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Australian Institute of Health and Welfare

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Healthy Communities

Healthy Communities: HPV immunisation rates in 2014–15

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This report shows the percentage of girls, and for the first time, boys, aged 15 who were fully immunised against the human papillomavirus in 2014–15. Results are presented for the 31 Primary Health Network (PHN) areas that cover Australia and for more than 80 smaller local areas.

Human papillomavirus (HPV) is a common sexually transmitted infection. It is estimated that four out of five people will have an HPV infection at some point in their lives.¹ Although often asymptomatic, HPV infection can cause a wide range of cancers, including cervical cancer, and other conditions such as genital warts.

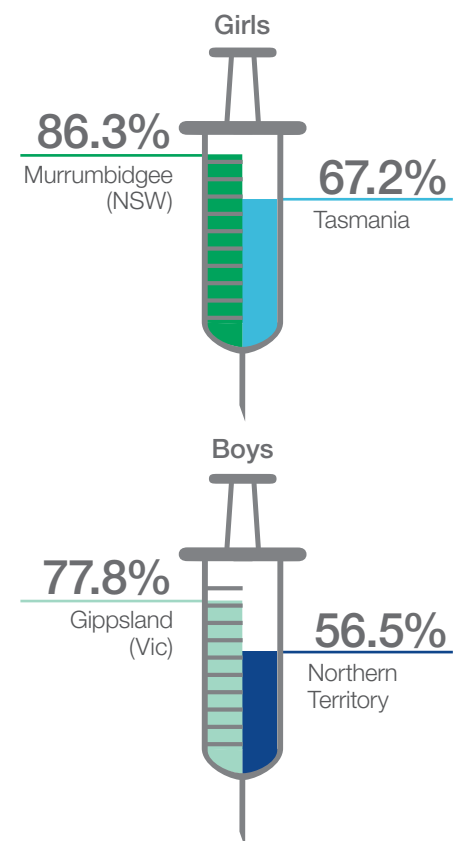
The Australian Government introduced the school-based National HPV Vaccination Program in 2007 for adolescent girls to protect against cervical cancer and other HPV-related diseases. In January 2013, the program was extended to include boys. The National HPV Vaccination Program includes three doses of the vaccine, usually administered over six months.² 'Fully immunised' boys and girls aged 15 are those who received all three doses of the HPV vaccine by 30 June 2015.

Nationally in 2014–15, 78.6% of girls aged 15 were fully immunised against HPV, an increase from 72.0% in 2012–13 and 74.3% in 2013–14. Across PHN areas in 2014–15, the percentage of girls fully immunised against HPV ranged from 86.3% (Murrumbidgee, NSW) to 67.2% (Tasmania). Most areas reported significant increases in HPV immunisation rates for girls over time.

For boys aged 15 in 2014–15, 67.3% were fully immunised against HPV nationally. Across PHN areas, percentages ranged from 77.8% (Gippsland, Vic) to 56.5% (Northern Territory).



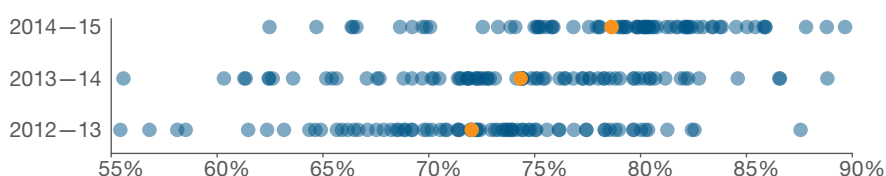
Fully immunised against HPV: range across PHN areas



What is a Primary Health Network?

Primary Health Networks (PHNs) are organisations that connect health services over local geographic areas. There are 31 PHNs in Australia. See the back page for more information.

Figure 1: Percentage of girls fully immunised, by local area (SA4) and year



Notes Each blue circle represents the percentage fully immunised in a local area (SA4), excluding local areas that are marked as interpret with caution. National rate

Source National HPV Vaccination Program Register.

