



National Health Performance **Authority**

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Healthy Communities:

Child and maternal health in 2009–2012





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Summary

The numbers of infants and children who die prematurely has fallen rapidly in recent years on a population basis. Nevertheless, Australia has infant mortality rates three times higher than the best-performing countries.¹ Even within Australia, there is a marked difference in infant and young child death rates between the areas where the rates are lowest, and areas where they are highest. Identifying these differences may help to inform improvements in access to or delivery of services that could in time lead to reductions in avoidable deaths among infants and young children.

This is the first report from the National Health Performance Authority (the Authority) that presents data at the local level for infant and young child mortality, low birthweight, smoking during pregnancy and access to antenatal care.

There is a strong relationship between antenatal care that commences within the first 13 weeks (first trimester) of pregnancy and positive child health outcomes.² Accordingly, in 2011 the Council of Australian Governments (COAG) identified the number of women with at least one antenatal visit in the first trimester as an important indicator of access to care in communities.

COAG also agreed that infant and young child mortality rates, the proportion of babies born with low birthweight and prevalence of smoking are important population health outcome measures that provide context for the interpretation of local health system performance.

For example, low-birthweight babies are at greater risk of poor health outcomes including death and disability, particularly in the first year of life, and have an increased risk in adulthood of diabetes type 2, high blood pressure and cardiovascular disease.³

Measuring access to antenatal care and the health outcomes of children at the local level, including premature death, low birthweight and smoking during pregnancy, allows us to begin to identify the communities where programs such as antenatal services are needed or have achieved success. Other factors such as the quality of antenatal care provided and broader social determinants of health also impact on infant and child health outcomes.

This report shows variation across local areas that is not seen when reporting at national or state and territory level. Data in the report cover all children and mothers and, where the data are available, Aboriginal and Torres Strait Islander mothers and their babies.

Data are presented for the period from January 2009 to December 2012, for 61 local areas across Australia called Medicare Local catchments. For measures regarding Aboriginal and Torres Strait Islander mothers and their babies, data are presented for the period from January 2007 to December 2011.

Key findings

Infant and young child mortality rate

In 2010–2012, the national rate of infant and young child mortality was 4.4 deaths per 1,000 live births (1,344 deaths).

Across local areas, the infant and young child mortality rate was **more than three times higher** in the catchment with the highest rate compared to the catchment with the lowest rate.

The infant and young child mortality rate ranged as follows:

Highest: Northern Territory – 9.2 deaths per 1,000 live births

Lowest: Bayside (Vic) – 2.6 deaths per 1,000 live births

(Figure 3, page 7 and pages 18 to 19).

To allow fairer comparisons, the Authority compared local areas across Australia that have similar characteristics such as remoteness, socioeconomic status and distance to hospitals. These catchments are grouped into one of seven 'peer groups' (page vi).

The report shows there are differences in infant and young child mortality rates across catchments in peer groups that have similar geographic characteristics.

Across the **metropolitan** catchments, the highest infant and young child mortality rate was **more than double** in the local area with the highest rate (6.1 deaths per 1,000 live births in Greater Metro South Brisbane) compared to the local area with the lowest rate (2.6 deaths per 1,000 live births in Bayside (Vic)).

There were also differences across similar local areas within the same peer group, even after accounting for geographic and socioeconomic characteristics.

- Across lower-income metropolitan communities (**Metro 2** peer group), the infant and young child mortality rate was **more than double** in Greater Metro South Brisbane (6.1 deaths per 1,000 live births) compared to South Western Melbourne (2.9 deaths per 1,000 live births)

- Across middle-income regional communities (**Regional 2** peer group), the infant and young child mortality rate was **86% higher** in Country South SA (6.5 deaths per 1,000 live births) compared to Goulburn Valley (Vic) (3.5 deaths per 1,000 live births) (Table 1, page 6).

While this report shows higher rates in many regional and rural areas compared to metropolitan areas, and in lower-income compared to higher-income areas, there are some areas that do not follow this trend. These areas demonstrate what is possible to achieve for other similar areas.

For example, Nepean-Blue Mountains (NSW), Barwon (Vic) and Goulburn Valley (Vic) are middle-to lower-income regional areas that have infant and young child mortality rates similar to or better than many higher-income metropolitan communities (Figure 4, page 12).

Low-birthweight babies

The national percentage of all liveborn singleton babies that were of low birthweight was 4.8% for babies born to all women in 2009–2011 and 11.0% for babies born to Aboriginal and Torres Strait Islander women in 2007–2011.

Across local areas, the percentage of all live births that were of low birthweight was **more than double** in the catchment with the highest percentage compared to the catchment with the lowest percentage.

The percentage of low-birthweight babies ranged as follows:

Highest: Northern Territory – 7.7%

Lowest: Sydney North Shore & Beaches – 3.3%

(Figure 4, page 12 and pages 22 to 23).

Differences were found across similar local areas even after accounting for geographic and socioeconomic characteristics.

Across middle-income metropolitan communities in the **Metro 2** peer group, the percentage of low-birthweight babies was **41% higher** in South Western Melbourne (5.2%) compared to Fremantle (WA) (3.7%).

The report also found that among Aboriginal and Torres Strait Islander mothers there was a greater proportion of low-birthweight babies compared with other mothers in Australia.

Across local areas, the percentage of low-birthweight babies to Aboriginal and Torres Strait Islander women ranged from 17.5% in Gippsland (Vic) to 6.7% in Frankston-Mornington Peninsula (Vic) (**Figure 5, page 13 and pages 24 to 25**).

Smoking during pregnancy

The national percentage of women who smoked during pregnancy was 13.9% for all women for 2009–2011 and 51.7% for Aboriginal and Torres Strait Islander women for 2007–2011.

Across local areas, the percentage of women who smoked during pregnancy was **18 times higher** in the catchment with the highest percentage compared to the catchment with the lowest percentage.

The percentage of women who smoked during pregnancy ranged as follows:

Highest: Far West NSW – 33.1%

Lowest: Sydney North Shore & Beaches – 1.8%
(**Figure 4, page 12 and pages 28 to 29**).

There were differences found across similar local areas even after accounting for geographic and socioeconomic characteristics.

Across high-income metropolitan communities (**Metro 1** peer group), the percentage of women who smoked during pregnancy was **more than five times higher** in Australian Capital Territory (10.2%) compared to Sydney North Shore & Beaches (1.8%).

The percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy ranged from 66.4% in Goulburn Valley (Vic) to 29.4% in Macedon Ranges & North Western Melbourne (**Figure 5, page 13 and pages 30 to 31**).

Antenatal visits in the first trimester

In 2010–2011, the national percentage of women who had at least one antenatal visit in the first trimester of pregnancy was 67.2% for all women and 50.3% for Aboriginal and Torres Strait Islander women.

Across local areas, the percentage of women who had at least one antenatal visit in the first trimester was **more than double** in the catchment with the highest percentage compared to the catchment with the lowest percentage.

The percentage of women who had at least one antenatal visit in the first trimester ranged as follows:

Highest: Western Sydney – 87.7%

Lowest: Grampians (Vic) – 36.6%

(**Figure 4, page 12 and pages 34 to 35**).

Differences were found across similar local areas even after accounting for geographic and socioeconomic characteristics.

Across higher-income regional communities (**Regional 1** peer group), the percentage of women who had at least one antenatal visit in the first trimester of pregnancy was **double** in Nepean-Blue Mountains (NSW) (85.5%) compared to Frankston-Mornington Peninsula (Vic) (41.7%).

While this report shows higher rates in many regional and rural areas compared to metropolitan areas, and in lower-income compared to higher-income areas, there are some that do not follow this trend. These areas demonstrate what is possible to achieve for other similar areas.

For example, Western Sydney is a lower-income metropolitan area that has a lower rate of smoking during pregnancy than most higher-income metropolitan communities, and has the highest rate of antenatal visits in the first trimester than all other metropolitan communities for all women, and the second-highest rate for Aboriginal and Torres Strait Islander women.

The percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester ranged from 80.5% in Nepean-Blue Mountains (NSW) to 21.8% in Grampians (Vic).

State and territory differences in definitions and methods used for data collection affect the comparability of data relating to smoking during pregnancy, low-birthweight babies and antenatal visits in the first trimester across state and territory jurisdictions and lower levels of geography within these jurisdictions.

Next steps

This is the first report from the Authority that presents data at the local level for infant and child mortality rates, low birthweight, smoking

during pregnancy and access to antenatal care across Australia.

Future reports will allow trends to be monitored across local communities and may explore other factors that contribute to poorer health outcomes for infants and young children.

About the peer groups

To enable fairer comparisons, the Authority allocated each Medicare Local catchment to one of seven peer groups, based on socioeconomic status, remoteness and distance to hospitals.

- **Metro 1:** High urban density, higher socioeconomic status
- **Metro 2:** Medium urban density, medium socioeconomic status
- **Metro 3:** Low urban density, lower socioeconomic status
- **Regional 1:** Outer urban areas, middle socioeconomic status
- **Regional 2:** Mostly non-metro urban and regional areas, middle socioeconomic status
- **Rural 1:** Distant from metro cities, with diverse socioeconomic status
- **Rural 2:** Mostly large remote areas, middle or lower socioeconomic status.

To find more information about peer groups, see *Healthy Communities: Child and maternal health in 2009–2012, Technical Supplement* at www.myhealthycommunities.gov.au

Introduction

About this report

The National Health Performance Authority (the Authority) bases its performance reports on indicators agreed by the Council of Australian Governments (COAG). This report focuses on the following indicators:

- Infant and young child mortality rate
- Proportion of babies with low birthweight
- Prevalence of smoking
- Number of women with at least one antenatal visit in the first trimester.

The report provides information broken down by 61 Medicare Local catchments. The national network of Medicare Local organisations was established between 2011 and 2012 to improve the responsiveness, coordination and integration of local health services. These organisations are due to be replaced in 2015 with Primary Health Networks.

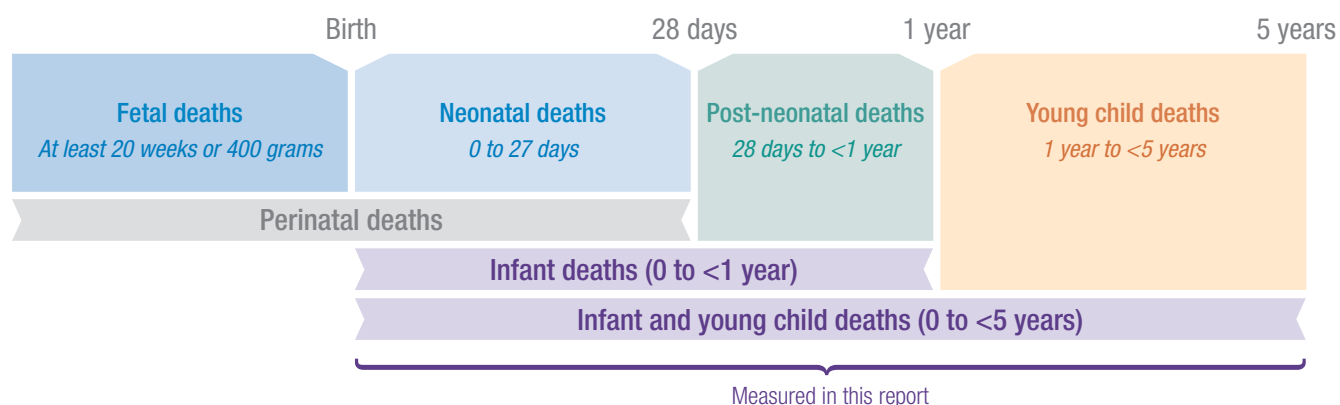
Data are presented for the period from January 2009 to December 2012. For some measures regarding Aboriginal and Torres Strait Islander mothers and their babies, data are presented for the period from January 2007 to December 2011.

Presentation of the findings in this report aims to help clinicians, health managers, administrators and the public see how rates of infant and child mortality, low birthweight, maternal smoking and antenatal care differ across local areas. They are also intended to provide Medicare Locals, Primary Health Networks and Local Health Networks with information they need to plan and deliver community and hospital care.

Why information on maternal and child health matters

Infant and child mortality is a broad measure of the overall health of a population. In Australia, **infant mortality** rates have declined by 33% from 2005 to 2012, from 4.9 deaths to 3.3 deaths per 1,000 live births.⁴ Australia is currently ranked 14 of 30 OECD countries for which infant mortality rates were reported for 2012. Australia had an infant mortality rate (3.3 deaths per 1,000 live births) three times higher than that of the best-performing country, Iceland (1.1 deaths per 1,000 live births), and twice that of Slovenia (1.6 deaths per 1,000 live births).¹

Figure 1: Infant and young child deaths measured in this report



Infant and young child mortality rates are reported as the number of deaths among children aged less than 5 years per 1,000 live births during the three calendar years from 1 January 2010 to 31 December 2012. The **number** of infant and young child deaths are reported as the average number of deaths per year during the same time period. The majority of these deaths (84%) occur in infancy (before 1 year of age).

In this report, **infant mortality** rates are reported as the number of deaths of liveborn infants aged less than 1 year per 1,000 live births during the three calendar years from 1 January 2010 to 31 December 2012. In 2010–2012, 70% of infant and young child deaths occurred before 28 days of life (neonatal death) (**Figure 1, page 1**).

Three years of data were combined to create stable estimates for reporting mortality rates at the local area level.

In 2011, there were 297,126 women who gave birth to 299,588 liveborn and 2,220 stillborn

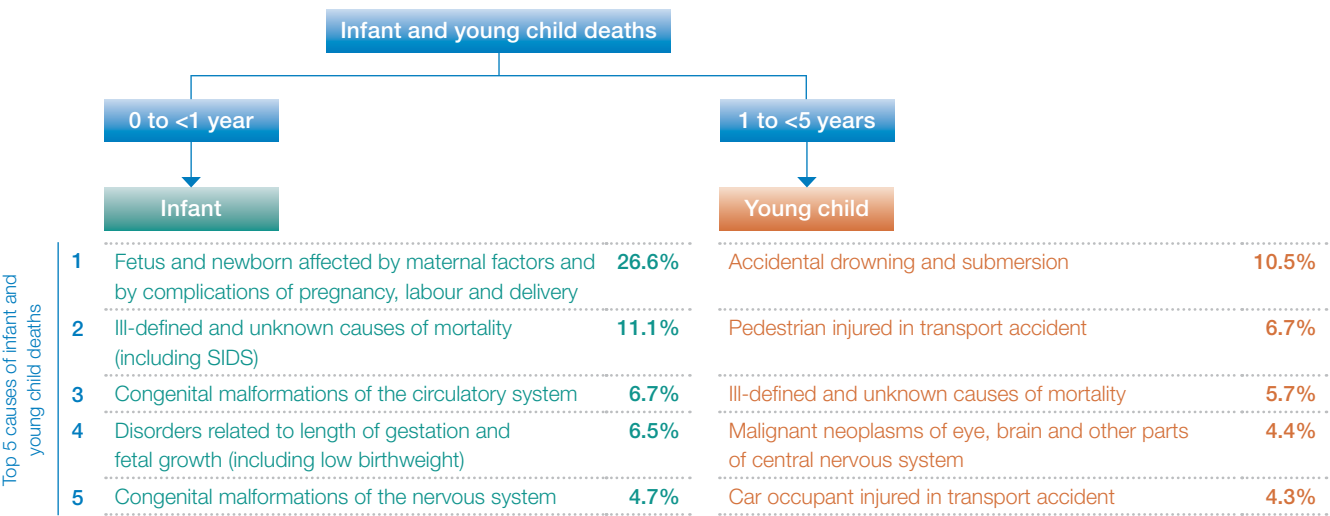
babies in Australia. Of these women, 11,729 were identified on the National Perinatal Data Collection (NPDC) as being Aboriginal and Torres Strait Islander women who gave birth to 11,737 liveborn and 158 stillborn babies.⁵

The leading causes of infant and young child mortality in Australia are shown below in **Figure 2**.

