



Antenatal vaccination in Canberra, Australia

Have we reached a ceiling?

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Outline

- Antenatal vaccines in the Australian context
- Methods
- Results
- Implications for public health

Introduction - Influenza

Vaccines in Australia

Commonwealth

State

Private

- Influenza
- Effectiveness
- Safety



Picture credit: Heather Hazzan, *SELF Magazine*

Introduction - Pertussis

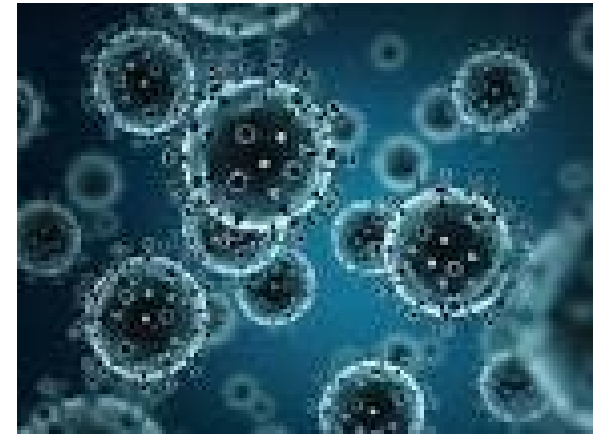
- Pertussis
- Effectiveness
- Safety

Recommended gestation of
administration

28 – 32 weeks



20 – 32 weeks



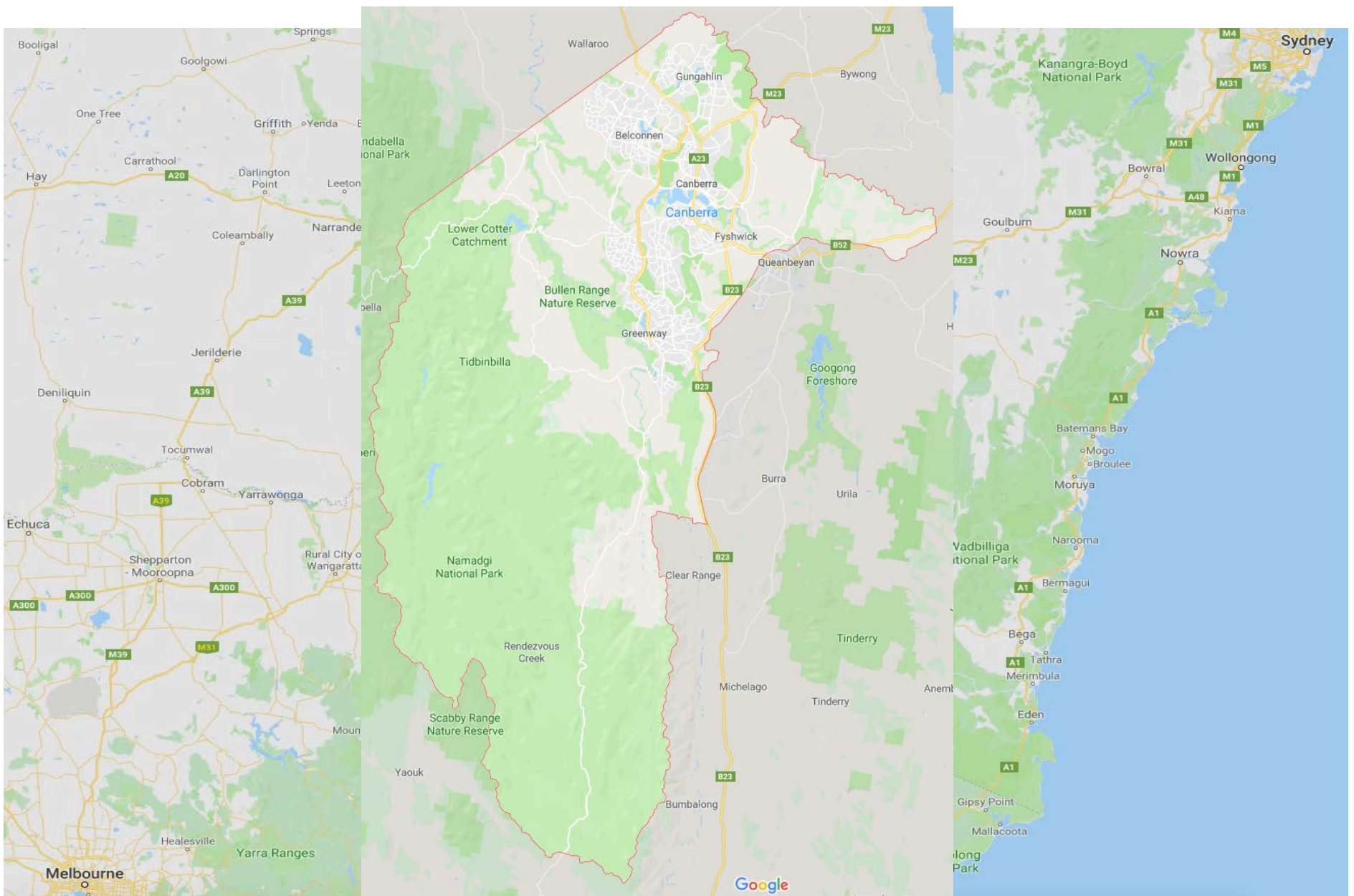
Aims

Primary Aim

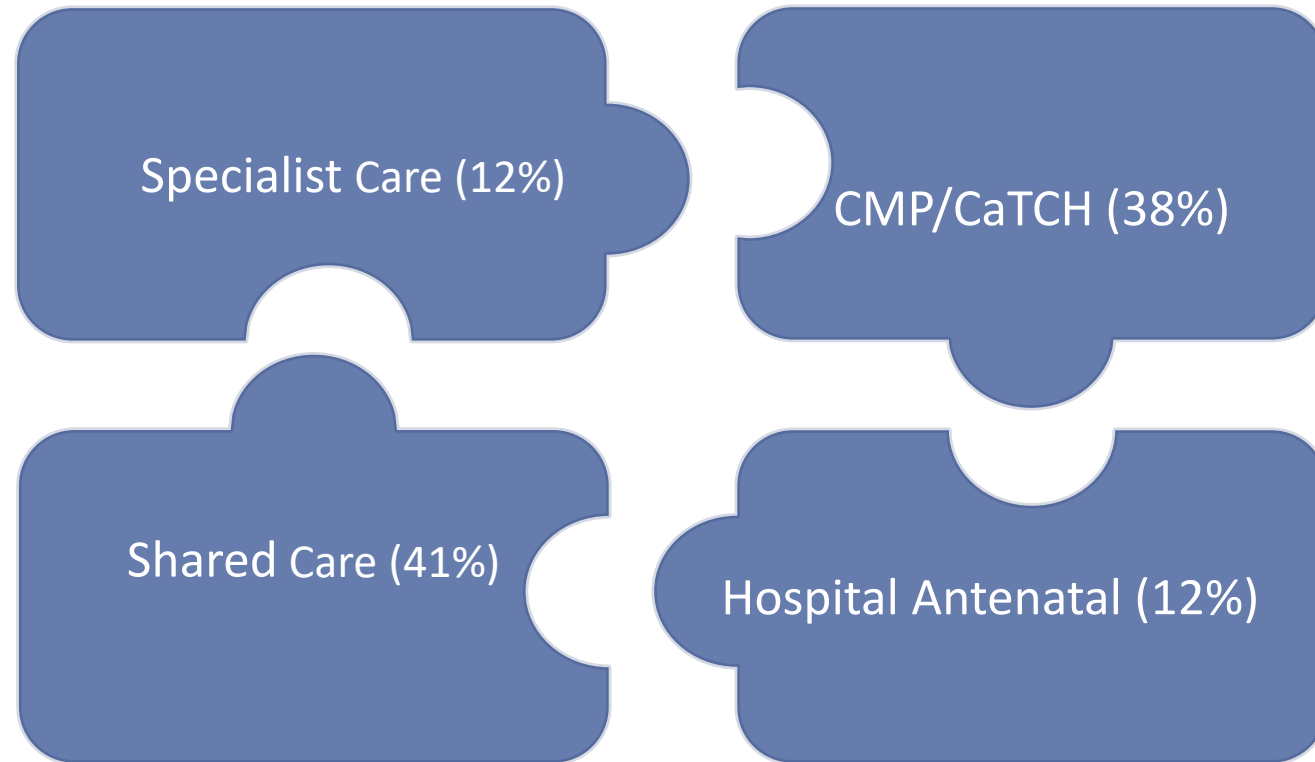
Estimate antenatal vaccine uptake in the ACT

