

National Health Performance Authority

Healthy Communities:

Immunisation rates for children in 2011–12





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GPO Box 9848 Sydney, NSW 2001 Australia Telephone: +61 2 9186 9210 www.nhpa.gov.au

Paper-based publications

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About the Authority

The National Health Performance Authority (the Authority) is an independent body that provides locally relevant and nationally consistent information on the performance of hospitals and other health care organisations. The Authority was set up under the *National Health Reform Act 2011* and commenced full operations in 2012.

Under the terms of the Act, the Authority monitors, and reports on, the performance of Local Hospital Networks, public and private hospitals, primary health care organisations and other bodies that provide health care services.

The Authority's reports provide timely and impartial information that allows all Australians to fairly compare their local health care organisations against their peers.

The reports let people see, for the first time, how their local health care organisations measure up against comparable organisations across Australia.

The Authority's activities are guided by a document called the *Performance and Accountability Framework* agreed by the Council of Australian Governments (COAG). The framework contains 48 indicators that form the basis for the Authority's reports.

The Authority's role includes reporting on the performance of health care organisations against the 48 indicators in order to identify both high-performing Local Hospital Networks, Medicare Locals and hospitals (so effective practices can be shared), and Local Hospital Networks and Medicare Locals that perform poorly (so that steps can be taken to address problems).

The Authority releases reports on a quarterly basis, and also publishes performance data on the MyHospitals website and on **www.nhpa.gov.au**

The Authority consists of a Chairman, a Deputy Chairman and five other members, appointed for up to five years. Members of the Authority are:

- Ms Patricia Faulkner AO (Chairman)
- Mr John Walsh AM (Deputy Chairman)
- Dr David Filby PSM
- Prof Michael Reid
- Prof Bryant Stokes AM RFD
- Prof Paul Torzillo AM
- Prof Claire Jackson (acting member).

The conclusions in this report are those of the Authority. No official endorsement from any Minister, department of health or health care organisation is intended or should be inferred.

Summary

Immunisation helps protect individuals and the community generally against potentially serious diseases such as measles, polio, tetanus and whooping cough (pertussis).

Although the great majority of children in Australia are immunised, it is important to maintain high immunisation rates to reduce the risk of outbreaks of these and other diseases recurring.

Australian governments and experts endorse achieving high immunisation rates to protect individuals and those not immunised or too young to be immunised. States and territories are expected to maintain or improve their existing respective immunisation rates under the terms of the National Partnership Agreement on Essential Vaccines agreed in 2009.

This report allows the public, clinicians and health managers to see for all children, and for Aboriginal and Torres Strait Islander children, the percentages fully immunised and how those percentages differ across the country. It reports these immunisation rates for each of the 61 geographic areas covered by the new network of Medicare Locals, which have been established to improve the responsiveness, coordination and integration of local health services.

These data were sourced from the Australian Childhood Immunisation Register (ACIR). It is important to note that these data cover the period from July 2011 to June 2012. As Medicare Locals were still being set up during this time, this report establishes a baseline for comparisons that in future will help clinicians, health managers and others to assess whether improvements are occurring.

Where possible, the results are broken down into geographic areas that are smaller than Medicare Local catchments – more than 300 statistical areas and more than 1500 postcodes.

The report shows the percentages of children who were fully immunised at 1 year, 2 years and 5 years in each Medicare Local catchment, and in the smaller units of geography where applicable. Also reported are the numbers of children in each area who are not fully immunised.

Key findings

The report's findings can be considered in the context of three broad themes:

- The percentages of children fully immunised and variation between Medicare Local catchments, and between age groups
- The numbers of children who are not fully immunised in each Medicare Local catchment
- Lower immunisation rates among Aboriginal and Torres Strait Islander children.

Percentages fully immunised and variation between Medicare Local catchments

There was considerable variation between Medicare Local catchments in terms of the percentages of all children fully immunised across all three age groups (Figure 3, page 10).

The percentages of all children fully immunised at:

 1 year of age ranged from 85% in Far West NSW to 94% in Great South Coast (Vic), Hume (Vic), Barwon (Vic), Murrumbidgee (NSW), Grampians (Vic), Goulburn Valley (Vic) and Australian Capital Territory (page 16).

- 2 years of age ranged from 89% in North Coast NSW, Eastern Sydney and Sunshine Coast (Qld) to 96% in Great South Coast (Vic) (page 20)
- 5 years of age ranged from 84% in Eastern Sydney to 95% in Great South Coast (Vic) (page 24).

Variation across age groups

Comparing the three age groups, percentages of children fully immunised were highest at 2 years of age. Out of the three age groups, percentages of all children fully immunised at 2 years of age were highest (or equal highest) for all but seven of the 61 Medicare Local catchments (Figure 3, page 10).

Rates were lowest at 5 years of age. Percentages of all children fully immunised at 5 years were lowest (or equal lowest) of the three age groups for all but four of the 61 Medicare Locals.

Aboriginal and Torres Strait Islander children

In many Medicare Local catchments, immunisation rates among Aboriginal and Torres Strait Islander children were considerably lower than they were for all children (Figure 5, page 12).

The percentages of Aboriginal and Torres Strait Islander children fully immunised at:

• 1 year of age ranged from 69% in Bentley-Armadale (WA) to 94% in Gold Coast (Qld) (page 18)

- 2 years of age ranged from 80% in Central Adelaide and Hills to 97% in Northern Territory and Gold Coast (Qld) (page 22)
- 5 years of age ranged from 70% in Perth North Metro to 95% in Central and North West Queensland (page 26).

Not only were the ranges wider when looking at Aboriginal and Torres Strait Islander children, but the percentages were lower among a large number of Medicare Local catchments.

The number of Medicare Local catchments where less than 90% of children were fully immunised was as follows¹:

1 year of age:

All children: 2 (of 61 reported)

Indigenous children: 46 (of 54 reported)²

2 years of age:

All children: 3 (of 61 reported)

Indigenous children: 16 (of 56 reported)

5 years of age:

All children: 23 (of 61 reported)

Indigenous children: 35 (of 55 reported)

There were also 12 Medicare Local catchments where less than 80% of Aboriginal and Torres Strait Islander children, in at least one age group, were fully immunised – eight for 1 year olds and nine for 5 year olds. No catchments returned results below 80% for all children (pages 18 and 26).

^{1.} The level of 90% of children fully immunised does not relate to any benchmarks and is used here for indicative purposes only.

^{2.} Results are not reported for Medicare Local catchments for any age group with less than 26 children registered with the ACIR.

Lower-level reporting

The report also shows the percentages of all children fully immunised in more than 300 smaller local areas called Statistical Areas Level 3 (SA3s).

There were 32 statistical areas where the percentages of all children fully immunised were 85% or lower for at least one age group.

There were 77 statistical areas where the percentages of all children fully immunised were 95% or higher for at least one age group.

There were 898,373 children aged 1, 2 or 5 years registered with the ACIR in 2011–12. Of these, the data suggests 76,769 are not fully immunised:

- for children aged 1 year 24,360
- for children aged 2 years 22,334
- for children aged 5 years 30,075.
 (pages 29 to 40).

Results for Aboriginal and Torres Strait Islander children are not reported for statistical areas because the populations of Indigenous children in those areas are too small to support reliable estimates.

Numbers of children not fully immunised

Some Medicare Local catchments contained high numbers of children who were not fully immunised. There are Medicare Local catchments where more than 1000 children aged 1, 2 or 5 years are not fully immunised (page 6).

Next steps

The National Immunisation Program Schedule has been expanded since the data in this report were collected. Future Authority reports will include data against the definition of fully immunised applied in this report and also include data on the revised definition of fully immunised, which includes additional vaccines on the National Immunisation Program Schedule.

The Authority is aware of issues with measuring percentages of children fully immunised in some urban areas. Factors such as population mobility and large immigrant populations may make tracking childhood immunisation rates more difficult.

A better understanding is also needed of the level of identification of children as Aboriginal and/or Torres Strait Islander in the Medicare enrolment data that is used in the ACIR, and the impact for reporting immunisation rates for these children.

The Authority will consider ways to address these issues in the future.

What is the percentage of children who are fully immunised in your local area?

The National Health Performance Authority has released 2011–12 data for Medicare Local catchments, for more than 300 smaller geographic areas, and for more than 1500 postcodes, on the percentages of all children who are fully immunised at 1 year, 2 years and 5 years.

For information about your local area, go to www.nhpa.gov.au

Introduction

About this report

The Authority bases its performance reports on the 48 indicators agreed by the Council of Australian Governments (COAG). In this report, the Authority has focused on the indicator that relates to rates of childhood immunisation.

While the percentages of children fully immunised are periodically reported at the state and national level, this report is different in that it provides this information at much smaller units of geography.

This report states the percentages for all children, and for all Aboriginal and Torres Strait Islander children, who are fully immunised at three time points – 1 year, 2 years and 5 years – for each area served by the new network of Medicare Locals.

There are 61 Medicare Locals across Australia, which were established in 2011 to improve the responsiveness, coordination and integration of local health services.

This report provides some data for even smaller geographic areas, called Statistical Areas Level 3 (SA3s), which are used by the Australian Bureau of Statistics. Some data are also available at the level of individual postcodes at www.nhpa.gov.au

The Authority has chosen to focus this report on childhood immunisation at this level of geographic detail in order to help clinicians and health managers better understand where more work needs to be done to increase the percentages of fully immunised children.

Fully immunised means that a child has received a subset of vaccinations that are detailed in the National Immunisation Program Schedule for their age. Four vaccinations on that Schedule are excluded for the purposes of measuring fully immunised status. Fully immunised for age means a child received the most recent vaccination for each disease, and assumes all previous vaccinations were administered (Figure 1, page 2).

It is important to note that these data relate to the period July 2011 to June 2012, while Medicare Locals were still being set up. Accordingly, the findings do not reflect on the performance of Medicare Locals as organisations.

Why immunisation matters

Routine childhood immunisations protect babies and children against potentially serious diseases such as measles, polio, tetanus and whooping cough (pertussis) (Glossary, page 41).

Although the majority of children in Australia are immunised, it is important to maintain high immunisation rates. When high percentages of people are fully immunised, diseases such as whooping cough have less opportunity to spread because there are fewer people who can be infected.

In addition, people who remain susceptible to infection – such as babies too young to be immunised and people with specific medical conditions that prevent them from being immunised – may be indirectly protected, as they are less likely to be exposed to disease. This concept is called "herd immunity" or "community immunity".

According to the World Health Organization (WHO), measles is a potentially serious and highly contagious disease (with a single infected person able to infect up to 17-20 other people).3 The WHO has advocated an immunisation rate of greater than 93-95% for all districts within a country to ensure measles elimination.4 The US Centers for Disease Control and Prevention considers whooping cough to be so infectious (with a single infected person able to infect up to 12-15 other people) that it is important everyone gets the recommended vaccine.5

Improving uptake

From 1 July 2012, Medicare Locals are responsible for ensuring high immunisation rates are maintained across their catchments.6

The National Partnership Agreement (NPA) on Essential Vaccines, established by Commonwealth, state and territory governments through COAG in 2009, set benchmarks for maintaining or improving the percentage of children fully immunised for:

- all children at 4 years of age (measured at 5 years of age)
- Aboriginal and Torres Strait Islander children at 1, 2 and 5 years of age
- all children in areas of low immunisation.

Figure 1: Vaccinations measured for fully immunised status

Age due	Vaccinations	Measured for fully immunised at
2 months	 Hepatitis B (hepB) Diphtheria, tetanus and whooping cough (DTPa) Haemophilus influenzae type b (Hib) Polio (IPV) 	
4 months	 Hepatitis B (hepB) Diphtheria, tetanus and whooping cough (DTPa) Haemophilus influenzae type b (Hib) Polio (IPV) 	
6 months	 Hepatitis B (hepB) Diphtheria, tetanus and whooping cough (DTPa) Haemophilus influenzae type b (Hib) Polio (IPV) 	1 year
12 months	 Haemophilus influenzae type b (Hib) Measles, mumps and rubella (MMR) 	2 years
4 years	 Diphtheria, tetanus and whooping cough (DTPa) Polio (IPV) Measles, mumps and rubella (MMR) 	5 years

Note:

For the purposes of reporting the data, fully immunised means a child receives the vaccinations due at or immediately prior to the age at which the measurement occurs. It is assumed that all previous vaccinations were received.

^{3.} World Health Organization, WHO guidelines for epidemic preparedness and response to measles outbreaks, WHO, Geneva, May 1999.

