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The impact of enhancing social care on healthcare use for people with disability: evidence from Australia*

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Abstract

This study examines the impact of enhanced social care provided through the Australian National Disability Insurance Scheme (NDIS) on subsided healthcare utilisation for people with disability. Using linked administrative datasets from 2011 to 2020, we employed a Difference in Difference model and the staggered rollout of the NDIS to assess its effects on healthcare services, focusing on visits to general practitioners (GP), mental healthcare providers, allied health professionals, specialists, and mental health prescriptions. The results show that the NDIS reduced subsidised mental health services and allied health services in the six quarters after enrolment. However, it did not significantly affect visits to GP, specialists, or mental health prescriptions. These effects were most pronounced among individuals aged 0-24 years, males, and those living in major cities. The findings suggest that services available from NDIS may substitute for subsided healthcare services by providing non-clinical care through social care channels. Further research is needed to investigate the long-term effects and health outcomes of the NDIS.

Key words: Healthcare, social care, personalised care, NDIS, disability, mental health**JEL Classification:** I11, I18, I38

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1 Introduction

People with disability face various barriers while accessing healthcare, such as a lack of information, additional costs of healthcare, limited mobility, stigmatisation on the demand side and staff attitude, communication barriers, and inaccessible facilities on the supply side (Baart & Taaka, 2017; Drainoni et al., 2006). These barriers can significantly impede individuals from accessing necessary healthcare services. Indeed, research shows that approximately 10% of people with disability in Australia reported unmet healthcare needs (Temple et al., 2020).

Social care focuses on assisting individuals with daily living and preserving their independence in communication, self-care, social participation, and mobility. In contrast, healthcare primarily deals with the prevention, treatment, or control of health conditions. There are some grey areas, however, such as physical and mental therapies, which can assist with daily living activities and control or treat a particular health condition, the same professionals often perform them. By offering improved social care services, there could be a ripple effect on healthcare utilisation, as it could facilitate easier access to healthcare. If the unmet healthcare needs of individuals with disabilities arise from barriers that social care can address either partially or entirely, the provision of social care will likely increase the utilisation of healthcare services. On the other hand, if subsided healthcare (mental and physical therapies) is being used because social care is insufficient, then enhancing social care may lead to a decrease in subsided healthcare utilisation due to substitution effects. Additionally, social care, especially over the longer term, has the potential to stabilise or enhance both physical and mental health outcomes for people with disability, consequently reducing the need for downstream healthcare utilisation.

Research on the interaction between health and social care can be grouped into three categories. The first focuses on hospital outcomes, highlighting issues like delayed discharges and higher readmission rates for patients with disabilities due to fragmented systems lacking continuity of care and post-discharge support (Costa et al., 2012; Gaughan et al., 2015; Houston et al., 2020; Rojas-García et al., 2018; Summer Foundation, 2021).

The second examines experimental programs aimed at improving health and social care integration. For instance, interprofessional collaboration interventions, reviewed by Zwarenstein et al. (2009), show potential for better healthcare outcomes through improved coordination among professionals. In the US, the Community Care Connection (CCC) program demonstrated reduced hospitalisations among older adults 90 days post-enrolment, though results for emergency department visits were mixed (Akiya et al., 2021; Fisher et al., 2021).

The third explores the macro-level relationship between healthcare costs, social spending, and health outcomes. Studies suggest that reallocating funds to social services in OECD countries correlates with better health indicators like reduced infant mortality and increased life expectancy, even after accounting for health spending and GDP levels (Bradley et al., 2011; Dutton et al., 2018; Rubin et al., 2016). However, these studies are limited to population-level outcomes and cannot assess individual-level effects or specific components of social services.

Significant gaps remain in our understanding of the interaction between health and social systems. Previous literature has focused purely on hospital outcomes. In many health systems, patients often first seek medical help from primary care, such as general practitioners (GP), urgent care clinics or allied health professionals. These medical professionals provide an initial assessment and treatment and can refer patients to specialists or hospitals. Therefore, it is important to estimate the impact of social care on the primary health system. Studies evaluating coordination programs assessed hospital outcomes within 90 days. While the short-term outcomes are important, it is also necessary to evaluate changes that happen in the longer term because some changes may not manifest until after a longer term. Previous studies have been limited by their relatively small sample size due to the experiment happening just in some clinics. Thus, the results are less likely to be able to generalise to a broader population.

To address these gaps, we consider the impact of a large-scale national disability reform in Australia. In 2013, the National Disability Insurance Scheme (NDIS) was introduced to enhance and personalise formal care for individuals under age 65 with significant and likely permanent disabilities. Individuals could now choose their providers from the private sector, and it replaced the previous block funding approach where state governments select the services and support to be provided, and individuals attempted to access these services. Following a trial phase, the NDIS has been gradually implemented through staggered rollouts based on geographic areas or age groups since 2016 and finished the roll-out in June 2023. The NDIS sought to empower people with disability by offering them greater control over the types and extent of services they receive, and the ability to choose their service providers. This transformative disability support reform provides us with a unique opportunity to investigate the impact of enhanced social care on healthcare outcomes.

Our study uses longitudinal administrative claims data linked to the Australian Census and NDIS data. These datasets provide valuable insights as they enable us to identify NDIS participants, track their first NDIS plan acquisition, and obtain comprehensive information on

their utilisation of healthcare services and mental health prescriptions before and after enrolment. We conduct analyses to assess the impact of the NDIS on the utilisation of healthcare services, mental health prescriptions and detailed mental health services for individuals with profound and severe disabilities who are enrolled in the NDIS after the trial stage and estimate the effects of the application stage and for 1.5 years after enrolment. In addition to analysing the combined NDIS sample, we explore the effects separately for males and females, different age groups, and various levels of remoteness. This stratified approach is important as the NDIS will likely have distinct impacts on these subgroups, allowing us to understand better the nuances and variations in outcomes within the NDIS population.

Our primary findings indicate that the application of NDIS did not have any discernible impact except during its trial stage. This implies that utilising healthcare services and mental health prescriptions remains largely unaffected by the NDIS application. Once individuals are enrolled, our results suggest no apparent ripple effects of social care on the utilisation of general practitioners (GPs), specialists, and claims for mental health prescriptions. However, some substitution effects concerning mental health and allied health services were observed. Upon further examination of various mental health services categories, we observe no change in psychiatrist utilisation. However, there is a decrease in the utilisation of psychologists, GP mental health services, and allied mental health services. When further investigating which subgroups drive the results, we found that the effects are stronger for males, young people and those living in major cities.

Our findings indicate that the presence of social care is unlikely to significantly impact healthcare services in areas where it is explicitly not covered. The barriers to accessing healthcare and the resulting unmet need are unlikely to be effectively mitigated in the short term by enhancing social care alone. To address this issue, it is necessary to tackle other concerns that social care measures may not adequately address. However, we did observe that social care is likely to substitute for healthcare utilisation in areas where there may be an overlap between the NDIS and the healthcare system, such as mental health and allied health services. In particular, psychosocial supports provided through the NDIS may substitute for psychosocial therapies previously subsided through the healthcare system. These findings contribute to the ongoing discussion regarding the escalating costs of social care, particularly concerning the NDIS in Australia. Projections suggest that the NDIS costs will surpass AU$50 billion by 2025 (Parliament of Australia, 2022).

The paper is organised as follows. Section 4.2 describes the institutional setting and data. Section 4.3 presents the empirical strategies for estimating the impact of social care on healthcare use and mental health prescription. The main results, robustness checks, and heterogeneity analyses are presented and discussed in Section 4.4, and Section 4.5 concludes.

2 Background

2.1 Institutional setting

2.1.1 Healthcare

In Australia, all citizens and permanent residents are entitled to subsided healthcare through Medicare, the country's universal health insurance program. Medicare offers comprehensive coverage for inpatient and outpatient care and prescription medications (Parliament of Australia, 2016). General Practitioners (GPs) are the primary contact in the health system for many people, often serving as the 'gatekeeper', referring patients to other healthcare professionals if particular expertise is considered necessary for diagnosis or treatment. To be eligible for Medicare rebates, a patient will need a referral letter from the GP to access out-of-hospital services provided by specialists, psychologists, and some allied health practitioners (Services Australia, 2023a). These services are reimbursed on a fee-for-service basis, and these professionals have the discretion to set their own fees (Van Doorslaer et al., 2008). If the service providers charge fees higher than the government-specified Medicare benefit, individuals may have to bear out-of-pocket costs. (Department of Health, 2020).

For people with complex and chronic (terminal) conditions, there are rebates for up to five visits per calendar year to allied health practitioners identified in the GP Management Plans (GPMPs) and Team Care Agreements (TCAs) (Harris et al., 2011) through Medicare. Australians also have access to mental healthcare services outside of hospitals, provided by various professionals such as general practitioners, psychiatrists, psychologists, and allied health practitioners (AIHW, 2022). A mental health treatment plan allows patients to claim subsidies for up to ten sessions[1] with a mental health professional each calendar year. First, the doctor (mostly a GP, but sometimes a psychiatrist or paediatrician) will refer the patient for up to six sessions in referral of the initial course of treatment. If more visits are needed, the doctor can refer the patient for additional sessions (Services Australia, 2023b). Patients who do not

[1] It was increased to 20 sessions during COVID until 31 December 2022 but has now returned to 10 sessions per calendar year.

have the referral from their GP or who have exceeded 10 sessions will have to pay the fee themselves, or when they have private health insurance for those services, they will either have the fees paid by themselves, their private health insurance or the gap fees if the private health insurance only covers part of the fees. Annual out-of-pocket costs are capped by 'Safety Net' programs (Van Gool et al., 2009) which means once a certain threshold of out-of-pocket costs is reached, the patient no longer pays for any out-of-pocket costs (for mental health visits or any other medical visits or services) for the rest of the calendar year (Neil, 2023).

2.1.2 NDIS

The NDIS supports people with permanent and significant disability who enter the scheme before age 65. In Australia, there are 4.4 million people with disability. As of September 2022, more than 550,000 people with disability are enrolled in the NDIS. National Disability Insurance Agency, 2023) Unlike the previous "block funding" system in which the funding went directly to service organisations as chosen by State Governments, the NDIS tailors funding to individual goals and preferences. Three types of support budgets can be funded in one's NDIS plan: the core supports the budget, the capacity building budget and the capital support budget. The core supports budget funds assistance related to participants' day-to-day living, such as self-care activities and transport if one cannot use public transportation, specialised disability accommodation, and government pre-paid supports. The capacity building support focuses on building capacity for people to better participate in society. The funding areas here include but are not limited to non-clinical therapies, positive relationship strategies, life skills training, and employment counselling. The capital support budget includes home modification and assistive technology to assist with daily activities. The NDIS has been designed as a market system. Services that the NDIS funds are accessed from the private/non-profit sector instead of the government so people with disability can choose who provide services at a reasonable price if the market functions appropriately (Carey et al., 2018).

The NDIS is not a replacement for mainstream health services. While GPs and specialists exclusively handle areas like prescribing medicines, the distinction between the NDIS and health services can blur in areas like mental health. For example, the NDIS may provide psychosocial support to improve social skills and daily functioning for those with severe mental illness, which overlaps with cognitive behavioural therapy in the health system, aimed at fostering healthier habits (Hamilton et al., 2020; National Disability Insurance Agency, 2023; Services Australia, 2023b).

The implementation of the NDIS has occurred in multiple stages. Initially, it underwent testing in trial sites across five states and territories starting in 2013. Access to the program was determined based on age or residential location at this stage. The trial phase concluded in July 2016, after which the NDIS commenced its nationwide rollout across Australia.[2] The Australian Capital Territory (ACT) was the first territory to complete the rollout, and Western Australia (WA) was the last state, with the NDIS finishing the roll-out on 30 June 2023. Details regarding the trial and rollout dates of the NDIS are listed in Appendix Table S1. This roll-out implied that in a given year, some of the individuals who in principle would meet the eligibility criteria for NDIS support were ineligible due to the NDIS not (yet) being available in their area of residence. The roll-out to different regions was unanticipated, and in some areas such as Melbourne or Sydney, it even split cities into eligible and ineligible neighbourhoods.

To receive a support budget from the NDIS, individuals must go through several steps: meeting eligibility requirements, attending planning meetings, and having the plan reviewed and approved by the NDIA. Once approved, participants can arrange services. The process can be lengthy, especially for those with psychosocial disabilities, as their symptoms are often episodic and harder to document. This makes proving eligibility more challenging compared to those with intellectual or physical disabilities (Williams & Smith, 2021b). It was only in 2018 that the NDIS launched the mental health access project to help people with mental illness enrol.

People on the NDIS may not all be able to utilise the fund that is provided in their plan because of thin markets (a lack of service providers offering the services needed) or the lack of ability to manage their fund and coordinate supports (Carey et al., 2018; Reeders et al., 2019). An evaluation report of the NDIS trial (Mavromaras et al., 2018) found that 32 percent of the participants in the trial reported that they could not access the supports they had funding for under the NDIS. Research also found that people from culturally and linguistically diverse (CALD) groups have a lower utilisation rate of their NDIS funds (Disney et al., 2021). A government report also points out that thin markets persist or worsen for NDIS participants living in rural and remote areas (Joint Standing Committee on the NDIS, 2018).

In sum, some healthcare services provided by doctors, such as GPs and psychiatrists, are funded only in the health system, while both systems could fund services by psychologists

[2] There are some early rollout regions, including the Blue Mountains region.

or allied health professionals under different conditions and restrictions. Thus, the NDIS may have different effects for different groups.

3 Methods

3.1 Data and sample

The main dataset employed is from the Person Level Integrated Data Asset (PLIDA). This dataset links individuals from the 2011 Census of Population and Housing to administrative datasets, including the Medicare Benefits Schedule (MBS) 2011-2020, Pharmaceutical Benefits Scheme (PBS) 2011-2020, Death Registry 2011-2020, and the National Disability Insurance Scheme (NDIS) participant information 2021. Information on the date of Medicare-funded medical visits (MBS) and filled government-funded prescriptions (PBS) are available and converted into quarterly data. Other information includes year and month of death, basic demographic information, location, whether the person had a disability and where they lived in 2011 (Census) and when they received their first plan under the NDIS. We also constructed a Local Government Area (LGA) level dataset with information on NDIS availability extracted from the agreements the states and territories signed with the Commonwealth government that we combined with the PLIDA data.

This study examines several healthcare outcomes, including quarterly frequency of visits to general practitioners (GPs), specialists, allied health professionals, and mental health services. The focus is on the impact of the NDIS on health services provided exclusively by the health system (GPs and specialists) and those offered by both the NDIS and health system (allied and mental health services). Additionally, the study assesses changes in the number of subsidised prescriptions filled for antidepressants, anti-anxiety, and antipsychotic medications per quarter, with a detailed analysis of Medicare-funded mental health services across subcategories such as GPs, psychologists, psychiatrists, and allied health professionals. The details of the MBS and PBS codes included in each outcome are listed in Appendix Table S2.

Mental health services and prescriptions are explored in detail because over 40% of people with profound or severe disabilities report anxiety-related problems, and an estimated 36% report mood disorders (Australian Institute of Health and Welfare, 2022). It is important to note that PBS and MBS records cover only government-subsidised out-of-hospital services, private inpatient medical services, and prescription medicines. Out-of-pocket or privately

funded services and over-the-counter or private prescriptions are excluded, though their share of healthcare costs is relatively small (Hall et al., 2020).

3.2 Sample

Appendix Table S3 shows the sample selection process. Our core data sample is people with profound or severe disability under 63 in 2011 to match the NDIS enrolment criteria[3] who are enrolled in the NDIS. We excluded the participants who entered the NDIS in the trial period between 2013q3 (i.e., quarter three of 2013) and 2016q2 because both the health and social systems are constantly changing to adjust to the NDIS in that period. Because NDIS participants who enrolled soon after the NDIS became available in their area may differ from those who enrol later (e.g., the latter may have been previously rejected and had to re-apply), we only included NDIS participants who enrolled during the first nine months[4] after the NDIS became available in their LGA.

As the NDIS adopted a staggered rollout plan, we compare those who enrolled in the NDIS early (due to NDIS availability in their area) to those who enrolled later (due to delayed NDIS rollout in their area). In this paper, we define NDIS enrolment as the time when a participant's first plan is approved. We compare the change in various healthcare utilisations of those who gained NDIS access 'early' to a control group who had not yet gained NDIS access but who eventually would. Therefore, the treatment group refers to NDIS participants who received their first plan with the NDIS between 2016q3 and 2017q1 and living in areas where the NDIS became available in this same period ('NDIS early access'). The control group consists of eventual NDIS participants who only received their first NDIS plan between 2019q1 and 2019q3 because they lived in areas where the NDIS only became available later ('Not yet on the NDIS"). We cannot compare NDIS participants with non-participants because they are significantly different, even though they may all have a limiting condition. Since no detailed information is available on disability characteristics (e.g., types and severity), it is difficult to form a control group with people who are not on the NDIS but are similar to the NDIS group.

We compared the characteristics of early versus late NDIS access areas to understand whether some areas were targeted for earlier NDIS implementation. Our comparison focused on the Index of Relative Socio-economic Disadvantage (IRSD) and the density of healthcare

[3] The NDIS trial started in 2013, and required participants to be under 65; thus, they need to be under 63 in 2011.

[4] NDIS participants may wait up to nine months from the time of their application until they receive their first plan prior to June 2019 (The National Disability Insurance Agency, 2020a).

professionals in each group. More early access areas were found to have the lowest IRSD scores (Appendix Figure S1), indicating higher levels of socio-economic disadvantage. Also, late access areas tended to have a greater number of healthcare professionals per 1,000 population. However, the changes to the density are similar between the early and late groups over time (Appendix Figure S2).

Although the sample is constructed using the 2011 location information of people with disability, we still explore the extent to which individuals with disability may have strategically relocated to gain earlier access to the NDIS. We examined migration patterns between early (2016Q3-2017Q1) and late (2019Q1-2019Q3) access areas. Overall, very few people moved between these groups, and the numbers of movers were similar in both directions. This suggests there was no, or limited systematic relocation aimed at accessing the NDIS earlier (Appendix Table S4).

The descriptive statistics at baseline for the estimation sample of the NDIS early accessors (n=12,251) and those not yet on the NDIS (n=3,858) are presented in Table 1. Compared to those not yet on the NDIS, the early accessors who are in the treated group have a lower number of anti-depression (0.59 vs 0.71 times/quarter) and anti-anxiety prescriptions (0.14 vs 0.25 times/quarter) claims and a higher proportion of state-transferred participants[2] (90% vs 82%)[3]. Other characteristics, such as education, marital status, and the number of visits to GP, are similar between these two groups. Furthermore, we compared our sample and the NDIS participants who reported having severe or profound disability in 2011 census to examine how representative our sample is compared to the NDIS population. We found that people in our sample shared similar characteristics with other NDIS participants not on our sample, except that our sample did not include anyone from South Australia (SA) or the Australian Capital Territory (ACT) (Appendix Table S5).

