Child Health and Parental Responses to an Unconditional Cash Transfer at Birth

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NBER Summer Institute
29 July 2022

Motivation

- Poverty in early childhood has large negative impacts on later life
- Cash transfers could potentially alleviate poverty, but accessing payments and navigating social safety net is not easy, take-up is not perfect for eligible people
- Giving cash transfers unconditionally can solve take-up issues but at large public costs
- Yet few exogenous sources of variation in cash alone (Currie and Almond, 2011)
  - new RCT Baby's First Years (Troller-Renfree et al., 2021)

Natural Experiments on Cash Transfers At Birth

- Earlier literature on maternal outcomes:
  - Maternal labor supply (González 2013; González and Trommlerova 2021)
  - fertility and fertility intentions (González 2013; Risse 2010)
  - Birth-shifting (Gans and Leigh 2009; Borra, González, Sevilla 2016, 2019)

- Recent evidence on children's outcomes
  - School achievement (Deutscher and Brunig 2017)
  - Siblings development and health (Gaitz and Schurer 2017)
  - Child health and health care utilization (Borra, Costa-Ramon, González, Sevilla 2021)

This Paper

- We study the introduction of the Australian Baby Bonus on child health care utilization, health status and parental behaviors
  - Universal access to high quality public health care sector
  - Little role of private health insurance in health care utilization
  - Little birth manipulation, so our estimates isolate the effect of the income transfer alone
- We exploit discontinuity in eligibility based on child birth date
  - before 1 July 2004 AU$840, from 1 July 2004 AU$3,000
- We focus on new outcomes and data to uncover behavioral mechanisms
  - Linked administrative data from South Australia – birth records, detailed hospital records (ER/inpatient), and social security records
  - Household survey data (in progress) – household expenditures
- Today: focus on effects from birth until age 1; effects up until age 5 in paper

table

Take-away

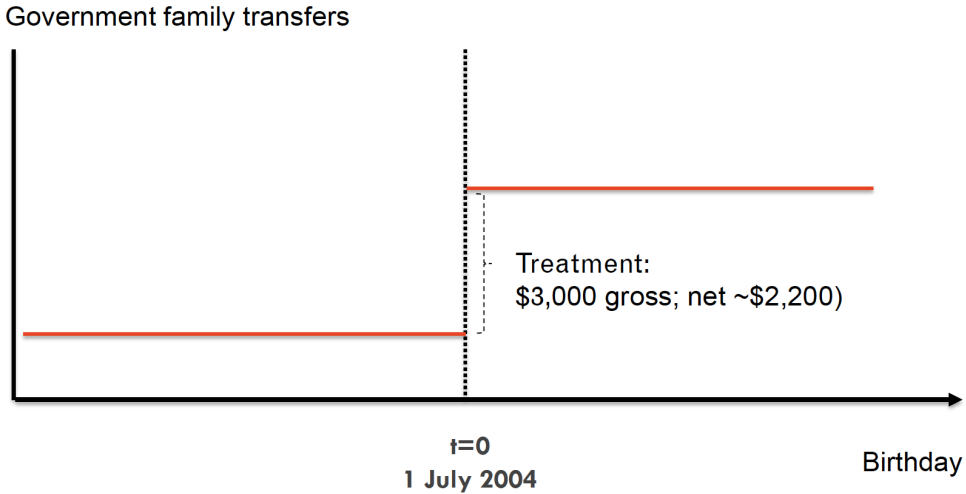
- Babies just eligible to the Baby Bonus have -9.8%SD health care utilization in first year of life
- Effects driven by fewer preventable, acute, and urgent hospital presentations
- Effects concentrated in respiratory problems and Potentially Preventable bronchiolitis
- We believe effects point to parental indirect investments in health

Institutional Background

The Australian Baby Bonus in Context

- A key family policy in Australia: replaced Maternity Allowance (AU$800) – no paid parental leave at the time
- Amount: before 1 July 2004 AU$840, from 1 July 2004 AU$3,000
- Official goal of the policy: to boost fertility by absorbing the financial costs associated with the birth of a child
- Announced on 11 May 2004 to be implemented on 1 July 2004 (7 weeks later).

