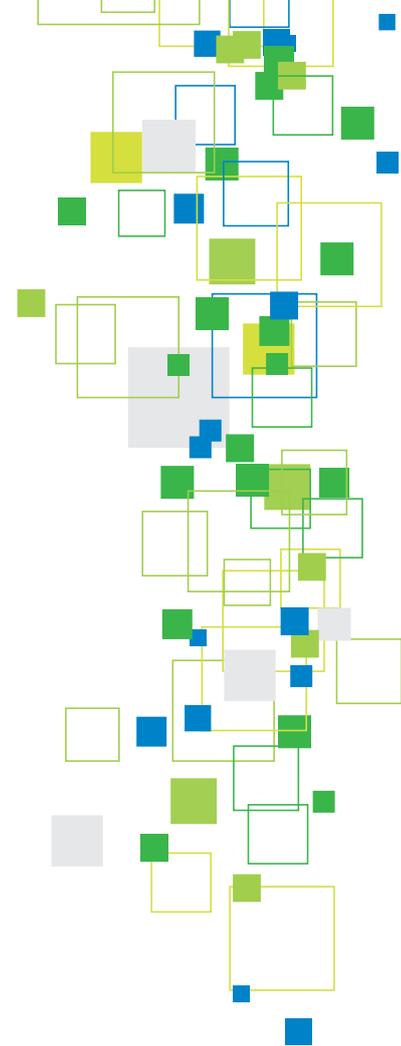




National Health Performance Authority



# National Health Performance Authority

---

## Healthy Communities:

HPV immunisation rates for girls in 2013

## Technical Note

**Please note:** This Technical Note relates only to the report *Healthy Communities: HPV immunisation rates for girls in 2013* (published August 2015). Data and methods have since been revised. See [www.myhealthycommunities.gov.au](http://www.myhealthycommunities.gov.au) for the most up-to-date results and methods.

# Healthy Communities: HPV immunisation rates for girls in 2013 summary

This technical note summarises methods used to calculate descriptive statistics and performance indicators presented in *Healthy Communities: HPV immunisation rates for girls in 2013*. This technical note also provides information on the Primary Health Network (PHN) areas which are being reported on for the first time for this indicator.

*Healthy Communities: HPV immunisation rates for girls in 2013* presents statistics about HPV immunisation rates for girls turning 15 years in 2013 who were fully immunised against the human papillomavirus (HPV), having received all three of the recommended doses of the HPV vaccine. As the HPV program targets girls aged 12–13 years, these results may reflect coverage achieved before 2013.

The cohort specifications and suppression rules have not changed since the Authority's previous release of data on HPV immunisation rates for girls. For more information on these see *Healthy Communities: Immunisation rates for children in 2012–13, Technical Supplement* at [www.myhealthycommunities.gov.au](http://www.myhealthycommunities.gov.au)

## Primary Health Networks

Primary Health Networks (PHNs) are primary health care organisations that were established in July 2015 to plan and fund health services in communities across Australia. PHN areas replaced Medicare Local catchments with a network of 31 areas across Australia. For this report, statistical information is presented using the boundaries of the newly created PHN areas as released by the Department of Health (see [www.health.gov.au/internet/main/publishing.nsf/content/primary\\_health\\_networks](http://www.health.gov.au/internet/main/publishing.nsf/content/primary_health_networks)).

Data are presented for all 31 PHN areas and more than 80 local geographical areas, called Statistical Areas Level 4 (SA4s). All data have been aggregated for geographic areas using protocols that ensure individual confidentiality.

# The National HPV Vaccination Program Register

Data on HPV vaccination for girls turning 15 years old in 2013 contained in the report *Healthy Communities: HPV immunisation rates for girls in 2013* were sourced from the National HPV Vaccination Program Register (HPV Register).

The HPV Register records information about HPV vaccine doses administered under the National HPV Vaccination Program in Australia.<sup>1</sup> The HPV Register is funded by the Australian Government Department of Health and operated by the Victorian Cytology Service.

The National HPV Vaccination Program is not compulsory, requiring parent or guardian consent. The Program began in 2007 and was extended to provide HPV vaccination to boys from 2013.<sup>2</sup> The Program currently delivers the HPV vaccine free of charge to:

- 12 and 13-year-old males and females through schools on an ongoing basis
- Males aged from 14 to 15 years during 2013 and 2014 through schools on a catch-up basis.

