

Report: Thin Market Trials Final Evaluation

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This document

This report presents the final evaluation findings related to National Disability Insurance Agency's (NDIA's) Thin Market Trials. This includes Trials in locations agreed by Commonwealth and State and Territory ministers responsible for disability and other thin market projects identified by the NDIA.

Contributors

The NDIA's Research and Evaluation Branch delivered this evaluation. The Branch is responsible for ensuring that trustworthy and robust evidence informs NDIA policies, practices and priorities.

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The NDIA also acknowledges the Traditional Owners and Custodians throughout Australia and their continuing connection to the many lands, seas and communities. The NDIA pays respect to Elders past and present and extends this acknowledgement and respect to any Aboriginal and Torres Strait Islander people who may be reading this report.

Contents

Abbreviations	i
Key findings	iii
Executive Summary	iv
ES1 Introduction	iv
ES2 Evaluation findings	iv
ES3 Conclusions	ix
1. Introduction	1
1.1 Background	1
1.2 About the Thin Market Trials	2
1.3 The evaluation	2
1.4 Limitations	3
1.5 This report	3
2. Data and methods	5
2.1 Administrative data and documents	5
2.2 Service provider survey	5
2.3 Stakeholder interviews	6
2.4 Data analysis	6
3. Market facilitation	9
3.1 Overview of market facilitation trials	10
3.2 Impact of market facilitation	11
3.3 The extent market facilitation has operated as intended	26
3.4 Factors affecting the success of market facilitation	30
4. Coordinated Funding Proposals	36
4.1 Overview of CFP trials	36
4.2 Impact of coordinated funding proposals	38
4.3 The extent coordinated funding proposals have operated as intended	42
4.4 Factors affecting the success of coordinated funding proposals	44
5. Direct commissioning	46
5.1 Overview of direct commissioning trials	46
5.2 Impact of direct commissioning trials	47

5.3	The extent direct commissioning has operated as intended	51
5.4	Factors affecting the success of direct commissioning	54
6.	Conclusions	56
6.1	The impacts of market interventions	56
6.2	Extent market interventions worked as intended	57
6.3	Factors affecting the success of market interventions	58
6.4	Conclusion	59
7.	Recommendations	60
7.1	Strategic initiatives to strengthen thin markets	60
7.2	Further testing to determine effective market intervention approaches in different contexts	61
7.3	Enhancements to current market intervention approaches	62
Appendix A	Program theory	63
Appendix B	Thin Market Trial overview	64
Appendix C	Data and methods supplementary information	67

Abbreviations

ACT	Australian Capital Territory
ATE	Average Treatment Effect
ATHM	Assistive Technology and Home Modifications
APY	Anangu Pitjantjatjara Yankunytjatjara
BLCW	Boosting the Local Care Workforce
BTS	Bayesian Time Series
CALD	Culturally and Linguistically Diverse
CB	Capacity Building (supports)
CBIR	Capacity Building – Improved Relationships
CBDA	Capacity Building – Daily Activities
CFP	Coordinated Funding Proposal
DiD	Difference-in-difference
DRC	Disability Reform Council
DRMC	Disability Reform Ministers Council
LAC	Local Area Coordinator
LGA	Local Government Area
MIC	Market Intervention and Commissioning (Branch)
MMM	Modified Monash Model
NDIA	National Disability Insurance Agency
NDIS	National Disability Insurance Scheme
NHS	National Health Service (United Kingdom)
NSW	New South Wales
NT	Northern Territory
PITC	Partner in the Community
PSM	Propensity Score Matching

QLD	Queensland
SA	South Australia
SOP	Standard Operating Procedure
TAS	Tasmania
VIC	Victoria
WA	Western Australia

Key findings

- Coordinated funding proposals (CFPs) and direct commissioning, especially in remote and very remote locations, are promising approaches to increase participant use of NDIS supports in thin markets. More so than LGA-level market facilitation.
- Across the nine CFPs in scope of the evaluation, 86% of participants increased their use of targeted functional assessments. This led to an increase in expenditure, including for relevant follow-on supports, of \$4,982 per participant over 12-months (+132%).
- Most CFPs to date have focused on coordinated sourcing of one-off functional assessments. To understand the potential of CFPs, they need testing across a wider range of support types and locations.
- Direct commissioning in the ACT and Waratah-Wynyard (Tas) has only seen a marginal increase in use of NDIS supports equating to \$237 and \$167 annualised per participant in the ACT and Waratah-Wynyard respectively. Direct commissioning in the APY Lands (SA) appears to have been more successful potentially resulting in an increase in support use of \$6,631 annualised per participant (+75%).
- There is a need for more testing to determine whether direct commissioning might be more effective in remote/very remote LGAs or is better suited to Core supports than Capacity Building supports, as the preliminary evidence might suggest. The recruitment method and provider payment arrangements might also impact on the effectiveness of direct commissioning.
- Direct commissioning increased assurance of demand and financial viability for service providers. However, in the ACT and Waratah-Wynyard fewer NDIS participants agreed to take part in the trials than expected. Of those that did agree, the average extent of their engagement in the trials was also less than expected. This financially challenged service providers and reduced the likelihood of them maintaining an ongoing presence.
- Across 31 LGA-level market facilitation projects, there was on average no statistically significant impact on use of NDIS supports above all other business as usual activities that support plan implementation. This suggests that LGA-level market facilitation is not effective in thin markets, however, different approaches to market facilitation across the projects makes it difficult to evaluate market facilitation as a distinct intervention.
- Although market facilitation projects increased service provider and support coordinator knowledge of supply and demand, it could not overcome structural challenges to motivate providers to increase their provision of services within thin markets. Service providers and support coordinators reported that value of travel allowances in the NDIS Pricing Arrangements and workforce shortages contribute to service providers not seeing thin markets as a viable business opportunity.
- Based on findings across all trials, participant understanding of supports appears to be a barrier to engagement, as such participant education about supports, especially Capacity Building supports, is key to successful market intervention.

Executive Summary

ES1 Introduction

In the context of the National Disability Insurance Scheme (NDIS), thin markets exist where there is a gap between the needs of participants and the services they access. In December 2019, the Disability Reform Council (DRC), now the Disability Reform Ministers (DRM), agreed that each State and Territory would host a thin market trial in agreed locations. The National Disability Insurance Agency (NDIA) identified other thin markets to implement projects (Appendix B). The trials tested three approaches to address market challenges:

- **Market facilitation**, which involves actions to improve connections between providers and participants, such as focused engagement and sharing targeted data.
- **Coordinated funding proposals (CFPs)**, which are a way to enable participants to pool funding to more efficiently secure services from providers.
- **Direct commissioning**, which directly contracts providers to deliver supports to a participant or a group of participants.

The evaluation

The evaluation aimed to answer the following key evaluation questions:

1. To what extent did different market interventions increase participant use of NDIS supports?
2. Did different market interventions work as expected in different thin markets?¹
3. Why did the market interventions work as intended, or not, in different thin markets?

This report focuses on impacts and implementation of all DRMC and NDIA-initiated thin market trials and projects up to 30 September 2022.

ES2 Evaluation findings

Market facilitation

Impact

The evaluation analysed participant payment data to assess the impact of market facilitation trials on participant expenditure and market indicators. The analyses showed:

- On average across all targeted LGAs, participants used \$1,942 per month additional targeted supports than they did before the trials (\$23,304 per participant annualised).

¹ Appendix A shows the program theory depicting how the market interventions intend to work.

- On average this increase was \$2,917 per month (\$35,004 annualised) more than for statistically matched participants in similar LGAs elsewhere. However, this difference is not statistically different from zero with a few LGAs positively skewing the average.
- The only LGAs where the change in monthly NDIS expenditure during trials was significantly greater than for matched participants was Aurukun (Qld) (+\$5,594) and Alice Springs (NT) (+\$5,029). However, in Walgett, Wentworth, Tiwi Islands, Mornington and Baw Baw, the change in monthly expenditure was significantly less than matched participants elsewhere.
- Analysis of changes in market indicators (active providers, participant/provider ratio, payment concentration) did not show improvements compared to matched LGAs elsewhere.

Taken together, there is no evidence that on average market facilitation trials increased participant use of NDIS supports or strengthened local NDIS markets above all other activities undertaken by the NDIA or other market intermediaries.

Extent market facilitation has operated as intended

Market facilitation largely operated through providing market data to and directly engaging support coordinators and service providers. The purpose was to raise awareness of supply and demand and facilitate connections between support coordinators, participants, and service providers. This in turn intended to motivate service providers to increase service provision in target LGAs.

Surveys and interviews with service providers and support coordinators showed this theory somewhat operated as intended. Providing market data and directly engaging service providers and support coordinators increased service provider and support coordinator awareness of available supply and local demand in some but not all LGAs.

In Victoria, the Market Development team gave support coordinators a specialist behaviour support provider capacity matrix every 4 to 6 weeks and a specialist behavioural support checklist. Interviewed support coordinators reported that these helped them connect their participants with providers, although challenges with waitlists persist. In Queensland, the Market Development team established support coordinator networking groups which support coordinators reported were useful to identify service providers. However, in NSW and the NT, most interviewed support coordinators said that market data and direct engagement did not improve their understanding of supply.

Despite market facilitation somewhat raising awareness, statistical analysis did not detect a significant increase in service delivery across target LGAs. Survey findings offer a possible explanation for this. Of service providers whose awareness of demand in target LGAs increased due to NDIA contact (51%), only 47% reported that they were delivering, or plan to deliver, more services. Together, this suggests that the translation of awareness to action has not operated as intended to a detectable extent.

Factors impacting the success of market facilitation

Service providers, support coordinators and other stakeholders reported that the market facilitation trials were insufficient to overcome the following market challenges and encourage greater service provision:

- Service viability – low economy of scale, logistics, and lack of infrastructure result in significant financial risk for providers.
- Provider travel costs (especially in regional and remote locations) – 34% of survey respondents cited travel as a barrier to service delivery.
- A lack of options to transport participants to available service providers.
- Workforce shortages and turnover – 49% of survey respondents cited workforce challenges.
- Barriers for participants to access the NDIS and low participant understanding of how to implement their plans. Participants also have low understanding of some supports such as specialist behaviour supports. The combined effects reduce effective market size.
- Specifically related to specialist behaviour supports, onerous registration and compliance requirements for service providers which discourages new market entrants.

Coordinated funding proposals

Impact

NDIS expenditure data showed that CFPs have been successful at facilitating participant access to various functional assessments and probably ongoing supports. In all LGAs where the NDIA completed a CFP, at least 80% of identified participants received the CFP supports (82% across all CFPs²). Importantly, in the 12-months after CFPs, the number of subsequent NDIS claims and expenditure increased by an average of \$4,982 per participant (+132%) relative to the 12-months before.

Extent CFPs have operated as intended

Interviews with service providers and support coordinators showed that CFPs operated as intended by giving service providers assurance of demand. CFPs also made service delivery in remote LGAs logistically and financially more viable by sharing the actual cost of travel across all participants.

All but one of the service providers involved were not already servicing the target LGAs. All these providers reported in interviews that the assurance of demand created by pooling participant funding gave them the confidence to expand their service without bearing excessive financial risk.

² Except for Central Desert (NT) as the CFP had only just begun at the time of data analysis.

CFPs also aim to build the capacity of support coordinators to implement CFPs in the future and use the existing NDIS Pricing Arrangements to their maximum efficiency. The theory is that this builds ongoing local capacity to address service barriers without NDIA intervention. However, while all support coordinators interviewed were willing to implement a CFP in future, few expressed they had confidence to do so without additional support. The NDIA is releasing a CFP toolkit to guide support coordinators, participants and others establish CFPs. This could provide the ongoing assistance support coordinators need in the future.

Factors impacting the success of CFPs

Although CFPs operated largely as intended and effectively facilitated participant access to the targeted supports, service providers, support coordinators and Trial Leads reported the following challenges:

- Difficulty for service providers coordinating across multiple support coordinators, which has flowed through to organising subsequent trips for follow-on supports.
- Support coordinators not always being based in the target communities, meaning service providers had to find another key community contact to provide on the ground support. One service provider included funding for a local community member to act in this role.
- CFPs rely on support coordinators working together. This was variable across candidate LGAs which meant the NDIA could not establish some potential CFPs.
- The NDIA could not establish a CFP in other potential locations due to monopolies on support coordination and/or no market separation between support coordination and existing, albeit inadequate, service provision.

Direct commissioning

Impact

Analysis of NDIS expenditure data combined with contractual reporting by service providers suggests mixed success from the three direct commissioning trials.

On average, participants in the ACT and Waratah-Wynyard (Tas) trials increased their use of specialist behaviour supports or speech and occupational therapy by \$2,592 annualised and \$2,604 annualised respectively during the trials. However, compared to participants originally targeted but who chose not to participate, the average per participant increases were only \$237 and \$167 annualised in the ACT and Waratah-Wynyard respectively. This equates to around one-hour of additional support and is only statistically significant in Waratah-Wynyard.

Direct commissioning in the APY Lands has been more successful to date, with a possible attributable projected increase in average per participant expenditure on Assistance with Social, Economic and Community Participation supports of \$6,631 annualised. It is difficult to be sure of the incremental impact of the direct commissioning arrangement in the APY Lands as it has not been possible to identify a suitable comparison group and it is early in the trial. However, on face value it appears to have been more effective than in the ACT or Waratah-Wynyard.

Extent direct commissioning has operated as intended

Like a CFP, direct commissioning aims to give service providers assurance of demand at a quotable price that is financially viable. However, according to participating service providers, direct commissioning in the ACT and Waratah-Wynyard has not assured demand as much as expected nor been financially rewarding.

The service providers involved in these trials recruited staff based on an expected number of referrals. However, the number of referrals was less than they expected which has created financial pressure to retain the additional staff. As of 30 September 2022, the ACT and Waratah-Wynyard trials had used only 55% and 52% of the allocated funds. Projections estimated this would rise to 61% and 55% by the end of the trials. The contract guarantees the service provider in the APY Lands a minimum amount meaning referral volumes are less of an issue.

Other financial challenges associated service providers reported included holding vacancies for anticipated referrals and the time required for reporting, invoicing and engaging and coordinating participants.

Theoretically, direct commissioning also intends to provide an opportunity for providers to establish in a new market by providing a period of guaranteed demand and financial stability. The ACT Trial appears to have realised this. The service providers involved have received ongoing referrals and intend to continue delivery in the ACT after the Trial ends. However, in Tasmania the high cost of travel to Waratah-Wynyard and the low volume of participants means the service providers are less likely to maintain a presence.

It is too early to see if direct commissioning in the APY Lands will lead to sustainable service delivery. Although given the extreme challenges and costs delivering services in the APY Lands, it is difficult to imagine viable service provision without guaranteed demand at a viable price.

Factors impacting the success of direct commissioning

Aside from the administrative burden for the NDIA and service providers to establish and manage direct commissioning contracts, the main challenge appears to be engaging with participants. Initially, the NDIA had to take frontline staff offline for a considerable period to recruit targeted participants and then undertake plan reviews to quarantine funding from their NDIS Plans. This resulted in only one-third of targeted participants in the ACT and Waratah-Wynyard opting into the trial. Service providers also reported difficulties engaging with participants and support coordinators once enrolled.

In the APY Lands, all participants with the targeted funding had to opt-out rather than opt-in, which was logistically easier. However, some support coordinators and other stakeholders questioned whether this approach is in tension with participant choice which is one of the principles of the NDIS.

The low enrolment of participants in the ACT and Waratah-Wynyard, and ongoing engagement challenges, indicates that bringing providers into a thin market can be

insufficient to stimulate participants to access supports. Findings from the Victorian market facilitation trial targeting specialist behaviour supports indicated that low participant understanding of supports is a barrier for them to engage. It is likely that this has also been a barrier to the success of direct commissioning in the ACT and perhaps Waratah-Wynyard.

ES3 Conclusions

The evaluation findings suggest that CFPs and direct commissioning are promising approaches to increasing participant use of funded supports in thin markets in some conditions. CFPs can easily be deployed using the existing NDIS pricing and purchasing arrangements to increase the financial viability of delivering supports in rural and remote locations. Direct commissioning may be more successful for Core rather than Capacity Building supports, and in remote/very remote locations if market conditions are unfavourable for a CFP. This needs further testing.

LGA-level market facilitation appears less effective against a backdrop of business-as-usual activities by the NDIA and NDIS market intermediaries to support participants implement their NDIS plan. Market facilitation also seems ineffective at overcoming challenges for NDIS service provision in thin markets such as assurance of demand, financial viability, workforce shortages and participant understanding of the NDIS and the supports in their NDIS Plan.

However, business-as-usual market facilitation is largely uncoordinated without an overarching strategy to address both common challenges affecting all, or most, thin markets and unique challenges in local contexts. There is also a need to clarify the roles of the NDIA and various market intermediaries in market facilitation.

Overall, the evaluation findings suggest the following for market interventions in thin markets:

- Coordinated strategic macro-level market facilitation within the NDIA and local level market facilitation alongside the role of various market intermediaries should operate as business as usual, rather than as a distinct intervention in thin markets.
- Where a targeted local-level intervention is necessary, a CFP should be the first option if there is sufficient support coordinator or participant capacity, and it is viable for a provider under the existing NDIS Pricing Arrangements and Price Limits.
- Direct commissioning should be considered if the above market conditions are unfavourable.

1. Introduction

1.1 Background

In the context of the National Disability Insurance Scheme (NDIS), thin markets exist where there is a gap between the needs of participants and the services available in the market. This can occur in a particular location, for a particular support type, and/or for certain cohorts of participants.

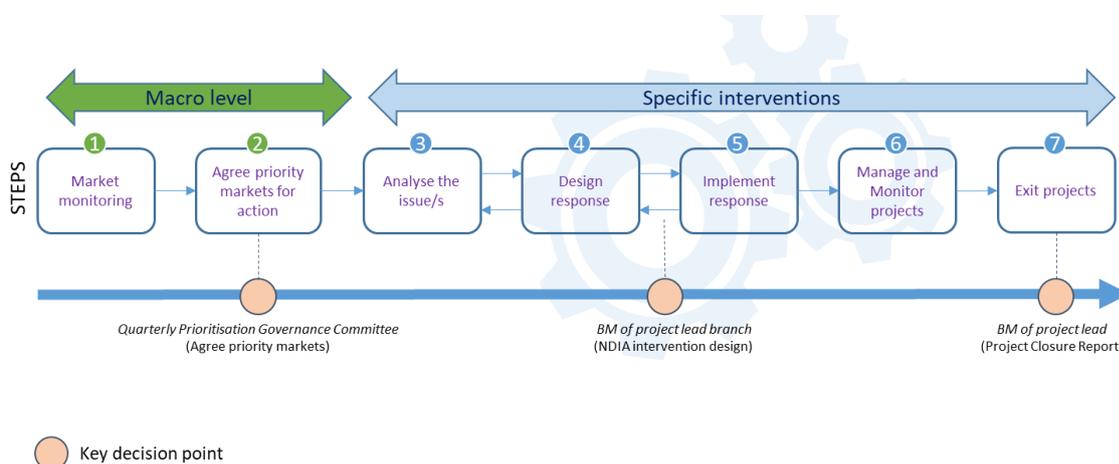
Participants can face service gaps for a number of reasons such as:

- Higher operating costs for service providers due to participants being geographically isolated, highly dispersed or low in number.
- Participants with complex needs requiring a specialised workforce that is not available.
- Temporary supply gaps due to transition to full implementation of the NDIS.

The National Disability Insurance Agency (NDIA) and the Department of Social Services jointly commissioned Ernst and Young in 2018 to identify market design and intervention options to address thin markets through research and consultation with stakeholders.

Based upon the Ernst and Young recommendations the NDIA subsequently developed a market monitoring and intervention model to outline a high-level approach to market intervention (Figure 1).

Figure 1: NDIA market intervention and monitoring operating model



The NDIA is implementing three interventions to address the challenges in thin markets:

- **Market facilitation:** involves specific actions to improve connections between providers and participants, such as focused engagement and sharing information with the market.
- **Coordinated funding proposals (CFPs):** are a way to enable participants to pool funding to more efficiently secure services from providers. Pooling participant funds allows service providers to apportion non-labour costs such as travel across multiple participants, improving value for money for participants.

- **Direct commissioning:** involves directly contracting providers to deliver supports to a participant or a group of participants.

Appendix A presents the theory of how these approaches intend to overcome market challenges, and lead to participants having better access to funded supports.

1.2 About the Thin Market Trials

In December 2019, the Disability Reform Council, now the Disability Reform Ministers Council (DRMC), agreed that a flexible approach to address NDIS market gaps was required and that each State and Territory would host a Thin Market Trial between 2020-2022 to test different approaches to market intervention. The Market Intervention and Commissioning Branch within the NDIA worked with State and Territory Governments and local working groups (consisting of Agency representatives, State and Territory representatives and other local stakeholders) to agree the scope and location of these trials.

The NDIA subsequently defined its operational model to identify and manage thin markets. This resulted in the identification of further thin markets in other local government areas (LGAs) where the NDIA implemented additional market interventions. Figure 2 shows the location of each of the thin market trials in this evaluation. Appendix B presents further details about each trial.

Figure 2: DRMC AND NDIA-initiated projects



1.3 The evaluation

The evaluation’s overarching objective was to examine the market interventions to identify the types of market interventions that are more likely to be successful in different types of

thin markets. The evaluation provides learnings about what works so that the Agency can adjust its approach to market intervention to address thin market challenges.

Broadly, the evaluation is seeking to answer the following overarching question:

To what extent are different market interventions successful, for which types of participants, in what contexts, and why are they successful or not?

More specifically, the evaluation answers the following questions:

1. To what extent did different market interventions increase participant use of NDIS supports?
2. Did different market interventions work as expected in different thin markets?
3. Why did the market interventions work as intended, or not, in different thin markets?

While participant outcomes are an important focus of the NDIS, participant outcomes are not in scope for this evaluation.

1.4 Limitations

There are some overarching limitations to the evaluation that impact on our ability to answer the evaluation questions. The main limitation is that the market interventions have not been trialled in enough different types of locations or with enough support types to fully compare their effectiveness to each other and in different contexts. There is existing market facilitation undertaken by the NDIA and NDIS market intermediaries which could have confounded the impacts of specific market intervention trials.

Other limitations to the evaluation are as follows:

- Market Development teams provided a list of service providers and potential interviewees within the stakeholder groups the Research and Evaluation Branch identified. Therefore, the sentiment of service providers and support coordinators surveyed/interviewed may not be generalisable.
- Market Development teams implemented a range of approaches under the umbrella of market facilitation, making it difficult to evaluate an approach to market facilitation as a distinct intervention.
- Chapter 2 outlines specific data limitations.

1.5 This report

1.5.1 Scope

This report focuses on impacts and implementation of all DRM, and NDIA-initiated Thin Market Trials shown in Figure 2 up to 30 September 2022.

Findings related to the trial in Anangu Pitjantjatjara Yankunytjatjara (APY) Lands in South Australia are preliminary findings only, as it is too early to make conclusions about the impacts of this trial.

1.5.2 Report structure

The structure of the rest of this report is as follows:

- Chapter 2 – Data and methods
- Chapter 3 – Market facilitation
- Chapter 4 – Coordinated funding proposals
- Chapter 5 – Direct commissioning
- Chapter 6 – Conclusions and recommendations
- Chapter 7 - Recommendations
- Appendix A – Program theory for market interventions
- Appendix B – Overview of thin market trials
- Appendix C – Supplementary data and methods.

2. Data and methods

The Research and Evaluation Branch used the following data and methods for this report.

2.1 Administrative data and documents

Table 1 shows the administrative data and documents that were analysed for this report.

Table 1: Administrative data and documents analysed

Data and documents	Source
The following NDIS participant data: <ul style="list-style-type: none">Detailed payment data (DSREPMA.PMTTXN_2207)Plan information and breakdown (ACARRMA.R03_REG_ALL_PLANS_2207)Demographic information about participants (DSNAROM.PARTICIPANT_DEMOGRAPHICS_2207)Committed support budgets by participant, month and support category (ACARRMA.R04_REGS_FS_2209)Scheme entry, plan approval dates and plan status (ACARRMA.R02_AR_ELIGIBLE_2209)Budgets and plan usage data (ACARRMA.R04_REG_UTILISATION_2209)	NDIA Enterprise Data Warehouse
Reports prepared for Trial Working Groups	MIC Branch
Request for Quote documentation to directly commission providers	MIC Branch
Trial Closure reports	MIC Branch
Market intervention guidance documents	MIC Branch
Quarterly reports prepared for market prioritisation meetings	MIC Branch
Executive briefs	MIC Branch
CFP documentation	MIC Branch
Directly commissioned provider reports	MIC Branch

2.2 Service provider survey

The Research and Evaluation Branch developed an online survey that Market Development teams disseminated to service providers in their target LGAs. There were two survey rounds depending on trial implementation. The first round was from March to June 2021 and the second from March to June 2022.

The first round mostly focused on market facilitation trials due to timing, although included the providers involved in the Katherine and Broome CFPs. The second round only focused on LGAs with market facilitation trials. The Evaluation Team interviewed providers involved in CFPs and direct commissioning instead.

There was a total of 104 responses. Appendix C.1 gives a breakdown of respondents, although it is not possible to determine their representativeness of the provider market.

2.3 Stakeholder interviews

Semi-structured interviews were conducted with service providers, support coordinators, members of the DRM-trial Working Groups, NDIA National Delivery representatives, representatives from the NDIA's Partners in the Community (PITC) and Market Development teams in all DRM trial LGAs and selected other LGAs. Interviews explored stakeholder views on challenges in their location, effectiveness of trial activities and impacts on supply of funded supports.

The Evaluation Team conducted two rounds of interviews depending on the implementation of individual trials. The first round was between January and July 2021 while the second was between March and August 2022.

There was a total of 114 interviews across all trials. Appendix C.2 gives a breakdown of interviewee characteristics. It is not possible to determine their representativeness of the provider market.

2.4 Data analysis

2.4.1 Statistical analysis of NDIS participant payments data

The evaluation estimated the impact of each Thin Market Trial on participants' use of funded supports using approaches tailored for the type of market intervention.

For all trials/market intervention types, analyses compared participant use of funded supports for up to 12-months before and after the trials commenced. Given that trials began at different dates, time was normalised to give the number of months before trials started (negative values), the month trials started (zero value) and months after the trial started (positive values). All analyses adjusted the value of funded supports for inflation.

