2. Participants from birth to before starting school: outcome indicators

2.1 Key findings

Overall, the three cohorts (C3, C2 and C1) have progressed in similar ways longitudinally.

Box 2.1: Overall findings for C3 cohort (participants who have been in the Scheme for three years)

- For participants with three years of Scheme experience, the longitudinal analysis revealed significant improvements across a number of indicators, with improvements in the first year generally continuing into the second and third years of Scheme experience. Improvements were seen particularly in the areas of:

- Social, community and civic participation: the percentage of parents/carers who say their child feels welcomed or actively included when they participate in age appropriate community, cultural or religious activities increased by 11.1% between baseline and third review, from 63.7% to 74.8%. The improvement was slightly stronger on an age-adjusted basis (11.7%). However, this indicator did not change significantly over the latest year. The percentage of children who have friends they enjoy playing with has increased by 21.9% over three years, including a 2.2% increase in the latest year.

- Specialist services: use of specialist services increased in the three years following Scheme entry, by 24.2%. The percentage of parents/carers who say specialist services support them in assisting their child increased by 12.9% between baseline and third review, from 86.0% to 98.9%. Further, the percentage of parents/carers who say specialist services help their child gain the skills they need to participate in everyday life increased by 12.9% between baseline and third review, from 85.7% to 98.5%. For these three indicators, there was no significant change over the latest year.

- Participating in family life: the percentage of parents/carers who say their child fits in with the everyday life of the family increased by 7.7% between baseline and third review, from 69.6% to 77.2%. On an age-adjusted basis the improvement was slightly stronger (11.9%). There was no significant change over the most recent year. The percentage who say that their child gets along with his or her brothers or sisters has decreased by 1.8% between baseline and third review. However, this change was not significant, and on an age-adjusted basis there was an increase of 6.0% over three years.

- Understandably, their child's progress in major developmental areas is a key concern of parents and carers. From the longitudinal analysis, the proportion of parents/carers expressing concern about their child's development in six or more of eight areas surveyed increased by 18.6% between baseline and third review, from 58.9% to 77.6%. However, on an age-adjusted basis, the increase was lower (8.2%).

- Social inclusion and interaction for children with a disability is another key concern, and the proportion of parents/carers who wanted their child to be more involved in community activities increased by 22.2% between baseline and third review, from 59.7% to 81.9%, including a significant increase of 4.1% over the latest year. There was also a 7.3% increase in the percentage of parents/carers who say their child's disability is one of the barriers to being more involved in community activities, from 80.3% at baseline to 87.6% at third review (but no significant change between second and third review).

Box 2.2 Overall findings for C2 cohort (participants who have been in the Scheme for two years)

- For participants with two years of Scheme experience, many indicators also showed significant longitudinal improvement over two years, for example:

- Social, community and civic participation: the percentage of parents/carers who say their child feels welcomed or actively included when they participate in age appropriate community, cultural or religious activities increased by 5.1% between baseline and second review, from 64.7% to 69.9%, with no significant change over the most recent year. The percentage of children who have friends they enjoy playing with has increased by 12.5% over two years in the Scheme, from 42.4% to 54.9%, including a significant increase of 4.2% over the most recent year.

- Specialist services: use of specialist services increased in the two years following Scheme entry, by 21.8% for the cohort entering in 2017-18, with an increase of 5.0% in the latest year. The percentage of parents/carers who say specialist services support them in assisting their child increased by 5.1% between baseline and second review, from 92.9% to 98.0%. The percentage who say specialist services help their child gain the skills they need to participate in everyday life increased by 5.7% between baseline and second review, from 92.5% to 98.2%. Further, the percentage who say the services they use assist staff at their child's day care, pre-school, or community activities to support their child has increased by 8.1% in the latest year and 34.1% overall.

- Participating in family life: the percentage of parents/carers who say their child fits in with the everyday life of the family increased by 6.7% between baseline and second review, from 69.4% to 76.1%. On an age-adjusted basis the improvement was slightly stronger (10.7%). In addition, the percentage who say that their child gets along with his or her brothers or sisters has increased by 2.2% (6.9% on an age-adjusted basis) between baseline and second review, from 84.3% to 86.5%.

- As for other cohorts, progress of their children in major developmental areas is a key concern of parents/carers. The proportion of parents/carers expressing concern about their child's development in six or more of eight areas surveyed increased by 10.9% between baseline and second review, from 66.0% to 76.9%. However, on an age-adjusted basis, the increase was slightly lower (7.5%).

- Social inclusion and interaction for children with a disability is another key concern, and the proportion of parents/carers who wanted their child to be more involved in community activities increased by 6.8% between baseline and second review, from 75.4% to 82.2%. There was also a 5.4% increase in the percentage of parents/carers who say their child's disability is one of the barriers to being involved in community activities (including a 2.7% increase over the most recent year), from 83.5% at baseline to 88.9% at second review.

Box 2.3 Overall findings for C1 cohort (participants who have been in the Scheme for one year)

- For participants with one year of Scheme experience, many indicators also showed significant longitudinal improvement over one year, for example:

- Social, community and civic participation: the percentage of parents/carers who say their child feels welcomed or actively included when they participate in age appropriate community, cultural or religious activities increased by 3.6% between baseline and first review, from 63.4% to 67.1%. The percentage of children who have friends they enjoy playing with has increased by 8.4% over one year in the Scheme, from 41.7% to 50.1%.

- Specialist services: use of specialist services increased in the year following Scheme entry, by 17.7% for the cohort entering in 2018-19. The percentage of parents/carers who say specialist services support them in assisting their child increased by 4.4% between baseline and first review, from 91.6% to 96.0%. The percentage who say specialist services help their child gain the skills they need to participate in everyday life increased by 5.5% between baseline and first review, from 90.2% to 95.7%. Further, the percentage who say the services they use assist staff at their child's day care, pre-school, or community activities to support their child has increased by 11.2% over one year in the Scheme, from 60.0% to 71.2%.

- Participating in family life: the percentage of parents/carers who say their child fits in with the everyday life of the family increased by 5.4% between baseline and first review, from 67.8% to 73.2%. On an age-adjusted basis the improvement was slightly stronger (7.4%). In addition, the percentage who say that their child gets along with his or her brothers or sisters has increased by 2.8% (3.7% on an age-adjusted basis) between baseline and first review, from 80.6% to 83.4%.

