2. Participants from birth to before starting school: overview of results

2.1 Key findings

Box 2.1: Overall findings for participants from birth to before starting school who joined the Scheme between 1 July 2016 and 30 June 2017

- For participants entering the Scheme in 2016-17, the longitudinal analysis revealed significant improvements across a number of indicators, with improvements in the first year generally continuing into the second year 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 6.4% between baseline and second review, from 64.4% to 70.8%. The improvement was slightly stronger on an age-adjusted basis (8.6%).

- Specialist services: use of specialist services increased in the year following Scheme entry, by 19% for the cohort entering in 2016-17, with a further increase of 4% for the second year in the Scheme. The percentage of parents/carers who say specialist services support them in assisting their child increased by 9.7% between baseline and second review, from 86.7% to 97.1%. 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 11.0% between baseline and second review, from 86.8% to 97.9%.

- Participating in family life: the percentage of parents/carers who say their child fits in with the everyday life of the family increased by 7.1% between baseline and second review, from 67.1% to 74.2%. On an age-adjusted basis the improvement was slightly stronger (8.2%). In addition, the percentage who say that their child gets along with his or her brothers or sisters has increased by 2.1% (7.7% on an age-adjusted basis) between baseline and second review, from 85.3% at baseline to 87.4% at second review.

- 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 15.6% between baseline and second review, from 60.3% to 75.9%. However, on an age-adjusted basis, the increase was lower (7.2%).

- 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 14.7% between baseline and second review, from 66.0% to 80.8%. However, there was also a 6.4% increase in the percentage of parents/carers who say their child's disability is one of the barriers to being involved in community activities, from 81.0% at baseline to 87.5% at second review.

Box 2.2 Overall findings for participants from birth to before starting school who joined the Scheme between 1 July 2017 and 30 June 2018

- For participants entering the Scheme in 2017-18, 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 4.3% between baseline and first review, from 64.1% to 68.4%. For those who use specialist services and childcare, the percentage who say they are assisted by their child's early intervention service to know how to support their child has increased by 34.6% over one year in the Scheme, from 50.0% to 84.6%.

– Specialist services: use of specialist services increased in the year following Scheme entry, by 15.0% for the cohort entering in 2017-18. The percentage of parents/carers who say specialist services support them in assisting their child increased by 2.9% between baseline and first review, from 94.2% to 97.0%. The percentage who say specialist services help their child gain the skills they need to participate in everyday life increased by 3.6% between baseline and first review, from 93.6% to 97.2%. 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 15.7% over one year in the Scheme, from 52.9% to 68.6%.

– Participating in family life: the percentage of parents/carers who say their child fits in with the everyday life of the family increased by 4.6% between baseline and first review, from 68.5% to 73.1%. On an age-adjusted basis the improvement was slightly stronger (6.9%). In addition, the percentage who say that their child gets along with his or her brothers or sisters has increased by 2.3% (3.3% on an age-adjusted basis) between baseline and first review, from 80.9% to 83.2%.

- As for parents/carers of participants entering in 2016-17, 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 6.2% between baseline and first review, from 67.7% to 73.9%. However, on an age-adjusted basis, the increase was slightly lower (5.3%).

- 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 3.3% between baseline and first review, from 77.9% to 81.2%. However, there was also a 4.4% increase in the percentage of parents/carers who say their child's disability is one of the barriers to being involved in community activities, from 81.4% at baseline to 85.9% at first review.

- Families who use childcare found it increasingly difficult to find childcare at short notice: the percentage who have no difficulties in finding childcare at short notice has decreased by 22.4%, from 57.1% at baseline to 34.7% at first review.

Box 2.3: Outcomes by key characteristics for participants from birth to before starting school

- Baseline and longitudinal outcomes vary with participant level of function. Participants with higher level of function tend to have better baseline outcomes and exhibit higher rates of improvement than those with a lower level of function.
- Participants with a hearing impairment generally experience better outcomes than those with other disabilities, both baseline and longitudinal.
- Participants from regional and remote locations, compared to those from major cities, show more positive results on some indicators – both at baseline and for longitudinal change. For example, parents/carers of children in regional or remote areas are less likely to have concerns in six or more developmental areas, and are more likely to improve on this indicator, than children living in major cities.
- Many baseline indicators are similar for Indigenous compared to non-Indigenous participants. However, Indigenous children are less likely to live with their parents than non-Indigenous children, and more likely to live in public housing. They are also less likely to use specialist services. One-way analyses suggest that Indigenous children are more likely to be able to make friends outside the family and to have friends they enjoy playing with, but less likely to participate in community, cultural or religious activities. For longitudinal change, Indigenous status was not identified as a significant predictor in multiple regression models for transitions from baseline (possibly due to small numbers).
- Some baseline indicators tend to be better for participants who are not from a CALD background compared to those who are from a CALD background. In baseline regression models, CALD participants are less likely to be able to tell their parents what they want, less likely to be welcomed or actively included when they participate in community, cultural or religious activities, and their parents/carers are more likely to want them to become more involved. However, CALD participants are more likely to live with their parents. For longitudinal change, CALD participants were less likely to improve in their ability to make friends outside the family.

Box 2.4: 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 (91.5% after one year in the Scheme, increasing to 93.7% after two years in the Scheme) and access to specialist services (89.4% after one year in the Scheme, increasing to 91.2% after two years in the Scheme). Higher plan utilisation is strongly associated with a positive response after one year in the Scheme, and also after two years in the Scheme, across all five areas surveyed. Participants entering the Scheme for early intervention are more likely to think that the NDIS had helped after one year in the Scheme than those entering due to disability.[9]

- The percentage who think that the NDIS has helped increased slightly (by 1.5-2.1%) between first and second review across all domains. The likelihood of improvement/ deterioration varied by some participant characteristics: participants with higher level of function and those living in higher socioeconomic areas (as measured by ABS SEIFA[10]) were more likely to improve (change their answer from "No" to "Yes"), and new participants (not previously receiving services from State/Territory or Commonwealth programs) were more likely to maintain a positive answer.

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

[10] The ABS Socio-Economic Indexes for Areas (SEIFA) ranks areas in Australia according to relative socio-economic advantage and disadvantage. The two SEIFA indices used were the Index of Education and Occupation (IEO) and the Index of Economic Resources (IER).

2.2 Results overview

2.2.1 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).