[Table 1]

3.3 Empirical strategies

To compare the NDIS early accessors who entered the NDIS between 2016q3 and 2017q1('the treated group') with the late accessors who entered between 2019q1 and 2019q3 (the 'control

[2] State-transferred participants meaning that the participants had support from the state or territory before entering the NDIS and then transitioned to the NDIS.
[3] The access for those with mental health conditions is slower early in the NDIS rollout, as explained in the background section.

group'), we assigned an 'artificial' NDIS enrolment date to the control group based on the distribution of enrolment dates in the treatment group. Therefore, both groups have an enrolment and hypothetical enrolment between 2016q3 and 2017q2. For the control group, however, we do not expect any 'NDIS-related change' to happen after the hypothetical enrolment, given that their enrolment date was artificial.

However, we expect to see some individuals seek healthcare assistance with developing evidence for their "NDIS application", which would happen before their NDIS enrolment. Typically, people must go to their healthcare providers to obtain evidence of their disability to apply for the NDIS. For this reason, we conservatively exclude the 12 months before NDIS enrolment as valid control periods. Therefore, as presented in Figure S3, we can only consider NDIS treatment effect outcomes up to the end of 2017 (where we still have valid control group observations). We have also excluded the first two periods (2011q1-q2) of our data because our definition of severe or profound disability (Australian Bureau of Statistics, 2011) is based on the 2011 Census, which took place in August 2011. Therefore, we only consider healthcare use outcomes between 2011q3 and 2017q4.

3.3.1 Event study: Assessing Parallel Trends

The main identifying assumption of the difference-in-difference approach is that in the absence of the NDIS, the difference in healthcare use between the treated group of NDIS early accessors and the control group of those not yet on the NDIS would have been constant over time (parallel trend assumption). Therefore, we assess the robustness of this hypothesis with an event study. We follow the specification below. Which allow us to look at the average difference between the treated and control group by time relative to NDIS enrolment:

$$y_{it} = \boldsymbol{\alpha}_i + \sum_{j=-22; j\neq -5}^{5} \gamma_j \, (T_{j.it} * Treat_i) + \mu_i + \lambda_t + \epsilon_{it} \qquad (1)$$

Where y_{it} denotes the outcomes of interest (i.e., healthcare use) for individual i at time t. $T_{j.it}$ represents a series of indicator variables for each possible period before and after individual i's real (for the treated group) or fictitious (for the control group) enrolment in the NDIS. $Treat_i$ takes the value of one if the individual is an NDIS early accessor and thus is in the treated group and zero if they are in the control group. μ_i is the individual fixed effects (which also capture differences in utilisation between groups), λ_t is the time fixed effects

(which captures both year and quarter-year effects as our data are quarterly data) and ϵ_{it} is the error term.

We define the period j as the period relative to the NDIS enrolment. That is with t_{0i} denoting when individual i enrols in the NDIS, we have $j = t - t_{oi}$. In our time window, people can be observed up to 22 quarters before enrolment and up to 5 quarters after enrolment, that is with the quarter for NDIS enrolment itself, there are 28 periods. To understand the role of the NDIS at each time period, we create a series of indicator variables for each of the 28 periods from $T_{-22.it}$ to $T_{5.it}$, where $T_{j.it}$=1 when t is such that the number of periods from the time at which individual i enrolled in the NDIS to time t is exactly j periods, that is, when j= t-t_{0i}. The indicator is otherwise equal to zero. That is, in the quarter of the enrolment (or hypothetical enrolment) j=0 such that $T_{0.it}$ is equal to one in this quarter and all other indicator variables are zero. Because the NDIS adopts a staggered roll-out, we have a smaller number of individuals with data available where $T_{-22.it} = 1$, $T_{-21.it} = 1$, $T_{4.it} = 1$ and $T_{5.it} = 1$ (Appendix Table S4). We consider that the preceding 4 quarters prior to NDIS enrolment may capture healthcare use associated with the application process itself and thus set the reference period as the fifth quarter prior to NDIS enrolment (i.e., we exclude $T_{-5.it}$). Thus, the period from ($T_{-4.it}\ to\ T_{-1.it}$) captures the potential application effect and the effects after the enrolment ($T_{0.it}\ to\ T_{5.it}$) capture enrolment effects.

In equation (1), the coefficients γ_j represent the estimates of the mean difference between the treated and control groups at each time point compared to T_{-5}. The estimations on the indicators ($T_{-22.it}\ to\ T_{-6.it}$) provide evidence on whether our outcomes exhibit a differing trend for our treated and control groups before the application period associated with the NDIS becoming available in the early accessors' area. Ideally, the coefficients should be small, statistically insignificant and have no clear pattern. Coefficients on the indicators T_{-4} to T_{-1} indicates the size of the 'application effect'. The coefficients on the indicators ($T_{1.it}\ to\ T_{5.it}$) show the effect of the NDIS over the five periods post enrolment. We use individual fixed effects to control for differences between individuals that are constant over time. Year-quarter (time) fixed effects are also included for common nationwide policy changes such as changes in welfare payments, the availability of new medicines and other nationwide trends, and the seasonal effects in healthcare use.

In addition to the event study, we also created two linear trend variables to assess the trends before and after the NDIS. Details could be found in Appendix Table S6.

3.1.2 Difference-in-difference with fixed effects

We then estimate the impact of the NDIS using a standard difference-in-difference approach using the following equation, where we group together the estimate from the application period and groups together the estimates from the post enrolment period:

$$y_{it} = \beta_0 + \beta_1(T_1 * Treat_i) + \beta_2\,(T_2 * Treat_i) + \beta_3 T_1 + \beta_4 T_2 + \mu_i + \lambda_t + \epsilon_{it} \qquad (2)$$

where β_1 estimates the application effect of the NDIS. T_1 takes the value of one if the time is within a year before enrolment (i.e., T_{-4} to T_{-1}) and zero if the time to enrolment T is smaller than -4 (i.e., T_{-5} to $T_{-22)}$. β_2 estimates the effect after enrolment to the NDIS. As we do not intend to compare the effect of enrolment to the effect of application, we constructed T_2 as taking the value of one after enrolment (i.e., T_0 to T_5) and zero if the time to enrolment T is smaller than -4 (i.e., T_{-5} to $T_{-22)}$. All other terms are defined in a similar manner as equation (1). The number of observations per time point could be found in Appendix Table S7.

4 Results

Descriptive trends in the outcomes at each time point relative to enrolment and hypothetical enrolment can be seen in Figures 1, 2, and 3. The periods between the dashed red line and the solid red line are the application period, while the periods after the solid red line are the post-enrolment periods. Generally, during the pre- and application periods, the lines depicting the treatment (early NDIS accessors) and control groups (not yet on the NDIS) are parallel for all outcomes. However, after enrolment and hypothetical enrolment, we observe a divergence for mental health services, psychologists, and mental health services provided by allied health professionals.

[Figure 1, 2, 3]

4.1 Event study

Figures 4, 5 and 6 present the event study results to understand whether it is reasonable to assume the parallel assumption will hold for all our healthcare utilisation outcomes. Each plot presents the estimated γ coefficients in equation (1) for the healthcare services, mental health service subgroups and the filled mental health prescriptions. If the parallel trend assumption is met prior to the application period, it provides us with more confidence that the trends would have continued to stay parallel after the NDIS application and enrolment had the NDIS reform not taken place. We observe that for the difference between the treatment and control groups at each time point relative to T_{-5} —when the application effect was not expected, it was

minimal and insignificant. In the earliest quarters T_{-22} and T_{-21}, more than five years prior to the NDIS, the estimates for some outcomes do suggest some differences, but these periods have smaller sample sizes and wider confidence intervals. Any effects in these early periods are unlikely to change our estimates in the difference-in-difference model due to the extensive pre-periods present in our data, but we test the sensitivity of our results to this in a robustness check. Overall, our event study results suggest that the parallel trend assumption is likely to be a reasonable assumption, and we do not observe a significant pre-trend before the reform for all outcomes.

[Figure 4, 5, 6]

4.2 Main results: impact on health care utilisation

The results of the difference-in-difference estimates of the impact of the NDIS on healthcare use outcomes are presented in Table 2. The primary healthcare use outcomes (1)–(4) are shown on the left side of the table including visits to: GP, specialist, mental health services, and allied health professionals. The next four columns (5)–(8) present the decompositions of mental health services into its four components, namely visits to: Psychiatrist, GP specialising in mental health, psychologists, and allied health professionals specialising in mental health.

[Table 2]

The estimated coefficient β_1 for *(NDIS#Application)* represents the absolute additional Medicare-funded healthcare use change up to four quarters before enrolment in the application period. The coefficients for primary healthcare outcomes are small and lack statistical significance. The results indicate that healthcare utilisation did not significantly change during the first year prior to enrolment (i.e., in the application period), suggesting that applying for the NDIS did not have a notable impact on the frequency of Medicare-funded healthcare visits.

The estimated β_2 coefficient for *(NDIS#Enrolment)* represents the impact of the NDIS after enrolment. The results show that after the enrolment, Medicare-funded mental health services dropped by 0.035 uses per person per quarter (b=-0.0348, 95%CI=-0.0612 to -0.0852). The use of Medicare-funded allied health professionals decreased by 0.017 uses per person per quarter (b=-0.0165, 95%CI= -0.0299 to -0.00324). However, there was no evidence that the NDIS enrolment had a significant impact on GP or specialist visits.

To better understand the individual contributions of various mental health service components to the reduction in overall mental health services, we conduct further analysis of the mental health services subgroups. The results show that, following NDIS enrolment, there is a decrease in the use of all Medicare-funded mental health services except for psychiatrist visits. Among these services, the most significant relative drop was observed in visits to Medicare-funded allied health professionals specialising in mental health (b = -0.00891, 95%CI = -0.0153 to -0.00249), representing a 45% decrease relative to the mean number of such visits during the pre-treatment period. GP mental health services showed a reduction of 20% (b = -0.00971, 95%CI = -0.0193 to -0.000146), while visits to psychologists declined by 18% (b = -0.0168, 95%CI = -0.0325 to -0.000963).

We also estimate the change in filled prescriptions of anti-depression, anti-anxiety and anti-psychotic medications, which may be suggestive of the mental health conditions of the NDIS participants. The coefficients for both the application and enrolment periods are statistically insignificant. This suggests that while there may be changes in health services utilisation, there is limited evidence to support that the NDIS enrolment has impacted the mental health prescriptions among its participants.

4.3 Robustness checks

An excess of zeros used in our healthcare data may affect the estimation as OLS may overfit extreme cases and lead to poor out-of-sample forecasts. In our first check, presented in Appendix Table S8, we transformed the outcome data using a logarithmic form[4] as discussed in some literature (Duan et al., 1983; Manning & Mullahy, 2001). The log transformation may affect parallel trends, but in our study, the parallel trend assumption still holds despite the transformation (Appendix Figure S4). The results are robust, with the exception of the visits to allied health professionals, for which the coefficient after enrolment is no longer significant. However, it remains negative, as per the main analysis.

Since our outcomes are count data, we conducted the analysis using Poisson regression, incorporating year-quarter and individual fixed effects as we did in the main analysis (Appendix Table S9). Consistent with the main findings, the Poisson estimates indicated an 11% reduction in mental health service use (β = 0.894, 95% CI: 0.849–0.941) and an 8% reduction in allied health service use (β = 0.917, 95% CI: 0.874–0.961) following enrolment. This decline in mental health service visits was further reflected in specific service categories, including GP

[4] We added 0.01 to each outcome because log 0 is undefined.

mental health services (β = 0.921, 95% CI: 0.845–1.002), psychology services (β = 0.867, 95% CI: 0.794–0.946), and allied mental health services (β = 0.503, 95% CI: 0.379–0.675).

We also apply our main specification to alternative treatment groups, which include the NDIS participants who were enrolled during the trial period. Appendix Table S10 presents the results where only those enrolled in the trial are in the treated group, and Appendix Table S11 presents the results where both those enrolled in the trial and those who enrolled early (that is, our treated group in our main analysis) form the treated group. The control group remains the same for our analysis in Appendix Table S10 and S11. The results showed an application effect on the outcome of GP visits when we included the people enrolled in the NDIS in the trial period. The number of visits to GP increased by 0.0573 and 0.0945 times per quarter for these two checks, respectively.

In the event study of the main analysis, we saw that the healthcare use further away from the enrolment time fluctuated more than those closer to the NDIS enrolment data, and the earliest two-time points had fewer observations due to the staggered design. We, therefore, ran the analysis by restricting the data to three years before the NDIS enrolment and one year after the enrolment (i.e., T_{-12} to T_3) (Appendix Table S12). There are no application effects found in this analysis as in the main one. The results for the enrolment effect of the NDIS are largely unchanged. However, the decreased use of psychologists has become statistically insignificant and slightly smaller even though the coefficient is also negative (b=-0.00971, 95%CI= -0.0305 to 0.0043).

In our main analysis, people with disability entered the NDIS across three different quarters, potentially leading to varying effects for each subgroup. To address this, we performed a robust check using a flexible DiD estimator—DiD with Multiple Groups and Periods as proposed by de Chaisemartin and D'Haultfœuille (2020). This estimator supports treatment switching and accommodates time-varying, heterogeneous treatment effects. We could not exclude the application effect from the total effect for the control group using this method. Therefore, we estimated three distinct effects using the de Chaisemartin and D'Haultfœuille's DiD estimator: the application effect, which considers the effects for four quarters preceding NDIS enrolment; the enrolment only effect, which looks at the effects from the time of enrolment onwards; and the application plus enrolment effect, which examines the combined effects of the application and the actual enrolment that is, it redefines the treatment period as being all quarters from the four quarter of enrolment onwards.

Consistent with our main analysis (Appendix Table S13), we found no evidence of an application effect on any outcomes. However, after excluding results with pre-trends, our estimation of the combined enrolment and application effect still revealed that the NDIS reduced visits to mental health services (b = -0.0171, 95% CI = -0.0294 to -0.0048), although the effect size is smaller than it is in the main analysis. This reduction in mental health service visits was observed across GP mental health services (b = -0.0058, 95% CI = -0.0105 to -0.0012), psychology services (b = -0.0126, 95% CI = -0.0205 to -0.0046), and allied mental health services (b = -0.0053, 95% CI = -0.0086 to -0.0019).

4.4 Heterogeneity analyses

Prior research suggests that the NDIS may affect individuals differently based on age, gender, and geographic location, with those in regional and remote areas facing unique service access challenges. To investigate these potential disparities and better understand the mechanisms behind the NDIS's impact, we stratified our sample by gender, age, remoteness, socio-economic status (IRSD), and disability type. Additionally, given that 74% of the treatment group in our main analysis is from New South Wales (NSW), while the control group includes no participants from NSW (see Table 1), we conducted a sensitivity analysis excluding NSW participants from the treatment group—keeping the control group unchanged—to assess whether the observed effects are primarily driven by this subgroup.

The estimated effects for each subgroup on the outcomes that showed significant effects are compared in Figure 7, and the detailed estimates are presented in Appendix Table S14-S19. We find that the impacts remained consistent and robust for all the outcomes within the male group. However, no significant changes were found for the female group. Furthermore, our findings indicate that the results are primarily driven by the two younger age groups, particularly the youngest group. Among the early accessors aged 0-14, there was a more substantial decrease in visits to Medicare-funded mental health and allied health services compared to the main analysis. This pattern was also observed in the subgroup analysis of GP mental health services and allied mental health services within the mental health service subgroup. In the 15-24-year-old group, we still observe a negative and significant effect on the use of allied health services. However, when it comes to allied mental health services, the effect becomes positive. No significant changes were found in Medicare-funded services for the 25+ age group. Regarding remoteness, we observed that participants residing in major cities primarily drove the impact on Medicare-funded mental and allied health services, including the psychologists and allied mental health subgroups. However, a more significant decrease in

mental health GP services was observed in regional and remote areas. Given that early access areas are, on average, more socio-economically disadvantaged than late access areas, we also conducted a subgroup analysis comparing early versus late NDIS areas with low IRSD scores (Deciles 1–5) and early versus late NDIS areas with high IRSD scores (Deciles 6–10). Both subgroups show similar patterns in the direction of change as the combined sample, such as reduced use of mental health and allied health services, though only in the high IRSD areas the effects are statistically significant—at the 10% level for mental health services and the 5% level for allied health. For disability groups, there is limited evidence that the decrease in mental health services is driven by any of the disability groups we included. However, for allied health services, it seems that it increases among people with psychosocial disability while decreases in other disability groups. We also found that the decrease in mental health services is not driven by NSW, however, the impact on allied health became statistically insignificant.

[Figure 7]

4.5 Broader impact of the NDIS on the wider disability population

We assess the impact of the NDIS implementation on the wider disability population (including those not enrolled in the NDIS) because there is a concern that the NDIS reallocated resources to those who managed to get onto the scheme and away from people with disability not on the NDIS (Hamilton et al., 2020). We identify this 'new' treatment and control group using the NDIS availability dates to the LGAs instead of using the actual NDIS enrolment status. We compare people with severe or profound disability who live in areas where the NDIS became available between 2016q3 to 2017q1 to those who live in areas where the NDIS had not yet become available (NDIS did not become available in their area until 2019q1 and 2019q3). This will indicate the short-term effect of NDIS availability on ALL those with severe disability in the LGA including on those who did not yet or never enrol into the NDIS. The standard errors are clustered at the LGA level. Most results become statistically insignificant and smaller except for visits to allied health professionals specialising in mental health which remains significant. This suggests that the NDIS effect for those who managed to get on the scheme may be at least partially offset by the effects of de-funding services for people with disability who are not on the NDIS (Appendix Table S20).

5 Discussion

With the ongoing challenges faced by people with disability in accessing healthcare and the persistent rise in healthcare and social system costs, there is a pressing need to understand the

interplay between these two systems. Unfortunately, the current body of evidence on this topic remains limited, particularly at the primary care level. The recent implementation of the NDIS in Australia offers a unique opportunity to investigate the potential impact of expanded social services on healthcare utilisation and overall health outcomes. Addressing this significant knowledge gap, the present study used the staggered rollout of the NDIS and linkage with administrative data to examine changes in healthcare utilisation patterns due to NDIS enrolment.

Our results suggest that the NDIS was unlikely to have had a significant short-term impact on health service use for most health services funded only by the healthcare system. There was, however, some reduction found in mental health and allied services, which may suggest substitution effects for services that could potentially be provided in both systems. For example, we find a decrease in publicly funded mental health service use by 13%. Still, when we look closer into the mental health service subgroups, we find that while the use of psychologists and allied mental health services has dropped, psychiatry services have remained stable. The GP mental health services decreased only in regional and remote areas where there may be a lack of supply of psychologists and allied health professionals. There was also limited evidence that the NDIS changed the use of GP and specialist services, nor the mental health prescriptions in the short term.

While it is reasonable to expect that improved health could lead to reduced healthcare service utilisation, our analysis points towards a substitution effect rather than a direct improvement in health. Firstly, we observed no changes in GP visits, which typically serve as the initial point of contact for many individuals seeking healthcare. If there were health improvements, we would likely see them reflected in GP visits. Secondly, the NDIS participant outcome report reveals that children under 15 use specialist services, such as speech pathologists and occupational therapists, more frequently after enrolling in the NDIS (The National Disability Insurance Agency, 2020b). However, we noticed a decrease in the use of Medicare-subsidised allied health services, particularly among young people. This indicates that the total use of such services may not have decreased due to improved health but because more people are now accessing these services under the NDIS.