World Health Organization, Measles vaccines: WHO position paper, Weekly epidemiological record, No 35, 84, 349-360, WHO, Geneva, 2009.

Centers for Disease Control and Prevention (2013), Pertussis frequently asked questions (factsheet), [Online] Available at: www.cdc.gov/pertussis/ about/faqs.html Accessed 26 March 2013

Medicare Local Key Reporting Areas for 2012-13. Key Reporting Area 2: Maintain or improve immunisation coverage rates for children.

The Commonwealth government pays for the purchase of all essential vaccines and provides payments to the states and territories and general practices that are linked to achieving high rates of immunisation and notification to the ACIR.

About the data

Data for this report, *Healthy Communities: Immunisation rates for children in 2011–12*, were sourced from the Australian Childhood Immunisation Register (ACIR) which is administered by the Australian Government Department of Human Services (Medicare).

It has been estimated that ACIR includes close to 99% of Australian children.⁷

The report includes data on both the percentages of children fully immunised and the numbers of children not fully immunised. All data from the ACIR are mapped to Medicare Local catchment areas in which children live (i.e. by the postcode for their address), rather than the areas in which the services are provided.

For more information, see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* at **www.nhpa.gov.au**

Australian Childhood Immunisation Register

The Australian Childhood Immunisation Register (ACIR) is a national register that records immunisations given to children up to the age of 7 years.

The ACIR helps parents and guardians keep track of children's immunisations. It also enables governments and health managers to monitor immunisation coverage in Australia.

The ACIR provides immunisation history statements that can be used as proof of immunisation status for childcare and school enrolments. Children who are not immunised are subject to exclusion from childcare and school when disease outbreaks occur.

Lower-level data

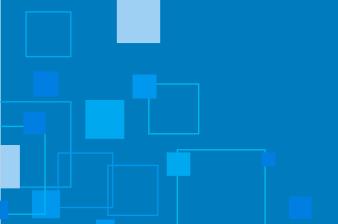
Information on the percentages of children fully immunised is available for local communities across Australia at www.nhpa.gov.au

The purpose of providing local information is to help clinicians and health managers to target their efforts to protect the health of children and the broader community. Note that where the number of children for an area is very small, data has been withheld to preserve confidentiality.

Hull BP, Shelley LD, McIntyre PB. The Australian Childhood Immunisation Register - A model for universal immunisation registers? Vaccine 2009; 27: 5054–5060.

Child immunisation rates

Key findings 2011–12



Key findings: All children

Percentages fully immunised: Variation by Medicare Local catchment

There was considerable variation between Medicare Local catchments in terms of the percentages of all children fully immunised across all three age groups.

Percentages of 1 year olds fully immunised, by Medicare Local catchment

The percentage of children aged 1 year fully immunised ranged from:

Highest 94% – Great South Coast (Vic), Hume (Vic), Barwon (Vic), Murrumbidgee (NSW), Grampians (Vic), Goulburn Valley (Vic), Australian Capital Territory

Lowest 85% – Far West NSW (pages 15 and 16).

Percentages of 2 year olds fully immunised, by Medicare Local catchment

The percentage of children aged 2 years fully immunised ranged from:

Highest 96% – Great South Coast (Vic) Lowest 89% – North Coast NSW, Eastern Sydney, Sunshine Coast (Qld) (pages 19 and 20).

Percentages of 5 year olds fully immunised, by Medicare Local catchment

The percentage of all children aged 5 years fully immunised ranged from:

Highest 95% – Great South Coast (Vic) Lowest 84% – Eastern Sydney (pages 23 and 24).

Percentages fully immunised: Variation by age

Immunisation rates were highest at 2 years of age. Out of the three age groups, percentages of children fully immunised at 2 years of age were highest (or equal highest) for all but seven of the 61 Medicare Local catchments.

Rates were lowest at 5 years of age. Percentages of children fully immunised at 5 years were lowest (or equal lowest) of the three age groups for all but four of the 61 Medicare Local catchments (Figure 3, page 10).

For children aged 1 year, two Medicare Local catchments recorded percentages fully immunised of less than 90%, while three catchments had less than 90% for children aged 2 years.

For children aged 5 years, 23 Medicare Local catchments had less than 90% of children fully immunised.8

Numbers of children not fully immunised

In a Medicare Local catchment with a large population, a high **percentage** of children who are fully immunised can conceal a high **number** of children who are not fully immunised **(Figure 2, page 9)**.

In four Medicare Local catchments, there were more than 1000 children who were not fully immunised in one or more age groups. One Medicare Local catchment (Western Sydney) had

The level of 90% of children fully immunised does not relate to any benchmarks and is used here for indicative purposes only.

nearly 3600 children who were not fully immunised across the three age groups combined (pages 16, 20 and 24).

The largest single group of children not fully immunised in one Medicare Local catchment was 1287 (recorded in Western Sydney for 5 year olds).

Numbers of 1 year olds not fully immunised, by Medicare Local catchment

The number of all children aged 1 year not fully immunised ranged from **more than 1100**, recorded in Western Sydney, Greater Metro South Brisbane and South Western Sydney, to **fewer than 80** recorded in Far West NSW, Central and Northern Queensland and Great South Coast (Vic) (page 16).

Numbers of 2 year olds not fully immunised, by Medicare Local catchment

The number of all children aged 2 years not fully immunised ranged from **almost 1100**, recorded in Western Sydney, to **fewer than 80**, recorded in Lower Murray (Vic), Great South Coast (Vic), Central and North West Queensland, and Far West NSW **(page 20)**.

Numbers of 5 year olds not fully immunised, by Medicare Local catchment

The number of all children aged 5 years not fully immunised ranged from more than 1200, recorded in Western Sydney, South Western Sydney and Greater Metro South Brisbane to fewer than 80 recorded in Greater South Coast (Vic), Far West NSW, and Central and North West Queensland (page 24).

Lower-level reporting

Where possible, the percentages of children fully immunised have been broken down by smaller local areas called Statistical Areas Level 3 (SA3) which are used by the Australian Bureau of Statistics. There are 333 statistical areas covering the whole of Australia without gaps or overlaps.

There were 32 statistical areas where the percentages of all children fully immunised were 85% or lower for at least one age group:

- for children 1 year of age 4 statistical areas
- for children 2 years of age 4
- for children 5 years of age 30.

There were 77 statistical areas where the percentages of all children fully immunised were 95% or higher for at least one age group:

- for children 1 year of age 23 statistical areas
- for children 2 years of age 72
- for children 5 years of age 3 (pages 29 to 40).

Results for Aboriginal and Torres Strait Islander children are not reported for statistical areas because the populations of these children in most of statistical areas are too small to support reliable estimates.

Local-level data are available at www.nhpa.gov.au

Key findings: Aboriginal and Torres Strait Islander children

The data presented here reflect results for those children who were identified as Aboriginal and Torres Strait Islander in the Australian Childhood Immunisation Register (ACIR) during 2011–12. The ACIR data are based on Medicare enrolment records and levels of identification may vary between Medicare Local catchments.

Percentages fully immunised: Variation by Medicare Local catchment

There was considerable variation between Medicare Local catchments in terms of the percentages of Aboriginal and Torres Strait Islander children fully immunised across all three age groups.

Percentages of 1 year olds fully immunised, by Medicare Local catchment

The percentage of Aboriginal and Torres Strait Islander children aged 1 fully immunised ranged from:

Highest 94% - Gold Coast (Qld)
Lowest 69% - Bentley-Armadale (WA) (pages 17 and 18).

Percentages of 2 year olds fully immunised, by Medicare Local catchment

The percentage of Aboriginal and Torres Strait Islander children aged 2 fully immunised ranged from:

Highest 97% – Northern Territory and Gold Coast (Qld)

Lowest 80% – Central Adelaide and Hills (pages 21 and 22).

Percentages of 5 year olds fully immunised, by Medicare Local catchment

The percentage of Aboriginal and Torres Strait Islander children aged 5 years fully immunised ranged from:

Highest 95% – Central and North West Queensland

Lowest 70% – Perth North Metro (pages 25 and 26).

Percentages fully immunised: Variation by age

Immunisation rates were highest at 2 years of age. Out of the three age groups, percentages of Aboriginal and Torres Strait Islander children fully immunised at 2 years of age were highest (or equal highest) for all but seven of the 56 Medicare Local catchments reported (Figure 5, page 12).

Rates were lowest for children at 1 year of age.

Percentages of Aboriginal and Torres Strait Islander children fully immunised at 1 year were lowest (or equal lowest) of the three age groups for 35 of the 56 Medicare Local catchments reported.

The percentages fully immunised for Aboriginal and Torres Strait Islander children aged 1 year and 5 years were also much lower than the 2 year age group.

For Aboriginal and Torres Strait Islander children aged 2 years, 16 Medicare Local catchments recorded percentages fully immunised of less than 90%.¹⁰

Results are not reported for Medicare Local catchments for any age group with less than 26 children registered with the ACIR.

^{10.} The level of 90% of children fully immunised does not relate to any benchmarks and is used here for indicative purposes only.

But for children aged 1 year, there were 46 Medicare Local catchments with percentages below 90%, and 35 catchments had less than 90% for children aged 5 years.

There were also eight Medicare Local catchments with percentages below 80% for children aged 1 year, and nine catchments with results below 80% for children aged 5 years.

Numbers of children not fully immunised

There were three Medicare Local catchments that recorded more than 100 Aboriginal and Torres Strait Islander children aged 1 year who were not fully immunised (Figure 4, page 11).

At 148, the largest single group of Aboriginal and Torres Strait Islander children not fully immunised was recorded for 1 year olds. Next were 5 year olds, with 110 in the largest group of children not fully immunised. The largest group of 2 year olds not fully immunised was 63 (pages 18, 22 and 26).

Numbers of 1 year olds not fully immunised, by Medicare Local catchment

The number of Aboriginal and Torres Strait Islander children aged 1 year not fully immunised ranged from 148 to 5 or fewer (page 18).

Numbers of 2 year olds not fully immunised, by Medicare Local catchment

The number of Aboriginal and Torres Strait Islander children aged 2 years not fully immunised ranged from 63 to 5 or fewer (page 22).

Numbers of 5 year olds not fully immunised, by Medicare Local catchment

The number of Aboriginal and Torres Strait Islander children aged 5 years not fully immunised ranged from 110 to 5 or fewer (page 26).

Comparison between percentages of Aboriginal and Torres Strait Islander children fully immunised and all children

The highest percentages recorded for Aboriginal and Torres Strait Islander children in Medicare Local catchments exceeded or equalled those recorded for all children. However, the lowest percentages recorded for Aboriginal and Torres Strait Islander children were substantially lower than those recorded for all children (pages 18, 22 and 26).

The lowest percentage of fully immunised Aboriginal and Torres Strait Islander children recorded for 1 year olds was 69%, compared with 85% for all children – a variation of 16 percentage points (pages 16 and 18).

The lowest percentage of fully immunised Aboriginal and Torres Strait Islander children recorded for 5 year olds was 70%, compared with 84% for all children – a variation of 14 percentage points (pages 24 and 26).

At 80%, the lowest percentage of fully immunised Aboriginal and Torres Strait Islander children recorded for 2 year olds was closest to that recorded for all children, which was 89%. The variation was 9 percentage points (pages 20 and 22).

Children fully immunised: Medicare Local catchment snapshot

It is important to look at the **percentages** of children who were fully immunised in conjunction with the **numbers** of children who were not fully immunised. (For the numbers of children aged 1, 2 and 5 not fully immunised see pages 16, 20 and 24.) A Medicare Local catchment with a large population can have a high percentage of children that are fully immunised and a high number of children who are not fully immunised.

Figure 2 shows the percentages of children that were fully immunised and the numbers of children not fully immunised at 1 year, 2 years and 5 years.

Each dot represents a Medicare Local catchment. The size of each dot is scaled to represent the number of children in each Medicare Local catchment that were not fully immunised.

The figure shows that there were Medicare Local catchments with 93% of children who were fully immunised that still contain groups of more than 600 children who were not fully immunised. The largest single group of children who were not fully immunised was recorded for 5 year olds (1287 children).

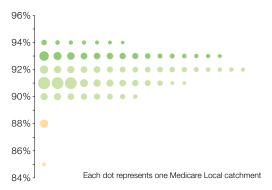
Figure 3 on the opposite page compares the percentages of children fully immunised for 1 year olds, 2 year olds and 5 year olds by Medicare Local catchment.

The figure shows that the percentage of children who were fully immunised at 2 years generally exceeded that recorded for 1 year olds. In most cases, the percentage recorded for 5 year olds was the lowest.