- As for parents/carers of participants in other cohorts, progress of their children in major developmental areas is a key concern. The proportion of parents/carers expressing concern about their child's development in six or more of eight areas surveyed increased by 5.7% between baseline and first review, from 67.6% to 73.2%. However, on an age-adjusted basis, the increase was slightly lower (4.0%).

- Social inclusion and interaction for children with a disability is another key concern, and the proportion of parents/carers who wanted their child to be more involved in community activities increased by 4.6% between baseline and first review, from 74.0% to 78.7%. There was also a 3.0% increase in the percentage of parents/carers who say their child's disability is one of the barriers to being involved in community activities, from 84.2% at baseline to 87.3% at first review.

Box 2.4: Outcomes by key characteristics for participants from birth to before starting school

- Longitudinal outcomes vary with participant level of function. Participants with a higher level of function tend to exhibit higher rates of improvement than those with a lower level of function.
- Participants with a hearing impairment generally experience better longitudinal outcomes than those with other disabilities.
- Participants from regional and remote locations, compared to those from major cities, show more positive longitudinal results on some indicators. For example, parents/carers of children in regional or remote areas more likely to improve with regard to having concerns in six or more developmental areas from baseline to first review, than children living in major cities.
- Indigenous status was not strongly associated with longitudinal change: only one multiple regression model found a significant difference between Indigenous and non-Indigenous participants. This model found that Indigenous children were more likely to deteriorate on the indicator “my child participates in age-appropriate community, cultural or religious activities” from baseline to second review.
- CALD participants were less likely to improve in making friends with people outside the family from baseline to first review and from baseline to second review. Parents/carers of CALD participants were also less likely to change their response from ”Yes” to ”No” for the indicator “I would like my child to be more involved in community activities”.
- Moving to a new LGA tends to have a negative impact for some transitions.
- The COVID-19 step-change variable was significant in at least one model for all but one indicator (“My child fits in with the everyday life of the family”), and had a negative impact for all but one of these models, with participants being less likely to improve or more likely to deteriorate in their response between the two time points when the later time point occurred during the COVID-19 period. The one indicator where there was a positive step change was “My child joins me when I complete tasks at home”, where participants were less likely to deteriorate between baseline and first review. There were two indicators where a favourable change in slope was observed after the COVID-19 date: “My child fits in with the everyday life of the family” and “My child’s disability is a barrier to being more involved”.

Box 2.5: Has the NDIS helped? – participants from birth to before starting school

- Opinions on whether the NDIS has helped tend to be positive for this cohort. In particular, there is widespread agreement that the NDIS has helped in areas related to the child's development (91.2% after one year in the Scheme, 95.4% after two years in the Scheme, and 94.9% three years in the Scheme) and access to specialist services (90.5% after one year in the Scheme, increasing to 93.2% after two years and 93.8% after three years in the Scheme).
- Higher plan utilisation is strongly associated with a positive response after one year in the Scheme, across all five areas surveyed. Higher utilisation of total plan budget, and higher utilisation of capacity building supports, were also associated with a higher likelihood of improvement, and a lower likelihood of deterioration, between first review and later reviews.
- Parents/carers of participants living in regional or remote areas are less likely to think that the NDIS has helped after one year in the Scheme than those living in major cities.
- Parents/carers of participants whose plans are fully self-managed were significantly more likely to think that the NDIS has helped after one year in the Scheme than those of participants with Agency-managed plans, across all domains except access to specialist services (where there was no significant difference).
- Across all domains, the percentage who think the NDIS has helped is slightly higher for participants who have been in the Scheme for two years compared to those who have been in the Scheme for one year. However, opinions on whether the NDIS has helped remained relatively unchanged between the second and third review.
- The percentage who think that the NDIS has helped increased slightly (by 1-4%) between first and third review across all domains. The likelihood of improvement/ deterioration varied by some participant characteristics:

- Participants who entered the Scheme due to disability are more likely to deteriorate between first and second review than those entering for early intervention.[10]
- Participants who have used a higher percentage of their total supports, and in particular of their capacity building supports, are generally more likely to improve and less likely to deteriorate between first review and later reviews.
- Participants with higher annualised plan budget are less likely to improve in thinking the NDIS has helped with their child's development, and with increasing their child's ability to communicate what they want.
- Parents/carers of Indigenous participants are more likely to deteriorate in thinking the NDIS has improved their child's access to specialist services.

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[10] Participants accessing the Scheme under Section 24 of the NDIS Act 2013 enter the Scheme due to disability, whereas participants accessing the Scheme under Section 25 of the Act enter the Scheme for early intervention.

2.2 Outcomes framework questionnaire domains

For children in the birth to before starting school cohort, the outcomes framework seeks to measure the extent to which participants are:

- Gaining functional, developmental and coping skills appropriate to their ability and circumstances (domain DL, daily living)
- Showing evidence of autonomy in their everyday lives (domain CC, choice and control)
- Using specialist services that assist them to be included in families and communities (domain SPL, use of specialist services)
- Participating meaningfully in family life (domain REL, relationships)
- Participating meaningfully in community life (domain S/CP, social, community and civic participation).

The LF includes 11 extra questions related to childcare, four related to specialist services, three about developmental/coping skills, two about effects on family, and one about developing autonomy.

Participants answer the outcomes questionnaire applicable to their age/schooling status at the time of interview. Hence the birth to before starting school cohort comprises children who are yet to start school when they enter the Scheme, and includes responses at all review time points for which they have still not started school.

2.3 Longitudinal indicators – overall

Longitudinal analysis describes how outcomes have changed for participants during the time they have been in the Scheme. Included here are participants who entered the Scheme between 1 July 2016 and 30 June 2019, for whom a record of outcomes is available at Scheme entry (baseline) and at one or more of the three time points: approximately one year following scheme entry (first review), approximately two years following scheme entry (second review), and approximately three years following scheme entry (third review).

For this year’s report, results are shown separately by entry year cohort, including the value of the indictator at baseline and each yearly review, as well as the change in the latest year, and the change between baseline and latest review. For example, for 2016-17 entrants, results at baseline, first review, second review, and third review are shown, as well as the change between second review and third review, and the change from baseline to third review.

There have been a number of improvements across all domains for the time periods being considered. Often, improvements tend to be greater in the earlier years in the Scheme, with smaller improvements observed in later years. Hence the change from baseline to latest review tends to be greater than the change over the latest year, for participants who have been in the Scheme for more than a year.

Changes over time for children will include an element of normal age-related development. Age-adjusted changes have been used to guide selection of indicators presented in this section.