All analyses used R Version x64 4.0.2

Appendix C.3 gives detailed statistical methods. The sections below provide a summary.

Market facilitation

The evaluation analysed data at the participant and the LGA (market) level. To standardise the length of trials the comparison period was 10-months before and after the start date of trials.

Analysis of participant-level expenditure

Participant-level analysis used difference-in-difference (DiD) modelling to compare the changes in participant use of funded supports after the start of market facilitation trials, with matched participants from other LGAs.

The evaluation used propensity score matching, which involves matching trial participants to similar participants from other LGAs where the NDIA did not implement any thin market trials. Every trial participant was matched to three non-trial participants based on the propensity scores.

A DiD regression was performed to give the causal effect of the trial. The outcome of interest was the participant's monthly total expenditure on NDIS-funded supports. The DiD regression also included a series of covariates to control for any residual differences between the characteristics of participants. Appendix C.3.1 gives a detailed description of the DiD modelling approach.

Analysis of LGA-level market indicators

The evaluation used Bayesian time series (BTS) analyses to assess the impact of market facilitation trials on the LGA-level participant to provider ratio, the distribution of expenditure across both participants and providers (using Gini Coefficients³) and indicators of participant choice around supports captured by the NDIS Short Form Outcomes Questionnaire.

BTS is an approach to estimate the causal effect of an intervention using time series data. It predicts the counterfactual observation (i.e., the level of a particular market indicator in the absence of a market facilitation trial). It then compares the observed level to that prediction.

We used a similar propensity score matching process to the one described for participant expenditure to identify similar LGAs for comparison. Appendix C.3.2 gives a detailed description of the matching and BTS modelling approach.

Coordinated funding proposals

Given the highly individualised approach to CFPs and the small sample sizes in each LGA, it was not feasible to use statistical matching to compare CFP participants to a comparison group. Therefore, we assessed the extent the participants received the commissioned supports by analysing their payment data for the duration of the CFP without comparing to other participants.

As all but two CFPs targeted some form of functional assessment that is necessary to access further supports (e.g., ATHM assessment), we also compared expenditure within relevant support categories 12-months either side of the CFP start dates.

Direct commissioning

As part of direct commissioning, the NDIA quarantined the relevant portion of a participant's budget and reimbursed service providers directly. Market Development teams manually recorded these amounts. The evaluation used these payment records to determine participant expenditure during the period of direct commissioning. Expenditure on the same

³ The Gini coefficient is a measure of dispersion. It is a number between 0 and 1, with 0 representing perfect equality and 1 perfect inequality. For example, if every participant made the same dollar claim to the NDIS, the Gini coefficient will be 0. In contrast, if only one participant made an NDIS claim and all others made none, the Gini coefficient will be 1

support type before the period of direct commissioning came from the NDIA's Enterprise Data Warehouse.

A comparison group came from participants who the NDIA identified for the trials but who chose not to participate. DiD analyses compare changes in expenditure on the commissioned support type during the direct commissioning period. Appendix C.3.1 gives a detailed description of the DiD approach.

2.4.2 Data limitations

There are several data limitations that should be considered in interpreting the results of the analyses:

- Participants are only observed if they have made a claim in the time period of interest (i.e., participants that have used none of their budget in the time before and/or after the trial are not observed).
- Data pertaining to participant use of funded supports includes payments to both registered and non-registered providers to the extent that a provider is linked to a specific payment (i.e., there is a provider number). In addition, payments via plan managers identify the plan management provider as the service provider due to the way the NDIA captures the data. As a result, the number of service providers are likely to be underestimated.
- Only claims greater than zero (i.e., no refunds) are included in the dataset.
- Participants may move during the time before or after the trials. While we have tried to account for this movement, there may be delays in Agency data reflecting this movement.
- We have used "LGANm2016" given the timing of the market interventions. There may be small discrepancies in comparison to the latest release "LGANm2021".
- Data entry errors exist that cannot be accounted for, however, on average we assume the impact of these is negligible.

2.4.3 Survey and interview data

Microsoft Excel was used to descriptively analyse closed survey responses, while NVivo was used to thematically analyse free text survey responses and stakeholder interview transcripts.

3. Market facilitation

Key findings

- On average across the 31 LGAs where the NDIA delivered market facilitation trials, participants used on average \$23,304 (annualised) more NDIS supports compared to the 12-months prior.
- However, compared to matched participants in similar LGAs elsewhere, this increase was not statistically significant. This suggests that on average, market facilitation did not significantly increase participant use of NDIS supports above all other business as usual actions that could affect NDIS plan implementation.
- On average, market facilitation also did not significantly affect indicators of market strength including the number of service providers that delivered supports in the target LGAs, the participant-to-provider ratio, market concentration or participant choice in who supports them. This suggests that market facilitation also did not significantly change the functioning of local NDIS markets.
- The market facilitation projects mostly focused on four mechanisms to increase service provider understanding of market opportunities and demand:
 - Providing market data to service providers
 - Direct engagement with service providers
 - Connecting service providers with support coordinators
 - Provider and participant forums.
- Based on survey findings, 70% of service providers in the targeted LGAs were aware of the NDIS market data and most of those found it useful (82%) as it gave them greater awareness of demand. Similarly, directly engaging service providers and support coordinators helped to increase awareness of supply and demand.
- However, of surveyed service providers whose awareness of demand in target LGAs increased due to NDIA contact (51%), only 47% reported that they were delivering, or planning to deliver, more services. This suggests that the translation of awareness to action has not operated as intended.
- Service providers and support coordinators reported that market facilitation activities were insufficient to overcome several market challenges and encourage greater service provision. The challenges they reported include low economies of scale, travel costs against allowances in the NDIS Pricing Arrangements and Price Limits, limited or no transport options for participants, workforce shortages and limited participant understanding of the NDIS and their NDIS plan.

3.1 Overview of market facilitation trials

The most common market intervention across the trial LGAs has been market facilitation. Most market facilitation trials (19 LGAs) have focused on all NDIS-supports, although some have focused on a specific support category (12 LGAs). Table 2 outlines the market facilitation trials in scope for this evaluation. In several trial LGAs, Market Development teams identified participants that would be the focus of ongoing monitoring of their use of NDIS-supports. This report refers to these participants as priority participants.

Table 2: In scope market facilitation trials

LGA (State/Territory)	Focus of market facilitation activities	Priority participants
Walgett, Wentworth, Bourke, Brewarrina (NSW)	All supports	187
Alice Springs, Barkly, Central Desert, MacDonnell (NT)	All supports	304
Ararat, Latrobe, Baw Baw, Bass Coast, East Gippsland, South Gippsland, Wellington (Vic)	Capacity Building – Improved Relationships (CBIR)	81
Halls Creek, Wyndham-East Kimberley (WA)	Capacity Building – Daily Activities (CBDA)	30
Palm Island (Qld)	Participants with psychosocial (CBDA supports)	14
Aurukun (Qld)	All supports	NA
Berri-Barmera (SA)	Core – Social and community participation	NA
Bland, Junee (NSW)	All supports	NA
Carpentaria (Qld)	All supports	NA
Cloncurry, Doomadgee, Woorabinda, Mornington (Qld)	All supports	NA
Goondiwindi (Qld)	Core – Assistance with Daily Life	114
Tiwi Islands, West Arnhem, West Daly (NT)	All supports	NA

LGAs where the NDIA trialled direct commissioning also had a period of market facilitation prior to the commissioning phase. However, the final evaluation has not analysed data related to the market facilitation phase of these trials.

3.2 Impact of market facilitation

This section presents the evaluation findings on the impact of market facilitation trials on participant use of NDIS- funded supports and changes in market indicators in target LGAs.⁴

Where market facilitation focused on a single support type, analyses used expenditure data related to only this support type. Where market facilitation focused on all NDIS supports, analyses combined data across all support types.

3.2.1 Participant use of funded supports

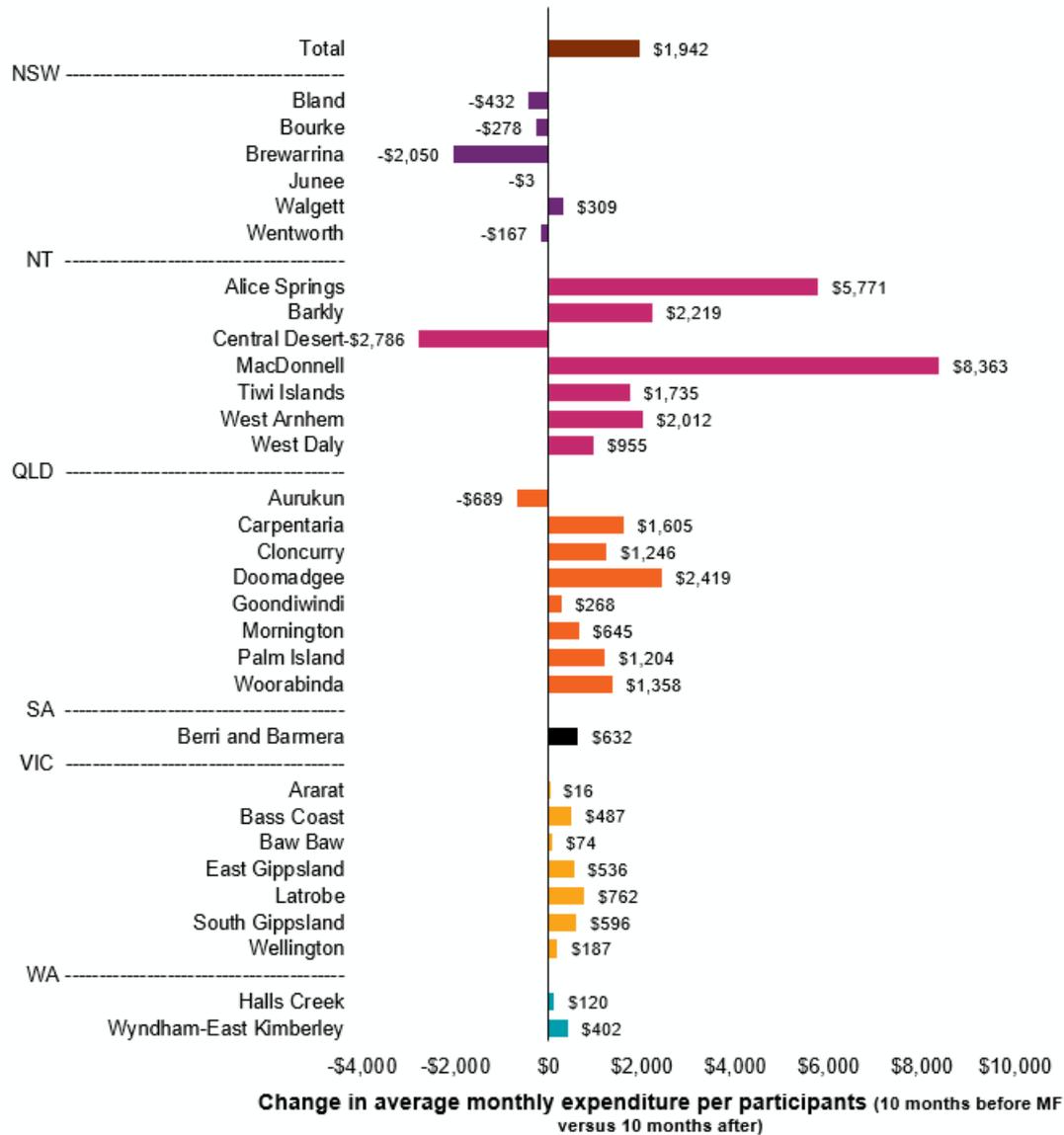
Average participant expenditure

Figure 3 shows that across trial LGAs, participants used on average \$1,942 more of the NDIS supports targeted in the 10-months after trials started compared to the 10-months before. This equates to an average increase of \$23,304 per participant annualised. Most LGAs had an increase in monthly expenditure per participant with the largest increases in MacDonnell (+\$8,363) and Alice Springs (+\$5,771). Monthly expenditure decreased in Bland, Bourke, Brewarrina, Wentworth (NSW), Central Desert (NT) and Aurukun (Qld).

⁴ The evaluation period is 10 months prior and 10 months after the start of market facilitation activities in the target LGAs to compare the impacts of each trial given Trials ran for different lengths of time. A 10-month cut-off also avoids confounding by CFPs which began in some LGAs around 12 months after market facilitation activities started.

Figure 3: Change in average monthly participant expenditure

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



Source: Research and Evaluation Branch analysis of NDIS payments data.

To better understand the effectiveness of market facilitation, the change in average monthly expenditure per participant was compared to similar participants using the “average treatment effect” (ATE).⁵

Figure 4 shows the ATE across all target LGAs combined and for each LGA individually. Across all target LGAs, the ATE was +\$2,917 across the 10 months after market facilitation trials started compared to the comparison group. However, this effect is not statistically different from zero, as evidenced by the 95% confidence interval spanning \$0. Put another

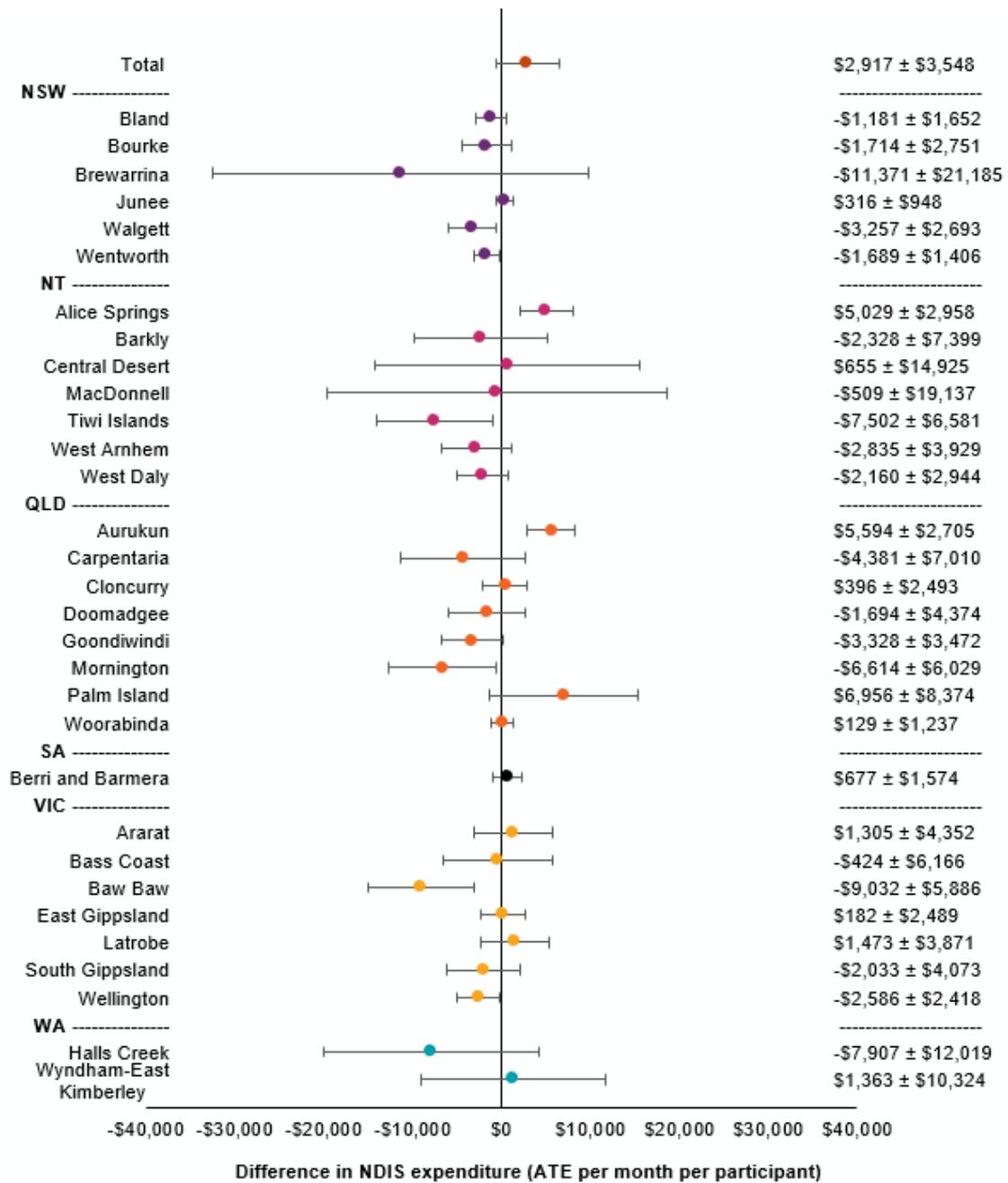
⁵ The ATE is the average difference in monthly NDIS expenditure per participant in the 10-months after trials started compared to the 10-months before in trial LGAs, compared to similar participants elsewhere.

way, the change in average participant use of the targeted NDIS supports across trial LGAs was statistically the same as the change for similar participants elsewhere. This suggests that, on average, the market facilitation trials did not have a significant impact above all other activities that could have contributed to participants' use of their NDIS plans.

Supporting this, the evaluation could only detect a significant increase in average use of funded supports (i.e., a significantly positive ATE) in two of the 31 LGAs. Aurukun (Qld) and Alice Springs (NT) had ATEs of \$5,594 and \$5,029 respectively. This suggests that market facilitation contributed to an increase in Alice Springs. In Aurukun, on average participant use of NDIS supports decreased during the trial indicating that participant use of supports decreased to a larger extent amongst similar participants elsewhere. This suggests that the market facilitation in Aurukun mitigated some of this decrease. In five LGAs, the ATEs were statistically negative (Walgett and Wentworth (NSW), Tiwi Islands (NT), Mornington (Qld) and Baw Baw (Vic)).

Figure 4: Average monthly treatment effect of market facilitation on participant expenditure

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before

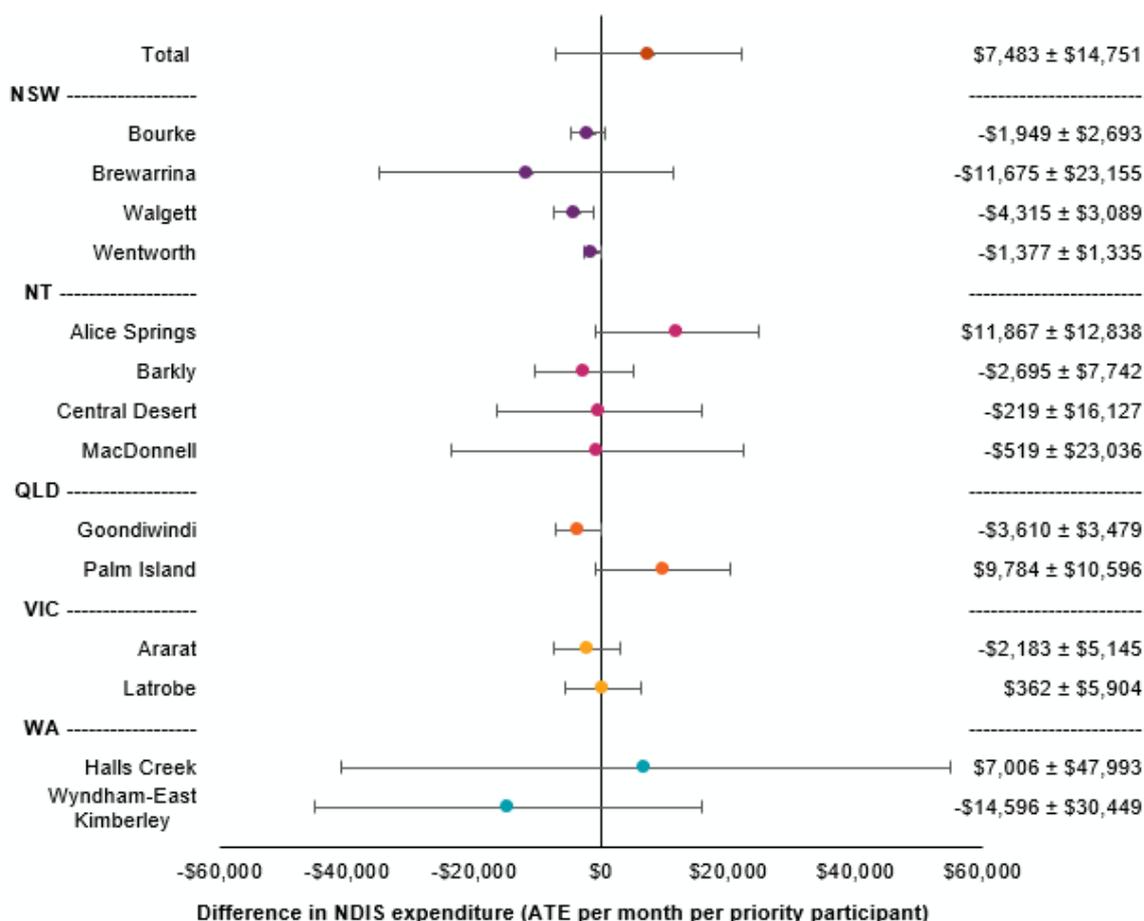


Source: Research and Evaluation Branch analysis of NDIS payments data.

Figure 5 shows the ATE for priority participants across the relevant LGAs. For all priority participants, the ATE was +\$7,483 in the 10 months after market facilitation started compared to the comparison group. However, this effect is not statistically different from zero. This suggests that on average, market facilitation did not have a significant impact on priority participant use of NDIS-supports.

Figure 5: Average treatment effect (ATE) of market facilitation on priority participant expenditure

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



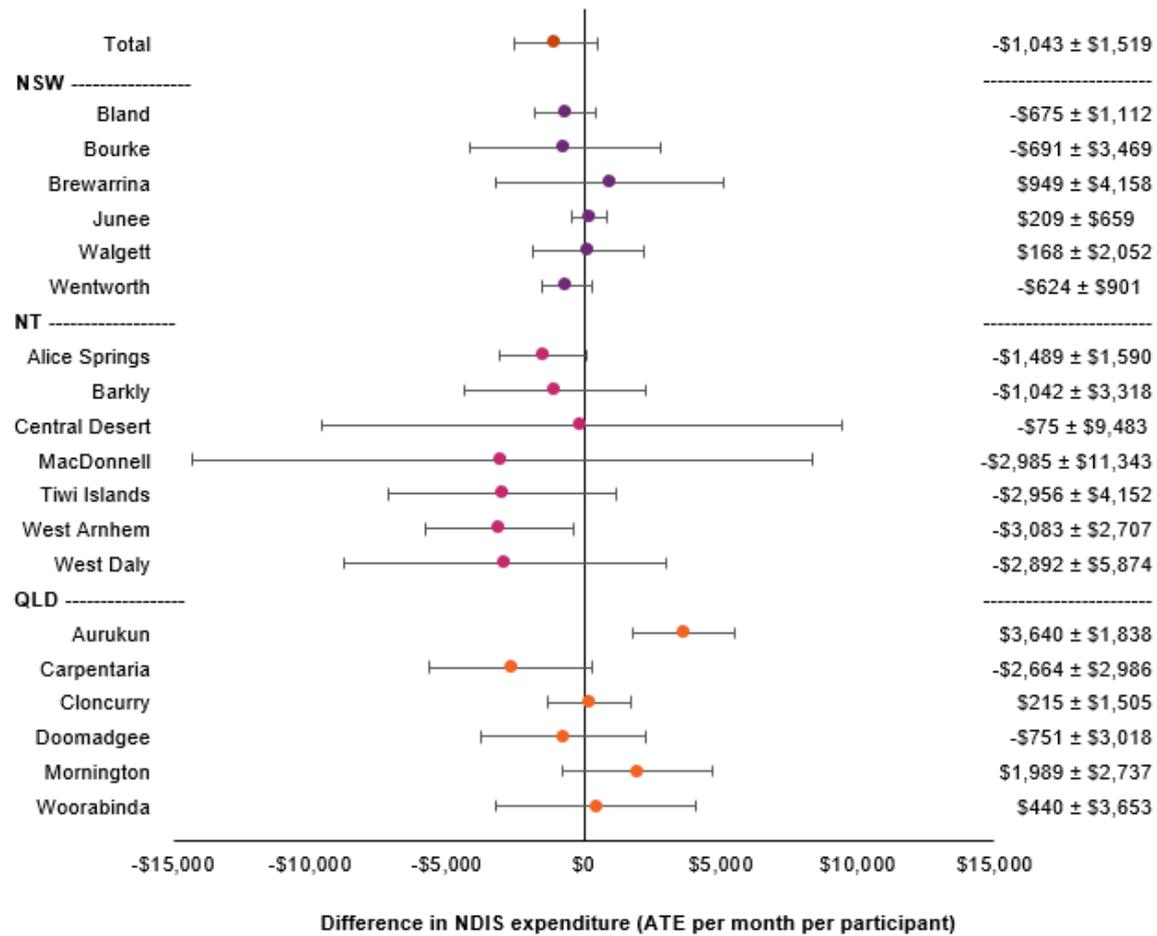
Source: Research and Evaluation Branch analysis of NDIS payments data.

For trials where market facilitation targeted all NDIS support types, we undertook the same analyses for Core and Capacity building supports individually.⁶ Figure 6 shows that across trial LGAs, the change in average use of Core supports in the 10-months after trials commenced was \$1,043 less than for similar participants in non-Trial LGAs. However, this difference is not statistically significant suggesting that on average market facilitation had no impact on participant use of Core supports. For individual LGAs, the ATEs on Core supports were only statistically significant for Aurukun (Qld) (+\$3,640 per month) and West Arnhem (NT) (-\$3,083 per month). Interviews with support coordinators suggested that the increase in Aurukun was due to a new Core support provider because of the NDIA's market facilitation.

⁶ Due to the nature of Capital supports and small sample sizes we have not included analysis of Capital supports in the report.

