National Disability Insurance Scheme Financial Sustainability Report (FSR)

2017-18

Final

Sarah Johnson BCom FIAA

Scheme Actuary

Overview

This annual financial sustainability report is required to be prepared for the Board and CEO of the NDIA under section 180B of the NDIS Act. This report provides an assessment of the financial sustainability of the NDIS after the second year of transition, which followed a three year trial period.

The Scheme continues to grow at a rapid pace. Significantly increased leadership capability within the past year has led to several improvements. Data quality is improving, operational processes are evolving, provider markets continue to develop, risk management initiatives, and financial functions are maturing, and there are several projects underway aimed at improving the participant experience and the supports provided to participants. This includes the participant and provider pathway review which aims to improve quality and outcomes for participants.

Scheme experience was not mature enough in previous Financial Sustainability Reports (FSRs) to enable the calibration of an experience based projection model. The projection model was therefore based off the original high level Productivity Commission costings. The phasing-in pattern was aligned with the details contained in the State/Territory bilateral agreements.

Scheme experience remains difficult to interpret, as there are many biases due to the phase-in timetable and the lack of consistent longitudinal data with which to inform projection assumptions. In addition, there are some issues with the current resource allocation process, and specifically the lack of a mechanism for independent assessment of support need. As the Scheme continues to mature, and the training and capability of frontline staff improves, there is an expectation that the Scheme experience will change, perhaps materially.

Nonetheless, a model using Scheme experience to date has been developed to project costs into the future. Scheme experience has been adjusted where relevant to allow for known biases, such as the phase-in timetable, and a forward looking view on drivers of inflation has been adopted rather than extrapolating past trends.

A number of scenarios have been modelled, which in many cases could be seen as alternatives to the baseline projection due to the inherent uncertainty in the assumptions.

The baseline projection and alternative scenarios highlight the impacts of different cost pressures. The Scheme is estimated to remain within budget in the short-term, providing time to continue to implement mitigation strategies to address the emerging pressures.

Information and data

This actuarial report uses information from the Agency's case management system, finance system and data warehouse. The data used for this report is broad-reaching and covers information across each participant pathway step, from Scheme access and eligibility to participant plan approval and plan review. Key participant risk parameters used in the

analysis include a participant's level of function, primary disability type, age, gender and whether or not they reside in shared supported accommodation. Plan amounts and payments made to service providers and participants (both cash and in-kind) are also used in the analysis. Lastly, participant outcome questionnaires and information from the States/Territories and Commonwealth are also considered.

The Agency has a clear vision around the future direction of data management and business intelligence, and over the past year, significant progress has been made on data issues identified in the previous FSR. However, a number of new issues have emerged which place limitations on the ability to perform more meaningful actuarial trend analysis. Whilst the data used in the analysis is adequate, improvements are required in the capture of accurate functional assessment information and Scheme new incidence and exit data. Work is also underway, coordinated through the Data Management Committee, to improve the consistency of data and efficiency of reporting within the Agency.

Scheme experience to 30 June 2018

Participants

The NDIS has nearly doubled in size in the year to 30 June 2018, with the number of participants with plans ever approved increasing from 90,638 to 176,197. Of these, 172,333 remained active participants as at 30 June 2018. There were a further 7,768 Early Childhood Early Intervention gateway referrals identified. The Scheme participant population is equivalent to over a third of the expected number of ultimate participants and about 76% of the bilateral estimate at 30 June 2018.[1]

The characteristics of participants entering the Scheme have been influenced by phasing-in patterns, especially as specific State/Territory programs and/or age groups are phased-in. This has meant an inherent bias towards younger participants, those participants with a lower level of function, participants in shared supported accommodation arrangements and a higher proportion of participants with autism and intellectual disability (including developmental delay and global developmental delay).

After adjusting for these phase-in biases, the following Scheme observations remain, noting that the first four of these observations have the potential to put significant upwards pressure on Scheme costs if left unmanaged in the short to medium term:

1. More children have been entering the Scheme than expected, although there are significant variations by region and cohort, and in particular there are higher than expected numbers of children with autism, developmental delay and sensory disabilities.

[1] This includes participants in the Early Childhood Early Intervention gateway but excludes participants who have transferred from the WA NDIS sites.

2. There have been higher than expected numbers of lower functioning participants entering the Scheme, with some variation among regions, noting that the guided planning process relies on functional assessments as a key input into the calculation of typical support packages for participants, which influence committed supports.
3. There continue to be new participants entering into the Scheme for the more mature sites, creating uncertainty about the ultimate numbers in these sites, and hence ultimate numbers in aggregate.
4. Exit rates from younger participants with autism have been much lower than expected, noting that the Scheme has only been operating for five years and that early intervention exits may have a duration-related component that may not emerge for a couple of years.
5. There have been fewer adults entering the Scheme than expected in most areas noting point three above that new participants continue to approach the more mature sites, again creating uncertainty about the longer-term experience.

Costs

There was $7.7 billion of committed support in 2017-18.

The following Scheme cost trends have been observed:

1. Typical support packages[2] (TSPs) have been trending upwards over the last year, influenced by trends in functional assessments and higher levels of participants reporting no informal supports. This is perhaps indicative of the growing awareness among both participants and planners of the impact that the guided planning questions have in determining typical support package amounts in participant plans. Typical support package amounts now exceed committed supports, which themselves exceed revenue received from the States/Territories and the Commonwealth.
2. Not all committed support in plans is being used by participants. The utilisation of committed supports has been about 65% for supports committed in 2013-14, 75% for supports committed from 2014-15 to 2015-16, 67% for 2016-17 and is projected to be about 73% for 2017-18. Utilisation varies across States/Territories, and is generally lower for a participant's first plan, capital and capacity building supports, participants with a sensory disability, children, those living in remote locations, higher

[2] Typical Support Packages (TSPs) are the output from the guided planning process. The approach generates funding across eight domains: daily activities, social participation, consumables, transport, support co-ordination, assistive technology, home modifications, and capacity building. These amounts are adjusted, up or down, across each of the eight domains based on the level of sustainable informal, community or mainstream supports reported as available to assist the participant in each of the domains, as well as other factors.

functioning participants and new entrants who have not previously accessed disability supports.

3. Individual plan amounts, and corresponding plan payments, have been increasing on review at levels over and above those expected due to inflation and ageing, especially between the first and second plan. The measured increase in payments between a trial participant's first and second year in the Scheme is 31%, and 20% between a participant's second and third year in the Scheme. The increase in committed supports between a trial participant's first and second year in the Scheme is lower than payments at 12%, and between second and third years at 10%.
4. There are expected to be further upward pressures on payments as a result of a number of changes such as increases in Specialist Disability Accommodation costs, costs for younger people in residential aged care, flow-on impacts on payments from the Independent Pricing Review, and increased access to assistive technology and home modifications.
5. Participants in shared supported accommodation account for 7% of the Scheme population and over a third of total expected participant support costs, with average annualised committed support sizes trending upwards, currently over $250,000. There is a trend towards these participants moving into higher average-cost living arrangements, a greater proportion of participants requiring "complex" supports, higher levels of non-accommodation supports, and more participants entering into these types of living arrangements.

Comparison between the revenue received during 2017-18 from both the Commonwealth and State/Territory governments and the amount of support used by participants results in an accounting surplus of about $771 million (approximately 12% of revenue received in 2017-18). The relatively low levels of utilisation to date has meant that the Scheme has operated well within the funding envelope.

Baseline projection

Key assumptions

The key assumptions used in the baseline projection include:

- Prevalence for 0-64 year olds of 2.1% of the total Australian population at 2023 (equivalent to 477,937 participants), which is consistent with the Productivity Commission estimated prevalence. The rate at which participants are approaching the Scheme is slower than expected for those who had not previously accessed government disability supports. This means that, while all eligible Australians will have access to the Scheme by 30 June 2020 (and all people in existing disability systems who are eligible will have transferred to the NDIS), a steady intake of participants is not estimated to be reached until 2023.

- The prevalence of 0-64 year olds is projected to increase to 2.4% at 2030, mainly due to participants with autism exiting the Scheme at much lower rates than previously assumed.
- New incidence of 0.14% of the Australian population aged 0 to 64 (31,728 new participants at 2023). This is higher than the previous assumed incidence rate of 0.10%, and this increase is mainly driven by higher numbers of new incidence for children with a sensory disability, developmental delay and autism. New incidence is highest in children aged 0 to 6 years, at 0.85% of population aged 0 to 6.
- Scheme exit rate of 2.0% per annum at 2023, projected to increase to 2.5% per annum at 2030[3], with expected exit rates of about 3% to 5% per annum from participants aged 7 to 14, through the impact of early intervention. This compares with a previously assumed Scheme exit rate of 2.2%.
- An average payment amount of $54,000 as at 30 June 2018 for participants on their second or later plan, reducing to $46,000 as at 30 June 2023 (in 30 June 2018 values), noting that the reduction is primarily from the changing mix in participants, partly offset by increases due to superimposed inflation. The projections assume that the average payment amount is 38% lower in the participant's first year compared with second and subsequent years.
- Inflation of payments at 8.8% in 2018-19, 6.5% in 2019-20, 5.0% in 2020-21 and 4.0% per annum thereafter. The superimposed inflation expected to emerge over the next three years (8% in total) is based on consideration of known changes which will impact payments.
- Long term operating expenses of 6% of participant costs.

Results

A summary of the key 2017-18 baseline projections results is included in the table below.

[3] The non-mortality exit rate assumptions have generally been reduced for this FSR, with particularly large reductions for participants with autism. The reason for the higher projected aggregate exit rates in this FSR, compared to the previous FSR, is because of the higher projected proportion of participants who are children, noting that children have high non-mortality exit rates.

	2018	2019	2020	2021	2022	2023	2024	2025	2030
Number of Participants									
0-64 years	169,070	301,071	372,090	414,067	448,323	477,937	494,159	509,420	578,020
65+ years	3,263	5,117	8,399	12,502	16,797	21,403	26,812	32,296	58,903
Total	172,333	306,189	380,490	426,569	465,120	499,340	520,971	541,716	636,922
Prevalence (0-64)	0.79%	1.40%	1.70%	1.87%	2.00%	2.11%	2.15%	2.19%	2.36%
Scheme Costs ($m)									
0-64 years		9,028	15,176	19,240	22,266	25,079	27,553	29,202	38,634
65+ years		266	462	752	1,105	1,514	1,990	2,512	5,761
Total Participant Costs		9,294	15,638	19,992	23,371	26,593	29,543	31,715	44,395
Operating Costs		1,092	1,423	1,435	1,603	1,760	1,773	1,903	2,664
Total Scheme Costs		10,386	17,061	21,427	24,973	28,353	31,315	33,618	47,059
Cost as % of GDP		0.55%	0.86%	1.02%	1.13%	1.21%	1.27%	1.29%	1.38%
Cost as % of GDP (<65)		0.53%	0.83%	0.98%	1.07%	1.14%	1.18%	1.19%	1.20%

The model is projected to reach a “Steady Intake” at 2023 based on current entry patterns. This is the date when new entrants into the Scheme primarily represents participants with new incidence of disability, as opposed to participants transferring into the Scheme with existing disabilities. This concept is different from Full Scheme, which is reached by 2020, when the NDIS is operational and available in all areas of Australia. As mentioned above, at Full Scheme, all people in Australia currently receiving government disability support and eligible for the NDIS are expected to be participants of the Scheme. It is also worth noting that whilst the number of people from the existing system entering the Scheme is likely to be less than expected, the number of people previously not receiving services entering the Scheme is likely to be more than expected.

The best estimate of projected costs of the NDIS in 2022-23 using an experience-based model is $28.4 billion, or $26.6 billion excluding operating costs. This is lower than the figures in the Portfolio Budget Statements until 2020-21, largely due to differences in participant phasing, but is 5% higher in 2021-22. The modelling used to inform the Portfolio Budget Statements assumes lower average costs per participant.

At 2022-23, the best estimate projection of $26.6bn excluding operating costs is relatively consistent with the 2017 Productivity Commission report, as shown in the table below, after allowing for unanticipated costs (specifically, the introduction of school transport and developmental delay and the actual implementation of the National Injury Insurance Scheme (NIIS)).

	2019-20	2022-23	2029-30
2017 PC report	$22.3bn	$26.7bn	$40.9bn
add unanticipated costs:			
Decrease in NIIS offset as not fully operational	$0.4bn	$0.5bn	$0.9bn
Children with developmental delay	$0.2bn	$0.4bn	$0.8bn
School transport	$0.3bn	$0.4bn	$0.5bn
less operating costs	-$1.5bn	-$1.5bn	-$2.8bn
Total expected cost allowing for unanticipated costs	**$21.7bn**	**$26.5bn**	**$40.2bn**
% GDP	**1.09%**	**1.13%**	**1.18%**

However, if strategies to mitigate the emerging trends are not effective, the projected costs are $47.1 billion at 2029-30, or $44.4 billion excluding operating costs. This is 10% above the projected Productivity Commission estimate of $40.2 billion excluding operating costs. This increase is mainly driven by higher than expected participants with autism. Exit rates for children with autism have been particularly low, and this means an increasing number of participants with autism in future projection years.

The slower than expected participant intake means that there is time for proposed management responses to assist in addressing the emerging cost pressures. The proposed management responses include a centralised initiative to control supported independent living plan costs, improving early childhood early intervention practice, strengthening integrity of Scheme access, and tightening controls on committed supports. In addition to initiatives already in place and incorporated into the baseline projection, management intends that these responses will further assist in keeping Scheme costs at financially sustainable levels in the longer term. Preliminary modeling based on discussions with management on the possible impact of the additional responses, suggests Scheme costs could be 3% lower than the baseline at 2020, and 7% lower at 2030. This is close to the 2030 projected cost in the 2017 PC report allowing for unanticipated costs. Regular monitoring will be put in place to track the performance of the responses against expectations.

Participant costs ($bn)	2019-20	2022-23	2029-30
2017-18 baseline projection	$15.6	$26.6	$44.4
2017 PC report allowing for unanticipated costs	$21.7	$26.5	$40.2
Preliminary estimate of the impact of management responses	$15.2	$25.3	$41.3

Scenario analysis

The assumptions derived from the experience to date have been adjusted for known biases. The Agency's constantly evolving operational practices means that alternative interpretations of the data, and therefore key assumptions, are also reasonable. A number of alternative scenarios have been developed compared to the baseline projection, based on observations of Scheme experience. Key findings for some scenarios, all other things being equal, are:

- If the number of early intervention exits for participants with autism were increased to the benchmark levels from the previous FSR then costs would progressively decrease from the baseline projection to be close to the costs from the previous FSR at 2030.
- Participants with an intellectual disability aged 17 to 22 previously receiving short-term State/Territory school leavers programs are entering the Scheme. If these participants remain in the Scheme then costs would progressively increase to be 5% above the baseline projection in 2030.
- If committed supports continue at current levels and payment utilisation increases from 75% to 100% of committed supports, then costs would emerge at about 20% above the baseline projection across all years.

- A superimposed inflation rate assumption of 3% per annum in plan costs over the next ten years would increase Scheme costs by 7% above the baseline projection in 2023 and 25% above the baseline projection in 2030, meaning that current superimposed inflation experience is not sustainable in the shorter term.
- Scheme costs are very sensitive to the outcomes of the Administrative Appeals Tribunal, especially in regards to how the Scheme interacts with mainstream services. A recent costing based on appeals currently being made to the AAT, indicated that Scheme costs could be around 16% higher across all years if participants with autism, developmental delay, Attention Deficit Hyperactivity Disorder (ADHD) and dyslexia were to receive additional therapy supports through the Scheme.

The first scenario indicates that costs could be more in line with Productivity Commission estimates if early intervention leads to increased exits from the Scheme. The remaining scenarios further illustrate the importance of early management responses to emerging Scheme trends.

Risk management

The Scheme has experienced a period of rapid growth over the two years since 1 July 2016, as well as significant changes to business processes, implementation of a new ICT system and significant changes to senior management.

In 2017-18, significant work has been undertaken by the Agency to expand its risk management capabilities. Key improvements include:

- Refreshed and streamlined risk management framework and strategy (RMS)
- Developing a risk appetite statement and risk tolerances
- A focus on awareness and staff training
- Increased rigour surrounding the identification, assessment, management and monitoring of risks under the direction of the new Chief Risk Officer
- Design of a new governance and reporting structure, with a focus on three ‘lines of defence’.

Significant work has been done to identify and report on key risks during the transition period, consistent with the Agency’s risk management framework. The key risks identified are currently above acceptable risk threshold levels and it is important that these risks are managed towards acceptable levels in the shorter to medium term, in the context of the Scheme’s aggressive timetable to full rollout.

In assessing the quality and consistency of decision making by Agency staff and partners, the Scheme Actuary engaged the Agency’s Compliance and Assurance team to review almost 600 records around access, level of function, plan reviews and TSPs during 2017-18.

A common concern identified in these reviews was the lack of quality documentation and adequate controls around decision making. Remediation was recommended for errors identified during the review, however the results to date have been limited.

Although the Agency has made progress with its risk management capabilities in 2017-18, the process continues to mature. A number of improvements have been identified for 2018-19 including the introduction of a purpose-built Integrated Risk Management system, development of training modules and the addition of new dedicated risk management resources. Real-time monitoring of the effectiveness of strategies implemented to mitigate the risks that are currently being assessed as 'critical' has also been identified as a priority, as is the introduction of appropriate controls in the ICT system to support best-practice decision making and strengthening of process for implementation of remediation actions.

The Agency's Participant and Provider Pathway review is being piloted to help improve the quality of the business decisions being made, and to help work with participants to focus on outcomes, while recognising the important role played by families/carers, providers and disability groups. Frontline staff and Agency partners must be supported to make eligibility and planning decisions consistent with the legislation and to understand the impact of those decisions on the Scheme's financial sustainability. Extensive training is required to put Scheme sustainability at the core of the Agency's business processes, along with development of the ICT system to assist staff with making decisions. This includes the need for objective independent benchmarks to assist in equitable resource allocation.

The Agency must continue to establish an effective risk management culture throughout the Agency, across all levels of staff during this transition period.

Recommendations

Whilst the Scheme has operated comfortably within the funding envelope over its first five years, the pressures identified in the emerging Scheme experience will require specific management responses, some of which have been discussed above.

Data quality and information

Improvements to the ICT system are required to better monitor and manage Scheme sustainability. These include developing the system to manage the Early Childhood Early Intervention (ECEI) gateway, implementing and tracking compensation recovery amounts, and improving payment controls at a unit price and quantity level. Additional information on new incidence and exits is also required to better understand the pattern of new incidence for future participants and to better understand why participants are exiting the Scheme.

It is also recommended that the introduction of independent functional assessments be a focus for the Scheme as this will help to facilitate more rigorous and consistent capture of disability type and levels of functional ability to better inform access and planning decisions.

Access and eligibility

Work should be undertaken to address the shortcomings in the ECEI pathway as per the Agency's January 2018 review, including clear outcomes and performance measurement. It is also recommended that the eligibility criteria for children be a continued point of focus and that the PEDI-CAT and PEDI-CAT (ASD) assessment tools be used in the determination of eligibility to the Scheme for children.

Targeted initiatives in the Australian Capital Territory and South Australia to reassess eligibility at plan review have been successful in identifying participants who no longer meet the access criteria of the NDIS Act and do not require individualised funding. This should be a continued focus across the Scheme.

There are a number of shorter term school leaver and transition to work programs which the State/Territories currently fund. These programs could be considered early intervention programs, after which participants may not continue in the Scheme. Particular strategies should be developed to test ongoing Scheme eligibility at this time.

Reference package and guided planning

The experience of the Scheme (particularly, the level of function and the prevalence of age and disability groups), is emerging differently to expectations and substantial changes could be made to respond to this experience. A governance framework should be established which outlines the conditions under which reference packages and the guided planning process should be updated. Following this, and the results of the independent assessment pilot, there could be a recalibration of the reference packages and guided planning process to enable a more useful comparison of Scheme experience against these expectations.

Planning and assessment

The Agency should implement more effective risk-based quality assurance and incorporation of business intelligence around key business processes to ensure better, more consistent and more accountable decision making. Particular areas of focus should include the development of additional controls in the ICT system around the plan review process, especially where large variations in annualised package amounts compared to benchmarks or previous plans are identified.

There should be continued focus on addressing emerging cost pressures for participants in shared supported accommodation. The Agency should focus on ensuring that the right participants are in shared supported accommodation places and that innovative and cost effective models of support are explored, where appropriate.

Funding

In their 2011 inquiry report into Disability Care and Support, the Productivity Commission recommended that a National Disability Insurance Scheme be funded as a 'pay-as-you-go' Scheme with a large enough reserve fund, such that it could be used to smooth out

fluctuations in funding and reduce uncertainty. Work should be undertaken, in conjunction with the Office of the Chief Financial Officer, to identify an appropriate target level of reserve funding for the Scheme. This should include a discussion on the governing principles and operation of the reserve fund.

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List of acronyms

AAT	Administrative Appeals Tribunal
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ADHD	Attention Deficit Hyperactivity Disorder
ASD	Autism Spectrum Disorder
ATHM	Assistive Technology and Home Modifications
CALD	Culturally and Linguistically Diverse
CANS	Care And Needs Scale
COAG	Council of Australian Governments
CPI	Consumer Price Index
CRA	Compensation Reduction Amount
CRM	Client Relationship Management
DHS	Department of Human Services (Australian Government)
DMC	Data Management Committee
DSS	Department of Social Services (Australian Government)
ECEI	Early Childhood Early Intervention
FSR	Financial Sustainability Report
GDP	Gross Domestic Product
ICT	Information and Communications Technology
ILC	Information, Linkages and Capacity Building
LAC	Local Area Coordinator
LFOF	Long-Form Outcomes Framework
MVP	Minimum Value Product
NDIA	National Disability Insurance Agency ('Agency')
NDIS	National Disability Insurance Scheme ('Scheme')
NIIS	National Injury Insurance Scheme
NSW	New South Wales
NT	Northern Territory
PC	Productivity Commission
PEDI-CAT	Pediatric Evaluation of Disability Inventory - Computer Adaptive Test
PBS	Portfolio Budget Statements
PSCD	Public Sector Collection and Disbursement
QLD	Queensland
RMS	Risk Management Strategy
SA	South Australia
SACS	Social and Community Services
SAP	Systems, Applications and Products
SAP HANA	Statistical Analysis System High-Performance Analytic Appliance
SAS	Statistical Analysis System
SAS VA	SAS Visual Analytics

SDA	Specialist Disability Accommodation
SDAC	Survey of Disability Ageing and Carers
SFOF	Short-Form Outcomes Framework
SIL	Supported Independent Living
SLES	School Leaver Employment Supports
SOWG	Senior Officials Working Group
SSA	Shared supported accommodation
TAS	Tasmania
TSP	Typical Support Package
VIC	Victoria
WA	Western Australia
WHODAS	World Health Organisation Disability Assessment Schedule

List of definitions

the Act	The National Disability Insurance Scheme Act 2013
the Agency	National Disability Insurance Agency
Committed Supports	The reasonable and necessary supports outlined in a participant's plan that will be funded for a specific duration, typically a year. Committed supports represent the dollar amount of support that has been made available to participants in their statement of plan supports. Payments of an amount greater than this value cannot be exceeded for each plan period.
Compensation Reduction Amount ("CRA")	The reduction to a participant's plan budget in recognition that a part of a participant's compensation settlement will be used to provide care and support needs of the participant on an ongoing basis. The calculation of CRAs is governed by the *National Disability Insurance Scheme (Supports for Participants – Accounting for Compensation) Rules 2013)* ("NDIS Rules").
Full Scheme	The time at which the NDIS is operational and available in all areas of Australia. For the previous FSR, this was 30 June 2020.
Information, Linkages and Capacity Building ("ILC")	Grants to organisations to deliver activities in the community, benefiting people with disability and their families. ILC activities are available to people with disabilities, both with and without an NDIS plan.
In-kind	Before the NDIS was established, the States/Territories paid for providers to deliver services to people with disabilities. Ceasing the provision of these services under the existing programs when participants enter the NDIS would likely lead to disruptions in service delivery or would be administratively burdensome for the jurisdiction. Hence, in some situations, States/Territories continue to pay for these services directly and NDIS participants will continue using these services. These pre-paid supports and services are called "in-kind" supports. The State/Territory and Commonwealth governments receive a revenue offset for the provision of these services.
Level of Function	A participant's functional ability, measured using a range of widely accepted and validated tools. The tools were selected based on expert advice from professionals with specialist disability knowledge, including disability organisations, clinicians and researchers.
"Need for Assistance" variable	First introduced in the 2006 Australian Bureau of Statistics (ABS) Census of Population and Housing, the Core Activity Need for Assistance variable was developed to measure the number of people with a profound or severe disability.
Reference Groups	Participants can be grouped based on similar characteristics, including their age, primary disability type and level of function.

Reference Packages	A benchmark package of supports developed for participants in each Reference Group with similar support needs and characteristics. Level of function is a key input into the reference package process. When the concept of reference packages were first developed, the sum of reference packages for each participant at Full Scheme was estimated to be equivalent to the $20.5 billion full scheme cost (before operating costs) at 2020. Actual committed supports for participants can be compared to reference packages to assist in the monitoring of Scheme performance and identification of cost drivers.
Revenue	Revenue refers to the funding provided to the NDIA to pay for participant supports in the NDIS. The revenue sources underlying the modelling described in this report are derived from contributions made by Commonwealth, State and Territory governments.
Risk Cohorts	Each risk cohort represents a group of participants with similar risk characteristics. The cohorts have been determined by age band, primary disability, level of function, gender and whether the participant is in shared supported accommodation arrangements.
The Scheme	The National Disability Insurance Scheme
Specialist Disability Accommodation	Some participants will require specialist disability accommodation because the physical, cognitive or psychosocial features of their disability require housing with specific design, specialist features or amenity to enable them to live safely. It does not refer to the support services, but instead to the homes in which these services are delivered.
Steady Intake	The point in time where new entrants into the Scheme primarily represents participants with new incidence of disability, as opposed to participants transferring into the Scheme with existing disabilities, primarily “unmet need”. This differs from the concept of Full Scheme, which is when the NDIS is operational in all areas of Australia.
Shared Supported Accommodation	Participants that, because of complexity of their disability and limitations in their informal support network, mean that their housing needs cannot be currently met in the community, or the costs of providing support for them to live independently in the community are prohibitive. Shared Supported Accommodation includes the assistance with and/or supervising tasks of daily life to develop the skills of individuals to live as autonomously as possible.
Typical Support Package	Typical support packages are the output from the guided planning process. The approach generates funding across eight domains: daily activities, social participation, consumables, transport, support co-ordination, assistive technology, home modifications, and capacity building. These amounts are adjusted, up or down, across each of the eight domains based on the level of sustainable informal, community or mainstream supports available to assist the participant in each of the domains, as well as other factors.

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1. Introduction

The requirements of this report are set out in the *National Disability Insurance Scheme Act 2013*, specifically section 180B(1) of the NDIS Act which states:

The Scheme Actuary must do all of the following each time an annual report is being prepared by the Board members under section 46 of the Public Governance, Performance and Accountability Act 2013:

a) assess:
  i. the financial sustainability of the National Disability Insurance Scheme; and
  ii. risks to that sustainability; and
  iii. on the basis of information held by the Agency, any trends in provision of supports to people with disability
b) consider the causes of those risks and trends;
c) make estimates of future expenditure of the National Disability Insurance Scheme;
d) prepare a report of that assessment, consideration and estimation;
e) prepare a summary of that report that includes the estimates described in paragraph (c).

In addition, Part 3 of the *National Disability Insurance Scheme – Rules for the Scheme Actuary 2013* provides further detail around the required content of the annual financial sustainability report. This includes, amongst other things:

- "*identification of key risks and issues impacting the financial sustainability of the NDIS*".
- "*recommendations designed to manage the risks or address the issues*".

In doing so, a discussion of recent Scheme experience is required as well as projections of the Scheme's future expenditure and a discussion of the Agency's administrative infrastructure, processes and risk management arrangements.

An Insurance Principles Manual has also been developed by the Agency which outlines the process for monitoring and managing the financial sustainability of the NDIS. The Insurance Principles Manual outlines the steps in the Prudential Governance Framework, and the Annual Financial Sustainability Report is included as a key component.

1.1 Structure of this report

The sections of this report are as follows:

- **Overview** which provides a high level summary of this FSR.
- **Introduction** including background and reliances and limitations (Section 1).
- **Information and data** including a description of the data available for actuarial analysis (Section 2).
- **Participant numbers** as at 30 June 2018 (Section 3).
- **Participant costs** as at 30 June 2018 (Section 4).
- **Scheme projections** of costs, including scenario analysis (Section 5).
- **Scheme outcomes** as at 30 June 2018 (Section 6).
- **Risk management** framework and adequacy of controls and processes (Section 7).
- **Management responses to 2016-17 FSR** (Section 8).
- **Recommendations arising from this review** (Section 9).

1.2 Previous reports

This report makes reference to a number of previous reports and other key documents. There are two reports where extensive reference has been used:

- "*National Disability Insurance Scheme financial sustainability report 2016-17*" which documents the previous year's FSR, referred to in this report as the "previous FSR".
- "*Quarterly actuarial report Full report 30 June 2018 (data to 31 May 2018)*" which is referred to in this report as the "30 June 2018 monitoring report", although noting that the 30 June 2018 monitoring report relies primarily on information and data as at 31 May 2018.

A number of other ad-hoc analyses have also been undertaken throughout 2017-18 which feed into this FSR. Individual references are given throughout this report, with some of the major analyses of note including:

- "*National Disability Insurance Scheme Reference Package and Guided Planning Framework Review"* dated April 2018 which provides a review of the reference package framework and the underlying guided planning process.
- "*National Disability Insurance Scheme Exit Analysis 31 December 2017*" which documents an in-depth analysis of the Scheme experience on exits, as compared with expectations from the previous FSR, with a view to better understanding the potential drivers of the emerging exits experience.

- "*National Disability Insurance Scheme Incidence Rates Analysis 31 December 2017*" which provides an outline of an in-depth analysis of Scheme new incidence rates, with a view to better understanding the drivers of the emerging new incidence rates.
- "*Autism Spectrum Disorder Population and Scheme prevalence*" dated November 2017 which considers autism prevalence both in Australia and overseas and investigates the trend towards increasing reported prevalence.
- "*Utilisation: Data as at 31 December 2017*" which investigates the drivers of plan utilisation and in particular, investigates the fall in utilisation rate from 2015-16 to 2016-17.
- "*Implementation of the NDIS and the Productivity Commission costing in 2011*" which provides commentary and analysis on some aspects of the NDIS implementation that differ from the costing of the NDIS in the Productivity Commission's 2011 Disability Care and Support Inquiry.
- "*National Disability Insurance Scheme Participant plan provision analysis as at 30 June 2018*" contains a valuation of the participant plan provision as at 30 June 2018.
- A number of papers on superimposed inflation, shared supported accommodation, psychosocial disability, Administrative Appeals Tribunal case summary and an analysis of the Australian Bureau of Statistics (ABS) Census "Core Activity Need for Assistance" variable have also been referenced in this FSR.

There is also a suite of seven regular monthly actuarial reporting spreadsheets which provide financial analysis relevant to the financial sustainability of the Scheme. The current monitoring spreadsheets are listed in Table 1.1. The monitoring includes one way tabulations for various participant cohorts, a comparison of Scheme experience against benchmarks expectations, monthly trends over time and has functionality for multi-way analysis. The content of this regular reporting has been used as the basis of many of the experience insights within this FSR. The reporting is periodically updated with new items of experience as the Scheme progresses through transition.

Table 1.1 Regular monthly reporting modules

Regular reporting module	Description
1. Access and eligibility	Profile of participants seeking access and eligibility to the Scheme
2. Plan approvals	Profile of participants with approved plans
3. Plan monitoring	Utilisation of committed supports by profile of participant
4. Plan reviews	Analysis of increases in committed supports at plan review
5. Provider monitoring	Profile of registered providers delivering supports for the Scheme
6. Reference packages	Analysis of the guided planning process and reference packages
7. Exits	Analysis of source of exits from the Scheme.

1.3 Modelling approach

Scheme experience was not mature enough in previous FSRs to enable the calibration of an experience-based projection model. The projection model was therefore based off the original high level Productivity Commission costings and represented expected future costs of a "well-functioning" NDIS. The phasing-in pattern was aligned with the details contained in the State/Territory bilateral agreements and assumed that a Steady Intake[4] was reached by 30 June 2020.

The detail of the previous FSR model was informed by the reference package framework. Reference package amounts were developed for each reference group; a benchmark package of supports for participants with similar support needs and characteristics. The reference packages provide a link between resource allocation to individual participants and the overall funding envelope. The costs of a well-functioning NDIS was split between these different reference package cohorts of age, disability and level of function, after being informed by discussions with peak bodies, clinicians, carers and people with a disability.

For this review, the Scheme has transitioned just over a third of the expected long term participants into the Scheme. In recognition of this, the modelling approach has been shifted from the current "benchmark-based" approach to an "experience-based" approach, where practicable. The change is necessary as the experience is emerging differently to the benchmark assumptions. The same underlying modelling framework has been adopted, although an additional "shared supported accommodation" indicator has been included in our model, to recognise the large average cost associated with these participants.

The calibration of this experience-based model has been challenging. For example, NDIA operational processes are changing and developing over time. In particular, the NDIA is in the process of introducing a new participant and provider pathway and the approach to accessing various supports is still evolving.[5] The accuracy of functional assessments appears to be poor and this adds a further complicating factor into the modelling process. In addition, the current Scheme participant profile is unlikely to provide a good representation of the long term profile at Steady Intake. For example, some regions have phased-in by different age cohorts, thus biasing the experience. Further, the participants who have transitioned to date are more typically those from existing State/Territory-based programs, and are likely to be lower functioning and have higher support packages. The modelling approach has made adjustments for known participant profile biases.

The revised approach and potential biases in Scheme experience means that, while an experience-based approach has been adopted, there may be significant future deviations from this experience if particular unknown biases have not been allowed for, or as NDIA operational processes gradually evolve, and as transition to Steady Intake occurs.

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[4] "Steady Intake" in this context means that "unmet need" is no longer coming into the Scheme, only new incidence of disability.

[5] For example, the NDIA's approach to managing compensation payments is evolving and the processes around the provision of assistive technology is under review.

Section 5.5 of this report therefore contains a number of other plausible scenarios, with alternative assumptions, to highlight the uncertainty of the current experience based model.

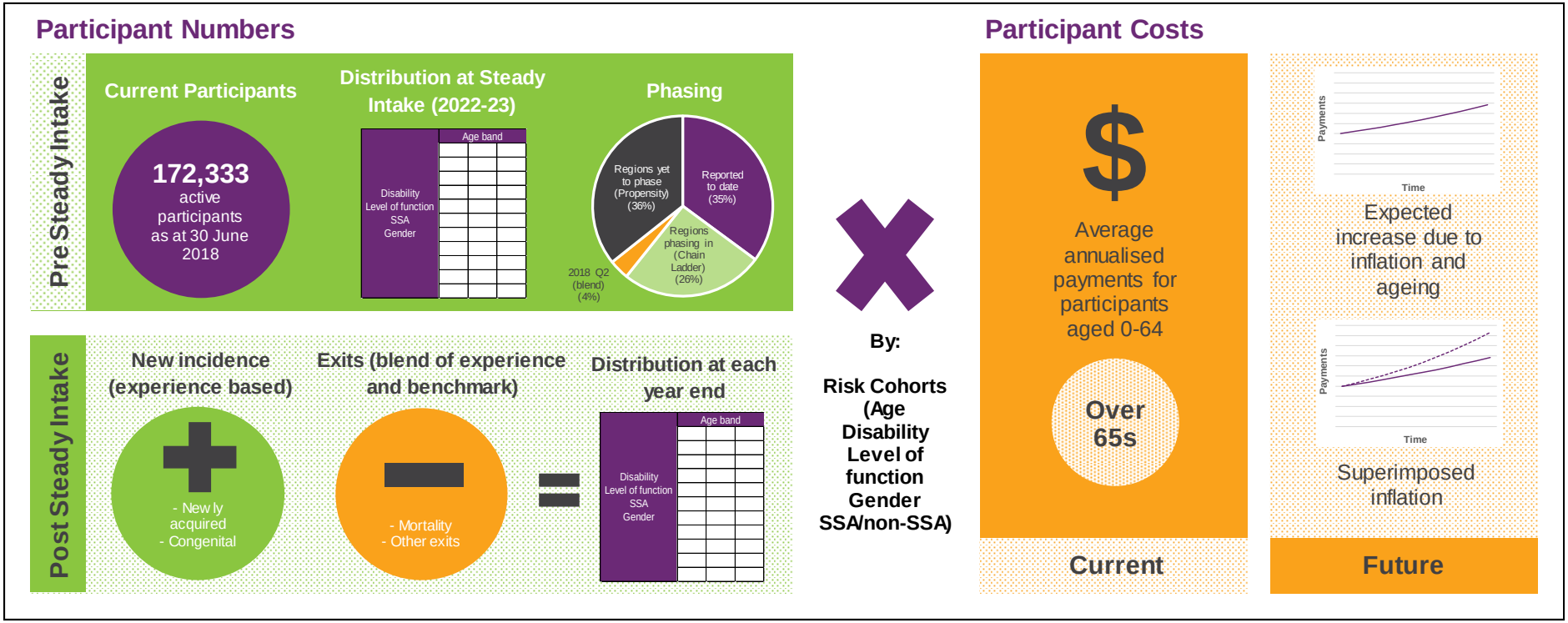
Figure 1.1 summarises the modelling approach in graphical format, noting that the main components of the modelling approach are:

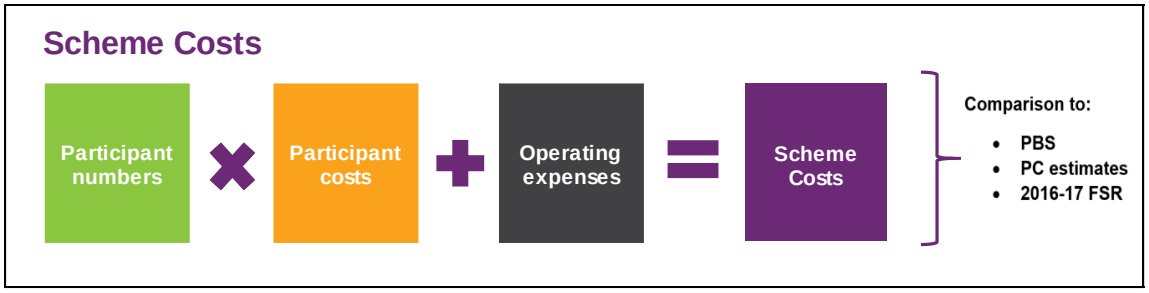
- Aggregate participant numbers for ages 0 to 64 are estimated using actuarial techniques[6] combined with the phasing schedules in the State/Territory bilateral agreement.
- The Steady Intake date is estimated, representing the point in time where new entrants into the Scheme represents participants with new incidence of disability, as opposed to participants transferring into the Scheme with existing disabilities.
- The risk profile of participants at Steady Intake has been determined by Risk Cohort, after allowing for known phasing biases into the Scheme. Each Risk Cohort is differentiated by age band (nine groups), primary disability and level of function (57 groups), gender (two groups) and whether a participant is in shared supported accommodation (two groups). This leads to 2,052 unique Risk Cohorts.
- The population projection from the current Scheme population to Steady Intake population is determined by extrapolation of the phasing-in schedule by Risk Cohort.
- Population projections after the Steady Intake date are calculated by Risk Cohort by adding on new incidence and subtracting mortality and non-mortality exits from the starting population.
- Participant costs are estimated by Risk Cohort using annualised payment levels for the six months to 30 June 2018 for those participants who were active at both 31 December 2017 and 30 June 2018, and had a second (or greater) plan start date at or prior to 31 December 2017. Costs are projected on a cash flow basis, representing the estimated rate of outflows from the Scheme (noting in-kind supports are expected to be used evenly throughout a participant's plan).
- Inflation of costs is added in future years for both normal inflationary sources, such as wage inflation and consumer price inflation, and for sources of superimposed inflation, such as known changes in the Scheme which are likely to lead to higher (or lower) payments than contained within current payment levels.
- Operating expenses are added onto total participant costs to give total Scheme costs.
- Comparisons are made to relevant benchmarks, and alternative scenarios are presented to give an indication of uncertainty within the projections.

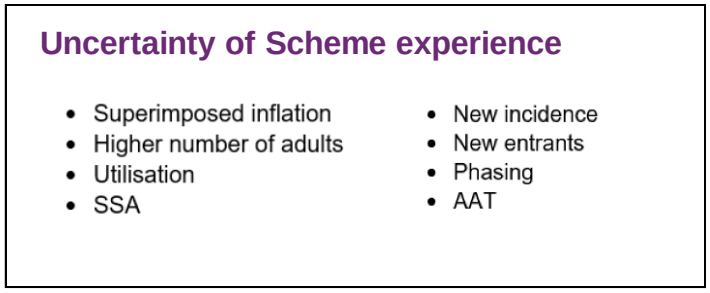
[6] Chain ladder analysis and propensity methodology.

The experience, method, assumptions and results using this methodology are discussed in more detail in Sections 3 to 5 of this report.

Figure 1.1 Schematic of modelling approach



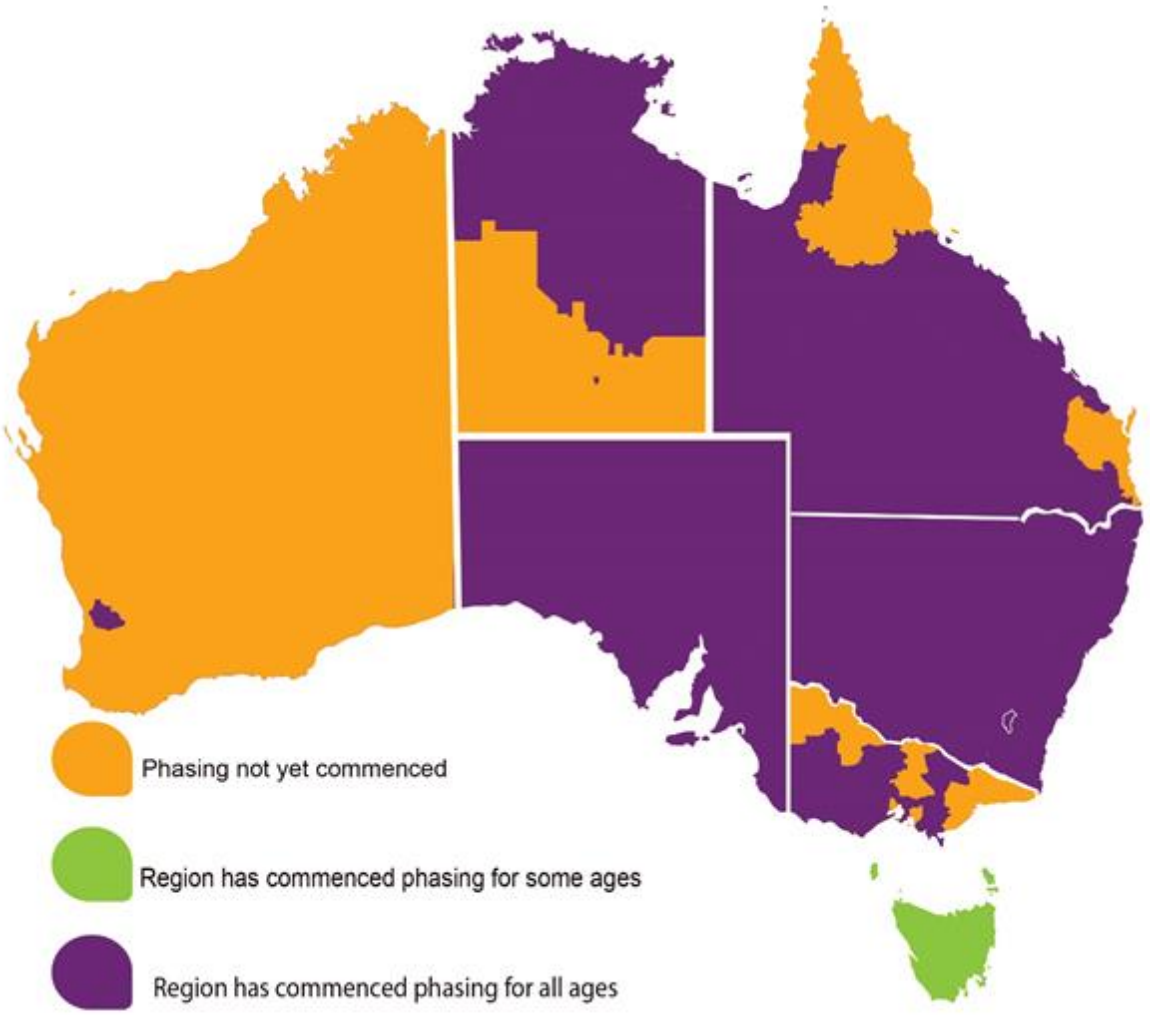




1.4 Phasing-in schedule

The National Disability Insurance Scheme (NDIS) Act received Royal Assent on 28 March 2013, and the NDIS commenced operations on 1 July 2013. At the conclusion of trial (30 June 2016), the NDIS was operational in the nine trial sites. On 1 July 2016 the NDIS commenced transitioning to Steady Intake and at 30 June 2018, the NDIS was operational in many additional locations as shown graphically in Figure 1.2.

Figure 1.2 NDIS locations – 30 June 2018



New South Wales and South Australia are now phasing across all regions and age groups. Phasing is yet to commence across most regions of Western Australia, the Cairns region as well as Brisbane and surrounding areas for Queensland, the southern regions of the Northern Territory, and several regions in Victoria. In addition, infants and participants 35 years and over are yet to commence phasing in Tasmania.

Further details on the phasing-in schedule is shown in Appendix A.

1.5 Key Scheme statistics as at 30 June 2018

Some of the key statistics for the Scheme as at 30 June 2018 are shown in Table 1.2.

Table 1.2 Key statistics of Scheme as at 30 June 2018[7,8,9]

Number of participants	Total	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Ever access met	223,839	94,053	52,944	27,450	9,959	26,306	4,471	7,271	1,384
Active access met	218,304	91,913	51,874	26,981	9,814	25,440	4,379	6,560	1,342
Ever with an approved plan	176,197	86,044	39,180	16,524	4,508	18,460	3,879	6,759	843
Active with an approved plan	172,333	84,594	38,564	16,229	4,415	17,751	3,821	6,141	818
Active ECEI confirmed	7,768	3,578	3,024	475	0	105	537	49	0

Committed Supports	2013-14	2014-15	2015-16	2016-17	2017-18	Beyond	Total
Committed Supports ($m)	132.8	496.8	939.3	3,237.1	7,723.1	5,669.7	18,198.9
Payments to date ($m)	86.2	370.8	703.2	2,163.3	4,921.6	3.0	8,248.2
Utilisation	65%	75%	75%	67%	64%		

Annualised committed supports	Total	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Annualised in current plans ($m)	9,899.4	5,104.3	2,197.7	1,054.4	232.5	582.7	272.8	332.1	122.9
Average annualised ($)	57,444	60,339	56,989	64,973	52,652	32,828	71,389	54,086	150,231

Heads of Agreement signed by the Commonwealth government and all State/Territory governments outline that the Scheme will be rolled out between 2017-18 and 2019-20. Bilateral agreements for transition specify the roll-out timetable. As at 30 June 2018 there were 176,197 participants that have ever had an approved plan. Including 7,768 people in the ECEI gateway, this was 76% of the bilateral agreements (excluding WA transfer participants), indicating that the roll-out of transition is behind schedule.[10] However, this still represents rapid Scheme growth over the 12 months to 30 June 2018, plans ever approved increasing by 94% from 90,638 to 176,197 and active participant numbers increasing by 92% from 89,610 to 172,333. Annualised committed supports within participant plans have increased by 111% from $4.69 billion at 30 June 2017 to $9.90 billion at 30 June 2018.

[7] There have been a low number of high cost Northern Territory participants who have entered the Scheme to date, dominated by those with shared supported accommodation arrangements in Darwin.
[8] The utilisation rate for 2017-18 is 64%. This is likely to increase over time as there is a lag between when supports are provided and when payments are made. This impacts the 2017-18 support year especially as many provider invoices may not have been prepared, processed or paid as yet.
[9] There is one participant that has a status of 'access met' but have a missing jurisdiction. This participant has been excluded from the table.
[10] The number of participants is below expectations and this is likely due to a number of reasons: the States/Territories information on existing clients may not always have been accurate in regard to potential clients; participants may not have been able to be contacted (or did not want to be phased into the Scheme); or participants did not have actual plans approved despite eligibility having been determined.

There were 172,333 active participants with an approved plan at 30 June 2018. These participants have average annualised committed supports of $57,444. Total committed supports to the end of 2018-19 was around $18.2 billion, however not all of these committed supports have been paid to participants, with utilisation rates emerging between 64% and 75% of committed supports since Scheme inception. The utilisation rate for 2017-18 is still emerging, with the ultimate projected utilisation expected to be 73%.

1.6 The participant pathway

The participant pathway is the experience that participants have from their first interaction to their ongoing engagement with the NDIS, and it is useful to consider this in the context of any actuarial modelling.

The steps in the current participant pathway at the time of writing is outlined in Figure 1.3. In summary the steps in the process are:

- Access: individuals submit an access request form in order for their eligibility to be assessed.
- Eligibility: eligibility is assessed against the eligibility criteria specified in the NDIS Act (sections 24 and 25).
- Planning and assessment: Participants develop a plan with the Local Area Coordinator and / or Agency Planner, which includes a statement of goals, a statement of needs, and a statement of supports.
- Support provision: participants engage supports in line with agreed plans.
- Review: plans are reviewed at the conclusion of each plan.

Significant work has been undertaken to refresh this participant journey, based on extensive consultation and feedback from participants, providers and other stakeholders. Figure 1.4 contains a visual summary of the proposed participant pathway. Initial pilots have been run and the pathway enhancements will be rolled out progressively across Australia from August 2018.

These enhancements include:

- Clearer links to other service systems including housing, education and health systems
- Easy to understand information provided in Easy English and multiple languages
- Stronger connections between Local Area Coordinators (LACs) and NDIA planners
- An easy-to-understand and accessible plan
- Face-to-face planning support

- Skilled planners and improved training focusing on disability awareness and cultural competency
- Better connections between participants and providers including improvements to the NDIS Provider Finder
- Improvements to systems including updates to the participant and provider portals and NDIS website

In addition, tailored pathways for different groups of participants with more specific needs, including: culturally and linguistically diverse, remote and very remote, Aboriginal and Torres Strait Islander, children aged 0-6 years, complex and people with a psychosocial disability are being developed.

