

The impact of the 2014 Disability Insurance (DSP) reassessment on healthcare use

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Motivation

- Number of DSP recipients **increasing**
- Recent changes in DSP policies: stricter assessment + **reassessments**
 - Threat to safety nets in OECD countries
 - working can be beneficial ?
- Little focus on effects besides labour market outcomes
 - unintended consequences?
 - anecdotal evidence of stress associated with reassessment
- How can data inform us on potential unintended consequences?

Related literature

- Mostly on labour potential \Rightarrow some can work (30–50%)
Bound (1989); Von Wachter et al. (2011); Chen & van der Klaauw (2008); Maestas et al. (2013); French & Song (2014); Moore (2015)
- Few on benefits of DSP
Deshpande (2019) financial distress; Autor et al. (2019) WTP
- Mortality
 - Gelber et al. (2018): more money \rightarrow less deaths
 - Garcia-Gomez & Gielen (2018): reassessment \rightarrow more deaths (those moved to employment or with reduced benefits)
- Health
 - Curnock et al. (2016) stricter policy (SF12) UK (survey)
 - DSP \rightarrow work: improve health (phy & psy)
 - DSP \rightarrow NSA: improve mental health only
 - DSP \rightarrow new DSP out of work: no change
 - Barr et al (2016) - aggregated data area trends in suicides, self-reported mental health problems & antidepressant scripts.

Strategy

The reform: July 2014

Reassessment of those who entered into DSP in 2008-2011 who are <35 years old (2014-2016)

Notification sent of upcoming medical review. File with medical “proof” to put together

If stressed, showing in antidepressants? How do we look at it?

Data: MADIP SSRI payments → those on DSP in 2011 (

PBS → antidepressants before and after 2014

Exploit longitudinal data to examine changes for the **same** group **before and after** the reform.

There might be other changes → Remove those changes thanks to a population “similar in trend” : those above 35. (**Diff in Diff**)

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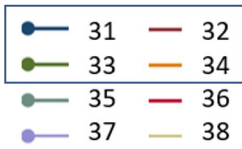
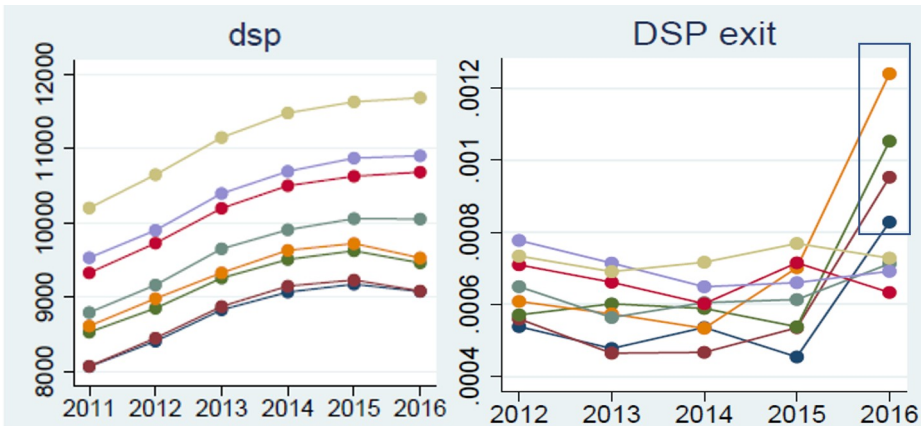
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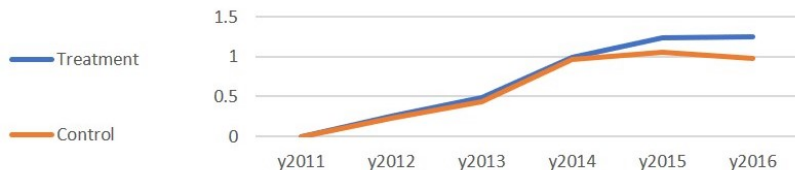


Can we see stress?

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We look at scripts for the nervous system.

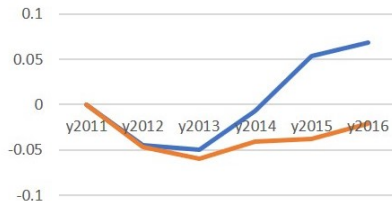
Treatment= those under 35 years old “young”



How can nervous system scripts increase?

