

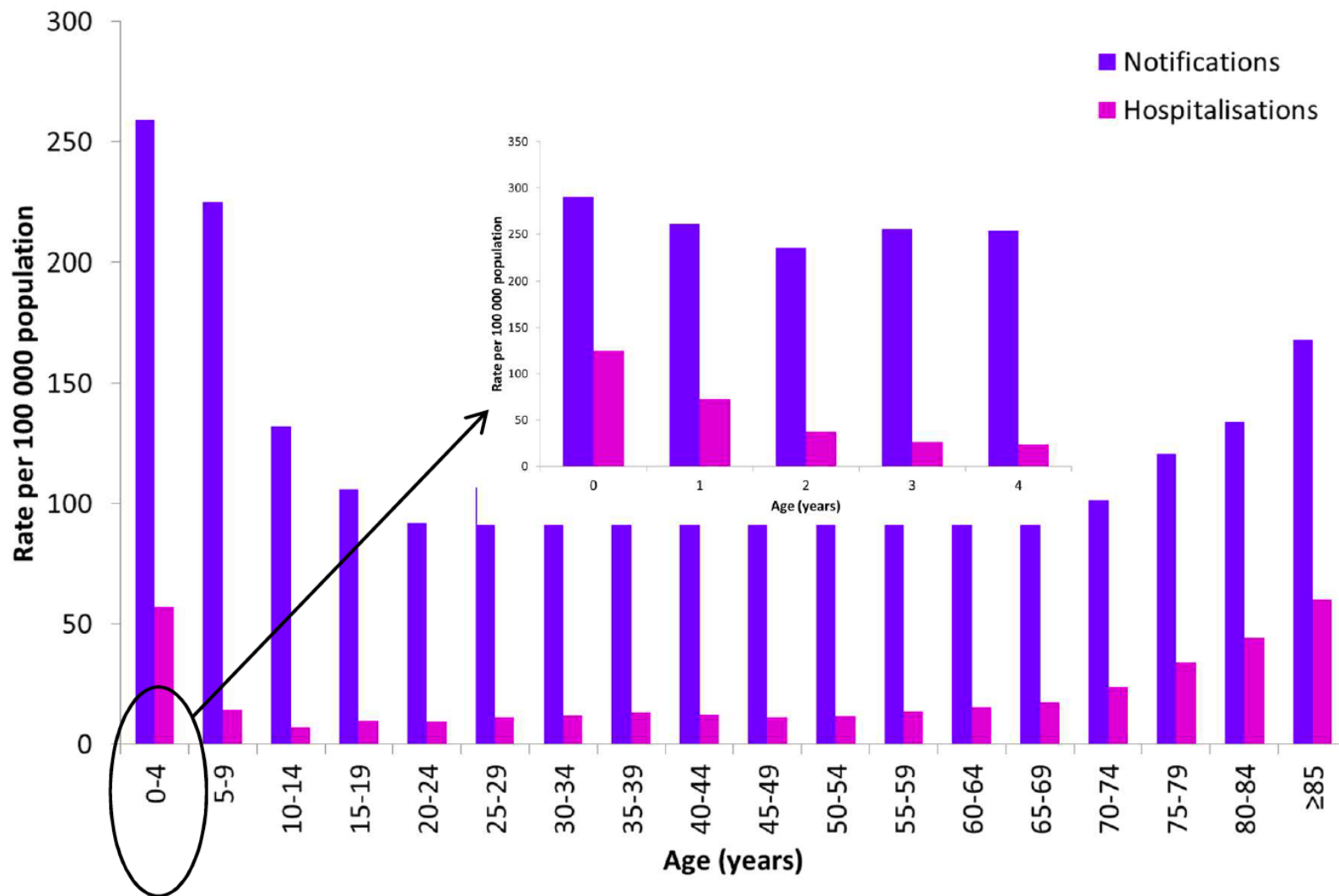
Seasonal influenza vaccination and coverage in Australia

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Average annual influenza notification and hospitalization rates in Australia (2010-2013)



Availability of influenza vaccines in Australia

- Only quadrivalent influenza vaccine (QIV) formulations are available through the National Immunisation Program in Australia in 2017
- Age restrictions apply according to vaccine brand

Registered age group	Vaccine			
	FluQuadri Junior 0.25 ml (Sanofi Pasteur)	FluQuadri 0.5 ml (Sanofi Pasteur)	Fluarix Tetra 0.5 ml (GSK)	Afluria Quad 0.5 ml (Seqirus)
< 6 m	No			
6-35 m (<3 y)	✓	No	No	No
≥3 y to <9 y	No	✓	✓	No
≥9 y	No	✓	✓	✓

