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Individualized disability support schemes and their impact on autism diagnoses

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Abstract

This paper examines the impact of individualized funding for disability supports on autism diagnoses. We identify these effects using the staggered roll out of the National Disability Insurance Scheme (NDIS), which provides individualized funding for non-medical disability interventions. We find compelling evidence that the introduction of the NDIS has led to a 32% increase in reported autism prevalence and accounts for 47% of new diagnoses since the introduction of the scheme. We also find a significant shift in diagnostic practices with a reduction in diagnoses from government subsided healthcare professionals. A lower threshold for recognition appears more important as a channel than catch-up in historical underdiagnoses.

Keywords: Autism, ASD, autism spectrum disorder, disability, diagnoses, government supports, National Disability Insurance Scheme, NDIS, neurodiversity, prevalence
JEL codes: H51, H53, I38

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1 Introduction

Disability policy worldwide has shifted focus since the United Nations Convention on the Rights of People with Disabilities (UNCRPD) came into effect in 2008. Systems of support that were mainly based on a medicalized model for rationed services have pivoted towards the social model of disability focused on removing barriers to inclusion and providing supports determined with input from people with disability (United Nations, 2006). In response, individualized funding schemes are increasingly adopted worldwide as countries move away from traditional systems of block funding. Australia's National Disability Insurance Scheme (NDIS), introduced in 2013, represents one of the world's most comprehensive attempts at implementing individualized disability support funding on a national scale. While such schemes aim to improve outcomes for people with disabilities, they may also create unintended incentives that affect diagnosis patterns and service utilization.

This paper examines how the introduction of individualized disability funding affects autism diagnosis rates. Autism constitutes a spectrum of neurodevelopmental conditions collectively defined by differences in social communication and interaction, and the presence of restricted and repetitive behaviours (APA, 2013). Autism and its rate or prevalence in our paper refers to the population with an autism diagnosis as reported in data from the national health system and the NDIS. We leverage Australia's staggered rollout of the NDIS between 2013 and 2020 to identify the causal impact of funding availability on autism diagnosis rates. Our study is particularly relevant given the global trend of rising autism prevalence, which has doubled in the United States (U.S.) between 2010 and 2020 and tripled in Australia over the same period (CDC, 2024; ABS, 2022). While researchers have identified various contributors to this trend, including changes in diagnostic practices, increased awareness, and environmental factors, the role of funding mechanisms remains understudied (Nassar et al., 2009; Lai et al., 2014; Baxter et al., 2015; Randall et al., 2016; May et al., 2017; Kim et al., 2019; Bai et al., 2019; Chiarotti and Venerosi, 2020; May et al., 2020; Zeidan et al., 2022; Bourke et al., 2023).

We provide the first empirical analysis of the causal effect of an individualized disability support funding mechanism on autism rates. Using national administrative data, we employ a staggered differences-in-differences approach to compare changes in reported autism prevalence across regions before and after NDIS introduction. We find compelling evidence that the NDIS has increased autism rates in Australia. Between 2013 and 2018, regions in which the NDIS was introduced reported autism rates that were on average 0.56 percentage points greater than areas where the NDIS was not yet available. The effect is larger for males (0.86 percentage points) than non-males[1] (0.25) but statistically significant for both genders.

Our findings indicate that the availability of NDIS funding has caused a 32% increase in reported autism prevalence and accounts for 47% of new diagnoses since 2013. Our numerical

[1]Non-males include females and those who identify as non-binary, gender diverse, or with descriptors other than man/boy or woman/girl. In our population, this is 1.2 per cent. This latter group is too small to allow for separate estimation. If we keep only those who identify as either male or female, the effect for female prevalence is statistically indistinguishable from that for 'non-males'. We include everyone for completeness.

estimates are robust to the inclusion of various possible confounding factors, including gender, household income, education, remoteness and measures of socio-economic advantage and disadvantage. These factors act as proxies for access to information about autism, cultural attitudes towards disability and availability of diagnostic services.

The results suggest that policy incentives for individualised funding are stronger, on average, than the stigma associated with take-up of government welfare supports (Celhay et al., 2025) and obtaining a lifetime disability diagnosis. To better understand this effect, we examine two possible channels through which the NDIS has increased reported autism prevalence. First is a lowering of the threshold for formal recognition of autism and the second is increased recognition of previously under-diagnosed groups with unmet needs. While both these effects are likely present in the data, we find that a lower threshold for recognition appears more important as a channel than catch-up in historical underdiagnoses.

We contribute to growing literature on the non-etiological drivers of reported autism prevalence by explicitly considering the impact of an individualised disability funding mechanism on diagnoses. Such funding schemes are increasingly popular around the world and are endorsed by disability advocates. Evaluating their impacts and unintended consequences is key to designing high-quality and sustainable disability policy. We also contribute to a highly active area of policy debate in Australia by providing a precise estimate of the impact of the NDIS on autism diagnoses separate from other factors that may explain increasing reported prevalence.

2 Literature and Institutional Context

2.1 Literature and Contribution

Worldwide, the number of people diagnosed with autism is rising, with marked increases over the last decade (Elsabbagh et al., 2012; Zeidan et al., 2022; Solmi et al., 2022; Salari et al., 2022). However, the rate of increase in reported autism prevalence is steeper in Australia over the past twenty years than other countries with comparable economies and health profiles (Elsabbagh et al., 2012; Zeidan et al., 2022; Ranjan, 2023; Talantseva, 2023). Whilst the increasing trend of autism prevalence is acknowledged worldwide, considerable differences of opinion emerge around what is driving this trend.

Autism research predominantly points to non-etiological factors, such as the “broadening of the diagnostic concepts, diagnostic switching from other developmental disabilities, service availability, and awareness of autistic spectrum disorders in both the lay and professional public”, as the primary drivers of the increase in reported prevalence (Prior, 2003; Leonard et al., 2010; Elsabbagh et al., 2012; Lai et al., 2014; Baxter et al., 2015; Taylor et al., 2016; Chiarotti and Venerosi, 2020; Zeidan et al., 2022). Whilst research acknowledges the broadening of

criteria after the publication of diagnostic manuals in 1994[2], that change is unlikely to explain the marked increase observed over the last decade. International studies from Asia, Australia, Europe and North America show that the introduction of new criteria in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) in 2013, resulted in decreases or at most no change in the number diagnosed (Bent et al., 2017, Kim et al., 2014, Maenner et al., 2014, Kulage et al., 2020, Peters and Matson, 2020).

Other studies suggest additional factors impacting autism diagnoses include both genetic and environmental factors linked to the biological processes of autism and behavioral incentives created by government funding mechanisms (Hertz-Picciotto and Delwiche, 2009; Nassar et al., 2009; Elsabbagh et al., 2012; Grabrucker, 2013; Fairthorne et al., 2016; Sandin et al., 2016; Ng et al., 2017; Kim et al., 2019; Bai et al., 2019; Chiarotti and Venerosi, 2020; Fombonne, 2020; Zeidan et al., 2022). Statistically significant associations were found across multiple studies for a few genetic biomarkers, including gender, parents' mathematical aptitude, mothers' advanced age and mothers' psychiatric conditions (Baron-Cohen, 2012; Howsmon et al., 2017; Grabrucker, 2013; Ng et al., 2017; Kim et al., 2019). However, it seems implausible that such rapid increases in reported prevalence over the past decade could reflect shifts in these biological risk factors, given a lack of substantial change to known biological processes associated with autism over the same period (Bourke et al., 2023).

With the rise in reported autism prevalence steeper in Australia than other countries with comparable economic and health systems, increased rates could potentially be attributed to the need, created by government policy, for a formal diagnosis to access the funding for NDIS disability supports. However, little academic research investigates the impact of the individualized funding model in Australia on the national increase in autism diagnoses.

In the U.S., researchers have investigated the impact of state insurance mandates requiring commercial health plans to cover services for children with autism on diagnosis rates and access to services. While Chatterji et al. (2015) and Acton et al. (2021) found no change in autism identification using national health survey and administrative education data respectively, Mandell et al. (2016) used data from three national insurers and found a small increase in prevalence (0.29 per 1000 children), three years after the mandate's introduction. However, the increase in community prevalence in the US remains unexplained as this policy only impacted the commercially insured population, where autism rates are significantly lower than community prevalence estimates.

Another branch of literature investigates the causes of systematic overdiagnosis of a similar neurological condition, attention-deficit/hyperactivity disorder (ADHD), in children and adolescents. Research from multiple countries have found that the use of heuristics, such as the subjective comparison of children in the same grade, instead of data-based decisions by diagnosticians has caused increased rates of children with ADHD (Elder, 2010; Evans et al., 2010; Schwandt et al., 2016; Karlstad et al. 2017; Merten et al., 2017). There is limited empirical

[2] Diagnostic and Statistical Manual of Mental Disorders 4th Edition and 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) came into use by practitioners in 1994.

evidence that this can also explain increased community prevalence of autism, a separate condition with different diagnostic processes and recommended interventions.

Many studies investigating autism prevalence hypothesize possible causes without providing empirical evidence. On the other hand, empirical studies investigating the impact of specific factors usually focus on one factor and are often constrained by small sample sizes, limited geographical coverage and a focus on narrow age groups. Our paper aims to fill a void in the literature by identifying the causal impact of the staggered roll out of the NDIS on autism prevalence in Australia.

2.2 Institutional Context

The National Disability Insurance Scheme (NDIS) is an Australian federal government program which provides individualized funding for disability supports. It was introduced on 1 July 2013 in four trial sites and progressively rolled out to the rest of the country by 1 July 2020. The national scheme replaced a disparate set of state-based disability support systems based on a medicalized model and funded by block grants. While joining an international trend towards establishing individual funding schemes for disability supports, the Australian approach is unique in its nation-wide scale and its foundations on the principles of social investment and insurance (Dickinson, 2017).

Over the past decade, the costs of the NDIS have escalated. The Scheme which was once expected to cost $22 billion a year at maturity, reported total annual expenditure of $42 billion in the most recent financial year (NDIA, 2024b; Australian Productivity Commission, 2017). Costs are expected to almost triple over the next decade (NDIA, 2023a). Official reports from the National Disability Insurance Agency (NDIA) and an independent governmental review of the NDIS point to greater than expected participation of children with autism and developmental delay, often a precursor to an autism diagnosis, as a significant driver of escalating costs (NDIA, 2023a; PM&C, 2023).

Individuals with autism can access funding or support through the NDIS if they meet three eligibility criteria relating to age, residency and disability (Australian Government, 2013). First, they must be under the age of 65 when applying for access. Second, they need to be an Australian citizen or permanent resident living in an area where the NDIS is available[3]. Third, their disability is caused by a permanent impairment which substantially reduces their functional capacity or ability to work, study or take part in social life. If an individual does not meet disability requirements, they may qualify to receive early interventions if they have a permanent impairment where early interventions will help reduce the functional impacts of the impairment, or if they are aged less than 6 and have developmental delay[4] (NDIA, 2024a).

[3] NDIS is available to some New Zealand passport holders who hold a protected Special Category Visa (SCV).
[4] The legislated definition for developmental delay is that it be caused by mental or physical impairments which substantially reduces the child's functional capacity compared with other children the same age and mean the child needs an interdisciplinary mix of specialist services for a duration longer than 12 months.

Access to NDIS is effectively guaranteed for individuals diagnosed with Level 2 or 3 autism using the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) diagnostic criteria (NDIA, 2024). For those under the age of 6 with developmental concerns[5], support is provided through the NDIS without a requirement for a diagnosis. Such individuals can continue to access support through the NDIS until age 7. In the year that they turn 7, they will need to obtain a diagnosis for ongoing NDIS support.

For those aged 6 and over who did not enter the Scheme at a younger age because of development concerns, a diagnosis of permanent and substantial disability is required for NDIS support. Those who do not have a permanent diagnosis of disability and are ineligible for the NDIS are directed to other mainstream and community supports, some of which are partially subsidized through Medicare, Australia's national health care system (NDIA, 2024a).

NDIS funding is individualized and can be used to purchase reasonable and necessary supports for a person's lifetime provided they continue to meet the significant and permanent thresholds after reassessment or until they choose to exit the NDIS (NDIA, 2024a). Reassessment takes place at the end of a plan, usually of 12-month duration. Reasonable and necessary supports include assistance with everyday activities, capacity building supports such as therapy for building independence and skills, and capital supports for one-off purchases including assistive technology, equipment and home or vehicle modifications.

Prior to the introduction of the NDIS, children with autism could access disability supports from providers who were block funded by state/territory governments under a national framework for service provision through mainstream sectors (Buckmaster and Clark, 2018). In addition, some children could access funding for individualized supports through the Helping Children with Autism (HCWA) program and Better Start initiatives (DSS, 2024).

As the NDIS progressively rolled out, previously Commonwealth funded programs ceased, whilst State and Territory funded providers of disability support in the community transitioned to either exclusively servicing NDIS participants or a hybrid model including privately funded clients. While most State and Territory governments have continued to provide schools with additional funding to facilitate inclusive education for students with a diagnosis, other funded disability supports in the community are no longer widely available for those outside of the NDIS (DSS, 2024). Much of the support for individuals who are ineligible for the NDIS appears to be self-funded through the private sector. The lack of funding through other sources could incentivize people to obtain diagnoses that make them eligible for the NDIS.

3 Data

Our analysis uses data from the Australian Bureau of Statistics' (ABS) Person Level Integrated Data Asset (PLIDA). PLIDA is a population-level dataset combining administrative records about individuals' health, education, government payments including disability funding, income and taxation, employment, and population demographics over time (ABS, 2024). Administrative data

[5] On 1 July 2023, the age cut off for the early intervention approach was raised from 7 to 9 years.

provide a more accurate measure of the outcome variable and a much larger sample than is typically available in survey data, enabling precise estimation and avoiding problems related to self-reporting of health conditions. However, a trade-off of using administrative data is the limited availability of demographic control variables.

3.1 Policy Variation

NDIS trial and transition agreements were negotiated between State/Territory and national governments.[6] The scheme was then implemented in a staggered manner across regions for selected age groups between 1 July 2013 and 1 July 2020[7]. Nine trial sites commenced operations between 1 July 2013 and 1 July 2016, after which the NDIS was progressively rolled out to remaining local government areas. Table 1 lists the nine NDIS trial sites, the respective age and geographical eligibility criteria, and dates of commencement[8]. A full list of phase-in dates for each local government area is provided in NDIS Roll Out.

Table 1 NDIS Trial sites by location, age range and date of commencement

State	NDIS Trial Site	Local Government Area	Age Range	Commenced
New South Wales	Hunter	Lake Macquarie (C)	0 - 64	1-Jul-13
New South Wales	Hunter	Maitland (C)	0 - 64	1-Jul-13
New South Wales	Hunter	Newcastle (C)	0 - 64	1-Jul-13
South Australia	South Australia	All	0 - 14	1-Jul-13
Tasmania	Tasmania	All	15 - 24	1-Jul-13
Victoria	Barwon	Colac-Otway (S)	0 - 64	1-Jul-13
Victoria	Barwon	Greater Geelong (C)	0 - 64	1-Jul-13
Victoria	Barwon	Queenscliffe (B)	0 - 64	1-Jul-13
Victoria	Barwon	Surf Coast (S)	0 - 64	1-Jul-13
Australian Capital Territory	Australian Capital Territory	All	0 - 64	1-Jul-14
Northern Territory	Barkly	Barkly (S)	0 - 64	1-Jul-14
Western Australia	Perth Hills	Kalamunda (S)	0 - 64	1-Jul-14
Western Australia	Perth Hills	Mundaring (S)	0 - 64	1-Jul-14
Western Australia	Perth Hills	Swan (C)	0 - 64	1-Jul-14
New South Wales	Nepean Blue Mountains	Blue Mountains (C)	0 - 17	1-Sep-15
New South Wales	Nepean Blue Mountains	Hawkesbury (C)	0 - 17	1-Sep-15
New South Wales	Nepean Blue Mountains	Lithgow (C)	0 - 17	1-Sep-15
New South Wales	Nepean Blue Mountains	Penrith (C)	0 - 17	1-Sep-15
Queensland	Townsville	Charters Towers (R)	0 - 17	1-Apr-16
Queensland	Townsville	Palm Island (S)	0 - 64	1-Apr-16
Queensland	Townsville	Townsville (C)	0 - 17	1-Apr-16

This variation in implementation creates an opportunity to compare prevalence trends between population cohorts that are eligible and ineligible for the NDIS, since the timing of the roll out of the NDIS was exogenous to the prevalence of autism across the states and territories. The selection of locations for NDIS trial sites and the transitional roll out was not related to the growth in autism prevalence, as confirmed in our analysis of pre-treatment effects (see Section 5.1 and Parallel Trends). Rather, the roll out was shaped by bilateral negotiations between state

[6] https://www.ndis.gov.au/about-us/governance/intergovernmental-agreements#ndis-trial-and-transition-agreements

[7] The NDIS was available in most regions by 1 October 2018 and throughout Australia by 1 July 2019 (availability in Christmas Island and the Cocos Islands began on 1 July 2020).

[8] In Western Australia, two trials operated simultaneously: the NDIS and the Western Australian Government's My Way model, which also provided individualized supports. In 2017, federal and state governments agreed that the NDIS model would be rolled out through-out the state and the My Way model discontinued. Our data do not include information about participants in the My Way model so we cannot exclude them from the control group. In Section 5.2, we show that results are slightly attenuated if we exclude Western Australia but still statistically significant.

and federal governments and the intention to obtain a representative sample of the population during the trial phase (Cowden et al., 2021). Analysis of cross-cohort prevalence allows inference about the impact of the NDIS on autism diagnosis rates.

3.2 Panel Set Up

We use the combined demography and location modules from PLIDA to identify our base population by location for the period 2011 to 2021, excluding non-residents ineligible for Medicare and NDIS supports.[9] These data include residential information on Australians over time and limited demographic data derived from Personal Income Tax data, Medicare Consumer Directory (MCD) and social services data. We use the Medicare Benefit Schedules (MBS) and NDIS datasets to identify the population with an autism diagnosis and the most recent 2021 Census dataset to capture demographic information for each region.

We use Statistical Area Level 2 (SA2) for our unit of analysis and randomly allocate individuals within each Local Government Area (LGA) to mapped SA2's in proportion to the population-weighted concordances from the ABS's correspondence tables.[10] This matching procedure allows us to obtain a best estimate of autism prevalence by SA2 and is in line with methodology recommended by the ABS. We examine treatment at a regional rather than individual level as treatment is required to be irreversible in our econometric approach. Individuals can move between treated and untreated status: regions cannot. In Section 5.2, we show selective migration has no impact on our results.

NDIS treatment indicators are generated based on the calendar year in which the region became eligible for the NDIS. The analysis focuses on the population aged 14 years and under, as diagnoses for Australians aged over 14 years who are not accessing supports via the NDIS cannot be easily identified in PLIDA (see section 3.3). We exclude regions with populations smaller than fifty people in any period and adopt a balanced panel of regions covering the years 2011 to 2021. With these data it is possible to evaluate the effect of NDIS implementation on post-entry prevalence for up to eight years after treatment.

3.3 Measure of Autism Prevalence

Our dependent variable is autism prevalence: the estimated proportion of the population with a reported autism diagnosis. Individuals are identified with a confirmed autism diagnosis if they:

- have accessed items[11] from the Medicare Benefits Schedule (MBS) which relate to a confirmed diagnosis of a complex neurodevelopmental disorder or disability; or

[9] Individuals who change residency status during the period are included when they are resident and excluded when non-resident.
[10] See ABS (2024a) for information on SA2, LGA and the broader Australian Statistical Geography Standard (ASGS).
[11] The item numbers are 135 (equivalent telehealth item 92141) or 289 (equivalent telehealth item 92434).

- have accessed any of the MBS items[12] related to subsequent services which require a confirmed diagnosis; or
- are an NDIS participant with a primary[13] disability of autism.

This method identifies most Australians who have received an autism diagnosis by the age of fourteen[14]. It does not include Australians with an autism diagnosis who have not interacted with government services nor those who may have obtained a diagnosis prior to 2011 and are not receiving support subsidized by Medicare or via the NDIS post-2011. Such individuals may not meet the eligibility criteria for the NDIS or may choose not to join the NDIS[15].

We estimate date of diagnosis using the earliest date of service recorded in the MBS or the date of diagnosis in NDIS data. Where the date of diagnosis is not available in the NDIS data, we assume that diagnosis happened within a year of approval of a first NDIS plan.