Figure 2: Percentages of all children¹ in each of 61 Medicare Local catchments that are fully immunised by age and number not fully immunised, 2011–12

Percentage full	y immunised	Number r	ot fully immunised
95 to 100%	•	0	50
00 up to 050/	• · · · 93 up to 95%	0	100
90 up to 95%	90 up to 93%	0	250
85 up to 90%		0	500
80 up to 85%		\circ	1000
75 up to 80%	•	\circ	1250

Children aged 1 year



Children aged 2 years

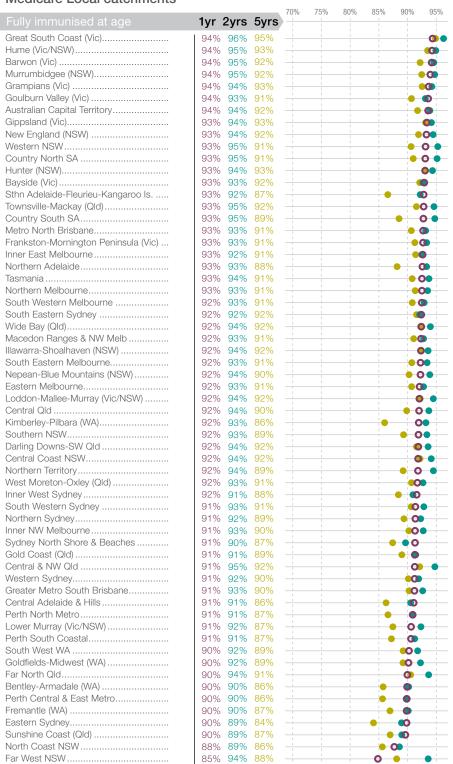


Children aged 5 years



Figure 3: Percentages of all children¹ in each of 61 Medicare Local catchments that are fully immunised by age, 2011–12

Medicare Local catchments



Definitions of fully immunised at:

O 1 year

Fully immunised at 1 year means that a child aged 12 months to less than 15 months received their third vaccination for diphtheria, tetanus, whooping cough and polio and either their second or third vaccination (dependent on the type of vaccine used) for hepatitis B and Haemophilus influenzae type b, all prior to the age of 1 year. It is assumed that all previous vaccinations were received.

2 years

Fully immunised at 2 years means that a child aged 24 to less than 27 months received their third or fourth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus, whooping cough and *Haemophilus influenzae* type b, their third vaccination for polio and hepatitis B and their first vaccination for measles, mumps and rubella, all prior to the age of 2 years. It is assumed that all previous vaccinations were received.

5 years

Fully immunised at 5 years means that a child aged 60 to less than 63 months received their fourth or fifth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus and whooping cough, their fourth vaccination for polio and their second vaccination for measles mumps and rubella, all prior to the age of 5 years. It is assumed that all previous vaccinations were received.

Statistical Area Level 3 and postcode-level data available at www.nhpa.gov.au

^{1.} Data are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

Aboriginal and Torres Strait Islander children fully immunised: Medicare Local catchment snapshot

Figure 4 shows the percentages of Aboriginal and Torres Strait Islander children that were fully immunised and the numbers of children not fully immunised at 1 year, 2 years and 5 years.

Each dot represents a Medicare Local catchment. The size of each dot is scaled to represent the number of children in each Medicare Local catchment that were not fully immunised.

There were large variations in the percentages of Aboriginal and Torres Strait Islander children who were fully immunised in all three age groups. The largest variation was recorded for 1 year olds and 5 year olds. The percentages of children aged 1 who were fully immunised ranged from 94% to

69%, and for children aged 5, the percentages ranged from 95% to 70%. The percentages of children aged 2 years who were fully immunised ranged from 97% to 80%.

Figure 5 on the opposite page compares the percentages of Aboriginal and Torres Strait Islander children fully immunised for 1 year olds, 2 year olds and 5 year olds by Medicare Local catchment.

The figure shows that the percentages of children who were fully immunised at 2 years almost always exceeded that recorded for 1 year olds. The percentages recorded for 5 year olds was almost always lower than that for 2 year olds.



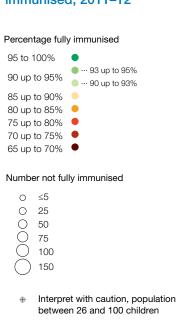
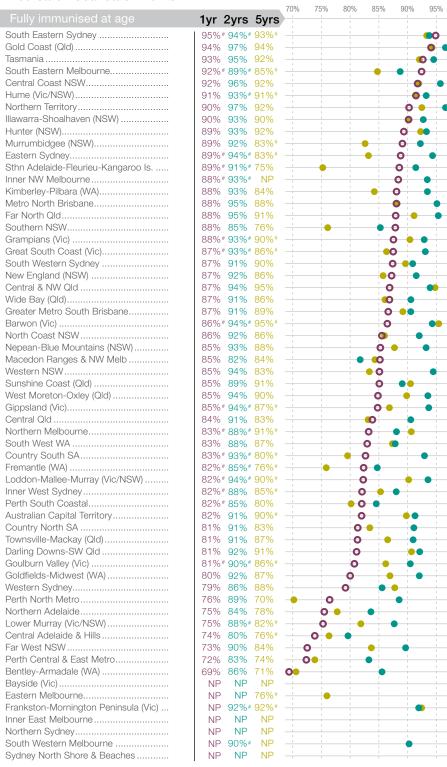




Figure 5: Percentages of Aboriginal and Torres Strait Islander children¹ in each of 61 Medicare Local catchments that are fully immunised by age, 2011–12

Medicare Local catchments



Definitions of fully immunised at:

O 1 year

Fully immunised at 1 year means that a child aged 12 months to less than 15 months received their third vaccination for diphtheria, tetanus, whooping cough and polio and either their second or third vaccination (dependent on the type of vaccine used) for hepatitis B and Haemophilus influenzae type b, all prior to the age of 1 year. It is assumed that all previous vaccinations were received.

2 years

Fully immunised at 2 years means that a child aged 24 to less than 27 months received their third or fourth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus, whooping cough and *Haemophilus influenzae* type b, their third vaccination for polio and hepatitis B and their first vaccination for measles, mumps and rubella, all prior to the age of 2 years. It is assumed that all previous vaccinations were received.

5 years

Fully immunised at 5 years means that a child aged 60 to less than 63 months received their fourth or fifth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus and whooping cough, their fourth vaccination for polio and their second vaccination for measles mumps and rubella, all prior to the age of 5 years. It is assumed that all previous vaccinations were received.

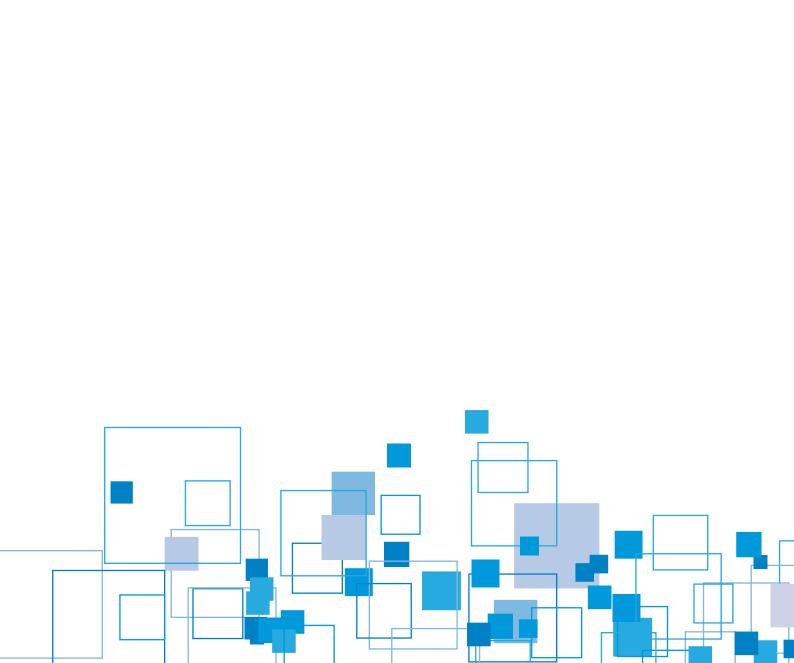
Interpret with caution: the eligible population is between 26 and 100 children, so small data errors can affect results.

NP Not published as less than 26 registered children in age group.

Note: Interpret with caution: the eligible population is between 26 and 100 Aboriginal or Torres Strait Islander children, so small data errors can affect results.

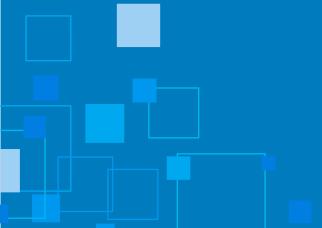
Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/1/2013.

^{1.} Data are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.



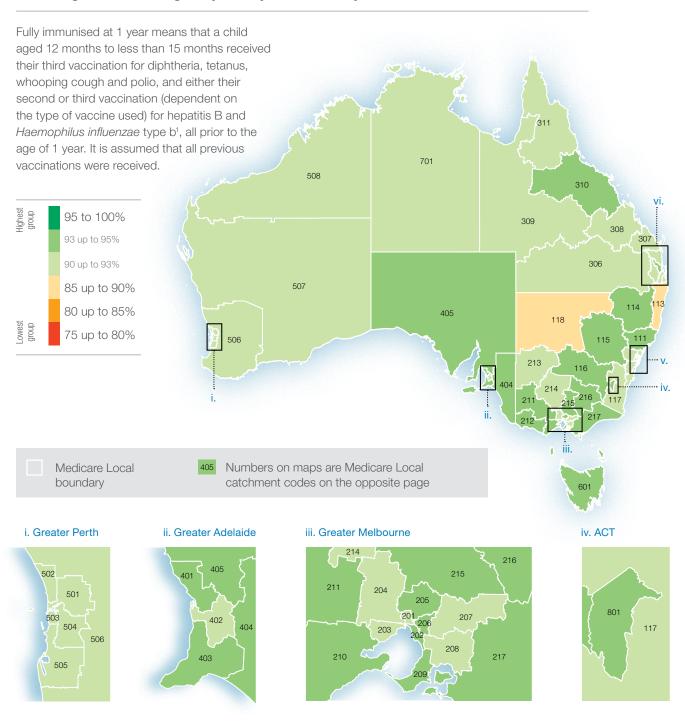
Child immunisation rates

Medicare Local catchments 2011–12



Children aged 1 year who were fully immunised, 2011–12

Percentages of children aged 1 year fully immunised, by Medicare Local catchment, 2011-12



For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A - Z. www.immunise.health.gov.au Accessed 26/02/2013.

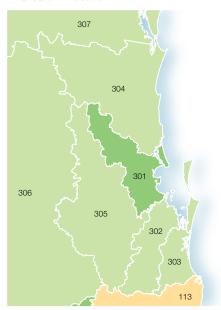
Note: Data exclude a number of invalid and unallocated postcodes – for more information see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* www.nhpa.gov.au

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

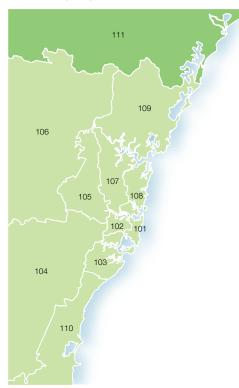
^{2.} Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.

