



## Impact of the Immunisation Policies 'No Jab, No Pay' and 'No Jab, No Play' on Immunisation Status and Services at the Royal Children's Hospital, Melbourne

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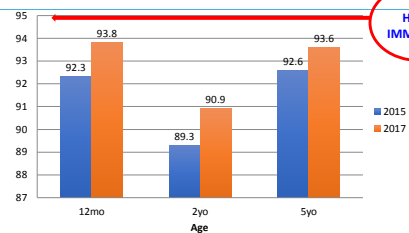


From 1<sup>st</sup> January 2016

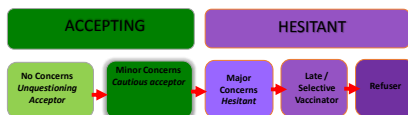
1. Fully vaccinated for age
2. On a recognised vaccination catch up schedule
3. Have a valid medical exemption



Australian Immunisation Register: Proportion Fully Immunised 2015 vs 2017



## Vaccine Hesitancy is on a Spectrum <sup>1</sup>



<sup>1</sup> Banks AL, et al. *Pediatrics* 2006  
<sup>2</sup> Lusak et al. *BMC Pediatrics* 2012  
<sup>3</sup> Chow et al. *Aust Fam Physician* 2017  
<sup>4</sup> Costa-Pinto et al. *JCP* 2017  
<sup>5</sup> Danchin et al. *Vaccine* 2017



## Objectives

### Primary:

1. Proportion attending RCH Immunisation services **motivated by the 'No Jab' policies** and **seeking a medical exemption**

### Secondary:

1. Assess **change in attitude to vaccination** after the policies, by degree of vaccine hesitancy
2. Assess **vaccine uptake** at baseline, 1 and 7 months post attendance
3. Impact of policies on **types of referrals to the SIC** and attendances to the DIC
4. Parents' **Opinion of 'No Jab' policies**



## Hypothesis

- Unlikely to change opinion or vaccine uptake for highly hesitant/refusing families
  - Reminder for late or complacent families
- Most affected by policies;
  - Low SES / logistical barriers
- Large number of referrals of;
  - Highly vaccine hesitant families
  - Families seeking non-valid medical exemption

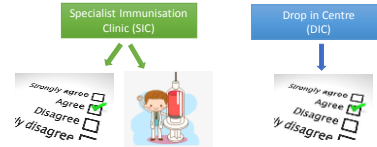


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## Methods

### 3 Surveys

October 2016-May 2017



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## Methods Stream 1 - SIC

- Parent surveys mailed prior to appointment;
  - Collected on day of appointment OR
  - Completed while waiting for appointment OR
  - Completed after appointment and mailed in
- Physician surveys completed in SIC via RedCap



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## Methods Stream 2 - DIC



- Parents/Guardians attending RCH Immunisation Drop in Centre (DIC)
- Surveys completed on iPads using RedCap



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## Methods

- Target sample size 500 patients
- All parents/guardians approached
- Consent for Australian Immunisation Register (AIR) access
  - Excluded special risk
  - Alternate schedules
  - Not registered
- Logistic regression: vaccine uptake 7 months post attendance, adjusting for vaccine status and age at baseline, and SEIFA tertile.
- Review of all referrals to SIC and all attendances to DIC



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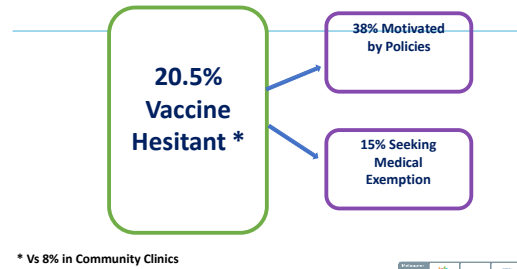
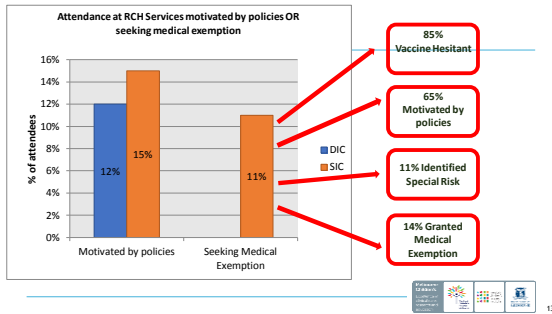
Table 1: Demographic details

Characteristics	n(%)
Total sample size	607
Age of child	Median age (IQR) in years 1.61 (0.5-5)
Person completing survey, relationship to child	418 (77.4)
Mother	95 (17.6)
Both parents	20 (3.7)
Other	7 (1.3)
Age of parent/guardian	14 (2.6)
15-24	207 (38.3)
25-34	252 (46.7)
35-44	58 (10.7)
45-54	8 (1.7)
Level of education of parent/guardian	33 (6.1)
Less than Year 12	60 (11.1)
Year 12	89 (16.5)
TAFE/Apprenticeship	357 (66.2)
University Degree	76 (14.2)
Socioeconomic Index of Advantage + Disadvantage (SEIFA)	233 (43.6)
Low	225 (42.1)
Middle	
High	