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With more GP visits (right) and Specialist visits (left)



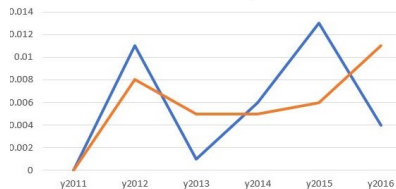
— Treatment

— Control

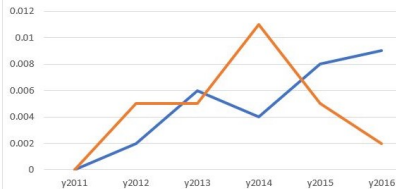
Maybe not bad? Early detection of medical issues?

Let us look at other scripts

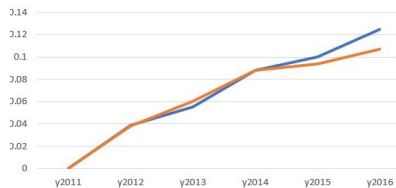
Dermatology



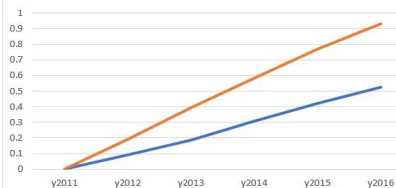
Genitourinary, sex hormones



Musculo-skeletal



Cardiovascular



— Treatment

— Control

Double Difference on healthcare use

	GP	Specialist	Dermato	Genitourin.	MSK	Nerv. Syst
Young*Post2014	0.259*** (0.036)	0.080*** (0.020)	0.000 (0.006)	0.007 (0.008)	0.013 (0.011)	0.194*** (0.043)
Young	-1.294*** (0.050)	-0.070** (0.027)	-0.037*** (0.006)	0.056*** (0.010)	-0.241*** (0.014)	-2.326*** (0.076)
Post 2014	0.277*** (0.023)	0.007 (0.012)	0.004 (0.004)	-0.002 (0.005)	0.054*** (0.007)	0.613*** (0.027)
Constant	8.475*** (0.033)	1.705*** (0.017)	0.261*** (0.004)	0.429*** (0.006)	0.678*** (0.010)	11.182*** (0.049)
Observations	471,306	471,306	471311	471311	471311	471311
Pretrend diff.	0.132	0.226	0.825	0.625	0.896	0.568

Healthcare costs? 2.2M AUD

Costs and use for those treated in 2015-2016

- Nerv scripts: \$5 out of pocket; \$60 subsidy
- GP visits: \$1.2 out of pocket; \$50 subsidy
- Specialist: \$23 out of pocket; \$110 subsidy
- Scripts costs: $\$58,581 + \$736,383 = \$794,964$
- GP visits: $\$19,974 + \$777,982 = \$797,997$
- Specialist: $\$110,364 + \$517,960 = \$627,522$

In total **\$2.2M** extra cost in healthcare.

Similar if using regressions on costs directly.

Underestimation as subpopulation of those targeted.

Summary

- Reform led to **0.2 more scripts** for the nervous system per person per year
- Together with GP & Specialist costs, this amounts to **\$2.2M**
- Seems to point to **increased stress** associated with the reform
- No similar effect on other scripts

Other regressions (not shown)

- Graphical results confirmed by regression results which are **robust to several alternative specifications** (adding individual and geographical characteristics, single-age cohort specific effects, individual fixed effects)
- **Placebo test**: reforms before 2014? No significant effect.
- Reform in July 2014 → **remove 2014**. Similar results.
- Heterogeneity: Nervous system scripts higher for men (but lower averages to start with).
- Not much expected on other household members

Next Steps

- Add people aged 33-34 in 2014
- Look further into the effect of the top coding (cf men may not be more affected?)
- Look further into intensive and extensive margins (are the extra scripts for those who already had scripts?)
- Triple difference with those of the same age
- ... to be discussed soon.

Acknowledgements Australian Bureau of Statistics 2011-2016,
Australian Census Longitudinal Dataset, (2011-2016). Detailed
Microdata, DataLab. Findings based on the use of ABS Microdata.

Appendix

Age groups targeted - Which years?