Figure 1.3 Current NDIS participant pathway

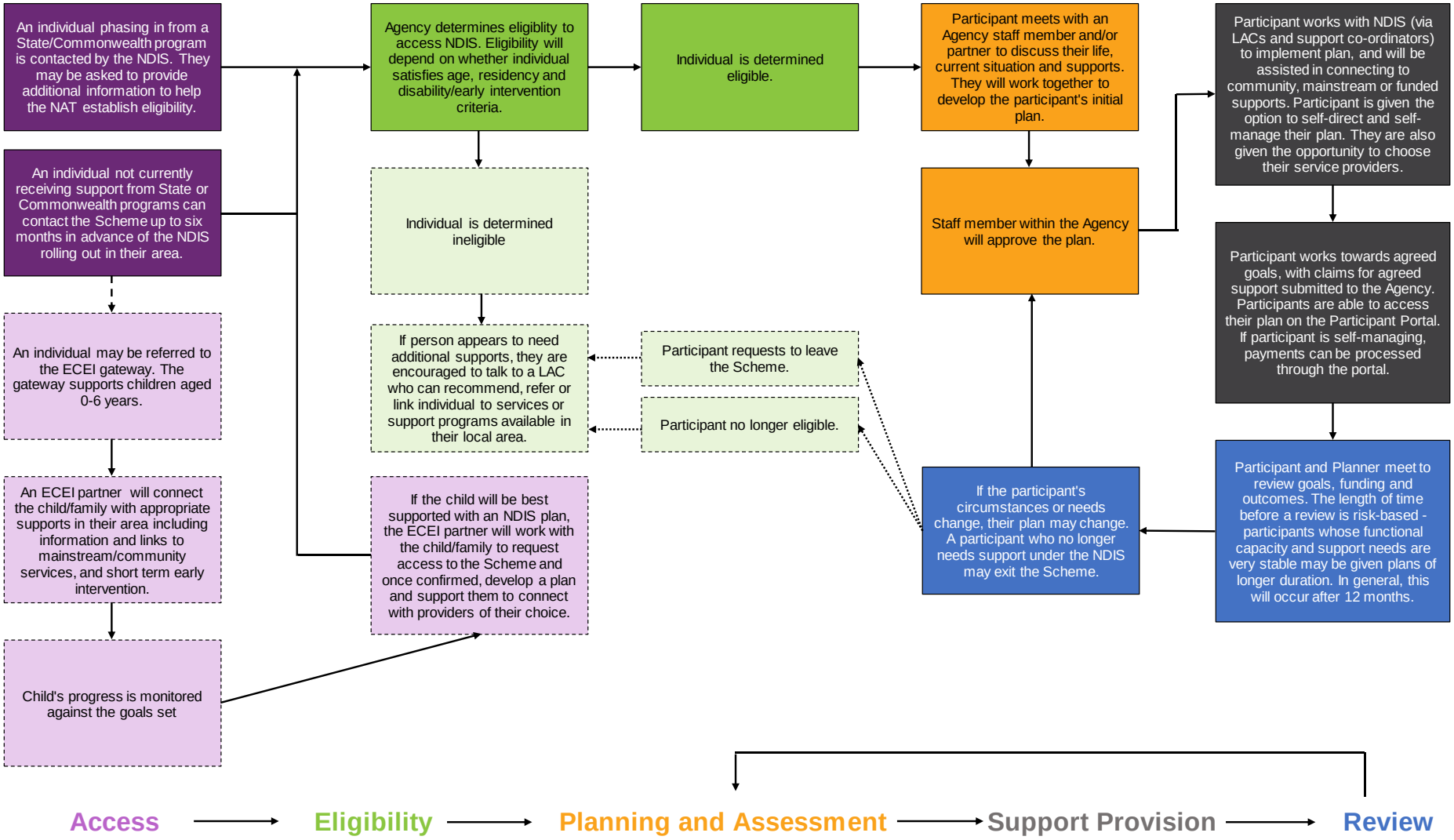
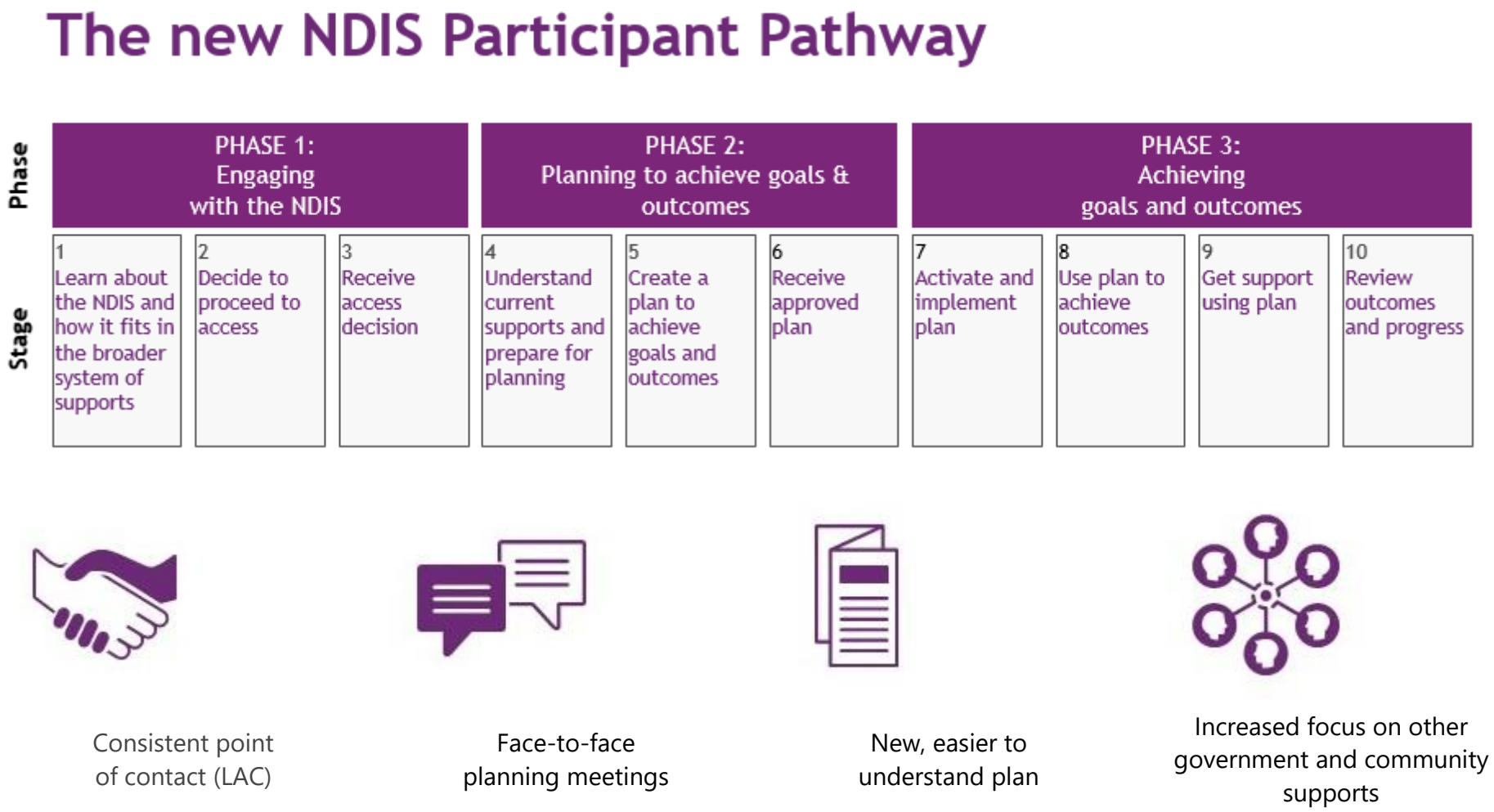


Figure 1.4 Proposed NDIS participant pathway



2. Information and data

Summary of key findings

- The NDIA currently uses SAP CRM as its case management system. The CRM is subject to a number of limitations including a design which:
  - does not easily allow for changes to meet business requirements
  - has limited business intelligence and data integrity validations
  - has limited ability to adequately capture and/or manage some aspects of information for important business processes, instead relying on manual processes.
- The Agency has a clear vision around the future direction of data management and business intelligence, and over the past year, significant progress has been made on data issues identified in the previous FSR. However, a number of new issues have emerged over the past year which place limitations on the ability to perform more meaningful actuarial trend analysis. Some of the key issues include:
  - Inability to capture accurate functional assessments and disability data
  - Inconsistent or missing data on new incidence of non-congenital disabilities
  - Lack of a robust process for capturing data on Scheme exits.
- Work is currently underway, coordinated through the Data Management Committee, to improve the consistency of data and efficiency of reporting. Key initiatives include:
  - Delivery of exception reporting via Enterprise Analytics Platforms
  - Development of an NDIS Enterprise Data Utility Framework
  - Development of the SAP HANA platform and SAS VA for regional reporting against key metrics
  - Migration of SAS Enterprise Guide users to an independent NDIS server.

This chapter provides a summary of the information available to undertake actuarial analysis and the systems from which this information is obtained.

2.1 Information systems

This report uses information from the Agency's case management system, finance system and the data warehouse. During the three years of trial, the Department of Social Services (DSS) hosted the Agency's information systems. From 1 July 2016, the Department of Human Services (DHS) has been the Agency's ICT supplier. Detailed information on the collection, storage and extraction of data for analysis can be found in Appendix C.

2.1.1 Case management systems

The design of the CRM is largely unchanged since the deployment of the Minimum Viable Product (MVP) on 1 July 2016. The primary objective of this delivery was to enable critical

operational activities, such as plan approvals and payments. The fundamental issue with this approach is that the design did not need to future-proof for known enhancements in order to meet MVP requirements.

An example of this in the current system is that it is possible to manage a plan for a participant with an individual budget, but without a major redesign, it is not possible to record the supports and referrals for a person with disability who does not have an individual budget, but could be supported in the ECEI gateway or by a local area coordinator. In 2017-18, the ICT program implemented a number of “change requests”, addressing specific deficits in the CRM design, however further changes are required. Further, there is limited business intelligence or data integrity validations in the system. System enhancements should consider these business intelligence requirements.

Currently, there are a number of areas where the CRM is unable to adequately capture and/or manage information for important business processes. Manual processes have had to be developed in lieu of an appropriate CRM solution, and these do not always have the appropriate risk management or governance structures to ensure the reliability of the data. The key areas impacted include:

- **Management of in-kind supports** - The ICT business system has limited capacity to adequately capture and manage information on in-kind services. Data on in-kind programs is therefore collected using off-system manual data collection tools. In-kind supports are not always entered into participant plans and there can be limited information on which participants are receiving in-kind services, meaning that supports cannot always be matched to individual participants. Furthermore, there are many examples of where there is a known difference between the NDIS benchmark price and the in-kind agreed draw down unit cost, requiring an adjustment to be made to the committed supports in a participant’s plan.

- **Delivery of capital supports** - The Agency’s current capital supports (assistive technology and home modifications) service delivery operating model is lengthy, resulting in significant delays for participants in accessing supports. Consequently, participant plans may be understating the amount of committed supports required and/or utilised. A project is underway to assess the feasibility of changing the operational delivery mechanism for capital supports.

- **Implementation of compensation recovery policies** - The current ICT system has limited capability to identify, manage and monitor compensation reduction amounts (CRAs) in participant plans. The Agency is currently relying on manual data matching with other injury support schemes in Australia to identify mutual participants. Thus, there is currently uncertainty around the materiality of these compensation amounts and the ability of the NDIS to recover compensation amounts.

2.1.2 Finance systems

SAP Finance is the Agency finance system. All payments to and from the Agency are made using SAP Finance. In line with DHS practice, the Agency commenced the use of SAP PSCD as an intermediary between the case management system and SAP Finance from 1 July 2016. This process appears to be working well. A reconciliation of financial information at 30 June 2018 is shown in Appendix D.

2.1.3 Data warehouse

There have been continuous improvements to the data warehouse over the last 12 months. Improved databases and analytical tools allow the actuarial team to monitor, analyse and provide operational support to the NDIA, and work more closely with Operations to understand experience, and also allow this monitoring to occur in a more timely way. A number of projects are underway to address any emerging issues on data quality[11], and these should continue as a priority in 2018-19.

2.2 Data available for analysis

The detailed actuarial analysis for this report is primarily based on data at 30 June 2018. Table 2.1 summarises the data available in the current systems for actuarial analysis. The use of this data and information in the context of the actuarial control cycle is included in Appendix B.

Table 2.1 Summary of data available for actuarial analysis

Data	Description
Access requests to the NDIS	• Demographic information (age, gender, disability, indigenous status, CALD status) • Contact details • Access request date • Outcome of request (for example: eligible, ineligible)

[11] For example, there are opportunities to improve the data quality of participant information on rural and remote area location, culturally and linguistically diverse participants and the capture of annualised committed supports for plans which end prior to their plan end date. The data quality of these variables are important for internal and external reporting, although they should not limit the effectiveness of the analysis in this report.

Data	Description
NDIS participant plans	• Plan approval date • All supports included in the plan, cost of the supports • Length of plan • Participant goals • Mainstream and informal supports • Reference package and typical support package • Total committed support
Payments to service providers	• Service provider submitting the claim for payment • Participant for whom the support was provided • The support item provided • Cost of support provided • Dates of when the support was provided
Payments to participants	• Participant submitting the claim for payment • The support category provided • Total cost spend on support category • Period of reimbursement
Data on level of function	• Since 1 July 2016 information on level of function should be available for all participants, however in some cases a default value has been assigned in CRM. The full extent of this is not currently identifiable, although work is ongoing to improve the data. As at 30 June 2018, it is estimated that 4% of participants that have ever had an approved plan have a missing or default level of function. In addition, the tool used is not always the preferred one, for example there is extensive use of the WHODAS tool, and there is some evidence that the quality of these assessments are less robust than the preferred tools.
Guided planning questionnaire	• The guided planning questionnaire collects data across eight domains: daily activities, social participation, consumables, transport, support co-ordination, assistive technology, home modifications, and capacity building. At 30 June 2018, 81% of active participants have information collected through the guided planning process.
Data on outcomes	• At 30 June 2016, 23,461 Short-Form Outcomes Framework (SFOF) questionnaires had been completed by trial participants: 13,082 for participants and 10,379 for their family/carers. For participants entering the Scheme from 1 July 2016, this information has been collected from about 99% of all participants, with the intention of collecting information on all participants.
Data provided by the State/Territory and Commonwealth governments	• List of clients receiving support from service providers in the existing disability system, including age and contact details. This data is loaded into the CRM for the National Access Team to contact potential participants. • Projected Scheme costs and numbers from the State, Territory and Commonwealth bilateral agreements.

Data	Description
ABS population projections	• 3222.0 Population Projections, Australia, 2012 (base) to 2101 (Series B).
Financial information	• Data from the SAP CRM system were reconciled with financial information in SAP.
Epidemiological data	• New incidence, prevalence and relative risk mortality on a range of disabilities, from accident compensation schemes, and the Australian Institute of Health and Welfare Burden of Disease Study.
ABS Survey of Disability, Ageing and Carers	• Prevalence of disability in Australia, including demographic and socio-economic profile of people with disabilities.
Commonwealth aged care data	• Information on entry to residential aged care was used to inform projections of participants remaining in the Scheme past the age of 65 years.
Productivity Commission costings	• The 2011 Productivity Commission costings of the Scheme. This was based on the 2009 ABS Survey of Disability, Ageing and Carers, and the cost of supports from accident compensation schemes, and State/Territory disability systems.

2.3 Data integrity

In the past year, significant progress has been made on the data issues identified in the previous FSR. However, as the Scheme matures, a number of new data integrity issues and limitations of the current ICT business system have emerged. These will have a direct impact on assessing financial sustainability of the Scheme for this review, and are expanded on in the table below.

The most material data integrity issues are highlighted in Table 2.2. Some of these issues relate to limitations in the ICT system (issues 8 and 9), some relate to process issues (issues 1, 2, 3, 6 and 7), and others relate to both (issues 4 and 5).

These issues are not expected to influence the conclusions and analysis contained within this FSR. However, they do place limitations on the ability to perform more meaningful actuarial trend analysis. In particular, the lack of credible independent functional assessment information limits the ability to perform meaningful analysis using the reference package framework and guided planning approach.

A focus on these issues over the coming year would improve the overall level of data quality available for analysis. Further information on the Agency's commitment to data management can be found in Appendix C.

Table 2.2 Summary of data integrity issues

Issue	Description
1. Level of function and disability (Section 4.3)	The following issues will impact analysis of long term participant distributions. • The functional assessment tool used to determine a participant's level of function is required to be recorded in the CRM for all participants. Where a functional assessment tool is not available or has not been used to assess a participant's level of function, a default value for level of function is recorded in the CRM. Data issues (including missing tool information) make it difficult to identify which participants have a default value. • There has been a high degree of usage of the generic WHODAS 2.0 functional assessment tool, rather than preferred disability-specific functional assessments. The WHODAS 2.0 is more susceptible to gaming. • A review of participant records, conducted by the Agency's Compliance and Assurance team during 2017-18, has indicated concerns with the collection of level of function and disability data. In particular, a recurring issue with the reviewed records was the lack of quality documentation.
2. New incidence (Section 3.3.2)	Data collected on the date that a disability was acquired is more often incomplete than complete, even for participants with non-congenital disabilities. Furthermore, the date recorded was often very recent. This may indicate that the field may sometimes be used to record the date of most recent diagnosis, rather than the date a condition was acquired. This has implications on the ability to analyse new incidence of non-congenital disabilities into the Scheme.
3. Exits (Section 3.3.1)	Exits are identified through merging multiple data sources, including the use of staff inboxes for participants who have exited the Scheme. This process, rather than being fully captured in the participant pathway variables, introduces additional data risk and impacts the accuracy of recording exit dates and sources. The lack of data capture on the reason for exit also limits the use of the information.

Issue	Description
4. Committed Supports (Section 4.2)	The follow issues impact analysis of committed support sizes. • Reviews of samples of participant plans during 2017-18 has revealed that approximately 20% of plans with very high inflation during early transition months were impacted by errors in plans. • Provider quotes are put into a plan sometime after the plan has been approved and this quote may be higher than the amount of supports included in a participant's plan. Thus, average sizes, particularly for more recent plans, may be biased downwards. • Pro-rating issues where plan amounts are not adjusted to the plan duration. This primarily occurs when a plan is reviewed before its original end date and a new plan approved. Where the new plan has a disproportionate amount of funding compared with the plan length, this leads to large apparent increases on an annualised basis. The number of plans with this issue has reduced significantly since June 2017 as a result of an ICT system fix.[12] • In late June 2018, the CRM functionality was changed to allow planners to perform "light touch" plan reviews. Initial analysis has been impacted by a lack of visibility of these reviews in the CRM which makes data validation difficult. While this is not a material issue at the moment, it may become a bigger issue over coming months.
5. Payments (Section 4.5.3)	A number of payments have been identified where the unit price and quantity appear to be reversed (e.g. unit price entered as $2 and a quantity set to the unit price). A subset of this issue is where the unit price is set to $1 and a quantity set to the total payment amount. This limits the types of future payment analysis that may be undertaken.
6. Typical Support Packages (TSPs) (Section 4.4)	The following issues impact analysis of average TSP sizes: • There is evidence that participants and/or Agency staff have been changing how to respond to the guided planning questions, such that the process is not being conducted with its original intention. • A number of manual adjustments are currently being made to TSPs as a result of changes to the guided planning questions. In particular, School Leaver Employment Supports and assistive technology support items (which are pre-populated in plans and not in TSPs) are manually added into TSPs. Issues with the accuracy of the dataset recording guided planning response will affect the accuracy of this adjustment.

[12] As at 30 June 2018, this has resulted in a downward adjustment of $235 million to account for plans being ended early and committed support not pro-rated downwards to reflect the shorter plan length. The adjustment has been made to 8,994 plans.

Issue	Description
7. SSA (Section 3.4 and 4.5.5)	Participants in SSA are currently identified using a combination of whether a participant is receiving an SSA line item in their plan, or have been allocated to an SSA funding cohort. A number of participants do not have the SSA line item recorded in their plan, meaning the proportion of SSA participants in the Scheme may be understated. This will impact the view of SSA participants at Steady Intake, and the distribution of these participants.
8. ECEI	The ICT system is unable to manage the Early Childhood Early Intervention (ECEI) gateway adequately.
9. In-kind (Section 4.6.6)	There are over 50 individual in-kind State/Territory or Commonwealth programs in place as at 30 June 2018 and over $1 billion in in-kind supports was provided for in 2017-18. The information supporting in-kind arrangements are generally captured using an off-system in-kind reconciliation process. This process is largely manual and is very time consuming. The governance arrangements and data quality around supports provided on an in-kind basis are poor.

3. Participant numbers

Summary of key findings

- As at 30 June 2018 there were 176,197 participants that have had an approved plan in the Scheme, of which 172,333 remain active participants. This is equivalent to just over a third of the expected Steady Intake population.
- The number of approved plans represents about 76% of the 2017-18 bilateral estimate, including participants in the ECEI gateway, meaning there is increasing pressure on the ability of the Scheme to meet the bilateral rollout targets.
- The profile of active participants has been influenced by phasing patterns, especially as specific State/Territory programs or specific age groups are phased-in, meaning a bias towards younger participants, lower functioning participants, participants in shared supported accommodation arrangements and participants with autism, developmental delay and intellectual disability.
- An experience-based model has been used to project participant numbers after making allowance for known phase-in biases within the transition schedules.
    - Steady Intake participant estimates remain consistent with the previous FSR (at 2.1% of the 0 to 64 population), although the slower than expected participant intake means the Scheme is not anticipated to reach Steady Intake until 2023 (478,000 participants aged 0 to 64), which is equivalent to 2020 in the previous FSR (458,000 participants aged 0 to 64).
    - Projections after 2022-23 suggest higher numbers of participants compared to the previous FSR, primarily higher number of participants with autism.
    - Separate projections for participants with developmental delay and for those in shared supported accommodation have been undertaken to reflect the very different characteristics of these participants.
- The main items of experience to date are:
    - more children than expected
    - more lower functioning participants than expected
    - lower numbers of adults than expected
    - slower entry of new participants into the Scheme than expected
    - significantly lower early intervention autism exits than expected
    - fewer exits from younger participants than expected
    - higher exits from adult participants than expected
    - higher prevalence for those of school leaving age than expected
    - higher prevalence for those with a sensory disability than expected
    - lower prevalence for those with a psychosocial disability than expected

3.1 Participant projections to Steady Intake

For this report, “Steady Intake” has been defined as the point in time where new entrants into the Scheme primarily represent participants with new incidence of disability, as opposed to participants transferring into the Scheme with existing disabilities, whether or not they are currently receiving government disability services. This is different from Full Scheme, which is when the NDIS is operational in all areas of Australia.

The approach taken to project participant numbers over the transition period to Steady Intake considers the patterns of participant entry into the Scheme for the more developed regions or cohorts of the Scheme. Traditional actuarial methods are useful in this regard, with two separate estimation methods used.

First, a standard actuarial chain ladder methodology has been used whereby participant intake patterns are considered by phasing quarter. The assumption for the actuarial chain ladder method is that participants enter the Scheme from the phasing quarter in a consistent manner over time.

Secondly, a propensity methodology has been used which assumes that a predictable proportion of the expected benchmark Steady Intake population in each phasing region enters the Scheme over time from the date of phasing.

The previous FSR assumed that the Steady Intake population will be reached by 30 June 2020, however emerging experience suggests that this is unlikely to occur based on existing participant intake patterns. This experience may be a reflection of delays in the processing of eligibility decisions for new participants, delays in the development of initial plans for eligible participants[13] or from barriers of entry into the Scheme[14].

3.1.1 Rate of participant intake from phasing date

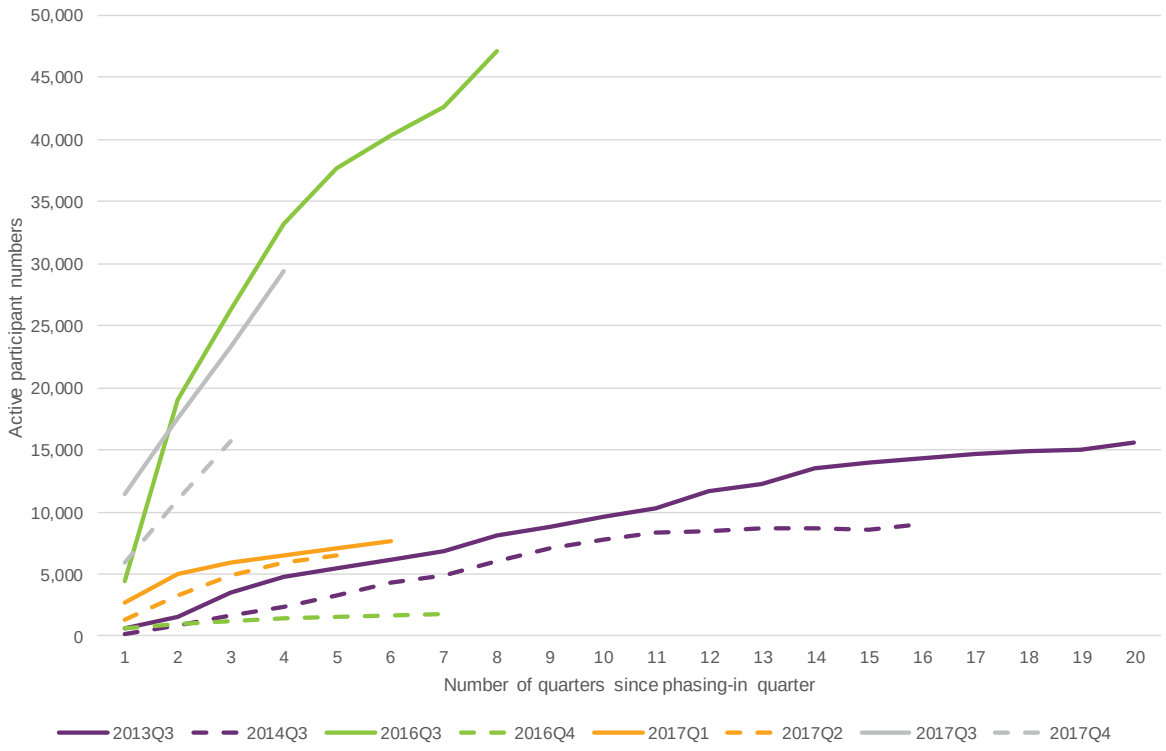
The bilateral agreements for each State/Territory contains an estimate of participant intake into the Scheme by quarter. Some of these bilateral agreements also include additional information on the phasing patterns for different regions, age groups and disability programs. In particular, the estimated participant intake is generally split between existing State/Territory clients, existing Commonwealth clients and expected “New” clients. This information can be used in conjunction with the emerging Scheme participant intake

[13] There were 37,540 people who have been assessed as eligible to enter the Scheme in a region that has begun phasing-in, but who were awaiting a plan as at 30 June 2018.
[14] Some potential participants may take time to approach the Scheme. Barriers to entry may include participants not being aware of their eligibility for the Scheme or participants not being familiar with the NDIS phasing implementation patterns. There are also particular barriers for participants with mental health conditions, particularly those with a psychosocial disability, who may not feel comfortable approaching the Scheme for an eligibility assessment.

experience to form an expectation on the number of participants entering the Scheme over time, assuming that future experience is reflective of prior experience.

Figure 3.1 shows the participant intake by phase-in quarter. These development curves show the number of active participants aged 0 to 64 in the Scheme at any point in time. Thus, the curve will increase over development time for new participants entering into the Scheme and will reduce for participants exiting the Scheme or turning age 65.

Figure 3.1 Participant intake since phase date[15]



These development curves illustrate a number of insights:

- The participant intake patterns for the trial sites (purple lines) are very different to those for the transition sites, reflecting the very different phase-in timetables and approaches for the trial period.
- The unbroken purple line shows the development of the 2013Q3 trial sites of Hunter and Barwon. The participant population in these regions continues to increase, despite being the first sites to phase in participants. However, the phasing pattern of these participants were such that State/Territory clients were expected to be phased

[15] Excludes regions which have phased participants in by age (for example, South Australia, Tasmania, Nepean Blue Mountains and Townsville), as these sites would bias these development charts and any chain ladder analysis.

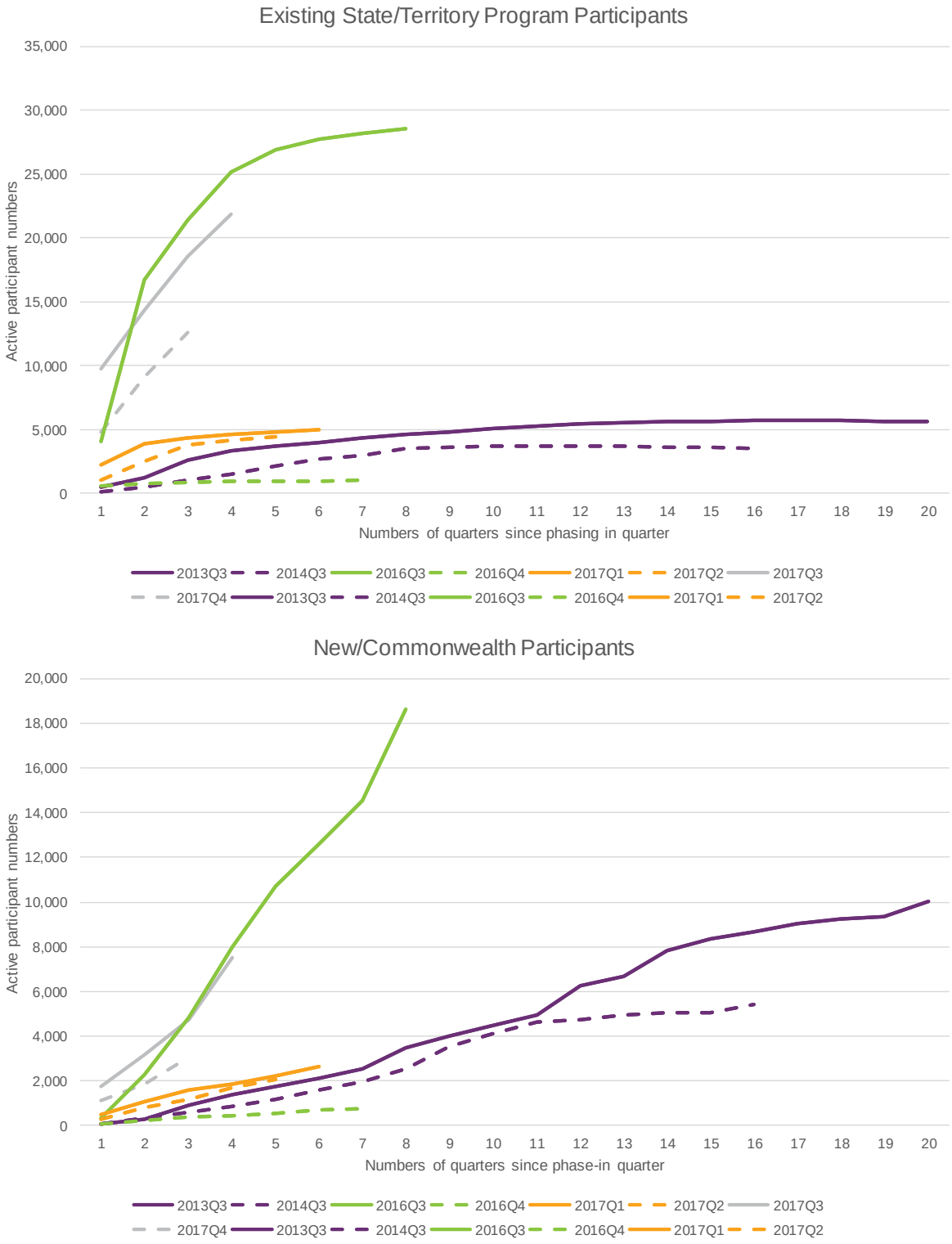
in over an extended period of twelve development quarters[16]. Thus, the development patterns for this phasing cohort are unlikely to be representative of future phasing experience for the transition sites.

- The broken purple line shows the development of the 2014Q3 trial sites of ACT, NT Barkly and WA Perth Hills. The participant population has stabilised after a period of 3 years[17], experiencing a more rapid phase-in than the 2013Q3 cohort. Much of this experience is in respect of the ACT and may reflect ACT's recent focus on assessing continued eligibility of participants into the Scheme on plan review for certain cohorts. There have been many participants exiting the Scheme, especially for those with developmental delay, as more fully described in Section 3.3.1.
- The unbroken green line shows the development of the 2016Q3 transition sites which are primarily NSW transition regions[18], and also contains Victoria's North East Melbourne region. The participant population is still increasing, although at a much slower rate in quarters five to seven. The experience is still subject to some irregularity, as seen in the most recent quarter, where there has been a large number of participants entering the Scheme, perhaps reflective of an operational focus of entering participants into the Scheme prior to financial year end.

The participant phase-in patterns are also very different for the existing State/Territory clients compared with Commonwealth and New[19] participants. This primarily reflects the phase-in arrangements contained within the bilateral agreements, where existing State/Territory clients are generally phased in earlier than other participants. This different rate of participant intake is shown in Figure 3.2.

[16] Barwon phased-in over an 18 month period, while Hunter phased-in over a three year period.
[17] There was an uptick in plan approvals in the June 2018 quarter. This has been because of historic backlogs in the number of eligibility assessment decisions being made in the ACT. There were about 800 potential participants awaiting eligibility assessment decisions in the ACT at the end of March 2018. This has reduced to only about 200 as at 30 June 2018, with a proportion of these receiving approved plans. Additionally, WA was out of the national Scheme for a period of time, and then moved back into the national Scheme, and this has had an impact on who has joined, and when.
[18] The Commonwealth and New participant intake in these regions was limited until relatively recently, so these numbers may increase again.
[19] New participants refer to those participants who were not part of existing State/Territory programs or Commonwealth programs.

Figure 3.2 Participant intake since phase date by cohort



These charts make it much clearer that participants entering into the Scheme from existing State/Territory programs phase-in much faster than New/Commonwealth participants. In particular, for the 2016Q3 transition sites (unbroken green lines), there is little development

occurring for existing State/Territory clients, while experience for the New/Commonwealth participants is showing no signs of stabilising.

The trial site experience also shows that the number of New/Commonwealth participants is exceeding the number of State/Territory clients, in some cases by a significant margin.

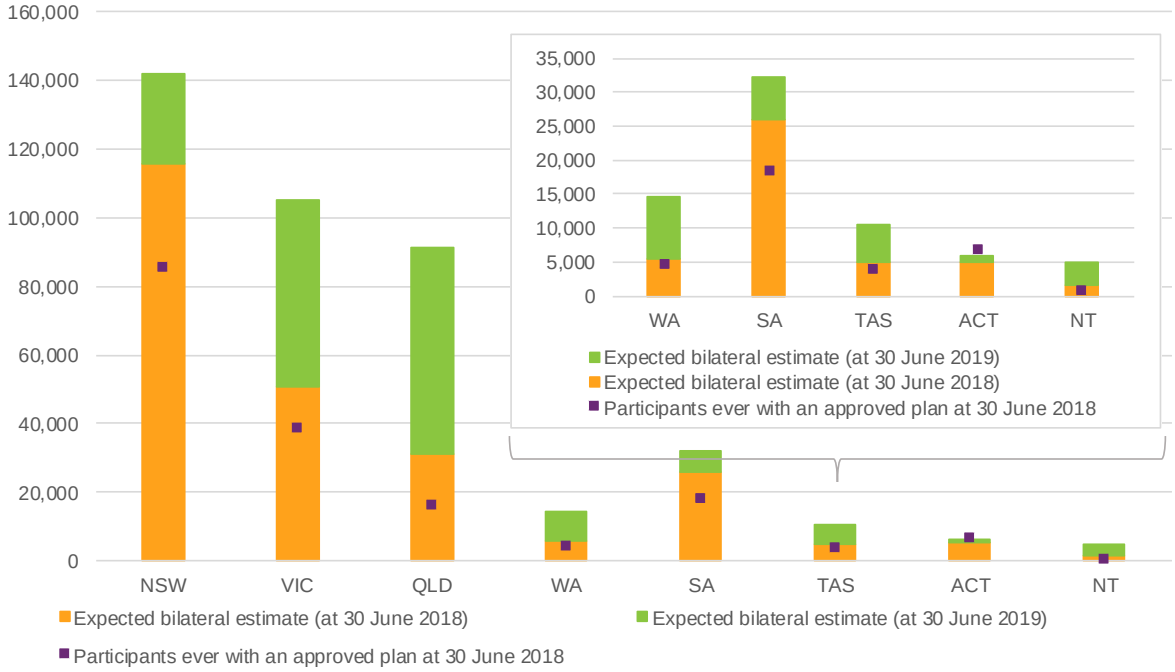
3.1.2 Phasing relative to the bilateral agreements

The bilateral agreements indicate that the majority of Scheme participants are expected to be in the Scheme by 30 June 2019[20], with the phasing schedule varying by State/Territory and region. Figure 3.3 shows the number of active participants with an approved plan compared with the 2017-18 and 2018-19 bilateral estimates. Overall, the number of approved plans represents 76% of the 2017-18 bilateral estimate, after including 7,768 participants in the Early Childhood Early Intervention gateway, however this percentage varies by State/Territory.

Most jurisdictions have been phasing-in much slower than expected, whilst the Australian Capital Territory is over 100% of their bilateral estimate at 30 June 2018. Separate monitoring has shown that the number of "eligible" participants is tracking closer to what is expected within the bilateral agreements, with 37,540 participants awaiting a plan as at 30 June 2018[21], suggesting that there have been delays in the approval of plans. This also supports a slower phasing of participants into the Scheme as outlined in Section 3.1.4.

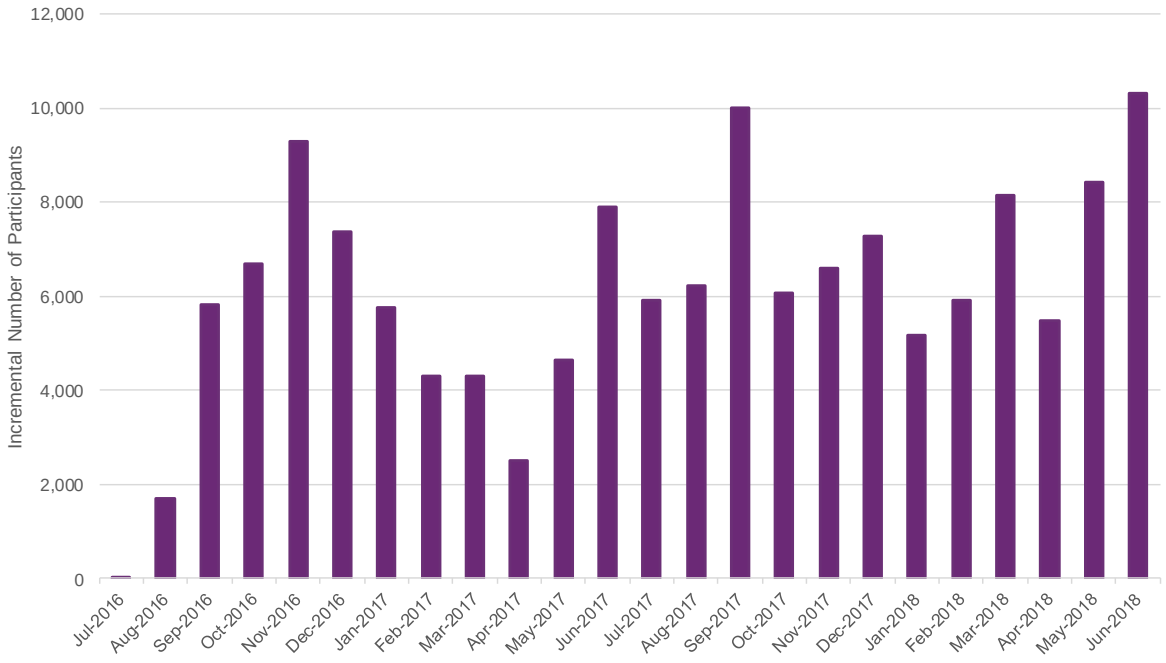
[20] Western Australian recently signed a bilateral agreement which means that existing clients of government disability services in Western Australia are expected to phase in by 30 June 2020.
[21] This number relates to regions that have begun phasing into the Scheme at 30 June 2018

Figure 3.3 Scheme participants compared to phasing schedule



In the weeks just preceding 30 June 2018, there was a focus on reaching the bilateral targets, with close to 50% more plans being approved in June 2018 compared with the two months prior (Figure 3.4).

Figure 3.4 Number of plan approvals each month



3.1.3 Benchmark participants using ABS Census data

To estimate expected participant numbers in regions that are yet to begin phasing into the Scheme, a suitable benchmark is required in lieu of actual experience. Demographic information by region, such as the population distribution by age can be used as a starting point.

The expected prevalence can be further informed using the National ABS Census Need for Assistance information. This gives a better benchmark for the expected prevalence by region, as it allows for demographic differences in the prevalence of disabilities within regions. The “Need for Assistance” variable has therefore been used to get the relativities by region, as opposed to informing aggregate Scheme numbers. The phase-in patterns assumed in Section 3.1.1 can then be used to estimate participant intake by future reporting quarter.

3.1.4 Projected participant numbers using expected phasing date

The development patterns assumed from the analysis in Section 3.1.1, combined with the benchmark population estimates by regions yet to phase-in from Section 3.1.3 have been used to project the number of participants in the Scheme, and using the current starting phasing-in dates contained in the State/Territory bilateral agreements.

The actuarial chain ladder methodology has been used to project participant intake for those regions which are in the process of phasing-in. The propensity method has been used for those regions which are yet to have phased-in. Those regions that are phasing-in the most recent quarter have used a blend of the two methods. Separate projections have been made for State/Territory participants and Commonwealth/New participants as a check on results.

The calibration of these actuarial models has required a degree of subjective judgement. The main areas of uncertainty in this parameterisation arise from inconsistency within the experience (for example, the different phasing-in experience of the different regions) and the limited relevant experience for development periods greater than 2 years after phasing-in dates. In effect, a decay rate has been used to project participant numbers for these later development periods.

Table 3.1 shows the projected number of active participants aged 0 to 64 for those regions that have phased-in to date, excluding those regions that have phased-in by age (i.e. South Australia, Tasmania, Nepean Blue Mountains and Townsville).

Table 3.1 Projection results by phasing quarter (ages 0 to 64 only)[22]

Phasing Quarter	Reported To Date	Future Reported	Total by Phasing Qtr	Projected Prevalence	Previous FSR Prevalence	Difference Prevalence
2013Q3	15,641	908	16,549	2.65%	2.71%	-0.06%
2014Q3	9,005	1,224	10,229	2.52%	1.84%	0.68%
2016Q3	47,181	25,048	72,229	1.84%	2.05%	-0.20%
2016Q4	1,791	1,105	2,896	1.84%	1.85%	-0.01%
2017Q1	7,637	5,444	13,081	1.60%	1.97%	-0.37%
2017Q2	6,531	5,484	12,015	2.55%	2.99%	-0.43%
2017Q3	29,386	31,338	60,724	2.20%	1.93%	0.27%
2017Q4	15,684	24,403	40,087	2.62%	1.95%	0.67%
2018Q1	1,900	4,728	6,628	1.92%	2.38%	-0.46%
2018Q2	1,728	13,908	15,636	1.43%	1.56%	-0.14%
Total	136,484	113,591	250,075	2.06%	2.03%	0.03%

The projection basis assumes that there will be a further 6% increase in active participant numbers aged 0 to 64 for the first trial sites in 2013, noting that about 4% entered the Scheme in the second quarter of the 2018 calendar year (Figure 3.1). Further, the projection basis assumes that there will be a further 14% increase in active participant numbers aged 0 to 64 for the trial sites which started in the third quarter of 2014, noting that about 5% entered the Scheme in the second quarter of 2018.

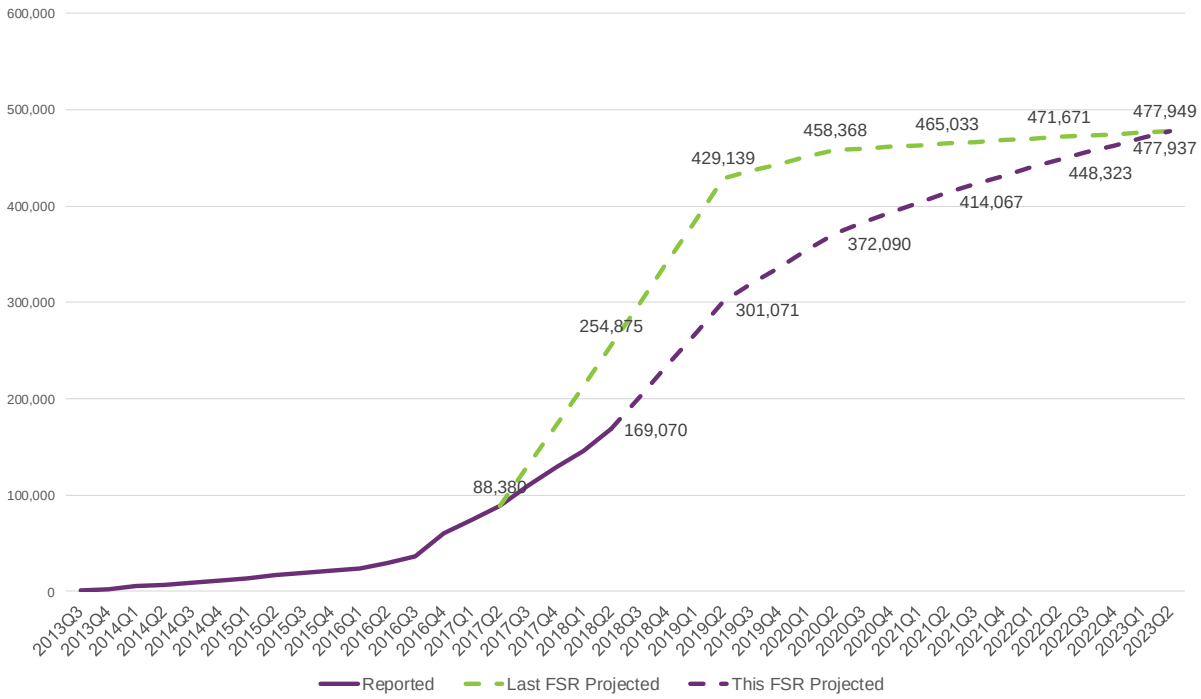
The results of the projection are very close to the previous FSR prevalence benchmark (which is in line with the Productivity Commission estimates for under 65 year olds), although the results vary by phasing quarter and region, albeit the Scheme participant intake pattern occurs over a longer time. For the purposes of this FSR it has been assumed that Steady Intake will be reached at 30 June 2023, with the prevalence adopted for ages 0 to 64 the same as was assumed at the previous FSR.

The slower participant intake is particularly due to the slower numbers of new participants approaching the Scheme. This has significant implications for Scheme cost in the shorter term, with lower numbers of participants, and hence Scheme costs, than projected in the previous FSR prior to 2022-23, all else being equal. For example, the projected Scheme population at 30 June 2020 under the above approach is around 370,000 compared to the 460,000 projected in the previous FSR.

Figure 3.5 shows the results of these projections. The analysis suggests that the expected Steady Intake population of 2.1% of the total Australian population aged 0 to 64 remains appropriate.

[22] Expected prevalence here is defined as the Scheme prevalence from the previous FSR, scaled to phase-in region using the ABS Census Need for Assistance regional information.

Figure 3.5 Participant intake – actual and expected by reporting quarter (0 to 64)



Appendix E contains a more detailed summary of the projected and expected prevalence by region, both for those regions that have begun phasing-in, and for those where phasing-in is yet to begin.

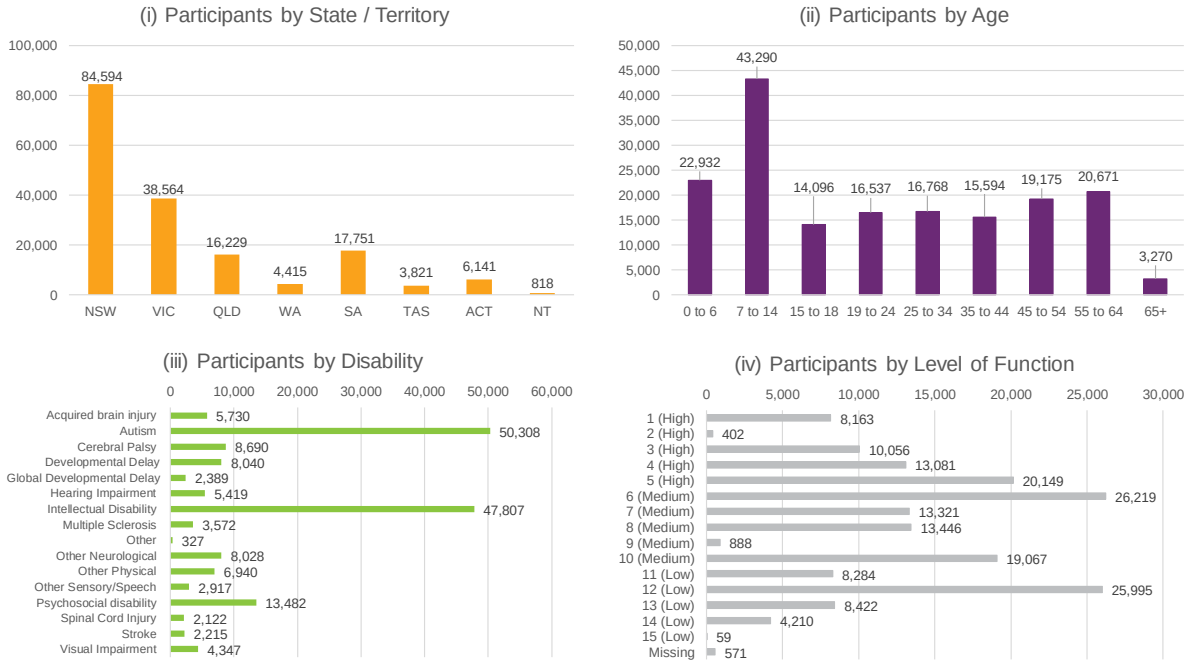
3.2 Participant characteristics at Steady Intake

Section 3.1 analysed the expected number of participants in the Scheme in aggregate. This section looks at the distribution of those participants by risk characteristic. The risk characteristics analysed reflect differences in cost, new incidence rates and/or exit rates that may be expected. The risk characteristics adopted include age, primary disability type, level of function, gender and whether a participant is in shared supported accommodation arrangements. Separate cost, new incidence and exit assumptions have been developed for each of these characteristics.

3.2.1 Profile of current participants

There were 172,333 active participants in the Scheme as at 30 June 2018. Figure 3.6 shows the distribution of participants in the Scheme by a number of different characteristics including State/Territory, age band, disability type and level of function.

Figure 3.6 Scheme participant characteristics as at 30 June 2018



Key observations from this experience are:

- The majority of participants are from New South Wales (49%), followed by Victoria (22%), South Australia (10%), Queensland (9%) and the Australian Capital Territory (4%).
- The distribution of participants by age band is skewed towards children under the age of 14. While part of this relates to the phasing-in schedule of the State/Territory bilateral agreements (where regions such as South Australia, Tasmania, Nepean Blue Mountains and Townsville have phased in children earlier), part of this appears to be genuine experience in that there have been more children assessed as eligible for the Scheme than expected. Section 3.2.3 considers this experience further.
- The distribution by disability type has seen high levels of children with autism, developmental delay and intellectual disability in the Scheme. Some of this has been influenced by the high numbers of children entering the Scheme.
- The distribution of participants by level of function is varied and primarily reflects the results of the specific disability assessment tools and the mapping of the results to the fifteen level of function categories.[23] There are some concerns around the data

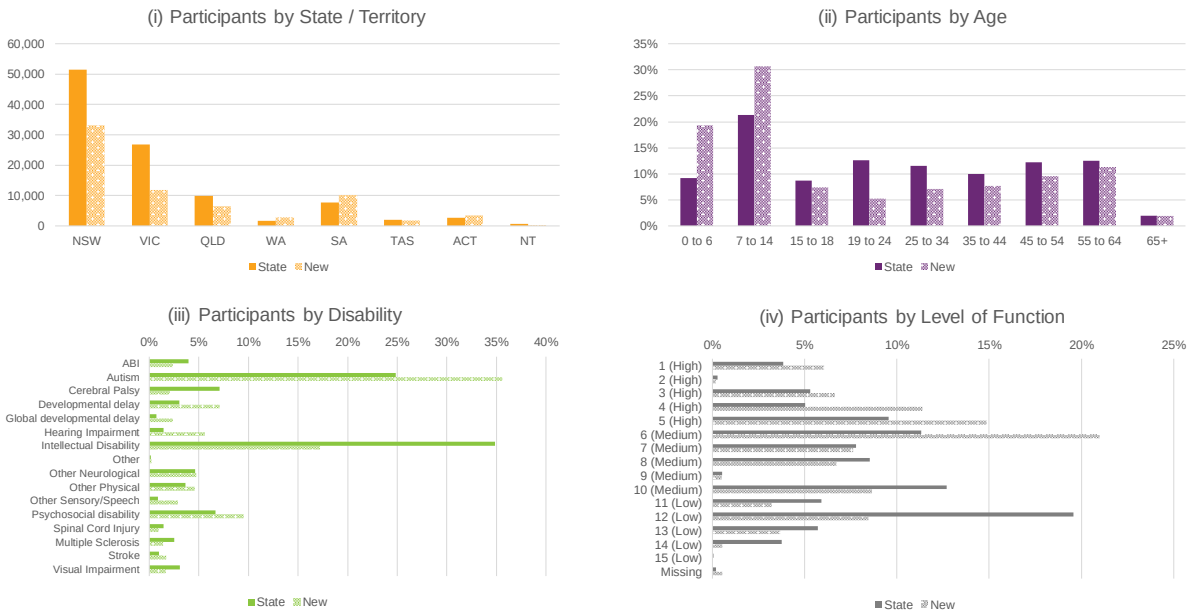
[23] For example, the disability assessment tool commonly used for intellectual disability is the DSM-V. This results in four different levels of function which correspond to levels 5, 7, 11 and 13 on the 15 point scale. Furthermore, almost 50% of participants are using the WHODAS 2.0, which accounts for the large number of participants with a level of function of 3, 6, 8, 10 or 12.

quality of the participant functional assessments, with evidence of lower functional assessments than justified (see Table 2.2 for more details).

3.2.2 Expected profile of participants yet to enter the Scheme

It would not be appropriate to assume that the risk characteristics of current participants reflects the distribution of risk characteristics of participants yet to enter the Scheme. In particular, the characteristics of existing State/Territory client programs ("State participants") typically have a lower average level of function than Commonwealth program participants and new participants ("New/Commonwealth participants"). Additionally, a higher proportion of existing State participants have transitioned to the NDIS compared to New/Commonwealth participants. The distribution of risk characteristics for State participants and New/Commonwealth participants is shown in Figure 3.7 below.

Figure 3.7 Scheme participant characteristics as at 30 June 2018 (State/New)



The ACT, Hunter and Barwon are the most mature regions and the risk characteristics of these regions have been used as a benchmark assumption to determine the risk characteristics of participants yet to enter the Scheme. The experience of these benchmark regions has been summarised by age, primary disability and level of function. This has been done separately for State participants and New/Commonwealth participants.