Substitution effects are likely with non-clinical supports that enhance independence and social participation for people with disabilities. While these supports can be funded by both the health system and the NDIS, the latter provides broader, fully covered services tailored to

individual needs. Previously, individuals relied on mental health or chronic disease management plans, which offered limited visits and often incurred out-of-pocket costs. The expanded coverage and personalised nature of NDIS-funded supports make them a more attractive option for participants. However, the expansion of the NDIS did not significantly influence the number of psychiatric visits. As psychiatrists are medical doctors who primarily provide intensive clinical treatment, these services generally fall outside the scope of typical NDIS-funded supports.

The results of the broader impact of the NDIS on the wider disability population (i.e., those on and not on the NDIS), however, have become insignificant, and the effect sizes for most outcomes have become smaller. The effects experienced by individuals on the NDIS might be counteracted by those not receiving NDIS support. These findings raise equity concerns, suggesting that if resources have been predominantly allocated to the NDIS, individuals not covered by the scheme may encounter challenges seeking adequate support.

Our research finds no application effects for people with disability who enrolled after the trial period. Still, we did observe such effects for GP services for those who enrolled during the trial. This finding suggests that during the initial stages of the NDIS implementation, GPs may have encountered challenges in familiarising themselves with the NDIS system, resulting in additional time to prepare the required application documents. Subsequently, as GPs became more acquainted with the NDIS processes and requirements, they could integrate the preparation of application documents into their regular sessions with patients. Consequently, no additional sessions were required solely for NDIS application preparation.

The heterogeneity analysis found that the Medicare-subsidised mental health and allied health services decreased only in major cities. The decrease in mental health services use in major cities was mainly influenced by the reduction in psychologists and allied mental health services. Conversely, we did not observe significant changes in overall mental health services for regional or remote areas. However, we did notice a considerable decrease in GP mental health visits in these regions. This occurrence could be attributed to the scarcity of mental health services in regional and remote areas, leading many individuals to rely on GPs as their primary source of mental health support. Consequently, if any changes occur, they are more likely to manifest in GP mental health services.

The heterogeneity analysis also found that the decreased use in the Medicare-subsidised mental health and allied health service are more likely to happen among young people and also

people living in less disadvantaged areas. Although we did not find that young people with disability used more mental health or allied health services before the NDIS, younger individuals may be more likely to engage with NDIS-funded services due to the developmental nature of their needs, which often require multidisciplinary and ongoing interventions. These supports are typically not covered comprehensively under Medicare. In contrast, the NDIS allows for a broader range of therapeutic interventions, including behavioural support, social skills training, and family-inclusive therapy, which are crucial during early years of life. Additionally, families in less disadvantaged areas may have greater capacity to navigate the NDIS system, and have a greater access to different providers who deliver NDIS-funded services as opposed to the more disadvantaged areas may face thin market issues. This could contribute to a greater substitution effect in these regions, as participants opt for the more tailored and potentially higher-quality supports available through the NDIS.

Whether or not the substitution effects observed are beneficial is controversial. For people with disability, substituting the NDIS may mean less out-of-pocket costs for using mental or allied health services. However, further research may need to explore what this substitution implies regarding health and quality of life. For the public system, the substitution effects may create an extra burden on public financing. Currently, the NDIS has price guidance for service providers regarding the maximum price they can charge NDIS participants. A report has shown that providers usually charge a higher fee for patients if they are covered by the NDIS than those who go through the Medicare system (McCubbing, 2023). Nonetheless, the reason behind the higher prices remains uncertain, as it could be attributed to the complexity of NDIS cases, increased management fees, or certain providers exploiting the system. Therefore, it is crucial to contextualise the substitution effects and the potential rising costs/prices in light of the changes in the health outcomes of NDIS participants.

It is important to acknowledge the limitations of this study to contextualise the findings and identify areas for future research. First, the outcomes included in this study are only Medicare-funded, and we do not have access to data on services funded by the NDIS. While we can identify the potential substitution effect of mental and allied health services between the health and social system, it is inappropriate to conclude that the total use of these services decreases because of the NDIS and thus leads to a reduction in costs. Second, due to the reform in the NDIS, more people with mental health conditions were enrolled in the NDIS late (i.e., in the control group) compared to those who were enrolled early (i.e., in the treatment group), which may impact our mental health outcomes. We used the event study to test for the pre-

treatment trends of the treatment and control group and found no significant difference. We have also plotted the mean use per quarter before the enrolment, and the results are similar. Third, we estimate short-term effects of the NDIS because we could not find a sample of good counterfactuals that are not yet NDIS participants in the longer term. The effects we estimated are four to five quarters after enrolment, which is already a longer period than used in the previous literature (i.e., 90 days). Future studies of long-term effects may rely on data that reveals more of the sample characteristics. Last, we need more data on the health outcomes and quality of life for NDIS participants. It would be valuable to investigate these aspects in future studies when the necessary data becomes available.

While acknowledging the need for future research to address these limitations, our current analysis highlights an interplay between the healthcare and social systems in the context of the NDIS. We find evidence of substitution effects occurring in healthcare that both the healthcare and social systems could potentially fund. This evidence adds to the ongoing discussion about the rising costs of the NDIS, highlighting the importance of understanding the potential cost-offsetting effects of social support programs. Our analysis found a small reduction of 0.0348 Medicare-funded mental health service uses per participant per quarter. Assuming an average cost of $230 per session, this translates to an estimated Medicare saving of over $19.2 million across 600,000 NDIS participants. Furthermore, our findings indicate that the NDIS does not lead to a short-term increase in healthcare utilisation among people with disability. This highlights the need for policymakers to explore additional strategies to address barriers and unmet needs faced by this population. Policymakers should also account for the equity issues to ensure services can reach people on the NDIS and those not on the NDIS.

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Tables

Table 1: Descriptive Statistics at baseline 2013 Q3 (N = 16,109)

	The treated group Early Access (n=12,251)	The Control Group Later Access (n=3,858)
	Mean/Prop.	Mean/Prop.
Outcome		
No. GP visits per quarter	1.79 (2.29)	1.7 (2.31)
No. specialist services per quarter	0.14 (0.48)	0.1 (0.42)
No. mental health services per quarter	0.26 (1.07)	0.29 (1.13)
No. allied health services per quarter	0.17 (0.58)	0.15 (0.58)
No. Anti-depression scripts per quarter	0.59 (1.42)	0.71 (1.55)
No. Anti-anxiety scripts per quarter	0.14 (0.84)	0.25 (1.39)
No. Anti-psychotic scripts per quarter	0.26 (0.95)	0.24 (0.88)
No. psychiatrist services per quarter	0.09 (0.58)	0.08 (0.51)
No. mental health GP services per quarter	0.04 (0.30)	0.07 (0.45)
No. psychologist services per quarter (inc clinical psych)	0.09 (0.61)	0.13 (0.73)
No. allied mental health services per quarter	0.03 (0.41)	0.01 (0.26)
Characteristics		
% Treatment and Control group	0.24	0.76
Age (Mean, SD)	27.25 (16.82)	27.5 (16.32)
Age group (%)		
0-14	16.38	17.19
15-24	22.58	24.44
25+	61.04	58.37
Scheme type (%)		
Commonwealth	0.02	0.05
New	0.08	0.13
State	0.90	0.82
Highest education (%)[a]		
Bachelor and above	0.04	0.03
Cert/ Diploma	0.07	0.11
Yr12	0.26	0.25
Yr9-11	0.31	0.32
Yr8 and below	0.32	0.30
Male (%)	0.60	0.57
State (%)		
NSW	0.74	--
Vic	0.14	0.25
Qld	0.09	0.64
WA	0.01	0.11
Tas	0.02	--
NT	<0.01	--
Married (%)[b]	0.13	0.17
Indigenous (%)[c]	0.04	0.03

Remoteness		
Major cities	71.97	70.48
Regional/ Remote Areas	28.03	29.52
Disability group		
Intellectual disability	39.10	33.67
Autism	19.24	18.79
Psychosocial disability	2.48	5.47
Other**	39.18	42.07

Notes: a: n=2474; b: n=2484; c: n=3787; **Including ABI, cerebral palsy, developmental delay, down syndrome, visual impairment, hearing impairment, multiple sclerosis, spinal cord injury, stroke, other neuroglial, physical, sensory/speech and other disability groups; NSW=New South Wales, Vic=Victoria, Qld=Queensland, WA=Western Australia, Tas=Tasmania, NT=Northern Territory, ABI= Acquired Brain Injury

Table 2 The impact of the NDIS on healthcare services and mental health prescriptions

	Healthcare services				Mental health services (MHS)				Mental health prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	GP	**spec**	**MHS**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	0.0069	0.0051	0.00283	0.00837	0.00406	-0.00038	-0.0017	0.000803	0.0263	0.0137	0.0106
	(-0.0267)	(0.00427)	(0.0126)	(0.00649)	(0.006)	(0.00438)	(0.00811)	(0.00313)	(0.0157)	(0.00964)	(0.0119)
NDIS#enrolment	-0.0111	0.00415	-0.0348***	-0.0165**	0.00053	-0.00971**	-0.0168**	-0.00891***	0.0148	0.0179	0.005
	(0.0273)	(0.00423)	(0.0134)	(0.00679)	(0.00737)	(0.00488)	(0.00805)	(0.00327)	(0.019)	(0.0119)	(0.0144)
Mean Pre-application	1.741	0.117	0.260	0.188	0.095	0.050	0.096	0.020	0.723	0.163	0.315
Observations	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610
Individuals	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109

Notes: Robust standard errors in parentheses; The model controls for individual and year-quarter fixed effects;*** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter; spec=specialist, MHS=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Figures

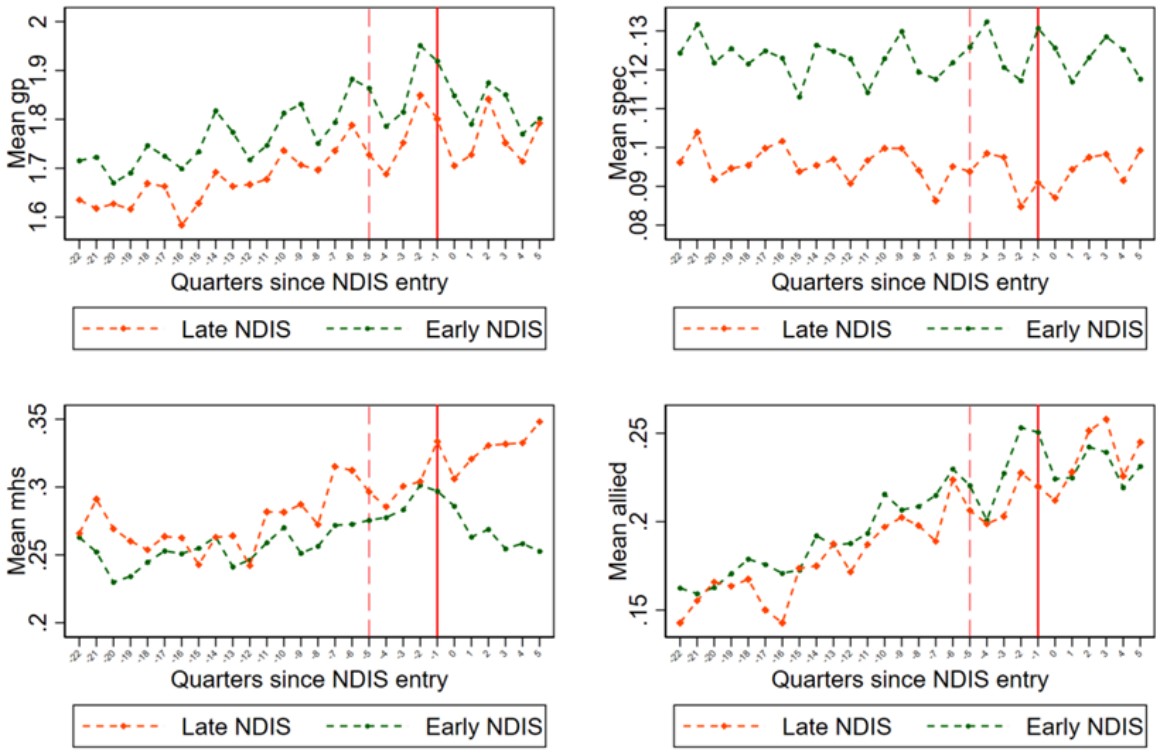

Figure 1 Healthcare use at each time point relative to enrolment

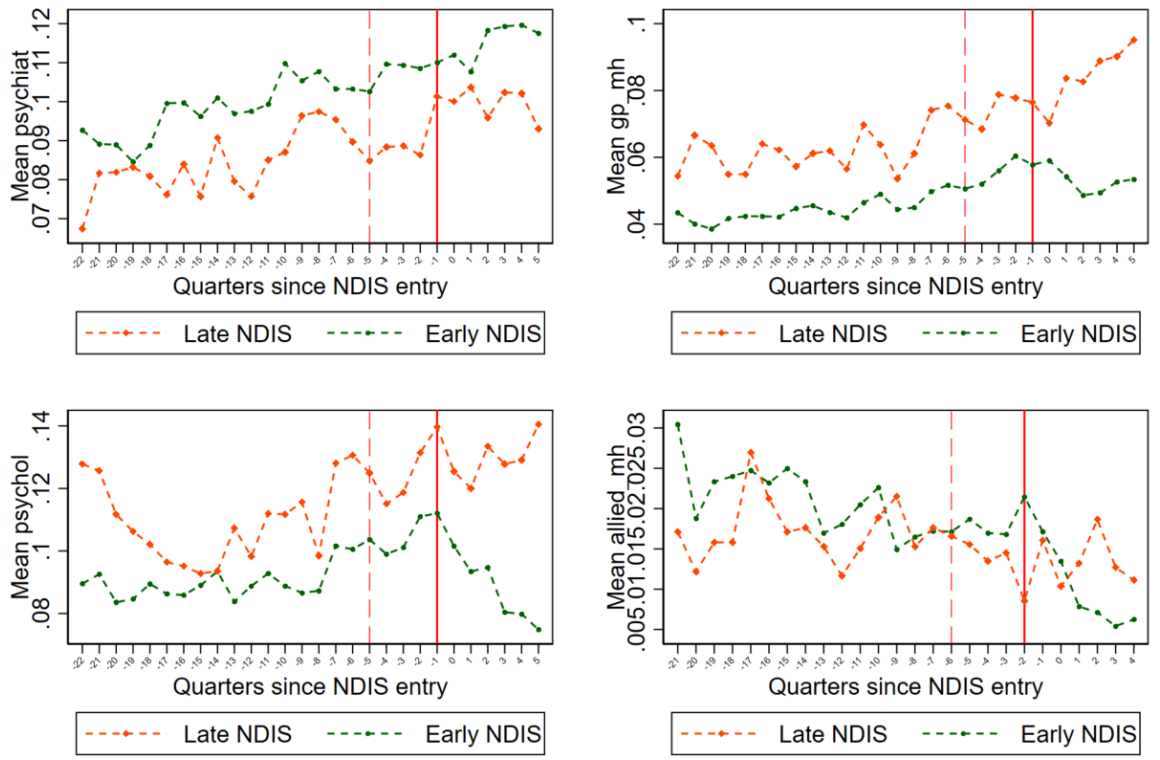

Figure 1 Mental health prescriptions at each time point relative to enrolment

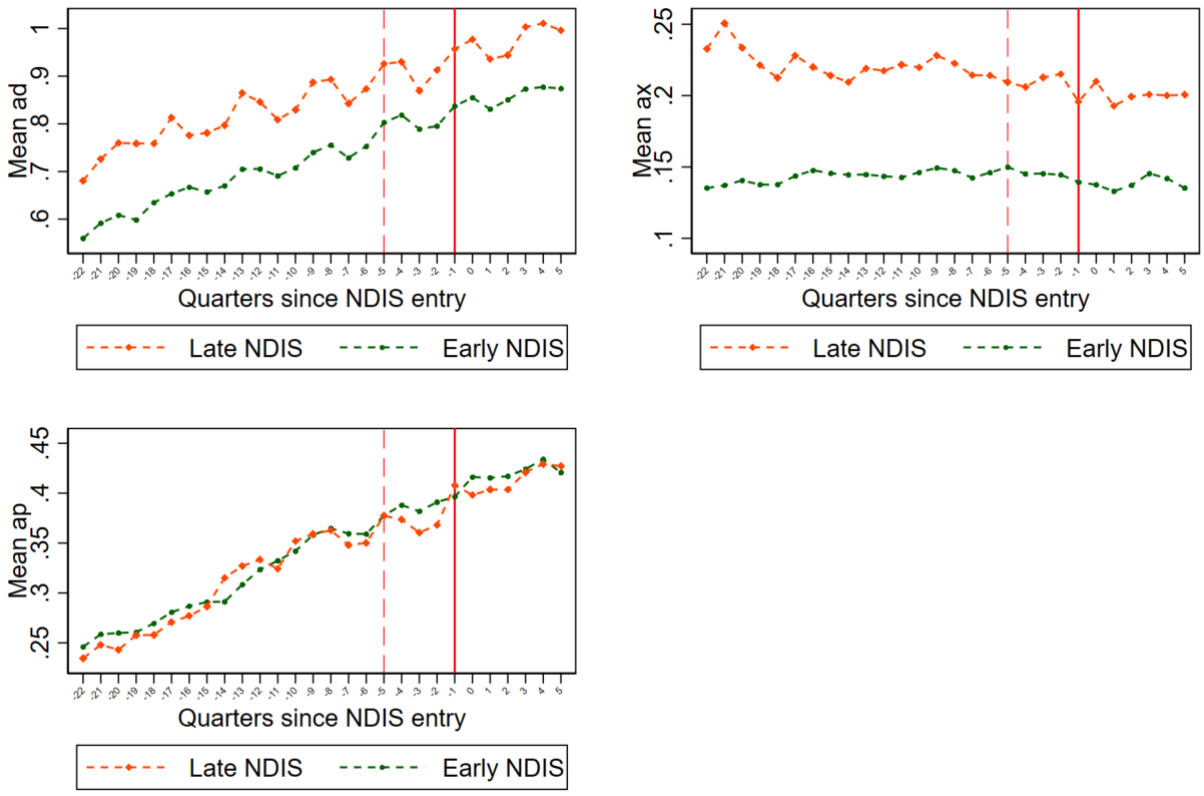

Figure 2 Mental health services subgroups at each time point relative to enrolment

Notes for Figures 1-3: Spec=specialist, MHS=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services. Graphs are produced without controlling for any covariates.