Two limitations to our analysis arise from the data. First, prevalence prior to 2011 is not captured, as the MBS data contain a snapshot of claims in each period. Our analysis focuses on additional prevalence between 2011 and 2021. Some historical prevalence will be captured as individuals become eligible for the NDIS if they use their pre-existing diagnosis to access the NDIS. Those without a recorded date of diagnosis are allocated to the period in which they became eligible for the NDIS even though they already had a diagnosis beforehand. This may artificially increase the rates of autism in later periods as more regions become NDIS eligible. We believe this is unlikely to have a material impact, given the small magnitude of recorded prevalence prior to 2011 (ABS, 2009). As far as we can tell from other data sources, most of these people would have aged out of the study cohort or do not enter the NDIS. Either way, this should not materially impact our estimates.

Second, the MBS codes cover all complex neurodevelopmental disorders and disabilities, not just autism. A cross match between those who were identified with these codes in the MBS and also present in the NDIS data showed that 84% had a primary disability of autism, 8% had developmental delay and a further 6% had intellectual disability. Many of these last two groups will have co-occurring autism (Matson and Shoemaker, 2009; Yirmiya and Charman, 2010; Lecavalier et al., 2011; Bolton et al. 2012). Further, development delay is often a precursor to an autism diagnosis. Using the MBS codes in this way will also capture neurodevelopmental diagnoses in general beyond autism, but the numbers are small.

[12] The item numbers are 82015, 82020, 82025 or 82035 (or equivalent telehealth items 93035, 93043, 93036 or 93044).
[13] Secondary disability and co-morbid conditions are not recorded in the data.
[14] From 1 March 2023, patient eligibility for the relevant codes expanded from under 13 years for assessment services and under 15 years for treatment services to under 25 years for both. Prior to 1 March 2023, MBS claims relating to the diagnosis of a patient over the age threshold would be captured in a broader item number which also includes other services provided by a psychiatrist.
[15] The proportion who are eligible but choose not to join the NDIS is likely to be very small in Australia, reflecting the high take up of government social welfare programs compared with other OECD countries (Mood, 2006; Ko & Moffitt, 2024). Further, the number of NDIS participants has been significantly greater than initially modelled for several years (NDIS, 2023).

3.4 Other Covariates

As discussed in section 2.1, researchers suggest that prevalence of autism has been increasing due to factors other than government policy. These include the rise of social and professional awareness and acceptance of autism and neurodiversity, shifts in diagnostic processes to recognize disabilities with milder impacts and some genetic and environmental factors. The introduction of the NDIS is likely to have affected professional and public awareness of potential government support following an autism diagnosis but unlikely to have affected the other factors. Our estimate of the impact of the NDIS introduction will incorporate this increased awareness. However, the remaining increases in prevalence over time unrelated to the NDIS should be experienced across all regions of Australia and should not impact our estimated treated effect.

In some models, we include region-specific, time-invariant demographic and socio-economic information to control for these potential confounding factors. We control for gender (proportion of the region's population that are male) and measures of socio-economic advantage and disadvantage (Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) and the Index of Education and Occupation (IEO) deciles). We include proxies for ability to afford a diagnosis (median household income), awareness of disability (proportion of households with a tertiary educated member) and availability of diagnostic services (remoteness indicator). These variables are measured either just prior to the introduction of the NDIS or in the 2021 Census. The fact that we only observe them at one point in time is unlikely to affect our results since these variables only evolve slowly.

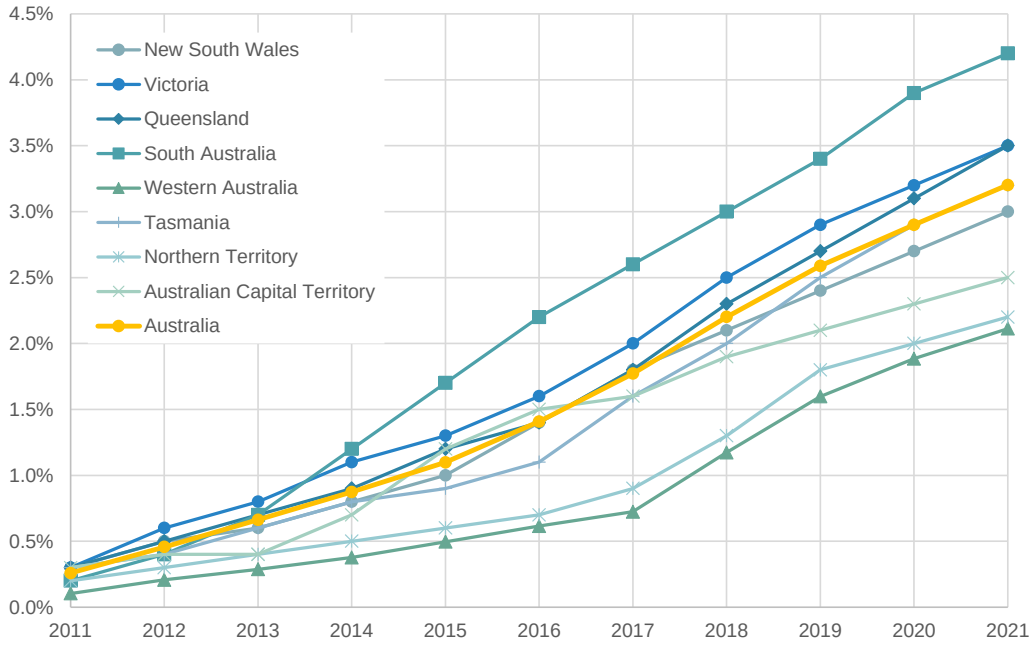
3.5 Summary Statistics

Table 2 presents the characteristics of SA2 regions in each year of the roll out, across treated and not yet treated areas, as defined in Section 3.1. The region means across groups are similar; the most apparent difference lies in distribution of remoteness for treated and not yet treated regions. We observe kinks in the trends of child autism rates for each state and territory in Figure 1, coinciding with the average timing of NDIS introduction.

Table 2 Summary statistics for treated and control (not yet treated) regions for each year during NDIS roll out

SA2 Characteristics (2016)	2013 Mean (SD)		2014 Mean (SD)		2015 Mean (SD)		2016 Mean (SD)		2017 Mean (SD)		2018 Mean (SD)	
	Treated	Not yet treated	Treated	Not yet treated	Treated	Not yet treated	Treated	Not yet treated	Treated	Not yet treated	Treated	Not yet treated
Observations	194	1964	146	1818	26	1792	375	1417	649	768	596	172
Autism rate	0.7% (0.4%)	0.6% (0.4%)	0.8% (0.4%)	0.8% (0.5%)	1.7% (0.5%)	1.0% (0.6%)	1.4% (0.6%)	1.2% (0.7%)	1.8% (0.8%)	1.4% (0.8%)	1.9% (0.8%)	2.2% (1.4%)
Population	1,926 (1,116)	2,045 (1,323)	1,294 (1,271)	2,146 (1,342)	2,861 (1,341)	2,188 (1,384)	2,741 (1,599)	2,094 (1,344)	1,853 (1,164)	2,348 (1,495)	2,406 (1,549)	2,265 (1,484)
Proportion of Males	50.9% (1.5%)	50.7% (1.5%)	50.6% (1.9%)	50.7% (1.4%)	51.0% (1.0%)	50.7% (1.4%)	50.8% (1.3%)	50.6% (1.4%)	50.7% (1.5%)	50.6% (1.4%)	50.6% (1.3%)	50.8% (1.5%)
Age	6.73 (0.55)	6.60 (0.84)	6.68 (0.87)	6.66 (0.73)	6.70 (0.94)	6.68 (0.74)	6.72 (0.80)	6.74 (0.74)	6.81 (0.72)	6.81 (0.80)	6.85 (0.73)	7.05 (0.79)
SEIFA (IRSAD) Decile	4.64 (2.51)	5.58 (2.88)	7.66 (2.29)	5.41 (2.86)	5.46 (2.37)	5.41 (2.87)	5.52 (3.00)	5.39 (2.83)	4.91 (2.83)	5.79 (2.78)	5.98 (2.80)	5.12 (2.60)
Proportion with Aboriginal and Torres Strait Islander background	4.7% (5.4%)	7.3% (9.7%)	5.4% (7.0%)	7.3% (9.8%)	7.9% (3.0%)	7.2% (9.6%)	6.8% (8.4%)	7.2% (9.7%)	8.9% (9.6%)	5.5% (9.0%)	5.3% (9.7%)	5.6% (5.0%)
Proportion of Culturally or linguistically diverse	7.3% (4.4%)	6.2% (3.6%)	7.7% (4.2%)	7.2% (4.4%)	4.2% (1.6%)	7.2% (4.5%)	7.6% (5.0%)	7.1% (4.5%)	6.1% (4.3%)	7.7% (4.6%)	8.0% (4.7%)	6.4% (4.3%)
Median income ($000's)	96 (27)	103 (39)	120 (47)	101 (38)	101 (16)	101 (39)	103 (41)	101 (38)	98 (37)	104 (38)	104 (39)	101 (37)
Proportion of households with at least 1 tertiary educated member	45.7% (19.2%)	47.5% (20.5%)	59.2% (19.3%)	46.5% (20.4%)	39.3% (12.1%)	46.6% (20.4%)	47.9% (20.9%)	46.3% (20.3%)	43.5% (19.8%)	48.7% (20.4%)	50.1% (20.7%)	43.6% (18.5%)
Remoteness (distribution of regions)												
Metropolitan	61%	59%	96%	56%	81%	56%	63%	54%	30%	74%	80%	56%
Inner regional	18%	22%	3%	24%	19%	24%	18%	26%	44%	10%	7%	21%
Outer regional	15%	14%	0%	15%	0%	16%	17%	15%	20%	11%	9%	20%
Remote	4%	2%	0%	2%	0%	2%	1%	2%	3%	2%	2%	2%
Very remote	3%	2%	1%	2%	0%	2%	1%	3%	3%	2%	3%	2%

Figure 1 Trends in rates of autism diagnoses in children by State/Territory



4 Empirical Strategy

4.1 Conceptual Framework

We apply the empirical framework proposed by Callaway and Sant'Anna (2021) to measure the causal effect of the staggered NDIS rollout on reported autism prevalence. This framework allows us to obtain robust estimators of the average treatment effect over multiple time periods for varying groups, accounting for the differences in treatment timing and dynamic effects, where outcomes are dependent on past treatment. The framework requires treatment to be binary and irreversible, which is appropriate for this study as a region becomes irreversibly treated once the NDIS becomes available to the population. We use regions that are 'not yet treated' for control groups.

Sun and Abraham (2021) and Borusyak et al. (2021) have proposed alternative frameworks that can assess treatment effects when treatment is binary and staggered (de Chaisemartin and D'Haultfoeuille, 2023). Because the NDIS was eventually implemented throughout Australia, we do not have a control group that is "never-treated". We use the Callaway and Sant'Anna (2021) method for the greater precision afforded by using a "not-yet-treated" control group. The Callaway and Sant'Anna (2021) approach offers an advantage relative to other methods mentioned above as it allows testing of the robustness of the estimated average treatment effect when the parallel trends assumption[16], needed for statistical identification, holds after conditioning on observed covariates (Callaway and Sant'Anna, 2021). In our case, this is not an

[16] In the canonical DiD set up, the parallel trends assumption underpins the statistical identification of the average treatment effect and requires that in the absence of treatment, the average outcomes for treated and comparison groups would have followed parallel paths over time.

issue since parallel trends hold unconditionally. We use the ability to incorporate covariates to test robustness of the results to potential confounding factors.

4.2 Model Specification

We use notation set out by Callaway and Sant'Anna (2021) and begin by considering the case with $T = 11$ periods, where we denote a particular time period $t = 1, \dots, T$. $D_{i,t}$ is a binary variable equal to one if the region i is treated in period t and equal to zero otherwise. Treatment is staggered and irreversible.

$$D_1 = 0 \; almost \; surely \; for \; t = 2, \dots, T \text{ and } D_{t-1} = 1 \; implies \; that \; D_t = 1 \; almost \; surely$$

J_i is defined as the time period in which a region is first treated. $J_{i,g}$ is a binary variable equal to one if region i is a member of group $g = 1, \dots, G$. $G = 7$ in our setup corresponding to the 7 possible years in which a region can enter the NDIS, 2013 ... 2019.

$$p_{g,s} = P\left(J_{i,g} = 1 \mid J_{i,g} + \left(1 - D_{i,s}\right)\left(1 - J_{i,g}\right) = 1\right) \quad (1)$$

denotes the generalized propensity score where $p_{g,s}$ is the probability of being first treated at time g, conditional on either being in group g (where $J_{i,g} = 1$) or a member of the "not-yet-treated" group by time s (where $\left(1 - D_{i,s}\right)\left(1 - J_{i,g}\right) = 1$). This propensity score is used in the weighting of the various year-by-year treatment effects in the staggered design.

For robustness checks, we include covariates X and the generalized propensity score becomes

$$p_{g,s} = P\left(J_{i,g} = 1 \mid X_i, J_{i,g} + \left(1 - D_{i,s}\right)\left(1 - J_{i,g}\right) = 1\right) \quad (2)$$

The framework requires covariates to be time-invariant. From the 2021 census, we include the proportion of households with a tertiary educated member, median household income, IRSAD and IEO deciles as described above in Section 3.4 and an ABS measure of remoteness[17]. Proportion of males in the region may vary over time. To include this as a time-invariant variable, post-treatment periods are set at values in the period immediately before the region becomes treated while pre-treatment periods are set at the value in the period before the current period.

$Y_{i,t}(0)$ denotes region i's untreated outcome at time t if they were to remain untreated through time period T. For $g = 1, \dots, G$, $Y_{i,t}(g)$ denotes the potential outcome that region i experiences at time t if they were in group g. The observed and potential outcomes for each region i are related through the following equation:

$$Y_{i,t} = Y_{i,t}(0) + \sum_{g=1}^{G} \left(Y_{i,t}(g) - Y_{i,t}(0)\right) . J_{i,g}. \quad (3)$$

The framework assumes random sampling where outcome variables, covariates and treatment timing for each region are independent and identically distributed. By 2020, all regions are treated.

[17] Each region is classified as major city, inner regional, outer regional, remote or very remote using the Accessibility/Remoteness Index of Australia (ARIA+) scores.

The causal parameter is called the *group-time average treatment effect* (ATT) for regions in a particular group g at time period t. These effects allow us to analyze how average treatment effects vary across different dimensions and are denoted as:

$$ATT(g,t) = E\left[Y_t(g) - Y_t(0) \mid J_g = 1\right]. \quad (4)$$

The effects can be aggregated over time periods and for groups as well as for length of exposure to treatment. The aggregation schemes are of the form

$$\theta = \sum_g \sum_{t=2}^{T} w(g,t) \cdot ATT(g,t) \quad (5)$$

where $w(g,t)$ are carefully-chosen weighting functions (see Callaway and Sant'Anna (2021) for further discussion).

4.3 Identification Assumptions

To identify the $ATT(g,t)$ and their functionals, we impose the following three assumptions identified by Callaway and Sant'Anna (2021). These assumptions do not impose strong restrictions, as our data and set up make these plausible. We provide additional evidence that they hold as described below.

Limited Treatment Anticipation

There is a known $\delta \geq 0$ where

$$E\left[Y_t(g) \mid X, J_g = 1\right] = E\left[Y_t(0) \mid X, J_g = 1\right] \; almost\ surely\ for\ all\ g \in \{1, \dots, G\}\ and\ t \in \{1, \dots, T\}$$

such that $t < g - \delta$. This assumption restricts anticipation of the treatment for all "eventually treated" groups. In our case, there is "no anticipation". Regions are assigned to a treatment period and are not able to "choose" treatment status before then. Individuals may anticipate treatment and seek diagnoses in advance of treatment. In our robustness checks in Section 5.2, we find no difference when we allow for one year of pre-treatment anticipation. This provides evidence against anticipation.

Conditional Parallel Trends Based on "Not-Yet-Treated" Groups

For all $g \in \{1, \dots, G\}$ and $(s,t) \in \{2, \dots, J\} \times \{2, \dots, J\}$ such that $t \geq g - \delta$ and $t + \delta \leq s < \bar{g}$,

$$E\left[Y_t(0) - Y_{t-1}(0) \mid X, J_g = 1\right] = E\left[Y_t(0) - Y_{t-1}(0) \mid X, D_s = 0, J_g = 0\right] \; almost\ surely.$$

This condition imposes conditional parallel trends between group g and groups that are "not-yet-treated" by $t + \delta$, allowing for covariate-specific trends and without restricting the relationship between treatment timing and potential outcomes, $Y_t(g)$. We show that parallel trends hold unconditionally in our data. The results are not sensitive to conditioning on covariates. We show that the parallel trends assumption holds by assessing the significance of placebo estimators in pre-treatment periods. Further discussion on parallel trends can be found in Parallel Trends.

Overlap

For all $g \in \{1, \dots, G\}$ and $t \in \{2, \dots, J\}$, there exist some $\varepsilon > 0$ such that $P(J_g = 1) > \varepsilon$ and $p_{g,t}(X) < 1 - \varepsilon \; almost \; surely$. This assumption states that a positive fraction of the population is treated in each group g, and that, for all g and t, the generalised propensity score is uniformly bounded away from one. In our case, the overlap assumption is met as at least one region became treated in every year between 2013 and 2019.

4.4 Estimation

We use the doubly-robust estimation approach combining both the outcome regression approach, which models the conditional expectation of the outcome evolution for the comparison groups, and the inverse probability weighting approach, which models the conditional probability of being in group g. In our base estimates, we do not include any control variables beyond treatment and time. This approach only requires correct specification of either the outcome evolution for the comparison group or the propensity score model (and not both). As such, it is more robust against model misspecifications and allows the use of a broader set of estimation methods. We use bootstrapped standard errors clustered at the region level.

5 Estimates of the Effect of Individualised Funding

5.1 Effect of Individualized Funding on Reported Prevalence

The effect of the introduction of the NDIS on reported autism prevalence in children aged under 14 years is shown over time and by group in Table 3 and Figure 2 below. For each group, the average treatment effect is the difference-in-difference of prevalence for the treated cohort, regions where the NDIS became available in that calendar year, and the control cohort, regions where the NDIS has not yet become available in that calendar year.

The red point estimates and 95% confidence bands in Figure 2 are for pre-treatment periods, allowing for region level clustering. The blue ones are for periods after the introduction of the NDIS. The estimates in red can be interpreted as “pseudo-ATTs”: they are the estimated treatment effect if the treatment had occurred in that period (as opposed to when it actually occurred). For the estimates in blue, the base period is the period immediately before treatment, providing cumulative estimates of the treatment effect over time.

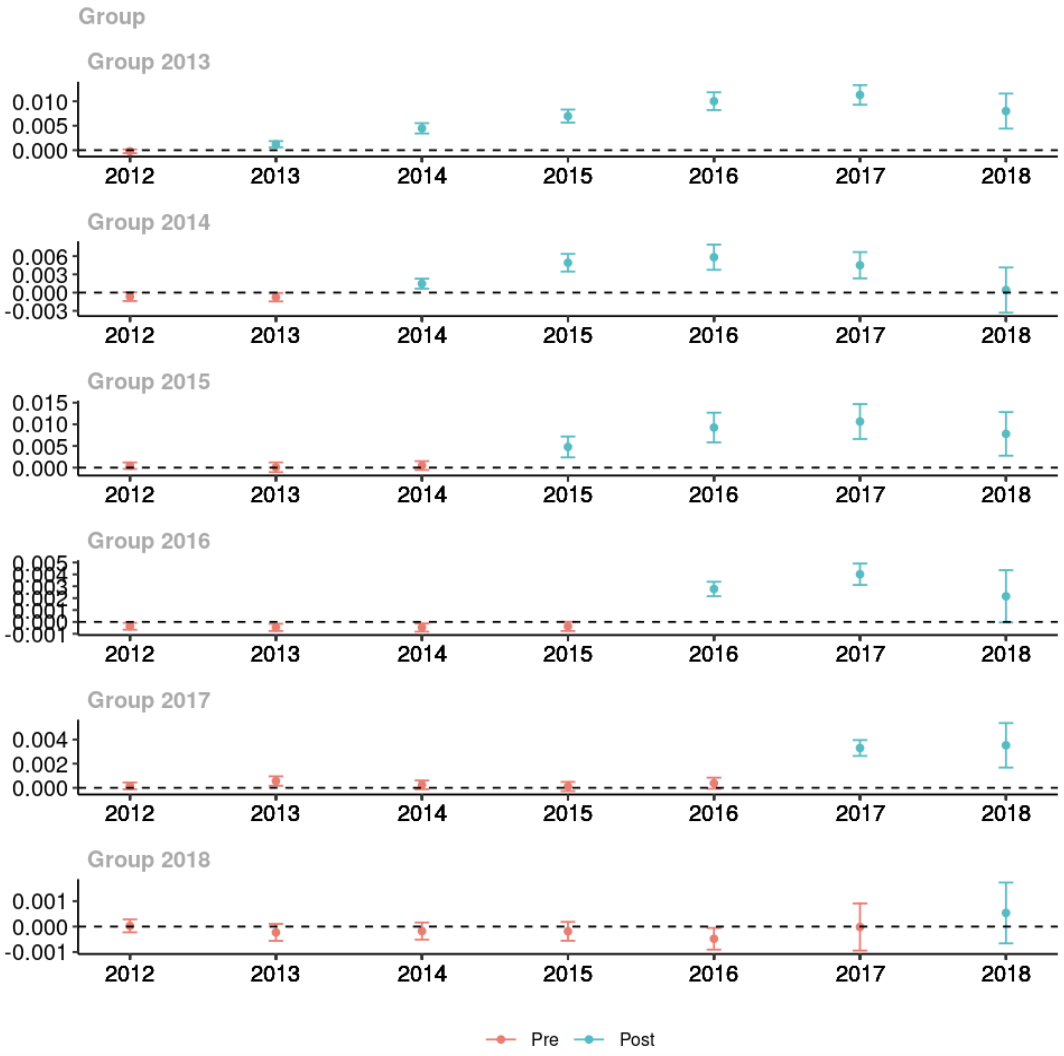
The pre-treatment effects in red are mostly not statistically different to zero (at a 5% significance level). For the few that are statistically significant, the size of the effect is very small (<0.1%) and immaterial. Figure 2 provides strong visual evidence that the parallel trends assumption holds, and the estimated treatment effects are real and substantial (see Parallel Trends for more discussion on parallel trends).