Number not fully

vi. Greater Brisbane



v. Greater Sydney



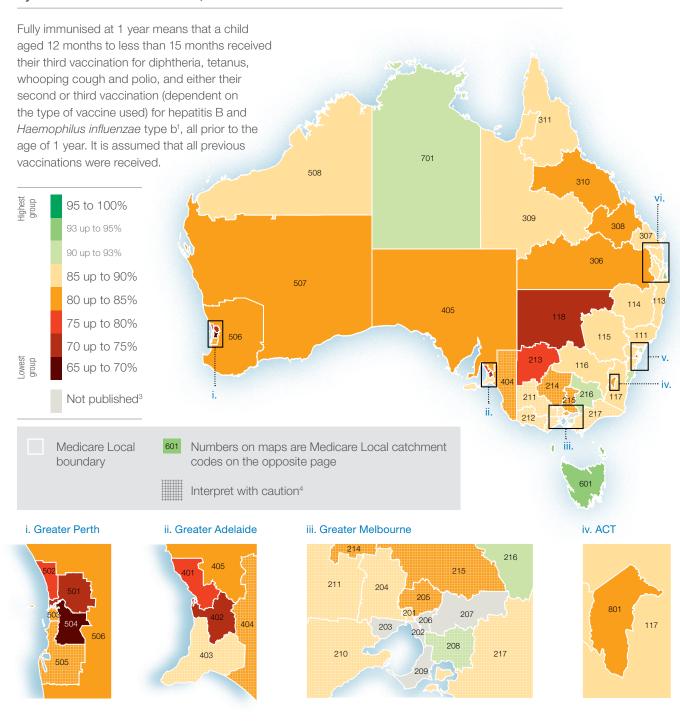
Statistical Area Level 3 and postcode-level data available at www.nhpa.gov.au

Percentages of children aged 1 year fully immunised², by Medicare Local catchment, 2011–12

Map Ref.	Medicare Local catchments						not fully immunised
	ational fully immunised rate	92%	70%	80%	90%	100%	1 year
	<u> </u>			1 1			
212 216	Great South Coast (Vic)	94%	1 1	1 1			- 69
210	Hume (Vic/NSW)	94%					135 199
116	Barwon (Vic)	94%					151
211	Grampians (Vic)	94%	1 1	1 1			157
215	Goulburn Valley (Vic)	94%		1 1			118
801	Australian Capital Territory	94%		- 1 1			326
217	Gippsland (Vic)	93%		1 1			208
114	New England (NSW)	93%		- 1 1			170
115	Western NSW	93%		1 1			249
405	Country North SA	93%					164
111	Hunter (NSW)	93%			•		598
202	Bayside (Vic)	93%					491
403	Sthn Adelaide-Fleurieu-Kangaroo Is	93%	+++				333
310	Townsville-Mackay (Qld)	93%			•		430
404	Country South SA	93%	-	1 1	100		113
301	Metro North Brisbane	93%	+ +	- 1 1	- 1		846
209	Frankston-Mornington Peninsula (Vic)	93%					254
206	Inner East Melbourne	93%				-	466
401	Northern Adelaide	93%					413
601	Tasmania	93%	-	- 1 1			461
205	Northern Melbourne	93%					664
203	South Western Melbourne	92%		- 1 1			351
103 307	South Eastern Sydney	92%		1 1			479
204	Wide Bay (Qld)	92% 92%			1:1		- 173 - 542
110	Illawarra-Shoalhaven (NSW)	92%					341
208	South Eastern Melbourne	92%					563
106	Nepean-Blue Mountains (NSW)	92%	_	1 1	- -		382
207	Eastern Melbourne	92%		- 1			404
214	Loddon-Mallee-Murray (Vic/NSW)	92%					214
308	Central Qld	92%					253
508	Kimberley-Pilbara (WA)	92%		- 1 - 1	i		128
117	Southern NSW	92%	1 1	1 1			178
306	Darling Downs-SW Qld	92%					346
109	Central Coast NSW	92%					330
701	Northern Territory	92%	+ +	+ +			305
305	West Moreton-Oxley (Qld)	92%	-	1 1			478
102	Inner West Sydney	92%				_	692
104	South Western Sydney	91%			- 1		1144
107	Northern Sydney	91%	-		3		385
201	Inner NW Melbourne	91%		11		i	445
108	Sydney North Shore & Beaches	91%					540
303 309	Gold Coast (Qld)	91%					576
105	Western Sydney	91%					70 1200
302	Greater Metro South Brisbane	91%					1150
402	Central Adelaide & Hills	91%					478
502	Perth North Metro	91%		1 1			642
213	Lower Murray (Vic/NSW)	91%					80
505	Perth South Coastal	91%		- i i			318
506	South West WA	90%					365
507	Goldfields-Midwest (WA)	90%	-1-1				182
311	Far North Qld	90%		<u> </u>			408
504	Bentley-Armadale (WA)	90%	1 1	1 1			552
501	Perth Central & East Metro	90%			•		533
503	Fremantle (WA)	90%		- 1 - 1	•		289
101	Eastern Sydney	90%	- 1		•		462
304	Sunshine Coast (Qld)	90%	1 1	1 1	•		425
113	North Coast NSW	88%					685
118	Far West NSW	85%					79

Aboriginal and Torres Strait Islander children aged 1 year who were fully immunised, 2011–12

Percentages of Aboriginal and Torres Strait Islander children aged 1 year fully immunised, by Medicare Local catchment, 2011–12



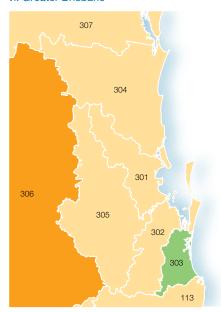
- 1. For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A Z. www.immunise.health.gov.au Accessed 26/02/2013.
- 2. Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.
- 3. Medicare Local catchments with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 4. Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

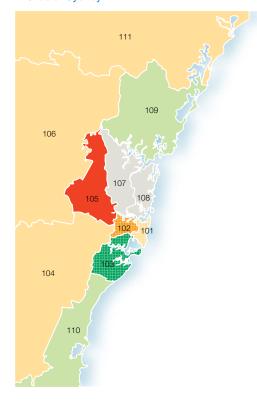
Number not fully

Aboriginal and
Torres Strait O All children

vi. Greater Brisbane



v. Greater Sydney



Percentage of Aboriginal and Torres Strait Islander children aged 1 year fully immunised2, by Medicare Local catchment, 2011–12

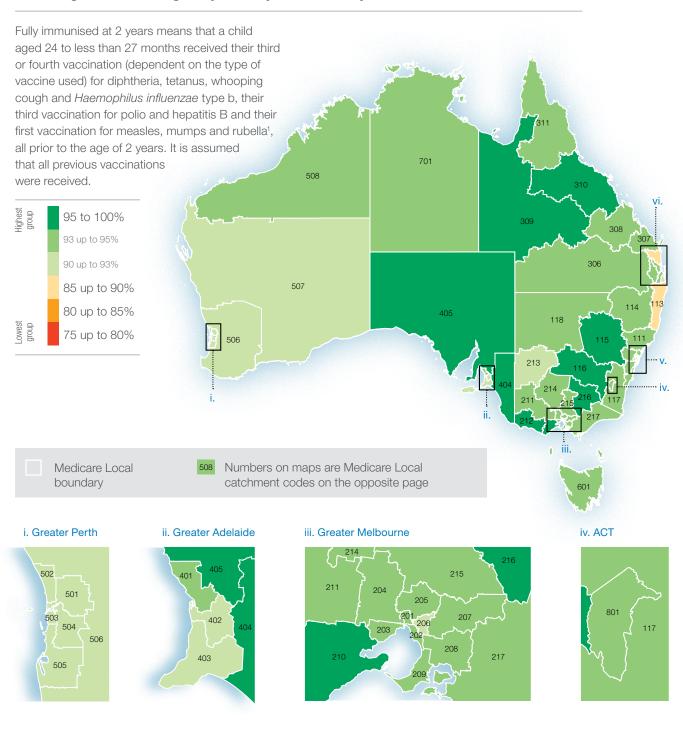
Map Ref.	Medicare Local catchments		Torres Islander ch	Strait	o All ch	ildren	Number not fully immunised
	akia walifullu inamu wia ad waka	0.50/	70%	80%	90%	100%	1 year
	<u> </u>	85%					1 year
103	South Eastern Sydney	95%					≤5
303	Gold Coast (Qld)	94%			0		- 7
601	Tasmania	93%			0		27
208	South Eastern Melbourne	92%			0		- ≤5
109	Central Coast NSW	92%			0		- 16
216 701	Hume (Vic/NSW)	91%					- 9
110	Northern Territory	90%			0		145 28
111	Hunter (NSW)	89%		- - -	0		- 59
116	Murrumbidgee (NSW)	89%					- 23
101	Eastern Sydney	89%					- ≤5
403	Sthn Adelaide-Fleurieu-Kangaroo Is	89%			-		10
201	Inner NW Melbourne	88%					≤5
508	Kimberley-Pilbara (WA)	88%		- 1		i i	72
301	Metro North Brisbane	88%	, 🕌		- 0	-	40
311	Far North Qld	88%	, -		-0		148
117	Southern NSW	88%	, ; ;	- 1	0		16
211	Grampians (Vic)	88%	4 + 1		0	1	- 7
212	Great South Coast (Vic)	87%	4			-	≤5
104	South Western Sydney	87%	, —		0	-	- 33
114	New England (NSW)	87%			 0		57
309	Central & NW Qld	87%			0		40
307	Wide Bay (Qld)	87%	1 1				25
302	Greater Metro South Brisbane	87%			- 10		57
210	Barwon (Vic)	86%					≤5
113	North Coast NSW	86%		1			84
106	Nepean-Blue Mountains (NSW)	85%					- 25
204	Macedon Ranges & NW Melb	85%					- 6
115	Western NSW	85%					- 81
304	Sunshine Coast (Qld)	85% 85%					- 22 - 42
305 217	West Moreton-Oxley (Qld)	85%					14
308	Central Qld	84%					59
205	Northern Melbourne	83%					- 16
506	South West WA	83%					42
404	Country South SA	83%			Ī		13
503	Fremantle (WA)	82%			0		- 12
214	Loddon-Mallee-Murray (Vic/NSW)	82%			0		16
102	Inner West Sydney	82%	4				14
505	Perth South Coastal	82%	4		0		16
801	Australian Capital Territory	82%	, 🔠	•	-		21
405	Country North SA	81%			0		48
310	Townsville-Mackay (Qld)	81%		-	0		129
306	Darling Downs-SW Qld	81%	, —		0		93
215	Goulburn Valley (Vic)	81%	4	•			16
507	Goldfields-Midwest (WA)	80%		•	\(\)		72
105	Western Sydney	79%		•	0		42
502	Perth North Metro	76%		•	0		34
401	Northern Adelaide	75%					- 53
213	Lower Murray (Vic/NSW)	75%			0		- 26
402	Central Adelaide & Hills	74%			0		29
118	Far West NSW	73%					44
501	Perth Central & East Metro	72%			0		40
504	Bentley-Armadale (WA)	69%			9		74
202	Bayside (Vic)	NF					
207 209	Eastern Melbourne	NF NF					
209	Frankston-Mornington Peninsula (Vic) Inner East Melbourne	NF					
107	Northern Sydney	NF					
203	South Western Melbourne	NF					
108	Sydney North Shore & Beaches	1					
100	Cydnoy North Onord & Deadiles	1 141					

Data exclude a number of invalid and unallocated postcodes - for more information see Healthy Communities: Immunisation rates for children in Notes: 2011–12, Technical Supplement www.nhpa.gov.au

This data reflects the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2011–12. Levels of identification may vary between Medicare Local catchments.

Children aged 2 years who were fully immunised, 2011–12

Percentages of children aged 2 years fully immunised, by Medicare Local catchment, 2011-12



For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A - Z. www.immunise.health.gov.au Accessed 26/02/2013.

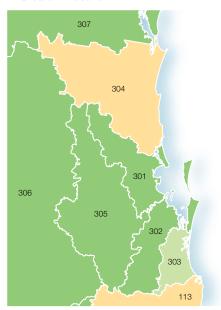
Note: Data exclude a number of invalid and unallocated postcodes – for more information see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* www.nhpa.gov.au

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

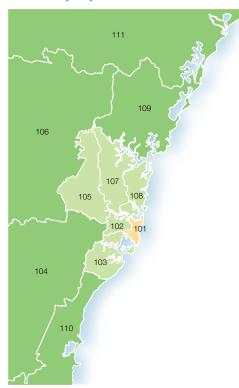
^{2.} Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.

