' 18 per cent, or 'most/all of the time', 57 per cent) as a result of being on the CDC. Similar large majorities reported that they felt embarrassed (73 per cent) and that it was not fair that they were on the CDC (75 per cent). Far fewer CDC participants reported that they 'never' or 'hardly ever' had these feelings about the CDC (21, 22 and 20 per cent for each of these three questions, respectively). These findings were very similar between Indigenous and non-Indigenous CDC participants and between men and women.

Table 3-48: Being on the Card, feelings of discrimination, embarrassment and unfairness, by Indigenous status and gender

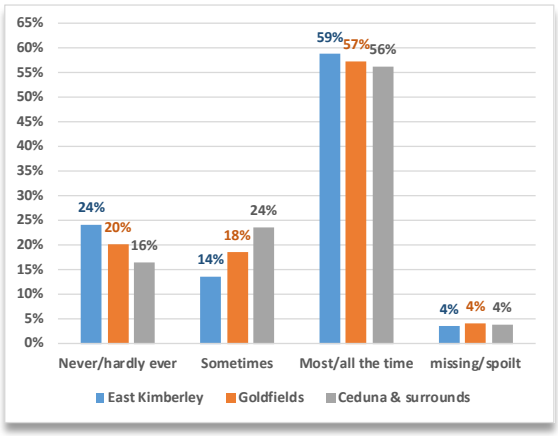
Feelings of discrimination, embarrassment and unfairness										
	All		Indigenous		Non-Indigenous		Male		Female	
	N	%	N	%	N	%	N	%	N	%
FEEL DISCRIMINATED AGAINST										
Never/hardly ever	1,245	**21**	805	**21**	440	**21**	527	**20**	718	**21**
Sometimes	1,085	**18**	701	**18**	384	**18**	516	**20**	569	**17**
Most /all the time	3,471	**57**	2,222	**57**	1,248	**58**	1,478	**57**	1,993	**58**
Missing/spoilt	238	**4**	170	**4**	68	**3**	67	**3**	171	**5**
BEING ON THE CARD IS EMBARRASSING										
Never/hardly ever	1,340	**22**	926	**24**	414	**19**	564	**22**	776	**23**
Sometimes	905	**15**	564	**14**	341	**16**	400	**15**	505	**15**
Most/all the time	3,529	**58**	2,223	**57**	1,306	**61**	1,520	**59**	2009	**58**
Missing/spoilt	265	**4**	185	**5**	80	**4**	105	**4**	159	**5**
IT IS NOT FAIR BEING ON THE CDC										
Never/hardly ever	1,204	**20**	816	**21**	388	**18**	486	**19**	718	**21**
Sometimes	826	**14**	536	**14**	290	**14**	384	**15**	442	**13**
Most/all the time	3,673	**61**	2,315	**59**	1,358	**63**	1,597	**62**	2,076	**60**
Missing/spoilt	336	**6**	231	**6**	105	**5**	122	**5**	214	**6**
TOTAL	**6,039**	**100**	**3,898**	**100**	**2,141**	**100**	**2,589**	**100**	**3,450**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

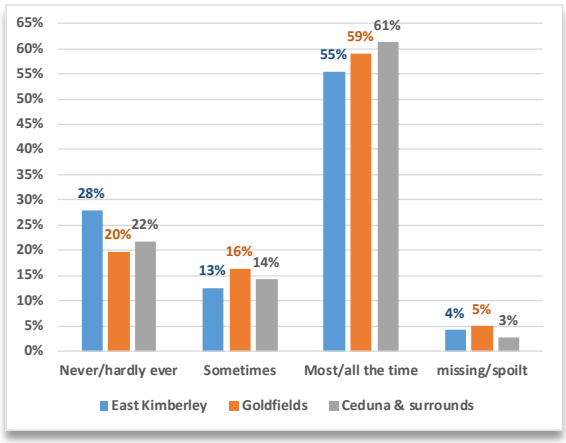
These feelings about discrimination, embarrassment and unfairness associated with the CDC were also shown to vary little between the three sites, as pictured in Figure 3-99 below. These findings were in stark contrast to the pattern we have observed with many other impacts of the CDC, where it is either that Indigenous CDC participants typically report more positive outcomes and perceptions and/or the non-Indigenous CDC participants in the Goldfields trial site typically report more negative outcomes and perceptions. In the case of these general feelings of embarrassment and discrimination, there appeared to be a consensus among four out of every five CDC participants.

Figure 3-99: Feelings of discrimination, embarrassment and unfairness related to being on the Card, by trial site

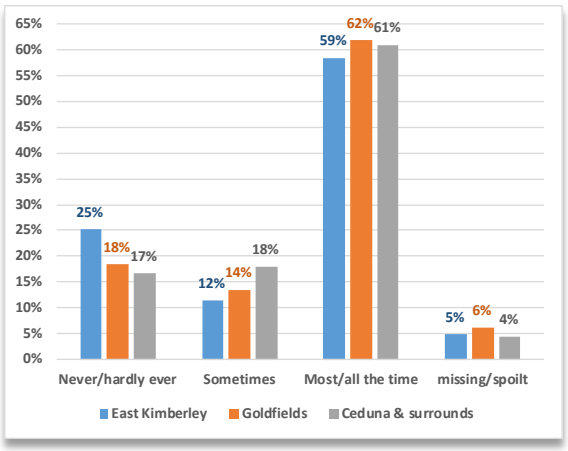
Feelings of being discriminated against



Feelings of embarrassment



Feelings of unfairness at being on the Card



Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.

We examined several individual characteristics using more complex tabulations (see Table 3-49 below) and multivariate regression analysis, but without managing to discover any major patterns. There was some weak evidence that CDC participants without any adult support in their household (that is, either living alone or as a single parent) may be more likely to report negative feelings about the CDC, but the differences we observed were not statistically significant.

Table 3-49: Being on the Card, feelings of discrimination, embarrassment and unfairness, by household type

Feelings of discrimination, embarrassment and unfairness	Living alone		Couple living alone		Couple with children		Single parent		Other household	
	N	%	N	%	N	%	N	%	N	%
FEEL DISCRIMINATED AGAINST										
Never/hardly ever	301	**19**	170	**27**	226	**23**	266	**17**	243	**23**
Sometimes	301	**19**	105	**17**	164	**17**	268	**17**	203	**19**
Most /all the time	956	**59**	331	**52**	549	**56**	931	**61**	578	**55**
Missing/spoilt	54	**3**	27	**4**	40	**4**	71	**5**	33	**3**
BEING ON THE CARD IS EMBARRASSING										
Never/hardly ever	370	**23**	188	**30**	231	**24**	277	**18**	234	**22**
Sometimes	226	**14**	97	**15**	144	**15**	215	**14**	189	**18**
Most/all the time	948	**59**	318	**50**	557	**57**	975	**63**	603	**57**
Missing/spoilt	68	**4**	31	**5**	47	**5**	69	**4**	31	**3**
IT IS NOT FAIR BEING ON THE CDC										
Never/hardly ever	342	**21**	143	**23**	191	**20**	255	**17**	237	**22**
Sometimes	209	**13**	77	**12**	159	**16**	192	**13**	150	**14**
Most/all the time	976	**61**	383	**61**	556	**57**	992	**65**	632	**60**
Missing/spoilt	85	**5**	30	**5**	73	**7**	96	**6**	39	**4**
TOTAL	**1,612**	**100**	**633**	**100**	**979**	**100**	**1,535**	**100**	**1,057**	**100**

Note: Cells may not add up to row/column totals due to rounding of both percentages and population weighted frequencies.
**Total sums to 5,816 as 223 (3.7 per cent of 6,039) survey respondents did not report their household type.*

A conclusion of the quantitative evidence is that feelings of discrimination, embarrassment and unfairness surrounding the CDC were widespread with approximately four out of five CDC participants expressing them in all three dimensions we have explored, without distinction of location or individual characteristics and circumstances.

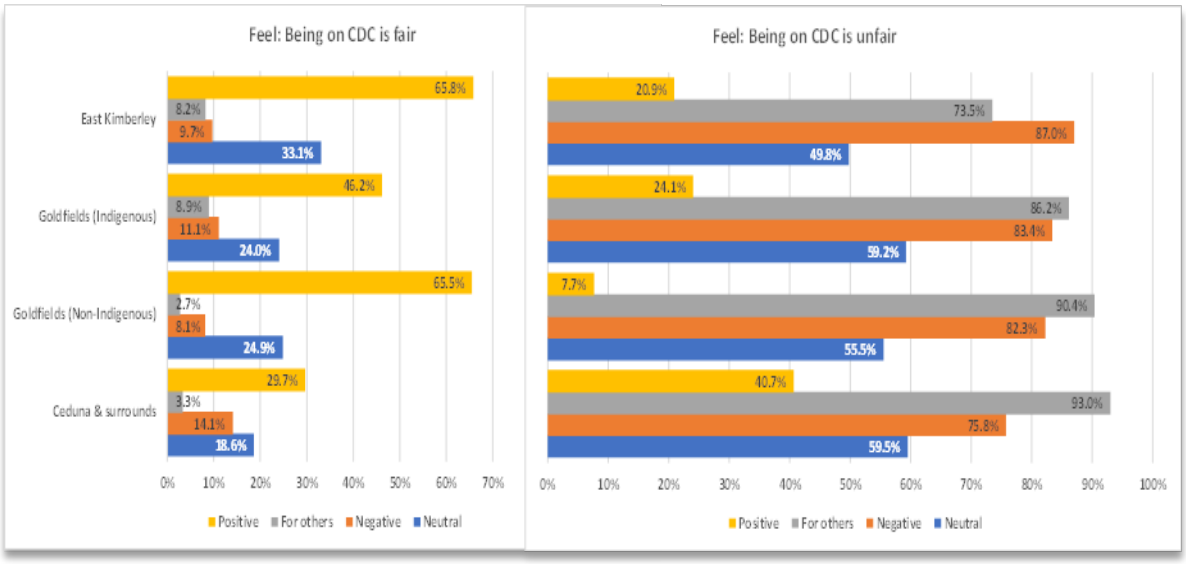
The quantitative survey also collected information in a set of five free text boxes where all respondents were invited to express their opinions over and above what they had said though their structured survey answers. Although these answers are provided in a form that may be harder to analyse in a formal statistical way, they have provided a number of useful insights. Following these free-text answers we categorised only those comments that expressed explicitly the personal views of CDC participants about the CDC as a policy, into the following categories:

- "Neutral" (54 per cent), those who did not express explicitly any personal view about the policy;
- "Negative" (28 per cent), those who expressed a negative personal view on the policy;
- "For Others" (11 per cent), those who expressed a personal view that they should not be on the CDC, as they did not have the problems the CDC was trying to address, but that the CDC was a good policy idea for those who needed it; and

- "Positive" (7 per cent), those who expressed a positive personal view about the policy.[87]

Figure 3-100 below combines the four categories of personal views with the reported view of whether the CDC participant considers that being on the CDC is fair or unfair. The left panel of Figure 3-100 reports the views of those who felt that being on the CDC is fair and the right panel reports the views of those who felt that being on the CDC is unfair. The left panel on Figure 3-100 suggests that those who reported feeling that being on the CDC was fair, had a predominantly positive view about the policy. The right panel on Figure 3-100 suggests that those who reported feeling that being on the CDC was unfair have a negative personal view about the policy.[88]

Figure 3-100: Feelings of fairness/unfairness about being on the CDC by CDC participants' personal views about the CDC policy (survey free text boxes)



The findings in Figure 3-100 about fairness were repeated in the context of discrimination and embarrassment. They are indicative of the multi-layered factors that are at play when opinions, views and perceptions are formed about the CDC and they offer an additional lens for viewing the oft encountered mixed findings in this report.

3.7.4.2 Using scores to summarise how CDC participants feel about the Card

In order to aggregate and simplify the information contained in the survey instrument that elicit how people feel about being on the Card, we generated a continuous index that represents how positive one feels about being on the Card on all dimensions. For each negative statement, including "I feel discriminated against", "being on the Cashless Debit Card is embarrassing", "It is not fair for me to be on the Cashless Debit Card", we attribute a value of 0 if the CDC participant states that he/she feels this way "all the time", 1 if it is "most of the time", 2 if it is "sometimes", 3 if it is "hardly ever", and 4 if it is "never". For positive statements such as "I am more in control of my life since being on the Cashless Debit Card", "Things are better for me and my family", "I feel have more control over my

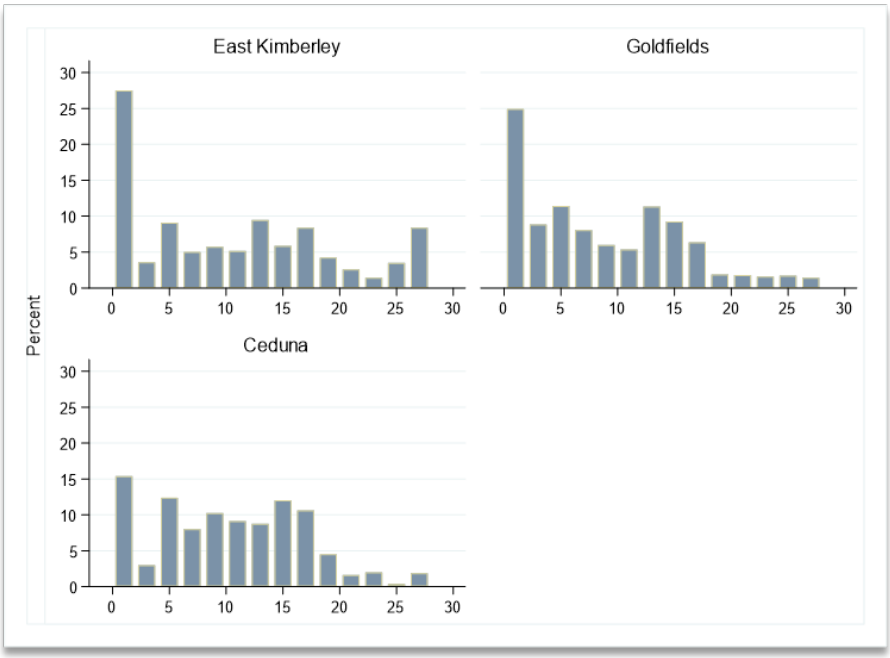
[87] As this part of the evidence is collected in a non-random way—respondents with the strongest views are more likely to provide additional information—the response rates need to be interpreted accordingly.

[88] We read Figure 3-100 as follows. Using East Kimberley as an example, of those who expressed a negative personal view on the CDC (28 per cent in total), 9.7 per cent thought that it is fair to be on the CDC (in the left panel) and 87 per cent felt that it is unfair (in the right panel). Each personal view category presents a separate message. In the example used in this footnote a complex picture emerges which suggests that feelings for unfairness for oneself and for others may differ when the CDC policy is considered. Similar patterns emerge for the questions on Discrimination and Embarrassment.

money", "I feel safer on the Cashless Debit Card", we reverse the coding, with the highest number, 4, assigned to individuals who say "all the time" and, the lowest value, 0, to those who report they 'never' feel that way. The lower the score of this index, the more negative the feelings CDC participants have towards being on the Card. The minimum possible score is 0 and the maximum is 28.

The following figure displays the distribution of this simple index by trial site. It shows a peak in the lower scores for East Kimberley and the Goldfields with 25 to 27 per cent of the CDC participants expressing very negative feelings about being on the Card. By contrast, we do not observe such a large peak for Ceduna and surrounds, where the scores are more uniformly distributed. Nevertheless, the distributions for all sites show that the majority of the CDC participants have a score below 14 (the midpoint between 0 and 28).

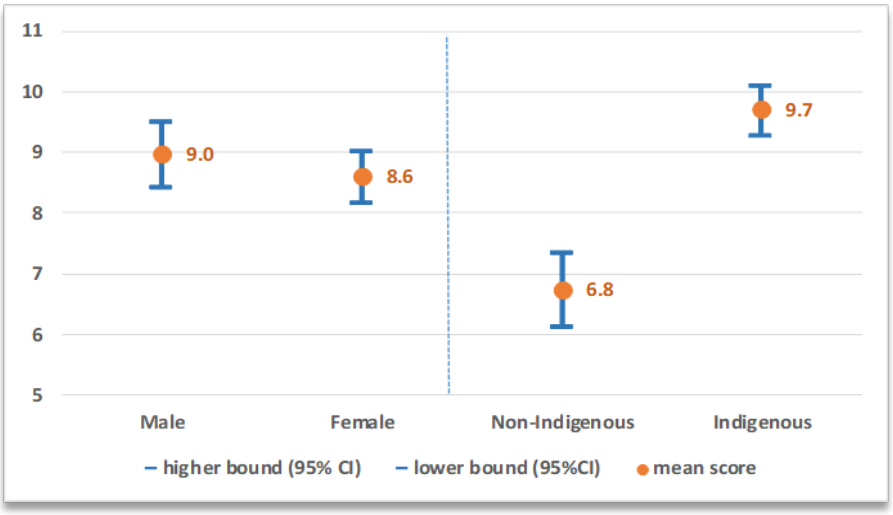
Figure 3-101: Feelings about being on the Card, scores of a synthetic index, by trial site



In the following figures (Figure 3-102 to Figure 3-104), we display the mean scores of this simple index by subgroups of the CDC population defined by a number of relevant characteristics. We also display the 95 per cent confidence interval around these mean scores in order to highlight where statistically significant differences exist.

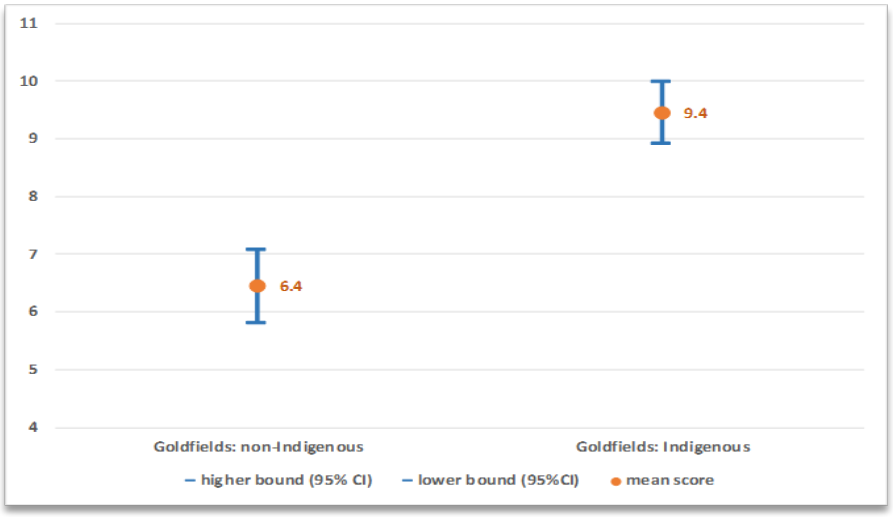
The following figure shows the mean scores of the index by gender and Indigenous status. We note that all mean scores are relatively low (since the index may vary from 0 to 28). The mean scores by gender do not show any significant differences with a mean score of 9 for males and 8.6 for females. By contrast, we observe a statistically significant difference by Indigenous status with larger scores for Indigenous CDC participants (9.7 on average) compared to non-Indigenous participants (6.8). In spite of these differences, the scores remain low for both subgroups.

Figure 3-102: Feelings about being on the Card, scores of a synthetic index, differences by gender and Indigenous status, all trial sites



In the following figure, we focus on the Goldfields trial site in order to determine whether the Indigenous CDC participants in that site have different scores than Indigenous participants in the two other sites[89] and to highlight differences within the Goldfields trial site. The difference between these two groups is similar to the difference we have already observed in the previous figure.

Figure 3-103: Feelings about being on the Card, scores of a synthetic index, differences by Indigenous status in the Goldfields trial site

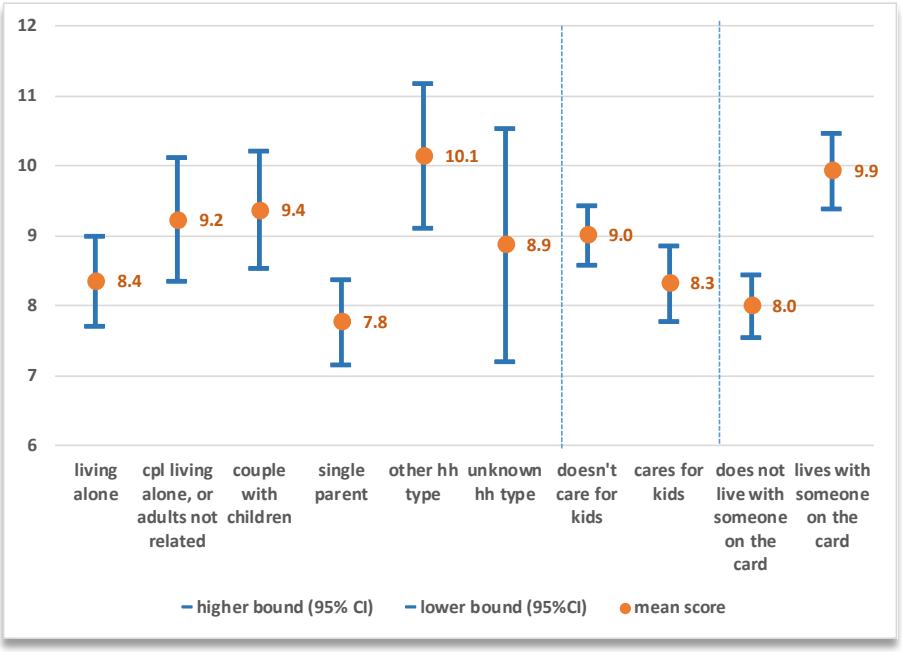


The next figure shows the mean scores according to a further set of individual characteristics. Note that the larger confidence intervals around a mean score indicated that there is a relatively small number of observations in the corresponding subgroup. With respect to household type, we note that single parents have a score which is slightly lower than that of the couples (mean score of 7.8). This score is not significantly different from that of the participants living alone. When we look at whether

[89] For other outcomes, we have noticed that there were differences between non-indigenous and indigenous CDC participants in the Goldfields but also that indigenous CDC participants in the Goldfields reported poorer outcomes than indigenous participants in the other sites. It is not the case for this index.

CDC participants are the carers of children or not, we do not see any significant score differences. However, participants living with someone who is on the Card show significantly larger scores than those who do not (feeling better about the Card).

Figure 3-104: Feelings about being on the Card, scores of a synthetic index, differences by household type, all trial sites



3.7.5 Perceptions about the future of the CDC

The survey asks CDC participants whether they would rather get off the CDC, remain on the CDC as it is currently set up, or remain on the CDC but with a lower amount of their government benefits being quarantined. We first look at the distribution of the CDC participants across these three choices and by trial site. We then extend the analysis to identifying the characteristics of those who would rather stay on the Card and look at what sets them apart, if anything, from the majority of the CDC participants who would rather get off the Card.

3.7.5.1 Stated preferences about staying on the Card or getting off it

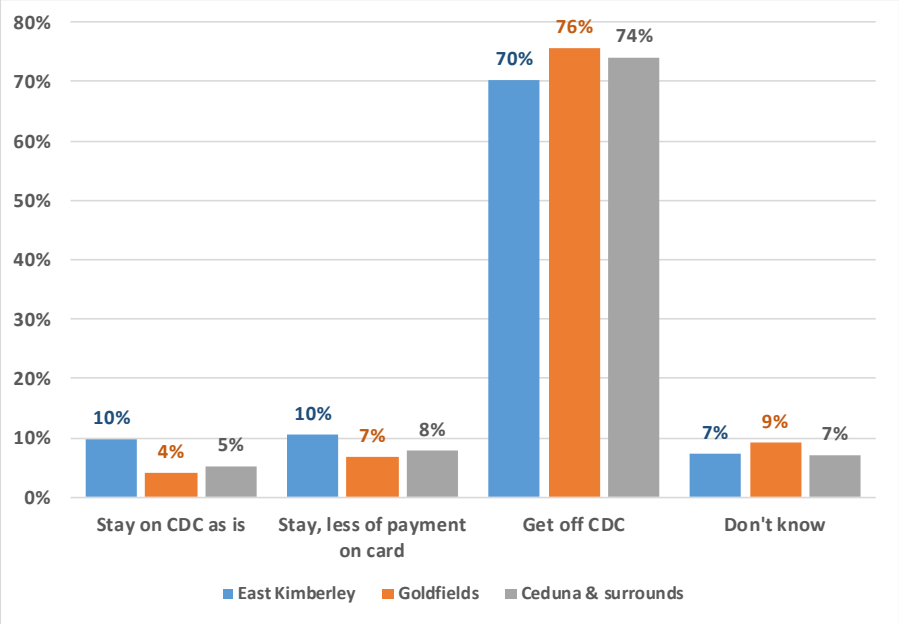
a) Preferences by trial site and Indigenous status

The evidence from the survey of CDC participants indicated that a large majority of participants would prefer to come off the Card. Figure 3-105 shows that about 74 per cent of all CDC participants surveyed indicated that they would prefer to come off the Card, with a slightly higher proportion in the Goldfields (76 per cent) and Ceduna (74 per cent), compared to East Kimberley (70 per cent).