Table 2.1 summarises changes for selected indicators by cohort across the three time periods. Indicators were selected for the tables if the change, either overall or for the latest year, was statistically significant[11], had an absolute magnitude greater than 0.02 for at least one entry year cohort, and was confirmed by the age-adjusted analysis.

Table 2.1 Selected longitudinal indicators for participants from birth to before starting school

Domain (Form)	Indicator	Cohort	Indicator at: Baseline	Review 1	Review 2	Review 3	Change Latest year	Overall	Significant[12] Latest year	Overall
Improvement										
SPL (SF)	% of parents/carers who say specialist services help their child gain skills to participate in everyday life	C3	85.7%	96.1%	97.6%	98.5%	0.9%	12.9%		**
		C2	92.5%	97.0%	98.2%		1.3%	5.7%	**	**
		C1	90.2%	95.7%			5.5%	5.5%	**	**
SPL (SF)	% of parents/carers who say specialist services support them in assisting their child	C3	86.0%	98.7%	98.1%	98.9%	0.8%	12.9%		**
		C2	92.9%	97.1%	98.0%		0.9%	5.1%	**	**
		C1	91.6%	96.0%			4.4%	4.4%	**	**
SPL (LF)	% who say services assist staff at day care/ preschool/ community activities to support child	C3	*Numbers are too small*							
		C2	45.5%	71.4%	79.5%		8.1%	34.1%	*	*
		C1	60.0%	71.2%			11.2%	11.2%	*	*
REL (SF)	% of children who get along with their brother(s)/sister(s)	C3	87.4%	89.5%	89.0%	85.6%	-3.4%	-1.8%		
		C2	84.3%	85.6%	86.5%		0.9%	2.2%	*	*
		C1	80.6%	83.4%			2.8%	2.8%	**	**
REL (SF)	% of parents/carers who say their child fits in with the everyday life of the family	C3	69.6%	77.0%	77.7%	77.2%	-0.5%	7.7%		*
		C2	69.4%	74.8%	76.1%		1.3%	6.7%	**	**
		C1	67.8%	73.2%			5.4%	5.4%	**	**
S/CP (SF)	% of children who have friends they enjoy playing with	C3	34.2%	45.9%	53.9%	56.1%	2.2%	21.9%	**	**
		C2	42.4%	50.7%	54.9%		4.2%	12.5%	**	**
		C1	41.7%	50.1%			8.4%	8.4%	**	**
S/CP (SF)	% of children who participate in age appropriate community/ cultural/ religious activities	C3	59.8%	60.8%	59.1%	56.9%	-2.3%	-3.0%		
		C2	52.8%	55.0%	53.8%		-1.2%	1.0%		
		C1	49.4%	52.1%			2.7%	2.7%	**	**
S/CP (SF)	% who feel welcomed/ actively included when they participate in community activities	C3	63.7%	70.1%	75.5%	74.8%	-0.7%	11.1%		*
		C2	64.7%	70.6%	69.9%		-0.8%	5.1%		**
		C1	63.4%	67.1%			3.6%	3.6%	**	**
S/CP (LF)	% whose childcare is assisted by their early intervention service to know how to support child	C3	*Numbers are too small*							
		C2	*Numbers are too small*							
		C1	53.2%	70.9%			17.7%	17.7%	*	*
Context dependent										
SPL (SF)	% who say their child uses specialist services that assist with their learning and development	C3	71.9%	88.8%	96.2%	96.2%	-0.1%	24.2%		**
		C2	73.8%	90.7%	95.6%		5.0%	21.8%	**	**
		C1	67.8%	85.5%			17.7%	17.7%	**	**
S/CP (SF)	% of parents/carers who would like their child to be more involved in community activities	C3	59.7%	69.4%	77.8%	81.9%	4.1%	22.2%	*	**
		C2	75.4%	80.5%	82.2%		1.7%	6.8%	*	**
		C1	74.0%	78.7%			4.6%	4.6%	**	**

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[11] McNemar's test at the 0.05 level.

[12] ** statistically significant, p-value<0.001; * statistically significant, p-value between 0.001 and 0.05.

Domain (Form)	Indicator	Cohort	Indicator at: Baseline	Indicator at: Review 1	Indicator at: Review 2	Indicator at: Review 3	Change Latest year	Change Overall	Significant[12] Latest year	Significant[12] Overall
Deterioration										
DL (SF)	% of parents/carers with concerns in 6 or more areas	C3	58.9%	63.8%	72.7%	77.6%	4.9%	18.6%		**
		C2	66.0%	73.4%	76.9%		3.5%	10.9%	**	**
		C1	67.6%	73.2%			5.7%	5.7%	**	**
S/CP (SF)	% of parents/carers who see their child's disability as a barrier to being more involved	C3	80.3%	86.6%	89.1%	87.6%	-1.5%	7.3%		*
		C2	83.5%	86.1%	88.9%		2.7%	5.4%	**	**
		C1	84.2%	87.3%			3.0%	3.0%	**	**

Key findings from Table 2.1 include:

- Use of specialist services has increased, along with the percentage of parents/carers who say that these services help their child gain the skills they need to participate in everyday life, and the percentage who say the services support them in assisting their child.
- There have been improvements across the social, community and civic participation domain, with a higher percentage of parents/carers saying their child is welcomed or actively included when they participate in community, cultural or religious activities.
- Participation in family life has also improved, with more parents/carers saying that their child fits in with the everyday life of the family, and that they get along with their siblings. The percentage of parents/carers who would like their child to be more involved in community activities increased across all time points.
- Further deterioration was observed for two of the indicators highlighted in last year's report: more parents/carers have concerns about their child's development in six or more of the eight areas surveyed, and more see their child's disability as a barrier to greater involvement in community activities.

2.4 Longitudinal indicators – participant characteristics

Analysis by participant characteristics has been examined in two ways:

1. A simple comparison of the change from baseline to first, second or third review in the percentage meeting the indicator, across different subgroups.
2. Multiple regression analyses with separate models for improvement and deterioration in the indicator. That is, for the subset without/with the indicator at baseline, the probability of meeting/not meeting the indicator at a subsequent review time point is modelled as a function of participant characteristics.[13,14]

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[13] The amount of data for modelling transitions reduces for later reviews, hence the number of significant predictors identified also tends to reduce.

[14] Note that these models are used to investigate factors associated with a higher or lower likelihood of change, rather than whether there has been a change overall, which was the purpose of the analysis summarised in the previous subsection. Considering the role of age, the models can identify whether younger or older participants are more likely to improve. Including age in the model also means that age is controlled for when interpreting the effect of other factors in the model. This is different to the concept of age adjustment that was used in the overall analysis. In the overall analysis, age-adjustment was used to remove the portion of change attributable to normal age-related development. The overall analysis does not say anything about differential rates of improvement by age (or any other factor).