Figure 6: Average treatment effect (ATE) of market facilitation on Core supports

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



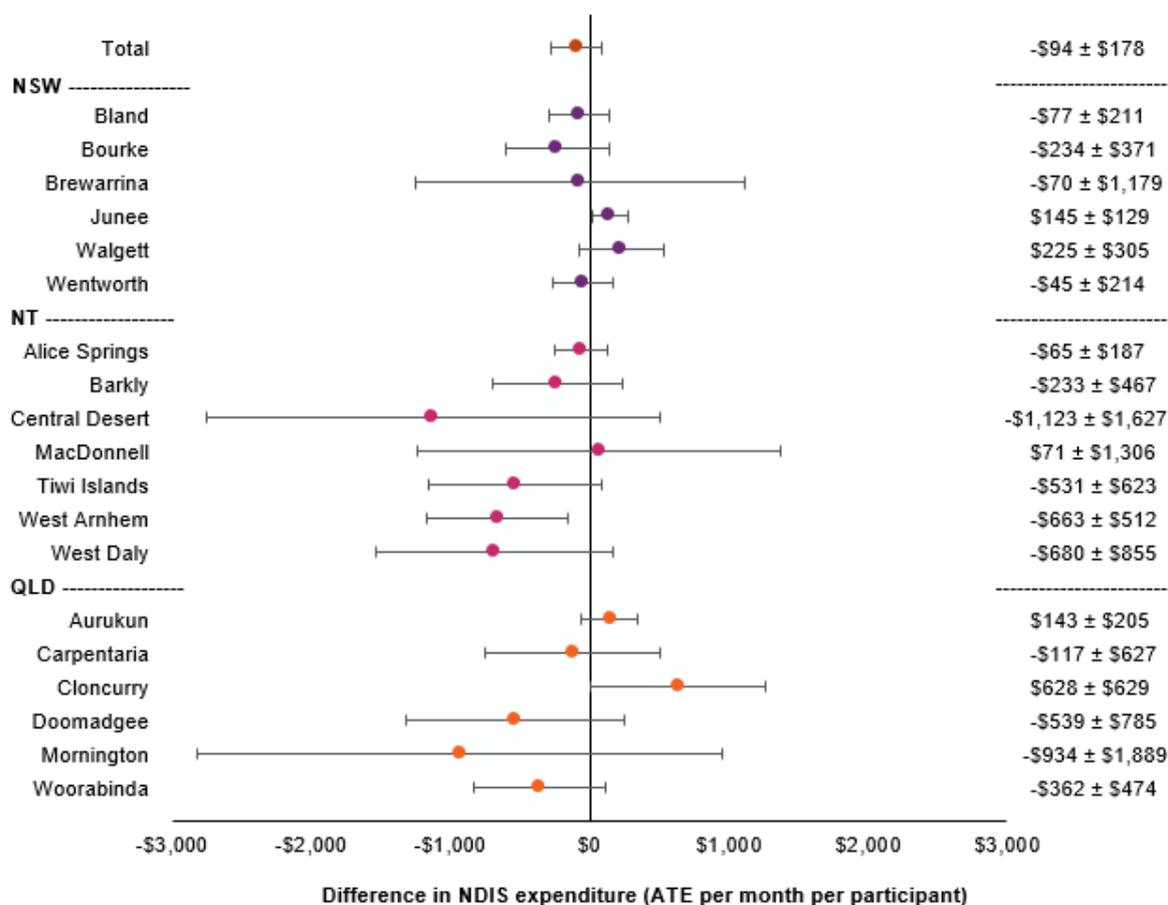
Source: Research and Evaluation Branch analysis of NDIS payments data.

Figure 7 shows that for Capacity Building supports, the ATE across all Trial LGAs was -\$94 per month, which is not statistically different from zero. This suggests that as with Core supports, the market facilitation trials did not have a significant impact on participant use of Capacity Building supports.

The only significant ATEs for Capacity Building supports were in Junee (NSW) and West Arnhem (NT) (Figure 7). In Junee, the change in average use of Capacity Building supports in the 10-months after the trial started was \$145 more than for similar participants in non-Trial LGAs. However, in West Arnhem the average change was \$663 less than for similar participants in non-Trial LGAs.

Figure 7: Average treatment effect (ATE) of market facilitation on Capacity Building supports

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



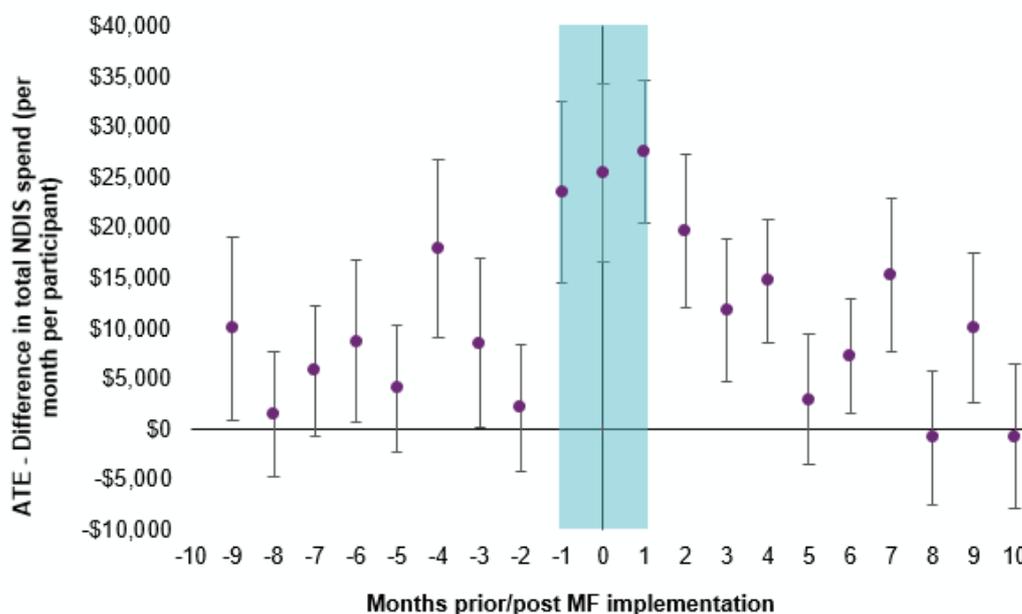
Source: Research and Evaluation Branch analysis of NDIS payments data.

Month-by-month impact of market facilitation

The above results comparing expenditure across 10 combined months either side of the trials starting suggests that in most cases market facilitation did not have a significant impact. This could be because the impacts were not sustainable over 10-months. To explore this, we calculated and plotted the ATEs for total expenditure across all trial participants month-by-month (Figure 8). As there is some uncertainty exactly when market facilitation activities began, we considered the start of trials to be one month either side of the start date (indicated by the shaded area).

The analysis shows that on average, there is a significant jump in total expenditure one month either side of the start date across all market facilitation trials (+\$25,000 per month) (Figure 8). This quickly diminishes and by three months the ATEs are statistically the same as most months prior to the start of trials. This suggests that the trials may have had an immediate but not sustained impact.

Figure 8: Average treatment effect (ATE) of market facilitation on participant spend by month



Source: Research and Evaluation Branch analysis of NDIS payments data.

3.2.2 Market indicators

LGA-level analyses were undertaken (refer section 2.4 for details) to assess the impact of market facilitation on the provider market in target LGAs. Note that due to the way that the NDIA captures data related to plan-managed and self-managed participants, the number of active providers is likely an underestimate.

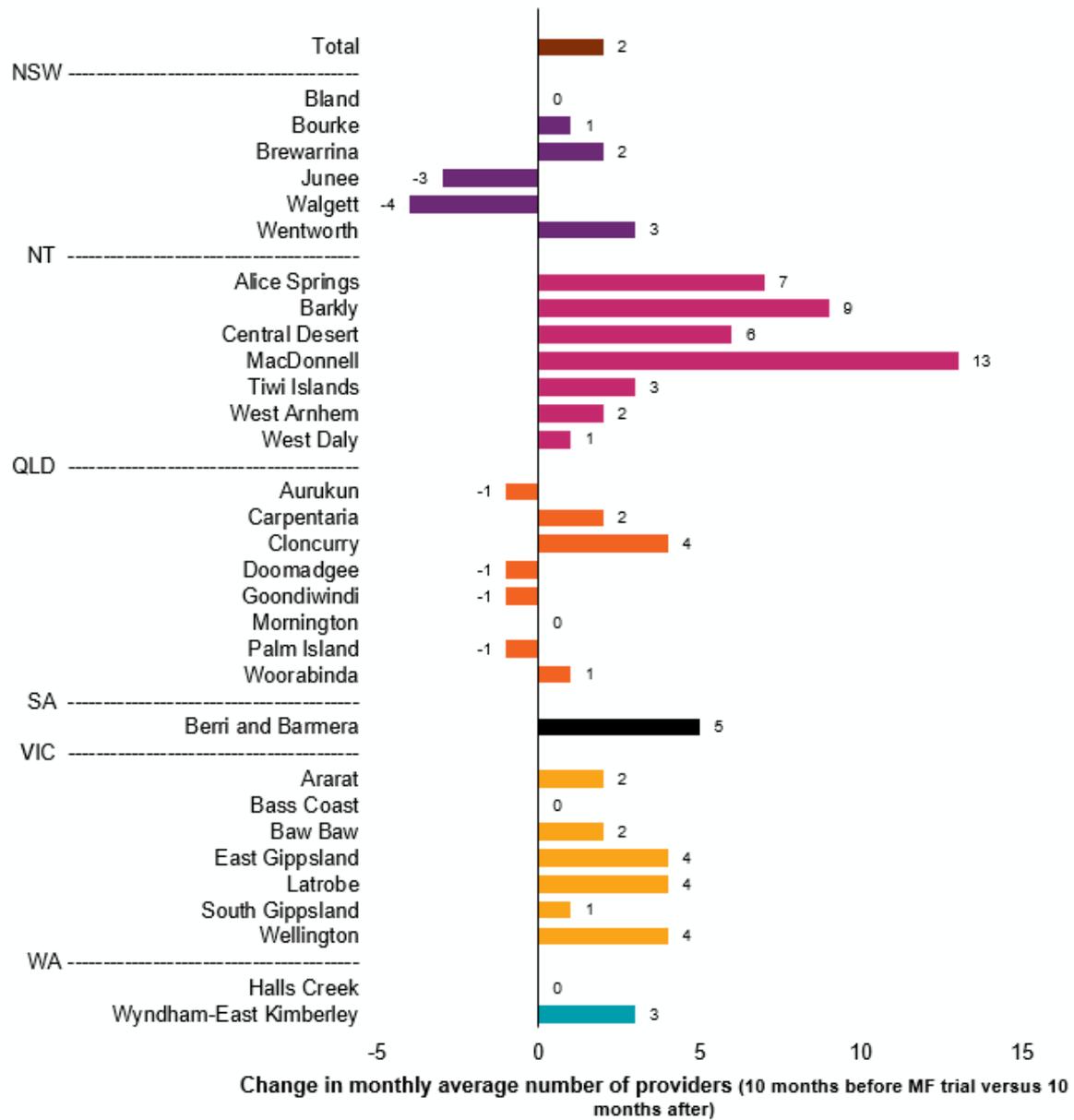
Active providers

Figure 9 shows the change in active providers⁷ over the market facilitation period compared to the 10 months prior. It shows the largest increase in active providers was in MacDonnell (+13) followed by Barkly (+9), while the greatest decrease was in Walgett (-4).

⁷ An active provider is a service provider who has made at least one NDIS-claim during the pre-trial and/or post-trial period.

Figure 9: Change in number of active providers

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



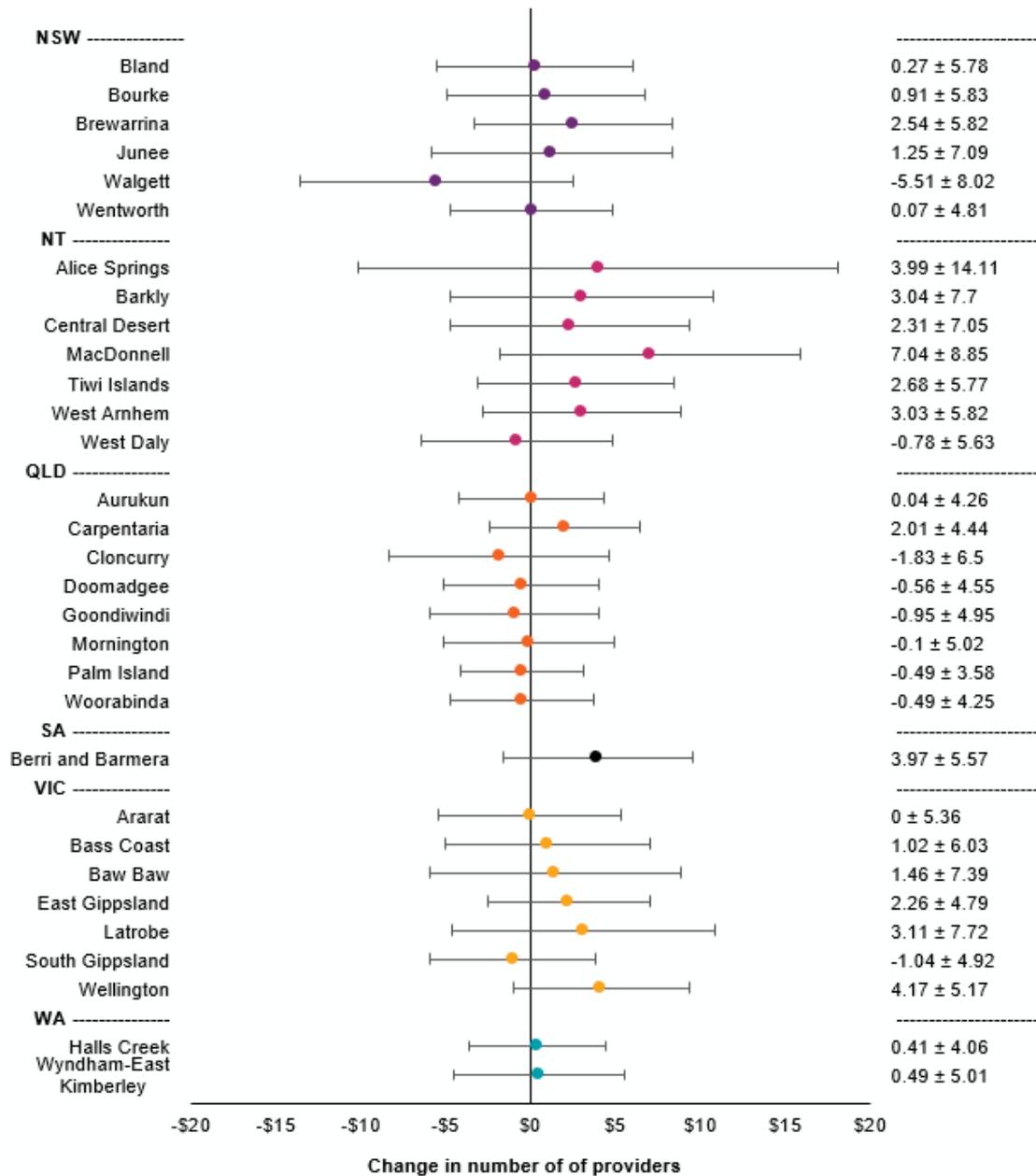
Source: Research and Evaluation Branch analysis of NDIS payments data.

The analyses show that market facilitation has not had an impact on the number of providers in target LGAs.⁸ The analyses show that the largest increase in active providers during market facilitation trials was in MacDonnell (NT) (+7.04) and the largest decrease in Walgett (NSW) (-5.15). However, the results suggest that the probability of these changes, and those for any other LGA, is random rather than systematic (Figure 10).

⁸ The analysis compared the change in active providers with matched non-trial LGAs using BTS analysis. BTS predicts what would have happened without market facilitation and compares this prediction to what did happen.

Figure 10: Estimated change in number of active providers due to market facilitation trials

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



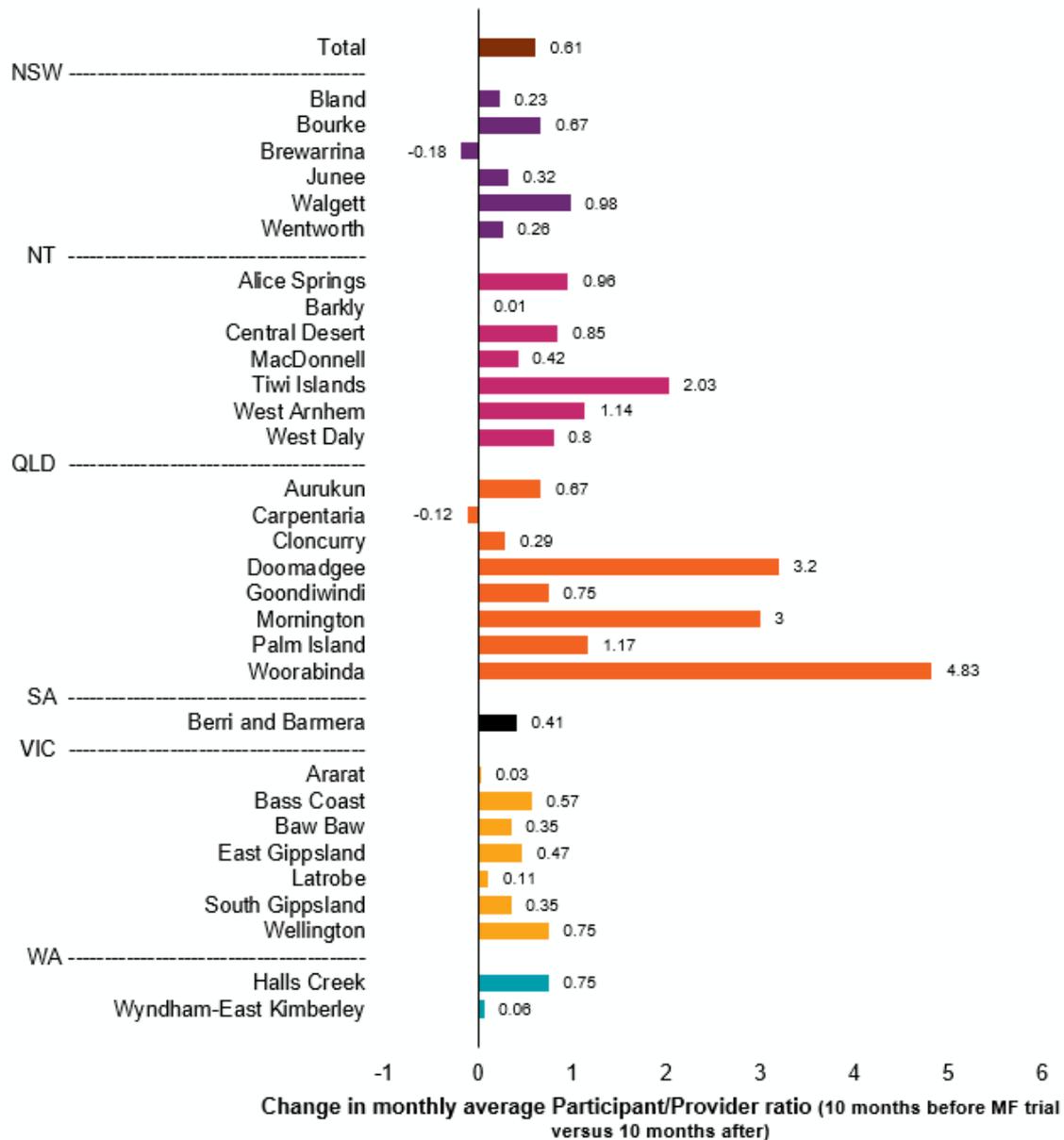
Source: Research and Evaluation Branch analysis of NDIS payments data.

Participant-to-provider ratio

Figure 11 shows the change in participant/provider ratio in the market facilitation periods compared to 10 months prior. In most LGAs, the participant/provider ratio increased. The largest increases were in Woorabinda (+4.83), Doomadgee (+3.2), Mornington (+3.0) and the Tiwi Islands (+2.03). This indicates that even though new providers entered these LGAs, the number of new participants increased at a faster rate. In other market facilitation trial LGAs the change in the participant/provider ratio was generally less than plus or minus 1.0 suggesting little if any material change.

Figure 11: Change in participant/provider ratio

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before

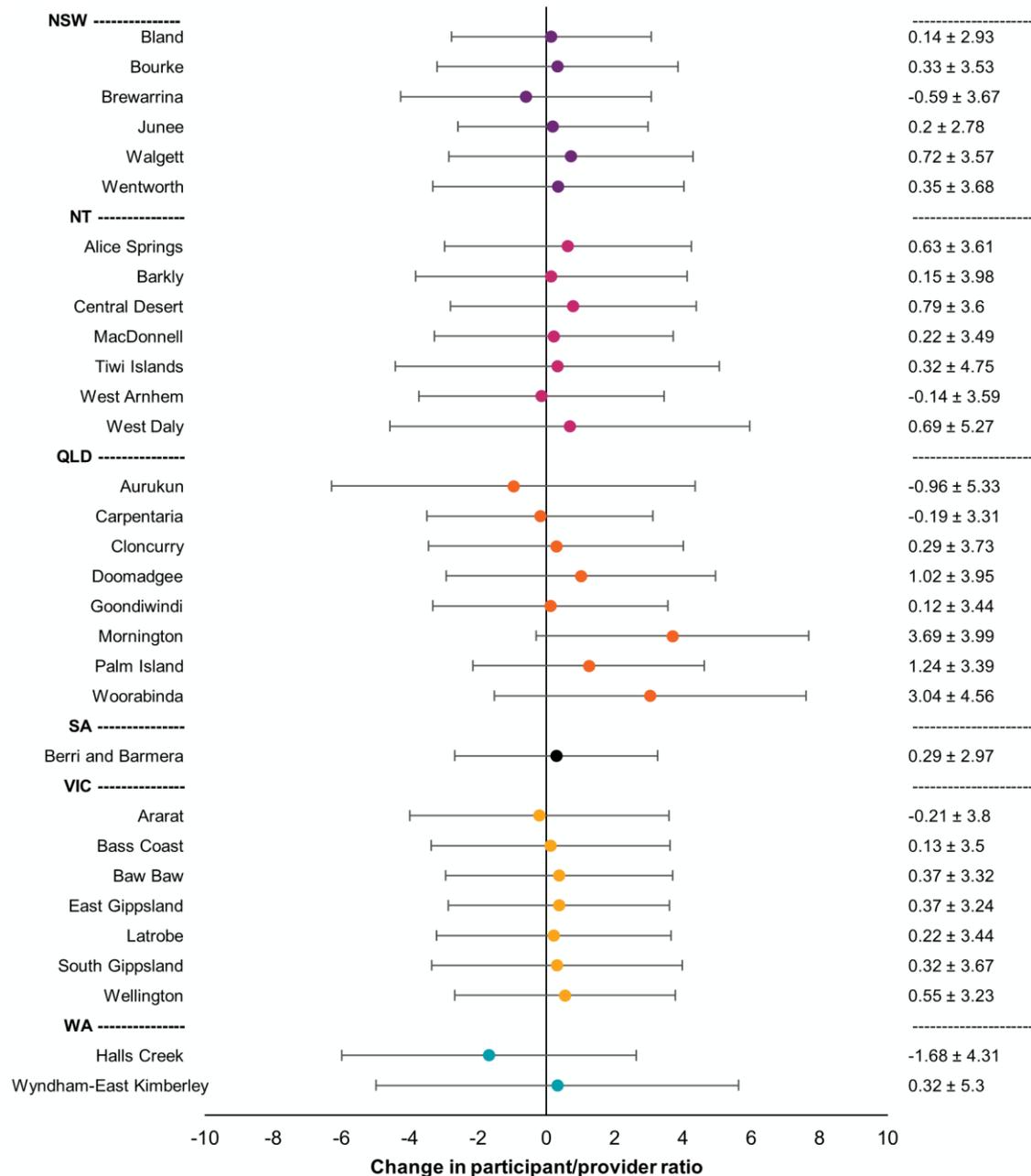


Source: Research and Evaluation Branch analysis of NDIS payments data.

The analyses show that across the trial LGAs, there was little change in participant-to-provider ratios in the 10-months after trials started compared to similar LGAs. The biggest increases were in Mornington (Qld) (+3.69) and Woorabinda (Qld) (+3.04) (Figure 12), although the results suggest that these changes were random rather than systematic.

Figure 12: Estimated change in participant-to-provider ratios due to market facilitation trials

Note: Comparison period is 10 months before market facilitation trial commenced versus 10 months before



Source: Research and Evaluation Branch analysis of NDIS payments data.

Market concentration

In the context of a NDIS market, a Gini coefficient measures the distribution of expenditure on funded supports across participants or providers. A higher Gini coefficient indicates greater expenditure concentrated amongst some participants or providers.⁹ We sought to determine a

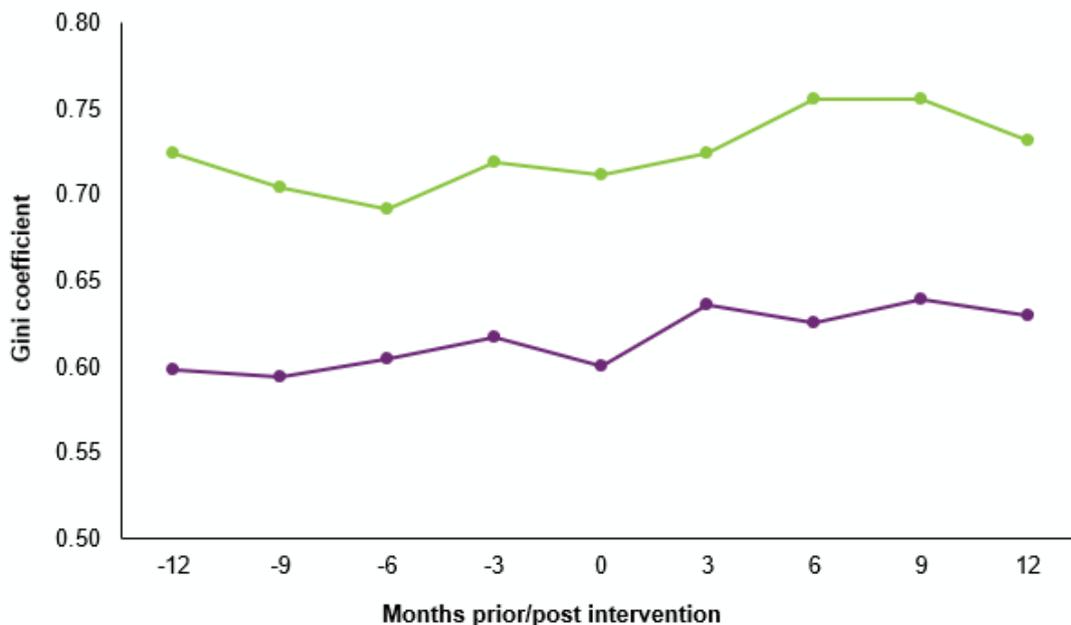
⁹ In a 'normal' market, a Gini coefficient above 0.5 indicates a concentrated market where relatively few participants account for most expenditure or only a few providers deliver most supports.

benchmark figure for the Gini coefficients that would help understand how the concentration of NDIS markets in trial LGAs compares to the broader NDIS. However, due to a high prevalence of plan-managed participants, which distorts the provider payment data, we could not produce reliable benchmark figures. As a result, this section focuses only on change in Gini coefficient.