Between 11 and 20 per cent of all CDC participants surveyed, across the three sites, reported that they would prefer to stay on the Card. This proportion was largest in East Kimberley (20 per cent) and smallest in the Goldfields (11 per cent). In East Kimberley, about half of those who reported that they would prefer to stay on the Card, would prefer less of their payment going on their Card, with the other half reporting they would prefer to stay on the Card in its current form. In the other two sites,

larger proportions among those who wanted to stay on the Card reported that they would prefer less of their payment going on the Card.

Figure 3-105: Stated preference about getting off the Card vs. staying on the Card, by trial site

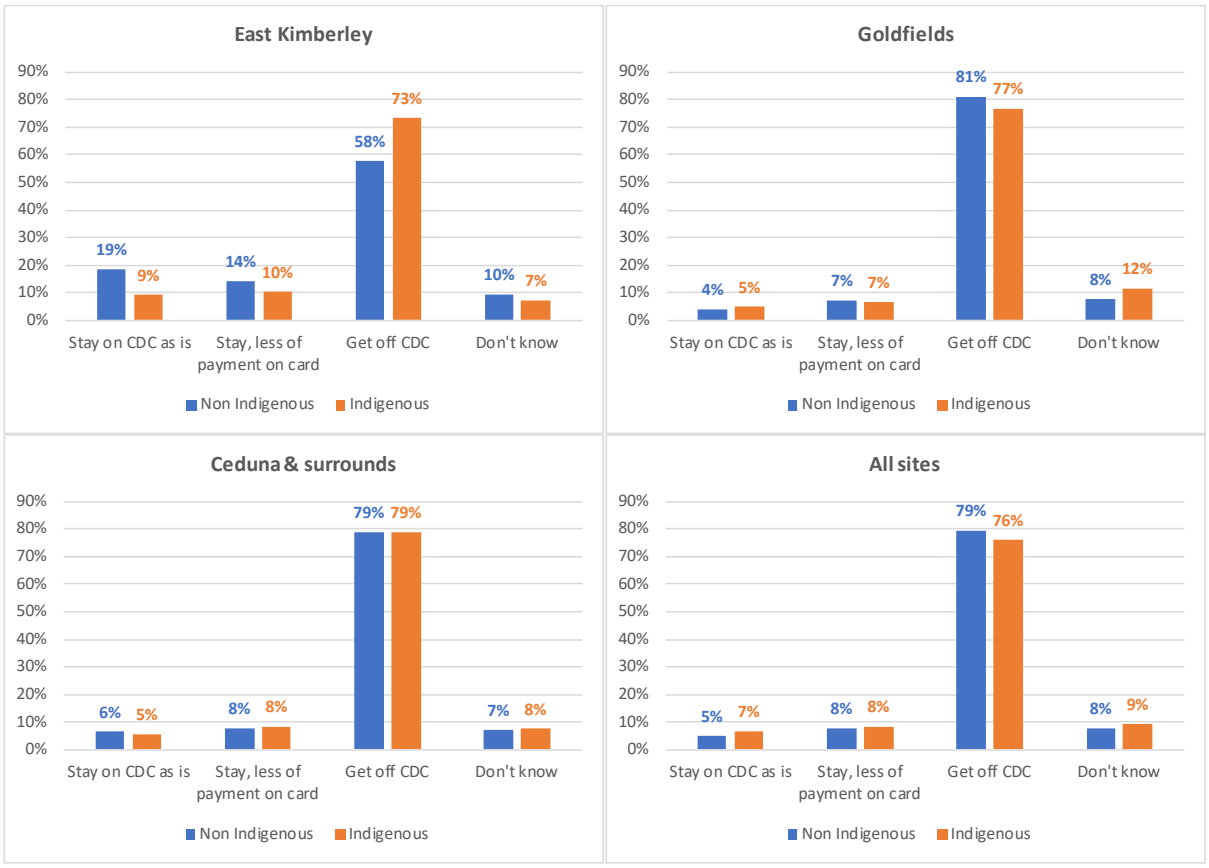


Note: the proportions do not sum to 100 per cent because we have removed the very small percentages of spoilt answers and missing responses.

The following Figure 3-106 displays the preferences of CDC participants with regards to remaining on/coming off the Card by trial site and by Indigenous status. For both groups, a majority of CDC participants would rather come off the Card.

Within the East Kimberley trial site, the quantitative survey found that the proportions of those who wanted to stay on the Card as it is currently set up was higher for non-Indigenous CDC participants (19 per cent against 9 per cent). In the other two sites, the proportion of those who would rather stay on the Card was similar by Indigenous status and varied little across the two options (stay on the Card as it is currently set up, or stay on with less of their payment going on the Card).

Figure 3-106: Stated preferences about getting off the Card vs. staying on the Card, by Indigenous status and trial site



Note: the proportions do not sum to 100 per cent because we have removed the very small percentages of spoilt answers and missing responses

b) Experience on the Card and preference to get off the Card

The following set of figures shows the relationship between how long CDC participants have been on the Card and the corresponding proportion of those who state they want to get off the Card.

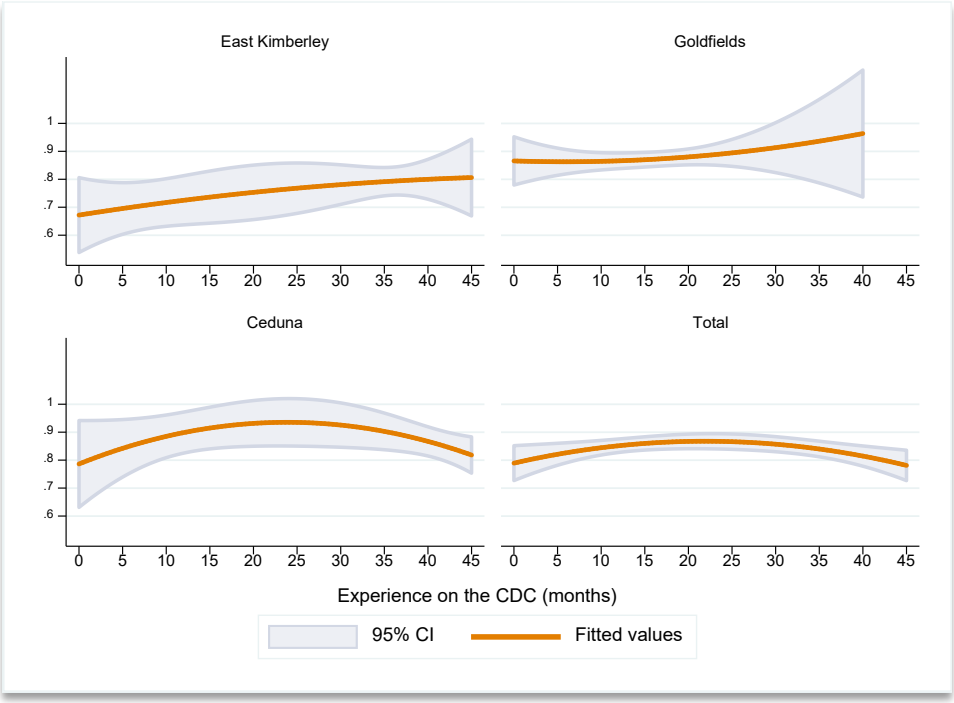
Overall, the actual proportion of CDC participants wanting to exit the Card varies little according to how long they have been on the Card. We are talking about a maximum of 10 percentage points. Nevertheless some patterns emerge and they seem to vary across trial sites.

In the Goldfields, the figure shows that the longer CDC participants are on the Card, the more likely they would state that they want to exit the Card. The patterns seem to be increasing at an increasing rate suggesting that CDC participants' willingness to get off the Card increases faster than the time they've spent on the Card. However, the confidence intervals around the estimates increase as the experience on the Card increases too, so it is hard to say whether this trend will remain. Also these estimates do not control for other demographic aspects of the CDC population. The multivariate analysis that follows will take those into account and determine whether such patterns remains after accounting for observable heterogeneity across site.

In East Kimberley, while the overall pattern of wanting to get off the Card is also increasing with how long CDC participants have been on the Card, we discern a slightly different trend. Indeed, it increases at a decreasing rate. This suggests that it may reach a maximum and then start decreasing beyond some time spent on the Card.

We observe a different trend in Ceduna and surrounds where it increases up to about 25 months on the CDC, reaches a maximum with about 90 per cent of the CDC participants wanting off the Card, and then decreases down to 80 per cent of the CDC participants wanting off the Card for those who have been on it the longest (about 40 to 45 months).

Figure 3-107: Stated preferences about getting off the Card and experience on the CDC, by trial site (population weighted)



3.7.5.2 Which CDC participants were more likely to prefer to stay on the Card?

In the next subsection, we show that CDC participants who have reported that the CDC has had a positive impact on their life outcome are more likely to indicate that they would prefer to stay on the CDC compared to those who did not report improvements in their situation.

a) Subjective impact of the CDC and willingness to remain on the Card

Table 3-50 looks at the proportions of CDC participants who are willing to remain on the Card (with or without change in the percentage of benefits quarantined) according to whether they reported a positive impact of the CDC on a range of first and second round outcomes of interest.

We note that for all outcomes reported in the table, we observe significant differences, indicating that those who have reported positive outcomes resulting from the CDC are also more likely to want to remain on the Card. We also note that, in spite of this strong relationship, the proportion of those who want to stay on the Card remains relatively small, even for those who experience positive outcomes. The feelings of embarrassment, discrimination and unfairness about being on the Card may have something to do with such an observation: in spite of acknowledging a positive impact of the CDC, the CDC participants still prefer to get off the Card in their majority.

Table 3-50: Preference to remain on the CDC and subjective impact of the CDC on one's life outcomes

Preference to remain on the CDC: Mean subjective impact on one's life			
	Among those who stated		
Impact of CDC on:	**No impact of CDC**	**A positive impact of CDC**	**Difference**
Alcohol consumption	0.103	0.309	0.206***
Drug consumption	0.129	0.278	0.149***
Gambling	0.123	0.299	0.177***
Money management	0.097	0.352	0.255***
Quality of life	0.101	0.372	0.271***

b) Multivariate analysis: characteristics of those who prefer to remain on the Card

We focus on those CDC participants who indicated that they prefer to stay on the Card and look at whether some observable individual characteristics are associated with the probability to prefer continuing with the Card. The results of the multivariate analysis are available in the appendices, Table A 4-32.

Box 3-10: Which CDC participants were more likely to report wanting to remain on the CDC? [90]

Individual characteristics of CDC participants estimated to be more likely to prefer staying on the Card (based on quantitative survey responses):

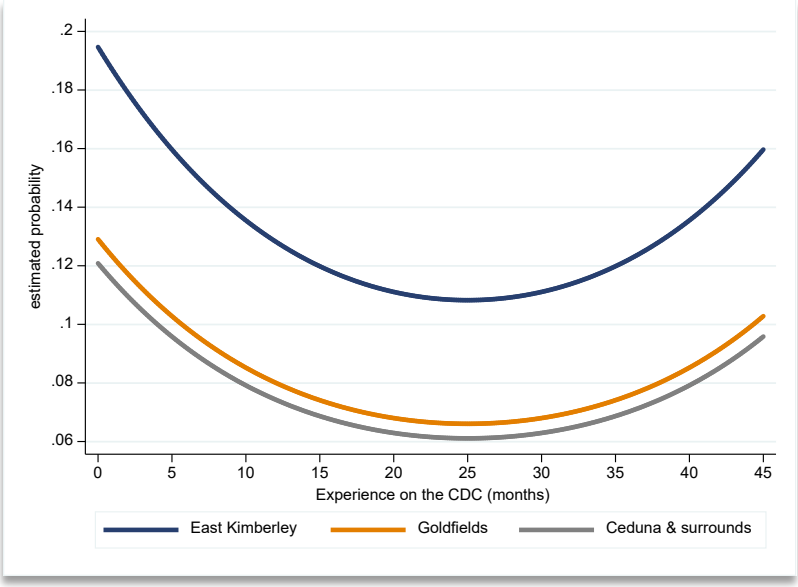
- Living in East Kimberley: CDC participants who lived in the East Kimberley were more likely to report that they preferred to stay on the Card than CDC participants living either in the Goldfields (more likely by 4.3 percentage points) or in Ceduna and surrounds (more likely by 4.1 percentage points).
- Experience on the CDC: The relationship between experience on the CDC and the probability of wanting to stay on the Card was 'U-shaped': it was highest for those who had been on the Card the shortest time (about one year) and for those who had been on the Card the longest (about three years). The probability of wanting to stay on the Card was lowest for those who had been on the Card for about 24 months. This result remained after we control for the later Goldfields rollout.

[90] Two clarifications about the interpretation of our findings are needed at this stage. First, the statistics in tables and figures convey a different message than the multivariate regression statistics, so that comparisons must be made with care. Tabulations and figures show univariate statistics, e.g. Figure 3-105 compares the willingness to stay on the Card by trial site. It does not tell us if any difference is associated with the observed demographics of the three sites. Using multivariate regression takes us one important step further: it estimates whether and how much the demographic composition of CDC participants in the three sites is associated with the outcome of interest.
Second, we estimate a two-outcomes model (a binary probabilistic model). For this type of model, whatever is said in Box 3.10 about the chosen outcome (that is, having stated a preference to stay on the Card), can automatically be reversed for the alternative outcome. For example, the finding that "CDC participants in East Kimberley are more likely to prefer to stay on the Card (compared to, say, their Goldfields counterparts)", could be stated as "CDC participants in East Kimberley are least likely to prefer to not stay on the Card (again compared to their Goldfields counterparts)". It is only in models with more than two possible outcomes (e.g. harder, same, easier) that we may need to distinguish between the (more than two) outcomes as the probabilities may not be uniformly (that is, evenly) distributed across each outcome.

- **Older CDC participants:** Older CDC participants were more likely to want to stay on the Card. The estimated probability of preferring to stay on the Card was extremely low (close to zero) for CDC participants below the age of 30 (especially in the Goldfields).
- **CDC participants who reported a positive impact of the CDC on alcohol consumption (for themselves, or their family, or their friends, or their community):** These participants were 5 percentage points more likely to prefer to stay on the Card than those who did not identify such an improvement after the introduction of the CDC.
- **CDC participants in receipt of parenting payments (both single and partnered):** These participants were 8.2 percentage points more likely (than participants receiving other types of payment) to prefer to stay on the Card.
- **Experienced higher financial hardship prior to the CDC:** CDC participants who reported experiencing higher financial hardship in the year leading to the introduction of the CDC were more likely to prefer to stay on the Card.
- **Experienced less financial hardship at the time of the survey:** Those who reported experiencing less financial hardship at the time of the survey (compared to other survey respondents) were more likely to prefer to stay on the Card.
- **Those who did not report they had problems using their Card:** CDC participants who reported no implementation issues with the Card were 6.8 percentage points more likely to prefer to stay on the Card than those who did.
- Household type, gender and Indigenous status did not seem to affect CDC participants' preferences about staying on the Card.

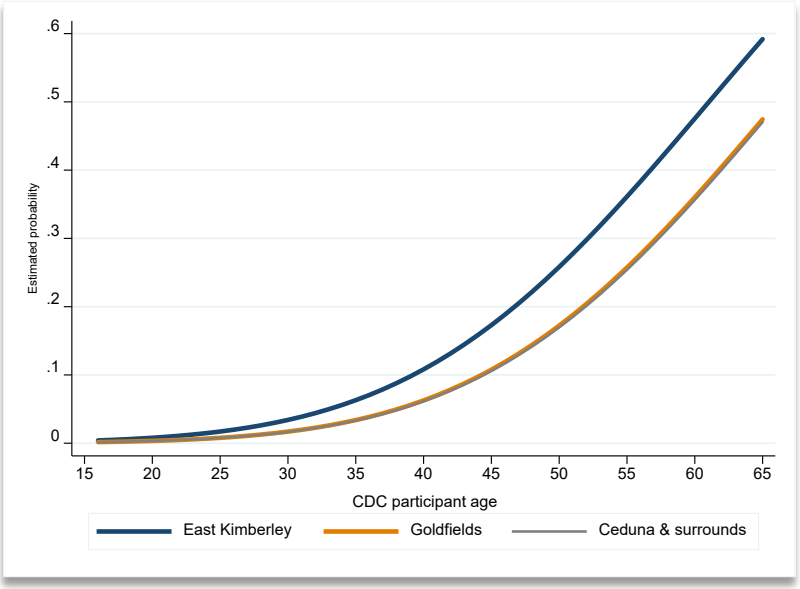
After controlling for individual characteristic differences that may exist between CDC participants and trial sites, we computed the estimated probabilities that CDC participants would prefer to stay on the Card according to how long they have been on the Card. As shown in the following figure, the estimated probabilities exhibit a 'U' shaped pattern, with larger probabilities observed for those who have been most recently triggered onto the Card and those who have been the longest, everything else held constant. For those who have been on the Card for about two years (24 to 25 months), the overwhelming majority is expected to want to exit the Card.

Figure 3-108: Estimated probabilities that the CDC participants prefer to stay on the Card according to how long they have been on the Card, by trial site



In the following figure we represent the estimated probabilities that CDC participants prefer to stay on the Card according to their age. The message is more straightforward compared to the relationship with one's experience on the Card. Here the profile of the probabilities is increasing, at an increasing rate. The older the CDC participants, the more willing they are to stay on the CDC.

Figure 3-109: Estimated probabilities that the CDC participants prefer to stay on the Card according to CDC participants' age, by trial site

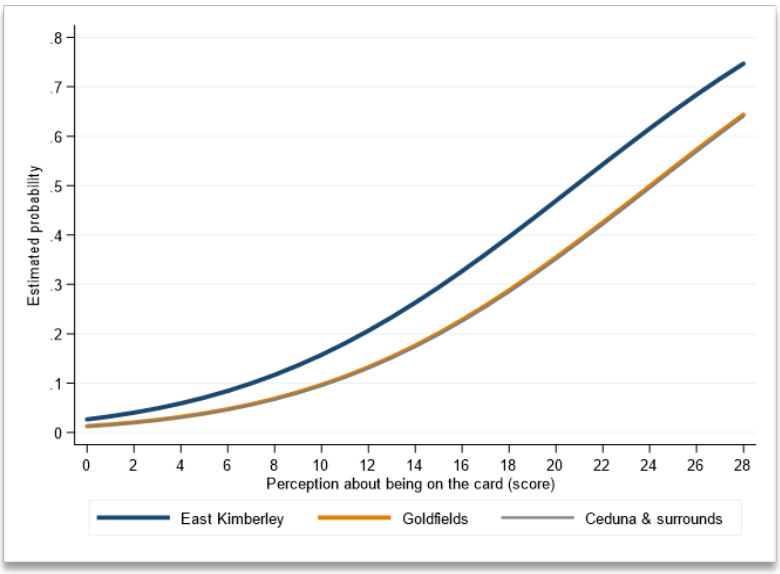


Note: In all three figures, the estimated probabilities are not statistically differences between Ceduna and Goldfields. Therefore, both lines are on top of each other.

Finally, we illustrate the relationship between one's feeling about the CDC and wanting to remain on the Card. The following figures shows the estimated probabilities that the CDC participants want to remain on the Card (everything else held constant) according to how much they score on the scale of

the feelings they have towards the Card as defined in the previous subsection. The relationship is clearly and strongly positive.

Figure 3-110: Estimated probabilities that the CDC participants prefer to stay on the Card according to their perception about being on the Card (perception score), by trial site



Note: In all three figures, the estimated probabilities are not statistically differences between Ceduna and Goldfields. Therefore, both lines are on top of each other.

4 Appendices

1. Appendices to Section 2.2.3: Analysis of CDC participants' transactions

Table A 4-1: Determinants of participants' daily purchases, multivariate results

MULTIVARIATE ANALYSIS: DEPENDENT VARIABLE DAILY DEBIT TRANSACTION AMOUNT ($)				
	OLS	**Q25**	**Q50**	**Q75**
MEAN NUMBER OF DAILY DEBITS	28.44***	27.10***	28.65***	29.71***
	(0.42)	(0.39)	(0.49)	(0.57)
INDIGENOUS	-4.20***	-1.61***	-3.75***	-6.47***
	(0.57)	(0.54)	(0.67)	(0.77)
FEMALE	3.46***	2.01***	2.29***	2.61***
	(0.60)	(0.56)	(0.70)	(0.81)
FEMALE * INDIGENOUS	-2.34***	-2.04***	-2.00***	-1.52
	(0.75)	(0.70)	(0.88)	(1.01)
BENEFITS TYPES (REF: NEWSTART ALLOWANCE)				
DSP	7.17***	4.86***	8.02***	10.27***
	(0.51)	(0.48)	(0.60)	(0.69)
PARENTING PAYMENT (SINGLE)	16.00***	10.92***	15.85***	21.25***
	(0.59)	(0.56)	(0.70)	(0.80)
PARENTING PAYMENT (PARTNERED)	14.73***	10.61***	12.96***	19.34***
	(0.96)	(0.90)	(1.13)	(1.31)
YOUTH ALLOWANCE	-4.47***	-2.43***	-3.61***	-5.62***
	(0.88)	(0.83)	(1.04)	(1.20)
OTHER BENEFITS	13.54***	8.39***	12.55***	17.39***
	(0.81)	(0.76)	(0.95)	(1.10)
EXPERIENCE ON CDC (MONTH)	-0.10***	0.03	0.02	-0.08
	(0.05)	(0.04)	(0.05)	(0.06)
AGE	0.07***	0.09***	0.15***	0.11***
	(0.03)	(0.03)	(0.03)	(0.04)
AGE * EXPERIENCE ON CDC	0.00	0.00	0.00**	0.00
	(0.00)	(0.00)	(0.001)	(0.001)
CONSTANT	11.19***	2.28*	6.47***	15.94***
	(1.37)	(1.29)	(1.61)	(1.86)
N	5,516	5,516	5,516	5,516
R SQUARE/PSEUDO R SQUARE	0.66	0.45	0.44	0.48

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

2. Appendices to Section 2.3.3.4: Results: do we find an impact of the CDC rollout onto Police outcomes?

Table A 4-2: Estimated impact of the CDC on Police outcomes, East Kimberley trial site, all estimation strategies

