

# AUSTRALIAN CHILDHOOD IMMUNISATION COVERAGE, 1 OCTOBER TO 31 DECEMBER COHORT, ASSESSED AS AT 31 MARCH 2014

Brynley P Hull for the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases

## Introduction

Tables 1, 2 and 3 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).

The data show the percentage of children 'fully immunised' at 12 months, 24 months and 60 months, for 3-month birth cohorts of children assessed at the stated ages between October and December 2013 using ACIR data as at 31 March 2014. 'Fully immunised' refers to vaccines on the National Immunisation Program Schedule, but excludes rotavirus, varicella, and meningococcal C conjugate vaccines, 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 three doses of a diphtheria (D), tetanus (T) and pertussis-containing (P) vaccine, 3 doses of polio vaccine, 2 or 3 doses of 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 vaccine or 4 doses of any other Hib vaccine, 3 doses of hepatitis B vaccine, and 1 dose of a measles, mumps and rubella-containing (MMR) 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.

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 1435, email: [brynley.hull@health.nsw.gov.au](mailto:brynley.hull@health.nsw.gov.au)

## Results

The percentage of children 'fully immunised' by 12 months of age for Australia decreased from the previous quarter by 0.4 of a percentage point to 89.7% (Table 1). This decrease, following on from a decrease in the previous quarter, is likely due to the recent inclusion of the 13-valent pneumococcal conjugate vaccine in the coverage calculation algorithm for 'fully immunised' at 12 months of age. Except for the Northern Territory, almost all jurisdictions experienced decreases in coverage for all individual vaccines due at 12 months of age, ranging from 0.1 of a percentage point to 1.5 percentage points.

The percentage of children 'fully immunised' by 24 months of age for Australia increased marginally from the previous quarter by 0.1 of a percentage

**Table 1. Percentage of children immunised at 12 months of age for the birth cohort 1 October to 31 December 2012, preliminary results, by disease and state or territory; assessment date 31 March 2014**

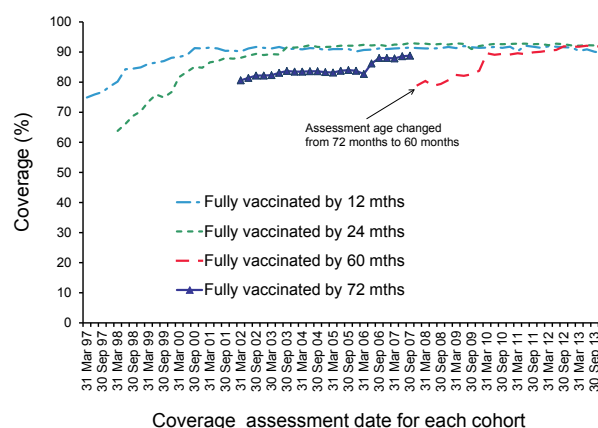
| Vaccine  | State or territory |        |      |        |       |       |        |       |        |
|--|--------------------|--------|------|--------|-------|-------|--------|-------|--------|
|  | ACT                | NSW    | NT   | Qld    | SA    | Tas   | Vic    | WA    | Aust   |
| Number of children                               | 1,393              | 25,202 | 915  | 15,551 | 5,112 | 1,501 | 19,535 | 8,493 | 77,702 |
| Diphtheria, tetanus, pertussis (%)               | 93.5               | 90.1   | 91.4 | 91.4   | 90.3  | 88.7  | 91.1   | 90.8  | 90.7   |
| Poliomyelitis (%)                                | 93.5               | 89.9   | 91.5 | 91.4   | 90.2  | 88.5  | 91.0   | 90.6  | 90.6   |
| <i>Haemophilus influenzae</i> type b (%)         | 93.1               | 89.9   | 91.3 | 91.3   | 90.1  | 88.5  | 90.8   | 90.4  | 90.5   |
| Hepatitis B (%)                                  | 93.1               | 89.7   | 91.1 | 91.1   | 90.0  | 88.5  | 90.5   | 90.1  | 90.3   |
| Pneumococcal                                     | 93.1               | 89.8   | 91.1 | 91.1   | 90.0  | 88.3  | 90.4   | 90.2  | 90.3   |
| Fully immunised (%)                              | 92.7               | 89.1   | 90.7 | 90.7   | 89.5  | 87.6  | 89.8   | 89.5  | 89.7   |
| Change in fully immunised since last quarter (%) | -0.6               | -0.4   | +0.7 | -0.4   | -0.2  | -1.6  | -0.7   | 0.0   | -0.4   |

point to 92.3% (Table 2). There were no important changes in coverage for any individual vaccines due at 24 months of age or by jurisdiction.