It should be noted that these two analyses can produce different results, particularly where there is a large difference in the indicator at baseline between subgroups.

In order to maximise the amount of data for the regression models, to prevent the same person contributing multiple transitions to the same model, and to keep the number of models to a manageable size, transitions from different cohorts have been grouped, and only selected groups of transitions have been modelled. Table 2.2 shows the four groups of transitions that have been modelled for participants from birth to before starting school, and the transitions contributed by each of the C1, C2 and C3 cohorts. Improvements and deteriorations have been considered separately, resulting in eight different models for each indicator.

Table 2.2 Transitions contributing to the models for cohorts C1, C2 and C3*

Cohort	1 year transitions		2 year transitions[15]	3 year transitions
	Baseline to First Review	Latest Year	Baseline to Second Review	Baseline to Third Review
C3	B → R1	R2 → R3	B → R2	B → R3
C2	B → R1	R1 → R2	B → R2	
C1	B → R1			

*B=baseline, R1=first review, R2=second review. The arrow represents transition between the two time points.

Some key features of the analyses for selected indicators are summarised below. For each indicator, a table summarising the direction of the effect for each significant predictor in the regression models is included.[16] Table 2.3 provides a key to aid interpretation of the arrow symbols used in these tables, including some examples.

Table 2.3 Definition of symbols used in key driver tables

Symbol	Meaning	Impact of characteristic	Example
⬆	More likely to improve	Positive	Participants who have friends are more likely to improve in relation to being able to communicate what they want
⬇	Less likely to improve	Negative	Children with autism are less likely to start feeling welcomed or actively included in community, cultural or religious activities
⬆	More likely to deteriorate	Negative	Children with autism are more likely to stop feeling welcomed or actively included in community, cultural or religious activities

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[15] There is another two-year transition, from first review to third review, however the amount of data for this transition is smaller and to keep the presentation manageable it has not been included. Results from selected models for this transition were generally consistent with baseline to second review (but tended to identify a smaller number of predictors, due to the smaller amount of data).

[16] For models where no variables are identified as significant predictors, the corresponding column in the table is shaded grey.

Symbol	Meaning	Impact of characteristic	Example
⬇	Less likely to deteriorate	Positive	Participants who have friends are less likely to deteriorate in relation to being able to communicate what they want
⬆	More likely to change from "No" to "Yes"	Depends on context	Parents/carers of participants with lower level of function were more likely to change from not wanting their child to be more involved in community activities, to wanting them to be more involved
⇩	Less likely to change from "No" to "Yes"	Depends on context	Parents/carers of participants who have friends were less likely to change from not wanting their child to be more involved in community activities, to wanting them to be more involved
⇧	More likely to change from "Yes" to "No"	Depends on context	Parents/carers of participants in more remote areas were more likely to change from wanting their child to be more involved in community activities, to not wanting them to be more involved
⬇	Less likely to change from "Yes" to "No"	Depends on context	Parents/carers of participants with a lower level of function were less likely to change from wanting their child to be more involved in community activities, to not wanting them to be more involved

My child participates in age-appropriate community, cultural or religious activities

The percentage of parents/carers reporting that their child participates in age-appropriate community, cultural or religious activities increased significantly between baseline and the first review (2.6%), but did not change significantly between baseline and second review, or between baseline and third review. This was a result of improvements offset by deteriorations as set out in Table 2.4 below.

Table 2.4 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	8,316	8,342	1,547	18.6%	1,110	13.3%	+2.6%
Baseline to Review 2	1,501	1,710	451	30.1%	418	24.4%	+1.0%
Baseline to Review 3	149	222	55	36.9%	66	29.7%	-3.0%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.5 below.

Table 2.5 Key drivers of likelihood of transitions in *"my child participates in age-appropriate community, cultural or religious activities"* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	Participant lives in VIC	↓	↓						
	Participant lives in QLD		↓						
	Participant lives in SA				↑				
	Participant lives in ACT, NT, TAS, or WA		↓		↓				
Global developmental delay / developmental delay	Disability is autism								↑
	Disability is cerebral palsy or other neurological disability								↑
	Disability is Down syndrome or an intellectual disability						↓		↑
	Disability is a sensory disability	↑	↓				↓		↑
	Disability is "Other"								↑
N/A	Participant is older		↓						
Male	Participant is female	↑	↓						
Non-Indigenous	Participant is Indigenous						↑		
N/A	Lower level of function	↓	↑		↑	↓	↑		

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
N/A	Higher annualised total funding	↓	↑						
N/A	Higher baseline utilisation					↑	↓		
N/A	Higher utilisation of capacity building supports	↑							
Agency-managed	Plan is managed by a plan manager	↑							
	Plan is fully self-managed	↑	↓		↓	↑			
	Plan is partly self-managed	↑							
Did not relocate	Participant relocated to a new Local Government Area (LGA)		↑						
Pre-COVID	Review during COVID period	↓				↓			
N/A	General time trend	↓							
Entered the Scheme for early intervention (s25)	Entered the Scheme due to disability (s24)				↑				
Lower level of NDIA support	Higher level of NDIA support		↑						
N/A	Participant lives in an area with a higher average unemployment rate	↓							

Key findings from Table 2.5 include:

- Having a plan that is fully self-managed was associated with a higher likelihood of improvement (starting to participate in community activities) between baseline and first review, and between baseline and second review. Participants with fully self-managed plans were also less likely to deteriorate from baseline to first review, and less likely to deteriorate over their latest year in the Scheme.
- Participants with a sensory disability were more likely to improve from baseline to first review, and less likely to deteriorate from baseline to first review and from baseline to second review. However, participants with developmental delay / global developmental delay (the reference category in the models) were less likely to deteriorate between baseline and third review than all other disability groups.
- Participants with higher level of function were more likely to improve and less likely to deteriorate over one and two years in the Scheme.
- There were some differences by State/Territory. For example, participants living in Victoria were less likely to improve, but also less likely to deteriorate, from baseline to first review.
- Having a review during the COVID-19 period was associated with participants being less likely to start participating in community activities between baseline and first review, and between baseline and second review.

My child feels welcomed or actively included when they participate in community activities

The percentage of participants who can make friends with people outside the family has increased significantly from baseline to all reviews, with net-increases of 3.9%, 5.7% and 11.1% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.6 below.