Table 3 Group-time ATT on reported autism prevalence

Group	2012	2013	2014	2015	2016	2017	2018
2013							
Sample Prevalence							
Treatment [n=194]	0.5%	0.8%	1.3%	1.8%	2.3%	2.6%	3.0%
Control [n=1,964]	0.5%	0.6%	0.8%	1.0%	1.3%	1.7%	2.1%
Group-Time Average Treatment Effect	-0.0002 (0.0001)	0.0012* (0.0002)	0.0045* (0.0003)	0.0070* (0.0004)	0.0100* (0.0006)	0.0113* (0.0006)	0.0080* (0.0011)
2014							
Sample Prevalence							
Treatment [n=146]	0.4%	0.5%	0.9%	1.4%	1.8%	1.9%	2.2%
Control [n=1,818]	0.5%	0.7%	0.8%	1.0%	1.3%	1.7%	2.1%
Group-Time Average Treatment Effect	-0.0007* (0.0002)	-0.0008* (0.0002)	0.0015* (0.0003)	0.0049* (0.0005)	0.0058* (0.0007)	0.0045* (0.0007)	0.0004 (0.0012)
2015							
Sample Prevalence							
Treatment [n=26]	0.6%	0.8%	1.1%	1.7%	2.4%	2.8%	3.0%
Control [n=1,792]	0.5%	0.7%	0.8%	1.0%	1.3%	1.7%	2.1%
Group-Time Average Treatment Effect	0.0004 (0.0002)	0.0001 (0.0004)	0.0005 (0.0003)	0.0048* (0.0008)	0.0093* (0.0011)	0.0106* (0.0013)	0.0078* (0.0016)
2016							
Sample Prevalence							
Treatment [n=375]	0.4%	0.6%	0.7%	0.9%	1.3%	1.7%	2.0%
Control [n=1,417]	0.5%	0.7%	0.9%	1.1%	1.3%	1.7%	2.1%
Group-Time Average Treatment Effect	-0.0004 (0.0001)	-0.0005* (0.0001)	-0.0005 (0.0001)	-0.0004* (0.0001)	0.0028* (0.0002)	0.0040* (0.0003)	0.0022* (0.0007)
2017							
Sample Prevalence							
Treatment [n=649]	0.5%	0.7%	0.9%	1.1%	1.3%	1.9%	2.4%
Control [n=768]	0.5%	0.7%	0.8%	1.0%	1.2%	1.5%	2.0%
Group-Time Average Treatment Effect	0.0002 (0.0001)	0.0006 (0.0001)	0.0002 (0.0001)	0.0001 (0.0001)	0.0004 (0.0001)	0.0033* (0.0002)	0.0035* (0.0006)
2018							
Sample Prevalence							
Treatment [n=596]	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%	2.0%
Control [n=172]	0.6%	0.8%	1.0%	1.2%	1.5%	1.7%	2.1%
Group-Time Average Treatment Effect	0.0000 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)	-0.0005* (0.0001)	0.0000 (0.0003)	0.0005 (0.0004)

Red = pre treatment effect, Blue = post treatment effect, Standard errors are in parentheses.
* Denotes statistical significance at the 0.05 level.

Figure 2 Group-time ATT on reported autism prevalence



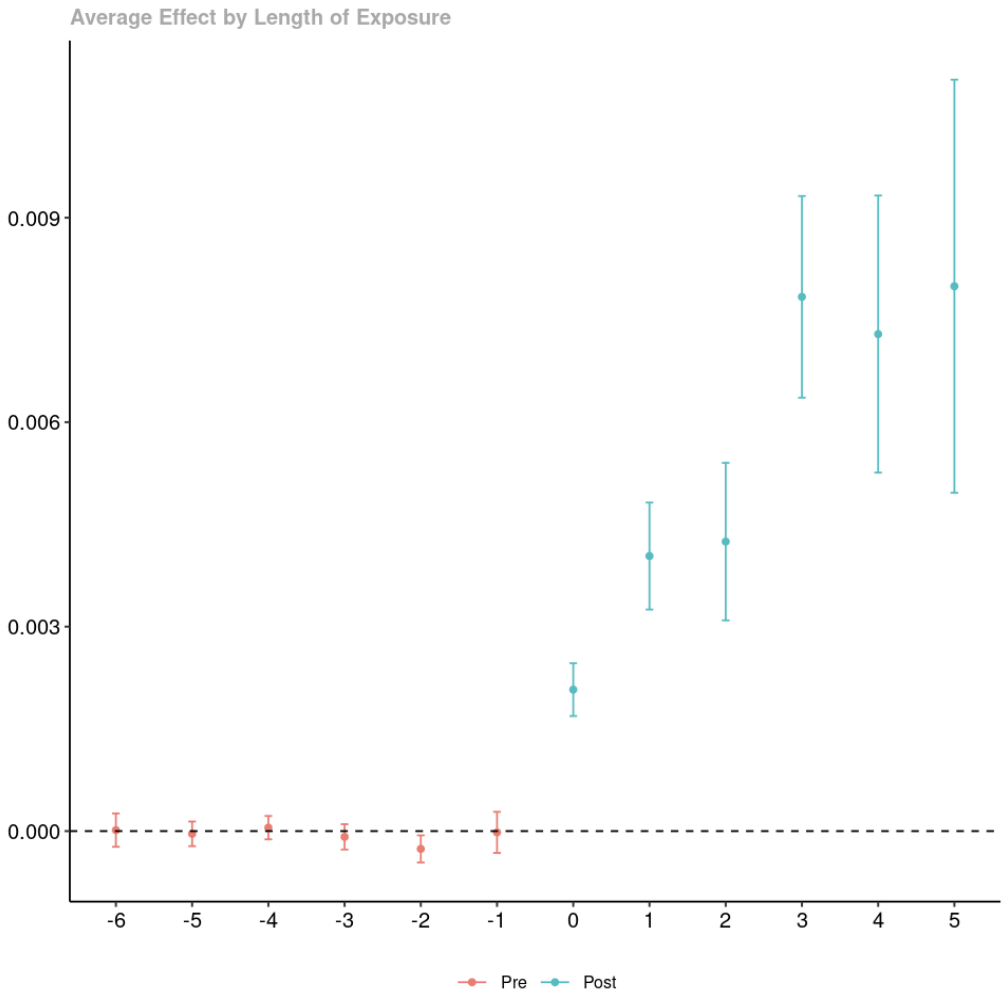
The group-time average treatment effect estimates provide support for the view that the introduction of the NDIS has led to an increase in reported child autism prevalence. All estimates are significant in the year of introduction as well as at least three years post introduction, except for the 2018 group. This exception likely reflects the composition and significantly smaller size of the control cohort, comprised of sparsely populated regions that only became eligible for the NDIS in the final year of policy roll out. The small sample size is also reflected in the wide confidence interval.

The aggregated treatment effect by length of exposure is shown in Figure 3. When aggregated, the pseudo-ATT in pre-treatment periods remains not statistically significant (at the 5% level) for all periods except in 2 periods prior to policy introduction, where the effect is very small. We observe three step increases in the size of the estimated effect in the year of introduction, and both one and three years after introduction. We believe these increases reflect a learning effect in both an operational sense and as a behavioral response to policy implementation.

A further possible learning or "spillover" effect may impact reported prevalence in regions closer to the trial sites, where the NDIS was introduced earlier. While accounting for this effect

will not change our conclusion and its significance, it may magnify the estimated treatment effect. In section 5.2 below, we examine the robustness of these results.

Figure 3 Aggregated ATT on reported autism prevalence by length of exposure



5.2 Robustness

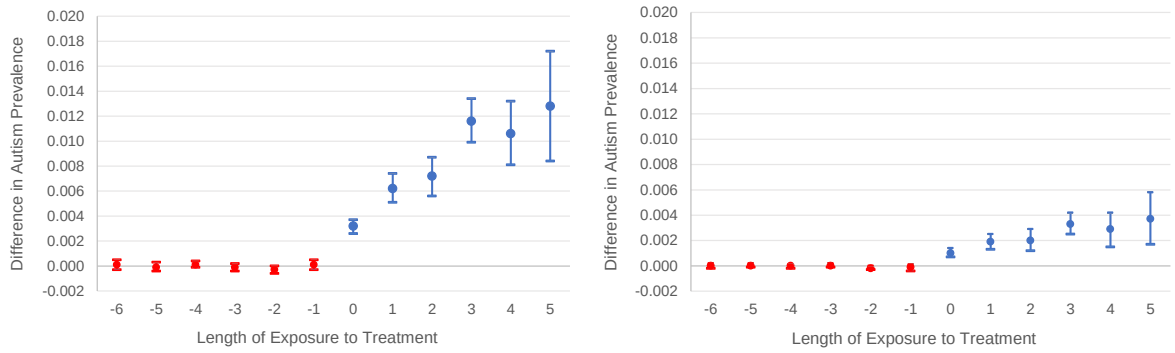
We examine whether allowing for covariate-specific trends changes the results, by conditioning on region-specific, time-invariant characteristics. We test the sensitivity of our results for various subsets of regions (major cities, regional and remote areas and excluding Western Australia) and outcome measures (male prevalence, non-male prevalence, and prevalence for those remaining in same region over the eleven-year period). The aggregated average treatment effect by length of exposure when we include various controls and estimation for sub-groups of interest are shown in Table 4.

Table 4 Aggregated ATT for various scenarios

Scenario	Aggregated Average Effect	Average Effect by Length of Exposure					
		0 year	1 year	2 years	3 years	4 years	5 years
ATT (full sample)	**0.0056* (0.0005)**	**0.0021* (0.0001)**	**0.0040* (0.0003)**	**0.0042* (0.0004)**	**0.0078* (0.0005)**	**0.0073* (0.0008)**	**0.0080* (0.0011)**
Conditioned on % male	0.0056* (0.0004)	0.0021* (0.0002)	0.0041* (0.0003)	0.0043* (0.0004)	0.0081* (0.0005)	0.0074* (0.0007)	0.0079* (0.0012)
Male prevalence	0.0086* (0.0006)	0.0032* (0.0002)	0.0062* (0.0004)	0.0072* (0.0005)	0.0116* (0.0006)	0.0106* (0.0009)	0.0128* (0.0016)
Non-male prevalence	0.0025* (0.0003)	0.0010* (0.0001)	0.0019* (0.0002)	0.0020* (0.0003)	0.0033* (0.0003)	0.0029* (0.0005)	0.0037* (0.0007)
Conditioned on median household income	0.0059* (0.0004)	0.0022* (0.0001)	0.0041* (0.0003)	0.0042* (0.0003)	0.0082* (0.0005)	0.0082* (0.0007)	0.0079* (0.0010)
Conditioned on % from household with tertiary education	0.0062* (0.0003)	0.0023* (0.0001)	0.0042* (0.0002)	0.0049* (0.0004)	0.0081* (0.0004)	0.0086* (0.0006)	0.0092* (0.0009)
Conditioned on socio-economic index scores (IRSAD decile)	0.0058* (0.0004)	0.0022* (0.0001)	0.0041* (0.0003)	0.0047* (0.0004)	0.0082* (0.0004)	0.0085* (0.0006)	0.0072* (0.0010)
Conditioned on socio-economic index scores (IEO decile)	0.0061* (0.0004)	0.0023* (0.0001)	0.0042* (0.0003)	0.0048* (0.0004)	0.0082* (0.0004)	0.0087* (0.0006)	0.0087* (0.0010)
Metropolitan areas (greater service availability)	0.0067* (0.0005)	0.0020* (0.0002)	0.0043* (0.0003)	0.0055* (0.0005)	0.0087* (0.0005)	0.0082* (0.0008)	0.0115* (0.0013)
Remote and regional areas (limited service availability)	0.0042* (0.0008)	0.0025* (0.0003)	0.0028* (0.0007)	0.21%* (0.0009)	0.0073* (0.0010)	0.0081* (0.0014)	0.23%* (0.0019)
Excluding regions in Western Australia	0.0041* (0.0005)	0.0016* (0.0001)	0.0030* (0.0003)	0.0028* (0.0005)	0.0075* (0.0005)	0.0062* (0.0007)	0.0037* (0.0011)
1 year of treatment anticipation	0.0055* (0.0004)	0.0026* (0.0002)	0.0034* (0.0004)	0.0063* (0.0004)	0.0070* (0.0006)	0.0080* (0.0011)	0.0000* (0.0000)
Prevalence for population that stayed in the same region	0.0051* (0.0005)	0.0022* (0.0001)	0.0036* (0.0003)	0.0040* (0.0005)	0.0074* (0.0005)	0.0066* (0.0007)	0.0070* (0.0012)
Inclusion of regions with small population (<50 people)	0.0056* (0.0005)	0.0021* (0.0001)	0.0040* (0.0003)	0.0042* (0.0004)	0.0078* (0.0005)	0.0073* (0.0007)	0.0080* (0.0011)

Standard errors are in parentheses.
* Results are not statistically significant at a 5% level.

Figure 4 Aggregated ATT by length of exposure for males (L) and non-males (R)



First, we examine the impact of gender. Research suggests that reported autism prevalence in males is three to four times the reported prevalence in females (May et al., 2020; Zeidan et al., 2022; Maenner et al., 2023). Conditioning on the proportion of males in each region, we find no

significant change to the results (scenario 1). We separately examine impacts on male and non-male prevalence and observe significant positive 'treatment effects' for both genders in Figure 4, but a greater effect for males (scenario 2 and 3). The introduction of the NDIS resulted in a steeper increase in autism rates for males and a modest increase for non-males. This could be consistent with autism being more prevalent amongst males. It is also consistent with research suggesting that a portion of the higher rates of reported prevalence in males can be explained by gender biases built into diagnostic tools and practices (Dworzynksi et al., 2012; Hiller et al., 2016; Geelhand et al., 2019).

Research suggests that reported prevalence of autism has been increasing with the rise of social and professional awareness and acceptance of autism and neurodiversity (Elsabbagh et al., 2012; Lai et al., 2014; Baxter et al., 2015; Taylor et al., 2016; Chiarotti and Venerosi, 2020; Zeidan et al., 2022). Some increased awareness can be attributed to communication associated with the introduction of NDIS and is captured by the treatment effect. We condition on various demographic and socio-economic factors as proxies for access to information about autism, cultural attitudes towards disability, and the ability to absorb the cost of a diagnosis (which can range from $2,000 to $5,000 in Australia).

The results are robust to conditioning on median household income, the proportion of households with a tertiary educated member, the Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) decile and the Index of Education and Occupation (IEO) decile (scenarios 4 to 7). Furthermore, the overall estimates of the average treatment effects are larger for these scenarios than for our base results. Income is similar across treatment and control regions. The control regions have slightly higher levels of tertiary education. If education can be viewed as a proxy for awareness, this could be interpreted as suggesting that rising awareness of autism in untreated areas may be influencing autism diagnoses and attenuating the results in our base case. The results of scenarios 4 to 7 indicate that our preferred base case estimates are more likely to underestimate than overestimate the increase in autism generated by the introduction of the NDIS.

We examined the impacts on reported prevalence in metropolitan and regional areas to account for greater availability of diagnostic services in major cities. We observe significant positive 'treatment effects' for both cohorts, with a greater policy-related effect on autism rates in metropolitan areas (scenario 8 and 9). We excluded regions in Western Australia (see footnote 8) to remove any potential confounding impact of their state-based program (scenario 10) and find a significant but smaller impact on autism rates.

We test the results with the inclusion of a one-year anticipation of treatment (scenario 11). Despite not being able to choose treatment timing, the transitional arrangements for the NDIS between 2016 and 2019 were finalized one to three years prior to implementation for some regions. This may have led people to seek diagnoses in anticipation of treatment. The results are essentially unchanged indicating that anticipation of treatment does not impact our results.

We test whether the results are impacted by selective migration into the region by restricting our population to those who stayed in the same region between 2011 and 2021 (scenario 12) and by

the inclusion of regions with populations smaller than fifty people (scenario 13). The conclusions are unchanged in both scenarios with very little change to the overall average treatment effect.

6 Interpretation and Policy Implications

6.1 Interpreting Effects on Reported Prevalence

To understand the impact of the NDIS on the overall increase in reported autism prevalence over the last decade, we use the aggregated treatment effects by length of exposure to construct an estimate of autism prevalence in a counterfactual scenario where the NDIS is not available. Figure 5 compares reported child autism prevalence in Australia with estimates from the counterfactual scenario. We note that the counterfactual estimate is consistent with estimates of reported child prevalence in the U.S. and the United Kingdom (Maennar, 2023; O'Nions et al., 2024). The impact of the NDIS on autism rates, taking into account the staggered roll out of the Scheme, is shown by the purple section. We find that reported autism prevalence is almost 32% higher than the counterfactual scenario.

Figure 5 Actual and counterfactual estimate of reported child autism prevalence over time

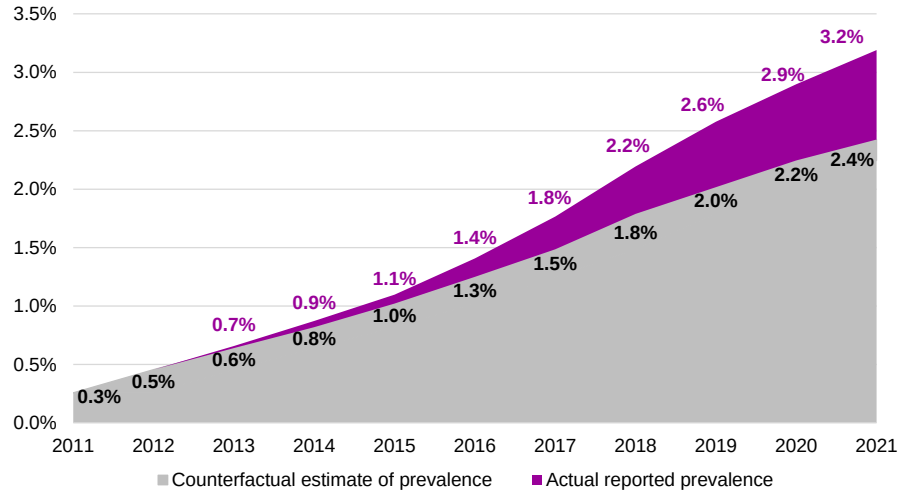
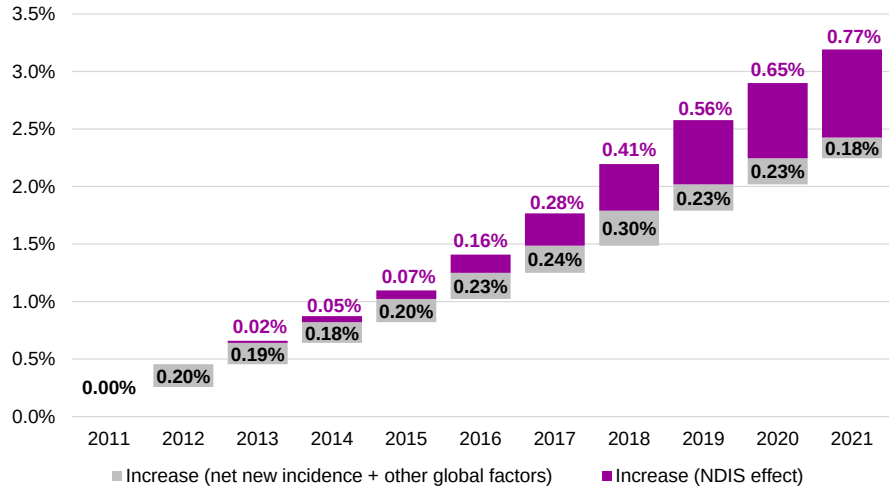


Figure 6 shows a comparison of the estimated impact of NDIS with year on year increases in the counterfactual scenario, which reflect the impact of other factors on reported autism prevalence that are not specific to the Australian context. Increases relating to net new incidence of autism and factors impacting global prevalence have remained stable over the past decade, while increases in autism rates relating to the NDIS have grown since its introduction.