Number not fully

vi. Greater Brisbane



v. Greater Sydney



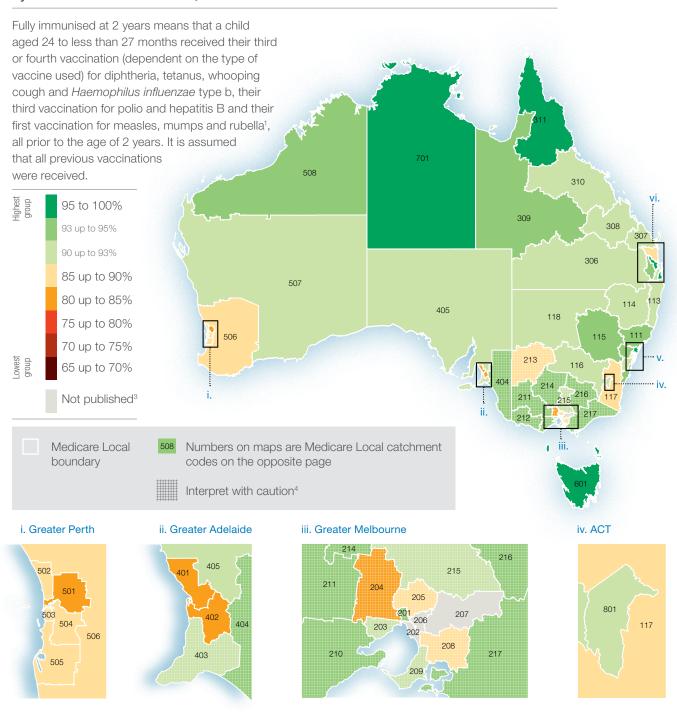
Statistical Area Level 3 and postcode-level data available at www.nhpa.gov.au

Percentages of children aged 2 years fully immunised², by Medicare Local catchment, 2011–12

Map Ref.	Medicare Local catchments	i					Number not fully immunised
	ational fully immunised rate	93%	70%	80%	90%	100%	2 years
212	Great South Coast (Vic)	196%					48
115	Western NSW	95%					169
405	Country North SA	95%					120
216	Hume (Vic/NSW)	95%					128
309	Central & NW Qld	95%	- 1				40
404	Country South SA	95%					87
116	Murrumbidgee (NSW)	95%					139
310	Townsville-Mackay (Qld)	95%					314
210	Barwon (Vic)	95%	- 1				197
701	Northern Territory	94%					206
214	Loddon-Mallee-Murray (Vic/NSW)	94%					144
114	New England (NSW)	94%					136
111	Hunter (NSW)	94%					498
211	Grampians (Vic)	94%	- !				146
217	Gippsland (Vic)	94%					187
109	Central Coast NSW	94%					242
307	Wide Bay (Qld)	94%	_				147
801	Australian Capital Territory	94%	- 1				319
106	Nepean-Blue Mountains (NSW)	94%					308
601	Tasmania	94%					401
308	Central Old	94%	- 1				211
311	Far North Qld	94%	- 1				261
118	Far West NSW	94%					36
306	Darling Downs-SW Qld	94%					276
110	Illawarra-Shoalhaven (NSW)	94%	- 1				306
205	Northern Melbourne	93%	- !				583
208	South Eastern Melbourne	93%					498
117	Southern NSW	93%					153
209	Frankston-Mornington Peninsula (Vic)	93%	-		1 51		243
401	Northern Adelaide	93%	- !		1 51		376
508	Kimberley-Pilbara (WA)	93%					107
301	Metro North Brisbane	93%					799
215	Goulburn Valley (Vic)	93%	- 1		1 1		138
203	South Western Melbourne	93%			111		329
104	South Western Sydney	93%					958
204	Macedon Ranges & NW Melb	93%					520
207	Eastern Melbourne	93%	- 1		111		380
201	Inner NW Melbourne	93%					355
305	West Moreton-Oxley (Qld)	93%					437
202	Bayside (Vic)	93%	i				492
302	Greater Metro South Brisbane	93%	-		111		969
206	Inner East Melbourne	92%	- !				491
213	Lower Murray (Vic/NSW)	92%			11		68
107	Northern Sydney	92%					364
507	Goldfields-Midwest (WA)	92%			111		142
403	Sthn Adelaide-Fleurieu-Kangaroo Is	92%	-				357
103	South Eastern Sydney	92%					492
105	Western Sydney	92%	-				1097
506	South West WA	92%					322
303	Gold Coast (Qld)	91%					589
505	Perth South Coastal	91%					302
102	Inner West Sydney	91%					724
502	Perth North Metro	91%					660
402	Central Adelaide & Hills	91%					514
504	Bentley-Armadale (WA)	90%	-				530
503	Fremantle (WA)	90%	-				284
501	Perth Central & East Metro	90%	-				553
108	Sydney North Shore & Beaches	90%					651
304	Sunshine Coast (Qld)	89%	<u>i</u>	1 1			475
101	Eastern Sydney	89%	-				473
113	North Coast NSW	89%					666

Aboriginal and Torres Strait Islander children aged 2 years who were fully immunised, 2011–12

Percentages of Aboriginal and Torres Strait Islander children aged 2 years fully immunised, by Medicare Local catchment, 2011–12



- 1. For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A Z. www.immunise.health.gov.au Accessed 26/02/2013.
- 2. Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.
- 3. Medicare Local catchments with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 4. Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

o All children

90%

Number not fully

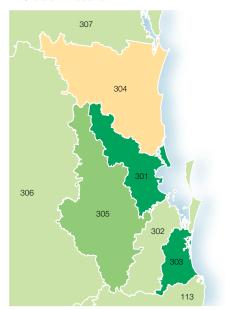
immunised

Medicare Local catchments

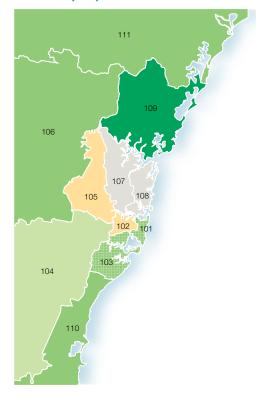
Мар

Ref.

vi. Greater Brisbane



v. Greater Sydney



Percentages of Aboriginal and Torres Strait Islander children aged 2 years fully immunised², by Medicare Local catchment, 2011–12

Aboriginal and Torres Strait

Islander children

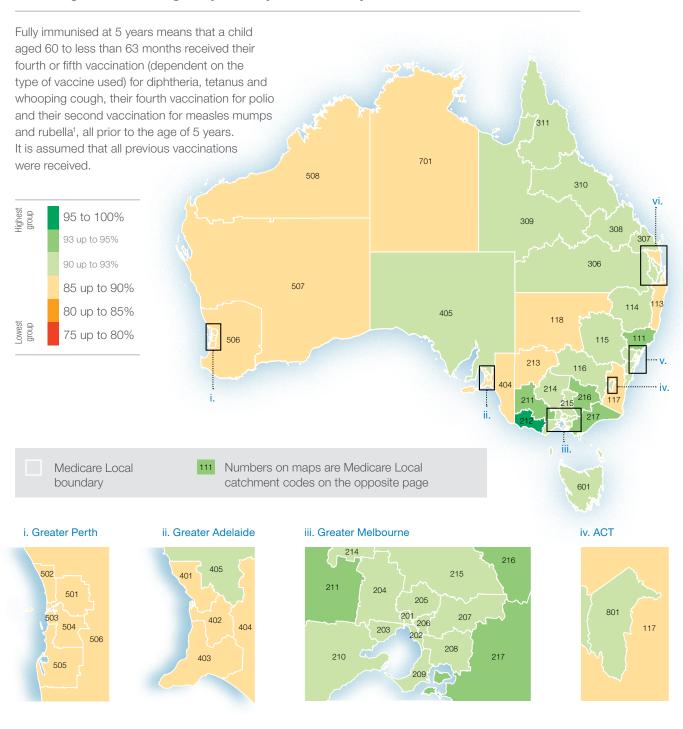
Cantral Coast NSW		National fully immunised rate	92%	70%	80%	90%	100%	2 years
303 Gold Coast (Old) 97% 98% 98% 99 98% 99% 57 9 98% 99% 57 98% 99% 57 9 98% 99% 57 9 98% 99% 57 9 98% 99% 57 9 98% 95% 95% 95% 95% 95% 95% 95% 95% 95% 95					1 1			
109 Central Coast NSW. 96% 9 9 9 311 Far North Old. 95% 95% 95 57 101 Metro North Brisbane. 95% 95% 16 16 16 17 asmania. 95% 92% 92% 94% 95% 922 115 Western NSW. 94% 94% 95% 92% 94% 95% 92% 94% 95% 95% 95% 95% 95% 95% 95% 95% 95% 95		· ·		+	1 1			
Sample					1 1	•		
Solition			1					
601 Tasmania			1			0		
115 Western NSW			1	Ť	1 1	0		
101 Eastern Sydney			1					
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404 Country South SA		. , ,	1					
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504 Bentley-Armadale (WA) 86% 31 117 Southern NSW 85% 17 503 Fremantle (WA) 85% ⁴ 11 505 Perth South Coastal 85% 32 401 Northern Adelaide 84% 32 501 Perth Central & East Metro 83% 27 204 Macedon Ranges & NW Melb 82% ⁴ 8 402 Central Adelaide & Hills 80% 26 202 Bayside (Vic) NP³ 26 207 Eastern Melbourne NP³ NP³ 206 Inner East Melbourne NP³ NP³ 107 Northern Sydney NP³ NP³	105	Western Sydney	86%					33
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505 Perth South Coastal 85% 17 401 Northern Adelaide 84% 32 501 Perth Central & East Metro 83% 27 204 Macedon Ranges & NW Melb 82% ⁴ 8 402 Central Adelaide & Hills 80% 26 202 Bayside (Vic) NP³ NP³ 206 Inner East Melbourne NP³ NP³ 107 Northern Sydney NP³ NP³	117	Southern NSW	85%	-		0		17
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501 Perth Central & East Metro 83% 27 204 Macedon Ranges & NW Melb 82% ⁴ 8 402 Central Adelaide & Hills 80% 26 202 Bayside (Vic) NP³ NP³ 207 Eastern Melbourne NP³ NP³ 206 Inner East Melbourne NP³ NP³ 107 Northern Sydney NP³ NP³	401	Northern Adelaide	84%	<u> </u>				32
402 Central Adelaide & Hills 80% 26 202 Bayside (Vic) NP³ 207 Eastern Melbourne NP³ 206 Inner East Melbourne NP³ 107 Northern Sydney NP³	501	Perth Central & East Metro	83%	-	1 1	0		27
202 Bayside (Vic) NP3 207 Eastern Melbourne NP3 206 Inner East Melbourne NP3 107 Northern Sydney NP3	204	Macedon Ranges & NW Melb	82%4	+	1	, b		8
207 Eastern Melbourne	402	Central Adelaide & Hills	80%	-	 •	0		26
206 Inner East Melbourne NP3 107 Northern Sydney NP3	202	, ,		+	1 1		<u> </u>	
107 Northern Sydney	207	Eastern Melbourne	NP ³	+				
	206	Inner East Melbourne	1	-	1 1			
108 Sydney North Shore & Beaches NP ³				+	1			
	108	Sydney North Shore & Beaches	I NP ³					

Notes: Data exclude a number of invalid and unallocated postcodes – for more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

This data reflects the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2011–12. Levels of identification may vary between Medicare Local catchments.

Children aged 5 years who were fully immunised, 2011–12

Percentages of children aged 5 years fully immunised, by Medicare Local catchment, 2011-12



For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A - Z. www.immunise.health.gov.au Accessed 26/02/2013.

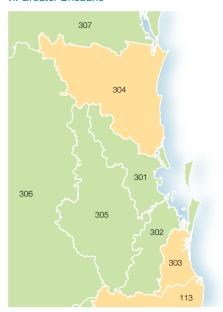
Note: Data exclude a number of invalid and unallocated postcodes – for more information see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* www.nhpa.gov.au

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

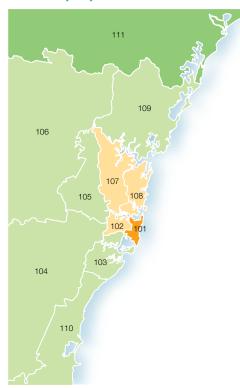
^{2.} Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.