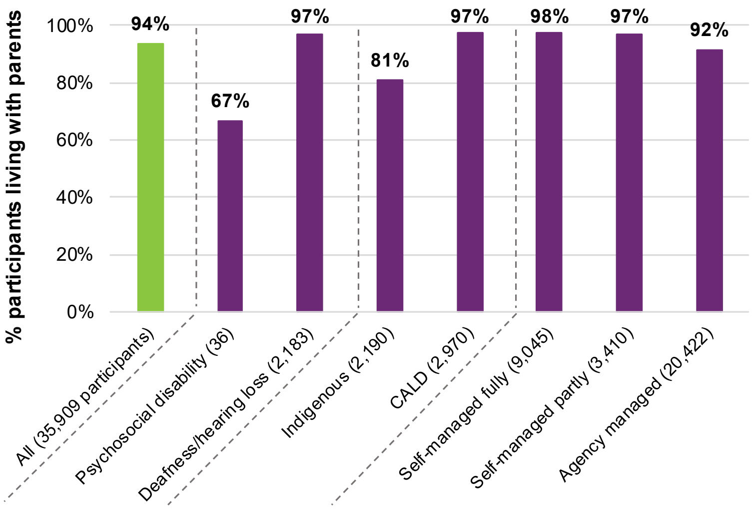
The LF includes 11 extra questions related to childcare, four related to specialist services, three about developmental/coping skills, two about effects on family, and one about developing autonomy.

2.2.2 Participant living arrangements

At baseline, 93.6% of children live with their parents. 2.4% live with other family members and 1.7% with non-relatives, such as foster carers. These percentages have not changed materially in the one and two year longitudinal analysis.

The percentage living with their parents at baseline is much lower for the small number of participants with a psychosocial disability (66.7% of the 36 participants) and higher for those with deafness/hearing loss (97.2%). Indigenous children are less likely to live with their parents (80.8%), however children from a culturally and linguistically diverse background are more likely to do so (97.5%). Children whose plan is self-managed, either partly or fully, are more likely to live with their parents (96.7% for partly self-managed and 97.7% for fully self-managed compared to 91.6% for agency-managed).

Figure 2.1 Proportion of participants living with parents at baseline



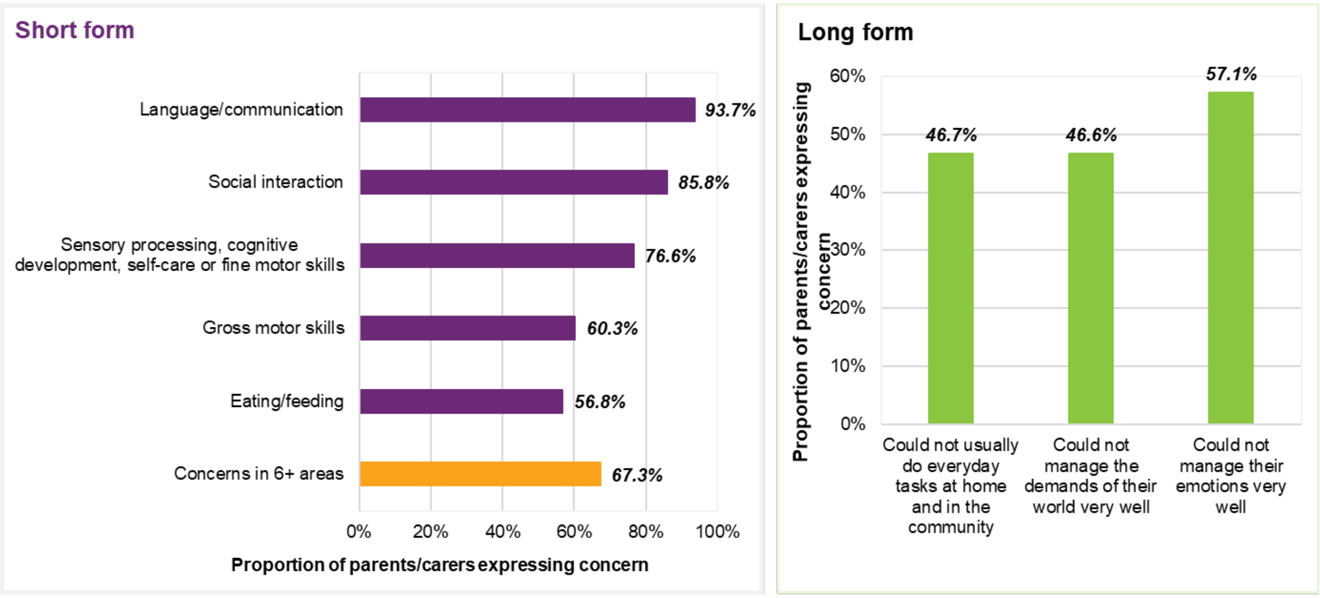
Most participants (89.8%) are in a private home either owned or rented from a private landlord. 8.0% of participants live in a private home rented from a public authority, but this percentage is much higher for Indigenous participants (27.6%) and for participants living in the Northern Territory (28.0%).

2.2.3 Baseline indicators – across all participants[11]

Areas of development

The SF asks parents/carers whether they have concerns about their child's development in eight different areas (multiple areas can be chosen). For each of the eight areas surveyed, more than half of parents/carers expressed concerns at baseline. The area with the highest level of concern was language/communication, where 93.7% of parents/carers had concerns, followed by social interaction (85.8%). Similar percentages of parents/carers had concerns related to the four areas sensory processing, cognitive development, self-care and fine motor skills (74.5% to 78.8%). A smaller percentage had concerns regarding gross motor skills (60.3%) or eating/feeding (56.8%). Most parents/carers had concerns in multiple areas, with 67.3% expressing concerns in six or more of the eight areas.

Figure 2.2 Proportion of parents/carers expressing concern



The LF asks parents/carers whether their child can usually manage their emotions, and the demands of their world. At baseline, 57.1% thought that their child could not manage their emotions very well, and 46.6% thought that they could not manage the demands of their world very well. 46.7% thought that their child could not usually do everyday tasks at home and in the community.

Autonomy

Most children exhibited evidence of growing autonomy, with 70.6% of SF respondents saying that their child was able to tell them what they want, and 91.0% of LF respondents saying that their child takes action once they have decided to do something.

In relation to family life, 51.0% of parents/carers think there is enough time to meet the needs of all family members. Of those with more than one child, 59.1% expressed some

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[11] The baseline aggregate results consider all participants in the appropriate age group with valid baseline plan responses. The combined baseline for participants entering in 2016-17 and 2017-18 is shown.

concern about the effect of having a sibling with disability on their other children, however 80% say that their child with disability gets along with their siblings. Overall, 66.5% say that their child fits into everyday family life. Evidence of integration into family life is provided by children assisting their parents/carers with tasks at home (72.9%) and outside the home (80.8%). 61.4% of children are able to make friends with people outside the family.