Our key finding is that the introduction of the NDIS has resulted in autism diagnoses for many Australians who may not have been diagnosed otherwise. We estimate that additional diagnoses due to the introduction of the NDIS increased from 0.02% in 2013 to 0.77% in 2021, whereas net new incidence due to other factors impacting global prevalence has remained

stable at 0.2% per year. Since 2013, the impact of the NDIS on reported autism rates accounts for 47% of new diagnoses[18].

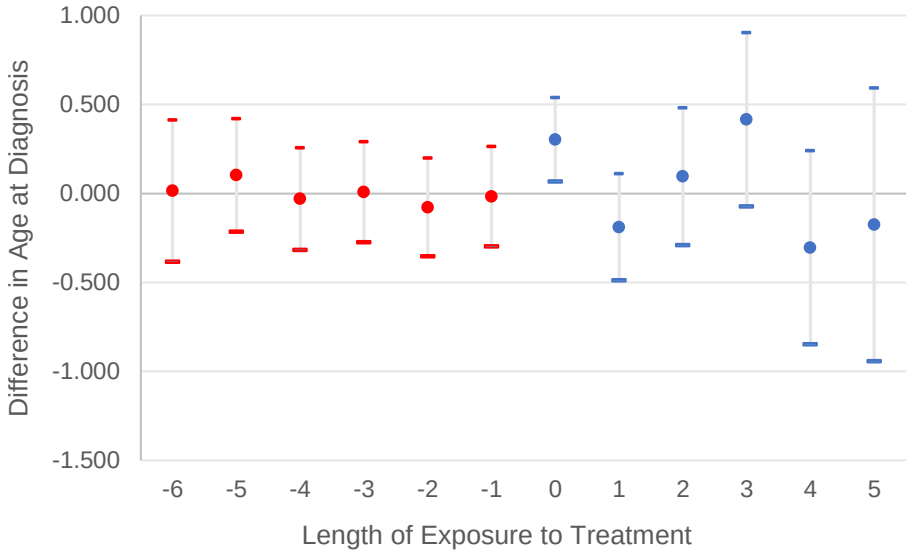
Figure 6 Drivers of increase in reported child autism prevalence over time



6.2 Effect of Individualized Funding on Other Outcomes

Age at Diagnoses

Figure 7 Aggregated ATT on age at diagnosis



Some clinicians and disability advocates attribute increased prevalence to increased diagnoses of previously under-reported autism in younger children, leading to earlier access for interventions thought to be more effective at younger ages (Warren et al., 2011; Estes et al., 2015; Fuller and Kaiser, 2020). Access to earlier interventions can result in improvements in the lifetime trajectories of outcomes, improving functional capacity and reducing the need for long-

[18] We compare 2021 prevalence with the 2012 prevalence estimate for children aged 0 to 14 years of 1.56% from the 2012 ABS Survey of Disability Ageing and Carers (SDAC, 2012).

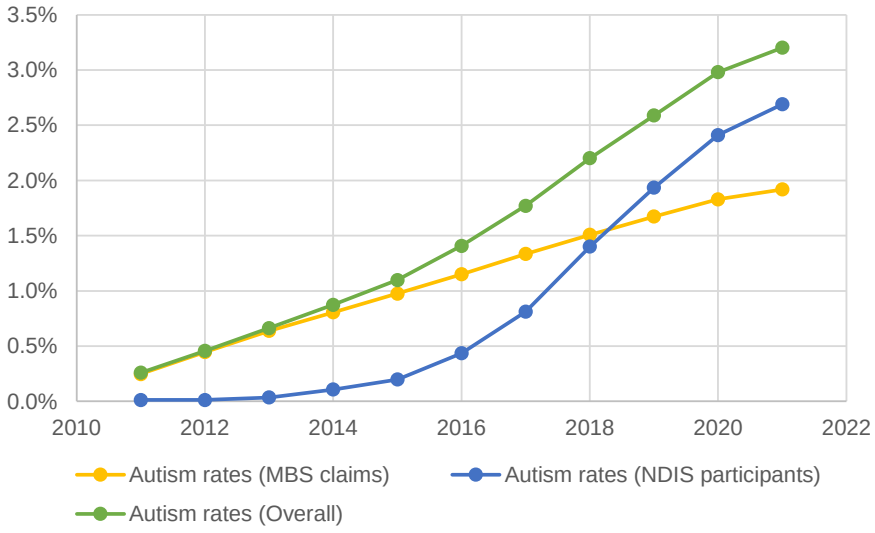
term paid supports for individuals with disability (Cidav et al., 2013; Lavelle et al., 2014; Whitehouse et al., 2021). However, we find that the NDIS has not resulted in a decrease in the age at which individuals are diagnosed (see Figure 7). Low rates of exit from the NDIS suggest that outcomes or trajectories of need have not changed significantly, however this could reflect a lack of supports and services available outside of the NDIS, resulting in an inability or unwillingness to transition out of the NDIS's early intervention pathway to community-based supports (PM&C, 2023).

Diagnostic Practice

Our analysis points to a shift in the way that autism is diagnosed in Australia as the NDIS has rolled out. Some researchers suggest that the administration of access to the NDIS has resulted in a relaxation of autism diagnostic standards (Bourke et al., 2023). These standards varied by state jurisdiction, ranging from tightly regulated multi-disciplinary team assessments in some jurisdictions to single-clinician assessments in other jurisdictions. The introduction of the National Guidelines for the assessment and diagnosis of autism in 2018 aimed to standardize the process and allowed the assessment pathway to be tailored to the behavioral complexity of an individual (Whitehouse et al., 2018). However, the use of the guidelines was not mandated, and single diagnosticians were empowered to determine diagnoses supported by assessments from a multidisciplinary team if deemed appropriate (Goodall et al., 2023; Bourke et al., 2023).

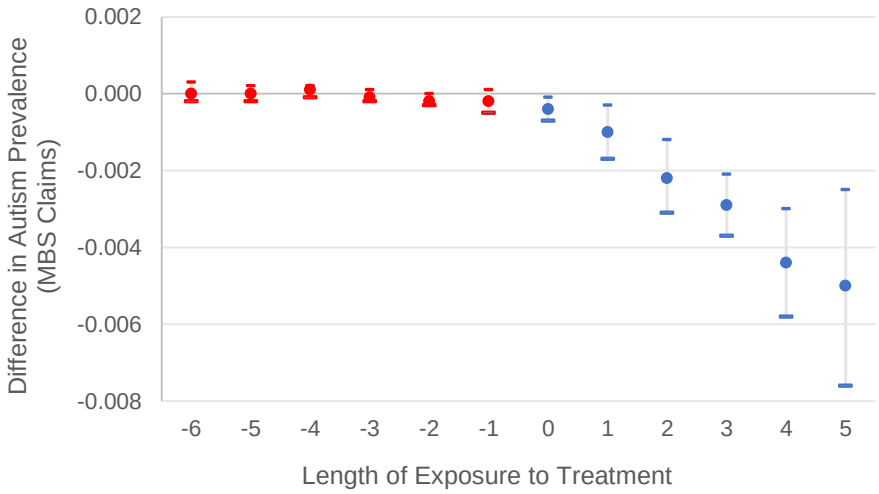
Originally, the disability support system was designed such that all children would receive a diagnosis from a qualified pediatrician or psychiatrist in line with the guidelines and standards for clinical diagnostic practices, but only a subset (i.e. those with substantial and permanent functional impairment) would go on to participate in the NDIS. However, we observe since 2018 more children accessing the NDIS with an autism diagnosis than having a diagnosis from a Medicare-registered health professional. (See Figure 8.)

Figure 8 Autism rates in PLIDA using MBS claims, NDIS participants and all data



This suggests that professionals not registered with Medicare are providing diagnoses. Figure 9 shows the average treatment effect of the roll out of the NDIS on reported rates of autism diagnoses by Medicare-registered professionals. Reported rates of autism in the Medicare data are lower in regions where the NDIS rolled out.

Figure 9 Aggregated ATT for autism prevalence based on MBS claims



Further investigation suggests that a new business model for the provision of diagnostic services has emerged in response to the NDIS. Providers of support services have included diagnostic services and "provide opportunities for suitably qualified medical and healthcare professionals (psychologists, speech pathologists, pediatricians and psychiatrists) to be trained in the diagnostic assessment process" (AutismSA, 2024). Not all professionals with this diagnostic training are Medicare registered. One expert at the agency that administers the NDIS said the emerging business model relies on "rapid-fire private diagnoses in exchange for the agreement to provide services to individuals afterwards" rather than government funding via Medicare.[19]

6.3 Channels for Policy Effects

Our estimates give the effect of the introduction of the NDIS on autism prevalence. A key question in interpreting these results is through what channels does this occur. We consider two possible channels. First, is a lowering of the threshold for formal recognition of autism. Despite unchanged diagnostic criteria, the NDIS provides a financial incentive for people at the margin with lower levels of functional impairment to obtain formal diagnoses. Second, is that the NDIS changes the cost-benefit trade-off for people who meet the criteria for a clinical diagnosis of autism resulting in the recognition of previously under-diagnosed groups with unmet needs. It is difficult to distinguish between the two reasons in our data, but we review the evidence for how each mechanism manifests, separately.

[19] In sharing our paper with practitioners and program administrators, we also heard anecdotal evidence that organizations providing services to participants are also providing diagnostic assessments. The financial incentive to do this is clear.

Lower Threshold for Autism Recognition

Despite no changes in the diagnostic criteria for autism since policy introduction, additional diagnoses could be a result of a lower threshold for the recognition of autism in professional practice as discussed in Section 6.2 above, combined with increased diagnosis-related information seeking behavior[20]. If this is the case, we would expect to see stronger policy effects for groups with better access to diagnostic services and with greater socioeconomic advantage.

In section 5.2, we found a greater treatment effect for metropolitan areas than for remote and regional areas. We confirm this with comparisons of autism trends across more granular levels of remoteness in Appendix C (see Figure C.4). We observe strong policy effects across all socioeconomic groups (see Figure C.5). We analysed compositional differences for new diagnoses between treatment and control groups by IRSAD decile (see Figure C.10) and find that, while composition for the control group remains largely unchanged, we observe a reduction in proportions of lower deciles in the treatment group. Together, this evidence suggests that policy driven increases are likely to reflect a wider threshold for recognition of autism.

Recognition of Previously Underdiagnosed Autism

If the additional diagnoses are a result of a recognition of historical underdiagnosis, we would expect to see the policy driving a catch up in diagnoses in traditionally underdiagnosed groups, that is older children, non-males, regional populations, culturally diverse and indigenous communities and those with backgrounds of greater socioeconomic disadvantage. Our robustness results in section 5.2 suggest that this is unlikely to be the case. We provide further evidence in Appendix C. The treatment effect is significantly larger for the male population (Figure C.1), the population living in metropolitan areas (Figure C.4) and those not from a culturally and linguistically diverse background (Figure C.2). Further, we find no policy effect on age at diagnosis (see section 6.2). However, despite finding no significant effects for most of the traditionally underdiagnosed groups, we do find a greater policy effect for the Aboriginal and Torres Strait islander population (Figure C.3).

We analysed the differences in composition of new diagnoses over time for the treatment and control groups and find no significant differences in the composition by age (Figure C.6), gender (Figure C.7), indigenous status (Figure C.8) and for those with cultural and linguistically diverse backgrounds (Figure C.9). We also observe decreases in the proportion of new diagnoses for those in areas of greater socioeconomic disadvantage (Figure C.10). Together, this evidence suggests that the policy driven increases in autism prevalence do not appear to reflect significant increases in the recognition of previously underdiagnosed autism.

[20] Studies have established greater information seeking behavior about autism through analysis of infodemiological data (Saposnik & Huber, 2020; Jawed et al., 2023).

7 Conclusion

Using a staggered difference-in-difference methodology that is robust to heterogenous treatment, we find compelling evidence that the introduction of the NDIS has resulted in an increase in the number of formal diagnoses of children with autism. On average, regions in which the NDIS was introduced reported autism prevalence rates 0.56 percentage points greater than areas where the NDIS was not available. Gender based analysis reveals statistically significant results for both genders with a larger overall effect for males at 0.86 percentage points and smaller for non-males at 0.25 percentage points.

The effect is greatest for regions which entered the NDIS in 2013, the first year of the Scheme. We find statistically significant effects for every year except 2018 (when only a few sparsely populated regions entered the Scheme). Effects are strong and significant up to three years after program introduction.

Using our results, we estimate autism prevalence in a counterfactual scenario without the NDIS and find that the NDIS has led to a 32% increase in overall autism prevalence. While net new incidence due to factors impacting global prevalence remains stable each year at around 0.2%, additional diagnoses due to the introduction of the NDIS increases from 0.02% in 2013 to 0.77% in 2021, accounting for 47% of new diagnoses.

We are agnostic about what constitutes a "genuine" autism diagnosis – the criteria for a clinical diagnosis of autism would not capture all individuals who identify as being autistic or neurodivergent. It may be that the NDIS incentivizes people at the margin with lower levels of functional impairment to obtain diagnoses of autism. A financial incentive to do this certainly exists. Also possible is that the NDIS changes the cost-benefit trade-off for people who meet the criteria for a clinical diagnosis of autism: that the benefits of receiving NDIS support offset the costs of obtaining a diagnosis and any potential stigma associated with autism. While both these effects are likely present in the data, we find that a lower threshold for recognition appears more important as a channel than catch-up in historical underdiagnoses. We cannot definitively distinguish between the two, but we can be certain that the program leads to more diagnoses.

The NDIS was one the first disability support schemes to be implemented at a national level with a participant-centric model of disability service provision. Its self-directed approach is innovative, allowing individuals to exercise choice and control by managing personalized budgets to purchase services and supports tailored to their individual needs and circumstances. However, skepticism is growing about such individualized funding models being more cost effective than other models and achieving desired outcomes. Research suggests self-directed models induce a shift in focus from achieving outcomes to maintaining high levels of financial support. Our research amplifies these concerns.

Our research responds to a need for further formal evaluation of the NDIS and similar individualized disability funding models and contributes to the growing literature on drivers of reported autism prevalence. The provision of quality disability supports that achieve

sustainable outcomes for individuals is a worldwide policy dilemma. Our results provide evidence that individualized funding models encourage formal diagnoses of autism. This fact must be included in consideration of any policy design and evaluation of the costs and benefits of individualized supports.

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Appendix A NDIS Roll Out

See attached Excel file.

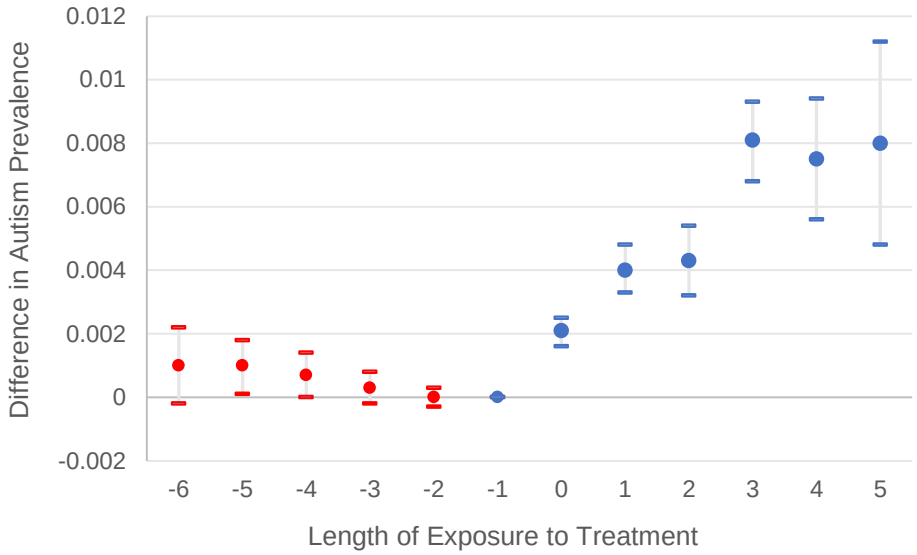
Appendix B Parallel Trends

In this section, we examine the parallel trends assumption. Heterogeneous treatment effects make the visual analysis of parallel trends more complicated than in typical studies using difference-in-difference methods. Callaway and Sant'Anna (2021) suggest that pre-treatment estimates can be used to "pre-test'' the parallel trends assumption. As discussed in section 5.1, the pre-treatment effects observed in Figure 2 are not statistically different to zero in most periods (at a 5% significance level) and are very small (<0.1%) for the periods in which they are statistically significant.

A common way to visually assess parallel pre-trends is to plot the difference-in-difference coefficients against the time to event, similar to a traditional two-way fixed effects event-study. In Figure 3, we observed that the aggregated estimates of the treatment effect are either not statistically significant or miniscule for all pre-treatment periods.

Roth (2024) suggests that the pre-treatment effects estimated by Callaway and Sant'Anna (2021) cannot be interpreted in the same way as a traditional event study, because the pre-treatment and post-treatment coefficients are constructed asymmetrically. The pre-treatment coefficients are based on comparisons of consecutive periods, whereas the post-treatment coefficients are based on comparisons relative to the period before treatment. Roth (2024) suggests that using a universal base for both pre- and post-treatment estimates can be interpreted in a similar way to conventional event-study plots. We present the aggregated results using a universal base period in Figure B.1 and find that the pre-treatment periods are not statistically significant or are close to zero in six periods prior to policy introduction.

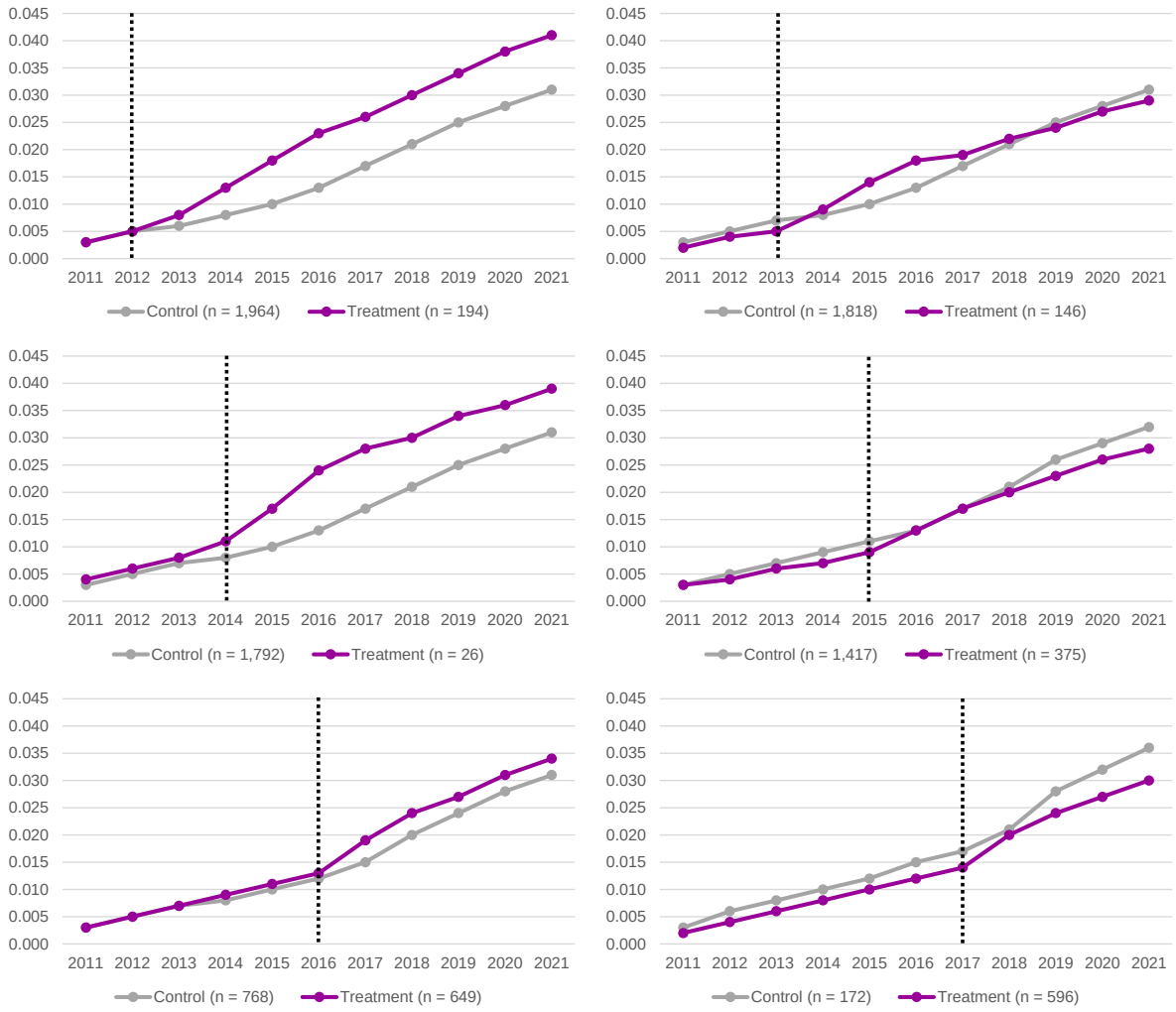
Figure B.1 Aggregated ATT using a universal base period



Statistically insignificant pre-trends, while highly suggestive, do not necessarily mean that the parallel counterfactual trends condition holds after treatment (Kahn-Lang and Lang, 2020). In this analysis, the control and treatment cohorts in each year focus on the population aged under 14 years in groups of multiple SA2 regions. The proportion of males and average age in each cohort are comparable. There are no known shifts in official diagnostic standards, including the introduction of the DSM-5 criteria, or in service availability that may have impacted autism prevalence in the control and treatment cohorts differently. Intuitively, the only difference between the control and treatment cohorts for each year is the eligibility for the NDIS and the subsequent shift in disability service provision.