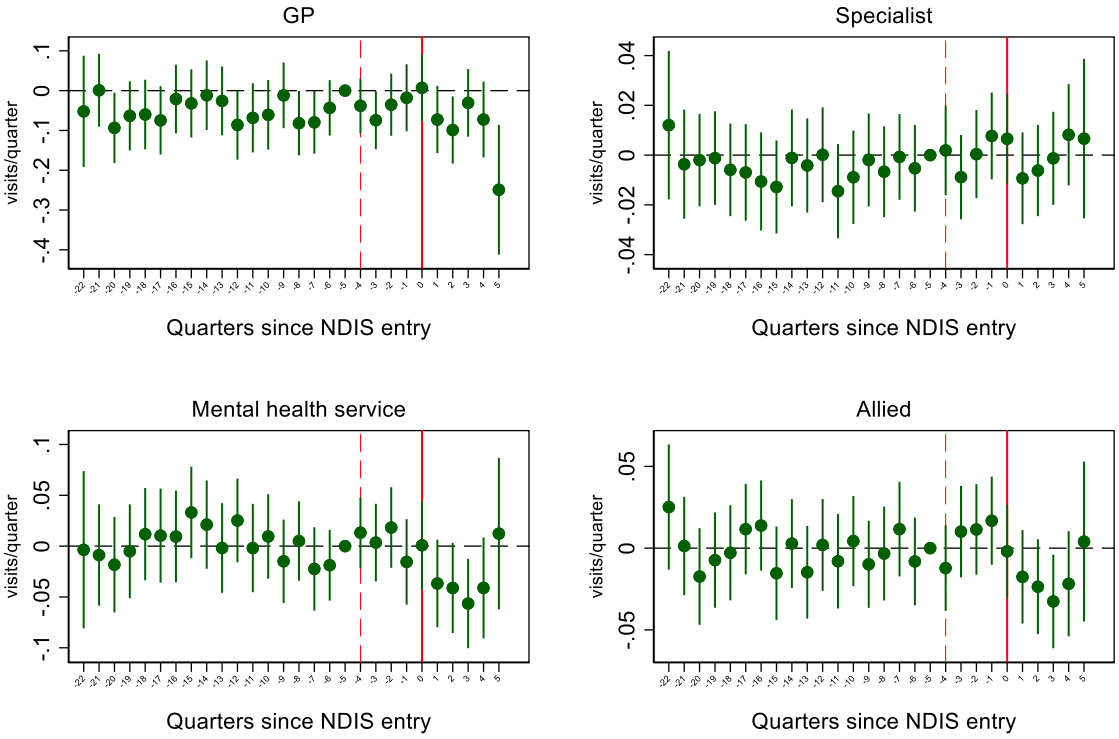

Figure 3 Event study graphs for healthcare use outcomes

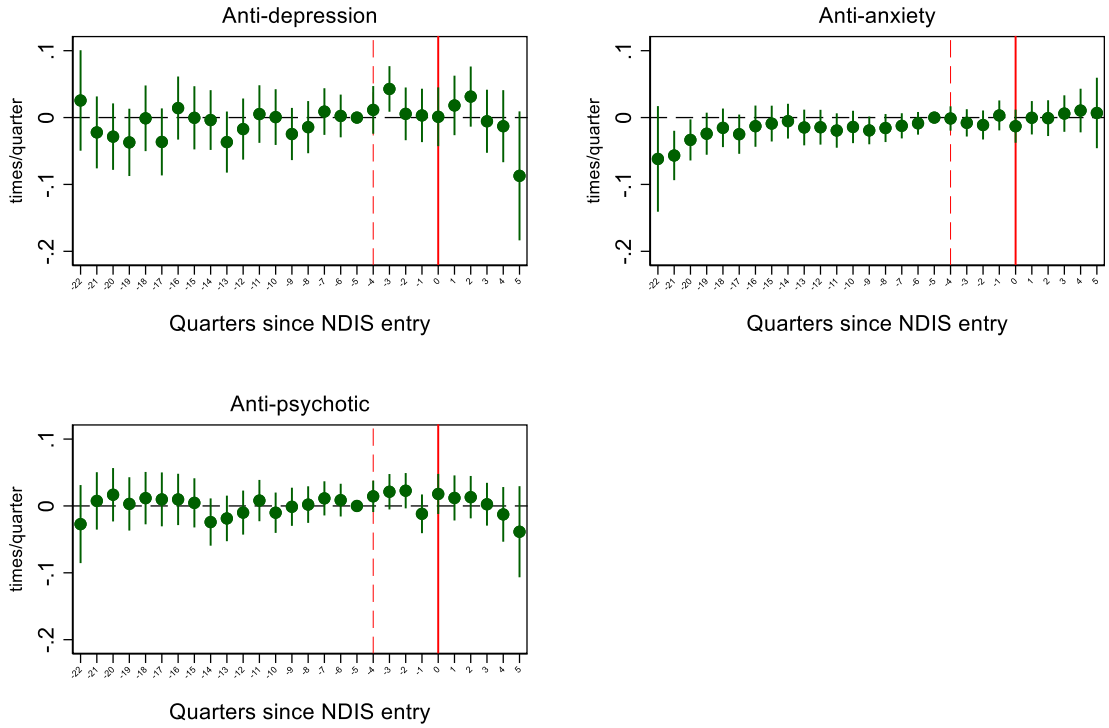

Figure 4 Event study graphs for mental health prescriptions

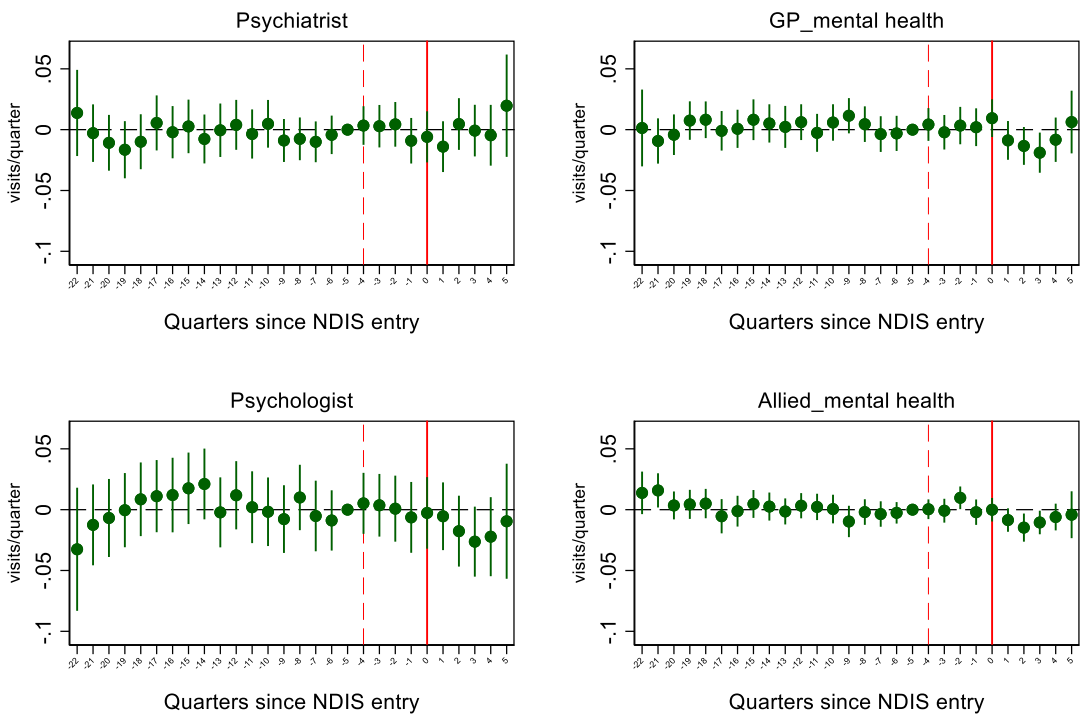

Figure 5 Event study graphs for mental health services subgroups

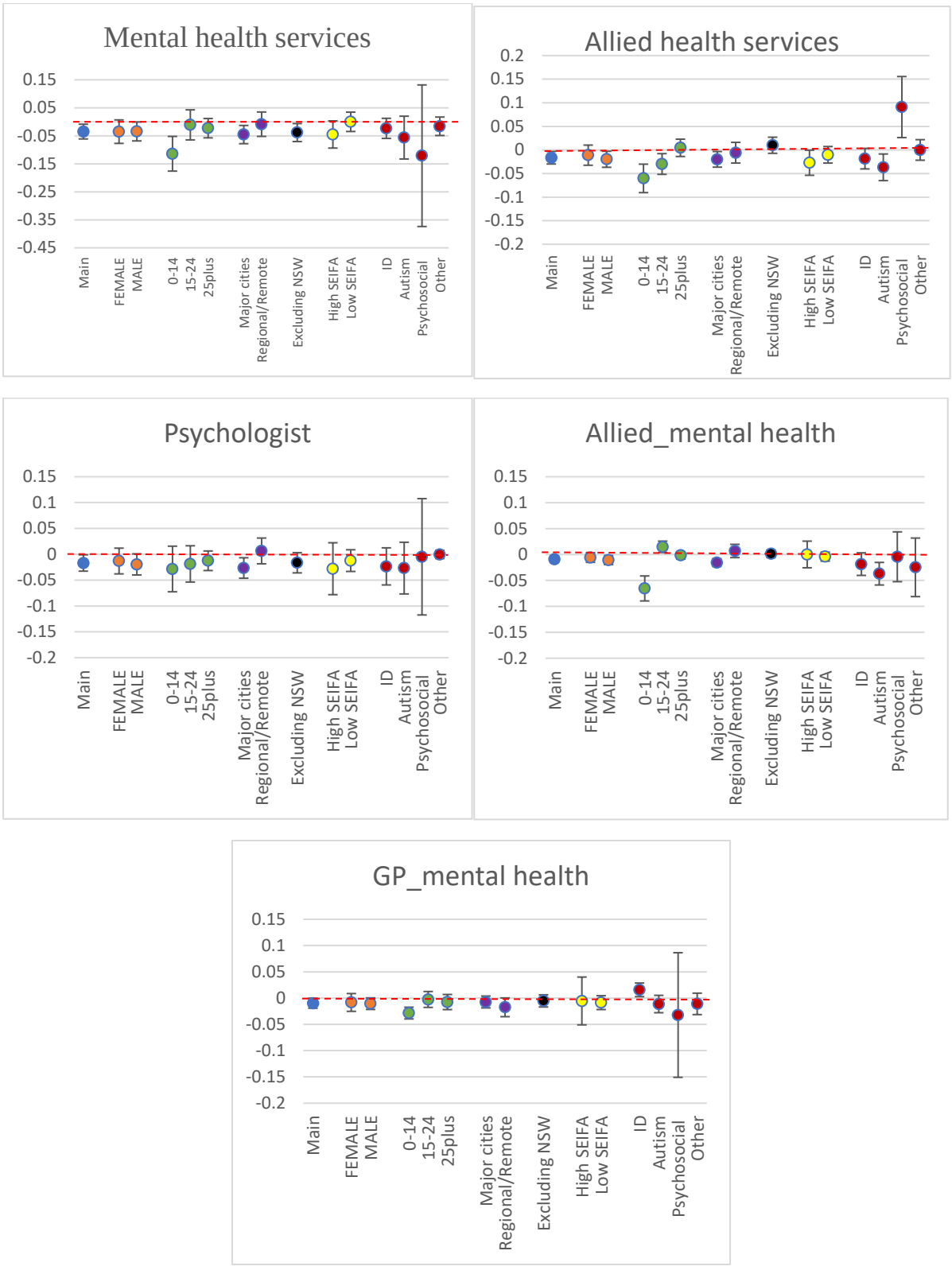

Figure 6 Comparison of subgroups in mental health services, Allied health services, GP mental health, Psychologists and allied mental health services

Appendix Tables and Figures for The impact of enhancing social care on healthcare use for people with disability: evidence from Australia

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Appendix Tables

Table S1 Rollout dates of NDIS by Local Government Areas (LGA)

LGAcode16	LGA Name 2016	First NDIS
11650	Central Coast (C) (NSW)	01-Jul-16
10300	Balranald (A)	01-Jul-17
11250	Broken Hill (C)	01-Jul-17
11700	Central Darling (A)	01-Jul-17
18200	Wentworth (A)	01-Jul-17
10130	Armidale Regional (A)	01-Jul-16
11720	Cessnock (C)	01-Jul-16
12700	Dungog (A)	01-Jul-16
13010	Glen Innes Severn (A)	01-Jul-16
15240	Mid-Coast (A)	01-Jul-16
13550	Gunnedah (A)	01-Jul-16
13660	Gwydir (A)	01-Jul-16
14200	Inverell (A)	01-Jul-16
14650	Lake Macquarie (C)	01-Jul-14
14920	Liverpool Plains (A)	01-Jul-16
15050	Maitland (C)	01-Jul-15
15300	Moree Plains (A)	01-Jul-16
15650	Muswellbrook (A)	01-Jul-16
15750	Narrabri (A)	01-Jul-16
15900	Newcastle (C)	01-Jul-13
16400	Port Stephens (A)	01-Jul-16
17000	Singleton (A)	01-Jul-16
17310	Tamworth Regional (A)	01-Jul-16
17400	Tenterfield (A)	01-Jul-16
17620	Upper Hunter Shire (A)	01-Jul-16
17650	Uralla (A)	01-Jul-16
17850	Walcha (A)	01-Jul-16
14400	Kiama (A)	01-Jul-17
16900	Shellharbour (C)	01-Jul-17
16950	Shoalhaven (C)	01-Jul-17
18450	Wollongong (C)	01-Jul-17
10600	Bellingen (A)	01-Jul-17
11800	Coffs Harbour (C)	01-Jul-17
14350	Kempsey (A)	01-Jul-17
15700	Nambucca (A)	01-Jul-17
16380	Port Macquarie-Hastings (A)	01-Jul-17
10050	Albury (C)	01-Jul-17
10650	Berrigan (A)	01-Jul-17
10800	Bland (A)	01-Jul-17
13910	Hilltops (A)	01-Jul-17
11600	Carrathool (A)	01-Jul-17
12730	Edward River (A)	01-Jul-17
12000	Coolamon (A)	01-Jul-17
13510	Gundagai (A)	01-Jul-17
12870	Federation (A)	01-Jul-17
13340	Greater Hume Shire (A)	01-Jul-17
13450	Griffith (C)	01-Jul-17
13850	Hay (A)	01-Jul-17
15560	Murrumbidgee (A)	01-Jul-17
14300	Junee (A)	01-Jul-17

14750	Leeton (A)	01-Jul-17
14950	Lockhart (A)	01-Jul-17
15520	Murray River (A)	01-Jul-17
15800	Narrandera (A)	01-Jul-17
17350	Temora (A)	01-Jul-17
17080	Snowy Valleys (A)	01-Jul-17
17750	Wagga Wagga (C)	01-Jul-17
10900	Blue Mountains (C)	01-Jul-15
13800	Hawkesbury (C)	01-Jul-15
14870	Lithgow (C)	01-Jul-15
16350	Penrith (C)	01-Jul-15
10250	Ballina (A)	01-Jul-17
11350	Byron (A)	01-Jul-17
11730	Clarence Valley (A)	01-Jul-17
14550	Kyogle (A)	01-Jul-17
14850	Lismore (C)	01-Jul-17
16610	Richmond Valley (A)	01-Jul-17
17550	Tweed (A)	01-Jul-17
14000	Hornsby (A)	01-Jul-16
14100	Hunters Hill (A)	01-Jul-16
14500	Ku-ring-gai (A)	01-Jul-16
15990	Northern Beaches (A)	01-Jul-16
15350	Mosman (A)	01-Jul-16
15950	North Sydney (A)	01-Jul-16
16700	Ryde (C)	01-Jul-16
18250	Willoughby (C)	01-Jul-16
11100	Botany Bay (C)	01-Jul-17
12930	Georges River (A)	01-Jul-17
16550	Randwick (C)	01-Jul-17
16650	Rockdale (C)	01-Jul-17
17150	Sutherland Shire (A)	01-Jul-17
17200	Sydney (C)	01-Jul-17
18050	Waverley (A)	01-Jul-17
18500	Woollahra (A)	01-Jul-17
10350	Bankstown (C)	01-Jul-16
11550	Canterbury (C)	01-Jul-17
11450	Camden (A)	01-Jul-16
11500	Campbelltown (C) (NSW)	01-Jul-16
12850	Fairfield (C)	01-Jul-16
14900	Liverpool (C)	01-Jul-16
18350	Wingecarribee (A)	01-Jul-16
18400	Wollondilly (A)	01-Jul-16
10550	Bega Valley (A)	01-Jul-16
17040	Snowy Monaro Regional (A)	01-Jul-16
12750	Eurobodalla (A)	01-Jul-16
13310	Goulburn Mulwaree (A)	01-Jul-16
16490	Queanbeyan-Palerang Regional (A)	01-Jul-16
17640	Upper Lachlan Shire (A)	01-Jul-16
18710	Yass Valley (A)	01-Jul-16
14170	Inner West (A)	01-Jul-17
11300	Burwood (A)	01-Jul-17
11520	Canada Bay (A)	01-Jul-17
17100	Strathfield (A)	01-Jul-17
10470	Bathurst Regional (A)	01-Jul-17

10850	Blayney (A)	01-Jul-17
10950	Bogan (A)	01-Jul-17
11150	Bourke (A)	01-Jul-17
11200	Brewarrina (A)	01-Jul-17
11400	Cabonne (A)	01-Jul-17
11750	Cobar (A)	01-Jul-17
12150	Coonamble (A)	01-Jul-17
12350	Cowra (A)	01-Jul-17
18230	Western Plains Regional (A)	01-Jul-17
12900	Forbes (A)	01-Jul-17
12950	Gilgandra (A)	01-Jul-17
14600	Lachlan (A)	01-Jul-17
15270	Mid-Western Regional (A)	01-Jul-17
15850	Narromine (A)	01-Jul-17
16100	Oberon (A)	01-Jul-17
16150	Orange (C)	01-Jul-17
16200	Parkes (A)	01-Jul-17
17900	Walgett (A)	01-Jul-17
17950	Warren (A)	01-Jul-17
18020	Warrumbungle Shire (A)	01-Jul-17
18100	Weddin (A)	01-Jul-17
12380	Cumberland (A)	01-Jul-16
10750	Blacktown (C)	01-Jul-16
16260	Parramatta (C)	01-Jul-16
17420	The Hills Shire (A)	01-Jul-16
20910	Bayside (C)	01-Apr-18
22170	Frankston (C)	01-Apr-18
22310	Glen Eira (C)	01-Apr-18
23430	Kingston (C) (Vic.)	01-Apr-18
25340	Mornington Peninsula (S)	01-Apr-18
25900	Port Phillip (C)	01-Apr-18
26350	Stonnington (C)	01-Apr-18
21180	Brimbank (C)	01-Oct-18
24650	Melton (C)	01-Oct-18
20260	Ararat (RC)	01-Jan-17
20570	Ballarat (C)	01-Jan-17
22490	Golden Plains (S)	01-Jan-17
22910	Hepburn (S)	01-Jan-17
25150	Moorabool (S)	01-Jan-17
25990	Pyrenees (S)	01-Jan-17
22830	Greater Shepparton (C)	01-Jan-19
24850	Mitchell (S)	01-Jan-19
24900	Moira (S)	01-Jan-19
25620	Murrindindi (S)	01-Jan-19
26430	Strathbogie (S)	01-Jan-19
23270	Hume (C)	01-Mar-18
25250	Moreland (C)	01-Mar-18
21110	Boroondara (C)	01-Nov-17
24210	Manningham (C)	01-Nov-17
24970	Monash (C)	01-Nov-17
26980	Whitehorse (C)	01-Nov-17
20740	Bass Coast (S)	01-Oct-17
20830	Baw Baw (S)	01-Oct-17
23810	Latrobe (C) (Vic.)	01-Oct-17
26170	South Gippsland (S)	01-Oct-17

