

AUSTRALIAN CHILDHOOD IMMUNISATION COVERAGE, 1 JULY 2015 AND 30 JUNE 2016 COHORT, ASSESSED AS AT 30 SEPTEMBER 2016

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Introduction

The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS) provides commentary on the trends in Australian Immunisation Register (AIR) data. For further information please contact NCIRS at: telephone +61 2 9845 1423, email: alexandra.hendry@health.nsw.gov.au

Tables 1, 2 and 3 provide the latest rolling annualised quarterly report on childhood immunisation coverage from the AIR.

The data show the percentage of all children 'fully immunised' at 12 months, 24 months and 60 months of age, for four 3-month birth cohorts of children assessed at the stated ages between 1 July 2015 and 30 June 2016 using AIR data up to 30 September 2016. 'Fully immunised' refers to vaccines on the National Immunisation Program Schedule, but excludes rotavirus, and is outlined in more detail below.

'Fully immunised' at 12 months of age is defined as a child having a record on the AIR of 3 doses of a diphtheria (D), tetanus (T) and pertussis-containing (P) vaccine, 3 doses of polio vaccine, 2 or 3 doses of *Haemophilus B* conjugate (PRP-OMP) containing *Haemophilus influenzae* type b (Hib) vaccine or 3 doses of any other Hib vaccine, 3 doses of hepatitis B vaccine, and 3 doses of 13-valent pneumococcal conjugate vaccine. 'Fully immunised' at 24 months of age is defined as a

child having a record on the AIR of 3 doses of a DTP-containing vaccine, 3 doses of polio vaccine, 3 or 4 doses of PRP-OMP Hib, Infanrix Hexa or Hiberix vaccine (3 doses only of Infanrix Hexa or Hiberix if given after 11.5 months of age), or 4 doses of any other Hib vaccine, 3 doses of hepatitis B vaccine, 2 doses of a measles, mumps and rubella-containing (MMR) vaccine, 1 dose of meningococcal C vaccine, and 1 dose of varicella vaccine. 'Fully immunised' at 60 months of age is defined as a child having a record on the AIR of 4 doses of a DTP-containing vaccine, 4 doses of polio vaccine, and 2 doses of an MMR-containing vaccine.

A full description of the basic methodology used can be found in *Communicable Diseases Intelligence* 1998;22(3):36–37.

Results

The rolling annualised percentage of all children 'fully immunised' by 12 months of age for Australia increased marginally from the previous report by 0.2 of a percentage point to 93.2% (Table 1). All states and territories, except Tasmania, experienced small increases in the percentage of children 'fully immunised' by 12 months of age. Coverage for 'fully immunised' by 12 months of age is now greater than 93% in all jurisdictions, apart from Western Australia. Coverage for individual vaccines due by 12 months of age also remained greater than 93% in all jurisdictions.

Table 1. Percentage of children immunised at 12 months of age for the birth cohort 1 July 2014 to 30 June 2015, preliminary results, by disease and state or territory; assessment date 30 September 2016

Vaccine	State or territory								Aust.
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	
Total number of children	5,680	97,874	3,807	61,898	19,800	5,737	76,915	34,238	305,949
Diphtheria, tetanus, pertussis (%)	95.7	94.1	93.8	94.1	93.8	93.8	94.3	93.6	94.1
Poliomyelitis (%)	95.6	94.1	93.7	94.1	93.8	93.8	94.2	93.6	94.1
<i>Haemophilus influenzae</i> type b (%)	95.2	93.8	93.6	93.9	93.5	93.6	93.8	93.3	93.8
Hepatitis B (%)	95.6	94.0	94.0	94.2	93.7	93.9	94.1	93.3	94.0
Pneumococcal	95.5	93.7	93.7	93.9	93.5	93.7	93.8	93.2	93.7
Fully immunised (%)	94.9	93.2	93.2	93.5	93.1	93.3	93.2	92.7	93.2

The rolling annualised percentage of all children 'fully immunised' by 24 months of age for Australia increased by 0.4 percentage points to reach 91.1% (Table 2). Coverage for individual vaccines due by 24 months of age is now above 94.5% in all jurisdictions, except for the measles, mumps and rubella vaccine and varicella vaccine. Coverage for these antigens at 24 months of age have however continued to improve from the previous report with measles, mumps and rubella coverage increasing by 0.3 of a percentage point to 92.6% and varicella coverage also increasing by 0.3 of a percentage point to 92.7%.