Childcare

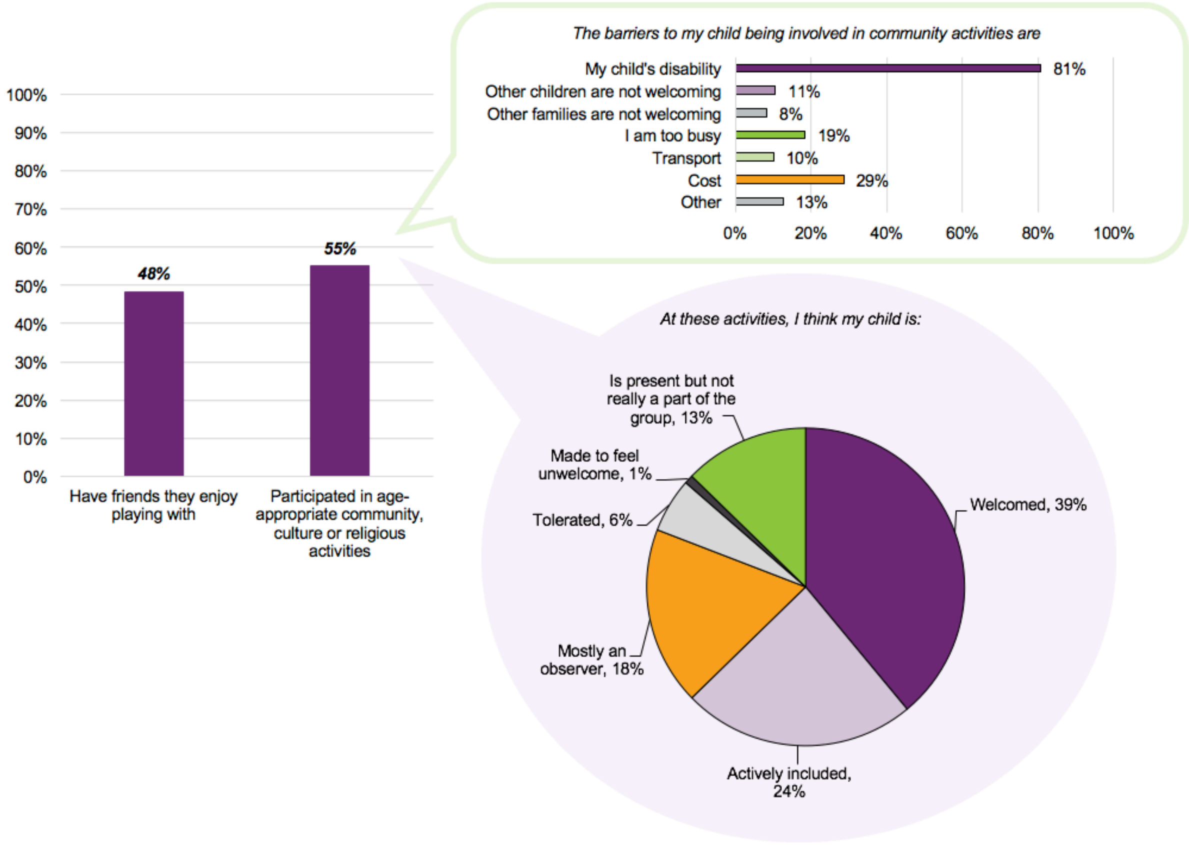
The LF includes a number of extra questions related to childcare. For this relatively small sample of 791 participants, 53.7% used some form of childcare. It was not uncommon for parents/carers to experience a lot of difficulty in finding good quality childcare (16.5%), finding the right person to take care of their child (15.1%), and finding childcare at short notice (24.3%). The most common form of childcare used was centre-based, including family day care, long day care, or any other care at a childcare centre. 64.4% of parents/carers used this form of childcare either while at work or while not at work, with a higher proportion using it while at work (44.1%) than while not at work (31.8%).

Children’s experiences at childcare were generally positive. Of those using group childcare, 93.6% said that other children were welcoming and 94.6% said that other families were welcoming. 90.1% of those using childcare thought that their child was asked to do tasks at an appropriate level, and 97.5% felt that their cultural heritage was respected (where applicable). Evidence of childcare services working together with the parent/carer to support the child was less strong, with 79.6% thinking the childcare helped them assist their child, 64.8% thinking the childcare involves them in planning for their child, and 59.6% saying the childcare helped them to plan for the future. 55.0% thought their childcare service was being assisted by their early intervention service (where applicable) to support their child.

Participation

Evidence of social and community participation outside childcare comes from the SF. 48.3% of children have friends they enjoy playing with, most often at social or family gatherings (55.0%) or pre-school (56.2%). 51.7% of children participated in age-appropriate community, cultural or religious activities, with 62.7% of parents/carers feeling that their child was welcomed or actively included in these activities. 75.0% of parents wanted their child to be more involved in community activities, with 80.9% perceiving their child’s disability as a barrier to being more involved. Community activities appear less welcoming than childcare, with other barriers to greater involvement including non-welcoming behaviour of other children (10.7%) or other families (8.4%). Cost is also a considerable barrier (28.7%).

Figure 2.3 Social and community participation, barriers and inclusion



Specialist services

71.2% of participants aged 0 to before starting school use specialist services (such as speech pathology, occupational therapy) to assist their learning and development. From the SF, 91.0% of parents/carers thought that these services helped their child's skill development and 91.6% thought they supported them to assist their child. From the LF, 95.2% thought that the services involved them, 92.6% that they respected the family/carer's cultural heritage, and 89.2% that they helped plan for the future. However the percentage thinking that the services assisted staff at their child's other activities (such as childcare/pre-school) to support their child was lower, at 60.9%.

2.2.4 Baseline indicators – participant characteristics

Baseline indicators have been analysed by participant characteristics using one-way analyses and multiple regression modelling. Multiple regression modelling was performed for the following indicators:

- The percentage of parents/carers with concerns in six or more of the areas: gross motor skills, fine motor skills, self-care, eating/feeding, social interaction, language/ communication, cognitive development, sensory processing
- The percentage of parents/carers who say their child is able to tell them what he/she wants
- The percentage of children who participate in age appropriate community, cultural or religious activities
- Of those who participate, the percentage who feel welcomed or actively included

- The percentage of parents/carers who would like their child to be more involved in community activities
- The percentage of parents/carers who say their child's disability is one of the barriers to being involved in community activities.

Key findings from the one-way analyses and regression modelling include:

- **Level of function**

  Baseline indicators are generally better for participants with higher level of function, particularly those related to family life and developmental concerns.