Identifying Variation



The Australian Baby Bonus in Details

- Non-taxable lump-sum cash transfer - No change to permanent income
- Unconditional: for all families with a child born on/after 1 July 2004
- Magnitude?
  - 2.5 times the weekly median disposable household income
  - 5.3 times for families in the lowest income decile
- Later changes (not relevant for this study):
  - Change in amount: AU$4,000 (1 July 2006), AU$5,000 (1 July 2008), end of ABB (1 March 2014)
  - Eligibility conditions: means-tested (1 Jan 2009)
  - Other payments introduced: Paid Parental Leave (1 Jan 2011)

Data

The South Australian Early Childhood Data Project (ECDP)

- Comprehensive population-level administrative database on children and families in South Australia
- Links 30+ administrative data sources spanning every birth cohort over 1999-2013

Data used for this study:

- Birth register (1991-2016)
- South Australian Perinatal Statistics Collection (1991-2016)
- Integrated South Australian Activity Collection (July 2001-2014) - hospital inpatient records
- South Australian Emergency Department Data Collection (July 2003-2014) - ER records

Data coverage concerns

1. Private hospitals

here

   - 76 / 99 are public hospitals (we have ER/Inpatient data)
   - 23 / 99 are private hospitals
     → of which 5 share ER with a public hospital (we have ER data)
     → 18 remaining *may* have own ER (we have no data)
   - However, babies almost only use public hospital services (Government yearly statistics)

2. GP and other health services (e.g. outpatient, physio...)
   - However, our focus is on severe/acute problems – not substituable by GP services
   - Babies almost never private health insurance patients

Outcomes by Dataset

Outcome	ER	Inpatient
Any presentation	✓	✓
Presentation for severe/acute problem (triage nurse)	✓	✓
Admission to ward or ICU	✓	✓
Admission with overnight stay		✓
Any returning visit (triage nurse)	✓	
Any Potentially Preventable Pediatric Hospitalization	✓	✓
Any planned visit (triage nurse)		✓
Any visit with medical referral		✓
Any visit for elective intervention		✓

Note:

1. "Potentially preventable pediatric hospitalization"
   - Tool used by hospital services to measure access to/use of appropriate primary care
   - *preventable by parents' actions*
   - E.g. vaccine-preventable conditions, acute conditions and chronic conditions.
2. Health Care Utilization summative index

Empirical Strategy

What We Estimate

- We estimate this equation:

$$Y_i = \alpha + \beta \mathbb{1}\{\text{birth date} \geq 1 \text{ July } 2004\} + \gamma g(\text{birth date}) + \epsilon_i$$

  where
  - Y_i: child i's health outcome
  - $g(.)$: flexible function of birth date
  - ϵ_{ics1}: error term – clustered at day level

- Local linear estimation with robust bias-corrected inference methods (Calonico, Cattaneo and Titiunik, 2014, Calonico, Cattaneo and Farrell, 2018, 2020, Calonico et al., 2019).

- Sharp discontinuity: 0% receipt if born before cutoff, 94% if born after - because birth reported by midwife/obstetrician and claim at birth registration

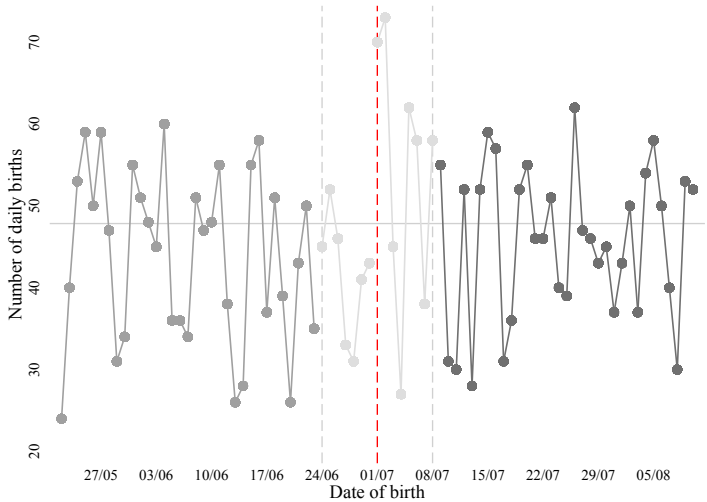
Validity of Regression Discontinuity Design

Our research design is valid if:

1. There is no manipulation in the running variable
   - No conception effect (because new policy announced 7 weeks before implementation)
   - No fewer abortions prior to 1 July 2004 here
   - Limited evidence of birth shifting

2. There is no evidence of significant differences in pre-treatment characteristics between control and treatment groups

Birth-Shifting



Birth-Shifting

1. Quantify birth-shifting by replicating Gans and Leigh (2009) in our dataset:
   - birth-shifting is highly concentrated in days immediately surrounding 1 July 2004
   - 49 births potentially shifted from days just before 1 July 2004 to just after
   - Magnitude?
     → 14% of all births expected in last week of June potentially shifted to first week of July
     → 1/6 maternity ward with 1 extra birth per day

2. Implement “donut” regression discontinuity design
   - Donuts of 1 to 15 days
   - “Best donut”: increasing donut size, until density test & balancing tests pass
   - 7-days donut is best, but results are robust throughout