Visit www.myhealthycommunities.gov.au for more detailed results

Sources and methods can be found in the Technical Note at www.myhealthycommunities.gov.au/publications

HPV immunisation rates for girls

Nationally in 2014–15, nearly four-fifths of girls aged 15 (78.6% or more than 108,000) were fully immunised against HPV. This was an increase from 72.0% of girls fully immunised in 2012–13 and 74.3% in 2013–14.

Variation across Primary Health Network areas

Across PHN areas in 2014–15 there was considerable variation in HPV immunisation rates for girls. Results ranged from 86.3% of girls fully immunised against HPV in Murrumbidgee (NSW) PHN area to 67.2% in Tasmania PHN area.

Figure 2 (page 3) maps the percentage of girls fully immunised against HPV for PHN areas in 2014–15.

Changes over time for Primary Health Network areas

Nationally, HPV immunisation rates for girls have increased significantly since 2012–13. Rates also increased significantly for 20 of Australia's 31 PHN areas in the year to 2014–15.

Nepean Blue Mountains (NSW) and Western Sydney PHN areas recorded the greatest increase in rates to 2014–15, improving by more than 12 percentage points, while Perth North and Country WA were the two PHN areas with a significant decrease in rates across the same period.

Table 1 shows the number of PHN areas with a statistically significant change in the percentage of fully immunised girls from the previous year.

Variation across local areas (SA4s)

In 2014–15 there was wide variation across more than 80 local areas called Statistical Areas Level 4 (SA4s). The percentages of girls who were fully immunised against HPV varied by nearly 30 percentage points, ranging from 89.7% in Sydney-Ryde (NSW) to 62.5% in Barossa-Yorke-Mid North (SA).

Figure 3 on pages 4 and 5 shows the percentages of girls fully immunised against HPV by SA4, over the three year period to 2014–15.

Changes over time for local areas (SA4s)

As with PHN areas, many local areas (SA4s) recorded a significant increase in HPV immunisation rates for girls, while a very small number of SA4s recorded a decrease.

The local areas with the greatest increase to 2014–15 were all in New South Wales, while the local areas with a significant decrease in rates were both in Western Australia (**Figure 3, pages 4 and 5**).

Table 1 shows the number of local areas (SA4s) with a statistically significant change in the percentage of fully immunised girls from the previous year.