Table 2.6 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	2477	4349	533	21.5%	265	6.1%	+3.9%
Baseline to Review 2	425	778	156	36.7%	88	11.3%	+5.7%
Baseline to Review 3	49	86	19	38.8%	4	4.7%	+11.1%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.7 below.

Table 2.7 Key drivers of likelihood of transitions in *"Of those who participate, % who feel welcomed or actively included"* response

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	Variable	Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	Participant lives in VIC	⬇	⇩			⬇			
	Participant lives in ACT, NT, TAS, WA	⬇				⬇			
Global developmental delay / developmental delay	Disability is autism		⬆				⬆		
	Disability is cerebral palsy or another neurological disability	⇧					⇩		
	Disability is Down Syndrome or an intellectual disability		⇩						
	Disability is a sensory disability	⇧							
Male	Participant is female							⇧	
Non-CALD	Participant is CALD	⬇							
N/A	Lower level of function				⬆				
N/A	Higher annualised total funding	⬇	⬆	⬇			⬆		
N/A	Higher baseline utilisation					⬇			
N/A	Higher utilisation of capacity building supports		⬆						

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	Variable	Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
Agency-managed	**Plan is fully self-managed**			⬆					
Pre-COVID	**Review during COVID period**	⬇							
Entered the Scheme for early intervention (s25)	**Entered the Scheme due to disability (s24)**				⬇				
N/A	**Participant lives in an area with a higher average unemployment rate**	⬇				⬇			

Key findings from Table 2.7 include:

- Participants with cerebral palsy or another neurological disorder were more likely to improve (start feeling welcomed or actively included when participating in community activities) over one year in the Scheme, and less likely to deteriorate over two years in the Scheme. Conversely, participants with autism were more likely to deteriorate, from baseline to first review and from baseline to second review.
- Participants living in Victoria, or in the State/Territory group ACT, NT, Tasmania or WA, were less likely to improve over one and two years in the Scheme, compared to participants living in NSW. Participants living in SA or Queensland were not significantly different to those living in NSW.
- Higher annualised plan budget was generally associated with a lower likelihood of improvement and a higher likelihood of deterioration.
- Having a review during the COVID-19 period was strongly associated with participants being less likely improve from baseline to first review.
- Participants living in areas with a higher average unemployment rate were less likely to improve from baseline to first review and from baseline to second review.

Parent/carer would like their child to be more involved in community activities

The percentage of parents/carers who would like their child to be more involved in community activities has increased significantly from baseline to all reviews, with net increases of 4.9%, 7.8% and 22.2% from baseline to the first, second and third review, respectively. This was a result of changes from “No” to “Yes”, and from “Yes” to “No”, as set out in Table 2.8 below.

Table 2.8 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Context Dependent: No to Yes		Context Dependent: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	4,476	12,661	1,472	5.0%	630	32.9%	+4.9%
Baseline to Review 2	855	2,439	459	8.3%	202	53.7%	+7.8%
Baseline to Review 3	158	234	105	7.7%	18	66.5%	+22.2%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.9 below.

Table 2.9 Key drivers of likelihood of transitions in *"% of parents/carers who would like their child to be more involved in community activities"* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No
NSW	**Participant lives in VIC**	⇩	⬇						
	Participant lives in QLD	⇩							
	Participant lives in ACT, NT, TAS, WA	⇩	⬇						
Global developmental delay / developmental delay	**Disability is autism**	⬆	⬇			⬆			
	Disability is cerebral palsy or another neurological disability	⇩				⇩			
	Disability is Down Syndrome or an intellectual disability		⇧						

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No
	Disability is a sensory disability		⇧						
	Disability is “Other”					⇩			
N/A	Participant is older	⇩							
Male	Participant is female				⇧		⇧		
Non-CALD	Participant is CALD		⬇				⬇		
2016/17	Participant entered the Scheme in 2017/18	⇩				⇩			
	Participant entered the Scheme in 2018/19	⇩							
N/A	General time trend		⬇						
N/A	Lower level of function			⬆	⬇		⬇		
N/A	Higher annualised total funding	⬆	⬇						
N/A	Higher baseline utilisation		⬇		⬇		⬇		
N/A	Higher utilisation of capacity building supports	⬆							
Agency-managed	Plan is managed by a plan manager	⬆							

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No	No to Yes	Yes to No
	Plan is fully self-managed	⬆							
Did not relocate	**Participant relocated to a new Local Government Area (LGA)**	⬆			⬇				
Major cities	**Participant does not live in a major city**		⇧	⇩		⇩			⇧
Pre-COVID	**Review during COVID period**	⇩						⇩	
Entered the Scheme for early intervention	**Entered the Scheme due to disability**		⬇				⬇		
Low level of NDIA support	**Medium level of NDIA support**						⇧		
N/A	**Participant lives in an area with a higher average unemployment rate**		⬇						

Key findings from Table 2.9 include:

- Compared to NSW, parents/carers from all States and Territories apart from SA were significantly less likely to transition from not wanting their child to be more involved in community activities at baseline, to wanting them to be more involved at first review. In addition, parents/carers living in Victoria and the State/Territory group ACT, NT, Tasmania and WA were less likely to change their response from “Yes” to “No” between baseline and first review.
- Parents/carers of participants living outside a major city were generally more likely to stop wanting their child to be more involved, and less likely to start wanting them to be more involved.
- There were also some differences by disability. For example, parents/carers of children with cerebral palsy or other neurological disorders who responded “No” at

baseline were less likely to respond “Yes” at first and second review. Conversely, parents/carers of children with autism were more likely to change their response from “No” to “Yes”, and less likely to change from “Yes” to “No”.

- Parents/carers of CALD participants were less likely to change their response from “Yes” to “No” between baseline and either first or second review.
- Parents/carers of female participants were more likely to change their response from “Yes” to “No” between baseline and second review, and over the child’s latest year in the Scheme.
- Those who responded “No” at baseline were less likely to answer “Yes” at first or third review when the review took place during the COVID-19 period.

Parents/carers who say their child’s disability is one of the barriers to being more involved in community activities

The percentage of parents/carers who say their child’s disability is one of the barriers to being more involved in community activities has increased significantly from baseline to all reviews, with net increases of 3.1%, 5.5% and 7.3% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.10 below.

Table 2.10 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort*		Improvements: Yes to No		Deteriorations: No to Yes		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	1,821	9,547	251	2.6%	605	33.2%	+3.1%
Baseline to Review 2	348	1,750	72	4.1%	187	53.7%	+5.5%
Baseline to Review 3	38	155	11	7.1%	25	65.8%	+7.3%

*The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.11 below.