  Level of function was a significant predictor in all six multiple regression models considered for baseline indicators. Controlling for other variables, a higher level of function is significantly associated with:

  - A lower likelihood of the parent/carer: having concerns in six or more areas of development (on a one-way basis, the percentages are 58.4%, 77.8% and 87.2% for participants with high, medium and low level of function, respectively), wanting their child to be more involved in community activities, and saying their child’s disability is one of the barriers to being more involved.
  - A higher likelihood that the child: is able to tell their parent/carer what they want (77.2%, 70.0% and 42.3% for participants with high, medium and low level of function, respectively), participates in age-appropriate community, cultural or religious activities, and is welcomed or actively included when they do participate.

  In one-way analyses for SF indicators not modelled, the largest differences occur for the percentage of parents/carers who say:

  - Their child can make friends with people outside the family (70.7%, 54.0% and 33.9% for participants with high, medium and low level of function, respectively)
  - Their child joins them when they complete tasks at home (81.0%, 67.1% and 47.5%), and to a lesser extent, outside the home (86.6%, 76.3% and 63.4%).

  Several LF indicators also differ significantly with level of function, particularly the percentage of parents/carers who say:

  - Their child is able to do everyday tasks at home/in the park/at childcare (59.2%, 45.2% and 19.0% for participants with high, medium and low level of function, respectively).
  - Their child manages the demands of his/her world most of the time (58.7%, 41.4% and 31.7%).
  - There is enough time each week for all members of their family to get their needs met (55.9%, 41.7% and 27.0%).

  Use of specialist services is more prevalent amongst children with low levels of function (76.8% compared to 74.6% and 68.5% for medium and high levels of function, respectively). However, there is less variation by level of function for the percentage who say the services help their child gain the skills needed to participate in everyday life (89.2%-91.6%), and the percentage who say the services support them in assisting their child (90.7%-92.0%).

- **Disability**

  Baseline indicators are often considerably better for participants with hearing loss compared to participants with other disabilities.

  Disability was a significant predictor in all six baseline regression models. Controlling for other variables:

    - Participants with hearing loss fared the best on four of the six indicators.
    - Participants with visual impairment were the most likely to participate in age-appropriate community, cultural or religious activities, and their parents/carers were the least likely to perceived their child's disability as a barrier to being more involved.
    - Parents/carers of children with global developmental delay were the most likely to have concerns in six or more developmental areas, followed by parents/carers of participants with Down syndrome. Parents/carers of children with a hearing impairment were the least likely (by a considerable margin) to have concerns in six or more developmental areas (15.7% on a one-way basis, compared to 67.3% overall).
    - Participants with global developmental delay were the least likely to participate in age-appropriate community, cultural or religious activities, and less likely to be welcomed or actively included than participants with all other disabilities except autism.
    - Participants with autism were less likely to participate in age-appropriate community, cultural or religious activities than participants with all other disabilities apart from global developmental delay, and less likely to be welcomed or actively included than participants with all other disabilities. Parents/carers of children were also the most likely to perceived their child's disability as a barrier to being more involved.

  In one-way analyses for SF indicators not modelled, the largest differences occur for:

    - The percentage of parents/carers who say their child fits in with the everyday life of the family: the percentage is lowest for the small number of children with a psychosocial disability (42.9%), followed by children with autism (52.8%), and is highest for children with a hearing impairment (87.0%).
    - The percentage of parents/carers who say their child can make friends with people outside the family: the percentage is lowest for children with autism (50.2%) and highest for children with another sensory/speech disability (77.4%).
    - The percentage of children who use specialist services that assist with their learning and development: the percentage is lowest for children with a hearing impairment (61.6%) and highest for those with cerebral palsy or another neurological disorder (86.4%).

  There are also some significant differences for LF indicators. For example:

    - Participants with autism are less likely to be able to manage their emotions (31.7% compared to 42.9% overall) and the demands of their world (43.8% compared to 53.4% overall).
    - Participants with intellectual disability/Down syndrome are less likely to be able to do everyday tasks at home/in the park/at childcare (27.9% compared to 53.3% overall).

- **Culturally and linguistically diverse backgrounds**
  Baseline indicators tend to be better for non-CALD compared to CALD participants.

  CALD status was a significant predictor in three of the six baseline regression models. Controlling for other factors:

  - Parents/carers of children from a CALD background are much less likely to say that their child is able to tell them what they want (57.8% compared with 71.9% for non-CALD participants, on a one-way basis).
  - Participants from a CALD background who participate in community activities are less likely to be welcomed or actively included (52.2% compared with 63.6% for non-CALD participants, on a one-way basis). However, the percentage participating in community activities did not differ significantly between CALD and non-CALD participants.
  - Parents/carers of children from a CALD background are more likely to want their child to be more involved in community activities (79.8% compared with 74.6% for non-CALD participants, on a one-way basis). However, the percentage of parents/carers who perceive their child's disability as a barrier to being more involved did not differ significantly between CALD and non-CALD participants.

  Strong differences on a one-way basis also occurred for several other relationship indicators, with CALD participants being less likely to be able to make friends outside the family (43.2% compared to 63.0% for non-CALD participants), less likely to have friends they enjoy playing with (32.1% versus 49.8%), and less likely to join in tasks within the home (57.4% versus 74.4%) and outside the home (71.5% versus 81.7%).