Secondary Aim

Identify key determinants of antenatal vaccine uptake in the ACT



Models of Antenatal Care



Methods

Design: Cross sectional survey

Ethics: ACT Health (2018/LRE/00147) ANU (2018/586)

Analysis: Descriptive & Multivariate logistic regression model

Inclusion criteria

- All women who gave birth at The Canberra Hospital (TCH) between 1 October 2018 – 31 March 2019

Exclusion criteria

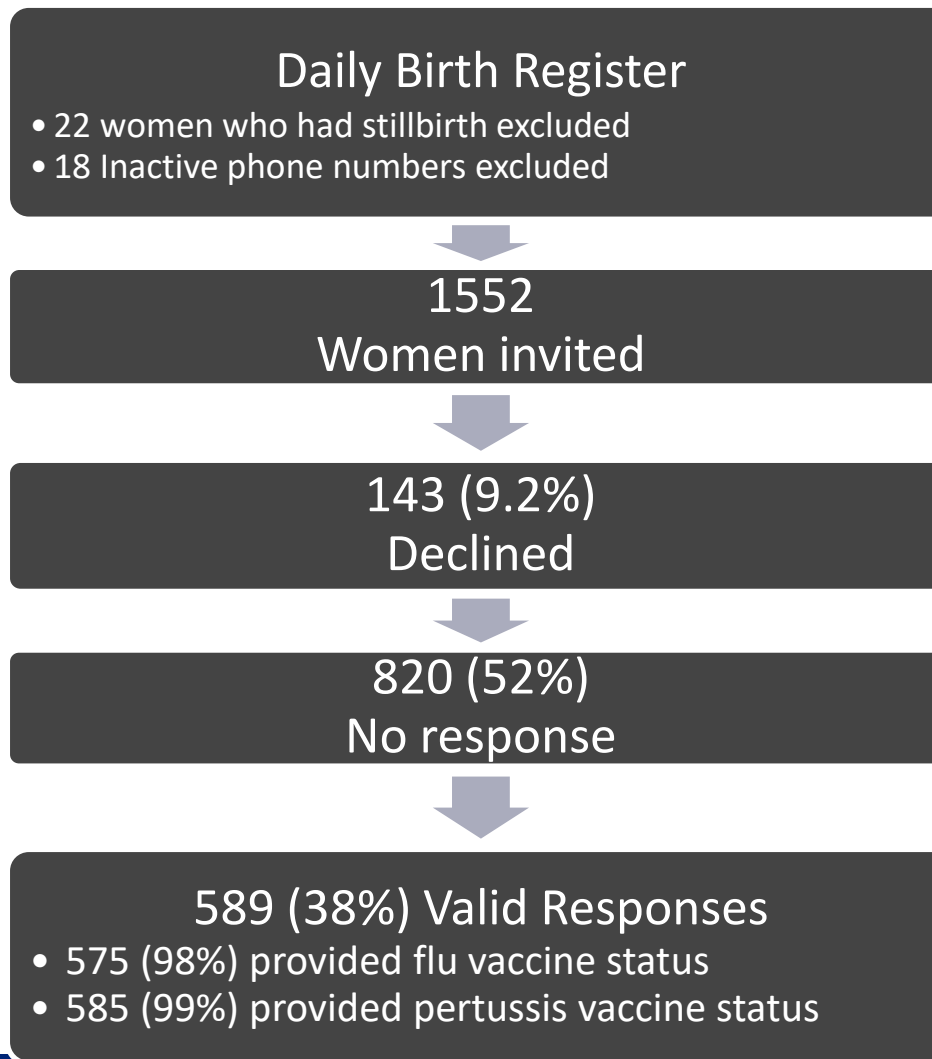
- Women who had a stillbirth and uncontactable