Low-birthweight babies are defined in this report as liveborn singleton babies who weigh less than 2,500 grams at birth. A baby’s birthweight is a key indicator of health status and may reflect the health of a mother during her pregnancy, including her smoking status and the quality of antenatal care received.³

In this report, the percentage of babies who were of low birthweight is the number of liveborn singleton babies who weighed less than 2,500 grams at birth, divided by the total number of live singleton babies born.

Figure 2: Most common causes and percentage of infant and young child deaths by category, in Australia, 2010–2012



Source: National Health Performance Authority analysis of Australian Bureau of Statistics Causes of Death Collection 2010–2012.

Smoking during pregnancy is the most common preventable risk factor for complications in pregnancy and is associated with poorer outcomes for babies such as low birthweight and perinatal death⁵, including sudden infant death syndrome (SIDS).

In this report, the percentage of women who smoked during pregnancy is the number of women who self-reported having smoked at any time during pregnancy, divided by the total number of women who gave birth.

Antenatal visits within the first trimester of pregnancy are important for monitoring the health of mothers and babies and identifying pregnancy complications early so that appropriate treatment can be provided. Antenatal care within the first trimester is within the first 13 weeks of pregnancy and involves assessment, appropriate advice and treatment during pregnancy either in hospital, in primary health care or specialist practices, or in the home. An antenatal visit in the first trimester represents an opportunity for appropriate care to be provided early on in pregnancy.

During an antenatal visit, a GP, midwife or other health professional provides care to monitor the health of the mother and fetus. This care may include taking a medical history, assessing the woman's specific health needs, screening tests, providing advice on pregnancy and delivery, and referral to a medical specialist if necessary.^{5,6}

Australian clinical guidelines recommend that the first antenatal visit is arranged at the first contact with a woman during pregnancy. This visit requires a long appointment and should occur within the first 10 weeks. Guidelines recommend for a woman's first pregnancy without

complications, a schedule of 10 visits and seven visits for subsequent uncomplicated pregnancies.⁶

In this report, the percentage of women who had at least one antenatal visit within the first trimester is the number of women who self-reported or who had a medical record that showed an antenatal visit occurred within the first trimester, divided by the total number of women who gave birth.

About the data

Infant and young child mortality rates were calculated using data from the Australian Bureau of Statistics (ABS) Death Registrations Collection and the ABS Birth Registrations Collection for the calendar years 2010, 2011 and 2012.

ABS births and deaths data contain administrative information supplied by the births, deaths and marriages registries in each state and territory. Deaths are attributed to the catchment in which a baby usually resided, irrespective of where they died. Live births are attributed to the catchment in which the mother usually resided, irrespective of where the birth occurred.

Information on low birthweight, smoking during pregnancy and antenatal visits are from the Australian Institute of Health and Welfare's (AIHW) National Perinatal Data Collection (NPDC).

The NPDC is a national population-based cross-sectional data collection of pregnancy and childbirth. Information is collected from the mother and the hospital, as well as records taken by a midwife or other health professional at the time of birth. The data are based on births reported to the perinatal data collection in each state and territory and are compiled and reported on annually by the AIHW's National Perinatal Epidemiology and Statistics Unit.

For the measures presented in this report, the NPDC data are attributed to the local area where the mother usually resided, rather than the place where the birth occurred and exclude Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.

Results for smoking during pregnancy exclude women whose smoking status during pregnancy was not stated.

Results for antenatal visits in the first trimester exclude women whose gestation at the first antenatal visit was not stated.

State and territory differences in definitions and methods used for collection of data related to smoking during pregnancy and antenatal visits in the first trimester affect the comparability of these data across state and territory jurisdictions and lower levels of geography within these jurisdictions. In particular, as data on smoking during pregnancy are not available for women who gave birth in Victoria in 2007 or 2008, the percentage of Aboriginal and Torres Strait Islander women who gave birth and smoked during pregnancy during the five calendar years from 1 January 2007 to 31 December 2011 does not include Aboriginal and Torres Strait Islander women who usually resided and gave birth in Victoria in 2007 or 2008. In WA and ACT, first antenatal visits that occur outside of the hospital may not be included.

Fair comparisons

To enable fairer comparisons, the Authority has allocated each Medicare Local catchment to one of seven peer groups, based on socioeconomic status, remoteness, and distance to hospitals: three in metropolitan areas, two in regional areas, and two in rural areas ([page vi](#)).

For further information see *Healthy Communities: Child and maternal health in 2009–2012, Technical Supplement* at www.myhealthycommunities.gov.au

The data presented on Aboriginal and Torres Strait Islander mothers and their babies are influenced by the quality and completeness of Aboriginal and Torres Strait Islander identification, which may vary across local areas.

Results for each measure in this report are presented on maps from [pages 17 to 37](#) and on www.myhealthycommunities.gov.au

Key findings: Infant and young child mortality

Infant and young child mortality in this report refers to the death of a liveborn child before the age of 5 years. The majority of these deaths (84%) occur in infancy (before 1 year of age).

In 2010–2012, the national rate of infant and young child mortality was 4.4 deaths per 1,000 live births (1,344 deaths).

Variation across local areas

Across local areas, the infant and young child mortality rate was **more than three times higher** in the catchment with the highest rate compared to the catchment with the lowest rate.

The infant and young child mortality rate ranged as follows:

Highest: Northern Territory – 9.2 deaths per 1,000 live births

Lowest: Bayside (Vic) – 2.6 deaths per 1,000 live births

(Figure 3, page 7 and pages 18 to 19).

The percentage of infant deaths compared with young child deaths also varied across local areas. Of the 59 local areas reported, **infant deaths** accounted for the vast majority (90% or more) of all infant and young child deaths in five Medicare Local catchments – Central Coast NSW, Eastern Sydney, Macedon Ranges & North Western Melbourne, Inner East Melbourne and Northern Sydney.

In contrast, **infant deaths** accounted for less than 75% of all infant and young child deaths in South West WA, Great South Coast (Vic), Frankston-Mornington Peninsula (Vic) and Country South SA.

Variation across peer groups

There were differences found in infant and young child mortality rates across local areas with similar geographic characteristics.

- Across **metropolitan areas**, the infant and young child mortality rate was **more than double** in the lower-income urban catchment of Greater Metro South Brisbane (6.1 deaths per 1,000 live births, Metro 2) compared to the wealthier inner-city catchment of Bayside (Vic) (2.6 deaths per 1,000 live births, Metro 1)
- Across **regional areas**, the infant and young child mortality rate was **almost double** in the lower-income catchment of Country South SA (6.5 deaths per 1,000 live births, Regional 2) compared to the wealthier catchment of Nepean-Blue Mountains (NSW) (3.3 deaths per 1,000 live births, Regional 1)
- Across **rural areas**, the infant and young child mortality rate was **almost double** in the Rural 2 catchment of Northern Territory (9.2 deaths per 1,000 live births) compared to 4.9 deaths per 1,000 live births in Country North SA (Rural 1) and Goldfields-Midwest (WA) (Rural 2).

Variation within peer groups

There were differences across similar local areas even after accounting for broad geographic and socioeconomic circumstances. For example:

- Within the **Metro 2** peer group, the infant and young child mortality rate was **more than double** in Greater Metro South Brisbane (6.1 deaths per 1,000 live births) compared to South Western Melbourne (2.9 deaths per 1,000 live births).
- Within the **Regional 2** peer group, the infant and young child mortality rate was **86% higher** in Country South SA (6.5 deaths per 1,000 live births) compared to Goulburn Valley (Vic) (3.5 deaths per 1,000 live births) (Table 1, page 6).

While this report shows higher rates of infant and young child deaths in regional and rural compared to metropolitan areas and in lower-income compared to higher-income areas, there are some areas that do not follow this trend. These areas demonstrate what can be achieved for other similar areas.