Individuals eligible for free influenza vaccine under the National Immunisation Program

- QIVs are funded on the National Immunisation Program (NIP) in 2017 for the following groups:
 - Aboriginal or Torres Strait Islander children aged 6 m to <5 years
 - Aboriginal or Torres Strait Islander children aged >15 years
 - All persons aged ≥ 65 years
 - All persons aged >6 mo who have certain medical conditions which increase the risk of influenza disease complications
 - Pregnant women (during any stage of pregnancy)

Medical conditions associated with increased risk of complications from influenza



Category	Conditions
Cardiac disease	Cyanotic congenital heart disease, congestive heart failure, coronary artery disease
Chronic respiratory conditions	Severe asthma, cystic fibrosis, bronchiectasis, suppurative lung disease, COPD, chronic emphysema
Chronic neurological conditions	Hereditary and degenerative CNS diseases, seizure disorders, spinal cord injuries, neuromuscular disorders
Immunocompromising conditions	Immunocompromised due to disease or treatment, asplenia or splenic dysfunction, HIV infection
Diabetes or other metabolic disorders	Type 1 or 2 diabetes, chronic metabolic disorders
Renal disease	Chronic renal failure
Haematological disorders	Haemoglobinopathies
Long-term aspirin therapy in children aged 6 m to 10 y	Increased risk of Reye syndrome following influenza infection

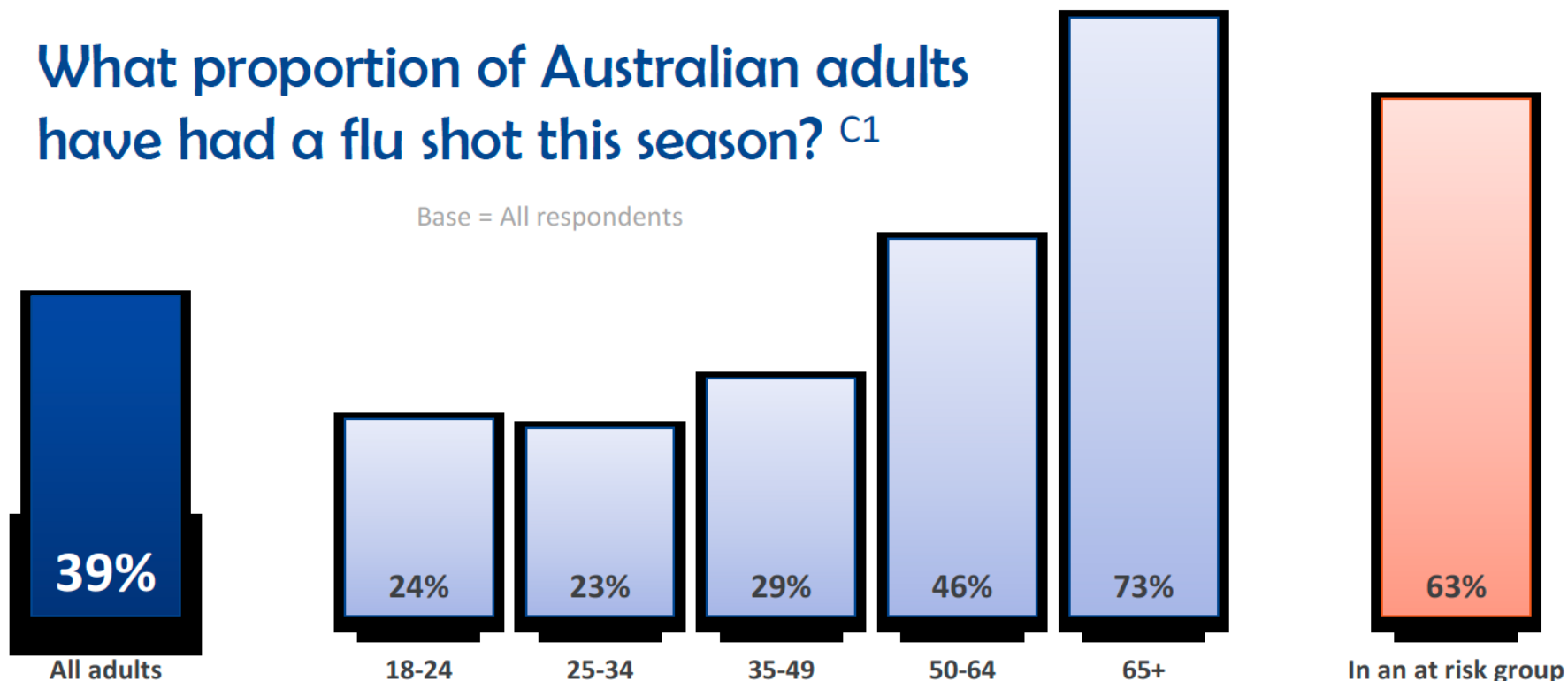
Individuals for whom vaccination is strongly recommended but who are not eligible for free influenza vaccine under the NIP