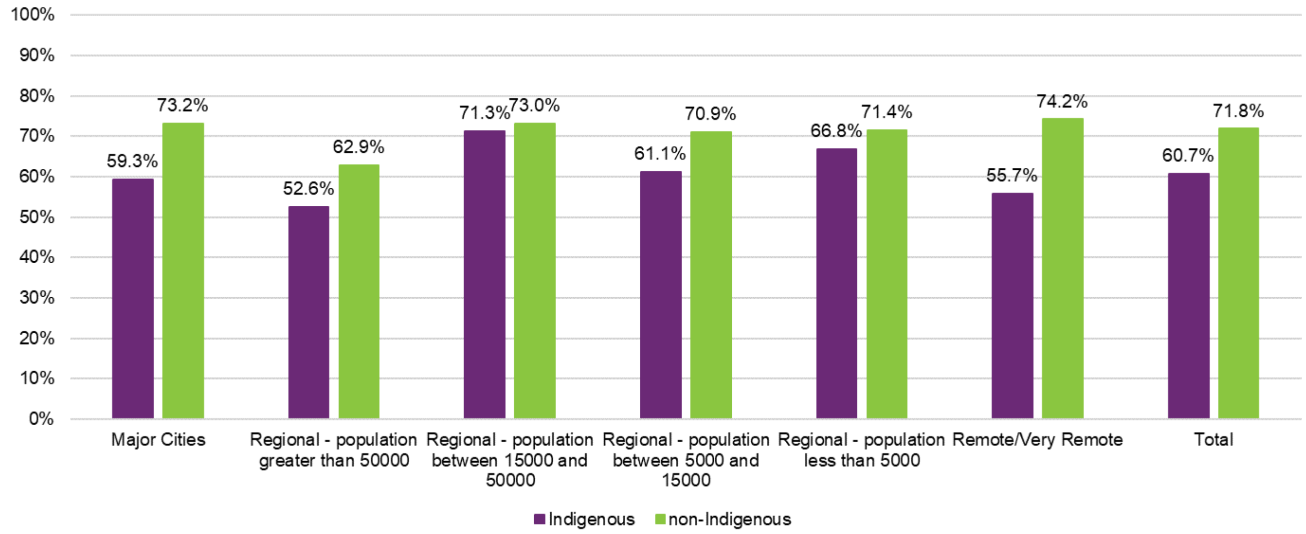
  However, the percentage of parents/carers who have concerns in six or more developmental areas did not differ significantly between CALD (67.5%) and non-CALD (67.2%) participants.
- **Indigenous**
  Many baseline indicators do not differ a great deal for Indigenous compared to non-Indigenous participants.

  Indigenous status is not a significant predictor in any of the six baseline regression models considered.

  From the one-way analyses, use of specialist services is an exception, with Indigenous participants being significantly less likely to use specialist services (60.8%) than non-Indigenous participants (70.2%). This does not seem to be driven by remoteness, as usage is lower for Indigenous participants at every level of remoteness (Figure 2.4) (but could be due to other factors not controlled for). Parents/carers of Indigenous participants who use specialist services are also less likely to think that the services involve them (90.9% versus 95.1%).

  Also on a one-way basis, Indigenous children are significantly more likely to be able to make friends with people outside the family (64.9% versus 60.7% for non-Indigenous children) and to have friends they enjoy playing with (52.0% versus 47.4% for non-Indigenous children). However, they are less likely to participate in community, cultural or religious activities (47.3% versus 51.5%).

Figure 2.4 Use of specialist services at baseline by Indigenous status and remoteness



- **Age**

There are some significant trends with baseline age, however some of these reflect normal childhood development. Some baseline indicators related to participation and developmental concerns appear to be better for younger children than for older children.

Age appears as a significant predictor in all six baseline regression models considered. Controlling for other factors:

- The percentage of parents/carers who say that their child is able to tell them what they want increases with baseline age, however this reflects normal childhood development.
- Participation in community, cultural or religious activities also increases with baseline age, and this is also likely to be related to normal childhood development.
- Parents/carers of older children are more likely to have concerns in six or more developmental areas.
- Older children are less likely to be welcomed or actively included in community, cultural or religious activities.
- Parents/carers of older children are more likely to want them to be more involved in community activities, and more likely to perceive their child's disability as a barrier to being more involved.

From the one-way analyses, older children are more likely to make friends outside the family, and to have friends they enjoy playing with, however these indicators are likely to reflect normal age-related development. Use of specialist services tends to increase with the child's age at baseline (from 66.0% for children aged 2 or younger to 75.5% for those aged 5 or older).

- **Gender**

Female participants have more positive baseline outcomes on some indicators.

Controlling for other factors in the baseline regression models, parents/carers of girls are less likely to have concerns in six or more of the eight areas surveyed (69.0% versus 62.9% on a one-way basis). Girls are more likely to participate in community, cultural or religious activities (53.9% versus 50.7% on a one-way basis) and are more likely to feel welcomed or actively included when they do (66.5% versus 61.1%).

- **Geography**
  Compared to children from major cities, children from regional and remote locations show more positive results on some indicators.

  Remoteness[12] was a significant predictor in three of the baseline regression models considered. Controlling for other factors:

  - Compared to parents/carers of participants living in major cities, parents/carers of participants living in regional areas with population less than 5000, or in remote/very remote locations, were significantly less likely to have concerns in six or more developmental areas (61.9%-63.0% on a one-way basis, compared to 68.7% for participants living in major cities).
  - Compared to parents/carers of participants living in major cities, parents/carers of participants living in regional and remote areas were more likely to say that their child is able to tell them what he/she wants (68.8% for major cities compared to 74.3% for more remote areas combined).
  - Compared to parents/carers of participants living in major cities, parents/carers of participants living in regional areas were less likely to want their child to be more involved in community activities. However, parents/carers of participants living in remote/very remote areas were significantly more likely to want their child to be more involved.

  One-way analyses suggest that participants living in regional areas are more likely to make friends with people outside the family than participants living in either major cities or remote/very remote locations. However, one-way analyses for remoteness should be interpreted with care due to the potential for confounding (for example, participants in remote/very remote areas are more likely to be Indigenous, and to be younger).

- **Plan management type**
  There were significant differences by plan management type for five of the baseline regression models. Children whose plan is self-managed, either partly or fully, were more likely to participate in community activities, but less likely to be welcomed or actively included in these activities. Parents/carers who self manage, either partly or fully, were more likely to want their child to be more involved in community activities, and more likely to perceive their child's disability as a barrier to being more involved. They were also more likely to have concerns in six or more developmental areas.

  Note that these baseline differences reflect characteristics of participants whose parents/carers choose to self manage, rather than the self-management process itself (since the results are at the start of the participant's first plan).

- **Relationships**
  Having friends they enjoy playing with was a significant positive factor in all six baseline regression models considered. Participation in community activities was also a positive factor, associated with a lower likelihood of parents/carers having concerns

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[12] Modified Monash Model: https://www.health.gov.au/health-workforce/health-workforce-classifications/modified-monash-model

in six or more developmental areas, and a higher likelihood of the child being able to tell parents/carers what they want.

- **Use of childcare and specialist services**
  In multiple regression models, children who used specialist services were more likely to be involved in community activities, and their parents/carers were more likely to say that they wanted their child to be more involved. However, parents/carers of children who use specialist services were more likely to perceive their child's disability as a barrier to being more involved, and considerably more likely to have concerns in six or more developmental areas.
  Use of childcare was generally a positive factor in the multiple regression models. Children of parents/carers who use childcare were more likely to be involved in community activities and more likely to be welcomed or actively included in these activities, and more likely to be able to tell their parent/carer what they want.