Table 2.11 Key drivers of likelihood of transitions in *“% of parents/carers who say their child’s disability is one of the barriers to being more involved in community activities”* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	**Participant lives in VIC**	⬇	⬇	⬇					

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	Variable	Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	Participant lives in SA	↓							
NSW	Participant lives in ACT, NT, TAS, WA	↓							
Global developmental delay/ developmental delay	Disability is a sensory disability					↑			
Global developmental delay/ developmental delay	Disability is "Other"					↑			
N/A	Participant is older		↓						
Male	Participant is female	↑				↑			
2016/17	Participant entered the Scheme in 2017/18	↓							
2016/17	Participant entered the Scheme in 2018/19	↓							
N/A	Lower level of function	↓	↑	↓		↓			
N/A	Higher annualised total funding	↓			↑	↓			
N/A	Higher baseline utilisation	↓							
N/A	Higher utilisation of capacity building supports		↑		↑				
Pre-COVID	Review during COVID period	↓			↑				

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	**Variable**	**Imp.**	**Det.**	**Imp.**	**Det.**	**Imp.**	**Det.**	**Imp.**	**Det.**
N/A	**Change in time trend post-COVID**				⬇				

Key findings from Table 2.11 include:

- Parents/carers of participants with higher level of function were more likely to stop perceiving their child's disability as a barrier over one and two years in the Scheme, and over the latest year in the Scheme.
- Compared to NSW, parents/carers from all States and Territories apart from SA were significantly less likely to stop thinking their child's disability is one of the barriers to being involved in community activities between baseline and first review. Parents/carers of participants living in Victoria were also less likely to improve over the latest year in the Scheme, but less likely to deteriorate from baseline to first review.
- Female participants were more likely to improve, both from baseline to first review and baseline to second review.
- Higher utilisation of capacity building supports was associated with a higher likelihood of deterioration both from baseline to first review and over the latest review period.
- The COVID-19 terms in the model for deterioration over the latest year in the Scheme suggest a significant step increase in the likelihood of perceiving the child's disability as a barrier to greater involvement at review, followed by a decreasing trend with time since the introduction of tighter restrictions.

Parents/carers with concerns in six or more areas

The percentage of parents/carers reporting concerns in six or more areas has increased significantly from baseline to all reviews, with net increases of 6.1%, 11.4% and 18.6% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.12 below.

Table 2.12 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: Yes to No		Deteriorations: No to Yes		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	5,730	11,649	806	32.4%	1,858	6.9%	+6.1%
Baseline to Review 2	1,166	2,179	216	51.2%	597	9.9%	+11.4%
Baseline to Review 3	161	231	18	56.5%	91	7.8%	+18.6%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.13 below.

Table 2.13 Key drivers of likelihood of transitions in *"% of parents/carers with concerns in 6 or more areas"* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	**Participant lives in VIC**	⬇				⬇			
	Participant lives in ACT, NT, TAS, WA		⬇						
Global developmental delay / developmental delay	**Disability is cerebral palsy or another neurological disability**	⬆	⬇		⬇		⬇		
	Disability is Down Syndrome or an intellectual disability	⬇	⬆			⬇			
	Disability is a sensory disability	⬆	⬇	⬆	⬇	⬆	⬇		
	Disability is "Other"	⬆	⬇						

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
N/A	Participant is older	↑	↓						
Male	Participant is female		↓		↓		↓		
2016/17	Participant entered the Scheme in 2017/18	↓							
N/A	Lower level of function	↓	↑	↓	↑	↓	↑		
N/A	Higher annualised total funding	↓	↑	↓		↓	↑		
N/A	Higher baseline utilisation	↓			↑				
N/A	Higher utilisation of capacity building supports		↑	↓		↓	↑		
N/A	Higher utilisation of capital funding		↑						
Agency-managed	Plan is managed by a plan manager				↑		↑		
Major cities	Participant lives outside a major city	↑							
Did not relocate	Participant relocated to a new Local Government Area (LGA)		↑						
Pre-COVID	Review during COVID period	↓							
Lower level of NDIA support	Medium level of NDIA support		↑						

Key findings from Table 2.13

Table 2.13 include:

- The participant's primary disability was an important predictor for the likelihood of improvement/deterioration in the percentage of parents/carers with concerns in six or more areas. Responses from parents/carers of participants with a hearing impairment, visual impairment or other speech/sensory impairment were more likely to improve and less likely to deteriorate across all models with sufficient data. Responses from parents/carers of participants with cerebral palsy or another neurological disability were less likely to deteriorate across all models, and more likely to improve from baseline to first review. Conversely, responses from parents/carers of participants with an intellectual disability or Down syndrome were less likely to improve and more likely to deteriorate between baseline and first review.
- Higher utilisation of capacity building supports was associated with a higher likelihood of deterioration from both baseline to first review and baseline to second review, and a lower likelihood of improvement from baseline to second review and over the latest year in the Scheme.
- Having a review during the COVID-19 period was associated with a lower likelihood of improvement between baseline and first review.
- Responses from parents/carers of female participants were less likely to deteriorate in all one-step transitions and between baseline and second review.
- Reponses from participants with higher level of function were more likely to improve and less likely to deteriorate across all models with sufficient data.

Parents/carers who say their child is able to tell them what he/she wants

The percentage of parents/carers reporting that their child is able to tell them what he/she wants has increased significantly from baseline to all reviews, with net increases of 13.9%, 25.3% and 31.6% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.14 below.

Table 2.14 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	6,690	10,482	2,688	40.2%	306	2.9%	+13.9%
Baseline to Review 2	1,548	1,746	911	58.9%	79	4.5%	+25.3%
Baseline to Review 3	212	177	135	63.7%	12	6.8%	+31.6%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.15 below.

