

National Health Performance Authority

Healthy Communities:

Immunisation rates for children in 2012–13





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National Health Performance Authority

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

Paper-based publications

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Healthy Communities: Immunisation rates for children in 2012-13, Technical Supplement

Summary

Immunisation programs help protect the community against the spread of potentially serious illness and disease but their success depends on maintaining high rates. Measuring immunisation rates allows us to identify the communities where programs have achieved success and those where improvement is needed.

Although the percentage of children fully immunised in Australia is high, there is still a large number of children who have not had any vaccinations, or have only received some doses. Children who are not fully immunised are spread unevenly across the country. Illnesses like measles and whooping cough can more easily spread in areas of low coverage.

This is the second report from the National Health Performance Authority (the Authority) on childhood immunisation rates in Australia. The percentages of children fully immunised are measured at three different ages: 1 year, 2 years and 5 years.

'Fully immunised' is a term that is defined by legislation and means that a child has received specified scheduled vaccinations according to their age (Figure 1, page 2). The National Immunisation Program Schedule lists these vaccinations and can be found at www.immunise.health.gov.au

Data in this report are presented for all Australian children at three geographic levels: Medicare Local catchment, Australian Bureau of Statistics Statistical Area Level 3 (SA3) and postcode.

Data for Aboriginal and Torres Strait Islander children are provided at Medicare Local catchment level. Where possible, data are provided at SA3 level.

The report shows data for child immunisation for the period July 2012 to June 2013, and compares results with the previous 12-month period.

For the first time, the report provides data on the number of children in each Medicare Local catchment who have a parent recorded as a conscientious objector.

New also to this report is information about uptake of a vaccine designed to protect against human papillomavirus (HPV) which causes cervical cancer and some other diseases.

Key findings

The report is divided into four sections:

- The variation across local areas in the percentages of all children aged 1, 2 and 5 years fully immunised and the numbers not fully immunised
- The variation across local areas in the percentages of Aboriginal and Torres Strait Islander children fully immunised and the numbers not fully immunised
- Changes over time in immunisation rates from 2011–12 to 2012–13
- **HPV vaccination rates** for girls turning 15 in 2012.

Local level reporting

Australia has 61 Medicare Locals and 333 SA3s. An SA3 is a geographic region defined by the Australian Bureau of Statistics generally with a population of 30,000–130,000 people. One Medicare Local catchment may contain anywhere from two to 17 SA3s.

Percentages of all children fully immunised

All Australian children should have completed their childhood immunisations in the National Immunisation Program Schedule before they turn 5. The aim is to ensure they have maximum protection appropriate for their age if they come into contact with harmful viruses and bacteria.

Nationally the percentage of children fully immunised is just above 90%. For some illnesses such as measles, it is recommended that 95% of children should be immunised.¹

This report shows many local areas had **less than 90%** of children aged 5 fully immunised:

- Thirteen of 61 Medicare Local catchments
- Just over one-quarter of SA3s
- Almost one-third of reportable postcodes.

The percentage of 5 year olds fully immunised across Medicare Local catchments ranged from:

Highest at 95.4% – Great South Coast (Vic)
Lowest at 86.2% – Eastern Sydney
(Figure 3, page 9).

Across SA3s, the percentage of 5 year olds fully immunised ranged from:

Highest at 96.8% – Tumut-Tumbarumba (NSW)
Lowest at 78.8% – Richmond Valley-Coastal (NSW)
(pages 28 to 31).

Comparing the three age groups, the percentages of all children fully immunised were highest among 2 year olds across most local areas (Figure 3, page 9 and pages 20 to 31).

Numbers of all children not fully immunised

Medicare Local catchments vary substantially in population size. 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.

Nationally there were 75,002 children aged 1, 2 or 5 years not fully immunised in 2012–13. The number of children not fully immunised ranged from 146 children in Far West NSW to 3,594 children in Western Sydney Medicare Local catchment.

There were 35 Medicare Local catchments with more than 1,000 children not fully immunised (Figure 3, page 9).

Conscientious objectors

Parents or guardians who register with the Australian Government an objection to their child being immunised are described as conscientious objectors.

Nationally there were 14,869 children aged 1, 2 or 5 years with a conscientious objection recorded in 2012–13. The **number** of children aged 1, 2 and 5 years combined with a conscientious objection recorded ranged from fewer than six in Far West NSW to 761 in North Coast NSW.

In 2012–13 the percentage of children aged 1, 2 or 5 years with a conscientious objection recorded varied across Medicare Local catchments. Among 5 year olds, the **percentage** of children with a conscientious objection recorded ranged from close to 0.0% in Far West NSW to 7.1% in Sunshine Coast (Qld).

Percentages of Aboriginal and Torres Strait Islander children fully immunised

In 13 of the 58 reported Medicare Local catchments, **95% or more** of Aboriginal and Torres Strait Islander children were fully immunised in at least one age group, compared with four Medicare Local catchments for all children.

Many local areas had **less than 90%** of Aboriginal and Torres Strait Islander children aged 5 fully immunised:

- Eighteen of 58 reported Medicare Local catchments
- Eight of 34 reported SA3s

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

• 1 year of age

Highest at 91.9% – Hunter (NSW) Lowest at 68.7% – Central Adelaide & Hills

2 years of age

Highest at 97.0% – Far North Qld Lowest at 81.6% – Central Adelaide & Hills

5 years of age

Highest at 97.0% – Gippsland (Vic)
Lowest at 80.6% – Central Adelaide & Hills

In 51 of the 58 reported Medicare Local catchments, **less than 90%** of Aboriginal and Torres Strait Islander children were fully immunised in at least one age group. Of these, 13 recorded less than 80%, all in the 1-year-old age group. By comparison, no Medicare Local catchment returned results below 80% for all children **(Figure 4, page 13)**.

The gap between the percentages of Aboriginal and Torres Strait Islander children fully immunised and all children was greatest among the 1-year-old age group in most Medicare Local catchments. The gap in percentages between Aboriginal and Torres Strait Islander children and all children narrowed in many Medicare Local catchments when the rates for the 2-year-old age group were compared (Figure 3, page 9 and Figure 4, page 13).

Numbers of Aboriginal and Torres Strait Islander children not fully immunised

The five Medicare Local catchments with the greatest number of Aboriginal and Torres Strait Islander children not fully immunised aged 1, 2 and 5 years combined were Northern Territory (272), Far North Qld (263), Townsville-Mackay (Qld) (235), North Coast NSW (198) and Western NSW (192).

Changes in child immunisation rates from 2011–12 to 2012–13

The Authority's previous report on child immunisation identified 23 Medicare Local catchments where **less than 90%** of children aged 5 years were fully immunised. In 2012–13, this had dropped to 13 Medicare Local catchments.

Across Medicare Local catchments changes in the percentages of children fully immunised from 2011–12 to 2012–13 were greatest among 5-yearold children.

Across almost all Medicare Local catchments, there were improvements in the percentages of 5-year-old Aboriginal and Torres Strait Islander children between 2011–12 and 2012–13. Of the 55 Medicare Local catchments reported for both years, the number with more than 90% of children fully immunised increased from 17 to 38 Medicare Local catchments across the two years.

Changes over time since the release of the first Authority report on child immunisation rates

The release of the Authority's first report on child immunisation rates in April 2013 generated extensive media coverage in support of high immunisation rates that led to considerable community interest. Data presented in this report were collected before the release of the first report. To find out if there were any shifts in immunisation rates following the release of the report in April 2013, the Authority compared rates in 2012–13 (the data in this report) with rates in the subsequent six-month period (1 April to 30 September 2013). Some small changes were seen in areas of lower rates among 1 and 2 year olds.

Percentages of girls fully immunised against HPV

The percentage of girls turning 15 years in 2012 who were fully immunised against HPV ranged across Medicare Local catchments from 92% in Great South Coast (Vic) to 59% in Country North SA and Eastern Sydney (pages 54 to 55).

Next steps

The National Immunisation Program Schedule has been expanded since the data in this report were collected. To ensure fair comparisons can continue to be made, for a limited time the Authority will report data using the definition of fully immunised applied in this report but also include data on the revised definition of fully immunised, which will include essential vaccines added to the definition.

The Authority is aware of issues with measuring percentages of children fully immunised in some urban areas, such as population mobility and

What is the immunisation rate for my postcode?

The National Health Performance
Authority has released 2012–13 data on immunisation rates for approximately 1,500 of 3,000 postcodes, covering 96% of all children aged 1, 2 and 5 years registered on the Australian Childhood Immunisation Register, and included in this report.

For information about postcodes, see **Table 4**, **page 35** or go to **www.myhealthycommunities.gov.au**

large immigrant populations. These factors may make tracking childhood immunisation rates more difficult.

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

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

In July 2012 the Australian Government announced the extension of the HPV vaccination program to boys. Future reports will include information on vaccination rates for adolescent boys as well as girls.

Introduction

About this report

The National Health Performance Authority (the Authority) bases its performance reports on indicators agreed by the Council of Australian Governments. This report focuses on one indicator: Vaccination rates for children.

The report shows variation in child immunisation rates across local areas not seen when reporting at national or state and territory level. It provides the **percentages** fully immunised and the **numbers** not fully immunised for all children, and for Aboriginal and Torres Strait Islander children at three different ages: 1 year, 2 years and 5 years (Figure 2, page 3).

Information is provided for three levels of geography, including the Medicare Local catchment level. There are 61 Medicare Locals across Australia that are responsible for planning and funding primary health services, including child immunisation. Data are also provided at Statistical Area Level 3 (SA3) and postcode level to allow Medicare Locals, health managers and providers to see where targeted efforts are needed. SA3s are used by the Australian Bureau of Statistics. There are 333 SA3s covering the whole of Australia. A single Medicare Local catchment may contain as few as two SA3s, or as many as 17. Data are for the period July 2012 to June 2013.

Immunisation programs are important because they help reduce the risk of spread of potentially serious illness and disease in the community. Australian governments and experts endorse achieving high immunisation rates to protect individuals and those not immunised or too young to be immunised.

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).² The WHO has advocated an immunisation rate of greater than 93–95% for all districts within a country to ensure measles elimination.¹ 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.³

In 2013, the Australian Government released the National Immunisation Strategy for Australia 2013–2018, which notes that although our national coverage of just over 90% meets international goals set by the WHO, many countries report coverage rates around 95%. The Strategy also emphasises the need to ensure high coverage rates at the local level, and observes that for measles the rate should be 95% in order to interrupt disease transmission.⁴

Under the terms of the National Partnership Agreement on Essential Vaccines agreed in 2009, states and territories are expected to maintain or improve their respective immunisation rates.

This report is divided into four sections:

- The variation across local areas in the percentages of all children aged 1, 2 and 5 years fully immunised and numbers not fully immunised
- The variation across local areas in the percentages of Aboriginal and Torres Strait Islander children fully immunised and numbers not fully immunised
- Changes over time in immunisation rates from 2011–12 to 2012–13
- HPV vaccination rates for girls turning 15 in 2012.

For the first time, the report also provides information at the Medicare Local catchment level on the number of children with a parent or guardian who has registered as a conscientious objector to immunisation.

HPV immunisation rates for girls aged 15 years in 2012

New in this report is information about the percentages of girls who turned 15 years in 2012 who were immunised against the human papillomavirus (HPV).

The human papillomavirus (HPV) is highly contagious. It is estimated that four out of five people will have an HPV infection at some point in their lives. Although infection is often asymptomatic it can cause cervical cancer and other conditions, including genital warts. The immunisation of girls against HPV is a school-based program. Medicare Locals may support the program, with GPs and other immunisation providers delivering vaccinations, including missed doses.

Why information on immunisation matters

Child immunisation programs protect children and the whole community against the spread of illness and potentially serious disease such as measles, polio, tetanus and whooping cough (pertussis).

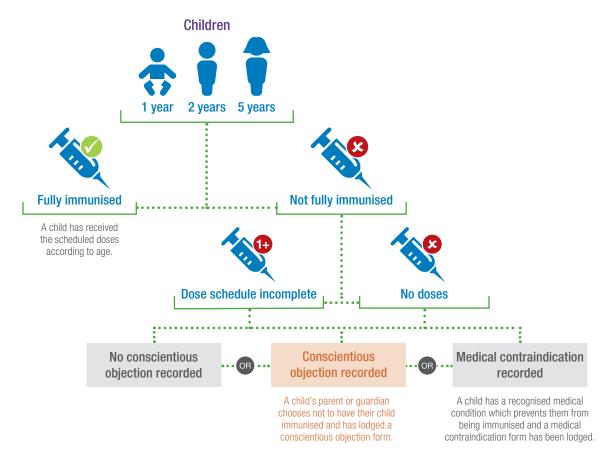
When immunisation rates are high, diseases have less opportunity to spread because there are fewer people who can be infected.

Figure 1: Vaccinations measured for fully immunised status for children aged 1, 2 and 5 years

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. Four vaccinations on the full Schedule are excluded for the purposes of measuring fully immunised status: chicken pox (varicella), pneumococcal, meningococcal C and rotavirus.

Figure 2: Classification of all children and Aboriginal and Torres Strait Islander children *fully immunised* or not *fully immunised* in this report



From 1 July 2012, Medicare Locals assumed responsibility for ensuring high immunisation rates are maintained across their catchments.⁵ The report provides information about child immunisation broken down by Medicare Local catchment as well as smaller geographic areas.

Providing information at more local levels of geography within a Medicare Local allows further insight into patterns of health and care. Where possible, information is reported at SA3 level. Information is also available for approximately 1,500 postcodes of the total number of 3,000 postcodes across Australia covering 96% of children aged 1, 2 and 5 years on the Australian Childhood Immunisation Register.

About the data

The data used to calculate performance measures in this report were derived from the Australian Childhood Immunisation Register (ACIR), which is administered by the Australian Government Department of Human Services (Medicare). It has been estimated that the ACIR covers close to 99% of children in Australia.⁶

The data for children fully immunised at 1, 2 and 5 years cover the period July 2012 to June 2013.

For a child to be fully immunised at the age of 1, 2 or 5 years, they must have received the vaccinations that are detailed in the National Immunisation Program Schedule for their age.

Fully immunised for age means a child has received the most recent vaccination for each disease, and assumes all previous vaccinations were administered (Figure 1, page 2). Four vaccinations on the full Schedule are excluded for the purposes of measuring fully immunised status: chicken pox (varicella), pneumococcal, meningococcal C and rotavirus.

Results for children who were identified as Aboriginal and Torres Strait Islander in the ACIR are based on Medicare enrolment records. Levels of identification being recorded may vary between local areas.

For more information, see *Healthy*Communities: Immunisation rates for children in 2012–13, Technical Supplement at
www.myhealthycommunities.gov.au

The National HPV Vaccination Program Register (HPV Register), which is funded by the Australian Government and operated by Victorian Cytology Service, was used to measure immunisation rates against HPV among girls aged 15 years. These data are for girls who turned 15 years in the period 1 January to 31 December 2012.

Data collected on HPV immunisation rates are from a different information source than for child immunisation. Information from school immunisation forms on whether a person is Aboriginal and/or Torres Strait Islander were incompletely recorded in the period covered by this report. Therefore HPV immunisation rates for Aboriginal and Torres Strait Islander girls were not available to report.