2.2.5 Longitudinal indicators – across all participants

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 2018, for whom a record of outcomes is available at scheme entry (baseline) and at one or more of the two time points: approximately one year following scheme entry (first review), and approximately two years following scheme entry (second review). The analysis considers how outcomes have changed between baseline and first review, between baseline and second review and between first review and second review for the short form and long form questionnaires[13].

There have been a number of improvements across all domains for the three periods being considered. The greatest changes occurred when considering a participant's responses from baseline to their second review.

As discussed in Section 4.2, 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 across different time periods. In Table 2.1, cohort "B,R1,R2" includes participants responding at baseline, first review and second review.[14] Cohort "B,R1" includes participants responding at both baseline and first review (but not at second review, so the cohorts do not overlap). Indicators were selected for the tables if the change was statistically significant[15], had an absolute magnitude greater than 0.02[16], and was confirmed by the age-adjusted analysis.

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[13] Due to an insufficient number of respondents, the change between baseline and second review was omitted for certain long form questions.

[14] A small number may be missing a response at the first review.

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

[16] Between baseline and second review for the "B,R1,R2" cohort, and between baseline and first review for the "B,R1" cohort.

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

Domain (Form)	Indicator	Cohort	Baseline	Review 1	Review 2	Change B-R1	Change R1-R2	Change B-R2	Improvement/ Deterioration
REL (SF)	% of children who get along with his/her brother(s)/sister(s)	B,R1,R2	85.3%	86.8%	87.4%	1.5%	0.6%	2.1%	**Improvement**
		B,R1	80.9%	83.2%		2.3%			
REL (SF)	% of parents/carers who say their child fits in with the everyday life of the family	B,R1,R2	67.1%	73.5%	74.2%	6.4%	0.7%	7.1%	**Improvement**
		B,R1	68.5%	73.1%		4.6%			
S/CP (SF)	Of those who participate in community, cultural or religious activities, % who feel welcomed or actively included	B,R1,R2	64.4%	69.7%	70.8%	5.3%	1.1%	6.4%	**Improvement**
		B,R1	64.1%	68.4%		4.3%			
S/CP (LF)	For families who use childcare and early intervention services, % who say their childcare is assisted by their early intervention services to know how to support their child	B,R1	50.0%	84.6%		34.6%			**Improvement**
SPL (SF)	% of parents/carers who say that specialist services help their child gain skills she/he needs to participate in everyday life	B,R1,R2	86.8%	95.0%	97.9%	8.2%	2.9%	11.0%	**Improvement**
		B,R1	93.6%	97.2%		3.6%			
SPL (SF)	% of parents/carers who say that specialist services support them in assisting their child	B,R1,R2	87.4%	96.1%	97.1%	8.7%	1.0%	9.7%	**Improvement**
		B,R1	94.2%	97.0%		2.9%			
SPL (LF)	For children who receive specialist services, % whose services assist staff at the child's daycare/ preschool/ community activities to support the child	B,R1	52.9%	68.6%		15.7%			**Improvement**
S/CP (SF)	% of parents/carers who would like their child to be more involved in community activities	B,R1,R2	66.0%	76.1%	80.8%	10.1%	4.6%	14.7%	**Context Dependent**
		B,R1	77.9%	81.2%		3.3%			

Domain (Form)	Indicator	Cohort	Baseline	Review 1	Review 2	Change B R1	Change R1 R2	Change B R2	Improvement/ Deterioration
SPL (SF)	% who say their child uses specialist services that assist with their learning and development	B,R1,R2	73.6%	92.7%	96.9%	19.1%	4.2%	23.3%	**Context dependent**
		B,R1	74.5%	89.5%		15.0%			
DL (SF)	% of parents/carers with concerns in 6 or more areas	B,R1,R2	60.3%	70.2%	75.9%	9.9%	5.7%	15.6%	**Deterioration**
		B,R1	67.7%	73.9%		6.2%			
REL (LF)	% of parents/carers who believe there is enough time each week for all members of their family to get their needs met	B,R1,R2	63.3%	50.0%	40.0%	-13.3%	-10.0%	-23.3%	**Deterioration**
		B,R1	55.3%	44.7%		-10.6%			
S/CP (SF)	% of parents/carers who say their child's disability is one of the barriers to being involved in community activities	B,R1,R2	81.0%	84.4%	87.5%	3.4%	3.1%	6.4%	**Deterioration**
		B,R1	81.4%	85.9%		4.4%			
S/CP (LF)	For families who use childcare, % who have no difficulties in finding childcare at short notice	B,R1	57.1%	34.7%		-22.4%			**Deterioration**

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.
- 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 three 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, fewer feel there is enough time to meet the needs of all family members, and more see their child’s disability as a barrier to greater involvement in community activities.
- Families who use childcare are finding it increasingly difficult to find childcare at short notice.

2.2.6 Longitudinal indicators – participant characteristics

Analysis by participant characteristics has been examined in two ways:

1. A simple comparison of the percentage meeting the indicator at first or second review with the percentage meeting the indicator at baseline. The difference (review-baseline) is compared for 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 first or second review is modelled as a function of participant characteristics.[17,18] Multiple regression analyses were performed for the same six indicators as considered for baseline.

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.

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. Table 2.2 provides a key to aid interpretation of the arrow symbols used in these tables, including some examples.

Table 2.2 Definition of symbols used in key driver tables

Symbol	Meaning	Impact	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
⬇	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

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[17] Modelling of baseline to second review transitions is based on a smaller amount of data, hence these models tend to identify a smaller number of significant predictors.

[18] 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).

Symbol	Meaning	Impact	Example
⇩	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 slightly between baseline and the first review (1.3%) and did not change significantly between baseline and the second review. This was a result of improvements offset by deteriorations as set out in Table 2.3 below.

Table 2.3 Breakdown of net movement in longitudinal responses

Longitudinal Period	Number of Baseline Responses in cohort[1]		Improvements: No to Yes		Deteriorations: Yes to No		Net Movement
	No	Yes	Number	%	Number	%	
Baseline to Review 1	3,582	4,113	685	19.1%	584	14.2%	+1.3%
Baseline to Review 2	384	528	127	33.1%	124	23.5%	+0.3%

[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 2.4 below.

Table 2.4 Key drivers of likelihood of transitions in *"my child participates in age-appropriate community, cultural or religious activities"* response

Variable	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	⬇	⬇	⬇	
Participant lives in Queensland		⬇	⬆	
Participant lives in South Australia			⬆	
Participant is female		⬇		
Entered the Scheme in 2016/17	⬆			
Lower level of function	⬇	⬆	⬇	⬆
Higher annualised plan budget	⬇			
Plan is fully self-managed	⬆			
More than 5% of supports are capital supports			⬇	
Lower level of NDIA support[19]		⬇		
Participant received services from Commonwealth programs before entering the NDIS				⬇
Participant has friends	⬆	⬇		
Uses specialist services		⬇		
Higher Index of Education and Occupation (IEO)		⬇		
Higher Index of Economic Resources (IER)			⬆	

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[19] The level of NDIA support a participant requires as they move along the participant pathway, having regard to the complexity of their situation.