The school-based National HPV Vaccination Program involves a three-dose schedule, with doses 2 and 3 delivered two and six months after the first, to provide the best protection against HPV. Some HPV vaccinations, such as missed doses, may be administered by school immunisation providers, general practitioners (GPs) or community health clinics.<sup>3</sup>

Between 2007 and 2009, the National HPV Vaccination Program included a two-year catch-up program that was conducted through schools for females aged up to 17 years, and through GPs and community immunisation providers for females aged from 18 to 26 years.<sup>2</sup>

Information about HPV vaccinations given in schools is provided by state and territory governments to the HPV Register as part of the Program. Information about vaccinations given in the community is provided to the HPV Register by the health professional who gave the vaccination. The HPV Register matches the vaccination doses information it receives to the correct person to assess vaccine completion. It does not have a prepopulated register of people.

Consent must be given for information about HPV vaccination to be provided to the National HPV Register. For the school-based program, a parent or guardian must return a signed consent form to their child's school before the HPV vaccination can be administered. There is the provision to opt out of the HPV Register at any time by writing to the HPV Register.

The main aims of the HPV Register are to monitor the uptake rates of HPV vaccination provided by the National HPV Vaccination Program, support the implementation of the Program by providing information to vaccine recipients and providers, and to maintain vaccination records in order to facilitate evaluation of the program's effect on HPV-related cancers and disease.<sup>1</sup>

As well as providing data supporting the management of the vaccination program for the school-based program, data from the HPV Register are used to:

- Provide vaccine recipients, parents or guardians with a completion statement when all three doses of HPV vaccine have been received
- Advise vaccine recipients, parents or guardians if a dose of HPV vaccine has been missed in the school-based program.<sup>4</sup>

# Indicator specification

*Healthy Communities: HPV immunisation rates for girls in 2013* presents information about the percentages of girls turning 15 years in 2013 who were fully immunised against Human Papillomavirus (HPV) according to the recommended schedule.<sup>5</sup>

De-identified unit record data were sourced from the National Human Papillomavirus Vaccination Program Register (HPV Register) in order to estimate HPV vaccination rates for girls who turned 15 years of age in 2013. Data were extracted from the HPV Register on 16 January 2015.

The percentages of girls who turned 15 years in 2013 who had received all three doses of HPV vaccine in accordance with the recommended schedule were calculated at the state and territory, PHN and SA4 level using the following method.

---

<b>Numerator:</b>	The number of girls turning 15 years of age in 2013 who had received all three doses of HPV vaccine according to the schedule.
-------------------	--

---

<b>Denominator:</b>	Australian Bureau of Statistics Estimated Resident Population for girls aged 15 years as at 30 June 2013.
---------------------	---

---

<b>Computation:</b>	$(\text{Numerator} \div \text{Denominator}) \times 100$
---------------------	---

---

<b>Disaggregation:</b>	By state and territory, Primary Health Network (PHN) area and Statistical Area Level 4 (SA4).
------------------------	---

---

<b>Suppression:</b>	Results are only provided for geographic areas where the Estimated Resident Population for girls aged 15 years is greater than 200.
---------------------	---

---

<b>Additional notes:</b>	<p>The data include records for girls turning 15 years in 2013 whose year of birth is 1998 and who had completed the three-dose course of HPV vaccination in accordance with the Chief Medical Officer guidelines. Under these guidelines, valid HPV vaccination is considered to have occurred where there is a total interval of 111 or more days between the first and third doses, or, for those aged 15 years and under, a gap between the first and third doses of 74 or more days.<sup>5</sup></p> <p>Vaccination rates were calculated using the postcode of the vaccinated girls and not the address where the vaccine was given. Because most vaccines are given at school, local coverage will be a reflection of the vaccine uptake achieved in the schools that the resident population attends, which may or may not also be located in that geographic area.</p> <p>HPV vaccine coverage assessment is routinely reported at 15 years of age to allow for completion by all eligible recipients by this age. This is due to the varying ages of administration around Australia (routinely given to children in the first year of high school, around 12–13 years of age) thus allowing valid comparisons across populations and time periods to be made. Only vaccinations reported to the HPV Register are included.</p> <p>Records are excluded for:</p> <ul style="list-style-type: none"><li>• Girls whose courses of HPV immunisation doses are considered to be incomplete according to the Chief Medical Officer guidelines</li><li>• Girls who do not wish their details to be recorded on the HPV Register.</li></ul>
--------------------------	--

---

# Data limitations

For doses of HPV delivered in schools as part of the school-based HPV vaccination program, HPV Register data are considered to be close to complete, except for individuals who do not consent to be vaccinated against HPV or who do not consent to their data being provided to the HPV Register.<sup>2</sup> However, the completeness of data for doses delivered outside of schools as part of the school-based program may vary across Australia.<sup>2</sup>

Reporting of Aboriginal and Torres Strait Islander status to the HPV Register is voluntary and is currently incompletely reported.<sup>2</sup> Therefore, it is not possible to report HPV vaccination coverage for Aboriginal and Torres Strait Islander girls aged 15 years in this report.