The rolling annualised percentage of all children 'fully immunised' by 60 months of age for Australia increased marginally from the previous report by 0.2 of a percentage point to 93.1% (Table 3). Coverage for individual vaccines due by 60 months of age remained greater than 92% in all jurisdictions.

The Figure shows the trends in vaccination coverage from the first published coverage estimates in 1997 to the current AIR estimates. Overall there is a clear trend of increasing vaccination coverage over time for children aged 12 months, 24 months and 60 months (from December 2007).

Coverage by 24 months did fall below the 12 and 60 month coverage estimates following the change in the 24 month coverage assessment algorithm to include MMR dose 2 instead of MMR dose 1, varicella dose 1, and meningococcal C dose 1. However, 'fully immunised' coverage by 24 months has been steadily increasing since this change and as at 30 June 2016 reached 91.9%, which was an increase of 0.6 of a percentage point from the previous quarterly report. A similar increase has been seen in the 'fully immunised' coverage by 12 months of age, reaching 93.9% and the 'fully immunised' coverage by 60 months increased by 0.4 of a percentage point to 93.4%.

Disclaimer

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Table 2. Percentage of children immunised at 24 months of age for the birth cohort 1 July 2013 to 30 June 2014, preliminary results, by disease and state or territory; assessment date 30 September 2016

Vaccine	State or territory								Aust.
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	
Total number of children	5,697	99,525	3,566	62,419	19,993	5,923	77,228	34,259	308,610
Diphtheria, tetanus, pertussis (%)	97.1	95.7	96.1	95.8	96.0	96.3	96.3	95.9	96.0
Poliomyelitis (%)	97.1	95.7	96.0	95.8	95.9	96.4	96.2	95.9	95.9
<i>Haemophilus influenzae</i> type b (%)	95.9	94.7	95.1	95.2	95.0	95.4	95.4	94.9	95.1
Measles, mumps, rubella (%)	93.6	92.4	91.7	93.1	92.9	93.6	92.9	91.6	92.6
Hepatitis B (%)	96.9	95.5	96.3	95.7	95.7	96.3	96.1	95.6	95.8
Meningococcal C (%)	95.6	94.6	94.9	95.1	95.0	95.4	95.1	94.5	94.9
Varicella (%)	93.6	92.5	91.0	92.9	92.8	93.2	93.1	91.5	92.7
Fully immunised (%)	91.9	90.6	89.4	91.9	91.2	91.4	91.4	90.1	91.1

Table 3. Percentage of children immunised at 60 months of age for the birth cohort 1 July 2010 to 30 June 2011, preliminary results, by disease and state or territory; assessment date 30 September 2016

Vaccine	State or territory								Aust.
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	
Total number of children	5,577	101,428	3,552	65,148	20,148	6,269	76,256	34,587	312,965
Diphtheria, tetanus, pertussis (%)	94.0	94.0	93.1	93.6	93.3	94.7	94.2	92.2	93.7
Poliomyelitis (%)	94.1	94.1	93.2	93.6	93.3	94.7	94.2	92.2	93.8
Measles, mumps, rubella (%)	94.3	94.1	93.4	93.6	93.4	94.7	94.2	92.5	93.8
Fully immunised (%)	93.4	93.5	92.3	92.9	92.7	94.0	93.5	91.5	93.1

Figure: Trends in vaccination coverage, Australia, 1997 to 30 June 2016, by age cohorts