Figure 13 shows Gini coefficients for providers (green line) and participants (purple line) across all trial LGAs 12-months¹⁰ before and after the start of market facilitation activities. Notably, both participant expenditure and the market share of providers are highly concentrated across all LGAs. The slightly upward trends in participant and provider concentration continued in the 12-months after market facilitation activities commenced, especially for participants. This likely reflects increases in the number of participants in trial LGAs without sufficient corresponding increases in the number of active providers.

Figure 13: Provider and Participant Gini coefficients before and after the start of market facilitation activities across all Trials

Note: Comparison period is 12 months before market facilitation trial commenced versus 12 months before



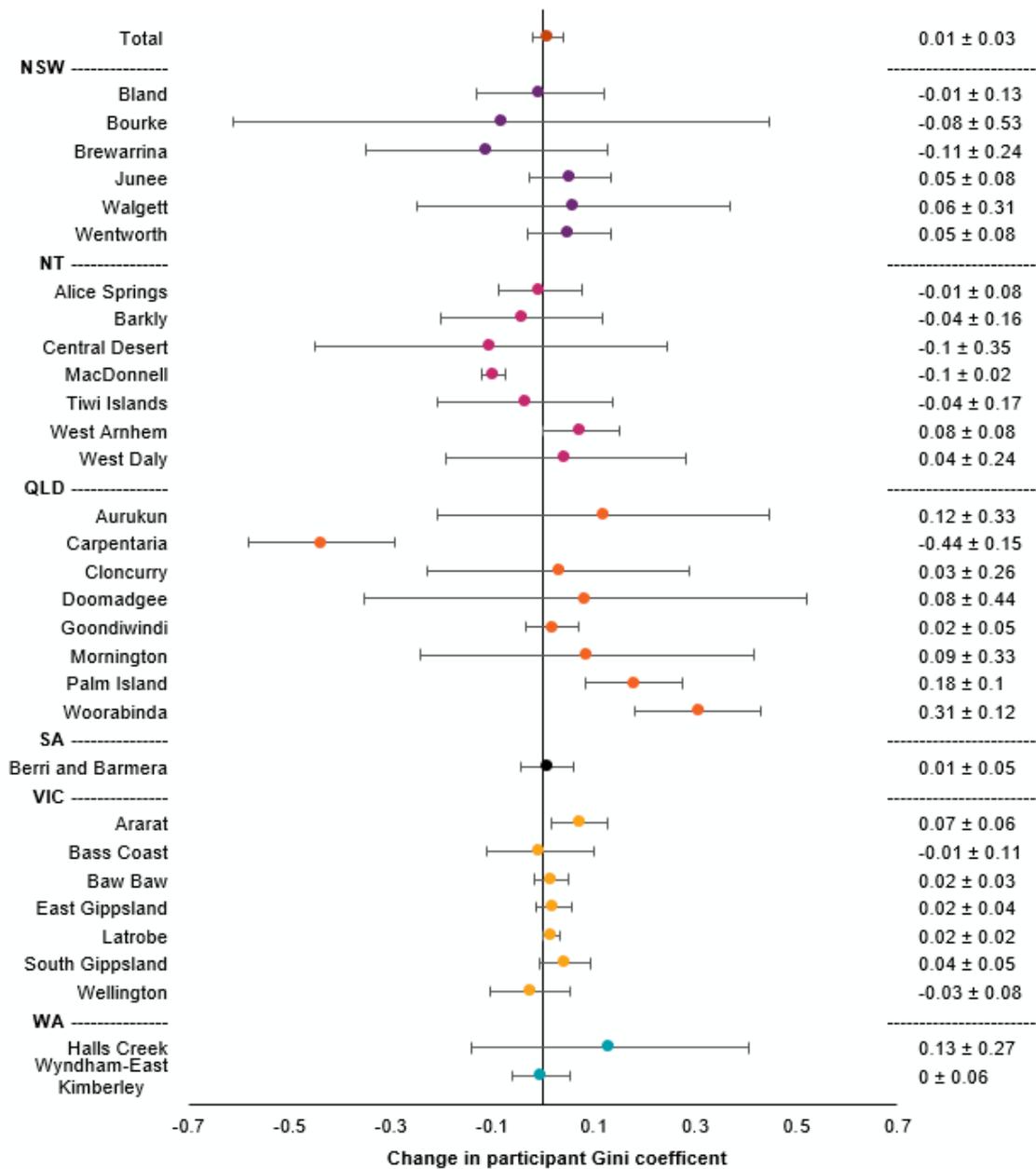
Source: Research and Evaluation Branch analysis of NDIS payments data.

The analyses show that in most target LGAs there was little change in participant Gini coefficient compared to similar LGAs due to market facilitation (Figure 14). There were large increases in Woorabinda (+0.31) and Palm Island (+0.18), that is unlikely to be random. This suggests that NDIS-support use became more concentrated to a small proportion of participants. Conversely, compared to similar LGAs, participant payments become less concentrated in MacDonnell (-0.1) and Carpentaria (-0.44), above random fluctuation alone.

¹⁰ 12 months has been used as data was aggregated on a quarterly level.

Figure 14: Estimated change in participant Gini coefficient

Note: Comparison period is 12 months before market facilitation trial commenced versus 12 months before

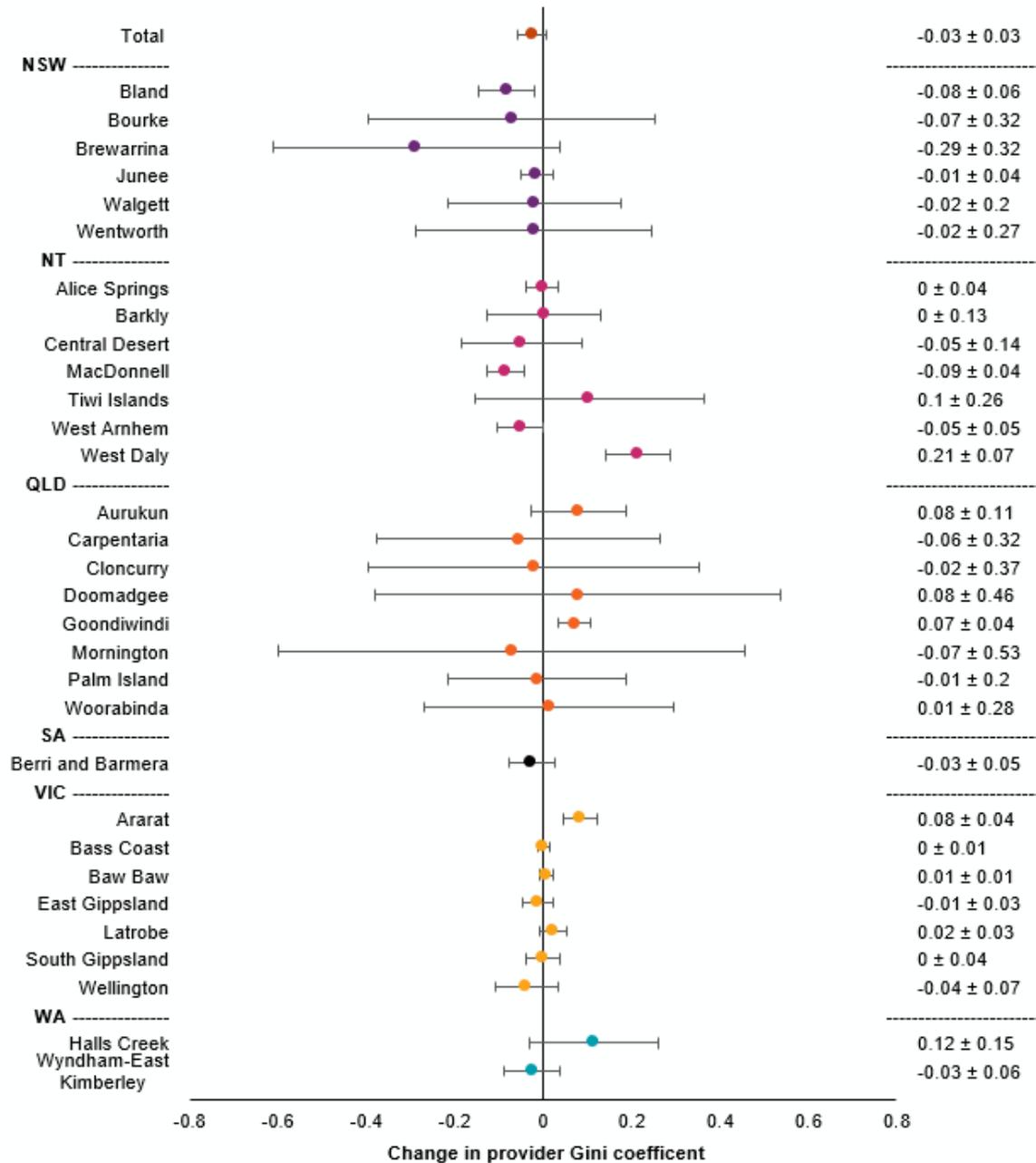


Source: Research and Evaluation Branch analysis of NDIS payments data.

The analyses show that in most target LGAs there was also little change in provider Gini coefficient compared to similar LGAs due to market facilitation (Figure 15). There were decreases in Bland (-0.08) and MacDonnell (-0.09) above random fluctuation alone. This suggests that the market in these LGAs became less concentrated relative to similar LGAs.

Figure 15: Estimated change in provider Gini coefficient

Note: Comparison period is 12 months before market facilitation trial commenced versus 12 months before



Source: Research and Evaluation Branch analysis of NDIS payments data.

3.3 The extent market facilitation has operated as intended

The program theory (Appendix A) shows that market facilitation aims to encourage service providers to increase their supply of funded supports by:

- increasing their understanding of market opportunities and greater certainty of demand
- improving the awareness of support coordinators about service providers and their vacancies
- improving the extent NDIS plans meet participant needs and reflect market challenges.

Market Development teams implemented a range of market facilitation activities to achieve the above outcomes. The sections below describe the extent market facilitation activities in Thin Market Trial locations have achieved these aims.

3.3.1 Service provider understanding of market opportunities and demand

Market facilitation predominantly focused on four mechanisms to increase service provider understanding of market opportunities and demand:

- Providing market data to service providers
- Direct engagement with service providers
- Connecting service providers with support coordinators
- Provider and participant forums.

Providing market data to service providers

The NDIA regularly publishes market data including high-level participant characteristics, market indicators, and plan utilisation statistics to help service providers understand demand within the market, providing an opportunity for providers to match this demand with their service offerings by either expanding the provision of existing supports in existing locations or offering new support types and/or enter new locations. The Market Development teams proactively communicated this information to service providers.

Just under three-quarters (70%) of surveyed service providers were aware of the NDIA market data and of those who were aware, 82% (n=59) reported that the data was useful.

Service providers who found the market data useful reported that it gave them greater awareness of demand, helped them focus their service delivery on un-met demand and de-prioritise supports where there is already sufficient supply.

“Having that information about where plans are not spent has been very helpful. It has improved our focus on daily activities and social participation because of getting the information and this means we will be deprioritising support coordination.” (Service provider interview)

Some service providers who did not find the market data useful stated that while the data gave them new information, they could not act due to workforce shortages and other barriers (e.g., financial viability, large travel distances and costs).

“Don't know that it [market data] helps that much. If you look at the data in our area, hardly any social and recreational or community access stuff is being delivered but that is about workforce, not lack of agencies. Have plenty of providers who could do it, but not the workforce to do it.” (Service provider interview)

Other providers already knew the state of the market from their own networks and commented that the market data would be more useful if it was more up to date, more specific (e.g., disability types, support types and hours in plans), and more granular (e.g., sub-LGA or community level) to help target specific communities.

Overall, it appears that the NDIA's market data is useful for some service providers to understand local markets and demand. However, for other service providers workforce shortages, financial and logistical barriers limit their ability to act on the information.

Directly engaging service providers

In all locations, Market Development teams engaged service providers to understand market challenges, increase provider awareness of market opportunities and to facilitate connections with support coordinators.

According to the service provider survey, 42% of service providers (n=43) had contact from the NDIA in the previous 12 months about their services in the trial LGAs. This contributed to:

- Delivering or planning to deliver new services (n=21, 49%)
- Increasing awareness of demand for services (n=19, 44%)
- Increasing NDIS participant awareness of their services (n=17, 40%)
- Making connections with support coordinators (n=14, 33%).

During interviews most service providers asked for more support from the NDIA, particularly regarding more detailed demand data (described above) and helping to facilitate local connections with support coordinators and other service providers.

“If you have a community and there are seven or eight participants and a few sit with different support coordinators then you need to make the connection so we can all work together. That would be useful so we can pool participants. The Agency has the information, and there is information they could share without breaching privacy so we can work with other providers and support coordinators.” (Service provider interview)

Some service providers also commented they would benefit from more engagement with local NDIA offices. It was suggested that this would help to establish a stronger relationship with the NDIA to help solve challenges affecting local service provision.

The findings from the interviews and survey show that NDIA engagement with service providers has had some success in increasing service provider understanding of market opportunities and encouraging providers to increase service provision in trial LGAs.

Connecting service providers with support coordinators

The program theory shows connecting support coordinators and service providers would:

- help service providers to be aware of demand
- make support coordinators aware of supply and vacancies.

According to the service provider survey, 69% (n=72) of respondents reported having contact with support coordinators from trial LGAs in the last 12 months. Just under half of these said that contact has increased (46%, n=33). For service providers who had contact with support coordinators, they reported this contributed to:

- Connecting them with NDIS participants (n=32, 45%)
- Increasing awareness of the demand for their services (n=30, 42%)
- Increasing awareness of NDIS participants about their services (n=27, 38%)
- Delivering, or planning to deliver, more services (n=22, 31%).

Although just 38% of respondents reported having increased the volume of services in trial LGAs over the previous 12-months, 59% of these attributed this to better connections with support coordinators.

During interviews, service providers reported mixed views about whether market facilitation activities had helped them make new connections with support coordinators. Common barriers to connecting with support coordinators were turnover and their high caseloads. This made it difficult for service providers to establish and maintain relationships with support coordinators.

The above findings suggest that market facilitation has, to a limited extent, resulted in increased connections between service providers and support coordinators. This has resulted in some service providers expanding, or intending to, expand service delivery.

Provider and participant forums

In Victoria, the Market Development team in conjunction with Boosting the Local Care Workforce (BLCW) and the NDIS Quality and Safeguards Commission, delivered three service provider/practitioner forums on specialist behavioural supports in late 2020 and early 2021. The forums provided information on the market in the trial LGAs, specialist behavioural support requirements and innovative strategies to address workforce shortages (according to the Vic Trial closure report). It is unclear the extent this translated to service provision, although one forum did seed the establishment of an innovative 'hub-and-spoke' delivery model for specialist behavioural supports.

Market development teams organised online forums in Bland/Junee (NSW) and Berri-Barmera (SA) in early 2022. The forums were online because of COVID-19 restrictions. The Bland/Junee forum targeted local service providers to increase their understanding of opportunities in the market. The Berri-Barmera forum targeted support coordinators and participants, with service providers presenting their social and community support service

offerings to facilitate connections and service growth and diversification. Both the forums had lower attendance than expected.

Overall, forums have had mixed impact on service provider awareness of the market. The success of the Victorian forums compared to the other locations suggests that forums are useful when they target areas of specific interest for specialist service providers in a face-to-face setting.

The low attendance at the Bland/Junee and Berri-Barmera forums could indicate that at that point in time, online forums were less effective than face-to-face forums. This may change as online engagement becomes normalised. Alternatively, the low attendance at these forums could indicate that forums are an ineffective way to provide general market information and connect participants with service providers.

3.3.2 Support coordinator awareness of the market

Market facilitation activities also focused on engaging with support coordinators to improve their awareness of service providers, vacancies, and waitlists. The intention is that this would help support coordinators connect participants with service providers more quickly. In some locations this engagement was on an individual basis, while in other locations Market Development facilitated a support coordinator networking group (e.g., Carpentaria).

In Victoria, support coordinators were given a service provider capacity matrix every four to six weeks that included vacancies and waitlists. Victorian support coordinators interviewed indicated that this gave them greater awareness of specialist behavioural support providers and had helped them connect their participants with new service providers. However, they noted there were still challenges around waitlists.

“Definitely helped me connect participants with specialist behavioural support providers”.
(Support coordinator interview)

In other locations, support coordinators had mixed views about the impact of trial activities on their awareness of the market. Support coordinators in Queensland LGAs reported that the networking group and other trial activities had helped them connect to new service providers. However, support Coordinators in NT Central and NSW trial LGAs reported that market facilitation activities did not help them better understand the market.

“The Market Development team were very proactive. We have monthly meetings, and they bring in guest speakers. That’s been fantastic. Because even if that gives only one other person in your community a service, it’s helped....And I can ring other support coordinators now and tell them I’ve got such and such a service going out, and their participants can link in.” (Support coordinator interview)

The findings suggest that market facilitation activities had mixed success in improving support coordinator awareness of the market. The findings from Victoria indicate that providing support coordinators information on service provider vacancies is helpful. The Queensland findings suggest that engaging with support coordinators as a network is more successful than individual engagement.

3.3.3 Impacts on participant plans

Market facilitation activities also focused on working with NDIA planners to ensure plan builds reflected both participant needs and market challenges. In Victoria, Market Development worked with National Delivery to implement training for planners to increase their understanding of the Standard Operating Procedure for Behaviour Intervention Supports, and the Practice Guide for Positive Behaviour Support and Behaviours of Concern. In other LGAs, Market Development teams worked directly with National Delivery to help understand and resolve systemic issues that impede plan utilisation, so that planners can consider them during plan builds, for example, plan management type, travel costs, etc.

Analysis of plan budgets showed that average CBIR budgets vary across the LGAs in Victoria and that they have increased in the two years since the trial. However, CBIR budgets are on average still less than recommended in the Practice Guide.

3.4 Factors affecting the success of market facilitation

The findings presented above indicate that market facilitation has not had the intended impacts or been able to operate completely as intended under the program theory. Interviews with service providers, support coordinators and other key stakeholders highlighted that market facilitation was not sufficient to overcome various systemic challenges affecting service delivery in thin markets. This section summarises these challenges.

3.4.1 Service viability

Stakeholders (PITC, service providers, support coordinators, Working Group members) in regional and remote trial LGAs reported that financial viability is an issue given the substantial complexity of servicing these locations. Challenges raised include logistics (including travel), pricing models, low economies of scale, safety and lack of housing/accommodation.

“We also have extra costs with recruitment and retention of staff like the housing for staff out there and we pay for them to come in on a monthly or bimonthly trip into [location] to help to reduce that burnout. That does mean then there is an extra cost to recruiting to [location]. We are paying for accommodation for the staff in [location]. So there's a lot of cost to keeping people out there...Everything is a challenge out there. Even with transport and the travel, the challenge is the wear and tear on vehicles that we've got out there, it's huge compared to other places that we service.” (Service provider interview)

Service providers and support coordinators commented that it was difficult to make a case for providing services in a location with low numbers of participants. Stakeholders in remote LGAs also expressed the sentiment that the individualised nature of NDIS funding impacts financial viability as it is not commensurate with remote service delivery due to the lack of critical participant mass.

“My worry is that if [Service Provider] don't have enough work, they will pull out. I've already seen them pull out of other communities.” (Support coordinator interview)

“We had a referral request for a participant in [location], which is probably about a 2 ½ to three-hour drive away. So initially what we did was I went back to the support coordinator and said, listen, we can do the work, but it's one participant and if you can find if there's another four or five participants that can be added into it, then it makes a business case from our perspective but also makes sense from the participants perspective because you can spread the costs around.” (Service provider interview)

The impact of low service viability is that in trial LGAs there is a limited number of service providers, creating long waiting lists for the services that are there. Market facilitation has not been able to overcome these challenges as there is no inbuilt financial mechanism to incentivise providers to deliver services in these locations.

3.4.2 Travel and transport costs

Across regional and remote trial LGAs, service providers and support coordinators identified travel costs and associated logistics as a significant barrier. In the service provider survey, 34% (n=32) of respondents who did not increase their services in trial LGAs in the previous 12 months reported that travel costs were a barrier to service delivery.

The consensus from interviewed service providers and support coordinators was that the NDIS does not sufficiently compensate service providers for travel expenses outside of metropolitan areas. This makes service providers less likely to deliver services to participants located farther than NDIS pricing arrangements will support. Service providers consider that they need to negotiate additional travel costs out of a participant's plan, resulting in participants receiving fewer hours of support.

“We're required to continue to source providers that will travel to provide services. So that travel component really eats up into people's funding. For the people that receive quotes, they're quite taken aback sometimes at the amount and it's mostly due to travel, not actually the service that they're going to be receiving.” (Support coordinator interview)

“If you're wanting to do a trip you need to advance plan three days of back-to-back activity to cover your costs and accommodation, which you need to book well beforehand. Otherwise, you end up paying through the roof for the last-minute flight, so it really makes it a challenge as a provider.” (Service provider interview)

Service providers and support coordinators also raised a lack of public transport or other affordable transport options as a barrier for participants to access services in major towns if providers won't travel to their community.

3.4.3 Workforce shortages and turnover

Although outside of the direct influence of the NDIA, the most reported challenge by service providers in both the survey (49%, n=47) and interviews was staff recruitment and retention. Other interviewed stakeholders also acknowledged that workforce challenges were common

across similar sectors in their locations, with shortages particularly acute for allied health staff.

“To recruit people and hold them for a year, we pay way above award, transport them here, train them and then they go. There is that level of risk we carry for our business, it is huge.” (Service provider interview)

In remote LGAs, service providers reported wanting to invest in local workforce development to help overcome recruitment challenges and provide culturally appropriate services. However, they cited the necessary resourcing as a significant barrier to being able to develop a local workforce.

“Recruitment is a challenge. When you want to do local workforce capacity building, everyone wants to do it, but it takes a huge amount of effort and resourcing. You need a position for that in and of itself separate to service delivery, but it's not built into funding.” (Service provider interview)

3.4.4 Barriers accessing the NDIS

Stakeholders in some remote trial locations also raised concerns about the number of people with disability who have not yet tried, or unsuccessfully tried, to access the NDIS. They reported that this is especially an issue in First Nations communities and considered that this relates to low awareness and understanding of the NDIS, cultural views of disability, general mistrust in government, communication challenges where English is often not a person's language and the availability of functional assessments to support access requests.

“[Remote location] is almost untouched in terms of getting people onto the Scheme, which means we can't pool the costs to get services regularly in communities.” (Support coordinator interview)

Increasing the number of NDIS participants was not a focus of any of the market interventions but could help address the critical mass of participants required for viable service delivery in thin markets.

3.4.5 Plan builds

Support coordinators and service providers highlighted issues with NDIS plans that impact participant access to funded supports.

Support coordination funding

During interviews support coordinators in remote LGAs reported that in the context of a thin market, it took longer to identify service providers and connect participants to them. Further, participants are often difficult to contact, which added to the time taken to coordinate supports for participants. Due to these challenges, support coordinators felt there was not enough hours in the participant plans for support coordination.

“One of the challenges we’re really facing is the lack of funds in a plan to actually deliver a credible service. And what I’m referring to there is support coordination in really remote areas. If a provider wants to draw down on travel to service some remote communities, we’ve got to then negotiate that. It’s additional funds being spent on admin.” (Support coordinator interview).

Analysis of plan budgets showed that, on average, support coordination funding varies considerably across the LGAs. In NSW LGAs, participants had the lowest support coordination funding, around 20-40 hours of Level 2 Coordination of Support per annum while participants in the NT and some Queensland LGAs had the highest level of funding (45-80 hours). The Standard Operating Procedure for Support Coordination recommends 85 to 100 hours per annum for participants that identify as Aboriginal and/or Torres Strait Islander living in remote areas. Given the high proportion of participants in these remote LGAs that are Aboriginal and/or Torres Strait Islander, the average should be closer to the recommended amount.

This indicates that in at least some trial LGAs participants are not getting the recommended funding for support coordination, which may be impacting on their ability to access funded supports from their plans. Furthermore, given that market facilitation and CFPs both target support coordinators, the effectiveness of these interventions depends on participants having adequate funding for support coordination.

Insufficient funding for specialist behaviour supports

Support coordinators and service providers in Victoria reported that plans often had what they perceived as being insufficient funding for specialist behavioural supports. They attributed this to evidence requirements and plans not being in line with NDIS guidelines. Interviews with the Market Development team in Victoria supported this view, with their dive into participant plans identifying plans that were not in line with the NDIS Practice Guide for Positive Behaviour Support and Behaviours of Concern.

“Getting behaviour supports into plans is a challenge because of the stringent evidence requirements. It is a lot of effort to gather that evidence and it’s largely up to the participant or the support coordinator, who isn’t really funded for that.” (Support coordinator interview)

According to the Practice Guide, Level 1 funding for specialist behavioural intervention supports should be up to 65 hours per annum in total. Analysis of plan budgets showed that funding varied considerably across the Victorian Trial LGAs, with participant plans in most of the LGAs, on average, having less than 65 hours per annum. While the Practice Guide does not identify a minimum number of hours, this does suggest that insufficient funding may impact the ability to attract service providers.

Plan builds not matching participant needs

Service providers and support coordinators also described challenges with plan builds not reflecting their perception of participant needs. This reportedly impacted on the ability of service providers to expand service delivery or to attract providers into the LGA. The service

provider survey supports this view, with 36% of respondents (n=34) identifying plan issues as a barrier to service expansion.