All data have been mapped to the Medicare Local catchments in which people live rather than the areas where services were provided. This means that if a child living in one Medicare Local catchment receives immunisations at a school or from a GP located in a different Medicare Local catchment, the child's status will influence the immunisation rates in the catchment where they live.

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.

National HPV Vaccination Program Register

The National HPV Vaccination Program Register (HPV Register) is a national register that records immunisations against human papillomavirus (HPV).

The HPV vaccination program is a school-based program that was introduced in 2007 for adolescent girls to protect against cervical cancer and some other diseases. The program has since been extended to adolescent boys. Parents or guardians are required to complete a consent form and

return it to their child's school to participate in the program. The program involves a threedose schedule, with the second and third doses being delivered two months and six months after the first dose, to provide the best protection against HPV.

While the HPV vaccination program is a school-based program, primary health care providers may be involved in delivering vaccinations including missed doses and providing information.

Key findings: All children

All Australian children should have completed their childhood immunisations in the National Immunisation Program Schedule before they turn 5. The aim is to ensure that by the time children start school, they have maximum protection if they come into contact with harmful viruses and bacteria.

The **percentages** of children fully immunised and the **numbers** of children not fully immunised can be broken down as follows:

• 1 year of age

91.2% of children fully immunised 26,456 children not fully immunised

· 2 years of age

92.5% of children fully immunised22,495 children not fully immunised

• 5 years of age

91.5% of children fully immunised 26,051 children not fully immunised.

Comparing the three age groups, across most local areas the percentages of children fully immunised were higher at 2 years of age than at 1 year or 5 years, and generally lower at 5 years (Figure 3, page 9 and pages 20 to 31).

Information is shown at three geographic levels. Immunisation rates are provided for the 61 Medicare Local catchments across Australia. The rates have also been provided for more than 300 local areas called Statistical Areas Level 3 (SA3) and for approximately 1,500 of 3,000 postcodes where there are sufficient numbers of children in the relevant age group to allow reliable reporting.

These postcodes account for more than 96% of children aged 1, 2 and 5 years on the Australian Childhood Immunisation Register.

Percentages of 1 year olds fully immunised

The percentage of 1 year olds fully immunised across Medicare Local catchments ranged from:

Highest at 94.5% – Great South Coast (Vic)
Lowest at 86.1% – North Coast NSW
(Figure 3, page 9).

Across SA3s, the percentage of 1 year olds fully immunised ranged from:

Highest at 96.1% – Whitsunday (Qld)

Lowest at 79.7% – Richmond Valley-Coastal (NSW)

(Figure 20, page 23)

About one-quarter of SA3s recorded immunisation rates for 1 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Recorded in seven SA3s
- 90% to 94.9%
 Recorded in 237 SA3s
- 85% to 89.9% Recorded in 75 SA3s
- Less than 85%
 Recorded in six SA3s.

About one in three reportable postcodes recorded immunisation rates for 1 year olds below 90%. The distribution can be summarised as follows:

95% or higher
 Recorded in 202 postcodes

- 90% to 94.9% Recorded in 794 postcodes
- 85% to 89.9%
 Recorded in 364 postcodes
- Less than 85%
 Recorded in 126 postcodes.

Percentages of 2 year olds fully immunised

The percentage of 2 year olds fully immunised across Medicare Local catchments ranged from:

Highest at 95.4% – Gippsland (Vic)
Lowest at 89.0% – North Coast NSW
(Figure 3, page 9).

Across SA3s, the percentage of 2 year olds fully immunised ranged from:

Highest at 97.5% – Katherine (NT)
Lowest at 81.6% – Richmond Valley-Coastal (NSW)
(Figure 24, page 27).

About one in 10 SA3s recorded immunisation rates for 2 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Recorded in 41 SA3s
- 90% to 94.9%
 Recorded in 242 SA3s
- 85% to 89.9%
 Recorded in 40 SA3s
- Less than 85%
 Recorded in two SA3s

One in five reprotable postcodes recorded immunisation rates for 2 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Recorded in 409 postcodes
- 90% to 94.9%
 Recorded in 772 postcodes
- 85% to 89.9%
 Recorded in 240 postcodes
- Less than 85%
 Recorded in 75 postcodes.

Percentages of 5 year olds fully immunised

The percentage of 5 year olds fully immunised across Medicare Local catchments ranged from:

Highest at 95.4% – Great South Coast (Vic)
Lowest at 86.2% – Eastern Sydney
(Figure 3, page 9).

Across SA3s, the percentage of 5 year olds fully immunised ranged from:

Highest at 96.8% – Tumut-Tumbarumba (NSW)

Lowest at 78.8% – Richmond Valley-Coastal (NSW)

(Figure 28, page 31).

About one-quarter of SA3s recorded immunisation rates for 5 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Recorded in 25 SA3s
- 90% to 94.9%
 Recorded in 213 SA3s

- 85% to 89.9%
 Recorded in 80 SA3s
- Less than 85%
 Recorded in seven SA3s

Almost one in three reportable postcodes recorded immunisation rates for 5 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Recorded in 293 postcodes
- 90% to 94.9%
 Recorded in 748 postcodes
- 85% to 89.9%
 Recorded in 367 postcodes
- Less than 85%
 Recorded in 124 postcodes

(Table 4, page 35).

For more information including interactive results by statistical area and postcode see www.myhealthycommunities.gov.au

Numbers of children not fully immunised

Medicare Local catchments vary substantially in population size. 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. There were 75,002 children aged 1, 2 and 5 years nationally who were not fully immunised in 2012–13.

The number of all children not fully immunised for the three age groups combined across Medicare Local catchments ranged from:

Lowest – 146 children in Far West NSW Highest – 3,594 children in Western Sydney. There were 35 Medicare Local catchments with more than 1,000 children not fully immunised for the three age groups combined.

The five Medicare Local catchments with the greatest number of children not fully immunised for the three age groups combined were Western Sydney (3,594 children), South Western Sydney (3,387), Greater Metro South Brisbane (3,196), Metro North Brisbane (2,644) and Inner West Sydney (2,175) (Figure 3, page 9).

Conscientious objectors

Parents or guardians who register with the Australian Government an objection to their child being immunised are described as conscientious objectors. There were 14,869 children aged 1, 2 and 5 years nationally with a conscientious objection recorded.

In 2012–13 the range in the percentages of children with a conscientious objection recorded for children aged 5 years was as follows:

Lowest at close to 0.0% – Far West NSW Highest at 7.1% – Sunshine Coast (Qld).

The five Medicare Local catchments with the greatest number of children registered with a conscientious objection in 2012–13 were:

- North Coast NSW 761
- Greater Metro South Brisbane 755
- Metro North Brisbane 708
- Sunshine Coast (Qld) 660
- Gold Coast (Qld) 652

(Figure 3, page 9).

Figure 3: Percentages of *all children* fully immunised*, numbers not fully immunised and numbers with conscientious objection[†] recorded, by Medicare Local catchment, 2012–13

	Percentag	e fully imm	unised at a	ge:				Number‡ not fully	Number‡ with conscientious
Medicare Local catchments	1yr	2yrs	5yrs	70%	80%	90%	100%	immunised	objection recorded
	0	•	•						
Great South Coast (Vic)	94.5%	94.8%	95.4%				1	193	80
Hume (Vic/NSW)	93.9%	94.7%	94.1% 94.3%			0		416	114
Hunter (NSW)	93.5% 93.2%	94.7% 94.9%	94.3%			0		1,581 649	320
Country South SA	93.2%	94.9%	93.7%			0	1	309	148 81
Australian Capital Territory	93.0%	93.4%	92.7%					1,093	182
Central Coast NSW	93.0%	93.5%	92.7%			0		872	257
Gippsland (Vic)	92.9%	95.4%	94.2%			000		560	170
Metro North Brisbane	92.9%	93.0%	92.0%			•••		2,644	708
Grampians (Vic)	92.8%	94.5%	93.1%			0		500	145
Central Qld	92.8%	93.3%	92.8%					697	108
Townsville-Mackay (Qld)	92.8%	94.5%	93.2%			0		1,177	214
Goulburn Valley (Vic)	92.5%	93.9%	92.4%			0	-	412	68
Darling Downs-SW Qld	92.4%	93.3%	92.9%			0	-	923	273
Greater Metro South Brisbane	92.4%	92.0%	91.2%			•••	-	3,196	755
Tasmania	92.2%	94.3%	92.9%			000		1,288	291
Northern Adelaide	92.1%	93.6%	92.2%			0	<u>i</u>	1,265	221
Murrumbidgee (NSW)	92.0%	95.1%	93.5%				-	493	73
Central & NW Qld	92.0%	94.7%	93.1%			000		158	13
New England (NSW)	92.0%	95.2%	94.5%			0 00		472	97
Northern Melbourne	91.9%	93.6%	92.6%			000	<u>i</u>	1,993	435
Inner East Melbourne	91.9%	92.2%	91.3%				-	1,632	262
West Moreton-Oxley (Qld)	91.8%	92.7%	91.7%			0	-	1,400	266
Southern NSW	91.7%	93.6%	91.6%			0	-	532	146
Nepean-Blue Mountains (NSW)	91.7%	93.0%	92.9%	1 1	1 1 1	00	1	1,114	180
South Eastern Sydney	91.6%	92.2%	91.5%			0	-	1,524	219
Wide Bay (Qld)	91.6%	93.1%	93.1%			0		539	150
Illawarra-Shoalhaven (NSW)	91.6%	93.8%	93.8%			0 0	-	973	185
Macedon Ranges & NW Melb	91.5%	92.8%	92.9%	1 1	1 1 1		1	1,652	208
Country North SA	91.4%	94.4%	92.9%			0 • •	-	527	109
Perth North Metro	91.4%	90.5%	89.5%			•••		2,094	340
Northern Territory	91.4%	93.6%	90.8%			(O)	-	894	117
Frankston-Mornington Peninsula (Vic)	91.4%	93.6%	92.6%		1 1 1 1	000	-	815	198
Sthn Adelaide-Fleurieu-Kang. Is	91.4%	92.4%	90.2%			•0•	-	1,197	377
Inner NW Melbourne	91.2%	91.6%	91.2%			0		1,242	184
Bayside (Vic)	91.2%	92.1%	91.3%			0		1,746	377
Western NSW	91.1%	94.6%	94.1%			0 •	-	732	80
Eastern Melbourne	91.1%	92.4%	92.1%			0		1,264	359
South Eastern Melbourne	90.9%	93.2%	92.6%			O (10)		1,791	212
Northern Sydney	90.9%	91.9%	89.7%			•0•		1,315	155
South West WA	90.8%	92.0%	91.4%			0)		1,013	326
Gold Coast (Qld)	90.7%	91.7%	89.2%			• •		1,931	652
Loddon-Mallee-Murray (Vic/NSW)	90.6%	94.0%	92.6%			0 ••		613	146
Fremantle (WA)	90.5%	89.7%	88.4%			• • • • • • • • • • • • • • • • • • • •		924	228
Inner West Sydney	90.5%	91.4%	89.6%			000	T	2,175	245
South Western Sydney	90.3%	92.3%	92.5%			2.		3,387	236
Western Sydney	90.3%	91.9%	91.7%			2		3,594	250
Sydney Nth Shore & Beaches	90.2%	90.3%	88.4%			2		1,908	365
Perth Central & East Metro	90.1%	89.7%	88.6%			0		1,720	330
Far North Qld	90.1%	92.9%	92.8%					1,159	120
Lower Murray (Vic/NSW)	90.0%	93.3% 93.1%	92.0% 91.6%			0 0		1,001 222	322
							1		34
Sunshine Coast (Qld)	89.6% 89.6%	89.6% 90.4%	88.0% 88.7%			0		1,419 1,730	660 437
Perth South Coastal	89.4%	90.4%	89.2%			0			437 137
Kimberley-Pilbara (WA)	89.3%	90.7%	91.9%			0	1	1,111 384	53
Goldfields-Midwest (WA)	89.2%	94.3%	90.5%			0			95
Bentley-Armadale (WA)	88.6%	92.6% 89.7%	90.5% 88.2%			0		513 1,898	95 247
Eastern Sydney	88.3%	89.3%	86.2%			• 00		1,522	212
Far West NSW	86.8%	91.9%	93.8%			0		1,522	≥12 ≤5
North Coast NSW	86.1%	89.0%	88.0%					2,149	≤5 761
NATIONAL RESULT§	91.2%	92.5%						75,002	14,869
	0112/0	02.0 /0	31.070					. 0,002	,

^{*} A child has received the scheduled vaccinations according to age. See Figure 1, page 2 or this report's Technical Supplement.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

[†] A child's parent or guardian chooses not to have their child immunised and has lodged a signed conscientious objection form, also signed by a recognised immunisation provider, with the Australian Childhood Immunisation Register that declares immunisation of their child should not take place.

Number of all children aged 1, 2 or 5 years combined.

[§] Components may not add to totals because of unallocated postcodes.

Key findings: Aboriginal and Torres Strait Islander children

The results for many Aboriginal and Torres Strait Islander communities are positive. For each age group, immunisation rates are provided for up to 58 Medicare Local catchments across Australia.

In 13 of the 58 reported Medicare Local catchments, 95% or more of Aboriginal and Torres Strait Islander children were fully immunised in at least one age group, compared with four Medicare Local catchments for all children.

In 51 Medicare Local catchments, less than 90% of Aboriginal and Torres Strait Islander children were fully immunised in at least one age group. Thirteen of these were less than 80%, all among the 1-year-old age group. By comparison, no Medicare Local catchment returned results below 80% for all children (Figure 4, page 13).

Comparing the three age groups, the percentages of Aboriginal and Torres Strait Islander children fully immunised were higher among children at 2 years and 5 years. Percentages were lowest for children aged 1 year across most Medicare Local catchments and SA3s (Figure 4, page 13 and Table 5, page 44).

The rates have also been provided for 38 of the 333 local areas called Statistical Areas Level 3 (SA3) that have a large enough population of Aboriginal and Torres Strait Islander children in at least one age group. This represents 48% of the Aboriginal and Torres Strait Islander children aged 1, 2 and 5 years on the Australian Childhood Immunisation Register.

Percentages of 1 year olds fully immunised

The percentage of Aboriginal and Torres Strait Islander children aged 1 year fully immunised ranged across Medicare Local catchments from:

Highest at 91.9% – Hunter (NSW)

Lowest at 68.7% – Central Adelaide & Hills.

The majority of Medicare Local catchments (49 out of 57 reported) had immunisation rates for 1 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 One Medicare Local catchment
- 90% to 94.9%
 Seven Medicare Local catchments
- 85% to 89.9%22 Medicare Local catchments
- Less than 85%27 Medicare Local catchments

(pages 38 to 39).

In the 34 SA3s reported for this age group, the percentage of 1 year olds fully immunised ranged from:

Highest at 94.7% – East Arnhem (NT)

Lowest at 74.5% – Eyre Peninsula and South
West (SA)

(Figure 5, page 44).

Percentages of 2 year olds fully immunised

The percentage of Aboriginal and Torres Strait Islander children aged 2 years fully immunised ranged across Medicare Local catchments from:

Highest at 97.0% – Far North Qld

Lowest at 81.6% – Central Adelaide & Hills.

About one-third of the 54 reported Medicare Local catchments had immunisation rates for 2 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Five Medicare Local catchments
- 90% to 94.9%32 Medicare Local catchments
- 85% to 89.9%13 Medicare Local catchments
- Less than 85%
 Four Medicare Local catchments

(pages 40 to 41).