EAST KIMBERLEY					
		strategy 1	strategy 2	strategy 3	strategy 4
Drug	**After**	**-7.741**	**-4.826**	**-0.002**	**-0.002**
		(8.961)	(4.431)	(0.009)	(0.007)
	CDC	**-19.112****	**-17.802**	**-0.026*****	**-0.005**
		(8.140)	(16.981)	(0.008)	(0.008)
	Impact	**-6.745**	**-3.999**	**0.003**	**0.001**
		(7.902)	(4.326)	(0.008)	(0.006)
Disorderly conduct	**After**	**-1.043**	**-0.914**	**0.000**	**-0.001**
		(3.582)	(1.691)	(0.008)	(0.004)
	CDC	**5.389**	**4.481**	**0.031*****	**0.014**
		(4.331)	(6.294)	(0.009)	(0.009)
	Impact	**0.315**	**0.096**	**-0.003**	**-0.001**
		(3.166)	(1.899)	(0.007)	(0.005)
DV	**After**	**23.496***	**12.560****	**0.007**	**0.006***
		(13.820)	(5.085)	(0.005)	(0.003)
	CDC	**-7.512**	**-15.777**	**-0.002**	**0.003**
		(13.801)	(40.263)	(0.005)	(0.013)
	Impact	**42.463*****	**39.210*****	**0.015*****	**0.012*****
		(13.803)	(5.668)	(0.005)	(0.003)
Assault	**After**	**0.204**	**0.623**	**-0.001**	**-0.000**
		(3.514)	(1.000)	(0.001)	(0.001)
	CDC	**-3.957**	**0.374**	**-0.001**	**0.001**
		(3.648)	(9.315)	(0.001)	(0.003)
	Impact	**0.533**	**0.268**	**0.000**	**0.000**
		(3.212)	(1.031)	(0.001)	(0.001)
Burglary/Robbery	**After**	**13.384****	**8.277*****	**0.009*****	**0.007*****
		(5.493)	(2.892)	(0.003)	(0.002)
	CDC	**5.873**	**2.642**	**0.007****	**0.002**
		(5.405)	(12.347)	(0.003)	(0.007)
	Impact	**6.176**	**4.841**	**-0.001**	**-0.000**
		(5.697)	(3.030)	(0.003)	(0.002)
Property Damage	**After**	**4.897**	**2.365**	**-0.003**	**-0.003****
		(4.982)	(2.162)	(0.002)	(0.001)
	CDC	**18.648*****	**17.894***	**0.005****	**0.004**
		(4.733)	(10.865)	(0.002)	(0.004)
	Impact	**9.297***	**6.595*****	**0.002**	**0.002**
		(5.011)	(2.302)	(0.002)	(0.001)
Stealing	**After**	**-0.415**	**0.952**	**-0.000**	**-0.000**

EAST KIMBERLEY					
		strategy 1	**strategy 2**	**strategy 3**	**strategy 4**
		(6.111)	(1.543)	(0.003)	(0.002)
	CDC	**-9.066**	**-9.655**	**-0.003**	**-0.004**
		(5.887)	(17.350)	(0.003)	(0.005)
	Impact	**10.265***	**8.483*****	**-0.000**	**0.002**
		(6.119)	(1.695)	(0.003)	(0.003)
All Stealing	**After**	**14.344**	**9.528****	**0.008***	**0.008****
		(9.881)	(3.916)	(0.005)	(0.003)
	CDC	**-6.372**	**-10.872**	**0.004**	**-0.003**
		(10.085)	(29.626)	(0.005)	(0.012)
	Impact	**19.925***	**17.539*****	**-0.001**	**0.002**
		(10.547)	(4.365)	(0.005)	(0.004)

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-3: Estimated impact of the CDC on Police outcomes, Goldfields trial site, all estimation strategies

GOLDFIELDS					
		strategy 1	strategy 2	strategy 3	strategy 4
Drug	**After**	**-2.948**	**-1.317**	**-0.006**	**-0.004**
		(1.795)	(0.899)	(0.012)	(0.008)
	CDC	**-0.408**	**-0.374**	**0.024***	**-0.004**
		(2.496)	(2.012)	(0.012)	(0.013)
	Impact	**1.672**	**0.752**	**0.025*****	**0.017*****
		(1.254)	(0.616)	(0.009)	(0.005)
Disorderly conduct	**After**	**0.557**	**0.304**	**0.001**	**-0.001**
		(1.367)	(0.535)	(0.002)	(0.002)
	CDC	**2.788****	**2.351***	**-0.003**	**0.000**
		(1.230)	(1.367)	(0.007)	(0.001)
	Impact	**-1.052**	**-0.445**	**-0.001**	**0.002**
		(0.871)	(0.365)	(0.001)	(0.001)
DV	**After**	**-2.866**	**-1.167**	**-0.003**	**0.001**
		(2.122)	(1.204)	(0.006)	(0.005)
	CDC	**1.825**	**1.971**	**0.023****	**0.013**
		(4.635)	(3.964)	(0.011)	(0.009)
	Impact	**3.145****	**1.305**	**0.001**	**-0.001**
		(1.451)	(0.820)	(0.004)	(0.003)
Assault	**After**	**-0.590**	**-0.217**	**-0.001**	**-0.002**
		(0.977)	(0.452)	(0.002)	(0.003)
	CDC	**2.127**	**1.982**	**0.011***	**0.004**
		(2.862)	(2.349)	(0.006)	(0.003)
	Impact	**-0.543**	**-0.334**	**-0.000**	**0.001**
		(0.654)	(0.308)	(0.001)	(0.002)
Burglary/Robbery	**After**	**0.642**	**0.460**	**-0.001**	**0.000**
		(2.112)	(1.129)	(0.007)	(0.005)
	CDC	**4.327**	**3.598**	**0.005**	**0.003**
		(3.061)	(2.509)	(0.007)	(0.004)
	Impact	**0.337**	**-0.132**	**0.001**	**-0.001**
		(1.438)	(0.768)	(0.005)	(0.003)
Property Damage	**After**	**-1.424**	**-0.478**	**-0.001**	**-0.001**
		(1.828)	(0.915)	(0.003)	(0.005)
	CDC	**4.595**	**4.271**	**0.007**	**0.005***
		(4.235)	(3.496)	(0.010)	(0.003)
	Impact	**-1.394**	**-1.128***	**-0.001**	**-0.003**
		(1.244)	(0.623)	(0.002)	(0.003)
Stealing	**After**	**1.473**	**0.766**	**0.004**	**0.006**
		(1.501)	(0.754)	(0.006)	(0.005)
	CDC	**3.864**	**3.877**	**0.024****	**0.008***
		(4.828)	(4.033)	(0.010)	(0.005)

GOLDFIELDS					
		strategy 1	strategy 2	strategy 3	strategy 4
	Impact	**0.085**	**-0.177**	**-0.004**	**-0.004**
		(1.015)	(0.516)	(0.004)	(0.003)
All Stealing	**After**	**3.091**	**1.422**	**0.008**	**0.005**
		(2.501)	(1.391)	(0.010)	(0.007)
	CDC	**6.272**	**6.124**	**0.024****	**0.015***
		(6.255)	(5.426)	(0.012)	(0.008)
	Impact	**-0.603**	**-0.654**	**-0.005**	**-0.004**
		(1.686)	(0.954)	(0.007)	(0.005)

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-4: Estimated impact of the CDC on Police outcomes, Ceduna and surrounds trial site, all estimation strategies

CEDUNA AND SURROUNDS					
		strategy 1	strategy 2	strategy 3	strategy 4
Fraud, deception and related offences	**After**	**2.515****	**0.547*****	**-3.436****	**-1.007****
		(1.116)	(0.190)	(1.573)	(0.457)
	CDC	**-0.640**	**0.092**	**0.128**	**0.063**
		(0.661)	(0.313)	(0.880)	(0.363)
	Impact	**-0.070**	**-0.239***	**-0.843**	**-0.355**
		(1.054)	(0.145)	(1.206)	(0.443)
Acts intended to cause injury	**After**	**-1.040**	**-0.221**	**5.972**	**3.658**
		(1.332)	(0.393)	(4.083)	(2.518)
	CDC	**1.044**	**1.246**	**-1.887**	**-0.223**
		(3.794)	(3.532)	(4.285)	(3.012)
	Impact	**0.158**	**0.156**	**-0.834**	**-0.322**
		(0.970)	(0.349)	(3.629)	(2.442)
Offences against the person	**After**	**-0.357**	**-0.093**	**0.887**	**0.302**
		(0.661)	(0.141)	(1.471)	(0.512)
	CDC	**-0.608**	**-0.160**	**-0.883**	**-0.245**
		(0.406)	(0.349)	(0.959)	(0.419)
	Impact	**0.669**	**-0.048**	**0.349**	**0.225**
		(0.590)	(0.123)	(1.289)	(0.496)
Property damage	**After**	**0.630**	**-0.001**	**0.397**	**0.261**
		(1.871)	(0.538)	(1.762)	(1.157)
	CDC	**0.275**	**0.639**	**-1.706**	**-0.288**
		(5.399)	(5.086)	(2.431)	(1.762)
	Impact	**-0.575**	**-0.236**	**0.621**	**0.466**
		(1.422)	(0.492)	(1.610)	(1.122)
Robbery, Theft and related offences	**After**	**0.465**	**0.061**	**-0.877**	**-0.739**
		(1.297)	(0.359)	(3.260)	(2.870)
	CDC	**2.311**	**1.915**	**-0.874**	**-2.224**
		(3.912)	(3.717)	(9.592)	(7.913)
	Impact	**-2.060****	**-1.197*****	**-3.356**	**-2.871**
		(1.048)	(0.374)	(3.402)	(2.784)
Serious criminal trespass	**After**	**4.803*****	**1.155*****	**-1.114**	**-0.716**
		(1.549)	(0.375)	(1.127)	(0.726)
	CDC	**0.885**	**0.517**	**-0.466**	**0.632**
		(2.087)	(1.943)	(1.322)	(1.022)
	Impact	**-1.935***	**-0.566***	**-0.360**	**-0.372**
		(1.171)	(0.309)	(0.926)	(0.704)

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

3. Appendices to Section 3.1: Survey Instruments, survey fielding and population weights

Table A 4-5: Population weights for the individual survey of CDC participants

	16-24 YEARS		25-34 YEARS		35-44 YEARS		45-54 YEARS		55+ YEARS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
POPULATION NUMBERS										
CEDUNA AND SURROUNDS	60	90	129	150	88	109	76	73	87	77
EAST KIMBERLEY	88	177	181	272	132	208	143	162	115	119
GOLDFIELDS										
NOT INDIGENOUS	76	153	141	276	138	202	198	173	257	234
INDIGENOUS	129	172	192	306	149	226	120	169	90	102
	353	*592*	*643*	*1004*	*507*	*745*	*537*	*577*	*549*	*532*
SAMPLE COUNTS										
CEDUNA AND SURROUNDS	12	29	30	50	28	53	41	44	33	41
EAST KIMBERLEY	27	28	43	75	35	66	48	69	27	26
GOLDFIELDS										
NOT INDIGENOUS	9	30	24	63	30	49	54	65	70	83
INDIGENOUS	33	57	70	121	54	108	53	101	35	49
	81	*144*	*167*	*309*	*147*	*276*	*196*	*279*	*165*	*199*
WEIGHTS										
CEDUNA AND SURROUNDS	5	3.103448	4.3	3	3.142857	2.056604	1.853659	1.659091	2.636364	1.878049
EAST KIMBERLEY	3.259259	6.321429	4.209302	3.626667	3.771429	3.151515	2.979167	2.347826	4.259259	4.576923
GOLDFIELDS										
NOT INDIGENOUS	8.444444	5.1	5.875	4.380952	4.6	4.122449	3.666667	2.661538	3.671429	2.819277
INDIGENOUS	3.909091	3.017544	2.742857	2.528926	2.759259	2.092593	2.264151	1.673267	2.571429	2.081633

4. Appendices to Section 3.2: Financial outcomes experienced by the CDC participants

Figure A 4-1: Subjective impact of the CDC on participants' financial situation: item 1, 'money management', by trial site (population weighted)

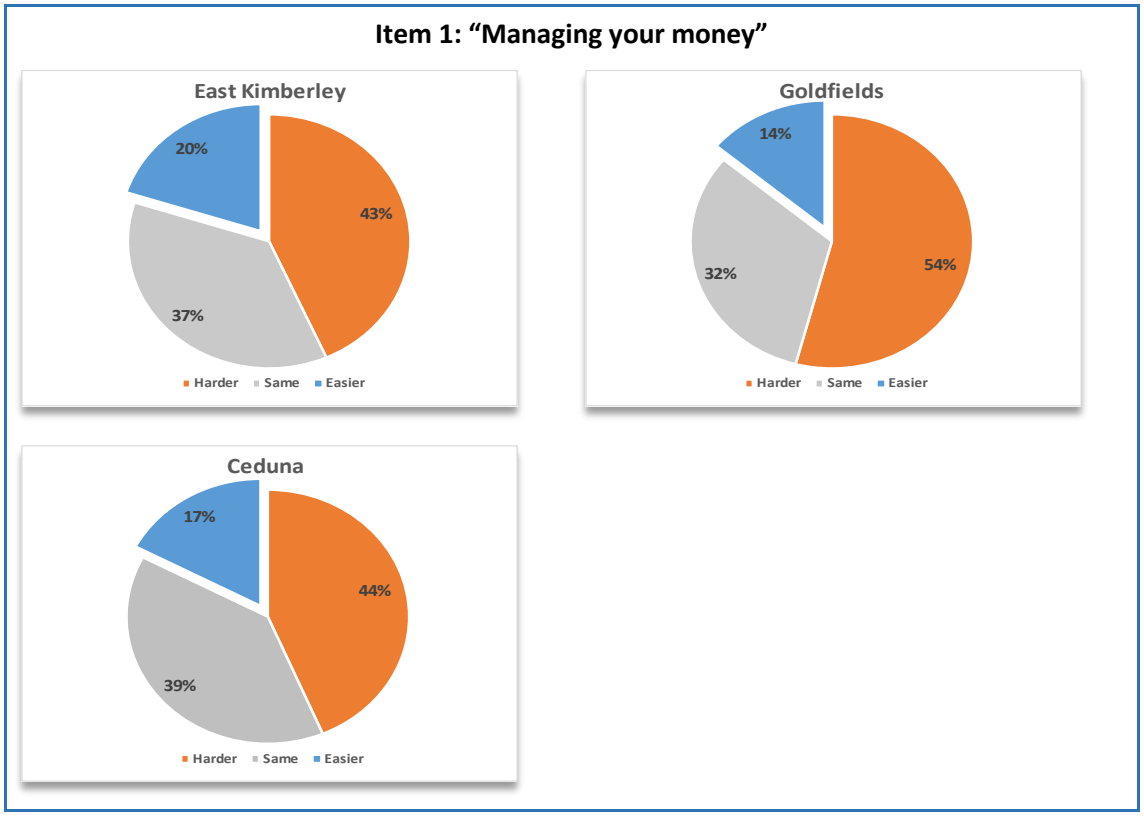


Figure A 4-2: Subjective impact of the CDC on participants' financial situation: item 2 'saving money', by trial site (population weighted)

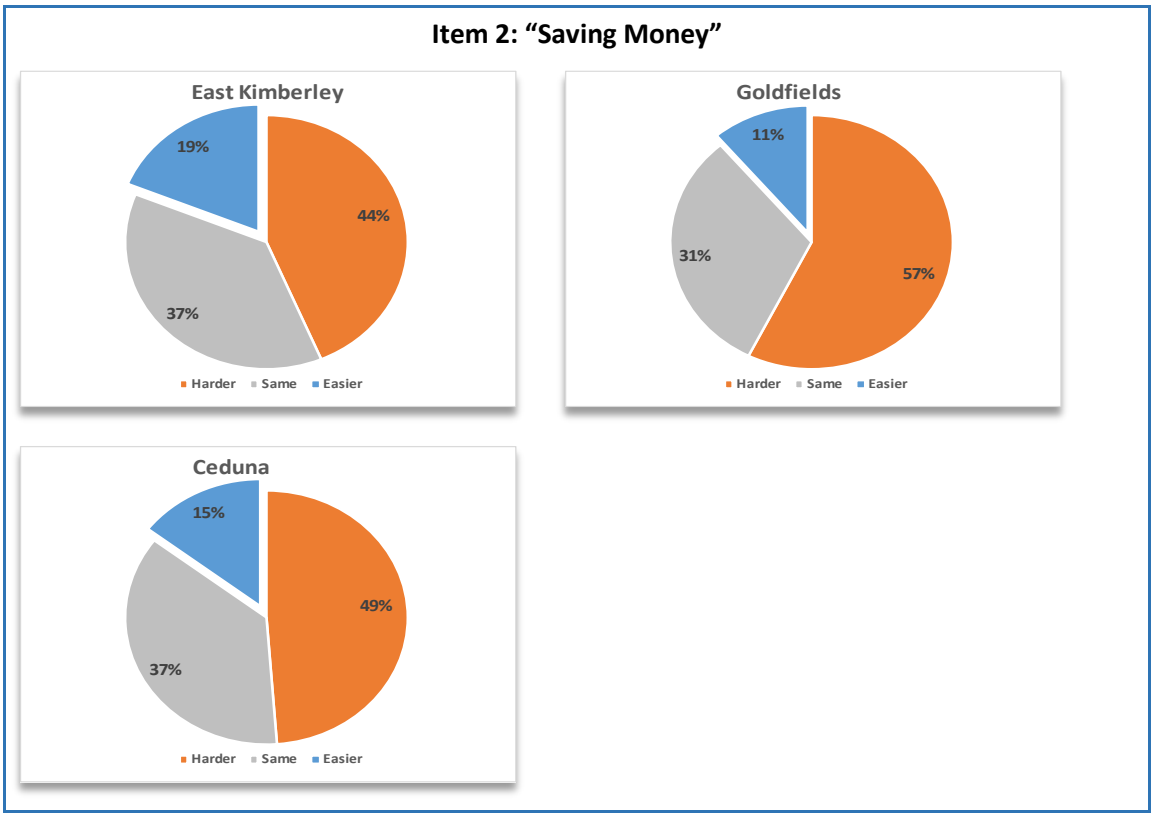


Figure A 4-3: Subjective impact of the CDC on participants' financial situation: item 3 'having enough money for food', by trial site (population weighted)

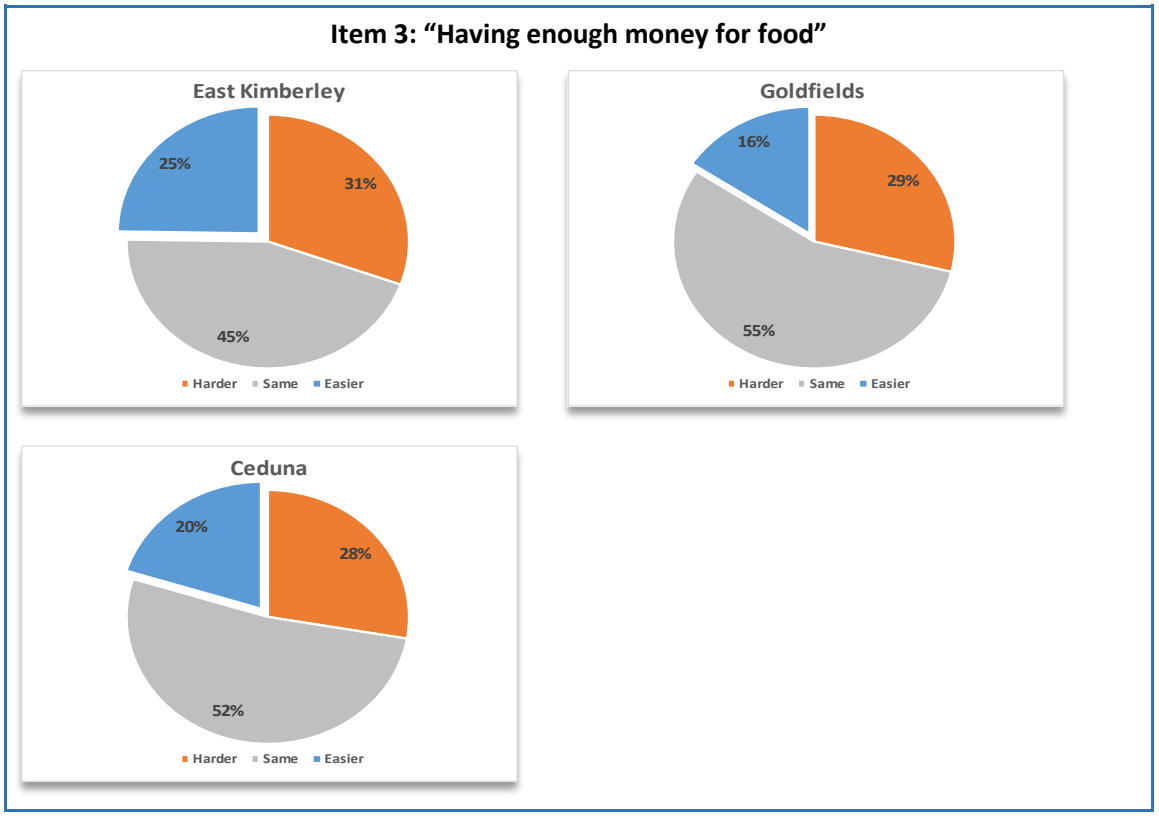


Figure A 4-4: Subjective impact of the CDC on participants' financial situation: item 4 'enough money to pay rent', by trial site (population weighted)

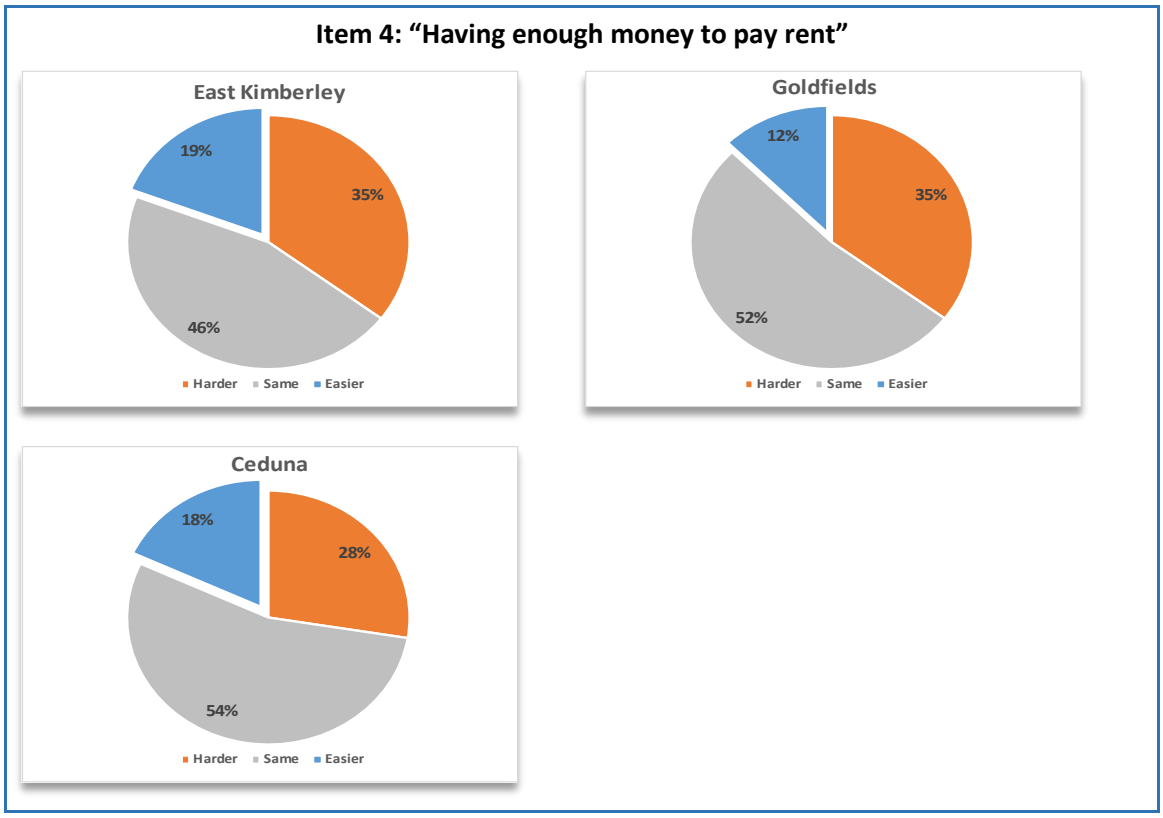


Figure A 4-5: Subjective impact of the CDC on participants' financial situation: item 5 'knowing how much money you have', by trial site (population weighted)