For the purposes of projecting the profile of Steady Intake participants, the existing participant profile has been supplemented with future participants split between State participants and New/Commonwealth participants and using the benchmark assumptions of the ACT, Hunter and Barwon. This has been calculated separately for each State/Territory to allow for the different expected phasing patterns of these jurisdictions and the different proportions of State participants compared to New/Commonwealth participants.

Table 3.2 shows the existing and projected participants split between State and New/Commonwealth participants. The basis for this split has generally used the information contained in the State/Territory bilateral agreements[24]. This means that the ACT distribution reflects the current participant population, the NSW distribution reflects the expectation that a higher proportion of future participants will be New/Commonwealth participants and Victoria a higher proportion of State participants.

Table 3.2 Profile of current and future participants to Steady Intake[25]

State / Territory	Existing State	Existing New/CW	Total	Existing %State	Future State	Future New/CW	Total	Future %State
NSW	50,349	32,253	82,602	61%	14,284	52,995	67,279	21%
VIC	26,275	11,389	37,664	70%	37,014	34,083	71,097	52%
QLD	9,662	6,281	15,943	61%	38,090	42,710	80,800	47%
ACT	2,481	3,375	5,856	42%	0	0	0	0%
WA	1,666	2,570	4,236	39%	23,999	19,706	43,705	55%
SA	7,506	9,939	17,445	43%	9,134	7,694	16,828	54%
NT	552	254	806	68%	2,640	1,709	4,349	61%
TAS	2,000	1,794	3,794	53%	2,277	5,318	7,595	30%
Total	**100,491**	**67,855**	**168,346**	**60%**	**127,438**	**164,216**	**291,654**	**44%**

It has not been possible to use this approach for South Australia and Tasmania, which have phased in by age groups. In addition, the Northern Territory experience is not developed enough to use this method. The Steady Intake population distribution for these State/Territories therefore assume a distribution similar to the rest of Australia.

A comparison of the total existing participants (excluding ECEI) to the bilateral estimates at 30 June 2018 shows that the number of State/Territory participants is about 66% of the bilateral estimate at that date, while the number of New/Commonwealth participants in the Scheme is about 82% of the bilateral estimate. At Steady Intake, the comparison of projected participants to bilateral estimates is 88% and 115% respectively for State/Territory and New/Commonwealth participants, with the difference to 100% representing the adjustment of 15,000 for both NSW and Victoria as per footnote 24, which reflects emerging experience.

[24] An adjustment of 15,000 additional New/Commonwealth and 15,000 less State participants has been made for both NSW and Victoria. In the case of NSW, this reflects the emerging experience more closely. In the case of Victoria, this reflects the very high number of State participants assumed to phase in compared to New/Commonwealth participants. An unadjusted use of the benchmark assumption for participants yet to enter the Scheme would result in a participant profile that was biased towards lower functioning participants compared to other State/Territories.

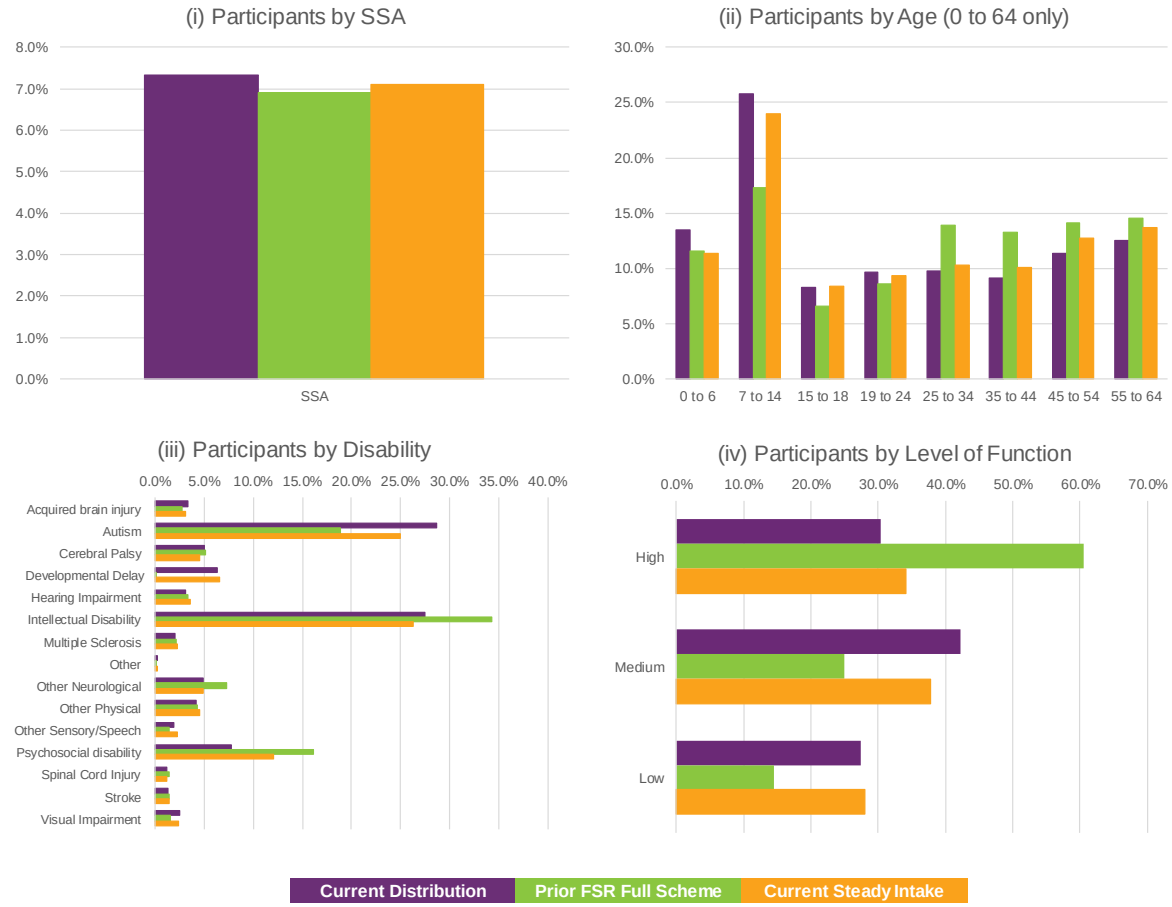
[25] These numbers are higher than the numbers in Table 3.1 because they include regions that have phased in by age, for example South Australia, Tasmania, Nepean Blue Mountains and Townsville. The “existing total” is lower than the 169,070 in Figure 3.5 because some participants do not have a functional assessment, and these participants have been excluded from the “existing total”.

3.2.3 Projected profile of participants at Steady Intake

Applying the above criteria and methods give the following participant characteristics at Steady Intake, remembering that the Steady Intake projected numbers remain reasonably unchanged from the previous FSR.

Figure 3.8 compares the current distribution of participants (purple bars) against the long term population distribution from the 2016-17 Financial Sustainability Report (green bars) and the projected Steady Intake distribution for the current Financial Sustainability Report (orange bars). There is a separate chart for age, disability, level of function and for the proportion of participants that are in Shared Supported Accommodation (SSA).

Figure 3.8 Scheme participant characteristics at 30 June 2018 – actual and projected



Key observations from this experience are:

- The current percentage of participants in shared supported accommodation arrangements (SSA) is 7.3%. This is higher than the projected long term percentage of 7.1%, primarily a result of the early phasing of participants in shared supported accommodation living arrangements into the Scheme.

- The current population (purple bars) has a higher proportion of children in the Scheme than at Steady Intake because it will be biased according to the age-based phasing-in within the Scheme. However, even allowing for this bias, the Scheme is projected to have more children than expected and lower numbers of adults than expected. The current assumptions adopted (orange bars) therefore lie between the current age distribution and the previous FSR.
- The current experience (purple bars) show a higher proportion of participants with autism than expected and lower proportions with psychosocial disability. There are some concerns that the automatic eligibility criteria for some participants with autism are not appropriate and also that participants with psychosocial disability are yet to phase-in across many regions. With this in mind a subjective adjustment has been made which assumes that a higher proportion of New/Commonwealth participants have a psychosocial disability and lower proportions of autism, than current experience suggests. Nonetheless, the ultimate proportions mean significant changes compared to the previous FSR.
- The functional distribution of participants assumed in the previous FSR reflects an expectation of much higher levels of function[26] compared to actual experience to date. The distribution assumed in this report reflects the emerging experience, adjusted for phasing-in biases. This is a significant assumption change, effectively doubling the proportion of participants assumed to have a low level of function. While part of this experience is thought to be attributable to potential issues with the functional assessment processes in the Scheme at the moment (as per Table 2.2), this approach has been adopted since this appears to be the most likely distribution for the Scheme over the shorter term. In conjunction with this change, the average cost assumptions will also require significant revisions, as the lowest functional category is likely to include some medium cost participants. This means that the average cost of supports for those participants with the lowest functional assessments will be lower than previously assumed.

The Scheme population has been subdivided into seven main cohorts, as per Table 3.3. The table shows the main changes in the projected prevalence by major disability categories from the previous FSR to the current FSR.

[26] High, medium and low function is relative within the NDIS population and not comparable to the general population.

Table 3.3 Profile of current and future participants to Steady Intake

Category	17-18 FSR	16-17 FSR	Difference
Autism (primarily children)	0.56%	0.42%	0.14%
Development delay / global developmental delay (primarily children)	0.15%	0.00%	0.15%
Intellectual disability	0.56%	0.73%	-0.16%
Sensory disabilities	0.17%	0.13%	0.05%
Psychosocial disabilty (primarily adults)	0.25%	0.34%	-0.08%
Other children	0.09%	0.08%	0.01%
Other adults	0.35%	0.42%	-0.07%
Total	2.13%	2.11%	0.02%
Child Prevalence (0 to 18)	3.30%	2.62%	0.68%
Adult Prevalence (19 to 64)	1.67%	1.90%	-0.24%

This shows that:

- The prevalence of autism and sensory disabilities is significantly higher in this FSR compared to the previous FSR.
- The prevalence of psychosocial disability and “other adults” is significantly lower in this FSR compared to the previous FSR.
- The previous FSR did not explicitly model participants with developmental delay/global developmental delay (DD/GDD), as this was included in intellectual disability. The combined prevalence of participants with intellectual disability and DD/GDD is similar in this FSR compared to the previous FSR.
- Overall, the prevalence of children has increased significantly since the previous FSR, while the prevalence of adults has reduced.

Independent Assessment Pilot

Figure 3.8 highlights the greater than expected number of participants in the Scheme with a lower level of function compared to expectations. Part of this is thought to be attributable to potential gaming of participant functional assessments through the planning process. The Independent Assessment Pilot is one of the major responses to this experience.

Current state

A recent reference package review highlighted some shortcomings in the functional assessment process. In particular the review highlighted some key deteriorations in functional assessments over time, over and above that expected from ageing or from degenerative disabilities. In addition, there was evidence of gaming of the guided planning process, and specifically the question as to the level of informal supports that a participant is receiving

Independent Assessment Pilot (continued)

Target State

The Independent Assessment Pilot will entail the introduction of an independent professional conducting a functional impact assessment with participants and prospective participants. Standardised assessment tools will be used by The Benevolent Society, who will act as the independent assessor on behalf of the NDIA for this Pilot, to conduct these assessments. By having independent professionals use disability specific, standardised assessment tools, the Pilot aims to increase the accuracy of functional impact information and enable more consistent and equitable access and planning decisions to be made.

The pilot will take an iterative approach, through two phases, the first of which will include prospective participants with a primary diagnosis of autism spectrum disorder, and the second will include prospective participants with a primary diagnosis of psychosocial or intellectual disability. Phase one will include 200 assessments, and a further 300 will be collected in phase two.

There will be two streams of participants; 1) those who have automatic access (as per the Operational Guidelines) and will be asked to undergo the assessment post-access, and 2) those who do not have automatic access and will be asked to undergo the assessment prior to an access decision being made.

The results of the assessments will inform the access decisions for those done prior to access, and set a reference package and typical support package for all participants captured under the Pilot. These plans will be monitored closely to ensure the functional impact results are not amended within the system prior to approval. Once approved they will be analysed to ascertain whether the plan was approved above the typical support package, and if so, why.

The Pilot is still in the planning phase while clarity is sought around the most efficient method for collection of this data and to ensure the Pilot can be implemented with ease in a scalable format.

Prevalence of autism spectrum disorder ("ASD")

A November 2017 paper on "*Autism Spectrum Disorder*" investigated the issue of much higher reported prevalence of ASD across all ages, especially 0-35 years, over the last 10+ years. This experience is mirrored in SDAC 2009 to 2015, the NDIS participant profile and other world-wide studies. This supports our reduction in autism non-mortality exit rates adopted in this FSR. The reasons for these increases are unclear, with many issues confounding any definitive conclusions.

Some of the increase, perhaps a material amount, may be due to changing study methodology and diagnosis criteria over time[27]. There are lower proportions of the ASD population with profound / severe core activity limitations (noting this does not necessarily mean lower absolute numbers with profound / severe core activity limitation). The delineation of diagnoses between autism, developmental delay, global developmental delay and intellectual disability may also be blurred, especially at younger ages. This appears to be the case in emerging ACT NDIS experience. In addition, there is a trend towards younger age of diagnosis of ASD in children.

From a financial sustainability perspective, it will be important to understand the extent that the increased prevalence of autism at younger ages will translate to increased prevalence at older ages. Hence, the gathering of an evidence base that supports the effectiveness of participants entering the Scheme through the early intervention requirements (Section 25 of the Act) to achieve outcomes to enable participants to exit the Scheme will be important.

3.3 Participant projections after Steady Intake

Once Steady Intake is reached, the participant projections will reflect:

- Increased participant numbers as a result of new incidence of disability. The new incidence may be congenital and present from birth, or it may be acquired as a result of injury from accidents, or adult onset degenerative conditions.
- Reduced participant numbers from deaths or other types of exit from the Scheme. One of the major outcome focuses of the Scheme is to provide early intervention supports for people with newly acquired disabilities so that they can build up capacity, increase independence and hence not require the same level of future supports within the Scheme. This is particularly appropriate for children and for those participants who have entered the Scheme through the early intervention requirements (Section 25 of the Act).

[27] For example, diagnostic methodologies have been changed from DSM-III and ICD-9 to DSM-IV and ICD-10 and the more recent diagnostic criteria has been associated with higher case-finding rates of ASD diagnosis.

In previous FSRs, benchmark new incidence assumptions and exit assumptions were generated using epidemiological data**,** including information on new incidence rates, prevalence rates and mortality rates for different disabilities.[28] However, there was limited benchmark experience for the calibration of non-mortality exit assumptions. The expected Scheme exit rates were therefore developed in aggregate to target a steady disability prevalence rate. To achieve this, a high benchmark exit rate was assumed for participants aged 7 to 24, as benefits from early intervention and provision of capacity building supports emerge.

3.3.1 Exits

Analysis of participants with approved plans who have exited the Scheme has been undertaken.[29] This is intended to include anyone who previously had an approved plan and has chosen to leave the Scheme, is deceased, or has had their eligibility revoked.

Using data as at 31 December 2017, the analysis compares Scheme exits occurring during 2017 with the exits expected to have occurred during the year, by applying the exit assumptions in the 2016-17 financial sustainability report.

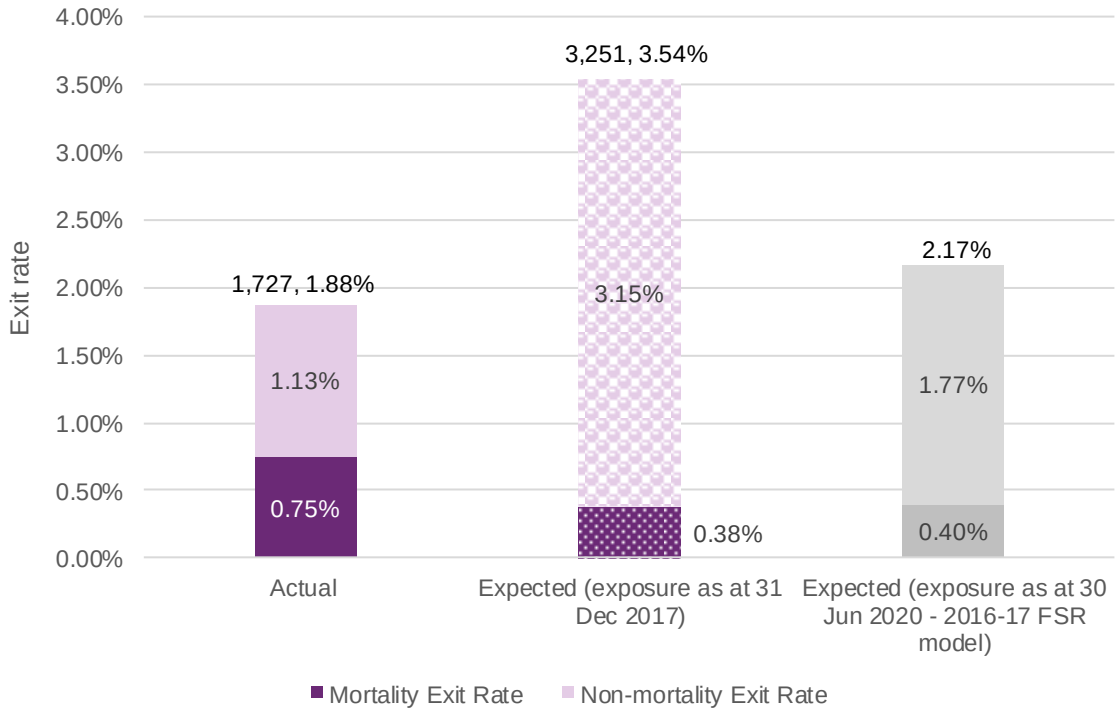
Monitoring for the period 1 January 2018 to 30 June 2018 has shown a general continuation of the trends identified in the 31 December 2017 exit analysis, with levels of exit relatively consistent with that emerging in the second half of 2017.

Experience split between mortality and non-mortality exits

Figure 3.9 compares the actual exit rate in 2017 against the expected exit rate for the year, split into mortality and non-mortality exit rates. For a complete comparison, the expected Steady Intake exit rate reported in the 2016-17 financial sustainability report is also shown to illustrate the impact of the difference in the mix of participants between now and at Steady Intake.

[28] This was largely determined using information contained in the 2009 Survey of Disability, Ageing and Carers.
[29] A full report which contains more detailed information, analysis and recommendations of the Scheme's exit rate experience is titled "*National Disability Insurance Scheme Exit Analysis 31 December 2017*".

Figure 3.9 Actual versus expected overall exit rate



The total number of participants with approved plans who exited the Scheme in 2017 was 1,727. This translates to an annual exit rate of 1.88% based on a calculated Scheme exposure of 91,963 participants. In comparison, the expected number of participants to exit the Scheme during 2017 was 3,251, or an expected annual exit rate of 3.54%. The actual exit rate was therefore significantly lower than expected[30] (47% lower).

Notably, the actual versus expected experience differs considerably for mortality and non-mortality exits. The actual mortality exit rate is higher than expected (0.75% versus 0.38% respectively), while the actual non-mortality exit rate is much lower than expected (1.13% versus 3.15% respectively), resulting in an overall lower than expected exits experience. As a result, increases in mortality rate assumptions for some disabilities have been incorporated into this year's FSR assumptions.

The expected exit rate at Full Scheme reported in the 2016-17 financial sustainability report was 2.17% in 2020, based on the expected Scheme exposure and mix of participants as at 30 June 2020. This was lower than the expected exit rate in 2017 due to differences in the mix of participants. In particular, there is a greater proportion of children in the Scheme currently, many of whom have autism and high assumed rates of exit. An important finding of

[30] The expected exit rates were derived from ABS survey information on prevalence, and also Burden of Disease benchmarks.

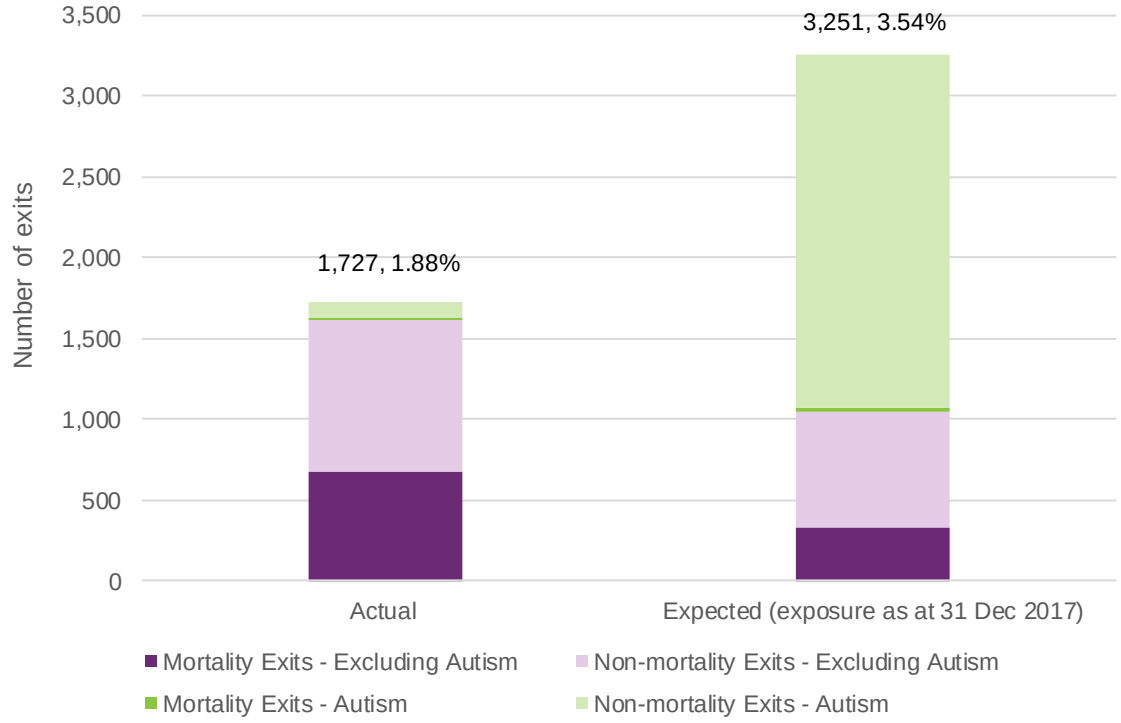
the exit analysis therefore is the exits experience for participants with autism and its impact on the overall exits experience.

The impact of autism on the exit rate experience

The actual non-mortality exit rate for autism is just 0.37%, which is significantly lower compared to the previously assumed rate of 8.15%. The high expected non-mortality exit rate reflects the explicit assumptions for autism in the previous FSR where exit rates ranging from 5% to 25% were assumed. The emerging experience clearly shows that the actual exit rate experience is well below this level. The high exit rates assumed for autism for the previous FSR were designed to target a steady prevalence rate for autism over time, and the exit rates were also implied by the age pattern of people with autism who reported a need for support in the ABS Survey of Disability, Ageing and Carers (SDAC). If these exit rates are not achieved, this equates to an effective increase in the prevalence rate for autism which has the potential to have a large impact on the Scheme's financial sustainability in the medium to longer term.

Figure 3.10 illustrates this impact by splitting the actual and expected exits in 2017 by those attributable to autism, and exits from other disabilities. As can be seen, the expected non-mortality exits from autism (shown as the light green bars) is a huge proportion of the overall expected exits, whereas the actual non-mortality exits is very low, driving the overall lower than expected exits experience. Significant reductions in autism non-mortality exit rates have been incorporated into this year's FSR assumptions.

Figure 3.10 Actual versus expected overall exits – impact of autism



Other key features of experience

There are a number of other features of the non-mortality exits experience. These include:

- For some disability types and older age groups, relatively moderate rates of non-mortality exits have been observed where little or no non-mortality exits are assumed. The reasons for these exits are being investigated and should be understood further before assumptions are changed.

- For participants aged 65 and over, non-mortality exits are much higher than expected, indicating that more participants may be moving into the aged care system than assumed, or exiting for some other reason. This is being investigated.

- For intellectual disability (and developmental delay and global developmental delay) the experience is mixed. While for developmental delay and global developmental delay, the actual non-mortality exit rates are much higher than expected; for Down syndrome and other intellectual disability, the actual exit rates are lower than expected. This is partly because the same exit assumptions were applied across all intellectual disability, whereas the experience varies between the different diagnoses. This has been reflected in the exit assumptions in this FSR.

- The non-mortality exit rate is higher for participants with a relatively high level of function and lower for participants with a relatively low level of function. For this FSR some targeted differentiation in exit assumptions by level of function has been introduced.

- There is a duration impact where exit rates are low during the first year of exposure and higher for up to the next three years. This indicates that the emerging experience may not be fully reflective of the Scheme's longer term state and that exit assumptions should consider a duration component. For this FSR we have assumed no non-mortality exits for participants in the Scheme for their first year.

- There is a clear difference between the early intervention and permanent disability non-mortality exit experience, as expected. The actual non-mortality exit rate is 3.31% for early intervention compared to 0.47% for permanent disability, although both are still lower than expected. The main disability types driving the non-mortality exits experience for permanent disability are autism and other sensory/speech.

- For non-mortality exits, the experience is heavily impacted by the effectiveness of exit strategies in place. Recent initiatives in the Australian Capital Territory to exit children from the Scheme who no longer require NDIS supports have led to significantly higher than expected non-mortality exit rates in the Australian Capital Territory. The children exited from the Scheme mostly have developmental delay, global developmental delay and sensory/speech disabilities, and a relatively high level of function. South Australia has also commenced exit strategies under the NDIA

Exit Strategy since July 2017. South Australia has a high proportion of participants who are children, many of whom have developmental delay or have accessed early intervention supports. It also accounts for a large proportion of lapsed plans.

Regular actuarial monthly exit reporting has been developed to continue to monitor the exits experience on an ongoing basis to identify and respond to emerging trends. The exit report made some recommendations which were designed to better understand the experience, identify opportunities for improvement, and incorporate the experience in monitoring the Scheme's financial sustainability. This covered a range of topics including qualitative reviews to better understand reasons for exit from the Scheme, further embedding of targeted exit strategies within regions[31] and also some suggested data quality improvements. More detail on this is provided in Section 9.1.3.

3.3.2 New incidence

In the context of this section, new incidence refers to the number of people acquiring disabilities and presenting to the Scheme, noting that in many cases this may not be the actual date of acquiring the disability. The data warehouse does not contain credible information on the date that a disability has been acquired. Nonetheless, some disabilities will primarily be congenital, and hence the disability is present from birth. In other cases, the disability may present as a person ages or as a person has an accident.

The prevalence rate for trial sites and 2016-17 transition regions that did not phase-in by age[32] were used to derive an implicit new incidence rate. The model developed for this analysis presumes that the prevalence rate for any age (say X) is equal to the prevalence rate at the previous age (X-1) plus the new incidence rate (for age X) minus the exit rate (again, for age X). From this relationship, a raw new incidence rate for each age was calculated. An underlying assumption of this relationship is that the rate of onset of each disability and in total has stayed constant over time, while noting that this may not be true for some disabilities.

Scheme level prevalence

In the regions considered, it is estimated that 2.05% of the general population aged 0 to 64 have a disability and are eligible for the NDIS.

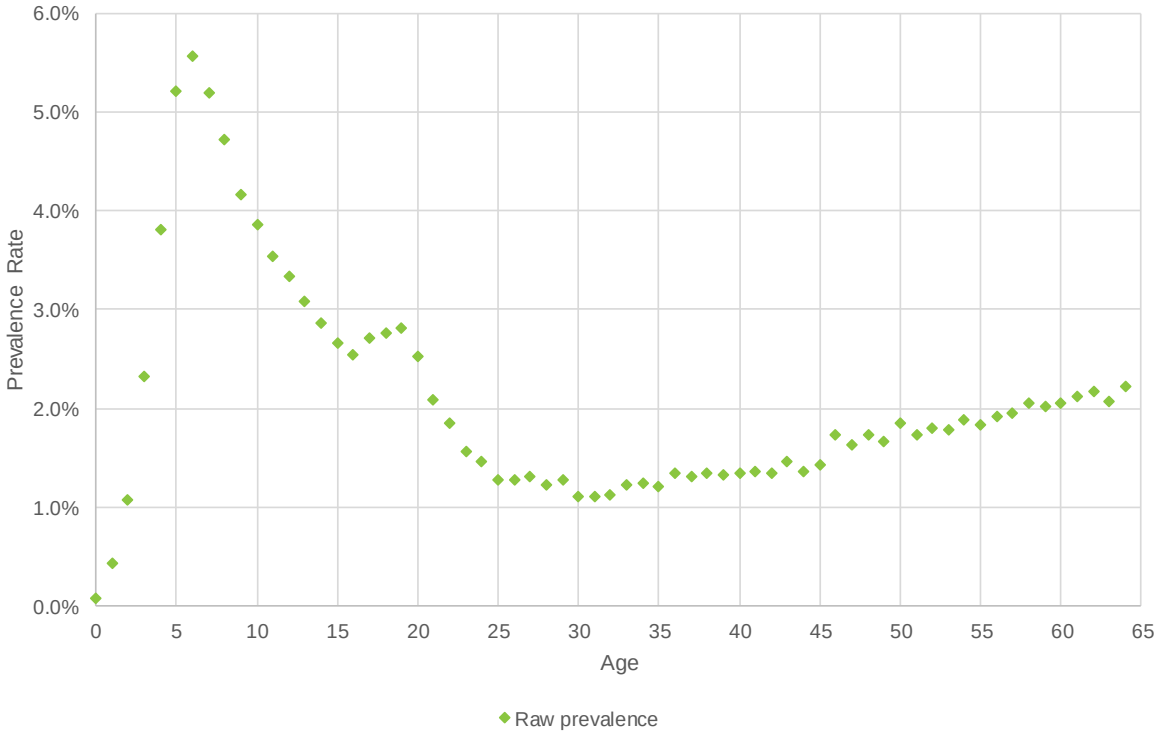
[31] This should not apply to compensation recovery matters as the Department of Social Services (DSS) has been clear that the policy parameter is for NIIS and other scheme participants to be covered by the NDIS, albeit with reduced supports if and when CRAs are applied.
[32] The methodology does not work for regions that phased by age. Hence South Australia, Tasmania, Nepean Blue Mountains and Townsville were excluded from the analysis.

Table 3.4 Prevalence of disability in areas phasing into the Scheme in 2016-17 or prior

Estimated NDIS-eligible cohort with any disability	133,362
General population ages 0 to 64	6,492,626
Estimated disability prevalence rate for ages 0 to 64	**2.05%[33]**

This prevalence varies substantially by age, with Scheme experience shown in Figure 3.11.

Figure 3.11 Actual prevalence of all disabilities



The shape of the prevalence curve is influenced by a number of factors, including the age at which people acquire a disability, the age at which they approach the Scheme, as well as the rate at which people cease accessing supports.

The prevalence of all disabilities rises from ages 0 to 6, peaking at approximately 5.5% of the general population at age 6. Prevalence at these ages is largely driven by congenital conditions (acquired at birth), noting that in many cases it can take time for children to

[33] This is slightly different to the results in Table 3.1, as they refer to different cohorts of participants. In particular, Table 3.4 was based on data as at 31 December 2017.

approach the Scheme for support. A high proportion of these participants are accessing the Scheme through the early intervention requirements (Section 25 of the Act).

After age 6, the prevalence of disability (meeting NDIS eligibility criteria) declines. A number of conditions may require early intervention supports up to a certain age, after which participants no longer have an ongoing need for support. There is also some impact from programs that predate the NDIS, such as State/Territory government early childhood supports and the Commonwealth Helping Children with Autism (HCWA) and Better Start programs, which provide support up to a specific age (age 6 in the case of HCWA and Better Start). The extent to which this decline happens depends on the rate at which participants exit the Scheme after receiving early intervention supports. This is important to understand for long term Scheme sustainability, as discussed in Section 3.3.1.

The trend of decreasing prevalence between ages 6 and 30 is interrupted by a brief increase between the ages of 16 and 19. This is largely driven by intellectual disability, and more specifically people transferring to the NDIS from State/Territory government programs targeted at school leavers, such as Transition to Work in NSW and Futures for Young Adults in Victoria. The prevalence rates in the Scheme suggest that these programs are shorter term, after which they exit these State / Territory programs. Thus, these programs may be considered early intervention programs, after which participants may not need to remain in the Scheme. Note that the extent to which these participants exit the Scheme after receiving school leaver supports will have an impact on long term financial sustainability.

After age 30, prevalence increases steadily with age. This reflects increasing prevalence of most acquired disabilities, including sensory impairments, physical and neurological disabilities.

Scheme level new incidence

Based on the methodology discussed previously, the following new incidence estimates have been determined.

Table 3.5 New incidence of disability in areas phasing at or prior to 2016-17

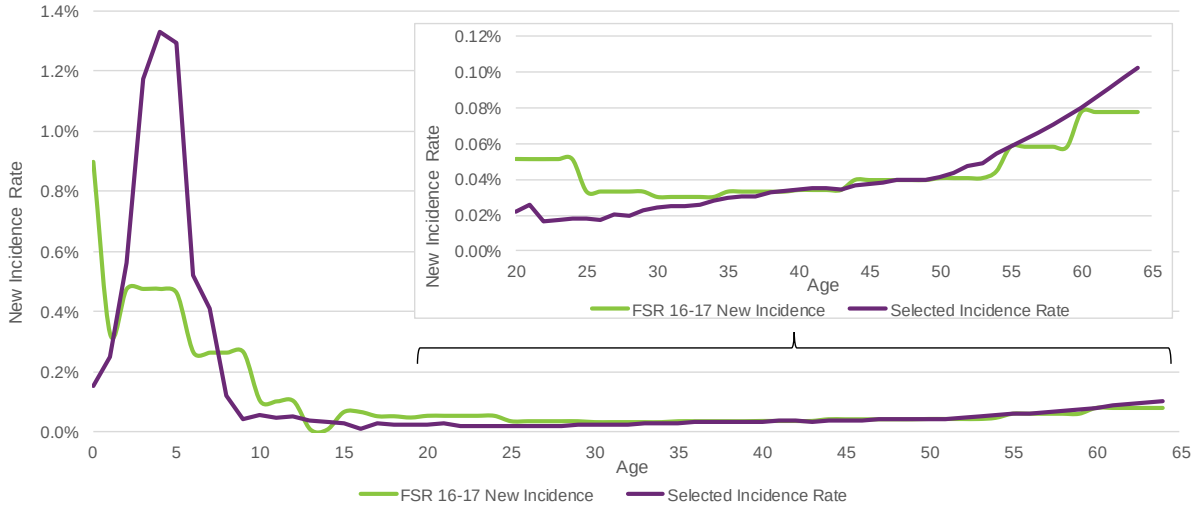
	New incidence per 100,000 population aged 0-64
Estimated incidence	126.3
Incidence in 2016-17 FSR	103.2
Difference	+23.1
% Difference	+22%

It is estimated that 126.3 people per 100,000 people aged 0-64 will acquire a disability each year, and become NDIS eligible. This is an increase of 22% from the assumptions adopted in the previous FSR. Much of this increase is in respect of sensory disabilities, autism and developmental delay, which primarily impact younger ages and have high expected exit

rates[34]. This means that the impact on future Scheme cost compared with the previous FSR will be much lower than 22%.

When new incidence is considered by age, Figure 3.12 shows that most people with a disability approach the Scheme during the first decade of childhood. The most common age to approach the Scheme is age four, with 1.3% of children aged four approaching the Scheme each year.

Figure 3.12 Assumed new incidence rate



New incidence rates, as a percentage of population, decreases after age four, reaching a minimum at age 16. Note that school leavers with an intellectual disability have not been allowed for in these new incidence rates. This reflects an expectation that they will not remain in the Scheme long term. Were they to be allowed for, a higher overall new incidence would be visible between ages 17 and 21. Section 5.5.2 considers this scenario given the impact that this could have on Scheme costs.

After age 30, new incidence increases with age. This reflects increasing new incidence of most acquired disabilities into the older ages. The total disability new incidence rate is 1.8 times higher for males compared to females, but this varies by disability.

In comparing to the assumptions adopted in the previous FSR, the following points are noted:

- The previous FSR assumed a much higher new incidence at age zero. This estimate was based on population studies, which indicate the age at which a disability is acquired (age zero for congenital conditions). However, as noted above, actual

[34] This FSR notes that the exit experience for autism has been low, and much lower than expected in the 2016-17 FSR. While exit rate assumptions for autism have been reduced for this FSR, the assumed exit rate remains high, pending further research and testing.

experience indicates that children with congenital disabilities can take some years to approach the Scheme.

- Actual experience suggests cumulative new incidence between ages zero and seven is about 70% higher than the previous FSR, a reflection that more children are entering the Scheme than expected.
- Between ages seven and 30, combined new incidence is about 20% lower than the previous FSR assumptions.
- Between ages 30 and 50, combined new incidence is similar to the previous FSR assumptions.
- Between ages 50 and 65, combined new incidence is about 16% higher than the previous FSR assumptions.
- The shape of the new incidence curve is smoother. This reflects the use of actual experience to inform assumptions.

Disability level new incidence

The following new incidence estimates by primary disability type and a comparison to the assumptions adopted at the previous FSR are shown in Table 3.6.

Table 3.6 New incidence of disability assumed by disability type

Disability Type	Estimated incidence per 100,000 pop 0-64	Incidence in 2016-17 FSR per 100,000 pop aged 0-64	Change	
			Difference	%
Acquired Brain Injury	2.2	1.8	0.5	26%
Autism	46.6	38.2	8.4	22%
Cerebral Palsy	3.7	2.5	1.2	48%
Hearing Impairment	5.9	3.5	2.4	68%
Intellectual Disability and Developmental Delay	26.2	21.4	4.8	23%
Multiple Sclerosis	3.0	3.7	-0.7	-19%
Other Neurological	6.5	8.1	-1.6	-19%
Other Physical	5.1	4.8	0.3	6%
Other Sensory and Speech	11.0	2.4	8.6	355%
Psychological Disability	8.8	10.9	-2.1	-19%
Spinal Cord Injury	1.2	1.5	-0.3	-23%
Stroke	2.9	3.0	0.0	-2%
Visual Impairment	3.2	1.6	1.6	99%
Total	**126.3**	**103.2**	**23.1**	**22%**

One of the main reasons for the increase in new incidence estimates for this year's FSR is attributable to sensory disabilities. Sensory disability new incidence accounts for about 12.6 of the 23.1 increase in new incidence per 100,000 population aged 0 to 64. Sensory disability participants are generally of lower average cost compared to other disabilities, and

a large proportion of these participants are expected to exit the Scheme through early intervention supports being provided by the Scheme. This increase therefore does not have a significant impact on financial sustainability.

There have also been increases in the estimated new incidence of autism, intellectual disability, developmental delay, cerebral palsy, acquired brain injury and other physical disabilities compared to the previous FSR. There have been reductions in estimated new incidence of spinal cord injury, multiple sclerosis, psychosocial and other neurological disabilities compared to the previous FSR.

3.3.3 Allowance for National Injury Insurance Scheme

From 30 June 2016 National Injury Insurance Schemes (NIIS) have been established in all State/Territories in respect to motor vehicle and workplace accidents. COAG has since made a decision in 2017 to not progress, for the time being, with a NIIS for coverage for no fault catastrophic medical treatment accidents. The Commonwealth and the States/Territories will continue to assess the feasibility of a NIIS for catastrophic general accidents in good faith, through the Standing Council on Federal Financial Relations.

The previous FSR modelled costs for all people with a disability in Australia that could meet the NDIS eligibility criteria. These costs were then reduced (as a "NIIS offset") for people with serious injury who were estimated to already have been covered under separate injury support scheme arrangements, primarily those in other NIIS, and hence would not require the support of the Scheme. The estimate of the NIIS offset[35] considered the new incidence of injury across motor vehicle accidents, workplace accidents, medical misadventure and general injury, and the associated costs of care and support. An allowance was made for both the historic and future new incidence of injuries based on the history of each State/Territory in providing NIIS-equivalent benefits from their respective injury support schemes.

The approach for this FSR has been to use the participant experience to date to estimate the number of people at Steady Intake. This experience will include people who have been historically injured from motor vehicle and workplace accidents, prior to a NIIS being established. Hence, both the current numbers of participants in the Scheme and the new incidence rates derived in Section 3.3.2 will include some people who have been injured from motor vehicle and workplace accidents.

[35] Estimates of the NIIS were based on Walsh et al, 2005: Long Term Care for Catastrophically Injured people, and the Productivity Commission, 2011: Inquiry into Disability Care and Support. These estimates had been updated in respect of general injuries, specifically incorporating unit record data sourced from the New Zealand Accident Compensation Corporation. This analysis indicated that the 2005 estimates for general injury were too low, with more up to date data suggesting that a higher new incidence should be projected.

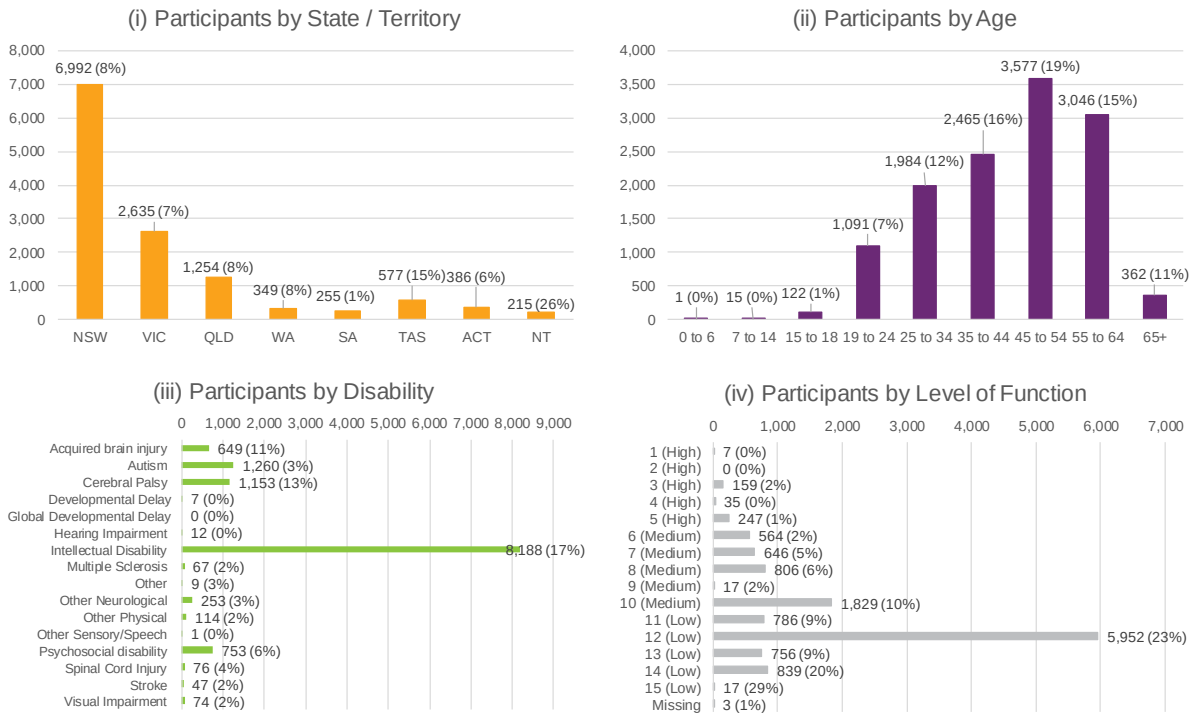
Given that, from 30 June 2016, the majority of participants injured from motor vehicle and workplace accidents will have the majority of their future supports provided for by a NIIS, the Scheme projections need to make an allowance for a reduction of new incidence in respect of this source. New incidence assumptions have therefore been reduced in respect to injuries expected to arise from motor vehicle and workplace accidents, from which NIIS are currently operational. The majority of the disability types related to these accidents are in respect of traumatic brain injuries and spinal cord injuries. The full new incidence assumptions have been adjusted downwards by about 30% over “gross-of-NIIS” assumptions, with about 330 participants with acquired brain injuries and 170 participants with spinal cord injuries still assumed to enter the Scheme each year. These numbers represent injuries arising from medical treatment and other general accidents, as well as any congenital disabilities.

3.4 Shared supported accommodation numbers

Participants with Shared Supported Accommodation (SSA) arrangements are expected to account for over a third of the total expected participant support costs in the Scheme but only about 7% of the participant population.

The number and proportion of participants in SSA arrangements varies by State/Territory, age, disability type, and level of function. The following charts give an indication of the number and proportion of total Scheme participants currently with SSA arrangements.

Figure 3.13 Profile of participants in SSA arrangements[36]



General comments based on this experience are:

- There is considerable variation by State/Territory, with the main variation relating to the population of each State/Territory and/or the phasing-in schedule of participants into the Scheme. For example, the Northern Territory experience has about 26% of participants in SSA arrangements, while South Australia has only 1%.
- Participants with an intellectual disability account for the majority of participants in SSA arrangements (65% of total SSA Scheme participants and 17% of participants with an intellectual disability), with significant numbers of participants with autism (10% of total SSA Scheme participants although only 3% of participants with autism), cerebral palsy (9% of total SSA Scheme participants and 13% of participants with cerebral palsy), psychosocial disability (6% of both total SSA Scheme participants and of participants with psychosocial disability) and acquired brain injury (5% of total SSA Scheme participants and 11% of participants with acquired brain injury).
- Participants with a lower level of function are more likely to be in SSA arrangements, as expected, although there are material numbers of participants in SSA arrangements who have a higher level of function. About 18% of participants with a low level of function are in SSA arrangements, with about 5% of participants with a

[36] The percentage shown in brackets (after each of the numbers) is the percentage of all participants in each category who are in shared supported accommodation arrangements.

medium level of function in SSA arrangements and about 1% participants with a high level of function in SSA arrangements.

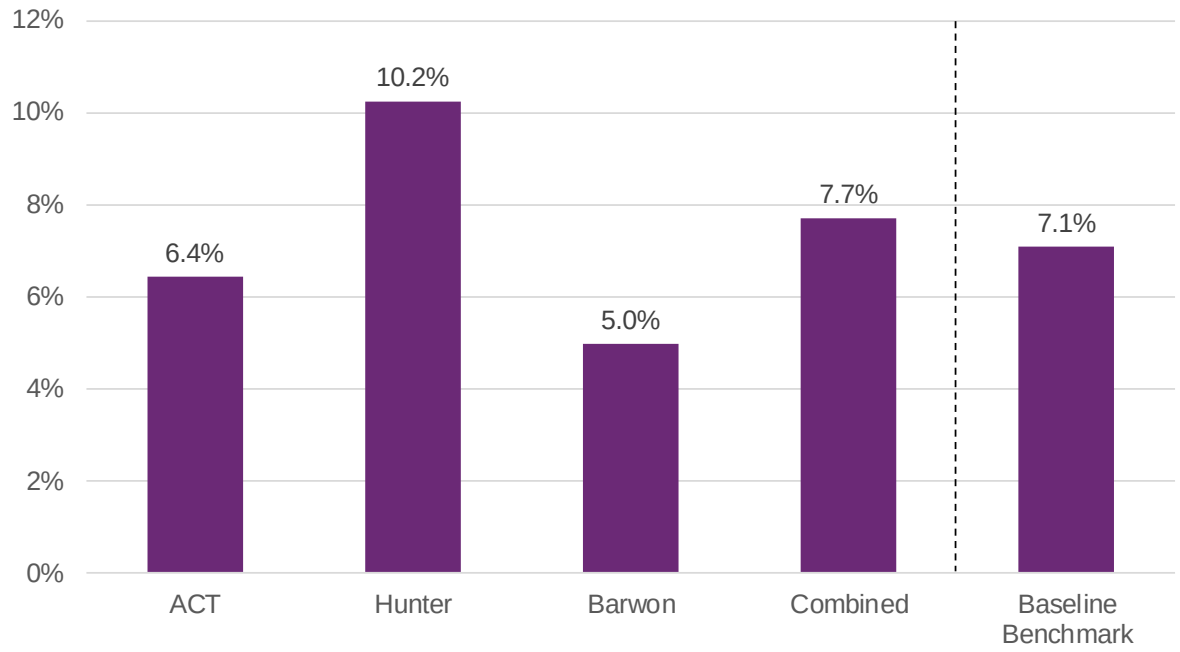
- The majority of participants are aged 25 and above, as expected, with about 15% of participants over the age of 25 in SSA arrangements.

One of the key observations arising from Figure 3.13 is the relatively large number of participants with a high to medium level of function (4,310) that are in SSA arrangements. This may be a legacy issue from the existing disability system and may mean that there is an opportunity over the medium to longer term for the Scheme to assist in building up the capacity of these participants to live independently, if provided with the right supports. Alternatively, other lower cost innovative accommodation arrangements may emerge over time within the Scheme.

SSA participant percentage by mature site

Figure 3.14 shows the split of participants by shared supported accommodation (SSA) and non-SSA in the three most mature trial sites compared with the Scheme benchmark.

Figure 3.14 Proportion of participants with SSA versus expected (0-64 years)



Hunter has a higher proportion of participants in SSA arrangements compared with the Scheme baseline benchmark, whilst Barwon and ACT have a lower proportion of participants in SSA. While this combined experience suggests slightly higher levels of SSA arrangements than the Scheme baseline benchmark, the Hunter region has some large residential accommodation centres contributing to its experience. Given the relatively small amount of experience, there is not enough evidence to suggest the baseline benchmark assumption of just over 7% is inappropriate.

4. Participant costs

Summary of key findings

- There were $7.7 billion in supports committed to participants in 2017-18.
- The distribution of participant level of function is emerging at a lower average level compared to the expectations from the previous FSR, meaning that the reference packages could be recalibrated to emerging experience to be more meaningful, or that level of function needs to be more independently assessed.
- Typical support packages have been increasing over the last year, a result of lower stated levels of informal supports from the guided planning process and also a trend to towards lower functional assessments, for both existing and new participants entering the Scheme.
- Utilisation of committed supports is projected to be 65% for supports committed in 2013-14, 75% for supports committed from 2014-15 to 2015-16, 67% for 2016-17 and 73% for 2017-18, noting that utilisation varies across State/Territories, and is generally lower for a participant's first plan.
- A participant's first plan utilisation is, on average, about 15% lower than for subsequent plans. Lower utilisation rates are also associated with capacity building and capital supports, higher functioning participants, sensory disabilities, children, those in remote locations and new entrants not previously accessing disability supports. A qualitative review also suggested that some participant plans contained committed supports above that considered reasonable and necessary.
- Payment projection assumptions have been calibrated using the rate of payment of participants with a second or later plan (39% of active participants in the Scheme), with a downwards adjustment in the rate of payment for the proportion of participants with first plans. Payments assumptions vary by primary disability, age band, level of function and shared supported accommodation indicator.
- Both committed supports and payments have been increasing significantly above that expected from inflation and ageing, with a broad range of factors driving the experience, not all of which are expected to continue into the future.
- An analysis of future superimposed inflation pressures suggest that an additional 8% should be added to the payment assumptions over the next 3 years, primarily reflecting the impact of increasing utilisation rates, implementation of the Independent Pricing Review recommendations, and the roll-out of various other NDIA initiatives. These assumptions assume that the guided planning decision-making behaviours are rational and that functional assessments are evidence based.

4.1 Background

Reference packages, typical support packages (TSPs) and committed supports are concepts developed by the NDIA to help monitor and manage the Scheme's financial sustainability. When the concept of reference packages were first developed, the sum of reference packages for each participant at Full Scheme was estimated to be equivalent to the $20.5 billion Full Scheme cost (before operating costs) at 2020. When combined with expected operating costs this was expected to equate to the $22 billion Full Scheme cost, also referred to as the "funding envelope". The sum of TSPs across all participants was expected to lead to a buffer of about 17% compared to the Full Scheme cost estimates (and reference packages). The sum of all Scheme committed supports should equal the sum of reference packages, assuming that all committed supports are utilised,

The proportion of committed supports utilised by participants cannot, by definition and because of governance controls in the Scheme, exceed 100% at a participant level[37]. Utilisation rates remain below 100% as the Scheme proceeds through the transition period, and is projected to be about 73% for the 2017-18 support year. It is likely that utilisation rates in a mature Scheme will remain below 100%, although it is not clear what an appropriate long term utilisation rate will be. Thus, there will be an implicit "buffer" in committed supports, whereby the sum of all participant committed supports may exceed the funding envelope while the Scheme still remains financially viable.

Notwithstanding the above commentary, the analysis of each of these components of the guided planning process is essential to assist in understanding cost trends within the Scheme, especially as the Scheme transitions to Steady Intake in the shorter to medium term. The utilisation of Scheme supports is likely to change over this period, which will impact on the financial results of the Scheme, and current experience may not necessarily be representative of longer term experience.

It is the payment experience that has been used to inform our Scheme projections in Chapter 5.