Study Invitation

- Women grouped by fortnight of birth
- Invited by text message, 4 weeks after birth

The screenshot shows a mobile survey interface. At the top right is an 'Exit' button. Below it is a header image with a calendar icon showing '25' and the text 'ACT Health: Whooping cough and flu vaccination in pregnancy study'. The main question is '* 1. Do you consent to take part in this study?' with radio buttons for 'Yes' and 'No'. Below the question is a text input field with the instruction 'If you clicked No please enter your mobile number to ensure you do not receive any further text messages'. A progress bar shows 21% completion. At the bottom are 'Prev' and 'Next' buttons.

Results



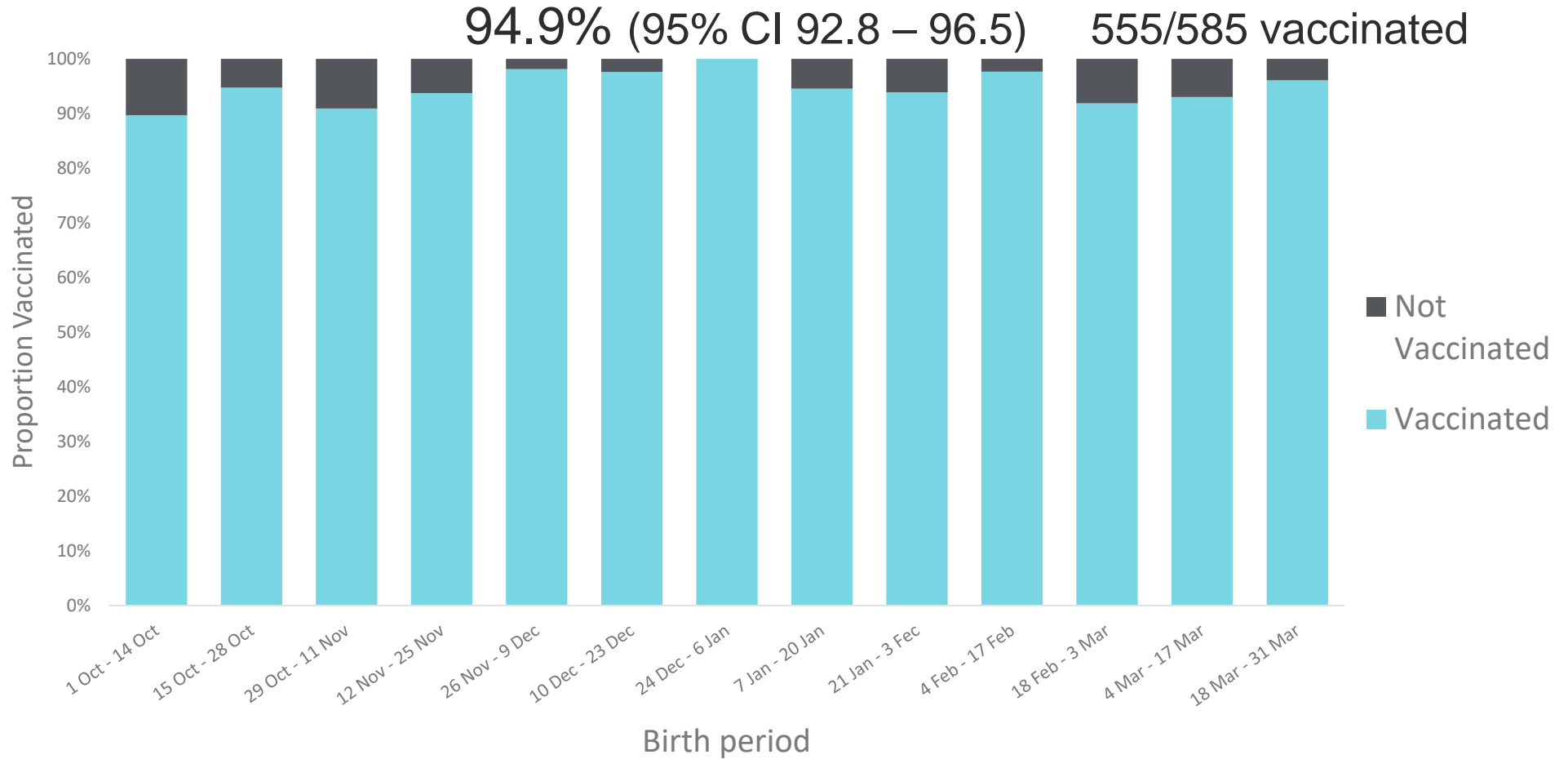
Source Population

		Responder		Non-responder		<i>p</i>
		n	%	n	%	
Age Category	16-24 years	34	6	114	12	
	25-29 years	128	22	269	28	
	30-34 years	243	41	351	36	
	35-39 years	131	22	189	20	
	40+ years	53	9	40	4	
	Total		589		963	
Indigenous Status	Indigenous	14	2	33	3	
	non-Indigenous	538	96	904	94	
	not stated	11	2	26	3	
	Total	563		963		<i>p</i> = 0.095
Country of Birth	Australia	395	67	573	60	
	non-Australia	194	33	390	41	
	Total	589		963		<i>p</i> = 0.003