We have the advantage of using long-term administrative data that both pre-dates and post-dates the period over which the policy was rolled out in a staggered manner. This allows us to visually assess parallel trends within each group. Figure B.2 shows trends in autism prevalence for the control and treatment cohorts for the six groups (2013 to 2018). The treatment cohort in each group includes all regions that became eligible for the NDIS in that year while the control cohort includes all regions that have not yet been treated. Treated regions are dropped from the control cohort in subsequent groups. The vertical dashed line in each group indicates the final year of pre-trends prior to the introduction of the policy.

Figure B.2 Autism prevalence trends in control and treatment cohorts by group (year of NDIS introduction)



We observe parallel trends in pre-treatment periods for all groups, including groups that became eligible for the NDIS in later years with longer pre-treatment experience. This gives further confidence in the assumption that parallel trends would have continued in the counterfactual scenario. Trends in post-treatment periods comprise a mix of treatment periods and are difficult to interpret. Overall, the graphs provide strong support for the hypothesis of parallel trends.

Appendix C Compositional Analysis

In this section, we further examine the channels through which the policy effects manifest to support the discussion in 6.3. Figure C.1 to Figure C.5 show comparisons in autism prevalence trends in control and treatment regions for various characteristics. Figure C.6 to Figure C.10 show the composition of new diagnoses in treated and control regions across various characteristics. These charts allow us to understand how the policy effects vary for subgroups of the populations.

Figure C.1 Autism prevalence trends in control and treatment regions by gender

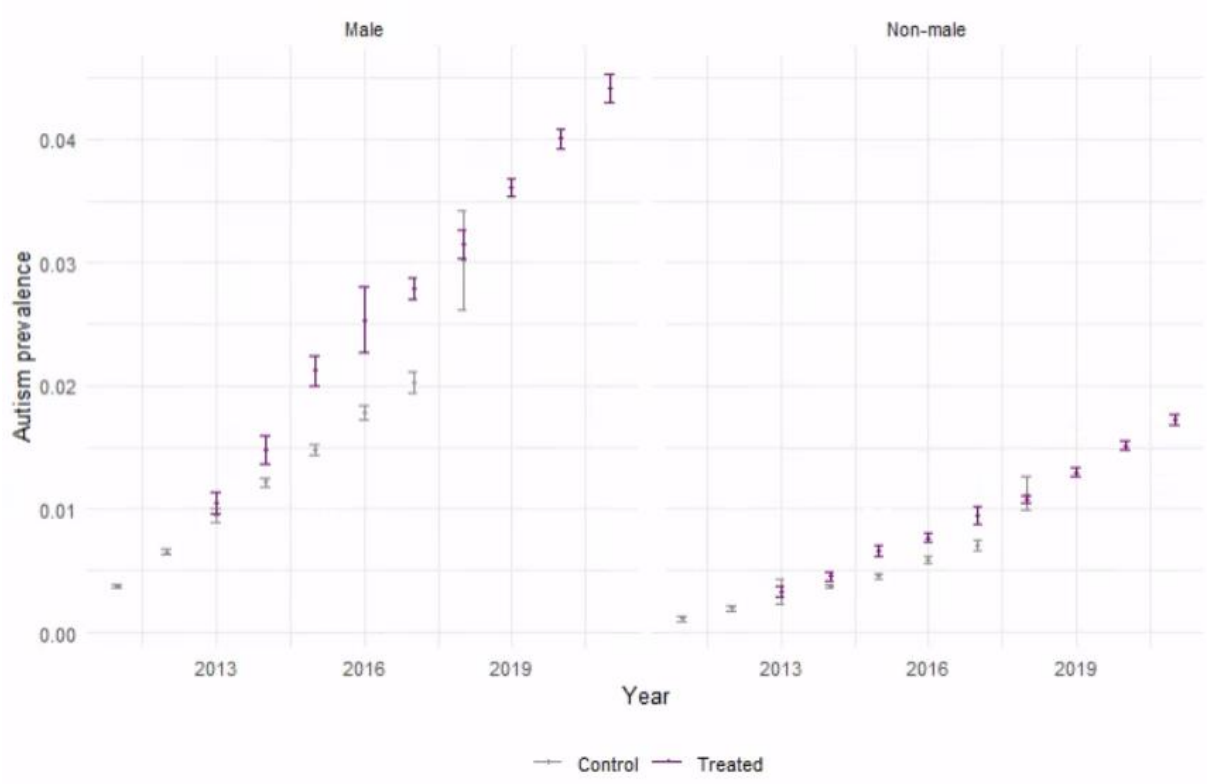


Figure C.2 Autism prevalence trends in control and treatment regions by cultural and linguistically diverse (CALD) background

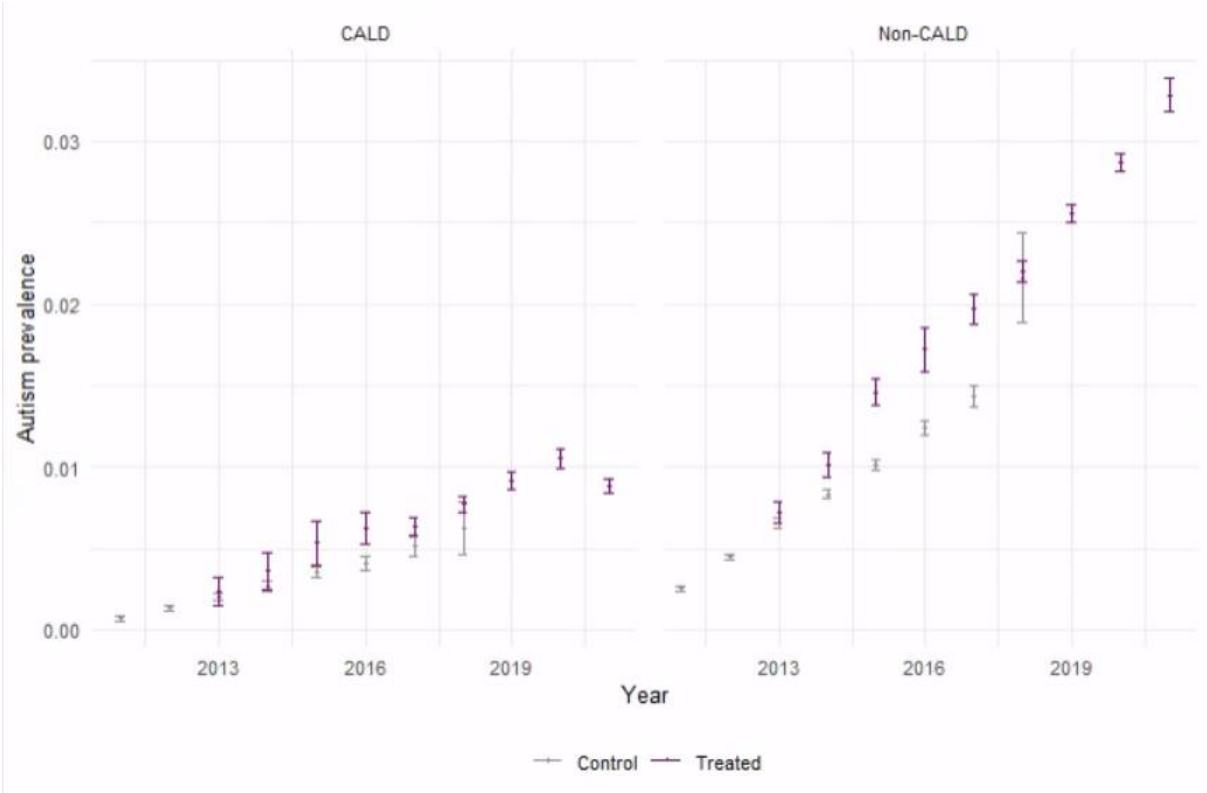


Figure C.3 Autism prevalence trends in control and treatment regions by Aboriginal and Torres Strait Islander (ATSI) status

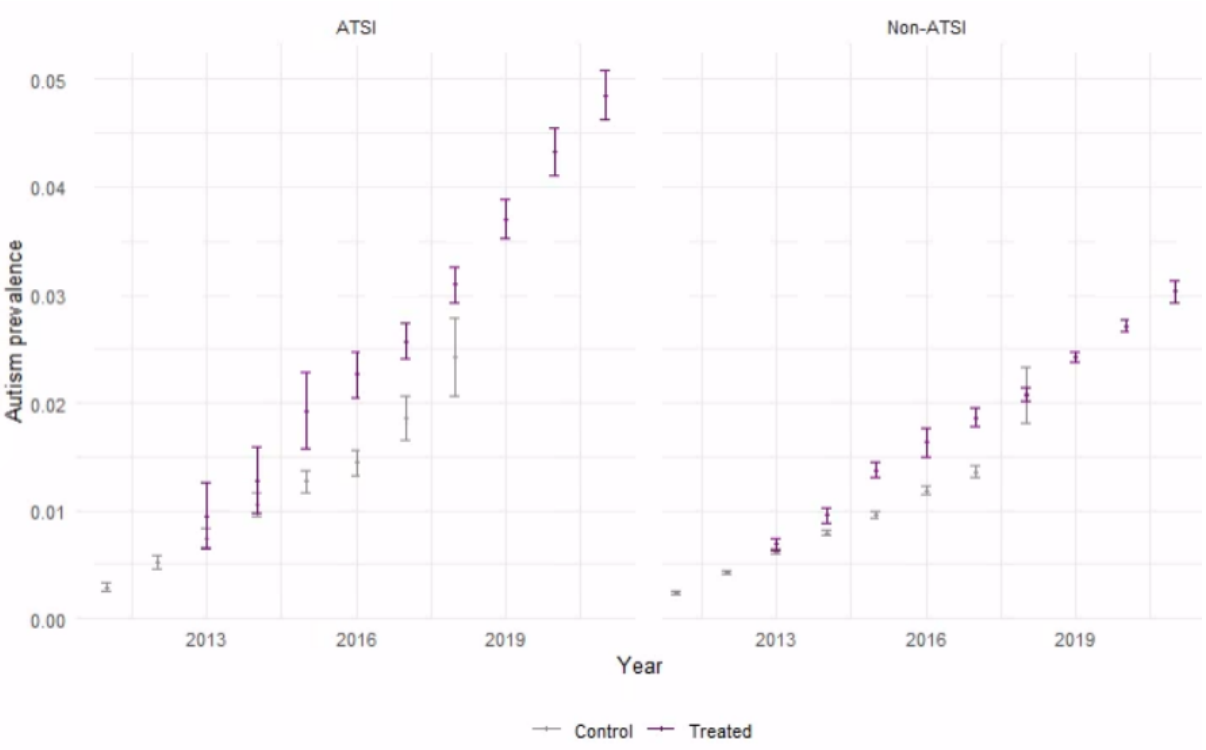


Figure C.4 Autism prevalence trends in control and treatment regions by remoteness

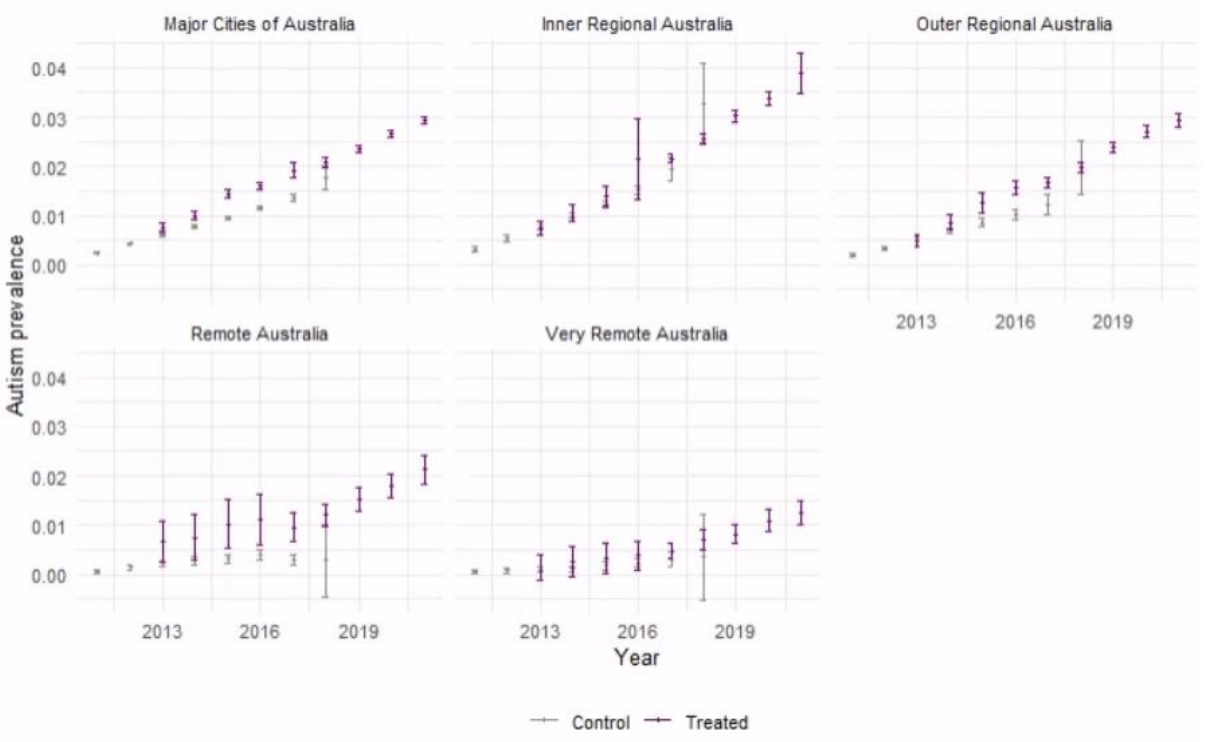


Figure C.5 Autism prevalence trends in control and treatment regions by socioeconomic status (IRSAD)

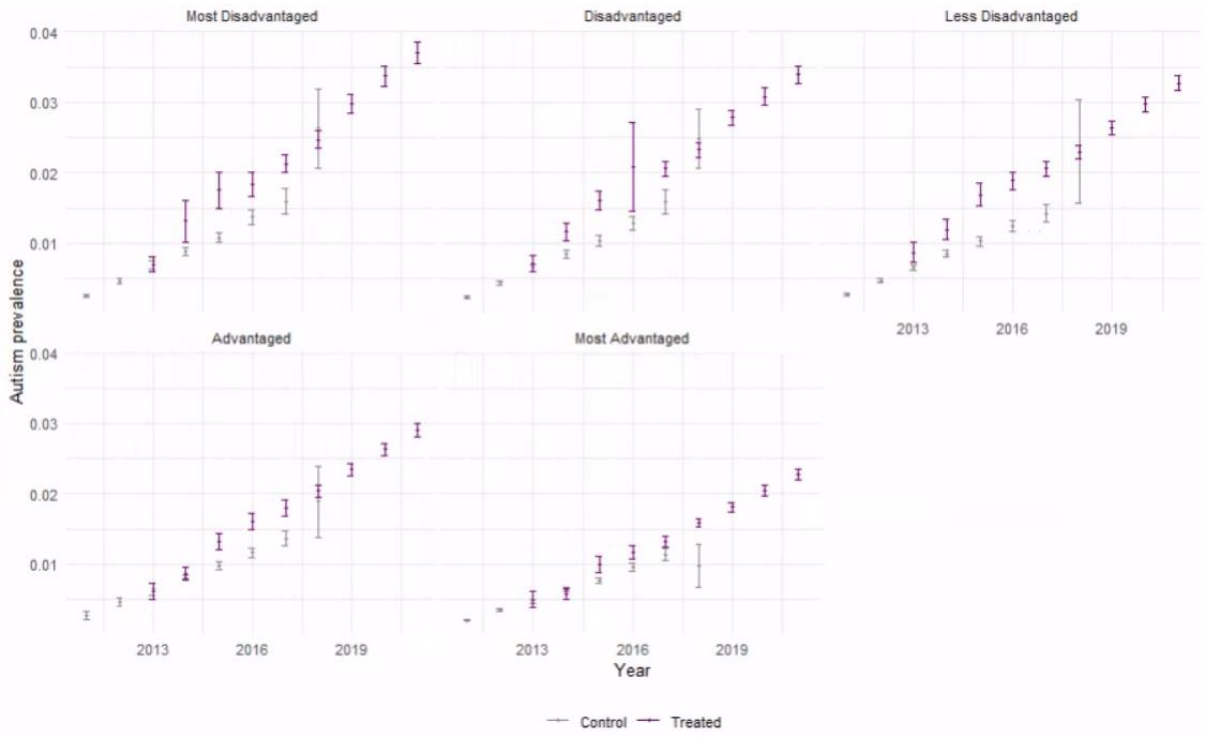


Figure C.6 Composition of new diagnoses by age

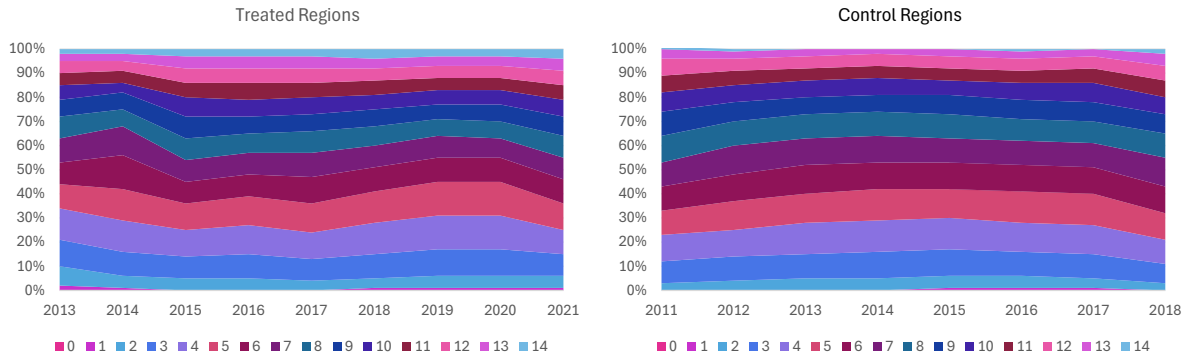


Figure C.7 Composition of new diagnoses by gender

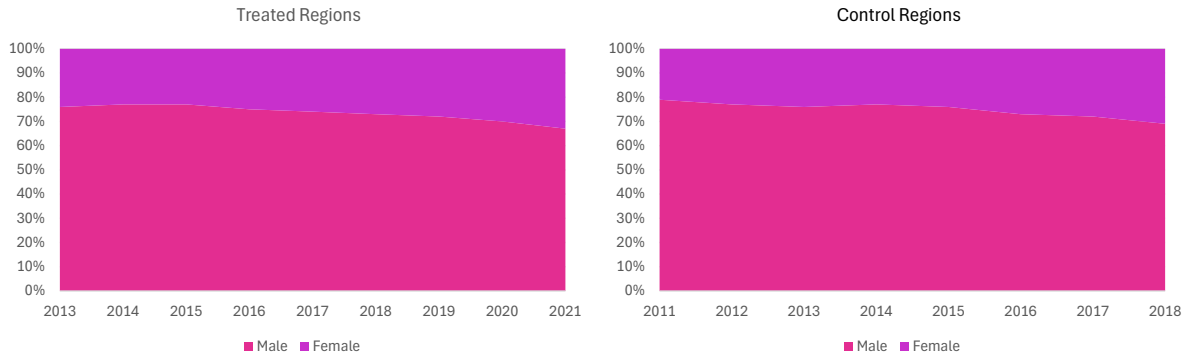


Figure C.8 Composition of new diagnoses by Indigeneity (Aboriginal or Torres Strait Islander background)