4.2 Committed supports

At 30 June 2018, 176,197 participants have (or have had) approved plans, of which 172,333 participants remain active. About $18.2 billion of support has been committed to these participants since the inception of the Scheme. Table 4.1 shows the split of these committed supports by support year. It is assumed that committed supports are provided evenly over the term of a participant's plan.

[37] There are some circumstances where manual payments mean that utilisation can exceed 100%.

Table 4.1 Supports committed by support year as at 30 June 2018[38]

Support Year	Committed Supports ($M)
2013-14	132.8
2014-15	496.8
2015-16	939.3
2016-17	3,237.1
2017-18	7,723.1
2018-19 and beyond	5,669.7
Total	18,198.9

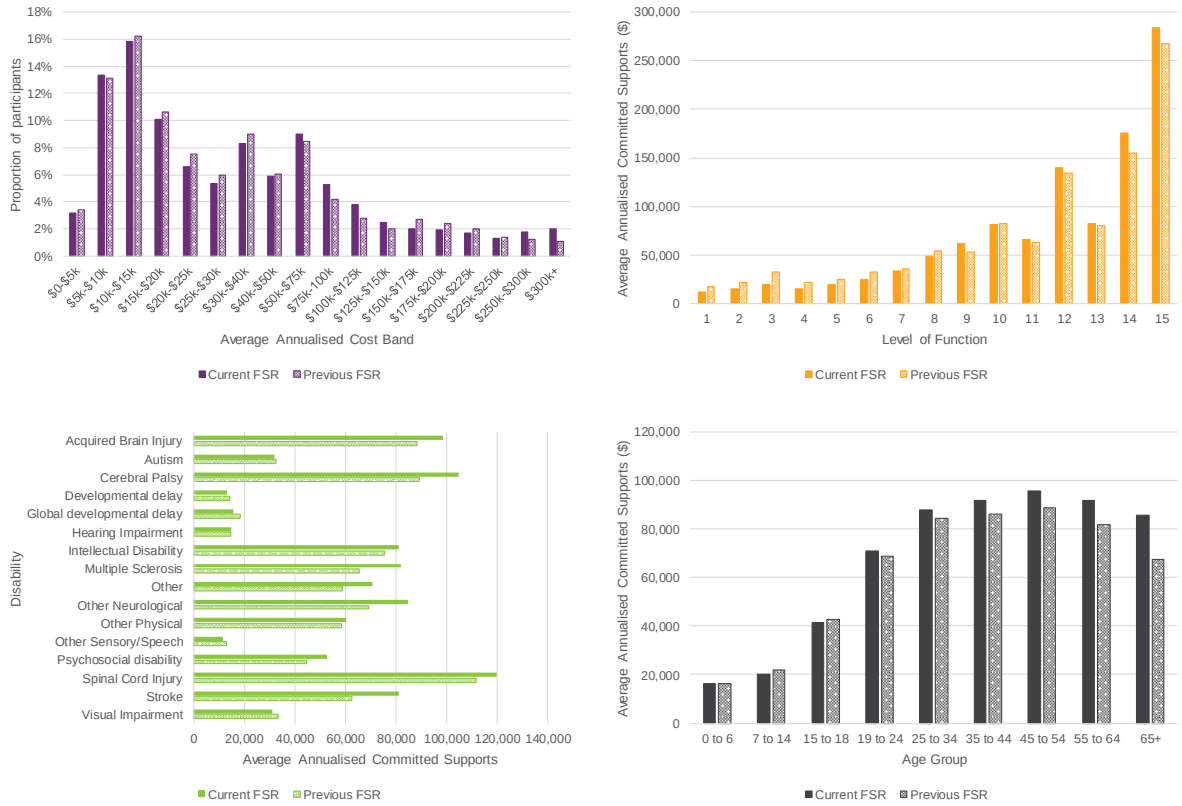
Committed supports for the 2017-18 support year is $7.7 billion, which is about 140% higher than for the 2016-17 support year, representing considerable growth in potential payments, and reflecting the rapid growth of the Scheme during the transition period. Information on the distribution of supports and types of supports in plans is also included in Appendix F.

Distribution of committed supports by cost band

The following graphs show the distribution of committed supports by annualised cost band, level of function, disability and age band for participants with an active plan at 30 June 2018, and compares this with active plans at the previous FSR, noting that these plan amounts have not been adjusted for inflation.

[38] This includes allowance for supports provided on an in-kind basis, where these in-kind supports are valued using in-kind prices, rather than the NDIS price.

Figure 4.1 Distribution of committed supports for active participants



Average committed supports have generally increased across the majority of participant characteristics. Key observations include:

- There is a high proportion of participants clustered in the low and middle cost bands ($5,000 to $75,000), but only a small proportion in the below $5,000 band. The 2011 Productivity Commission costings assumed a higher proportion of participants receive supports of less than $5,000.
- Committed supports are inversely proportional to level of function, with higher functioning participants having lower average committed supports and vice versa.
- Average committed supports vary by disability group. Notably, participants with spinal cord injury, cerebral palsy and an acquired brain injury have higher committed support amounts on average. Part of this is driven by the age distribution for these disability groups.
- Committed supports are seen to increase by age for the younger age groups, before stabilising between ages 25 to 64, and then decreasing for the older age groups. The reduction in average committed supports at ages 55 and above is less pronounced compared with the previous FSR. The reductions in average committed supports from age 64 is contrary to experience seen in many other injury support schemes providing lifetime care and support.

Distribution of committed supports by cost band

Figure 4.2 shows the distribution of annualised committed supports by cost band, for low, medium and high levels of function.

Figure 4.2 Distribution of committed supports by cost band and level of function

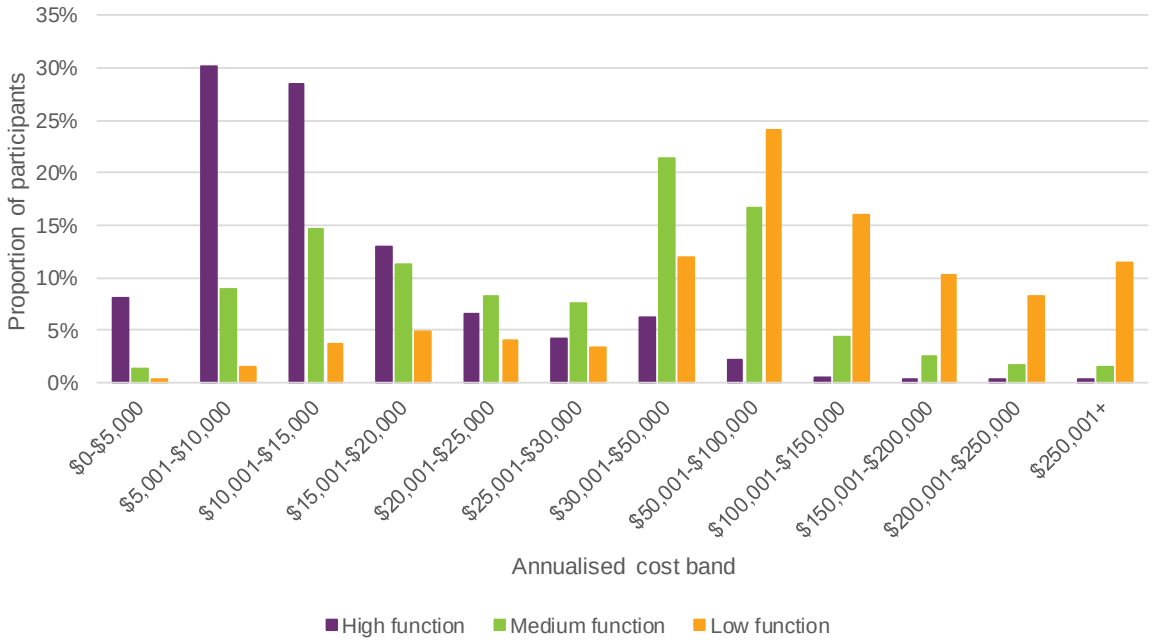
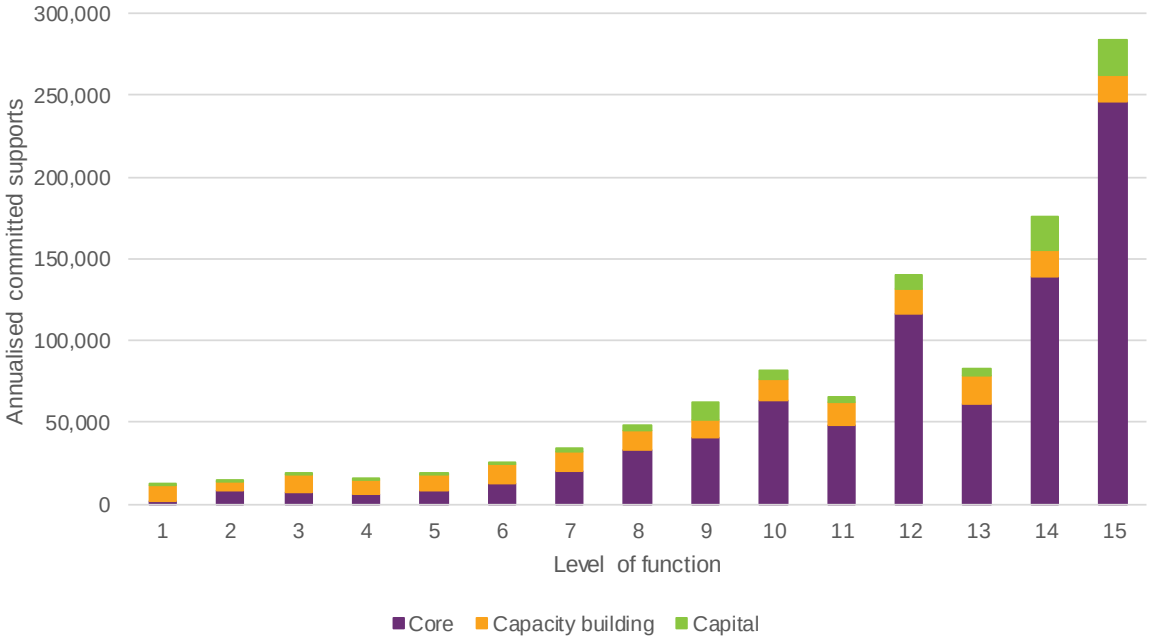


Figure 4.2 shows that just over 60% of the higher functioning participants have annualised committed supports over $10,000, 90% of medium functioning participants have committed supports over $10,000, and almost all lower functioning participants have committed supports over $10,000. The distribution of committed supports by cost band is similar to the previous year for moderate and low functioning participants, while for high functioning participants, there is now a higher proportion of participants in the lower cost bands.

Figure 4.3 presents committed supports subdivided by core, capital and capacity building supports. This shows that a significant proportion of participants in the Scheme are receiving capacity building supports (orange shading) in their plan and this amount does not appear to differ significantly by level of function. This is consistent with the expectation that there may be higher proportions of capacity building supports early on in a participant's plan, particularly for children and for those that entered the Scheme under the early intervention requirement (Section 25 of the Act). In the long term, it is expected that the amount of these supports will decrease as a participant builds capacity.

Figure 4.3 Distribution of average annualised supports by type and level of function



Further analysis on the distribution of core, capacity building and capital supports by age and disability can be found in Appendix F.

4.3 Reference packages

Committed supports in participant plans can be compared to reference packages to assist in the monitoring of Scheme performance and identification of cost drivers. Accurate functional assessments are a fundamental building block of the reference package framework and the guided planning process.

4.3.1 Participant functional assessments

A participant's level of function is measured using a range of widely accepted and validated tools. The tools were selected based on expert advice from professionals with specialist disability knowledge, including disability organisations, clinicians and researchers. Functional assessment tools have been agreed for the main disabilities of participants currently in the Scheme – namely, intellectual disability (including Down syndrome), autism, developmental delay, global developmental delay, cerebral palsy, multiple sclerosis, stroke, hearing and vision loss. Experts were also used to develop baseline reference packages. A tool is currently being trialed for participants with a psychosocial disability.

The importance of accurate functional assessment

A participant's functional assessment links directly into their calculated reference package and their typical support package. Qualitative sampling of access and planning decisions has indicated that there is a lack of quality documentation of disability and level of function in participant records, particularly for participants in defined programs.

There has also been a trend towards a worsening of a participant's recorded level of function over time. This worsening has been above what might be considered reasonable, after allowing for impacts of ageing or that expected in degenerative disabilities. This is a behavioural concern, in that there are incentives for lower functional assessments, as this would increase the potential committed supports in a participant's plan.

There is therefore some doubt over whether the current functional assessments of participants are unbiased, or whether they reflect other behavioural experience trends. A good example of this is the high degree of usage of the WHODAS 2.0 general functional assessment tool rather than the preferred disability-specific assessments. The WHODAS 2.0 is more susceptible to gaming. For adults with intellectual disability, 66% of participants have a WHODAS 2.0 assessment rather than a DSM-V or Vineland-II, which are the preferred disability specific assessment tools. About 7% of functional assessments made using DSM V are assigned the lowest level of function, while 36% of functional assessments using the WHODAS 2.0 tool are assigned the lowest level of function.

The concerns over the accuracy of functional assessments limits the effectiveness of the current reference package framework. For the reference package framework to be more effective, either the functional assessments need to be more accurate, or the reference packages should be recalibrated to the emerging experience. The first approach is preferred.

In addition, a number of shortcomings have been identified in the information used to support decision-making by Agency staff/partners. The Agency's Compliance and Assurance team has reviewed almost 600 records around access, level of function, plan reviews and typical support packages. The review of access decisions indicated concerns with the use of some professional reports in gaining access to the Scheme. The other reviews identified a number of themes which suggest a failure in the collection of data to support the guided planning process. The lack of quality documentation to support the primary disability and level of function in participant records means that the TSP generated may be inappropriate or unsupported.

4.3.2 Emerging reference package experience

Table 4.2 compares average reference packages with committed supports by level of function and age group as at 30 June 2018.

Table 4.2 Comparison of average reference package to committed supports[39]

Cohort and level of function	Number of participants	Average reference package	Average committed supports	Committed supports : Reference package
All participants with a level of function				
High	51,722	11,421	17,129	150%
Medium	72,850	46,334	46,232	100%
Low	46,939	183,722	119,972	65%
Total	171,511	73,406	57,637	79%
Ages 0 to 14 with a level of function				
High	34,132	8,658	12,554	145%
Medium	19,969	12,605	16,183	128%
Low	11,688	76,859	40,922	53%
Total	65,789	21,972	18,695	85%
Ages 15+ with a level of function				
High	17,590	16,784	26,007	155%
Medium	52,881	59,071	57,579	97%
Low	35,251	219,154	146,182	67%
Total	105,722	105,412	81,869	78%
ACT, Hunter and Barwon with a level of function				
High	7,420	11,883	16,854	142%
Medium	9,363	43,968	44,454	101%
Low	5,030	186,254	131,963	71%
Total	21,813	65,864	55,245	84%

Table 4.2 shows that higher functioning participants have committed supports and reference packages that are less than those for lower functioning participants. This indicates that functional categorisation of participants is working (at a conceptual level) and that the reference package framework remains a suitable framework. However, there are problems with the measuring of functional capacity, making it difficult to assess the financial

[39] The number of participants is less than the 172,333 active participants in the Scheme from Table 1.2, as not all active participants have a functional assessment, and hence a reference package cannot be calculated for these participants.

sustainability of the reference package framework using the current reference package calibration.

Table 4.2 suggests that committed supports are 21% below reference packages. Based on this comparison it could be thought that the amounts included in participant plans is below expectations. However, this comparison is misleading without being considered in the context of the characteristics of the participants included in the analysis:

- Committed supports exhibit a much lower dollar variation by level of function compared to reference packages. This means that higher functioning participants are receiving committed supports that are higher than reference packages, and lower functioning participants are receiving committed supports that are lower than reference packages.
- The overall average reference package per participant is $73,500. This is almost double the expected average reference package at Steady Intake in today's dollars (approximately $40,000). While part of this difference can be attributed to participant phasing bias[40] during the transition period, the most significant contributor is the distribution of level of function, which is emerging very differently to the expectations from the previous FSR. [41]

This means that significantly more participants are being categorised as lower functioning than expected in the previous FSR. Further, if the current FSR expected participant functional distribution were assumed to apply to the current calibration of the reference packages, the Scheme costs would be over 60% above that from the previous FSR.

This means that some thought could be given to recalibrating the current reference packages in the shorter term to better reflect emerging Scheme functional assessment experience. [42] Alternatively, the preferred approach would be to investigate whether the current functional assessments are a true representation of what would be the functional assessment under an independent and objective application of the preferred functional assessment instruments. This recalibration would mean that the sum of reference packages for each participant at Steady Intake would be closer to the funding envelope of the Scheme.

Implications for financial sustainability

The experience of the trial sites of Hunter, Barwon and ACT in Table 4.2 are likely to provide the best indication of Steady Intake experience, as they should have no particular bias in disability, function or age. Average committed supports in these sites are nearly $55,000,

[40] Participants in State/Territory programs have generally phased into the Scheme first and these are generally lower functioning participants.
[41] This is illustrated in Figure 3.8 of this report, where the previous FSR assumed significantly less lower-functioning participants at Full Scheme, compared to the current FSR.
[42] The timing of any recalibration should consider the results from the Independent Assessment Pilot, as any changes in the way that functional assessments are made could have an influence on the shorter to medium term functional assessment distribution for the Scheme.

and to reach an average cost per participant of $40,000 in payments would require a utilisation rate of between 70% and 75%. This utilisation rate is required for plan costs to be equivalent to the funding envelope from the previous FSR, all other things being equal.

The average annualised payments for participants in the ACT, Hunter and Barwon sites that are included in the payments assumption setting analysis[43] is around $47,400, suggesting a utilisation rate above 75%. In addition, the above analysis does not consider any future superimposed inflation, which is a strong trend within the Scheme experience to date. A continuation of these trends over the shorter-term would further impact negatively on any assessment of the financial sustainability of the Scheme.

4.4 Typical support packages (TSP)

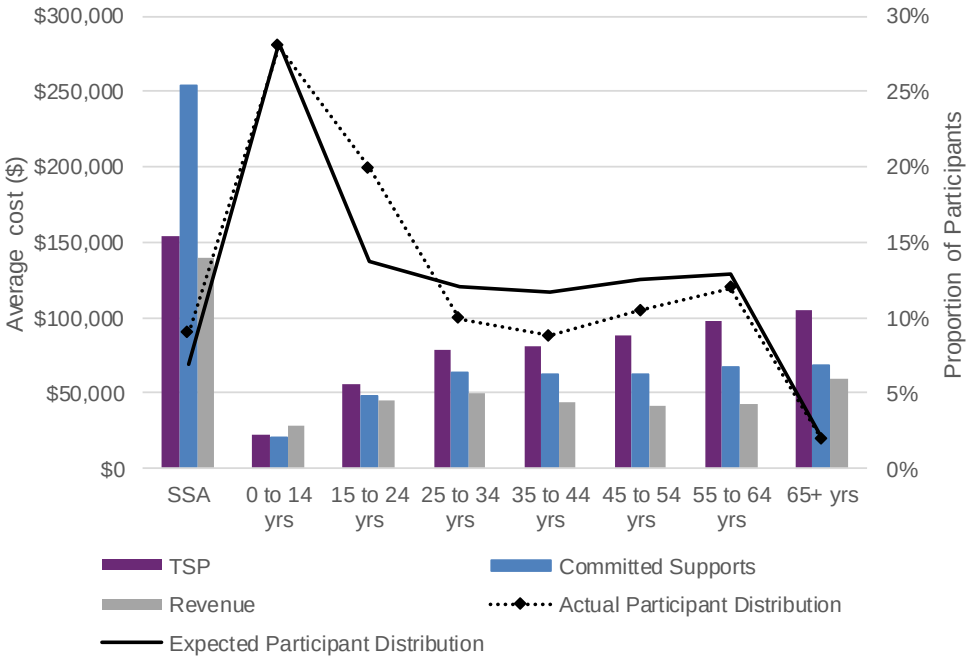
4.4.1 Current TSP experience

There were 139,409 active participants with an approved plan via the guided planning process as at 30 June 2018. This represents 81% of the 172,333 active participants who had an approved plan at 30 June 2018. Figure 4.4 compares the total TSP amount to the amount of committed support in a participant's plan and the revenue received[44], as at 30 June 2018.

[43] This analysis considers payments for participants that were active from 31 December 2017 to 30 June 2018 and were not on their first plan at any point during this period. Further detail can be found in Section 4.5.4.

[44] The revenue received from States/Territories and the Commonwealth governments is based on a participant's phasing cohort, noting that monitoring of revenue to committed support is especially relevant for short-term sustainability.

Figure 4.4 Summary of average TSP, committed support and revenue by age

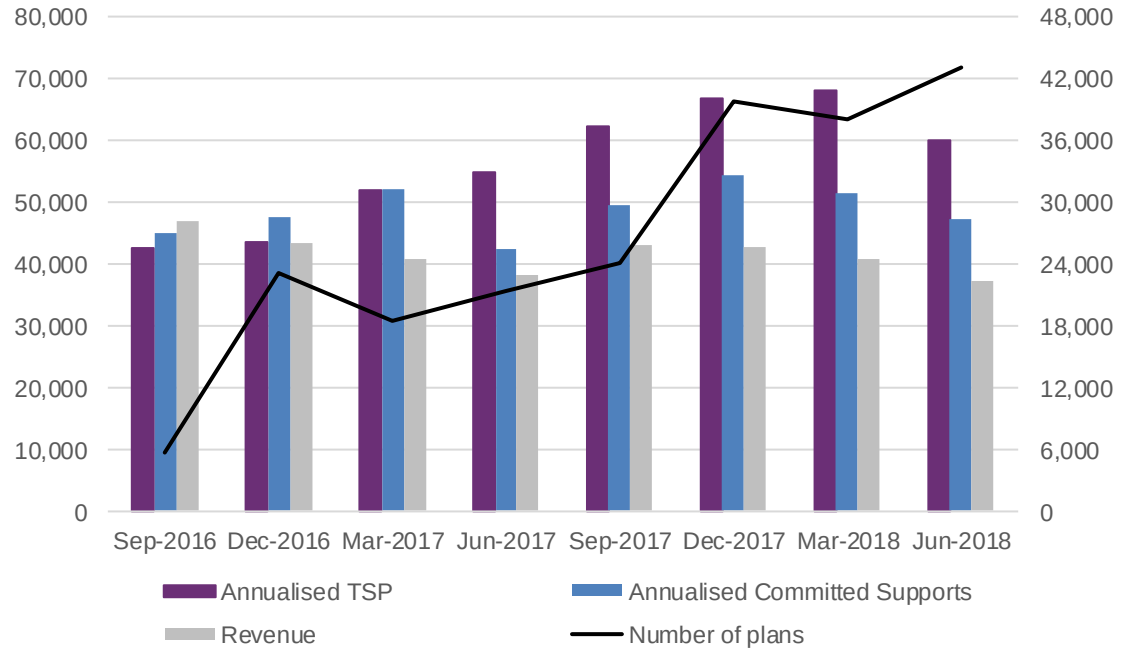


For participants in shared supported accommodation (the “SSA” column in Figure 4.4), average committed supports are much higher than average revenue and TSPs. For participants aged over 15 years that are not in shared supported accommodation, the average TSP is above committed supports, which is in turn higher than revenue. For participants aged 0 to 14 years, average TSPs are in line with committed supports and below revenue.

4.4.2 Quarterly trends in TSPs

It is useful to monitor trends in the level of TSPs and their relativity to committed supports and revenue, as TSPs can be a leading indicator of trends in committed supports. Figure 4.5 shows the quarterly trend in average TSPs, committed supports and revenue for participants that are not in SSA over the past two years.

Figure 4.5 Quarterly average TSPs, committed supports and revenue (non-SSA)



Average revenue is driven by the bilateral arrangements and has remained relatively stable over this period, while average TSPs have been seen to increase significantly (the purple columns). The increase in TSPs has been influenced by an increasing proportion of participants receiving low and moderate functional assessments, as well as an increasing proportion of participants stating that they have 'no informal supports' in their guided planning responses. There has been some volatility in committed supports during the transition period, however in the past year movements in committed supports have roughly followed movements in TSPs.

A number of factors may be driving the trends in TSPs:

- The increase could reflect the phasing of participants into the Scheme, with participants more recently entering into the Scheme having lower levels of informal, mainstream and community supports, among other factors.
- Both participants and planners could be more conscious of the impact that the guided planning questions have in determining the TSP amounts for participants. In particular, the wording of certain questions in the guided planning process may be subjective and responses may be tending towards those responses that lead to higher TSPs.
- The introduction of a key performance indicator (KPI) on the percentage of plans more than 10% above TSP in February 2017 may have resulted in changes to how level of function and the guided planning questionnaire are answered by Agency staff and partners.

- There may be a duration-related component to the answers to the guided planning questions, where responses in second plans result in higher modifiers, compared to those responses in participants' first plans. In the longer term, as capacity building support outcomes are achieved, there should probably be an expectation that the modifiers reduce over time. Offsetting this, as a participant ages, there may be an expectation that the modifiers increase gradually over time.

There has been a decrease in TSPs observed in recent quarters, which is attributed to a decrease in modifiers for the daily activities and social participation domains. However, unless underlying behavioural issues are rectified, these remain emerging pressures for the financial sustainability of the Scheme to the extent that they translate into higher payments.

The preceding analysis implies that participants in shared supported accommodation arrangements have committed supports that may be too high in comparison to the TSP benchmark. This suggests that the guided planning process and TSP calculation method could be improved by adjusting for a participant's specific living arrangements.

4.4.3 Reference package review recommendations

The trends above were considered in a recent reference package and guided planning review conducted in March 2018. A number of recommendations were developed to address the key financial sustainability pressures and these remain valid. The primary recommendation is the Independent Assessment Pilot, which aims to improve processes at access and through the participant pathway, to provide more consistent, objective and sustainable levels of Scheme access and funded supports.

A number of other recommendations have been identified which include the development of minimum standards for documentation and file maintenance, ongoing quality assurance work, and a review of key performance indicators relating to guided planning. These recommendations will be assessed and implemented, where considered appropriate, over the 2018 calendar year.

4.5 Payments, utilisation and plan provisioning

This section looks at payments related to supports that have been committed to 30 June 2018. This includes payments made to date plus estimates of outstanding payments relating to supports that have already been committed. The participant plan provision within the financial accounts represents the estimated value of support provided prior to the balance date, but not included in payments made to date. The provision is estimated using information on committed supports contained within participant plans, the payments emerging over time relating to these committed supports and the expected ultimate utilisation of those committed supports. The report "*National Disability Insurance Scheme Participant plan provision analysis as at 30 June 2018*" contains a summary of the analysis and recommendations.

4.5.1 Recent experience

The following table shows a summary of the recommended participant plan provision at 30 June 2018 for inclusion in the Annual Financial Statements, as well as committed supports and payments by support year. The participant plan provision is required as not all support provided at 30 June 2018 has been paid for by the Agency.

Table 4.3 Payments compared with committed support – as at 30 June 2018[45]

Support Year	Committed Supports ($M)	Payments ($M)	Participant plan provision ($M)	Utilisation
2013-14	132.80	86.22	0.02	64.9%
2014-15	496.82	370.84	0.18	74.7%
2015-16	939.30	703.20	1.43	75.0%
2016-17	3,237.12	2,163.31	18.19	67.4%
2017-18	7,723.13	4,921.62	696.99	72.8%
Total	12,529.17	8,245.19	716.80	71.5%

The utilisation rate for 2014-15 to 2015-16 is projected to be around 75%, while a utilisation rate of 67% is projected for 2016-17 and 73% is projected for 2017-18. This suggests that not all committed supports are being utilised. There can be many reasons for underutilisation of supports, including:

- participants may take time to learn to navigate Scheme processes or to build the capacity to implement the plan;
- some participant circumstances will inevitably change throughout their plan period meaning changes in the level of supports required;
- participants may not be able to access information as to how much of their supports are available;
- planners may be allocating supports to participants above what is needed;
- service providers may have not claimed for the support provided (possibly because of existing block grants from State/Territories); and/or
- there may be insufficient market capacity as disability support markets expand.

[45] Note that payments also includes the value of supports provided on an in-kind basis. The amount adopted in the participant plan provision includes an allowance for current uncertainties in the payment process. Using standard actuarial methods results in an ultimate utilisation of around 73% for 2017-18.

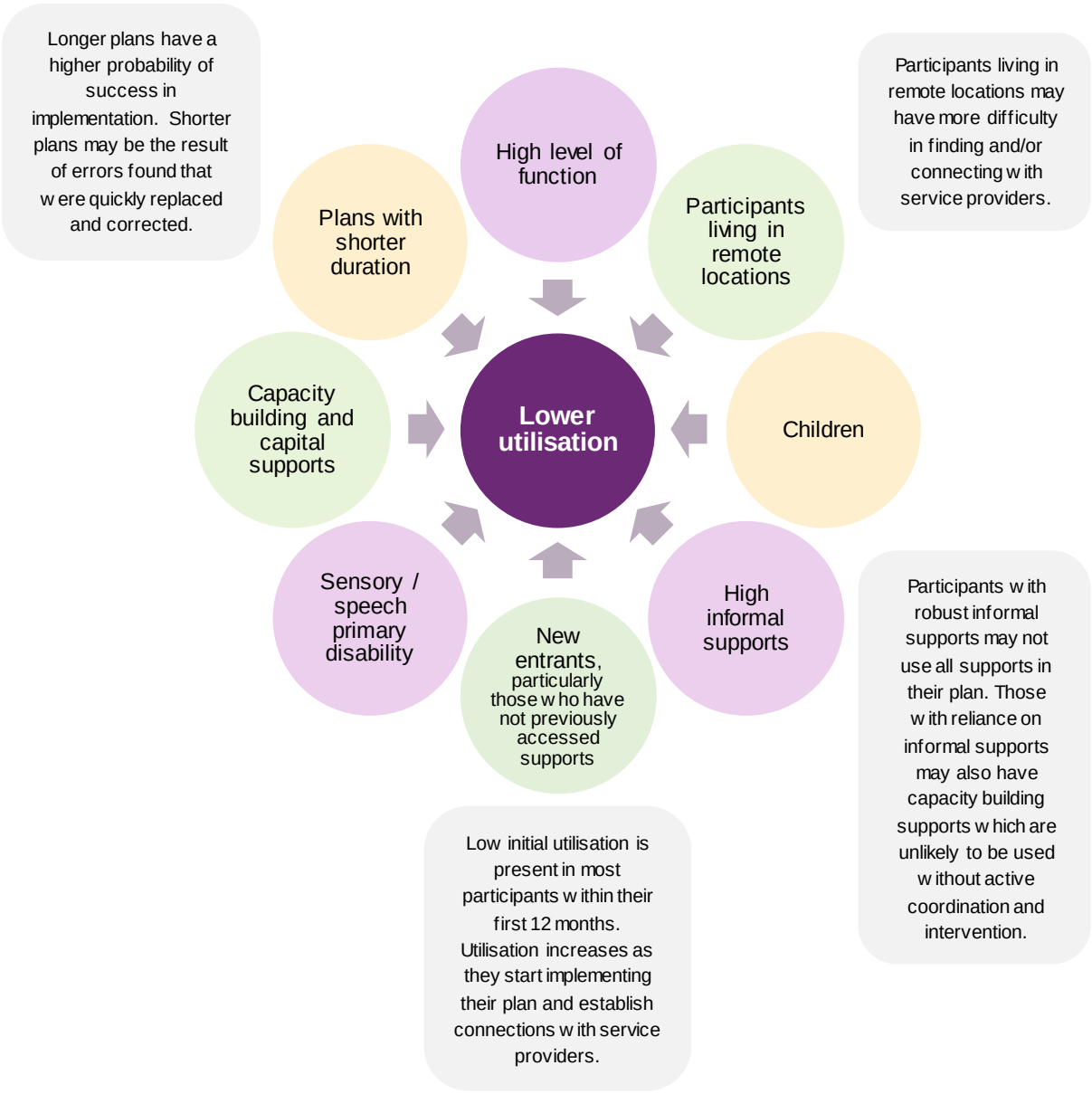
Some of these reasons will predominantly be attributable to, or accentuated by, the transition period of the Scheme. However, there will always be an element of underutilisation, with experience from other more mature injury support schemes supporting this view.

4.5.2 Under-utilisation of committed supports

The paper "*Utilisation: Data as at 31 December 2017*" uses statistical analysis to attribute the reasons for low utilisation rates. The main contributing factor appears to be the high proportion of new participants. A participant's first plan utilisation is, on average, about 15% lower than for subsequent plans. This may reflect the time taken for participants and/or service providers to become familiar with the Scheme's systems and processes. Thus, cohorts of participants which are being phased into the Scheme generally have lower levels of utilisation of committed supports. In addition, the utilisation of capacity building supports is lower than for core supports. This is not surprising given the rapid growth of the Scheme and the potential focus on core supports in a participant's first plan.

While the main contributing factor appears to be the high proportion of new participants entering the Scheme in 2016-17, and noting that a participant's first plan utilisation is on average 15% lower than for subsequent plans, additional factors are also at play. Figure 4.6 summarises the other main factors related to lower utilisation.

Figure 4.6 Characteristics related to lower utilisation



A qualitative review of 50 participants was conducted, aimed at giving more insights into these trends. In particular, for about a third of the participants reviewed, the committed supports did not appear to reflect the participant's needs, and hence contained supports that were unlikely to be utilised.

There is also some evidence that the new CRM from 1 July 2016 may have led to lower levels of utilisation over the periods investigated. There are known limitations with the CRM system, for example in regard to the implementation of assistive technology and home modifications, of which the current assistive technology process is under review.

Assistive technology and home modification (ATHM) redesign project[46]

ATHM are an important support item for many participants of the Scheme as they can be used to build a participant's capacity and independence. ATHM covers a wide range of aids and appliance items which vary substantially in cost. Over a third of participants have capital ATHM in their plan and this rises to almost 60% if consumable assistive technology is included. Examples of ATHM include wheelchairs, lifters, communication aids, prostheses and continence aids. The Agency has a project underway assessing the feasibility of changing the operational delivery mechanism for ATHM.

Current state

NDIA's current ATHM service delivery operating model is lengthy and struggling to keep up with demand of ATHM and therefore limits participant outcomes and is a source of frustration for participants and providers. The time required for Planners and LACs to include ATHM in a participant's plan is too high (about 8 hours per request) and there is a growing backlog of outstanding requests for unscheduled plan reviews (many thousands). Repair and maintenance providers are also struggling to make service bookings and be paid. There is also a view that the current practices under the ATHM process will continue to expose the NDIA to significant legal and reputational risks.

Target State

The ATHM redesign project aims to address participant and provider pain points relating to the current ATHM process and to mitigate the potential cost blowouts to the NDIS. Under the proposed process, Section 36 assessors would be expected to forecast a participant's ATHM needs for the next 2-3 years. The proposed target state process is expected to reduce the associated operational expenditure compared to the current state. However, to deliver the proposed ATHM process, there will be some project delivery costs for team resources and for developing and implementing ICT changes to the NDIS Business System.

The target state includes the release of a low cost ATHM process, the introduction of a specialised ATHM assessor panel, a comprehensive ATHM pricing review, additional training and published guidance on ATHM, and the exploration of additional options for remote community capacity development. These are intended to provide more effective and efficient delivery of ATHM to help build participant capacity.

Future considerations in determining utilisation includes the influence that the "cashing out" of in-kind supports may have, or any changes made to the guided planning process. Any changes in the plan construction phase needs to be carefully considered. If there is a

[46] This information has largely been taken from a document titled "*Preliminary Impact Analysis: AT Current and Target State*" as updated to February 2018. This document describes in much detail the current Scheme AT processes, the ideal target state and the financial and qualitative outcomes expected from moving to the target state.

reduction in participant plans related to supports that were unlikely to have been used in the first instance, then package sizes may reduce but be offset by increases in utilisation rates. Therefore, the link between committed supports and payments requires careful consideration.

Appendix F considers utilisation rates by State/Territory and also the distribution of utilisation rates by participant plans. The variation in utilisation by State/Territory and for individual participant plans suggests that a longer term utilisation rate of between 80% and 90% may be appropriate. However, note that the appropriate level of utilisation will depend on whether the committed supports in participant plans are at a reasonable level.

4.5.3 Payment experience

The previous discussion has shown that the full amount of committed supports in participant plans is not being used and that there are concerns that the guided planning process is not being implemented as intended. In light of this, it is useful to consider the average payments actually being made per participant as a means to project Scheme costs. Payments are less likely to be influenced by the issues affecting TSPs, committed supports and reference packages, but cannot be entirely divorced from these concepts.

The payment experience remains relatively immature. From this perspective, annualised payment levels for the six months to 30 June 2018 for those active participants at both 31 December 2017 and 30 June 2018 and with a second (or greater) plan start date prior to 31 December 2017 have been used to analyse payments as they provide a good indicator of longer term payment experience.[47] This is illustrated in Figure 4.7.

[47] A six month period was selected to maximise the number of participants who would meet the criteria of being on their second plan (or greater) prior to the start of the period. Due to the large number of participants who phased into the Scheme during transition, using a 12 month period would result in significantly less participants who met the criteria, thus reducing the representativeness of the payment experience.

Figure 4.7 Participants, payments and plans used to set payment assumptions

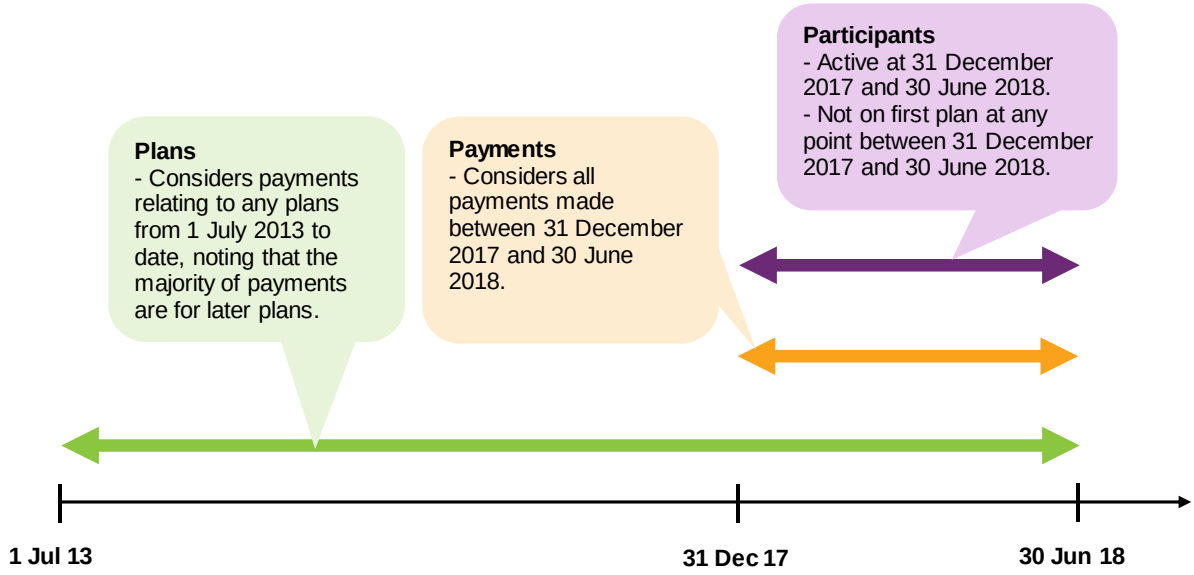
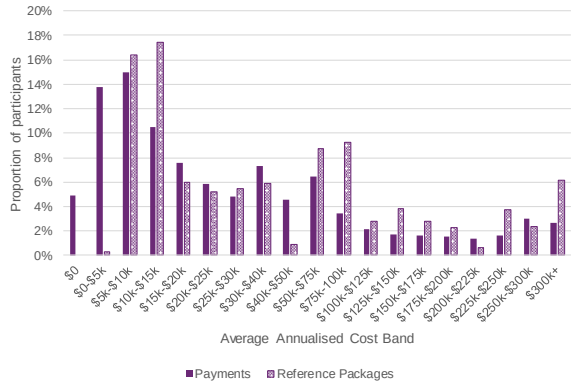
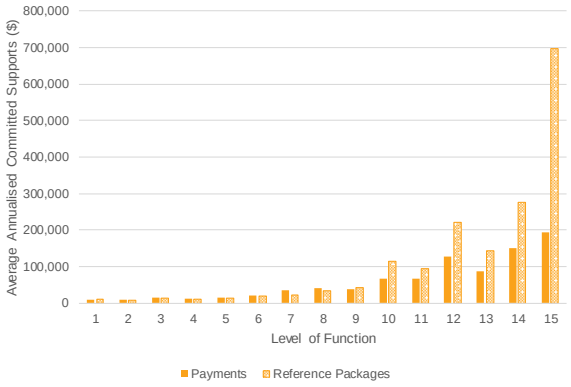
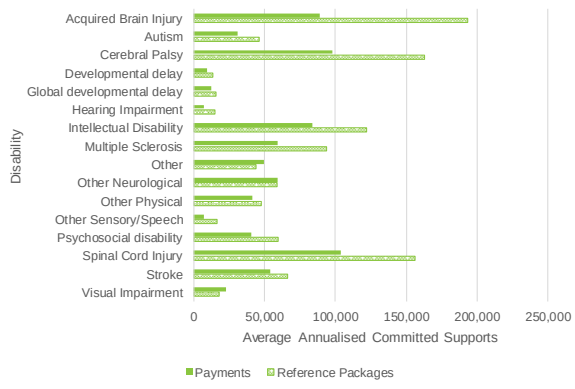


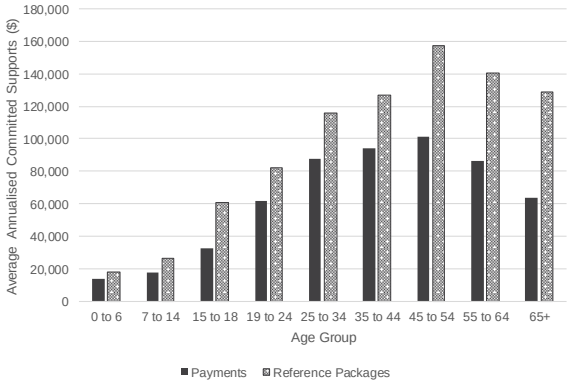
Figure 4.8 summarises average annualised payments and reference package amounts by various risk characteristics for the above cohort of participants. The experience includes an allowance for in-kind supports being provided.

Figure 4.8 Scheme payments and reference packages at 30 June 2018









The overall average annualised payment experience for this cohort of participants is about $54,000, noting that this average contains biases based on the phasing-in patterns of regions into the Scheme. In particular, about 11% of these participants are in shared supported accommodation arrangements. The average annualised payment experience for participants in shared supported accommodation is about $245,000, while the average is about $31,000 for those who are not.

Figure 4.8 also shows that average reference packages for this cohort of participants are higher than payments across most risk characteristics. This primarily reflects the concerns around the accuracy of the participant's functional assessment, with many more participants being assessed as lower functioning than expected, and noting that lower functioning groups are assumed to have higher reference packages. Nonetheless, a comparison between the two is useful, as these average payment assumptions, adjusted for phasing-in biases and any expected superimposed inflation, could be used as a basis for a recalibrated reference package assumption, and on the assumption that the current functional assessment process were to continue without any change.

4.5.4 Payment assumptions

Annual cost assumptions have been calculated for each participant based on current payment levels, with separate assumptions by age, disability, level of function and shared supported accommodation indicator. As with the analysis of payments experience, payment assumptions have been determined using annualised payment levels for the six months to 30 June 2018 for those active participants at both 31 December 2017 and 30 June 2018 and with a second (or greater) plan start date prior to 31 December 2017. These assumptions also allow an estimate of the calculation of the lifetime cost of participants who are currently in the Scheme, or enter the Scheme.

Average cost assumptions for participants not in shared supported accommodation arrangements for the main disability types are summarised in Figure 4.9.

Figure 4.9 Annualised payment assumptions for main disability types (non-SSA)

Some of the key aspects of Figure 4.9 include:

- Payment assumptions are highest for those participants with the lowest level of function (the darker lines) across all disability types, noting that there are generally smaller numbers of participants in these low functioning groups.
- Payment assumptions for children are generally lower than for adults, reflecting the relatively high level of informal care and support that is provided by parents, and that support need tends to increase with age.
- Payment assumptions vary significantly by disability type, level of function and age.
    - Payment assumptions for participants with autism, intellectual disability and cerebral palsy have a large difference between the highest level of function and the lowest level of function. Payment assumptions for acquired brain injury have the largest percentage differential between the highest level of function and the lowest level of function, a reflection, in part, to the Care and Needs Score (CANS) functional assessment tool that is used, which relates level of function to a participant's need for attendant care support.

- Payment assumptions for intellectual disability, acquired brain injury and cerebral palsy follow a humped distribution, reaching a maximum at the ages of 15-44. Payments assumptions for autism increase with age.

For each year, the annual cost across the whole Scheme can be determined based on the underlying profile of participants in the Scheme for the year. More detail is included in Appendix F.

An adjustment to projected payments has been made for participants on their first plans. Experience indicates that a participant's first plan utilisation is, on average, about 15% lower than for subsequent plans. Additionally, a participant's second plan typically has committed supports that are much higher than their first plan. The combined impact of higher utilisation and higher levels of committed supports in a plan means that the rate of payment in a participants' first plan is tracking about 38% lower than for their second and subsequent plans. This adjustment has therefore been made to the projected payments for participants on their first plans, and also noting that this adjustment is separate to the allowance for "utilisation increases" in Section 4.6.3. This impact is most significant during the transition period, where there is a high proportion of new entrants to the Scheme, with the impact becoming smaller once the point of Steady Intake is reached.

4.5.5 Shared supported accommodation

There may be some participants that, because of complexity of their disability and limitations in their informal support network, mean that their housing needs cannot be currently met in the community or the costs of providing support for them to live independently in the community are prohibitive.

While participants with Shared Supported Accommodation (SSA) arrangements are expected to account for only about 7% of the participant population, they are expected to account for over a third of the total expected participant support costs in the Scheme. Ensuring that the number of participants in SSA arrangements are targeted at the right cohort through the reasonable and necessary support criteria therefore remains an important part of maintaining the financial sustainability of the Scheme.

This section provides a discussion of some of the emerging cost pressures on SSA arrangements and Section 5.5.3 provides sensitivity analysis on the financial impact of these pressures.

Shared supported accommodation costs

The average annualised committed supports for participants in shared supported accommodation arrangements is over $250,000 and this level is reasonably consistent across age and disability type. The majority of a plan's committed supports generally relate to Supported Independent Living (SIL), representing the daily living costs of an accommodation place. The plan will also generally have an allowance for Specialist

Disability Accommodation (SDA) supports, which represent the capital costs of the accommodation place. A participant will also generally have a component in their plan for community participation. There is some variation in plan budget by level of function, although participants with high levels of function in SSA arrangements still have average committed supports of around $208,000.

Specialist disability accommodation payments

In their 2011 inquiry report into Disability Care and Support, the Productivity Commission acknowledged that the Scheme would need to supply capital funding for Specialist Disability Accommodation not normally provided by social housing, and hence referred to this funding as the user cost of capital. This was notionally included in packages for people with very high support needs (around 28,000 people) and estimated to be 12% of their annual support package.

There are specific rules within the NDIS legislation for the inclusion of SDA supports in a participant's plan.[48] These rules require participants to have an "extreme functional impairment or very high support needs". There is also a requirement to have regard to "the need to ensure the financial sustainability of the NDIS".

Since 1 July 2016, support for Specialist Disability Accommodation has been included, where appropriate, in participant plans. This allows for ongoing monitoring of this support, both in terms of the number of participants accessing this support and also the average cost of providing this support. There is a high correlation between participants in shared supported accommodation arrangements and those with Specialist Disability Accommodation in their plans.

At 30 June 2018, there were 8,858 active participants with SDA supports in their plans and more than $80 million has been committed to SDA supports in these plans. At Steady Intake there are expected to be over 30,000 people with an SDA component to their plan.

There have been ongoing pressures leading to increasing average costs over time[49], driven by:

- A higher level of non-accommodation supports are being provided to participants in SSA arrangements over time.
- A change in the mix of participants towards higher cost participants, in particular higher proportions in 2 or 3 person homes, rather than larger accommodations.

[48] "National Disability Insurance Scheme (Specialist Disability Accommodation) Rules 2016"
[49] An analysis of NSW SSA costs to 31 December 2016, which accounts for over half of those participants identified as having SSA arrangements, has been one source of this information. Further background has been sourced from the recent paper '*Supported independent living and specialist disability accommodation – participant profile and experience*'.

- Increases in cost for in-kind trial participants indicating that the accommodation cost of some in-kind arrangements were understated.
- A greater proportion of transition participants require “complex” (and more costly) supports, rather than “standard” supports.
- A high number of participants have entered shared supported accommodation arrangements over the last year, some of whom are relatively high functioning participants.

Around 28% of SSA arrangements at 30 June 2018 are provided through “in-kind” agreements between the States/Territories and the NDIS. The accommodation price for these in-kind agreements are generally above the agreed NDIS price for such arrangements. Analysis suggests that in-kind prices could be 20% to 80% higher than equivalent NDIS prices, depending on the jurisdiction. NSW are in the process of “cashing out” these in-kind arrangements, with other jurisdictions likely to follow once transition phasing has completed.

SSA payment assumptions

Figure 4.10 summarises the annualised payment assumptions for SSA participants for some of the key disability types.

Figure 4.10 Annualised payment assumptions for main disability types (SSA)

Some of the key aspects of Figure 4.10 include:

- There is less differentiation in payment assumptions by level of function compared with non-SSA participants. There is a large difference in assumptions for autism levels 1 and 2, relative to levels 3 and 4.
- Across all the disability types, the payment assumptions for children are the same, noting that children below the age of 14 are not expected to reside in supported accommodation places for long periods of time, if at all.
- Payment assumptions are relatively stable for adults, although for autism, intellectual disability and cerebral palsy, there is a hump in costs at around the 19-24 age group.

Managing supported accommodation costs

Supported accommodation costs are a large proportion of total Scheme costs and it is important that these costs are well managed. A recent literature review identified some barriers which were limiting the degree of innovation in the shared supported accommodation area. It is recommended that these alternative models of support be explored so that an evidence base can be established to determine the most appropriate and cost effective models of support.

It is appropriate that the management of supported accommodation costs are a priority for the Agency. For example, management could consider:

- An approval process for participants moving into SIL to ensure alternative options have been explored, including the development of capacity building strategies.
- Reviewing participant's ongoing need for SIL for those participants with a high to moderate level of function, including those who have recently entered accommodation for the first time.
- Identification of alternate models of support to help participants to move out of supported independent living, where appropriate, and helping to facilitate innovative market responses to participant circumstances.

Young people in residential aged care

Some younger people have been identified as residing in Residential Aged Care. The accommodation services for these participants are currently provided for through the aged care system. The Scheme is invoiced an amount by the Department of Health at the end of each financial year as payment for these services.

At 30 June 2018 there were about 2,531 participants identified as residing in Residential Aged Care. Around 64% of these participants were aged 55 to 64. Department of Health data indicates that there are about 6,300 people aged under 65 in Residential Aged Care, of whom about 85% are aged 55 to 64. This issue was specifically identified in the Productivity Commission inquiry in 2011.

For those participants living in Residential Aged Care currently in the Scheme, the accommodation (and associated care cost) is not being fully captured within individual participant plans. It is expected that there will be a continuing transition of this cost through to the Scheme over the next year as plan reviews occur. It is expected that over time, some of these participant arrangements may be transitioned to shared supported accommodation arrangements in situations other than Residential Aged Care facilities. The average cost of alternative arrangements are likely to be higher than the cost within Residential Aged Care facilities, predominantly because the care costs within Residential Aged Care are spread over a much larger number of people.

This puts upwards pressure on Scheme costs in the shorter term and has been captured as a future source of superimposed inflation in Section 4.6.3. Ultimately, the provision of shared supported accommodation will be closely linked to the availability of appropriate homes with disability-specific accommodation.

4.6 Superimposed inflation

Superimposed inflation is the increase in committed supports and/or payments above the expected rate of inflation. This inflation can be monitored in a number of different ways, and current monthly monitoring presents a range of metrics which are tracked and segmented by a variety of participant cohorts. Typical analysis of superimposed inflation requires the comparison of metrics over long periods of time. The immaturity of the Scheme means that there is limited information over which to form this assessment. In addition, there have been many changes in the way that plans are constructed, including the way that payments and participant details are processed. This means that a heavy reliance on benchmarks is appropriate to inform future assumptions.