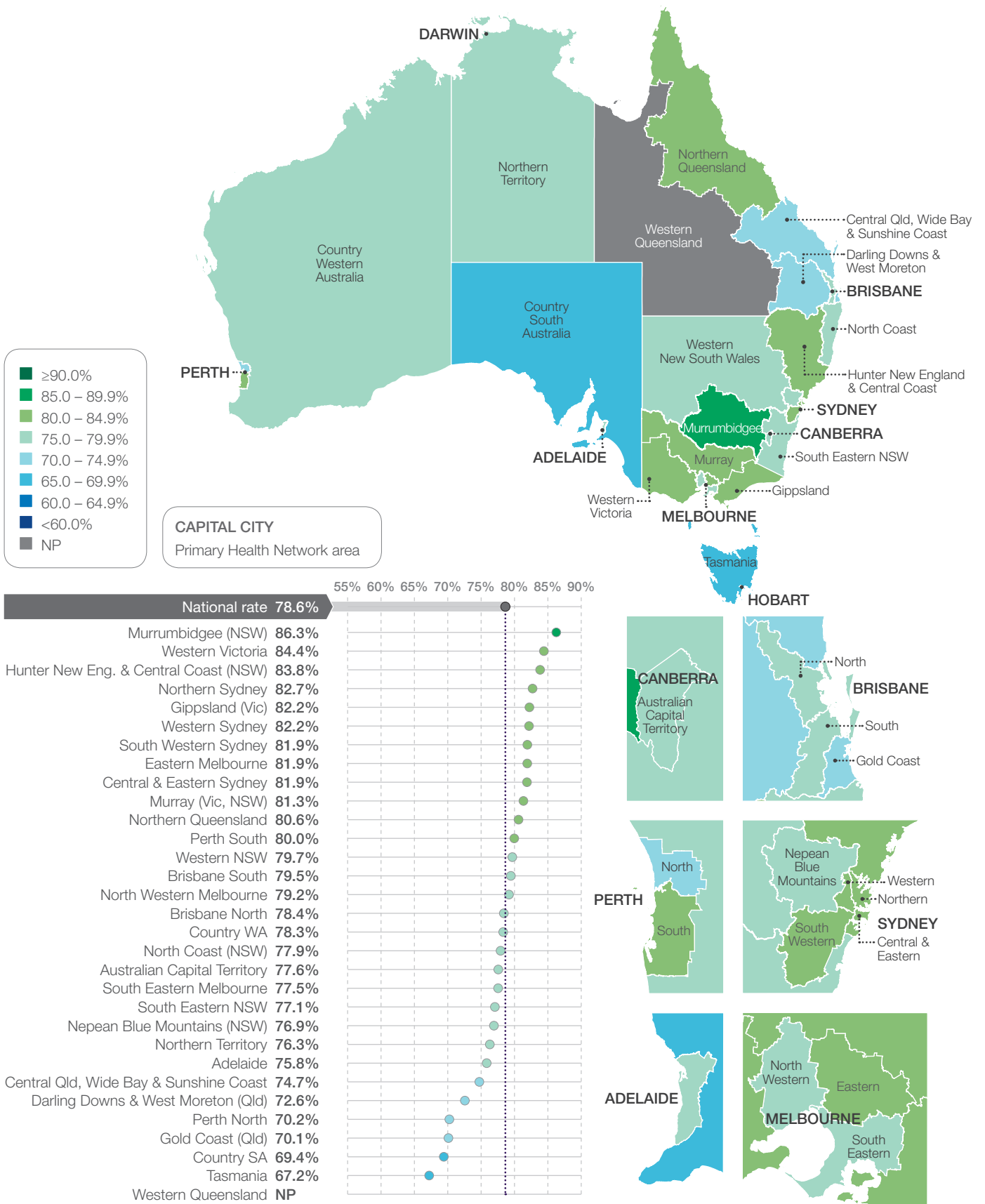
HPV immunisation rates for all PHN and local areas (for which data were available) from 2012–13 to 2014–15, including changes over time, can be accessed in downloadable Excel sheets at www.myhealthycommunities.gov.au

Table 1: Number of areas with a change over time in HPV immunisation rates for girls

	PHN areas		Local areas (SA4s)	
	2012–13 to 2013–14	2013–14 to 2014–15	2012–13 to 2013–14	2013–14 to 2014–15
Significant increase (+)	17	20	32	43
Significant decrease (-)	2	2	3	2
No significant change	9	8	39	25
Total	28	30	74	70

Notes Changes were considered to be statistically significant with 95% confidence. Change over time was not calculated for areas with a target population less than 200 and/or had a population change of >5% over the two years prior to reporting.

Figure 2: Percentage of girls in 2014–15 fully immunised against HPV by Primary Health Network (PHN) area



NP Not available for publication as the area's target population was less than 200 and/or had a change of ≥10% over the two years prior to reporting.

Notes These data include girls aged 15 who had received three doses of HPV vaccine by 30 June 2015. 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 guidelines⁸ and girls who do not wish their details to be recorded on the HPV Register are excluded. Data are reported to one decimal place, however for graphical display and ordering they are plotted unrounded.

Sources National HPV Vaccination Program Register, data extracted 4 August 2016, and Australian Bureau of Statistics, Estimated Resident Population 30 June 2013.