“That’s been our other barrier too, for a lot of our plans the funding’s just not there. And then we’re going back for reviews all the time because you’re not able to deliver the support you want to deliver because there’s just not the funding. And then you can’t get the services in to do those reports to bump up that evidence for you to put that more funding in. But even then, it’s still not enough funding for a lot of these guys.” (Support coordinator interview)

3.4.6 Limited participant understanding of the NDIS

In the service provider survey, 31% of respondents (n=29) reported that community understanding of the NDIS amongst participants is a barrier to growth. Stakeholders in remote locations commented that many participants did not even know they had a NDIS plan, and if they did, struggled to understand that they were only able to use funds for disability-related supports. This was particularly hard when many participants struggled to have their basic needs met (e.g., food, clothing).

“A lot of people don’t even know if they’re on a plan or not on a plan. They are trying to understand the concept of having a plan with money that is your money but that you can’t spend it on anything that you want like food, or to get your blankets.” (Service provider interview)

Stakeholders in the Victorian trial commented that some participants or their families had limited understanding of the nature and purpose of positive behaviour supports, which can have a stigma attached. As such, some participants or their families are reportedly reluctant to use their funding for these supports.

The impact of this on service providers is that it lowers demand for their services, despite there being a need. None of the trialled market interventions incorporated the need to build “customer” (i.e., participants and their families/carers) awareness, understanding and benefits of services and products to help drive market demand. The survey and interview findings suggest that this could be an area for the NDIA to focus on to support market intervention. The Research and Evaluation Branch are developing a series of Guides for Understanding Supports targeted at participants to help address this issue.

3.4.7 Registration and compliance

Interviewed service providers in Victoria and the ACT also raised registration and compliance requirements to deliver specialist behaviour supports as a disincentive for new market entrants.

To deliver specialist behaviour supports, service providers must register with the NDIS Quality and Safeguards Commission and comply with obligations such as submission of behaviour support plans, registration of behaviour support practitioners and the Positive

Behaviour Support Capability Framework. In addition, each State and Territory has their own specific requirements around the use of restrictive practices.

Service providers reported that meeting these requirements, including registration and reporting, is costly and not adequately covered by the NDIS price limits.

4. Coordinated Funding Proposals

Key findings

- Of the nine CFPs in the scope of the evaluation, seven focused on some form of assessment to inform the NDIA's consideration of participants' need for additional supports.
- Analysis of NDIS expenditure data shows that CFPs have been successful at facilitating participant access to various assessments and probably ongoing supports. In all LGAs where the NDIA implemented a CFP, at least 80% of identified participants received the CFP supports (82% across all CFPs).
- Importantly, the number of NDIS claims and expenditure for follow-on supports substantially increased after most CFPs relative to the 12-months before.
- Interviews with service providers and support coordinators showed that CFPs gave service providers assurance of demand and made service delivery in remote LGAs more financially viable by sharing the actual cost of travel across all participants.
- Based on interviews, the main challenges with CFPs appear to be the logistical challenge for service providers to coordinate service delivery across multiple support coordinators who are not always based in the community.
- Market Development teams commented that underlying market conditions with monopolies on support coordination and/or no market separation between support coordination and existing, albeit inadequate, service provision made CFPs unviable in some locations.

4.1 Overview of CFP trials

CFPs aim to facilitate access to funded supports for 'groups' of participants by pooling their plan funding. A CFP provides a mechanism for a group of participants, either directly or their support coordinators/representatives, to invite service providers to quote for specified supports that all participants in the group need. Participants and/or their representatives can then choose the service provider that best suits their needs and provides them value for money.

Grouping participants gives greater assurance of demand for providers, encouraging providers to increase their provision of supports. A CFP also encourages 'sharing' of travel and administrative costs across the group of participants which improves value for money for the participants and the NDIS.

The NDIA has implemented nine CFPs at the time of this report. The first two CFPs were in Katherine (Assistive Technology/Home Modifications (ATHM) assessments) and Broome (assessments for orthotics and prosthetics), which allowed for testing and refinement of the CFP process. Since then, the NDIA has implemented seven additional CFPs. These CFPs

mostly focused on enabling access to functional assessments and/or assessments to support ongoing therapies (Table 3).

Table 3: In scope CFP trials

LGA (State/Territory)	Support focus	Relevant support item/s	No. participants
Katherine (NT)	ATHM assessments	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	16
Broome (WA)	Orthotics and prosthetics assessments	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	24
West Arnhem (NT) - Gunbalanya	Speech pathology assessments	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	16
West Arnhem (NT) - Maningrida	Speech pathology assessments	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	6
Tiwi Islands (NT)	Speech pathology assessments	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	14
Mornington (Qld)	Functional assessments (OT)	Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy	17
Central Desert (NT)	Daily personal activities and household tasks	<ul style="list-style-type: none"> • Assistance With Personal Domestic Activities • Group Activities In The Community - 1:2 - Standard - Weekday Daytime • Access Community Social and Rec Activities - Weekday Daytime • Group Activities in The Community - 1:3 - Standard - Weekday Daytime • Employment Support • Skills Development and Training • Linen Service • Assistance With the Cost of Preparation and Delivery of Meals 	7
APY Lands (SA)	Functional assessments	<ul style="list-style-type: none"> • Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy • Capacity Building Supports for Early Childhood Interventions - Other Therapy 	10

LGA (State/Territory)	Support focus	Relevant support item/s	No. participants
		<ul style="list-style-type: none"> Therapy Assistant - Level 2 	
APY Lands (SA)	Daily living tasks (for residents of the Independent Living Centre)	<ul style="list-style-type: none"> Assistance With Self-Care Activities - Level 2 - Weekday Daytime Assistance With Self-Care Activities - Level 2 - Saturday Assistance With Self-Care Activities - Level 2 - Sunday Assistance With Self-Care Activities - Level 2 - Public Holiday House Cleaning and Other Household Activities Group Activities - Standard - Weekday Daytime 	4

4.2 Impact of coordinated funding proposals

As a CFP targets participants with low use of supports, at a simple level a CFP is successful if the targeted participants receive the relevant support/s from the chosen provider. To assess the extent this occurred, the evaluation analysed trial participant expenditure on the targeted funded support (as shown in Table 3).

4.2.1 Participant use of CFP-targeted supports

Table 4 shows that except for Central Desert, at least 82% of targeted participants in trial LGAs received the CFP-targeted funded support. In Katherine and Tiwi Islands, all targeted participants accessed ATHM assessments and speech pathology assessments respectively. The Central Desert CFP only commenced in June 2022, so the NDIS payments data may not yet reflect the extent of services delivered under the CFP. However, these findings suggest that CFPs have been successful at facilitating participant access to at least NDIS-funded assessments.

Table 4: Participant use of CFP targeted supports at 31 July 2022

Note: The Central Desert CFP commenced service delivery in the week commencing 6 June 2022. At the time of data extraction, the service provider may not yet have invoiced participants for supplied supports.

LGA	Trial participants	Participants who received support
APY Lands (SA)	14	13 (93%)
Broome (WA)	24	20 (83%)
Mornington (QLD)	17	14 (82%)
Katherine (NT)	16	16 (100%)
Tiwi Islands (NT)	14	14 (100%)
West Arnhem (NT)	22	19 (86%)
<i>Central Desert (NT)</i>	7	2 (29%)

Source: Research and Evaluation Branch analysis of NDIS payments data

4.2.2 Participant use of follow-on supports

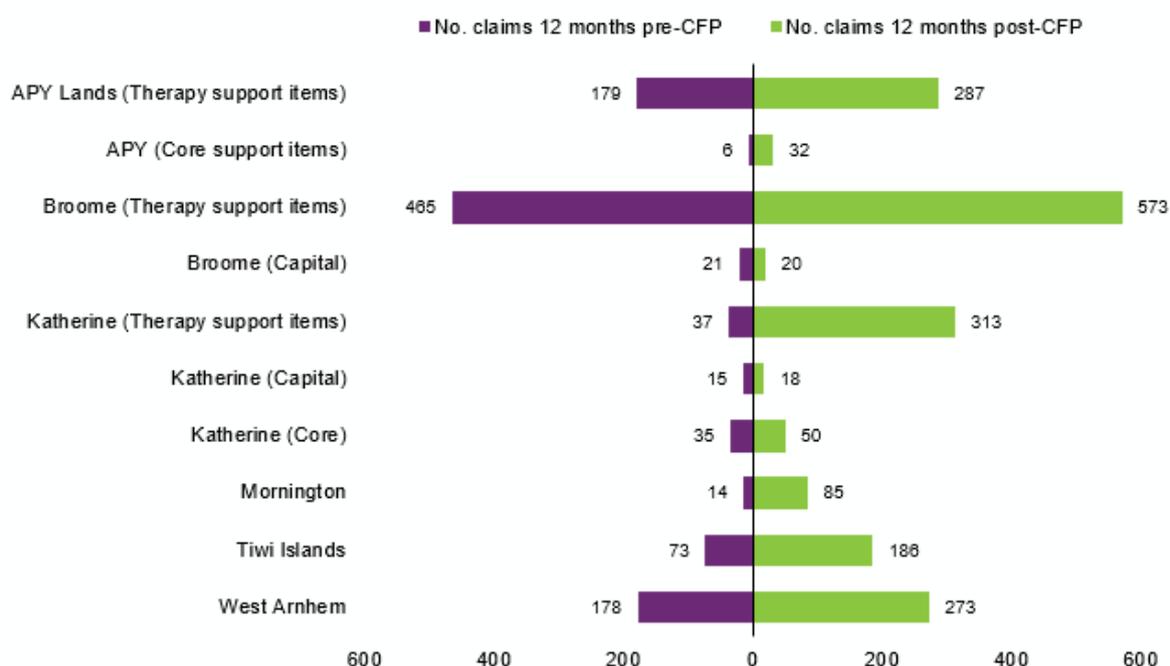
Most of the CFPs focused on an assessment to provide participants further access to supports (e.g., ATHM, orthotics, prosthetics, therapy). The above findings indicate that the CFPs have been successful at supporting trial participants to access those assessments.

To understand if participants accessed follow on supports, the evaluation analysed their use of relevant funded supports before and after the CFP. As many CFPs come under a therapy support item¹¹, it was not possible to differentiate between expenditure on supports related to the CFP and other therapy supports participants may use. This makes it difficult to determine the flow-on impact of most of the CFPs trialled to date.

Figure 16 below shows the number of NDIS claims for relevant support items participants targeted by CFPs made 12-months before and after the start of the CFP. For Broome and Katherine, analyses looked at relevant Capacity building supports and Capital supports as these trials focused on assessments for orthotics and prosthetics and ATHM respectively. For Katherine, analyses also included Core – Consumables to account for low-cost AT items. The findings show that the number of claims in the relevant support categories by CFP-targeted participants increased in all Trial LGAs.

¹¹ Assessment Recommendation Therapy And/or Training (Incl. AT) - Other Therapy (15_056_0128_1_3)

Figure 16: Participant claims 12 months pre- and post-CFP



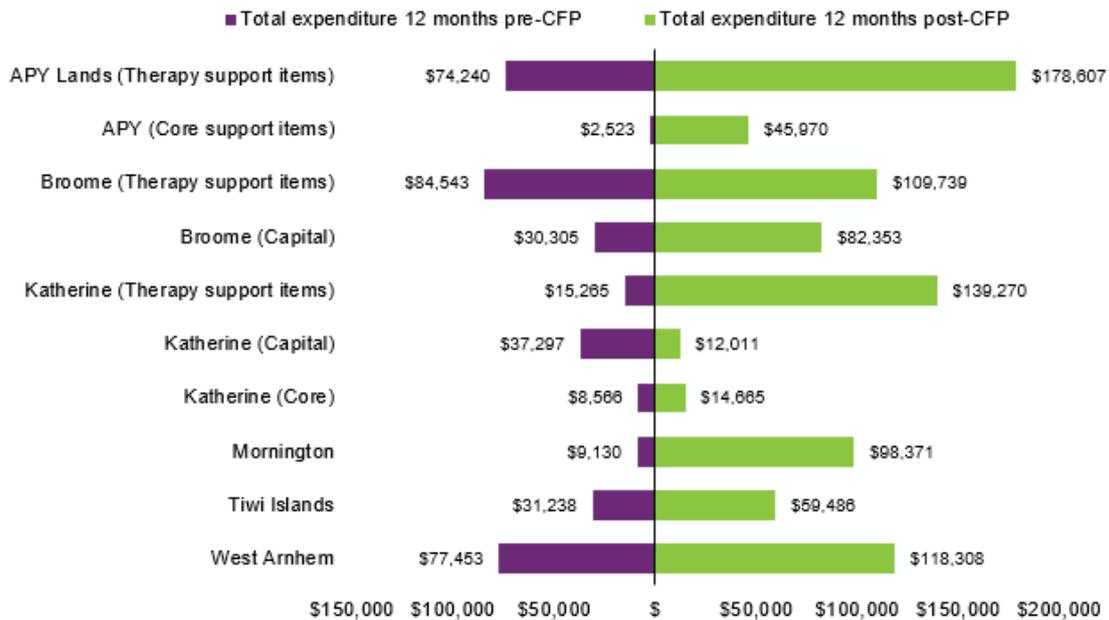
Source: Research and Evaluation Branch analysis of NDIS payments data

Figure 17 shows that in all LGAs, total expenditure in relevant support items increased by \$4,982 per participant (+132%) over the 12-months after CFPs commenced. This included support items covering therapies, ATHM and Core-Consumables.

Interestingly, in Broome total expenditure on orthotic and prosthetic AT increased by 171% (+\$52,038) despite the number of claims for orthotic and prosthetic AT decreasing. This suggests the targeted participants in Broome received better quality AT that better meets their needs because of the CFP.

In contrast, expenditure on ATHM in Katherine fell by 68% after the CFP (-\$25,286) despite the small increase in the number of claims. This suggests that participants in Katherine may be having difficulty accessing the ATHM their assessments indicated they need. Interviews with the service provider confirmed that it is difficult for participants to get their AT due to logistics of equipment testing and transporting equipment and a limited number of providers in the market to do home modifications. The Market Development team also confirmed that some participants are trialling equipment (under a therapy support item), waiting for equipment delivery or have purchased low-cost ATHM using their Core - Consumables budget.

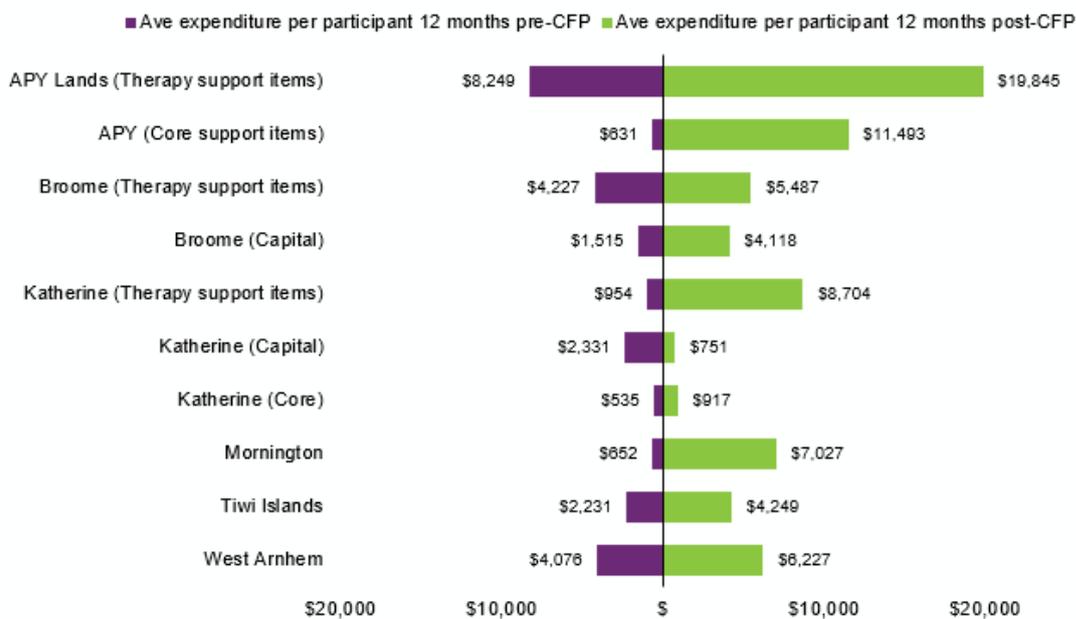
Figure 17: Participant expenditure 12 months before and after CFPs



Source: Research and Evaluation Branch analysis of NDIS payments data.

Figure 18 shows that average expenditure per participant increased in all locations, except for ATHM (Capital) in Katherine. There were large increases in average expenditure in APY Lands (Therapy +\$11,596; Core +\$10,862), Katherine (Therapy +\$7,750) and Mornington (+\$6,374).

Figure 18: Average participant expenditure 12 months before and after CFPs



Source: Research and Evaluation Branch analysis of NDIS payments data.

Together the above findings show that CFPs have been successful at increasing participant access to various functional and AT assessments. Importantly the findings also provide some evidence that participants have gone on to access a greater volume of additional follow-on supports.

4.3 The extent coordinated funding proposals have operated as intended

CFPs allow support coordinators to “pool” participants to give service providers assurance of demand and make service delivery more financially viable through this pooled demand and spreading of non-labour costs. Service providers then give assurance they will supply this given volume of supports for the quoted price. The sections below discuss the extent the theoretical mechanisms that underpin CFP operated as intended according to the program theory (refer to Appendix A)

4.3.1 Assurance of demand

The aim of a CFP is to stimulate supply of supports by providing service providers assurance of the demand for their services, thereby encouraging them to start delivering supports in the area. All but one of the service providers interviewed reported that the pooling of participants gave them confidence to deliver supports into a new location. The other service provider was already delivering supports in the location. Service providers also commented that they were hoping to use the CFP to kickstart ongoing delivery in the target community.

“Makes it easy because it's obviously viable for us to go there. We already know that there's this amount of participants that need support.” (Service provider interview)

4.3.2 The financial viability of service delivery

During interviews service providers reported that participating in a CFP had helped address the financial risks and the viability of service delivery in remote locations. As most of the CFPs were for assessments, the provider was able to travel to a location for two to three days to assess all participants over that period.

However, service providers commented that there was considerably more administrative time involved than expected that impacted the financial benefit of the CFP. This related to meetings and additional reporting to the NDIA and the logistics of coordinating services across multiple support coordinators.

“For me it was incredibly frustrating. It was really frustrating for my staff who already manage big caseloads and then we found ourselves reporting twice. I reported as the manager but I don't bill for that time. I didn't build the quote for it. You are reporting, as you know, from a program perspective, but it certainly placed additional administrative load on clinicians whose priority is to work with the client.” (Service provider interview)

“Some of the challenges has been the communication or lack thereof between support coordinators.” (Service provider interview)

Some service providers also reported that a lack of participant information in the quote documentation impacted their ability to appropriately quote for the services, which impacted on the viability of delivering the CFP supports.

“We needed more information. We significantly under quoted.” (Service provider interview)

The other way CFPs intend to improve service viability is by facilitating connections between support coordinators and service providers, resulting in ongoing referrals. Service providers in the first CFPs (Broome and Katherine) reported that they had continued to receive referrals allowing them to continue offering services in these locations.

At the time of interviews, service providers in other CFPs were yet to provide additional supports, including follow on supports, in those locations. However, all but one was planning on continuing service delivery if they received referrals and are able group enough participants into each trip. Support coordinators from these locations also reported that they intended to continue referring participants who need ongoing support to the CFP provider.

“Given the participants we saw who had a mental health diagnosis we would definitely be keen to get our OTs and psychologist out there [in addition to speech pathology].” (Service provider interview)

Together, these findings confirm that CFPs do make service provision more financially viable and can support service provision in remote locations. However, there is a need to review ways to reduce administrative time for providers and ensure quoted prices include logistics.

4.3.3 Capacity building of support coordinators

The design of CFPs allows support coordinators to establish and implement CFPs independently of the NDIA. Through the Thin Market Trials, the NDIA aimed to build the capacity of support coordinators to implement future CFPs themselves.

All support coordinators interviewed were willing to implement a CFP again in the future. However, they had mixed views about whether they could do this independently or will need NDIA support.

“Going through the process of working with the thin markets team has given us some more ideas about how we can address some of the unmet needs in people's plans.” (Support coordinator interview)

Support coordinators who indicated they will need NDIA support to establish future CFP cited the following reasons:

- Wanting an independent party involved in working with other support coordinators
- A lack of confidence to implement
- Needing assistance to identify and engage with service providers.

These findings suggest that while in theory support coordinators can establish CFPs themselves, the NDIA will need to invest in further capacity building and education for this to occur.

4.4 Factors affecting the success of coordinated funding proposals

Based on the evaluation findings, the above factors limiting the success of market facilitation also seem likely to affect the ongoing impact of CFPs beyond the initial arrangement. However, the evaluation findings suggest other more immediate challenges establishing and delivering CFPs in the first place.

4.4.1 Service providers coordinating between support coordinators

Most of the CFPs implemented to date have involved multiple support coordinators from different organisations. This means that to deliver an efficient service, service providers need to coordinate across these support coordinators. Service providers reported that it was often difficult to coordinate across multiple support coordinators, due to varying abilities of the support coordinator. This challenge meant for service providers it was more effort to organise logistics for the trip, get required information on participants and get service agreements signed. This also flowed through to the post-CFP stage, where service providers have tried to organise subsequent trips and have experienced challenges in contacting support coordinators to organise referrals and new service agreements for ongoing supports. This is likely contributing to the delay in getting follow-on supports up and running for participants.

4.4.2 On the ground support for service providers

A facilitator of delivering the CFP supports successfully to participants was the presence of a key individual on the ground to find the participants, facilitate introductions, and provide transport for participants to the service provider or take the service provider to participant homes. Service providers reported having this additional support on the ground was crucial to successfully and efficiently undertaking their assessments. This person was usually a support coordinator or a community member. Where there was no such support, service providers reported it was much more challenging. One service provider included funding for a local community member to act in this role to ensure successful delivery of supports.

4.4.3 CFPs rely on support coordinators working together

Support coordinators working together effectively is crucial to the success of a CFP. Feedback from Market Development teams and support coordinators suggest mixed ability to do this successfully in trial LGAs and was a factor in some CFPs not proceeding. Assistance in working with other support coordinators was one of the main reasons support coordinators gave for wanting the NDIA help in future to implement CFPs. Market Development teams also reported in some cases there was reluctance from support coordinators to work with other support coordinators. This suggests that in some cases the

NDIA may need to facilitate collaboration between support coordinators for CFPs to be successful.

4.4.4 Unfavourable market conditions

According to Market Development teams there were instances where they considered market conditions unfavourable and so they did not proceed with intended CFPs. This was due to monopolies on service provision and/or no market separation between support coordination and existing, albeit inadequate, service provision.

5. Direct commissioning

Key findings

- Analysis of NDIS expenditure data combined with contractual reporting by service providers suggests mixed success from the three direct commissioning trials.
- On average, participants in the ACT and Waratah-Wynyard (Tas) trials increased their use of specialist behaviour supports or speech and occupational therapy (the target market segments) by \$2,592 annualised and \$2,604 annualised respectively during the trials. However, compared to participants who chose not to participate, the average per participant increases were only \$237 and \$167 annualised respectively.
- Direct commissioning in the APY Lands (SA) seems to have been more successful. Although it is not possible to identify a suitable comparison group for the APY Lands, the projected increase in average per participant expenditure on Assistance with Social, Economic and Community Participation supports therapy (the target market segments) is \$15,424 annualised.
- Like a CFP, direct commissioning aims to give service providers assurance of demand at a quotable price that is financially viable. However, according to participating service providers, direct commissioning in the ACT and Waratah-Wynyard has not assured demand nor been financially rewarding with only around 60% of expected demand realised. This financially burdened providers around staffing and vacancy management.
- In the ACT, the participating service providers involved have received ongoing referrals and intend to continue delivery in the ACT after the Trial ends. However, in Tasmania the high cost of travel to Waratah-Wynyard and the low volume of participants means not all the service providers are likely to maintain a presence.

5.1 Overview of direct commissioning trials

The NDIA has implemented three direct commissioning trials (Table 5). At the time of this report, two were in the closing stages (ACT and Tasmania). The trial in the APY Lands commenced in March 2022 and will conclude in March 2024. The evaluation findings mainly reflect the trials in the ACT and Tasmania. However, the findings include insights from the initial stages of the APY Lands trial where relevant.

Table 5: Direct commissioning trials

LGA (State/Territory)	Supports delivered	Relevant support category	Participants	Providers
ACT	Specialist behavioural supports	Capacity Building – Improved Relationships (CBIR)	21	3
Waratah-Wynyard (Tas)	Speech pathology and occupational therapy	Capacity Building – Daily Activities (CBDA)	30	3
APY Lands (SA)	Social and community participation	Core - Assistance with Social, Economic and Community Participation	33	1

NDIA National Delivery and/or the Market Development team contacted participants with low utilisation in the ACT and Tasmania and invited them to opt-in to receive supports under a direct commissioning arrangement. In the APY Lands, the direct commissioning arrangement included all participants with the relevant funding in their plans in the identified communities unless they chose to opt-out. Trial participants had a plan review where funding in the relevant support category was quarantined and replaced with a nominal \$1 amount.

In both the ACT and Tasmania, the NDIA contracted three providers to deliver the relevant supports to the participants who opted in. In the ACT, the NDIA matched participants with a provider based on the provider’s expertise. In Tasmania, participants were able to choose the provider they received supports from. In the APY Lands, the NDIA contracted a single provider to deliver the relevant supports in two regions (Amata, Indulkana/Mimili). Market Development are still considering next steps in Pukatja and Pipalyatjara and their surrounding communities.

5.2 Impact of direct commissioning trials

Most of the data¹² presented in this section relates to ACT and Waratah-Wynyard as it is too early to assess the impact of the APY Lands trial. Data for ACT and Waratah-Wynyard is up to 30 September 2022, although the trials concluded in October and November 2022 respectively.

¹² Data came from NDIS participant expenditure data from the NDIS Business System and contractual reporting from the service providers participating in the Trials. The latter provided data about participant access to the commissioned supports. NDIS Business System data informed baseline use of the supports by trial participants and data for comparison participants. The comparison group consisted of participants the NDIA identified for the trial but who chose not to participate.