7-Days Donut RDD: Local Polynomial Density Test

Table: Local Polynomial Density Test

Estimation Method	Est. Bandwidth Left	Est. Bandwidth Right	Observations Left	Observations Right	Density Test p-val.
Models with symmetric bandwidth:					
Restricted, linear	184	184	8,455	8,217	0.777
Restricted, 2nd order polynomial	361	361	17,019	16,940	0.069
Unrestricted, linear	106	106	4,678	4,613	0.308
Unrestricted, 2nd order polynomial	97	97	4,169	4,086	0.180
Models with asymmetric bandwidth:					
Unrestricted, linear	114	166	5,059	7,348	0.325
Unrestricted, 2nd order polynomial	73	117	2,990	5,114	0.156

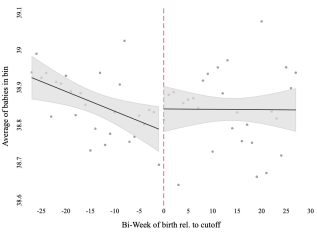
7-Days Donut RDD: Continuity of Pre-Determined Characteristics

Table: Pre-Determined Characteristics

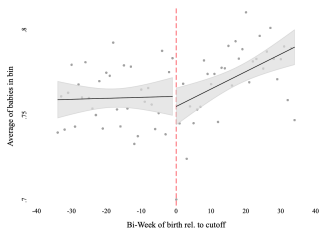
	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Child is Female	0.015	0.011	0.175	477	22,681	22,733	0.483
Birth in Private Hospital	0.012	0.013	0.334	387	18,366	18,187	0.341
No. of ante-natal visits	−0.056	0.09	0.535	325	14,058	13,840	10.682
Mother smoke	0.002	0.008	0.788	591	27,325	27,787	0.205
Mother age:							
35+	−0.005	0.008	0.509	565	26,620	26,846	0.180
40+	−0.004	0.004	0.288	475	22,566	22,635	0.031
Father occupation:							
High skilled	0.007	0.012	0.554	472	21,323	21,216	0.332
Low skilled	0.009	0.012	0.458	558	25,023	25,088	0.557
Mother marital status:							
Never Married	0.011	0.006	*0.077*	620	29,180	29,639	0.117
Married	−0.006	0.008	0.464	503	23,821	23,910	0.871
Single	−0.004	0.003	0.115	425	20,117	20,039	0.013
Mother race:							
Caucasian	0.001	0.006	0.915	509	24,082	24,150	0.908
Asian	0.003	0.004	0.531	571	26,895	27,117	0.046
Aboriginal or TSI	−0.004	0.005	0.346	471	22,369	22,411	0.045

7-Days Donut RDD: Birth Outcomes

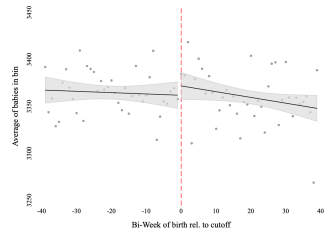
(a) Gestational age



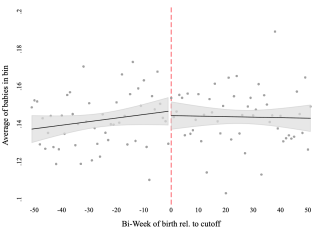
(b) Apgar score, 1 min



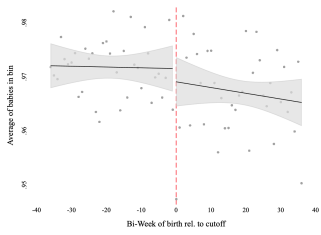
(c) Birth weight (in g)