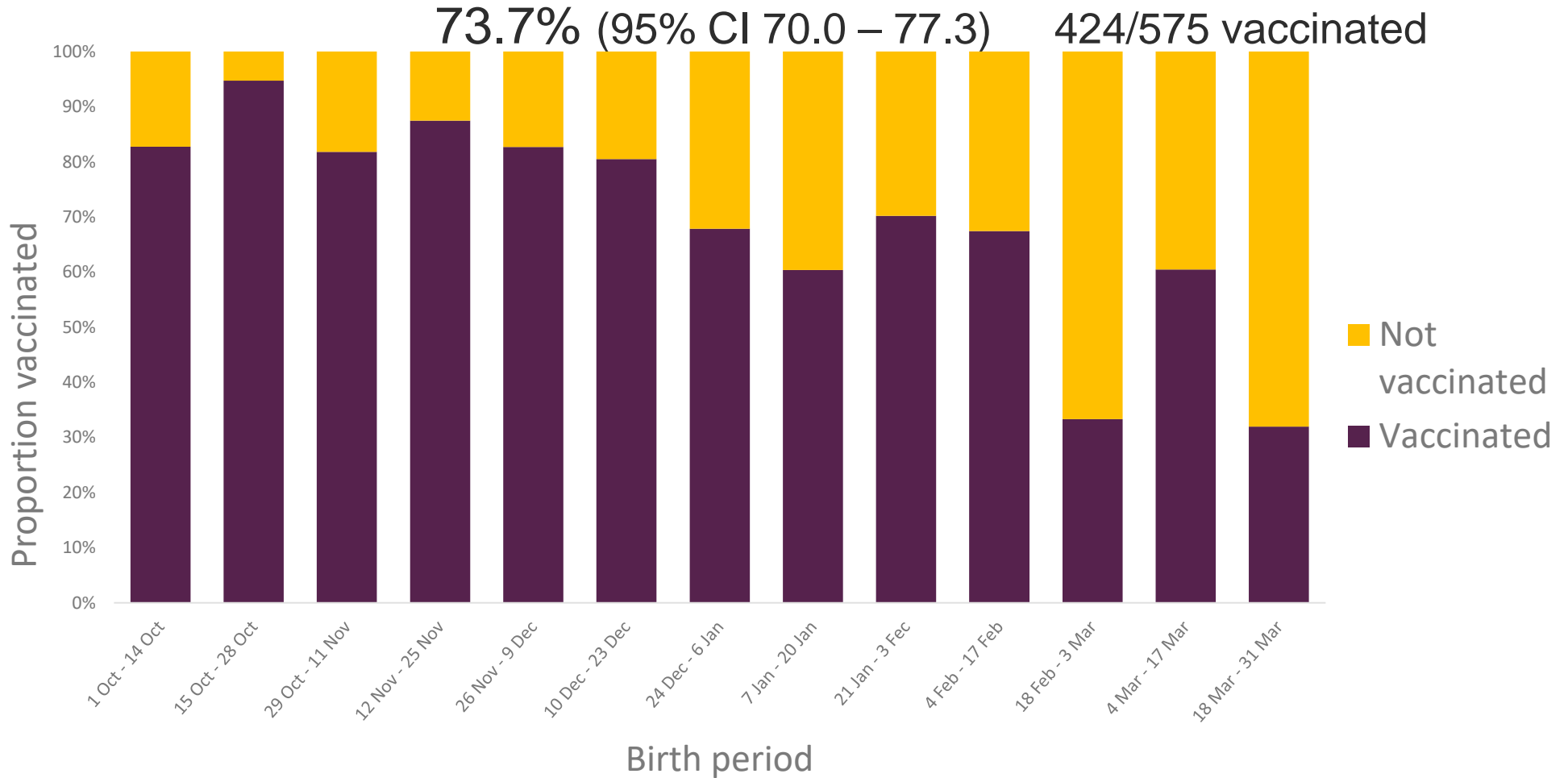
Responders

		n	%
Household Income	<\$50,000	49	9
	\$50,000 - \$100,000	120	23
	>\$100,000 - \$150,000	132	25
	>\$150,000	167	31
	Rather not say	63	12
Education	Primary school	6	1
	High school	81	15
	TAFE, trade, vocational	120	23
	Undergraduate	167	32
	Postgraduate	156	29
Birth gestation	≥38 weeks	467	87
	34 – 37 weeks	52	10
	38 – 33 weeks	14	3
	<28 weeks	2	0.4

Antenatal vaccine uptake - Pertussis



Antenatal vaccine uptake - Influenza



Association between: Healthcare provider recommendation and vaccine uptake

Pertussis	Vaccine Uptake
Recommended	96%
Not recommended	73%
aOR 10.5; 95% CI 3.7 – 30.0 p < 0.001	

Influenza	Vaccine Uptake
Recommended	79%
Not recommended	33%
aOR 7.9; 95% CI 4.9 – 12.7 p < 0.001	

Other points of note

Timing of Vaccination

88% of those receiving both vaccines received them in different trimesters from different providers.

Access & Affordability

Higher income associated with increased influenza vaccination

OR 1.6 95% CI 1.07-2.41 $p=0.023$

Higher income associated with workplace influenza vaccinations

OR 7.7 95% CI 1.33-44.96 $p=0.023$

Other points of note

Timing of Vaccination

Association between first child and influenza vaccine uptake

aOR 1.85 (1.15-2.98) $p = 0.011$

Limitations

- Self-selection bias
- Self-reporting bias



Implications for practice

1. Supports existing evidence regarding importance of healthcare recommendation
2. Appropriate, timely method of routine documentation at time of administration
3. Strategies to encourage dual vaccination

Influenza Vaccine



Pertussis Vaccine



Picture credit: Heather Hazzan, *SELF Magazine*

Take home points

- Very high self-reports of antenatal pertussis vaccine uptake
- Encourage recommendation and administration of flu vaccine at the same time as pertussis vaccine.



**THANK
YOU**
for
LISTENING
ANY QUESTIONS?

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