4.6.1 Superimposed inflation experience to date

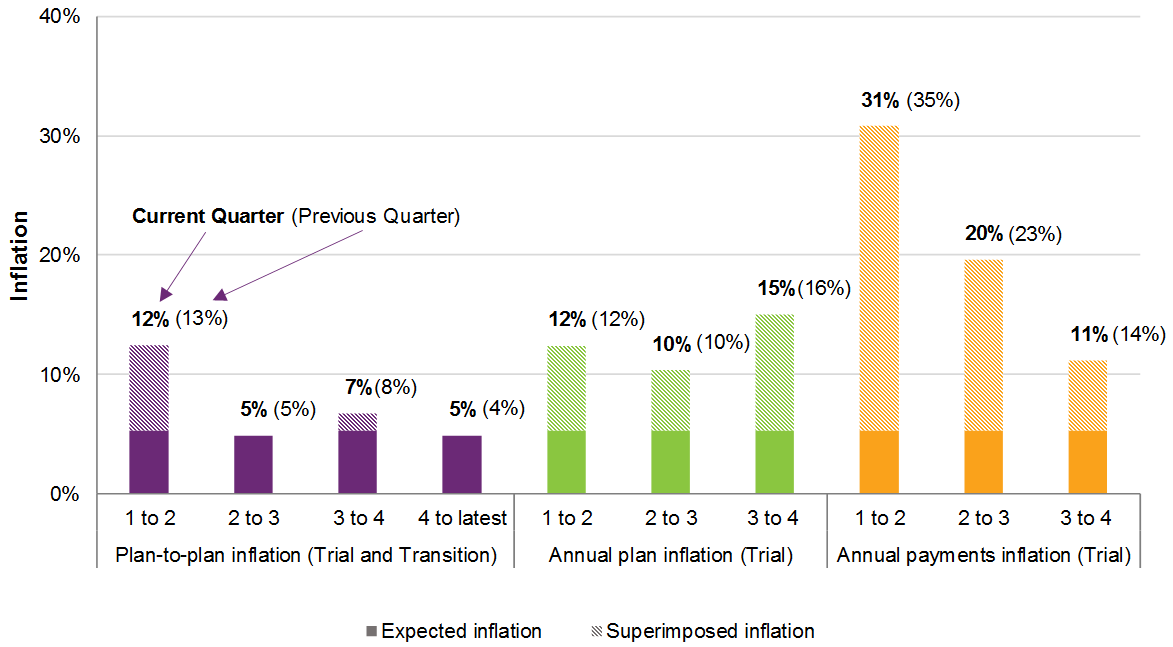
As at 30 June 2018, 54% of participants ever with an approved plan (95,744) had received more than one plan. There are 46% of participants who entered the Scheme post 1 July 2016 who had received more than one plan, and the majority of participants who received their first plan during the trial period had received more than one plan.[50] This is experience over a relatively short period of time from which to form a view on superimposed inflation, especially when it is considered in the context of a rapidly evolving operating environment.

[50] This excludes 15,941 plans less than 31 days in duration. In addition, a further 1,538 plans (458 participants) with $0 committed are excluded.

Figure 4.11 shows a summary of how plan costs change over time using data as at 31 May 2018, measured using several methods:

1. Annualised committed support for consecutive plans (purple columns: “plan-to-plan inflation”)
2. Committed supports in consecutive twelve month periods per participant (green columns: “annual plan inflation”)
3. Payments in consecutive twelve month periods per participant (orange columns: “annual payments inflation”)

Figure 4.11 Change in plan values between plans[51]



Plan-to-plan costs have increased over and above inflation and ageing, with a particularly large change between the first and second plans (12%), and smaller increases of 5%, 7% and 5% for second to third, third to fourth plans and fourth to fifth plans respectively. The normal inflation component of this increase is approximately 5% per annum.

Annual plan inflation experience for trial participants has been higher than the total experience overall, and trial payments experience has also been very high. The superimposed inflation component is highlighted in hatched shading in the bars above. The volatility of this experience indicates some of the systemic changes in the planning process from trial to transition, the duration-related component of superimposed inflation and also

[51] Plans shorter than 31 days have been excluded from cost trajectory analyses as these plans may not be representative. Additionally, a further 646 plans (238 participants) have been excluded from cost trajectory analyses as they have had at least one zero dollar plan.

highlights the difficulty of estimating future superimposed inflation given the limited post-transition participant experience.

Annual payment inflation for trial participants by year of entry to the Scheme and State/Territory is presented in Table 4.4. The high payment inflation from year 1 to 2 may be driven by the low utilisation of committed supports often seen in the first year of participants entering the Scheme. Annual payment inflation reduces significantly in year 2 to 3 and year 3 to 4 as participants gain familiarity with the Scheme. The emerging superimposed payments inflation for trial participants is above 10%, and this reflects the increasing usage of committed supports as participants gain familiarity with the Scheme as well as one-off issues associated with in-kind and systems/process changes.

Table 4.4 Annual payment inflation by year of entry and State/Territory

First plan approval year	Year 1 to 2	Year 2 to 3	Year 3 to 4	Participants	Year 1 to 2	Year 2 to 3	Year 3 to 4	Participants
	NSW				SA			
2013-14	32.2%	50.6%	19.6%	2,167	29.8%	4.1%	-5.1%	1,341
2014-15	79.9%	45.1%		2,270	11.2%	-2.2%		3,194
2015-16	36.9%			3,007	12.2%			1,169
Trial	46.9%	48.2%	19.6%	7,444	16.1%	0.8%	-5.1%	5,704
	TAS				VIC			
2013-14	59.7%	24.6%	14.0%	726	24.8%	12.0%	11.5%	2,801
2014-15	78.7%	22.8%		169	14.9%	9.2%		1,389
2015-16	38.1%			166	24.4%			451
Trial	59.8%	24.4%	14.0%	1,061	22.2%	11.3%	11.5%	4,641
	All States/Territories							
2013-14	32.1%	26.2%	14.2%	7,035				
2014-15	43.1%	18.5%		9,565				
2015-16	28.1%			7,349				
Trial	34.6%	22.8%	14.2%	23,949				

Drivers of superimposed inflation trends

A recent paper[52] documents some of the key drivers of superimposed inflation. Investigation and segmentation shows that common causes of superimposed inflation include participants moving into more expensive accommodation arrangements, changes to in-kind arrangements, participants having a change in level of function after only a short time in the Scheme, data issues relating to remediation reviews, changes in plan duration, changes in levels of informal supports and high utilisation.

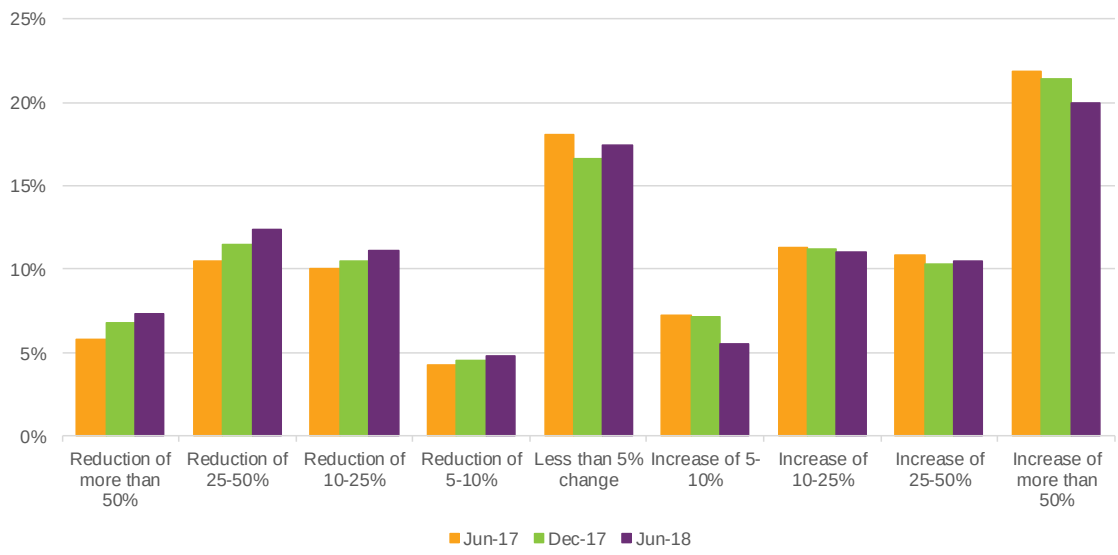
[52] A recent paper titled "*Superimposed Inflation Analysis*" dated August 2018 discusses the measurement of superimposed inflation in a number of different ways and also discusses the key sources of this data.

There are valid reasons for increases in plan values and associated payments due to changes in circumstances, such as the functional deterioration associated with degenerative disabilities. In other circumstances, the reasons for the increases are less clear, for example a Scheme-wide reduction in the reporting of the level of informal supports for participants and a similar trend towards deteriorating functional assessments. It is unclear whether these trends are a reflection of experience, or if they may be a result of potential gaming of the guided planning process.[53]

4.6.2 Analysis of individual committed support movements

At 30 June 2018, on an individual plan level, 17% of plan reviews to date resulted in a plan within 5% of the previous value, and 20% of plan reviews lead to an increase in annualised committed supports by more than 50%[54] as shown in Figure 4.12. The trend in the past year has seen an increasing proportion of plans with reductions of 10% to 50% and a decreasing proportion of plans with increases of 10% to 50%. This illustrates the volatility in plan values from period to period and the volatility is higher than would generally be expected in a stable Scheme position. This raises some questions over the consistency of plan funding decisions over time and between staff, and the impact of operational policies and procedures on reasonable and necessary decision making.

Figure 4.12 Percentage change in individual plans (all reviews to date)[55]



[53] The reference package review highlighted areas where the change in experience did not appear to be supported by formal documentation. See Section 4.4.3 for more discussion on this.
[54] Plans can increase by more than 50% because of participants moving into shared supported accommodation, particularly for participants who are over 18 years of age.
[55] Zero dollar plans and plans shorter than 31 days have been excluded from cost trajectory analyses as these plans may not be representative.

4.6.3 A forward looking approach to superimposed inflation

Historic analysis necessarily focuses on trial participants, as analysis can only include participants with plans covering a minimum of two years. Trial participants have experienced very high superimposed inflation over and above that expected from inflation and ageing, although more recent experience has been lower. There have been a number of one-off transition effects contributing to this experience, including changes in the ICT system, increases in the types and prices of in-kind supports, planning process changes, and the introduction of the guided planning process.

Historic inflation pressures are likely to be different to future inflation pressures. The past inflation analysis has been volatile and part of the inflation may be related to reasons that may not be applicable going forward. From this perspective, a forward looking approach has been used to better understand the expected future components of superimposed inflation. This approach has obvious limitations, in that unknown sources of superimposed inflation may in fact be the major contributor to the future, noting that the increase in payments as a result of the ageing process is captured within the model assumptions, and that this impact is greatest on transition from childhood to adulthood. Known contributors to historic superimposed inflation, as identified in Section 4.6.1 have been considered and assessed, based on the likelihood of being a future contributor to increasing costs.

Table 4.5 gives a summary of expected future pressures on Scheme payments that would likely emerge as superimposed inflation, noting that the FSR projections use a payments-based methodology. Importantly, our forward looking analysis assumes that the guided planning decision-making behaviours are rational and that functional assessments are evidence based. This implicitly means that there are no behavioural-related changes in a participant's level of function over time, relative to their current assessment, and that the way that reported level of informal supports are being provided to participants does not behaviourally change, and noting that these two factors have been identified as significant contributors to historic levels of superimposed inflation. Section 5.5.8 considers the financial impact on the Scheme if there was a continuation of these behavioural trends.

Table 4.5 Forward looking analysis of superimposed inflation sources

Source of superimposed inflation	Discussion
1. Utilisation increases 	A participant's second plan typically has higher levels of payments and committed supports compared to first plans. The payment assumptions in the FSR projection model used payments from participants on their second plans or later. In addition, average payments have increased over time as shown in Table 4.4. An allowance of about 5% superimposed inflation has been adopted for these utilisation increases, emerging primarily over the next four years to reflect the expected phasing of participants into the Scheme.
2. Payment calibration bias 	Participants from existing State/Territory programs have shown higher payment levels than those from Commonwealth programs or those not previously receiving supports for a given age, disability, level of function and gender grouping. The Scheme has phased in a higher proportion of participants from State/Territory programs and hence analysis has shown that there is an expectation that the current payments will be about 4% above Steady Intake.
3. Independent Pricing Review (IPR) 	There are a number of recommendations in the IPR which are expected to increase payments. Some are expected to be temporary, such as the temporary support for overheads, while others are likely to be sustained. An allowance of above-inflation payments has been adopted at a level of 2% in the next year, 1% in the following year, and a reduction in the next year as the temporary support for overheads recommendation is unwound.[56]
4. Assistive technology review 	The Assistive Technology and Home Modifications Redesign Project will transform the way that participants are able to access capital supports. This should lead to higher access and utilisation of capital supports. A 2% increase in Scheme payment levels is expected over a period of the next three years.

[56] Further detail on the expected impact of these IPR changes are discussed in Section 4.6.4.

Source of superimposed inflation	Discussion
5. Increases in Specialist Disability Accommodation (SDA) 	There is an expectation that more participants will access shared supported accommodation arrangements and this will have a flow-on impact to SDA costs. It is also known that not all plans which should have SDA in their plan do have SDA in their plan. An allowance of 2% additional inflation, mainly over the next two years, is expected.
6. Younger people in residential aged care 	The accommodation costs for these participants are currently being met through the aged care system. This cost is paid for off-system and hence is not captured within our individual payments data. An allowance of 1.8% has been made in recognition of these costs.
7. Impact of compensation policy 	The NDIS compensation policies are yet to be implemented. There is an expectation that recoveries will be made from both statutory and common law sources, and this is not included in historic data. A conservative reduction of Scheme costs of about 1% over three years has been included as the operationalisation of compensation policies occurs, noting that these costs are currently being paid by the Scheme.

The combined impact of the above sources of superimposed inflation is likely to increase costs by about 8% over the next three years, with the analysis of the expected sources shown in the following table.

Table 4.6 Sources of expected future superimposed inflation

Source	Projection Year				Total
	2018-19	2019-20	2020-21	2021-22+	
1. Utilisation increases	1.0%	1.9%	1.6%	0.5%	5.0%
2. Payment calibration bias	-1.9%	-1.9%			-3.8%
3. Independent pricing review	2.2%	0.7%	-0.5%	0.0%	2.5%
4. Assistive technology review	0.7%	0.7%	0.7%		2.0%
5. Increases in SDA	1.0%	0.9%	0.0%	0.0%	2.0%
6. Younger people in residential aged care	1.8%	0.0%	0.0%	0.0%	1.8%
7. Impact of compensation policy	-0.3%	-0.3%	-0.3%		-1.0%
Total	4.5%	2.0%	1.4%	0.5%	8.4%
Adopted	4.5%	2.5%	1.0%	0.0%	8.0%

The table reflects the known sources of future superimposed inflation, both upwards and downwards. There may be other influences on Scheme costs, both over and under normal inflation. For example:

- There are many Administrative Appeals Tribunal cases which may create precedence for future cost inflation or additional participant numbers
- The impact of early intervention supports may build a participant's capacity to live more independently and reduce future costs
- Innovations may occur in the provider market to give more cost effective supports to participants, for example in shared supported accommodation
- The development of provider markets may lead to increases in the utilisation of participant plan supports
- There may be behavioural changes in the level of functional assessments or the responses to guided planning questions, which may increase future costs

The FSR assumptions therefore anticipate that the sum of these "unknown" inflationary pressures will be neutral. This remains a key uncertainty in the projection analysis.

4.6.4 Independent pricing review

McKinsey & Company released an "Independent Pricing Review" in February 2018 on the appropriateness of the NDIA's pricing strategy and the approach and suitability of current price levels for supports and services. The report made 25 recommendations which can be broadly grouped into three themes of market monitoring / engagement, price limits and supporting interventions. The NDIA has agreed in principle with the 25 recommendations, and the changes are being progressively implemented.

The main recommendations which are expected to impact payments (as a percentage of payment assumptions) include:

- Recommendation 4 and 19 - the availability of travel allowances for providers in rural areas and for therapy supports (+0.7%)
- Recommendation 7 - the introduction of a high intensity loading (+0.6%)
- Recommendation 15 and 20 - changes to the cancellation policy for attendant care / therapy supports up to a certain threshold (+1.0%)
- Recommendation 21 – the payment of providers for the time spent writing NDIA requested reports (+0.2%).
- Recommendation 14 - relates to a temporary support for overheads for a period of 12 months (+1.0%) in respect to the price limit for standard intensity attendant care. At the end of the 12 months the temporary support for overheads price cap would be removed.

The costings highlight that the impact to the Scheme will depend on the way in which the recommendations are implemented. For example, for recommendations 15 and 20, the policy limits placed on the number of cancellations allowed per provider or per participant, and the imposition of these caps, would impact on the expected additional payments to the Scheme. Some of these changes have already been implemented as part of the NDIS Price Guide for 2018-19. For example, the temporary support for overheads has been implemented with the expectation that this would be removed in a staged process over 24 months, as opposed to the 12 months as per the IPR recommendation.

These additional payments have been included in the projections as a source of future superimposed inflation above current payment levels.

4.6.5 Compensation

Compensation policies are being developed within the NDIA through a compensation project team that was established in June 2017, although, to date, these policies have not been fully operationalised. An actuarial paper in late 2017 [57] estimated that some 8,000 (1.7%) to 15,000 (3.3%) of participants at Steady Intake may be able to access, or may have accessed, lump sum compensation. The actuarial paper contains further details on which participants are most likely to have accessed, or may be able to access, compensation.

Once a compensation amount for a participant is identified, the general process to operationalise the recovery of compensation amounts will often be through the use of a Compensation Reduction Amount (CRA) in a participant's plan. A CRA is a reduction to a participant's plan budget in recognition that a part of a participant's compensation settlement will be used to meet the care and support needs of the participant on an ongoing basis. The calculation of CRAs is governed by the *National Disability Insurance Scheme (Supports for Participants – Accounting for Compensation) Rules 2013)* ("NDIS Rules").

The gathering of robust and appropriate information is imperative to the calculation of CRAs and these processes are being developed. To help facilitate the calculation of CRAs, a number of data sharing arrangements with other injury support schemes around Australia are being developed.[58] An additional barrier to the implementation of CRAs in participant plans is that the current ICT system does not have the full functionality to manage and monitor CRAs in participant plans, although an ICT change request has been made to help build this functionality.

[57] A paper was developed titled "*National Disability Insurance Agency Actuarial considerations on emerging compensation policies*" in December 2017.
[58] Memorandums of understanding (MoUs) for information exchange are in development for most State/Territory injury support schemes, with agreements in place for a number of these schemes.

The implementation of a National Injury Insurance Scheme (NIIS) for motor vehicle and workplace injuries from 30 June 2016 means that these catastrophic injuries are covered by a State/Territory based NIIS for future lifetime care and support costs.[59] The intention is that NIIS participants would not ordinarily be able to access the NDIS, as this would constitute double-dipping for future supports, although there is emerging evidence that some people are "mutual participants" of both a NIIS and the NDIS.

It is clear that there are material numbers of participants in the Scheme, and due to enter the Scheme, who will have been paid compensation amounts. It is less clear the materiality of these compensation amounts and the ability of the NDIS to make recoveries to avoid participants being paid twice for supports being received. Once compensation policies have been established and implemented within the NDIA, then the quantum of these compensation offsets will be able to be estimated. In the interim, the FSR model has assumed that NIIS participants will not enter the NDIS[60] and that there is an expectation of reductions in Scheme costs of about 1% over current payment levels as a result of the implementation of compensation policies.

4.6.6 In-kind supports

There are over 50 individual in-kind State/Territory or Commonwealth programs in place as at 30 June 2018. Over $1 billion in in-kind supports was provided for in 2017-18, accounting for about a fifth of all supports provided to participants. The largest proportion of in-kind supports relate to government operated shared supported accommodation arrangements. For example, the in-kind offset in relation to NSW-operated Group Homes represents nearly a third of all in-kind supports identified in the 2017-18 support year. The proportion of supports provided in-kind is expected to reduce over time, as in-kind arrangements are progressively converted to cash arrangements, often termed "cashing out".

The information supporting in-kind arrangements are generally captured using an off-system in-kind reconciliation process. This process involves an extensive data matching exercise requiring State/Territory governments to provide the NDIA with a list of all clients who receive in-kind services for agreed in-kind programs. This list is then matched to identify clients who are NDIS participants with an approved plan. In-kind supports are assumed to be fully utilised at the time, or over the time period, that the support is provided, and the unit cost is provided by the State/Territory governments to the NDIA. In some cases it can be

[59] Western Australia and Queensland schemes allow a person to opt out of the NIIS and instead pursue a lump sum, thus presenting as potential candidates for lump sum offsets to the NDIS – perhaps for full amounts.

[60] A relatively straightforward approach has been adopted which reduces the new incidence of people with spinal cord injury and acquired brain injury compared to the levels suggested in the new incidence analysis paper.

difficult to match each in-kind amount to an individual participant plan or to a specific support time period. This process is largely manual and is very time consuming.

The governance arrangements and data quality around supports provided on an in-kind basis are poor. For example, there are some aspects of the process which can lead to retrospective changes such as the late agreement of in-kind programs or the delay in submission of in-kind data from States/Territories. It can also be difficult to determine whether the in-kind supports provided to participants satisfy the reasonable and necessary requirements of the legislation and whether the in-kind supports have been provided in full. In many cases the participants do not have choice and control over the supports that are being provided in-kind.

“Cashing out” of in-kind arrangements refers to the unwinding of existing government programs to participants of the Scheme, thereby allowing participants to choose the provider of the supports they currently receive on an in-kind basis. The financial impact of the cashing out process is largely unknown, although there may be reductions in costs if the price of the support is lower, using NDIS prices, than the in-kind price. Further, reductions in costs may emerge if the utilisation of the new supports is lower than 100%, noting that all in-kind supports are assumed to be fully utilised. The “cashing out” of programs such as shared supported accommodation arrangements has the potential to have an impact on the financial sustainability of the Scheme, as the in-kind price of accommodation supports is generally much higher than the NDIS price.

There is ongoing policy debate around a number of in-kind supports and whether they should continue indefinitely. For example, student transport to and from school, and personal care at school, remain problematic in terms of the respective responsibility of funding for education for children with a disability and how this is split between the NDIS and the education system. A Senior Officials Working Group reporting to the Disability Reform Council has been established to help define this.

4.6.7 Unanticipated costs and emerging cost pressures

There are a number of aspects of the implementation of the NDIS that differs from the costing of the NDIS in the 2011 Productivity Commission’s Disability Care and Support Inquiry. Table 4.7 gives a summary of four such implementation differences.

Table 4.7 Unanticipated Scheme costs

Change from Productivity Commission Costings	Discussion
Participants remaining in the Scheme post age 65 years	Original NDIS cost estimates did not allow for participants ageing past 65 years. This cost will increase over time, as the number of Scheme participants aged over 65 increases. The additional participant costs related to over 65 year olds compared to the original Productivity Costing is expected to increase from about 3% in 2019 currently to 13% in 2030.
Children with developmental delay (aged 0-6 years)	Original NDIS cost estimates excluded “developmental learning disorders” and “other developmental disorders”. For this FSR a separate costing of children with developmental delay and global developmental delay has been performed. The additional cost of this is about 1.4% of the original Productivity Costing participant costs.
Participants seriously injured through medical misadventure or through general injuries (other than road and workplace injuries)	Original NDIS cost estimates assumed the establishment of a NIIS in each jurisdiction to support people seriously injured in accidents, regardless of the cause (that is, whether from a road accident, workplace injury, medical misadventure or general injury). The impact to the Scheme increases over time, as it is only the injuries that were expected to occur from the intended NIIS implementation date (1 July 2018) that would impact on the NDIS cost estimates. The impact increases from about 0.3% of the original Productivity Costing participant costs for the current year to about 2% at 2030.

Change from Productivity Commission Costings	Discussion
School transport	Original NDIS cost estimates did not include the delivering of specialist school transport services. On the whole, costs are likely to be in the range between $300 million and $600 million (1% to 2% of the original Productivity Costing participant cost estimates at 2023), noting that currently States/Territories provide these services on an in-kind basis, and that these services have been counted as an offset to States/Territories' contribution to the NDIS. The sub-SOWG Transport Working Group is anticipated to provide advice on a recommended approach and related costs to the September 2018 meetings of SOWG and the Disability Reform Council, to be subsequently advised to COAG.

Table 4.7 gives an indication of additional cost pressures impacting the Scheme. More costs pressures are likely to emerge. For example, the States/Territories have been pushing for the inclusion of many additional in-kind programs such as "personal care in schools" and "out of home care (child and youth protection services)". These types of supports are gradually emerging, as the boundaries between mainstream services (such as education and child protection) and NDIS supports are tested. Specifically, the States/Territories are claiming the additional disability-specific costs associated with these mainstream supports should be covered by the NDIS. In practice, it can be a very subjective exercise to segregate disability-specific costs from other support costs, as the care is often provided to a range of people, both for those with and without disabilities.

Administrative Appeals Tribunal (AAT) Cases

There are many emerging pressures on entry criteria which may impact the number of Steady Intake participants. There are particular pressures in relation to Scheme interactions with mainstream services. These may manifest in the form of AAT matters, which can set precedence for defining access to the Scheme or related to the supports funded under NDIS plans. A recent review of AAT matters highlighted the following themes.

Health Interface

Medical conditions may present as a permanent disability but may be better treated as part of the medical system. This may manifest as either an increase in the number of participants being granted access to the Scheme or as an increase in the level of supports provided.

Administrative Appeals Tribunal (AAT) Cases (continued)

Some of the conditions where people are seeking access to the Scheme include Chronic Pain /Fibromyalgia, chronic obstructive pulmonary disease, "Chronic Fatigue Syndrome" and "Ankylosing spondylitis" (arthritis of spine). Some actuarial reports have been prepared in response to these AAT matters[61] to cost the potential impact of including some of these conditions and also outlining the potential reasons that these conditions should not be covered by the Scheme. For example, "Chronic Pain" has high prevalence and would have significant impact on the Scheme if people with Chronic Pain entered the Scheme.

For access and Scheme eligibility, common themes are in relation to whether the disability is permanent, whether the participant has substantially reduced functional capacity or whether the applicant meets residency requirements.

Erosion of Informal Supports

Several AAT matters involve parents seeking formal care support (including a mother returning to work two days per week, a family requesting 24/7 external supports, and a carer who has an injured shoulder and could no longer provide care). A further matter involves a participant who wants to pay a family member as the support worker, noting that there is no dispute as to the level of support.

The NDIS Act specifically requires the NDIA to fund reasonable and necessary supports that "take into account what is reasonable to expect families, carers, informal networks and the community to provide." The risk to sustainability from these cases, is that over time, funded support replaces support from informal networks and the community.

Funding decisions

There have been several matters where extra transport is being requested, either as the only request, or as part of a group of support requests.

A number of matters involve requests for Specialist Disability Accommodation. A specific case involves an age 19 applicant with multiple sclerosis who wants 24/7 support to live alone. This raises many questions on what is reasonable and necessary, such as "what is an ordinary life for a 19 year old?" In 2018 this is probably not living alone, with a parental home or shared home until age 30 probably more "ordinary".

[61] For example, an actuarial report was prepared which contained a costing for people with chronic obstructive pulmonary disease were they to be included in the Scheme.

Administrative Appeals Tribunal (AAT) Cases (continued)

Some AAT matters involve support requests for home modifications and assistive technology. Many of these matters are involved with the definitions of what is reasonable and necessary, with different points of view on what may be a gold-standard option versus a similar option that provides more value for money. There is a broader risk here that expensive technologies are being developed that may become “the normal standard” quickly, and then be hard to argue against as reasonable and necessary.

A growing number of matters involve assistance dogs, not just for visual impairment, but also for psychosocial disabilities. There is growing evidence that companion dogs are beneficial for wellbeing for people with depression, chronic conditions and other similar conditions. This questions “what is an ordinary life?” In general, people have pets/animals for companionship and it’s a personal expense.

These are all examples where the boundaries of what is defined as reasonable and necessary supports are being tested.

5. Scheme projections

Summary of key findings

- The projected overall costs at Steady Intake in 2022-23 is estimated to be $28.4 billion, including $1.5 billion for people aged over 65 years and $1.8 billion in operating costs. The estimate at 2022-23 is around 3% higher than the previous FSR. The baseline projection is lower than the estimate of reasonable and necessary supports in the Portfolio Budget Statements (PBS) from 2018-19 to 2020-21, largely due to differences in participant phasing, but is 5% higher than the PBS for 2021-22 (the latest publicly available estimate).
- The current FSR uses assumptions primarily based on experience (but adjusted for phase-in biases) to inform projections, rather than benchmarks, which were used in previous FSRs. It is appropriate to use the projection as a basis against which to monitor the actual Scheme experience.
- Key assumptions and results of the baseline projection include:
  - Steady Intake prevalence for 0-64 year olds of 2.1% of the total Australian population at 2023 (equivalent to 477,937 participants), projected to increase to 2.4% at 2030 (equivalent to 578,020 participants).
  - New incidence per annum of 0.14% of the Australian population aged 0 to 64 (equivalent to 31,728 new participants per annum at 30 June 2023).
  - Scheme exit rate of 1.6% per annum at 2020 and projected to increase to 2.5% per annum at 2030, with expected exit rates of about 3% to 5% per annum from participants aged 7 to 14, through the impact of early intervention.
  - Total Scheme costs of 1.21% of GDP at 2023, increasing to 1.38% at 2030 (1.14% and 1.20% of GDP at 2023 and 2030 respectively for 0-64 year olds).
  - Long term operating expenses of 6% of participant costs.
- Key movements from the previous FSR include:
  - Participant numbers and costs are lower from 2018 to 2022, primarily due to the slower phasing of participants. Steady Intake is assumed to be reached at 2023 rather than 2020.
  - Participant numbers and costs are higher after 2023, particularly in the longer term, due primarily to lower autism non-mortality exit rate assumptions.
- A number of plausible scenarios have been compared to the projection, based on different interpretations of emerging Scheme trends. Some scenarios represent additional costs for the Scheme's financial sustainability (such as higher costs, greater numbers of participants or lower Scheme exits), while other scenarios consider reduced costs (such as innovations in the delivery of SSA supports or higher autism exit rates). The majority of the scenarios considered have impacts which materialise in the longer term, reaffirming the opportunity for the Scheme to invest in appropriate management responses to emerging unfavourable experience.

5.1 Data used

The baseline projection at the previous FSR was based primarily on benchmarks[62] which assumed the costs of a well-functioning NDIS when it reached maturity. The baseline projection at the current review is based primarily on the emerging experience of the Scheme. However, there continue to be some areas where benchmark assumptions are used, primarily in areas where Scheme experience is either underdeveloped or where there are too many biases in the current experience to justify the use of that experience. Preceding sections of this report discuss the key assumptions and the approach that has been adopted in the calibration of these assumptions.

Some key areas where benchmark assumptions continue to be used, or partly used, include:

- **Mortality and other exit assumptions -** the exit experience is insufficiently developed within the Scheme to allow it to be fully relied upon. These assumptions have been based on a blend of the emerging experience and the benchmark assumptions from the previous FSR. There is also evidence of a duration-related component to exit rates, which limits the ability to reliably use the emerging experience.
- **Shared supported accommodation assumptions -** the proportion of participants living in shared supported accommodation arrangements is uncertain, as State/Territory phasing schedules are difficult to interpret. There is also expected to be further development and innovation in the delivery of shared supported accommodation as a result of the introduction of the NDIS, however this may not emerge for some time. Benchmark assumptions have been adopted for the proportion of participants living in shared supported accommodation arrangements.
- **Superimposed inflation assumptions -** the drivers of future superimposed inflation will likely be different to the historic drivers of superimposed inflation, so a forward looking methodology has been adopted to calibrate this assumption.
- **ABS population projections -** to determine the number of new participants entering the Scheme each year (based on the new incidence rates) and also the Census "Need for Assistance" variable to notionally allocate participants by phasing region.
- **Autism and psychosocial disability –** a blend of benchmark assumptions and experience has been used to determine the number of participants with these two disabilities (see Section 3.2.3 for more details). The later phasing of participants with

[62] The 2011 Productivity Commission report provided some initial costings of the Scheme and some of the assumptions underlying these projections have been used to help inform our estimates. The Productivity Commission estimate was based on the Australian Bureau of Statistics (ABS) Survey of Disability Ageing and Carers (SDAC). Additional data has been used to obtain a more detailed breakdown of the Productivity Commission estimate and to allow monitoring of actual experience against expected experience.

a psychosocial disability and potential barriers to Scheme entry means emerging experience may not be indicative of the number of longer term participants in the Scheme. Similarly, the access and eligibility pathway for autism is being reviewed, meaning that current experience may not be reflective of the experience at Steady Intake.

5.2 Methodology

An annual projection methodology has been applied to separate cohorts of the Scheme's population, projecting Scheme population and then projecting Scheme costs. The cohorts have been determined for participants with different primary disabilities, levels of function, gender and age. The model has 57 separate disability/level of function cohorts. A Scheme view of participant numbers and costs is formed by summing up these individual cohorts of participants.

The main changes in the cohorts from last year's model is:

- Developmental delay and global developmental delay (referred to as the "developmental delay group") have been separated out of the intellectual disability group because these participants have very different characteristics to other participants in the intellectual disability group. Further, the "developmental delay group" has been split into a higher and lower functioning group.
- The previous FSR had three functional groupings for the "Other" disability grouping[63]. This has been consolidated into one group because it is not expected that many participants will be grouped within this cohort.
- Once the projections by primary disability, level of function, gender and age have been calibrated, the cohorts have been further subdivided between those participants in shared supported accommodation arrangements and those without, by assuming that a proportion of participants in each cohort will be in shared supported accommodation arrangements.

5.2.1 Participant population methodology

Separate new entrant assumptions are used as the Scheme expands to Steady Intake in 2023, implicitly containing new incidence for those regions that have phased in, plus the phasing-in of people with an existing disability for those regions in the process of, or expected to, phase-in. The projections also assume that each year, participants exit the Scheme or remain in the Scheme and age one year. From Steady Intake at 2023

[63] This is distinct from the "other physical" and "other neurological" disability groupings, which each continue to have three functional assessment categories underlying each disability group.

participants who acquire disabilities are assumed to enter the Scheme. This dynamic uses deterministic assumptions based on the assumptions presented earlier in this report.

5.2.2 Projection of Scheme payments

The main components of the projection of Scheme payments are:

- Annualised participant payments are applied to participants in each cohort, with separate payment assumptions by age, primary disability, level of function and whether they are in shared supported accommodation arrangements.
- Inflation is applied to participant payments considering wage rates (including the SACS award), increases in CPI and any additionally identified inflationary factors.
- The participant payments across the Scheme is the sum of all cohorts based on the underlying profile of participants in the Scheme for each projection year.
- Agency operating costs are added as a percentage of participant payments, noting that this loading includes Tier 2 funding costs related to Local Area Coordinators and Early Childhood Early Intervention partners.
- The resulting costs are then compared with GDP.

Previously, the payments attributable to any potential participants who are already having their support needs met by the National Injury Insurance Scheme was removed from the total Scheme cost. The approach for this review has been to model this directly in the new incidence and population assumptions. More information is documented in Section 5.3.7.

5.3 Summary of key assumptions

5.3.1 Long term population

In the 2016-17 FSR, Steady Intake was expected to be reached at 30 June 2020. The revised Scheme intake transition to Steady Intake is not scheduled to be completed for another five years, rather than two years, and the model assumes a population of around 500,000 participants at the end of 30 June 2023, of which about 478,000 are assumed to be aged 0 to 64. This is relatively consistent with the original Productivity Commission estimate updated with expected Australia population growth.

A summary of the participant projections up to 30 June 2026, split by age band, is shown in Table 5.1. The age group 65+ is expected to represent a higher proportion of the participant population over time. This is because only people under age 65 are initially eligible for the Scheme, but they will remain in the Scheme once they reach the age of 65, unless they move to a residential aged care facility or exit the Scheme for other reasons.

Table 5.1 Scheme participant population projection summary[64]

Age Band	30/06/2018	30/06/2019	30/06/2020	30/06/2021	30/06/2022	30/06/2023	30/06/2024	30/06/2025	30/06/2026
0 to 6	22,951	54,206	65,314	66,297	62,601	54,225	57,161	60,536	63,277
7 to 14	43,187	65,155	79,549	90,583	102,153	114,899	120,289	124,088	128,084
15 to 18	14,095	21,974	28,431	33,529	36,912	40,068	40,745	42,187	43,781
19 to 24	16,522	24,394	29,316	33,235	38,811	44,643	48,556	52,167	54,630
25 to 34	16,786	29,427	36,605	41,149	45,070	49,438	50,989	52,622	55,267
35 to 44	15,615	30,459	38,117	42,495	45,218	48,267	48,953	49,167	50,012
45 to 54	19,207	37,322	46,720	52,561	57,397	60,806	60,025	59,698	58,309
55 to 64	20,709	38,135	48,039	54,220	60,162	65,591	67,440	68,954	70,916
65+	3,263	5,117	8,399	12,502	16,797	21,403	26,812	32,296	37,417
Total	172,333	306,189	380,490	426,569	465,120	499,340	520,971	541,716	561,694
Total 0-64	169,070	301,071	372,090	414,067	448,323	477,937	494,159	509,420	524,276
Incremental increase in participant numbers									
Total		133,856	74,301	46,079	38,551	34,220	21,631	20,745	19,978
Total 0-64		132,001	71,019	41,977	34,256	29,614	16,221	15,261	14,856

Table 5.2 shows the assumed distribution of the Scheme population as at 30 June 2023 split by disability type and age band.

Table 5.2 Scheme population as at 30 June 2023 by age band and primary disability

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+	Total	Percent
Acquired Brain Injury	192	572	374	747	1,568	2,378	3,669	4,156	1,501	15,156	3.0%
Autism	15,667	61,266	18,863	15,859	8,130	2,855	1,487	703	173	125,003	25.0%
Cerebral Palsy	2,241	4,689	2,201	2,902	3,227	2,894	2,492	1,479	399	22,523	4.5%
Developmental delay	23,006	9,308	160	135	154	68	56	22	5	32,913	6.6%
Hearing Impairment	1,995	2,754	1,079	868	1,656	1,782	2,811	3,519	1,084	17,548	3.5%
Intellectual Disability	4,376	22,051	13,437	18,346	20,926	15,726	17,738	14,344	4,206	131,149	26.3%
Multiple Sclerosis	0	2	2	51	504	1,812	3,208	3,988	1,406	10,974	2.2%
Other	156	254	70	83	64	81	87	189	67	1,050	0.2%
Other Neurological	1,011	2,597	1,204	1,204	1,589	2,177	3,682	7,784	3,103	24,351	4.9%
Other Physical	1,049	2,029	745	745	1,159	2,379	4,452	7,341	2,705	22,603	4.5%
Other SensorySpeech	3,899	6,465	411	192	43	41	54	70	7	11,182	2.2%
Psychosocial disability	56	1,385	700	2,573	8,518	13,273	16,149	13,978	3,654	60,286	12.1%
Spinal Cord Injury	18	81	83	149	707	906	1,299	1,735	678	5,655	1.1%
Stroke	42	79	41	98	207	637	1,372	3,477	1,303	7,256	1.5%
Visual Impairment	517	1,369	698	691	987	1,257	2,250	2,807	1,113	11,690	2.3%
Total	54,225	114,899	40,068	44,643	49,438	48,267	60,806	65,591	21,403	499,340	100.0%
Percent of Total	10.9%	23.0%	8.0%	8.9%	9.9%	9.7%	12.2%	13.1%	4.3%	100.0%	100.0%

This shows that about 26% of participants are expected to have an intellectual disability, with a further 25% having autism and 12% having a psychosocial disability. Remaining disabilities make up about 37% of the Scheme population. The majority of early intervention participants are concentrated around children aged 0 to 14, particularly those with autism, developmental delay, global developmental delay, an intellectual disability or an “other sensory/speech” disability.

[64] The projected number of participants aged 0 to 6 for the years 2020 to 2022 are higher than that projected at Steady Intake. This is a result of the projection methodology adopted in the first five years up to Steady Intake. The 30 June 2023 population is “forced”, based on an implied new entrant intake philosophy. While this progression is not desirable from a projection methodology perspective, the financial impacts of this is not considered to lead to a material misstatement in projected costs.

Table 5.3 shows the assumed distribution of the SSA Scheme population as at 30 June 2023 split by disability type and age band.

Table 5.3 SSA population as at 30 June 2023 by age band and primary disability

Disability Type	*0 to 6*	*7 to 14*	*15 to 18*	*19 to 24*	*25 to 34*	*35 to 44*	*45 to 54*	*55 to 64*	*65+*	*Total*	Percent
Acquired Brain Injury	0	0	0	92	179	257	416	471	172	1,587	4.5%
Autism	0	0	61	763	1,065	913	458	193	62	3,515	9.9%
Cerebral Palsy	0	0	14	222	540	943	821	466	133	3,140	8.9%
Developmental delay	0	0	0	0	0	0	0	0	0	0	0.0%
Hearing Impairment	0	0	0	2	4	4	8	8	3	30	0.1%
Intellectual Disability	0	0	117	1,419	2,803	3,820	6,429	5,958	1,749	22,295	62.9%
Multiple Sclerosis	0	0	0	0	5	18	55	79	31	188	0.5%
Other	0	0	0	0	0	0	0	0	0	0	0.0%
Other Neurological	0	0	4	41	55	75	126	281	113	695	2.0%
Other Physical	0	0	0	12	15	36	76	140	43	322	0.9%
Other SensorySpeech	0	0	0	2	0	0	1	1	0	4	0.0%
Psychosocial disability	0	0	21	126	431	674	845	832	223	3,152	8.9%
Spinal Cord Injury	0	0	0	6	24	34	46	66	24	199	0.6%
Stroke	0	0	0	2	3	10	21	62	24	121	0.3%
Visual Impairment	0	0	0	11	19	23	49	54	22	179	0.5%
Total	0	0	217	2,699	5,142	6,807	9,350	8,612	2,599	35,426	100.0%
Percent of Scheme	0.0%	0.0%	0.5%	6.0%	10.4%	14.1%	15.4%	13.1%	12.1%	7.1%	

About 7.1% of all participants at 30 June 2023 are projected to live in shared supported accommodation arrangements. Of these participants, about 63% are expected to have intellectual disability as their primary disability, with a further 9-10% each for participants with autism, psychosocial disability and cerebral palsy. Remaining disabilities make up about 9% of the participants in shared supported accommodation arrangements.

5.3.2 New Incidence

New incidence assumptions in this context does not mean the number of participants who acquire a disability at a specific point in time. Instead, new incidence has been defined as when a participant presents to the Scheme to gain access to an approved plan. For example, for children born with autism, it may be a number of years before a diagnosis of autism is reached, and it may be some further time before they approach the Scheme and then enter the Scheme with an approved plan.

Assumptions on participants entering the Scheme (as a percentage of the general population) have been based primarily on Scheme experience, and to a lesser degree, epidemiological data. These assumptions are broken down by age, gender, primary disability and level of function. New incidence into the Scheme is only considered for participants under the age of 65.

The general population assumptions are based on ABS projections of the Australian population. Further, it's assumed that the new incidence of disability, as a percentage of the general population, remains the same over time. Table 5.4 gives a summary of the new incidence assumptions for the coming year as at 30 June 2023, per 100,000 people, split by primary disability group and age band.

Table 5.4 New Incidence by disability and age (per 100,000 people)[65]

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Total (0-64)
Acquired Brain Injury	1.1	0.4	3.0	2.4	1.3	1.3	1.8	2.1	1.5
Autism	354.3	64.9	0.0	0.0	0.0	0.0	0.0	0.0	45.8
Cerebral Palsy	27.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Developmental Delay	254.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3
Hearing Impairment	15.0	4.4	2.6	2.5	2.2	4.0	6.5	8.3	5.7
Intellectual Disability	65.1	65.3	6.7	0.0	0.0	0.0	0.0	0.0	15.2
Multiple Sclerosis	0.0	0.0	0.0	0.5	2.3	3.9	5.5	7.5	2.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Neurological	9.4	2.7	1.8	1.8	1.4	1.4	5.3	23.4	6.0
Other Physical	7.4	2.1	1.5	1.4	1.1	1.1	4.2	18.5	4.8
Other SensorySpeech	96.3	4.1	0.0	0.0	0.0	0.0	0.0	0.0	10.8
Psychosocial disability	4.4	1.6	10.2	14.8	11.7	12.0	8.3	6.9	8.8
Spinal Cord Injury	0.1	0.3	1.3	0.5	0.6	0.7	1.1	1.7	0.8
Stroke	0.1	0.2	0.2	0.2	0.4	1.3	3.9	13.0	2.7
Visual Impairment	8.3	2.4	1.4	1.4	1.2	2.2	3.6	4.6	3.1
Total	843.8	153.0	28.7	25.5	22.4	28.1	40.2	85.9	139.0

The annual new incidence assumed as at 30 June 2023 is nearly 32,000 people as shown in Table 5.5. For future years, this is assumed to increase with projected Australian population growth.

Table 5.5 Scheme Participant New Incidence Summary as at 30 June 2023

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Total
Acquired Brain Injury	28	11	40	49	51	52	60	64	353
Autism	8,671	1,777	0	0	0	0	0	0	10,448
Cerebral Palsy	682	129	0	0	0	0	0	0	811
Developmental Delay	6,227	0	0	0	0	0	0	0	6,227
Hearing Impairment	368	120	35	52	86	155	223	256	1,295
Intellectual Disability	1,592	1,788	88	0	0	0	0	0	3,468
Multiple Sclerosis	0	0	0	10	89	150	189	230	668
Other	0	0	0	0	0	0	0	0	0
Other Neurological	230	74	24	36	56	56	180	723	1,380
Other Physical	181	58	19	29	44	44	142	570	1,089
Other SensorySpeech	2,357	111	0	0	0	0	0	0	2,469
Psychosocial disability	107	43	134	302	456	467	284	214	2,007
Spinal Cord Injury	3	8	17	11	24	28	37	53	182
Stroke	3	5	3	4	15	52	134	400	616
Visual Impairment	203	66	19	29	47	86	123	141	715
Total	20,654	4,190	379	523	868	1,090	1,372	2,652	31,728

About two thirds of the new incidence is attributable to participants aged 0 to 6 and a further 13% for participants aged 7 to 14, with the bulk of these participants being born with their

[65] The “total” column shows the new incidence by primary disability group across total population aged 0 to 64 per 100,000 people, while the age bands express new incidence across population in that age category only. The figures in this table are different to that presented in Table 3.6 because they have been updated to 30 June 2023 and reflect a different age distribution. Furthermore, it is assumed that some of the new incidence related to intellectual disability is actually a reclassification of existing people in the Scheme with developmental delay. In contrast, Table 3.6 directly adjusts developmental delay new incidence for this. Additionally, reductions in acquired brain injury and spinal cord injury new incidence reflect the expected impact of the National Injury Insurance Scheme for motor and worker-related injuries.

disability. This means that about 22% of new incidence is attributable to participants who acquire their disability throughout their life.[66]

Autism makes up about a third of all new incidence, developmental delay makes up a further 20% and intellectual disability makes up a further 11%. Other sensory/speech makes up about 8% of new incidence, however this increases to 14% if we include all the sensory disabilities. Psychosocial disability makes up about 6% of new incidence, with some supports for this disability potentially provided on an episodic basis, with new incidence generally arising as an adult. Other disabilities make up the 22% remainder of new incidence.

5.3.3 Exit rates

Participants are assumed to exit the Scheme due to mortality, no longer needing support, or by entering into residential aged care (in the case of participants aged over 65 years). Assumptions on participants exiting the Scheme were based on a blend between benchmarks[67] and emerging experience. These assumptions are broken down by gender, age, disability and level of function.

Mortality rates

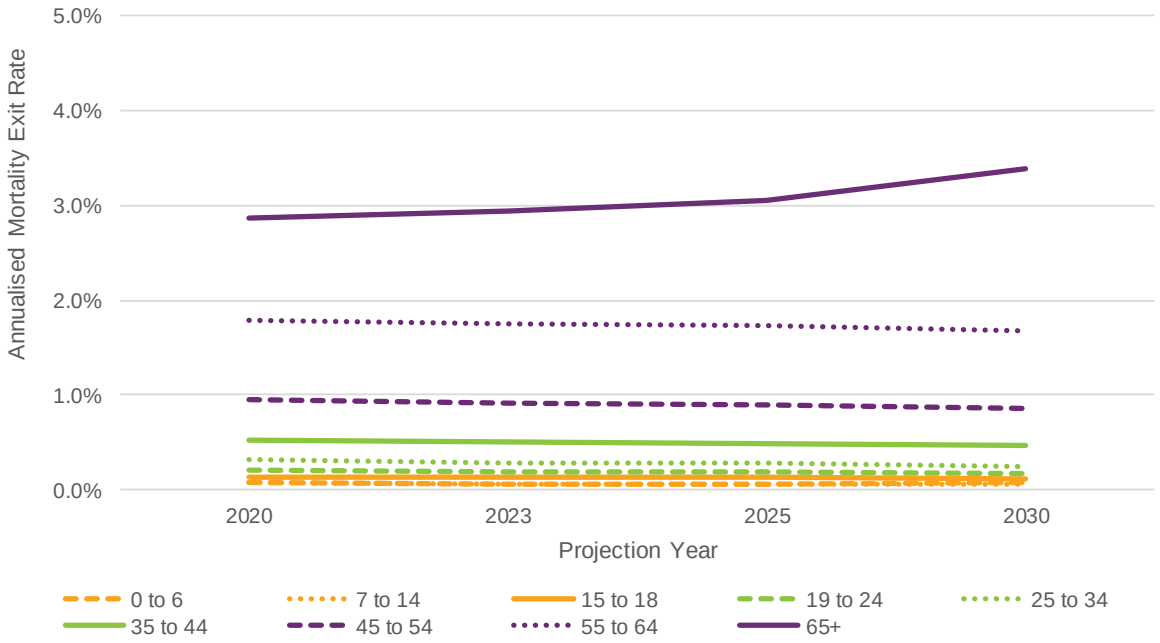
Mortality rate assumptions have been based on a multiple of the standard Australian mortality rate according to the Australian Life Tables 2014-16. At the previous FSR the Australian Life Table 2010-12 was used as the base, noting that the move to the more recent life tables is not a material impact for the projections. Separate mortality multiplier assumptions are used for gender, primary disability, level of function and age. Multipliers are generally higher at younger ages, where disability is a larger contributor to the overall mortality rate for that age group. Multipliers are also generally higher for lower levels of function. Appendix G contains a summary of these mortality multipliers.

[66] There will also be additional new incidence of disabilities in respect of injuries which will be covered under a National Injury Insurance Scheme, specifically those people who may not present to the NDIS.

[67] Benchmark assumptions have been based on epidemiological data, the ABS SDAC and data from the Commonwealth aged care system.

Combining these assumptions together, the overall rate of exit through mortality can be summarised in the following chart:

Figure 5.1 Mortality rate by projection year

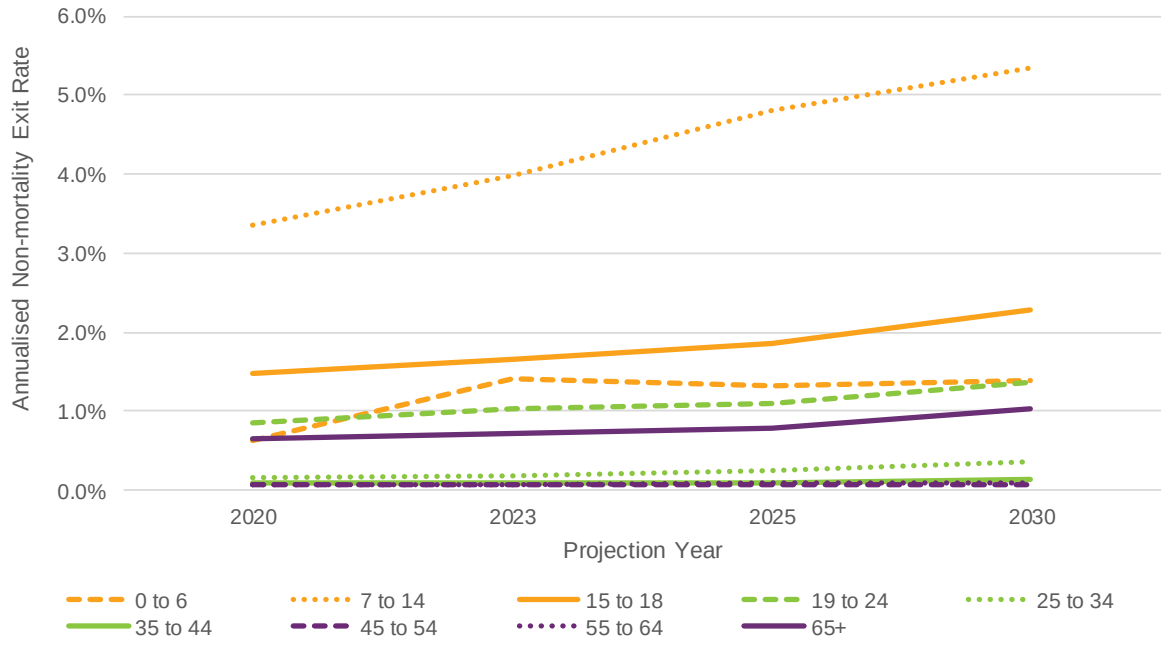


The mortality rate reduces slightly over time for the less than 65 year age groups. This is due to the increasing projected prevalence of autism within the Scheme, and noting that participants with autism have lower mortality rates, in general, than other disabilities. The 65+ age group mortality rate increases from about 3% per annum in 2020 to 3.4% per annum in 2030, because the average age for this age group gradually increases over time. Relatively few deaths are expected up to the age of about 45, at which point the mortality rate increases above 0.5%.