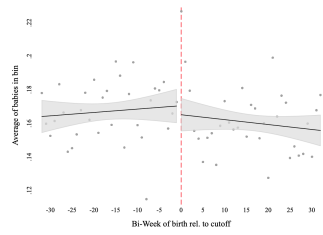
(d) Pre-term birth



(e) Apgar score, 5 min

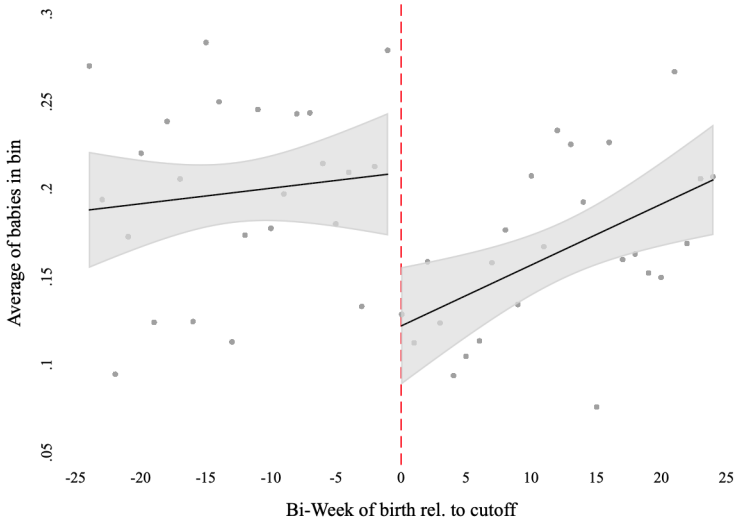


(f) NICU admission



Results

Health Care Utilization in the First Year of Life

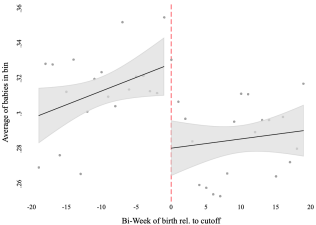


- -9.8%SD [p-val < 0.005]

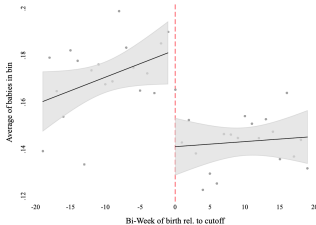
Detailed hospital presentations

Table

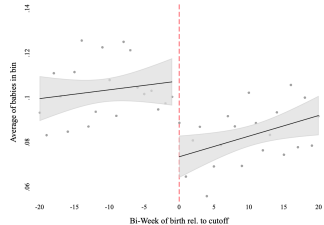
(a) Inpatient services visit



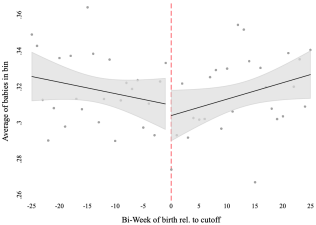
(b) Severe/acute problems



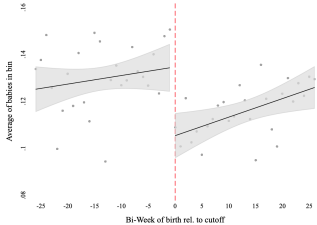
(c) Potentially Preventable (Inpatient)



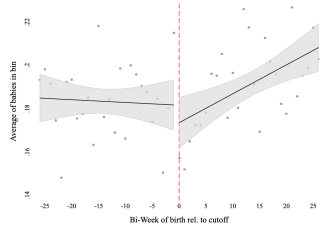
(d) ER Visit



(e) Admission to ER ward



(f) Potentially Preventable (ER)

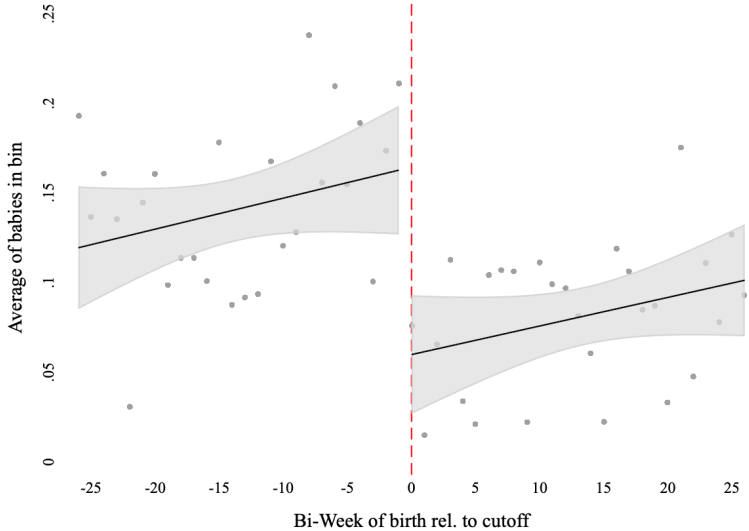


Detailed hospital presentations

Table: Presentations for Elective / Planned Care / Referrals

	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Planned visit	−0.001	0.004	0.882	289	13,535	13,442	0.025
Visit with med. referral	−0.010	0.010	0.308	198	9,108	8,874	0.094
Booked elective procedure	0.003	0.008	0.657	230	10,579	10,481	0.056

Respiratory Problems



Presenting Problems

Table: Presenting Problems (ICD-10-AM Chapters) Within the First Year of Life

	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Respiratory	−0.127	0.032	**0.000**	309	14,530	14,437	0.132
Infection	−0.007	0.033	0.835	286	13,353	13,278	0.110
Digestive	−0.008	0.032	0.810	356	16,833	16,749	0.078
Unspecified	−0.021	0.029	0.476	367	17,335	17,211	0.040
Eyes and ears	0.035	0.028	0.209	417	19,809	19,620	0.033
Skin	0.016	0.025	0.527	392	18,613	18,479	0.024
Injury/Trauma/Poisoning	0.019	0.027	0.481	347	16,366	16,260	0.010