In the 34 reported SA3s for this age group, the percentage of 2 year olds fully immunised ranged from:

Highest at 98.1% – Katherine (NT)

Lowest at 82.9% – Richmond Valley-Hinterland

(Figure 5, page 44).

(NSW)

Percentages of 5 year olds fully immunised

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

Highest at 97.0% – Gippsland (Vic)

Lowest at 80.6% - Central Adelaide & Hills.

About one-third of the 58 reported Medicare Local catchments had immunisation rates for 5 year olds below 90%. The distribution can be summarised as follows:

- 95% or higher
 Nine Medicare Local catchments
- 90% to 94.9%
 31 Medicare Local catchments
- 85% to 89.9%13 Medicare Local catchments
- Less than 85%
 Five Medicare Local catchments

(pages 42 to 43).

In the 34 reported SA3s for this age group, the percentage of 5 year olds fully immunised ranged from:

Highest at 95.8% – East Arnhem (NT), Katherine (NT), Outback North (Qld), Tablelands (East)-Kuranda (Qld) and Tamworth-Gunnedah (NSW)

Lowest at 87.1% – Moree-Narrabri (NSW)

(Figure 5, page 44).

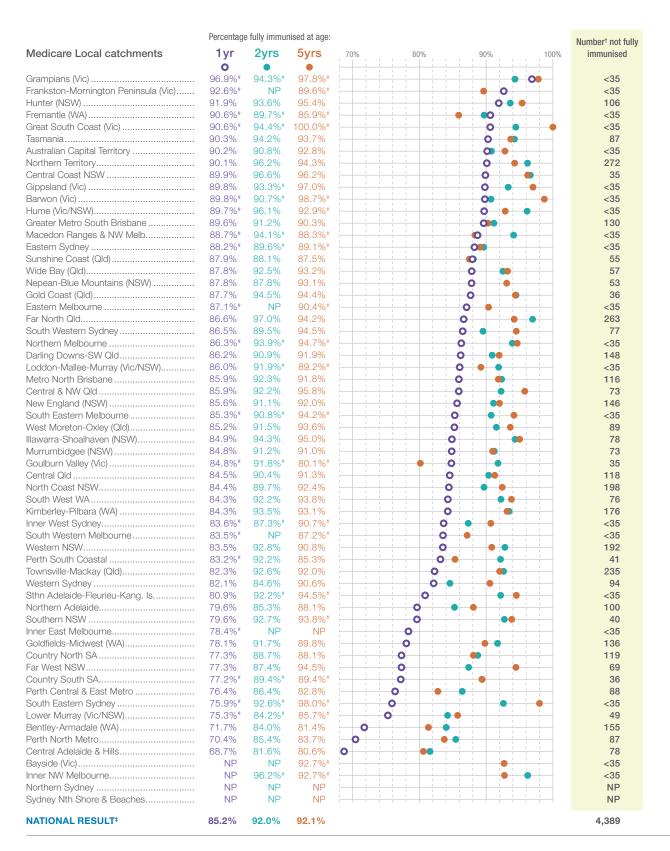
Numbers of children not fully immunised

The number of Aboriginal and Torres Strait Islander children for the three age groups combined who were not fully immunised was 4,389. Across Medicare Local catchments, the numbers ranged from fewer than six children in Bayside (Vic), Great South Coast (Vic), Northern Sydney and Sydney North Shore and Beaches, to 272 children in the Northern Territory.

The five Medicare Local catchments with the greatest number of Aboriginal and Torres Strait Islander children not fully immunised for the three age groups combined were:

- Northern Territory 272
- Far North Qld 263
- Townsville-Mackay (Qld) 235
- North Coast NSW 198
- Western NSW 192.

Figure 4: Percentages of *Aboriginal and Torres Strait Islander children* fully immunised* and numbers not fully immunised, by Medicare Local catchment, 2012–13



^{*} A child has received the scheduled vaccinations according to age. See Figure 1, page 2 or this report's Technical Supplement.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Number of Aboriginal and Torres Strait Islander children aged 1, 2 or 5 years combined.

Components may not add to totals because of unallocated postcodes.

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

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

Key findings: Changes in coverage from 2011–12 to 2012–13

The Authority's previous report on childhood immunisation rates identified that nationally there were 76,769 or 8.5% of children aged 1, 2 and 5 years not fully immunised in 2011–12. This report shows a slight decrease to 75,002 or 8.2% of children not fully immunised in 2012–13.

The greatest change in the percentages of all children fully immunised, and for Aboriginal and Torres Strait Islander children, was seen among children aged 5 years. Nationally the percentage of all children aged 5 years fully immunised increased by 1.5 percentage points between 2011–12 and 2012–13. There was little change among children aged 1 year or 2 years.

Results describing changes in the percentages of children fully immunised between 2011–12 and 2012–13 are only reported for geographic areas where the number of children is greater than 100 and the percentage change is at least 3 percentage points, which indicates a threshold of change that can be considered meaningful.* Smaller changes may still represent a large number of children, particularly in Medicare Local catchments with large populations.

Change in the percentages of 1 year olds fully immunised

Between 2011–12 and 2012–13, there were no Medicare Local catchments where the percentage of 1 year olds fully immunised increased or decreased by 3 percentage points or more (Figure 5, page 46).

Across SA3s, the percentage of 1 year olds fully immunised increased by 3 percentage points or more in seven statistical areas and decreased by 3 percentage points or more in 20.

Largest increases (SA3):

- Snowy Mountains (NSW) from 89.9% to 94.6%
- Great Lakes (NSW) from 87.7% to 92.1%
- Granite Belt (Qld) from 89.0% to 93.0%.

Largest decreases (SA3):

- Botany (NSW) from 94.3% to 88.4%
- Prospect-Wakerville (SA) from 94.3% to 90.0%
- Lower North (SA) from 95.9% to 92.1%.

Across postcodes, the percentage of 1 year olds fully immunised increased by 3 percentage points or more in 70 postcodes and decreased by 3 percentage points or more in 139 postcodes.

For the postcodes that reported the highest and lowest percentages of children fully immunised in 2011–12 and the changes in 2012–13, see **Table 6, page 52**.

For more information including interactive results by statistical areas and postcodes for 2011–12 and 2012–13 see www.myhealthycommunities. gov.au

^{*} For more information see Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement at www.myhealthycommunities.gov.au

Change in the percentages of 2 year olds fully immunised

Between 2011–12 and 2012–13, there were no Medicare Local catchments where the percentage of 2 year olds fully immunised increased or decreased by 3 percentage points or more (Figure 6, page 47).

Across SA3s, the percentage of 2 year olds fully immunised increased by 3 percentage points or more in seven statistical areas and decreased by 3 percentage points in nine.

Largest increases (SA3):

- Port Douglas-Daintree (Qld) from 88.3% to 93.0%
- Meander Valley-West Tamar (Tas) from 90.9% to 95.5%
- Sorrell-Dodges Ferry (Tas) 90.7% to 94.8%.

Largest decreases (SA3):

- Loddon-Elmore (Vic) from 97.1% to 91.2%
- Kwinana (WA) from 93.2% to 89.1%
- Outback-North and East (SA) from 94.3% to 90.3%.

Across postcodes, the percentage of 2 year olds fully immunised increased by 3 percentage points or more in 83 postcodes and decreased by 3 percentage points or more in 88 postcodes (Table 6, page 52).

Change in the percentages of 5 year olds fully immunised

Between 2011–12 and 2012–13, the percentage of 5 year olds fully immunised increased by 3 percentage points or more in nine Medicare Local catchments and decreased by 3 percentage points or more in none (Figure 7, page 48).

Across SA3s, the percentage of 5 year olds fully immunised increased by 3 percentage points or more in 69 statistical areas and decreased in four.

Largest increases (SA3):

- Lower Murray (NSW) from 86.2% to 93.9%
- Broken Hill and Far West (NSW) from 89.1% to 95.6%
- Kempsey-Nambucca (NSW) from 84.6% to 91.1%.

Largest decreases (SA3):

- Stonnington-West (Vic) from 89.9% to 85.7%
- Huon-Bruny Island (Tas) from 88.5% to 84.7%
- Port Douglas-Daintree (Qld) from 91.1% to 87.5%.

Across postcodes, the percentage of 5 year olds fully immunised increased by 3 percentage points or more in 230 postcodes and decreased by 3 percentage points or more in 44 postcodes (Table 6, page 52).

Change in the percentages of Aboriginal and Torres Strait Islander children fully immunised

Between 2011–12 and 2012–13, the following changes in the percentages of Aboriginal and Torres Strait Islander children fully immunised were recorded:

- Aged 1 year (29 Medicare Local catchments reported)
 - Six increased by 3 percentage points or more
 - Six decreased by 3 percentage points or more (Figure 8, page 49)
- Aged 2 years (34 Medicare Local catchments reported)
 - Three increased by 3 percentage points or more
 - Two decreased by 3 percentage points or more (Figure 9, page 50)
- Aged 5 years (31 Medicare Local catchments reported)
 - 23 increased by 3 percentage points or more
 - One decreased by 3 percentage points or more (Figure 10, page 51).

Changes over time since the release of the previous Authority report on child immunisation

Many activities contribute to changes in the percentages of children fully immunised.

Measuring change over time at the local level is therefore important for monitoring the impact of these activities.

New laws requiring children to be immunised to enrol in childcare, government rebates to parents, state and territory government programs and local action by healthcare professionals all contribute to change. Public reporting of immunisation rates at the local level may also encourage improvements in the percentages of children fully immunised. The previous report by the Authority on child immunisation rates released in April 2013 generated extensive media coverage and community interest including a pro-vaccination campaign by a major metropolitan newspaper.

The 2012–13 data in this report are for children who were 1, 2 and 5 years between 1 April 2012 and 31 March 2013 which was before the release of the previous report. To find out if there were any shifts in immunisation rates following the release of the report in April 2013, the Authority compared rates in 2012–13 (the data in this report) with rates in the subsequent six-month period (1 April to 30 September 2013). Some small changes were seen in areas of lower rates among 1 and 2 year olds.

For a number of reasons, the Authority decided it was too early to say if there had been any changes in immunisation rates that might have resulted from the publicity around the previous report. One is that it is likely that new activities, such as public reporting by the Authority at the local level, will take time to be reflected in changes in the percentages of children fully immunised, particularly if cohorts of children are followed over time across the three age groups.

Another reason why it is not yet possible to speculate on the impact of last year's report is seasonal patterns in immunisation rates may render a comparison between a 12-month period (1 April 2012 to 31 March 2013) with a six-month period (1 April to 30 September 2013) premature, particularly if rates improve in the months before school entry (October 2013 to February 2014).

The Authority's next report on immunisation rates will provide further insight into the impact of activities that contribute to changes in rates.

Key findings: Girls immunised against HPV

The percentage of girls who turned 15 years in the calendar year 2012 who were fully immunised against human papillomavirus (HPV) was 70% nationally.

While the HPV vaccination program is a school-based program, Medicare Locals may support the program, with GPs and other immunisation providers delivering vaccinations, including missed doses. Providing local level data will assist school-based programs and health system managers to determine where improvement in rates is needed.

Immunisation rates for 15-year-old girls against HPV

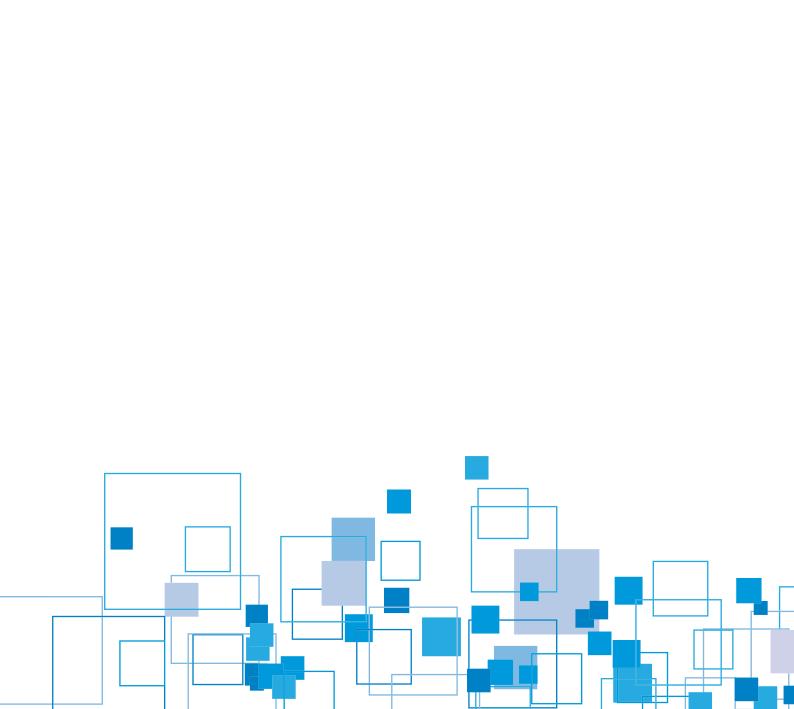
There was considerable variation across Medicare Local catchments in the percentages of girls turning 15 in 2012 who were fully immunised against HPV.

The percentage of girls fully immunised ranged across Medicare Local catchments from:

Highest at 92% – Great South Coast (Vic)
Lowest at 59% – Country North SA and
Eastern Sydney.

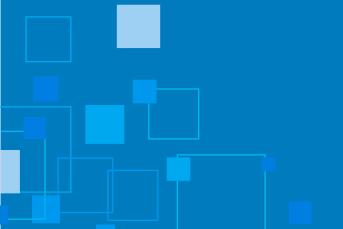
In 2012, there were 23 Medicare Local catchments with less than 70% of girls turning 15 who were fully immunised against HPV. Of these, six were lower that 65% (pages 54 to 55).

This measure is unable to be reported by Aboriginal and Torres Strait Islander status because information from school immunisation forms on whether a person is Aboriginal and/or Torres Strait Islander was incompletely recorded in the period covered by this report..



All children

Immunisation rates for children in 2012–13



Children aged 1 year who were fully immunised, by statistical area, 2012–13

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 areas, ranging from fewer than 25 children to around 390.

Findings

In 2012–13, the percentages of children aged 1 year who were fully immunised varied across statistical areas, ranging from 79.7% to 96.1%.

The statistical area with the highest percentage was Whitsunday (Qld).

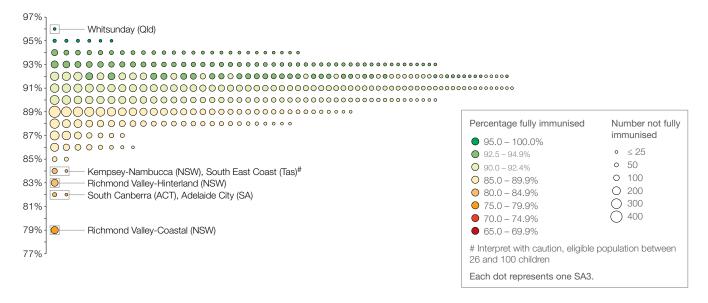
The statistical area with the lowest percentage was Richmond Valley-Coastal (NSW).