Number not fully

vi. Greater Brisbane



v. Greater Sydney



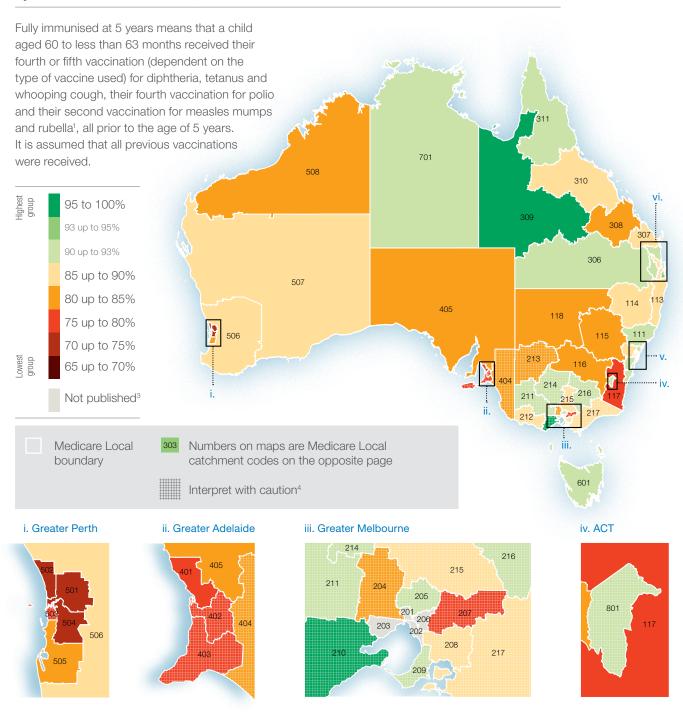
Statistical Area Level 3 and postcode-level data available at www.nhpa.gov.au

Percentages of children aged 5 years fully immunised², by Medicare Local catchment, 2011–12

Map Ref.	Medicare Local catchments	S					not fully immunised
N	ational fully immunised rate	90%	70%	80%	90%	100%	5 years
212	Great South Coast (Vic)						71
216	Hume (Vic/NSW)						168
217	Gippsland (Vic)	1					234
111	Hunter (NSW)					1	623
211	Grampians (Vic)						202
116	Murrumbidgee (NSW)	. 92%	-	-		1 1	201
110	Illawarra-Shoalhaven (NSW)	. 92%	-		•		362
307	Wide Bay (Qld)	. 92%	-			H	197
214	Loddon-Mallee-Murray (Vic/NSW)	. 92%	-			1 1	216
210	Barwon (Vic)	1	-		•		285
109	Central Coast NSW				•		336
202	Bayside (Vic)						537
309	Central & NW Qld				•		57
114	New England (NSW)	1					208
801	Australian Capital Territory	1					398
103	South Eastern Sydney						501
306 310	Darling Downs-SW Qld Townsville-Mackay (Qld)						371 484
206	Inner East Melbourne	1					604
205	Northern Melbourne						770
209	Frankston-Mornington Peninsula (Vic)						329
204	Macedon Ranges & NW Melb	1					622
405	Country North SA						228
203	South Western Melbourne						372
601	Tasmania				-		592
208	South Eastern Melbourne	. 91%	-		- 5	i	693
207	Eastern Melbourne	. 91%	-		-		492
215	Goulburn Valley (Vic)	. 91%	-		<u> </u>		194
305	West Moreton-Oxley (Qld)	. 91%	- 1		<u> </u>		539
301	Metro North Brisbane	. 91%	-		<u> </u>		1098
104	South Western Sydney		-				1274
115	Western NSW	1	-				352
311	Far North Qld	1					376
106	Nepean-Blue Mountains (NSW)					Ħ.	480
302	Greater Metro South Brisbane						1252
201 105	Inner NW Melbourne						417 1287
308	Western Sydney Central Qld	1			.		328
107	Northern Sydney						543
117	Southern NSW						265
506	South West WA						446
701	Northern Territory						377
507	Goldfields-Midwest (WA)	1				i	192
303	Gold Coast (Qld)	. 89%				-	742
404	Country South SA	. 89%					203
102	Inner West Sydney	. 88%	-				782
401	Northern Adelaide	. 88%					630
118	Far West NSW		-				62
213	Lower Murray (Vic/NSW)	1					113
108	Sydney North Shore & Beaches	1					757
505	Perth South Coastal	1					456
304	Sunshine Coast (Qld)	1					602
503	Fremantle (WA)						368
502	Perth North Metro					1	940
403 402	Sthn Adelaide-Fleurieu-Kangaroo Is Central Adelaide & Hills	1					- 621 - 755
508	Kimberley-Pilbara (WA)						755 206
504	Bentley-Armadale (WA)	1			<u> </u>		741
501	Perth Central & East Metro	1					787
113	North Coast NSW	1					896
101	Eastern Sydney						592
	, ,			_			

Aboriginal and Torres Strait Islander children aged 5 years who were fully immunised, 2011–12

Percentages of Aboriginal and Torres Strait Islander children aged 5 years fully immunised, by Medicare Local catchment, 2011–12



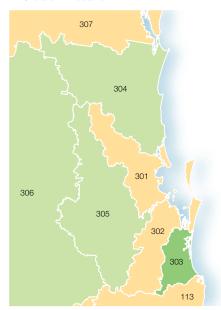
- For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A Z. www.immunise.health.gov.au Accessed 26/02/2013.
- 2. Results are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places.
- Medicare Local catchments with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 4. Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

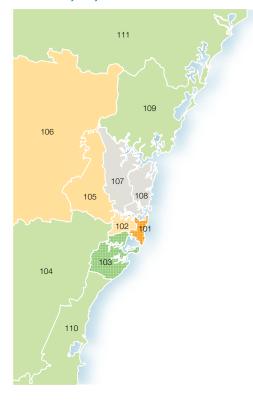
Number not fully

Aboriginal and
Torres Strait O All children

vi. Greater Brisbane



v. Greater Sydney

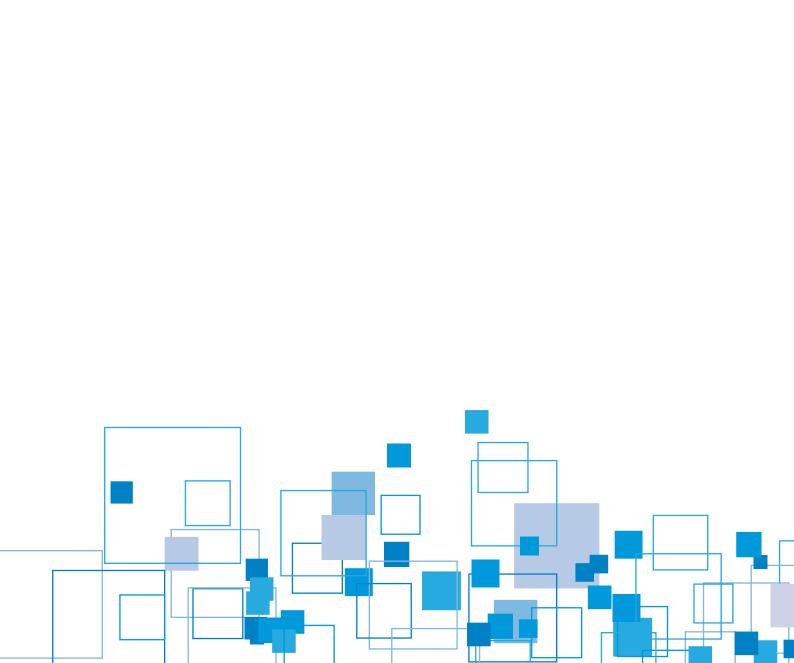


Percentages of Aboriginal and Torres Strait Islander children aged 5 years fully immunised2, by Medicare Local catchment, 2011-12

Ma Re		Medicare Local catchments		Islander cl	hildren			immunised
ne				70%	80%	90%	100%	
	N	ational fully immunised rate	87%			•		5 years
21	10	Barwon (Vic)	95%	4				≤5
30	9	Central & NW Qld	95%	-				12
30)3	Gold Coast (Qld)	94%			•		9
10	03	South Eastern Sydney	93%	4		0	i i	≤5
70)1	Northern Territory	92%			0		110
20	9	Frankston-Mornington Peninsula (Vic)	92%	4	1 1	0	1 1	≤5
11	11	Hunter (NSW)	92%			. 0	-	35
60)1	Tasmania	92%			0		27
10	9	Central Coast NSW	92%			0		15
21	16	Hume (Vic/NSW)	91%	4	1 1		i i	6
31	11	Far North Qld	91%				-	95
30	06	Darling Downs-SW Qld	91%			0	-	40
20)5	Northern Melbourne	91%			0		7
30		Sunshine Coast (Qld)	91%					10
21		Grampians (Vic)	90%					≤5
11		Illawarra-Shoalhaven (NSW)	90%					19
21		Loddon-Mallee-Murray (Vic/NSW)	90%					- 8
30		West Moreton-Oxley (Qld)	90%					- 33
80		Australian Capital Territory	90%					10
10		South Western Sydney	90%					- 22
30		Greater Metro South Brisbane	89%					43
30		Metro North Brisbane	88%					33
)5		88%					24
		Western Sydney				1 1		
	06	Nepean-Blue Mountains (NSW)	88%					17
50		South West WA	87%					32
50		` /	87%					45
21		Gippsland (Vic)	87%					10
31		Townsville-Mackay (Qld)	87%					78
21		Great South Coast (Vic)	86%				9	≤5
21		Goulburn Valley (Vic)	86%			P		9
30		Wide Bay (Qld)	86%			0		24
	13	North Coast NSW	86%			0		75
11		New England (NSW)	86%					50
)2	Inner West Sydney	85%			0	i i	12
20		South Eastern Melbourne	85%	1				6
20		Macedon Ranges & NW Melb	84%		 	10		6
50		Kimberley-Pilbara (WA)	84%		1	0		87
	18	Far West NSW	84%					23
40		Country North SA	83%		-	: 0	-	36
11	15	Western NSW	83%		-	0	-	78
10)1	Eastern Sydney	83%	4	1 1		+	7
30	8(Central Qld	83%		-	. •		54
11	16	Murrumbidgee (NSW)	83%		-		-	32
21	13	Lower Murray (Vic/NSW)	82%	4	-	•		14
50)5	Perth South Coastal	80%		-	•	-	24
40)4	Country South SA	80%	4	<u> </u>	0	+	16
40)1	Northern Adelaide	78%	-	-			35
40)2	Central Adelaide & Hills	76%			· O .		24
11	17	Southern NSW	76%			0	-	28
20)7	Eastern Melbourne	76%					7
50	03	Fremantle (WA)	76%			0	1	14
40		Sthn Adelaide-Fleurieu-Kangaroo Is	75%				1	20
50		Perth Central & East Metro	74%	1		0		45
50		Bentley-Armadale (WA)	71%		1 1	0		61
50		Perth North Metro	70%			0		48
20		Bayside (Vic)	NP					10
20		Inner East Melbourne	NP					
20		Inner NW Melbourne	NP					
)7	Northern Sydney	NP					
20		South Western Melbourne	NP					
)8	Sydney North Shore & Beaches	NP					
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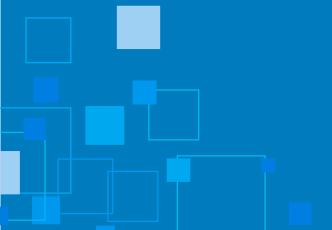
Data exclude a number of invalid and unallocated postcodes - for more information see Healthy Communities: Immunisation rates for children in Notes: 2011–12, Technical Supplement www.nhpa.gov.au

This data reflects the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2011–12. Levels of identification may vary between Medicare Local catchments.



Child immunisation rates

Statistical areas 2011–12



Children aged 1 year who were fully immunised, by statistical area, 2011–12

Variation within Medicare Local catchments

The maps on these pages show the percentages of children aged 1 year who were fully immunised by geographic areas referred to as Statistical Areas Level 3 (SA3). The numbers of children not fully immunised for each statistical area are also shown.

There was large variation in the number of children aged 1 year not fully immunised across statistical areas¹, ranging from less than 25 children to around 270.

Findings

In 2011–12, the percentages of children aged 1 year who were fully immunised varied across statistical areas¹, ranging from 96% to 82%.

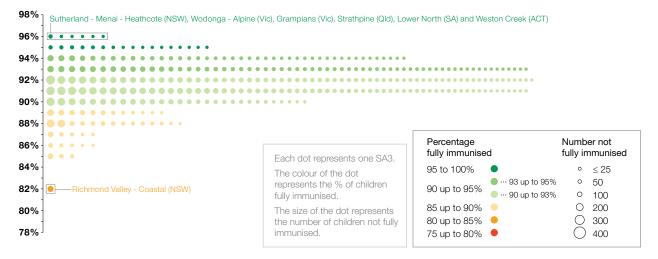
The statistical areas¹ with the highest percentage were Sutherland - Menai - Heathcote (NSW), Wodonga - Alpine (Vic), Grampians (Vic), Strathpine (Qld), Lower North (SA) and Weston Creek (ACT). The statistical area¹ with the lowest percentage was Richmond Valley - Coastal (NSW).

The location of the statistical areas¹ with the highest and lowest percentages are shown on the maps.