5.2.1 Participant use of funded supports

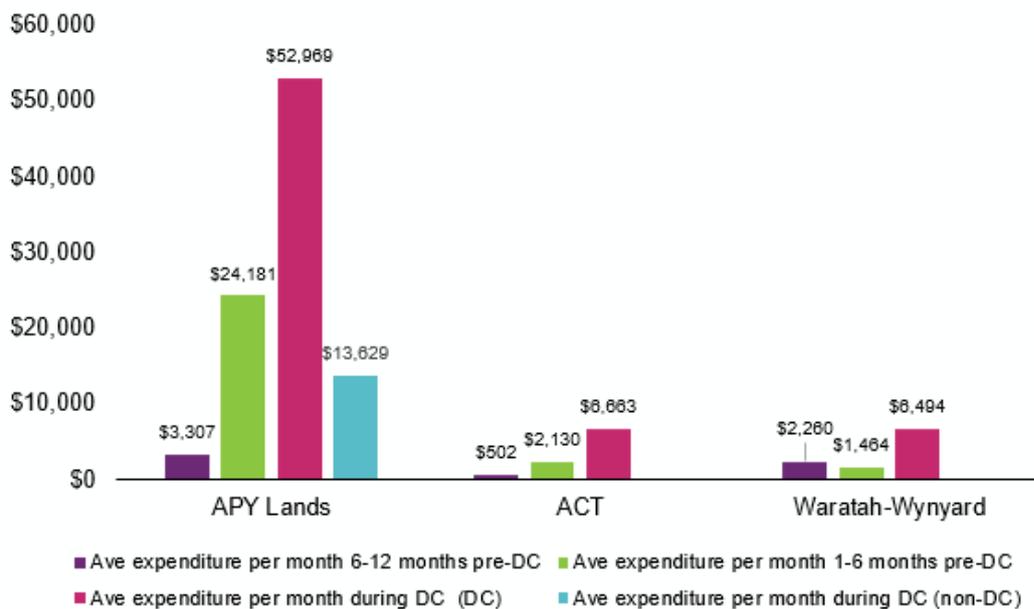
Figure 19 shows the average total monthly expenditure on the directly commissioned supports across all trial participants before (6-12 months before and 1-6 months before) and after direct commissioning commenced. In all LGAs, the average monthly expenditure during the trials exceeded the preceding time periods, indicating that on average participants increased their use of the commissioned supports.

The largest increase has been in the APY Lands (+\$42,417 per month or +\$1,285 per month per participant (\$15,424 annualised)). However, \$13,629 of this represents participants purchasing Assistance with Social, Economic and Community Participation supports outside of the direct commissioning arrangement. This is presumably through flexible use of their Core funding. Assuming a substitution effect, the increase possibly attributable to direct commissioning is +\$18,263 per month or +\$552 per month per participant (\$6,631 annualised).¹³

The increases were smaller in the ACT (+\$4,533 per month or +\$216 per month per participant) and Waratah-Wynyard (+\$5,030 per month or +\$216 per month per participant) where there were no substitution effects due to NDIS rules around Capacity building funds.¹⁴

Figure 19: Average expenditure per month by Trial participants

Note: Waratah-Wynyard data includes a \$500 per participant establishment fee.



Source: Research and Evaluation Branch analysis of NDIS payments data.

¹³ We assume that direct commissioning in the APY Lands substituted \$10,552 of expected expenditure on Core social and community participation supports during the first 6 months of the commissioning period (\$24,181 - \$13,629) (i.e. the 33 participants didn't purchase \$10,552 of supports because we offered them direct commissioning). Therefore the possible effect of direct commissioning = \$52,969 - \$10,552 - \$24,181 = \$18,263.

¹⁴ Participants can only use Capacity building funding to purchase supports within the support category they are allocated.

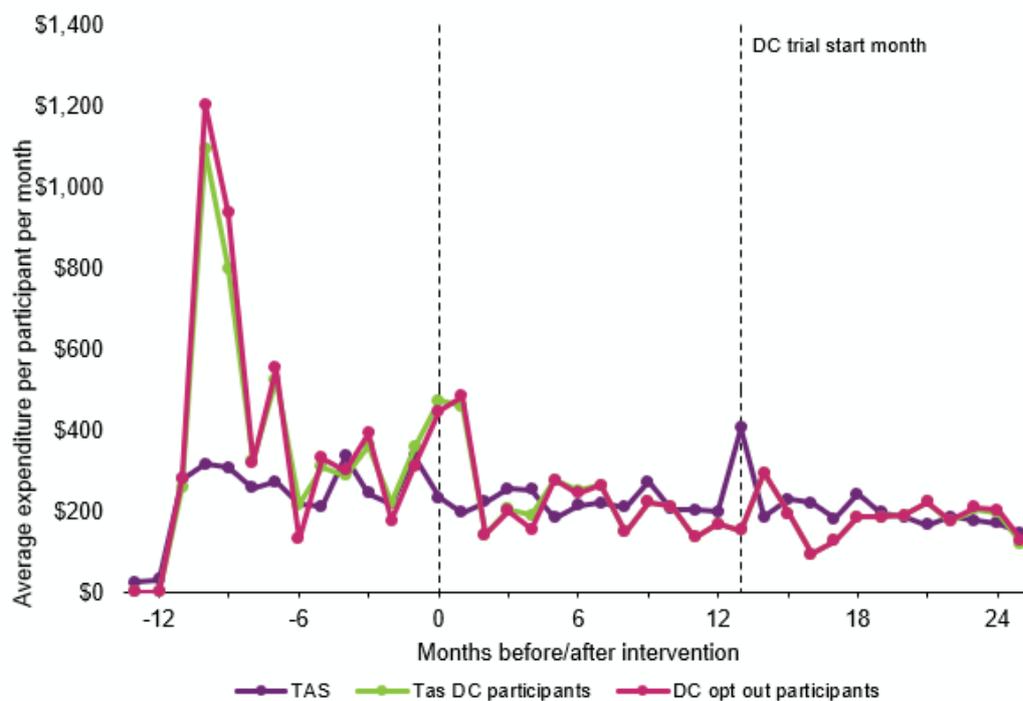
To see if the increase in expenditure was greater than what might have occurred without direct commissioning, the evaluation compared the increases against the comparison group. **Difference-in-difference analysis showed that in both ACT and Waratah-Wynyard, trial participants used only marginally more funding than the comparison group (+\$237 and +\$167 annualised per participant respectively). This difference is statistically significant for Waratah Wynyard (p=0.022).** Although statistically significant in Waratah-Wynyard, the difference in the ACT is not statistically significant (p=0.219).

The analyses suggests that direct commissioning in the ACT and Waratah-Wynyard only had small impacts. However, in the 12-months preceding the periods of direct commissioning, the NDIA undertook market facilitation activities in both LGAs. Therefore, it is possible that these market facilitation activities were effective for at least those participants who chose not to participate in direct commissioning. If so, this would reduce the observable impacts of direct commissioning.

Figure 20 shows that in Waratah-Wynyard while there was a small spike in monthly expenditure per participant at the time market facilitation commenced for participants in direct commissioning (green) and for those who chose not to participate (pink), this diminished quickly. It also shows that average participant expenditure per month on CBDA supports has remained generally consistent over time, including when both market facilitation and direct commissioning commenced.

Figure 20: Monthly expenditure (CBDA) per participant in Waratah-Wynyard before and after market facilitation

Note: Data includes a \$500 per participant establishment fee.

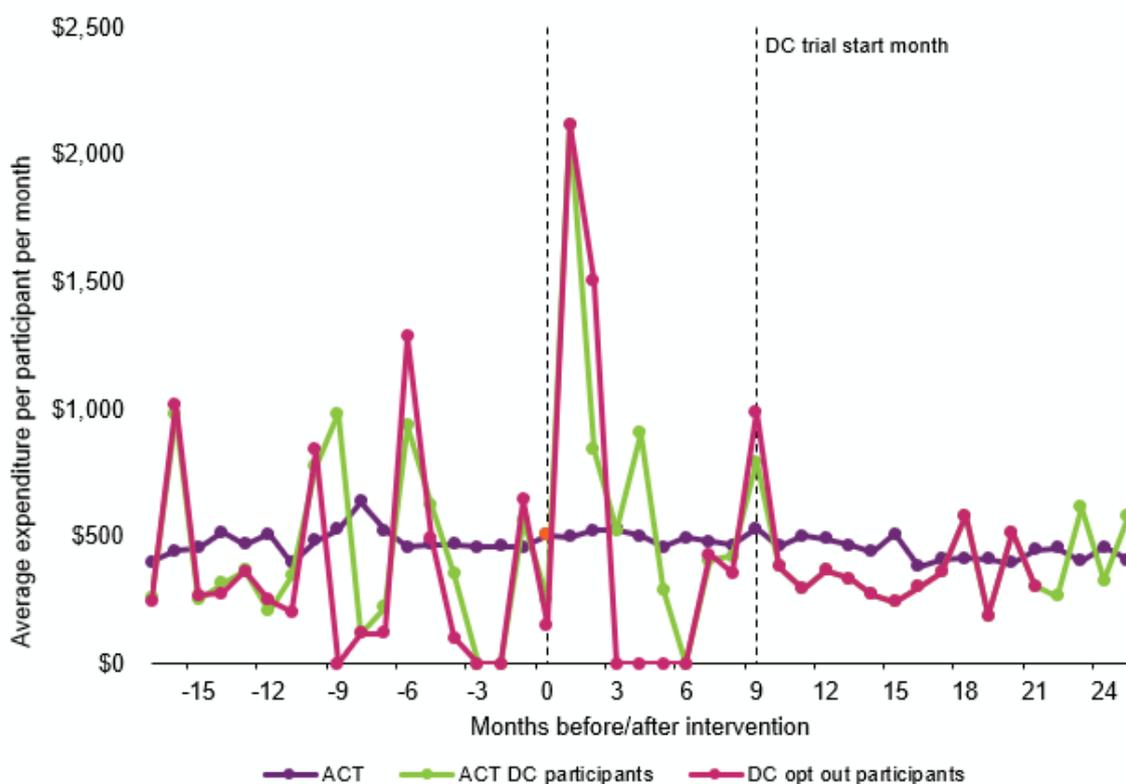


Source: Research and Evaluation Branch analysis of NDIS payments data.

Figure 21 shows that in the ACT there was also a small spike in average monthly expenditure per participant at the time market facilitation and direct commissioning commenced, however, this diminished quickly in both cases.

This suggests that it is unlikely that market facilitation resulted in increased participant expenditure and so it is also unlikely to have reduced effectiveness of direct commissioning.

Figure 21: Monthly expenditure (CBIR) per participant in ACT before and after market facilitation



Source: Research and Evaluation Branch analysis of NDIS payments data.

5.2.2 The total amount of allocated supports accessed by participants

The above findings show that the direct commissioning trials have increased access to the targeted supports for those participants who took part but only to a modest extent. To further assess the success of the trials we also analysed the total value of supports commissioned against the allocated funds. The assumption is that the total allocated funds reflect target utilisation.

Table 6 shows that as of 30 September 2022, trial participants had only used 55% of the allocated funds for direct commissioning in the ACT and only 52% in Waratah-Wynyard.¹⁵ Based on current use, the projected use by the end of the trials in Waratah-Wynyard (October 2022) and ACT (November 2022) will be 61% and 55% respectively. In the APY Lands, participant use of the allocated funds has been much higher (85% as of 30

¹⁵ This includes the \$500 per participant establishment fee paid to service providers.

September 2022), however, unlike in the ACT and Waratah-Wynyard, the service provider is paid based on 5 hours per participant regardless of actual delivered hours of support to the participant, so this does not necessarily reflect actual utilisation.

Table 6: Total and average funds used on directly commissioned supports to 30 Sep 2022

LGA	Funds allocated	Funds used (to 30 Sep 22)	Projected funds used (to end of Trial) ^{16,17}
ACT	\$218,199	\$119,927	\$133,253
Waratah-Wynyard (Tas) ¹⁸	\$176,046	\$90,922	\$97,416
APY Lands (SA)	\$374,342 (to 30 Sept 22)	\$317,816	NA ¹⁹

Source: Research and Evaluation Branch analysis of NDIS payments data

5.3 The extent direct commissioning has operated as intended

The data shows that most participants received supports under the direct commissioning arrangements, indicating that direct commissioning helps fill immediate market gaps. Guaranteeing service providers a market share to connect with participants and support coordinators, will hopefully also encourage them to continue to service the target LGAs when the commissioning arrangement ends (refer to Appendix A). This section discusses how well the direct commissioning trials to date have operated in line with this theory.

5.3.1 The financial viability of service delivery

By guaranteeing a certain volume of participants, direct commissioning aims to encourage service providers to start supporting new locations. In the ACT the commissioned service providers reported that they were already planning on expanding in the ACT prior to the trial. However, the trial fast-tracked their plans by offering a base of participants to grow from. Two of the service providers specifically recruited staff due to the direct commissioning contract. Similarly, in Tasmania, two of the providers used the trial to help grow a Tasmanian workforce.

“It’s been a really nice way as an organisation to recruit for a specific area and know that you’re going to get work. So we were able to recruit a clinician in the area and develop a full-time caseload easily, which was nice.” (Service provider interview)

¹⁶ Projected funds = (average expenditure per month x no. of months remaining) + funds used to 30 Sep 22.

¹⁷ Trial end dates: ACT 30 Nov 22; Waratah-Wynyard 31 Oct 22.

¹⁸ Includes a \$500 per participant establishment fee (\$15,000 total).

¹⁹ As the trial is in its early stages and does not finish until March 2024, we have not projected funds for APY Lands.

In the ACT and Tasmania, the deeds of standing offer with service providers did not guarantee the number of participants or the timeframe over which providers would receive referrals. Providers in the ACT reported that they had expected to receive more referrals and that holding unfilled vacancies on their caseload had a negative financial impact.

“We onboarded an extra two practitioners specifically for the trial thinking the demand would be a little bit higher but unfortunately the demand wasn't there. We had to let one go because we just didn't get the referrals through that we thought we would from the trial.” (Service provider interview)

In Tasmania, none of the contracted providers had staff based in Waratah-Wynyard itself and so operated a fly-in fly-out or drive-in drive-out model. As part of the trial, service providers were able to claim the full costs of travel above the amount normally allowed under the NDIS Pricing Arrangements.²⁰ This made it financially viable for providers to deliver the supports when participants needed them, rather than waiting to pool a group of participants to apportion the travel costs.

“Covering the travel costs is usually a challenge. And that's been a good thing with this trial is I've been able to say to the therapist, you can just go down for the one person, just get it done and claim it.” (Service provider interview)

Service providers in the ACT and Tasmania unanimously reported that the trial was administratively burdensome. This mainly related to reporting and invoicing requirements, which was manual given the supports were paid directly by the NDIA instead of claiming from participant plans. Providers also reported that referrals from the Agency often lacked information about the participants which made it difficult to engage them.

Overall, the small number of participants and the administrative burden meant that the direct commissioning arrangements in ACT and Tasmania ended up being unprofitable for providers.

“I think the disappointing part about the process is it's a really small tender in the scheme of things and much smaller because we've had seven of those 30 participants. So now if we look at that versus the amount of effort and time we spent putting together the tender, the amount of work that we've had to put into getting those participants ready to engage in our service, it's not worth it. We've absolutely made a loss if you're costing our time and energy for that work.” (Service provider interview)

“I'm not sure we would have gone to all the effort of the tender submission for eight referrals.” (Service provider interview)

It is too early to assess whether delivering supports under a direct commissioning arrangement will be financially viable for the service provider contracted in the APY Lands.

²⁰ Waratah-Wynyard has a MMM rating that spans three to five, which normally means service providers can claim labour costs for up to 30 minutes of travel for MMM 3 or 60 minutes for MMM 4 to 5, in addition to non-labour travel costs.

However, during interviews the service provider and other community stakeholders reported that service delivery in the APY Lands is very expensive due to distance and limited infrastructure such as accommodation and housing. Some providers did not respond to the tender due to concerns over financial viability.

“We had a fair bit of financial modelling done at the time the tender came out as we were keen to go for it. It came out that we would lose half a million dollars over three years. There were guarantees for a certain amount [of money] but it would only allow three staff. You would probably need double that. It didn’t provide for any set-up costs. Housing is non-existent so we would have to get demountable housing or houses to refurbish so it would be very expensive. We gave feedback that it just didn’t stack up.” (Service provider interview)

The service provider that has commenced in two of the four regions had an existing presence and infrastructure in these communities. The provider only tendered for the locations it had infrastructure it could leverage due to the issues raised above. Though it is early days, the service provider is hopeful that the direct commissioning will set them up to continue a sustainable service in the future.

“It’s giving us the ability to invest in some of that stuff [infrastructure and workforce], where before we weren’t confident investing in it if we weren’t able to have the participants attending. So it really has given us the ability to invest into the process and the support for the participants.” (Service provider interview)

Together, the findings suggest that at least in metropolitan and regional locations, the current direct commissioning arrangements do not make service delivery financially viable. However, by guaranteeing more referrals (possibly through contracting less providers) and streamlining invoicing and reporting requirements, direct commissioning could become more financially attractive for service providers.

5.3.2 Post-trial sustainability of service delivery

Direct commissioning intends to provide a base for service providers to build a financially viable market presence and continue service delivery after the end of the contract. To do this, service providers need to receive a critical volume of ongoing referrals.

Service providers in the ACT reported that through the trial they developed new relationships with support coordinators which is resulting in new referrals. Similarly, support coordinators reported that they were continuing to refer participants to the service providers.

“From the trial we’ve had three participants with the one organisation, so that relationship has strengthened. We didn’t even know about them before the trial. Since then, they have sent through other referrals directly to us.” (Service provider interview)

In Tasmania, service providers reported picking up new referrals within Waratah-Wynyard. However, without the additional funding for travel costs available during the trial, they will need a critical number of participants to pool travel costs to continue to provide services.

“Our clinicians are located outside of the tender region and actually we've supported approximately 7 other people in the Waratah-Wynyard region where we've tagged them onto a visit [under the Trial] where we've only been able to obviously charge under the normal guidelines...But there's no promise about being able to continue services...Sadly, at this stage that unless there was some kind of funding support, it would be near impossible to continue our service into that region.” (Service provider interview)

In Tasmania, service providers and support coordinators expressed anxiety about whether supports will still be available when the trial ends. At the time of this report, the contracts were still ongoing so it is unclear the extent participants will be able to continue to access supports under normal NDIS pricing arrangements.

“Nothing has changed due to the trial. If those providers are not offered that financial incentive to come to Tasmania then we are in no better place than we were two years ago when it started.” (Support coordinator interview)

Together, these findings suggest that while direct commissioning supports participants to access supports during the contract period, there are financial barriers for providers to continue offering supports after the contract ends. This suggests direct commissioning in the form trialled does not lead to ongoing market strengthening and might not be a sustainable solution given the considerable effort involved.

5.4 Factors affecting the success of direct commissioning

Like CFPs, the evaluation findings suggest that the same factors limiting the success of market facilitation will limit the ongoing success of direct commissioning. In the ACT, the contracted providers plan to maintain their presence after the contract ends as factors such as travel costs will not be an impact. However, according to service providers and support coordinators, a low understanding of behaviour supports amongst participants will make it difficult to maintain and grow their market share after the contract ends.

At this stage it appears that in Tasmania, direct commissioning may not result in ongoing service delivery by the service providers due to high anticipated travel costs.

While direct commissioning does not appear to be able to overcome these structural challenges, NDIA stakeholders and service providers identified establishing contracts and engaging participants as factors to improve for future direct commissioning arrangements.

5.4.1 Establishing contracts

Implementing direct commissioning arrangements required substantial effort including scoping, tender development, quote evaluation, participant recruitment and plan reviews. This meant that it took substantial time for all the direct commissioning trials to commence delivering supports to participants, with it taking around one year between start of the trials and service delivery in ACT and Tasmania, and almost two years in the APY Lands.

The NDIA had to take National Delivery staff offline to recruit participants for the trials and then undertake the required plan reviews. Staff in National Delivery reported that it was

somewhat manageable due to the small group of participants. However, this might not be the case if the NDIA decides to scale up the use of direct commissioning, which would further delay participants receiving supports.

5.4.2 Participant recruitment and engagement

Market Development and National Delivery stakeholders reported challenges recruiting participants to the trials. Overall, around one in three participants contacted agreed to participate in the ACT and Tasmania. Participants gave a range of reasons for choosing not to participate, such as not wanting a plan review, not being ready to engage, already having a provider or being happy to wait for a specific provider to have a vacancy.

This meant that in the ACT, only 21 out of the target of 30 participants ended up receiving supports under the contracts. In Tasmania, the NDIA broadened the catchment region beyond Waratah-Wynard to get the full quota of participants.

Service providers also reported issues engaging participants after they had received a referral. They commented that the referrals contained limited information about the participant, and they had to gather considerable necessary information before they could commence service delivery (e.g., nature of disability, living arrangements).

Service providers also thought that since participants did not actively seek out the support themselves, they were generally less engaged and motivated to receive support. Analysis of participant direct commissioning expenditure supports this view. In Tasmania, around one-third of participants had used less than half of their funds, while in the ACT approximately 60% used less than half of their funding.

These two factors, according to service providers, added time and, therefore, they bore additional costs.

6. Conclusions

6.1 The impacts of market interventions

The evaluation findings suggest that CFPs, and under some conditions direct commissioning, are promising approaches to increasing participant use of funded supports in thin markets. Across the nine CFP projects in the scope of this evaluation, 86% (98 of 114) of targeted participants had received the intended support at the time of preparing this report. Seven of the CFPs focused on functional assessments to understand what additional supports participants need. For these CFPs, expenditure within the relevant follow-on support categories increased by 132% respectively after the CFP period compared with the prior 12-months. This equates to on average an additional spend of \$4,982 per participant.

An advantage of a CFP is that it can be easily deployed using the existing NDIS Pricing Arrangements and Price Limits. Participants, their families, or support coordinators can establish a CFP independent of the NDIA. However, most of the CFPs to date have focused on one-off functional assessments for other supports such as therapies and ATHM. To understand the full potential of CFPs, they need piloting across a wider range of support types. The NDIA has commenced further piloting with a CFP targeting Core supports in Central Desert (NT). There is a case to undertake further piloting into regional and rural LGAs where market facilitation seems ineffective. Broader piloting will also occur following the NDIA's release of a CFP toolkit in December 2022.

The three direct commissioning trials have also increased participant use of supports, although only marginally in the ACT and Waratah-Wynyard (Tas). In the ACT, the participants involved increased their use of specialist behaviour supports by \$2,592 (annualised) compared to the 12-months prior. In Waratah-Wynyard, the annualised increase in supports was \$2,604 for speech pathology or occupational therapy per participant. However, when compared to participants who chose not to participate in the trial, these annualised increases were only \$237 and \$167 higher per participant in the ACT and Waratah-Wynyard respectively.

Although early, direct commissioning in the APY Lands appears to have been more successful to date, with a possible projected increase in average per participant expenditure on Assistance with Social, Economic and Community Participation supports of \$6,631 annualised. However, it is difficult to estimate the impact as there is no suitable comparison group within or outside the APY Lands. Furthermore, under the contract the provider receives a guaranteed amount whether participants receive support as scheduled or not.

Direct commissioning will likely be necessary in some circumstances to ensure participants access the supports they need. However, as there were only three direct commissioning projects, it is difficult to draw reliable conclusions about 'if' and 'in which contexts' direct commissioning is likely to be effective, especially given the differing recruitment and payment arrangements deployed in the trials. More testing is needed to determine whether direct commissioning might be more effective (and necessary) in remote/very remote LGAs

that are far from providers or is better suited to Core supports than Capacity Building supports, as the preliminary evidence might suggest.

Targeted market facilitation projects were initially appealing due to its relatively 'light touch' nature and has generally been the NDIA's first option in thin markets. However, the evaluation presents strong evidence that these projects are not effective above the widespread business as usual activities that could affect NDIS plan implementation. On average participants in the targeted LGAs used \$3,000 more supports per month than similar participants in similar locations elsewhere. However, this difference was not statistically significant overall or in 29 of 31 LGAs. This holds for Core, Capital and Capacity Building supports in metropolitan, regional, and remote LGAs.

The evaluation findings do not necessarily indicate that market facilitation doesn't have a role in the NDIS. Rather, market facilitation is already widespread through the various NDIS intermediaries such as Local Area Coordinators, Early Childhood Partners, various support coordination roles and Remote Community Connectors. Various parts of the NDIA also undertake widespread market facilitation including National Delivery, Provider Engagement and Analytics, Data and Actuarial. This makes it challenging to isolate the impacts of the targeted market facilitation undertaken in the Thin Market Trials.

Although widespread, currently market facilitation activities are largely uncoordinated without an overarching strategy to understand and address common challenges affecting all, or most, thin markets. This potentially creates duplication, inconsistencies and gaps in addressing macro-level market challenges.

6.2 Extent market interventions worked as intended

Despite varying effectiveness, to some extent the mechanisms by which market facilitation and alternative commissioning theoretically lead to participant and market outcomes operated as expected. However, with each trialled intervention there are areas where the underlying theoretical mechanism did not operate in thin markets.

Based on surveys and interviews market facilitation increased service provider awareness of potential demand and support coordinator awareness of available supply. This was mainly through the NDIA providing market data and Market Development teams proactively connecting support coordinators with service providers. While new providers entered the targeted LGAs and some expanded their footprint, some providers also left the target LGAs and the overall strength of local markets generally did not improve. This suggests that the market intervention activities only worked partially as intended.

A limitation of targeting support coordinators is the fact that only 52% of participants in the LGAs targeted by market facilitation projects have support coordination in their NDIS plan, although this is higher in remote and very remote thin markets.²¹ Therefore, a key strategy underpinning the market facilitation precluded many participants.

²¹ Ranges from 28% to 100% across target LGAs.

Service providers also highlighted that the available market data is not current or granular enough to give them a true understanding of demand, especially in remote communities. To get this granular picture, they must engage multiple support coordinators which is challenging where there is high turnover of support coordinators. This turnover also impacts support coordinator awareness of service providers and their capacity.