21370	Campaspe (S)	01-May-17
21670	Central Goldfields (S)	01-May-17
23940	Loddon (S)	01-May-17
24130	Macedon Ranges (S)	01-May-17
25430	Mount Alexander (S)	01-May-17
21270	Buloke (S)	01-Jan-19
22250	Gannawarra (S)	01-Jan-19
24780	Mildura (RC)	01-Jan-19
26610	Swan Hill (RC)	01-Jan-19
20660	Banyule (C)	01-Jul-16
21890	Darebin (C)	01-Jul-16
25710	Nillumbik (S)	01-Jul-16
27070	Whittlesea (C)	01-Jul-16
27350	Yarra (C)	01-Jul-16
23670	Knox (C)	01-Nov-17
24410	Maroondah (C)	01-Nov-17
27450	Yarra Ranges (S)	01-Nov-17
22110	East Gippsland (S)	01-Jan-19
26810	Wellington (S)	01-Jan-19
20110	Alpine (S)	01-Oct-17
21010	Benalla (RC)	01-Oct-17
23350	Indigo (S)	01-Oct-17
24250	Mansfield (S)	01-Oct-17
26670	Towong (S)	01-Oct-17
26700	Wangaratta (RC)	01-Oct-17
27170	Wodonga (C)	01-Oct-17
21450	Cardinia (S)	01-Sep-18
21610	Casey (C)	01-Sep-18
22670	Greater Dandenong (C)	01-Sep-18
21830	Corangamite (S)	01-Oct-17
22410	Glenelg (S)	01-Oct-17
22980	Hindmarsh (S)	01-Oct-17
23190	Horsham (RC)	01-Oct-17
25490	Moyne (S)	01-Oct-17
25810	Northern Grampians (S)	01-Oct-17
26260	Southern Grampians (S)	01-Oct-17
26730	Warrnambool (C)	01-Oct-17
26890	West Wimmera (S)	01-Oct-17
27630	Yarriambiack (S)	01-Oct-17
23110	Hobsons Bay (C)	01-Oct-18
24330	Maribyrnong (C)	01-Oct-18
24600	Melbourne (C)	01-Oct-18
25060	Moonee Valley (C)	01-Oct-18
27260	Wyndham (C)	01-Oct-18
21750	Colac-Otway (S)	01-Jul-13
22750	Greater Geelong (C)	01-Jul-13
26490	Surf Coast (S)	01-Jul-13
26080	Queenscliffe (B)	01-Jul-13
34590	Logan (C)	01-Jul-18
36250	Redland (C)	01-Jul-18
31000	Brisbane (C)	01-Jul-18
31001	Brisbane (C)	01-Jul-18
31820	Bundaberg (R)	01-Oct-17
35010	Moreton Bay (R)	01-Jan-19
30250	Aurukun (S)	01-Jul-18

32080	Cairns (R)	01-Jul-18
32260	Cassowary Coast (R)	01-Jul-18
32500	Cook (S)	01-Jul-18
32600	Croydon (S)	01-Jul-18
32810	Douglas (S)	01-Jul-18
33100	Etheridge (S)	01-Jul-18
33830	Hope Vale (S)	01-Jul-18
34420	Kowanyama (S)	01-Jul-18
34570	Lockhart River (S)	01-Jul-18
34830	Mapoon (S)	01-Jul-18
34880	Mareeba (S)	01-Jul-18
35670	Napranum (S)	01-Jul-18
35780	Northern Peninsula Area (R)	01-Jul-18
36070	Pormpuraaw (S)	01-Jul-18
36820	Tablelands (R)	01-Jul-18
36950	Torres (S)	01-Jul-18
36960	Torres Strait Island (R)	01-Jul-18
37300	Weipa (T)	01-Jul-18
37570	Wujal Wujal (S)	01-Jul-18
37600	Yarrabah (S)	01-Jul-18
33960	Ipswich (C)	01-Jul-17
34580	Lockyer Valley (R)	01-Jul-17
36510	Scenic Rim (R)	01-Jul-17
36580	Somerset (R)	01-Jul-17
33980	Isaac (R)	01-Nov-16
34770	Mackay (R)	01-Nov-16
37340	Whitsunday (R)	01-Nov-16
33620	Gympie (R)	01-Jan-19
36720	Sunshine Coast (R)	01-Jan-19
35740	Noosa (S)	01-Jan-19
32330	Cherbourg (S)	01-Jul-18
33220	Fraser Coast (R)	01-Jul-18
35760	North Burnett (R)	01-Jul-18
36630	South Burnett (R)	01-Jul-18
33430	Gold Coast (C)	01-Jul-18
30370	Banana (S)	01-Jan-18
30410	Barcaldine (R)	01-Jan-18
30450	Barcoo (S)	01-Jan-18
30760	Blackall-Tambo (R)	01-Jan-18
32270	Central Highlands (R) (Qld)	01-Jan-18
32750	Diamantina (S)	01-Jan-18
33360	Gladstone (R)	01-Jan-18
34710	Longreach (R)	01-Jan-18
36370	Rockhampton (R)	01-Jan-18
34530	Livingstone (S)	01-Jan-18
37400	Winton (S)	01-Jan-18
37550	Woorabinda (S)	01-Jan-18
30300	Balonne (S)	01-Jan-17
34860	Maranoa (R)	01-Jan-17
35600	Murweh (S)	01-Jan-17
35800	Paroo (S)	01-Jan-17
36150	Quilpie (S)	01-Jan-17
36660	Southern Downs (R)	01-Jan-17
36910	Toowoomba (R)	01-Jan-17
37310	Western Downs (R)	01-Jan-17

30900	Boulia (S)	01-Oct-16
31900	Burdekin (S)	01-Oct-16
31950	Burke (S)	01-Oct-16
32250	Carpentaria (S)	01-Oct-16
32310	Charters Towers (R)	01-Jan-16
32450	Cloncurry (S)	01-Oct-16
32770	Doomadgee (S)	01-Oct-16
33200	Flinders (S) (Qld)	01-Oct-16
33800	Hinchinbrook (S)	01-Oct-16
34800	McKinlay (S)	01-Oct-16
35250	Mornington (S)	01-Oct-16
35300	Mount Isa (C)	01-Oct-16
35790	Palm Island (S)	01-Oct-16
36300	Richmond (S)	01-Oct-16
37010	Townsville (C)	01-Jan-16
40120	Adelaide Hills (DC)	01-Apr-18
44550	Mount Barker (DC)	01-Apr-18
40310	Barossa (DC)	01-Jul-17
42030	Gawler (T)	01-Jul-17
43650	Light (RegC)	01-Jul-17
43920	Mallala (DC)	01-Jul-17
40070	Adelaide (C)	01-Apr-18
40700	Burnside (C)	01-Apr-18
40910	Campbelltown (C) (SA)	01-Apr-18
45290	Norwood Payneham St Peters (C)	01-Apr-18
46510	Prospect (C)	01-Apr-18
47980	Unley	01-Apr-18
48260	Walkerville	01-Apr-18
41010	Ceduna (DC)	01-Jan-18
41190	Cleve (DC)	01-Jan-18
41750	Elliston (DC)	01-Jan-18
41960	Franklin Harbour (DC)	01-Jan-18
43220	Kimba (DC)	01-Jan-18
43710	Lower Eyre Peninsula (DC)	01-Jan-18
46300	Port Lincoln (C)	01-Jan-18
47490	Streaky Bay (DC)	01-Jan-18
47910	Tumby Bay (DC)	01-Jan-18
48540	Whyalla (C)	01-Jan-18
48640	Wudinna (DC)	01-Jan-18
40250	Anangu Pitjantjatjara (AC)	01-Jan-18
41330	Coober Pedy (DC)	01-Jan-18
41830	Flinders Ranges (DC)	01-Jan-18
46090	Port Augusta (C)	01-Jan-18
46970	Roxby Downs (M)	01-Jan-18
40220	Alexandrina (DC)	01-Jan-18
42750	Kangaroo Island (DC)	01-Jan-18
48050	Victor Harbor (C)	01-Jan-18
48750	Yankalilla (DC)	01-Jan-18
42250	Grant (DC)	01-Oct-17
43360	Kingston (DC) (SA)	01-Oct-17
44620	Mount Gambier (C)	01-Oct-17
45090	Naracoorte and Lucindale (DC)	01-Oct-17
46860	Robe (DC)	01-Oct-17
47630	Tatiara (DC)	01-Oct-17

48340	Wattle Range (DC)	01-Oct-17
40520	Berri and Barmera (DC)	01-Oct-17
43080	Karoonda East Murray (DC)	01-Oct-17
43790	Loxton Waikerie (DC)	01-Oct-17
44210	Mid Murray (DC)	01-Oct-17
45040	Murray Bridge (RC)	01-Oct-17
46670	Renmark Paringa (DC)	01-Oct-17
47290	Southern Mallee (DC)	01-Oct-17
47800	The Coorong (DC)	01-Oct-17
45680	Playford (C)	01-Jul-17
45890	Port Adelaide Enfield (C)	01-Jul-17
47140	Salisbury (C)	01-Jul-17
47700	Tea Tree Gully (C)	01-Oct-17
42600	Holdfast Bay (C)	01-Jan-18
44060	Marion (C)	01-Jan-18
44340	Mitcham (C)	01-Jan-18
45340	Onkaparinga (C)	01-Jan-18
41060	Charles Sturt (C)	01-Apr-18
48410	West Torrens (C)	01-Apr-18
40430	Barunga West (DC)	01-Jan-18
41140	Clare and Gilbert Valleys (DC)	01-Jan-18
41560	Copper Coast	01-Jan-18
42110	Goyder (DC)	01-Jan-18
44830	Mount Remarkable (DC)	01-Jan-18
45120	Northern Areas (DC)	01-Jan-18
45400	Orroroo/Carrieton (DC)	01-Jan-18
45540	Peterborough (DC)	01-Jan-18
46450	Port Pirie City and Dists (M)	01-Jan-18
48130	Wakefield (DC)	01-Jan-18
48830	Yorke Peninsula (DC)	01-Jan-18
51310	Cambridge (T)	01-Jul-19
51750	Claremont (T)	01-Jul-19
52170	Cottesloe (T)	01-Jul-19
55740	Mosman Park (T)	01-Jul-19
56580	Nedlands (C)	01-Jul-19
56930	Peppermint Grove (S)	01-Jul-19
57080	Perth (C)	01-Jul-19
57910	Stirling (C)	01-Jul-19
57980	Subiaco (C)	01-Jul-19
58570	Vincent (C)	01-Jul-19
51820	Cockburn (C)	01-Jul-18
53150	East Fremantle (T)	01-Jul-18
53430	Fremantle (C)	01-Jul-18
54830	Kwinana (C)	01-Jul-18
55320	Melville (C)	01-Jul-18
57840	South Perth (C)	01-Jul-18
54170	Joondalup (C)	01-Jul-18
58760	Wanneroo (C)	01-Jul-18
50350	Bassendean (T)	01-Jan-17
50420	Bayswater (C)	01-Jan-17
54200	Kalamunda (S)	01-Jul-17
56090	Mundaring (S)	01-Jul-17
58050	Swan (C)	01-Jul-17
50490	Belmont (C)	01-Jul-19
51330	Canning (C)	01-Jul-19

53780	Gosnells (C)	01-Jul-19
58510	Victoria Park (T)	01-Jul-19
50210	Armadale (C)	01-Oct-16
55110	Mandurah (C)	01-Jul-17
56230	Murray (S)	01-Oct-16
57490	Rockingham (C)	01-Jul-17
57700	Serpentine-Jarrahdale (S)	01-Oct-16
50250	Ashburton (S)	01-Jul-17
50980	Broome (S)	01-Jul-17
52800	Derby-West Kimberley (S)	01-Jul-17
53220	East Pilbara (S)	01-Jul-17
53920	Halls Creek (S)	01-Jul-17
54310	Karratha (C)	01-Jul-17
57280	Port Hedland (T)	01-Jul-17
59340	Wyndham-East Kimberley (S)	01-Jul-17
51470	Carnamah (S)	01-Jul-19
51540	Carnarvon (S)	01-Jul-19
51610	Chapman Valley (S)	01-Jul-19
52030	Coorow (S)	01-Jul-19
52380	Cue (S)	01-Jul-19
53360	Exmouth (S)	01-Jul-19
53800	Greater Geraldton (C)	01-Jul-19
54060	Irwin (S)	01-Jul-19
55250	Meekatharra (S)	01-Jul-19
55530	Mingenew (S)	01-Jul-19
55670	Morawa (S)	01-Jul-19
55810	Mount Magnet (S)	01-Jul-19
56160	Murchison (S)	01-Jul-19
56790	Northampton (S)	01-Jul-19
57000	Perenjori (S)	01-Jul-19
57630	Sandstone (S)	01-Jul-19
57770	Shark Bay (S)	01-Jul-19
58260	Three Springs (S)	01-Jul-19
58470	Upper Gascoyne (S)	01-Jul-19
59250	Wiluna (S)	01-Jul-19
59350	Yalgoo (S)	01-Jul-19
50560	Beverley (S)	01-Jul-18
50630	Boddington (S)	01-Jul-18
50910	Brookton (S)	01-Jul-18
51120	Bruce Rock (S)	01-Jul-18
51680	Chittering (S)	01-Jan-17
52100	Corrigin (S)	02-Jan-17
52310	Cuballing (S)	03-Jan-17
52450	Cunderdin (S)	04-Jan-17
52520	Dalwallinu (S)	05-Jan-17
52590	Dandaragan (S)	06-Jan-17
52940	Dowerin (S)	01-Jul-18
53010	Dumbleyung (S)	01-Jul-18
53570	Gingin (S)	01-Jul-18
53710	Goomalling (S)	01-Jul-18
54410	Kellerberrin (S)	01-Jul-18
54760	Kulin (S)	01-Jul-18
54620	Kondinin (S)	01-Jul-18
54690	Koorda (S)	01-Jul-18
54900	Lake Grace (S)	01-Jul-18

55460	Merredin (S)	01-Jul-18
55600	Moora (S)	01-Jul-18
55880	Mount Marshall (S)	01-Jul-18
55950	Mukinbudin (S)	01-Jul-18
56370	Narembeen (S)	01-Jul-18
56460	Narrogin (S)	01-Jul-18
56730	Northam (S)	01-Jul-18
56860	Nungarin (S)	01-Jul-18
57140	Pingelly (S)	01-Jul-18
57350	Quairading (S)	01-Jul-18
58190	Tammin (S)	01-Jul-18
58330	Toodyay (S)	01-Jul-18
58400	Trayning (S)	01-Jul-18
58540	Victoria Plains (S)	01-Jul-18
58610	Wagin (S)	01-Jul-18
58680	Wandering (S)	01-Jul-18
58890	West Arthur (S)	01-Jul-18
59030	Westonia (S)	01-Jul-18
59100	Wickepin (S)	01-Jul-18
59170	Williams (S)	01-Jul-18
59310	Wongan-Ballidu (S)	01-Jul-18
59330	Wyalkatchem (S)	01-Jul-18
59360	Yilgarn (S)	01-Jul-18
59370	York (S)	01-Jul-18
50280	Augusta-Margaret River (S)	01-Jul-18
50770	Boyup Brook (S)	01-Jul-18
50840	Bridgetown-Greenbushes (S)	01-Jul-18
51190	Bunbury (C)	01-Jul-18
51260	Busselton (C)	01-Jul-18
51400	Capel (S)	01-Jul-18
51890	Collie (S)	01-Jul-18
52660	Dardanup (S)	01-Jul-18
52870	Donnybrook-Balingup (S)	01-Jul-18
53990	Harvey (S)	01-Jul-18
55180	Manjimup (S)	01-Jul-18
56300	Nannup (S)	01-Jul-18
58820	Waroona (S)	01-Jul-18
50080	Albany (C)	01-Jul-19
51080	Broomehill-Tambellup (S)	01-Jul-19
52240	Cranbrook (S)	01-Jul-19
52730	Denmark (S)	01-Jul-19
53640	Gnowangerup (S)	01-Jul-19
54130	Jerramungup (S)	01-Jul-19
54550	Kojonup	01-Jul-19
57210	Plantagenet Woodanilling	01-Jul-19
51960	Coolgardie (S)	01-Jul-18
53080	Dundas (S)	01-Jul-18
53290	Esperance (S)	01-Jul-18
54280	Kalgoorlie/Boulder (C)	01-Jul-18
54970	Laverton (S)	01-Jul-18
55040	Leonora (S)	01-Jul-18
55390	Menzies (S)	01-Jul-18
56620	Ngaanyatjarraku (S)	01-Jul-18
57420	Ravensthorpe (S)	01-Jul-18
60210	Break O'Day (M)	01-Jul-16

60410	Brighton (M)	01-Jul-16
60610	Burnie (C)	01-Jul-16
60810	Central Coast (M) (Tas.)	01-Jul-16
61010	Central Highlands (M) (Tas.)	01-Jul-16
61210	Circular Head (M)	01-Jul-16
61410	Clarence (C)	01-Jul-16
61510	Derwent Valley (M)	01-Jul-16
61610	Devonport (C)	01-Jul-16
61810	Dorset (M)	01-Jul-16
62010	Flinders (M) (Tas.)	01-Jul-16
62210	George Town (M)	01-Jul-16
62410	Glamorgan/Spring Bay (M)	01-Jul-16
62610	Glenorchy (C)	01-Jul-16
62810	Hobart (C)	01-Jul-16
63010	Huon Valley (M)	01-Jul-16
63210	Kentish (M)	01-Jul-16
63410	King Island (M)	01-Jul-16
63610	Kingborough (M)	01-Jul-16
63810	Latrobe (M) (Tas.)	01-Jul-16
64010	Launceston (C)	01-Jul-16
64210	Meander Valley (M)	01-Jul-16
64610	Northern Midlands (M)	01-Jul-16
64810	Sorell (M)	01-Jul-16
65010	Southern Midlands (M)	01-Jul-16
65210	Tasman (M)	01-Jul-16
65410	Waratah/Wynyard (M)	01-Jul-16
65610	West Coast (M)	01-Jul-16
65810	West Tamar (M)	01-Jul-16
70420	Barkly (R)	01-Jul-14
71300	East Arnhem (R)	01-Jan-17
70200	Alice Springs (T)	01-Jul-18
70620	Central Desert (R)	01-Jul-18
72330	MacDonnell (R)	01-Jul-18
70540	Belyuen (S)	01-Jul-18
70700	Coomalie (S)	01-Jul-18
71000	Darwin (C)	01-Jul-18
72800	Palmerston (C)	01-Jul-18
74560	Wagait (S)	01-Jul-18
73600	Roper Gulf (R)	01-Jul-17
74050	Tiwi Islands (R)	01-Jul-17
74550	Victoria Daly (R)	01-Jul-17
74680	West Daly (R)	01-Jul-17
74660	West Arnhem (R)	01-Jul-17
72200	Katherine (T)	01-Jul-17
89399	Unincorporated ACT	01-Jul-14