Key findings from Table 2.4 include:

- Participants with higher level of function were more likely to start participating in community, cultural or religious activities and less likely to stop participating. From one-way analyses, the percentage of children participating increased by 3.1% between baseline and second review for those with a high level of function, whereas there was little change (0.5%) for participants with medium level of function, and a 9.5% decrease for participants with low level of function.
- Participant disability type was not significant in any of the four models for this indicator.
- Participants who have friends they enjoy playing with are more likely to improve and less likely to deteriorate between baseline and first review.
- Higher socioeconomic status (as measured by SEIFA indices) tends to be associated with a higher likelihood of improvement and lower likelihood of deterioration.
- There were some differences by State/Territory. For example, participants living in Victoria were less likely to transition (either improve or deteriorate) between baseline and first review, and were less likely to improve between baseline and second review.

At these activities I think my child feels welcomed or actively included

The percentage of parents/carers reporting that their child feels welcomed or actively included increased 4.6% between baseline and first review and increased 6.4% between baseline and second review. This was a result of improvements offset by deteriorations as set out in Table 2.5 below.

Table 2.5 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	1,245	2,204	306	24.6%	149	6.8%	+4.6%
Baseline to Review 2	139	251	53	38.1%	28	11.2%	+6.4%

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 2.6 below.

Table 2.6 Key drivers of likelihood of transitions of *"at these activities I think my child feels welcomed or actively included"* response

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	↓	↓	Numbers are too small	
Participant lives in Queensland	↓			
Participant lives in South Australia		↓		
Disability is autism	↓	↑		
Disability is Down syndrome or an intellectual disability	↑			
Disability is a sensory disability	↑			
Lower level of function	↓			
Higher annualised plan budget		↑		
Plan is agency-managed		↓		
Higher Index of Economic Resources (IER)	↑			

Key findings from Table 2.6, regarding transitions from baseline to first review, include:

- Children with autism are less likely to start feeling welcomed or actively included in community, cultural or religious activities than children with other disabilities, and more likely to stop feeling welcomed or actively included. Children with Down syndrome or an intellectual disability, and those with a sensory disability, are more likely to start feeling welcomed or actively included.
- Participants with higher level of function were more likely to improve. Likely related to level of function, participants with lower annualised plan budget were less likely to deteriorate.

My child’s disability is one of the barriers to being involved in community activities

The percentage of parents/carers reporting that their child’s disability is one of the barriers to being involved in community activities increased 4.3% between baseline and first review and by 6.4% between baseline and second review. This was a result of improvements offset by deteriorations[20] as set out in Table 2.7 below.

Table 2.7 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	1,052	4,589	155	3.4%	398	37.8%	+4.3%
Baseline to Review 2	109	465	29	6.2%	66	60.6%	+6.4%

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 2.8 below.

Table 2.8 Key drivers of likelihood of transitions of *“my child’s disability is one of the barriers to being involved in community activities”* response

Variable	Baseline to First Review Relationship with likelihood of		Baseline to Second Review Relationship with likelihood of	
	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	⬇			
Participant lives in South Australia	⬇			
Disability is autism	⬇	⬆		
Entered the Scheme in 2016/17	⬆			
Lower level of function	⬇	⬆		⬆
Higher annualised plan budget	⬇	⬆		
More than 5% of supports are capital supports		⬆		
Lower level of NDIA support		⬆		

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[20] Note that a decrease in this indicator represents an improvement, and an increase represents a deterioration.

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Uses child-care		⬇		
Higher Index of Economic Resources (IER)		⬆		

Key findings from Table 2.8, regarding transitions between baseline and first review, include:

- Parents/carers of children with autism were more likely to start perceiving, and less likely to stop perceiving, their child's disability as a barrier to being more involved in community activities.
- Lower level of function and higher plan budget were both associated with a lower likelihood of improvement and a higher likelihood of deterioration. Lower level of function was also associated with a higher likelihood of deterioration between baseline and second review.
- Improvement was less likely for participants living in Victoria and South Australia.
- Deterioration was more likely for participants whose plans consisted of more than 5% capital supports, and for participants requiring lower levels of NDIA support through the participant pathway.
- Deterioration was less likely for participants who use child care.
- Parents/carers of participants living in areas with higher economic resources were more likely to start perceiving their child's disability as a barrier to being more involved.

I would like my child to be more involved in community, cultural or religious activities

The percentage of parents/carers reporting that they would like their child to be more involved in age-appropriate community, cultural or religious activities increased between baseline and the first review (4.1%) and between baseline and the second review (14.7%). This was a result of improvements offset by deteriorations as set out in Table 2.9 below.

Table 2.9 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	1,834	5,976	655	35.7%	335	5.6%	+4.1%
Baseline to Review 2	325	632	199	61.2%	58	9.2%	+14.7%

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 2.10 below.

Table 2.10 Key drivers of likelihood of transitions in *"I would like my child to be more involved in community, cultural or religious activities"* response

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	**No to Yes**	**Yes to No**	**No to Yes**	**Yes to No**
Participant lives in New South Wales	⬆		⬆	
Participant lives in Victoria	⇩	⬇		
Participant lives in Queensland				⇧
Participant lives in South Australia	⬆			
Participant lives in NT, TAS, WA or ACT		⬇		
Disability is autism	⬆	⬇		
Disability is cerebral palsy, another neurological disability, a sensory disability, Down syndrome or an intellectual disability		⇧		
Participant is CALD		⬇		
Entered the Scheme in 2016/17	⬆			
Lower level of function	⬆	⬇		⬇
Participant lives in a more remote area		⇧		
Higher annualised plan budget		⬇		
Plan is fully self-managed	⬆			
Less than 75% of supports are capacity building supports			⬆	
Participant has not received services from Commonwealth or state systems before entering the NDIS			⇩	
Participant has friends	⇩		⇩	

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	No to Yes	Yes to No	No to Yes	Yes to No
Higher Index of Economic Resources (IER)	↑		↑	

Key findings from Table 2.10 include:

- Given a ‘No’ response at baseline, parents/carers of participants with a lower level of function were more likely to want their child to be more involved, at the first review. Given a ‘Yes’ response at baseline, parents/carers of participants with a lower level of function were more likely to want their child to be more involved, at both first and second reviews.
- Parents/carers of participants who have friends they enjoy playing with are less likely to change their response from ‘No’ to ‘Yes’, between both baseline and the first review, and baseline and the second review.
- Higher economic resources (as measured by the IER) is associated with a higher likelihood of a parent/carer’s response changing from ‘No’ to ‘Yes’.
- Participants living in NSW were more likely to change their response from ‘No’ to ‘Yes’, between both baseline and the first review, and baseline and the second review.