Figure 3: Percentages of girls in 2012–13, 2013–14 and 2014–15 fully immunised against HPV by local area (SA4), sorted by HPV immunisation rate in 2014–15

	2012–13	2013–14	2014–15
National	72.0%	74.3%	78.6%
New South Wales	69.1%	71.1%	81.5%
Victoria	76.0%	78.5%	80.5%
Australian Capital Territory	74.7%	70.2%	77.6%
Queensland	71.6%	74.2%	76.7%
Northern Territory	77.7%	72.7%	76.4%
Western Australia	73.6%	77.8%	75.7%
South Australia	72.6%	73.4%	73.8%
Tasmania	62.5%	66.8%	67.2%
New South Wales	69.1%	71.1%	81.5%
Sydney-Ryde	75.0%	80.4%	89.7%
Central Coast	73.7%	80.2%	88.8%
Sydney-South West	71.4%	75.4%	85.8%
Newcastle & Lake Macquarie	69.2%	72.9%	85.0%
Sydney-Parramatta	69.9%	75.1%	84.5%
Riverina	70.8%	75.5%	83.8%
Murray	78.3%	71.9%	83.7%
Sydney-Inner West	73.9%	76.4%	83.4%
Sydney-Sutherland	68.5%	74.4%	83.4%
New England & North West	68.6%	69.7%	82.3%
Far West & Orana	71.4%	70.4%#	81.9%#
Sydney-North Sydney & Hornsby	73.5%	71.8%	81.7%
Sydney-Northern Beaches	67.9%	65.2%	81.4%
Sydney-Inner South West	70.9%	71.9%	80.6%
Sydney-City & Inner South	58.5%	71.8%	80.6%
Hunter Valley excl. Newcastle	72.0%	72.5%	80.4%
Sydney-Blacktown	61.5%	62.4%	80.4%
Sydney-Outer South West	72.2%	77.3%	80.3%
Illawarra	63.2%	65.4%	80.2%
Central West	74.0%	73.1%	79.9%
Sydney-Eastern Suburbs	68.8%	65.6%	79.8%
Sydney-Baulkham Hills & Hawkesbury	68.2%	71.4%	79.8%
Mid North Coast	67.1%	70.5%	79.3%
Coffs Harbour-Grafton	64.9%	71.5%	78.1%
Southern Highlands & Shoalhaven	66.5%	67.6%	78.1%
Sydney-Outer West & Blue Mountains	65.7%	62.5%	75.8%
Richmond-Tweed	55.4%	60.3%	75.3%
Capital Region	70.5%	68.8%	72.5%
Victoria	76.0%	78.5%	80.5%
North West	82.5%	79.9%	87.8%
Warrnambool & South West	87.6%	86.6%	85.4%
Melbourne-Inner East	80.4%	86.6%	84.0%#
Geelong	74.8%	79.7%	83.7%#
Melbourne-Inner	77.4%	80.7%	83.0%
Shepparton	81.3%	84.6%	82.7%
Latrobe-Gippsland	79.7%	82.8%	82.2%
Melbourne-Inner South	80.2%	80.5%	82.1%
Hume	72.5%#	NP	81.9%#
Melbourne-Outer East	73.7%	78.3%	81.2%
Mornington Peninsula	77.4%	77.6%	80.8%
Melbourne-North East	79.0%	79.0%	80.2%
Melbourne-West	74.4%	74.4%	80.1%
Bendigo	71.4%	74.9%	79.9%
Ballarat	72.3%	82.1%	79.2%
Melbourne-North West	73.6%	76.8%	75.9%
Melbourne-South East	69.8%	72.2%	74.6%#