Other exits

Exits from the Scheme for reasons other than death, whether this be from exit through successful early intervention or from older participants moving into residential aged care facilities, exhibit a very different pattern compared to exits from mortality. Explicit exit assumptions are adopted for younger participants with autism, developmental delay or a sensory disability. These exit rate assumptions vary by age, as shown in Figure 5.2.

Figure 5.2 Non-mortality Rate by Projection Year



The exit rate from the Scheme through causes other than mortality is expected to be highest for ages 7 to 14. For other ages the exit rate is generally less than 2% per annum. The ECEI gateway is designed to provide a more robust process around Scheme eligibility for children aged 0 to 6 years. The baseline model assumes that where children are found eligible for the Scheme, exits are deferred to ages 7+ and this is an area where further work will be required in future reviews. The exit rate for the 65+ age group increases over time as the average age of this group increases over time. This reflects the expectation of an increased probability of a participant moving into the aged care system at older ages.

The exit rates for participants aged 7 to 14 are expected to be around 3% to 5% per annum. These exits are anticipated to arise primarily from those participants accessing the Scheme through the early intervention pathway, typically from participants with a primary disability of developmental delay or one of the sensory disabilities. There is also an expectation of significant numbers of exits from children with autism, although the assumptions for autism are not, as yet, supported by Scheme experience.

Experience has shown that many of the early intervention exits may be expected to arise on a duration basis, where duration is measured from when capacity building supports are first provided. This highlights the need for the Scheme to establish a mechanism to ensure the review of continued eligibility in the Scheme after certain milestones have been reached, perhaps two years after entry to the Scheme or at certain milestone ages.

Combined exit rates

Table 5.6 shows the combined exit rates for the Scheme by age band and projection year. The projected average exit rate begins at 1.6% in 2020 and increases to 2.5% in 2030,

largely driven by increases in deaths for participants over the age of 65 and increases in non-mortality exits for children with developmental delay and sensory disabilities.

Table 5.6 Projected exit rate by age band[68]

	Mortality Exits				Non-Mortality Exits				Total Exits			
Age Band	2020	2023	2025	2030	2020	2023	2025	2030	2020	2023	2025	2030
0 to 6	0.1%	0.1%	0.1%	0.1%	0.6%	1.4%	1.3%	1.4%	0.7%	1.5%	1.4%	1.5%
7 to 14	0.1%	0.1%	0.1%	0.1%	3.4%	4.0%	4.8%	5.3%	3.4%	4.0%	4.9%	5.4%
15 to 18	0.1%	0.1%	0.1%	0.1%	1.5%	1.7%	1.9%	2.3%	1.6%	1.8%	2.0%	2.4%
19 to 24	0.2%	0.2%	0.2%	0.2%	0.8%	1.0%	1.1%	1.4%	1.0%	1.2%	1.3%	1.5%
25 to 34	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.4%	0.5%	0.5%	0.5%	0.6%
35 to 44	0.5%	0.5%	0.5%	0.5%	0.1%	0.1%	0.1%	0.1%	0.6%	0.6%	0.6%	0.6%
45 to 54	1.0%	0.9%	0.9%	0.9%	0.1%	0.1%	0.1%	0.1%	1.0%	1.0%	1.0%	0.9%
55 to 64	1.8%	1.8%	1.7%	1.7%	0.1%	0.1%	0.1%	0.1%	1.9%	1.8%	1.8%	1.8%
65+	2.9%	3.0%	3.1%	3.4%	0.7%	0.7%	0.8%	1.0%	3.5%	3.7%	3.8%	4.4%
Total	0.5%	0.6%	0.6%	0.7%	1.1%	1.4%	1.6%	1.8%	1.6%	2.0%	2.2%	2.5%
Total Exits	2,101	3,022	3,440	4,566	4,070	7,075	9,009	11,980	6,171	10,097	12,449	16,546

5.3.4 Payment assumptions

Annual payment assumptions

Separate annual payment assumptions are derived by age, disability, level of function and shared supported accommodation arrangements for each projection year. The payment assumptions for this FSR represents the annualised rate of payments over the six months ending 30 June 2018 for those participants with a second or greater plan as at 31 December 2017. First plans show lower utilisation than second and later plans, as participants learn to navigate the Scheme. This approach therefore removes payment bias for a participant's first plan.

The expected average annual payment assumptions (in current dollars) at Steady Intake, split by disability and age band are shown in Table 5.7.

[68] The high rate of projected exits in 2023 is a result of the projection methodology changing from transition to Steady Intake and thereafter. The projected exit rate is better expressed as increasing from 2.2% in 2020 to 2.8% in 2030.

Table 5.7 Average payment assumptions by age band and disability (current dollars)[69]

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+	Total
Acquired Brain Injury	27,000	31,000	55,000	91,000	86,000	85,000	81,000	72,000	78,000	77,000
Autism	15,000	15,000	26,000	49,000	80,000	122,000	113,000	103,000	134,000	29,000
Cerebral Palsy	25,000	36,000	62,000	96,000	120,000	142,000	143,000	135,000	149,000	90,000
Hearing Impairment	8,000	7,000	6,000	8,000	7,000	7,000	6,000	5,000	6,000	7,000
Intellectual Disability	16,000	21,000	31,000	56,000	75,000	97,000	123,000	131,000	138,000	73,000
Multiple Sclerosis				12,000	24,000	45,000	57,000	53,000	56,000	52,000
Delay	10,000	9,000	16,000	18,000	20,000	24,000	17,000	10,000		10,000
Other	26,000	27,000	74,000	73,000	74,000	74,000	74,000	25,000	26,000	44,000
Other Neurological	20,000	28,000	49,000	69,000	69,000	67,000	61,000	53,000	52,000	53,000
Other Physical	15,000	19,000	26,000	47,000	52,000	44,000	44,000	38,000	32,000	37,000
Other SensorySpeech	7,000	7,000	17,000	19,000	20,000	20,000	20,000	20,000		7,000
Psychosocial disability	12,000	11,000	30,000	32,000	34,000	34,000	35,000	34,000	36,000	34,000
Spinal Cord Injury		88,000	91,000	106,000	89,000	99,000	92,000	97,000	102,000	96,000
Stroke	17,000	28,000	35,000	37,000	40,000	46,000	47,000	51,000	55,000	50,000
Visual Impairment	11,000	13,000	12,000	16,000	28,000	26,000	27,000	24,000	24,000	22,000
Total	13,000	16,000	30,000	54,000	67,000	71,000	73,000	65,000	66,000	46,000

The above averages are a combination of the assumptions by age, level of function, primary disability and shared supported accommodation arrangement. These are weighted by the distribution of level of function and shared supported accommodation arrangement within each disability and age group. The disability types with the largest annualised average payments are acquired brain injury, spinal cord injury and cerebral palsy. The lowest average payment disabilities are hearing impairment, developmental delay, visual impairment and other sensory/speech impairments.

These assumptions also allow an estimate of the calculation of lifetime costs of participants who are currently in the Scheme, or who enter the Scheme.

A more complete set of payment assumptions by disability type, level of function, age and shared supported accommodation arrangement is shown in Appendix G.

Section 5.5.5 of this report considers a scenario where committed supports in participant plans are modelled, combined with a utilisation rate assumption. This gives an alternative view on the level of future payments.

5.3.5 Economic assumptions

Normal inflation

Inflation is applied to participant costs considering wage rates (including the SACS award), and increases in CPI. Inflation of 4.3% per annum is assumed in the short-term reflecting current wage rate inflation in the attendant care industry and the SACS award. A long term assumption of 4.0% per annum is assumed to apply from 1 July 2020. The long term normal

[69] This table excludes groups with less than 20 participants.

inflation rate is consistent with the assumptions in the 2015 Intergenerational Report[70], and consists of a long term domestic inflation rate of 2.5% per annum plus an additional 1.5% per annum for productivity growth. More detail is included in Appendix G.

Superimposed inflation

Section 4.6 contains an analysis of historic and expected future superimposed inflation. A total superimposed inflation rate of 8% above normal inflation has been assumed to emerge over the three years ending 30 June 2021, with 4.5% allowed for in 2018-19, 2.5% in 2019-20 and 1.0% in 2020-21.

Costs for participants aged 65+ are also assumed to increase at the rate of 1% per annum above the normal wage inflation rate for participants with primary disabilities of acquired brain injury, spinal cord injury, autism, intellectual disability and cerebral palsy and up to a maximum loading of 25%. These primary disabilities are expected to have cost assumptions that increase with age, although there is limited experience to support this to date. The average age for the 65+ age group will increase gradually over time as the Scheme matures. Hence, average costs for this cohort should increase above normal inflation over time until a more mature state is reached.

Total inflation

Combining the above normal and superimposed inflation of cost assumptions for participants aged 0 to 64 gives projected inflation rates of 8.8% p.a. in 2018-19, 6.5% in 2019-20, 5.0% in 2020-21 and 4.0% p.a. thereafter.

5.3.6 Operating expenses

Shorter term Agency operating costs have been based on a detailed activity-based costing of Agency operations. Operating expenses as a percentage of participant costs is higher in the shorter term, reflecting the higher costs of the Scheme associated with bringing new participants into the Scheme. In the long term, it is assumed that expenses will comprise 6% of participant costs. This was derived using inflation assumptions consistent with the current FSR model. This expense rate is at the lower end of the range of expense rates seen in comparable injury support schemes around Australia, even allowing for the greater scale of the Scheme.

The longer term operating expense assumption implicitly assumes that the Scheme has a well-functioning ICT system. The current ICT system has a number of limitations and there

[70] Page 30 of the '*2015 Intergenerational Report Australia in 2055*' dated March 2015

are a number of work-arounds which means that, in its current form, it would likely result in operating expenses that are higher than anticipated. For example:

- The current ICT system does not allow participant plans to be amended without forcing a full plan review.[71] While there are many sound reasons why there should be stringent controls around the ability of staff to make plan amendments, there are also some circumstances where it would make sense to allow minor plan amendments, within limits, without triggering a full plan review. For example, where a quoted amount for a support in a plan is slightly below the actual cost of a support, the plan currently may need a full plan review in order for the person to access that support.[72]
- There is also a need to build some important business intelligence rules into the ICT system. For example, the plan budget amounts allocated to a participant do not have rigorous enough checks and balances to allow staff to determine whether the annualised level of supports are reasonable in regards to previous plans. This is especially the case when unscheduled plan reviews are undertaken and the unused portion of the plan is automatically rolled over into the new plan, without consideration given to the duration of the new plan.

In both of the above examples, additional costs would be expected from additional plan reviews and additional manual work to remediate a large number of user errors.

5.3.7 NIIS assumptions

The approach adopted to allow for the National Injury Insurance Scheme (NIIS) is discussed in Section 3.3.3.

5.4 Baseline projection

The baseline projection can be considered as the best estimate, on the evidence available to date, of the longer term cost trajectory for the NDIS. The baseline projection results in a total Scheme cost as at 30 June 2023 of about $28.4 billion, as shown in Table 5.8.

[71] In July 2018, a new process for 'light touch' plan reviews was implemented and subsequent changes made to the ICT system to allow Agency staff to complete an unscheduled plan review in a more efficient way.
[72] The principle of fungibility does help in some cases, although there are limits to its effectiveness.

Table 5.8 Baseline projection of the Scheme compared to the previous FSR

Number of participants	2018	2019	2020	2021	2022	2023	2024	2025	2030
2017-18 FSR									
0-64 years	169,070	301,071	372,090	414,067	448,323	477,937	494,159	509,420	578,020
65+ years	3,263	5,117	8,399	12,502	16,797	21,403	26,812	32,296	58,903
Total	172,333	306,189	380,490	426,569	465,120	499,340	520,971	541,716	636,922
Prevalence (0-64)	0.79%	1.40%	1.70%	1.87%	2.00%	2.11%	2.15%	2.19%	2.36%
2016-17 FSR									
0-64 years	254,875	429,139	458,368	465,033	471,671	477,949	483,817	489,350	514,160
65+ years	2,116	5,251	10,690	16,393	22,346	28,495	34,672	40,837	70,000
Total	256,991	434,390	469,058	481,425	494,018	506,444	518,489	530,186	584,160
Prevalence (0-64)	1.20%	1.99%	2.10%	2.10%	2.10%	2.11%	2.11%	2.11%	2.10%
Difference									
0-64 years	-85,805	-128,068	-86,278	-50,965	-23,348	-12	10,342	20,070	63,860
65+ years	1,147	-134	-2,291	-3,891	-5,549	-7,092	-7,860	-8,540	-11,098
Total	-84,658	-128,202	-88,569	-54,856	-28,897	-7,104	2,482	11,530	52,762
Prevalence (0-64)	-0.40%	-0.59%	-0.39%	-0.23%	-0.10%	0.00%	0.05%	0.09%	0.26%

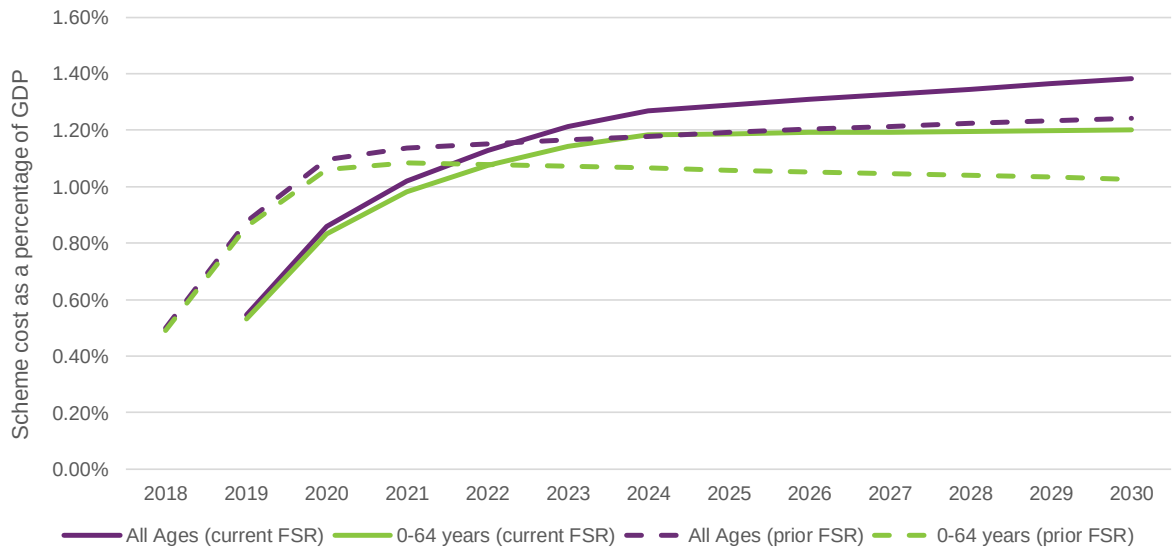
Participant Costs ($m)	2018	2019	2020	2021	2022	2023	2024	2025	2030
2017-18 FSR									
0-64 years		9,028	15,176	19,240	22,266	25,079	27,553	29,202	38,634
65+ years		266	462	752	1,105	1,514	1,990	2,512	5,761
Total		9,294	15,638	19,992	23,371	26,593	29,543	31,715	44,395
2016-17 FSR									
0-64 years		14,905	19,852	21,404	22,513	23,653	24,831	26,054	33,148
65+ years		300	599	996	1,444	1,949	2,502	3,098	6,565
Total		15,204	20,451	22,399	23,957	25,602	27,333	29,151	39,713
Difference									
0-64 years		-5,877	-4,676	-2,164	-248	1,426	2,721	3,149	5,487
65+ years		-34	-137	-243	-339	-435	-512	-585	-804
Total		-5,910	-4,813	-2,407	-587	991	2,210	2,563	4,683

Total Scheme Costs ($m)	2018	2019	2020	2021	2022	2023	2024	2025	2030
2017-18 FSR									
Total Participant Costs		9,294	15,638	19,992	23,371	26,593	29,543	31,715	44,395
Operating Costs		1,092	1,423	1,435	1,603	1,760	1,773	1,903	2,664
Total Scheme Costs		10,386	17,061	21,427	24,973	28,353	31,315	33,618	47,059
Cost as % of GDP		0.55%	0.86%	1.02%	1.13%	1.21%	1.27%	1.29%	1.38%
Cost as % of GDP (0-64)		0.53%	0.83%	0.98%	1.07%	1.14%	1.18%	1.19%	1.20%
2016-17 FSR									
Total Participant Costs		15,204	20,451	22,399	23,957	25,602	27,333	29,151	39,713
Operating Costs		1,444	1,487	1,630	1,746	1,869	1,998	2,134	2,925
Total Scheme Costs		16,648	21,938	24,029	25,703	27,471	29,331	31,286	42,637
Cost as % of GDP		0.88%	1.10%	1.14%	1.15%	1.17%	1.18%	1.19%	1.24%
Cost as % of GDP (0-64)		0.86%	1.06%	1.08%	1.08%	1.07%	1.07%	1.06%	1.03%
Difference									
Total Participant Costs		-5,910	-4,813	-2,407	-587	991	2,210	2,563	4,683
Operating Costs		-351	-64	-195	-143	-109	-226	-232	-261
Total Scheme Costs		-6,261	-4,877	-2,602	-730	882	1,984	2,332	4,422
Cost as % of GDP		-0.33%	-0.24%	-0.12%	-0.02%	0.05%	0.09%	0.10%	0.14%
Cost as % of GDP (0-64)		-0.33%	-0.23%	-0.10%	-0.01%	0.07%	0.12%	0.13%	0.18%

Some observations from the baseline projection and comparisons with the previous FSR include:

- The Scheme is projected to increase in size rapidly over the five years to 30 June 2023. Participant numbers up to 2023 are lower than participant numbers projected in the previous FSR (green shaded cells). This reflects the impact of phasing. After 2023, the participant numbers in the current FSR are projected to be higher than the previous FSR (orange shaded cells). This reflects the impact of lower autism non-mortality exits. The current FSR also projects a lower number of participants aged 65 and over compared with the previous FSR (grey shaded cells) due to the slower phasing of participants to date.
- Participant costs at Steady Intake in 2022-23 are estimated to be $26.6 billion, including $1.5 billion for people aged over 65 years of age. The effect of the inclusion of operating costs increases this to $28.4 billion.
- The proportion of costs attributable to participants over the age of 65 increases gradually over time, making up 3% of participant costs in 2019-20 and increasing to 13% of participant costs in 2029-30.
- Operating costs are assumed to be 11.8% of participant costs at 2019, decreasing to 6.6% at 2023, and then 6.0% thereafter.
- Figure 5.3 shows that total projected costs of the Scheme (purple lines) based on current experience are assumed to be about 1.21% of GDP at Steady Intake in 2023 and are projected to increase to 1.38% of GDP by 2030, the increase primarily a result of an increasing number of participants with autism and the number of participants aged over 65 years.
- Scheme costs for participants aged 0 to 64 (green lines) are expected to be about 1.14% of GDP at 2023, increasing to 1.20% at 2030. The increase is primarily attributable to the projected number of participants with autism.
- These estimates are about 3% higher than the 2016-17 FSR at 2022-23, and costs are projected to increase well above this in the longer term, primarily due to an increase in the prevalence of participants with autism and the inclusion of participants over the age of 65 years.

Figure 5.3 Total Scheme costs as a percentage of GDP



The broken lines of Figure 5.3 show the projections from the previous FSR model. Scheme costs build up more slowly than previously projected, due to a slower assumed phasing-in pattern, while in the medium to longer term the costs are projected to be higher, predominantly from the increase in autism as previously described.

Table 5.9 shows a summary of participant costs over time by key Risk Cohorts.

Table 5.9 Participant costs by Risk Cohort

Cost ($m)	*2020*	*2023*	*2030*
Shared supported accommodation			
SSA	6,239	10,618	17,366
non-SSA	9,399	15,975	27,030
Total	15,638	26,593	44,395
Primary disability			
Intellectual Disability	6,601	11,180	17,504
Autism	2,424	4,197	8,835
Other	6,613	11,217	18,056
Total	15,638	26,593	44,395
Age group			
0 to 18	2,862	4,428	7,357
19 to 24	1,552	2,706	4,467
25 to 44	4,740	7,812	13,317
45 to 64	6,021	10,133	13,493
65+	462	1,514	5,761
Total	15,638	26,593	44,395

Proportion of cost	*2020*	*2023*	*2030*
Shared supported accommodation			
SSA	40%	40%	39%
non-SSA	60%	60%	61%
Total	100%	100%	100%
Primary disability			
Intellectual Disability	42%	42%	39%
Autism	16%	16%	20%
Other	42%	42%	41%
Total	100%	100%	100%
Age group			
0 to 18	18%	17%	17%
19 to 24	10%	10%	10%
25 to 44	30%	29%	30%
45 to 64	39%	38%	30%
65+	3%	6%	13%
Total	100%	100%	100%

Key observations include:

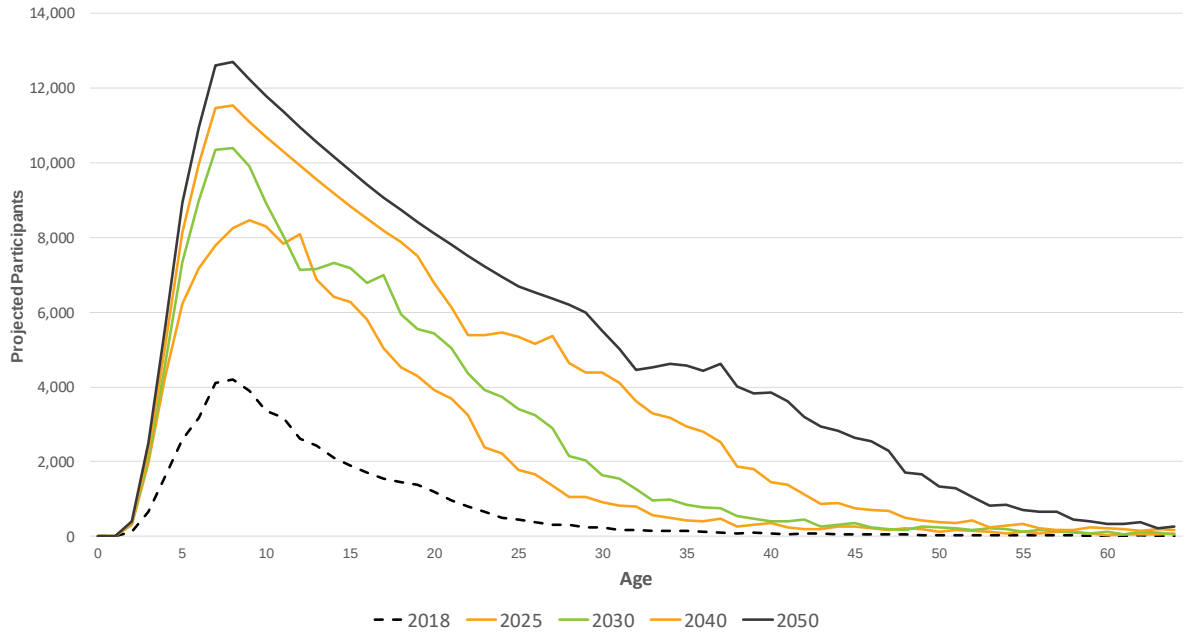
- The cost of SSA participants as a proportion of total participant costs is high, at approximately 40%. This is also higher than the current breakdown of SSA committed supports as a proportion of total committed supports (33%).
- The cost of participants with autism is expected to increase as a proportion of total participant costs. This is driven by the increase in prevalence of autism participants over time (Section 5.4.1). The cost of participants with intellectual disability is significant, accounting for over 40% of participant Scheme costs at 2020, but this proportion reduces over time, and in line with other disabilities (excluding autism). This offsets the increased proportion of autism costs.
- Participant costs for those aged 65+ are expected to increase as a proportion of total cost, reflecting the increased numbers of participants aged 65+ over time. Participant costs for those aged 0 to 44 are about 55% to 60% of total participant costs and this is relatively stable over time. This reflects an increase in the proportional costs associated with autism, but is offset (proportionally) by the increased cost of participants aged 65+. In contrast, the 45 to 64 age group costs are expected to decrease as a proportion of total cost, as they will not, up to 2030, be impacted by the increasing numbers of participants with autism.

Appendix G includes a split of Scheme costs by age and disability, as well as lifetime cost estimates for participants.

5.4.1 Scheme projected autism participants

One of the major changes from the previous FSR is the future projection of participants with autism. The main assumption change is the reduction in the assumed non-mortality exit rate for this cohort of participants. The impact of this is to increase the prevalence of participants with autism over time. This is highlighted in Figure 5.4 which shows the change in the number of participants with autism in the Scheme from 2018 to 2050. A longer time period has been considered for this projection as the impact of this experience is expected to emerge gradually, but persistently, over time.

Figure 5.4 Projected Scheme autism population



The key point is the increase in the autism population at older ages. There are currently few participants in the Scheme aged over 30 with autism. This is expected to change over the medium term, based on the current exit experience and accounts for the majority of the increase in Scheme costs after 2025.

5.4.2 Comparison with previous FSR assumptions

There have been significant shifts in the projections of Scheme costs since the previous FSR. The model has been moved from a benchmark cost model (consistent with the initial Productivity Costing in 2011) to an experience based model using current Scheme experience.

The experience-based projection can be compared against the projections outlined in the Productivity Commission's 2017 report on National Disability Insurance Scheme Costs[73], updated for unanticipated costs.

[73] Productivity Commission 2017, *National Disability Insurance Scheme (NDIS) Costs*, Study Report, Canberra (Table 2.3)

Table 5.10 Estimates of Scheme costs in the 2017 Productivity Commission report[74]

	2019-20	2022-23	2029-30
2017 PC report	$22.3bn	$26.7bn	$40.9bn
add unanticipated costs:			
Decrease in NIIS offset as not fully operational	$0.4bn	$0.5bn	$0.9bn
Children with developmental delay	$0.2bn	$0.4bn	$0.8bn
School transport	$0.3bn	$0.4bn	$0.5bn
less operating costs	-$1.5bn	-$1.5bn	-$2.8bn
Total expected cost allowing for unanticipated costs	**$21.7bn**	**$26.5bn**	**$40.2bn**
% GDP	**1.09%**	**1.13%**	**1.18%**

Table 5.10 shows that the expected annual cost of the Scheme in 2019-20 was $22.3 billion. By allowing for unanticipated costs such as children with developmental delay, school transport, and a NIIS offset for motor / workplace injuries only, the annual cost of the Scheme is about $21.7 billion. The projected cost of the Scheme at 2019-20 is about $15.6 billion excluding operating expenses, or about 28% below the Productivity Commission estimate. The difference is primarily related to a slower assumed phasing pattern, with additional unmet demand expected over the three years to 2022-23.

Table 5.10 also shows that after allowing for unanticipated costs, the annual cost of the Scheme based on the 2017 Productivity Commission report is expected to be around $26.5 billion in 2022-23. This is in line with the baseline projected cost of the Scheme at 2023 (about $26.6 billion excluding operating expenses).

However in 2029-30, the baseline projected costs increase to $44.4 billion, excluding operating costs. This is 10% above the $40.2 billion expected in the 2017 Productivity Commission report, after allowing for unanticipated costs. This increase is mainly driven by higher than expected participants with autism. Exit rates for children with autism have been particularly low, and this means an increasing number of participants with autism in future projection years.

5.4.3 Comparison with Portfolio Budget Statements

Each year, the Commonwealth government releases the Portfolio Budget Statements (PBS) in support of the current year's budget.[75] A comparison of the baseline projection to the

[74] The Productivity Commission costings did not include explicit allowance for children with developmental delay and for school transport, noting that these two items could account for an additional $800 million per annum at full Scheme.

[75] The Australian Government Department of Social Services 2018, Portfolio Budget Statements 2018-19 Social Services Portfolio, Canberra. Available at: https://www.dss.gov.au/sites/default/files/documents/05_2018/social_services_portfolio_budget_statements_2018-19.pdf [Accessed 2 August 2018]

estimate of reasonable and necessary supports for 2018-19 to 2021-22 is shown in Table 5.11 below. The baseline projection is lower than the figures in the PBS until 2020-21, largely due to differences in participant phasing, but is 5% higher in 2021-22.

Table 5.11 Comparison of baseline projection to 2018-19 PBS ($m)

Total Participant Costs[1] ($m)	*2019*	*2020*	*2021*	*2022*
2017-18 FSR	9,294	15,638	19,992	23,371
Portfolio Budget Statements	15,139	19,357	21,064	22,300
Difference	-5,845	-3,719	-1,072	1,071
Difference (%)	-39%	-19%	-5%	5%

[1] Excludes operating costs

The baseline projection grows at around 7% per annum after Steady Intake, reflecting expected inflation, population growth and the increasing number of participants aged 65 years and over. The PBS estimates grow by 5.9% from 2021 to 2022. Full Scheme agreements are available for New South Wales and South Australia which grow by 4% each year of the agreement (ten years for New South Wales and five years for South Australia) for participants aged 0-64 years.

5.4.4 Key movements between previous FSR and current FSR

This section presents the main movements in participant numbers and projected costs from the previous FSR to the current FSR at various points in time. The key components of this change in basis are described in the table below.[76]

Table 5.12 Summary of key movements between previous FSR and current FSR

Change	Explanation
FSR 2016-17	FSR model as at 2016-17
Model changes	Impact of the change in disability groupings, specifically the addition of developmental delay/global developmental delay and the removal of functional groupings for the 'other' disability group.
Revised Steady Intake and committed supports	Impact of using long term age, disability, level of function and SSA distributions based on Scheme experience to date, and adopting committed support cost assumptions.
Payments	Impact of adopting cost assumptions based on current payment experience in the Scheme for participants on second or greater plans.
Superimposed inflation	Including superimposed inflation of 8% spread over three years.

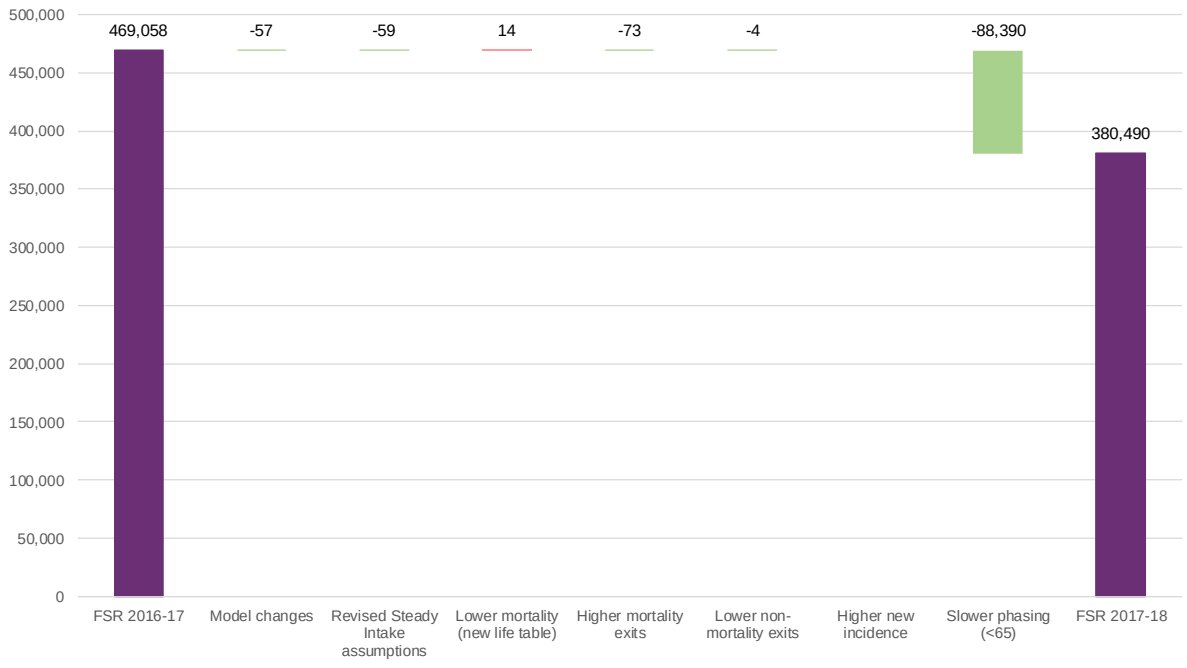
[76] Some of the components of the change in basis have been grouped for the purpose of presentation. For example, the impact of revised Steady Intake assumptions can be further broken down by age, disability and level of function changes. A more detailed change in basis is included as Appendix G.

Change	Explanation
Lower mortality rates (new life table)	Impact of mortality rates using the Australian Life Table 2014-16, previously Australian Life Table 2010-12.
Higher mortality exits	Impact of mortality exit assumptions using some aspects of recent Scheme experience.
Lower non-mortality exits	Impact of non-mortality exit assumptions using some aspects of recent Scheme experience.
Higher new incidence	Impact of using new incidence assumptions based on recent Scheme experience.
Slower phasing	Impact of using new phasing assumptions, with Steady Intake being reached at 30 June 2023, rather than 30 June 2020.
FSR 2017-18	Final FSR model for 2017-18.

Comparison with previous FSR assumptions as at 2020 projection year

Figure 5.5 gives a comparison of the main movements in participant numbers from the previous FSR compared to the current FSR as at 2020, noting that the previous FSR assumed Steady Intake was reached as at 30 June 2020.

Figure 5.5 Change in projected participant numbers from previous FSR at 2020

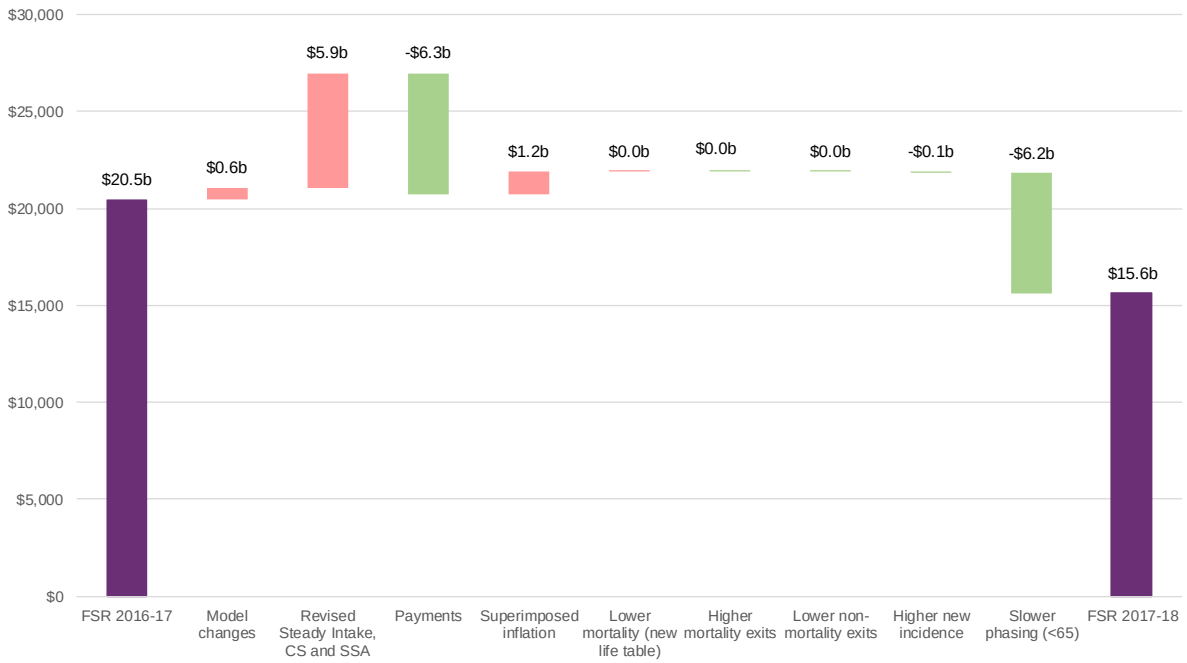


The main changes in population from the 2016-17 FSR projections are as a result of slower phasing, with only about 380,000 participants projected to have been phased in by 30 June 2020, compared with about 469,000 previously.

Similarly, the main driver of the change in projected cost as at 30 June 2020 is related to the number of active participants in the Scheme. The adoption of committed support

assumptions along with a revised long term participant distribution by age, disability and level of function increases the projected Scheme cost significantly. This indicates that the Scheme currently has average committed supports which, if applied to the Steady Intake population, would exceed the funding envelope by a significant level. This is offset by the use of payment assumptions, which are substantially lower than committed supports and reflect utilisation rates of less than 100%. This movement is shown in Figure 5.6.

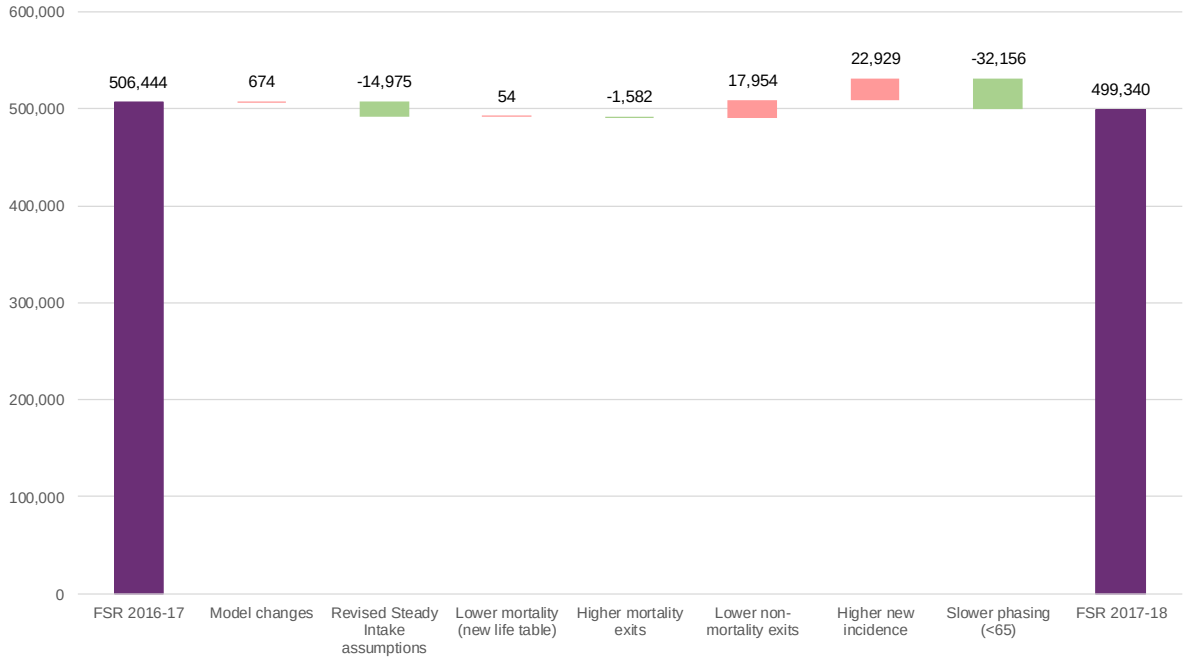
Figure 5.6 Change in projected participant cost from previous FSR at 2020



Comparison with previous FSR assumptions as at 2023 projection year

Figure 5.7 gives a comparison of the main movements in participant numbers from the previous FSR compared to the current FSR as at 2023, and noting the current FSR assumes that Steady Intake will be reached as at 30 June 2023.

Figure 5.7 Change in projected participant numbers from previous FSR at 2023



The projected population of participants aged 0 to 64 remains relatively unchanged, with the reduction in participants in the Scheme related primarily to the number of participants aged 65+ (28,495 aged over 65 for the previous FSR versus 21,403 for this FSR). This arises from both the lower numbers of adults in the Scheme compared to the previous FSR and from the slower phasing of participants into the Scheme.

At 2023, the projected cost in the current FSR is about $1.0b higher than the 2016-17 FSR. The higher projected costs at 2023 is mainly attributable to higher assumed average payment assumptions, including the impact of superimposed inflation, than that adopted at the previous FSR. This can be attributed to additional unanticipated costs such as children with developmental delay and school transport costs. The movement is shown in Figure 5.8.

Figure 5.8 Change in projected participant cost from previous FSR at 2023

Comparison with previous FSR assumptions as at 2030 projection year

Figure 5.9 and Figure 5.10 compare the main movements in participant numbers and projected costs between the previous FSR and current FSR as at 2030, giving a better longer term indication of the impact of the new incidence and exit assumptions.

Figure 5.9 Change in projected participant numbers from previous FSR at 2030

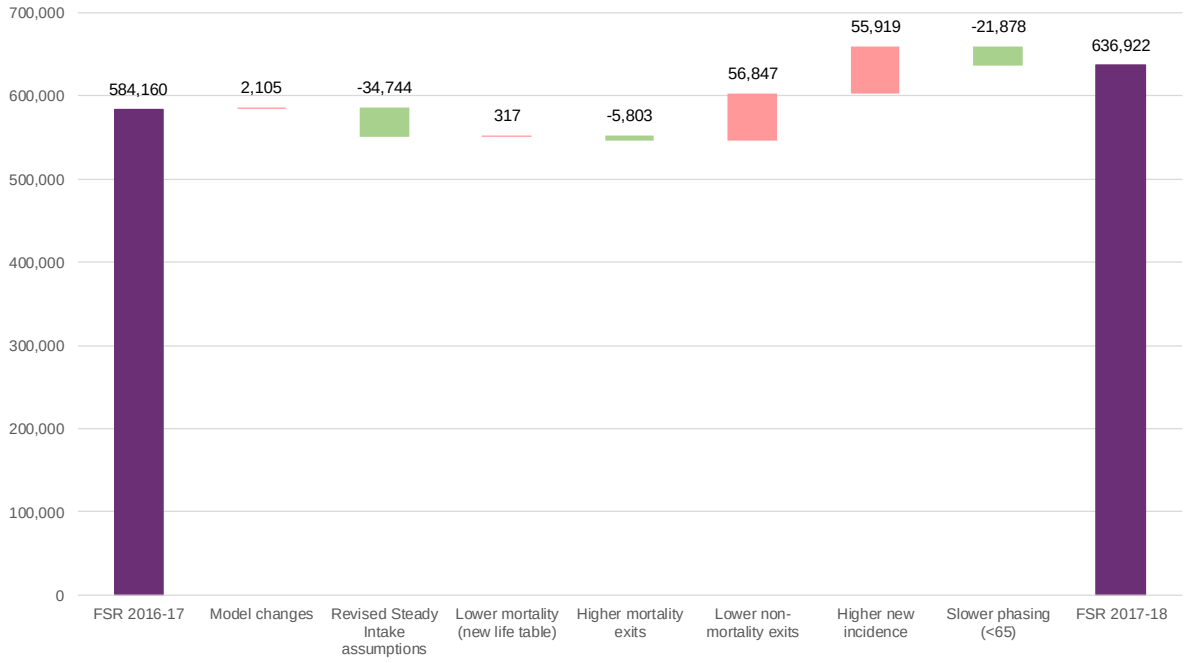


Figure 5.10 Change in projected participant cost from previous FSR at 2030

At 2030, the projected population of participants in the current FSR is higher than the projected population in the 2016-17 FSR. This is primarily due to the new assumptions around non-mortality exits (lower for autism) and the higher new incidence assumptions. The participant population increases have also flowed through to higher participant costs, meaning that participant costs are expected to be about $4.7 billion or 12% higher than in the 2016-17 FSR.

5.4.5 Lifetime cost estimates

The assumptions underlying the baseline projections also allow an estimate of the average lifetime cost of participants to be determined. These lifetime costs have been prepared using the assumptions outlined earlier, exclude operating expenses, and are discounted into a present value as at 30 June 2018 assuming a discount rate assumption of 6% p.a.[77]

[77] The inflation rate used for this analysis is 4.0% p.a. and when combined with the discount rate of 6.0% p.a. assumes a real gap of 2.0% p.a. The results are very sensitive to the real gap.

Table 5.13 Average lifetime cost estimates for current Scheme participants[78]

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+	Total
Acquired Brain Injury	$1.51m	$1.59m	$1.64m	$2.60m	$2.27m	$1.86m	$1.46m	$1.13m	$0.89m	$1.55m
Autism	$0.80m	$0.80m	$1.19m	$1.66m	$2.34m	$3.19m	$2.60m	$2.07m	$1.80m	$1.09m
Cerebral Palsy	$1.24m	$1.75m	$2.16m	$2.78m	$3.11m	$3.46m	$2.79m	$2.02m	$1.54m	$2.37m
Developmental Delay	$0.07m	$0.06m	$0.17m							$0.07m
Hearing Impairment	$0.18m	$0.20m	$0.22m	$0.23m	$0.20m	$0.17m	$0.15m	$0.12m	$0.09m	$0.17m
Intellectual Disability	$0.96m	$1.28m	$1.52m	$1.97m	$2.17m	$2.33m	$2.29m	$1.83m	$1.39m	$1.86m
Multiple Sclerosis				$0.55m	$0.84m	$0.94m	$1.00m	$0.78m	$0.58m	$0.86m
Other	$2.11m	$2.22m			$1.73m	$1.27m	$0.73m	$0.33m	$0.23m	$1.39m
Other Neurological	$0.92m	$1.27m	$1.66m	$1.91m	$1.61m	$1.36m	$0.97m	$0.69m	$0.49m	$1.05m
Other Physical	$0.78m	$1.02m	$1.13m	$1.55m	$1.19m	$0.92m	$0.70m	$0.48m	$0.34m	$0.74m
Other SensorySpeech	$0.06m	$0.10m	$0.20m	$0.44m						$0.10m
Psychosocial disability	$0.49m	$0.51m	$0.95m	$1.07m	$1.02m	$0.89m	$0.75m	$0.60m	$0.47m	$0.79m
Spinal Cord Injury		$3.06m	$3.38m	$3.34m	$2.92m	$2.53m	$2.04m	$1.57m	$1.13m	$2.09m
Stroke		$0.77m		$0.81m	$0.94m	$0.88m	$0.84m	$0.68m	$0.50m	$0.72m
Visual Impairment	$0.47m	$0.50m	$0.65m	$0.87m	$0.86m	$0.72m	$0.59m	$0.44m	$0.34m	$0.59m
Total	$0.50m	$0.88m	$1.34m	$1.83m	$2.00m	$1.83m	$1.46m	$0.99m	$0.68m	$1.23m

Table 5.13 shows that the estimated lifetime cost varies significantly by disability and age, and it is also worth noting that within each disability, the lifetime cost also varies significantly by level of function and gender. A few key points are:

- The estimated average lifetime cost for participants is $1.2 million and shows a significant level of variation across age and disability type.
- The highest average cost disabilities are cerebral palsy, acquired brain injury, intellectual disability and spinal cord injury which all have average lifetime costs of over $1.5 million.
- Sensory disabilities, such as visual and hearing impairment, have lower average lifetime costs.
- Participants with developmental delay have a very low average lifetime cost, as these participants are expected to either exit from the Scheme through the impact of early intervention supports, or to have their disability reclassified to one of the other disability groups as they age.
- Autism has a lower average cost at younger ages, which is driven by the expectation of significant numbers of exits from the Scheme arising from early intervention and capacity building supports for children who are higher-functioning on the autism-spectrum.

[78] The average lifetime cost will depend on other characteristics of individual participants within the Scheme, particularly their gender, level of function and whether they are in shared supported accommodation arrangements. Average lifetime cost has only been included in this table where there are more than 20 participants within the Scheme, and left blank otherwise.

- For the 172,333 active participants in the Scheme at 30 June 2018, the lifetime cost can be used to estimate the outstanding claims liability at that date, which is around $212 billion.

The expected lifetime cost for an individual participant will depend on their specific circumstances and in particular on their functional impairment and any longer term informal support networks. Table 5.14 shows a split of costs by level of function for intellectual disability.

Table 5.14 Lifetime cost estimates by age and level of function for intellectual disability

Disability Type	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+	Total
Intellectual Disability - Level 1	$0.71m	$0.72m	$0.72m	$1.01m	$0.94m	$1.04m	$0.85m	$0.97m	$0.73m	$0.82m
Intellectual Disability - Level 2	$1.05m	$1.07m	$1.14m	$1.45m	$1.46m	$1.46m	$1.49m	$1.34m	$1.08m	$1.34m
Intellectual Disability - Level 3	$1.88m	$1.93m	$2.02m	$2.50m	$2.61m	$2.82m	$2.61m	$1.95m	$1.44m	$2.35m
Intellectual Disability - Level 4	$2.50m	$2.49m	$2.56m	$3.12m	$3.33m	$3.45m	$3.14m	$2.24m	$1.62m	$2.93m
Intellectual Disability - Total	$0.96m	$1.28m	$1.52m	$1.97m	$2.17m	$2.33m	$2.29m	$1.83m	$1.39m	$1.86m

These results indicate the wide variation in participant lifetime costs, noting that these costs are still averages. It also highlights the benefits that can be obtained if the investment of appropriate capacity building supports in the shorter term results in lower ongoing needs for certain other supports in the longer term.

Table 5.15 shows the large difference between expected future costs for participants living in shared supported accommodation arrangements.

Table 5.15 Lifetime cost estimates by age and living arrangements

Living arrangements	0 to 6	7 to 14	15 to 18	19 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+	Total
Shared Supported Accommodation	$6.98m	$7.66m	$8.70m	$8.15m	$7.38m	$6.23m	$4.92m	$3.63m	$2.69m	$5.53m
Other	$0.50m	$0.88m	$1.30m	$1.39m	$1.31m	$1.01m	$0.79m	$0.58m	$0.42m	$0.91m
Total	$0.50m	$0.88m	$1.34m	$1.83m	$2.00m	$1.83m	$1.46m	$0.99m	$0.68m	$1.23m

The large costs associated with participants living in shared supported accommodation is mainly due to the high average cost of these living arrangements, but is also reflective of these participants having a lower average functional assessment, which would require more non-accommodation supports.

More detailed lifetime costs have been prepared in respect to participants with other disabilities by different levels of function, included as Appendix G.

5.5 Scenario analysis

The baseline projection primarily uses assumptions derived from Scheme experience to date. Data integrity issues combined with the phasing pattern of new participants into the Scheme means that it can be difficult to interpret the Scheme experience to inform projections.

This section therefore presents the impact of a number of alternative “scenarios” if aspects of the current Scheme experience were to emerge differently to that adopted, all other assumptions kept the same. These scenarios have relied heavily on the insights gained from Sections 3 and 4 of this report and generally represent alternative assumptions which may also be considered reasonable.

Alternative scenarios have been presented and compared with the baseline projection. These alternative projections do not represent the full range of possible outcomes that may eventuate over time, but rather may be considered as alternatives to the baseline projection:

- Scenario 1: Alternative autism non-mortality exit rates are assumed; both in line with the previous FSR and in line with the actual Scheme experience.
- Scenario 2: Increase in new incidence rates for intellectual disability ages 17 to 22, consistent with the intellectual disability hump in prevalence rates currently seen in the Scheme at these ages.
- Scenario 3: Alternative shared supported accommodation arrangement assumptions, both higher (10% of all Scheme participants) and lower (removal of all mild functioning and some moderate functioning participants in SSA), and alternative SSA cost assumptions resulting from innovations in the delivery of SSA supports.
- Scenario 4: Scenario 4a assumes that adult prevalence catches up to that adopted in the previous FSR. Scenario 4b assumes that the number of children reduces to that adopted in the previous FSR. Scenario 4c assumes an increased number of new entrants in the tail run-off.
- Scenario 5: The committed supports currently in participant plans in conjunction with a utilisation rate is used. Two cases are considered; 100% utilisation of committed supports are used (upper bound on Scheme spend), and 75% utilisation of committed supports (in line with current Scheme experience).
- Scenario 6: Alternative phasing assumptions, assuming the Scheme will reach Steady Intake by 2020.
- Scenario 7: Considers the impact of Administrative Appeals Tribunal cases, in particular the impact of participant with autism, developmental delay, ADHD and dyslexia receiving additional therapy supports, and the impact of participants with heart conditions and depression/anxiety gaining eligibility to the Scheme.
- Scenario 8: Assuming alternate superimposed inflation rates. Two scenarios are considered; 3% per annum superimposed inflation over the next 10 years and 0% superimposed inflation.

The tables below summaries the key changes from the baseline for each of the above scenarios.