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

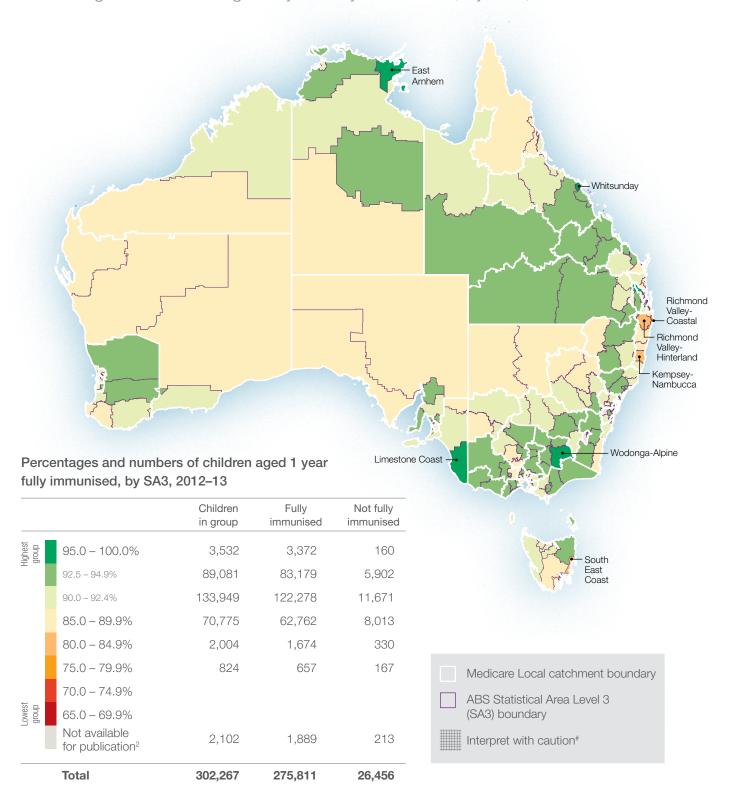
What does fully immunised at 1 year mean?

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 and numbers not fully immunised, by SA3, 2012–13



Percentages of children aged 1 year fully immunised, by SA3, 2012-13



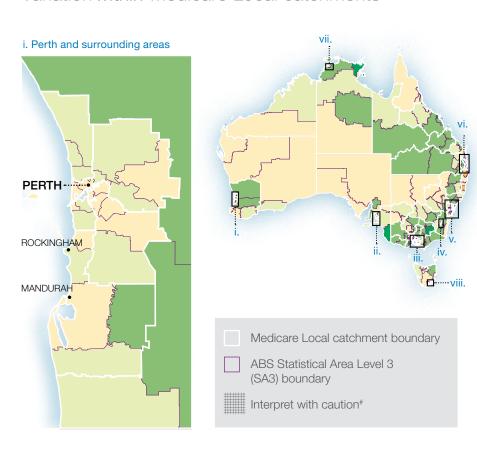
[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results

^{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 24 February 2014.

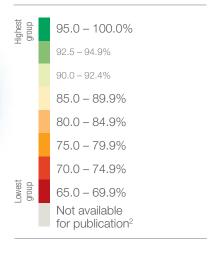
SA3 data exclude a number of invalid and unallocated postcodes. SA3s with fewer than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement* at www.myhealthycommunities.gov.au
 Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Children aged 1 year who were fully immunised, by statistical area, 2012–13

Variation within Medicare Local catchments



Percentages of children aged 1 year fully immunised, by SA3¹, 2012–13



Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au



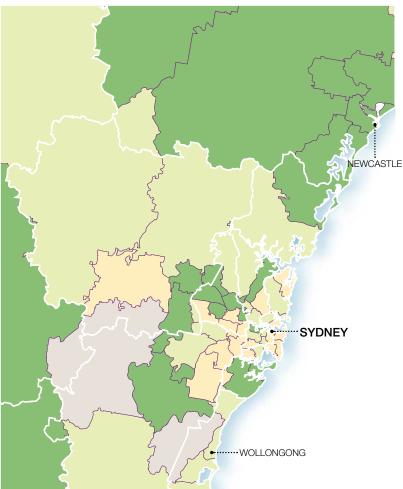




iv. Canberra and surrounding areas



v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



vii. Darwin and surrounding areas



viii. Hobart and surrounding areas



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

^{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 24 February 2014.

SA3 data exclude a number of invalid and unallocated postcodes. SA3s with fewer than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement* at www.myhealthycommunities.gov.au
 Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Children aged 2 years who were fully immunised, by statistical area, 2012–13

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.

There was large variation in the number of children aged 2 years not fully immunised across statistical areas, ranging from fewer than 25 children to around 280.

Findings

In 2012–13, the percentages of children aged 2 years who were fully immunised varied across statistical areas, ranging from 81.6% to 97.5%.

The statistical area with the highest percentage was Katherine (NT).

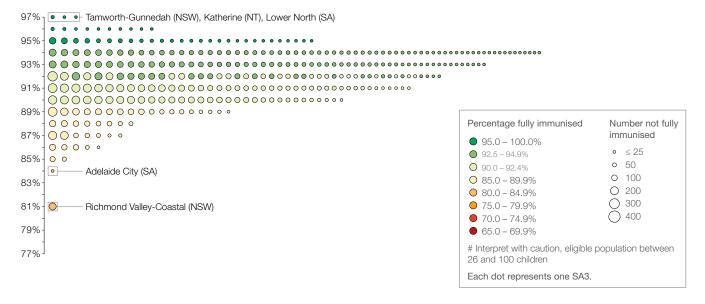
The statistical area with the lowest percentage was Richmond Valley-Coastal (NSW).

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

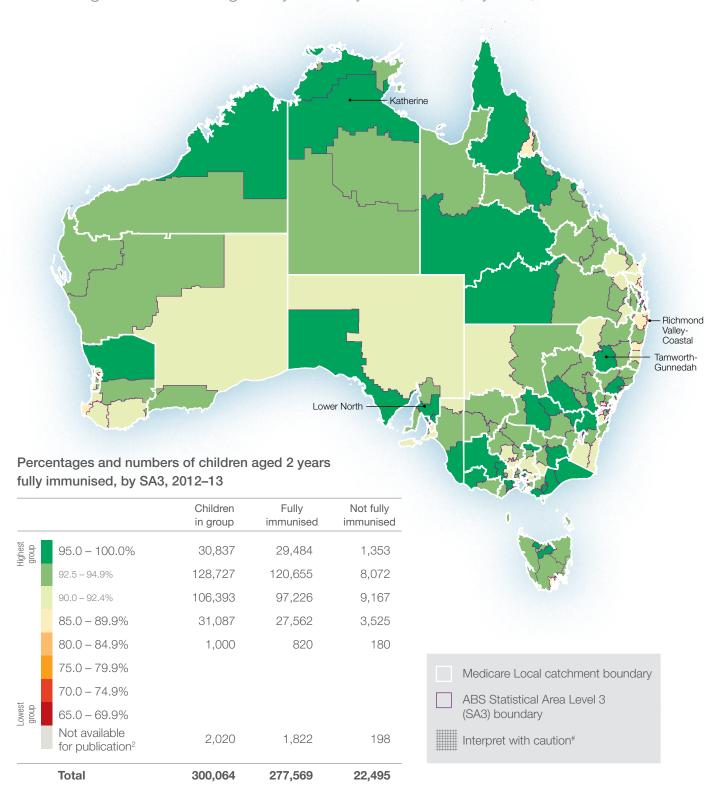
What does fully immunised at 2 years mean?

Fully immunised at 2 years means that a child aged 24 months 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 and numbers not fully immunised, by SA3, 2012–13



Percentages of children aged 2 years fully immunised, by SA3, 2012-13



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

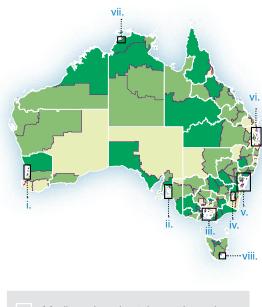
^{1.} For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 24 February 2014.

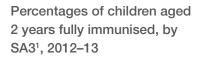
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 Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

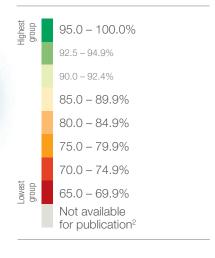
Children aged 2 years who were fully immunised, by statistical area, 2012–13

Variation within Medicare Local catchments









Medicare Local catchment boundary

ABS Statistical Area Level 3 (SA3) boundary

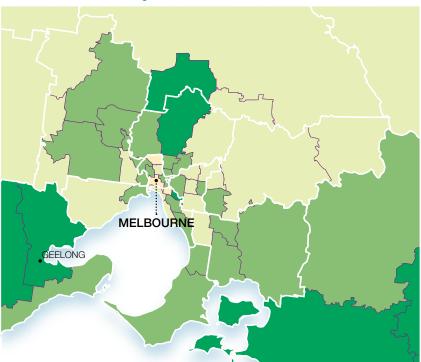
Interpret with caution#

Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au









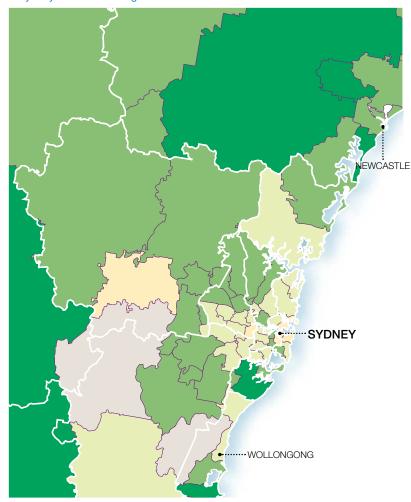
iv. Canberra and surrounding areas



vi. Brisbane and surrounding areas



v. Sydney and surrounding areas



vii. Darwin and surrounding areas



viii. Hobart and surrounding areas



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

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 24 February 2014.

SA3 data exclude a number of invalid and unallocated postcodes. SA3s with fewer than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement* at www.myhealthycommunities.gov.au
 Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Children aged 5 years who were fully immunised, by statistical area, 2012–13

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). The numbers of children not fully immunised for each statistical area are also shown.

There was large variation in the number of children aged 5 years not fully immunised across statistical areas, ranging from fewer than 25 children to around 300.

Findings

In 2012–13, the percentages of children aged 5 years who were fully immunised varied across statistical areas, ranging from 78.8% to 96.8%.

The statistical area with the highest percentage was Tumut-Tumbarumba (NSW).

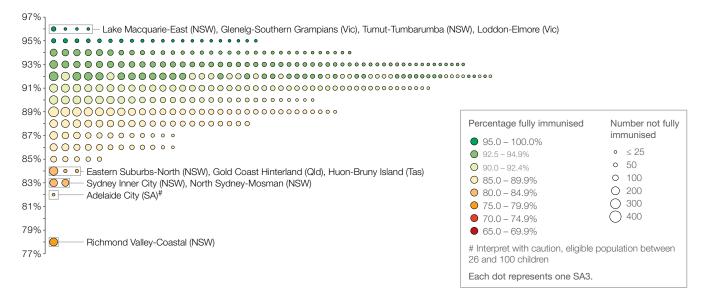
The statistical area with the lowest percentage was Richmond Valley-Coastal (NSW).

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

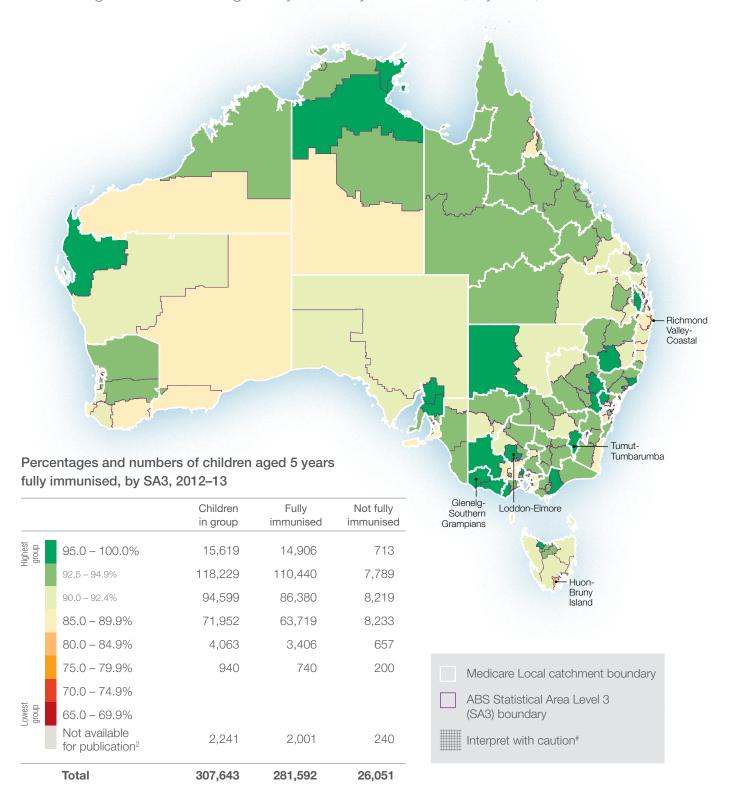
What does fully immunised at 5 years mean?

Fully immunised at 5 years means that a child aged 60 months 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 and numbers not fully immunised, by SA3, 2012–13



Percentages of children aged 5 years fully immunised, by SA3, 2012-13



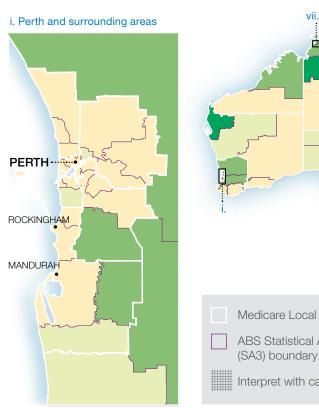
[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

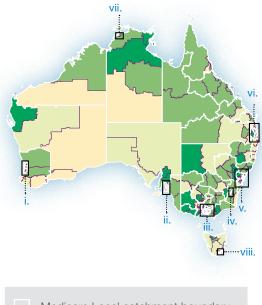
For more information about SA3s see Australian Bureau of Statistics (2010) Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital Cities Statistical Areas, July 2011. www.abs.gov.au Accessed 24 February 2014.