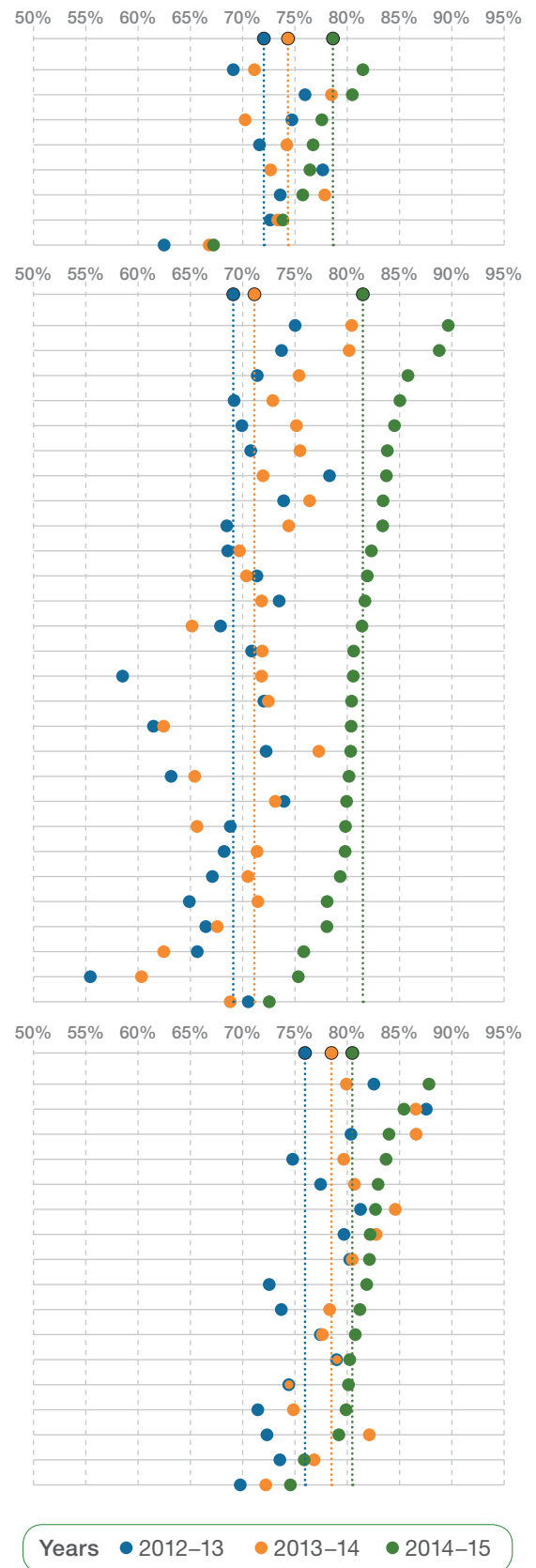
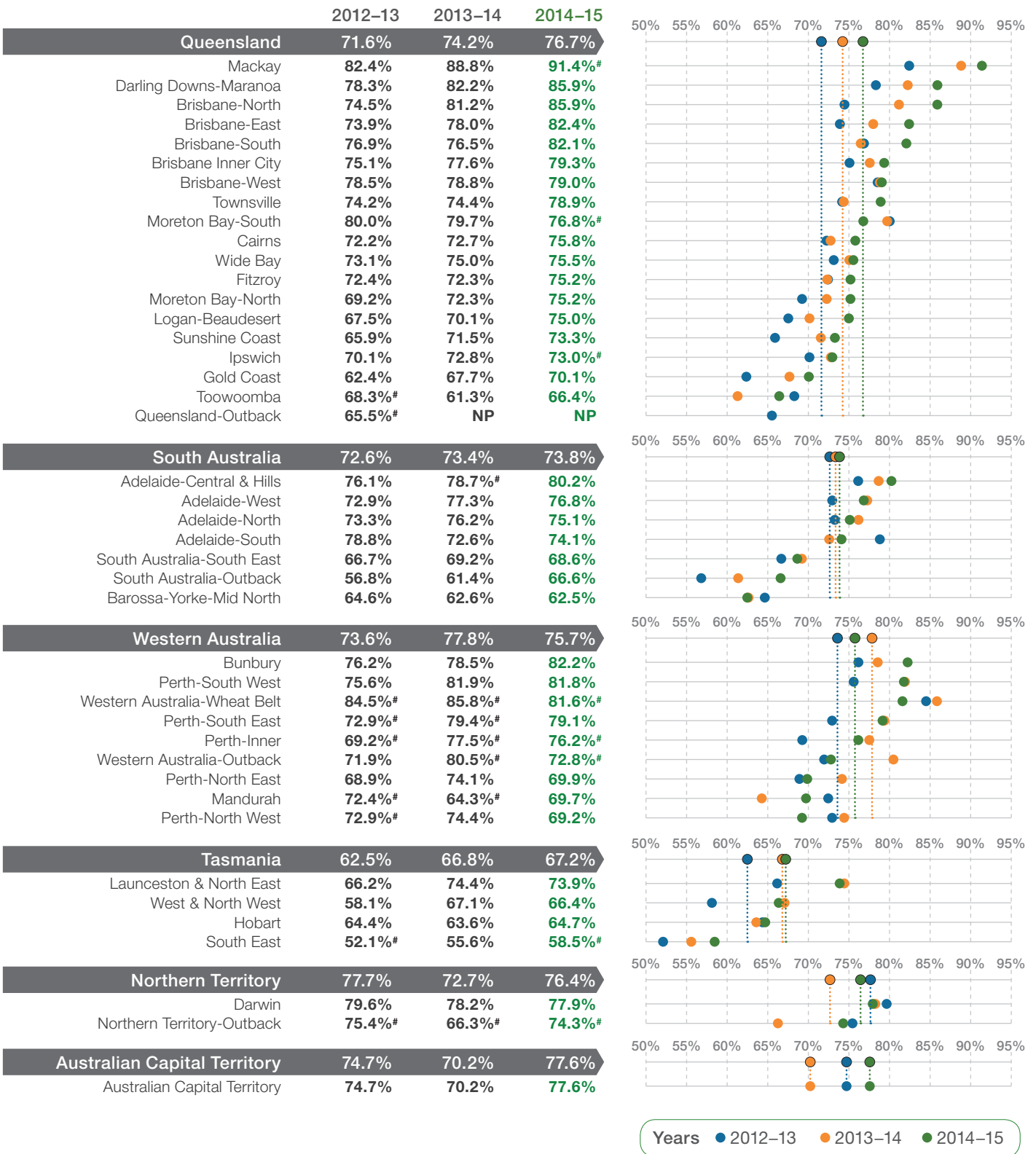