- Groups who are increased risk of influenza and its complications.
 - Aboriginal or Torres Strait Islander children aged 5-15 years
 - Persons with Down syndrome
 - Persons with class III obesity ($BMI \geq 40 \text{ kg/m}^2$)
 - Persons with chronic liver disease
 - Children aged 6 mo to < 5 years of age
 - Residents of aged care and long term residential facilities
 - Persons who may transmit influenza to children or adults at increased risk of influenza complications (eg healthcare workers)
 - Homeless people
 - Persons involved in the commercial poultry or pork industry or in culling poultry or pigs during periods of confirmed avian or swine influenza activity
 - Persons providing essential services
 - Persons traveling during influenza season, especially if it is known before travel that influenza is circulating in the destination region.

Newspoll Omnibus telephone survey of 1200 Australian adults

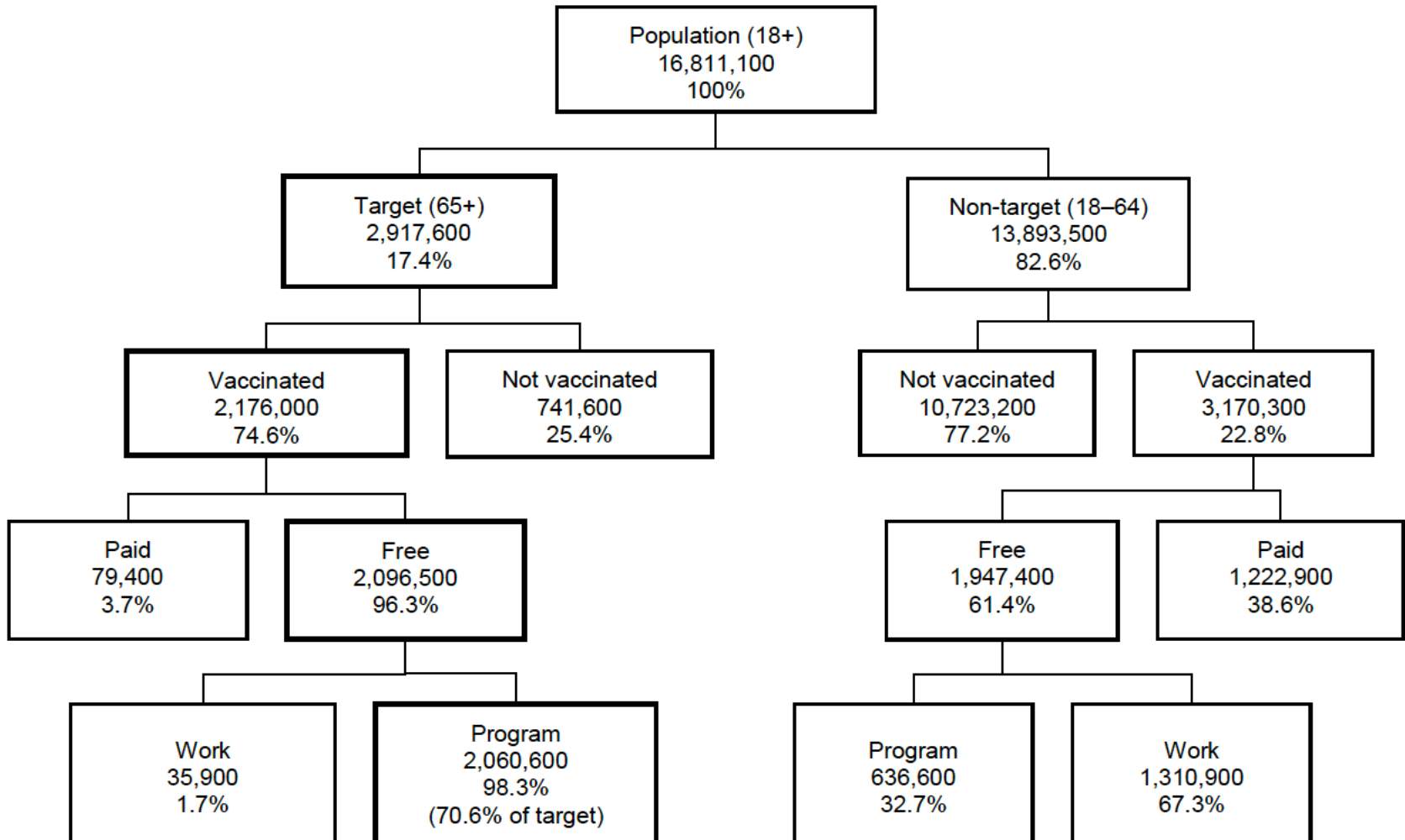
What proportion of Australian adults have had a flu shot this season? ^{C1}