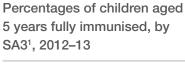
SA3 data exclude a number of invalid and unallocated postcodes. SA3s with fewer than 26 registered children in the age group are not reported. For more information see *Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement* at www.myhealthycommunities.gov.au
 Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

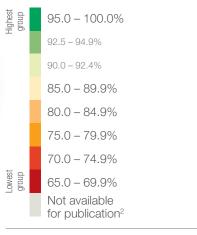
Children aged 5 years who were fully immunised, by statistical area, 2012-13

Variation within Medicare Local catchments









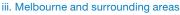
Medicare Local catchment boundary ABS Statistical Area Level 3

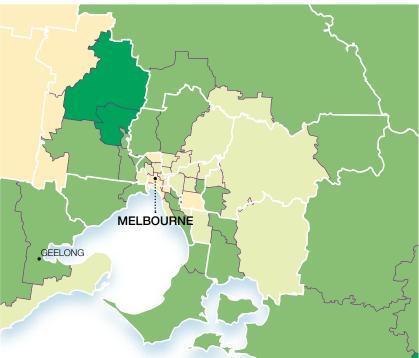
Interpret with caution#

Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au



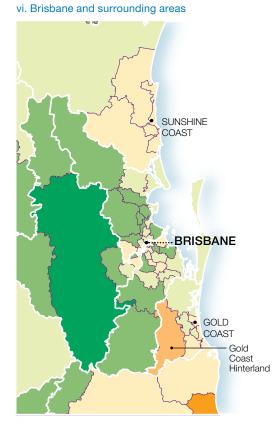




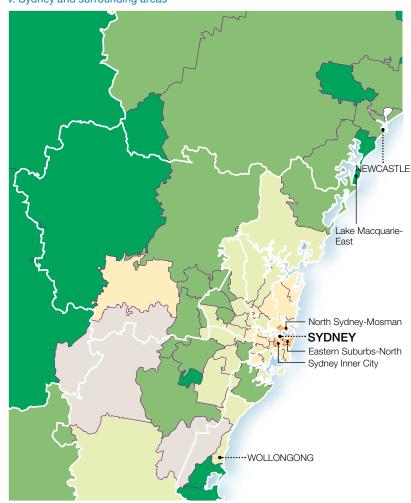


iv. Canberra and surrounding areas





v. Sydney and surrounding areas



vii. Darwin and surrounding areas



viii. Hobart and surrounding areas



Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

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 24 February 2014.

^{2.} SA3 data exclude a number of invalid and unallocated postcodes. SA3s with fewer than 26 registered children in the age group are not reported. For more information see Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement at www.myhealthycommunities.gov.au Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Table 1: Statistical areas (SA3) with the highest and lowest percentages of all children aged 1 year fully immunised, 2012-13

State/ Territory	Statistical area	Medicare Local catchments ¹	Percentage fully immunised	Number not fully immunised
Qld	Whitsunday	Townsville-Mackay	96.1%	10
SA	Limestone Coast	Country South SA	95.7%	34
NT	East Arnhem	Northern Territory	95.5%	11
Vic/NSW	Wodonga-Alpine	Hume	95.4%	36
Tas	Hobart-North East	Tasmania	95.3%	30
Qld	Carindale	Greater Metro South Brisbane	95.1%	32
Qld	Caboolture Hinterland	Metro North Brisbane, West Moreton-Oxley	95.0%	7
Vic	Latrobe Valley	Gippsland	94.9%	49
Qld	Bald Hills-Everton Park	Metro North Brisbane	94.8%	29
ACT	Weston Creek	Australian Capital Territory	94.8%	18
NSW	Camden	South Western Sydney	94.8%	44
NSW	Upper Hunter	Hunter	94.7%	26
SA	Barossa	Country North SA, Northern Adelaide	94.6%	21
NSW	Queanbeyan	Southern NSW	94.6%	38
NSW	Snowy Mountains	Southern NSW	94.6%	11
ACT	Belconnen	Australian Capital Territory	94.6%	76
Qld	Strathpine	Metro North Brisbane	94.6%	31
Vic	Sunbury	Macedon Ranges & NW Melb	94.5%	29
Vic	Warrnambool-Otway Ranges	Great South Coast, Barwon	94.4%	61
Vic	Grampians	Grampians	94.4%	36
WA	Augusta-Margaret River-Busselton	South West WA	87.3%	75
Qld	Tablelands (East)-Kuranda	Far North Qld	87.2%	62
NSW	Sydney Inner City	Inner West Sydney, Eastern Sydney	87.1%	232
WA	Canning	Bentley-Armadale	87.1%	156
NSW	Mount Druitt	Western Sydney	87.0%	256
Vic	Melbourne City	Inner NW Melbourne, Bayside	86.7%	109
WA	Manjimup	South West WA	86.7%	32
WA	Gascoyne	Goldfields-Midwest	86.6%	21
WA	Mundaring	Perth Central & East Metro	86.3%	58
NSW	Auburn	Western Sydney	86.2%	206
NSW	Tweed Valley	North Coast NSW	86.2%	131
NSW	South Coast	Southern NSW	86.1%	93
SA	Burnside	Central Adelaide & Hills	86.1%	46
Qld	Sunshine Coast Hinterland	Sunshine Coast	85.8%	72
WA	Fremantle	Fremantle	85.6%	53
NSW	Kempsey-Nambucca	North Coast NSW	84.5%	89
NSW	Richmond Valley-Hinterland	North Coast NSW	83.5%	153
ACT	South Canberra	Australian Capital Territory	82.5%	55
SA	Adelaide City	Central Adelaide & Hills	82.1%	25
NSW	Richmond Valley-Coastal	North Coast NSW	79.7%	167

1. Any Medicare Local catchment containing at least 5% of the SA3 estimated resident population as at 30 June 2011 is listed.

Note: Results are provided for the 20 SA3s with the highest and lowest percentages of children aged 1 year fully immunised which have more than 100 registered children. For interactive results at SA3 level see www.myhealthycommunities.gov.au

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Table 2: Statistical areas (SA3) with the *highest and lowest* percentages of all children *aged 2 years* fully immunised, 2012–13

State/ Territory	Statistical area	Medicare Local catchments ¹	Percentage fully immunised	Number not fully immunised
NT	Katherine	Northern Territory	97.5%	10
SA	Lower North	Country North SA	97.0%	7
NSW	Tamworth-Gunnedah	New England	97.0%	35
Qld	Outback-South	Central & NW Qld, Darling Downs-SW Qld	96.7%	11
Vic	Grampians	Grampians	96.6%	22
NSW	Maitland	Hunter	96.5%	36
Vic	Barwon-West	Barwon	96.4%	8
Vic	Glenelg-Southern Grampians	Great South Coast	96.4%	14
Vic	Wellington	Gippsland	96.4%	18
Vic	Gippsland-East	Gippsland	96.3%	17
NSW	Goulburn-Yass	Southern NSW, Murrumbidgee	96.2%	32
Tas	Burnie-Ulverstone	Tasmania	96.1%	23
Qld	Whitsunday Townsville-Mackay		96.1%	10
NSW	Bathurst	Western NSW	95.9%	25
NSW	Lower Hunter	Hunter	95.9%	52
NSW	Lachlan Valley	Western NSW, Murrumbidgee	95.8%	29
Vic	Moira	Goulburn Valley	95.8%	13
NT	Daly-Tiwi-West Arnhem	Northern Territory	95.7%	17
Tas	Hobart-North West	Tasmania	95.7%	31
Vic	Latrobe Valley	Gippsland	95.7%	43
Qld	Tablelands (East)-Kuranda	Far North Qld	88.8%	57
WA	Perth City	Perth Central & East Metro, Perth North	88.5%	119
WA	Melville	Metro Fremantle	88.5%	126
NSW			88.4%	73
Qld	Manly Sunshine Coast Hinterland	Sydney Nth Shore & Beaches Sunshine Coast	87.9%	69
ACT			87.7%	
NSW	South Canberra	Australian Capital Territory Inner West Sydney, Eastern Sydney	87.7%	33 192
NSW	Sydney Inner City Eastern Suburbs-North		87.5%	
Qld	Surfers Paradise	Eastern Sydney Gold Coast	87.4%	209
WA	South Perth		87.3%	
VVA		Bentley-Armadale Bayside	87.1%	52
	Stonnington-West			65
Tas	Huon-Bruny Island	Tasmania	86.9%	24
Vic	Melbourne City	Inner NW Melbourne, Bayside	86.7%	95
- AVOVA	Fremantle Picture Alice Advantage	Fremantle	86.6%	49
NSW	Richmond Valley-Hinterland	North Coast NSW	86.6%	119
Qld	Nambour-Pomona	Sunshine Coast	86.3%	93
Qld	Brisbane Inner	Metro North Brisbane, Greater Metro South Brisbane	85.9%	58
WA	Cottesloe-Claremont	Perth Central & East Metro	85.4%	85
SA	Adelaide City	Central Adelaide & Hills	84.4%	21
NSW	Richmond Valley-Coastal	North Coast NSW	81.6%	159

^{1.} Any Medicare Local catchment containing at least 5% of the SA3 estimated resident population as at 30 June 2011 is listed.

Note: Results are provided for the 20 SA3s with the highest and lowest percentages of children aged 1 year fully immunised which have more than 100 registered children. For interactive results at SA3 level see www.myhealthycommunities.gov.au

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Table 3: Statistical areas (SA3) with the highest and lowest percentages of all children aged 5 years fully immunised, 2012-13

State/ Territory	Statistical area	Medicare Local catchments ¹	Percentage fully immunised	Number not fully immunised
NSW	Tumut-Tumbarumba	Murrumbidgee	96.8%	6
Vic	Glenelg-Southern Grampians	Great South Coast	96.4%	16
Vic/NSW	Loddon-Elmore	Loddon-Mallee-Murray	96.2%	≤5
NSW	Lake Macquarie-East	Hunter	96.0%	65
NSW	Camden	South Western Sydney	95.9%	40
NSW	Tamworth-Gunnedah	New England	95.8%	47
NT	East Arnhem	Northern Territory	95.7%	10
Vic	Wellington	Gippsland	95.6%	20
NSW	Broken Hill and Far West	Far West NSW	95.6%	12
NSW	Maitland	Hunter	95.5%	46
Vic	Macedon Ranges	Macedon Ranges & NW Melb	95.4%	18
NSW	Bathurst	Western NSW	95.3%	28
NT	Katherine	Northern Territory	95.3%	17
Qld	Ipswich Hinterland	West Moreton-Oxley	95.2%	40
NSW	Dapto-Port Kembla	Illawarra-Shoalhaven	95.2%	49
Vic	Sunbury	Macedon Ranges & NW Melb	95.2%	25
Vic	Grampians	Grampians	95.1%	35
SA	Mid North	Country North SA	95.1%	17
NSW	Great Lakes	Hunter	95.1%	15
NSW	Lithgow-Mudgee	Western NSW, Nepean-Blue Mountains	95.1%	30
Vic	Port Phillip	Bayside	86.7%	116
WA	Canning	Bentley-Armadale	86.7%	159
WA	Mundaring	Perth Central & East Metro	86.7%	67
Qld	Coolangatta	Gold Coast	86.6%	78
WA	Melville	Fremantle	86.4%	164
NT	Darwin City	Northern Territory	86.2%	26
Qld	Noosa	Sunshine Coast	86.1%	66
NT	Darwin Suburbs	Northern Territory	86.1%	112
Qld	Surfers Paradise	Gold Coast	86.0%	36
Vic	Stonnington-West	Bayside	85.7%	67
WA	Fremantle	Fremantle	85.6%	64
Vic	Melbourne City	Inner NW Melbourne, Bayside	85.4%	76
Qld	Sunshine Coast Hinterland	Sunshine Coast	85.3%	88
Qld	Nambour-Pomona	Sunshine Coast	85.3%	111
Tas	Huon-Bruny Island	Tasmania	84.7%	36
Qld	Gold Coast Hinterland	Gold Coast	84.5%	37
NSW	Eastern Suburbs-North	Eastern Sydney	84.4%	227
NSW	North Sydney-Mosman	Sydney Nth Shore & Beaches	83.4%	156
NSW	Sydney Inner City	Inner West Sydney, Eastern Sydney	83.3%	184
NSW	Richmond Valley-Coastal	North Coast NSW	78.8%	200

Any Medicare Local catchment containing at least 5% of the SA3 estimated resident population as at 30 June 2011 is listed.

Results are provided for the 20 SA3s with the highest and lowest percentages of children aged 1 year fully immunised which have more than Note:

100 registered children. For interactive results at SA3 level see www.myhealthycommunities.gov.au

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13,

data supplied 6 February 2014.

Table 4: Postcodes with the highest and lowest percentages of all children aged 5 years fully immunised, 2012-13

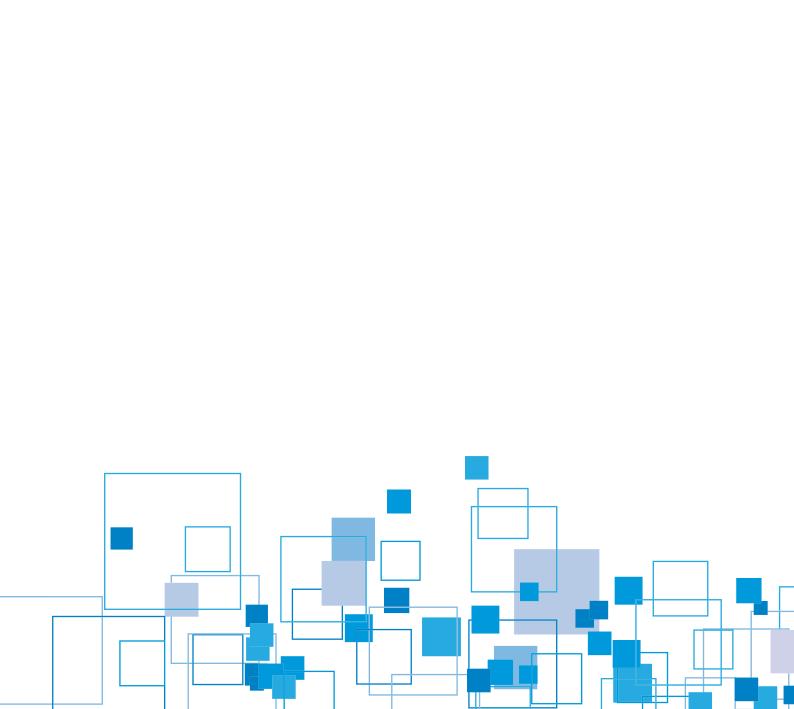
Postcode	Suburbs	Medicare Local catchments ¹	Percentage fully immunised
3730	Bundalong, Yarrawonga (Vic) and eight others	Goulburn Valley (Vic)	99.0%
2517	Woonona, Woonona East and Russell Vale (NSW)	Illawarra-Shoalhaven (NSW)	98.4%
3756	Chintin, Darraweit Guim, Wallan (Vic) and one other	Goulburn Valley (Vic), Macedon Ranges & NW Melb	98.1%
5126	Fairview Park, Surrey Downs and Yatala Vale (SA)	Northern Adelaide	98.1%
0852	Daly River, Mataranka, Victoria River (NT) and 47 others	Northern Territory	98.0%
3250	Colac, Elliminyt (Vic) and two others	Barwon (Vic)	98.0%
2769	The Ponds (NSW)	Western Sydney	97.7%
2390	Back Creek, Narrabri, Turrawan (NSW) and 13 others	New England (NSW)	97.3%
5093	Para Vista and Valley View (SA)	Northern Adelaide	97.1%
2282	Eleebana, Lakelands and Warners Bay (NSW)	Hunter (NSW)	97.1%
3224	Leopold and Moolap (Vic)	Barwon (Vic)	97.1%
3042	Airport West, Keilor Park, Niddrie and Niddrie North (Vic)	Inner NW Melbourne, Macedon Ranges & NW Melb	97.0%
3305	Allestree, Gorae, Portland (Vic) and nine others	Great South Coast (Vic)	97.0%
2281	Blacksmiths, Nords Wharf, Swansea (NSW) and eight others	Hunter (NSW)	96.9%
3400	Horsham (Vic)	Grampians (Vic)	96.9%
2337	Belltrees, Moobi, Scone (NSW) and 22 others	Hunter (NSW)	96.9%
7018	Bellerive, Howrah, Rosny, Warrane (Tas) and four others	Tasmania	96.9%
4037	Eatons Hill (Qld)	Metro North Brisbane	96.8%
3840	Hazelwood, Jeeralang, Morwell (Vic) and five others	Gippsland (Vic)	96.8%
3049	Attwood and Westmeadows (Vic)	Northern Melbourne	96.7%
4567	Castaways Beach, Noosa Heads (Qld) and two others	Sunshine Coast (Qld)	83.1%
2089	Kurraba Point, Neutral Bay and Neutral Bay Junction (NSW)	Sydney Nth Shore & Beaches	83.0%
2071	East Killara and Killara (NSW)	Northern Sydney	83.0%
3141	South Yarra (Vic)	Bayside (Vic)	82.9%
6076	Kalamunda, Lesmurdie, Walliston (WA) and eight others	Perth Central & East Metro	82.8%
2135	Strathfield (NSW)	Inner West Sydney	82.6%
2131	Ashfield (NSW)	Inner West Sydney	82.5%
2017	Waterloo and Zetland (NSW)	Inner West Sydney	82.4%
5076	Athelstone and Castambul (SA)	Central Adelaide & Hills	82.1%
6148	Ferndale, Riverton, Shelley (WA) and one other	Bentley-Armadale (WA)	81.9%
2021	Centennial Park, Moore Park and Paddington (NSW)	Eastern Sydney	81.8%
5066	Beaumont, Burnside, Erindale (SA) and four others	Central Adelaide & Hills	81.7%
0810	Casuarina, Jingili, Wanguri (NT) and 13 others	Northern Territory	81.7%
2150	Harris Park and Parramatta (NSW)	Western Sydney	81.2%
2038	Annandale (NSW)	Inner West Sydney	81.1%
2484	Cedar Creek, Murwillumbah (NSW) and 55 others	North Coast NSW	80.6%
2095	Manly and Manly East (NSW)	Sydney Nth Shore & Beaches	80.4%
2000	Haymarket, Sydney, The Rocks (NSW) and five others	Eastern Sydney	72.1%
2483	Brunswick Heads, Ocean Shores (NSW) and 12 others	North Coast NSW	70.2%
2481	Broken Head, Byron Bay (NSW) and seven others	North Coast NSW	66.7%