Figure 3 (continued): Percentages of girls in 2012–13, 2013–14 and 2014–15 fully immunised against HPV by local area (SA4), sorted by HPV immunisation rate in 2014–15



Interpret with caution as the area's target population had a change of 5 to <10% over the two years prior to reporting.
 NP Not available for publication as the area's target population was less than 200 and/or had a change of ≥10% over the two years prior to reporting.
 Notes These data include girls aged 15 who had received three doses of HPV vaccine by 30 June 2013, 2014 and 2015, respectively. 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 guidelines³ and girls who do not wish their details to be recorded on the HPV Register are excluded. Data are reported to one decimal place, however for graphical display and ordering they are plotted unrounded.
 Sources National HPV Vaccination Program Register, data extracted 4 August 2016, and Australian Bureau of Statistics, Estimated Resident Population 30 June.

HPV immunisation rates for boys

This section presents local area HPV immunisation rates for boys, for the first time since the National HPV Vaccination Program was extended to boys in 2013.

Nationally in 2014–15, more than two-thirds of boys aged 15 (67.3% or more than 96,000) were fully immunised against HPV.

It is important to note the majority of these boys would have received their vaccinations in 2013, the year in which the program was extended to boys. HPV immunisation rates for boys are expected to improve over time.

Variation across Primary Health Network areas

There was considerable variation in HPV immunisation rates for boys across PHN areas in 2014–15, with results ranging from 77.8% in Gippsland (Vic) to 56.5% in Northern Territory.

Figure 4 (page 7) maps the percentage of boys fully immunised against HPV for PHN areas in 2014–15.