Table S2: MBS subgroups and item codes for outcomes of interest

	Definition	MBS group	MBS item number	PBS item number	ATC codes
GP	General practitioner attendances to which no other item applies	A01			
Specialist	Specialist attendances to which no other item applies	A03			
Allied health	Allied health services	M03			
Psychiatrist	Medicare-subsidised mental health-specific items by psychiatrist		296,297,299,291,293,300,302,304,306,308,310,312,314,316,318,319,90266,90268,91827,91828,91829,91830,91831,91837,91838,91839,91840,91841,92462,92463,92464,92465,92501,92502,92503,92504,92505,92506,320,322,324,326,328,330,332,334,336,338,154,155,156,342,344,346,92455,92456,92457,92495,92496,92497,157,158,159,348,350,352,92458,92459,92460,92498,92499,92500,288,353,355,356,357,358,359,361,364,366,367,369,370,855,857,858,861,864,866,14224,340,886,153,289,90260,90262,92162,92166,92172,92178,92434,92435,92436,92437,92446,92474,92475,92476,92477	-	-

GP_MH	Medicare-subsidised mental health-specific items by general practitioner		2710,93400,2715,93401, 2717,93403,281,93404,282, 93405,92116,93408,92117, 93409,92122,93431,92123, 93432,92128,93435,92129, 93436,92134,93439,92135, 93440,93402,90264,93406, 90267,93407,90269,93410, 90271,93411,90272,93433, 90273,93434,90274,93437, 90275,93438,90276,93441, 90277,93442,90278,2700, 90279,2701,90280,2702, 90281,2712,90282,2713, 90250,2719,90251,272, 90252,276,90253,277, 90254,279,90255,894, 90256,896,90257,898, 90261,2121,90263,2150, 92163,2196,92167,92112, 92146,92113,92147,92114, 92148,92115,92149,92118, 92150,92119,92151,92120, 92152,92121,92153,92124, 92154,92125,92155,92126, 92156,92127,92157,92130, 92158,92131,92159,92131, 92160,92133,92161,92170, 2721,92171,2723,92173, 2725,92176,2727,92177, 2729,92179,2731,93421, 2733,93422,2735,93423, 283,93451,285,93452,286, 93453,287,371,372,941,942 ,92188,92194,92196,92198, 92200,93287,93288,93291, 93292,93300,93301,93302, 93303,93304,93305,93306, 93307,93308,93309,93310, 93311,91283,91285,91286, 91287,91371,91372,91721, 91723,91725,91727,91729, 91731,170,171,172,996,997 ,998,221,222,223,20104, 2575,2577,2578,2704,2705, 2707,2708		

Psychologist	Medicare-subsidised mental health-specific items by psychologists		80000,80001,80005,80010, 80011,80015,80020,80021, 82352,82353,82354,82355, 82356,82357,82358,82359, 93076,93079,93110,93113, 91000,91001,91005,91010, 91011,91015,93312,93313, 93330,93331,93332,93333, 93334,93335,93375,93376, 10968,80100,80101,80105, 80110,80111,80115,80120, 80121,91169,91170,91183, 91184,91100,91105,91101, 91111,91115,93316,93319, 93350,93351,93352,93353, 93354,93355,93381,93382, 93512,93535,93557,82000, 82015,91166,91167,91181, 91182,93032,93035,93040, 93043,81355,82360,82361, 82362,82363,82364,82365, 82366,82367,93084,93087, 93118,93121,93590		
Allied_MH	Medicare-subsidised mental health-specific items by allied health professionals		10956,80125,80126,80130, 80135,80136,80140,80145, 80146,80150,80151,80155, 80160,80161,80165,80170, 80171,91125,91126,91130, 91135,91136,91140,91150, 91151,91155,91160,91161, 91165,91172,91173,91175, 91176,91185,91186,91187, 91188,93322,93323,93326, 93327,93362,93363,93364, 93365,93366,93367,93357, 93358,93359,93360,93361, 93383,93384,93385,93386, 93506,93529,93551,93584, 81325,92350,82351,82368, 82369,82370,82371,82372, 82373,82374,82375,82376, 82377,82378,82379,82380, 82381,82382,82383,93074, 93092,93095,93100,93105, 93108,93126,93129,93134, 93137		

ad	Drugs used to treat the symptoms of clinical depressio n.			2417F, 2418G,2429W, 1561E,1358L, 1011F,1012G, 1013H, 2420J, 2421K, 2522R, 2523T, 8220P, 8702B, 8703C,8700X,8701Y,1018 1W,9432K,9433L,8270G,1 434L,8512B,8174F,2242B, 2236Q,2237R,8836C,8837 D,2856H,11713L,2444P,19 00B,8003F,10231L,10234P ,10241B,10245F,9366Y,93 67B,9155W,9156X,3059B, 8090H,1627P,1628Q,8513 C,8855C,8856D,8857E,888 3M,9365X,8583R,8301X,8 302Y,8868R	N06A
ax	Drugs prescribed to treat symptoms of anxiety.			2130D,2131E,2132F,8118 G,11186R,11187T,11205R, 3161J,3162K,2558P,2132 W,3133X,2723H,2089Y	N05B
ap	Drugs used to treat symptoms of psychosis (a severe mental disorder characteri sed by loss of contact with reality, delusions and hallucinat ions), common in conditions such as schizophr enia, mania and				N05A

	delusional disorder.				

Note: Mental health services (MHS) are the sum of psychiatrist, GP_mental health, Psychologist and Allied_Mental Health; ax=anxiolytics, ap=anti-psychotic, ad= antidepressants

Table S3: Sample restriction

	Observation	Participant
People with disability under 63 in 2011	14,275,480	356,887
People on the NDIS	4,100,080	102,502
People not on trial	3,751,960	93,799
People who enrolled in the two periods	1,300,840	32,521
People whose LGA also has the NDIS in those periods (Final sample)	644,360	16,109

* Notes: We also excluded those with duplicate IDs, blank IDs, IDs that could not be merged, and those whose intake dates are before the NDIS availability dates in their LGAs.

Table S4 The numbers of movers moving from late to early access areas and vice versa

	Late to early	Early to late
Number of individuals who moved	48	51
Number of individuals who moved from late areas to early areas one year before the NDIS became available in current address	<10)	<10
Number of individuals who moved from late areas to early areas one year after the NDIS became available in current address	<10	<10
Total number of individuals	14,961	

Table S5 Characteristics of analytic sample, NDIS participants, and people with disability not on the NDIS

	Sample Treatment (n=12,251)	Sample Control (n=3,858)	NDIS (n=87,710)	Non-NDIS* (n=254,369)
			Mean/Prop.	Mean/Prop.
		Outcome		
No. GP visits per quarter	1.79	1.70	1.80	2.29
No. specialist services per quarter	0.14	0.10	0.12	0.16
No. mental health services per quarter	0.26	0.29	0.35	0.32
No. allied health services per quarter	0.17	0.15	0.13	0.12
No. Anti-depression scripts per quarter	0.59	0.71	0.68	0.88
No. Anti-anxiety scripts per quarter	0.14	0.25	0.24	0.43
No. Anti-psychotic scripts per quarter	0.26	0.24	0.27	0.10
No. psychiatrist services per quarter	0.09	0.08	0.12	0.10
No. mental health GP services per quarter	0.04	0.07	0.07	0.08
No. psychologist services per quarter (inc clinical psych)	0.09	0.13	0.14	0.13
		Characteristics		
Age	27.25	27.50	28.95	43.58
Highest education(%)[a]				
Bachelor and above	0.04	0.03	0.05	0.08
Cert/ Diploma	0.07	0.11	0.11	0.22
Yr12	0.26	0.25	0.22	0.15
Yr9-11	0.31	0.32	0.34	0.40
Yr8 and below	0.32	0.30	0.27	0.16
Male(%)	0.60	0.57	0.58	0.52
State(%)				
NSW	0.74	--	0.33	0.33
Vic	0.14	0.25	0.26	0.25
Qld	0.09	0.64	0.21	0.21
SA			0.08	0.09
WA	0.01	0.11	0.09	0.07
Tas	0.02	--	0.02	0.03
NT	<0.01	--	0.01	0.01
ACT	--	--	0.01	0.01
Married(%)[b]	0.13	0.17	0.19	0.53
Indigenous(%)[c]	0.04	0.03	0.04	0.05

Notes: *People with profound or severe disability not on the NDIS; NSW=New South Wales, Vic=Victoria, Qld=Queensland, SA=South Australia, WA=Western Australia, Tas=Tasmania, NT=Northern Territory,

Table S6: Assessing pre-trends using linear trend variables

Besides the event study presented in Section 3.3.1, we also use linear trend variables to understand if there are pre-trends and how confident we are regarding the possible degree of differing trends. Two linear trend variables were created and estimated using the following equation:

$$y_i = \beta_0 + \beta_1 Treat_i * Time_{pre} + \beta_2 * Treat_i * Time_{post} + \beta_3 Time_{pre} + \beta_4 Time_{post} + \alpha_i + \delta_t + \epsilon_{it}$$

The dependent variable y_i represents the number of visits to different health professionals for individual (i) per quarter. The key explanatory variables are two time-to-event indicators: $Time_{pre}$ and $Time_{post}$.

$Time_{pre}$represents the pre-treatment period, covering 22 to 5 quarters before the event. It is coded from -22 to -5 to capture pre-trend dynamics, and set to 0 for quarters later than -4 to the event. This variable is interacted with the treatment indicator (treat), which equals 1 for treated individuals and 0 for controls.

$Time_{post}$ captures the post-treatment period, ranging from 4 quarters before the event (to account for anticipation effects) up to 5 quarters after. It is coded as 0 for quarters earlier than -4, and from -4 to 5 for quarters within and after the anticipation and treatment window. Like $Time_{pre}$, it is also interacted with the treatment indicator.

These interactions allow the model to estimate β coefficients for pre-treatment trends and γ coefficients for post-treatment effects and explore the standard error for these to better understand the power of our pre-trends analysis. The model includes individual fixed effects (α_i) to control for time-invariant personal characteristics, and year-quarter fixed effects (δ_t) to account for common temporal shocks. The error term (ε_{it}) captures unobserved influences.

The results are shown in Appendix Table S6 below.

Note that, in general, the standard errors of the differences in pre-trends are relatively small when compared to the estimates of the effect of the NDIS which suggests that we are confidence that differences in pre-trends are unlikely to be driving the results seen. While the standard errors of the differences in the linear pre-trends are, in general, larger for the heterogeneity analysis they are smaller than the estimated NDIS effects.

Table S6: Assessing pre-trends using linear trend variables

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	2	3	4	5	6	7	8	9	10	11
	gp	spec	mhs	allied	psychiat	gp_mh	psychol	allied_mh	ad	ax	ap
Main Analysis											
Time_pre* Treat	-0.0000206	0.000236	-0.00115	-0.00029	0.000139	-0.00028	-0.000565	-0.000445**	0.00142	0.00139*	0.000321
(SE)	(0.00165)	(0.000247)	(0.000798)	(0.000381)	(0.000428)	(0.000291)	(0.000480)	(0.000213)	(0.00113)	(0.000719)	(0.000949)
Time_post*Treat	-0.00565	0.000236	-0.00808***	-0.00404***	-0.00039	-0.00218***	-0.00371**	-0.00180***	-0.00393	0.00162	-0.00299
(SE)	(0.00505)	(0.000961)	(0.00244)	(0.00140)	(0.00125)	(0.000819)	(0.00157)	(0.000532)	(0.00290)	(0.00180)	(0.00217)
Age											
0-14											
Time_pre* Treat	0.00163	0.000653	-0.00363**	-0.00136	0.000148	-0.000936***	9.96E-05	-0.00294***	-0.00011	0.00027	0.00339***
(SE)	(0.00235)	(0.000574)	(0.00184)	(0.000953)	(0.000571)	(0.000285)	(0.00126)	(0.000824)	(0.00205)	(0.000387)	(0.00128)
Time_post*Treat	0.00638	-0.00114	-0.0274***	-0.0180***	0.0018	-0.00424***	-0.0146***	-0.0104***	-0.00274	-5.6E-05	-0.00477
(SE)	(0.00688)	(0.00177)	(0.00558)	(0.00332)	(0.00178)	(0.00121)	(0.00427)	(0.00205)	(0.00540)	(0.000836)	(0.00410)
15-24											
Time_pre* Treat	0.000301	0.000644	-0.00046	-0.00141**	9.73E-05	6.17E-05	-0.00135	0.000731*	0.00196	6.04E-05	0.00187
(SE)	(0.00255)	(0.000432)	(0.00157)	(0.000556)	(0.000744)	(0.000386)	(0.00104)	(0.000423)	(0.00219)	(0.000643)	(0.00163)
Time_post*Treat	-0.012	0.000978	-0.00386	-0.00601**	-0.00107	-0.00287	1.47E-05	6.43E-05	-0.00168	0.00185	0.000146
(SE)	(0.00822)	(0.00186)	(0.00524)	(0.00238)	(0.00223)	(0.00194)	(0.00367)	(0.000854)	(0.00551)	(0.00210)	(0.00426)
25+											
Time_pre* Treat	-0.000294	0.000043	-0.00084	0.000737	4.28E-05	-0.00026	-0.000465	-0.00016	0.00146	0.00210*	-0.00101
(SE)	(0.00246)	(0.000339)	(0.00106)	(0.000523)	(0.000629)	(0.000450)	(0.000595)	(0.000213)	(0.00157)	(0.00115)	(0.00140)
Time_post*Treat	-0.00764	0.000383	-0.00437	0.000101	-0.00067	-0.00131	-0.00208	-0.00032	-0.00474	0.00198	-0.00346
(SE)	(0.00749)	(0.00134)	(0.00316)	(0.00193)	(0.00183)	(0.00109)	(0.00185)	(0.000600)	(0.00405)	(0.00285)	(0.00300)
Sex											
Male											
Time_pre* Treat	-0.000576	0.000578**	-0.00104	-0.00018	0.000894*	-0.00028	-0.00115*	-0.000503*	0.00128	0.000943	0.000369
(SE)	(0.00185)	(0.000287)	(0.00103)	(0.000486)	(0.000537)	(0.000307)	(0.000623)	(0.000290)	(0.00144)	(0.000844)	(0.00139)
Time_post*Treat	-0.00572	-2.3E-05	-0.00885***	-0.00424**	-0.00142	-0.00276***	-0.00246	-0.00221***	-0.00636*	0.00294	-0.00258
(SE)	(0.00644)	(0.00115)	(0.00297)	(0.00180)	(0.00140)	(0.00105)	(0.00197)	(0.000653)	(0.00354)	(0.00222)	(0.00302)
Female											
Time_pre* Treat	0.000961	-0.00023	-0.00128	-0.00036	-0.00091	-0.00027	0.000226	-0.00032	0.00174	0.00197	0.000117
(SE)	(0.00300)	(0.000434)	(0.00126)	(0.000609)	(0.000700)	(0.000544)	(0.000755)	(0.000309)	(0.00180)	(0.00125)	(0.00120)
Time_post*Treat	-0.00575	0.000708	-0.00689*	-0.00377*	0.00104	-0.00137	-0.00536**	-0.0012	-0.00027	-0.00012	-0.0037
(SE)	(0.00810)	(0.00166)	(0.00411)	(0.00224)	(0.00227)	(0.00131)	(0.00258)	(0.000887)	(0.00486)	(0.00300)	(0.00305)
Remoteness											

Remote/Regional											
Time_pre* Treat	-0.000323	-0.00022	0.000623	0.000649	0.00064	-0.000796*	0.000483	0.000297	0.00331	-0.00015	0.00128
(SE)	(0.00259)	(0.000478)	(0.00127)	(0.000624)	(0.000600)	(0.000439)	(0.000783)	(0.000412)	(0.00216)	(0.000988)	(0.00168)
Time_post*Treat	-0.0141	-0.00119	-0.00891**	-0.00247	-0.00403*	-0.00292**	-0.00147	-0.00048	-0.00296	-0.00118	-0.00733*
(SE)	(0.00861)	(0.00195)	(0.00400)	(0.00233)	(0.00213)	(0.00141)	(0.00258)	(0.00100)	(0.00547)	(0.00303)	(0.00407)
Major cities											
Time_pre* Treat	0.000516	0.000468	-0.00185*	-0.00064	-1.7E-05	-8.3E-05	-0.000959	-0.000792***	0.000777	0.00213**	4.94E-05
(SE)	(0.00209)	(0.000289)	(0.00100)	(0.000475)	(0.000556)	(0.000370)	(0.000600)	(0.000249)	(0.00132)	(0.000932)	(0.00116)
Time_post*Treat	-0.000879	0.000726	-0.00776**	-0.00441**	0.00114	-0.00210**	-0.00464**	-0.00216***	-0.00434	0.00283	-0.00096
(SE)	(0.00618)	(0.00112)	(0.00303)	(0.00174)	(0.00154)	(0.00100)	(0.00196)	(0.000625)	(0.00343)	(0.00224)	(0.00257)
SEIFA											
High SEIFA											
Time_pre* Treat	0.00540**	0.000639	-0.00176	-9.9E-05	-0.00012	-0.00025	-0.000868	-0.00052	-0.00039	-6.8E-05	-0.00129
(SE)	(0.00264)	(0.000484)	(0.00150)	(0.000750)	(0.000723)	(0.000487)	(0.000895)	(0.000467)	(0.00204)	(0.00112)	(0.00148)
Time_post*Treat	-0.00123	0.00013	-0.00987**	-0.00706***	0.000248	-0.00207	-0.00580*	-0.00225**	0.00106	0.000452	-0.00713*
(SE)	(0.00845)	(0.00196)	(0.00446)	(0.00266)	(0.00214)	(0.00140)	(0.00296)	(0.000956)	(0.00570)	(0.00381)	(0.00402)
Low SEIFA											
Time_pre* Treat	-0.00305	0.000184	-0.00059	-0.00038	0.000201	-0.00024	-0.000283	-0.00027	0.00236	0.00207*	0.00129
(SE)	(0.00248)	(0.000325)	(0.00101)	(0.000506)	(0.000524)	(0.000396)	(0.000624)	(0.000267)	(0.00153)	(0.00107)	(0.00138)
Time_post*Treat	-0.00978	0.000231	-0.00718**	-0.00291	-0.00076	-0.00200*	-0.00363*	-0.00079	-0.00442	0.00166	-0.00432
(SE)	(0.00707)	(0.00124)	(0.00328)	(0.00188)	(0.00160)	(0.00117)	(0.00214)	(0.000726)	(0.00385)	(0.00230)	(0.00295)
Disability types											
Intellectual disability											
Time_pre* Treat	0.00139	0.000688*	-0.00093	-3.9E-05	0.000489	-0.000698**	-0.000633	-9.1E-05	0.00239	0.000698	-0.00035
(SE)	(0.00239)	(0.000386)	(0.00109)	(0.000619)	(0.000555)	(0.000344)	(0.000706)	(0.000280)	(0.00166)	(0.000768)	(0.00137)
Time_post*Treat	-0.0115	0.00291*	0.0017	-0.00308	0.00118	-7.2E-05	0.00111	-0.00051	0.00302	0.00208	-0.00391
(SE)	(0.00794)	(0.00157)	(0.00338)	(0.00212)	(0.00167)	(0.00115)	(0.00227)	(0.000649)	(0.00443)	(0.00177)	(0.00334)
Autism											
Time_pre* Treat	-0.00357	-0.00032	-0.00142	-0.00065	0.00166	-0.0002	-0.000829	-0.00205***	0.00242	-0.00035	0.00417**
(SE)	(0.00260)	(0.000402)	(0.00231)	(0.000822)	(0.00114)	(0.000413)	(0.00150)	(0.000749)	(0.00257)	(0.000616)	(0.00196)
Time_post*Treat	-0.00244	-0.00091	-0.0218***	-0.0115***	-0.00014	-0.00494**	-0.00982**	-0.00690***	-0.00716	-0.00271*	-0.00254
(SE)	(0.00854)	(0.00137)	(0.00700)	(0.00293)	(0.00304)	(0.00206)	(0.00488)	(0.00181)	(0.00678)	(0.00151)	(0.00552)
Psychosocial Disability											
Time_pre* Treat	0.02	-0.00159	-0.00577	0.00368**	-0.00671	0.000853	0.000506	-0.00041	0.00119	0.00386	0.0379***
(SE)	(0.0158)	(0.00128)	(0.00794)	(0.00185)	(0.00527)	(0.00402)	(0.00331)	(0.00145)	(0.00853)	(0.00655)	(0.0133)
Time_post*Treat	-0.0198	0.00765	-0.0426*	0.0194**	-0.0166	-0.015	-0.0079	-0.00313	0.0233	-0.0101	-0.0397
(SE)	(0.0326)	(0.00500)	(0.0227)	(0.00753)	(0.0145)	(0.00935)	(0.0111)	(0.00324)	(0.0234)	(0.0180)	(0.0283)
Other											
Time_pre* Treat	-0.00171	0.000277	-0.00018	-0.00049	-3.5E-05	0.000171	-0.000386	6.81E-05	0.000138	0.00195	0.000375