Table 2.15 Key drivers of likelihood of transitions in *“% of parents/carers who say their child is able to tell them what he/she wants”* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	Participant lives in VIC	⬇	⇩						
	Participant lives in QLD	⇧	⇩						
	Participant lives in SA	⇧							
Global development delay / developmental delay	Disability is cerebral palsy or another neurological disability	⬇		⬇		⬇			
	Disability is Down Syndrome or an intellectual disability	⬇	⬆			⬇			
N/A	Participant is older	⇧	⇩	⇧		⇧	⇩		
Non-CALD	Participant is CALD					⬇			
2016/17	Participant entered the Scheme in 2017/18						⇩		
N/A	Lower level of function	⬇	⬆	⬇		⬇	⬆		
N/A	Higher annualised total funding	⬇	⬆			⬇	⬆	⬇	
N/A	Higher baseline utilisation		⬆						
N/A	Higher utilisation of core supports		⬆						

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
Agency-managed	**Plan is fully self-managed**	↑	↓						
Major cities	**Participant does not live in a major city**							↑	
Pre-COVID	**Review during COVID period**	↓							
N/A	**Participant lives in an area with a higher average unemployment rate**	↓							

Key findings from Table 2.15 include:

- Improvement was more likely, and deterioration less likely, over the first year in the Scheme for participants with fully self-managed plans than for participants whose plan is Agency-managed.
- State/Territory has a significant impact on the percentage of parents/carers who say their child is able to tell them what he/she wants. For example, participants living in Queensland were more likely to improve and less likely to deteriorate from baseline to first review than participants living in NSW.
- There were also some differences by disability. For example, participants with cerebral palsy or other neurological conditions were less likely to improve in all one-step transitions and from baseline to second review. Participants with an intellectual disability or Down syndrome were less likely to improve and more likely to deteriorate between baseline and first review.
- In most models, improvement was more likely, and deterioration less likely, for participants with higher level of function.
- Having a review during the COVID-19 period resulted in participants being less likely to improve from baseline to first review.
- Older participants were more likely to improve and less likely to deteriorate in all transitions with sufficient data except from baseline to third review.

My child can make friends with people outside the family

The percentage of participants who can make friends with people outside the family has increased significantly from baseline to all reviews, with net increases of 6.3%, 7.8% and 11.4% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.16 below.

Table 2.16 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	7,435	9,745	1,813	24.4%	723	7.4%	+6.3%
Baseline to Review 2	1,375	1,922	505	36.7%	247	12.9%	+7.8%
Baseline to Review 3	174	213	78	44.8%	34	16.0%	+11.4%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.17 below.

Table 2.17 Key drivers of likelihood of transitions in *"% of children who can make friends with people outside the family"* response

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	**Participant lives in VIC**	⬇	⬇	⬇		⬇			
	Participant lives in QLD		⬇						
	Participant lives in SA	⬆							
	Participant lives in ACT, NT, TAS, WA		⬇						
Global developmental delay / developmental delay	**Disability is autism**		⬆						
	Disability is cerebral palsy or another neurological disability		⬇				⬇	⬆	
	Disability is Down syndrome or an intellectual disability							⬆	

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
	Disability is a sensory disability	⬆	⬇				⬇		
	Disability is “Other”	⬆	⬇						
N/A	Participant is older	⬆	⬇				⬇		
Non-CALD	Participant is CALD	⬇				⬇			
N/A	General time trend		⬇		⬇				
N/A	Lower level of function	⬇	⬆		⬆	⬇	⬆	⬇	
N/A	Higher annualised total funding	⬇	⬆	⬇		⬇		⬇	
N/A	Higher baseline utilisation	⬇	⬆			⬇			
N/A	Higher utilisation of capital funding						⬆		
Agency-managed	Plan is fully self-managed					⬆			
	Plan is partly self-managed					⬆			
Major cities	Participant lives outside a major city	⬆					⬇		
Did not relocate	Participant relocated to a new Local Government Area (LGA)				⬆		⬆		
Pre-COVID	Review during COVID period	⬇		⬇					
Lower level of NDIA support	Medium level of NDIA support				⬇				

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
N/A	**Participant lives in an area with a higher average unemployment rate**	⬇		⬇		⬇		⬆	

Key findings from Table 2.17 include:

- Participants with cerebral palsy or another neurological disability, and those with Down syndrome or an intellectual disability, were more likely to improve over three years in the Scheme. Participants with a sensory disability, or a disability in the "Other" category, were more likely to improve and less likely to deteriorate over one year in the Scheme.
- Participants living in Victoria were less likely to improve for all one-step transitions and from baseline to second review than those living in NSW. However, participants from Victoria were less likely to deteriorate from baseline to first review.
- Having a review during the COVID-19 period was associated with participants being less likely to improve in all one-step transitions.
- Participants with higher annualised plan budgets, and those with lower level of function, were generally less likely to improve and more likely to deteriorate.
- Participants that relocated during the transition were more likely to deteriorate in their latest year in the scheme, and from baseline to second review.

My child joins me when I complete tasks at home

The percentage of parents/carers reporting that their child joins them when they complete tasks at home has increased significantly from baseline to all reviews, with net increases of 3.6%, 8.3% and 14.0% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.18 below.

Table 2.18 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort*		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	5,030	12,087	1,322	26.2%	703	5.8%	+3.6%
Baseline to Review 2	1,024	2,262	459	44.8%	186	8.2%	+8.3%
Baseline to Review 3	136	250	80	58.8%	26	10.4%	+14.0%

*The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.19 below.

Table 2.19 Key drivers of likelihood of transitions in *"% parents/carers who say their child joins them when they complete tasks at home*

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	Variable	Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	Participant lives in VIC	⬇	⬇			⬇			
	Participant lives in QLD		⬇						
	Participant lives in ACT, NT, TAS, WA		⬇						
Global developmental delay / developmental delay	Disability is autism		⬆						⬆
	Disability is cerebral palsy or another neurological disability		⬇						
	Disability is a sensory disability		⬇						
	Disability is "Other"								⬆
N/A	Participant is older		⬇				⬇		
Male	Participant is female		⬇				⬇		
Non-Indigenous	Participant did not state their Indigenous status						⬆		
Non-CALD	Participant is CALD	⬇							
N/A	Lower level of function	⬇	⬆		⬆	⬇	⬆		

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
2016/17	Participant entered the Scheme in 2017-18	⬇							
	Participant entered the Scheme in 2018-19	⬇	⇩						
N/A	Higher annualised total funding	⬇	⬆		⬆	⬇	⬆		⬆
N/A	Higher baseline utilisation	⬇			⬆	⬇	⬆		
N/A	Higher utilisation of core supports						⬇		
N/A	Higher utilisation of capacity building supports		⬆						
Agency-managed	Plan is fully self-managed	⇧							
	Plan is partly self-managed						⇩		
Major cities	Participant lives outside a major city		⇩						
Did not relocate	Participant relocated to a new Local Government Area (LGA)		⬆						
Pre-COVID	Review during COVID period	⬇	⇩		⬆				
Lower level of NDIA support	Medium level of NDIA support					⇧			
	Higher level of NDIA support					⇧			