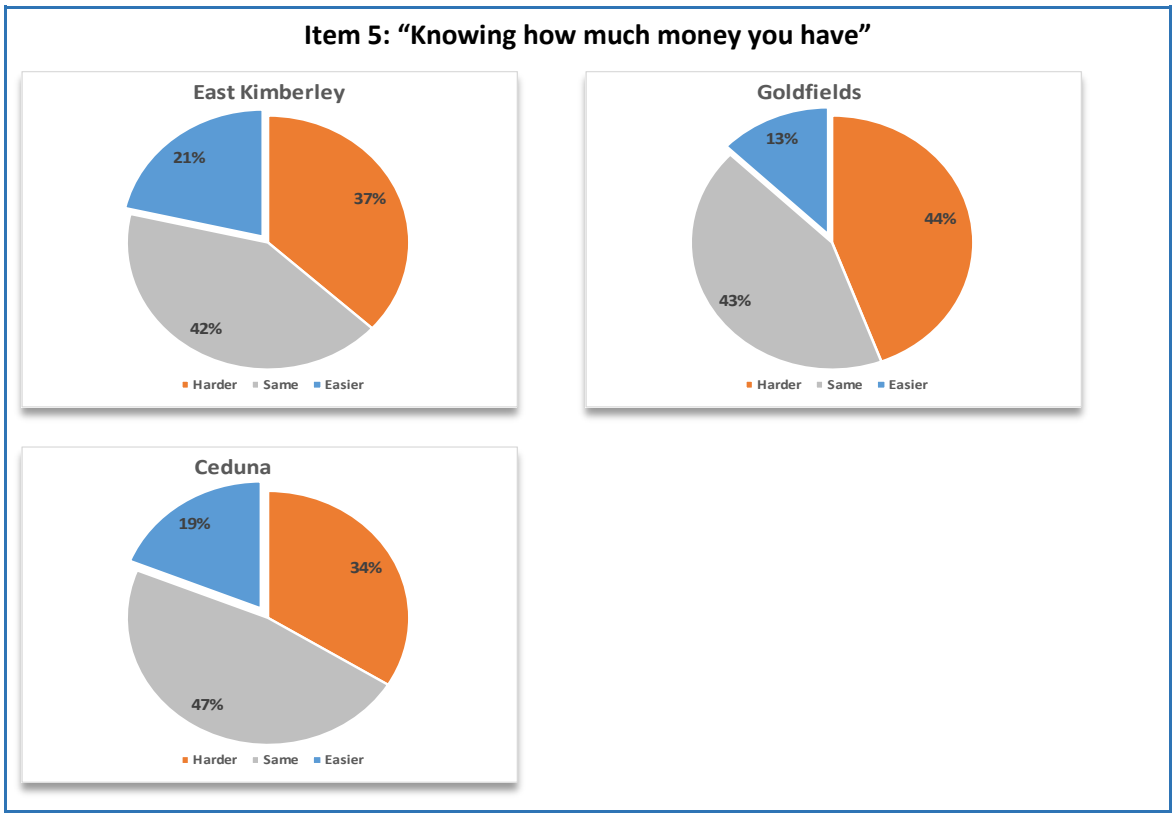


Figure A 4-6: Subjective impact of the CDC on participants' financial situation: item 6 'looking after family obligations', by trial site (population weighted)

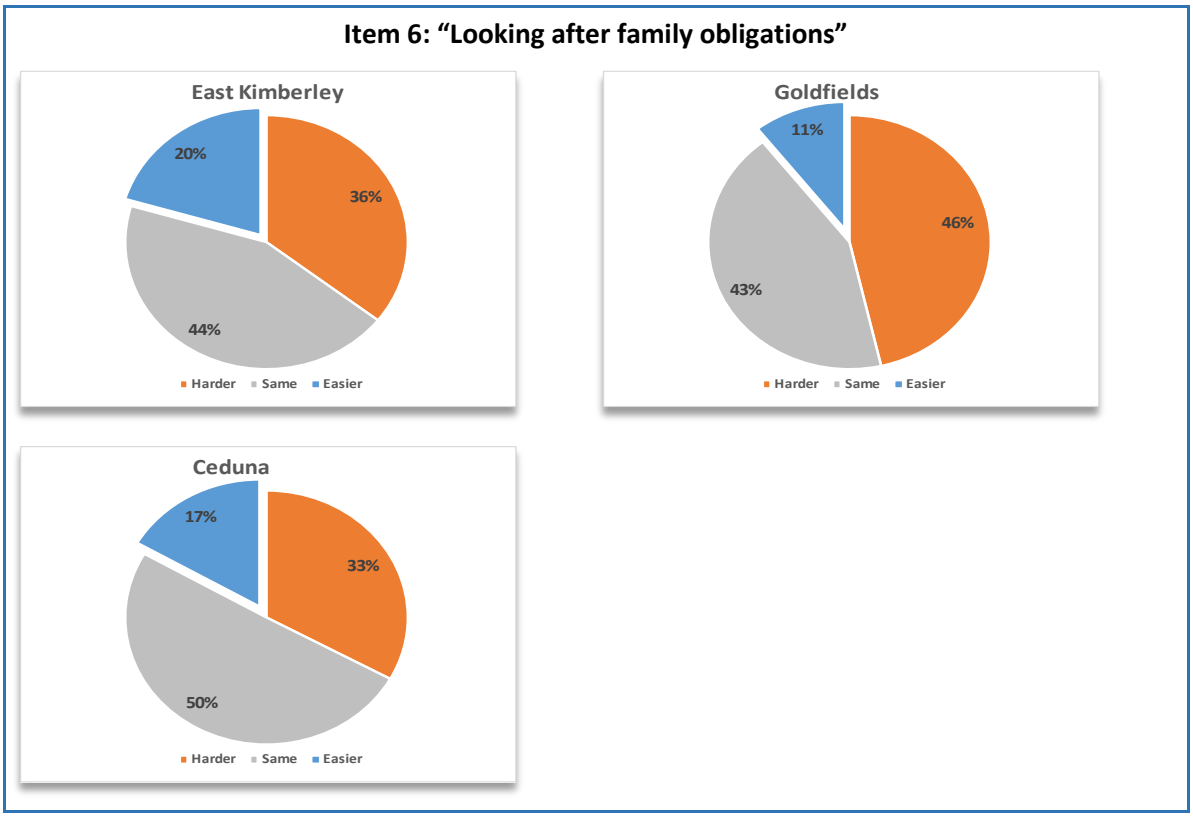


Table A 4-6: Multivariate analysis, 'managing money' and 'saving money'

	MANAGING YOUR MONEY				SAVING MONEY			
VARIABLES	COEFS	MARGINAL EFFECTS			COEFS	MARGINAL EFFECTS		
		HARDER	SAME	EASIER		HARDER	SAME	EASIER
GOLDFIELDS	-0.077*	0.031*	-0.016*	-0.015*	-0.14***	0.056***	-0.031***	-0.025***
	(0.044)	(0.017)	(0.0089)	(0.0085)	(0.044)	(0.017)	(0.0096)	(0.0078)
CEDUNA	0.063	-0.025	0.013	0.012	-0.051	0.020	-0.012	-0.0087
	(0.055)	(0.022)	(0.011)	(0.011)	(0.055)	(0.022)	(0.013)	(0.0091)
INDIGENOUS	0.24***	-0.096***	0.051***	0.045***	0.33***	-0.13***	0.076***	0.054***
	(0.042)	(0.017)	(0.0093)	(0.0076)	(0.043)	(0.017)	(0.010)	(0.0068)
AGE	0.013	-0.0053	0.0028	0.0026	0.017*	-0.0068*	0.0038*	0.0030*
	(0.0090)	(0.0036)	(0.0019)	(0.0017)	(0.0090)	(0.0036)	(0.0020)	(0.0016)
AGE SQUARE	-0.00022**	0.000087**	-0.000045**	-0.000042**	-0.00023**	0.000093**	-0.000052**	-0.000041**
	(0.00011)	(0.000043)	(0.000022)	(0.000021)	(0.00011)	(0.000043)	(0.000024)	(0.000019)
CURRENT FINANCIAL STRESS	-0.12***	0.047***	-0.024***	-0.023***	-0.12***	0.048***	-0.027***	-0.021***
	(0.0054)	(0.0021)	(0.0014)	(0.0011)	(0.0054)	(0.0021)	(0.0015)	(0.0010)
FINANCIAL STRESS 12 MTHS PRE- CDC	0.067***	-0.027***	0.014***	0.013***	0.066***	-0.026***	0.015***	0.012***
	(0.0058)	(0.0023)	(0.0013)	(0.0011)	(0.0058)	(0.0023)	(0.0014)	(0.0010)
EXPERIENCED PROBLEMS WITH THE CARD	-0.93***	0.36***	-0.19***	-0.16***	-0.72***	0.28***	-0.16***	-0.12***
	(0.038)	(0.013)	(0.0093)	(0.0070)	(0.038)	(0.014)	(0.0094)	(0.0063)
LIVE WITH ANYONE ELSE ON CDC	0.079**	-0.031**	0.016**	0.015**	0.039	-0.015	0.0086	0.0067
	(0.036)	(0.014)	(0.0073)	(0.0071)	(0.036)	(0.014)	(0.0080)	(0.0063)
FEMALE	0.17***	-0.068***	0.036***	0.033***	0.077**	-0.031**	0.017**	0.013**
	(0.037)	(0.015)	(0.0078)	(0.0069)	(0.037)	(0.015)	(0.0083)	(0.0063)
HAD A JOB LAST 4 WEEKS	0.18***	-0.070***	0.035***	0.035***	0.19***	-0.074***	0.040***	0.034***

	MANAGING YOUR MONEY				SAVING MONEY			
VARIABLES	COEFS	MARGINAL EFFECTS			COEFS	MARGINAL EFFECTS		
		HARDER	SAME	EASIER		HARDER	SAME	EASIER
	(0.038)	(0.015)	(0.0073)	(0.0081)	(0.038)	(0.015)	(0.0081)	(0.0074)
NEWSTART ALLOWANCE	**-0.092****	**0.037****	**-0.019****	**-0.018****	**-0.11****	**0.043****	**-0.024****	**-0.019****
	(0.042)	(0.017)	(0.0088)	(0.0081)	(0.042)	(0.017)	(0.0095)	(0.0073)
DSP	**0.036**	**-0.014**	**0.0073**	**0.0070**	**0.014**	**-0.0054**	**0.0030**	**0.0024**
	(0.056)	(0.022)	(0.011)	(0.011)	(0.056)	(0.022)	(0.012)	(0.0099)
/CUT1	-0.22				-0.031			
	(0.17)				(0.17)			
/CUT2	0.98***				1.18***			
	(0.17)				(0.17)			
OBSERVATIONS	1,628				1,632			
R2_P	0.14				0.13			
LL	-4365				-4338			
LL_0	-5100				-4971			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-7: Multivariate analysis, 'enough money for food' and 'enough money to pay rent'

	HAVING ENOUGH MONEY FOR FOOD				HAVING ENOUGH MONEY TO PAY RENT			
VARIABLES	COEFS	MARGINAL EFFECTS			COEFS	MARGINAL EFFECTS		
		HARDER	SAME	EASIER		HARDER	SAME	EASIER
GOLDFIELDS	-0.0035	0.0011	-0.00032	-0.00083	-0.0022	0.00079	-0.00035	-0.00044
	(0.043)	(0.014)	(0.0039)	(0.010)	(0.044)	(0.016)	(0.0071)	(0.0089)
CEDUNA	-0.027	0.0090	-0.0026	-0.0064	0.17***	-0.058***	0.022***	0.036***
	(0.054)	(0.018)	(0.0053)	(0.012)	(0.056)	(0.019)	(0.0063)	(0.013)
INDIGENOUS	0.15***	-0.049***	0.015***	0.034***	0.14***	-0.049***	0.023***	0.027***
	(0.040)	(0.013)	(0.0045)	(0.0091)	(0.041)	(0.015)	(0.0072)	(0.0080)
AGE	0.031***	-0.010***	0.0028***	0.0073***	0.037***	-0.013***	0.0058***	0.0073***
	(0.0087)	(0.0028)	(0.00082)	(0.0020)	(0.0091)	(0.0033)	(0.0015)	(0.0018)
AGE SQUARE	-0.00039***	0.00013***	-0.000035***	-0.000091***	-0.00037***	0.00013***	-0.000059***	-0.000074***
	(0.00010)	(0.000034)	(9.9E-06)	(0.000024)	(0.00011)	(0.000039)	(0.000018)	(0.000022)
CURRENT FINANCIAL STRESS	-0.14***	0.046***	-0.013***	-0.033***	-0.12***	0.044***	-0.020***	-0.025***
	(0.0052)	(0.0017)	(0.0012)	(0.0013)	(0.0052)	(0.0019)	(0.0013)	(0.0011)
FINANCIAL STRESS 12 MTHS PRE- CDC	0.055***	-0.018***	0.0050***	0.013***	0.055***	-0.020***	0.0087***	0.011***
	(0.0055)	(0.0018)	(0.00066)	(0.0013)	(0.0056)	(0.0020)	(0.00099)	(0.0011)
EXPERIENCED PROBLEMS WITH THE CARD	-0.43***	0.14***	-0.046***	-0.096***	-0.51***	0.19***	-0.089***	-0.098***
	(0.036)	(0.012)	(0.0054)	(0.0078)	(0.037)	(0.013)	(0.0078)	(0.0070)
LIVE WITH ANYONE ELSE ON CDC	0.14***	-0.044***	0.011***	0.032***	0.16***	-0.057***	0.024***	0.033***
	(0.035)	(0.011)	(0.0029)	(0.0084)	(0.036)	(0.013)	(0.0054)	(0.0076)
FEMALE	0.098***	-0.032***	0.0092***	0.023***	0.12***	-0.044***	0.020***	0.024***
	(0.035)	(0.012)	(0.0035)	(0.0082)	(0.036)	(0.013)	(0.0061)	(0.0072)
HAD A JOB LAST 4 WEEKS	0.23***	-0.071***	0.016***	0.056***	0.21***	-0.073***	0.029***	0.044***
	(0.037)	(0.011)	(0.0025)	(0.0096)	(0.039)	(0.013)	(0.0050)	(0.0086)

	HAVING ENOUGH MONEY FOR FOOD				HAVING ENOUGH MONEY TO PAY RENT			
VARIABLES	**COEFS**	**MARGINAL EFFECTS**			**COEFS**	**MARGINAL EFFECTS**		
		HARDER	**SAME**	**EASIER**		**HARDER**	**SAME**	**EASIER**
NEWSTART ALLOWANCE	**-0.14*** **	**0.046*** **	**-0.013*** **	**-0.033*** **	**-0.20*** **	**0.072*** **	**-0.032*** **	**-0.040*** **
	(0.041)	(0.013)	(0.0040)	(0.0095)	(0.042)	(0.015)	(0.0070)	(0.0085)
DSP	**-0.0053**	**0.0017**	**-0.00048**	**-0.0012**	**0.046**	**-0.017**	**0.0071**	**0.0095**
	(0.054)	(0.018)	(0.0050)	(0.013)	(0.056)	(0.020)	(0.0081)	(0.012)
/CUT1	-0.46***				0.014			
	(0.17)				(0.18)			
/CUT2	1.21***				1.64***			
	(0.17)				(0.18)			
OBSERVATIONS	1,619				1,520			
R2_P	0.12				0.11			
LL	-4490				-4202			
LL_0	-5075				-4715			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-8: Multivariate analysis, 'knowing how much you have' and 'looking after family obligations'

	KNOWING HOW MUCH YOU HAVE				LOOKING AFTER FAMILY OBLIGATIONS			
VARIABLES	COEFS	MARGINAL EFFECTS			COEFS	MARGINAL EFFECTS		
		HARDER	SAME	EASIER		HARDER	SAME	EASIER
GOLDFIELDS	-0.085**	0.033**	-0.015**	-0.018**	-0.18***	0.070***	-0.036***	-0.034***
	(0.043)	(0.017)	(0.0075)	(0.0090)	(0.044)	(0.017)	(0.0084)	(0.0085)
CEDUNA	0.10*	-0.039*	0.017**	0.022*	0.033	-0.013	0.0064	0.0061
	(0.054)	(0.020)	(0.0083)	(0.012)	(0.056)	(0.021)	(0.011)	(0.011)
INDIGENOUS	0.19***	-0.073***	0.035***	0.038***	0.25***	-0.096***	0.052***	0.044***
	(0.041)	(0.016)	(0.0080)	(0.0079)	(0.042)	(0.016)	(0.0093)	(0.0072)
AGE	0.021**	-0.0080**	0.0037**	0.0043**	-0.0061	0.0024	-0.0012	-0.0011
	(0.0088)	(0.0034)	(0.0016)	(0.0018)	(0.0090)	(0.0035)	(0.0018)	(0.0017)
AGE SQUARE	-0.00032***	0.00012***	-0.000057***	-0.000065***	0.000057	-0.000022	0.000012	0.000011
	(0.00011)	(0.000041)	(0.000019)	(0.000022)	(0.00011)	(0.000042)	(0.000022)	(0.000020)
CURRENT FINANCIAL STRESS	-0.11***	0.042***	-0.019***	-0.022***	-0.11***	0.043***	-0.023***	-0.021***
	(0.0051)	(0.0020)	(0.0012)	(0.0011)	(0.0052)	(0.0020)	(0.0014)	(0.0011)
FINANCIAL STRESS 12 MTHS PRE- CDC	0.056***	-0.022***	0.010***	0.012***	0.056***	-0.022***	0.011***	0.010***
	(0.0055)	(0.0021)	(0.0011)	(0.0012)	(0.0057)	(0.0022)	(0.0012)	(0.0011)
EXPERIENCED PROBLEMS WITH THE CARD	-0.66***	0.26***	-0.13***	-0.13***	-0.59***	0.23***	-0.12***	-0.10***
	(0.036)	(0.014)	(0.0085)	(0.0070)	(0.037)	(0.014)	(0.0091)	(0.0065)
LIVE WITH ANYONE ELSE ON CDC	0.24***	-0.091***	0.041***	0.051***	0.22***	-0.084***	0.042***	0.042***
	(0.035)	(0.013)	(0.0059)	(0.0077)	(0.036)	(0.014)	(0.0068)	(0.0071)
FEMALE	0.12***	-0.044***	0.021***	0.023***	-0.017	0.0065	-0.0034	-0.0031
	(0.035)	(0.014)	(0.0066)	(0.0072)	(0.036)	(0.014)	(0.0073)	(0.0068)
HAD A JOB LAST 4 WEEKS	0.19***	-0.072***	0.031***	0.040***	0.26***	-0.10***	0.048***	0.052***

	KNOWING HOW MUCH YOU HAVE				LOOKING AFTER FAMILY OBLIGATIONS			
VARIABLES	COEFS	MARGINAL EFFECTS			COEFS	MARGINAL EFFECTS		
		HARDER	SAME	EASIER		HARDER	SAME	EASIER
	(0.038)	(0.014)	(0.0059)	(0.0084)	(0.039)	(0.014)	(0.0065)	(0.0082)
NEWSTART ALLOWANCE	**-0.15*** **	**0.059*** **	**-0.028*** **	**-0.032*** **	**-0.15*** **	**0.056*** **	**-0.029*** **	**-0.027*** **
	(0.041)	(0.016)	(0.0075)	(0.0084)	(0.042)	(0.016)	(0.0086)	(0.0078)
DSP	**0.058**	**-0.022**	**0.010**	**0.012**	**-0.11***	**0.042***	**-0.023***	**-0.019** **
	(0.054)	(0.021)	(0.0090)	(0.012)	(0.056)	(0.022)	(0.013)	(0.0095)
/CUT1	-0.29*				-0.79***			
	(0.17)				(0.17)			
/CUT2	1.13***				0.70***			
	(0.17)				(0.17)			
OBSERVATIONS	1,614				1,546			
R2_P	0.12				0.12			
LL	-4540				-4248			
LL_0	-5132				-4812			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-9: Probability to report that money management has improved since the CDC for oneself, family, friends or community

	COEFS.	MARGINAL EFFECTS
GOLDFIELDS	**-0.21*** **	**-0.063*** **
	(0.057)	(0.017)
CEDUNA AND SURROUNDS	**-0.099**	**-0.029**
	(0.067)	(0.019)
FEMALE	**0.071**	**0.021**
	(0.046)	(0.014)
INDIGNEOUS	**0.55*** **	**0.15*** **
	(0.053)	(0.014)
AGE	**0.0084**	**0.0025**
	(0.011)	(0.0034)
AGE SQUARE	**-0.00012**	**-0.000036**
	(0.00014)	(0.000041)
EXPERIENCE ON CDC	**-0.011*** **	**-0.0034*** **
	(0.0020)	(0.00060)
HAD ISSUE WITH THE CARD	**-0.35*** **	**-0.10*** **
	(0.047)	(0.013)
COUPLE WITHOUT CHILDREN	**0.35*** **	**0.11*** **
	(0.067)	(0.023)
COUPLE WITH CHILDREN	**0.32*** **	**0.10*** **
	(0.068)	(0.023)
SINGLE PARENT	**0.16** **	**0.051** **
	(0.069)	(0.022)
OTHER HOUSEHOLD	**0.30*** **	**0.096*** **
	(0.069)	(0.024)
HOUSEHOLD TYPE UNKNOWN	**0.18**	**0.058**
	(0.12)	(0.040)
NEWSTART ALLOWANCE	**0.076**	**0.023**
	(0.055)	(0.017)
DSP	**0.28*** **	**0.089*** **
	(0.071)	(0.024)
FINANCIAL STRESS 12 MONTH PRIO CDC	**0.10*** **	**0.030*** **
	(0.0073)	(0.0022)
CURRENT FINANCIAL STRESS	**-0.080*** **	**-0.024*** **
	(0.0070)	(0.0021)
HAD A JOB WITH 4 WEEKS OF SURVEY	**0.20*** **	**0.063*** **
	(0.047)	(0.015)
CONSTANT	**-1.09*** **	
	(0.22)	
OBSERVATIONS	**1,543**	
LL	-2407	
LL_0	-2744	
R2_P	0.12	

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

5. Appendices to Section 3.3: Gambling

Table A 4-10: Probability to report that CDC has helped with gambling problems for oneself, family, friends or community

	COEFS.	MARGINAL EFFECTS
GOLDFIELDS	**-0.21*** **	**-0.063*** **
	(0.057)	(0.017)
CEDUNA AND SURROUNDS	**-0.099**	**-0.029**
	(0.067)	(0.019)
FEMALE	**0.071**	**0.021**
	(0.046)	(0.014)
INDIGNEOUS	**0.55*** **	**0.15*** **
	(0.053)	(0.014)
AGE	**0.0084**	**0.0025**
	(0.011)	(0.0034)
AGE SQUARE	**-0.00012**	**-0.000036**
	(0.00014)	(0.000041)
EXPERIENCE ON CDC	**-0.011*** **	**-0.0034*** **
	(0.0020)	(0.00060)
HAD ISSUE WITH THE CARD	**-0.35*** **	**-0.10*** **
	(0.047)	(0.013)
COUPLE WITHOUT CHILDREN	**0.35*** **	**0.11*** **
	(0.067)	(0.023)
COUPLE WITH CHILDREN	**0.32*** **	**0.10*** **
	(0.068)	(0.023)
SINGLE PARENT	**0.16** **	**0.051** **
	(0.069)	(0.022)
OTHER HOUSEHOLD	**0.30*** **	**0.096*** **
	(0.069)	(0.024)
HOUSEHOLD TYPE UNKNOWN	**0.18**	**0.058**
	(0.12)	(0.040)
NEWSTART ALLOWANCE	**0.076**	**0.023**
	(0.055)	(0.017)
DSP	**0.28*** **	**0.089*** **
	(0.071)	(0.024)
FINANCIAL STRESS 12 MONTH PRIO CDC	**0.10*** **	**0.030*** **
	(0.0073)	(0.0022)
CURRENT FINANCIAL STRESS	**-0.080*** **	**-0.024*** **
	(0.0070)	(0.0021)
HAD A JOB WITH 4 WEEKS OF SURVEY	**0.20*** **	**0.063*** **
	(0.047)	(0.015)
CONSTANT	**-1.09*** **	
	(0.22)	
OBSERVATIONS	**1,543**	
LL	-2407	
LL_0	-2744	
R2_P	0.12	

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

6. Appendices to Section 3.4: Alcohol use and misuse

Table A 4-11: Determinants of CDC participants' amounts of alcohol consumed on a usual day of drinking, ordered Probit