(SE)	(0.00261)	(0.000446)	(0.000984)	(0.000619)	(0.000475)	(0.000383)	(0.000620)	(0.000236)	(0.00175)	(0.00140)	(0.000986)
Time_post*Treat	-0.00198	-0.00226	-0.00577*	-0.00371	-0.00036	-0.00129	-0.00371*	-0.00042	-0.0105**	0.00414	0.00374*
(SE)	(0.00861)	(0.00172)	(0.00312)	(0.00240)	(0.00157)	(0.00103)	(0.00207)	(0.000694)	(0.00436)	(0.00346)	(0.00214)

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter; Spec=specialist, MHS=mental health service, allied=allied health, Ax=anxiolytics, ap=anti psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S7 Number of observations per time point

Time point	Control	Treatment	Total
-22	1116	3568	4684
-21	3121	9957	13078
-20	3858	12251	16109
-19	3858	12251	16109
-18	3858	12251	16109
-17	3858	12251	16109
-16	3858	12251	16109
-15	3858	12251	16109
-14	3858	12251	16109
-13	3858	12251	16109
-12	3858	12251	16109
-11	3858	12251	16109
-10	3858	12251	16109
-9	3858	12251	16109
-8	3858	12251	16109
-7	3858	12251	16109
-6	3858	12251	16109
-5	3858	12251	16109
-4	3858	12251	16109
-3	3858	12251	16109
-2	3858	12251	16109
-1	3858	12251	16109
0	3858	12251	16109
1	3858	12251	16109
2	3858	12251	16109
3	3858	12251	16109
4	2742	8683	11425
5	737	2294	3031
Total	100308	318526	418834

Table S8 Sensitivity analysis 1: Log transformation for the outcomes

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	-0.00465	0.00919	-0.0042	0.0114	0.00414	0.00304	-0.0141	-0.00028	0.0306	0.0131	0.0176
	(0.0251)	(0.0136)	(0.0208)	(0.0184)	(0.0126)	(0.0114)	(0.0157)	(0.00598)	(0.0223)	(0.013)	(0.0159)
NDIS#enrolment	0.00492	0.00771	-0.0642***	-0.033	0.000618	-0.0254**	-0.0459***	-0.0126**	0.0341	0.0131	-0.01
	(0.0272)	(0.0137)	(0.0223)	(0.0202)	(0.0147)	(0.0115)	(0.0162)	(0.00628)	(0.0262)	(0.0148)	(0.0199)
Observations	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610	418,610
Individuals	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S9 Sensitivity analysis 2: Poisson regression with two-way fixed effects

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**gp_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	1.0008	1.0491	1.0179	1.0310	1.027177	1.0580	1.0116	1.1052	1.0558***	1.0654**	1.0305
	(0.0097)	(0.0375)	(0.0278)	(0.0273)	(0.0398)	(0.0471)	(0.0468)	(0.1471)	(0.0106)	(0.0286)	(0.0182)
NDIS#enrolment	0.9910	1.0416	0.8939***	0.9168***	0.979606	0.9205*	0.8670***	0.5057***	1.0474***	1.0817***	1.0070
	(0.0092)	(0.0342)	(0.0234)	(0.0222)	(0.0377)	(0.04)	(0.0387)	(0.0747)	(0.0104)	(0.0315)	(0.0172)
Observations	416380	233365	189179	205705	86608	145302	91760	15495	164711	106011	89362

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
Spec=specialist, MHS=mental health service, allied=allied health, Ax=anxiolytics, ap=anti psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S10 Sensitivity analysis 3: Trial as the treatment group

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	0.0573**	0.00318	0.0102	0.00885	-0.0085	0.00921	0.0113	-0.00187	0.00105	0.0089	0.00275
	(0.0251)	(0.00558)	(0.0146)	(0.00728)	(0.00678)	(0.00554)	(0.00983)	(0.00372)	(0.0168)	(0.0105)	(0.0146)
NDIS#enrolment	0.0209	0.00228	-0.0532***	-0.0193***	-0.0178**	0.00243	-0.0305***	-0.00735	0.0272	0.000485	0.0321
	(0.0277)	(0.00506)	(0.0155)	(0.0072)	(0.0081)	(0.00627)	(0.00913)	(0.00414)	(0.0213)	(0.013)	(0.0197)
Observations	192,334	192,334	192,334	192,334	192,334	192,334	192,334	192,334	192,334	192,334	192,334
Individuals	8,498	8,498	8,498	8,498	8,498	8,498	8,498	8,498	8,498	8,498	8,498

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S11 Sensitivity analysis 4: Trial+main as the treatment group

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	0.0945***	0.00536	0.00485	0.0101	-0.00449	0.00383	0.00839	-0.00289	0.0238	0.00247	0.00548
	(0.0292)	(0.00484)	(0.0127)	(0.00690)	(0.00654)	(0.00457)	(0.00834)	(0.00323)	(0.0165)	(0.0112)	(0.0130)
NDIS#enrolment	0.0270	0.00319	-0.0494***	-0.00538	-0.0141*	-0.00441	-0.0273***	-0.00367	0.0169	0.0113	0.0241
	(0.0283)	(0.00438)	(0.0138)	(0.00670)	(0.00731)	(0.00530)	(0.00827)	(0.00357)	(0.0198)	(0.0126)	(0.0167)
Observations	312,292	312,292	312,292	312,292	312,292	312,292	312,292	312,292	312,292	312,292	312,292
Individuals	12,069	12,069	12,069	12,069	12,069	12,069	12,069	12,069	12,069	12,069	12,069

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S12 Sensitivity analysis 5: Shorter periods (-12,3)

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	0.0124	0.00504	0.00712	0.00790	0.00356	-0.000468	0.000763	0.00327	0.0206	0.00869	0.0106
	(0.0251)	(0.00448)	(0.0122)	(0.00665)	(0.00552)	(0.00410)	(0.00820)	(0.00299)	(0.0141)	(0.00896)	(0.00958)
NDIS#enrolment	0.00510	0.00216	-0.0312**	-0.0175**	-0.000816	-0.0103**	-0.0131	-0.00698**	0.0161	0.0111	0.0103
	(0.0280)	(0.00481)	(0.0144)	(0.00734)	(0.00726)	(0.00513)	(0.00888)	(0.00340)	(0.0182)	(0.0117)	(0.0128)
Observations	257,626	257,626	257,626	257,626	257,626	257,626	257,626	257,626	257,626	257,626	257,626
Individuals	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109	16,109

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S13 Sensitivity Analysis 6: Difference-in-difference estimator with multiple groups and periods

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
Enrolment only											
Estimate	-0.0545***	-0.0064	-0.0414***	-0.0141***	0.0117**	-0.0125***	-0.0290***	-0.0115***	0.0093	0.0023	0.0173**
SE	0.0180	0.0035	0.0095	0.0048	0.0049	0.0035	0.0059	0.0025	0.0097	0.0072	0.0083
N	381,513	381,513	381,513	381,513	381,513	381,513	381,513	381,513	381,513	381,513	381,513
Switchers	173,998	173,998	173,998	173,998	173,998	173,998	173,998	173,998	173,998	173,998	173,998
Application only											
Estimate	-0.0096	-0.0014	-0.0036	0.0027	0.0013	-0.0022	-0.0015	-0.0012	0.0066	0.0028	0.0055
SE	0.0096	0.0021	0.0048	0.0032	0.0022	0.0019	0.0032	0.0013	0.0045	0.0029	0.0038
N	635269	635269	635269	635269	635269	635269	635269	635269	635269	635269	635269
Switchers	187469	187469	187469	187469	187469	187469	187469	187469	187469	187469	187469
Joint signi pretrend (p-value)	0.7779	0.3207	0.1843	0.6107	0.2176	0.6327	0.2824	0.9636	0.3030	0.0558	0.1441
Application + Enrolment											
Estimate	-0.0262**	-0.0033	-0.0171***	-0.0035	0.0066**	-0.0058**	-0.0126***	-0.0053***	0.0077	0.0023	0.0106**
SE	0.0121	0.0025	0.0063	0.0035	0.0031	0.0024	0.0040	0.0017	0.0062	0.0044	0.0053
N	856660	856660	856660	856660	856660	856660	856660	856660	856660	856660	856660
Switchers	408860	408860	408860	408860	408860	408860	408860	408860	408860	408860	408860
Joint signi pretrend(p-value)	0.0378	0.0333	0.4064	0.1802	0.8071	0.4344	0.2388	0.1656	0.1479	0.4704	0.0004

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S14 Heterogeneity analysis by sex

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
					FEMALE						
NDIS#application	0.00710	0.000695	-0.0112	0.0102	-0.0121	-0.00623	0.00718	-7.36e-05	0.0344	0.0237	0.00669
	(0.0473)	(0.00742)	(0.0199)	(0.0104)	(0.00938)	(0.00826)	(0.0124)	(0.00470)	(0.0255)	(0.0174)	(0.0156)
NDIS#enrolment	-0.0243	0.00239	-0.0351	-0.0111	-0.00808	-0.00830	-0.0130	-0.00580	0.0343	0.0205	-0.00238
	(0.0463)	(0.00730)	(0.0214)	(0.0109)	(0.0122)	(0.00863)	(0.0127)	(0.00476)	(0.0313)	(0.0223)	(0.0190)
Observations	170,204	170,204	170,204	170,204	170,204	170,204	170,204	170,204	170,204	170,204	170,204
Individuals	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550
					MALE						
NDIS#application	0.00826	0.00793	0.0131	0.00781	0.0156**	0.00400	-0.00827	0.00178	0.0205	0.00583	0.0127
	(0.0308)	(0.00505)	(0.0162)	(0.00828)	(0.00781)	(0.00457)	(0.0107)	(0.00418)	(0.0197)	(0.0107)	(0.0172)
NDIS#enrolment	-0.000709	0.00563	-0.0344**	-0.0198**	0.00658	-0.0106*	-0.0196*	-0.0107**	0.00161	0.0157	0.00878
	(0.0332)	(0.00505)	(0.0173)	(0.00867)	(0.00916)	(0.00561)	(0.0104)	(0.00446)	(0.0236)	(0.0125)	(0.0207)
Observations	248,406	248,406	248,406	248,406	248,406	248,406	248,406	248,406	248,406	248,406	248,406
Individuals	9,559	9,559	9,559	9,559	9,559	9,559	9,559	9,559	9,559	9,559	9,559

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S15 Heterogeneity analysis by age

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	2	3	4	5	6	7	8	9	10	11
	gp	spec	mhs	allied	psychiat	GP_mh	psychol	allied_mh	ad	ax	ap
0-14											
NDIS#application	-0.0128	0.00231	0.0521*	0.0291*	0.000874	-0.00082	0.0631***	-0.011	0.00281	0.00575	0.0576***
	(0.039)	(0.00953)	(0.029)	(0.0163)	(0.00986)	(0.00498)	(0.0197)	(0.0131)	(0.0277)	(0.00738)	(0.0181)
NDIS#enrolment	0.0352	-0.00025	-0.114***	-0.0603***	0.00871	-0.0285***	-0.0284	-0.0654***	0.00106	0.00523	0.0384
	(0.0378)	(0.00884)	(0.0316)	(0.0154)	(0.00916)	(0.00569)	(0.0225)	(0.0123)	(0.035)	(0.00676)	(0.0248)
Observations	71,177	71,177	71,177	71,177	71,177	71,177	71,177	71,177	71,177	71,177	71,177
Individuals	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738	2,738
15-24											
NDIS#application	0.0045	0.00995	-0.00565	0.000436	-0.0027	0.00895	-0.0248	0.0129**	0.0064	0.0049	0.0236
	(0.0399)	(0.00835)	(0.0259)	(0.0102)	(0.0113)	(0.00739)	(0.0188)	(0.006)	(0.0303)	(0.00938)	(0.0216)
NDIS#enrolment	-0.0312	0.0145*	-0.0109	-0.0298***	-0.00452	-0.00259	-0.0186	0.0148***	0.0165	0.00446	0.0351
	(0.0451)	(0.00782)	(0.0274)	(0.0112)	(0.0145)	(0.00771)	(0.0179)	(0.0056)	(0.0378)	(0.0159)	(0.0268)
Observations	100,475	100,475	100,475	100,475	100,475	100,475	100,475	100,475	100,475	100,475	100,475
Individuals	3,865	3,865	3,865	3,865	3,865	3,865	3,865	3,865	3,865	3,865	3,865
25plus											
NDIS#1.post	0.0183	0.00421	-0.0092	0.00941	0.00632	-0.00413	-0.0113	-7.21E-05	0.0380*	0.0185	-0.00676
	(0.0399)	(0.00576)	(0.0165)	(0.00888)	(0.00852)	(0.00652)	(0.00997)	(0.00296)	(0.0219)	(0.0154)	(0.0173)
NDIS#2.post	-0.0167	0.00217	-0.0227	0.00449	-0.00097	-0.0075	-0.0125	-0.00171	0.0152	0.0252	-0.0152
	(0.0404)	(0.00586)	(0.0176)	(0.00937)	(0.0106)	(0.00734)	(0.00965)	(0.00363)	(0.0262)	(0.0186)	(0.0204)
Observations	246,958	246,958	246,958	246,958	246,958	246,958	246,958	246,958	246,958	246,958	246,958
Individuals	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S16 Heterogeneity analysis by remoteness

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
Major Cities											
NDIS#application	0.0112	0.00802	-0.00846	0.00607	0.000390	0.000959	-0.00603	-0.00377	0.0182	0.0222*	0.00642
	(0.0338)	(0.00499)	(0.0157)	(0.00808)	(0.00771)	(0.00550)	(0.0101)	(0.00347)	(0.0184)	(0.0125)	(0.0144)
NDIS#enrolment	0.0161	0.00901*	-0.0455***	-0.0199**	0.00389	-0.00740	-0.0265***	-0.0155***	0.00770	0.0338**	0.0138
	(0.0333)	(0.00492)	(0.0166)	(0.00845)	(0.00925)	(0.00575)	(0.0101)	(0.00377)	(0.0222)	(0.0153)	(0.0168)
Observations	292,102	292,102	292,102	292,102	292,102	292,102	292,102	292,102	292,102	292,102	292,102
Individuals	11,240	11,241	11,242	11,243	11,245	11,246	11,247	11,248	11,250	11,251	11,252
Regional/ Remote Areas											
NDIS#application	0.00342	-0.000306	0.0331	0.0121	0.0163*	-0.00305	0.0106	0.00930	0.0512*	-0.00256	0.0246
	(0.0406)	(0.00855)	(0.0204)	(0.0107)	(0.00894)	(0.00715)	(0.0134)	(0.00665)	(0.0304)	(0.0134)	(0.0217)
NDIS#enrolment	-0.0599	-0.00614	-0.00845	-0.00584	-0.00429	-0.0175*	0.00653	0.00683	0.0398	-0.0170	-0.0121
	(0.0479)	(0.00836)	(0.0222)	(0.0112)	(0.0117)	(0.00911)	(0.0127)	(0.00652)	(0.0370)	(0.0171)	(0.0281)
Observations	115,805	115,805	115,805	115,805	115,805	115,805	115,805	115,805	115,805	115,805	115,805
Individuals	4,457	4,458	4,459	4,460	4,462	4,463	4,464	4,465	4,467	4,468	4,469

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S17 Heterogeneity analysis by socio-economic status

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**gp_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
					Low SEIFA						
NDIS#application	-0.0313	0.00546	0.000170	0.00502	0.00177	-0.00117	-0.000276	-0.000162	0.0387*	0.0217	0.0317*
	(0.0403)	(0.00546)	(0.0164)	(0.00874)	(0.00766)	(0.00588)	(0.0107)	(0.00408)	(0.0216)	(0.0142)	(0.0172)
NDIS#enrolment	-0.0604	0.00244	-0.0276	-0.0103	-0.00266	-0.00863	-0.0122	-0.00413	0.0250	0.0284*	0.0208
	(0.0394)	(0.00557)	(0.0176)	(0.00894)	(0.00924)	(0.00673)	(0.0107)	(0.00441)	(0.0259)	(0.0165)	(0.0199)
Observations	210,098	210,098	210,098	210,098	210,098	210,098	210,098	210,098	210,098	210,098	210,098
Individuals	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085
					High SEIFA						
NDIS#application	0.0700*	0.0136	0.0145	0.0192	-0.00636	0.00455	-0.00641	0.00489	0.00266	0.00627	0.000673
	(0.0417)	(0.00839)	(0.0233)	(0.0125)	(0.0280)	(0.0146)	(0.0174)	(0.0103)	(0.00786)	(0.0150)	(0.00671)
NDIS#enrolment	0.0862*	0.0110	-0.0452*	-0.0271**	0.00466	-0.00546	-0.0279	9.69e-05	-0.00831	-0.0256*	-0.0114
	(0.0454)	(0.00838)	(0.0248)	(0.0136)	(0.0353)	(0.0232)	(0.0256)	(0.0131)	(0.00845)	(0.0148)	(0.00700)
Observations	131,298	131,298	131,298	131,298	131,298	131,298	131,298	131,298	131,298	131,298	131,298
Individuals	5,052	5,052	5,052	5,052	5,052	5,052	5,052	5,052	5,052	5,052	5,052

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
Spec=specialist, MHS=mental health service, allied=allied health, Ax=anxiolytics, ap=anti psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S18 Heterogeneity analysis by disability types