For example, Nepean-Blue Mountains (NSW), Barwon (Vic) and Goulburn Valley (Vic) are middle- to lower-income regional areas that have infant and child mortality rates similar to or better than many higher-income metropolitan communities.

Table 1: Highest and lowest infant and young child mortality rates across Medicare Local catchments, by peer group, 2010–2012

Peer group	Highest rate	Lowest rate	Difference	
Metro 1	4.2	2.6	62%	(1.6 times higher)
Metro 2	6.1	2.9	110%	(2.1 times higher)
Metro 3	5.0	3.3	52%	(1.5 times higher)
Regional 1	5.8	3.3	76%	(1.8 times higher)
Regional 2	6.5	3.5	86%	(1.9 times higher)
Rural 1	7.3	4.9	49%	(1.5 times higher)
Rural 2	9.2	4.9	88%	(1.9 times higher)

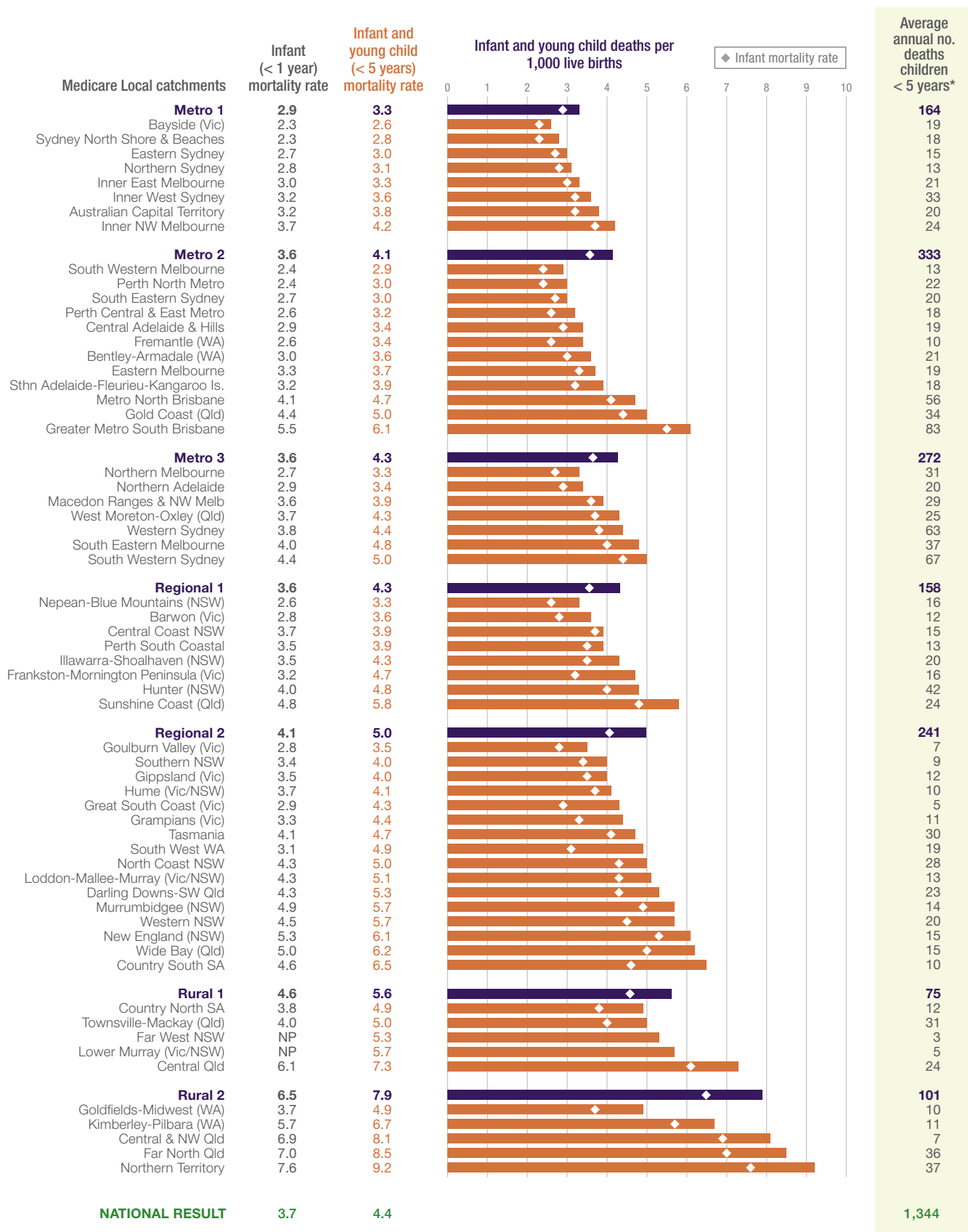
Aboriginal and Torres Strait Islander infant and young child mortality

Infant and young child mortality rates for Aboriginal and Torres Strait Islander children have declined over the past decade with 42% of the decline in **infant** mortality rates due to a decrease in sudden infant deaths syndrome (SIDS) and 25% due to a fall in deaths from certain conditions originating in the perinatal period.⁷ External causes (injury and poisoning) account for just over half of all deaths of Aboriginal and Torres Strait Islander infant and young children.

The recent Australian Government report on Closing the Gap (2014) showed that changes in the Aboriginal and Torres Strait Islander **infant and young child** mortality rate are currently within range to meet the target of halving the gap in mortality rates by 2018.⁸ However, between 2006 and 2010 Aboriginal and Torres Strait Islander infant and young child mortality rates were still double the non-Indigenous rate, as were **infant** mortality rates (8 deaths per 1,000 live births compared with 4 deaths per 1,000 live births). Aboriginal and Torres Strait Islander infant mortality rates also varied across states and territories, from 6 deaths per 1,000 live births in SA, to 13 deaths per 1,000 live births in the NT.*⁹

* Reliable data on child mortality for Aboriginal and Torres Strait Islander people are available for NSW, Qld, WA, SA and the NT.

Figure 3: Infant and young child mortality rates, by Medicare Local catchment, 2010–2012



* The number of deaths may vary across Medicare Local catchments with similar rates due to differences in the number of live births.

NP Not available for publication.

Notes: Deaths are attributed to the Medicare Local catchment in which the infant or young child usually resided, irrespective of where they died. Births are attributed to the Medicare Local catchment in which the mother usually resided, irrespective of where the birth occurred.

Sources: National Health Performance Authority analysis of Australian Bureau of Statistics Death Registrations Collection 2010–2012 and Australian Bureau of Statistics Birth Registrations Collection 2010–2012.

Key findings: Low birthweight and smoking during pregnancy

Low birthweight, all women

Nationally, the percentage of liveborn babies* of low birthweight was 4.8% for babies born to all women in 2009–2011 and 11.0% for babies born to Aboriginal and Torres Strait Islander women in 2007–2011.

Variation across local areas

Across local areas, the percentage of all live births that were of low birthweight was **more than double** in the catchment with the highest percentage compared to the catchment with the lowest percentage.

The percentage of all live births that were of low birthweight ranged as follows:

Highest: Northern Territory – 7.7%

Lowest: Sydney North Shore & Beaches – 3.3%

(Figure 4, page 12 and pages 22 to 23).

Variation across peer groups

There were differences in the percentage of babies born of low birthweight across local areas with similar geographic characteristics.

- Across **metropolitan areas**, the percentage of all liveborn babies of low birthweight was **73% higher** in the lower-income urban catchment of Northern Adelaide (5.7%, Metro 3) compared to the wealthy inner-city catchment of Sydney North Shore & Beaches (3.3%, Metro 1)
- Across **regional and rural areas**, the percentage of all liveborn babies of low birthweight was higher in most lower-income catchments (Regional 2 and Rural 2) compared to higher-income catchments (Regional 1 and Rural 1).

Variation within peer groups

There were differences across similar catchments even after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 2** peer group, the percentage of all live births that were of low birthweight was **41% higher** in South Western Melbourne (5.2%) compared to Fremantle (WA) (3.7%)
- Within the **Regional 2** peer group, the percentage of all live births that were of low birthweight was **27% higher** in Country South SA, New England (NSW) and Tasmania (5.6%) compared to South West WA (4.4%) (Table 2, page 9).