DEPENDENT VARIABLE: AMOUNT OF DRINKING ON A USUAL DRINKING DAY					
VARIABLES	**COEFS.**	**1-2**	**3-4 DRINKS**	**5 TO 9**	**10 OR**
AGE: REFERENCE 25-34 YEARS OLD:					
16-24 YEARS OLD	**-0.15**	**0.039**	**0.020**	**-0.014**	**-0.045**
	(0.13)	(0.036)	(0.016)	(0.015)	(0.037)
35-44 YEARS OLD	**-0.18***	**0.046***	**0.024***	**-0.016**	**-0.054***
	(0.10)	(0.027)	(0.013)	(0.011)	(0.029)
45-54 YEARS OLD	**-0.16**	**0.040**	**0.021***	**-0.014**	**-0.048**
	(0.099)	(0.026)	(0.013)	(0.0100)	(0.029)
55 YEARS OLD OR OLDER	**-0.39*****	**0.11*****	**0.045*****	**-0.044****	**-0.11*****
	(0.12)	(0.037)	(0.012)	(0.019)	(0.030)
INDIGENOUS	**0.97*****	**-0.28*****	**-0.089*****	**0.12*****	**0.25*****
	(0.23)	(0.077)	(0.012)	(0.037)	(0.049)
SITE: REFERENCE EAST KIMBERLEY:					
GOLDFIELDS	**-0.50****	**0.12****	**0.068****	**-0.035****	**-0.15****
	(0.23)	(0.056)	(0.031)	(0.016)	(0.072)
CEDUNA AND SURROUNDS	**-0.88*****	**0.27*****	**0.069*****	**-0.13****	**-0.21*****
	(0.29)	(0.10)	(0.0091)	(0.056)	(0.051)
INDIGENOUS*GOLDFIELDS	**-0.34**	**0.088**	**0.043**	**-0.032**	**-0.100**
	(0.25)	(0.069)	(0.029)	(0.028)	(0.070)
INDIGENOUS*CEDUNA	**0.059**	**-0.014**	**-0.0085**	**0.0040**	**0.019**
	(0.31)	(0.073)	(0.046)	(0.019)	(0.10)
FREQUENCY OF DRINKING, REFERENCE: 2-4 TIMES A MONTH					
DRINKS MONTHLY OR LESS	**-0.29*****	**0.071*****	**0.041*****	**-0.021*****	**-0.091*****
	(0.085)	(0.021)	(0.012)	(0.0069)	(0.027)
DRINKS MORE THAN WEEKLY	**0.15**	**-0.036**	**-0.022**	**0.0091***	**0.049**
	(0.10)	(0.023)	(0.016)	(0.0051)	(0.034)
THRESHOLD 1	**-1.06*****				
	(0.25)				
THRESHOLD 2	**-0.34**				
	(0.24)				
THRESHOLD 3	**0.64*****				
	(0.25)				
OBSERVATIONS	978				
R2_P	0.11				
LOG LIKELIHOOD	-1196				
RESTRICTED LOG LIKELIHOOD	-1339				

Note: the first column includes the estimated coefficients, the 4 following columns include the estimated marginal effects for each possible outcome of this ordered categorical variable.
*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-12: Harmonisation of the AUDIT questions used in the survey and the NDSHS instruments

	LOW SCORE	HIGH SCORE
CODING	**LABEL**	**LABEL**
QUESTION1 (E7)		
0	No drink	No drink
1	Less often/about 1 day a month	Less often/about 1 day a month
2	2 to 3 days a month	2 to 3 days a month
3	1 to 2 days a week/3 to 4 days a week	1 to 2 days a week
4	5 to 6 days a week/every day	3 to 4 days a week/5 to 6 days a week/every day
QUESTION 2 (E15)		
0	No drink/half a drink/1 drink/2 drinks	No drink/half a drink/1 drink/2 drinks
1	3 – 4 drinks	3 – 4 drinks
2	5 – 6 drinks	5 – 6 drinks
3	7 – 8 drinks/9 – 10 drinks	7 – 8 drinks
4	11 – 12 drinks/13 – 15 drinks/ 16 – 19 drinks/20 or more drinks	9 – 10 drinks/11 – 12 drinks/13 – 15 drinks/16 – 19 drinks/20 or more drinks
QUESTION 3 (E17)		
0	No drink/less than 1 standard drink per day/1 – 2 standard drinks a day/3 – 4 standard drinks a day/5 – 6 standard drinks a day/7 – 10 standard drinks a day (never) /11 – 19 standard drinks a day(never) /20 or more standard drinks a day (never)	No drink/less than 1 standard drink per day/1 – 2 standard drinks a day/3 – 4 standard drinks a day/5 – 6 standard drinks a day (never)/7 – 10 standard drinks a day (never) /11 – 19 standard drinks a day(never) /20 or more standard drinks a day (never)
1	7 – 10 standard drinks a day (less often) /11 – 19 standard drinks a day (less often) /20 or more standard drinks a day (less often)	5 – 6 standard drinks a day (less often)/7 – 10 standard drinks a day (less often) /11 – 19 standard drinks a day (less often) /20 or more standard drinks a day (less often)
2	7 – 10 standard drinks a day (about 1 day a month/2 – 3 days a month) / 11 – 19 standard drinks a day (about 1 day a month/2 – 3 days a month) /20 or more standard drinks a day (about 1 day a month/2 – 3 days a month)	5 – 6 standard drinks a day (about 1 day a month)/ 7 – 10 standard drinks a day (about 1 day a month) / 11 – 19 standard drinks a day (about 1 day a month) / 20 or more standard drinks a day (about 1 day a month)
3	7 – 10 standard drinks a day (1 – 2 days a week/3 – 4 days a week) /11 – 19 standard drinks a day (1 – 2 days a week/3 – 4 days a week) / 20 or more standard drinks a day (1 – 2 days a week/3 – 4 days a week)	5 – 6 standard drinks a day (2 – 3 days a month/1 – 2 days a week)/7 – 10 standard drinks a day (2 – 3 days a month/ 1 – 2 days a week) /11 – 19 standard drinks a day (2 – 3 days a month/ 1 – 2 days a week) /20 or more standard drinks a day (2 – 3 days a month/ 1 – 2 days a week)
4	7 – 10 standard drinks a day (5 – 6 days a week/every day) /11 – 19 standard drinks a day (5 – 6 days a week/every day) /20 or more standard drinks a day (5 – 6 days a week/ every day)	7 – 10 standard drinks a day (3 – 4 days a week/5 – 6 days a week/every day) /11 – 19 standard drinks a day (3 – 4 days a week/5 – 6 days a week/every day) /20 or more standard drinks a day (3 – 4 days a week/5 – 6 days a week/every day)
QUESTION 4 (E22)		
0	No drink	No drink

	LOW SCORE	HIGH SCORE
1	Less often but at least once	Less often but at least once
2	About 1 day a month/2 – 3 days a month	About 1 day a month
3	1 – 2 days a week/3 – 4 days a week	2 – 3 days a month/1 – 2 days a week
4	5 – 6 days a week/every day	3 – 4 days a week/5 – 6 days a week/every day
QUESTION 5 (E23)		
0	No drink	No drink
1	Less often but at least once	Less often but at least once
2	About 1 day a month/2 – 3 days a month	About 1 day a month
3	1 – 2 days a week/3 – 4 days a week	2 – 3 days a month/1 – 2 days a week
4	5 – 6 days a week/every day	3 – 4 days a week/5 – 6 days a week/every day
QUESTION 6 (E24)		
0	No drink	No drink
1	Less often but at least once	Less often but at least once
2	About 1 day a month/2 – 3 days a month	About 1 day a month
3	1 – 2 days a week/3 – 4 days a week	2 – 3 days a month/1 – 2 days a week
4	5 – 6 days a week/every day	3 – 4 days a week/5 – 6 days a week/every day
QUESTION 7 (E25)		
0	No drink	No drink
1	Less often but at least once	Less often but at least once
2	About 1 day a month/2 – 3 days a month	About 1 day a month
3	1 – 2 days a week/3 – 4 days a week	2 – 3 days a month/1 – 2 days a week
4	5 – 6 days a week/every day	3 – 4 days a week /5 – 6 days a week/every day
QUESTION 8 (E21)		
0	No drink	No drink
1	Less often but at least once	Less often but at least once
2	About 1 day a month/2 – 3 days a month	About 1 day a month
3	1 – 2 days a week/3 – 4 days a week	2 – 3 days a month/1 – 2 days a week
4	5 – 6 days a week/every day	3 – 4 days a week/5 – 6 days a week/every day
QUESTION 9 (E26)		
0	No	No
2	Yes, but not in the last 12 months	Yes, but not in the last 12 months
4	Yes, in the last 12 months	Yes, in the last 12 months
QUESTION 10 (E27)		
0	No	No
2	Yes, but not in the last 12 months	Yes, but not in the last 12 months
4	Yes, in the last 12 months	Yes, in the last 12 months

Table A 4-13: Alcohol Use Disorder Identification Test (AUDIT), total score (East Kimberley vs. benchmarks)

EAST KIMBERLEY	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-7)	870	54.5	78.3	74.2	70.8	61.7	76.7	71.6	77.1	72.1
MODERATE (8-15)	446	27.9	16.7	18.9	22.5	29.8	17.9	21.1	17.9	21.0
HIGH (16-19)	131	8.2	3.0	3.6	2.4	2.7	2.9	3.4	2.8	3.6
VERY HIGH (20 OR MORE)	150	9.4	2.1	3.3	4.3	5.8	2.5	3.9	2.2	3.3
TOTAL	1,597	100	100	100	100	100	100	100	100	100

Table A 4-14: Alcohol Use Disorder Identification Test (AUDIT), total score (Goldfields vs. benchmarks)

GOLDFIELDS	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-7)	2,895	82.7	78.3	74.2	70.8	61.7	76.7	71.6	77.1	72.1
MODERATE (8-15)	386	11.0	16.7	18.9	22.5	29.8	17.9	21.1	17.9	21.0
HIGH (16-19)	89	2.5	3.0	3.6	2.4	2.7	2.9	3.4	2.8	3.6
VERY HIGH (20 OR MORE)	132	3.8	2.1	3.3	4.3	5.8	2.5	3.9	2.2	3.3
TOTAL	3,502	100	100	100	100	100	100	100	100	100

Table A 4-15: Alcohol Use Disorder Identification Test (AUDIT), total score (Ceduna vs. benchmarks)

CEDUNA AND SURROUNDS	CDC PARTICIPANTS		ADELAIDE		SA, EXCL. ADELAIDE		SOUTH AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-7)	769	81.9	77.7	73.5	68.0	64.1	75.7	71.6	77.1	72.1
MODERATE (8-15)	93	9.9	18.3	20.2	24.5	26.8	19.6	21.6	17.9	21.0
HIGH (16-19)	28	3.0	2.0	3.5	5.2	5.1	2.7	3.9	2.8	3.6
VERY HIGH (20 OR MORE)	49	5.2	2.0	2.7	2.2	4.0	2.0	3.0	2.2	3.3
TOTAL	939	100	100	100	100	100	100	100	100	100

Table A 4-16: Alcohol Use Disorder Identification Test (AUDIT), consumption score (East Kimberley vs benchmarks)

EAST KIMBERLEY	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-5)	939	58.8	82.2	73.1	69.6	60.6	79.6	70.5	79.7	71.6
MIDDLE (6-7)	315	19.7	10.3	11.7	18.2	14.4	12.0	12.2	11.3	11.3
HIGH (8 OR MORE)	343	21.5	7.5	15.2	12.2	24.9	8.5	17.2	9.0	17.1
TOTAL	1,597	100	100	100	100	100	100	100	100	100

Table A 4-17: Alcohol Use Disorder Identification Test (AUDIT), consumption score (Goldfields vs. benchmarks)

GOLDFIELDS	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-5)	2,958	84.4	82.2	73.1	69.6	60.6	79.6	70.5	79.7	71.6
MIDDLE (6-7)	334	9.5	10.3	11.7	18.2	14.4	12.0	12.2	11.3	11.3
HIGH (8 OR MORE)	212	6.1	7.5	15.2	12.2	24.9	8.5	17.2	9.0	17.1
TOTAL	3,504	100	100	100	100	100	100	100	100	100

Table A 4-18: Alcohol Use Disorder Identification Test (AUDIT), consumption score (Ceduna vs. benchmarks)

CEDUNA AND SURROUNDS	CDC PARTICIPANTS		ADELAIDE		SA, EXCL. ADELAIDE		SOUTH AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
LOW (0-5)	796	84.8	81.3	72.4	72.8	63.9	79.5	70.7	79.7	71.6
MIDDLE (6-7)	86	9.2	10.5	12.6	16.7	14.5	11.8	13.0	11.3	11.3
HIGH (8 OR MORE)	57	6.1	8.3	14.9	10.5	21.6	8.7	16.3	9.0	17.1
TOTAL	939	100	100	100	100	100	100	100	100	100

Table A 4-19: Alcohol Use Disorder Identification Test (AUDIT), dependence score (East Kimberley vs. benchmarks)

EAST KIMBERLEY	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
NO DEPENDENCE (0-3)	1,341	84.0	96.2	95.6	94.6	94.3	95.9	95.4	96.2	95.6
DEPENDENCE (4 OR MORE)	256	16.0	3.8	4.4	5.4	5.7	4.1	4.6	3.8	4.4
TOTAL	1,597	100	100	100	100	100	100	100	100	100

Table A 4-20: Alcohol Use Disorder Identification Test (AUDIT), dependence score (Goldfields vs. benchmarks)

GOLDFIELDS	CDC PARTICIPANTS		PERTH		WA, EXCL. PERTH		WESTERN AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
NO DEPENDENCE (0-3)	3,241	92.5	96.2	95.6	94.6	94.3	95.9	95.4	96.2	95.6
DEPENDENCE (4 OR MORE)	262	7.5	3.8	4.4	5.4	5.7	4.1	4.6	3.8	4.4
TOTAL	3,503	100	100	100	100	100	100	100	100	100

Table A 4-21: Alcohol Use Disorder Identification Test (AUDIT), dependence score (Ceduna vs. benchmarks)

CEDUNA AND SURROUNDS	CDC PARTICIPANTS		ADELAIDE		SA, EXCL. ADELAIDE		SOUTH AUSTRALIA		AUSTRALIA	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
	NUMBER	%	%	%	%	%	%	%	%	%
NO DEPENDENCE (0-3)	842	89.7	96.9	96.0	96.7	96.0	96.9	96.0	96.2	95.6
DEPENDENCE (4 OR MORE)	97	10.3	3.1	4.0	3.3	4.0	3.1	4.0	3.8	4.4
TOTAL	939	100	100	100	100	100	100	100	100	100

Figure A 4-7: Stated changes in alcohol consumption after the rollout of the CDC according to one's Total AUDIT score, East Kimberley site (population weighted)

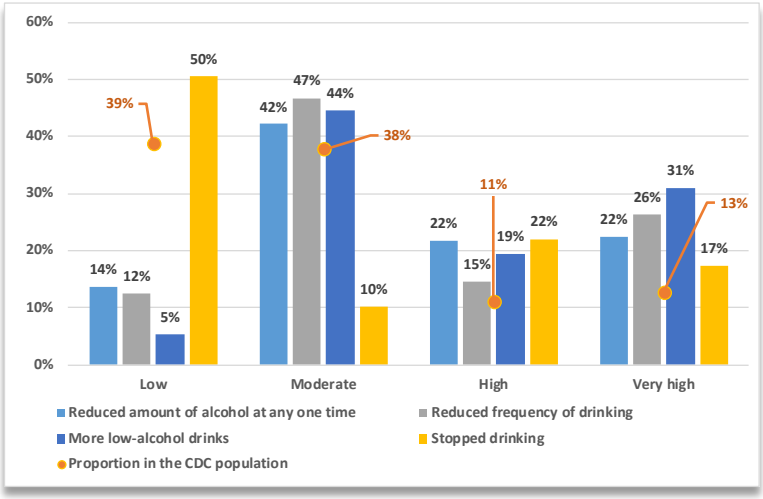


Figure A 4-8: Stated changes in alcohol consumption after the rollout of the CDC according to one's Total AUDIT score, Goldfields site (population weighted)

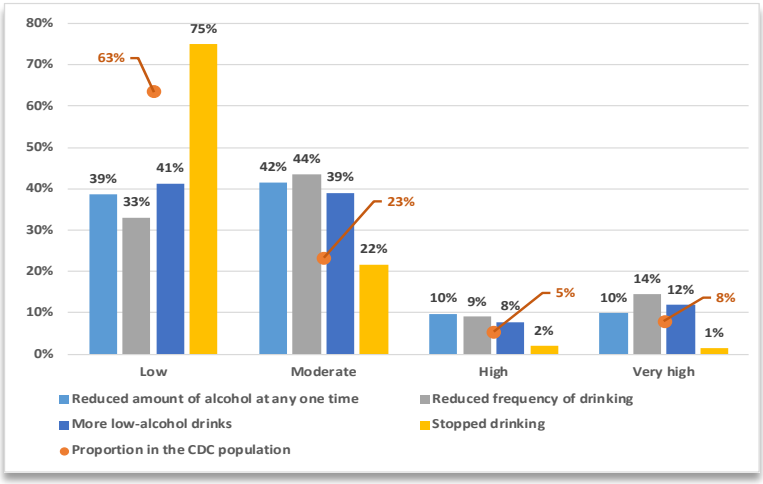


Figure A 4-9: Stated changes in alcohol consumption after the rollout of the CDC according to one's Total AUDIT score, Ceduna and surrounds site (population weighted)

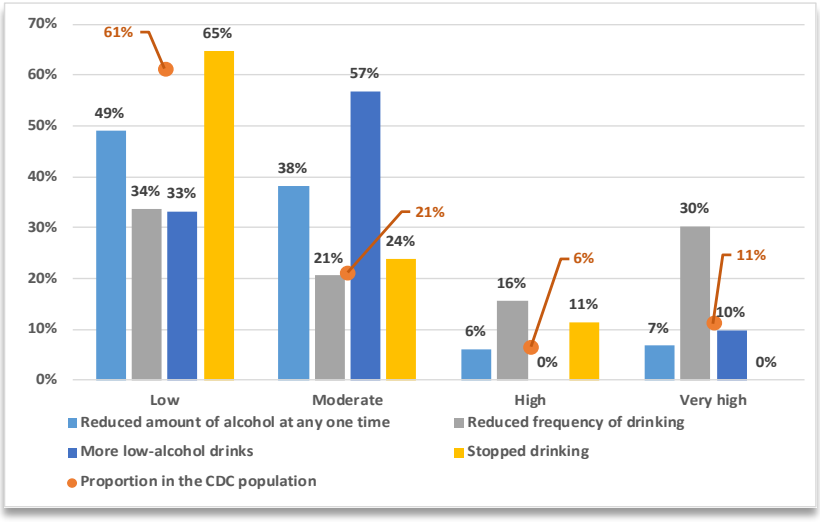


Figure A 4-10: Reported impact of the CDC on alcohol consumption according to one's Total AUDIT score, East Kimberley site (population weighted)

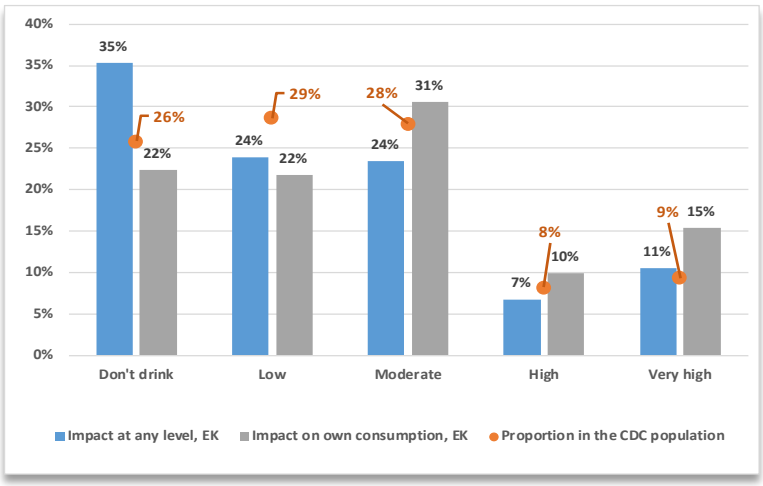


Figure A 4-11: Reported impact of the CDC on alcohol consumption according to one's Total AUDIT score, Goldfields site (population weighted)

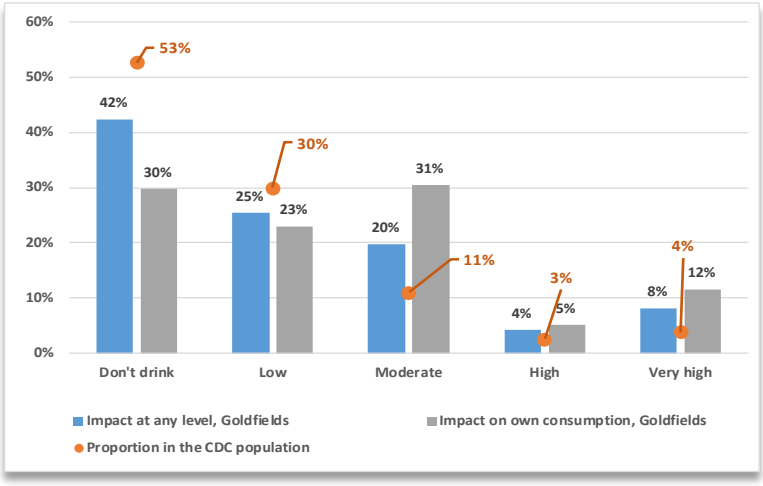


Figure A 4-12: Reported impact of the CDC on alcohol consumption according to one's Total AUDIT score, Ceduna and surrounds site (population weighted)

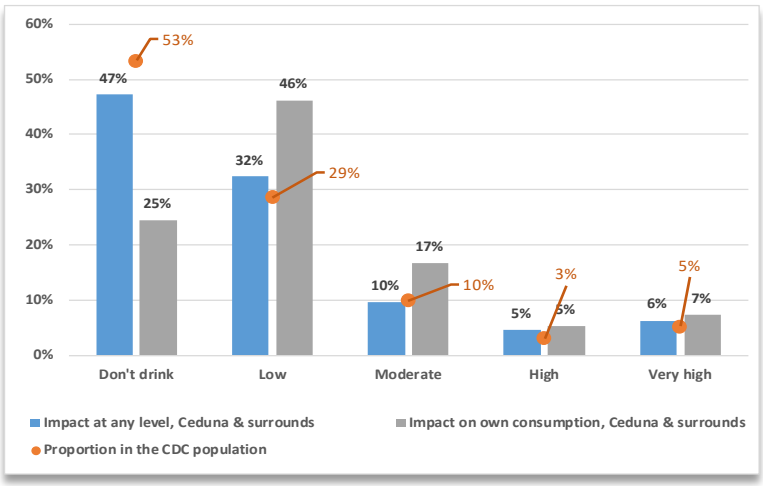


Table A 4-22: Determinants of the probability that CDC participants report a positive impact of the CDC on alcohol consumption (impact at any level and impact for one's consumption), Probit models