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	2	3	4	5	6	7	8	9	10	11
	gp	spec	mhs	allied	psychiat	gp_mh	psychol	allied_mh	ad	ax	ap
Intellectual Disability											
NDIS#application	0.0451	0.00590	-0.0325*	0.00469	0.0451	0.00590	-0.0325*	0.00469	0.0271	0.00505	-0.00598
	(0.0363)	(0.00725)	(0.0187)	(0.0106)	(0.0363)	(0.00725)	(0.0187)	(0.0106)	(0.0227)	(0.0106)	(0.0184)
NDIS#enrolment	0.00681	0.0157**	-0.0234	-0.0185*	0.00681	0.0157**	-0.0234	-0.0185*	0.0486*	0.00429	-0.0165
	(0.0426)	(0.00660)	(0.0183)	(0.0111)	(0.0426)	(0.00660)	(0.0183)	(0.0111)	(0.0282)	(0.0117)	(0.0225)
Observations	158,216	158,216	158,216	158,216	158,216	158,216	158,216	158,216	158,216	158,216	158,216
Individuals	6,089	6,089	6,089	6,089	6,089	6,089	6,089	6,089	6,089	6,089	6,089
Autism											
NDIS#application	-0.0388	-0.00283	0.0611*	0.0257*	0.0229	0.0135**	0.0271	-0.00240	0.0190	0.000957	0.0624**
	(0.0434)	(0.00660)	(0.0361)	(0.0138)	(0.0163)	(0.00662)	(0.0251)	(0.0109)	(0.0356)	(0.00811)	(0.0249)
NDIS#enrolment	-0.0705	-0.00679	-0.0563	-0.0368**	0.0187	-0.0113	-0.0267	-0.0370***	0.00900	-0.0126	0.0661**
	(0.0441)	(0.00742)	(0.0390)	(0.0144)	(0.0200)	(0.00844)	(0.0255)	(0.0111)	(0.0442)	(0.0106)	(0.0332)
Observations	80,128	80,128	80,128	80,128	80,128	80,128	80,128	80,128	80,128	80,128	80,128
Individuals	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082
Psychosocial Disability											
NDIS#application	0.255	-0.0357*	0.0374	-0.0112	0.00876	0.0349	-0.0180	0.0118	0.0714	0.00891	0.531***
	(0.244)	(0.0216)	(0.114)	(0.0332)	(0.0727)	(0.0558)	(0.0564)	(0.0171)	(0.123)	(0.0902)	(0.158)
NDIS#enrolment	0.242	-0.000163	-0.121	0.0909***	-0.0800	-0.0322	-0.00486	-0.00433	0.153	-0.00297	0.411**
	(0.243)	(0.0221)	(0.129)	(0.0330)	(0.0838)	(0.0605)	(0.0574)	(0.0245)	(0.150)	(0.0931)	(0.191)
Observations	13,388	13,388	13,388	13,388	13,388	13,388	13,388	13,388	13,388	13,388	13,388
Individuals	515	515	515	515	515	515	515	515	515	515	515
Other Disability											
NDIS#application	-0.0323	0.0118	0.00677	0.00814	-0.00170	0.00240	0.00328	0.00279	0.0223	0.0209	0.00196
	(0.0445)	(0.00738)	(0.0154)	(0.0105)	(0.00645)	(0.00600)	(0.00986)	(0.00395)	(0.0244)	(0.0190)	(0.0131)
NDIS#enrolment	-0.0288	0.000263	-0.0159	-0.0135	0.000927	-0.0110	-0.000364	-0.0247	0.0377	0.0184	-0.00548

	(0.0429)	(0.00756)	(0.0168)	(0.0111)	(0.00641)	(0.0104)	(0.00402)	(0.0288)	(0.0241)	(0.0130)	(0.00851)
Observations	166,878	166,878	166,878	166,878	166,878	166,878	166,878	166,878	166,878	166,878	166,878
Individuals	6,423	6,423	6,423	6,423	6,423	6,423	6,423	6,423	6,423	6,423	6,423

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
Spec=specialist, MHS=mental health service, allied=allied health, ax=anxiolytics, ap=anti psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S19 Heterogeneity analysis: Excluding NSW (VIC., QLD, WA, TAS. and NT) in treatment

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#Application	0.0595	0.00362	0.00206	0.0231***	-0.00259	0.00198	-0.00791	0.0106**	0.0451**	0.0299**	0.00793
	(0.0334)	(0.0054)	(0.0155)	(0.00827)	(0.00767)	(0.0052)	(0.00977)	(0.00452)	(0.0202)	(0.012)	(0.0158)
NDIS#Enrol	0.0343	0.00451	-0.0383**	0.00991	-0.0179**	-0.0053	-0.0164	0.00128	0.0349	0.0146	-0.013
	(0.0341)	(0.00535)	(0.0164)	(0.00871)	(0.00896)	(0.00592)	(0.00999)	(0.0037)	(0.0249)	(0.0141)	(0.0183)
Observations	182,442	182,442	182,442	182,442	182,442	182,442	182,442	182,442	182,442	182,442	182,442
Individuals	7,019	7,019	7,019	7,019	7,019	7,019	7,019	7,019	7,019	7,019	7,019

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Table S20 Broader impact on people with profound/severe disability

	Healthcare use				Mental health services				Mental Health Prescriptions		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
	gp	**spec**	**mhs**	**allied**	**psychiat**	**GP_mh**	**psychol**	**allied_mh**	**ad**	**ax**	**ap**
NDIS#application	-0.0144	-0.00298	-0.00482	-0.00233	-0.00211	-0.00157	0.000214	-0.00135	0.00414	-0.0017	0.0188***
	(0.0255)	(0.00302)	(0.009)	(0.00446)	(0.00343)	(0.00265)	(0.0048)	(0.00144)	(0.00879)	(0.0067)	(0.00455)
NDIS#enrolment	-0.0465	-0.0019	-0.0139	-0.00256	-0.00441	-0.00195	-0.00464	-0.00294**	-0.00275	0.0128	0.0229***
	(0.0302)	(0.0038)	(0.00881)	(0.00431)	(0.00354)	(0.00297)	(0.0042)	(0.00133)	(0.0114)	(0.00852)	(0.00588)
Observations	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100	2,915,100
Individuals	112,393	112,393	112,393	112,393	112,393	112,393	112,393	112,393	112,393	112,393	112,393

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05; Outcomes are numbers of use per quarter;
spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, GP_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.

Appendix Figures

Figure S1: The Index of Relative Socio-economic Disadvantage by access group

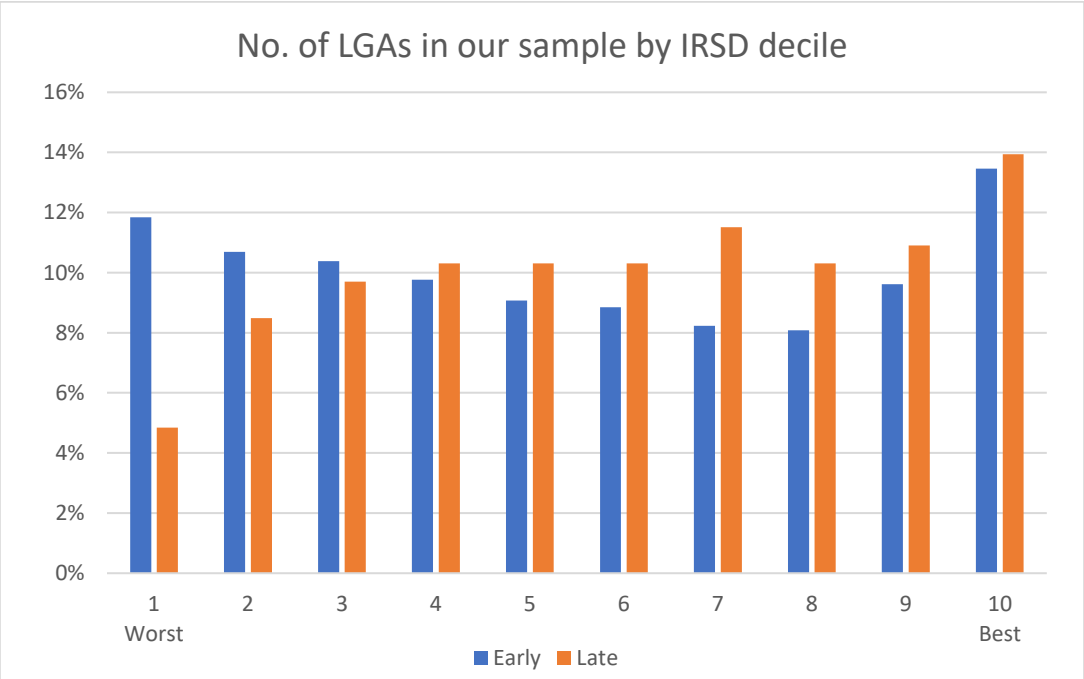
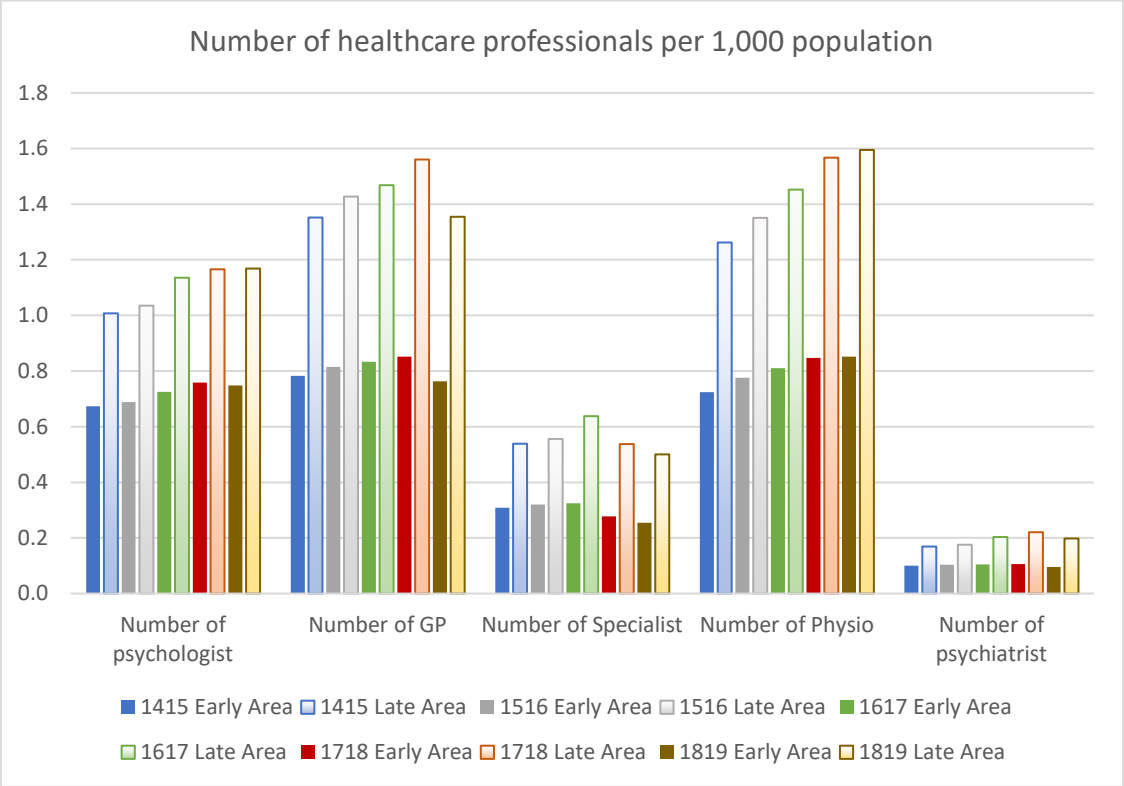


Figure S2: Comparison of healthcare professional density by access group and year



Note: Early areas are areas where the NDIS rolled out between 2016Q3 and 2017 Q1; Late areas are areas where the NDIS rolled out between 2019Q1 and 2019Q3. 1415 refers to financial year 2014-15, similar interpretation for 1516, 1617,1718 and 1819.

Figure S3: Illustration of the construction of treatment and control periods

(Note: Areas highlighted in grey are excluded from the study)

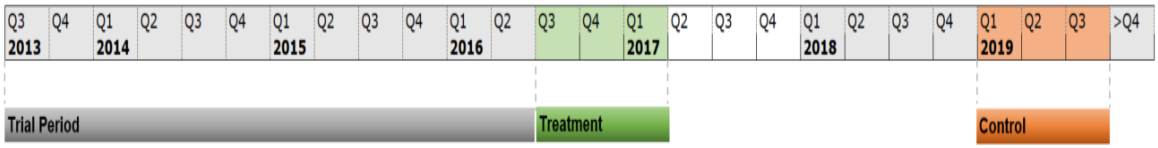
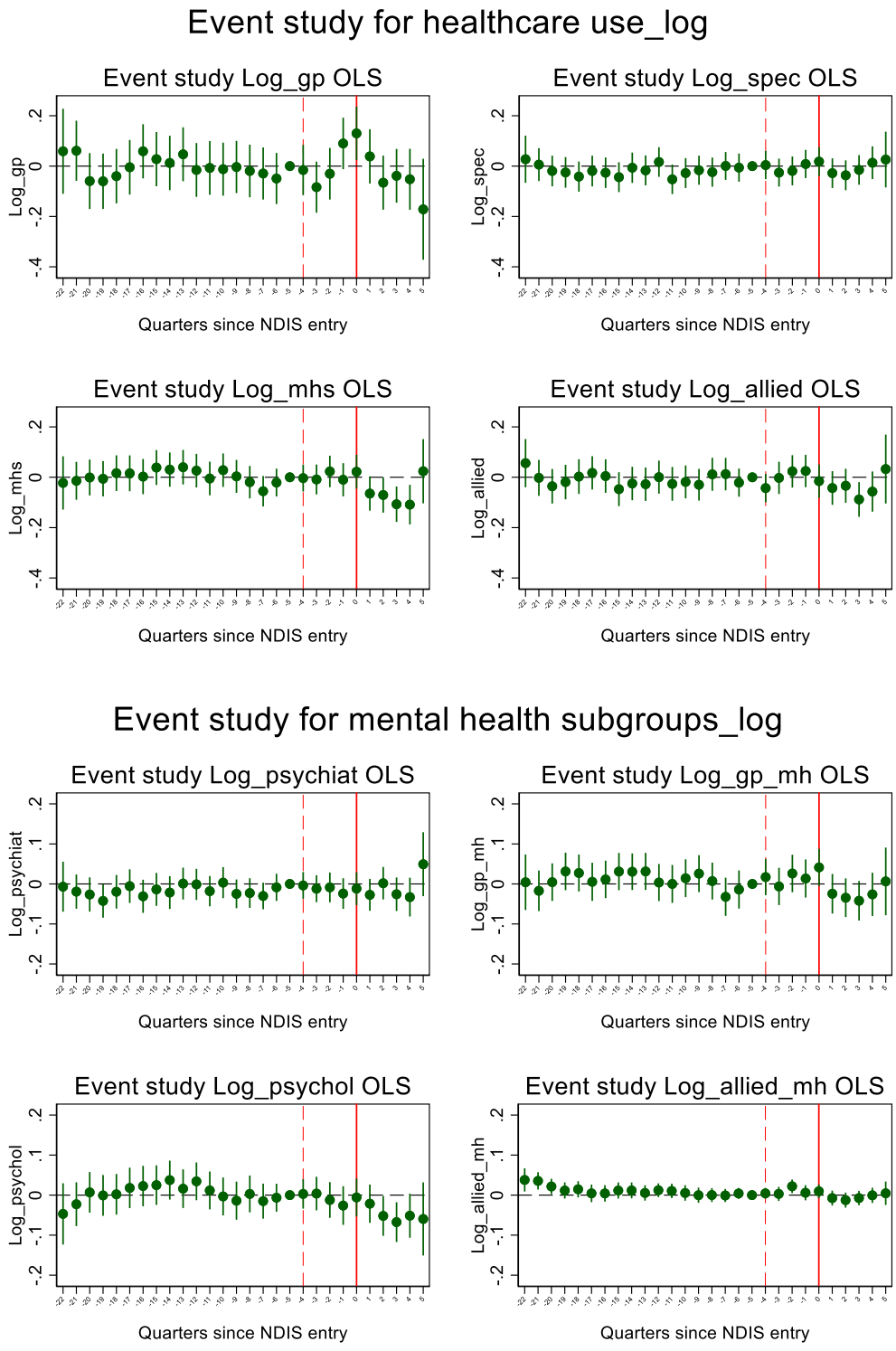
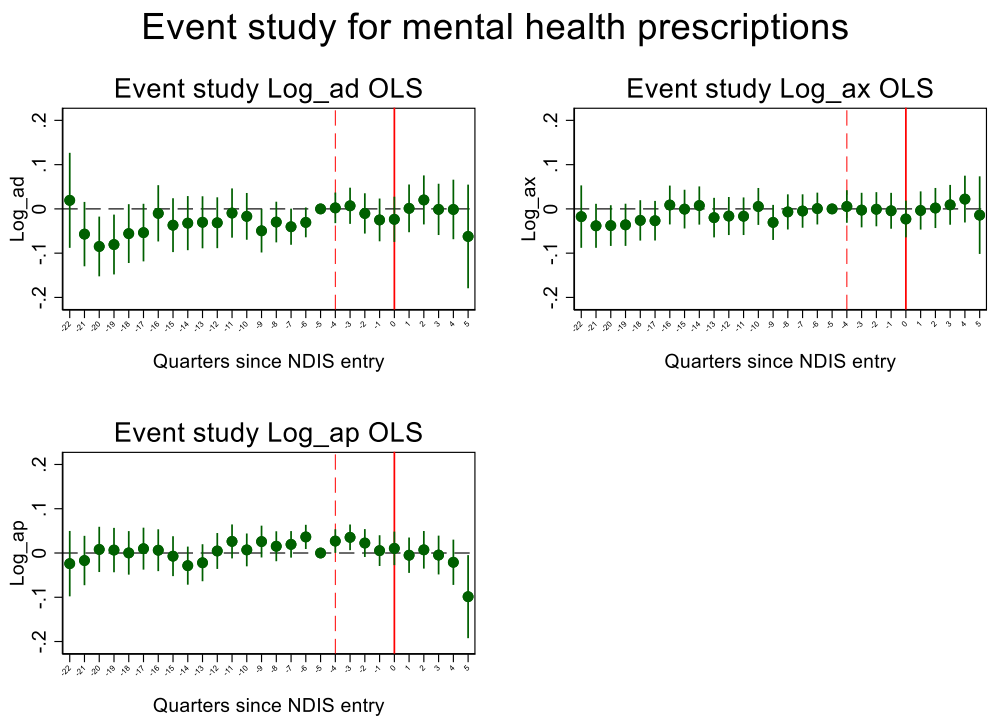


Figure S4: Event Study for healthcare use, mental health subgroups and mental health prescriptions, outcome transformed in Log form





Notes: spec=specialist, mhs=mental health service, allied=allied health, ax=anxiolytics, ap=anti-psychotic, ad= antidepressants, psychiat=psychiatrist, gp_mh=GP mental health service, psychol=psychologist, allied_mh=allied mental health services.