Smoking during pregnancy, all women

Nationally, the percentage of women who smoked during pregnancy was 13.9% for all women for 2009–2011 and 51.7% for Aboriginal and Torres Strait Islander women for 2007–2011.

Variation across local areas

Across local areas, the percentage of women who smoked during pregnancy was **18 times higher** in the catchment with the highest compared to the catchment with the lowest percentage.

The percentage of women who smoked during pregnancy ranged as follows:

Highest: Far West NSW – 33.1%

Lowest: Sydney North Shore & Beaches – 1.8%

(Figure 4, page 12 and pages 28 to 29).

* Multiple births are excluded for the results for low birthweight in this report.

Table 2: Highest and lowest percentage of low-birthweight babies of all women across Medicare Local catchments, by peer group, 2009–2011

Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1	4.4%	3.3%	33%	(1.3 times higher)
Metro 2	5.2%	3.7%	41%	(1.4 times higher)
Metro 3	5.7%	4.7%	21%	(1.2 times higher)
Regional 1	4.9%	4.3%	14%	(1.1 times higher)
Regional 2	5.6%	4.4%	27%	(1.3 times higher)
Rural 1	7.5%	5.0%	50%	(1.5 times higher)
Rural 2	7.7%	5.8%	33%	(1.3 times higher)

Table 3: Highest and lowest percentage of smoking during pregnancy among all women across Medicare Local catchments, by peer group, 2009–2011

Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1	10.2%	1.8%	467%	(5.7 times higher)
Metro 2	14.5%	4.7%	209%	(3.1 times higher)
Metro 3	22.4%	8.0%	180%	(2.8 times higher)
Regional 1	18.8%	14.0%	34%	(1.3 times higher)
Regional 2	26.5%	15.5%	71%	(1.7 times higher)
Rural 1	33.1%	19.5%	70%	(1.7 times higher)
Rural 2	27.6%	21.2%	30%	(1.3 times higher)

Variation across peer groups

There were differences in the percentage of women who smoked during pregnancy across local areas with similar geographic characteristics.

- Across **metropolitan areas**, the percentage of women who smoked during pregnancy was **12 times higher** in the lower-income urban catchment of Northern Adelaide (22.4%, Metro 3) compared to the wealthier inner-city catchment of Sydney North Shore & Beaches (1.8%, Metro 1)
- Across **regional areas**, the percentage of women who smoked during pregnancy was higher in most lower-income catchments compared to higher-income catchments. For example, the percentage of women who smoked during pregnancy was **almost double** at 26.5% in Wide Bay (Qld) (Regional 2) compared to 14.0% in Barwon (Vic) and Illawarra-Shoalhaven (NSW) (Regional 1).

However across rural areas this trend of lower rates of smoking during pregnancy in higher-income areas compared to lower-income areas was not apparent.

Variation within peer groups

There were differences across similar catchments even after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 1** peer group, the percentage of women who smoked during pregnancy was **more than five times higher** in Australian Capital Territory (10.2%) compared to Sydney North Shore & Beaches (1.8%)
- Within the **Metro 2** peer group, the percentage of women who smoked during pregnancy was **three times higher** in Southern Adelaide-Flourieu-Kangaroo Island (SA) (14.5%) compared to South Eastern Sydney (4.7%) **(Table 3)**.

Low birthweight, Aboriginal and Torres Strait Islander women

Variation across local areas

Across local areas, the percentage of live births to Aboriginal and Torres Strait Islander women that were of low birthweight was **2.6 times higher** in the catchment with the highest compared to the catchment with the lowest percentage.

The percentage of live births to Aboriginal and Torres Strait Islander women that were of low birthweight ranged from:

Highest: Gippsland (Vic) – 17.5%

Lowest: Frankston-Mornington Peninsula (Vic) – 6.7%

(Figure 5, page 13 and pages 24 to 25).

Variation across peer groups

Across the three metropolitan peer groups, there was no apparent trend of lower rates of low-birthweight babies in higher-income areas compared to lower-income areas. Similarly, no trend was seen across regional areas or across rural areas.

Variation within peer groups

There were differences across similar catchments after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 2** peer group, the percentage of all live births that were babies of low birthweight born to Aboriginal and Torres Strait Islander mothers was **twice as high** in Bentley-Armadale (WA) (14.3%) compared to Metro North Brisbane (7.1%)

- Within the **Regional 2** peer group, the percentage of all live births that were babies of low birthweight born to Aboriginal and Torres Strait Islander mothers was **more than twice as high** in Gippsland (Vic) (17.5%) compared to Wide Bay (Qld) (7.6%) (Table 4).

Smoking during pregnancy, Aboriginal and Torres Strait Islander women

Variation across local areas

Across local areas, the percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy* was **more than double** in the catchment with the highest compared to the catchment with the lowest percentage.

The percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy ranged as follows:

Highest: Goulburn Valley (Vic) – 66.4%

Lowest: Macedon Ranges & North Western Melbourne – 29.4%

(Figure 5, page 13 and pages 30 to 31).

Variation across peer groups

There were differences in the percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy across regional peer groups with higher rates of smoking during pregnancy in almost all lower-income areas compared to middle-income areas.

Across metropolitan areas and across rural areas, this trend of lower rates of low-birthweight babies in higher-income areas compared to lower-income areas was not apparent.

* The results do not include data for Aboriginal and Torres Strait Islander women who usually resided in Victoria and gave birth in Victoria in 2007 and 2008.

Table 4: Highest and lowest percentage of low-birthweight babies of Aboriginal and Torres Strait Islander women across Medicare Local catchments, by peer group, 2007–2011

Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1	13.5%	8.0%	69%	(1.7 times higher)
Metro 2	14.3%	7.1%	101%	(2.0 times higher)
Metro 3	13.5%	7.0%	93%	(1.9 times higher)
Regional 1	13.0%	6.7%	94%	(1.9 times higher)
Regional 2	17.5%	7.6%	130%	(2.3 times higher)
Rural 1	13.6%	9.1%	49%	(1.5 times higher)
Rural 2	13.3%	10.3%	29%	(1.3 times higher)

Table 5: Highest and lowest percentage of smoking during pregnancy among Aboriginal and Torres Strait Islander women across Medicare Local catchments, by peer group, 2007–2011*

Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1	53.7%	35.1%	53%	(1.5 times higher)
Metro 2	56.7%	34.4%	65%	(1.6 times higher)
Metro 3	62.0%	29.4%	111%	(2.1 times higher)
Regional 1	48.9%	42.0%	16%	(1.2 times higher)
Regional 2	66.4%	34.7%	91%	(1.9 times higher)
Rural 1	62.2%	51.5%	21%	(1.2 times higher)
Rural 2	55.6%	46.7%	19%	(1.2 times higher)