Unlike market facilitation, CFPs and direct commissioning aim to make service provision more viable for providers by providing greater assurance of demand. Theoretically, this will also result in service providers forming sustainable connections with the targeted participants and connecting with new participants to establish an ongoing presence. The evaluation findings suggest that CFPs are more likely to achieve this.

Although the nature of supports commissioned via CFPs to date have mainly been assessments, the service providers involved commented that pooling participants has made service delivery viable. Furthermore, by CFPs being support coordinator led, the providers have made local connections on the ground which they hope will lead to ongoing service delivery. This warrants ongoing monitoring.

Based on the three trials to date, the success of direct commissioning has had mixed success at assuring demand and financial viability for providers. In the ACT and Waratah-Wynyard (Tas), the providers involved have not received the number of referrals they expected, which has created financial challenges. For providers in Waratah-Wynyard they doubt that it will be financially viable to provide supports there beyond the commissioning period. Furthermore, unlike CFPs, the NDIA rather than support coordinators led direct commissioning. The providers involved in the ACT and Waratah-Wynyard trials have not formed close relationships with support coordinators that can support an ongoing presence.

In the APY Lands, the provider has greater assurance of demand due to the participant opt-out rather than opt-in approach and a guaranteed contract value. While this guarantees financial viability during the life of the contract, it is unlikely this will lead to ongoing service provision given the challenges delivering the NDIS in very remote communities.

6.3 Factors affecting the success of market interventions

The market intervention projects to date have mainly operated via the participant side (i.e., demand side) rather than addressing supply challenges such as pricing, travel costs and workforce shortages. Irrespective of this though, participant use of supports depends on their understanding of the NDIS and the supports in their plans. Based on interviews with providers, low participant understanding of their NDIS plans may have contributed to the limited success of market facilitation and direct commissioning trials. Therefore, participant education remains vital to underpin both business-as-usual and targeted market intervention.

There are three supply side challenges for effective market intervention:

- Providers covering the cost of travel under the NDIS Pricing Arrangements and Price Limits, especially in regional areas.
- Limited options in regional and remote areas to transport participants to providers.

- Workforce shortages which limit the ability to establish services in thin markets.

With the rapidly rising costs of the NDIS, alternatives to increasing travel allowances in the NDIS Pricing Arrangements are attractive. CFPs offer such a mechanism by allowing providers to claim the actual cost of travel and split the cost across multiple participants. Coupled with greater assurance of service provision, this should allay provider concerns about the financial viability of providing services in thin markets. Additionally, sharing travel costs will offer participants and the NDIS improved value for money.

The NDIA does not have any direct control over transport options and infrastructure. This is the remit of State and Territory Governments and private operators. However, CFPs or direct commissioning could be mechanisms to increase transport options for regional and remote participants to travel to a provider of their choice.

Addressing workforce shortages is more complex. The NDIS will require an estimated 128,000 additional workers by July 2025 to meet growing demand. This is in addition to the estimated 181,000 to 292,000 workers expected to leave the sector between July 2022 and June 2025.²² This includes Allied Health and community-based and home-based support workers. In a recent survey, 70% of disability service providers reported problems recruiting workers²³, which suggests shortages will persist in the near term. The aged care, veterans care and community mental health sectors face similar capacity shortages, especially in regional and remote locations.²⁴

Given service shortages across related sectors and potential workforce cross-over, joint commissioning might offer a solution until workforce initiatives take effect.

6.4 Conclusion

The evaluation findings suggest the following for market interventions in thin markets:

- Coordinated strategic macro-level market facilitation within the NDIA and local level market facilitation alongside the role of various market intermediaries should operate as business as usual, rather than as a distinct intervention in thin markets.
- Where a targeted local-level intervention is necessary, a CFP should be the first option if there is sufficient support coordinator or participant capacity and it is viable for a provider under the existing NDIS Pricing Arrangements and Price Limits.
- Direct commissioning should be considered if the above market conditions are unfavourable.

²² NDIS national workforce data provided by the Department of Social Services.

²³ National Disability Services (2021). State of the Disability Sector Report 2021. Available at: www.nds.org.au/about/state-of-the-disability-sector-report.

²⁴ National Skills Commission (2021). Care Workforce Labour Market Study Final Report. Available at: www.nationalskillscommission.gov.au/sites/default/files/2022-10/Care%20Workforce%20Labour%20Market%20Study.pdf.

7. Recommendations

The conclusions drawn from the evaluation have informed recommendations for future market intervention in the NDIS. **These align to the aims and objectives of the NDIS Review.**²⁵

The recommended **strategic initiatives are longer-term actions** to build a more responsive and supportive market and workforce to reduce the occurrence of thin markets. These align closely with the objectives of Part 2 of the NDIS Review.

Medium-term recommendations focus on further testing of CFPs and direct commissioning to determine the most effective market intervention approaches in different contexts. These aim to improve the design, operation and sustainability of the NDIS in different types of thin markets, which aligns with the objectives under Part 1 of the NDIS Review. In time, this will inform strategic initiatives to build a more responsive and supportive NDIS market.

Finally, the evaluation findings suggest **immediate actions** to enhance current approaches to commissioning and market facilitation while there is further testing of market intervention approaches.

7.1 Strategic initiatives to strengthen thin markets

Recommendation 1

The NDIA should work with the disability sector and other key stakeholders to develop and implement a thin market intervention strategy. This should clarify and streamline when to use different types of market intervention and define the roles of various NDIS intermediaries, NDIA business units, other Commonwealth and State and Territory Government Agencies and Disability Representative and Carer Organisations.

Recommendation 2

The NDIA should explore the potential to work with the Department of Social Services and other Government Agencies to trial the joint commissioning of services where thin markets exist across the NDIS, aged care, veterans care and community mental health sectors. As part of this there could be consideration to devolving responsibility for commissioning supports to local or regional organisations or governance bodies. Depending on the location and context of a thin market, these could include Aboriginal controlled organisations or assemblies or local government, with commissioning support provided by an appropriate Commonwealth Agency.

²⁵ [NDIS Review Terms of Reference](#)

Recommendation 3

To inform NDIS workforce strategy, the NDIA should work with the Department of Social Services to collaborate on LGA-level spatial mapping of the current and potential NDIS workforce. This would guide detailed workforce planning and potentially the types of market interventions necessary in different thin markets.

Recommendation 4

Investment in educating participants and their informal supporters about the benefits and effectiveness of NDIS funded supports should be a priority. The NDIA's Research and Evaluation Branch has commenced this through development of a series of Guides for Understanding Supports. It will be important to expand and focus this program on underutilised supports. It will also be important to develop and promote the Guides in formats suitable for different cultures and languages given the contexts of many NDIS thin markets.

7.2 Further testing to determine effective market intervention approaches in different contexts

Recommendation 5

To understand the potential of CFPs as a ubiquitous market intervention strategy, there should be further testing of the effectiveness of CFPs on a range of Core, Capital and Capacity Building supports in locations where market facilitation has not had a significant impact.

Recommendation 6

To support the evaluation of CFPs, the NDIA should monitor participant use of funded supports under CFPs established independently of the NDIA following release of the CFP toolkit. One possibility could be to introduce a temporary support item for CFPs in the NDIS Pricing Arrangements and Price Limits.

Recommendation 7

As part of the ongoing development of CFPs, there should be ongoing evaluation of the extent providers deliver supports in the target communities beyond the CFP period and if not why. This could help refine the CFP approach.

Recommendation 8

There should be resistance to provider sentiment to further increase travel allowances in the NDIS Pricing Arrangements and Price Limits. Instead, the focus should be on building market capacity to implement commissioning approaches.

Recommendation 9

To address transport shortages for participants to access supports in thin markets, Core - Transport supports could be a focus of ongoing trials of CFPs and direct commissioning in regional and remote thin markets.

Recommendation 10

To better understand the effectiveness of direct commissioning, there should be further piloting including for Capacity Building and Capital supports in remote and very remote thin markets and possibly Core and Capital supports in regional and rural thin markets. However, as it takes a large effort to implement direct commissioning arrangements this should be where a CFP is unlikely to be effective or feasible.

7.3 Enhancements to current market intervention approaches

Recommendation 11

For future direct commissioning projects, providers should get greater assurance of the contract value to ensure the arrangement is financially viable. There should also be greater involvement of support coordinators so that providers can form 'on the ground' relationships and maintain a viable presence beyond the contract.

Recommendation 12

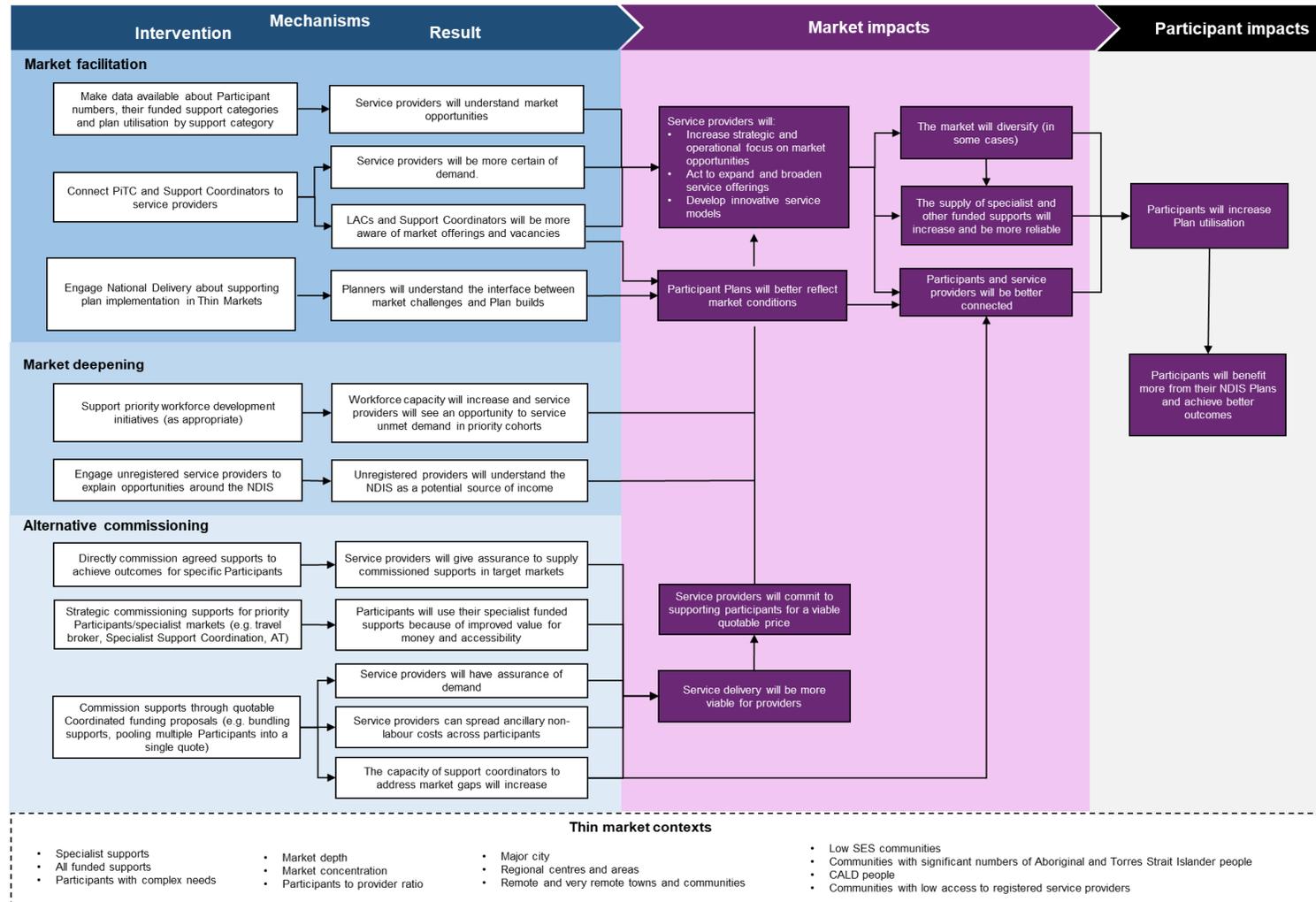
As part of business-as-usual market facilitation, the NDIA should consider quarterly releases of detailed data on the amount of funds by support category available in participant plans. Ideally this data would be at sub LGA level (e.g., Statistical Areas Level 2) and have a lag of no more than one quarter.

Recommendation 13

The NDIA should consider developing and promoting a national online service provider capacity matrix for participants, support coordinators and other NDIS market intermediaries. Service providers could voluntarily update their vacancies and waitlists for various NDIS supports directly, such that it requires minimal maintenance.

Appendix A Program theory

Mission: To increase the use of funded supports in Thin markets, by stimulating the supply of services and facilitating demand.



Appendix B Thin Market Trial overview

Table 7 presents an overview of the Thin Market Trials as relevant to this report. Note that * indicates a DRMC-trial.

Table 7: Overview of Thin Market Trials

Location (LGA)	Intervention	Support type	Start date - end date	Project status
ACT*	Direct commissioning	Capacity Building Improved Relationships (specialist behavioural intervention support)	Mar 21 – Nov 22 (DC commenced Mar 21)	Ongoing
Alice Springs*, Barkly*, Central Desert*, MacDonnell* (NT)	<ul style="list-style-type: none"> Market facilitation CFP (Central Desert) 	<ul style="list-style-type: none"> All supports Core Assistance with Daily Life (CFP) 	Apr 20 – Sep 21	Ongoing (Central Desert, Barkly)
APY Lands (SA)	<ul style="list-style-type: none"> Direct commissioning CFP 	<ul style="list-style-type: none"> Core Assistance with Social, Economic and Community Participation (DC) Capacity Building Daily Activities (CFP) 	May 20 – Oct 23 (DC commenced Mar 22)	Ongoing
Ararat*, Latrobe*, Baw Baw, Bass Coast, East Gippsland, South Gippsland, Wellington (VIC)	Market facilitation	Capacity Building Improved Relationships (specialist behavioural intervention support)	May 20 – Jun 21	Closed
Aurukun (Qld)	Market facilitation	All supports	Dec 21 – TBC	Ongoing

Location (LGA)	Intervention	Support type	Start date - end date	Project status
Berri-Barmera (SA)	Market facilitation	Core Assistance with Social & Community Participation	Aug 21 – TBC	Ongoing
Bland, Junee (NSW)	Market facilitation	All supports	Oct 21 – Jun 22	Closed
Broome (WA)	CFP	Assessments to access Capital Assistive Technology (Orthotics & Prosthetics)	Sep 20 – Nov 21	Closed
Carpentaria (Qld)	Market facilitation	All supports	Oct 21 – TBC	Ongoing
Cloncurry, Doomadgee, Woorabinda, Mornington (Qld)	<ul style="list-style-type: none"> Market facilitation CFP (Mornington) 	<ul style="list-style-type: none"> All supports Capacity Building Daily Activities (CFP) 	Aug 20 – Jun 21	Closed (Mornington ongoing)
Goondiwindi (Qld)	Market facilitation	Core Assistance with Daily Life	Apr 21 – TBC	Ongoing
Halls Creek*, Wyndham-East Kimberley* (WA)	Market facilitation	Capacity Building Daily Activities	June 20 – TBC	Ongoing
Katherine (NT)	CFP	Assessments to access Capital Assistive Technology and Home Modifications	Mar 20 – Jun 21	Closed

Location (LGA)	Intervention	Support type	Start date - end date	Project status
Palm Island* (Qld)	Market facilitation	Supports for participants with psychosocial disability	Dec 21 – TBC	Ongoing
Tiwi Islands, West Arnhem, West Daly (NT)	<ul style="list-style-type: none"> Market facilitation CFP (excluding West Daly) 	<ul style="list-style-type: none"> All supports Capacity Building Daily Activities (CFP) 	Jun 20 – TBC	Ongoing
Walgett*, Wentworth*, Brewarrina, Bourke (NSW)	Market facilitation	All supports	Mar 20 – Jun 21 (Walgett only) Mar 20 – Oct 21	Ongoing (Walgett closed)
Waratah-Wynyard* (TAS)	Direct commissioning	Capacity Building Daily Activities (focus on occupational therapy and speech pathology)	Apr 20 – Oct 22 (Note DC commenced Jul 21)	Ongoing

Appendix C Data and methods supplementary information

This appendix provides further information on the data and methods used in the evaluation.

C.1 Service provider survey

Table 8 outlines the number of responses received for each Trial and the response rate.

Table 8: Service provider survey responses

Trial	Survey period	Number of respondents	Estimated response rate
Walgett, Wentworth, Bourke, Brewarrina (NSW)	13 Apr 21 - 21 Jun 21	12	36%
Alice Springs, Central Desert, Barkly, MacDonnell (NT)	28 Apr 21 - 21 Jun 21	16	47%
Ararat, Latrobe, Baw Baw, Bass Coast, East Gippsland, South Gippsland, Wellington (VIC)	24 Mar 21 - 21 Jun 21	31	9% ²⁶
Katherine (NT)	24 Jun 21 – 14 Aug 21	2	67%
Broome (WA)	24 Jun 21 – 16 Jul 21	2	67%
West Daly, West Arnhem, Tiwi Islands (NT)	26 Mar 21 - 21 Jun 21	10	90% ²⁷
Cloncurry, Doomadgee, Mornington, Woorabinda (QLD)	26 Mar 21 - 21 Jun 21	22	29%
Berri-Barmera (SA)	2 May 22 – 8 Jun 22	3	30%
Bland, Junee (NSW)	24 Mar 22 – 8 Jun 22	8	22%
Halls Creek, Wyndham East Kimberley (WA)	18 Mar 22 – 8 Jun 22	1	6%
Palm Island, Aurukun, Carpentaria, Goondiwindi (QLD)	18 Mar 22 – 8 Jun 22	6	15%
Total	-	104	17%

²⁶ All service providers that registered to attend behaviour support forums were invited to respond to the survey, reducing the response rate compared to other Trial locations.

²⁷ Note that providers invited to respond to the survey for NT Central may have also responded to questions about the NT North Trial, inflating the estimated response rate.

C.2 Stakeholder interviews

Table 9 outlines the number and nature of stakeholders interviewed for each market intervention type.

Table 9: Stakeholder interviews undertaken

Intervention type	Service providers	Support coordinators	National Delivery	PITC	Working Group	Trial Lead	Total
Market facilitation	17	27	4	4	6	4	62
CFPs	6	10	0	0	0	1	8
Direct commissioning	9	9	4	0	14	2	37
Total	32	46	8	4	20	4²⁸	114

C.3 Quantitative data analysis

C.3.1 Analysis of participant-level expenditure

A DiD approach was the most fitting option to assess the impact of market facilitation and direct commissioning on participant use of funded supports given the available data. For market facilitation we combined with DiD with Propensity Score Matching (PSM). The sections below describe how the evaluation applied this to market facilitation trials.

Difference-in-difference

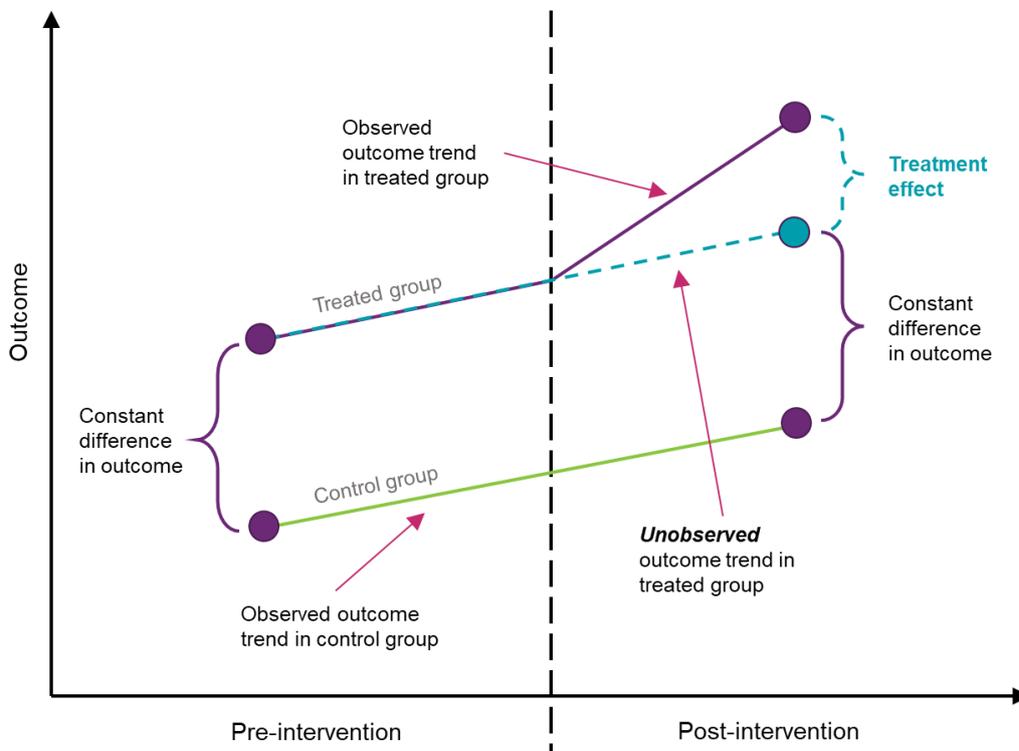
DiD is an analytical approach that facilitates causal inference. It does this by comparing changes in outcomes over time between a population enrolled in a program/trial (the treatment group) and a population that is not (the control group). DiD builds on potential outcomes when we cannot draw causal conclusions by observing simple before-and-after changes in outcomes, as factors other than the treatment may influence the outcome over time. Further, we cannot simply compare treated and untreated groups due to differences in unobservable characteristics between the two groups.

DiD takes the before-after difference in the treatment group's outcomes. This is the first difference. In comparing the same group to itself, the first difference controls for factors that are constant over time in that group. Then, to capture time-varying factors, DiD takes the before-after difference in the control group, which was exposed to the same set of conditions as the treatment group. This is the second difference. Finally, DiD "cleans" all time-varying factors from the first difference by subtracting the second difference from it. This leaves us

²⁸ Note, that Trial Leads are responsible for multiple Trials, and as such the numbers in the column do not represent separate interviews.

with the impact estimation also known as the average treatment effect (ATE). Figure 22 is a graphical explanation of DiD estimation.

Figure 22: Difference-in-difference



The validity of the DiD approach relies on the parallel trend assumption, that is, the assumption that no time-varying differences exist between the treatment and control groups. In the figure above, that is the paralleled difference between the purple and green lines post-intervention – the unobserved outcome trend in treated group (dotted line). While this assumption cannot be proved, its validity can be assessed by comparing changes in the outcomes for the treatment and control groups repeatedly before the trial is implemented. If the outcome trend moves in parallel before the program began, we can assume that it would have continued moving in tandem in the absence of the intervention.

Propensity score matching

To best meet the parallel trend assumption, our analysis employed a propensity score matching (PSM) technique. PSM is a quasi-experimental method which uses statistical estimation to construct an artificial control group by matching each treated participant with one or more non-treated participant of similar characteristics. PSM estimates the probability that a participant will receive treatment based on observed characteristics. This is the propensity score. Then, PSM matches treated participants to untreated participants based on the propensity score. The PSM relies on the assumption that, conditional on some observable characteristics, untreated participants are analogous to treated participants and thus can be compared as if the treatment has been fully randomised.

PSM requires large samples and good data on both treated and non-treated groups. Further, the data must include sufficient untreated participants with characteristics that correspond to those of the treated participants. The data should include all relevant characteristics related to treatment participation and outcomes. Given that all characteristics relevant to treatment participation and outcomes are observable in the dataset, the propensity score will produce valid matches for estimating the impact of an intervention.

Application to participant expenditure analysis

For the participant expenditure analysis, we first implemented the PSM and then conducted the DiD using the valid control group that had been constructed.

Step 1: Implement PSM to create control group

The analysis was at the participant level and matching was calculated and estimated for each LGA individually. This was due to varying start times and differences in targeted support types. The following algorithm below was performed for each LGA:

- Step 1: Collected and collapsed payment data into “before treatment” participant observations. This included: 1) a participants total spend in the 12 months prior to intervention, 2) average spend per month in the 12 months prior to intervention, 3) the average claim amount in the 12 months prior to intervention, and 4) median claim amount in the 12 months prior to intervention. After this step, each participant had four variables assigned to them.
- Step 2: Collected participant level demographics and merged them to step 1 data set. Demographics included age, NDIS disability, gender, First Nations and CALD indicators, MMM location, vulnerable participant indicator, NDIS severity score, country of birth, NDIS entry quarter, and NDIS entry type.
- Step 3: Collected participant historical budget information and merge to the core dataset. This included annualised budget for 2017/18 financial year, annualised budget for 2018/19 financial year, annualised budget for 2019/20 financial year, total committed support budget, adjusted total committed supports budget, and proportion of plan management arrangements in the participant’s plan history.
- Step 4: The data set contained individual observations for every NDIS participant. Table 10 lists the balance of all included variables. Participants who reside in the treated LGA of interest were flagged as “treated” and propensity scores estimated using all the available variables. Binomial logistic regression is used to calculate propensity scores between 0 and 1. The score predicts the probability that a participant is treated or not.
- Step 5: Following estimation of all the propensity scores, each treated participant was matched to three other non-treated participants. To ensure appropriate matching, participants could not be matched to a participant in another LGA that is or was part of a thin market trial (DRM or NDIA initiated). The matching procedure was a nearest neighbour procedure in which every participant was always matched to three others based on their propensity score and no untreated participant could be matched more than once. This means that some matches could be notably different but remain the

closest match based on the propensity score. We chose to use this method because the large sample of NDIS participants means this error will be zero on average.

- Step 6: The treated participants were saved to a list with their untreated matches and their group categories. For example, group 1 contains 1 treated participant and 3 untreated participants.

The resulting data set was the treated participants in the targeted LGAs and their associated matches. We then visually and analytically tested our matching procedure (Table 10 and Figure 23).

Figure 23 shows the results of the matching procedure using an example of average spend per month per participant. There is a clear parallel trend in the treated and the control group indicating that the matching procedure produced statistically similar groups to compare.