Variation across local areas (SA4s)

Variation was much wider across more than 80 local areas (SA4s). The percentage of boys aged 15 in 2014–15 who were fully immunised against HPV ranged from 81.6% in Perth-South West (WA), nearly 40 percentage points higher than South East (Tas), which recorded a rate of 42.8%.

Local area (SA4)	Boys fully immunised
Perth-South West (WA)	81.6%
Warrnambool & South-West (Vic)	80.2%
Mackay (Qld)	80.1%
National rate	67.3%
Perth-North East (WA)	52.7%
South Australia-Outback	52.0%
South East (Tas)	42.8%

Results for all SA4s (where data were available) can be found in the downloadable Excel sheets at www.myhealthycommunities.gov.au

About the data

Data were sourced from the National HPV Vaccination Program Register (HPV Register). The data reported are for girls and boys aged 15 who had received three doses of HPV vaccine by 30 June 2015. HPV immunisation status is assessed at age 15 to allow for completion of the immunisation schedule by all eligible recipients. Reporting by this age group accommodates the varying ages of vaccination around Australia (usually in the first year of high school, around ages 12–13).

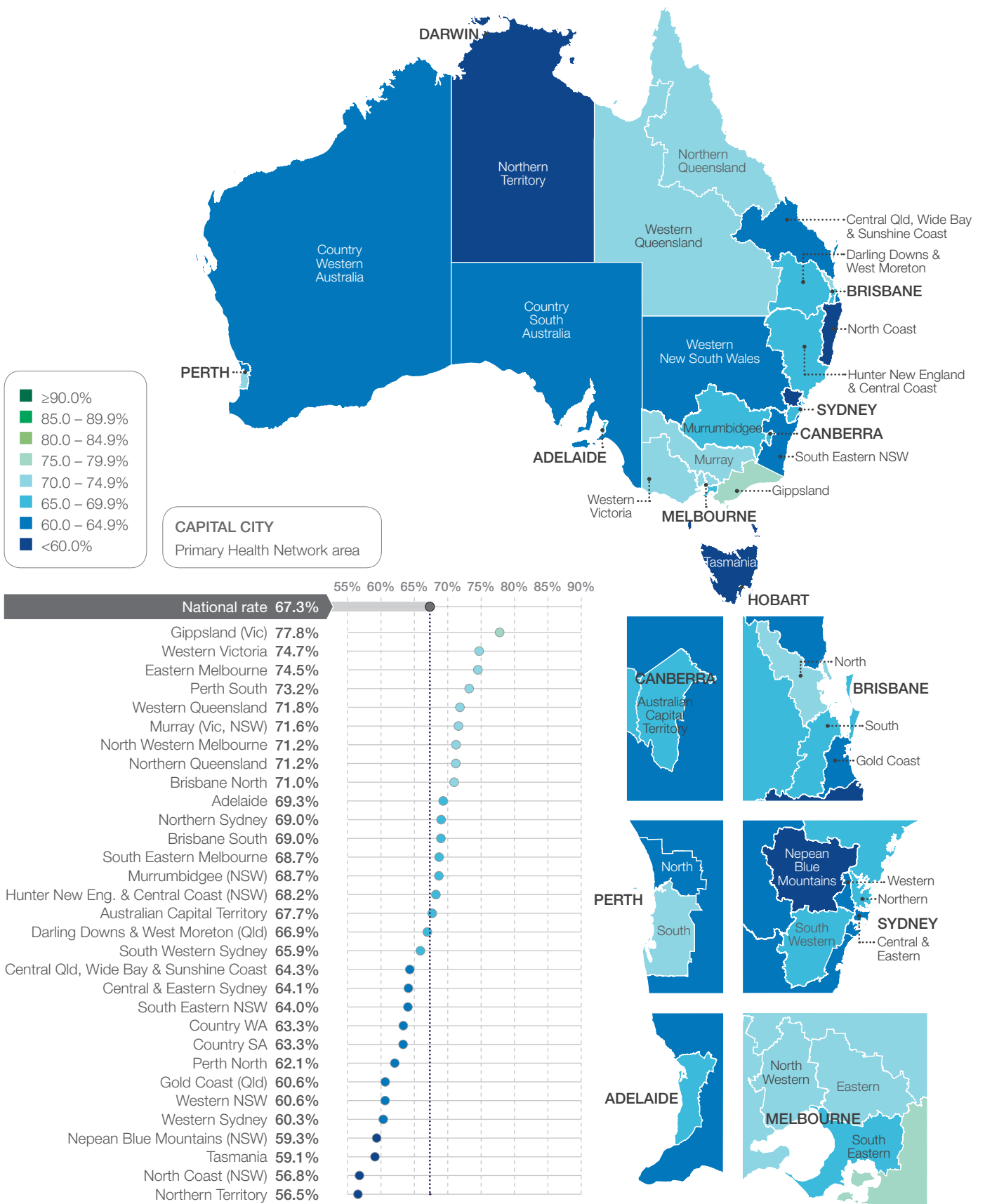
The Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) for females and males aged 13 at 30 June 2013 was used for the denominator, as this reflects the eligible population at the time most vaccinations were administered. Immunisation rates were mapped to the area in which people lived rather than the area where services were provided, using postcode information provided to the HPV Register at the time of their final vaccination.