Variation within peer groups

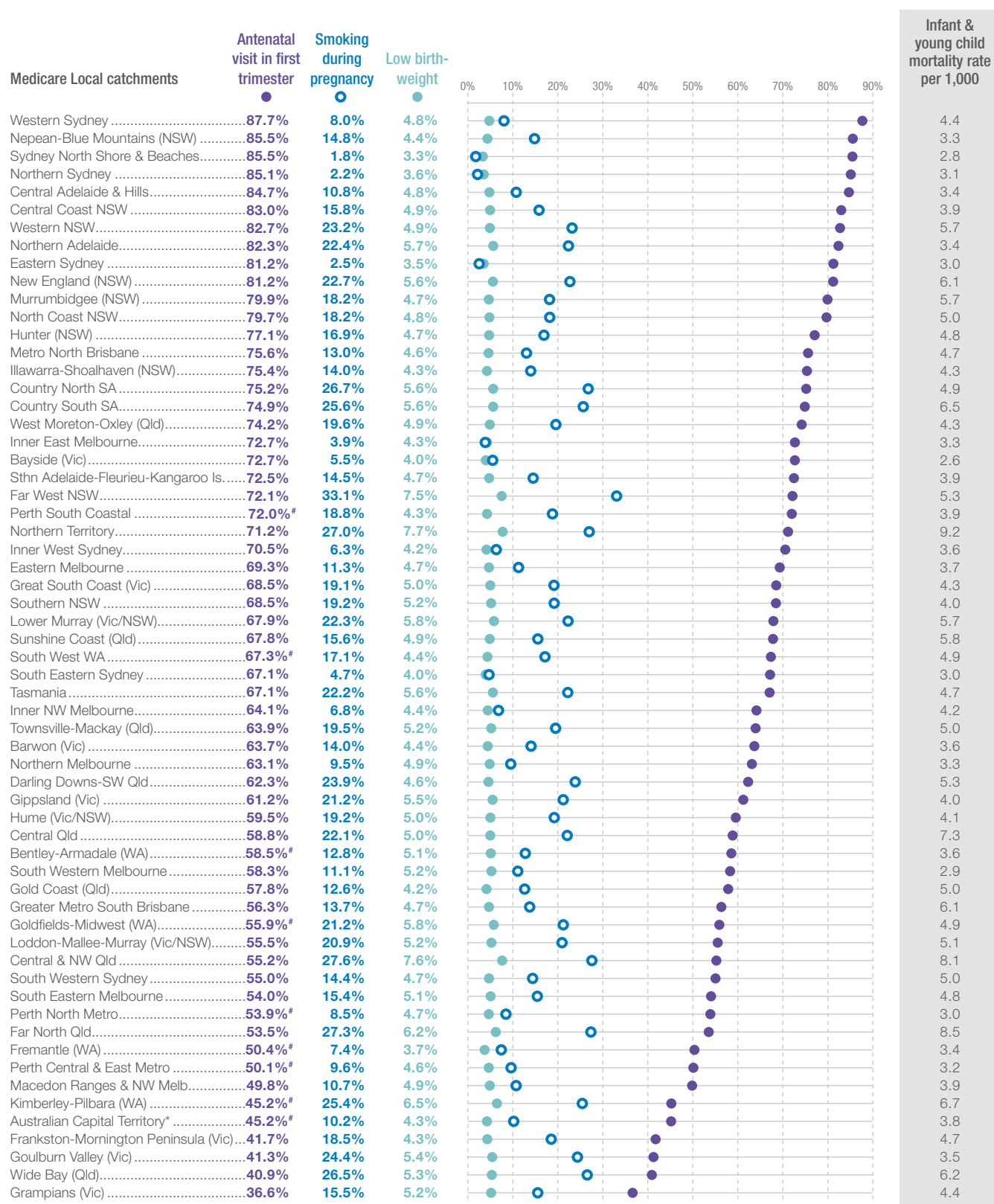
There were differences across similar catchments even after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 3** peer group, the percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy was **more than double** in Northern Adelaide (62.0%) compared to Macedon Ranges & North Western Melbourne (29.4%)

- Within the **Regional 2** peer group, the percentage of Aboriginal and Torres Strait Islander women who smoked during pregnancy was **almost double** in Goulburn Valley (Vic) (66.4%) compared to Grampians (Vic) (34.7%) (**Table 5**).

* The results do not include data for Aboriginal and Torres Strait Islander women who usually resided in Victoria and gave birth in Victoria in 2007 and 2008.

Figure 4: Percentage of *all women* who had at least one antenatal visit in the first trimester, by measures of child and maternal health, by Medicare Local catchment, 2009–2012



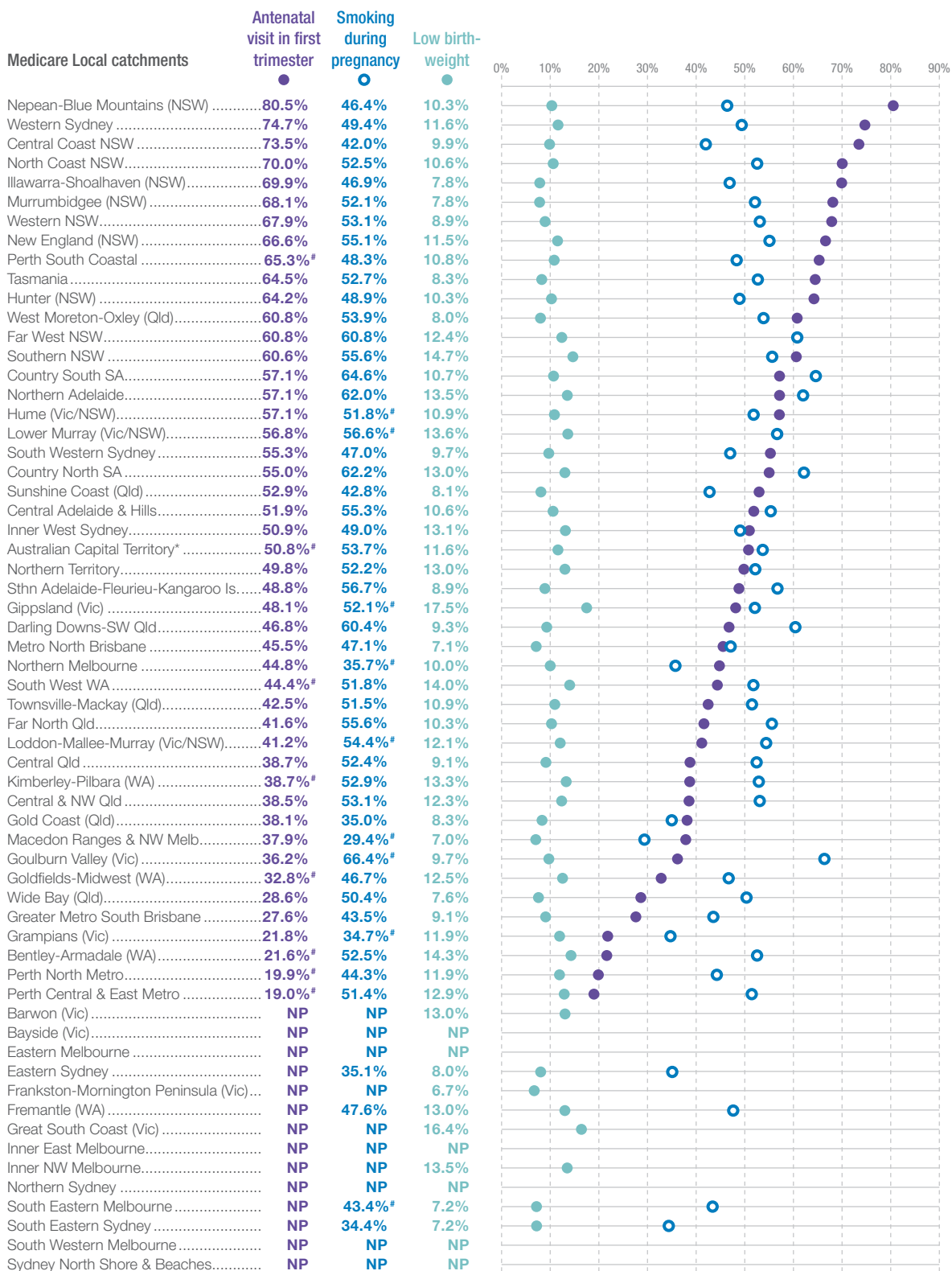
* Women who usually resided in the Australian Capital Territory and gave birth in New South Wales were not counted in the results for the Australian Capital Territory Medicare Local catchment for antenatal visits in the first trimester, smoking during pregnancy and low birthweight.

Interpret with caution. In WA and ACT, first antenatal visits that occur outside of the hospital may not be included.

Notes: Jurisdictional differences in definitions and methods used for data collection affect the comparability of these data across jurisdictions and lower levels of geography within jurisdictions. For data limitations and exclusions, see this report's Technical Supplement.

Sources: Customised data report prepared for the NHPA from the AIHW National Perinatal Data Collection 2009–2011 (birthweight, smoking during pregnancy) and 2010–2011 (antenatal visits) and NHPA analysis of ABS Death Registrations Collection 2010–2012 and ABS Birth Registrations Collection 2010–2012.