Table 5.16 Summary of scenarios – change in participant numbers

Scenario	Description	2020	2023	2030
Scenario 1a	Higher autism exits	-2%	-4%	-9%
Scenario 1b	Lower autism exits	1%	2%	4%
Scenario 2	Intellectual disability new incidence hump 17-22 yrs	0%	0%	3%
Scenario 3a	Higher proportion of participants in SSA	0%	0%	0%
Scenario 3b	Lower proportion of participants in SSA	0%	0%	0%
Scenario 3c	SSA cost innovation	0%	0%	0%
Scenario 4a	Increased number of adults	18%	37%	38%
Scenario 4b	Decreased number of children	-13%	-6%	-8%
Scenario 4c	Increased new entrants	3%	15%	10%
Scenario 5a	Committed supports and 100% utilisation	0%	0%	0%
Scenario 5b	Committed supports and 75% utilisation	0%	0%	0%
Scenario 6	Phasing 2020	23%	6%	3%
Scenario 7a	AAT and mainstream	0%	0%	0%
Scenario 7b	AAT, mainstream and level of function movement	0%	0%	0%
Scenario 7c	AAT access decisions	9%	13%	14%
Scenario 8a	3% p.a. superimposed inflation for 10 years	0%	0%	0%
Scenario 8b	0% superimposed inflation	0%	0%	0%

Table 5.17 Summary of scenarios – change in participant costs[79]

Scenario	Description	2020	2023	2030
Scenario 1a	Higher autism exits	-1%	-3%	-9%
Scenario 1b	Lower autism exits	0%	1%	3%
Scenario 2	Intellectual disability new incidence hump 17-22 yrs	0%	0%	5%
Scenario 3a	Higher proportion of participants in SSA	13%	13%	13%
Scenario 3b	Lower proportion of participants in SSA	-1%	-2%	-2%
Scenario 3c	SSA cost innovation	-20%	-8%	-7%
Scenario 4a	Increased number of adults	4%	16%	21%
Scenario 4b	Decreased number of children	-9%	-5%	-2%
Scenario 4c	Increased new entrants	2%	11%	13%
Scenario 5a	Committed supports and 100% utilisation	21%	20%	20%
Scenario 5b	Committed supports and 75% utilisation	-12%	-10%	-10%
Scenario 6	Phasing 2020	40%	6%	2%
Scenario 7a	AAT and mainstream	16%	16%	16%
Scenario 7b	AAT, mainstream and level of function movement	18%	18%	18%
Scenario 7c	AAT access decisions	7%	7%	7%
Scenario 8a	3% p.a. superimposed inflation for 10 years	0%	7%	25%
Scenario 8b	0% superimposed inflation	-5%	-7%	-7%

[79] Note that changes in participant numbers will have flow on effects to operational expenses. These expenses are not considered in this table.

The majority of these scenarios represent considerable downside risks for the Scheme's financial sustainability based on the Scheme's emerging experience. The current experience of high inflation, low exit rates, higher numbers of children and the potential impact of higher Scheme utilisation represent very real threats to the Scheme's medium to longer term financial sustainability if not adequately addressed. Strong management responses are required to change this experience and some of these responses are discussed in Section 8.2.

Conversely, the lower number of adults presenting to the Scheme represents favorable experience, although this needs to be considered together with the number of new participants approaching the Scheme. Innovations in the delivery of SSA supports and reductions in the number of mild and moderate functioning SSA participants can also lead to potential cost savings for the Scheme.

The majority of these scenarios have material impacts in the longer term, with much smaller changes occurring in the short to medium term. This reaffirms the opportunity for the Scheme to invest in appropriate management responses to unfavourable emerging Scheme experience. The relatively lower cost of operational expense initiatives can have multiplicatively favourable impacts on the financial sustainability of the Scheme.

5.5.1 Scenario 1: Alternative autism exit rates

Scheme experience indicates minimal numbers of non-mortality exits for participants with autism. The previous FSR assumed significant numbers of Scheme exits. This was calibrated to achieve a longer term prevalence close to the expected prevalence for autism. This scenario models two non-mortality exit rate assumptions:

a) Similar to the 2016-17 FSR.
b) Closer to actual Scheme experience.[80]

Scenario results and conclusion

The following table and charts compare the results of this scenario to the baseline projection and the previous FSR projection. Scenario 1a assumes autism exits are in line with the 2016-17 FSR. This results in 2% lower participant numbers at 2020, increasing to 9% lower at 2030. By contrast, Scenario 1b assumes autism exits continue in line with the current Scheme experience i.e. significantly lower exits. This results in participant numbers being 1% higher by 2020 and 4% higher by 2030.

[80] The actual Scheme experience was not fully adopted in the baseline model because it is unclear whether such a large change in autism non-mortality rate assumptions is reasonable in the longer term. One of the recommendations in this FSR is to determine the potential for non-mortality exits from higher functioning participants with autism.

Participant costs follow a similar trajectory to participant numbers in the two scenarios, with costs being between 1% to 9% lower in Scenario 1a and up to 3% higher in Scenario 1b.

This scenario demonstrates the significant impact of autism non-mortality exit rates on the long term cost of the Scheme. In particular, there are large improvements in cost from the baseline projection which can be achieved through higher non-mortality exit rates.

Table 5.18 Comparison of projection results – scenario 1

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 1a	373,698	478,523	579,094	15,453	25,734	40,485
Scenario 1b	382,860	507,564	665,266	15,676	26,791	45,579
Percentage change relative to FSR 2017-18						
Scenario 1a	-2%	-4%	-9%	-1%	-3%	-9%
Scenario 1b	1%	2%	4%	0%	1%	3%

Figure 5.11 Comparison of scenario 1 to baseline projection – participant numbers

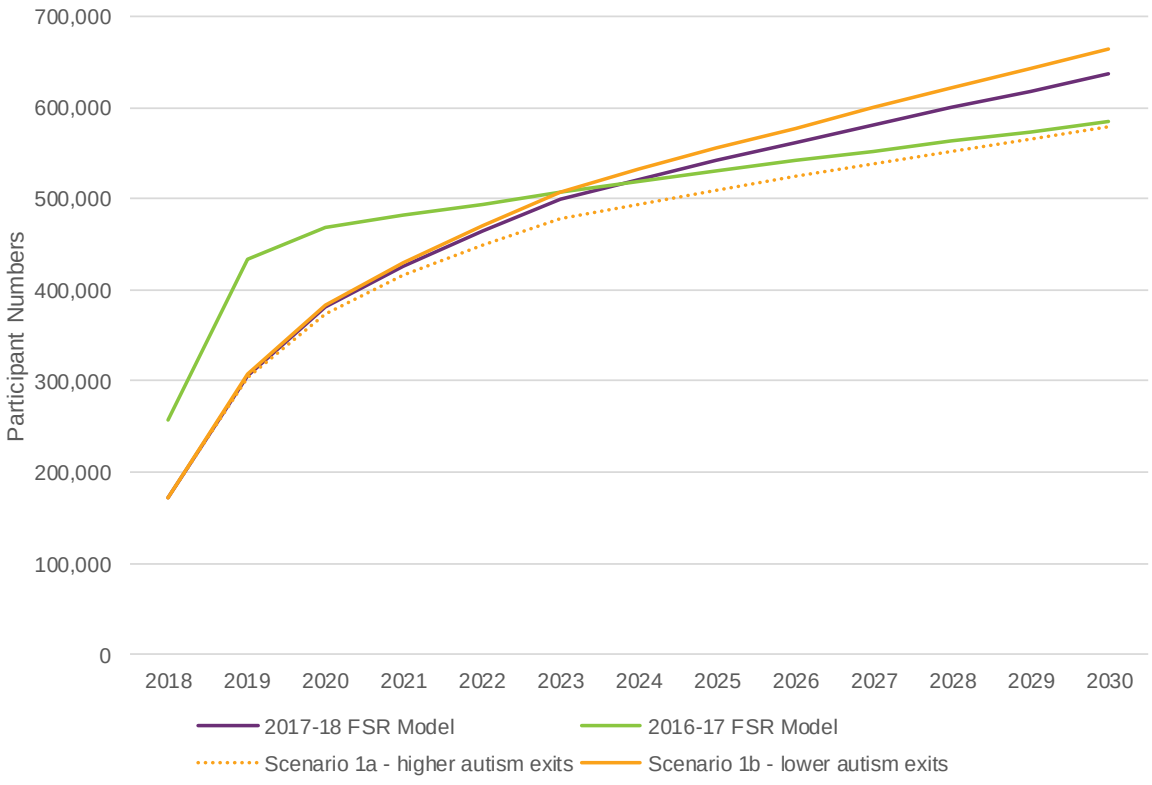
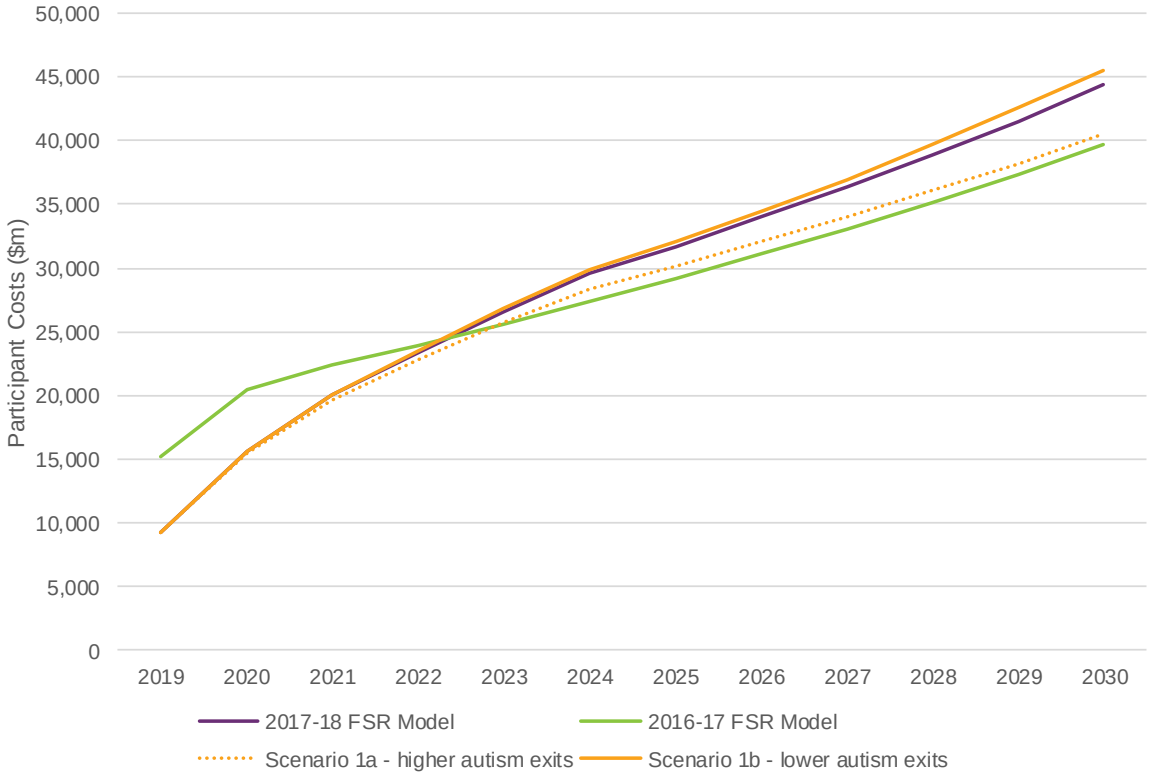


Figure 5.12 Comparison of scenario 1 to baseline projection – participant costs



5.5.2 Scenario 2: Intellectual disability young adult numbers

Analysis of Scheme experience has shown a 'hump' in new incidence for participants with intellectual disability aged 17 to 22. The 'hump' is related to existing State/Territory government programs targeted at school leavers and this increased new incidence has not been modelled in the baseline scenario as there is still uncertainty about whether this trend will continue into the long-term and the impact of this trend. In this scenario, a higher new incidence rate for intellectual disability aged 17 to 22 has been included, with exit rates at "normal" levels.

Scenario results and conclusion

The following table and charts compare the results of this scenario to the baseline projection and the 2016-17 FSR projection. This scenario begins to have an impact after 2023 on numbers as new incidence of participants is assumed to occur after Steady Intake has been reached. The gap between the baseline projection and this scenario then increases to 3% at 2030. Similarly, participant costs begin to differ from the baseline projection after 2023, increasing to 5% at 2030.

This scenario indicates that management of support for participants with an intellectual disability at school leaving age can have a material impact on the long term Scheme sustainability, if entry to the Scheme is not short term.

Table 5.19 Comparison of projection results – scenario 2

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 2	380,490	499,340	657,906	15,638	26,593	46,518
Percentage change relative to FSR 2017-18						
Scenario 2	0%	0%	3%	0%	0%	5%

Figure 5.13 Comparison of scenario 2 to baseline projection – participant numbers

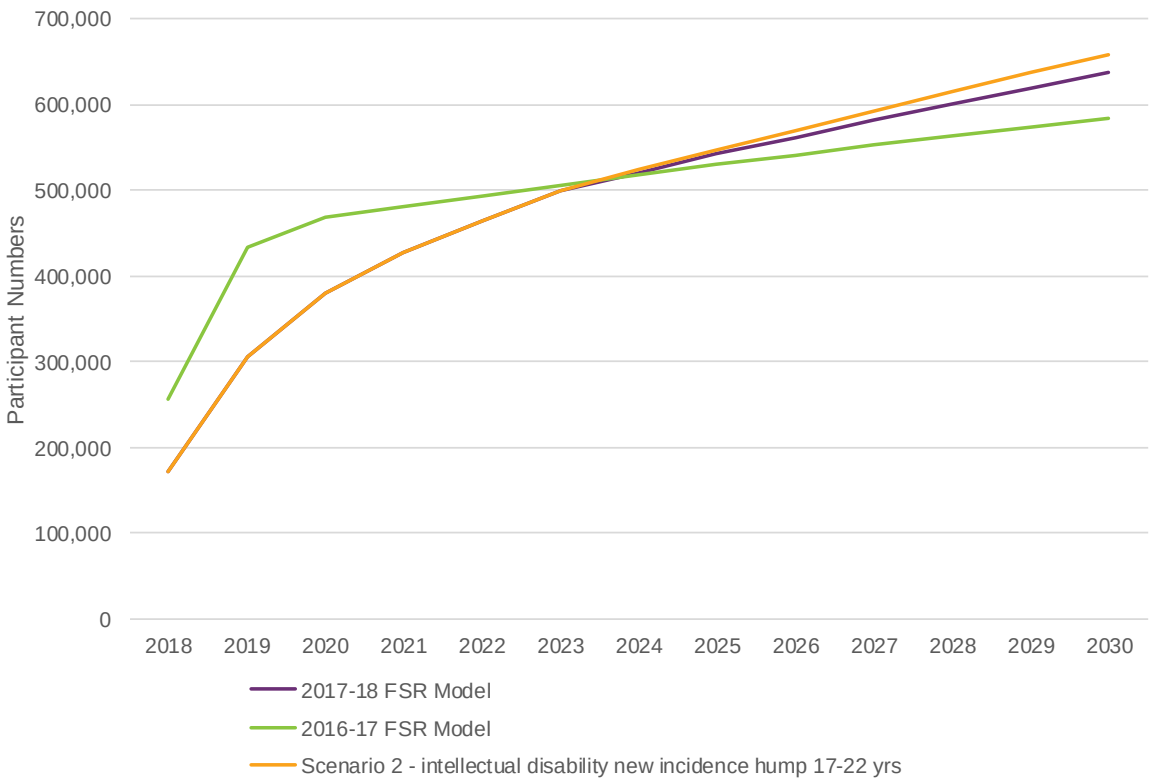
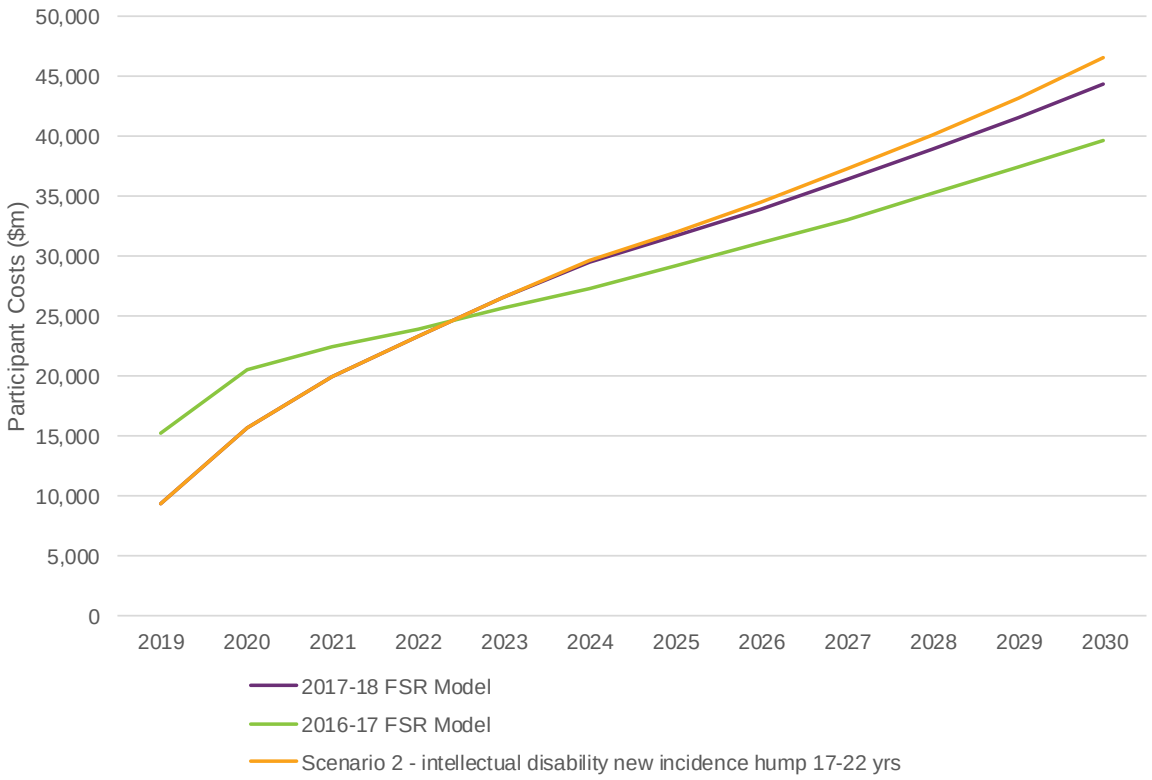


Figure 5.14 Comparison of scenario 2 to baseline projection – participant costs



5.5.3 Scenario 3: Shared supported accommodation (SSA)

This section considers a number of alternate assumptions around the cost and distribution of participants in shared supported accommodation. The alternate assumptions in these scenarios are as follows:

- Scenario 3a – this scenario tests the impact of increasing the proportion of SSA participants in the Scheme from 7% to 10%.
- Scenario 3b – this scenario assumes that there are no SSA participants with mild and moderate levels of function.
- Scenario 3c – this scenario allows for a 30% reduction in costs for SSA participants as a result of innovation in the delivery of supports. Further detail can be found in the draft paper *Supported independent living and Specialist disability accommodation – Participant profile and experience*.

Scenario results and conclusion

The following table and chart compare the results of these scenarios to the baseline projection and the 2016-17 FSR projection. The number of participants remains the same as the baseline in all four scenarios. This is because scenarios 3a and 3b assume a

redistribution of participants from non-SSA to SSA and vice versa, and 3c assumes movements to costs only.

The impact on costs varies by scenario:

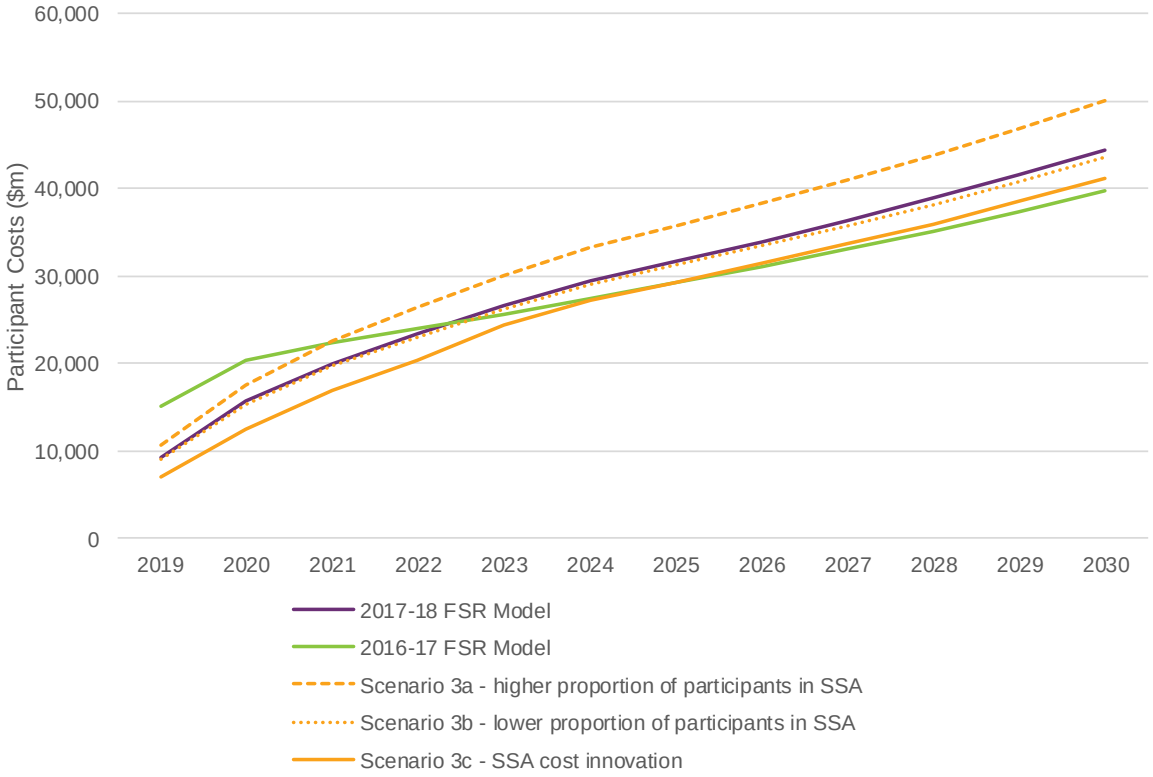
- Scenario 3a results in costs being around 13% higher than the baseline across all years.
- Scenario 3b results in a reduction in costs across all years. The reduction is relatively small due to there being small numbers of SSA participants with a mild level of function.
- Scenario 3c results in lower costs across all years.

Increasing the proportion of participants in SSA has a significant impact because of the high average cost of SSA participants. This emphasises the importance of prudent management of this cohort of participants and their supports.

Table 5.20 Comparison of projection results – scenario 3

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 3a	380,490	499,340	636,922	17,636	30,006	50,034
Scenario 3b	380,490	499,340	636,922	15,405	26,175	43,556
Scenario 3c	380,490	499,340	636,922	12,489	24,428	41,178
Percentage change relative to FSR 2017-18						
Scenario 3a	0%	0%	0%	13%	13%	13%
Scenario 3b	0%	0%	0%	-1%	-2%	-2%
Scenario 3c	0%	0%	0%	-20%	-8%	-7%

Figure 5.15 Comparison of scenario 3 to baseline projection – participant costs



5.5.4 Scenario 4: Participant numbers and distribution by age

From experience seen in the Scheme to date, there remains uncertainty around the ultimate number and distribution of participants and the speed of phasing. The Scheme currently has a higher number of children than expected and a lower number of adults. As these trends are also seen in the more mature sites (ACT, Hunter and Barwon), it is likely that this relates to legitimate experience rather than the earlier phasing of children. Further, higher than expected numbers of new participants continue to approach the Scheme, even in the mature sites, suggesting that the number of adults may not yet have reached Steady Intake levels.

Three scenarios have been considered as plausible alternative Steady Intake numbers:

- Scenario 4a assumes that there will continue to be high numbers of children in the Scheme, and that the number of adults will catch up to expected levels. New incidence rates for adults are also assumed to increase in proportion to the increase in adults. This scenario may occur, for example, if a specific AAT matter sets a precedence which allows participants to access the Scheme for medical conditions that were not anticipated as part of the original Scheme design.
- Scenario 4b assumes that the higher number of children is primarily a result of phasing and will be lower than the baseline at Steady Intake. In addition there will

continue to be lower than expected numbers of adults. New incidence rates for children are assumed to decrease in proportion to the decrease in children.

- Scenario 4c assumes that there will be increased numbers of new entrants in the tail run-off. This means that we expect higher numbers of "new" participants into the Scheme, or put another way, higher levels of "unmet need" for disability services compared to the current experience.

Scenario results and conclusion

The following table and charts compare the results of these scenarios to the baseline projection and the 2016-17 FSR projection. Increasing the number of expected adults at Steady Intake (scenario 4a) has an immediate impact on costs, and these increased costs continue into the longer term. Similarly, assuming increased numbers of new entrants (scenario 4c) results in significantly higher costs, both in the short and long term. Assuming a lower number of children (scenario 4b) results in lower costs across all years.

Overall, these scenarios show that Scheme costs in the short and long term are materially impacted by the long term participant distribution and new incidence levels. This also highlights the financial impact of not having an adequate eligibility gateway and/or information, linkages and capacity building supports.

Table 5.21 Comparison of projection results – scenario 4

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 4a	449,522	683,457	881,769	16,276	30,771	53,883
Scenario 4b	330,990	468,316	586,398	14,213	25,327	43,463
Scenario 4c	391,221	576,662	702,933	15,887	29,627	50,143
Percentage change relative to FSR 2017-18						
Scenario 4a	18%	37%	38%	4%	16%	21%
Scenario 4b	-13%	-6%	-8%	-9%	-5%	-2%
Scenario 4c	3%	15%	10%	2%	11%	13%

Figure 5.16 Comparison of scenario 4 to baseline projection – participant numbers

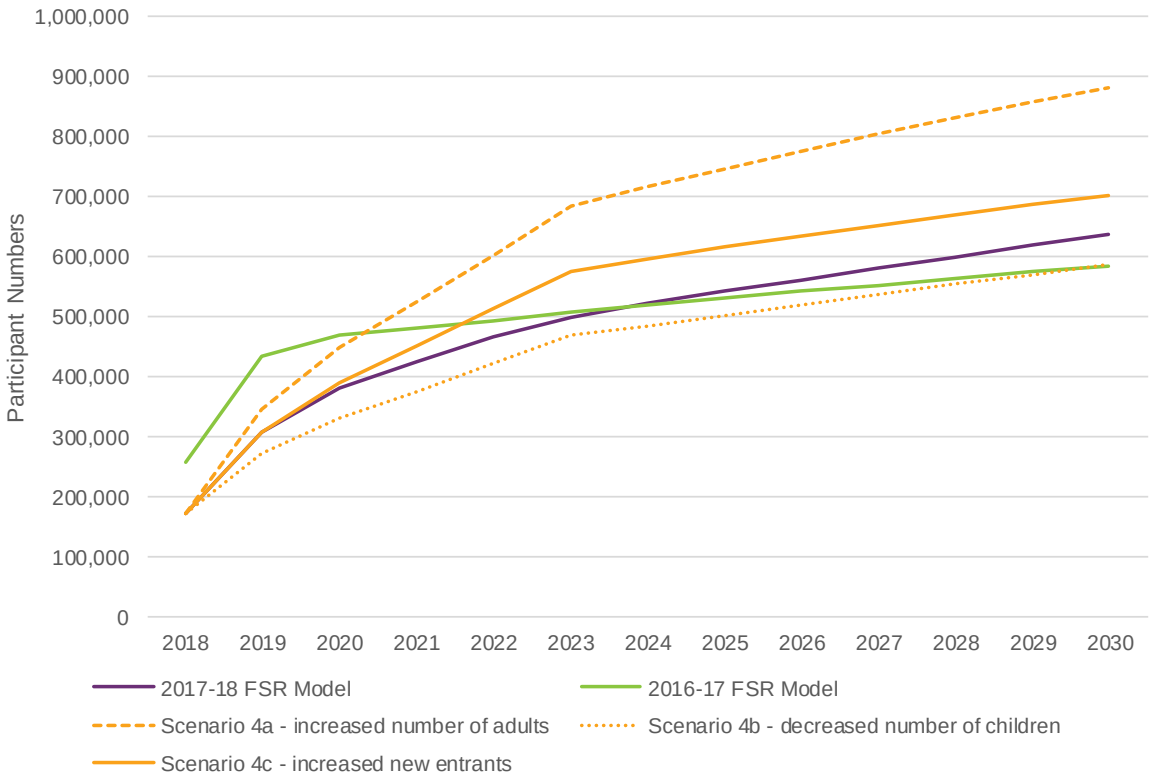
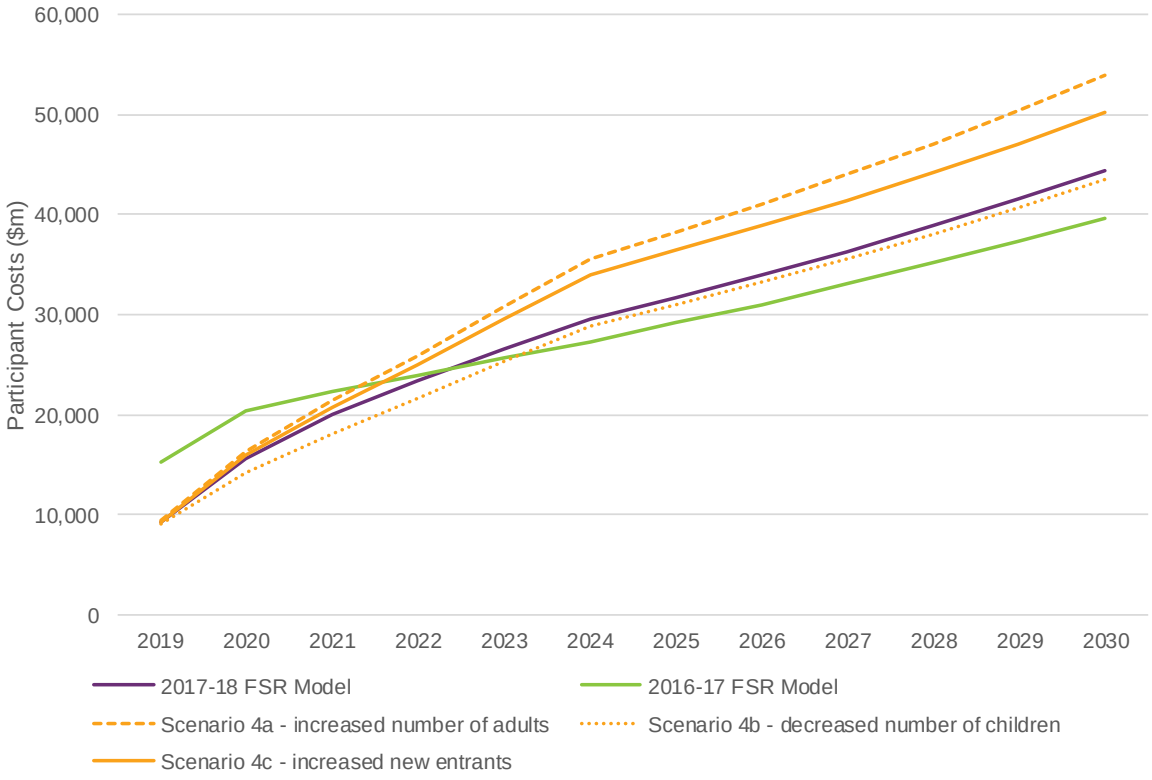


Figure 5.17 Comparison of scenario 4 to baseline projection – participant costs



5.5.5 Scenario 5: Utilisation rates

Utilisation rates in the Scheme range from 50% to 85% of committed support (Section 4.5.3). Given this experience, a plan utilisation rate of 100% is unlikely to occur. Nevertheless, it is useful to consider the costs that would eventuate assuming all supports committed into plans are utilised, as this amount represents an upper limit of what the Scheme is liable to pay. Average annualised cost assumptions under this scenario are outlined in Appendix H. Furthermore, a participant's committed supports should reflect the reasonable and necessary supports of a participant. In light of the lower utilisation rates seen to date, a scenario with long term utilisation at 75% is also considered.

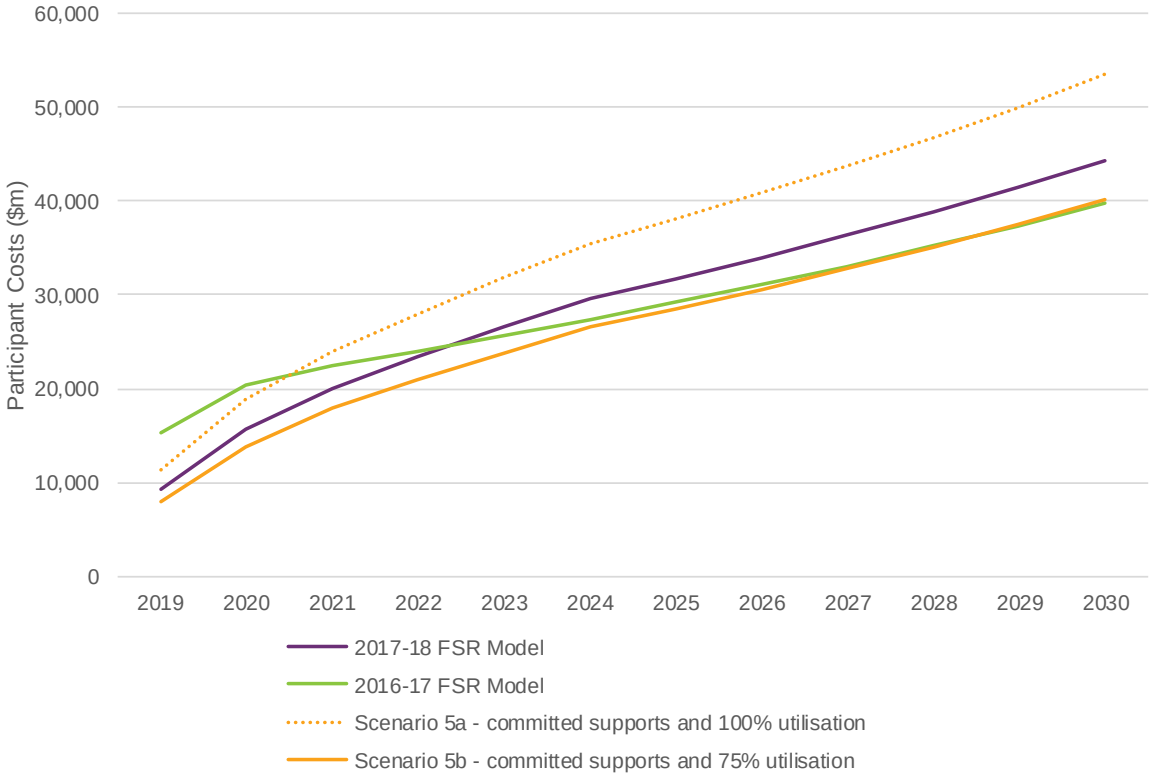
Scenario results and conclusion

The following table and chart compare the results of these scenarios to the baseline projection and the 2016-17 FSR projection. With 100% utilisation there is significant increase in costs in both the short and long term, while a utilisation rate of 75% results in costs being below the baseline. Thus, the overall cost of the Scheme is sensitive to the utilisation of committed supports in plans.

Table 5.22 Comparison of projection results – scenario 5

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 5a	380,490	499,340	636,922	18,957	31,815	53,473
Scenario 5b	380,490	499,340	636,922	13,839	23,861	40,105
Percentage change relative to FSR 2017-18						
Scenario 5a	0%	0%	0%	21%	20%	20%
Scenario 5b	0%	0%	0%	-12%	-10%	-10%

Figure 5.18 Comparison of scenario 5 to baseline projection – participant costs



5.5.6 Scenario 6: Phasing of new entrants

The Scheme currently has 24% less participants than what is expected based on the bilateral estimates. In light of this, the baseline projection assumes that Steady Intake participant numbers will be reached at 2023 rather than 2020, as assumed in previous projections. However there remains uncertainty as to the date of Steady Intake rollout, and improvements in the process for determining eligibility and approving plans may increase the speed of rollout in the future, making the 2020 Steady Intake target more feasible. This scenario considers the cost and participant implications if Steady Intake is reached by 2020.

Scenario results and conclusion

The following table and charts compare the results of these scenarios to the baseline projection and the 2016-17 FSR projection. Participant numbers and costs are similar to the 2016-17 FSR projection up to 2020, but increase above the projection thereafter. Compared with the baseline projection for 2017-18, participant numbers and costs are significantly higher in the short term, but the impact is minimal in the long term. The additional participant numbers and additional cost is primarily due to a higher number of participants in the Scheme over the age of 65.

Overall, the assumption that participants will be fully phased in by 2020 does not have a material impact on the sustainability of the Scheme. However, Scheme costs would exceed the costings outlined in the 2018-19 Portfolio Budget Statements (Table 5.11) for the first time in 2019-20 (13% higher excluding operating costs), instead of 2021-22.

Table 5.23 Comparison of projection results – scenario 6

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 6	468,880	531,492	658,790	21,818	28,146	45,156
Percentage change relative to FSR 2017-18						
Scenario 6	23%	6%	3%	40%	6%	2%

Figure 5.19 Comparison of scenario 6 to baseline projection – participant numbers

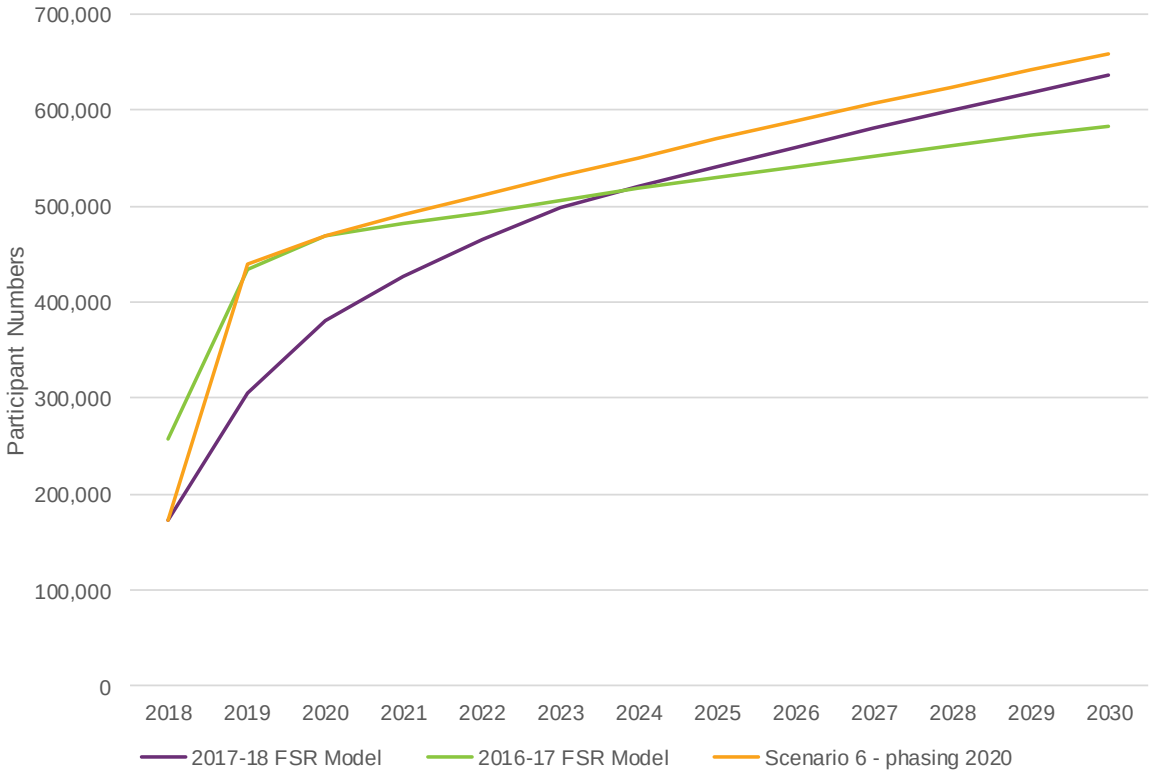
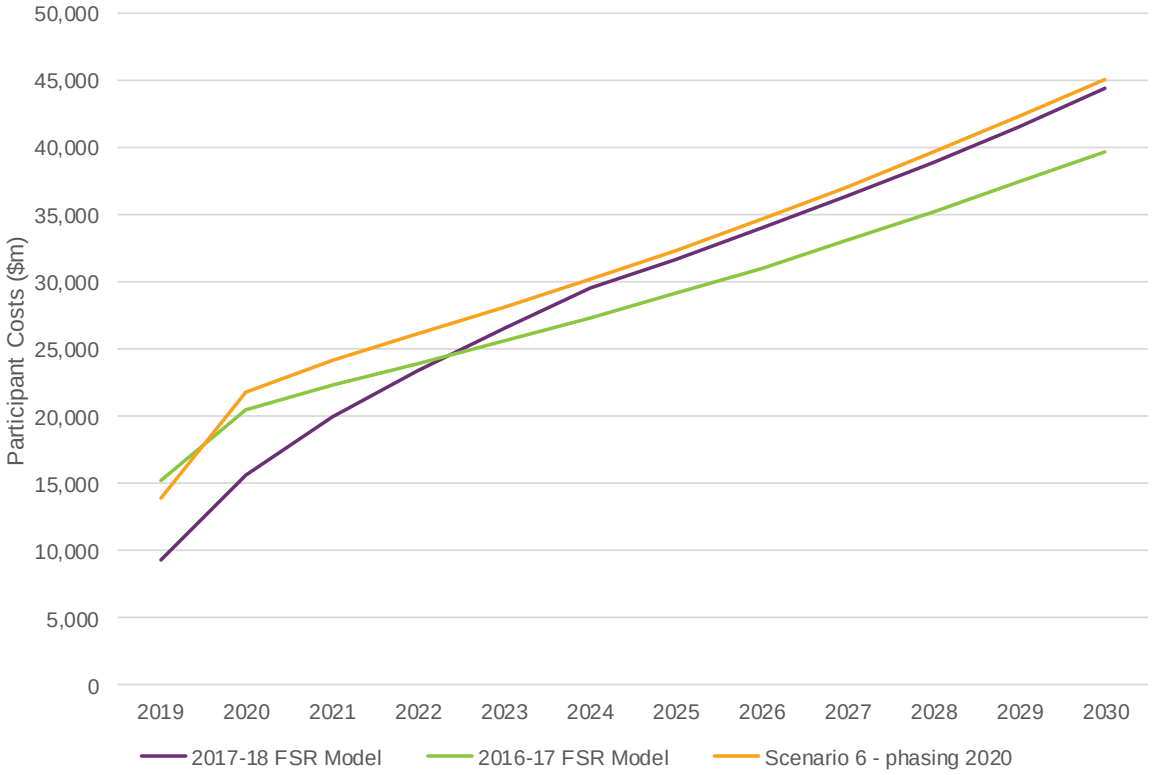


Figure 5.20 Comparison of scenario 6 to baseline projection – participant costs



5.5.7 Scenario 7: Administrative appeals tribunal – interaction with mainstream

The Scheme is facing a number of pressures in entry and funding decisions, particularly in relation to Scheme interactions with mainstream services. These pressures may manifest in the form of AAT matters which can set precedents for defining access to the Scheme, or the supports funded under NDIS plans. Scenarios 7a and 7b consider the potential impact to the financial sustainability of the Scheme if participants with autism, developmental delay, ADHD and dyslexia were to receive additional therapy supports through the Scheme.[81] Scenario 7c considers the impact if people with heart conditions and depression/anxiety are able to gain eligibility to the Scheme.[82]

[81] Refer to paper *Autism – Therapy Support Potential Impact on Scheme Financial Sustainability, June 2018.*
[82] Refer to paper *NDIS and Health Interface: B. Access for People with Health Conditions – Potential Impacts on Financial Sustainability, August 2018.*

Scenario results and conclusion

Overall, the impact of scenario 7a is to increase costs by $2.49 billion per annum, or 16% of Scheme costs at 30 June 2020. This amount increases to $2.76 billion per annum, or 18% of Scheme costs at 30 June 2020 if there is assumed to be a shift of participants to lower levels of function (Scenario 7b). The impact of people with heart conditions and depression/anxiety gaining eligibility to the Scheme is to increase participant numbers by 9% at 2020 and 13%-14% thereafter, and costs by 7% at 2020 and thereafter.

Thus, the precedents established through AAT decisions can potentially have a large impact on the future costs of the Scheme.

Table 5.24 Comparison of projection results – scenario 7

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 7a	380,490	499,340	636,922	18,123	30,819	51,450
Scenario 7b	380,490	499,340	636,922	18,400	31,290	52,236
Scenario 7c	415,776	565,557	722,911	16,670	28,508	47,592
Percentage change relative to FSR 2017-18						
Scenario 7a	0%	0%	0%	16%	16%	16%
Scenario 7b	0%	0%	0%	18%	18%	18%
Scenario 7c	9%	13%	14%	7%	7%	7%

5.5.8 Scenario 8: Superimposed inflation

The baseline projection for the 2017-18 FSR assumes that there will be 8% superimposed inflation in payments across the next three years. Historic Scheme experience to date has shown higher levels of superimposed inflation in both committed supports and payments. Two scenarios are considered here:

a) Scenario 8a: 3% p.a. superimposed inflation across 10 years, more in line with Scheme experience to date.
b) Scenario 8b: 0% superimposed inflation.

Scenario results and conclusion

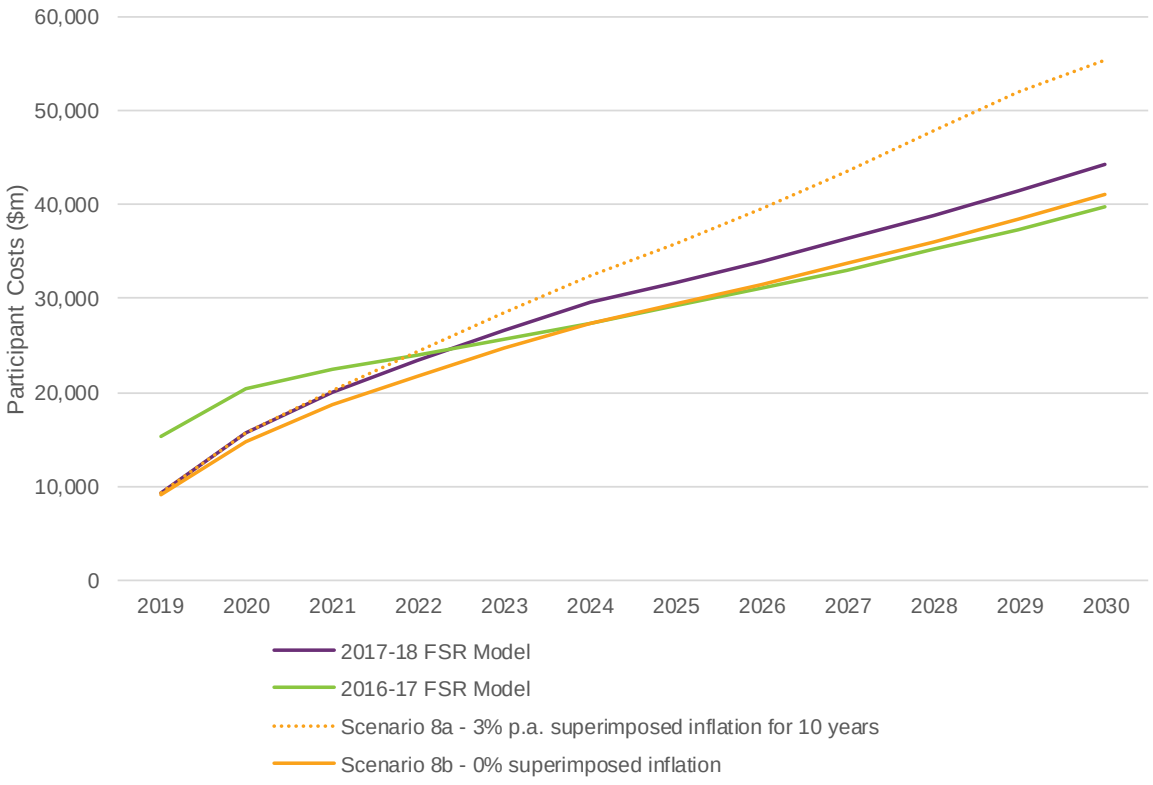
The following table and chart compare the results of these scenarios to the baseline projection and the 2016-17 FSR projection. Scenario 8a results in a slight increase in costs at 2020, with the gap increasing rapidly in the medium to longer term. At 2030, participant costs are 25% higher than the baseline. In contrast, Scenario 8b shows that if superimposed inflation is controlled, there is a potential for a 7% decrease in participant costs in the long term.

Thus, controlling superimposed inflation in the Scheme will have significant implications for the long term sustainability of the Scheme.

Table 5.25 Comparison of projection results – scenario 8

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
Scenario 8a	380,490	499,340	636,922	15,676	28,424	55,465
Scenario 8b	380,490	499,340	636,922	14,810	24,658	41,164
Percentage change relative to FSR 2017-18						
Scenario 8a	0%	0%	0%	0%	7%	25%
Scenario 8b	0%	0%	0%	-5%	-7%	-7%

Figure 5.21 Comparison of scenario 8 to baseline projection – participant costs



5.6 Shorter-term trajectory of Scheme cost

Section 4.1 of the 30 June 2018 quarterly actuarial monitoring report sets out the underlying assumptions and results of projecting the agreed funding mechanism for the 2017-18 and 2018-19 years. The projection combines revenue amounts per participant, as set out in the bilateral agreements, with phasing of participants (drawn from those same bilateral agreements, and also actual data) and the experience of committed supports and utilisation.

These projections are different to the baseline projections in Section 5.4 in that they provide a more granular short term view of both revenue and costs under a number of different assumptions, with a focus on understanding accounting surplus/deficits and cash surplus/deficits during the transition period. The latter is done to understand the impact of States/Territories paying invoices in arrears and assumptions about the payment pattern (that is, assumptions on the lag between when support is provided and when it is paid) on the Scheme cash position. The appendices of the 30 June 2018 quarterly actuarial report also contains a detailed breakdown by State/Territory as Appendix I.

An accounting surplus of $770 million (12% of the 2017-18 funding envelope) was reported for 2017-18. The cash position results in a higher surplus than the accrual position due to the delay in making payments to providers, with a surplus of $848 million (20%).

Similarly, a surplus of $1,082.5 million is projected in 2018-19 (8.8%), with a cash utilisation assumption of 70%. This assumes however that participant intake rises to reach bilateral estimates by the end of 2018-19, which would require a very substantial speed-up in plan approvals. If an allowance is made for historic activity rates, participant numbers are expected to be in line with that assumed in the baseline model in Section 5.4 and the projected surplus increases to 12.0%.

There is considerable uncertainty, particularly in the 2018-19 projection, as experience for different participant cohorts is likely to change as more participants phase into the Scheme. In addition, any changes in utilisation will have a significant impact on the projected surplus/deficit.

6. Scheme outcomes

Summary of key findings

- Baseline data from the short-form outcomes framework questionnaires were collected during 2016-17 and 2017-18 when participants first enter the Scheme. These data reveal that participants generally want more choice and control in their life, have low levels of employment and community participation and that families and carers would like to work more and see their family and friends more often.
- Data was also collected on participants who had received more than one plan. This information indicated that the NDIS was helping most in the domains of choice and control, daily activities, and health and wellbeing. The NDIS was helping least in the domains of work and home.
- For families/carers of participants who had received more than one plan, the NDIS impacted most in supporting families/carers and assisting families/carers to access services for participants. The NDIS impacted least in the domain of succession planning.
- Lastly, data was collected on participant satisfaction with the planning process. Satisfaction has been about 10 percentage points lower during the transition period, at 85% in 2016-17 and 2017-18, compared to the trial period with about 95% reporting that the planning process was either good or very good in trial.

Evidence of positive Scheme outcomes are important in the context of the continuing support for the Scheme from its participants and from the general public. The previous system of disability support was very different, much of which was block-funded and provided very little in the way of choice and control for people with a disability. The NDIS aims to be more focused on participants having greater choice and control in the types of supports that they receive to help them to reach a better level of independence. This may require higher upfront investment than the previous model and therefore the expectation is that participant outcomes would be improved. Demonstration of this is imperative in such an insurance-principles based support model.

From this perspective, a key aspiration of the NDIS is to facilitate outcomes of economic and social independence for participants, and to deliver an exceptional service for participants, families, carers and providers.[83] An outcomes framework therefore helps inform which types of support lead to better participant outcomes and also helps to demonstrate the success of the Scheme in improving participant outcomes and quality of life.

[83] As per the NDIS 2017-21 Corporate Plan

Development of the outcomes framework involved a review of existing national and international frameworks, a review of available population data against which to benchmark performance and consultation with a wide range of stakeholders, including the NDIA Independent Advisory Council (IAC). The result is a series of questionnaires designed to measure outcomes.

Some other areas of interest around the strategy are participant goals, data linkage to understand the benefits of other Government services, LAC/community/mainstream and satisfaction surveys.

6.1 Participant outcomes

Short-Form (SFOF) and Long-Form (LFOF) versions of the framework have been developed, and collection of both forms has commenced over the last two years. The SFOF is being collected for all participants, and the LFOF for a sample of participants. Both forms are being collected longitudinally over time to enable tracking of progress.