Mechanisms

Parental Behavioral Responses

We think parents respond to the cash transfer by changing their behaviors at home. We look into this in 2 ways:

1. Potentially Preventable Pediatric Hospitalizations, detailed diagnoses

2. Household expenditures

Potentially Preventable Pediatric Hospitalizations

RD Plot

Table: Potentially Preventable Pediatric Hospitalizations Within the First Year of Life

	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Emergency Department:							
Bronchiolitis	−0.025	0.010	**0.012**	152	6,870	6,704	0.074
Respiratory infection	−0.013	0.010	0.223	121	5,357	5,280	0.046
Gastroenteritis	−0.024	0.013	*0.061*	94	4,047	3,969	0.043
Laryngitis	−0.002	0.006	0.759	127	5,674	5,622	0.010
Otitis media	−0.002	0.005	0.706	136	6,056	5,978	0.009
Inpatient services:							
Bronchiolitis	−0.013	0.008	0.105	160	7,272	7,126	0.057
Gastroenteritis	−0.007	0.005	0.141	208	9,507	9,292	0.020
Respiratory infection	−0.003	0.004	0.453	271	12,540	12,537	0.013
Laryngitis	0.000	0.002	0.849	221	10,151	9,965	0.004
Otitis media	0.001	0.001	0.369	274	12,657	12,665	0.003

Household expenditures (Work in Progress)

- We use Australia's longitudinal household survey (HILDA)
- We re-estimate our RD models on detailed categories of household expenditures
- Preliminary results:
  - Heating expenditures increase for treated babies
  - No significant differences in other expenditures

Robustness of Findings

Robustness of Findings

1. Choice of bandwidth
   - Data-driven bandwidths: CER, MSE, two-sided CER — here
   - 60, and 90 days bandwidths — here
2. Choice of donut — here
3. Fertility and abortions — here
4. Placebo cutoffs — here
5. Placebo policy years — here
6. Alternative running variable density test — here
7. Sample selection — here
8. Inference: Correction for multiple hypothesis testing — here

Conclusions

Conclusions

- We exploit the introduction of the Australian Baby Bonus to study the impact of cash at birth on health care utilization, health status and parental investments in health
- We analyze ER and inpatient hospital presentations using a regression discontinuity design
- We find -9.8%SD reduction in hospital care utilization before 1 year
- Effects come from a decline in presentations for preventable/severe/acute problems
  - mostly respiratory problems,
  - Potentially Preventable bronchiolitis, the #1 cause of hospital presentations for babies
- Cost-Benefit?
  - Up to 34% of immediate costs recouped within one year
  - Expect positive long-term impact of policy from prevention of respiratory diseases and chronic conditions

Thank you!

Appendix

Selective Abortions

Identification | Robustness

Table: Selective Abortions

	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Past Pregnancies:							
Any past pregnancy	−0.015	0.016	0.337	313	14,639	14,529	0.689
Number of life births	−0.016	0.027	0.567	419	19,937	19,783	0.916
Any miscarriage	−0.011	0.011	0.311	439	20,859	20,742	0.226
Abortions:							
Any abortion	−0.006	0.007	0.340	671	31,792	32,261	0.136
Number of abortions	−0.007	0.010	0.508	664	31,378	31,841	0.177
Days since last abortion	−1.276	31.730	0.968	392	8,892	8,511	1092.650