VARIABLES	IMPACT AT ANY LEVEL (INDIVIDUAL, FAMILY, FRIENDS, COMMUNITY)		IMPACT ON CDC PARTICIPANT'S OWN CONSUMPTION	
	COEFS	MARG. EFFECTS	COEFS	MARG. EFFECTS
AUDIT SCORE: REFERENCE, LOW RISK				
DON'T DRINK	-0.054 (0.090)	-0.018 (0.030)	-0.28** (0.12)	-0.051** (0.021)
MODERATE/HIGH/VERY HIGH	0.58*** (0.099)	0.21*** (0.036)	0.57*** (0.11)	0.12*** (0.028)
SITES: REFERENCE EAST KIMBERLEY				
GOLDFIELDS	0.18* (0.10)	0.061* (0.034)	-0.065 (0.12)	-0.012 (0.023)
CEDUNA AND SURROUNDS	0.32*** (0.12)	0.11*** (0.042)	0.020 (0.13)	0.0038 (0.025)
INDIGENOUS	0.33*** (0.087)	0.11*** (0.027)	0.45*** (0.12)	0.075*** (0.017)
HOUSEHOLD TYPE (REFERENCE: LIVING ALONE)				
CPL LIVING ALONE OR UNRELATED ADULTS	0.36*** (0.11)	0.13*** (0.042)	0.40*** (0.13)	0.086*** (0.033)
CPL WITH CHILDREN, DEPDT OR NOT	0.38*** (0.11)	0.14*** (0.041)	0.25* (0.13)	0.052* (0.030)
SINGLE PARENT WITH DEPDT OR NOT	0.13 (0.11)	0.043 (0.038)	-0.030 (0.14)	-0.0055 (0.025)
OTHER HOUSEHOLD TYPE	0.36*** (0.12)	0.13*** (0.044)	0.39*** (0.14)	0.085** (0.035)
EXPERIENCE ON CDC (MONTHS)	-0.0075** (0.0035)	-0.0025** (0.0012)	0.0012 (0.0042)	0.00022 (0.00077)
FEMALE	0.13* (0.077)	0.043* (0.025)	0.073 (0.093)	0.013 (0.017)
HAD A JOB IN THE 4 WEEKS PRIOR TO SURVEY	0.21*** (0.078)	0.071*** (0.027)	0.19** (0.091)	0.036* (0.018)
EXPERIENCED PROBLEMS WITH THE CARD	-0.32*** (0.077)	-0.10*** (0.024)	-0.23** (0.096)	-0.042** (0.017)
YEAR PRIOR TO CDC: FINANCIAL STRESS INDEX	0.047*** (0.0099)	0.016*** (0.0033)	0.0057*** (0.0015)	0.0011*** (0.00028)
CONSTANT	-1.33*** (0.17)		-1.89*** (0.21)	
OBSERVATIONS	1,551		1,551	
LIKELIHOOD	-849		-544	
RESTRICTED LIKELIHOOD	-945		-639	
PSEUDO R2	0.10		0.15	

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

7. Appendices to Section 3.5: Drug use and misuse

Table A 4-23: Determinants of the probability that CDC participants report a positive impact of the CDC on drug use (impact at any level), Probit model

VARIABLES	COEFFICIENTS	MARGINAL
REFERENCE: LOW RISK		
DON'T DRINK	0.070	0.019
	(0.056)	(0.015)
MODERATE/HIGH/VERY HIGH	0.64***	0.19***
	(0.060)	(0.020)
SITE: (REFERENCE: EAST KIMBERLEY)		
GOLDFIELDS	0.16***	0.042***
	(0.062)	(0.016)
CEDUNA AND SURROUNDS	0.37***	0.11***
	(0.070)	(0.023)
INDIGENOUS	0.50***	0.13***
	(0.056)	(0.013)
HOUSEHOLD TYPE (REFERENCE: SINGLE LIVING ALONE)		
CPL LIVING ALONE OR UNRELATED ADULTS	0.32***	0.094***
	(0.068)	(0.022)
CPL WITH CHILDREN, DEPDT OR NOT	0.40***	0.12***
	(0.068)	(0.022)
SINGLE PARENT WITH DPDT OR NOT	0.065	0.018
	(0.068)	(0.019)
OTHER HOUSEHODL TYPE	0.19***	0.055**
	(0.071)	(0.021)
HOUSEHOLD TYPE UNKNOWN	0.18	0.052
	(0.12)	(0.038)
AGE	-0.0059***	-0.0016***
	(0.0018)	(0.00047)
CURRENT: INDEX OF FINANCIAL STRESS	-0.034***	-0.0090***
	(0.0061)	(0.0016)
MCS	-0.0099***	-0.0027***
	(0.0017)	(0.00045)
EXPERIENCED PROBLEMS USING THE CARD	-0.23***	-0.059***
	(0.048)	(0.012)
NEWSTART ALLOWANCE RECIPIENT	0.17***	0.044***
	(0.045)	(0.012)
EXPERIENCE ON CDC	-0.0082***	-0.0022***
	(0.0021)	(0.00055)
CONSTANT	-0.66***	
	(0.15)	
OBSERVATIONS	1,545	1,545
LL	-2216	-2216
LL_0	-2486	-2486
R2_P	0.11	0.11

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

8. Appendices to Section 3.6.2: Quality of life: has the CDC made life better?

Table A 4-24: Determinants of the probability that CDC participants report that the CDC has made their lives better or worse, Ordered Probit model

VARIABLES	COEFFICIENTS	WORSE OR LOT WORSE	NO DIFFERENT	BETTER OR A LOT BETTER
REFERENCE: LOW RISK				
DON'T DRINK	-0.14***	0.048***	-0.023***	-0.025***
	(0.049)	(0.017)	(0.0085)	(0.0090)
MODERATE/HIGH/VERY HIGH	0.20***	-0.074***	0.034***	0.040***
	(0.056)	(0.021)	(0.0091)	(0.012)
GOLDFIELDS	-0.24***	0.087***	-0.041***	-0.046***
	(0.051)	(0.019)	(0.0086)	(0.010)
CEDUNA AND SURROUNDS	-0.23***	0.077***	-0.040***	-0.038***
	(0.066)	(0.022)	(0.012)	(0.010)
INDIGENOUS	0.22***	-0.078***	0.038***	0.040***
	(0.050)	(0.017)	(0.0086)	(0.0087)
CPL LIVING ALONE OR UNRELATED ADULTS	0.22***	-0.082***	0.037***	0.045***
	(0.066)	(0.025)	(0.010)	(0.015)
CPL WITH CHILDREN, DEPDT OR NOT	0.24***	-0.088***	0.039***	0.048***
	(0.068)	(0.026)	(0.011)	(0.015)
SINGLE PARENT WITH DPDT OR NOT	0.091	-0.033	0.015	0.017
	(0.060)	(0.022)	(0.010)	(0.012)
OTHER HOUSEHOLD TYPE	0.20***	-0.073***	0.033***	0.040***
	(0.069)	(0.026)	(0.011)	(0.015)
HOUSEHOLD TYPE UNKNOWN	0.38***	-0.14***	0.058***	0.087***
	(0.11)	(0.045)	(0.014)	(0.031)
AGE	0.021**	-0.0075**	0.0036**	0.0039**
	(0.010)	(0.0037)	(0.0018)	(0.0019)
AGE SQUARE	-0.00021*	0.000075*	-0.000036*	-0.000039*
	(0.00013)	(0.000045)	(0.000022)	(0.000023)
CURRENT: INDEX OF FINANCIAL STRESS	-0.15***	0.055***	-0.027***	-0.029***
	(0.0099)	(0.0034)	(0.0020)	(0.0018)
PRIOR TO CDC: INDEX OF FINANCIAL STRESS	0.085***	-0.030***	0.015***	0.016***
	(0.0100)	(0.0036)	(0.0018)	(0.0019)
INTERACTION PRE-POST FINANCIAL STRESS INDEX	0.0023	-0.00081	0.00039	0.00042
	(0.0014)	(0.00051)	(0.00024)	(0.00026)
EXPERIENCED PROBLEMS USING THE CARD	-0.88***	0.29***	-0.14***	-0.15***
	(0.044)	(0.013)	(0.0080)	(0.0078)
LIVE WITH ANYONE ELSE ON CDC	0.082*	-0.029*	0.014*	0.015*

VARIABLES	COEFFICIENTS	WORSE OR LOT WORSE	NO DIFFERENT	BETTER OR A LOT BETTER
	(0.046)	(0.017)	(0.0079)	(0.0087)
FEMALE	0.15***	-0.055***	0.027***	0.028***
	(0.043)	(0.015)	(0.0074)	(0.0077)
PAST 4 WEEKS HAD A JOB	0.17***	-0.062***	0.029***	0.033***
	(0.043)	(0.016)	(0.0072)	(0.0088)
GAMBLED PRIOR TO CDC	0.18**	-0.066**	0.030**	0.036**
	(0.077)	(0.029)	(0.012)	(0.017)
CURRENTLY GAMBLES	-0.23***	0.079***	-0.040***	-0.038***
	(0.087)	(0.028)	(0.015)	(0.013)
/CUT1	0.52**			
	(0.21)			
/CUT2	1.29***			
	(0.21)			
OBSERVATIONS	1,470			
R2_P	0.17			
LL	-3424			
LL_0	-4127			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-25: Determinants of the probability that CDC participants report that the CDC has improved quality of life for themselves, family, friends, community, Probit models

	IMPACT AT ANY LEVEL (INDIVIDUAL, FAMILY, FRIENDS, COMMUNITY)		IMPACT ON CDC PARTICIPANT'S OWN QUALITY OF LIFE	
	COEFS	MARG. EFF.	COEFS	MARG. EFF.
ALCOHOL CONSUMPTION RISK (REF: LOW RISK)				
DON'T DRINK	-0.040	-0.011	0.0073	0.0012
	(0.057)	(0.015)	(0.070)	(0.011)
MODERATE/HIGH/VERY HIGH	0.54***	0.16***	0.51***	0.095***
	(0.061)	(0.019)	(0.070)	(0.015)
GOLDFIELDS (REF: EK)	0.017	0.0045	-0.18***	-0.030***
	(0.061)	(0.016)	(0.070)	(0.012)
CEDUNA AND SURROUNDS (REF: EK)	0.20***	0.056***	-0.17**	-0.024**
	(0.072)	(0.022)	(0.084)	(0.011)
INDIGENOUS	0.50***	0.12***	0.47***	0.069***
	(0.057)	(0.013)	(0.072)	(0.0095)
HOUSEHOLD TYPE (REF: LIVING ALONE)				
CPL LIVING ALONE OR UNRELATED ADULTS	0.35***	0.10***	0.43***	0.084***
	(0.070)	(0.022)	(0.082)	(0.019)
CPL WITH CHILDREN, DEPDT OR NOT	0.33***	0.096***	0.38***	0.072***
	(0.070)	(0.022)	(0.082)	(0.018)
SINGLE PARENT WITH DEPDT OR NOT	0.16**	0.043**	0.14*	0.024
	(0.070)	(0.020)	(0.085)	(0.015)
OTHER HOUSEHOLD TYPE	0.13*	0.036*	0.34***	0.063***
	(0.074)	(0.021)	(0.084)	(0.018)
HOUSEHOLD TYPE UNKNOWN	0.24*	0.069*	0.33**	0.064**
	(0.12)	(0.039)	(0.14)	(0.033)
AGE	0.010	0.0027	0.017	0.0027
	(0.012)	(0.0032)	(0.014)	(0.0023)
AGE SQUARE	-0.00012	-0.000032	-0.00019	-0.000030
	(0.00015)	(0.000039)	(0.00018)	(0.000028)
CURRENT: INDEX OF FINANCIAL STRESS	0.095***	0.025***	0.085***	0.014***
	(0.011)	(0.0030)	(0.012)	(0.0020)
PRIOR TO CDC: INDEX OF FINANCIAL STRESS	-0.066***	-0.018***	-0.047***	-0.0076***
	(0.0097)	(0.0026)	(0.011)	(0.0017)
INTERACTION PRE-POST FINANCIAL STRESS INDEX	-0.0026*	-0.00068*	-0.0024	-0.00038
	(0.0015)	(0.00040)	(0.0017)	(0.00028)
EXPERIENCED PROBLEMS USING THE CARD	-0.47***	-0.12***	-0.49***	-0.073***
	(0.050)	(0.012)	(0.062)	(0.0086)
FEMALE	0.13***	0.034***	0.090	0.014
	(0.048)	(0.013)	(0.055)	(0.0087)
PAST 4 WEEKS HAD A JOB	0.11**	0.030**	0.14**	0.024**

	IMPACT AT ANY LEVEL (INDIVIDUAL, FAMILY, FRIENDS, COMMUNITY)		IMPACT ON CDC PARTICIPANT'S OWN QUALITY OF LIFE	
	COEFS	**MARG. EFF.**	**COEFS**	**MARG. EFF.**
	(0.050)	(0.014)	(0.057)	(0.0098)
DSP RECIPIENT	**0.24*** **	**0.067*** **	**0.23*** **	**0.040*** **
	(0.063)	(0.019)	(0.072)	(0.014)
EXPERIENCE ON THE CDC	**-0.012*** **	**-0.0033*** **	**-0.00032**	**-0.000051**
	(0.0021)	(0.00056)	(0.0024)	(0.00039)
CONSTANT	**-1.44*** **		**-2.21*** **	
	(0.24)		(0.28)	
OBSERVATIONS	1,516		1,516	
LL	-2130		-1504	
LL_0	-2510		-1799	
R2_P	0.15		0.16	

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

9. Appendices to Section 3.6.4: Safety, crime and family violence

--- SEE FOLLOWING PAGES ---

Table A 4-26: Multivariate analysis: safety in the streets during the day and at night, Ordered Probit

	IN STREETS DURING THE DAY				IN STREETS DURING THE NIGHT			
	COEFS	MARGINAL	MARGINAL	MARGINAL	COEFS	MARGINAL	MARGINAL	MARGINAL
DON'T DRINK (REF: LOW RISK)	-0.076*	0.023*	0.0029*	-0.026*	-0.16***	0.051***	-0.0013	-0.050***
	(0.045)	(0.014)	(0.0017)	(0.015)	(0.046)	(0.015)	(0.0013)	(0.015)
MODERATE/HIGH/VERY HIGH (REF: LOW RISK)	-0.22***	0.070***	0.0043***	-0.074***	-0.24***	0.082***	-0.0063**	-0.076***
	(0.052)	(0.017)	(0.0017)	(0.017)	(0.052)	(0.018)	(0.0031)	(0.016)
GOLDFIELDS (REF: EK)	-0.24***	0.072***	0.011***	-0.083***	-0.29***	0.093***	0.00044	-0.094***
	(0.054)	(0.016)	(0.0032)	(0.019)	(0.055)	(0.018)	(0.0022)	(0.018)
CEDUNA (REF: EK)	-0.097	0.030	0.0025**	-0.033	-0.13**	0.042**	-0.0028	-0.039**
	(0.062)	(0.020)	(0.0010)	(0.020)	(0.062)	(0.021)	(0.0027)	(0.019)
FEMALE	0.13***	-0.040***	-0.0049***	0.045***	0.14***	-0.044***	0.00082	0.044***
	(0.040)	(0.012)	(0.0017)	(0.014)	(0.041)	(0.013)	(0.0011)	(0.013)
INDIGENOUS	0.43***	-0.14***	-0.0066**	0.14***	0.39***	-0.13***	0.0097***	0.12***
	(0.046)	(0.015)	(0.0033)	(0.015)	(0.048)	(0.016)	(0.0037)	(0.014)
AGE	0.014	-0.0041	-0.00054	0.0047	-0.0028	0.00090	-9.9E-06	-0.00089
	(0.0096)	(0.0029)	(0.00040)	(0.0033)	(0.0098)	(0.0032)	(0.000041)	(0.0032)
AGE SQUARE	-0.00017	0.000052	6.8E-06	-0.000059	0.000047	-0.000015	1.7E-07	0.000015
	(0.00012)	(0.000035)	(4.8E-06)	(0.000040)	(0.00012)	(0.000039)	(5.6E-07)	(0.000038)
EXPERIENCE ON CDC	0.0038**	-0.0012**	-0.00015*	0.0013**	0.0060***	-0.0020***	0.000022	0.0019***
	(0.0018)	(0.00056)	(0.000080)	(0.00063)	(0.0019)	(0.00061)	(0.000047)	(0.00060)
EXPERIENCED PROBLEMS WITH THE CARD	-0.32***	0.10***	0.0082***	-0.11***	-0.29***	0.095***	-0.0046*	-0.090***
	(0.039)	(0.013)	(0.0025)	(0.013)	(0.040)	(0.013)	(0.0025)	(0.012)
HOUSEHOLD TYPE (REF: LIVING ALONE)								
CPL LIVING ALONE OR UNRELATED ADULTS	-0.094	0.029	0.0025**	-0.032*	-0.18***	0.060***	-0.0052	-0.055***
	(0.058)	(0.018)	(0.0010)	(0.019)	(0.059)	(0.021)	(0.0035)	(0.017)
CPL WITH CHILDREN, DEPDT OR NOT	-0.010	0.0032	0.00040	-0.0036	0.029	-0.0094	-0.000016	0.0095
	(0.059)	(0.018)	(0.0022)	(0.020)	(0.060)	(0.019)	(0.00036)	(0.020)
SINGLE PARENT WITH DPDT OR NOT	-0.16***	0.052***	0.0036***	-0.055***	-0.14**	0.047**	-0.0026	-0.044**
	(0.056)	(0.018)	(0.0013)	(0.018)	(0.057)	(0.019)	(0.0022)	(0.018)

	IN STREETS DURING THE DAY				IN STREETS DURING THE NIGHT			
	COEFS	MARGINAL	MARGINAL	MARGINAL	COEFS	MARGINAL	MARGINAL	MARGINAL
OTHER HOUSEHOLD TYPE	-0.17***	0.053***	0.0025*	-0.055***	-0.13**	0.042**	-0.0028	-0.040**
	(0.061)	(0.020)	(0.0014)	(0.019)	(0.062)	(0.021)	(0.0027)	(0.019)
HOUSEHOLD TYPE UNKNOWN	0.23**	-0.064**	-0.019	0.083*	0.22*	-0.066**	-0.0085	0.075*
	(0.11)	(0.029)	(0.014)	(0.043)	(0.11)	(0.032)	(0.0094)	(0.041)
DSP RECIPIENT	0.11**	-0.033**	-0.0062*	0.039**	0.14***	-0.044***	-0.0021	0.046**
	(0.053)	(0.015)	(0.0038)	(0.019)	(0.054)	(0.016)	(0.0021)	(0.018)
CURRENT: NEITHER SAFE NOR UNSAFE	0.69***	-0.17***	-0.095***	0.26***	0.55***	-0.15***	-0.043***	0.20***
	(0.084)	(0.015)	(0.018)	(0.033)	(0.068)	(0.016)	(0.011)	(0.026)
CURRENT: SAFE	1.41***	-0.49***	0.14***	0.35***	1.30***	-0.45***	0.097***	0.35***
	(0.069)	(0.024)	(0.016)	(0.012)	(0.051)	(0.017)	(0.011)	(0.012)
YR PRIOR TO CDC: FINANCIAL PRESS INDEX: RANGE 1-13	0.012**	-0.0036**	-0.00048*	0.0041**	0.028***	-0.0090***	0.000099	0.0089***
	(0.0060)	(0.0018)	(0.00026)	(0.0021)	(0.0061)	(0.0020)	(0.00021)	(0.0020)
LAST 4 WKS: FINANCIAL PRESS INDEX: RANGE 1-13	-0.029***	0.0088***	0.0012***	-0.0099***	-0.042***	0.014***	-0.00015	-0.013***
	(0.0054)	(0.0016)	(0.00031)	(0.0018)	(0.0055)	(0.0018)	(0.00032)	(0.0018)
PAST 4 WEEKS HAD A JOB	0.19***	-0.056***	-0.010***	0.066***	0.18***	-0.057***	-0.0018	0.058***
	(0.041)	(0.012)	(0.0032)	(0.015)	(0.042)	(0.013)	(0.0017)	(0.014)
/CUT1	0.67***				0.22			
	(0.20)				(0.20)			
/CUT2	1.96***				1.51***			
	(0.21)				(0.20)			
OBSERVATIONS	1,299				1,292			
R2_P	0.14				0.18			
LL	-3844				-3663			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-27: Multivariate analysis: safety at home during the day and at night, Ordered Probit

	AT HOME DURING THE DAY				AT HOME DURING THE NIGHT			
	COEFS	MARGINAL	MARGINAL	MARGINAL	COEFS	MARGINAL	MARGINAL	MARGINAL
DON'T DRINK (REF: LOW RISK)	-0.067	0.018	0.0058	-0.024	-0.068	0.020	0.0029	-0.023
	(0.045)	(0.012)	(0.0038)	(0.016)	(0.045)	(0.014)	(0.0019)	(0.015)
MODERATE/HIGH/VERY HIGH (REF: LOW RISK)	-0.16***	0.044***	0.012***	-0.056***	-0.14***	0.043***	0.0044***	-0.047***
	(0.051)	(0.015)	(0.0033)	(0.018)	(0.052)	(0.016)	(0.0015)	(0.017)
GOLDFIELDS (REF: EK)	-0.24***	0.065***	0.022***	-0.087***	-0.30***	0.088***	0.015***	-0.10***
	(0.054)	(0.014)	(0.0055)	(0.019)	(0.054)	(0.016)	(0.0038)	(0.019)
CEDUNA (REF: EK)	-0.16**	0.044**	0.010***	-0.055***	-0.20***	0.064***	0.0030	-0.067***
	(0.061)	(0.018)	(0.0029)	(0.021)	(0.062)	(0.020)	(0.0018)	(0.019)
FEMALE	0.10***	-0.028**	-0.0090**	0.037***	0.096**	-0.029**	-0.0041**	0.033**
	(0.040)	(0.011)	(0.0035)	(0.014)	(0.041)	(0.012)	(0.0018)	(0.014)
INDIGENOUS	0.44***	-0.13***	-0.028***	0.15***	0.41***	-0.13***	-0.0086***	0.14***
	(0.046)	(0.014)	(0.0037)	(0.015)	(0.047)	(0.015)	(0.0032)	(0.015)
AGE	0.0074	-0.0020	-0.00066	0.0027	-0.0042	0.0012	0.00019	-0.0014
	(0.0096)	(0.0026)	(0.00085)	(0.0034)	(0.0097)	(0.0029)	(0.00044)	(0.0033)
AGE SQUARE	-0.000094	0.000025	8.3E-06	-0.000034	0.000042	-0.000012	-1.9E-06	0.000014
	(0.00012)	(0.000031)	(0.000010)	(0.000041)	(0.00012)	(0.000034)	(5.2E-06)	(0.000040)
EXPERIENCE ON CDC	0.0055***	-0.0015***	-0.00049***	0.0020***	0.0058***	-0.0017***	-0.00026***	0.0020***
	(0.0018)	(0.00050)	(0.00017)	(0.00066)	(0.0018)	(0.00055)	(0.000095)	(0.00063)
EXPERIENCED PROBLEMS WITH THE CARD	-0.35***	0.097***	0.025***	-0.12***	-0.35***	0.11***	0.0099***	-0.12***
	(0.039)	(0.011)	(0.0034)	(0.013)	(0.040)	(0.012)	(0.0027)	(0.013)
HOUSEHOLD TYPE (REF: LIVING ALONE)								
CPL LIVING ALONE OR UNRELATED ADULTS	-0.031	0.0084	0.0026	-0.011	-0.037	0.011	0.0015	-0.013
	(0.058)	(0.016)	(0.0047)	(0.021)	(0.059)	(0.018)	(0.0020)	(0.020)
CPL WITH CHILDREN, DEPDT OR NOT	0.013	-0.0035	-0.0012	0.0047	0.0075	-0.0022	-0.00034	0.0026
	(0.059)	(0.016)	(0.0054)	(0.021)	(0.060)	(0.018)	(0.0028)	(0.020)
SINGLE PARENT WITH DPDT OR NOT	-0.15***	0.042***	0.011***	-0.053***	-0.12**	0.037**	0.0038***	-0.041**
	(0.056)	(0.016)	(0.0033)	(0.019)	(0.057)	(0.018)	(0.0014)	(0.019)
OTHER HOUSEHOLD TYPE	-0.055	0.015	0.0044	-0.020	-0.11*	0.035*	0.0032***	-0.038*