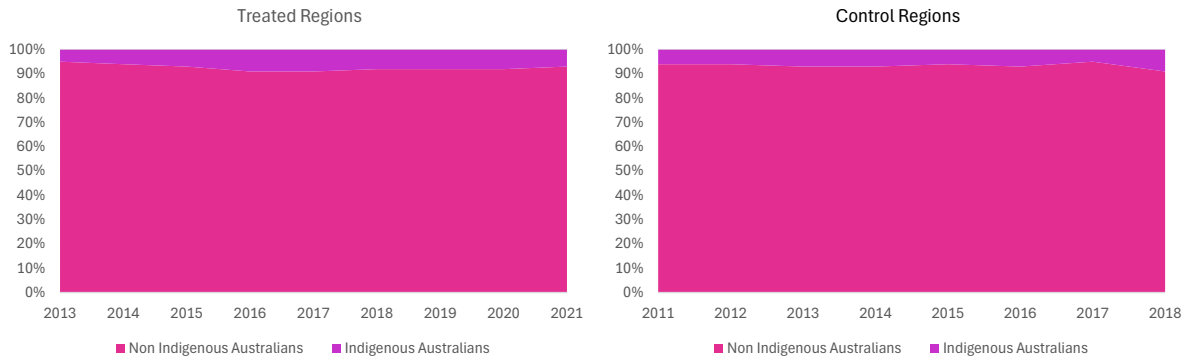


Figure C.9 Composition of new diagnoses by culturally and linguistically diverse (CALD) background

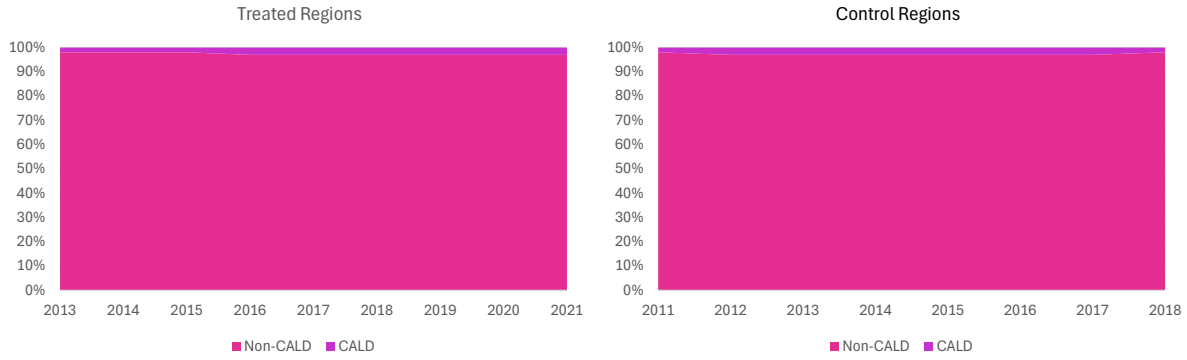
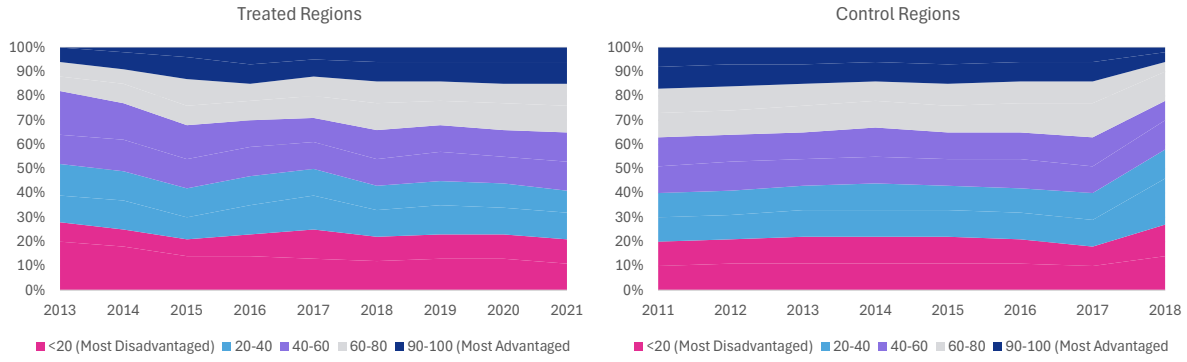


Figure C.10 Composition of new diagnoses by socioeconomic status (IRSAD Quintile)



Appendix A: List of NDIS Phase In Dates for All Local Government Are

LGA Code	LGA Name	State	Service District	Age band
10050	Albury (C)	NSW	Murrumbidgee	All
10180	Armidale Regional (A)	NSW	Hunter New England	All
10250	Ballina (A)	NSW	Northern NSW	All
10300	Balranald (A)	NSW	Far West	All
10470	Bathurst Regional (A)	NSW	Western NSW	All
10500	Bayside (A)	NSW	South Eastern Sydney	All
10550	Bega Valley (A)	NSW	Southern NSW	All
10600	Bellingen (A)	NSW	Mid North Coast	All
10650	Berrigan (A)	NSW	Murrumbidgee	All
10750	Blacktown (C)	NSW	Western Sydney	All
10800	Bland (A)	NSW	Murrumbidgee	All
10850	Blayney (A)	NSW	Western NSW	All
10900	Blue Mountains (C)	NSW	Nepean Blue Mountains	0 to 17
10900	Blue Mountains (C)	NSW	Nepean Blue Mountains	18+
10950	Bogan (A)	NSW	Western NSW	All
11150	Bourke (A)	NSW	Western NSW	All
11200	Brewarrina (A)	NSW	Western NSW	All
11250	Broken Hill (C)	NSW	Far West	All
11300	Burwood (A)	NSW	Sydney	All
11350	Byron (A)	NSW	Northern NSW	All
11400	Cabonne (A)	NSW	Western NSW	All
11450	Camden (A)	NSW	South Western Sydney	All
11500	Campbelltown (C) (NSW)	NSW	South Western Sydney	All
11520	Canada Bay (A)	NSW	Sydney	All
11570	Canterbury-Bankstown (A)	NSW	South Western Sydney	All
11600	Carrathool (A)	NSW	Murrumbidgee	All
11650	Central Coast (C) (NSW)	NSW	Central Coast	All
11700	Central Darling (A)	NSW	Far West	All
11720	Cessnock (C)	NSW	Hunter New England	All
11730	Clarence Valley (A)	NSW	Northern NSW	All
11750	Cobar (A)	NSW	Western NSW	All
11800	Coffs Harbour (C)	NSW	Mid North Coast	All
12000	Coolamon (A)	NSW	Murrumbidgee	All
12150	Coonamble (A)	NSW	Western NSW	All
12160	Cootamundra-Gundagai Regional (A)	NSW	Murrumbidgee	All
12350	Cowra (A)	NSW	Western NSW	All
12380	Cumberland (A)	NSW	Western Sydney	All
12390	Dubbo Regional (A)	NSW	Western NSW	All
12700	Dungog (A)	NSW	Hunter New England	All
12730	Edward River (A)	NSW	Murrumbidgee	All
12750	Eurobodalla (A)	NSW	Southern NSW	All
12850	Fairfield (C)	NSW	South Western Sydney	All
12870	Federation (A)	NSW	Murrumbidgee	All
12900	Forbes (A)	NSW	Western NSW	All
12930	Georges River (A)	NSW	South Eastern Sydney	All
12950	Gilgandra (A)	NSW	Western NSW	All

13010	Glen Innes Severn (A)	NSW	Hunter New England	All
13310	Goulburn Mulwaree (A)	NSW	Southern NSW	All
13340	Greater Hume Shire (A)	NSW	Murrumbidgee	All
13450	Griffith (C)	NSW	Murrumbidgee	All
13550	Gunnedah (A)	NSW	Hunter New England	All
13660	Gwydir (A)	NSW	Hunter New England	All
13800	Hawkesbury (C)	NSW	Nepean Blue Mountains	0 to 17
13800	Hawkesbury (C)	NSW	Nepean Blue Mountains	18+
13850	Hay (A)	NSW	Murrumbidgee	All
13910	Hilltops (A)	NSW	Murrumbidgee	All
14000	Hornsby (A)	NSW	North Sydney	All
14100	Hunters Hill (A)	NSW	North Sydney	All
14170	Inner West (A)	NSW	Sydney	All
14220	Inverell (A)	NSW	Hunter New England	All
14300	Junee (A)	NSW	Murrumbidgee	All
14350	Kempsey (A)	NSW	Mid North Coast	All
14400	Kiama (A)	NSW	Illawarra Shoalhaven	All
14500	Ku-ring-gai (A)	NSW	North Sydney	All
14550	Kyogle (A)	NSW	Northern NSW	All
14600	Lachlan (A)	NSW	Western NSW	All
14650	Lake Macquarie (C)	NSW	Hunter New England	All
14700	Lane Cove (A)	NSW	North Sydney	All
14750	Leeton (A)	NSW	Murrumbidgee	All
14850	Lismore (C)	NSW	Northern NSW	All
14870	Lithgow (C)	NSW	Nepean Blue Mountains	0 to 17
14870	Lithgow (C)	NSW	Nepean Blue Mountains	18+
14900	Liverpool (C)	NSW	South Western Sydney	All
14920	Liverpool Plains (A)	NSW	Hunter New England	All
14950	Lockhart (A)	NSW	Murrumbidgee	All
15050	Maitland (C)	NSW	Hunter New England	All
15240	Mid-Coast (A)	NSW	Hunter New England	All
15270	Mid-Western Regional (A)	NSW	Western NSW	All
15300	Moree Plains (A)	NSW	Hunter New England	All
15350	Mosman (A)	NSW	North Sydney	All
15520	Murray River (A)	NSW	Murrumbidgee	All
15560	Murrumbidgee (A)	NSW	Murrumbidgee	All
15650	Muswellbrook (A)	NSW	Hunter New England	All
15700	Nambucca Valley (A)	NSW	Mid North Coast	All
15750	Narrabri (A)	NSW	Hunter New England	All
15800	Narrandera (A)	NSW	Murrumbidgee	All
15850	Narromine (A)	NSW	Western NSW	All
15900	Newcastle (C)	NSW	Hunter New England	All
15950	North Sydney (A)	NSW	North Sydney	All
15990	Northern Beaches (A)	NSW	North Sydney	All
16100	Oberon (A)	NSW	Western NSW	All
16150	Orange (C)	NSW	Western NSW	All
16200	Parkes (A)	NSW	Western NSW	All
16260	Parramatta (C)	NSW	Western Sydney	All
16350	Penrith (C)	NSW	Nepean Blue Mountains	0 to 17
16350	Penrith (C)	NSW	Nepean Blue Mountains	18+

16380	Port Macquarie-Hastings (A)	NSW	Mid North Coast	All
16400	Port Stephens (A)	NSW	Hunter New England	All
16490	Queanbeyan-Palerang Regional (A)	NSW	Southern NSW	All
16550	Randwick (C)	NSW	South Eastern Sydney	All
16610	Richmond Valley (A)	NSW	Northern NSW	All
16700	Ryde (C)	NSW	North Sydney	All
16900	Shellharbour (C)	NSW	Illawarra Shoalhaven	All
16950	Shoalhaven (C)	NSW	Illawarra Shoalhaven	All
17000	Singleton (A)	NSW	Hunter New England	All
17040	Snowy Monaro Regional (A)	NSW	Southern NSW	All
17080	Snowy Valleys (A)	NSW	Murrumbidgee	All
17100	Strathfield (A)	NSW	Sydney	All
17150	Sutherland Shire (A)	NSW	South Eastern Sydney	All
17200	Sydney (C)	NSW	Sydney	All
17310	Tamworth Regional (A)	NSW	Hunter New England	All
17350	Temora (A)	NSW	Murrumbidgee	All
17400	Tenterfield (A)	NSW	Hunter New England	All
17420	The Hills Shire (A)	NSW	Western Sydney	All
17550	Tweed (A)	NSW	Northern NSW	All
17620	Upper Hunter Shire (A)	NSW	Hunter New England	All
17640	Upper Lachlan Shire (A)	NSW	Southern NSW	All
17650	Uralla (A)	NSW	Hunter New England	All
17750	Wagga Wagga (C)	NSW	Murrumbidgee	All
17850	Walcha (A)	NSW	Hunter New England	All
17900	Walgett (A)	NSW	Western NSW	All
17950	Warren (A)	NSW	Western NSW	All
18020	Warrumbungle Shire (A)	NSW	Western NSW	All
18050	Waverley (A)	NSW	South Eastern Sydney	All
18100	Weddin (A)	NSW	Western NSW	All
18200	Wentworth (A)	NSW	Far West	All
18250	Willoughby (C)	NSW	North Sydney	All
18350	Wingecarribee (A)	NSW	South Western Sydney	All
18400	Wollondilly (A)	NSW	South Western Sydney	All
18450	Wollongong (C)	NSW	Illawarra Shoalhaven	All
18500	Woollahra (A)	NSW	South Eastern Sydney	All
18710	Yass Valley (A)	NSW	Southern NSW	All
20110	Alpine (S)	VIC	Ovens Murray	All
20260	Ararat (RC)	VIC	Central Highlands	All
20570	Ballarat (C)	VIC	Central Highlands	All
20660	Banyule (C)	VIC	North East Melbourne	All
20740	Bass Coast (S)	VIC	Inner Gippsland	All
20830	Baw Baw (S)	VIC	Inner Gippsland	All
20910	Bayside (C)	VIC	Bayside Peninsula	All
21010	Benalla (RC)	VIC	Ovens Murray	All
21110	Boroondara (C)	VIC	Inner East Melbourne	All
21180	Brimbank (C)	VIC	Brimbank Melton	All
21270	Buloke (S)	VIC	Mallee	All
21370	Campaspe (S)	VIC	Loddon	All
21450	Cardinia (S)	VIC	Southern Melbourne	All
21610	Casey (C)	VIC	Southern Melbourne	All

21670	Central Goldfields (S)	VIC	Loddon	All
21750	Colac-Otway (S)	VIC	Barwon	All
21830	Corangamite (S)	VIC	Western District	All
21890	Darebin (C)	VIC	North East Melbourne	All
22110	East Gippsland (S)	VIC	Outer Gippsland	All
22170	Frankston (C)	VIC	Bayside Peninsula	All
22250	Gannawarra (S)	VIC	Mallee	All
22310	Glen Eira (C)	VIC	Bayside Peninsula	All
22410	Glenelg (S)	VIC	Western District	All
22490	Golden Plains (S)	VIC	Central Highlands	All
22620	Greater Bendigo (C)	VIC	Loddon	All
22670	Greater Dandenong (C)	VIC	Southern Melbourne	All
22750	Greater Geelong (C)	VIC	Barwon	All
22830	Greater Shepparton (C)	VIC	Goulburn	All
22910	Hepburn (S)	VIC	Central Highlands	All
22980	Hindmarsh (S)	VIC	Western District	All
23110	Hobsons Bay (C)	VIC	Western Melbourne	All
23190	Horsham (RC)	VIC	Western District	All
23270	Hume (C)	VIC	Hume Moreland	All
23350	Indigo (S)	VIC	Ovens Murray	All
23430	Kingston (C) (Vic.)	VIC	Bayside Peninsula	All
23670	Knox (C)	VIC	Outer East Melbourne	All
23810	Latrobe (C) (Vic.)	VIC	Inner Gippsland	All
23940	Loddon (S)	VIC	Loddon	All
24130	Macedon Ranges (S)	VIC	Loddon	All
24210	Manningham (C)	VIC	Inner East Melbourne	All
24250	Mansfield (S)	VIC	Ovens Murray	All
24330	Maribyrnong (C)	VIC	Western Melbourne	All
24410	Maroondah (C)	VIC	Outer East Melbourne	All
24600	Melbourne (C)	VIC	Western Melbourne	All
24650	Melton (C)	VIC	Brimbank Melton	All
24780	Mildura (RC)	VIC	Mallee	All
24850	Mitchell (S)	VIC	Goulburn	All
24900	Moira (S)	VIC	Goulburn	All
24970	Monash (C)	VIC	Inner East Melbourne	All
25060	Moonee Valley (C)	VIC	Western Melbourne	All
25150	Moorabool (S)	VIC	Central Highlands	All
25250	Moreland (C)	VIC	Hume Moreland	All
25340	Mornington Peninsula (S)	VIC	Bayside Peninsula	All
25430	Mount Alexander (S)	VIC	Loddon	All
25490	Moyne (S)	VIC	Western District	All
25620	Murrindindi (S)	VIC	Goulburn	All
25710	Nillumbik (S)	VIC	North East Melbourne	All
25810	Northern Grampians (S)	VIC	Western District	All
25900	Port Phillip (C)	VIC	Bayside Peninsula	All
25990	Pyrenees (S)	VIC	Central Highlands	All
26080	Queenscliffe (B)	VIC	Barwon	All
26170	South Gippsland (S)	VIC	Inner Gippsland	All
26260	Southern Grampians (S)	VIC	Western District	All
26350	Stonnington (C)	VIC	Bayside Peninsula	All

26430	Strathbogie (S)	VIC	Goulburn	All
26490	Surf Coast (S)	VIC	Barwon	All
26610	Swan Hill (RC)	VIC	Mallee	All
26670	Towong (S)	VIC	Ovens Murray	All
26700	Wangaratta (RC)	VIC	Ovens Murray	All
26730	Warrnambool (C)	VIC	Western District	All
26810	Wellington (S)	VIC	Outer Gippsland	All
26890	West Wimmera (S)	VIC	Western District	All
26980	Whitehorse (C)	VIC	Inner East Melbourne	All
27070	Whittlesea (C)	VIC	North East Melbourne	All
27170	Wodonga (C)	VIC	Ovens Murray	All
27260	Wyndham (C)	VIC	Western Melbourne	All
27350	Yarra (C)	VIC	North East Melbourne	All
27450	Yarra Ranges (S)	VIC	Outer East Melbourne	All
27630	Yarriambiack (S)	VIC	Western District	All
30250	Aurukun (S)	QLD	Cairns	All
30300	Balonne (S)	QLD	Toowoomba	All
30370	Banana (S)	QLD	Rockhampton	All
30410	Barcaldine (R)	QLD	Rockhampton	All
30450	Barcoo (S)	QLD	Rockhampton	All
30760	Blackall-Tambo (R)	QLD	Rockhampton	All
30900	Boulia (S)	QLD	Townsville	0 to 17
30900	Boulia (S)	QLD	Townsville	18+
31000	Brisbane (C)	QLD	Brisbane	All
31750	Bulloo (S)	QLD	Toowoomba	All
31820	Bundaberg (R)	QLD	Bundaberg	All
31900	Burdekin (S)	QLD	Townsville	0 to 17
31900	Burdekin (S)	QLD	Townsville	18+
31950	Burke (S)	QLD	Townsville	0 to 17
31950	Burke (S)	QLD	Townsville	18+
32080	Cairns (R)	QLD	Cairns	All
32250	Carpentaria (S)	QLD	Townsville	0 to 17
32250	Carpentaria (S)	QLD	Townsville	18+
32260	Cassowary Coast (R)	QLD	Cairns	All
32270	Central Highlands (R) (Qld)	QLD	Rockhampton	All
32310	Charters Towers (R)	QLD	Townsville	0 to 17
32310	Charters Towers (R)	QLD	Townsville	18+
32330	Cherbourg (S)	QLD	Maryborough	All
32450	Cloncurry (S)	QLD	Townsville	0 to 17
32450	Cloncurry (S)	QLD	Townsville	18+
32500	Cook (S)	QLD	Cairns	All
32600	Croydon (S)	QLD	Cairns	All
32750	Diamantina (S)	QLD	Rockhampton	All
32770	Doomadgee (S)	QLD	Townsville	0 to 17
32770	Doomadgee (S)	QLD	Townsville	18+
32810	Douglas (S)	QLD	Cairns	All
33100	Etheridge (S)	QLD	Cairns	All
33200	Flinders (S) (Qld)	QLD	Townsville	0 to 17
33200	Flinders (S) (Qld)	QLD	Townsville	18+
33220	Fraser Coast (R)	QLD	Maryborough	All

