

# AUSTRALIAN CHILDHOOD IMMUNISATION COVERAGE, 1 OCTOBER TO 30 SEPTEMBER COHORT, ASSESSED AS AT 31 DECEMBER 2015

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## Introduction

The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS) provides commentary on the trends in ACIR 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 Australian Childhood Immunisation Register (ACIR) for all children.

The data show the percentage of all children 'fully immunised' at 12 months, 24 months and 60 months, for four 3-month birth cohorts of children assessed at the stated ages between 1 October 2014 and 30 September 2015 using ACIR data up to 31 December 2015. '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 ACIR 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 ACIR 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 ACIR 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 *Commun Dis Intell* 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 0.6 of a percentage point to 92.3% (Table 1). All jurisdictions experienced small increases in the percentage of children 'fully immunised' by 12 months of age. For individual vaccines due by 12 months of age all jurisdictions achieved coverage greater than 92%.

The rolling annualised percentage of all children 'fully immunised' by 24 months of age for Australia increased for the first time in 4 consecutive reports by 0.8 percentage points to 89.3% (Table 2). All jurisdictions experienced increases in fully immunised coverage for this age group.

**Table 1. Percentage of children immunised at 12 months of age for the birth cohort 1 October 2013 to 30 September 2014, preliminary results, by disease and state or territory; assessment date 31 December 2015**

Vaccine	State or territory								Aust.
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	
Total number of children	5,751	99,099	3,705	62,810	20,192	5,934	76,660	34,392	308,543
Diphtheria, tetanus, pertussis (%)	94.8	93.0	93.1	93.0	93.1	92.8	93.1	92.9	93.1
Poliomyelitis (%)	94.8	93.0	93.1	93.0	93.0	92.7	93.1	92.9	93.0
<i>Haemophilus influenzae</i> type b (%)	94.4	92.8	93.0	92.9	92.9	92.8	92.8	92.7	92.9
Hepatitis B (%)	94.4	92.8	93.4	92.8	92.9	92.7	92.8	92.6	92.8
Pneumococcal	94.5	92.7	93.1	92.7	92.8	92.8	92.7	92.5	92.7
Fully immunised (%)	93.8	92.2	92.6	92.4	92.4	92.4	92.2	92.1	92.3

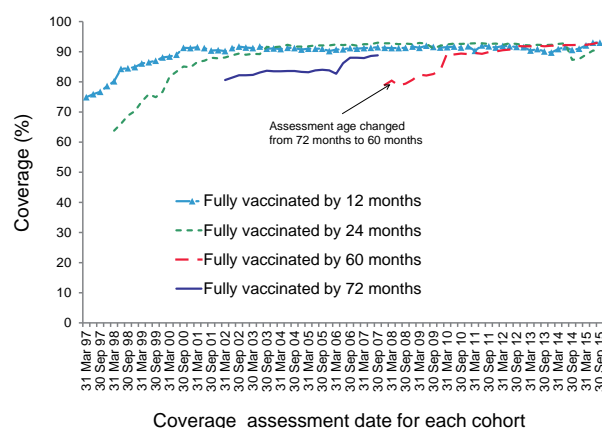
Coverage for individual vaccines due by 24 months was above 90% in all jurisdictions. Coverage for varicella increased by 0.3 of a percentage point to 91.8% and for MMR by 0.6 of a percentage point to 91.2%. This is the second time that a full 12 month wide birth cohort (4 quarters) has been used to assess coverage at 24 months of age for the MMRV vaccine due at 18 months of age (the 1st dose of varicella and the 2nd dose of MMR).

The rolling annualised percentage of all children ‘fully immunised’ by 60 months of age for Australia increased marginally from the previous report by 0.3 of a percentage point to 92.6% (Table 3). This marginal increase in fully immunised coverage at 60 months of age occurred in all jurisdictions. Coverage for individual vaccines due by 60 months was greater than 91% in all jurisdictions.

The Figure shows the trends in vaccination coverage from the first ACIR-derived published coverage estimates in 1997 to the current estimates. There is a clear trend of increasing vaccination coverage over time for children aged 12 months, 24 months and 60 months (from December 2007). From September 2014, coverage at 24 months is lower than coverage at 12 and 60 months of age. This

is most likely due to the change in the 24 month coverage assessment algorithm as described above. Coverage estimates of fully vaccinated children by 12 months and by 24 months have remained stable since June 2015. There has been a marginal increase in coverage of fully vaccinated children by 60 months from 92.6% to 93.2%.

**Figure: Trends in vaccination coverage, Australia, 1997 to 30 September 2015, by age cohorts**



**Table 2. Percentage of children immunised at 24 months of age for the birth cohort 1 October 2012 to 30 September 2013, preliminary results, by disease and state or territory; assessment date 31 December 2015**

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	Aust.
Total number of children	5,602	99,789	3,566	62,777	19,953	5,957	77,115	34,200	308,959
Diphtheria, tetanus, pertussis (%)	96.6	95.3	94.9	95.3	95.3	95.6	95.9	95.3	95.5
Poliomyelitis (%)	96.5	95.3	94.9	95.3	95.3	95.5	95.8	95.2	95.4
<i>Haemophilus influenzae</i> type b (%)	95.6	94.2	93.9	94.5	94.3	94.2	94.8	94.2	94.5
Measles, mumps, rubella (%)	92.6	91.0	90.4	91.6	90.8	90.8	91.5	90.2	91.2
Hepatitis B (%)	96.2	95.0	95.1	95.1	94.9	95.3	95.6	94.8	95.2
Meningococcal C (%)	95.0	94.1	94.0	94.5	93.4	94.3	94.4	93.3	94.2
Varicella (%)	93.8	91.7	89.7	91.8	91.4	90.8	92.3	91.0	91.8
Fully immunised (%)	91.0	89.1	87.7	90.2	88.3	88.3	89.7	88.1	89.3

**Table 3. Percentage of children immunised at 60 months of age for the birth cohort 1 October 2009 to 30 September 2010, preliminary results, by disease and state or territory; assessment date 31 December 2015**

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	Aust.
Total number of children	5,573	101,773	3,467	65,450	20,244	6,196	76,782	34,460	313,945
Diphtheria, tetanus, pertussis (%)	94.1	93.6	93.5	93.0	91.9	93.9	93.6	91.7	93.2
Poliomyelitis (%)	94.1	93.7	93.5	93.0	91.9	93.9	93.5	91.7	93.2
Measles, mumps, rubella (%)	94.0	93.5	93.7	92.9	91.9	93.8	93.6	91.7	93.1
Fully immunised (%)	93.5	93.0	92.8	92.4	91.2	93.3	93.0	91.1	92.6