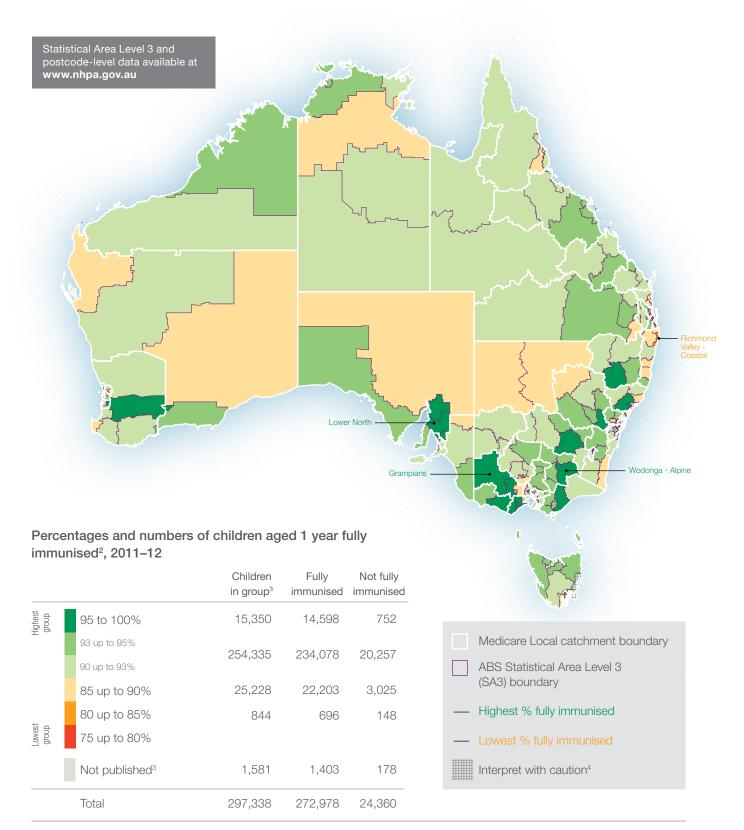
What does fully immunised at 1 year mean?

Fully immunised at 1 year means that a child aged 12 months to less than 15 months received their third vaccination for diphtheria, tetanus, whooping cough and polio, and either their second or third vaccination (dependent on the type of vaccine used) for hepatitis B and *Haemophilus influenzae* type b, all prior to the age of 1 year. It is assumed that all previous vaccinations were received.

Percentages of children aged 1 year who are fully immunised by number not fully immunised² and statistical area¹, 2011–12



Percentages of children aged 1 year fully immunised, by statistical area, 2011-12



^{1.} For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.

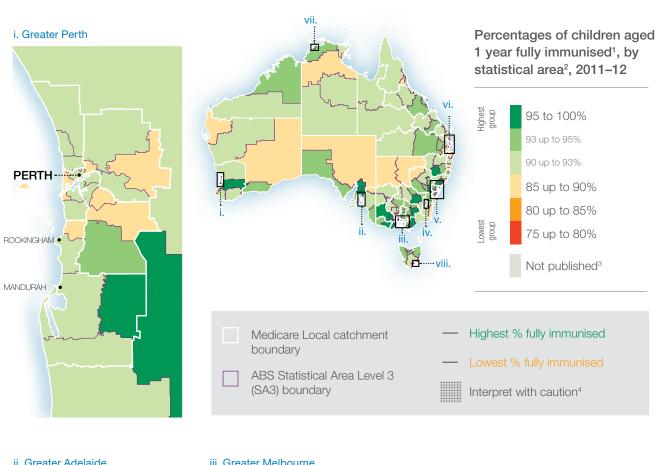
^{2.} Figures are rounded - see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

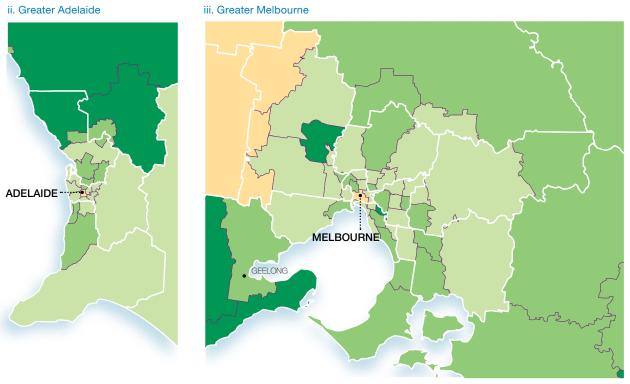
^{3.} SA3 data exclude a number of invalid and unallocated postcodes, and SA3s with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

^{1.} Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Children aged 1 year who were fully immunised, by statistical area, 2011–12

Variation within Medicare Local catchments

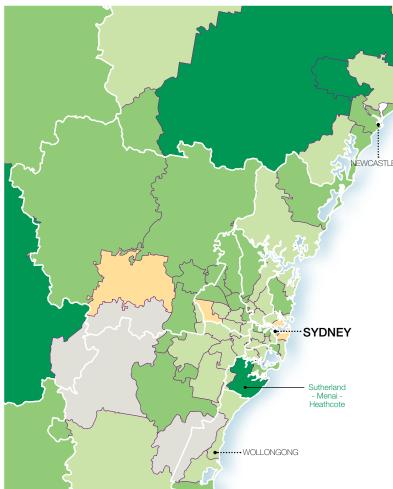




iv. ACT



v. Greater Sydney



vi. Greater Brisbane



vii. Greater Darwin



viii. Greater Hobart



- 1. Figures are rounded see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 2. For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.
- 3. SA3s with less than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* www.nhpa.gov.au
- 4. Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Children aged 2 years who were fully immunised, by statistical area, 2011–12

Variation within Medicare Local catchments

The maps on these pages show the percentages of children aged 2 years who were fully immunised by geographic areas referred to as Statistical Areas Level 3 (SA3). The numbers of children not fully immunised for each statistical area are also shown.

Findings

In 2011–12, the percentage of children aged 2 years who were fully immunised varied across statistical areas¹, ranging from 97% to 80%.

The statistical areas¹ with the highest percentage were Camden (NSW), Charters Towers - Ayr - Ingham (Qld), Mid North (SA), East Arnhem (NT), Whitsunday (Qld) and Loddon-Elmore (Vic).

The statistical area¹ with the lowest percentage was Richmond Valley - Coastal (NSW).

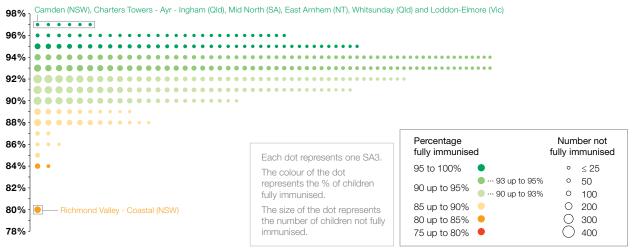
The location of the statistical areas¹ with the highest and lowest percentages are shown on the maps.

There was large variation in the number of children aged 2 years not fully immunised across statistical areas¹, ranging from less than 25 children to around 260.

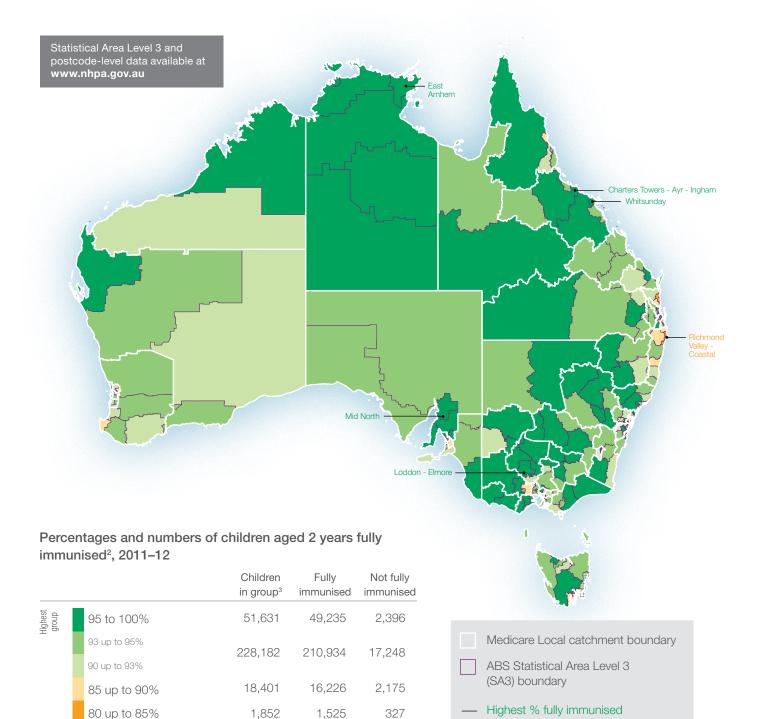
What does fully immunised at 2 years mean?

Fully immunised at 2 years means that a child aged 24 to less than 27 months received their third or fourth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus, whooping cough and *Haemophilus influenzae* type b, their third vaccination for polio and hepatitis B and their first vaccination for measles, mumps and rubella, all prior to the age of 2 years. It is assumed that all previous vaccinations were received.

Percentages of children aged 2 years who are fully immunised by number not fully immunised² and statistical area¹, 2011–12



Percentages of children aged 2 years fully immunised, by statistical area, 2011-12



1,428

279,349

190

22,334

Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14/01/2013.

75 up to 80%

Not published³

Total

_owest

1,618

301,683

Interpret with caution4

For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.

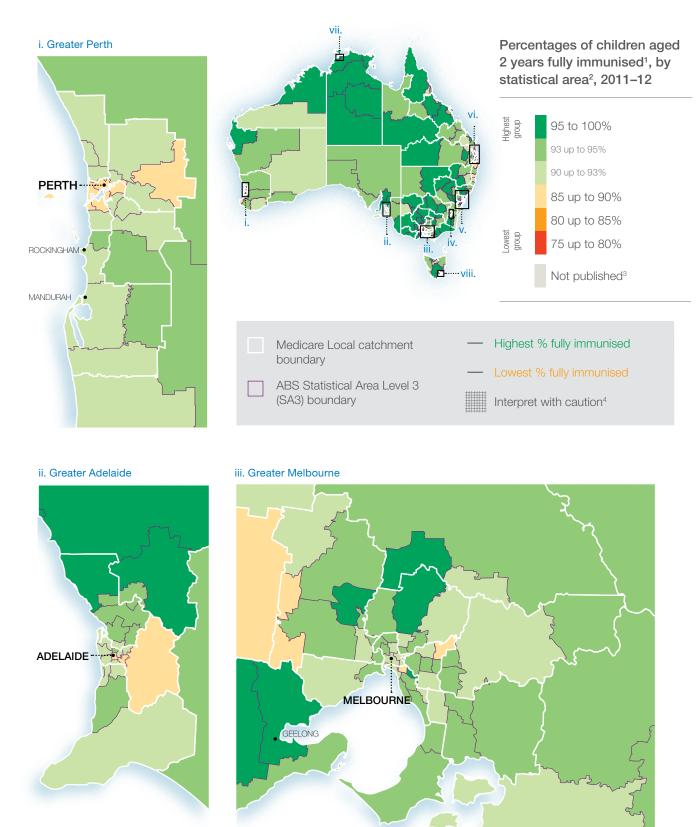
Figures are rounded - see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

SA3 data exclude a number of invalid and unallocated postcodes, and SA3s with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results

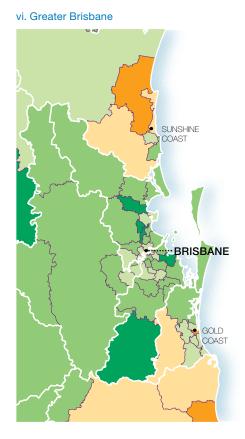
Children aged 2 years who were fully immunised, by statistical area, 2011–12

Variation within Medicare Local catchments

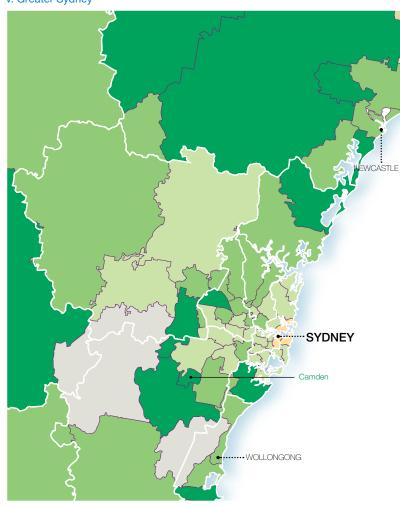


iv. ACT





v. Greater Sydney



vii. Greater Darwin



viii. Greater Hobart



- 1. Figures are rounded see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 2. For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.
- 3. SA3s with less than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement* www.nhpa.gov.au
- 1. Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Children aged 5 years who were fully immunised, by statistical area, 2011–12

Variation within Medicare Local catchments

The maps on these pages show the percentages of children aged 5 years who were fully immunised by geographic areas referred to as Statistical Areas Level 3 (SA3)¹. The numbers of children not fully immunised for each statistical area¹ are also shown.