The percentage of children ‘fully immunised’ by 60 months of age for Australia increased marginally from the previous quarter by 0.2 of a percentage point to 92.0% (Table 3). This maintains the improvement in coverage for this age milestone. There were no important changes in coverage for any individual vaccines due at 60 months of age or by jurisdiction.

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). Coverage at 12 months is still lower than coverage at 24 and 60 months of age.

**Figure: Trends in vaccination coverage, Australia, 1997 to 31 December 2013, by age cohorts**



**Table 2. Percentage of children immunised at 24 months of age for the birth cohort 1 October to 31 December 2011, preliminary results, by disease and state or territory; assessment date 31 March 2014\***

| Vaccine  | State or territory |        |      |        |       |       |        |       | Aust   |
|--|--------------------|--------|------|--------|-------|-------|--------|-------|--------|
|  | ACT                | NSW    | NT   | Qld    | SA    | Tas   | Vic    | WA    |        |
| Total number of children                         | 1,344              | 24,127 | 837  | 14,916 | 4,973 | 1,573 | 18,566 | 7,938 | 74,274 |
| Diphtheria, tetanus, pertussis (%)               | 95.4               | 94.8   | 94.5 | 95.5   | 94.7  | 95.5  | 95.3   | 94.3  | 95.0   |
| Poliomyelitis (%)                                | 95.4               | 94.7   | 94.5 | 95.5   | 94.7  | 95.5  | 95.2   | 94.2  | 95.0   |
| <i>Haemophilus influenzae</i> type b (%)         | 93.8               | 93.4   | 94.1 | 94.5   | 93.2  | 93.6  | 93.9   | 92.9  | 93.7   |
| Measles, mumps, rubella (%)                      | 94.0               | 93.8   | 94.9 | 95.0   | 94.1  | 93.7  | 94.2   | 93.3  | 94.1   |
| Hepatitis B (%)                                  | 95.1               | 94.2   | 94.5 | 95.0   | 94.2  | 95.0  | 94.9   | 93.4  | 94.5   |
| Fully immunised (%)                              | 92.9               | 91.8   | 92.7 | 93.5   | 92.0  | 92.6  | 92.4   | 91.1  | 92.3   |
| Change in fully immunised since last quarter (%) | -0.7               | 0.0    | +0.2 | +0.7   | -0.3  | -1.0  | -0.5   | +1.0  | +0.1   |

\* The 12 months age data for this cohort were published in *Commun Dis Intell* 2013;37(3):E275.

**Table 3. Percentage of children immunised at 60 months of age for the birth cohort 1 October to 31 December 2008, preliminary results, by disease and state or territory; assessment date 31 March 2014**

| Vaccine  | State or territory |        |      |        |       |       |        |       | Aust   |
|--|--------------------|--------|------|--------|-------|-------|--------|-------|--------|
|  | ACT                | NSW    | NT   | Qld    | SA    | Tas   | Vic    | WA    |        |
| Total number of children                         | 1,353              | 25,434 | 812  | 15,907 | 5,037 | 1,705 | 18,839 | 8,170 | 77,257 |
| Diphtheria, tetanus, pertussis (%)               | 93.0               | 92.7   | 91.4 | 93.1   | 91.5  | 93.4  | 93.0   | 89.5  | 92.5   |
| Poliomyelitis (%)                                | 92.9               | 92.6   | 91.1 | 93.1   | 91.4  | 93.0  | 93.0   | 89.5  | 92.4   |
| Measles, mumps, rubella (%)                      | 92.4               | 92.6   | 91.5 | 93.2   | 91.6  | 93.4  | 93.0   | 89.4  | 92.4   |
| Fully immunised (%)                              | 92.2               | 92.2   | 90.9 | 92.8   | 91.0  | 92.6  | 92.6   | 88.9  | 92.0   |
| Change in fully immunised since last quarter (%) | +1.3               | +0.1   | -1.3 | +0.9   | +0.2  | -0.2  | +0.2   | -0.6  | +0.2   |