6.1.1 Baseline data

As at 30 June 2018, 219,384 SFOF questionnaires had been completed: 141,638 for participants and 77,746 for their family/carers.

Table 6.1 Number of questionnaires completed by SFOF version

Version	Number of questionnaires collected 2016-17	Number of questionnaires collected 2017-18	Number of questionnaires
Participant 0 to school	7,861	11,980	19,841
Participant school to 14	14,341	21,748	36,089
Participant 15 to 24	9,671	12,484	22,155
Participant 25 and over	25,207	38,346	63,553
Total Participant	**57,080**	**84,558**	**141,638**
Family 0 to 14	20,895	32,837	53,732
Family 15 to 24	2,766	8,521	11,287
Family 25 and over	802	11,925	12,727
Total Family	**24,463**	**53,283**	**77,746**
Total	**81,543**	**137,841**	**219,384**

Results from the SFOF questionnaires collected during 2016-17 and 2017-18 are shown in Appendix I, for active participants with a first plan approved during the period 1 July 2016 to 30 June 2018. The data collected to date primarily represents a cross-section of participants (baseline). Over time it will be possible to measure and report on within-individual change over time.

On the whole, participants want more choice and control in their life, have low levels of employment and have low levels of community participation. Participation rates for mainstream education, training and skill development were also low. Most participants were happy with their current home.

Baseline outcomes were also collected on families and carers. Many reported that they would like to work more than they do and also see family and friends more often. For families and carers of older participants, many did not feel in control when selecting services and a majority had not made plans for when they were no longer able to care for their family member with a disability.

6.1.2 Results for "Has the NDIS helped?" questions

Data was also collected on participants (and their families/carers) who had received more than one plan from the Scheme. Participants and families/carers reported that the NDIS was helping in a number of domains, and also indicated domains where the NDIS could assist more. The results have been summarised below.

Participants

For participants from birth to starting school:

- 91% said the NDIS had improved their child's development (Domain 1)
- 89% said the NDIS had improved their child's access to specialist services (Domain 1)
- 82% said the NDIS had helped increase their child's ability to communicate what they want (Domain 2)
- 72% said the NDIS had improved how their child fit into family life (Domain 3)
- 59% said the NDIS had improved how their child fits into community life (Domain 4).

For participants from starting school to age 14:

- 51% said the NDIS had helped their child to become more independent (Domain 1)
- 42% said the NDIS had improved their child's relationships with family and friends (Domain 3)
- 42% said the NDIS had improved their child's social and recreational life (Domain 4)
- 33% said the NDIS had improved their child's access to education (Domain 2)

For participants aged 15 to 24, the percentage of positive responses is highest for domain 1 (choice and control, 61%), followed by domain 2 (daily living, 59%). The lowest percentages were for domain 7 (work, 21%) and domain 4 (home, 24%). Similar trends were observed for participants age 25 and over.

Families and carers

For families/carers of participants aged 0 to 14:

- 69% said the NDIS had improved their ability/capacity to help their child develop and learn (Domain 4)
- 64% said the NDIS had improved their access to services, programs and activities in the community (Domain 3)
- 61% said the NDIS had improved the level of support for their family (Domain 2)
- 54% said the NDIS improved their capacity to advocate (stand up) for their child (Domain 1)
- 38% said the NDIS had improved their health and wellbeing (Domain 5).

Similar trends were observed for families/carers of participants aged 15 to 24, except that domain 2 (55%) had a slightly higher percentage of positive responses than domain 4 (51%). There was a tendency for the percentages of positive responses to be slightly lower across all domains in the older age group, however.

For families/carers of participants aged 25 and over, domain 2 had the highest percentage of positive responses (67%), followed by domain 3 (63%). Domain 4 asks about succession plans (not asked for younger participants), and the question “Has the NDIS helped you with preparing for the future support of your family member?” had the lowest percentage of positive responses (34%).

6.1.3 Longitudinal data and analysis

The first longitudinal analysis of outcomes information is currently being analysed, by comparing the baseline information with first plan review information. Some useful insights can be examined to test whether different programs, supports or participant plan goals can be linked to successful participant outcomes. The answers to the short form outcomes survey can be combined with information from the actuarial data warehouse to use statistical analysis to help answer these types of questions.

The following section on employment outcomes gives an example of such a longitudinal analysis that has been prepared.

Employment outcomes

Employment has a significant impact on the overall wellbeing of people with a disability. Not only does participation in paid employment increase an individual's level of financial independence, it can also lead to a greater sense of identity and social inclusion. This in turn may lead to positive physical and mental health impacts for people with a disability who engage in the workforce.[84] The NDIA has a long term goal to gradually increase the employment rate of its participants to a benchmark of 50%, consistent with the employment rate for people with a disability in the top 10 OECD countries.

As at March 2018, the percentages of NDIS participants in paid employment at the time of receiving their baseline plan (excluding trial participants) were 18% of 15-24 year old participants and 26% of participants aged 25 and over. A recent longitudinal analysis of NDIS transition participants who have been in the Scheme for at least one year, indicated that employment rates have slightly improved for 15-24 year olds (from 15% to 18%) and slightly decreased for participants aged 25 and over (from 25% to 24%).

An in-depth longitudinal analysis has been conducted to investigate the key drivers of participants finding and maintaining paid employment during their time in the Scheme. A summary of the key insights from this analysis is given below. A more detailed report is currently being prepared, which contains a number of other analyses and insights to help better understand the factors which contribute to disability employment outcomes.

Participants aged 15 to 24 who are seeking paid employment were found to have a significantly higher likelihood of finding paid work when they are able to increase their level of capacity and their sense of independence through their involvement with the NDIS. This finding highlights the important role of the School Leaver Employment Support (SLES) program, which aims to help school leavers to build capacity, develop vocational skills and maximize their opportunities for independence and employment. Participation in general community groups, volunteering, and working in an unpaid job (i.e. work experience) were also found to lead to higher rates of employment success.

[84] https://www.humanrights.gov.au/publications/issues-paper-employment-discrimination-against-australians-disability/6-economic-and

Employment outcomes (continued)

For job seekers aged 25 and over, only 7% of participants have found paid work while in the Scheme compared to 12% of participants aged 15 to 24. This may be indicative of older participants not having access to a support program similar to SLES, which is also supported by the finding that building a participant's capacity and level of independence does not have a significant impact on employment outcomes for this group. Rather, an improvement in the participant's health status over the plan period is found to lead to higher rates of employment success. Additionally, in the absence of targeted employment support programs, a participant having a specific work-related goal in their plan will help them to build a vision of success and have a higher likelihood of finding paid work.

For participants who are already in paid work, the key driver of maintaining a job is the type of employment. Participants working in an Australian Disability Enterprise (ADE) were found to have a higher likelihood of keeping a job compared to participants in open employment, particularly for older participants and those with low levels of functional capacity or poor health. This suggests some gaps exist in the supports available to high need participants in the open employment market. Whilst working in an ADE may offer stability of employment, this may come at the expense of lower wages and less inclusive social interactions for participants.

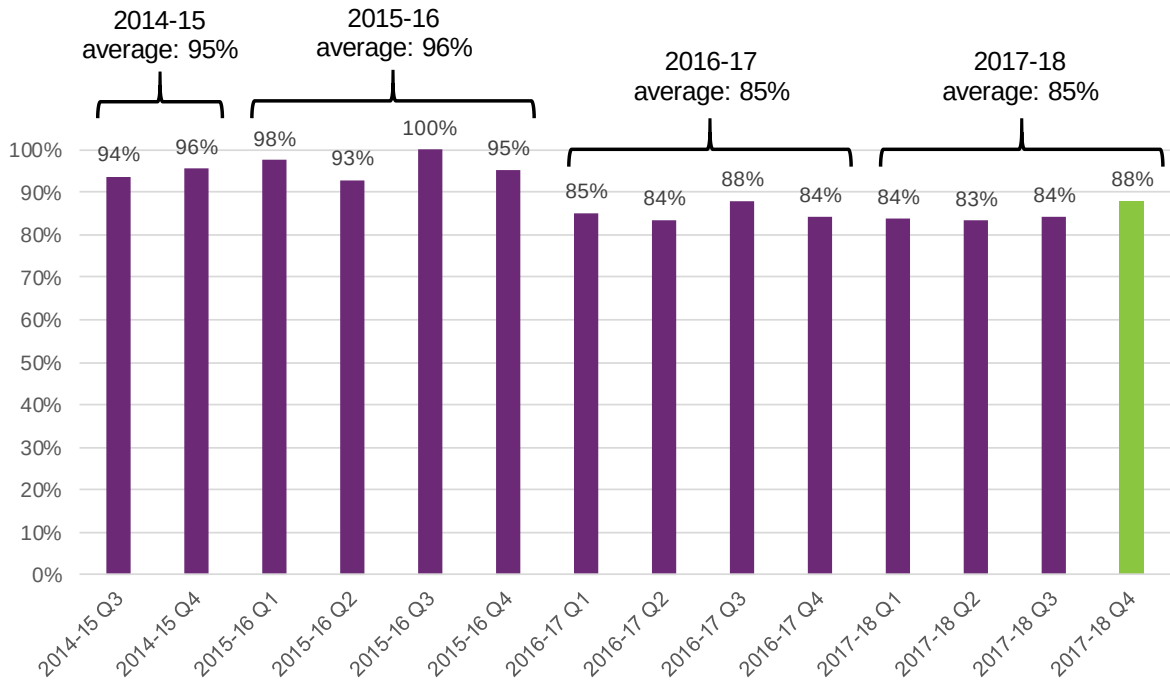
6.2 Participant satisfaction

Participants are contacted by a member of the engagement team after their plan is agreed with their planner to rate their satisfaction with the Agency's planning process. The overall satisfaction rating is calculated as an average of the satisfaction ratings of each participant surveyed[85].

Participant satisfaction continues to be high, but has dropped during transition by about 10 percentage points, compared with the experience during trial.

[85] Note, not all participants choose to complete and submit their survey, and the participant responses remain anonymous to the Agency.

Figure 6.1 Participants whose satisfaction with the Agency is good or very good



6.3 Participant interaction with mainstream services

Participant outcomes are also impacted by the use of mainstream services. Monitoring the extent to which mainstream services are used by participants will assist in identifying any cost pressures to the Scheme if mainstream service use decreases, and also any increases in social inclusion if participants use mainstream services more over time.

About 90% of active participants access mainstream services. Participants are accessing mainstream services predominantly for health and wellbeing (about 50% of participants), lifelong learning (about 12% of participants) and daily activities (about 8% of participants).

Data is being linked with the income support system, and links with other administrative data sets are being pursued. This data will be useful in identifying and quantifying the use of mainstream services. This will be reported as information becomes available.

There are a number of boundary issues emerging in respect to the provision of some of these mainstream services, especially health related services. In some cases, these have manifested in the form of AAT cases (Section 4.6.7). The overarching issues are:

- Support items that were previously considered to be health/medical related costs, but where State/Territory Health agencies are advocating that the supports/costs should be NDIS disability costs, which represents a potential cost shifting from State/Territory Health budgets to federal NDIS budget.

- People seeking access to the Scheme with high prevalence, chronic health and/or mental health conditions, where the 2011 Productivity Commission report and costings did not envision that these (mostly age related) health conditions would satisfy the disability eligibility requirements, and would, more appropriately, continue to be serviced by the Health, Palliative Care and Aged Care systems.
- A longer term issue, which is a combination of the above, where participants who have satisfied the disability eligibility requirements, but who currently have co-morbid health/mental health conditions (or who will develop health conditions as they age within the Scheme) are able to receive supports within the Scheme that may be more related to their deteriorating health, but have the potential to be 'characterised' as disability supports.

6.4 Information, Linkages and Capacity Building

Information, linkages and capacity building (ILC) was not funded during the trial phase and first year of transition of the Scheme, but has been progressively rolled out since. It is still too early to draw any meaningful conclusions on the effectiveness of this funding. There is a need for an outcomes framework to be developed covering ILC initiatives. Further, the ICT system will need to be significantly improved to support data collections and operations. This will assist in understanding outcomes and the use of mainstream services. It is important that ILC, along with local area coordination, is adequately funded to divert people from the Scheme where appropriate, and reduce the need for funded supports (through the use of mainstream and community supports where possible). Section 5.5.4 highlights the financial impact of not having an adequate eligibility gateway and/or information, linkages and capacity building supports.

The NDIA is developing an ILC Investment Strategy which will guide ILC investment from 2019-20. The Investment Strategy will be aimed at ensuring ILC funds are used most effectively in supporting people with disability in the community and supporting Scheme sustainability.

7. Risk management

Summary of key findings

- In the 2016-17 FSR, it was noted that the policies and procedures that support the assessment and mitigation of risk within the Agency must keep pace during the transition period of rapid growth as the Scheme rolls out nationally. In 2017-18, significant work has been undertaken by the Agency to expand its risk management capabilities. Key improvements include:
    - Refreshed and streamlined risk management framework and strategy (RMS).
    - Developing a risk appetite statement and risk tolerances.
    - A focus on awareness and staff training.
    - Increased rigour surrounding the identification, assessment, management and monitoring of risks under the direction of the new Chief Risk Officer.
    - Design of a new governance and reporting structure, with a focus on two 'lines' of resources.
- In assessing the quality and consistency of decision making by Agency staff and partners, the Scheme Actuary engaged the Agency's Compliance and Assurance team to review almost 600 records around access, level of function, plan reviews and TSPs during 2017-18. A common concern identified in these reviews was the lack of quality documentation and adequate controls around decision making. Remediation was recommended for errors identified during the review, however the results to date have been limited.
- Although the Agency has made progress with its risk management capabilities in 2017-18, the process continues to mature. A number of improvements have been identified for 2018-19 including:
    - A purpose-built Integrated Risk Management system
    - Development of training modules
    - Addition of new dedicated risk management resources
    - Real-time monitoring of the effectiveness of strategies implemented to mitigate the risks that are currently being assessed as 'critical'
    - Introduction of appropriate controls in the ICT system to support best-practice decision making and strengthening of process for implementation of remediation actions.

The NDIS Rules for the Scheme Actuary (section 11a) require the annual financial sustainability report to include a discussion on the Agency's risk management arrangements. This chapter provides an assessment of the suitability and adequacy of the Agency risk management framework and governance arrangements, including commentary on the material risks that could adversely affect the financial sustainability of the Scheme.

7.1 Observations on risk management in 2017-18

The Scheme continues to experience a period of rapid growth as it rolls out nationally. In the 2016-17 FSR, it was noted that the policies and procedures that support the assessment and mitigation of risk within the Agency must keep pace during this transition. In 2017-18, significant work has been undertaken by the Agency to expand its risk management capabilities, although the approach is not yet mature.

Key improvements in 2017-18 include:

- The risk management framework and strategy has been refreshed and streamlined. It has been approved by the Board in December 2017 and is currently awaiting sign off by the Council of Australian Governments (COAG) Disability Reform Council.
- The Agency has begun to articulate a risk appetite statement, including tolerances (for example, beyond tolerance and requires further action, beyond tolerance and requires monitoring, and within tolerance).
- There has been a focus on awareness and staff training. Each group or division now has a fully functional risk committee and risk register, with clarity of leadership. Planning has commenced for formal training via an eLearning module in 2018-19. The Risk division has also developed a risk management guide, published on the Agency's intranet for use by all staff, which provides guidance on identifying, assessing, managing and reporting risk across the Agency.
- Rigour surrounding the identification, assessment and management of risks has increased under the direction of the new Chief Risk Officer, supported by the Chief Executive Officer. This has been driven by increased attention, focus and resources, as well as engagement and alignment of the Agency's risk committee and Executive Leadership Team. Terminology has been brought in line with that used by the Australian Prudential Regulation Authority (APRA).
- A new governance and reporting structure has been designed. The focus of this structure will be three "lines of defence". The first line of defence is the risk owners, the second line undertakes a "review and challenge", and the third line is independent assurance by a third party:
    - First line resources are embedded within divisions and help to maintain awareness and enhance information that flows into each Group Risk register. These roles are currently part-time risk champion roles but will move to full-time, dedicated resources embedded in teams, designed to build the capacity of the Agency. First line teams will commence their own assurance activities across 2018-19.
    - Second line resources currently deal with operational risk, specialist strategic risks, assurance (both quality and process/compliance) and governance.

These include dedicated project resources. In 2018-19, as first line capability improves, the second line will transition to a purer “review and challenge” role.

- The outsourced third line independent internal audit provider undertakes risk based reviews of key processes and compliance obligations. An internal Chief Auditor Officer was appointed during 2017-18. Further internal capability will be established across 2018-19.

Despite this progress, further work remains. The Risk division experienced a period of transition in 2017-18 with a number of leadership changes, including an interim Chief Risk Officer (CRO), before the appointment of the new Chief Risk Officer in January 2018. The new CRO has provided consistency in approach and stability of leadership in the second half of the financial year. This has also provided clarity of direction.

The work of the Risk division has been limited by a lack of dedicated resources in 2017-18, however the team will expand significantly in 2018-19 to around 35 staff members, which is appropriate given the size and scale of Agency’s operations. First line resources are not yet in place, and second line resources will need to expand significantly in the coming year.

These new resources will be supported by a new Integrated Risk Management system to be implemented in early 2018-19. Currently, Agency staff use spreadsheets to monitor risks, which are manually updated after each meeting. The new system will allow for centralised, real-time management of risk and reduce complexity for Agency staff. Monitoring of strategic risk level Key Risk Indicators commenced during 2017-18. Work is also underway on the development of operational level Key Risk Indicators, which will provide a further level of granularity in the assessment and reporting of risks.

The roll-out of the Scheme will continue to pose challenges over the coming year. The increasing workforce and network is likely to continue to impact the Scheme over the next 12 to 18 months. Work will continue to occur over the coming year to move the Scheme towards a fully effective and mature risk management approach, with clarity and consistency of direction, fully functioning risk registers and regular reporting to the Board and management, and sufficient resources available to support the approach.

7.2 The risk management strategy

The Agency’s current risk management strategy (RMS) was endorsed by the Board in December 2017 and is awaiting approval by the COAG Disability Reform Council. It has been developed to meet the Agency’s obligations under federal law, including:

- *The Public Governance, Performance and Accountability Act 2013*
- *The National Disability Insurance Scheme Act 2013*
- *The National Disability Insurance Scheme – Risk Management Rules 2013.*

It also reflects the expectations of the Scheme's contributors expressed in the Statement of Strategic Guidance for the Board, issued by the Council of Australian Government Disability Reform Council on 15 March 2017 to identify strategic risks early and manage risks well by:

- Taking a structured approach to identifying and managing risks
- Developing a sophisticated understanding of the risk interdependencies that could impact delivery of the NDIS
- During transition, escalate important issues urgently.

This RMS has six areas of focus to help build a robust, high-performing, professional and systems-based Agency that continues to improve its practices (Table 7.1).

Table 7.1 Summary of Risk Management Strategy

Area of focus	Summary	Commentary
Culture and behaviour: Agency staff are risk aware and sensitive to financial sustainability and positive participant outcomes	• Defines the risk culture as the set of shared attitudes, values and behaviours that characterise how Agency staff and community partners consider risk in their day-to-day activities and decisions. • Requires staff and partners to take accountability for managing risks, to communicate and escalate risks as appropriate and to openly share and learn from mistakes. • Importantly, it requires staff to understand and apply the Agency's risk management principles, processes and reporting.	Instilling a risk management culture across all levels of staff was a key recommendation of the 2016-17 FSR. In particular, supporting frontline staff and Agency partners to make eligibility and planning decisions consistent with the legislation and to understand the impact of those decisions. Extensive training is required to put Scheme sustainability at the core of the Agency's business processes. Clear articulation of the Agency's position on this is an important step forward. A positive risk culture promotes an open and proactive approach to managing risk. It balances both the threats and opportunities that emerge from the uncertainty of rollout to Steady Intake. This will be further supported by publishing the RMS and supporting information, guidance and tools on the Agency's intranet. Ongoing monitoring of the effectiveness of the risk management culture is also key. Insights will come from an annual risk culture survey, regular pulse surveys and tracking performance results against key performance indicators that include training, application of risk management processes and demonstration of the preferred behaviours. The risk management culture of the Agency remains a key risk and opportunity for the Scheme going forward.

Area of focus	Summary	Commentary
Leadership: Agency leaders setting the 'tone at the top' to reinforce the importance of being prepared for risk	• The RMS sets out the expected behaviours of management and the Board.	Tied closely with a positive risk culture is the importance of strong leadership. Leaders at all levels within the Agency are responsible for setting the positive tone, outlook and approach that encourages and rewards risk-based decision making. The Agency has a relatively new executive leadership team, with many positions having been established over the last year. It will take some to embed new decision making processes.
Capability: Building the skills and insights of Agency staff and community partners	• The RMS sets out the risk management capabilities required by staff to identify new and emerging risks, and to apply common risk management principles. • All Agency staff must have a comprehensive understanding of the NDIA's guiding risk principles and how they apply to their individual accountabilities. • Appropriate training must be provided to staff, as well as insight and advice from qualified and experienced specialist risk management practitioners.	The Agency has developed a risk management training strategy and training will be undertaken on a regular basis to develop, refine and enhance these skills. The Agency also maintains a comprehensive suite of guidelines and toolkits to enable leaders and team members to understand and carry out their risk responsibilities. These documents and tools detail the Agency's risk management processes and approach. It will be important to monitor and evaluate the effectiveness of the new training program once implemented.

Area of focus	Summary	Commentary

Processes and approach: Ensuring a risk lens informs the way Agency staff think and act	• The overall approach is for uncertainty, opportunity and threats to be identified, managed and monitored within the planning and execution levels of the Agency:
	  ○ Corporate Plan
	  ○ Divisional Plans
	  ○ Regional Plans
	  ○ Individual Staff Plans
		Risk reporting at each of three levels (Corporate Plan, Divisional Plan and Regional Plan) has evolved over the financial year, with an improved framework for capturing risks, resulting in more timely and comprehensive reporting. A summary of the 2017-18 risk reporting can be found in Appendix J. Work has also been completed to identify treatment actions which will help to manage the risks that have been identified. The risks are then reassessed after assuming that the treatment actions are successfully completed.
		
		A focus on how individual risk obligations and responsibilities are identified and recorded in staff's 100 day plans (one of the Agency's performance development tools) would be a beneficial next step in the development of the Agency's risk management processes.

Area of focus	Summary	Commentary

Operating model and risk governance: Ensuring a contemporary approach to the way staff and partners work	• The Board, supported by its Risk Committee, is ultimately responsible for overseeing the establishment of an effective risk management approach at the Agency.
	• The Agency maintains strong strategic oversight of uncertainty, opportunity and risk through its Executive Leadership Team. Each executive team is supported by the Agency's Chief Risk Officer and the Risk Division.
	• The Agency has adopted the 'three lines of defence' operating model, as follows:
	  ○ First: Agency Executives who are the risk control owners
	  ○ Second: Chief risk Officer who supports risk owners by designing, reviewing and challenging risk management activities
	  ○ Third: Independent assurance to test and verify the adequacy of controls and compliance with obligations.
		While the Agency's governance structure and three lines of defense strategy remains relatively unchanged over the past year, the Scheme has benefited from an increased focus on risk management under the appointment of the Agency's new Chief Risk Officer in the second half of the year.
		
		The Agency will also benefit from the new organisational structure ('One NDIA') introduced from 30 July 2018. One NDIA is a functions-based structure, which streamlines core business functions, creates Centres of Excellence and provides clear workflows and accountabilities.

Supporting infrastructure: Establishing what is needed to operationalise the RMS	Successful implementation of this RMS relies on supporting infrastructure, including: • An Enterprise Risk Management Plan, developed on an annual basis, to guide the effective implementation of the RMS • Risk training, designed to build and maintain a strong level of risk management capability • Performance assessments, designed to reinforce and recognise the demonstration of appropriate risk behaviours • Risk systems to allow the collection and analysis of appropriate data to enable accurate reporting and guide risk-informed decision making and oversight.	The introduction of the new Integrated Risk Management system in early 2018-19, as well as the development of formal eLearning modules, will contribute to the development of appropriate infrastructure to support the Agency's risk management strategy.

7.3 Adequacy of tools, processes and procedures

In assessing the quality and consistency of decision making by Agency staff and partners, the Scheme Actuary engaged the Agency's Compliance and Assurance team to review almost 600 records around access, level of function, plan reviews and typical support packages over 2017-18.

The review of access decisions indicated concerns with the use of some professional reports in gaining access to the Scheme. In particular, the documentation on file for more than half of the records in the sample was considered to be of poor quality. Reports typically contained the necessary language from a qualified professional to gain access to the Scheme, but failed to follow professional standards for assessing and diagnosing the participant. These included letters from paediatricians assigning a DSM-V Level 2 Autism diagnosis without an assessment or where other assessments were indicative of lower severity. Other examples included professional reports that appear to have been completed entirely by parent testimony, rather than by observation or assessment of the child.

In addition, there were a number of themes identified which highlighted the limitations of data collected for the guided planning process. Notably, the lack of quality documentation of disability and level of function in participant records means that the reference package and TSP generated may be inappropriate or unsupported. This is particularly the case for participants in defined programs, who can enter the Scheme with little or no documentation. These participants generally represent around 70% - 80% of the samples.

Regular assurance reviews are also conducted by the Agency. The Office of the Scheme Actuary developed a sampling methodology to randomly sample participants based on the perceived likelihood that an incorrect decision has been made. Each month, samples are generated and provided to quality assurance auditors in the Participants and Planning branch. Audits are an essential management tool to be used for verifying objective evidence of processes, to assess how successfully processes have been implemented, and providing evidence concerning reduction and elimination of problem areas. These quality audits report on compliance, quality, and sustainability of records. Remediation is recommended when errors are identified through the audit process.

During 2017-18 Quarter 4 the audit questionnaires were jointly revised by the Office of the Scheme Actuary and Participants and Planning with the intent of making the questions more direct and setting the audits up to be a data asset. In 2018-19 the sampling regime will be fine-tuned and the breadth and quantity of audits increased. To date, the results of remediation recommended by the audit program has been limited at best. A program has been set out to increase the efficacy of remediation actions.

This lack of adequate controls around quality decision making continues to present a risk to the financial sustainability of the Scheme. While progress has been made on the development of the Agency's risk based quality assurance program, significant shortcomings

remain. It is imperative that a level of independence is enforced between the reviewer and the decisions they review (i.e. a reviewer examining decisions in other regions or offices). The process for implementation of remediation actions also needs to be strengthened. In addition, work must be undertaken as a priority to introduce appropriate controls in the ICT system to support best-practice decision making. For example, prompts where the annualised increase at plan reviews is greater than 25% or where there are large differences in plan values compared with the benchmark, with a specific focus on level of function.

7.4 Suitability and adequacy of risk management framework

Significant progress has been made with respect to the Agency's risk management capabilities in 2017-18. An updated risk management strategy has been reviewed and approved by the Board. While the NDIA is not APRA regulated, the Agency has integrated the best practice principles of prudential standard *CPS 220 Risk Management* into this strategy. Clarity around leadership and governance arrangements has resulted in a more appropriate, useful and timely reporting to the Board and the Executive Leadership Team and the Agency's risk management activities have benefited from an increased focus and resources.

Despite this, the process is not yet mature. A number of improvements have been identified for 2018-19, including a purpose-built Integrated Risk Management system, additional staff members and the development of training modules. A number of high-profile media articles on Agency decisions and/or errors in recent months have highlighted the continued need for comprehensive training in the identification of risk for staff at all levels. This should remain an important focus of the Risk division in the coming year.

The risk management strategy appropriately includes a focus on both the non-financial and financial objectives of the Scheme. However, tensions remain between some of the Scheme's non-financial objectives (for example, meeting the bilateral targets for number of participants in the Scheme) and the financial sustainability objectives of the Scheme (ensuring high quality plans, in line with Productivity Commission modelling), and thus there is a need to balance the two. The risk management strategy will play an important role in identifying and managing these tensions.

Many of the risks (both Strategic and Operational) are currently assessed at levels above those considered acceptable, including a number at "Critical". These risks are fundamental to the financial and non-financial success of the Scheme. While strategies to mitigate these risks are articulated in current risk reporting, it will be critical to monitor the effectiveness of these strategies in real-time to ensure that they are having the desired impact. Significant work will be required to manage these risks to an acceptable level over the next one to three years, particularly given the pace and scale of the rollout during this time.

8. Management responses

This chapter contains a summary of the key recommendations identified in the 2016-17 FSR and summarises the management responses. It also considers proposed initiatives by NDIA management to respond to pressures identified in this report.

8.1 Previous FSR key pressures

The previous FSR highlighted the following pressures on Scheme sustainability:

- **Higher than expected numbers of children entering the Scheme.**
  Regional monitoring continued to show prevalence pressure emerging for children and young adults in several sites. This has continued over the last year.
- **High numbers of potential participants continuing to approach the Scheme.**
  The pace of potential participants approaching the Scheme remained above expected long term levels in some trial sites, exacerbating the ongoing numbers pressure in the younger age bands, particularly for ages 7-24. This has continued over the last year.
- **Lower than expected participants exiting the Scheme.**
  Participants had not been exiting the Scheme at expected levels, meaning that overall participant numbers were higher than expected if these anticipated exits did not occur. Exit rates have increased over the last year, although exit rates from higher functioning younger participants with autism are still well below expected.
- **Increasing package costs over and above the impacts of inflation and ageing ("superimposed" inflation).**
  Superimposed inflation continued to emerge at higher levels during the transition months than during trial, with this issue most evident for trial participants. Superimposed inflation levels are lower for second and greater plans.
- **A mismatch between benchmark package costs and actual package costs.**
  Analysis of committed supports against the TSPs as a benchmark showed some improvement since June 2016 after a renewed focus on relativities to TSPs. However, the last year has seen significant increases in TSPs due to changes in response behaviours as part of the guided planning process.
- **Higher costs for participants in shared supported accommodation.**
  Committed supports for participants in shared supported accommodation is higher than the TSP and higher than revenue received. This trend has continued over the last year.

The previous FSR presented a number of recommendations designed to help to mitigate the emerging financial sustainability pressures. These recommendations were grouped into four main themes of data integrity, access & eligibility, quality assurance, and planning and assessment.

8.2 Management responses to 2016-17 FSR

Management have responded to emerging Scheme experience and the specific recommendations set out in the previous FSR through the development of a number of specific initiatives. Existing initiatives and management responses are outlined in Table 8.1.

Overall, whilst work has been undertaken by management over the past year, the impact on the key risks to scheme sustainability is limited at this stage.

Table 8.1 Management responses to experience and 2016-17 FSR recommendations

2016-17 FSR Recommendation	Background and discussion
Data integrity	
Data Management Committee (DMC)	The DMC was designed to address existing and emerging data integrity issues and improve the efficiency and timeliness of changes to ICT system. A number of data quality and integrity issues have been addressed, while others persist despite the efforts of the Data Management Committee over the past year. Some of these relate to the suitability of the Agency's ICT system and others relate to the system inputs by participants and Agency staff and partners.
Access and eligibility	
The Early Childhood Early Intervention (ECEI) approach	A strategic review of the implementation of the ECEI approach was conducted between September and December 2017, with the final report issued in January 2018. Key findings from the report indicate that the ECEI approach has not been implemented as originally envisaged, which appears to be contributing to the limited evidence of improvement across the key cost pressures (i.e. number of children presenting and exits). Significant work is required to implement the recommendations in the report, including a focus on clear outcomes and performance measurement.
PEDI-CAT (ASD) validation	The validation and use of PEDI-CAT (ASD) will place a strong emphasis on functional impact rather than diagnosis and assist Agency staff and partners to better measure function at access.
Disability-specific functional assessment tools	There has been some improvement in the collection of disability-specific functional assessment tools over the year, supported by the introduction of exception reporting. However, there remains a large proportion of participants for whom the general disability tool WHODAS 2.0 has been used in lieu of disability specific functional assessment tools. In particular, there is some evidence that the quality of these assessments are less robust than the disability-specific functional assessment tools. Refer to Section 4.3.1 for further information.

2016-17 FSR Recommendation	Background and discussion
Transition out strategy	The 'Transition Out' strategy considered participants aged 0-14 years who entered the Scheme under the early intervention requirement (Section 25 of the Act). At plan review, these participants were assessed as to whether they still met the criteria for early intervention. Those who did not were supported to exit the Scheme, with established links to community and mainstream services. This strategy was first implemented in the Australian Capital Territory and then subsequently rolled out in South Australia. There was a large increase in the number of exits from the Scheme with exit rates for the year ending 30 June 2018 being about 7.5% and 4.5% for the Australian Capital Territory and South Australia respectively.
Quality assurance	
Qualitative reviews	The Agency's assurance team undertook a number of quality assurance reviews which highlighted issues with the quality and consistency of decision making around access and planning. Further work is required to strengthen the Agency's risk based quality assurance framework and controls over the coming year. Refer to Section 7.3 for further information.
Superimposed inflation	Between November 2017 and May 2018, the Sustainability and Quality branch established a Community of Practice on Superimposed Inflation, with representatives from across the Agency, to better understand available data on plan reviews, identify practice and resource issues and develop strategies to change behaviour. A number of recommendations were put forward, namely around improved training, communication and resources for staff, a focus on annual plans to reduce the risk of pro-rata errors, the development of standards for evidence required in functional assessment of participants and a focus on reducing the reliance on self-report and general assessment tools such as WHODAS and a pilot to reduce the volume of unscheduled reviews, which have higher rates of inflation. The implementation of these recommendations should be prioritised in 2018-19.

2016-17 FSR Recommendation	Background and discussion
Planning and assessment	
Reference packages framework review	A review of the reference package and guided planning approval process was undertaken during 2017-18. Section 4.4.3 of this report describes the recommendations arising from the review to address the key financial sustainability pressures. The primary recommendation is the Independent Assessment Pilot, as further discussed in Section 3.2.3 and Section 4.4.3 of this report. The reference package and guided planning review did not recommend any specific changes to the reference package and guided planning models, given that the outcomes of the review needed to be better understood. A governance framework needs to be established to better articulate the purpose of the framework and under what circumstances the framework should be recalibrated. This would then enable a more structured transition across to a reference package and guided planning model that better reflects emerging experience.
Pathway review	In the 2016-17 FSR, the NDIS participant and provider pathway review was highlighted as a key management response to emerging Scheme experience. Its aim was to deliver a pathway that was participant centric, outcomes-focused, and based on insurance principles. While the increased emphasis on the role of mainstream and community services will have flow on effects to Scheme sustainability, there has been limited focus within the pilot to date on broader sustainability pressures, including the objective assessment of level of function. From a sustainability perspective, it is anticipated that the pilot of independent assessment will have the biggest impact on emerging cost pressures through improved data quality and evidence to support decision making on eligibility and reasonable and necessary plan budgets.

8.3 Management responses to experience in 2017-18

Initiatives have been developed by management to address emerging issues identified in this report. These are outlined in Table 8.2.

Table 8.2 Management responses to 2017-18 experience

Other initiatives	Background and discussion
Independent Assessment Pilot	The recent reference package framework paper identified areas of potential gaming of functional assessments and certain aspects of the guided planning process. The Agency has introduced a pilot with the aim of using independent functional assessment to objectively inform the initial and ongoing access decisions and planning. Refer to Section 3.2.3 for further information. The Independent Assessment Pilot is part of a broader management response to strengthen the integrity of the Access process, including: • reviewing the rigour of the application of the current process and reissuing of instructions to Agency staff on the implementation of the Access guidelines • raising the standard of evidence and quality of professional required for diagnosis for children with autism and/or intellectual disability • evaluating the Independent Assessment Pilot with a view to wider implementation in early 2019.
Improving early childhood early intervention practice	Work to date on the eligibility reassessment procedure in the ACT and South Australia will be more formally rolled out as part of the plan review process. There has been ongoing development of letters, taskcards, operational guidelines, training packages and practice guidelines. Other work includes: • a review of all existing process requirements for ECEI partners, LACs and planners. • a dedicated team to ensure all children who entered the Scheme under S25 (Early Intervention) who have not had a plan review within the last 12 months have their ongoing eligibility assessed. • focus on coaching for Agency staff and partners.

Other initiatives	Background and discussion
Centralised SIL/SDA response	A centralised response has been designed to better understand and control direct and indirect plan costs for people living in shared supported accommodation arrangements. This includes: • Refined definitions of SIL: and SDA products, and accepted deviations from standard products • A centralised team to assess all applications for SIL/SDA to improve consistency and understand drivers of experience • The establishment of audit functions to examine evidence of provision of services by SIL providers.
Plan value controls	Updated targets and increased monitoring to support more appropriate determination of plan budgets, with the intention of increasing objectivity and equity and limiting unsustainable and subjectively determined plan increases over time.
Employment strategies for school leavers	A number of strategies have been identified to address the increasing prevalence of participants within the NDIS for the purposes of accessing employment supports, particularly in the 15-24 year age band. These include: • The development of an employment framework that fully supports and enables participation and inclusion in Australian society, by providing supports to obtain and retain quality employment. • The establishment of an Employment Steering Committee, bringing together staff working on employment across the Agency to create a consistent policy setting. A joint working group with the Department of Social Services will also be formed, to progress cross-agency initiatives, including mainstream interfaces. • Additional analysis to better understand current employment experience of participants in the Scheme, including changes in employment status and monitoring of package costs and exits for 19-24 year olds.
Business Intelligence Strategy	Work has commenced on a number of initiatives to support the Agency's established business intelligence strategy, including tools to support decision making and cost-benefit analysis by planners. This work is supported by an expanded team of qualified staff and access to enterprise analytics platforms.

8.3.1 Possible impact of management responses

The baseline projection and scenario analysis indicate a number of pressures impacting on Scheme financial sustainability and highlight the need for early management responses. In addition to initiatives already in place and incorporated into the baseline projection, management intends that the responses listed in Table 8.2 will further respond to these key pressures and keep Scheme costs at financially sustainable levels. Regular monitoring will be put in place to track the performance of the responses against expectations.

Table 8.3 compares preliminary analysis of some of these management responses with the 2017-18 baseline projection, the 2016-17 FSR projection, and the 2017 Productivity Commission (PC) report allowing for unanticipated costs. Based on discussions with management on the possible impacts of the responses, a slight decrease in participant numbers at 2020 is estimated, increasing to a 6% reduction at 2030. Participant costs are estimated to be 3% lower at 2020, and 7% lower at 2030. At 2030, the projected costs are estimated to be slightly higher than the 2017 PC report and the 2016-17 FSR.

Table 8.3 Comparison of projection results

Scenario	Participant Numbers			Participant Costs ($m)		
	2020	2023	2030	2020	2023	2030
FSR 2017-18	380,490	499,340	636,922	15,638	26,593	44,395
FSR 2016-17	469,058	506,444	584,160	20,451	25,602	39,713
2017 PC report allowing for unanticipated costs	-	-	-	21,660	26,464	40,207
Management responses						
Centralised response to control SIL plan costs	380,490	499,340	636,922	15,451	26,062	43,527
Improving ECEI practice	378,736	493,573	619,625	15,423	25,921	42,737
Strengthening integrity of Scheme access	376,433	485,375	597,291	15,284	25,790	42,094
Tightening controls on plan values	376,433	485,375	597,291	15,190	25,319	41,320
Impact of all management responses	**376,433**	**485,375**	**597,291**	**15,190**	**25,319**	**41,320**
Percentage change relative to FSR 2017-18						
Centralised response to control SIL plan costs	0%	0%	0%	-1%	-2%	-2%
Improving ECEI practice	0%	-1%	-3%	-1%	-3%	-4%
Strengthening integrity of Scheme access	-1%	-3%	-6%	-2%	-3%	-5%
Tightening controls on plan values	-1%	-3%	-6%	-3%	-5%	-7%
Impact of all management responses	**-1%**	**-3%**	**-6%**	**-3%**	**-5%**	**-7%**

9. Recommendations arising from this review

This report has provided an overview of the emerging experience of the Scheme and has provided a number of recommendations which may address current challenges impacting on financial sustainability. Some of these recommendations have common themes and this chapter contains the following sections which consolidate these recommendations into five groups:

- Data quality
- Access and eligibility
- Reference package and guided planning
- Planning and assessment
- Funding

9.1 Data quality

The Scheme has a strong focus on the collection, storage and analysis of appropriate and high quality data. This focus enables the analysis of emerging trends to allow early identification and management of Scheme trends. There has been improvements in data quality over the last year. However, the data needs of the Scheme will continue to evolve as the Scheme matures.

A number of data quality and integrity issues persist despite the efforts of the Data Management Committee over the past year. Some relate to the suitability of the Agency's ICT system and others relate to the system inputs by participants and Agency staff and partners. Key focus areas on where data quality should be evolved over the next year are highlighted in the rest of this section.

9.1.1 ICT effectiveness

It is clear that there are a significant number of issues relating to the adequacy of the current ICT system which have yet to be addressed. In many cases, these issues were identified in the previous FSR. Other issues require changes to business processes, supported by stakeholder engagement and training. The longer that these issues remain unresolved, the harder it will be to form views on any adverse trends in Scheme experience and for management to be able to respond accordingly.

A number of areas where enhancements to the ICT system have been identified, and in some case are starting to be addressed, include:

- ECEI and ILC capability
- ability to manage compensation recovery amounts
- governance around to recording of in-kind arrangements
- payment controls at a unit price times quantity level
- payment indexation to reflect updated NDIS unit prices
- robust implementation of unscheduled plan reviews

Most of these areas require some form of manual work-arounds from a data management perspective, some of which lack the appropriate governance and data quality controls. Others limit the ability to perform effective Scheme analysis. It is recommended that outstanding issues be progressed as a priority with DHS, with enhancements raised and prioritised as appropriate.

9.1.2 Independent functional assessment

Evidence suggests participants and/or Agency staff answer questions on functional capacity in a particular way to maximise funding. The introduction of independent functional assessments will help to facilitate the consistent capture of disability type and functional ability to better inform access and planning decisions. It is hoped that improved processes around data collection will help to minimise gaming of level of function. Additionally, the approach will provide a more robust understanding of the reasons for deviations from benchmark plan amounts, and greater certainty over the Scheme's cost trajectory. It is recommended that the pilot, evaluation and roll out (if appropriate) of independent assessments be a key priority for the Agency over the next twelve months.

There should also be a continued focus on the collection of disability-specific functional assessments, where appropriate. This was a recommendation provided in the 2016-17 FSR and while there has been some improvement, supported by the introduction of exception reporting, there remains a large proportion of participants for whom the general disability tool WHODAS 2.0 has been used in lieu of disability-specific functional assessment tools. It is recommended that there is a renewed focus on the collection of disability-specific assessments over the next twelve months, including a review of accepted tools.

A review by the Agency's Compliance and Assurance team identified a number of issues associated with the use of the "other physical" group. It is recommended that the detailed disability list in the Agency's ICT system and associated disability groups be independently reviewed to ensure the mappings are appropriate and there is sufficient granularity in the "other" categories to allow for identification and analysis of trends.

9.1.3 Exit and new incidence data collection

Analysis and projection of new incidence and exits is a key input into the model of long term Scheme costs. Additional information around the reason for a participant's exit, cause of death and/or validation of the exit date captured in the CRM would be beneficial. For non-congenital disabilities, the date a disability is acquired or diagnosed should also be recorded. This is important for the projection of new incidence.

It is recommended that changes are made to business processes, supported by a communication strategy, to highlight the importance of capturing the date a disability is acquired and/or reason for exit in the ICT system.

9.2 Access and eligibility

Numbers of children aged 0-14 years in the Scheme continues to be higher than expected and monitoring shows prevalence pressure emerging in several sites for 15-18 year olds and 19-24 year olds. It is clear that the ECEI gateway is not working as expected.

9.2.1 Initial eligibility

The number of children accessing the Scheme continues to be above expectations, despite the introduction of the ECEI gateway. It is unclear whether the right children are gaining access to the Scheme to benefit from early intervention strategies, especially children with autism and developmental delay.

It is recommended that:

- Significant work be undertaken to address the shortcomings in the ECEI pathway as per the January 2018 review, including clear outcomes and performance measurement.
- The eligibility criteria for children should be a continued point of focus for the Scheme and that the PEDI-CAT and PEDI-CAT (ASD) assessment tool be used as a key indicator in the determination of eligibility to the Scheme for children.

9.2.2 Continued eligibility assessment

One of the goals of the Scheme is to provide early intervention supports for people with newly acquired disabilities so that they can build capacity, increase independence and hence not require the same level of future supports, if any, within the Scheme. This is particularly appropriate for children and for those participants who have entered the Scheme through the early intervention requirement (Section 25 of the Act).

Targeted initiatives in the Australian Capital Territory and South Australia reassess eligibility at plan review so that only participants who continue to meet the access criteria of the NDIS Act receive individualised funding. These strategies have resulted in a relatively high number of participants transitioning from the Scheme to mainstream services, and it is recommended that these strategies continue to be a focus in other jurisdictions, in line with the core principles of the Scheme.

The Agency should consider the implementation of a formal periodic review of continued eligibility for participants who have entered the Scheme via the early intervention pathway, with the intention of identifying participants from the Scheme who no longer require Scheme supports. This formal review may occur after certain key milestones have been reached, for example, two years after entry into the Scheme or on attainment of certain ages/life stages.

Further, a qualitative review of participant samples is recommended to better understand reasons for participants exiting the Scheme and also the potential barriers to exit for participants who may no longer require funded supports, including:

- The cause of death for participants to better understand potential reasons for higher than expected rates of mortality within the Scheme.
- The reasons for participants aged 35 years and over exiting the Scheme for reasons other than death, especially for those with disability types “other physical”, psychosocial disability and “other neurological”.
- Higher functioning participants with autism who have not exited the Scheme, especially those who have entered the Scheme via the early intervention pathway, to understand what barriers to exit may exist.
- Participants with lapsed plans who have not formally exited the Scheme.

School leaver and transition to work supports

There are a number of school leaver and transition to work programs which the State/Territories currently fund. The prevalence rates of people with a disability are higher at these age groups, suggesting that these programs are shorter term in nature, after which participants cease to access State/Territory supports. These programs may be considered early intervention programs, after which participants may not continue in the Scheme. Particular strategies should be developed to test ongoing Scheme eligibility at this time, especially for participants with an intellectual disability. If these participants were to continue in the Scheme, costs could be up to 5% higher than the baseline projection in 2030 (Scenario 2).

9.2.3 Continued emphasis on ILC

An effective ILC assists in managing Scheme sustainability by ensuring people who are ineligible for the Scheme receive the access to mainstream and community services that

they require, and also assists in putting downward pressure on individual support packages by using mainstream and community services where appropriate. The Agency should continue to develop its Investment Approach for the determination of ILC funding. This includes the development of a more strategic approach to the approval of ILC funding, linking the funding to those activities that have the greatest impact on reducing package sizes or better controlling Scheme eligibility. Enhanced ongoing monitoring of ILC spend is important in order to understand the impact of each program. This would allow the development and/or scaling of best practice.

9.3 Reference package and guided planning

Further work is required on reference packages, the guided planning process and typical support packages (TSPs) to ensure their effectiveness in monitoring and managing the Scheme's financial sustainability.

9.3.1 Governance framework document

The experience of the Scheme is emerging differently to expectations. Substantial changes could be made to respond to this experience, although the potential impact on the Scheme could be significant. From this perspective, a governance framework should be established which outlines the conditions under which the reference packages and guided planning process should be updated. Further, key guiding principles should be established on the way that changes are implemented.

9.3.2 Reference packages and guided planning calibration

The disconnection between the current calibration of the reference packages and guided planning process against emerging Scheme experience limits the usefulness of comparisons between the two.

The outcomes of this FSR combined with the recent reference package paper could be used as inputs into a recalibration of reference packages and the guided planning process. This would enable a more useful comparison of Scheme experience against expectations.

Alternatively, the preferred approach would be to investigate whether the current functional assessments are a true representation of what would be the functional assessment under an independent and objective application of the preferred functional assessment instruments (recommendation in Section 9.1.2). The recalibration of reference packages could be delayed until an independent functional assessment process is implemented.

The following considerations would be appropriate as an additional input into any recalibration process:

- Other inputs from expert stakeholders such as peak bodies and clinicians should be used to test proposed changes.
- Consideration should also be given to a potential simplification of TSP process for higher functioning participants
- A review of the guided planning questions relating to informal supports and other subjective self-reporting areas.
- A review of the KPIs underlying the guided planning process, with a focus on understanding their potential behavioural consequences.[86]
- Consideration of the inclusion of explicit questions around the accommodation arrangements of participants as part of the guided planning process, to respond to the experience that TSPs for participants in shared supported accommodation arrangements are lower than committed supports in these plans.
- The question around the level of informal supports has a leveraged impact on a participant's TSP, and experience indicates that the answer to this question may be being gamed. A review of the wording and/or the use of external data sources to validate the level of informal supports may increase the veracity of the data collected.

9.4 Planning and assessment

The Agency should implement more effective risk-based quality assurance and incorporation of business intelligence input around key business processes to enhance decision making.

9.4.1 Risk-based quality assurance and decision making

Many qualitative reviews have been undertaken over the last year, as distinct from compliance reviews, in a variety of areas such as functional assessments, documentation of access and planning decisions and analysis of funding decisions. These reviews are useful in helping to understand emerging trends and further reviews are recommended to better understand emerging areas of interest.

[86] Regional KPIs were introduced in February 2017 to measure the proportion of plans with committed supports above TSPs. This may have had a perverse impact on planner and staff behaviour, with evidence suggesting that inputs to the TSP are being deliberately misstated in order to increase the amount of funded supports generated in the TSP. This reduces the number of plans identified in the KPI reporting.

Particular areas of focus should include:

- The controls around approval of plan reviews with annualised increases or decreases in committed supports above expectations and large differences in initial plans against benchmark.
- Review of decisions by staff who have approved/developed a high proportion of their plans that are above/below typical support package benchmarks to better understand what may be driving the large differences.
- Frontline staff and Agency partners must be supported, through additional business intelligence, to make decisions consistent with the legislation and to understand the impact of those decisions[87]. Extensive training is required to put Scheme sustainability at the core of the Agency's business processes and to enable consistent decision making.
- There are few qualitative controls in the ICT business system around the plan review processes, and this could be contributing to large variations in plan values on plan review. The introduction of quality assurance controls around the plan review process should be a priority for the Agency to ensure that the right people are getting the right supports.

The existing participant pathway resources for Agency staff and partners should also be streamlined to reduce the volume of guidance and information to ensure consistency in decision making across different regions. Resources should be reviewed to ensure they highlight key risks to Scheme sustainability and align with management responses.

9.4.2 Focus on shared supported accommodation costs

The management of supported accommodation costs should be a continued priority for the Agency. Areas of focus should include:

- Ensuring the right participants are moving into SIL and ensuring that alternative options have been explored.
- Reviewing participant's ongoing need for SIL for those participants with a high to moderate level of function.
- Identification of alternate models of support to help participants to move out of supported independent living where appropriate.

[87] For example, it was noted in Section 4.5.2 that some participant plans included committed supports that did not reflect a participant's reasonable and necessary needs.

9.5 Funding

In their 2011 inquiry report into Disability Care and Support, the Productivity Commission recommended that a National Disability Insurance Scheme be funded as a 'pay-as-you-go' Scheme with a large enough reserve fund, such that it could be used to smooth out fluctuations in funding and reduce uncertainty. In their 2017 review of NDIS Costs, the Productivity Commission affirmed their belief that an actuarially-assessed buffer for risk would ensure that cost overruns in a mature Scheme will only occur where cost increases are sudden and difficult to predict.[88] Work should be undertaken, in conjunction with the Office of the Chief Financial Officer, as to an appropriate target level of funding for the Scheme. This should include a discussion on the governing principles and purpose of the reserve fund.

[88] Productivity Commission 2017, National Disability Insurance Scheme (NDIS) Costs, Study Report, Canberra. Available at: https://www.pc.gov.au/inquiries/completed/ndis-costs/report/ndis-costs.pdf [Accessed 4 July 2018]

10. Reliances and limitations

This work was conducted for the sole use and benefit of the National Disability Insurance Agency and the NDIS Board to assist with monitoring, reporting, and management of the financial sustainability of the Scheme.

No liability is accepted for loss or damage howsoever arising in the use of this document by the Agency or third parties for other than the purpose stated above, or for any use of this document, without full understanding of the reliance and limitations noted herein, or for errors or omissions arising from the provision of inaccurate or incomplete information.

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Scheme experience is immature and remains difficult to interpret. There are many biases in the experience due to the phase-in timetable and the lack of consistent longitudinal data with which to inform projection assumptions. Scheme operational procedures continue to rapidly evolve, meaning that past experience may not be the best indicator of future experience. In addition, there are some issues with the current resource allocation process, and specifically the lack of a mechanism for independent assessment of support need. As the Scheme continues to mature, and the training and capability of frontline staff improves, there is an expectation that the Scheme experience will change, perhaps materially, and this would impact on the cost estimates in this report.

This report has been prepared in accordance with all relevant Code of Professional Conduct guidelines of the Institute of Actuaries of Australia. Further, where appropriate, this report has also been prepared in accordance with the International Standard of Actuarial Practice 2: Financial Analysis of Social Security Programs.