There was large variation in the number of children aged 5 years not fully immunised across statistical areas¹, ranging from less than 25 children to around 360.

Findings

In 2011–12, the percentages of children aged 5 years who were fully immunised varied across statistical areas¹, ranging from 96% to 79%.

The statistical areas¹ with the highest percentage were Maitland (NSW) and Yorke Peninsula (SA).

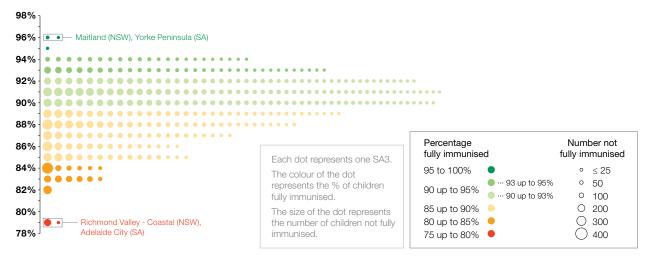
The statistical areas¹ with the lowest percentage were Richmond Valley - Coastal (NSW) and Adelaide City (SA).

The location of the statistical areas¹ with the highest and lowest percentages are shown on the maps.

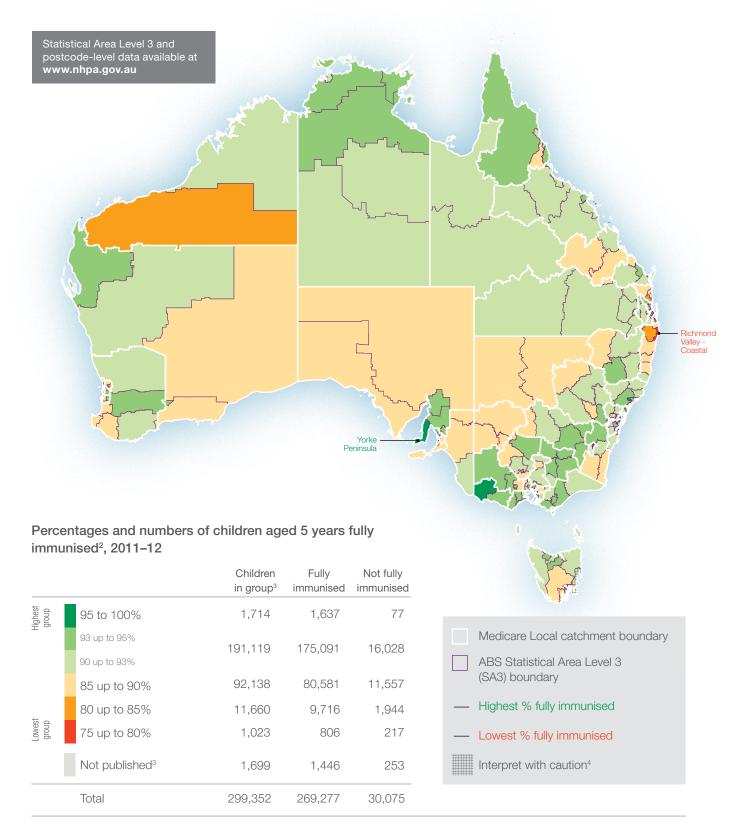
What does fully immunised at 5 years mean?

Fully immunised at 5 years means that a child aged 60 to less than 63 months received their fourth or fifth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus and whooping cough, their fourth vaccination for polio and their second vaccination for measles mumps and rubella, all prior to the age of 5 years. It is assumed that all previous vaccinations were received.

Percentages of children aged 5 years who are fully immunised by number not fully immunised² and statistical area¹, 2011–12



Percentages of children aged 5 years fully immunised, by statistical area¹, 2011–12



^{1.} For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.

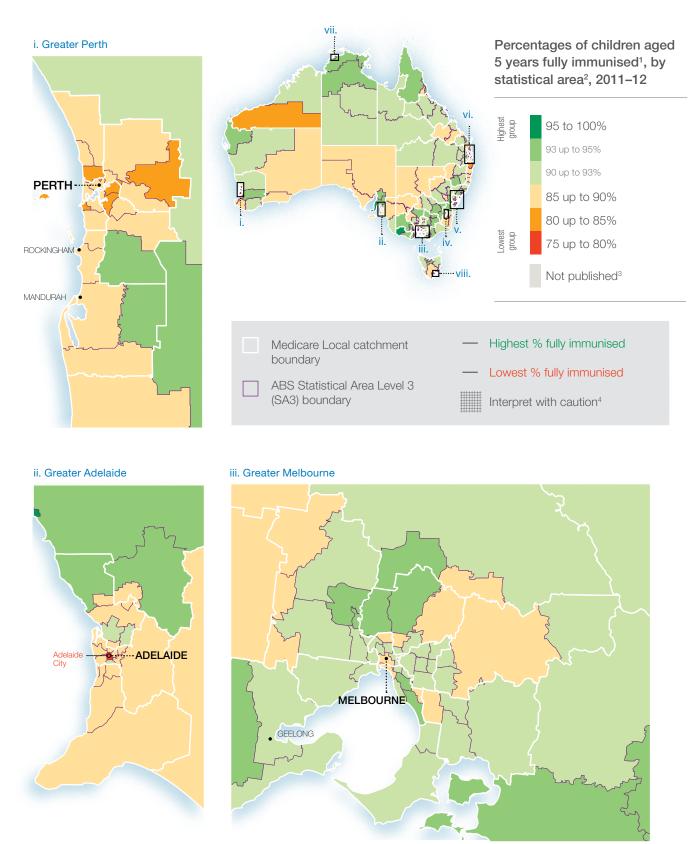
^{2.} Figures are rounded - see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

SA3 data exclude a number of invalid and unallocated postcodes, and SA3s with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au

^{4.} Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Children aged 5 years who were fully immunised, by statistical area, 2011–12

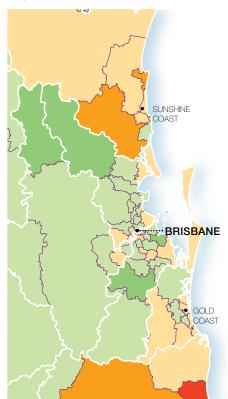
Variation within Medicare Local catchments



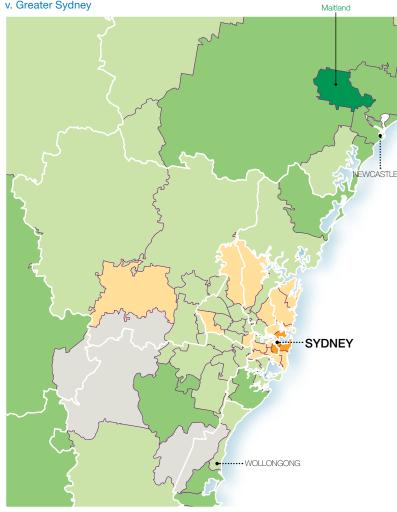
iv. ACT



vi. Greater Brisbane



v. Greater Sydney



vii. Greater Darwin



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- Figures are rounded see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- 2. For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 26/02/2013.
- 3. SA3s with less than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement www.nhpa.gov.au
- Interpret with caution as the eligible population is between 26 and 100 children so small data errors can affect results.

Glossary

This glossary defines technical and medical terms used in this report. For more information, please see *Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement.*

Diphtheria	Diphtheria is an acute illness caused by the bacterium <i>Corynebacterium diphtheriae</i> . Symptoms include severe inflammation of the nose, throat and windpipe leading to breathing and swallowing problems. Diphtheria can cause nerve and heart damage, and result in death.
Fully immunised	Fully immunised means received the scheduled vaccinations according to age for hepatitis B (hepB); diphtheria, tetanus and whooping cough (acellular pertussis) (DTPa); <i>Haemophilus influenzae</i> type B (Hib); poliomyelitis (inactivated poliomyelitis IPV); and measles, mumps and rubella (MMR). See <i>Healthy Communities: Immunisation rates for children in 2011–12, Technical Supplement</i> for more information.
German measles	See rubella.
Haemophilus	Haemophilus influenzae type B is a bacterium that causes meningitis and
influenzae type B (Hib)	other serious infections in young children.
Hepatitis	Hepatitis means inflammation of the liver. The most common types of viral hepatitis are hepatitis A, hepatitis B and hepatitis C.
Infection	An infection occurs when bacteria or viruses enter the human body. If the body cannot fight the infection, the person may get sick. Measles, rubella, mumps, polio and hepatitis B are examples of infections caused by viruses. Diphtheria, tetanus, pertussis and Hib are examples of infections caused by bacteria.
Immunisation	Immunisation means both receiving a vaccine and becoming immune to a disease as a result of being vaccinated.
Measles	Measles is a highly infectious disease caused by the <i>Morbillivirus</i> . Symptoms include rash, fever cough, runny nose and inflammation of the eye.
Medicare Local	A Medicare Local is an organisation that has responsibility for the provision, delivery and coordination of primary health care services in a defined geographical area. There are 61 Medicare Locals across Australia.

A Medicare Local catchment is a population that lives in a specific				
geographical area defined as a Medicare Local. See Medicare Local.				
See Haemophilus influenzae type B (Hib).				
Mumps is a salivary gland infection caused by the <i>Rubulavirus</i> . Symptoms include swelling under the jaw, fever, headache and aching muscles.				
The schedule which describes the 16 vaccinations that are provided free to				
Australians under childhood programs, school programs and programs for special groups.				
See whooping cough.				
Polio, also known as poliomyelitis, is caused by a highly infectious virus. Symptoms include headache, nausea and vomiting, tiredness, stiffness and muscle pain. Polio also causes paralysis and in some cases is fatal.				
Rubella, also known as German measles, is a viral illness that causes a rash and joint pains.				
A statistical area or a Statistical Area Level 3 is a geographic area defined by the Australian Bureau of Statistics (ABS) which has a population of between 30,000 and 130,000 people. There are more than 300 Statistical Areas Level 3 in Australia.				
Tetanus, also known as lockjaw, is a serious disease caused by the bacterium <i>Clostridium tetani</i> . Caused by a toxin made by bacteria present in soil, dust and manure, tetanus attacks the nervous system and causes severe muscle spasms leading to breathing difficulties, painful convulsions and abnormal heart rhythms.				
Vaccination means having a vaccine – that is actually getting the injection.				
A product made from whole, or extracts of, killed viruses or bacteria, or from live weakened strains of viruses or bacteria.				
Whooping cough, also known as pertussis, is a serious, contagious respiratory infection caused by the bacterium <i>Bordetella pertussis</i> .				

Acknowledgements

This report has benefited from advice from a number of individuals and organisations with interest and expertise in immunisation.

The National Health Performance Authority received advice from its Immunisation Advisory Group. The Advisory Group comprised:

- Professor Peter McIntyre
 - National Immunisation Committee
 - Director, National Centre for Immunisation Research & Surveillance
 - Professor, Discipline of Paediatrics and Child Health and School of Public Health, University of Sydney
- Dr Aditi Dey
 - National Centre for Immunisation Research & Surveillance
- Professor Terry Nolan
 - Chair, Australian Technical Advisory Group on Immunisation
 - Head, Melbourne School of Population and Global Health, University of Melbourne
- Ms Debra Petrys
 - Consumer representative nominated to bring a consumer perspective by the Consumers Health Forum of Australia
- Ms Helen Moore
 - National Immunisation Committee
 - National Principal Adviser Immunisation,
 Australian Medicare Local Alliance
- Ms Karen Peterson
 - National Immunisation Committee
 - Immunisation Manager, Queensland Health

- Dr Michael Crampton
 - RACGP representative, National Immunisation Committee
 - General Practitioner, Clinical Director, WentWest Ltd
- Mr Michael Frost
 - Deputy Head of Secretariat, COAG
 Reform Council

The Authority also received advice from representatives of:

- the National Advisory Group on Aboriginal and Torres Strait Islander Health Information Data
- the National Aboriginal and Torres Strait Islander Health Standing Committee
- the National Aboriginal Community Controlled Health Organisation.

This report relies on data provided by the Australian Government Department of Health and Ageing (DoHA) from the Australian Childhood Immunisation Register (ACIR). These data were used to calculate the performance measures in this report. The Authority does a number of checks to ensure data quality, and also relies on the data quality work of DoHA and the Australian Government Department of Human Services for the ACIR.

Thanks are extended to all those who contributed.

National Health Performance Authority

MDP 158, GPO Box 9848 Sydney, NSW 2001, Australia Telephone: +61 2 9186 9210

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