33360	Gladstone (R)	QLD	Rockhampton	All
33430	Gold Coast (C)	QLD	Robina	All
33610	Goondiwindi (R)	QLD	Toowoomba	All
33620	Gympie (R)	QLD	Maroochydore	All
33800	Hinchinbrook (S)	QLD	Townsville	0 to 17
33800	Hinchinbrook (S)	QLD	Townsville	18+
33830	Hope Vale (S)	QLD	Cairns	All
33960	Ipswich (C)	QLD	Ipswich	All
33980	Isaac (R)	QLD	Mackay	All
34420	Kowanyama (S)	QLD	Cairns	All
34530	Livingstone (S)	QLD	Rockhampton	All
34570	Lockhart River (S)	QLD	Cairns	All
34580	Lockyer Valley (R)	QLD	Ipswich	All
34590	Logan (C)	QLD	Beenleigh	All
34710	Longreach (R)	QLD	Rockhampton	All
34770	Mackay (R)	QLD	Mackay	All
34800	McKinlay (S)	QLD	Townsville	0 to 17
34800	McKinlay (S)	QLD	Townsville	18+
34830	Mapoon (S)	QLD	Cairns	All
34860	Maranoa (R)	QLD	Toowoomba	All
34880	Mareeba (S)	QLD	Cairns	All
35010	Moreton Bay (R)	QLD	Caboolture/Strathpine	All
35250	Mornington (S)	QLD	Townsville	0 to 17
35250	Mornington (S)	QLD	Townsville	18+
35300	Mount Isa (C)	QLD	Townsville	0 to 17
35300	Mount Isa (C)	QLD	Townsville	18+
35600	Murweh (S)	QLD	Toowoomba	All
35670	Napranum (S)	QLD	Cairns	All
35740	Noosa (S)	QLD	Maroochydore	All
35760	North Burnett (R)	QLD	Maryborough	All
35780	Northern Peninsula Area (R)	QLD	Cairns	All
35790	Palm Island (S)	QLD	Townsville	0 to 17
35790	Palm Island (S)	QLD	Townsville	18+
35800	Paroo (S)	QLD	Toowoomba	All
36070	Pormpuraaw (S)	QLD	Cairns	All
36150	Quilpie (S)	QLD	Toowoomba	All
36250	Redland (C)	QLD	Beenleigh	All
36300	Richmond (S)	QLD	Townsville	0 to 17
36300	Richmond (S)	QLD	Townsville	18+
36370	Rockhampton (R)	QLD	Rockhampton	All
36510	Scenic Rim (R)	QLD	Ipswich	All
36580	Somerset (R)	QLD	Ipswich	All
36630	South Burnett (R)	QLD	Maryborough	All
36660	Southern Downs (R)	QLD	Toowoomba	All
36720	Sunshine Coast (R)	QLD	Maroochydore	All
36820	Tablelands (R)	QLD	Cairns	All
36910	Toowoomba (R)	QLD	Toowoomba	All
36950	Torres (S)	QLD	Cairns	All
36960	Torres Strait Island (R)	QLD	Cairns	All
37010	Townsville (C)	QLD	Townsville	0 to 17

37010	Townsville (C)	QLD	Townsville	18+
37300	Weipa (T)	QLD	Cairns	All
37310	Western Downs (R)	QLD	Toowoomba	All
37340	Whitsunday (R)	QLD	Mackay	All
37400	Winton (S)	QLD	Rockhampton	All
37550	Woorabinda (S)	QLD	Rockhampton	All
37570	Wujal Wujal (S)	QLD	Cairns	All
37600	Yarrabah (S)	QLD	Cairns	All
40070	Adelaide (C)	SA	Eastern Adelaide	0 to 14
40070	Adelaide (C)	SA	Eastern Adelaide	14 to 17
40070	Adelaide (C)	SA	Eastern Adelaide	18+
40120	Adelaide Hills (DC)	SA	Adelaide Hills	0 to 14
40120	Adelaide Hills (DC)	SA	Adelaide Hills	14 to 17
40120	Adelaide Hills (DC)	SA	Adelaide Hills	18+
40150	Adelaide Plains (DC)	SA	Barossa, Light and Lower North	0 to 14
40150	Adelaide Plains (DC)	SA	Barossa, Light and Lower North	14 to 17
40150	Adelaide Plains (DC)	SA	Barossa, Light and Lower North	18+
40220	Alexandrina (DC)	SA	Fleurieu and Kangaroo Island	0 to 14
40220	Alexandrina (DC)	SA	Fleurieu and Kangaroo Island	14 to 17
40220	Alexandrina (DC)	SA	Fleurieu and Kangaroo Island	18+
40250	Anangu Pitjantjatjara (AC)	SA	Far North (SA)	0 to 14
40250	Anangu Pitjantjatjara (AC)	SA	Far North (SA)	14 to 17
40250	Anangu Pitjantjatjara (AC)	SA	Far North (SA)	18+
40310	Barossa (DC)	SA	Barossa, Light and Lower North	0 to 14
40310	Barossa (DC)	SA	Barossa, Light and Lower North	14 to 17
40310	Barossa (DC)	SA	Barossa, Light and Lower North	18+
40430	Barunga West (DC)	SA	Yorke and Mid North	0 to 14
40430	Barunga West (DC)	SA	Yorke and Mid North	14 to 17
40430	Barunga West (DC)	SA	Yorke and Mid North	18+
40520	Berri and Barmera (DC)	SA	Murray and Mallee	0 to 14
40520	Berri and Barmera (DC)	SA	Murray and Mallee	14 to 17
40520	Berri and Barmera (DC)	SA	Murray and Mallee	18+
40700	Burnside (C)	SA	Eastern Adelaide	0 to 14
40700	Burnside (C)	SA	Eastern Adelaide	14 to 17
40700	Burnside (C)	SA	Eastern Adelaide	18+
40910	Campbelltown (C) (SA)	SA	Eastern Adelaide	0 to 14
40910	Campbelltown (C) (SA)	SA	Eastern Adelaide	14 to 17
40910	Campbelltown (C) (SA)	SA	Eastern Adelaide	18+
41010	Ceduna (DC)	SA	Eyre and Western	0 to 14
41010	Ceduna (DC)	SA	Eyre and Western	14 to 17
41010	Ceduna (DC)	SA	Eyre and Western	18+
41060	Charles Sturt (C)	SA	Western Adelaide	0 to 14
41060	Charles Sturt (C)	SA	Western Adelaide	14 to 17
41060	Charles Sturt (C)	SA	Western Adelaide	18+
41140	Clare and Gilbert Valleys (DC)	SA	Yorke and Mid North	0 to 14
41140	Clare and Gilbert Valleys (DC)	SA	Yorke and Mid North	14 to 17
41140	Clare and Gilbert Valleys (DC)	SA	Yorke and Mid North	18+
41190	Cleve (DC)	SA	Eyre and Western	0 to 14
41190	Cleve (DC)	SA	Eyre and Western	14 to 17
41190	Cleve (DC)	SA	Eyre and Western	18+

41330	Coober Pedy (DC)	SA	Far North (SA)	0 to 14
41330	Coober Pedy (DC)	SA	Far North (SA)	14 to 17
41330	Coober Pedy (DC)	SA	Far North (SA)	18+
41560	Copper Coast (DC)	SA	Yorke and Mid North	0 to 14
41560	Copper Coast (DC)	SA	Yorke and Mid North	14 to 17
41560	Copper Coast (DC)	SA	Yorke and Mid North	18+
41750	Elliston (DC)	SA	Eyre and Western	0 to 14
41750	Elliston (DC)	SA	Eyre and Western	14 to 17
41750	Elliston (DC)	SA	Eyre and Western	18+
41830	Flinders Ranges (DC)	SA	Far North (SA)	0 to 14
41830	Flinders Ranges (DC)	SA	Far North (SA)	14 to 17
41830	Flinders Ranges (DC)	SA	Far North (SA)	18+
41960	Franklin Harbour (DC)	SA	Eyre and Western	0 to 14
41960	Franklin Harbour (DC)	SA	Eyre and Western	14 to 17
41960	Franklin Harbour (DC)	SA	Eyre and Western	18+
42030	Gawler (T)	SA	Barossa, Light and Lower North	0 to 14
42030	Gawler (T)	SA	Barossa, Light and Lower North	14 to 17
42030	Gawler (T)	SA	Barossa, Light and Lower North	18+
42110	Goyder (DC)	SA	Yorke and Mid North	0 to 14
42110	Goyder (DC)	SA	Yorke and Mid North	14 to 17
42110	Goyder (DC)	SA	Yorke and Mid North	18+
42250	Grant (DC)	SA	Limestone Coast	0 to 14
42250	Grant (DC)	SA	Limestone Coast	14 to 17
42250	Grant (DC)	SA	Limestone Coast	18+
42600	Holdfast Bay (C)	SA	Southern Adelaide	0 to 14
42600	Holdfast Bay (C)	SA	Southern Adelaide	14 to 17
42600	Holdfast Bay (C)	SA	Southern Adelaide	18+
42750	Kangaroo Island (DC)	SA	Fleurieu and Kangaroo Island	0 to 14
42750	Kangaroo Island (DC)	SA	Fleurieu and Kangaroo Island	14 to 17
42750	Kangaroo Island (DC)	SA	Fleurieu and Kangaroo Island	18+
43080	Karoonda East Murray (DC)	SA	Murray and Mallee	0 to 14
43080	Karoonda East Murray (DC)	SA	Murray and Mallee	14 to 17
43080	Karoonda East Murray (DC)	SA	Murray and Mallee	18+
43220	Kimba (DC)	SA	Eyre and Western	0 to 14
43220	Kimba (DC)	SA	Eyre and Western	14 to 17
43220	Kimba (DC)	SA	Eyre and Western	18+
43360	Kingston (DC) (SA)	SA	Limestone Coast	0 to 14
43360	Kingston (DC) (SA)	SA	Limestone Coast	14 to 17
43360	Kingston (DC) (SA)	SA	Limestone Coast	18+
43650	Light (RegC)	SA	Barossa, Light and Lower North	0 to 14
43650	Light (RegC)	SA	Barossa, Light and Lower North	14 to 17
43650	Light (RegC)	SA	Barossa, Light and Lower North	18+
43710	Lower Eyre Peninsula (DC)	SA	Eyre and Western	0 to 14
43710	Lower Eyre Peninsula (DC)	SA	Eyre and Western	14 to 17
43710	Lower Eyre Peninsula (DC)	SA	Eyre and Western	18+
43790	Loxton Waikerie (DC)	SA	Murray and Mallee	0 to 14
43790	Loxton Waikerie (DC)	SA	Murray and Mallee	14 to 17
43790	Loxton Waikerie (DC)	SA	Murray and Mallee	18+
44000	Maralinga Tjarutja (AC)	SA	Eyre and Western	0 to 14
44000	Maralinga Tjarutja (AC)	SA	Eyre and Western	14 to 17

44000	Maralinga Tjarutja (AC)	SA	Eyre and Western	18+
44060	Marion (C)	SA	Southern Adelaide	0 to 14
44060	Marion (C)	SA	Southern Adelaide	14 to 17
44060	Marion (C)	SA	Southern Adelaide	18+
44210	Mid Murray (DC)	SA	Murray and Mallee	0 to 14
44210	Mid Murray (DC)	SA	Murray and Mallee	14 to 17
44210	Mid Murray (DC)	SA	Murray and Mallee	18+
44340	Mitcham (C)	SA	Southern Adelaide	0 to 14
44340	Mitcham (C)	SA	Southern Adelaide	14 to 17
44340	Mitcham (C)	SA	Southern Adelaide	18+
44550	Mount Barker (DC)	SA	Adelaide Hills	0 to 14
44550	Mount Barker (DC)	SA	Adelaide Hills	14 to 17
44550	Mount Barker (DC)	SA	Adelaide Hills	18+
44620	Mount Gambier (C)	SA	Limestone Coast	0 to 14
44620	Mount Gambier (C)	SA	Limestone Coast	14 to 17
44620	Mount Gambier (C)	SA	Limestone Coast	18+
44830	Mount Remarkable (DC)	SA	Yorke and Mid North	0 to 14
44830	Mount Remarkable (DC)	SA	Yorke and Mid North	14 to 17
44830	Mount Remarkable (DC)	SA	Yorke and Mid North	18+
45040	Murray Bridge (RC)	SA	Murray and Mallee	0 to 14
45040	Murray Bridge (RC)	SA	Murray and Mallee	14 to 17
45040	Murray Bridge (RC)	SA	Murray and Mallee	18+
45090	Naracoorte and Lucindale (DC)	SA	Limestone Coast	0 to 14
45090	Naracoorte and Lucindale (DC)	SA	Limestone Coast	14 to 17
45090	Naracoorte and Lucindale (DC)	SA	Limestone Coast	18+
45120	Northern Areas (DC)	SA	Yorke and Mid North	0 to 14
45120	Northern Areas (DC)	SA	Yorke and Mid North	14 to 17
45120	Northern Areas (DC)	SA	Yorke and Mid North	18+
45290	Norwood Payneham St Peters (C)	SA	Eastern Adelaide	0 to 14
45290	Norwood Payneham St Peters (C)	SA	Eastern Adelaide	14 to 17
45290	Norwood Payneham St Peters (C)	SA	Eastern Adelaide	18+
45340	Onkaparinga (C)	SA	Southern Adelaide	0 to 14
45340	Onkaparinga (C)	SA	Southern Adelaide	14 to 17
45340	Onkaparinga (C)	SA	Southern Adelaide	18+
45400	Orroroo/Carrieton (DC)	SA	Yorke and Mid North	0 to 14
45400	Orroroo/Carrieton (DC)	SA	Yorke and Mid North	14 to 17
45400	Orroroo/Carrieton (DC)	SA	Yorke and Mid North	18+
45540	Peterborough (DC)	SA	Yorke and Mid North	0 to 14
45540	Peterborough (DC)	SA	Yorke and Mid North	14 to 17
45540	Peterborough (DC)	SA	Yorke and Mid North	18+
45680	Playford (C)	SA	Northern Adelaide	0 to 14
45680	Playford (C)	SA	Northern Adelaide	14 to 17
45680	Playford (C)	SA	Northern Adelaide	18+
45890	Port Adelaide Enfield (C)	SA	Northern Adelaide	0 to 14
45890	Port Adelaide Enfield (C)	SA	Northern Adelaide	14 to 17
45890	Port Adelaide Enfield (C)	SA	Northern Adelaide	18+
46090	Port Augusta (C)	SA	Far North (SA)	0 to 14
46090	Port Augusta (C)	SA	Far North (SA)	14 to 17
46090	Port Augusta (C)	SA	Far North (SA)	18+
46300	Port Lincoln (C)	SA	Eyre and Western	0 to 14

46300	Port Lincoln (C)	SA	Eyre and Western	14 to 17
46300	Port Lincoln (C)	SA	Eyre and Western	18+
46450	Port Pirie City and Dists (M)	SA	Yorke and Mid North	0 to 14
46450	Port Pirie City and Dists (M)	SA	Yorke and Mid North	14 to 17
46450	Port Pirie City and Dists (M)	SA	Yorke and Mid North	18+
46510	Prospect (C)	SA	Eastern Adelaide	0 to 14
46510	Prospect (C)	SA	Eastern Adelaide	14 to 17
46510	Prospect (C)	SA	Eastern Adelaide	18+
46670	Renmark Paringa (DC)	SA	Murray and Mallee	0 to 14
46670	Renmark Paringa (DC)	SA	Murray and Mallee	14 to 17
46670	Renmark Paringa (DC)	SA	Murray and Mallee	18+
46860	Robe (DC)	SA	Limestone Coast	0 to 14
46860	Robe (DC)	SA	Limestone Coast	14 to 17
46860	Robe (DC)	SA	Limestone Coast	18+
46970	Roxby Downs (M)	SA	Far North (SA)	0 to 14
46970	Roxby Downs (M)	SA	Far North (SA)	14 to 17
46970	Roxby Downs (M)	SA	Far North (SA)	18+
47140	Salisbury (C)	SA	Northern Adelaide	0 to 14
47140	Salisbury (C)	SA	Northern Adelaide	14 to 17
47140	Salisbury (C)	SA	Northern Adelaide	18+
47290	Southern Mallee (DC)	SA	Murray and Mallee	0 to 14
47290	Southern Mallee (DC)	SA	Murray and Mallee	14 to 17
47290	Southern Mallee (DC)	SA	Murray and Mallee	18+
47490	Streaky Bay (DC)	SA	Eyre and Western	0 to 14
47490	Streaky Bay (DC)	SA	Eyre and Western	14 to 17
47490	Streaky Bay (DC)	SA	Eyre and Western	18+
47630	Tatiara (DC)	SA	Limestone Coast	0 to 14
47630	Tatiara (DC)	SA	Limestone Coast	14 to 17
47630	Tatiara (DC)	SA	Limestone Coast	18+
47700	Tea Tree Gully (C)	SA	Northern Adelaide	0 to 14
47700	Tea Tree Gully (C)	SA	Northern Adelaide	14 to 17
47700	Tea Tree Gully (C)	SA	Northern Adelaide	18+
47800	The Coorong (DC)	SA	Murray and Mallee	0 to 14
47800	The Coorong (DC)	SA	Murray and Mallee	14 to 17
47800	The Coorong (DC)	SA	Murray and Mallee	18+
47910	Tumby Bay (DC)	SA	Eyre and Western	0 to 14
47910	Tumby Bay (DC)	SA	Eyre and Western	14 to 17
47910	Tumby Bay (DC)	SA	Eyre and Western	18+
47980	Unley (C)	SA	Eastern Adelaide	0 to 14
47980	Unley (C)	SA	Eastern Adelaide	14 to 17
47980	Unley (C)	SA	Eastern Adelaide	18+
48050	Victor Harbor (C)	SA	Fleurieu and Kangaroo Island	0 to 14
48050	Victor Harbor (C)	SA	Fleurieu and Kangaroo Island	14 to 17
48050	Victor Harbor (C)	SA	Fleurieu and Kangaroo Island	18+
48130	Wakefield (DC)	SA	Yorke and Mid North	0 to 14
48130	Wakefield (DC)	SA	Yorke and Mid North	14 to 17
48130	Wakefield (DC)	SA	Yorke and Mid North	18+
48260	Walkerville (M)	SA	Eastern Adelaide	0 to 14
48260	Walkerville (M)	SA	Eastern Adelaide	14 to 17
48260	Walkerville (M)	SA	Eastern Adelaide	18+

48340	Wattle Range (DC)	SA	Limestone Coast	0 to 14
48340	Wattle Range (DC)	SA	Limestone Coast	14 to 17
48340	Wattle Range (DC)	SA	Limestone Coast	18+
48410	West Torrens (C)	SA	Western Adelaide	0 to 14
48410	West Torrens (C)	SA	Western Adelaide	14 to 17
48410	West Torrens (C)	SA	Western Adelaide	18+
48540	Whyalla (C)	SA	Eyre and Western	0 to 14
48540	Whyalla (C)	SA	Eyre and Western	14 to 17
48540	Whyalla (C)	SA	Eyre and Western	18+
48640	Wudinna (DC)	SA	Eyre and Western	0 to 14
48640	Wudinna (DC)	SA	Eyre and Western	14 to 17
48640	Wudinna (DC)	SA	Eyre and Western	18+
48750	Yankalilla (DC)	SA	Fleurieu and Kangaroo Island	0 to 14
48750	Yankalilla (DC)	SA	Fleurieu and Kangaroo Island	14 to 17
48750	Yankalilla (DC)	SA	Fleurieu and Kangaroo Island	18+
48830	Yorke Peninsula (DC)	SA	Yorke and Mid North	0 to 14
48830	Yorke Peninsula (DC)	SA	Yorke and Mid North	14 to 17
48830	Yorke Peninsula (DC)	SA	Yorke and Mid North	18+
50080	Albany (C)	WA	Great Southern	All
50210	Armadale (C)	WA	South Metro	All
50250	Ashburton (S)	WA	Kimberley-Pilbara	All
50280	Augusta-Margaret River (S)	WA	South West	All
50350	Bassendean (T)	WA	North East Metro	All
50420	Bayswater (C)	WA	North East Metro	All
50490	Belmont (C)	WA	South East Metro	All
50560	Beverley (S)	WA	Wheat Belt	All
50630	Boddington (S)	WA	Wheat Belt	All
50770	Boyup Brook (S)	WA	South West	All
50840	Bridgetown-Greenbushes (S)	WA	South West	All
50910	Brookton (S)	WA	Wheat Belt	All
50980	Broome (S)	WA	Kimberley-Pilbara	All
51080	Broomehill-Tambellup (S)	WA	Great Southern	All
51120	Bruce Rock (S)	WA	Wheat Belt	All
51190	Bunbury (C)	WA	South West	All
51260	Busselton (C)	WA	South West	All
51310	Cambridge (T)	WA	Central North Metro	All
51330	Canning (C)	WA	South East Metro	All
51400	Capel (S)	WA	South West	All
51470	Carnamah (S)	WA	Midwest-Gascoyne	All
51540	Carnarvon (S)	WA	Midwest-Gascoyne	All
51610	Chapman Valley (S)	WA	Midwest-Gascoyne	All
51680	Chittering (S)	WA	Wheat Belt	All
51750	Claremont (T)	WA	Central North Metro	All
51820	Cockburn (C)	WA	Central South Metro	All
51890	Collie (S)	WA	South West	All
51960	Coolgardie (S)	WA	Goldfields-Esperance	All
52030	Coorow (S)	WA	Midwest-Gascoyne	All
52100	Corrigin (S)	WA	Wheat Belt	All
52170	Cottesloe (T)	WA	Central North Metro	All
52240	Cranbrook (S)	WA	Great Southern	All