Base = All respondents



An estimated 75% of older (65+) Australians were vaccinated against influenza in 2009

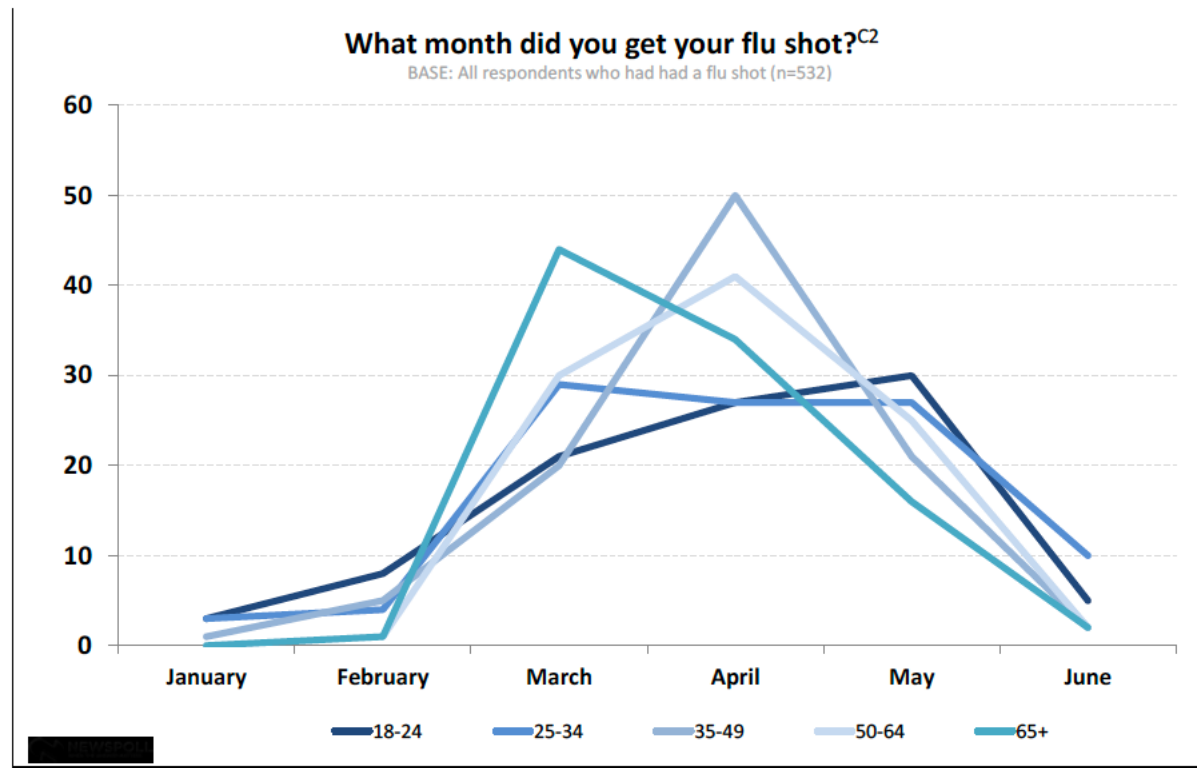
Computer assisted telephone interviews of 10,231 Australian adults



What about people younger than 65 y?