Any Medicare Local catchment containing at least 5% of the postcode's estimated resident population as at 30 June 2011 is listed.

Results are provided for the 20 postcodes with the highest and lowest percentages of children aged 5 years fully immunised which have more than Note:

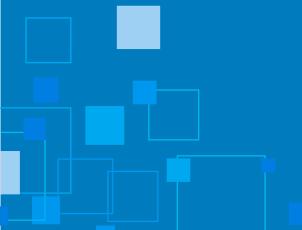
100 children registered. For interactive results at postcode level see www.myhealthycommunities.gov.au

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.



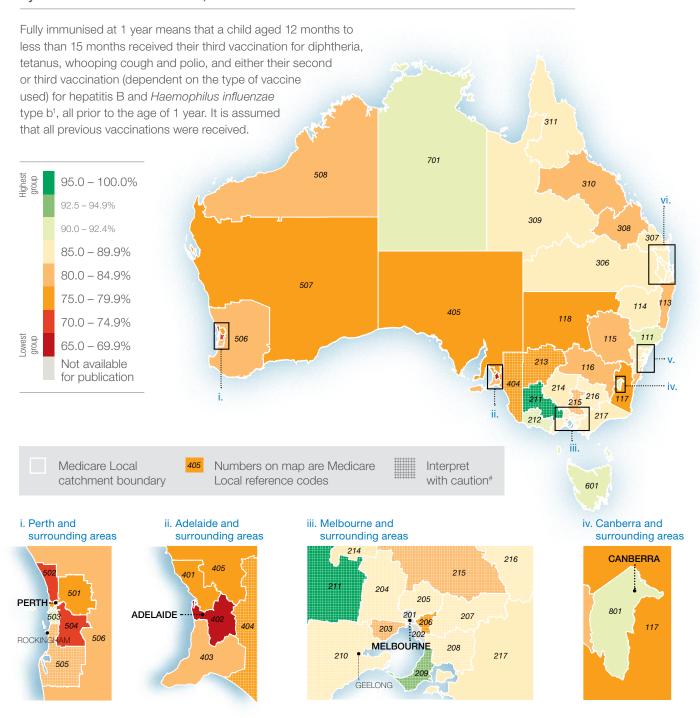
Aboriginal and Torres Strait Islander children

Immunisation rates for children in 2012–13



Aboriginal and Torres Strait Islander children aged 1 year who were fully immunised, 2012–13

Percentages of Aboriginal and Torres Strait Islander children aged 1 year fully immunised, by Medicare Local catchment, 2012–13



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Data can be downloaded from www.myhealthycommunities.gov.au

For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A–Z, www.immunise.health.gov.au
Accessed 27 February 2014.

o All children

Aboriginal and Torres

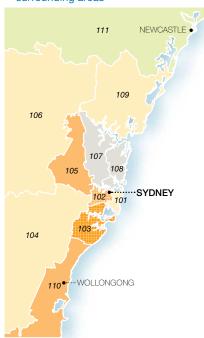
Strait Islander children

Number

not fully

immunised

v. Sydney and surrounding areas

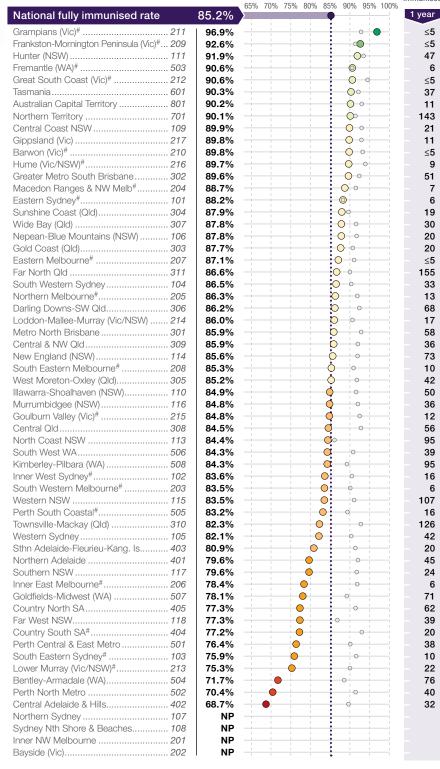


vi. Brisbane and surrounding areas



Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au

Map Medicare Local catchments Ref.



TOTAL*

2,172

^{*} Components may not add to totals because of unallocated postcodes.

NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

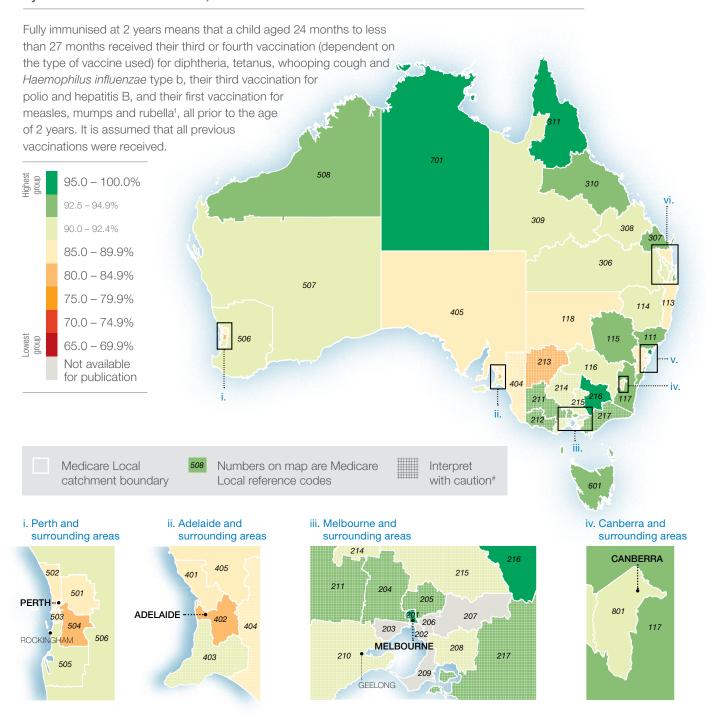
Notes: Data exclude a number of invalid and unallocated postcodes – for more information see this report's Technical Supplement.

These data reflect the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2012–13. Levels of identification may vary between Medicare Local catchments.

More information can be found at www.myhealthycommunities.gov.au and in this report's Technical Supplement.

Aboriginal and Torres Strait Islander children aged 2 years who were fully immunised, 2012–13

Percentages of Aboriginal and Torres Strait Islander children aged 2 years fully immunised, by Medicare Local catchment, 2012–13



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Data can be downloaded from www.myhealthycommunities.gov.au

For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A–Z, www.immunise.health.gov.au
Accessed 27 February 2014.

Мар

o All children

Aboriginal and Torres

Strait Islander children

Number

not fully

immunised

37

7

≤5

53

<5

8

≤5

16

≤5

21

≤5

≤5

35

39

6

38

10

54

≤5

15

29

25

20

8

8

8

7

29

25

19

40

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≤5

30 7

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34

33

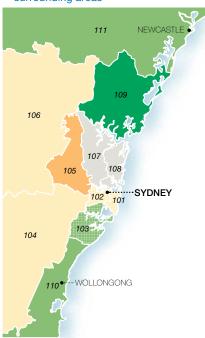
15

41

24

1.140

v. Sydney and surrounding areas

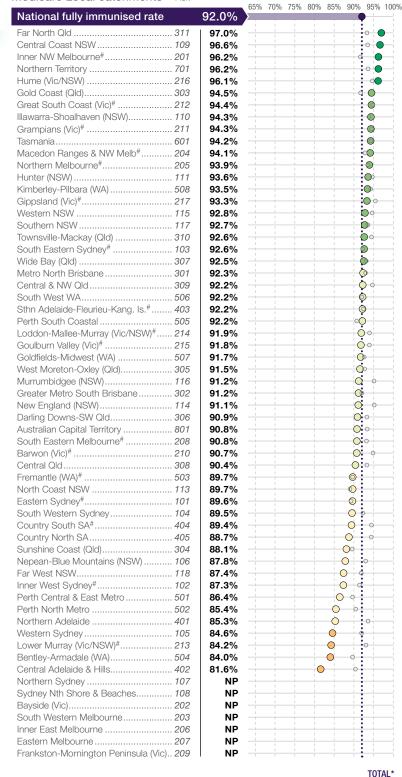


vi. Brisbane and surrounding areas



Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au

Medicare Local catchments



Components may not add to totals because of unallocated postcodes.

NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

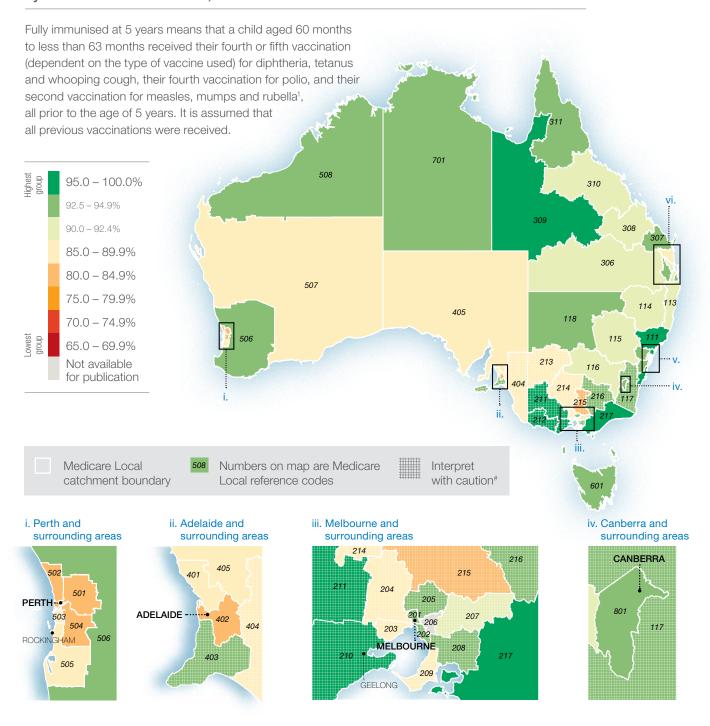
Notes: Data exclude a number of invalid and unallocated postcodes – for more information see this report's Technical Supplement.

These data reflect the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2012–13. Levels of identification may vary between Medicare Local catchments.

 $[\]label{thm:model} \textit{More information can be found at } \textbf{www.myhealthycommunities.gov.au} \ \text{and in this report's Technical Supplement.}$

Aboriginal and Torres Strait Islander children aged 5 years who were fully immunised, 2012–13

Percentages of Aboriginal and Torres Strait Islander children aged 5 years fully immunised, by Medicare Local catchment, 2012–13



[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Data can be downloaded from www.myhealthycommunities.gov.au

For more details on the diseases and immunisations see Immunise Australia Program. Diseases and Programs A–Z, www.immunise.health.gov.au
Accessed 27 February 2014.

o All children

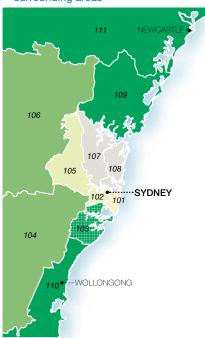
Aboriginal and Torres

Strait Islander children

Number

not fully

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



Statistical Area Level 3 (SA3) and postcode-level data available at www.myhealthycommunities.gov.au

Map
Medicare Local catchments Ref.



Components may not add to totals because of unallocated postcodes.

NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

Notes: Data exclude a number of invalid and unallocated postcodes – for more information see this report's Technical Supplement.

These data reflect the results for children identified as Aboriginal and Torres Strait Islander in the ACIR in 2012–13. Levels of identification may vary between Medicare Local catchments.

More information can be found at www.myhealthycommunities.gov.au and in this report's Technical Supplement.