Figure 5: Percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester, by measures of child and maternal health, by Medicare Local catchment, 2007–2011



* Women who usually resided in the Australian Capital Territory and gave birth in New South Wales were not counted in the results for the Australian Capital Territory Medicare Local catchment for antenatal visits in the first trimester, smoking during pregnancy and low birthweight.

Interpret with caution. In WA and ACT, first antenatal visits that occur outside of the hospital may not be included. Data on smoking during pregnancy were not available for Aboriginal and Torres Strait Islander women who usually resided in Victoria and gave birth in Victoria in 2007 and 2008.

Notes: Jurisdictional differences in definitions and methods used for data collection affect the comparability of these data across jurisdictions and lower levels of geography within jurisdictions. For data limitations and exclusions, see this report's Technical Supplement.

Source: Customised data report prepared for the NHPA from the AIHW National Perinatal Data Collection 2007–2011 (birthweight, smoking during pregnancy) and 2010–2011 (antenatal visits).

Key findings: Antenatal visits in the first trimester

All women

In 2010–2011, the national percentage of women who had at least one antenatal visit in the first trimester of pregnancy was 67.2% for all women and 50.3% for Aboriginal and Torres Strait Islander women.

Variation across local areas

Across local areas, the percentage of women who had at least one antenatal visit in the first trimester in 2010–2011 was **more than double** in the catchment with the highest percentage compared to the catchment with the lowest percentage.

The percentage of women who had at least one antenatal visit in the first trimester ranged as follows:

Highest: Western Sydney – 87.7%

Lowest: Grampians (Vic) – 36.6%

(Figure 4, page 12 and pages 34 to 35).

Variation across peer groups

There were differences in the percentage of women who had at least one antenatal visit in the first trimester across local areas with similar geographic characteristics.

Across **rural areas**, the percentage of women who had at least one antenatal visit in the first trimester was **41% higher** in the Rural 1 catchment of Country North SA (75.2%) compared to the Rural 2 catchment of Far North Queensland (53.5%).

However, across metropolitan areas and across regional areas this trend of higher rates of women who had at least one antenatal visit in the first trimester in higher-income areas compared to lower-income areas was not apparent, with some local areas demonstrating what can be achieved for other similar areas.

For example:

- Across **metropolitan areas**, the percentage of women who had at least one antenatal visit in the first trimester was **37% higher** in the lower-income urban catchment of Western Sydney (87.7%, Metro 3) compared to wealthier inner-city catchment of Inner North West Melbourne (64.1%, Metro 1)
- Across **regional areas**, the percentage of women who had at least one antenatal visit in the first trimester was **almost double** in the lower-income catchment of Western NSW (82.7%) compared to the wealthier catchment of Frankston-Mornington-Peninsula (Vic) (41.7%).

Variation within peer groups

There were differences across similar catchments even after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 1** peer group, the percentage of women who had at least one antenatal visit in the first trimester was **33% higher** in Sydney North Shore & Beaches (85.5%) compared to Inner North West Melbourne (64.1%)
- Within the **Regional 1** peer group, the percentage of women who had at least one antenatal visit in the first trimester was **double** in Nepean-Blue Mountains (NSW) (85.5%) compared to Frankston-Mornington-Peninsula (Vic) (41.7%) (Table 6, page 15).

Table 6: Highest and lowest percentage of all women who had at least one antenatal visit in the first trimester across Medicare Local catchments, by peer group, 2010–2011

Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1	85.5%	64.1%	33%	(1.3 times higher)
Metro 2	84.7%	56.3%	50%	(1.5 times higher)
Metro 3	87.7%	49.8%	76%	(1.8 times higher)
Regional 1	85.5%	41.7%	105%	(2.1 times higher)
Regional 2	82.7%	36.6%	126%	(2.3 times higher)
Rural 1	75.2%	58.8%	28%	(1.3 times higher)
Rural 2	71.2%	53.5%	33%	(1.3 times higher)

Note: Results for Medicare Local catchments that are to be interpreted with caution are not included.

Aboriginal and Torres Strait Islander women

Variation across local areas

Across local areas, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester in 2010–2011 was **almost four times higher** in the catchment with the highest compared to the catchment with the lowest percentage.

The percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester ranged as follows:

Highest: Nepean-Blue Mountains (NSW) – 80.5%

Lowest: Grampians (Vic) – 21.8%

(Figure 5, page 13 and pages 36 to 37).

Variation across peer groups

There were differences in the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester across local areas with similar geographic characteristics.

- Across **regional areas**, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester was **almost four times higher** in the wealthier catchment of Nepean-Blue Mountains (NSW) (80.5%, Regional 1) compared to the lower-income catchment of Grampians (Vic) (21.8%, Regional 2)
- Across **rural areas**, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester tended to be higher in the Rural 1 peer group compared to the Rural 2 peer group. The percentage was **58% higher** in Far West NSW (60.8%, Rural 1) compared to Central & North West Queensland (38.5%, Rural 2).

However, across metropolitan areas this trend of higher rates of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester in higher-income areas compared to lower-income areas was not apparent, with some local areas demonstrating what can be achieved for other similar areas.

For example, across **metropolitan areas**, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester was **almost three times higher** in the lower-income urban catchment of Western Sydney (74.7%, Metro 3) compared to Greater Metro South Brisbane (27.6%, Metro 2).

Variation within peer groups

There were differences across similar catchments even after accounting for geographic and socioeconomic circumstances.

- Within the **Metro 2** peer group, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester was **almost double** in Central Adelaide & Hills (51.9%) compared to Greater Metro South Brisbane (27.6%)

- Within the **Regional 2** peer group, the percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester was **more than three times higher** in North Coast NSW (70.0%) compared to Grampians (Vic) (21.8%) (**Table 7**).

Table 7: Highest and lowest percentage of Aboriginal and Torres Strait Islander women who had at least one antenatal visit in the first trimester across Medicare Local catchments, by peer group, 2010–2011

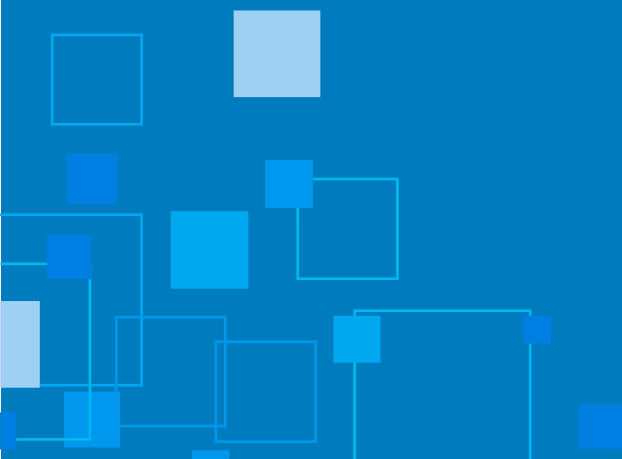
Peer group	Highest percentage	Lowest percentage	Difference	
Metro 1*	-	-	-	-
Metro 2	51.9%	27.6%	88%	(1.9 times higher)
Metro 3	74.7%	37.9%	97%	(2.0 times higher)
Regional 1	80.5%	52.9%	52%	(1.5 times higher)
Regional 2	70.0%	21.8%	221%	(3.2 times higher)
Rural 1	60.8%	38.7%	57%	(1.6 times higher)
Rural 2	49.8%	38.5%	29%	(1.3 times higher)

* Data were only available for two Medicare Local catchments in this peer group.

Note: Results for Medicare Local catchments that are to be interpreted with caution are not included.