The immunisation rates presented here are not comparable with those produced by the HPV Register due to methodological differences. The HPV Register reports current coverage for each cohort at the date of data extraction. Therefore, the number fully immunised may vary in reports prepared by the HPV Register. A further difference is the HPV Register's use of ABS ERP at age 15, which differs to the method used here.

HPV immunisation rates for Aboriginal and Torres Strait Islander people are unable to be reported separately due to limitations of available data. The AIHW will work with stakeholders to consider ways to address this issue in the future.

For more information refer to the Technical note.

Figure 4: Percentage of boys in 2014–15 fully immunised against HPV by Primary Health Network (PHN) area



Notes These data include boys aged 15 who had received three doses of HPV vaccine by 30 June 2015. Only vaccinations reported to the National HPV Vaccination Program Register (HPV Register) are included. Boys whose courses are considered to be incomplete according to the Chief Medical Officer guidelines⁹ and boys who do not wish their details to be recorded on the HPV Register are excluded. Data are reported to one decimal place, however for graphical display and ordering they are plotted unrounded.

Sources National HPV Vaccination Program Register, data extracted 4 August 2016, and Australian Bureau of Statistics, Estimated Resident Population 30 June 2013.

What is a Primary Health Network?

Primary Health Networks (PHNs) are local organisations that connect health services across a specific geographic area, with the boundaries defined by the Australian Government Department of Health.

Thirty-one PHNs commenced operations on 1 July 2015, replacing Medicare Locals. They have the key objectives of increasing the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and improving coordination of care to ensure patients receive the right care in the right place at the right time.

In this report, a PHN area refers to the population that lives in the geographic area covered by a particular PHN. The results in this report relate to the period before PHNs were established; therefore, the findings do not reflect the performance of PHNs.

For more information, see

<http://www.aihw.gov.au/primary-health-care/phn/>

References

1. Doorbar J, Quint W, Banks L, Bravo IG, Stoler M, Broker TR et al. 2012. The biology and life-cycle of human papillomaviruses. *Vaccine* 30:F55–70.
2. Department of Health 2015. The Australian Immunisation Handbook 10th edition (updated June 2015). Canberra: Department of Health.
3. DoHA (Department of Health and Ageing) 2009. Chief Medical Officer Guidance on revaccination where HPV vaccine doses have been given at less than recommended minimum intervals January 2009. Canberra: DoHA. Viewed 20 February 2017, <[http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/cmo-full-advice-hpv-cnt/\\$File/CMO-full-advice-hpv.pdf](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/cmo-full-advice-hpv-cnt/$File/CMO-full-advice-hpv.pdf)>.

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Please note that there is the potential for minor revisions of this document.