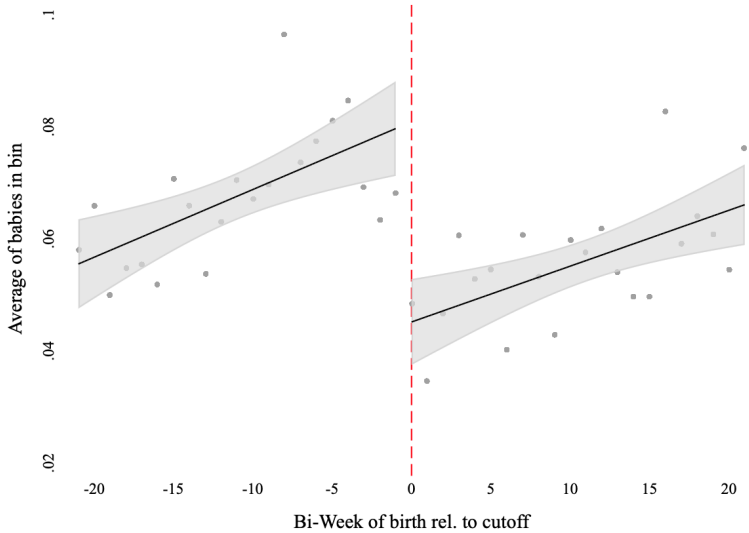
Detailed hospital presentations

Back

Table: Presentations for Severe / Acute / Preventable Problems

	Coef. Est.	Sd.err.	p-value	Bandwidth 1/2 length	N.Obs. Left	N.Obs. Right	Pre-cutoff Mean
Any hospital service	−0.013	0.021	0.532	175	8,022	7,855	0.451
Emergency department	−0.024	0.020	0.230	152	6,906	6,764	0.310
Inpatient service	−0.034	0.017	**0.040**	215	9,832	9,611	0.313
Urgent/severe presentations:							
Emergency Department:							
Acute/Severe Problem	−0.017	0.018	0.369	172	7,833	7,667	0.207
Admission to ward	−0.038	0.013	**0.004**	173	7,891	7,772	0.130
Returning visit	−0.010	0.005	*0.074*	147	6,619	6,497	0.017
Inpatient Services:							
Acute/Severe Problem	−0.037	0.013	**0.005**	207	9,483	9,235	0.172
Admission to ward	0.002	0.007	0.761	206	9,426	9,202	0.027
Overnight admission	−0.022	0.012	*0.074*	299	13,994	13,856	0.204
Potentially Preventable Pediatric Hospitalizations:							
Any PPPH	−0.033	0.019	*0.083*	153	6,906	6,764	0.218
Any PPPH at ED	−0.032	0.018	*0.071*	142	6,418	6,320	0.180
Any PPPH at inpatient services	−0.028	0.010	**0.005**	215	9,832	9,611	0.105

Potentially Preventable Bronchiolitis Table



Binomial Density Test

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Table: Binomial Density Test

Window 1/2 Length	Furthest Day Away from Cutoff	Observations		Density Test p-val.
		Left	Right	
1	8	35	55	0.05
...	...	..	...	...
100	107	4,748	4,651	0.32
		Share p-values $<$ 0.10		0.03
		Share p-values $<$ 0.05		0.01

Robustness to Choice of Bandwidth

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Table: Sensitivity of Main Results to Optimal Bandwidth Selection Method

Bandwidth Method:	CER-optimal, sym.		MSE-optimal, sym.		CER-optimal, asym.	
	Coef.	Sd.err.	Coef.	Sd.err.	Coef.	Sd.err.
Health Care Utilization Index [std.]	-0.098^{***}	0.034	-0.166^{***}	0.03	-0.099^{***}	0.033
Presentation at Inpatient services	-0.034^{**}	0.017	-0.044^{***}	0.015	-0.047^{***}	0.015
Urgent/severe presentations:						
Emergency Department:						
Admission to ward	-0.038^{***}	0.013	-0.038^{***}	0.012	-0.037^{***}	0.011
Returning visit	-0.010^{*}	0.005	-0.010^{**}	0.005	-0.005	0.004
Inpatient Services:						
Acute/Severe Problem	-0.037^{***}	0.013	-0.042^{***}	0.012	-0.041^{***}	0.012
Overnight admission	-0.022^{*}	0.012	-0.027^{**}	0.011	-0.034^{***}	0.011
Potentially Preventable Pediatric Hospitalization:						
Any PPPH	-0.033^{*}	0.019	-0.034^{**}	0.017	-0.025	0.016
Any PPPH at ED	-0.032^{*}	0.018	-0.030^{*}	0.016	-0.019	0.015
Any PPPH at inpatient services	-0.028^{***}	0.010	-0.034^{***}	0.009	-0.027^{***}	0.009

Smaller windows?

Back

Table: Sensitivity of Main Results to Narrower Bandwidth

Bandwidth Method:	CER-optimal		90 days		60 days	
	Coef.	Sd.err.	Coef.	Sd.err.	Coef.	Sd.err.
Health Care Utilization Index [std.]	−0.098***	0.034	−0.224**	0.097	−0.321**	0.136
Presentations at Inpatient services	−0.034**	0.017	−0.007	0.041	−0.035	0.059
Urgent/severe presentations:						
Emergency Department:						
Admission to ward	−0.038***	0.013	−0.070**	0.031	−0.101**	0.047
Returning visit	−0.010*	0.005	−0.016	0.014	−0.003	0.021
Inpatient Services:						
Acute/Severe Problem	−0.037***	0.013	−0.042	0.035	−0.050	0.053
Overnight admission	−0.022*	0.012	0.031	0.039	0.050	0.055
Potentially Preventable Pediatric Hospitalization:						
Any PPPH	−0.033*	0.019	−0.100**	0.041	−0.117**	0.036
Any PPPH at ED	−0.032*	0.018	−0.094**	0.039	−0.121**	0.053
Any PPPH at inpatient services	−0.028***	0.010	−0.022	0.026	−0.009	0.037