	AT HOME DURING THE DAY				AT HOME DURING THE NIGHT			
	COEFS	MARGINAL	MARGINAL	MARGINAL	COEFS	MARGINAL	MARGINAL	MARGINAL
	(0.060)	(0.017)	(0.0044)	(0.021)	(0.061)	(0.019)	(0.0011)	(0.020)
HOUSEHOLD TYPE UNKNOWN	**0.29****	**-0.069*****	**-0.040***	**0.11****	**0.18**	**-0.049***	**-0.014**	**0.063**
	(0.11)	(0.023)	(0.021)	(0.044)	(0.11)	(0.029)	(0.013)	(0.041)
DSP RECIPIENT	**0.13****	**-0.035*****	**-0.014****	**0.049****	**0.13****	**-0.038*****	**-0.0084***	**0.047****
	(0.052)	(0.013)	(0.0064)	(0.019)	(0.053)	(0.015)	(0.0044)	(0.019)
CURRENT: NEITHER SAFE NOR UNSAFE	**1.13*****	**-0.19*****	**-0.24*****	**0.43*****	**0.86*****	**-0.18*****	**-0.14*****	**0.32*****
	(0.10)	(0.011)	(0.026)	(0.035)	(0.080)	(0.012)	(0.020)	(0.031)
CURRENT: SAFE	**1.75*****	**-0.60*****	**0.19*****	**0.41*****	**1.57*****	**-0.54*****	**0.15*****	**0.39*****
	(0.089)	(0.028)	(0.021)	(0.012)	(0.061)	(0.020)	(0.014)	(0.011)
YR PRIOR TO CDC: FINANCIAL PRESS INDEX: RANGE 1-13	**0.012****	**-0.0032****	**-0.0011***	**0.0043****	**0.017*****	**-0.0051*****	**-0.00078****	**0.0059*****
	(0.0060)	(0.0016)	(0.00054)	(0.0022)	(0.0061)	(0.0018)	(0.00030)	(0.0021)
LAST 4 WKS: FINANCIAL PRESS INDEX: RANGE 1-13	**-0.032*****	**0.0087*****	**0.0028*****	**-0.012*****	**-0.036*****	**0.011*****	**0.0016*****	**-0.012*****
	(0.0054)	(0.0015)	(0.00053)	(0.0019)	(0.0054)	(0.0016)	(0.00037)	(0.0019)
PAST 4 WEEKS HAD A JOB	**0.12*****	**-0.033*****	**-0.012*****	**0.045*****	**0.097****	**-0.028****	**-0.0051***	**0.034****
	(0.041)	(0.011)	(0.0045)	(0.015)	(0.042)	(0.012)	(0.0026)	(0.014)
/CUT1	**0.84*****				**0.37***			
	(0.21)				(0.20)			
/CUT2	**2.18*****				**1.71*****			
	(0.21)				(0.20)			
OBSERVATIONS	1,331				1,324			
R2_P	0.14				0.18			
LL	-3,862				-3,726			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

10. Appendices to Section 3.6.5: Children well-being

Table A 4-28: Perceived changes for children in your area since the introduction of the CDC, by carer/non-carer

PERCEIVED CHANGES FOR CHILDREN IN YOUR AREA SINCE THE INTRODUCTION OF THE CDC BY CARER/ NON-CARER							
		East Kimberley		Goldfields		Ceduna	
		Carer	Non-carer	Carer	Non-carer	Carer	Non-carer
Change in:		%	%	%	%	%	%
Health	Less healthy	19.0	28.9	13.3	14.2	12.6	10.9
	About the same	56.1	47.5	72.0	70.1	72.8	68.5
	Healthier	24.9	23.6	14.7	15.7	14.7	20.6
Food	Less food	24.0	27.3	19.9	18.0	11.9	12.0
	About the same	49.6	42.0	62.0	62.2	73.0	62.3
	More food	26.4	30.8	18.1	19.8	15.1	25.7
Safety	Less safe	28.0	27.7	25.9	22.3	16.0	13.3
	About the same	49.4	44.6	59.1	64.2	70.3	64.7
	Safer	22.6	27.7	15.0	13.6	13.8	22.0
Going to school	More	27.7	33.3	20.6	17.6	13.2	13.3
	About the same	54.1	43.2	63.5	67.2	68.4	63.0
	Less	18.3	23.5	16.0	15.2	18.4	23.7
Happiness	Less happy	31.2	32.0	25.0	24.1	14.1	12.3
	About the same	50.1	43.7	59.8	62.3	66.5	66.2
	Happier	18.7	24.3	15.2	13.6	19.4	21.5
Cultural activities	Fewer activities	28.9	34.7	27.5	22.4	17.1	13.5
	About the same	58.7	49.1	57.6	64.1	71.2	69.1
	More activities	12.4	16.2	15.0	13.5	11.7	17.4
Social activities	Fewer activities	30.7	35.0	30.3	23.2	19.2	17.6
	About the same	51.6	44.3	54.4	61.5	70.6	66.9
	More activities	17.7	20.7	15.3	15.4	10.3	15.5

Table A 4-29: Perceived changes for children in your area since the introduction of the CDC, by household type

PERCEIVED CHANGES FOR CHILDREN IN YOUR AREA SINCE THE INTRODUCTION OF THE CDC BY HOUSEHOLD TYPE										
		East Kimberley			Goldfields			Ceduna		
Change in:		Couple %	Single %	Other %	Couple %	Single %	Other %	Couple %	Single %	Other %
Health	Less healthy	17.7	14.0	30.3	12.7	13.2	14.4	15.3	12.4	10.1
	About the same	48.5	69.4	46.0	70.9	73.4	69.7	72.4	73.6	68.4
	Healthier	33.8	16.6	23.8	16.4	13.4	15.9	12.3	14.0	21.5
Food	Less food	24.6	17.3	29.0	18.1	19.1	18.8	11.9	14.6	11.2
	About the same	43.1	61.1	40.8	63.0	64.7	60.7	73.7	64.7	64.6
	More food	32.3	21.7	30.2	18.9	16.2	20.5	14.4	20.8	24.1
Safety	Less safe	21.6	22.5	31.1	18.1	29.0	22.7	9.2	24.4	12.9
	About the same	48.2	56.5	43.0	65.8	59.1	62.7	76.0	64.5	64.6
	Safer	30.2	21.0	25.9	16.0	12.0	14.7	14.8	11.1	22.5
Going to school	More	29.9	19.4	34.9	19.4	21.7	17.4	10.4	17.6	12.9
	About the same	48.4	63.4	42.5	60.2	67.1	66.4	68.3	68.5	63.0
	Less	21.8	17.2	22.6	20.4	11.2	16.2	21.3	14.0	24.1
Happiness	Less happy	28.5	26.4	34.2	24.1	27.9	23.0	12.6	18.8	11.4
	About the same	46.1	57.6	42.8	59.7	60.7	61.9	69.5	69.1	64.4
	Happier	25.4	16.0	23.0	16.2	11.4	15.1	17.9	12.1	24.2
Cultural activities	Fewer activities	26.8	27.9	35.4	27.8	29.4	21.4	19.7	19.3	12.0
	About the same	52.9	64.8	49.4	55.2	59.1	64.0	71.0	70.0	69.6
	More activities	20.4	7.3	15.2	17.0	11.4	14.6	9.3	10.7	18.5
Social activities	Fewer activities	25.1	32.0	36.1	29.7	31.5	22.7	16.7	25.9	16.5
	About the same	47.6	59.9	43.3	54.1	56.2	60.8	74.0	65.2	67.4
	More activities	27.3	8.1	20.6	16.3	12.3	16.5	9.3	8.9	16.1

11. Appendices to Section 3.7.3: Feelings of control over one's life and money

Table A 4-30: Multivariate analysis: Feeling more or less in control over one's life post-CDC, Ordered Probit

DEPENDENT VARIABLE: FEEL MORE IN CONTROL OF LIFE SINCE BEING ON THE CDC				
	COEFS	MARGINAL EFFECTS		
		NEVER/HARDLY EVER	SOMETIMES	MOST/ALL THE TIME
DON'T DRINK (REF: LOW RISK)	**0.12**	**-0.049**	**0.011**	**0.037**
	(0.079)	(0.031)	(0.0073)	(0.024)
MODERATE/HIGH/VERY HIGH (REF: LOW RISK)	0.39***	-0.15***	0.029***	0.12***
	(0.088)	(0.035)	(0.0058)	(0.030)
GOLDFIELDS (REF EK)	**-0.046**	**0.018**	**-0.0043**	**-0.014**
	(0.093)	(0.037)	(0.0087)	(0.028)
CEDUNA AND SURROUNDS (REF EK)	**0.039**	**-0.015**	**0.0036**	**0.012**
	(0.10)	(0.041)	(0.0093)	(0.032)
INDIGENOUS	**0.40*** **	**-0.16*** **	**0.043*** **	**0.11*** **
	(0.080)	(0.030)	(0.0098)	(0.021)
AGE	**0.00038**	**-0.00015**	**0.000036**	**0.00011**
	(0.0027)	(0.0011)	(0.00025)	(0.00081)
EXPERIENCE ON THE CDC	**0.0033**	**-0.0013**	**0.00031**	**0.0010**
	(0.0031)	(0.0012)	(0.00030)	(0.00095)
EXPERIENCED PROBLEMS WITH THE CARD	**-0.36*** **	**0.14*** **	**-0.035*** **	**-0.10*** **
	(0.069)	(0.027)	(0.0078)	(0.020)
CPL LIVING ALONE OR UNRELATED ADULTS	**-0.0010**	**0.00041**	**-0.000098**	**-0.00031**
	(0.10)	(0.040)	(0.0096)	(0.031)
CPL WITH CHILDREN, DEPDT OR NOT	**0.14**	**-0.055**	**0.012**	**0.043**
	(0.099)	(0.039)	(0.0077)	(0.032)
SINGLE PARENT WITH DPDT OR NOT	**0.026**	**-0.010**	**0.0024**	**0.0078**
	(0.093)	(0.037)	(0.0086)	(0.028)
OTHER HOUSEHOLD TYPE	**0.18***	**-0.070***	**0.014***	**0.056**
	(0.11)	(0.042)	(0.0074)	(0.035)
HOUSEHOLD TYPE UNKNOWN	**0.089**	**-0.035**	**0.0077**	**0.028**
	(0.18)	(0.073)	(0.014)	(0.058)
RECEIVING DSP	**0.17***	**-0.067***	**0.014****	**0.053***
	(0.087)	(0.035)	(0.0065)	(0.028)
C7INDEX	**0.070*** **	**-0.028*** **	**0.0066*** **	**0.021*** **
	(0.011)	(0.0042)	(0.0012)	(0.0032)
C8INDEX	**-0.072*** **	**0.029*** **	**-0.0068*** **	**-0.022*** **
	(0.010)	(0.0040)	(0.0011)	(0.0030)
/CUT1	0.51***			
	(0.19)			

DEPENDENT VARIABLE: FEEL MORE IN CONTROL OF LIFE SINCE BEING ON THE CDC				
	COEFS	MARGINAL EFFECTS		
		NEVER/HARDLY EVER	SOMETIMES	MOST/ALL THE TIME
/CUT2	1.14***			
	(0.19)			
OBSERVATIONS	1,469			
R2_P	0.074			
LL	-1,372			
LL_0	-1,483			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table A 4-31: Multivariate analysis: Feeling more or less in control over one's money post-CDC, Ordered Probit

DEPENDENT VARIABLE: FEEL MORE IN CONTROL OF MONEY SINCE BEING ON THE CDC				
	COEFS	MARGINAL EFFECTS		
		NEVER/HARDLY EVER	SOMETIMES	MOST/ALL THE TIME
DON'T DRINK (REF: LOW RISK)	**0.029**	**-0.011**	**0.0026**	**0.0085**
	(0.081)	(0.032)	(0.0073)	(0.024)
MODERATE/HIGH/VERY HIGH (REF: LOW RISK)	**0.37*** **	**-0.15*** **	**0.028*** **	**0.12*** **
	(0.089)	(0.035)	(0.0061)	(0.030)
GOLDFIELDS (REF EK)	**-0.029**	**0.011**	**-0.0027**	**-0.0088**
	(0.094)	(0.037)	(0.0085)	(0.028)
CEDUNA AND SURROUNDS (REF EK)	**0.027**	**-0.010**	**0.0024**	**0.0080**
	(0.11)	(0.041)	(0.0093)	(0.032)
INDIGENOUS	**0.47*** **	**-0.18*** **	**0.047*** **	**0.13*** **
	(0.082)	(0.029)	(0.0095)	(0.021)
AGE	**-0.00013**	**0.000049**	**-0.000012**	**-0.000038**
	(0.0027)	(0.0011)	(0.00025)	(0.00081)
EXPERIENCE ON THE CDC	**0.00019**	**-0.000074**	**0.000017**	**0.000057**
	(0.0032)	(0.0012)	(0.00029)	(0.00095)
EXPERIENCED PROBLEMS WITH THE CARD	**-0.50*** **	**0.19*** **	**-0.048*** **	**-0.14*** **
	(0.071)	(0.026)	(0.0081)	(0.019)
CPL LIVING ALONE OR UNRELATED ADULTS	**0.077**	**-0.030**	**0.0067**	**0.023**
	(0.10)	(0.041)	(0.0086)	(0.032)
CPL WITH CHILDREN, DEPDT OR NOT	**0.18***	**-0.071***	**0.015** **	**0.056***
	(0.10)	(0.040)	(0.0074)	(0.033)
SINGLE PARENT WITH DPDT OR NOT	**0.050**	**-0.019**	**0.0044**	**0.015**
	(0.096)	(0.037)	(0.0084)	(0.029)
OTHER HOUSEHOLD TYPE	**0.21** **	**-0.084** **	**0.017** **	**0.067***
	(0.11)	(0.043)	(0.0073)	(0.036)
HOUSEHOLD TYPE UNKNOWN	**-0.043**	**0.017**	**-0.0040**	**-0.013**
	(0.19)	(0.072)	(0.018)	(0.054)
RECEIVING DSP	**0.11**	**-0.044**	**0.0095**	**0.034**
	(0.090)	(0.035)	(0.0073)	(0.028)
C7INDEX	**0.073*** **	**-0.028*** **	**0.0067*** **	**0.022*** **
	(0.011)	(0.0043)	(0.0012)	(0.0033)
C8INDEX	**-0.086*** **	**0.033*** **	**-0.0078*** **	**-0.025*** **
	(0.010)	(0.0041)	(0.0012)	(0.0031)
/CUT1	**0.45** **			
	(0.19)			
/CUT2	**0.99*** **			
	(0.19)			
OBSERVATIONS	1,492			
R2_P	0.096			

DEPENDENT VARIABLE: FEEL MORE IN CONTROL OF MONEY SINCE BEING ON THE CDC				
	COEFS	MARGINAL EFFECTS		
		NEVER/HARDLY EVER	SOMETIMES	MOST/ALL THE TIME
LL	-1310			
LL_0	-1448			

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

12. Appendices to Section 3.7.5: Perceptions about the future of the CDC

Table A 4-32: Multivariate analysis: Want to stay on the CDC, Probit model

VARIABLE	COEFFICIENTS	MARGINAL EFFECTS
GOLDFIELDS	-0.27*	-0.043*
	(0.14)	(0.023)
CEDUNA AND SURROUNDS	-0.31**	-0.041**
	(0.16)	(0.018)
INDIGENOUS	-0.16	-0.027
	(0.13)	(0.022)
EXPERIENCE ON THE CDC	-0.030**	-0.0046**
	(0.014)	(0.0022)
EXPERIENCE ON CDC SQUARED	0.00060**	0.000092**
	(0.00029)	(0.000045)
FEMALE	0.014	0.0021
	(0.11)	(0.017)
AGE	0.083***	0.013***
	(0.031)	(0.0048)
AGE SQUARE	-0.00074**	-0.00011**
	(0.00036)	(0.000056)
ENCOUNTERED ISSUES WITH CARD	-0.46***	-0.068***
	(0.12)	(0.017)
CURRENT FINANCIAL STRESS INDEX	-0.039**	-0.0060**
	(0.016)	(0.0024)
STATED POSITIVE IMPACT OF CDC ON QUALITY OF LIFE	0.073	0.012
	(0.14)	(0.023)
STATED POSITIVE IMPACT OF CDC ON ALCOHOL CONSUMPTION	0.34**	0.057**
	(0.13)	(0.025)
INDEX OF PERCEPTION ABOUT BEING ON THE CDC	0.095***	0.015***
	(0.0077)	(0.0014)
REFERENCE: NEWSTART ALLOWANCE		
PARENTING PAYMENT	0.44***	0.082**
	(0.16)	(0.036)
YOUTH ALLOWANCE	0.48	0.099
	(0.32)	(0.083)
DSP	0.016	0.0025
	(0.14)	(0.022)
CA/CP	-0.18	-0.025
	(0.26)	(0.031)
FTB AND OTHER BENEFITS	0.19	0.033
	(0.21)	(0.040)
CONSTANT	-3.52***	

VARIABLE	COEFFICIENTS	MARGINAL EFFECTS
	(0.67)	
OBSERVATIONS	1,371	1,371
LL	-402	-402
LL_0	-617	-617
R2_P	0.35	0.35

*Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

13. CDC participants individual survey

---SEE FOLLOWING PAGES---

Have your say about the Indue card

Cashless Debit Card Participants Survey

Thank you for helping us with the evaluation of the Cashless Debit Card by answering this survey.

The results from this survey will be used to find out what people think about the Cashless Debit Card and what their experiences are using the card. We also want to examine whether the card is helping people to manage their money better and if it is changing attitudes to alcohol, drug and gambling use. This survey is part of the independent evaluation currently being conducted by the University of Adelaide on behalf of the Department of Social Services.

It is important for this study to understand the views of people who are already using the Cashless Debit Card. We appreciate you finding the time to complete this survey. By answering and returning the survey you are providing your consent to be included in the evaluation.

You will receive a $50 supermarket voucher to thank you for the time you took to answer this survey. You will find instructions about how to receive your voucher at the end of this survey.

All information collected is confidential. Your answers will be used for research purposes only.

Participation in the survey is voluntary. It will not have any impact on any benefits or payments you currently receive from Centrelink.

THE UNIVERSITY of ADELAIDE

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number H-2018-117).

How to fill out this survey

Please use a black or blue ballpoint pen

To answer most of the questions you only need to cross a box

Please mark the box closest to your answer like this: ☒

Don't worry if you make a mistake or want to change your answer; simply colour in the wrong box and mark the correct box like this:

YES ☒ NO ☒

Please write numbers into individual boxes like this: 12/09/18

Sometimes you can write an answer in a box.

You will see this symbol  above or beside the box.

Not all questions will apply to you. If you see a ➔ GO TO instruction next to your answer, go to that question. It will look like this: ☒ ➔ GO TO

If there is no ➔ GO TO instruction, continue to the next question.

Call us on 1800 519 672 or send us an email at cdc_fes@adelaide.edu.au if you have any questions about the survey or if you need assistance.

Your answers to this survey are completely confidential. Your responses will be used for research purposes only. You and your household will never be identified.

ETHICS APPROVAL:

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number H-2018-117).

If you have questions or problems about your participation in the project or want to raise a concern or complaint about the project, please contact the Principal Investigator Kostas Mavromaras on 1800 519 672 or email directorfes@adelaide.edu.au.

If you want to speak to an independent person about the study, please contact the Human Research Ethics Committee's Secretariat on +61 8 8313 6028 or email hrec@adelaide.edu.au;
or by mail to: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000.

Any complaint or concern will be treated in confidence and will be fully investigated.
You will be informed of the outcome.

Section A: About You

A1. What is your gender?

Male ☐
Female ☐

A2. What is your current age?

☐☐ years

A3. Which category best describes the household you live in?

Person living alone ☐
Couple living alone ☐
Couple with non-dependent child(ren) ☐
Couple with dependent child(ren) ☐
Couple with dependent and non-dependent child(ren) ☐
Single parent with non-dependent child(ren) ☐
Single parent with dependent child(ren) ☐
Single parent with dependent and non-dependent child(ren) ☐
Adults you are not related to who share your house/apartment ☐
Other household type *(specify in the box below)* ☐

A4. Are you the main carer of any children aged under 5 years?

Yes, one child aged under 5 ☐
Yes, two children aged under 5 ☐
Yes, three or more children aged under 5 ☐
No ☐

A5. Are you the main carer of any children aged 5 years up to 15 years?

Yes, one child aged between 5 and 15 years ☐
Yes, two children aged between 5 and 15 years ☐
Yes, three or more children aged between 5 and 15 years ☐
No ☐

IF YOU ANSWERED 'NO' to the previous question, please GO TO SECTION B: Work/Employment

OFFICE USE ONLY

Date: ☐☐/☐☐/☐☐

ASSISTANT CODE: ☐☐☐☐

UID_CODE:

CHILDREN AT SCHOOL:

A6. For each child you care for (aged 5-15 years), how often did they go to school last term?

	Every Day	Most Days	Sometimes	Never	Don't Know
Child aged 5-15, 1	☐	☐	☐	☐	☐
Child aged 5-15, 2	☐	☐	☐	☐	☐
Child aged 5-15, 3	☐	☐	☐	☐	☐
Child aged 5-15, 4	☐	☐	☐	☐	☐
Child aged 5-15, 5	☐	☐	☐	☐	☐

IF YOU ANSWERED 'Sometimes', 'Never' or 'Don't know' for any of your children, please GO TO THE NEXT QUESTION. → GO TO A7

IF YOU ANSWERED 'Everyday' or 'Most days' for all your children, please GO TO SECTION B

A7. Why did they not attend school more often? *(Mark all that apply)*

Have other cultural or family obligations more important than school ☐
Don't need to go to school ☐
Have no way of getting there / no transport ☐
The school is not culturally appropriate for my child ☐
The school in my area is not good quality ☐
Child has special needs / has a disability or very sick ☐
Child is picked on / bullied or scared to go to school ☐
Child doesn't like school / doesn't want to go to school ☐
Child is taken to school – but leaves ☐
Other *(specify in the box below)* ☐

Section B : Work/Employment

B1. In the last 4 weeks, did you do any work?

Yes, CDP job / work for the dole (Job Active) ☐
Yes, other paid work ☐
No ☐ → GO TO B4

B2. How long have you been doing that job?

Number of days ☐☐
Number of months ☐☐
Number of years ☐☐

B3. How many hours do you work in that job each week?

Number of hours ☐☐ → GO TO B5
Don't know ☐ → GO TO B5

B4. Why are you not working at the moment?
(Mark all that apply)

- Lack necessary training / qualifications / experience ☐
- Considered too old by employers ☐
- Difficulties with language or ethnic background ☐
- Unable to work because of disability ☐
- No jobs with suitable conditions/ arrangements ☐
- Problems with access to transport ☐
- Short term sickness or injury ☐
- No jobs or vacancies in locality / line of work / at all ☐
- Studying / returning to studies ☐
- Moving house ☐
- Taking holidays ☐
- Caring for children ☐
- Caring for ill/ disabled/ elderly person ☐
- Pregnancy ☐
- Home duties ☐
- No need / satisfied with current arrangement / retired (for now) ☐
- Visa requirements ☐
- Other (*specify in the box below*) ☐

B5. At any time in the last 4 weeks, have you been looking for work?

Yes ☐ → GO TO SECTION C
No ☐ → GO TO B6

B6. Even though you have not been looking for work in the last 4 weeks, would you like a job / different job?

Yes ☐
No ☐

Section C : About Money

C1. Have you activated your Cashless Debit Card and started using it to buy things?

Yes ☐
No ☐
Don't know ☐

C2. For how long have you been on the Cashless Debit Card?

Date got the card: ☐☐/☐☐/☐☐

Or

Number of months since you got the card: ☐☐ months

C3. Have you had any problems using your Cashless Debit Card?

Yes ☐
No ☐ → GO TO C5

C4. Please tell us about these problems

C5. Do you live with anyone else who is on the Cashless Debit Card?

Yes ☐
No ☐ → GO TO C7

C6. What is your relationship to them?
Are they your... *(Mark all that apply)*

- Father ☐
- Mother ☐
- Husband / Wife / De facto partner / Boyfriend / Girlfriend ☐
- Brother / Sister ☐
- Aunt / Uncle ☐
- Child ☐
- Other *(specify in the box below)* ☐

Reminder: Your answers are completely confidential. Your responses are used for research purposes only.

You and your household will never be identified.

Your accurate and honest responses to this survey are important and appreciated.