- 22.8% of persons aged 18-64 y were vaccinated against seasonal influenza
 - Substantial variation across the states and territories (20.8% to 33.4%)
 - 4.6% used program-funded vaccine
- >25% of all Australians aged >18 y reported a medical condition that predisposed them to severe influenza
 - Of these, 53.4% were vaccinated in 2009
 - But the vaccination rate for those at risk but aged 18-64 y was 36.2%
- Despite widespread dissemination of information, vaccine coverage in other NHMRC recommended groups was low
 - Health care provider, residential care worker, child care worker: 42.5%
 - Living in a HH with someone aged <65 y suffering from chronic conditions: 27.2%
 - Pregnant any time since May 2009: 12.7%
 - Persons of Aboriginal/Torres Strait Islander origin: 27.5%

Older Australians (65+) were most likely to get their vaccination early in the season

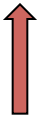
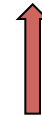
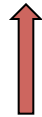


A majority of Australians received their vaccination through their doctor or at a General Practice clinic

Where did you get your flu shot? ^{C3}	Total	In an at risk group	18-34	35-49	50-64	65+
GP / GP Clinic	69%	83%	54%	42%	73%	89%
At work	21%	9%	25%	48%	21%	3%
Somewhere else	10%	8%	21%	10%	6%	8%
<i>Sample size</i>	532	315	72	97	120	243

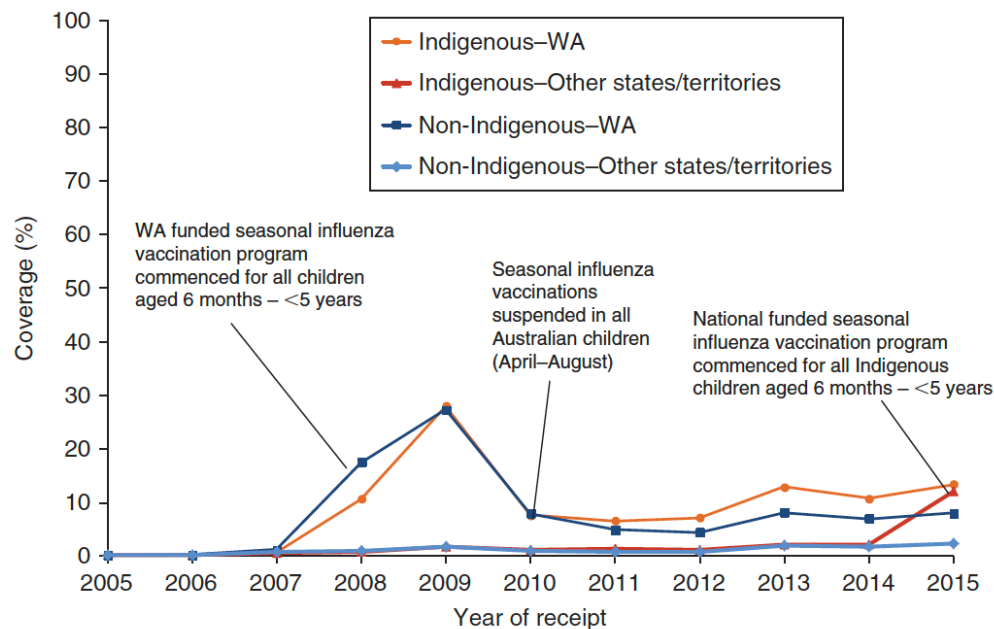
Vaccination coverage in influenza negative controls in sentinel surveillance networks, as a proxy for vaccine coverage: 2016

	Pooled		ASPREN		SPNWA		VicSPIN	
	Cases	Controls	Cases	Controls	Cases	Controls	Cases	Controls
Total	554	1,162	243	538	182	459	129	165
0-<18	142	189	58	86	61	87	23	16
18-<65	357	813	151	381	109	294	97	138
≥65	55	160	34	71	12	78	9	11
Vaccinated	128 (23)	391 (34)	57 (23)	193 (36)	35 (19)	140 (31)	36 (28)	58 (35)



Seasonal Influenza Vaccine coverage in children aged 6 m to < 5 y (2005-2015)

- Coverage in WA increased to ~28% with a funded program for influenza vaccine for all children < 6m to 5 y of age
- With a national funded program for indigenous children in 2015, coverage increased to 12.3% vs. 2.9% in non-indigenous children
- Substantial variation between jurisdictions:
 - In indigenous children: 2.4% in Victoria to 55.8% in the NT
 - In non-indigenous children: 1.9% in the NT to 8% in WA



Summary

- We do not have much data in real time
- There is a significant variability across different States and Territories because jurisdictions have their own programs
- Vaccine coverage in the 65+ age group is good
- Working age adults are covered by employers more than through the national program
- The national program is closing some of the gaps by focusing on specific groups, e.g. indigenous children
- The National Immunisation Program is regularly reviewed and updated

Thank you!

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