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review Relationship with likelihood of		Latest Year Relationship with likelihood of		Baseline to Second Review Relationship with likelihood of		Baseline to Third Review Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
Entered the Scheme for early intervention	**Entered the Scheme due to disability**		⬇						⬆
N/A	**Participant lives in an area with a higher unemployment rate**	⬇				⬇	⬆		

Key findings from Table 2.19 include:

- Female participants, and older participants, were less likely to deteriorate (stop joining their parents/carers when they complete tasks at home), between baseline and first review, and between baseline and second review.
- Participants living in Victoria were less likely to improve from baseline to first review and baseline to second review than those living in NSW. However, participants from Victoria were less likely to deteriorate from baseline to first review.
- There were also some differences by disability. For example, participants with autism were more likely to deteriorate from baseline to first review and from baseline to third review than those with global developmental delay / developmental delay.
- Participants with higher annualised plan budgets, and those with lower level of function, were generally less likely to improve and more likely to deteriorate.
- Participants living in an area with a higher average unemployment rate were less likely to improve from baseline to first review and baseline to second review. These participants were also more likely to deteriorate from baseline to second review.

My child fits in with the everyday life of the family

The percentage of parents/carers reporting that their child fits in with the everyday life of the family has increased significantly from baseline to all reviews, with net increases of 5.2%, 6.6% and 7.7% from baseline to the first, second and third review, respectively. This was a result of improvements offset by deteriorations as set out in Table 2.20 below.

Table 2.20 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[*]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	5,404	11,655	1,580	29.2%	689	5.9%	+5.2%
Baseline to Review 2	988	2,265	435	44.0%	220	9.7%	+6.6%
Baseline to Review 3	119	272	70	58.8%	40	14.7%	+7.7%

[*] The cohort is selected as all those with non-missing responses at the relevant surveys.

Participant characteristics that had a statistically significant effect ($p<0.05$) on the likelihood of improvement or deterioration in the outcome are set out in Table 2.21 below.

Table 2.21 Key drivers of likelihood of transitions in *"% parents/carers who say their child fits in with the everyday life of the family*

Reference Category	Variable	1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
		Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
NSW	**Participant lives in VIC**	↓	↓			↓			
	Participant lives in QLD		↓						
	Participant lives in SA			↑		↑			
	Participant lives in ACT, NT, TAS, WA	↓	↓						
Global developmental delay / developmental delay	**Disability is autism**		↑		↑		↑		
	Disability is cerebral palsy or another neurological disability		↓						
	Disability is Down Syndrome or an intellectual disability		↓						

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	**Variable**	**Imp.**	**Det.**	**Imp.**	**Det.**	**Imp.**	**Det.**	**Imp.**	**Det.**
	Disability is a sensory disability	↑	↓						
	Disability is "Other"		↓				↓		
N/A	**Participant is older**		↓						
Male	**Participant is female**	↑			↓		↓		
Non-CALD	**Participant is CALD**						↑		
N/A	**Lower level of function**	↓	↑				↑	↓	
N/A	**Higher annualised total funding**	↓	↑		↑	↓	↑		↑
N/A	**Higher baseline utilisation**	↓							
N/A	**Higher utilisation of core supports**			↓					
N/A	**Higher utilisation of capacity building supports**		↑						
N/A	**Higher utilisation of capital supports**		↑						
Agency-managed	**Plan is managed by a plan manager**	↓	↑			↓		↓	
	Plan is partly self-managed							↓	
Major cities	**Participant lives outside a major city**		↓						
Did not relocate	**Participant relocated to a new Local**		↑		↑				

		1 step transitions				2 step transitions		3 step transitions	
		Baseline to First Review		Latest Year		Baseline to Second Review		Baseline to Third Review	
		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of		Relationship with likelihood of	
Reference Category	Variable	Imp.	Det.	Imp.	Det.	Imp.	Det.	Imp.	Det.
	Government Area (LGA)								
N/A	**Change in time trend post-COVID**		⬇						
Lower level of NDIA support	**Higher level of NDIA support**								⬆
N/A	**Participant lives in an area with a higher average unemployment rate**	⬇		⬇					

Key findings from Table 2.21 include:

- Responses from parents/carers of participants with autism were more likely to deteriorate in all one-step transitions and from baseline to second review.
- Responses from parents/carers of female participants were more likely to improve from baseline to first review, and less likely to deteriorate between baseline and second review and over the latest year in the Scheme.
- Improvement in responses was less likely for participants whose plans are plan managed than whose plans are Agency-managed, from baseline to first, second or third review. Responses for these participants were also less likely to deteriorate from baseline to first review.
- Responses for participants living in an area with a higher average unemployment rate were less likely to improve in all one-step transitions.
- Responses for participants who changed address were more likely to deteriorate in all one-step transitions.

A summary of key findings from this section is contained in Box 2.6.

Box 2.6: Summary of findings: longitudinal indicators by participant characteristics

- Longitudinal outcomes vary with participant level of function. Participants with a higher level of function tend to exhibit higher rates of improvement than those with a lower level of function.
- Participants with a hearing impairment generally experience better longitudinal outcomes than those with other disabilities.
- Participants from regional and remote locations, compared to those from major cities, show more positive longitudinal results on some indicators. For example, parents/carers of children in regional or remote areas more likely to improve with regard to having concerns in six or more developmental areas from baseline to first review, than children living in major cities.
- Indigenous status was not strongly associated with longitudinal change: only one multiple regression model found a significant difference between Indigenous and non-Indigenous participants. This model found that Indigenous children were more likely to deteriorate on the indicator “my child participates in age-appropriate community, cultural or religious activities” from baseline to second review.
- CALD participants were less likely to improve in making friends with people outside the family from baseline to first review and from baseline to second review. Parents/carers of CALD participants were also less likely to change their response from ”Yes” to ”No” for the indicator “I would like my child to be more involved in community activities”.
- Moving to a new LGA tends to have a negative impact for some transitions.
- The COVID-19 step-change variable was significant in at least one model for all but one indicator (“My child fits in with the everyday life of the family”), and had a negative impact for all but one of these models, with participants being less likely to improve or more likely to deteriorate in their response between the two time points when the later time point occurred during the COVID-19 period. The one indicator where there was a positive step change was “My child joins me when I complete tasks at home”, where participants were less likely to deteriorate between baseline and first review. There were two indicators where a favourable change in slope was observed after the COVID-19 date: “My child fits in with the everyday life of the family” and “My child’s disability is a barrier to being more involved”.