Not all states and territories monitor the return of consent forms, and therefore it is difficult to determine how many parents or guardians do not consent to HPV vaccination for their child.<sup>2</sup>

## Geography levels

HPV immunisation rates for girls turning 15 years in 2013 are presented by state and territory, Primary Health Network (PHN) areas and Statistical Areas Level 4 (SA4s), based on the girl's postcode of residence in the HPV Register, which is held by the Victorian Cytology Service.

HPV immunisation statistics at state and territory, PHN and SA4 level have been compiled by applying a geographic concordance to the HPV Register de-identified unit record data using the postcode of the residential address. This has led to several technical methodological decisions which were required to produce results for this report. Where postcodes overlapped PHN areas or SA4 boundaries, numbers of children were attributed to a PHN area or SA4 based on the percentage of the population of 15-year-old girls for each postcode in each PHN area or SA4.

In many instances, counts of children at a postcode level were apportioned between multiple PHN areas or SA4s. State and territory results were derived from SA4 results, whereas national results were summarised from the entire data set. Rounding of figures was performed at the end of calculations to avoid truncation error. Small differences in coverage estimates at the state level may be seen compared to published register estimates for the same cohorts due to rounding and summing methodology.

A small number of postcodes do not map to an SA4 or a PHN, such as postcodes for post office boxes and delivery centres. The Authority reviewed all such postcodes and devised a method to allocate them to appropriate SA4s, using the geographic coordinates of post offices sourced from the Australia Post website.

### Primary Health Networks

PHNs were established in July 2015 with the key objectives of increasing the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes. There are 31 PHNs across Australia. For this report, statistical information is presented using the PHN areas as released by the Department of Health (see [www.health.gov.au/internet/main/publishing.nsf/content/primary\\_health\\_networks](http://www.health.gov.au/internet/main/publishing.nsf/content/primary_health_networks)).

### Statistical Areas Level 4

SA4s are geographic areas defined in the Australian Bureau of Statistics (ABS) Australian Statistical Geography Standard (ASGS). SA4s are the largest sub-state regions and create a standard framework for the analysis of ABS data at the regional level through clustering groups of smaller areas called Statistical Areas Level 3 (SA3s). SA4s are built from whole SA3s and have similar regional characteristics. There are more than 80 SA4 areas covering the whole of Australia without gaps or overlaps and they are designed to provide a regional breakdown of data across Australia. SA4s generally have a population of between 100,000 and 300,000 people in regional areas and between 300,000 and 500,000 in metropolitan areas.

# Geographic correspondences

Geographic correspondences (sometimes referred to as concordances or mapping files) can be used where the location information in an original survey, census or administrative data is not available at the geographic area required for analysis and reporting. Geographic correspondences are a mathematical method for reassigning data from one geographic area (e.g. a postcode of a patient's address in a HPV unit record) to a new geographic area (e.g. PHN area or SA4).

In 2015, the Department of Health commissioned the ABS to compile several correspondences to convert data from defined ABS geographic levels to PHN areas using PHN boundaries and ABS Estimated Resident Population (ERP).

Differences in dates of extraction and the use of geographic concordances are responsible for the difference in three-dose coverage rates reported here when compared to the coverage rates reported by the National HPV Program Register.

## References for *Healthy Communities: HPV immunisation rates for girls in 2013*

1. Gertig DM, Brotherton JML, Saville M. Measuring human papillomavirus (HPV) vaccination coverage and role of the National HPV Vaccination Program Register, Australia. *Sex Health*. 2011;8:171–8.
2. Brotherton JML, Murray SL, Hall MA, Andrewartha LK, Banks CA, Meijer D, et al. Human papillomavirus vaccine coverage among female Australian adolescents: success of the school-based approach. *Med J Aust*. 2013;199(9):614–7.
3. HPV School Vaccination Program. HPV factsheet for health professionals [Internet]. Canberra: Department of Health; 2014 [cited 2015 July 17]. Available from: <http://hpv.health.gov.au/downloads/factsheet-for-professionals/>
4. National HPV Vaccination Program Register. The National HPV Vaccination Program Register. Information for vaccine recipients and their parents or guardians [Internet]. 2013 [cited 2015 July 17]. Available from: <http://www.hpvregister.org.au/site/defaultsite/filesystem/documents/parents-teens/NHVPR-brochure-for-vaccine-recipients.pdf>
5. Department of Health. Chief Medical Officer Guidance on revaccination where HPV vaccine doses have been given at less than recommended minimum intervals January 2009 [Internet]. Canberra: Department of Health; 2010 [cited 2015 Jun 15]. Available from: <http://www.health.gov.au/internet/immunise/publishing.nsf/content/cmo-full-advice-hpv-cnt>

## Acknowledgements

The Performance Authority would like to acknowledge Associate Professor Julia Brotherton and staff from the National HPV Vaccination Program Register for advice and supply of data.