Table 5: Percentages of Aboriginal and Torres Strait Islander children in selected statistical areas (SA3)* that were fully immunised† and numbers not fully immunised, 2012-13

Selected local areas	Percenta	Number [‡] not fully immunised		
	1 year	2 years	5 years	
East Arnhem (NT)	94.7%	97.0%	95.8%	19
Wyong (NSW)	93.8%	95.6%	95.6%	19
Daly-Tiwi-West Arnhem (NT)	93.4%	97.2%	95.1%	28
Darling Downs (West)-Maranoa (Qld)	90.8%#	95.0%	91.1%#	24
Katherine (NT)	89.9%	98.1%	95.8%	44
Alice Springs (NT)	89.6%	96.3%	93.9%	72
Tamworth-Gunnedah (NSW)	89.1%	93.4%	95.8%	45
Kimberley (WA)	89.0%	95.6%	94.9%	83
Far North (Qld)	88.8%	97.2%	95.1%	76
Campbelltown (NSW)	88.1%#	91.7%	95.5%	25
Mackay (Qld)	88.0%	94.2%	94.2%	37
Innisfail-Cassowary Coast (Qld)	87.3%	96.8%	93.7%	37
Outback-North (Qld)	86.9%	91.7%	95.8%	66
Wagga Wagga (NSW)	86.8%	90.0%	90.2%#	35
Burnett (Qld)	86.4%	86.6%	84.0%#	42
lpswich Inner (Qld)	86.2%	92.3%	95.6%	31
Palmerston (NT)	85.7%	89.9%	91.2%	38
Tablelands (East)-Kuranda (Qld)	85.5%	96.5%	95.8%	25
Cairns-South (Qld)	85.2%	96.9%	93.9%	94
Darwin Suburbs (NT)	84.3%	95.3%	91.5%	42
Kempsey-Nambucca (NSW)	83.2%	88.3%	88.2%	52
Goldfields (WA)	83.2%	87.9%	87.9%	48
Shoalhaven (NSW)	82.9%	92.3%	95.2%	40
Cairns-North (Qld)	82.7%#	96.4%#	94.0%	26
Rockhampton (Qld)	82.4%	88.3%	92.8%	79
Lachlan Valley (NSW)	80.9%	93.0%#	94.5%	36
Townsville (Qld)	80.8%	91.8%	92.3%	136
Bourke-Cobar-Coonamble (NSW)	80.8%	90.3%	91.8%	64
Mount Druitt (NSW)	80.6%	86.2%#	91.3%	44
Outback-North and East (SA)	80.6%	88.7%	89.2%	45
Dubbo (NSW)	80.3%	92.4%	91.0%	102
Toowoomba (Qld)	79.4%	91.7%	95.6%	52
Moree-Narrabri (NSW)	79.2%	86.8%	87.1%	62
Mid West (WA)	75.6%	93.9%	90.4%	67
Richmond Valley-Hinterland (NSW)	75.3%	82.9%	90.0%	59
Charters Towers-Ayr-Ingham (Qld)	75.2%#	90.8%	88.0%	49
Pilbara (WA)	75.0%	89.3%	88.8%	92
Eyre Peninsula and South West (SA)	74.5%	86.7%#	88.0%#	51

Data are reported for 38 of 333 statistical areas defined by the Australian Bureau of Statistics as Statistical Areas Level 3 (SA3). These 38 SA3s have a sufficiently high number (n>100 for at least one age group) of Aboriginal and Torres Strait Islander children to allow reliable and confidential reporting of child immunisation rates, and represent 48% of the Aboriginal and Torres Strait Islander children aged 1, 2 and 5 years in the Australian Childhood Immunisation Register (ACIR).

A child has received the scheduled vaccinations according to age. See **Figure 1**, **page 2** or this report's Technical Supplement. Number of Aboriginal and Torres Strait Islander children aged 1, 2 or 5 years combined.

Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2012–13, data supplied 6 February 2014.

Changes in coverage from 2011–12 to 2012–13

Immunisation rates for children in 2012–13

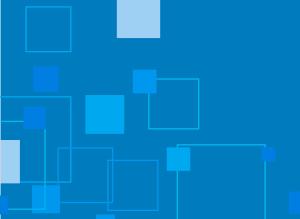


Figure 5: Percentages of all children, *aged 1 year*, who were fully immunised, by Medicare Local catchment, 2011–12 and 2012–13

Percentages of children aged 1 year fully immunised

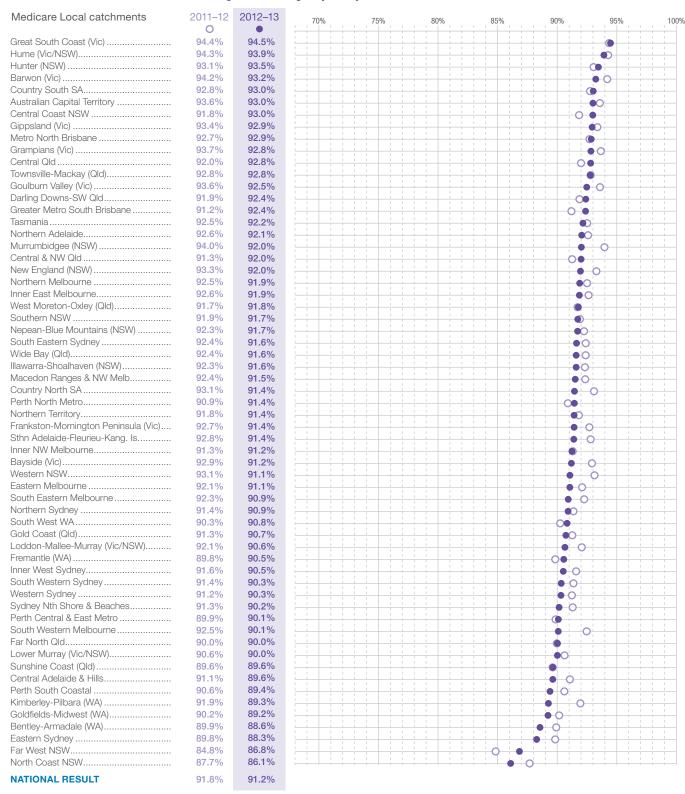


Figure 6: Percentages of all children, *aged 2 years*, who were fully immunised, by Medicare Local catchment, 2011–12 and 2012–13

Percentages of children aged 2 years fully immunised

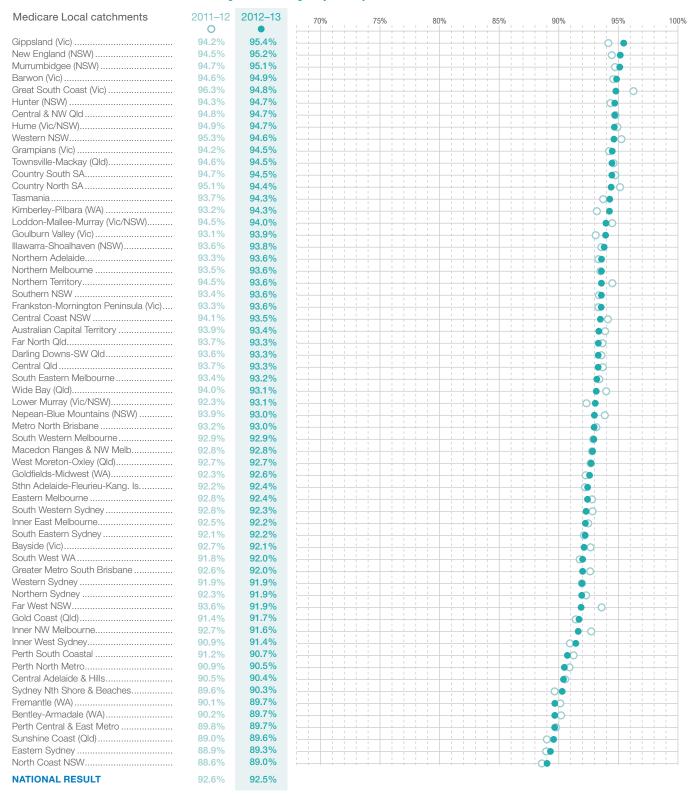


Figure 7: Percentages of all children, *aged 5 years*, who were fully immunised, by Medicare Local catchment, 2011–12 and 2012–13

Percentages of children aged 5 years fully immunised

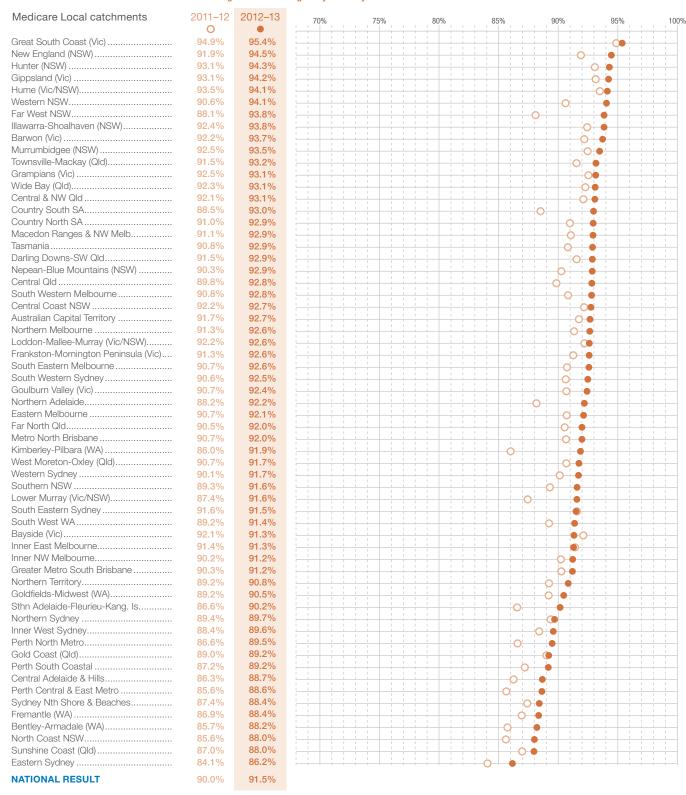


Figure 8: Percentages of Aboriginal and Torres Strait Islander children, *aged 1 year*, who were fully immunised, by Medicare Local catchment, 2011–12 and 2012–13

Percentages of children aged 1 year fully immunised

Medicare Local catchments	2011–12	2012–13	70%	75%	809	%	85%	90%	1 1 1	95%	100%
Grampians (Vic)	O 87.5%#	96.9%#									
Frankston-Mornington Peninsula (Vic)	NP	92.6%#						0			
Hunter (NSW)	89.4%	91.9%					1 1			1 1 1	1 1
Fremantle (WA)	82.3%#	90.6%#				0					
Great South Coast (Vic)	87.5%#	90.6%#									
Tasmania	92.7%	90.3%						0			
Australian Capital Territory	82.0%	90.2%							0		
Northern Territory	90.3%	90.2 %				10			1 1 1		1 1
Central Coast NSW	91.8%	89.9%									
Gippsland (Vic)	84.8%#	89.8%							0		
Barwon (Vic)	86.5%#	89.8%#					19				
Hume (Vic/NSW)	91.5%	89.7%#				1 1 1	10				
,	86.6%								0		1 1
Greater Metro South Brisbane		89.6%									
Macedon Ranges & NW Melb	85.2%#	88.7%#					10		1111		
Eastern Sydney	88.8%#	88.2%#					i I i	•0	1 1 1		
Sunshine Coast (Qld)	85.1%	87.9%				1 1 1	7 9 1		1 1 1		1 1
Wide Bay (Qld)	86.8%	87.8%						7 🖣 🗼	1 1 1		
Nepean-Blue Mountains (NSW)	85.3%	87.8%					+0+	•			
Gold Coast (Qld)	94.1%	87.7%					1	•	1 1 1	\circ	
Eastern Melbourne	NP	87.1%#						•			
Far North Qld	87.9%	86.6%					•				
South Western Sydney	87.4%	86.5%		-			-	0	1 1 1		
Northern Melbourne	83.2%#	86.3%#		1			-				1 1
Darling Downs-SW Qld	81.1%	86.2%				0	•		1 1 1		
Loddon-Mallee-Murray (Vic/NSW)	82.3%#	86.0%				0	•				
Metro North Brisbane	88.1%	85.9%						0			
Central & NW Qld	86.9%	85.9%		1			+ • () 		1 1 1	1 1
New England (NSW)	87.2%	85.6%		-				0	1 1 1	1 1 1	1 1
South Eastern Melbourne	92.4%#	85.3%#					•		0		
West Moreton-Oxley (Qld)	84.8%	85.2%									
Illawarra-Shoalhaven (NSW)	90.2%	84.9%		1			+ + +	: : : 		1 1 1	1 1
Murrumbidgee (NSW)	89.1%	84.8%		1			+ + +		1 1 1	1 1 1	1 1
Goulburn Valley (Vic)	80.7%#	84.8%#				0	•				
Central Qld	83.9%	84.5%					0				
North Coast NSW	85.5%	84.4%		-			• 0			<u>i i i</u>	1 1
South West WA	83.0%	84.3%		1		0		1 1 1	1 1 1	1 1 1	1 1
Kimberley-Pilbara (WA)	88.1%	84.3%						6		1 1 1	
Inner West Sydney	82.1%#	83.6%#							1 1 1		
South Western Melbourne	NP	83.5%#									
Western NSW	85.1%	83.5%		-					1 1 1		1 1
Perth South Coastal	82.0%#	83.2%#				0			1 1 1		1 1
Townsville-Mackay (Qld)	81.3%	82.3%				0					
Western Sydney	79.2%	82.1%			0		1		1 1 1		
Sthn Adelaide-Fleurieu-Kang. Is	88.6%#	80.9%		-			1 1	0	1 1 1	<u>i i i i</u>	1 1
Northern Adelaide	75.5%	79.6%				111	1 1		1 1 1		1 1
Southern NSW	87.9%	79.6%						0			
Inner East Melbourne	NP	78.4%#									
Goldfields-Midwest (WA)	80.0%	78.1%							1 1 1		
Country North SA	81.3%	77.3%				0			1 1 1		
Far West NSW	72.5%	77.3%	0	- 1			1 1				1 1
Country South SA	82.7%#	77.2%#		-		0	1 1	1 1 1	1 1 1		1 1
Perth Central & East Metro	72.4%	76.4%	0			1 19			1 1 1		
South Eastern Sydney	94.9%#	75.9%#									
Lower Murray (Vic/NSW)	75.3%	75.3%#								I Y I I	i
Bentley-Armadale (WA)	69.4%	71.7%	0				1 1	1 1 1			1 1
Perth North Metro	76.4%	70.4%			0						
Central Adelaide & Hills	73.8%	68.7%									
Bayside (Vic)	73.0 % NP	NP		9							
Inner NW Melbourne	88.4%#	NP									
Northern Sydney	00.4 % NP	NP NP		I I							1 1
Sydney Nth Shore & Beaches	NP NP	NP NP									
NATIONAL RESULT	85.4%	85.2%									

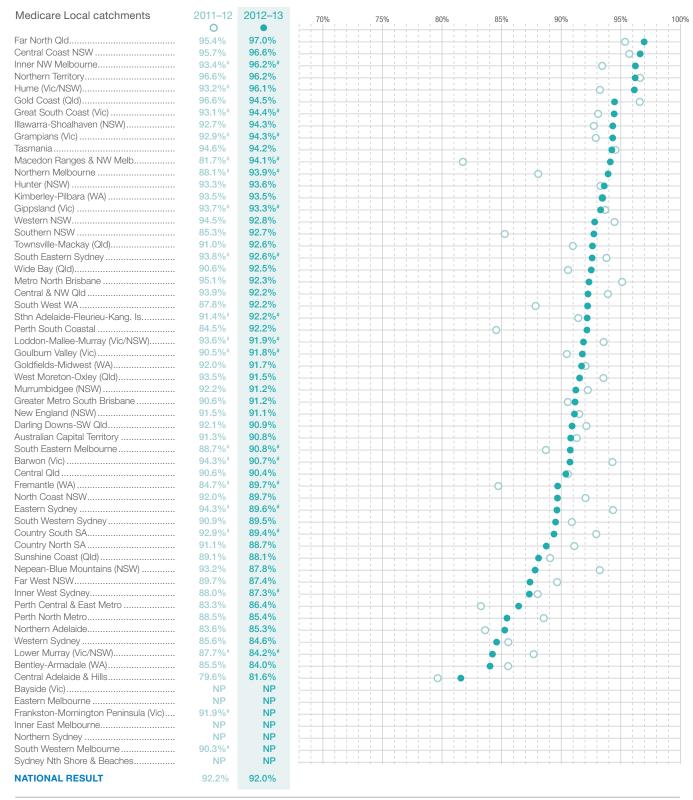
[#] Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

Source: National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14 January 2013, and 2012–13, data supplied 6 February 2014.