Figure 23: Average expenditure per participant per month of the control and treated groups

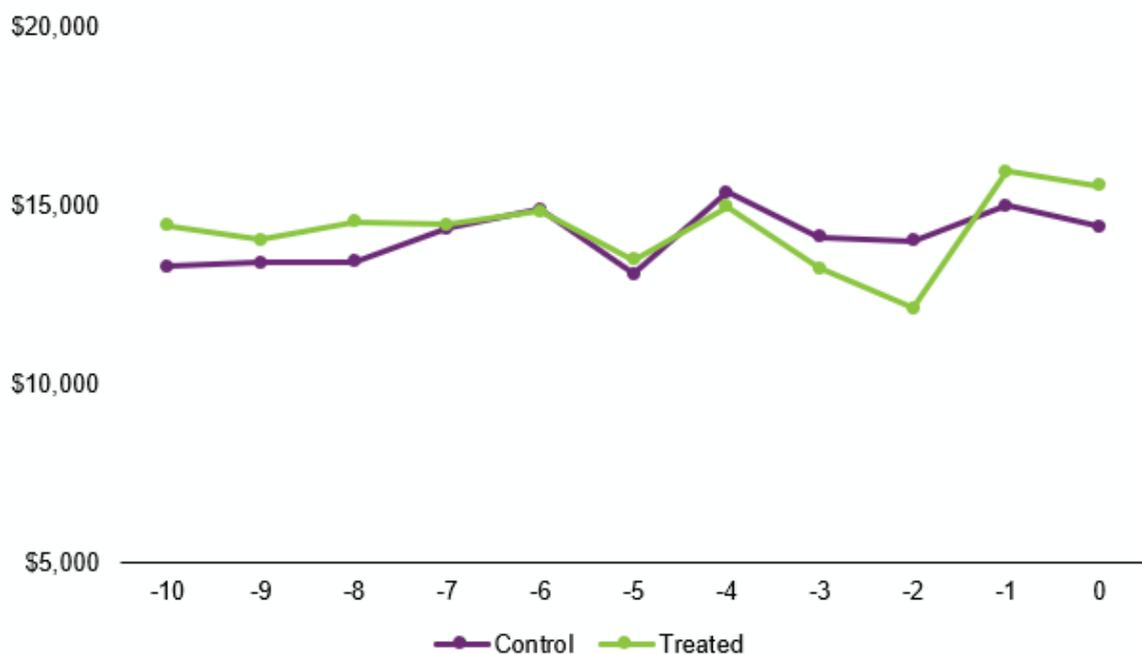


Figure 23 and the balance statistics reported in Table 10 (below) mean that we can be confident that there were no time-varying differences, and no time independent differences, between the treatment and control groups in the months prior to the market facilitation starting. The remaining small differences between the cohorts were accounted for in the DiD regression by including them as covariates.

Table 10: Participant matching balance statistics

Matching variable	P Value ²⁹	Mean - Control group	Mean – Market facilitation group
Age	0.236	32	31
Age when entered scheme	0.952	28	28
NDIS severity score	0.000	7.8	8.1
Vulnerable participant indicator	0.000	8.0%	6.6%
Adjusted annualised budget	0.000	\$58,268	\$65,099
Total funded budget amount	0.000	\$67,599	\$77,638
FY17-18 committed support budget	0.000	\$16,387	\$12,322
FY18-19 committed support budget	0.000	\$31,670	\$35,793
FY19-20 committed support budget	0.000	\$52,306	\$64,222
% self-managed plans	0.001	21.4%	22.6%
% agency managed plans	0.000	86.9%	83.9%
% management managed plans	0.000	53.7%	61.0%
Historical number of plans	0.688	4.77	4.50
Total claims - 12 months prior	0.002	\$141,622	\$109,490
Average total claim per month - 12 months prior	0.516	\$11,292	\$11,836
Number of claims made - 12 months prior	0.776	110	110
Number of providers used - 12 months prior	0.579	2	2
Number of plans/reviews - 12 months prior	0.666	2	2
First Nations - No	-	70.4%	68.3%
First Nations - Not stated	-	15.0%	15.2%
First Nations - Yes	-	14.6%	16.5%
CALD - No	-	93.3%	92.6%
CALD - Not stated	-	1.6%	0.5%
CALD - Yes	-	5.2%	6.9%
Female	-	38.1%	40.1%
Male	-	61.0%	59.0%
Gender undisclosed	-	0.9%	0.9%
Age - 0 to 6	-	5.1%	5.2%
Age - 7 to 14	-	25.5%	25.2%
Age - 15 to 18	-	8.6%	6.8%
Age - 19 to 24	-	8.9%	8.4%

²⁹ The categorical variables do not have a p value

Matching variable	P Value ²⁹	Mean - Control group	Mean – Market facilitation group
Age - 25 to 34	-	9.1%	11.5%
Age - 35 to 44	-	8.8%	9.7%
Age - 45 to 54	-	11.0%	12.1%
Age - 55 to 64	-	15.2%	15.3%
Age - 65+	-	7.8%	5.7%
1 ⁰ disability - Acquired brain injury	-	4.3%	4.6%
1 ⁰ disability - Autism	-	28.8%	24.5%
1 ⁰ disability - Cerebral palsy	-	3.4%	4.0%
1 ⁰ disability - Developmental delay	-	4.8%	5.1%
1 ⁰ disability - Down syndrome	-	2.8%	3.1%
1 ⁰ disability - Global dev. delay	-	1.1%	1.1%
1 ⁰ disability - Hearing impairment	-	3.5%	3.5%
1 ⁰ disability - Intellectual disability	-	20.9%	22.3%
1 ⁰ disability - Multiple sclerosis	-	2.2%	1.9%
1 ⁰ disability - Other	-	0.8%	0.9%
1 ⁰ disability - Other neurological	-	5.0%	4.3%
1 ⁰ disability - Other physical	-	6.0%	4.6%
1 ⁰ disability - Other sensory/speech	-	0.7%	0.8%
1 ⁰ disability - Psychosocial disability	-	9.5%	13.6%
1 ⁰ disability - Spinal cord Injury	-	1.5%	1.3%
1 ⁰ disability - Stroke	-	2.3%	1.9%
1 ⁰ disability - Visual impairment	-	2.3%	2.4%
Resides - NSW	-	38.8%	5.0%
Resides -NT	-	3.5%	9.6%
Resides -QLD	-	19.9%	5.0%
Resides -SA	-	10.7%	3.8%
Resides -TAS	-	2.3%	0.0%
Resides -VIC	-	18.0%	75.4%
Resides -WA	-	6.7%	1.1%
Resides -MMM 3	-	22.7%	22.4%
Resides -MMM 4	-	36.2%	36.2%
Resides -MMM 5	-	26.0%	25.7%
Resides -MMM 6	-	6.9%	7.0%
Resides -MMM 7	-	8.2%	8.7%

Matching variable	P Value ²⁹	Mean - Control group	Mean – Market facilitation group
NDIS Entry - FY16/17	-	26.2%	9.6%
NDIS Entry - FY17/18	-	48.7%	55.3%
NDIS Entry - FY18/19	-	23.5%	35.1%
NDIS Entry - FY19/20	-	1.6%	0.0%
Transition from - Commonwealth	-	8.9%	7.2%
Transition from - New	-	44.2%	33.8%
Transition from - State	-	46.9%	59.1%
1 st plan approved - 2013	-	0.5%	0.1%
1 st plan approved - 2014	-	1.3%	0.8%
1 st plan approved - 2015	-	1.2%	1.1%
1 st plan approved - 2016	-	7.5%	1.5%
1 st plan approved - 2017	-	22.2%	16.9%
1 st plan approved - 2018	-	26.5%	33.5%
1 st plan approved - 2019	-	28.2%	32.5%
1 st plan approved - 2020	-	11.8%	12.7%
1 st plan approved - 2021	-	0.8%	0.9%
Stream - Complex	-	2.5%	4.4%
Stream - General	-	25.8%	19.6%
Stream - Intensive	-	25.8%	24.2%
Stream - Super Intensive	-	4.4%	5.0%
Stream - Supported	-	41.4%	46.8%

Step 2: Implement DiD

We aggregated/averaged day/month/year participant payments data into month/year observations for each participant. Start dates of trial activities were normalised, so that zero corresponded to the month/year of the start month. Any number less than zero (negative) corresponds to months before the trial start month and any number greater than zero (positive) represents months after the intervention started.

To this data we added participant demographics and covariates to include in the DiD regression equation to account for any minor differences that may exist between the treatment and control groups after PSM.

DiD is usually implemented as an interaction term between time and treatment group dummy variables in a regression model. The equation below describes this interaction and the estimated coefficient of interest.

$$Y = \beta_0 + \beta_1 * [Time] + \beta_2 * [Treat] + \beta_3 * [Time * Treat] + \beta_N * [X_N] + \varepsilon$$

Y is the outcome variable of interest. In our analysis the outcome of interest is “total NDIS expenditure per month per participant”.

β_0 reports the model intercept coefficient or the baseline average across the sample data. That is the average total spend per participant per month in the sample.

β_1 reports the time trend coefficient. Here “*Time*” is a dummy variable that is equal to one in the period that corresponds to any month after the intervention, and equal to zero if it corresponds to any month before the intervention. For our analysis we include 10 periods (months) before and 10 periods after the intervention (21 periods total including $t = 0$ for time of intervention). This can be formalised as the first difference (before versus after).

β_2 reports the group coefficient. Here “*Treat*” is a dummy variable equal to one if the participant was treated (part of the trial) and equal to zero if the participant was not part of the trial. This can be formalised as the second difference (treatment versus control).

β_3 reports the DiD coefficient. This is the interaction between the before versus after effect of the intervention, and the treated versus control effect of the intervention. Overall, if the parallel trends assumption is met, β_3 will represent the ATE (average treatment effect) of the market facilitation on the outcome variable of interest.

Also included in the DiD regression equation is β_N which is the covariate X_N coefficient. This is to control for any small differences between the participants and in turn control for differences between the treatment and control group. This covariate term included participant age, Australian state or territory, NDIS entry time, year of first claim, gender, MMM location, NDIS primary disability group, NDIS normalised severity score, vulnerable participant indicator, CALD and First Nations indicators, and NDIS entry year/quarter. The last term of the DiD regression equation is ε which is the regression error term.

Table 11 illustrates the mechanics behind the coefficient of interest β_3 . The table shows how through a regression equation, we can remove any treated participant effects (β_2) and any time effects (β_1). In turn the equation theoretically controls for any differences between participants, controls for any time trends in the outcome variable and estimates the causal effect of the trial intervention.

Table 11: Difference-in-difference

Time/Group	Treated	Control	Difference
Before	$\beta_0 + \beta_2$	β_0	β_2
After	$\beta_0 + \beta_1 + \beta_2 + \beta_3$	$\beta_0 + \beta_1$	$\beta_2 + \beta_3$
Difference	$\beta_1 + \beta_3$	β_1	β_3

We undertook analyses at several different levels but all followed the DiD equation structure above. The levels we conducted were the overall intervention level, the LGA level, the support category level, the specific months before and months after the trial level and just for priority participants specifically targeted by some trials.

C.3.2 Analysis of market indicators

We used Bayesian Time Series Analysis (BTS) to estimate the effect of market facilitation on market indicators. BTS is better suited to LGA market analysis than DiD because it applies a Bayesian sampling method to estimate the distribution of variance where there is a limited number of observations such as LGAs (548 nationally). This section explains in detail the approach to BTS.

Bayesian time series analysis

BTS is an analytic technique designed for time series data which typically consist of successive measurements made from the same source to track change over time. An observed time series has three components: The trend (long term direction), the seasonal (systematic, calendar related movements) and the irregular (unsystematic, short-term fluctuations).

BTS takes a response time series variable and a set of control time series variables and constructs a structural time-series model to estimate a counterfactual observation (i.e., how a response variable would have changed as if a market intervention had never occurred). Time series models make it possible to (i) infer the chronological evolution of attributable impact, (ii) incorporate empirical Bayesian priors on the parameters and (iii) flexibly accommodate multiple sources of variation, including the time-varying influence of simultaneous covariates.

The first aspect in the BTS model is the prediction calculation where data is divided in two parts: a “pre-intervention” period and a “post-intervention” period. In pre-intervention period the BTS was used to fit a model that best explains what has been observed in the data between the treated and control group. The fitted model was then used to forecast what the response in the post-intervention period would look like had the intervention not taken place. The inferences are based on the differences between observed responses to the predicted responses which yields the absolute and relative treatment effect of the intervention.

The second aspect in the BTS is the handling of the time series through a Kalman filter. A Kalman filter is a specific type of Bayesian filter. Bayesian filtering is a general probabilistic approach for estimating unknown distributions recursively over time using observations from the previous period. Kalman filtering is an algorithm that uses a series of observed variables and produces estimates of latent state variables assuming a normal, linear relationship between the two. The Kalman filter does this in two stages: Predict and update. The predict stage uses a normally distributed prior to inform the variables at time $t-1$. The update stage then uses this prior and Bayes rule to estimate the posterior at time t . The posterior is then used as the prior at time t and these steps are continued forward until the end of our sample period.

The third aspect is the “spike and slab” Bayesian variable selection where the most important regression predictors are simultaneously selected by performing linear regressions. Following Bayesian inference, we set the prior of our model predictors to be normally distributed and to have a large mass at zero (i.e. a positive probability of not being

in the model). This is the “spike” because the distribution spikes at zero. We then need to inform the variance or “slab” of the prior normal distribution. To best avoid collapsing towards not including the predictor in the model, we set an inverse gamma distribution to inform the model variance parameter. This makes up the Bayesian prior of the regression predictors.

The final aspect of the BTS is the Bayesian model averaging which combines the prediction calculation (aspect 1 and 2) and the feature selection results (aspect 3). Together with a valid control group, the resulting model estimates not only correlations but also causations in the underlying data.

Application to market indicator analysis

The BTS estimates the causal effect of market facilitation in terms of the variation seen in the response variable after the intervention that cannot be explained by other means. It does so by sampling the variation between a before and after-period of a trial.

Step 1: Implement PSM to identify control LGAs

BTS relies on the assumption that the control variables were not themselves affected by the intervention and that they follow similar time series components (trend, seasonal, and irregular) as the target LGAs. To best meet this criterion, we employed a matching process to find LGAs that were statistically like the treated LGA. To do this we first collected individual payment summary statistics for each LGA in the 12 months prior to the intervention. This included total number of claims in an LGA, total funds claimed, average funds claimed, number of participants, and number of providers in the 12 months prior to the intervention. We then merged this set to a LGA demographic data set.

The demographic data set included: the proportion of participants who identify as First Nations, proportion who identify as CALD, proportion in MMM1 to MMM7, the historical total number of participants in the LGA, the average age of participants in the LGA, the average NDIS normalised severity score in the LGA, the proportion of participants by primary disability group (autism, cerebral palsy, acquired brain injury, psychosocial disability, multiple sclerosis, intellectual disability, other neurological, other physical, developmental delay, visual impairment, down syndrome, and spinal cord injury), the proportion of “vulnerable” participants, and the proportion of “active”³⁰ participants in the LGA.

Using the collection of LGA level variables above, PSM was conducted on the treated (i.e., trial) LGAs to match to three other LGAs in the data set. Each LGA could only be matched once and treated LGAs could not be matched to another thin market trial LGA. Finally, we iteratively rejected any LGA matches that we deemed too geographically “close” to a trial LGA that may cause our estimates to be downward biased.

Table 12 shows summary statistics of the matching process. It illustrates the success of the matching procedure in identifying a valid counterfactual for each LGA in the BTS analysis.

³⁰ Active participant refers to a participant that is currently in the NDIS (i.e., they have not exited the Scheme).

While some statistical differences exist, we accounted for these variables in the BTS model itself to control for any minor differences between the treated and control group. We are also confident these differences represent the selection into the treatment group that cannot be accounted for. For example, the proportion of MMM7 locations is larger in the treated group given that thin market trials targeted mainly remote LGAs. Therefore, there are less 'untreated' MMM7 LGAs to match with. As such, this difference does not highlight an issue in matching but rather highlights selection into the trials.

Table 12: LGA matching balance statistics

Matching variable	P Value	Mean Control LGAs	Mean Trial LGAs
First Nations	0.001	25%	47%
CALD	0.009	4%	17%
MMM 3	0.918	5%	5%
MMM 4	0.171	22%	14%
MMM 5	0.003	42%	20%
MMM 6	0.607	13%	17%
MMM 7	0.007	17%	45%
Historical no. of participants	0.809	602	649
Average participant age	0.329	33	34
% Australian citizen	0.709	65%	64%
NDIS severity score	0.737	7.11	7.17
% Autism	0.001	14%	9%
% Cerebral palsy	0.603	2%	2%
% Acquired brain injury	0.111	3%	3%
% Psychosocial disability	0.074	8%	11%
% Multiple sclerosis	0.023	1%	1%
% Intellectual disability	0.318	13%	12%
% Other neurological	0.564	4%	4%
% Other physical	0.838	7%	7%
% Developmental delay	0.114	7%	6%
% Visual Impairment	0.432	2%	1%
% Down syndrome	0.124	1%	1%
% Spinal cord injury	0.578	1%	1%
Vulnerable participant indicator	0.091	4%	3%
% participants who made a claim	0.29	51%	49%
LGA total spend – 12 months prior	0.862	\$10,597,926	\$11,289,558
LGA no. of participants – 12 months prior	0.787	258	282
LGA no. of providers – 12 months prior	0.686	79	72

Matching variable	P Value	Mean Control LGAs	Mean Trial LGAs
Participant ave. spend per claim – 12 months prior	0.508	\$757	\$852
Participant ave. no. of plans – 12 months prior	0.828	3	3
Participant ave. no. of providers – 12 months prior	0.779	2	2
Provider ave. claim amount – 12 months prior	0.697	\$1,545	\$1,428
Provider ave. no. of plans – 12 months prior	0.669	7	7
Provider ave. no. of participants – 12 months prior	0.451	5	5

Table 13 shows the LGAs matched to the target LGAs.

Table 13: LGAs matched to trial LGAs

Trial LGA	LGA Match 1	LGA Match 2	LGA Match 3
Alice Springs	Albany	Gunnedah	Pompuraaw
Ararat	Balonne	Gympie	Port Augusta
Aurukun	Balranald	Hilltops	Port Lincoln
Barkly	Banana	Hinchinbrook	Port Pirie City
Bass Coast	Bega Valley	Hindmarsh	Quairading
Baw Baw	Benalla	Hope Vale	Robe
Berri and Barmera	Berrigan	Kempsey	Roper Gulf
Bland	Bogan	Kowanyama	Shoalhaven
Bourke	Boulia	Lachlan	Snowy Monaro
Brewarrina	Bulloo	Leeton	Snowy Valleys
Carpentaria	Burdekin	Lithgow	South Burnett
Central Desert	Cassowary Coast	Liverpool Plains	Southern Downs
Cloncurry	Ceduna	Loxton Waikerie	Swan Hill
Doomadgee	Central Darling	Mid-Coast	Tablelands
East Gippsland	Central Goldfields	Mid-Western Regional	Tenterfield
Goondiwindi	Charters Towers	Moirá	Torres
Halls Creek	Cherbourg	Mount Isa	Upper Hunter Shire
Juneé	Clare and Gilbert Valleys	Mukinbudin	Victoria Daly
Latrobe	Cobar	Murrumbidgee	Walcha
MacDonnell	Colac-Otway	Muswellbrook	Wandering
Palm Island	Coober Pedy	Napranum	Wangaratta
Mornington	Coomalie	Narrabri	Warren
South Gippsland	Coonamble	Narrandera	Warrumbungle Shire

Trial LGA	LGA Match 1	LGA Match 2	LGA Match 3
Tiwi Islands	Corangamite	Narrogin	Weddin
Walgett	Dundas	Narromine	Western Downs
Wellington	Eurobodalla	Ngaanyatjarraku	Westonia
Wentworth	Flinders (Qld)	North Burnett	Wujal Wujal
West Arnhem	Gannawarra	Northern Areas	Wyalkatchem
West Daly	Gilgandra	Northern Grampians	Yarrabah
Woorabinda	Glen Innes Severn	Northern Peninsula	Yarriambiack
Wyndham-East Kimberley	Greater Shepparton	Paroo	Yorke Peninsula

Step 2: Implement BTS analysis

The outcome variables in the BTS analysis were participant/provider ratio, provider Gini coefficient, participant Gini coefficient, and answers to short form outcomes questionnaire items about participant choice. The BTS data was constructed using the participant payments data. Using the initial payments by participant by day/month/year, the data was restricted to the set of treated LGAs and their matched counterparts before being collapsed and summarised into LGA level month/year observations. This allowed us to collect total payments in a month, average payments in a month, variance, the number of unique participant numbers, number of unique provider numbers, participant/provider ratios, number of unique plan numbers and plan budget details.

Using the same data, we calculated Gini coefficients for participants in an LGA, providers in an LGA and the Gini ratio. We aggregated the Gini coefficient into quarterly level data to better accommodate shifts in the market inputs (e.g., number of providers, number of participants).

We then applied our BTS model to the data. To conduct the BTS model, the data was restricted to one treated LGA and its matches at a time. The treated before and after period was then set using the maximum available observations both before and after the intervention. We did this to get the largest number of training observations, and the largest number of observations to be used for computing predictions.

Before we conducted BTS we set our priors and distribution assumptions. To do this we assumed the form of the time series data. This required assumptions on two steps in the data. The first step was describing the distribution of how the outcome evolves over time. The second step described the distribution of the outcome at the starting time. That is, how the outcome variable varies over time and how the outcome variable varies within time.

The first step is described through a local level state specification. The local level model assumes each outcome follows a “random walk” where the next period’s outcome is a function of this period’s outcome plus some ‘error term’ of the time series. The model assumption is that this error term on average is zero its variance follows an inverse gamma distribution. The second step is described through an initial state vector in the model’s first period. Following the Kalman filter, our initial state vector assumes a normal distribution with

a mean of zero and a variance equal to one. The model then used the observed data and samples each period using Markov chain Monte Carlo sampling of 2,000 iterations. These iterations are then used to update each of the priors and calculate the posterior distributions of the outcome in each period.

We repeated the above process for each LGA and for each of the market indicators. The results were collected in the form of a time series. To better represent results and aid interpretation, we constructed an average treatment effect using the BTS results. This was the average of the point prediction 6 months before and 6 months after market facilitation for each LGA. The ATE standard error was calculated the same way by averaging the standard error before and after the trial. These together with the prior normal distribution inference of the resulting posterior distribution of the ATE. This produced a single ATE estimate for each LGA for each market indicator.

C.4 Qualitative data analysis

The tables below provide the coding frame used to analyse stakeholder interviews and free text survey responses.

Table 14: Code frame for KEQ2– Did market facilitation work as expected?

Category	Sub-category	Description
Impacts on participant plan builds	NA	Plan builds reflect market conditions
Providing market data to service providers	Market data helpful to service providers	Provision of market data to service providers helps providers understand market opportunities
Providing market data to service providers	Market data is not useful	Market data is not helpful; suggestions to make it useful
Connecting PITC and support coordinators to service providers	Support coordinator/PITC increased awareness of market	Connections resulted in support coordinators/PITC increasing their understanding of market, make referrals to new service providers
Connecting PITC and support coordinators to service providers	Has made no difference	Not resulted in improved connections; referrals
Connecting PITC and support coordinators to service providers	Service providers awareness of demand	Connections resulted in service providers understanding demand for supports; increased referrals

Table 15: Code frame for KEQ2 – Did CFPs work as expected?

Category	Sub-category	Description
Assurance of demand	NA	CFPs were helpful in providing assurance for demand for services
CFP supports are viable to deliver	NA	Views on enablers and barriers to support viability
Connections between support coordinators/service providers	NA	Benefits of connections; ongoing referrals
Support coordinator capacity building	NA	Support coordinator use of CFPs in future; barriers to implementing

Table 16: Code frame for KEQ2 – Did direct commissioning work as expected?

Category	Sub-category	Description
Service viability	Intentions to expand	Direct commissioning provides platform for providers to grow; recruitment of staff
Service viability	Number of participants	Effort of direct commissioning considering effort to tender, recruit staff
Service viability	Administrative burden	Administrative aspects of Trial burdensome; impacts on profitability
Post-trial sustainability	Support coordinator/service provider connections	New connections made; ongoing referrals
Post-trial sustainability	Barriers to sustainability	Barriers to ongoing service delivery

Table 17: Code frame for KEQ3 – Why did market interventions work as intended or not?

Category	Sub-category	Description
Factors impacting thin market locations	Access to NDIS and supports	Barriers to accessing NDIS or supports; access to assessments; individuals not tested eligibility; lack of engagement
Factors impacting thin market locations	Lack of service providers	Not enough service providers; long waitlists
Factors impacting thin market locations	Lack of understanding of NDIS	Participants do not understand NDIS; how to access supports; language barriers, etc
Factors impacting thin market locations	Travel	High cost of travel; logistics (inc. safety); lack of affordable participant travel
Factors impacting thin market locations	Service viability	Services in thin markets are not financially viable; pricing structures
Factors impacting thin market locations	Infrastructure in communities	Inadequate infrastructure in communities; lack of housing/accommodation
Factors impacting thin market locations	NDIS requirements	Evidence for behaviour supports; registration and reporting requirements
Factors impacting thin market locations	Plan builds	Plan builds do not reflect participant need
Factors impacting thin market locations	Support coordinators	Knowledge and capacity of support coordinators; hours in plans
Factors impacting thin market locations	Workforce	Workforce shortages; high turnover of staff; cost impacts to attract staff
Implementation	Choosing intervention/focus of Trial	How were decisions made about focus, intervention, exit for Trials made?
Implementation	Direct commissioning	Descriptions of implementation of direct commissioning, e.g., time taken, recruitment, reporting

Category	Sub-category	Description
Implementation	CFPs	Descriptions of CFP implementation, e.g., tendering, reporting, service delivery etc.
Implementation	Market facilitation	Description of market facilitation activities
Barriers and enablers	Administration burden	Admin burden; reporting requirements; logistics to arrange
Barriers and enablers	Ability to engage market	Providers or support coordinators difficult to engage in market activities; provider-level barriers to engage in Trial activities
Barriers and enablers	Engaging participants	Difficulty in recruiting and/or engaging participants in Trial
Barriers and enablers	Information	Lack of information in documentation (quotes, referrals)
Barriers and enablers	NDIA support	Value of connection with Trial Leads through Trial activities
Barriers and enablers	On ground support	Support on the ground for CFP assessments
Barriers and enablers	Support coordinators	Working together; liaising with service providers