My child is able to tell me what he/she wants

The percentage of parents/carers reporting that their child is able to tell them what he/she wants increased by 12.3% between baseline and first review and by 19.7% between baseline and second review. This was a result of improvements offset by deteriorations as set out in Table 2.11 below.

Table 2.11 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	2,838	5,011	1,129	39.8%	165	3.3%	+12.3%
Baseline to Review 2	390	548	220	56.4%	35	6.4%	+19.7%

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 2.12 below.

Table 2.12 Key drivers of likelihood of transitions of *“my child is able to tell me what he/she wants”* response

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	⬇	⬇		
Participant lives in Queensland		⬇		
Participant lives in South Australia	⬆		⬆	
Disability is autism	⬆			
Disability is a sensory disability	⬆			
Participant is older	⬆	⬇		⬇
Participant is female				⬆
Participant lives in a more remote location				⬇
Lower level of function	⬇	⬆	⬇	⬆
Higher annualised plan budget	⬇	⬆		⬆
Plan is self-managed		⬇	⬇	
Participant uses child-care		⬇	⬆	
Participant participates in the community	⬆		⬆	
Participant has friends	⬆	⬇		⬇
Higher Index of Education and Occupation (IEO)	⬆			
Participants lives in an area with a higher unemployment rate		⬆		

Key findings from Table 2.12 include:

- Participants with autism and those with a sensory disability were more likely to transition from not being able to communicate what they want, to being able to communicate what they want, between baseline and first review.
- Older participants were more likely to experience positive transitions in being able to tell their parents/carers what they want.
- Participants with higher level of function were more likely to improve, and less likely to deteriorate, in their ability to communicate what they want.
- Participants living in more remote locations were less likely to deteriorate over two years.
- Use of child care, having friends, and participating in the community were associated with positive transitions.
- Participants living in areas with higher education and occupation opportunities were more likely to improve over one year, whereas participants living in higher unemployment areas were more likely to deteriorate.

Percentage with concerns in six or more areas

The percentage of parents/carers with concerns in six or more areas increased by 6.7% between baseline and first review and by 15.6% between baseline and second review. This was a result of improvements offset by deteriorations as set out in Table 2.13 below.

Table 2.13 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	2,644	5,332	397	7.4%	928	35.1%	+6.7%
Baseline to Review 2	380	577	46	8.0%	195	51.3%	+15.6%

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 2.14 below.

Table 2.14 Key drivers of likelihood of transitions of *"concerns in six or more areas"* response

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	⬇			
Disability is Down syndrome or an intellectual disability	⬇	⬆		
Disability is a sensory disability	⬆	⬇		⬇
Disability is developmental delay or global developmental delay			⬆	
Participant is older	⬇			
Participant is female		⬇		⬇
Participant entered the Scheme in 2016/17	⬆	⬇		
Lower level of function	⬇	⬆		⬆
Participant lives in more remote area	⬆		⬆	
Higher annualised plan budget	⬇	⬆		⬆
Participant received services from Commonwealth programs before entering the NDIS	⬆			
Participant received State/ Territory supports before entering the NDIS				⬆
Higher level of NDIA support	⬇			
Plan is plan managed/Agency managed				⬆
Participant participates in the community		⬇		
Participant has friends		⬇		

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Higher unemployment area				⬆

Key findings from Table 2.14 include:

- Parents/carers of participants with a sensory disability who had concerns in six or more developmental areas at baseline were more likely to say they did not have concerns in six or more areas at first review, compared to parents/carers of participants with other disabilities. Similarly, parents/carers of participants with a sensory disability who did not have concerns in six or more developmental areas at baseline were less likely to say they had concerns in six or more areas at first review, and at second review, compared to parents/carers of participants with other disabilities. However, improvement was less likely, and deterioration more likely, for parents/carers of participants with Down syndrome or an intellectual disability.
- Deterioration was less likely for female participants, at both first and second review.
- Higher level of function, and lower plan budget, were associated with a higher likelihood of improvement and a lower likelihood of deterioration.
- Improvement was more likely for participants living in more remote areas, at both first and second review.
- Having friends and participating in community was associated with a lower likelihood of deterioration after one year.

My child can make friends with people outside the family

The percentage of parents/carers reporting that their child can make friends with people outside the family increased by 5.4% between baseline and first review and by 7.6% between baseline and second review. This was a result of improvements offset by deteriorations as set out in Table 2.15 below.

Table 2.15 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	3,187	4,678	810	25.4%	388	8.3%	+5.4%
Baseline to Review 2	398	548	143	35.9%	71	13.0%	+7.6%

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 2.16 below.

Table 2.16 Key drivers of likelihood of transitions of *"my child can make friends with people outside the family"* response

	Baseline to First Review		Baseline to Second Review	
	Relationship with likelihood of		Relationship with likelihood of	
Variable	Improvement	Deterioration	Improvement	Deterioration
Participant lives in Victoria	↓	↓		
Participant lives in Queensland		↓		
Participant lives in South Australia	↑		↑	
Disability is autism		↑		↑
Disability is a cerebral palsy or another neurological disability		↓		
Disability is a sensory disability		↓	↑	
Participant is CALD	↓		↓	
Participant is older		↓		
Entered the Scheme in 2016/17	↑			
Lower level of function	↓	↑	↓	↑
Higher annualised plan budget	↓	↑		
Plan is agency managed				↑
Higher level of NDIA support				↑
Access type is early intervention	↓			
Participant uses child-care		↓		
Participant participates in the community		↓		
Participants lives in an area with a higher unemployment rate	↓			

Key findings from Table 2.16 include:

- Participants with autism were more likely to deteriorate, and those with cerebral palsy, another neurological disability or a sensory disability were less likely.
- Older participants were less likely to experience deterioration in their ability to make friends outside the family.
- Participants with higher level of function were more likely to improve, and less likely to deteriorate, in their ability to make friends outside the family.
- Participants with a higher annualised plan budget were less likely to improve, and were more likely to deteriorate, between baseline and first review.
- Use of child care and participation in the community are associated with a lower likelihood of deterioration.
- Participants living in areas with higher unemployment rates were less likely to improve between baseline and first review.