Figure 9: Percentages of Aboriginal and Torres Strait Islander children, aged 2 years, who were fully immunised, by Medicare Local catchment, 2011–12 and 2012–13

Percentages of children aged 2 years fully immunised



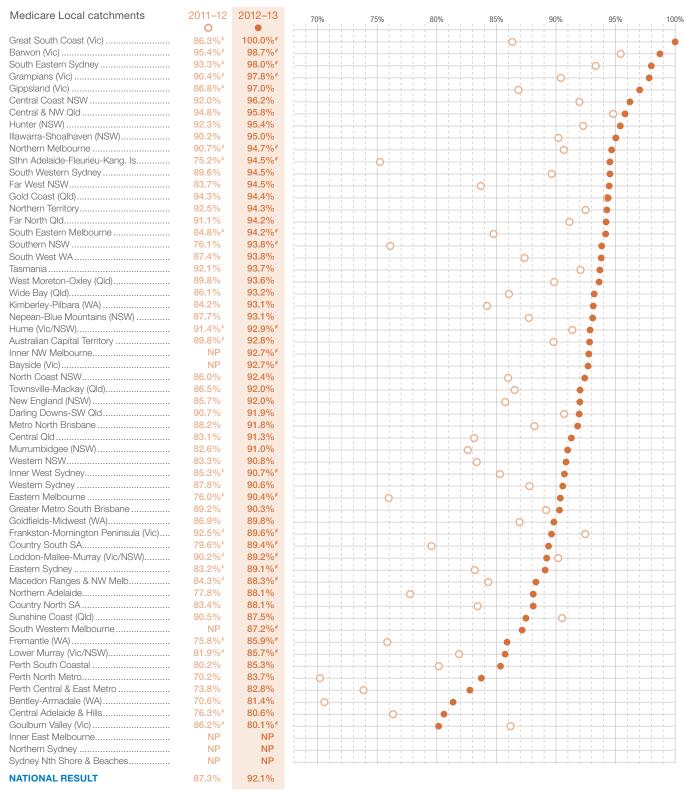
Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results. NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

Source:

National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, data supplied 14 January 2013, and 2012-13, data supplied 6 February 2014.

Figure 10: Percentages of Aboriginal and Torres Strait Islander children, aged 5 years, who were fully immunised, by Medicare Local catchment, 2011-12 and 2012-13

Percentages of children aged 5 years fully immunised



Interpret with caution. The eligible population is between 26 and 100 children, therefore small data errors can affect results.

NP Not available for publication. Medicare Local catchments with fewer than 26 registered children in the age group are not reported.

National Health Performance Authority analysis of Department of Human Services, Australian Childhood Immunisation Register statistics 2011–12, Source: data supplied 14 January 2013, and 2012-13, data supplied 6 February 2014.

Table 6: Postcodes with the *highest and lowest percentages* of *all children* fully immunised in 2011–12, and *change* in 2012–13

Children aged 1 year

			Percentage fu	lly immunised	
	Postcode	Suburbs	2011–12	2012–13	Change
Highest	3206	Albert Park and Middle Park (Vic)	99.3%	92.6%	-6.7
rates 2011-12	2619	Jerrabomberra (NSW)	98.7%	96.8%	-1.9
2011 12	2912	Gungahlin (ACT)	98.4%	97.4%	-1.0
	3033	Keilor East (Vic)	98.0%	94.0%	-4.0
	4073	Seventeen Mile Rocks and Sinnamon Park (Qld)	97.5%	94.1%	-3.4
Lowest	6162	Beaconsfield, South Fremantle and White Gum Valley (WA)	81.7%	87.0%	+5.3
rates 2011-12	2780	Katoomba, Leura and Medlow Bath (NSW)	78.3%	80.7%	+2.4
2011 12	2483	Brunswick Heads, Ocean Shores (NSW) and 12 others	77.2%	72.4%	-4.8
	2481	Broken Head, Byron Bay (NSW) and seven others	76.3%	68.9%	-7.4
	2000	Haymarket, Sydney, The Rocks (NSW) and five others	73.1%	78.0%	+4.9

Children aged 2 years

			Percentage fu	lly immunised	
	Postcode	Suburbs	2011–12	2012-13	Change
Highest	4820	Charters Towers (Qld) and 20 others	98.9%	96.0%	-2.9
rates 2011-12	0822	Acacia Hills (NT) and 101 others	98.9%	96.5%	-2.4
2011-12	7010	Glenorchy (Tas) and four others	98.6%	96.0%	-2.6
	0872	Ngaanyatjarra-Giles, Nyapari, Yulara (NT, SA and WA) and 71 others	98.4%	95.9%	-2.5
	2327	Kurri Kurri, Pelaw Main and Stanford Merthyr (NSW)	98.2%	95.5%	-2.7
Lowest	2780	Katoomba, Leura and Medlow Bath (NSW)	80.9%	77.3%	-3.6
rates 2011-12	2095	Manly and Manly East (NSW)	80.2%	86.6%	+6.4
2011 12	2000	Haymarket, Sydney, The Rocks (NSW) and five others	78.1%	73.4%	-4.7
	2483	Brunswick Heads, Ocean Shores (NSW) and 12 others	71.8%	74.8%	+3.0
	2481	Broken Head, Byron Bay (NSW) and seven others	69.4%	73.6%	+4.2

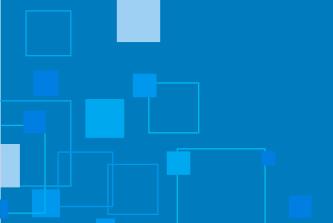
Children aged 5 years

			Percentage fu	lly immunised	
	Postcode	Suburbs	2011–12	2012–13	Change
Highest	3807	Beaconsfield and Guys Hill (Vic)	99.1%	96.4%	-2.7
rates 2011-12	3300	Byaduk North and Hamilton (Vic)	98.4%	95.9%	-2.5
2011-12	2590	Bethungra, Cootamundra and Illabo (NSW)	98.0%	94.1%	-3.9
	3059	Greenvale (Vic)	97.6%	95.3%	-2.3
	4865	Gordonvale (Qld) and five others	97.4%	94.9%	-2.5
Lowest	2483	Brunswick Heads, Ocean Shores (NSW) and 12 others	74.6%	70.2%	-4.4
rates 2011-12	2780	Katoomba, Leura and Medlow Bath (NSW)	74.3%	85.2%	+10.9
2011 12	6102	Bentley, Bentley South and St James (WA)	73.3%	88.0%	+14.7
	2000	Haymarket, Sydney, The Rocks (NSW) and five others	67.0%	72.1%	+5.1
	2481	Broken Head, Byron Bay (NSW) and seven others	63.3%	66.7%	+3.4

Note: Results are provided for postcodes with more than 100 children registered in both 2011–12 and 2012–13.

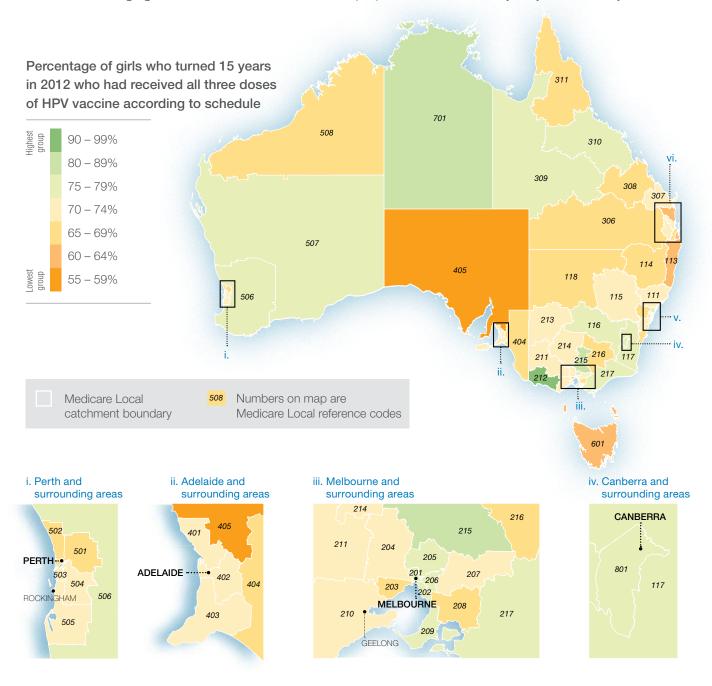
HPV immunisation

Immunisation rates for children in 2012–13



Girls turning 15 years in 2012 who were fully immunised against HPV

The percentage of girls who turned 15 years in 2012 who had received all three doses of the human papillomavirus (HPV)¹ vaccine according to the recommended schedule varied across Medicare Local catchments, ranging from 92% in Great South Coast (Vic) to 59% in Eastern Sydney and Country North SA.



^{1.} Human papillomavirus (HPV) is a common sexually transmitted virus that can cause genital warts as well as cancers of the cervix, vagina, vulva, penis and anus

Source: National Health Performance Authority analysis of Department of Health, National HPV Vaccination Program Register, data extracted 8 January 2014.

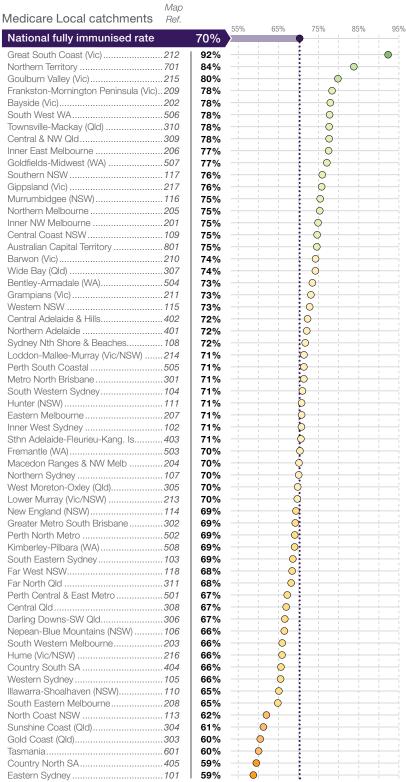
Note: These data include girls turning 15 years in 2012 whose year of birth is 1997 and who have completed the recommended three-dose course of HPV vaccination. Only vaccinations reported to the National HPV Vaccination Program Register (HPV Register) are included. Girls whose courses are considered to be incomplete according to the Chief Medical Officer guidelines (http://www.health.gov.au/internet/immunise/publishing.nsf/Content/cmo-full-advice-hpv-cnt) and girls who do not wish their details to be recorded on the HPV Register are excluded.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas





More information can be found at www.myhealthycommunities.gov.au and in this report's Technical Supplement. Data can be downloaded from www.myhealthycommunities.gov.au

Glossary

Conscientious objector	Parents or guardians who register with the Australian Government an objection to their child being immunised are described as conscientious objectors.
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); Haemophilus influenzae type B (Hib); poliomyelitis (inactivated poliomyelitis IPV); and measles, mumps and rubella (MMR). See Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement for more information.
German measles	See rubella.
Haemophilus influenzae type B (Hib)	Haemophilus influenzae type B is a bacterium that causes meningitis and 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.
Human papillomavirus	Human papillomavirus (HPV) is a common sexually transmitted virus that affects both men and women. There are different types of HPV that affect different parts of the body, with some types being more harmful than others. HPV can cause genital warts as well as cancers of the cervix, vagina, vulva, penis and anus.
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	Medicare Locals plan and fund health services in communities across Australia. They help to ensure patients can access the care they need, particularly when a variety of health workers are involved in providing treatments.
Medicare Local catchment	A Medicare Local catchment is a population that lives in a specific geographical area defined as a Medicare Local. See Medicare Local.
Meningitis	See Haemophilus influenzae type B (Hib)
Mumps	Mumps is a salivary gland infection caused by the <i>Rubulavirus</i> . Symptoms include swelling under the jaw, fever, headache and aching muscles.
National Immunisation Program Schedule	The schedule which describes the 16 vaccinations that are provided free to Australians under childhood programs, school programs and programs for special groups.
Pertussis	See whooping cough.
Polio	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	Rubella, also known as German measles, is a viral illness that causes a rash and joint pains.
Statistical Area Level 3	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	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.
Vaccine	A preventative health product that protects individuals against diseases by training the immune system to recognise and fight off invading organisms.
Whooping cough	Whooping cough, also known as pertussis, is a serious, contagious respiratory infection caused by the bacterium Bordetella pertussis.

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- 6. Hull BP, Deeks SL, McIntyre PB. The Australian Childhood Immunisation Register A model for universal immunisation registers? Vaccine. 2009;27:5054–60

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The National Health Performance Authority received advice from its Immunisation Report Advisory Committee. The group did not have a direct role in writing the report.

The Advisory Committee comprised:

- Ms Lisa Briggs
 - CEO, National Aboriginal Community Controlled Health Organisation
- Professor Ngiare Brown
 - Public Health Medical Officer, National Aboriginal Community Controlled Health Organisation
- Dr Michael Crampton
 - RACGP representative, National Immunisation Committee
 - General practitioner, Clinical Director, WentWest I td
- Dr Aditi Dey
 - Manager, Surveillance, National Centre for Immunisation Research & Surveillance
 - Conjoint Senior Lecturer, Sydney Medical School, University of Sydney
- Mr Michael Frost
 - Deputy Head of Secretariat, COAG Reform Council
- Mr Brendon Kelaher
 - National Indigenous Coordinator, National Centre for Immunisation Research & Surveillance
- 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 Robert Menzies
 - Deputy Director Surveillance, National Centre for Immunisation Research & Surveillance
- Ms Helen Moore
 - National Immunisation Committee
 - National Principal Adviser Immunisation,
 Australian Medicare Local Alliance
- Professor Terry Nolan
 - Chair, Australian Technical Advisory Group on Immunisation
 - Head, Melbourne School of Population and Global Health, University of Melbourne
- Ms Karen Peterson
 - National Immunisation Committee
 - Immunisation Manager, Queensland Health
- Ms Debra Petrys
 - Consumer representative nominated to bring a consumer perspective by the Consumers Health Forum of Australia.

The Authority also received advice from Dr Julia Brotherton and Genevieve Chappell from the National HPV Vaccination Program Register operated by the Victorian Cytology Service.

This report relies on data provided by the Australian Government Department of Health from the Australian Childhood Immunisation Register (ACIR), and data from the National HPV Vaccination Program Register operated by the Victorian Cytology Service. 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 these data custodians.

About the Authority

The National Health Performance Authority has been set up as an independent agency under the *National Health Reform Act 2011*. It 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 give all Australians access to timely and impartial information that allows them to compare fairly their local health care organisations against other similar organisations and against national standards.

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

The Authority's activities are also guided by a document known as the Performance and Accountability Framework agreed by the Council of Australian Governments. The framework contains 48 indicators that form the basis for the Authority's performance reports.

The Authority's role will include 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 (www.myhospitals.gov.au), the MyHealthyCommunities website (www.myhealthycommunities.gov.au) 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
- Professor Michael Reid
- Professor Bryant Stokes AM RFD (on leave)
- Professor Paul Torzillo AM
- Professor Claire Jackson.

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.

National Health Performance Authority

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

www.nhpa.gov.au