Robustness to Choice of Donut

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Table: Sensitivity of Main Results to Observations Near the Cutoff

Exclude births within:	5 days		8 days		12 days		15 days	
	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.
Health Care Utilization Index [std.]	−0.095***	0.036	−0.094***	0.035	−0.088**	0.034	−0.073**	0.037
Presentation at Inpatient services	−0.032*	0.017	−0.034**	0.017	−0.038**	0.017	−0.041**	0.018
Urgent/severe presentation:								
Emergency Department:								
Planned visit	−0.007	0.005	−0.012**	0.005	−0.013**	0.006	−0.009	0.006
Admission to ward	−0.035***	0.012	−0.037***	0.013	−0.036**	0.014	−0.027*	0.015
Inpatient Services:								
Emergency presentation	−0.032**	0.013	−0.037***	0.014	−0.039***	0.014	−0.036**	0.015
Overnight admission	−0.023*	0.012	−0.023*	0.013	−0.028**	0.013	−0.029**	0.013
Potentially Preventable Pediatric Hospitalization:								
Any PPPH	−0.029*	0.017	−0.027	0.019	−0.023	0.020	−0.005	0.020
Any PPPH at ED	−0.030*	0.016	−0.027	0.018	−0.021	0.018	−0.005	0.018
Any PPPH, inpatient services	−0.026***	0.010	−0.029***	0.010	−0.030***	0.011	−0.028**	0.012

Seasonalities? Placebo Cutoffs

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Table: Main Results and Placebo Cutoffs

	Asymptotic p-value	Randomization-based p-value
Health Care Utilization Index [std.]	0.004	0.022
Presentation at Inpatient services	0.040	0.696
Urgent/severe presentations:		
Emergency Department:		
Admission to ward	0.004	0.044
Returning visit	0.074	0.044
Inpatient Services:		
Severe/acute problem	0.005	0.099
Overnight admission	0.074	0.917
Potentially Preventable Pediatric Hospitalization		
Any PPPH	0.083	0.110
Any PPPH at ED	0.071	0.122
Any PPPH at inpatient services	0.005	0.265

Placebo Years

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Table: Health Care Utilization in Placebo-Policy Years (Inpatient Services only)

	Actual Effects		Placebo Pre-Policy Years Cutoffs			
	1 July 2004		1 July 2002		1 July 2003	
	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.
Presentation at Inpatient service	−0.034**	0.017	0.030	0.019	0.002	0.019
Urgent/severe presentation:						
Severe/acute problem	−0.037***	0.013	0.012	0.014	0.013	0.024
Admission to ward	0.002	0.007	−0.004	0.009	−0.001	0.007
Overnight admission	−0.022*	0.012	0.010	0.017	−0.015	0.020
Potentially Preventable Pediatric Hospitalization:						
Any PPPH at inpatient services	−0.028***	0.010	−0.018	0.011	0.035**	0.017
Planned visits or with medical referral:						
Planned visit	−0.001	0.004	0.002	0.006	0.006	0.008
Visit with med. referral	−0.010	0.010	0.012	0.014	−0.010	0.018
Booked elective procedure	0.003	0.008	0.018	0.012	−0.003	0.012

Sample selection: Health Care Utilization and Health

Back

Do hospital data tell us about health, beyond just health care utilization?

- Hospital records for children: 15% of all child consultations take place in hospitals in first 2 years of life
- Hospital records = precise diagnoses, precise health status
- ER records = focus on acute, severe problems that are not substitute to GP services
- Inpatient services = either come from ER (free of charge) or come in for elective care with referral (e.g. for pediatrician, AU$130 out-of-pocket because not fully covered by Medicare)

Potential concern: we could be missing demand for GP services and elective care out of the hospital.

Sample selection: Health Care Utilization and Health

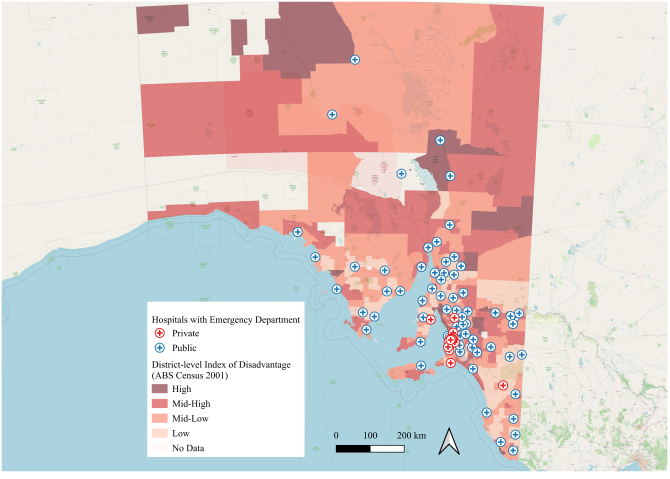
Back

How biased are our public hospital data?