C7. In the 12 months before being on the Cashless Debit Card, did any of these things happen to you? *(Answer all items)*

	Yes	No	Not applicable	Don't know
Ran out of money to buy food	☐	☐	☐	☐
Ran out of money to buy clothes	☐	☐	☐	☐
Ran out of money to buy medicines	☐	☐	☐	☐
Unable to pay rent on time	☐	☐	☐	☐
Unable to save up bond money	☐	☐	☐	☐
Unable to pay water and electricity bills on time	☐	☐	☐	☐
Able to save money	☐	☐	☐	☐
Gave money to others causing financial problems for you	☐	☐	☐	☐
Asked for money from others because you could not buy essential things (e.g. food, clothes, medicine, bills)	☐	☐	☐	☐
Asked for emergency relief	☐	☐	☐	☐
Unable to afford to travel to visit family/friends	☐	☐	☐	☐
Unable to pay for things that your child/children needed for school, like books	☐	☐	☐	☐
Unable to pay for school activities/trips or sports for children	☐	☐	☐	☐

C8. In the last 4 weeks, did any of these things happen to you? *(Answer all items)*

	Yes	No	Not applicable	Don't know
Ran out of money to buy food	☐	☐	☐	☐
Ran out of money to buy clothes	☐	☐	☐	☐
Ran out of money to buy medicines	☐	☐	☐	☐
Unable to pay rent on time	☐	☐	☐	☐
Unable to save up bond money	☐	☐	☐	☐
Unable to pay water and electricity bills on time	☐	☐	☐	☐
Able to save money	☐	☐	☐	☐
Gave money to others causing financial problems for you	☐	☐	☐	☐
Asked for money from others because you could not buy essential things (e.g. food, clothes, medicine, bills)	☐	☐	☐	☐
Asked for emergency relief	☐	☐	☐	☐
Unable to afford to travel to visit family/friends	☐	☐	☐	☐
Unable to pay for things that your child/children needed for school, like books	☐	☐	☐	☐
Unable to pay for school activities/trips or sports for children	☐	☐	☐	☐

C9. Since being on the Cashless Debit Card, what has helped with any money problems you may have had?

C10. Since being on the Cashless Debit Card, what has caused you to experience any money problems?

Section D: Behaviour and Attitudes

D1. How often do you drink alcohol?

- Never ☐ → GO TO D15
- Monthly or less ☐
- 2-4 times a month ☐
- 2-3 times a week ☐
- 4 or more times a week ☐

D2. Where do you usually drink alcohol?
(Mark all that apply)

- In my own/spouse/partner's home ☐
- At a friend's house ☐
- At a party at someone's house ☐
- At rave/dance parties ☐
- At restaurants/cafes ☐
- At licensed premises (e.g. pubs, clubs) ☐
- At school, TAFE, university, etc. ☐
- At my workplace ☐
- In public places (e.g. parks, beaches) ☐
- In a car or other vehicle ☐
- Somewhere else ☐

D3. Where do you usually get your alcohol?
(Mark one response only)

- Friend or acquaintance ☐
- Brother or sister ☐
- Parent ☐
- Spouse or partner ☐
- Other relative ☐
- Get stranger/someone not known to me to get it ☐
- Steal it ☐
- Purchase it myself to take home ☐
- Purchase it myself to drink at a venue (e.g. pub, café) ☐
- Other ☐

D4. How many drinks of alcohol do you have on a usual day when you are drinking?

- 1 or 2 ☐
- 3 or 4 ☐
- 5 or 6 ☐
- 7 to 9 ☐
- 10 or more ☐

D5. How often do you have six or more drinks at one time?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D6. How often during the last year have you been unable to stop drinking once you had started?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D7. How often during the last year have you not done what was expected of you because of drinking?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D8. How often during the last year have you needed a drink in the morning to get yourself going after a heavy drinking session?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D9. How often during the last year have you felt guilty after drinking?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D10. How often during the last year have you been unable to remember what happened because of your drinking?

- Never ☐
- Less than Monthly ☐
- Monthly ☐
- Weekly ☐
- Daily or almost daily ☐

D11. Have you or someone else been injured because of your drinking?

- No ☐
- Yes, but not in the last year ☐
- Yes, during the last year ☐

D12. Has a relative, friend, doctor or other health care worker been worried about your drinking or suggested you cut down?

- No ☐
- Yes, but not in the last year ☐
- Yes, during the last year ☐

D13. Since being on the Cashless Debit Card, have you? *(Mark all that apply)*

- Reduced the amount of alcohol you drink at any one time ☐
- Reduced the number of times you drink each week ☐
- Drink more low-alcohol drinks ☐
- Stopped drinking alcohol ☐
- None of the above ☐ → GO TO D15

D14. What were the reasons for doing that? *(Mark all that apply)*

- Health reasons (e.g. weight, diabetes, avoid hangover) ☐
- Life style reasons (e.g. work/study commitments, less opportunity) ☐
- Social reasons (e.g. believe in moderation, concerned about violence) ☐
- Pregnant and/or breastfeeding ☐
- Taste/Enjoyment (e.g. prefer low alcohol beer, don't get drunk) ☐
- Drink driving rules ☐
- Financial reasons ☐
- Adult/parent pressure ☐
- Peer pressure ☐
- The price of alcohol has increased ☐
- Other ☐

D15. In the 12 months before being on the Cashless Debit Card, did you... *(Answer all items)*

	Not at all	Less than monthly	Monthly	Weekly	Daily or almost daily
Gamble	☐	☐	☐	☐	☐
Spend more than $50 a day gambling	☐	☐	☐	☐	☐
Gamble more than you could afford to lose	☐	☐	☐	☐	☐
Borrow money or sell things to have money to gamble	☐	☐	☐	☐	☐
Use an illegal drug or prescription medicine for non-medical reasons	☐	☐	☐	☐	☐
Spend more than $50 a day on drugs not prescribed by a doctor	☐	☐	☐	☐	☐
Borrow money or sell things to get money to buy drugs	☐	☐	☐	☐	☐

D16. Since being on the Cashless Debit Card, have you... *(Answer all items)*

	Not at all	Less than monthly	Monthly	Weekly	Daily or almost daily
Gambled	☐	☐	☐	☐	☐
Spent more than $50 a day gambling	☐	☐	☐	☐	☐
Gambled more than you could afford to lose	☐	☐	☐	☐	☐
Borrowed money or sell things to have money to gamble	☐	☐	☐	☐	☐
Used an illegal drug or prescription medicine for non-medical reasons	☐	☐	☐	☐	☐
Spent more than $50 a day on drugs not prescribed by a doctor	☐	☐	☐	☐	☐
Borrowed money or sell things to get money to buy drugs	☐	☐	☐	☐	☐

D17. **When people talk about "a drug problem", which is the first drug you think of?** *(Mark one response only)*

Alcohol	☐
Tobacco	☐
Marijuana/Cannabis (e.g. Pot, Grass, Weed, Reefer, Joint, MaryJane, Acapulco gold, Rope, Mull, Cone, Spliff, Dope, Hydro, Bhang, Ganja, Hash, Chronic)	☐
Meth/amphetamine (e.g. Speed, Base, Ice, Crystal, Meth, Amphet, Shabu, Tina, Paste, Skates, Ox blood, Leopards blood, Whizz, Zip)	☐
Cocaine (e.g. Coke, Crack, Flake, Snow, White lady/girl, Happy dust, Gold dust, Toot, Scotty, Charlie, Cecil, C, Freebase)	☐
Ecstasy (e.g. Molly, XTC, E, Ex, Ecci, E and C, Adam, MDMA, MDDA, MDEA, Eve, PMA)	☐
Heroin (e.g. Hammer, Smack, Horse, H, Boy, Junk, Gear)	☐
Pain-killers/Pain-relievers and Opioids (e.g. Panadeine Forte, Nurofen Plus, Mersyndol, Disprin Forte, Morphine, Oxycodone)	☐
Methadone/Buprenorphine (e.g. Done, Junk, Jungle juice, Bupe, Sub)	☐
Steroids (e.g. Roids, Juice, Gear, Andriol, Halotestin)	☐
Drugs other than listed	☐
None/Can't think of any	☐

D18. **Which of these drugs causes the most problems in the area where you live?** *(Mark one response only)*

Excessive drinking of alcohol	☐
Tobacco smoking	☐
Marijuana/Cannabis	☐
Non-medical use of Meth/amphetamine	☐
Cocaine	☐
Ecstasy	☐
Heroin	☐
Non-medical use of Pain-killers/Pain-relievers and Opioids (e.g. Morphine, Panadeine Forte, Nurofen Plus)	☐
Non-medical use of Methadone/Buprenorphine	☐
Non-medical use of Steroids	☐
None of these	☐

FOR THIS SURVEY, THE TERM "NON-MEDICAL USE" MEANS DRUGS USED:

1. **By itself to give a drug experience or feeling;**
2. **With other drugs to enhance a drug experience;**
3. **For performance enhancement (e.g. athletic); or**
4. **For cosmetic purposes, (e.g. body shaping).**

Reminder: Your answers are completely confidential. Your responses are used for research purposes only. You and your household will never be identified. Your accurate and honest responses to this survey are important and appreciated.

D19. **For each of the drugs below, do you agree or disagree to them being regularly used by adults?**
(Mark one response for each drug type below)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Alcohol	☐	☐	☐	☐	☐	☐
Tobacco	☐	☐	☐	☐	☐	☐
Non-medical use of Tranquillisers, Sleeping pills	☐	☐	☐	☐	☐	☐
Non-medical use of Prescription Pain-killers/ Pain-relievers and Opioids (e.g. Oxycodone, Panadeine Forte, Morphine)	☐	☐	☐	☐	☐	☐
Non-medical use of Over-the-counter Pain-killers/ Pain-relievers and Opioids (e.g. a codeine product such as Nurofen Plus)	☐	☐	☐	☐	☐	☐
Non-medical use of Steroids	☐	☐	☐	☐	☐	☐
Sniffing Petrol/Glue/Aerosols/Solvents	☐	☐	☐	☐	☐	☐
Marijuana/Cannabis	☐	☐	☐	☐	☐	☐
Hallucinogens/LSD/Magic Mushrooms	☐	☐	☐	☐	☐	☐
Non-medical use of Methadone/Buprenorphine	☐	☐	☐	☐	☐	☐
Non-medical use of Meth/amphetamine	☐	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐
Cocaine/Crack	☐	☐	☐	☐	☐	☐
Ecstasy	☐	☐	☐	☐	☐	☐
GHB	☐	☐	☐	☐	☐	☐
Ketamine	☐	☐	☐	☐	☐	☐
Kava	☐	☐	☐	☐	☐	☐

D20. **What one thing do you think should happen to people if they are caught with a small amount of the following drugs?** *(Mark one response only for each drug type i.e. one answer in each column)*

	Marijuana/ Cannabis	Ecstasy	Heroin	Meth/amphetamine (Non-medical Use)	Hallucinogens
No action	☐	☐	☐	☐	☐
A caution or warning only	☐	☐	☐	☐	☐
Referral to drug education program	☐	☐	☐	☐	☐
Referral to treatment	☐	☐	☐	☐	☐
Something similar to a parking fine, up to $200	☐	☐	☐	☐	☐
A substantial fine, around $1,000	☐	☐	☐	☐	☐
A community service order	☐	☐	☐	☐	☐
Weekend detention	☐	☐	☐	☐	☐
A prison sentence	☐	☐	☐	☐	☐
Some other arrangement	☐	☐	☐	☐	☐
Don't know	☐	☐	☐	☐	☐

D21. **Do you think that using Marijuana/Cannabis should be illegal?**

- Yes ☐
- No ☐
- Unsure/Don't know ☐

D22. **If Marijuana/Cannabis were legal to use, would you. . . ?** *(Mark one response only)*

- Not use it, even if it were legal and available ☐
- Try it ☐
- Use it about as often as you do now ☐
- Use it more often than you do now ☐
- Use it less often than you do now ☐
- Don't know ☐

D23. **For each of these drugs, do you agree or disagree that they should be legal for personal use?** *(Mark one response in each row)*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Marijuana/Cannabis	☐	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐
Meth/amphetamine (i.e. Speed, Ice, Crystal, Base)	☐	☐	☐	☐	☐	☐
Cocaine	☐	☐	☐	☐	☐	☐
Ecstasy	☐	☐	☐	☐	☐	☐

D24. **For each of these drugs, do you agree or disagree that there should be more penalties for their sale or supply?** *(Mark one response in each row)*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Marijuana/Cannabis	☐	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐
Meth/amphetamine (i.e. Speed, Ice, Crystal, Base)	☐	☐	☐	☐	☐	☐
Cocaine	☐	☐	☐	☐	☐	☐
Ecstasy	☐	☐	☐	☐	☐	☐

You are getting close to the end of the survey! Thank you for making the effort and sharing your views with us. Please continue to the end!

Section E: Health

E1. **In general, would you say your health is:**

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Fair
- ☐ Poor

E2. **The following questions are about activities you might do during a typical day. Does your health limit you from doing any of these activities? If so, how much?** *(Answer all items)*

	Yes, a lot	Yes, a little	No, not at all
Moderate activities such as moving a table, pushing a vacuum cleaner	☐	☐	☐
Climbing several flights of stairs	☐	☐	☐

E3. **During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?** *(Answer all items)*

	Yes	No
Done less than you would like	☐	☐
Affected the kind of work or other activities	☐	☐

E4. **During the past 4 weeks, have emotional problems affected your work or daily activities in the following ways?** *(Answer all items)*

	Yes	No
Done less than you would like	☐	☐
Affected the kind of work or other activities	☐	☐

E5. **During the past 4 weeks, how much did pain interfere with your normal work (both in and outside the home)?**

- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

E6. **During the past 4 weeks, how much has your physical health or emotional problems affected your social activities (such as visiting friends and relatives)?**

- ☐ All of the time
- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ None of the time

E7. **During the past 4 weeks, how much of the time did you…?** *(Answer all items)*

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Feel calm and peaceful?	☐	☐	☐	☐	☐
Have lots of energy?	☐	☐	☐	☐	☐
Feel downhearted and depressed?	☐	☐	☐	☐	☐

E8. The following questions ask how happy you feel about things in your life.

Please use the scale from 1 to 10 to say how you have been feeling this week. 1 means you are 'not at all happy' and 10 means you are 'completely happy'

a. How happy are you with your life as a whole?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

b. How happy are you with your standard of living?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

c. How happy are you with your health?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

d. How happy are you with what you are currently achieving in life?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

e. How happy are you with your personal relationships?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

f. How happy are you with how safe you feel?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

g. How happy are you with feeling part of your community?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

h. How happy are you with your future security?

Not at all happy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Completely happy

Section F: Feelings about being on the Cashless Debit Card

F1. How often do you feel this way about being on the Cashless Debit Card? *(Answer all items)*

	All the time	Most of the time	Sometimes	Hardly ever	Never
I feel discriminated against	☐	☐	☐	☐	☐
Being on the Cashless Debit Card is embarrassing	☐	☐	☐	☐	☐
I am more in control of my life since being on the Cashless Debit Card	☐	☐	☐	☐	☐
It is not fair for me to be on the Cashless Debit Card	☐	☐	☐	☐	☐
Things are better for me and my family	☐	☐	☐	☐	☐
I feel I have more control over my money	☐	☐	☐	☐	☐
I feel safer on the Cashless Debit Card	☐	☐	☐	☐	☐

F2. Since being on the Cashless Debit Card, how have the following things changed for you? *(Answer all items)*

	Easier	About the same	Harder	Don't know
Managing your money	☐	☐	☐	☐
Saving money	☐	☐	☐	☐
Having enough money for food	☐	☐	☐	☐
Having enough money to pay rent	☐	☐	☐	☐
Knowing how much money you have	☐	☐	☐	☐
Looking after family obligations	☐	☐	☐	☐

F3. Do you want to...

- Stay on the Cashless Debit Card as it is currently set up ☐
- Stay on the Cashless Debit Card but with less of your Centrelink payments going on the card ☐
- Get off the Cashless Debit Card ☐
- Don't know / Not sure ☐

F4. Would you say that the Cashless Debit Card has made your life ...

- A lot better ☐
- A bit better ☐
- No different ☐
- A bit worse ☐
- A lot worse ☐
- Don't know / Not sure ☐

Section G: Feelings about the community you live in

G1. How safe do you feel in the area where you live? *(Answer all items)*

	Very Safe	Safe	Neither	Unsafe	Very unsafe	Don't know
On the streets where you live during the day	☐	☐	☐	☐	☐	☐
On the streets where you live during the night	☐	☐	☐	☐	☐	☐
At home during the day	☐	☐	☐	☐	☐	☐
At home at night	☐	☐	☐	☐	☐	☐

G2. Since the Cashless Debit Card was introduced, has the safety of the area where you live changed? *(Answer all items)*

	A lot safer	Safer	Neither	Less Safe	A lot less safe	Don't know
On the streets where you live during the day	☐	☐	☐	☐	☐	☐
On the streets where you live during the night	☐	☐	☐	☐	☐	☐
At home during the day	☐	☐	☐	☐	☐	☐
At home at night	☐	☐	☐	☐	☐	☐

G3. Since the Cashless Debit Card was introduced, have you noticed any changes for children in the area where you live? *(Answer all items)*

Health	Healthier ☐	About the same ☐	Less healthy ☐	Don't know ☐
Food	More food ☐	About the same ☐	Less food ☐	☐
Safety	Safer ☐	About the same ☐	Less safe ☐	☐
School	Going to school more ☐	About the same ☐	Going to school less ☐	☐
Happiness	Happier ☐	About the same ☐	Less happy ☐	☐
Cultural activities	More cultural activities ☐	About the same ☐	Less cultural activities ☐	☐
Social activities	More social activities ☐	About the same ☐	Less social activities ☐	☐

G4. For the items below, is the Cashless Debit Card making a difference for you, your family or friends, and the area where you live? *(Answer all items and all that apply)*

The Cashless Debit Card...	You	Your family	Your friends	Where you live	No change at all	Don't know
... helps decrease alcohol consumption	☐	☐	☐	☐	☐	☐
... helps decrease the use of illicit drugs	☐	☐	☐	☐	☐	☐
... helps with reducing gambling problems	☐	☐	☐	☐	☐	☐
... improves money management	☐	☐	☐	☐	☐	☐
... improves the quality of life	☐	☐	☐	☐	☐	☐

Section H: Further comments about the Cashless Debit Card

Please tell us if you have anything more to say about the Cashless Debit Card. You can write as much as you like. If you run out of space, please use page 17 or you can write more on a separate piece of paper and attach it to this questionnaire. Please remember that your views will be treated in total confidence like the whole of the survey. Thank you again.

H1. Overall, what do you think is good about the Cashless Debit Card?

H2. Overall, what do you think is bad about the Cashless Debit Card?

Please turn over...

Section I: Demographics

We need to ask you a few more questions to finish the survey. *Please answer the following.*

I1. Do you identify as being Aboriginal or Torres Strait Islander origin?

- ☐ No
- ☐ Yes, Aboriginal
- ☐ Yes, Torres Strait Islander
- ☐ Yes, both
- ☐ Prefer not to say

I2. What town, suburb or community do you usually live in?
(Where you have spent most of your time in the past 4 weeks).

Town, suburb or community:

In which state or territory?

- ☐ Western Australia
- ☐ South Australia
- ☐ Northern Territory
- ☐ Victoria
- ☐ Queensland
- ☐ Australia Capital Territory
- ☐ New South Wales
- ☐ Tasmania

I3. Do you get any of the following benefits or government payments? *(Mark all that apply)*

- ☐ Austudy
- ☐ ABSTUDY
- ☐ Youth Allowance
- ☐ Parenting Payment (Partnered)
- ☐ Parenting Payment (Single)
- ☐ Newstart Allowance
- ☐ Disability Support Pension
- ☐ Age Pension
- ☐ Carer's Payment or Allowance
- ☐ Family Tax Benefit (FTB)
- ☐ Child Care Benefit (CCB)
- ☐ Veterans Payment
- ☐ None of these
- ☐ Don't know
- ☐ Other *(specify in the box below)*

Data Linkage

We would like to ask your permission to link your survey answers with your Cashless Debit Card administrative records provided to us by the Department of Social Services (DSS).

Linking your survey answers to your administrative records will help the research team get a more accurate picture of how the Cashless Debit Card is going in the trial areas.

Personal details will be kept COMPLETELY confidential at all times.

If you give consent for your survey answers to be linked, only the research team will be able to match the survey answers to your administrative records. The research team must comply with strict ethical and confidentiality criteria:

- Administrative records will be used only for the purpose of this study in order to provide information that is not asked in the survey.
- All identifying information will be removed from participants' survey answers before they are released to the research team for statistical analysis or publication.
- At no time will any participants in this study be identifiable from their survey answers. Everything will be anonymised, that is, any names and identifiable information will be removed from your survey.

You can withdraw your consent to link your survey answers at any time. To do this call: 1800 519 672. Consent to the linking of survey answers ceases from the date of withdrawal.

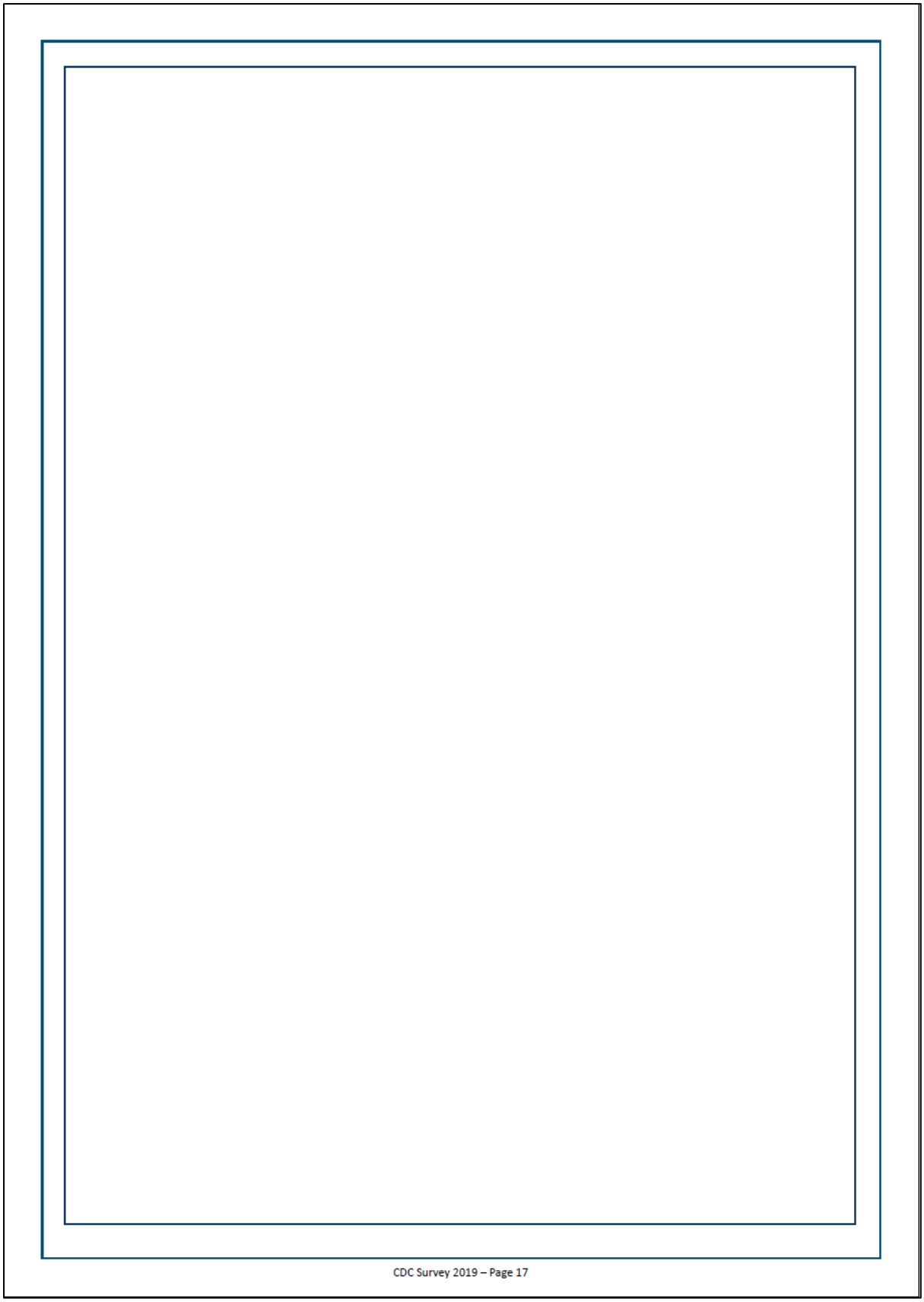
If you require further information before consenting to linking your survey answers to your administrative records, please call: 1800 519 672.

Do you consent to your survey answers being linked to your administrative records for the purpose of this study?

Yes ☐
No ☐

Thank you for taking part in the survey.

Information about claiming your $50 voucher is on the following page.



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