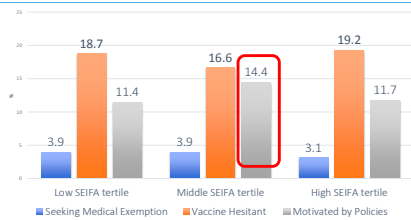
214 SIC  
393 DIC



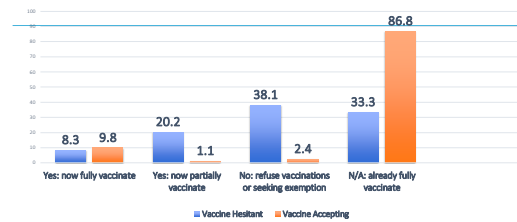
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SEIFA tertile vs Seeking Exemption, Vaccine Hesitancy and Motivation to Attend Due to Policies

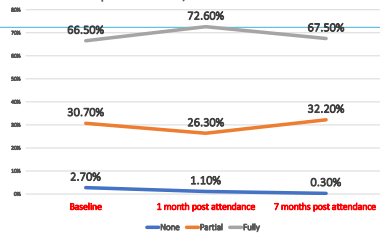


At baseline: have the policies changed your approach to vaccination?



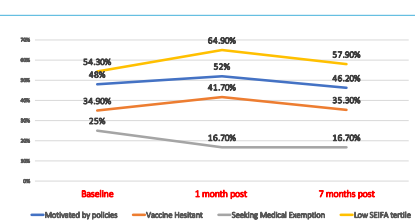
For vaccine hesitant parents:  
 8% decided to fully vaccinate  
 38% policy made no difference, won't vaccinate

Vaccine Uptake at Baseline, 1 and 7 months Post Attendance



n=292  
 Median age at baseline = 0.9yrs (IQR 0.4-1.8)

Fully Vaccinated Status vs Policy Motivation, VH, Seeking Exemption or Low SEIFA Tertile



n=292  
 Median age at baseline = 0.9yrs (IQR 0.4-1.8)

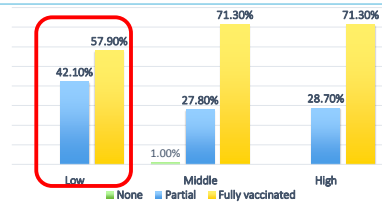
## Fully Vaccinated At 7 Months

	% fully vaccinated	Difference	OR	95% CI
<b>Vaccine Hesitancy</b>				
- Hesitant	54%	19%	0.26	0.1-0.7
- Accepting	73%			
<b>Seeking Medical Exemption</b>				
- Yes	40%	30%	0.13	0.2-0.9
- No	70%			
<b>Motivated by Policies</b>				
- Yes	64%	4%	0.63	0.2-2
- No	70%			



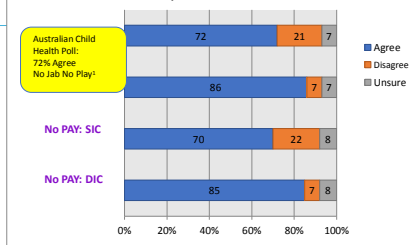
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Vaccine Status at 7 months post attendance vs SEIFA tertile



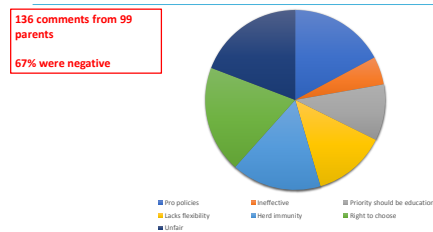
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Opinion of Policies



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Thematic analysis of comments from parents, DIC and SIC



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## Strengths

- No other published evaluation of the impact of policies on services, parents seeking medical exemptions or vaccine uptake
- Good sample size and high completion rates
- Insight into inequity of policies and unintended negative consequences



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## Limitations

- Selection bias (particularly DIC)
- Low SES poorly represented in our cohort
- High proportion medically complex patients
- AIR data incomplete – refusers not on AIR!



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## Key Findings

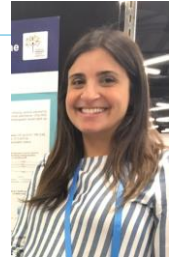
- Highly vaccine hesitant cohort 20.5%
- **12-15% of parents** were motivated to attend RCH immunisation services by the policies, especially VH parents (38%)
- VH parents and those seeking medical exemption were **less likely to be fully vaccinated at 7 months post attendance**
- Policy motivation **not associated** with vaccine uptake
- High rates of partial vaccination in low SEIFA group, suggestive of practical barriers to vaccination as well as acceptance issues



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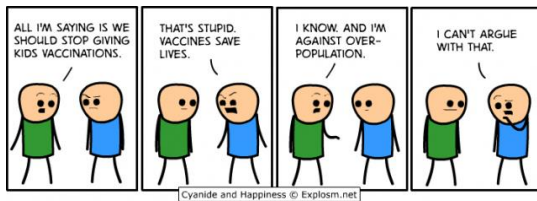
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## Thank you



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