- In 2004 in South Australia: 99 hospitals, 76 public and 23 private
- All private hospitals are in vicinity of public hospitals (5/23 share ER with public hospital)
- Young children are rarely treated in private hospitals in SA:
  - 15% aged 0-4 will be treated in a private hospital as a private patient overall in Australia.
  - Emergency care for children is almost exclusively provided in public hospitals.
  - in 2004 Private patient infants (age 0-4) made up around 1.5% of all hospital separations, 0% in private hospitals

Data Coverage

Data Robustness



Inference? Correction for Multiple Hypothesis Testing

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Table: Correction for Multiple Hypothesis Testing

P-Values	Original	Romano-Wolf	Holm
Health Care Utilization Index [std.]	**0.004**	**0.014**	**0.018**
Any presentation	0.532	0.935	1.000
Presentation at ER	0.230	0.617	0.839
Presentation at Inpatient service	**0.040**	0.123	*0.052*
Urgent/severe presentation:			
Emergency Department:			
Severe/acute problem	0.369	0.818	1.000
Admission to ward	**0.004**	**0.014**	**0.017**
Returning visit	*0.074*	0.246	0.230
Inpatient Services:			
Severe/acute problem	**0.005**	**0.016**	**0.015**
Admission to ward	0.761	0.980	1.000
Overnight admission	*0.074*	0.246	0.538
Potentially Preventable Pediatric Hospitalization:			
Any PPPH	*0.083*	0.246	0.180
Any PPPH at ED	*0.071*	0.242	0.288
Any PPPH at inpatient services	**0.005**	**0.016**	**0.016**

Inference? Correction for Multiple Hypothesis Testing

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Table: Robustness of Main Results to Multiple Hypothesis Testing

P-Values	Original	Romano-Wolf	Holm
Planned visits or with medical referral:			
Planned visit	0.882	0.980	0.875
Visit with med. referral	0.308	0.744	0.930
Booked elective procedure	0.657	0.965	1.000

Effects Age 1 to 5

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Table: Hospital Presentations at Ages 1 to 5

Child age:	1 to 2		2 to 3		3 to 4		4 to 5	
	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.
Health Care Utilization	−0.028	0.044	0.009	0.031	−0.029	0.033	0.004	0.028
Any presentation	−0.006	0.031	0.004	0.019	−0.022*	0.013	0.010	0.009
ER visit	−0.020	0.033	−0.001	0.021	−0.019	0.013	0.013	0.009
Presentation at Inpatient service	0.007	0.011	0.001	0.008	−0.005	0.006	−0.002	0.006
Urgent/severe presentation:								
Emergency Department:								
Severe/Acute problem	−0.030	0.022	−0.001	0.015	−0.004	0.009	0.007	0.006
Admission to ward	−0.007	0.013	0.004	0.009	−0.008	0.007	−0.001	0.006
Returning visit	−0.007	0.005	0.008**	0.004	0.001	0.002	−0.001	0.001
Inpatient Services:								
Severe/Acute problem	0.002	0.011	0.000	0.008	−0.007	0.005	−0.002	0.005
Admission to ward	−0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
Overnight admission	−0.001	0.005	−0.001	0.004	0.001	0.003	0.001	0.002
Potentially Preventable Pediatric Hospitalization:								
Any PPPH	−0.017	0.022	0.014	0.016	−0.002	0.010	−0.002	0.008
Any PPPH at ED	−0.026	0.022	0.013	0.014	0.009	0.010	−0.003	0.008
Any PPPH, inpatient services	−0.002	0.012	−0.005	0.007	−0.009**	0.005	−0.001	0.004

Effects Age 1 to 5

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Table: Planned / Elective visits or with referral at Ages 1 to 5

Child age:	1 to 2		2 to 3		3 to 4		4 to 5	
	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.	Coef. Est.	Sd.err.
Planned/Elective visits or with referral:								
Planned visit	0.017***	0.007	−0.001	0.004	0.000	0.004	0.002	0.003
Visit with med. referral	0.013	0.008	0.003	0.005	0.002	0.005	0.000	0.004
Booked elective procedure	0.016**	0.007	0.002	0.004	0.002	0.005	0.000	0.004