52310	Cuballing (S)	WA	Wheat Belt	All
52380	Cue (S)	WA	Midwest-Gascoyne	All
52450	Cunderdin (S)	WA	Wheat Belt	All
52520	Dalwallinu (S)	WA	Wheat Belt	All
52590	Dandaragan (S)	WA	Wheat Belt	All
52660	Dardanup (S)	WA	South West	All
52730	Denmark (S)	WA	Great Southern	All
52800	Derby-West Kimberley (S)	WA	Kimberley-Pilbara	All
52870	Donnybrook-Balingup (S)	WA	South West	All
52940	Dowerin (S)	WA	Wheat Belt	All
53010	Dumbleyung (S)	WA	Wheat Belt	All
53080	Dundas (S)	WA	Goldfields-Esperance	All
53150	East Fremantle (T)	WA	Central South Metro	All
53220	East Pilbara (S)	WA	Kimberley-Pilbara	All
53290	Esperance (S)	WA	Goldfields-Esperance	All
53360	Exmouth (S)	WA	Midwest-Gascoyne	All
53430	Fremantle (C)	WA	Central South Metro	All
53570	Gingin (S)	WA	Wheat Belt	All
53640	Gnowangerup (S)	WA	Great Southern	All
53710	Goomalling (S)	WA	Wheat Belt	All
53780	Gosnells (C)	WA	South East Metro	All
53800	Greater Geraldton (C)	WA	Midwest-Gascoyne	All
53920	Halls Creek (S)	WA	Kimberley-Pilbara	All
53990	Harvey (S)	WA	South West	All
54060	Irwin (S)	WA	Midwest-Gascoyne	All
54130	Jerramungup (S)	WA	Great Southern	All
54170	Joondalup (C)	WA	North Metro	All
54200	Kalamunda (C)	WA	North East Metro	All
54280	Kalgoorlie/Boulder (C)	WA	Goldfields-Esperance	All
54310	Karratha (C)	WA	Kimberley-Pilbara	All
54340	Katanning (S)	WA	Great Southern	All
54410	Kellerberrin (S)	WA	Wheat Belt	All
54480	Kent (S)	WA	Great Southern	All
54550	Kojonup (S)	WA	Great Southern	All
54620	Kondinin (S)	WA	Wheat Belt	All
54690	Koorda (S)	WA	Wheat Belt	All
54760	Kulin (S)	WA	Wheat Belt	All
54830	Kwinana (C)	WA	Central South Metro	All
54900	Lake Grace (S)	WA	Wheat Belt	All
54970	Laverton (S)	WA	Goldfields-Esperance	All
55040	Leonora (S)	WA	Goldfields-Esperance	All
55110	Mandurah (C)	WA	South Metro	All
55180	Manjimup (S)	WA	South West	All
55250	Meekatharra (S)	WA	Midwest-Gascoyne	All
55320	Melville (C)	WA	Central South Metro	All
55390	Menzies (S)	WA	Goldfields-Esperance	All
55460	Merredin (S)	WA	Wheat Belt	All
55530	Mingenew (S)	WA	Midwest-Gascoyne	All
55600	Moora (S)	WA	Wheat Belt	All
55670	Morawa (S)	WA	Midwest-Gascoyne	All

55740	Mosman Park (T)	WA	Central North Metro	All
55810	Mount Magnet (S)	WA	Midwest-Gascoyne	All
55880	Mount Marshall (S)	WA	Wheat Belt	All
55950	Mukinbudin (S)	WA	Wheat Belt	All
56090	Mundaring (S)	WA	North East Metro	All
56160	Murchison (S)	WA	Midwest-Gascoyne	All
56230	Murray (S)	WA	South Metro	All
56300	Nannup (S)	WA	South West	All
56370	Narembeen (S)	WA	Wheat Belt	All
56460	Narrogin (S)	WA	Wheat Belt	All
56580	Nedlands (C)	WA	Central North Metro	All
56620	Ngaanyatjarraku (S)	WA	Goldfields-Esperance	All
56730	Northam (S)	WA	Wheat Belt	All
56790	Northampton (S)	WA	Midwest-Gascoyne	All
56860	Nungarin (S)	WA	Wheat Belt	All
56930	Peppermint Grove (S)	WA	Central North Metro	All
57000	Perenjori (S)	WA	Midwest-Gascoyne	All
57080	Perth (C)	WA	Central North Metro	All
57140	Pingelly (S)	WA	Wheat Belt	All
57210	Plantagenet (S)	WA	Great Southern	All
57280	Port Hedland (T)	WA	Kimberley-Pilbara	All
57350	Quairading (S)	WA	Wheat Belt	All
57420	Ravensthorpe (S)	WA	Goldfields-Esperance	All
57490	Rockingham (C)	WA	South Metro	All
57630	Sandstone (S)	WA	Midwest-Gascoyne	All
57700	Serpentine-Jarrahdale (S)	WA	South Metro	All
57770	Shark Bay (S)	WA	Midwest-Gascoyne	All
57840	South Perth (C)	WA	Central South Metro	All
57910	Stirling (C)	WA	Central North Metro	All
57980	Subiaco (C)	WA	Central North Metro	All
58050	Swan (C)	WA	North East Metro	All
58190	Tammin (S)	WA	Wheat Belt	All
58260	Three Springs (S)	WA	Midwest-Gascoyne	All
58330	Toodyay (S)	WA	Wheat Belt	All
58400	Trayning (S)	WA	Wheat Belt	All
58470	Upper Gascoyne (S)	WA	Midwest-Gascoyne	All
58510	Victoria Park (T)	WA	South East Metro	All
58540	Victoria Plains (S)	WA	Wheat Belt	All
58570	Vincent (C)	WA	Central North Metro	All
58610	Wagin (S)	WA	Wheat Belt	All
58680	Wandering (S)	WA	Wheat Belt	All
58760	Wanneroo (C)	WA	North Metro	All
58820	Waroona (S)	WA	South West	All
58890	West Arthur (S)	WA	Wheat Belt	All
59030	Westonia (S)	WA	Wheat Belt	All
59100	Wickepin (S)	WA	Wheat Belt	All
59170	Williams (S)	WA	Wheat Belt	All
59250	Wiluna (S)	WA	Midwest-Gascoyne	All
59310	Wongan-Ballidu (S)	WA	Wheat Belt	All
59320	Woodanilling (S)	WA	Great Southern	All

59330	Wyalkatchem (S)	WA	Wheat Belt	All
59340	Wyndham-East Kimberley (S)	WA	Kimberley-Pilbara	All
59350	Yalgoo (S)	WA	Midwest-Gascoyne	All
59360	Yilgarn (S)	WA	Wheat Belt	All
59370	York (S)	WA	Wheat Belt	All
60210	Break O'Day (M)	TAS	TAS North	0 to 6
60210	Break O'Day (M)	TAS	TAS North	7 to 14
60210	Break O'Day (M)	TAS	TAS North	15 to 24
60210	Break O'Day (M)	TAS	TAS North	25 to 34
60210	Break O'Day (M)	TAS	TAS North	35 to 54
60210	Break O'Day (M)	TAS	TAS North	55+
60410	Brighton (M)	TAS	TAS South East	0 to 6
60410	Brighton (M)	TAS	TAS South East	7 to 14
60410	Brighton (M)	TAS	TAS South East	15 to 24
60410	Brighton (M)	TAS	TAS South East	25 to 34
60410	Brighton (M)	TAS	TAS South East	35 to 54
60410	Brighton (M)	TAS	TAS South East	55+
60610	Burnie (C)	TAS	TAS North West	0 to 6
60610	Burnie (C)	TAS	TAS North West	7 to 14
60610	Burnie (C)	TAS	TAS North West	15 to 24
60610	Burnie (C)	TAS	TAS North West	25 to 34
60610	Burnie (C)	TAS	TAS North West	35 to 54
60610	Burnie (C)	TAS	TAS North West	55+
60810	Central Coast (M) (Tas.)	TAS	TAS North West	0 to 6
60810	Central Coast (M) (Tas.)	TAS	TAS North West	7 to 14
60810	Central Coast (M) (Tas.)	TAS	TAS North West	15 to 24
60810	Central Coast (M) (Tas.)	TAS	TAS North West	25 to 34
60810	Central Coast (M) (Tas.)	TAS	TAS North West	35 to 54
60810	Central Coast (M) (Tas.)	TAS	TAS North West	55+
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	0 to 6
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	7 to 14
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	15 to 24
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	25 to 34
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	35 to 54
61010	Central Highlands (M) (Tas.)	TAS	TAS South East	55+
61210	Circular Head (M)	TAS	TAS North West	0 to 6
61210	Circular Head (M)	TAS	TAS North West	7 to 14
61210	Circular Head (M)	TAS	TAS North West	15 to 24
61210	Circular Head (M)	TAS	TAS North West	25 to 34
61210	Circular Head (M)	TAS	TAS North West	35 to 54
61210	Circular Head (M)	TAS	TAS North West	55+
61410	Clarence (C)	TAS	TAS South East	0 to 6
61410	Clarence (C)	TAS	TAS South East	7 to 14
61410	Clarence (C)	TAS	TAS South East	15 to 24
61410	Clarence (C)	TAS	TAS South East	25 to 34
61410	Clarence (C)	TAS	TAS South East	35 to 54
61410	Clarence (C)	TAS	TAS South East	55+
61510	Derwent Valley (M)	TAS	TAS South East	0 to 6
61510	Derwent Valley (M)	TAS	TAS South East	7 to 14
61510	Derwent Valley (M)	TAS	TAS South East	15 to 24

61510	Derwent Valley (M)	TAS	TAS South East	25 to 34
61510	Derwent Valley (M)	TAS	TAS South East	35 to 54
61510	Derwent Valley (M)	TAS	TAS South East	55+
61610	Devonport (C)	TAS	TAS North West	0 to 6
61610	Devonport (C)	TAS	TAS North West	7 to 14
61610	Devonport (C)	TAS	TAS North West	15 to 24
61610	Devonport (C)	TAS	TAS North West	25 to 34
61610	Devonport (C)	TAS	TAS North West	35 to 54
61610	Devonport (C)	TAS	TAS North West	55+
61810	Dorset (M)	TAS	TAS North	0 to 6
61810	Dorset (M)	TAS	TAS North	7 to 14
61810	Dorset (M)	TAS	TAS North	15 to 24
61810	Dorset (M)	TAS	TAS North	25 to 34
61810	Dorset (M)	TAS	TAS North	35 to 54
61810	Dorset (M)	TAS	TAS North	55+
62010	Flinders (M) (Tas.)	TAS	TAS North	0 to 6
62010	Flinders (M) (Tas.)	TAS	TAS North	7 to 14
62010	Flinders (M) (Tas.)	TAS	TAS North	15 to 24
62010	Flinders (M) (Tas.)	TAS	TAS North	25 to 34
62010	Flinders (M) (Tas.)	TAS	TAS North	35 to 54
62010	Flinders (M) (Tas.)	TAS	TAS North	55+
62210	George Town (M)	TAS	TAS North	0 to 6
62210	George Town (M)	TAS	TAS North	7 to 14
62210	George Town (M)	TAS	TAS North	15 to 24
62210	George Town (M)	TAS	TAS North	25 to 34
62210	George Town (M)	TAS	TAS North	35 to 54
62210	George Town (M)	TAS	TAS North	55+
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	0 to 6
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	7 to 14
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	15 to 24
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	25 to 34
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	35 to 54
62410	Glamorgan/Spring Bay (M)	TAS	TAS South East	55+
62610	Glenorchy (C)	TAS	TAS South West	0 to 6
62610	Glenorchy (C)	TAS	TAS South West	7 to 14
62610	Glenorchy (C)	TAS	TAS South West	15 to 24
62610	Glenorchy (C)	TAS	TAS South West	25 to 34
62610	Glenorchy (C)	TAS	TAS South West	35 to 54
62610	Glenorchy (C)	TAS	TAS South West	55+
62810	Hobart (C)	TAS	TAS South West	0 to 6
62810	Hobart (C)	TAS	TAS South West	7 to 14
62810	Hobart (C)	TAS	TAS South West	15 to 24
62810	Hobart (C)	TAS	TAS South West	25 to 34
62810	Hobart (C)	TAS	TAS South West	35 to 54
62810	Hobart (C)	TAS	TAS South West	55+
63010	Huon Valley (M)	TAS	TAS South West	0 to 6
63010	Huon Valley (M)	TAS	TAS South West	7 to 14
63010	Huon Valley (M)	TAS	TAS South West	15 to 24
63010	Huon Valley (M)	TAS	TAS South West	25 to 34
63010	Huon Valley (M)	TAS	TAS South West	35 to 54

63010	Huon Valley (M)	TAS	TAS South West	55+
63210	Kentish (M)	TAS	TAS North West	0 to 6
63210	Kentish (M)	TAS	TAS North West	7 to 14
63210	Kentish (M)	TAS	TAS North West	15 to 24
63210	Kentish (M)	TAS	TAS North West	25 to 34
63210	Kentish (M)	TAS	TAS North West	35 to 54
63210	Kentish (M)	TAS	TAS North West	55+
63410	King Island (M)	TAS	TAS North West	0 to 6
63410	King Island (M)	TAS	TAS North West	7 to 14
63410	King Island (M)	TAS	TAS North West	15 to 24
63410	King Island (M)	TAS	TAS North West	25 to 34
63410	King Island (M)	TAS	TAS North West	35 to 54
63410	King Island (M)	TAS	TAS North West	55+
63610	Kingborough (M)	TAS	TAS South West	0 to 6
63610	Kingborough (M)	TAS	TAS South West	7 to 14
63610	Kingborough (M)	TAS	TAS South West	15 to 24
63610	Kingborough (M)	TAS	TAS South West	25 to 34
63610	Kingborough (M)	TAS	TAS South West	35 to 54
63610	Kingborough (M)	TAS	TAS South West	55+
63810	Latrobe (M) (Tas.)	TAS	TAS North West	0 to 6
63810	Latrobe (M) (Tas.)	TAS	TAS North West	7 to 14
63810	Latrobe (M) (Tas.)	TAS	TAS North West	15 to 24
63810	Latrobe (M) (Tas.)	TAS	TAS North West	25 to 34
63810	Latrobe (M) (Tas.)	TAS	TAS North West	35 to 54
63810	Latrobe (M) (Tas.)	TAS	TAS North West	55+
64010	Launceston (C)	TAS	TAS North	0 to 6
64010	Launceston (C)	TAS	TAS North	7 to 14
64010	Launceston (C)	TAS	TAS North	15 to 24
64010	Launceston (C)	TAS	TAS North	25 to 34
64010	Launceston (C)	TAS	TAS North	35 to 54
64010	Launceston (C)	TAS	TAS North	55+
64210	Meander Valley (M)	TAS	TAS North	0 to 6
64210	Meander Valley (M)	TAS	TAS North	7 to 14
64210	Meander Valley (M)	TAS	TAS North	15 to 24
64210	Meander Valley (M)	TAS	TAS North	25 to 34
64210	Meander Valley (M)	TAS	TAS North	35 to 54
64210	Meander Valley (M)	TAS	TAS North	55+
64610	Northern Midlands (M)	TAS	TAS North	0 to 6
64610	Northern Midlands (M)	TAS	TAS North	7 to 14
64610	Northern Midlands (M)	TAS	TAS North	15 to 24
64610	Northern Midlands (M)	TAS	TAS North	25 to 34
64610	Northern Midlands (M)	TAS	TAS North	35 to 54
64610	Northern Midlands (M)	TAS	TAS North	55+
64810	Sorell (M)	TAS	TAS South East	0 to 6
64810	Sorell (M)	TAS	TAS South East	7 to 14
64810	Sorell (M)	TAS	TAS South East	15 to 24
64810	Sorell (M)	TAS	TAS South East	25 to 34
64810	Sorell (M)	TAS	TAS South East	35 to 54
64810	Sorell (M)	TAS	TAS South East	55+
65010	Southern Midlands (M)	TAS	TAS South East	0 to 6

65010	Southern Midlands (M)	TAS	TAS South East	7 to 14
65010	Southern Midlands (M)	TAS	TAS South East	15 to 24
65010	Southern Midlands (M)	TAS	TAS South East	25 to 34
65010	Southern Midlands (M)	TAS	TAS South East	35 to 54
65010	Southern Midlands (M)	TAS	TAS South East	55+
65210	Tasman (M)	TAS	TAS South East	0 to 6
65210	Tasman (M)	TAS	TAS South East	7 to 14
65210	Tasman (M)	TAS	TAS South East	15 to 24
65210	Tasman (M)	TAS	TAS South East	25 to 34
65210	Tasman (M)	TAS	TAS South East	35 to 54
65210	Tasman (M)	TAS	TAS South East	55+
65410	Waratah/Wynyard (M)	TAS	TAS North West	0 to 6
65410	Waratah/Wynyard (M)	TAS	TAS North West	7 to 14
65410	Waratah/Wynyard (M)	TAS	TAS North West	15 to 24
65410	Waratah/Wynyard (M)	TAS	TAS North West	25 to 34
65410	Waratah/Wynyard (M)	TAS	TAS North West	35 to 54
65410	Waratah/Wynyard (M)	TAS	TAS North West	55+
65610	West Coast (M)	TAS	TAS North West	0 to 6
65610	West Coast (M)	TAS	TAS North West	7 to 14
65610	West Coast (M)	TAS	TAS North West	15 to 24
65610	West Coast (M)	TAS	TAS North West	25 to 34
65610	West Coast (M)	TAS	TAS North West	35 to 54
65610	West Coast (M)	TAS	TAS North West	55+
65810	West Tamar (M)	TAS	TAS North	0 to 6
65810	West Tamar (M)	TAS	TAS North	7 to 14
65810	West Tamar (M)	TAS	TAS North	15 to 24
65810	West Tamar (M)	TAS	TAS North	25 to 34
65810	West Tamar (M)	TAS	TAS North	35 to 54
65810	West Tamar (M)	TAS	TAS North	55+
70200	Alice Springs (T)	NT	Central Australia	All
70420	Barkly (R)	NT	Barkly	All
70540	Belyuen (S)	NT	Darwin Urban	All
70620	Central Desert (R)	NT	Central Australia	All
70700	Coomalie (S)	NT	Darwin Urban	All
71000	Darwin (C)	NT	Darwin Urban	All
71300	East Arnhem (R)	NT	East Arnhem	All
72200	Katherine (T)	NT	Katherine	All
72300	Litchfield (M)	NT	Darwin Urban	All
72330	MacDonnell (R)	NT	Central Australia	All
72800	Palmerston (C)	NT	Darwin Urban	All
73600	Roper Gulf (R)	NT	Darwin Remote	All
74050	Tiwi Islands (R)	NT	Darwin Remote	All
74550	Victoria Daly (R)	NT	Darwin Remote	All
74560	Wagait (S)	NT	Darwin Urban	All
74660	West Arnhem (R)	NT	Darwin Remote	All
74680	West Daly (R)	NT	Darwin Remote	All
89399	Unincorporated ACT	ACT	ACT	All
89499	NO usual address (ACT)	ACT	ACT	All
89799	Migratory - Offshore - Shipping (ACT)	ACT	ACT	All

eas by Age Group

Phase in quarter	Phase in year
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