Health status and outcomes

Child and maternal health in 2009–2012



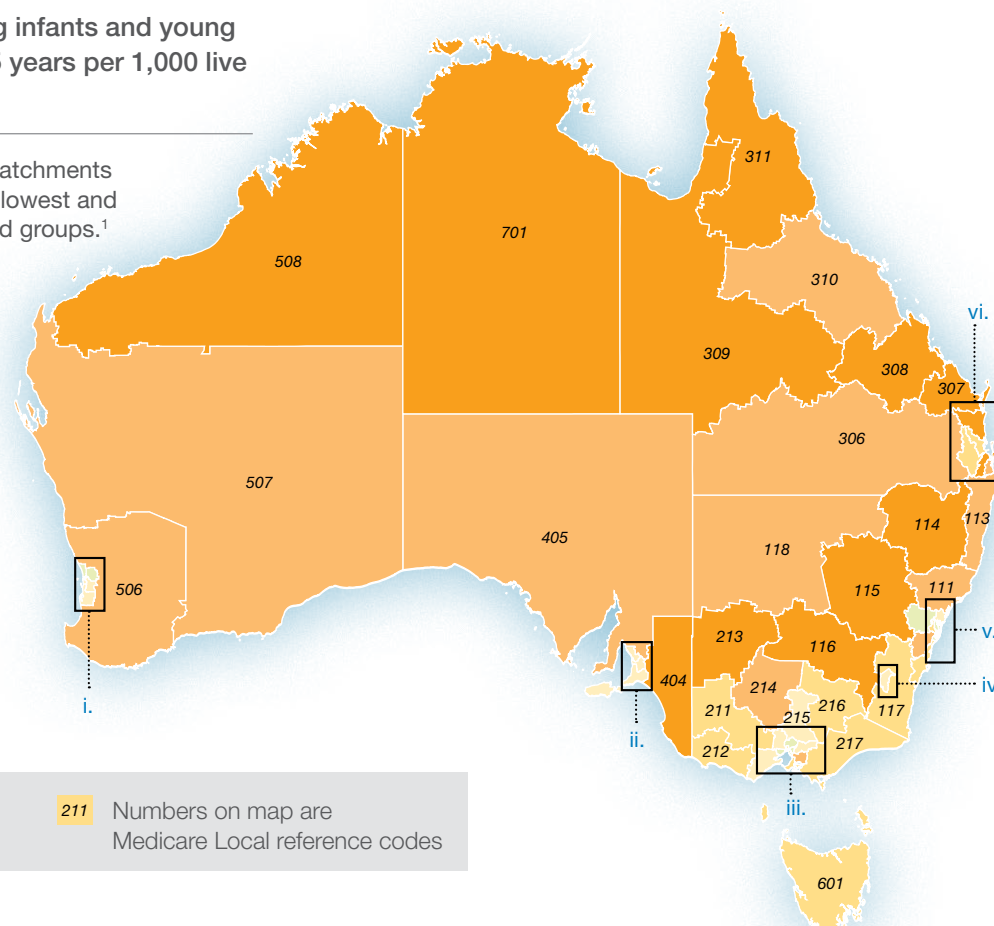
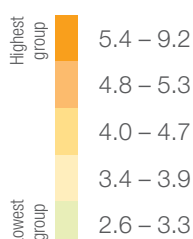
Infant and young child mortality rate

Years of data: 2010–2012

During 2010–2012, the infant and young child mortality rate varied across Medicare Local catchments and across peer groups, ranging from 2.6 deaths per 1,000 live births in Bayside (Vic) to 9.2 deaths per 1,000 live births in the Northern Territory.

Number of deaths among infants and young children aged less than 5 years per 1,000 live births, 2010–2012

Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



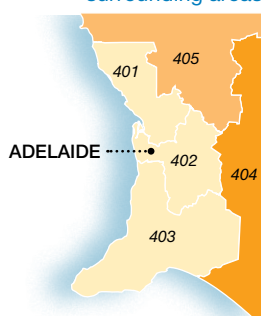
Medicare Local catchment boundary

Numbers on map are Medicare Local reference codes

i. Perth and surrounding areas



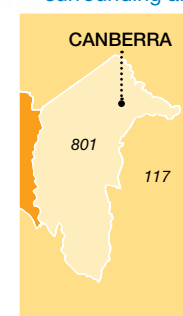
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

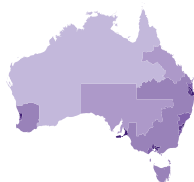
2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

Notes: Deaths are attributed to the Medicare Local catchment in which the infant or young child usually resided, irrespective of where they died. Births are attributed to the Medicare Local catchment in which the mother usually resided, irrespective of where the birth occurred.

Sources: National Health Performance Authority analysis of Australian Bureau of Statistics Death Registrations Collection 2010–2012 and Australian Bureau of Statistics Birth Registrations Collection 2010–2012.

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

Fair comparisons



To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

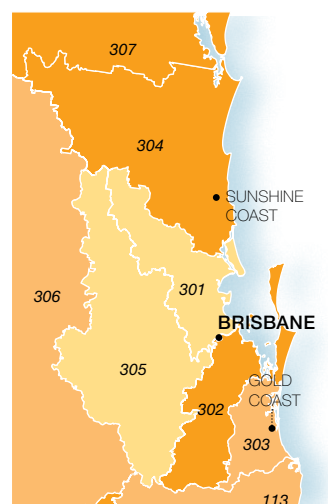
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas

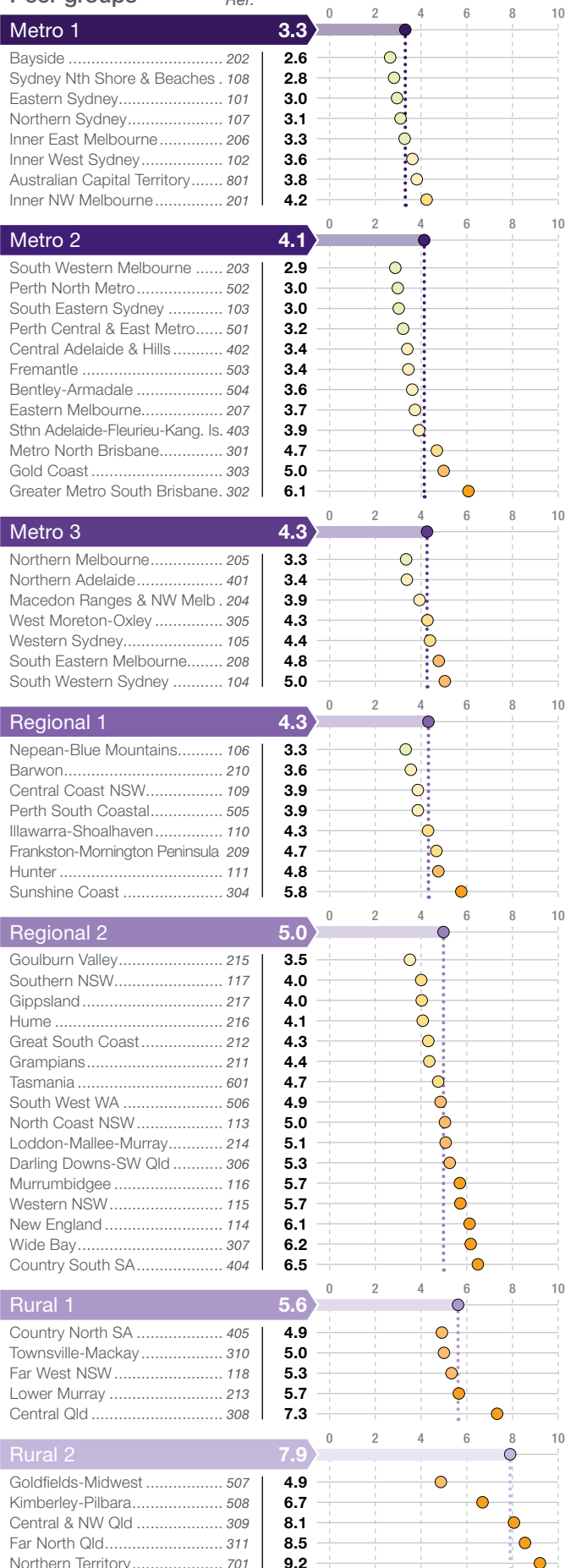


vi. Brisbane and surrounding areas



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

Peer groups



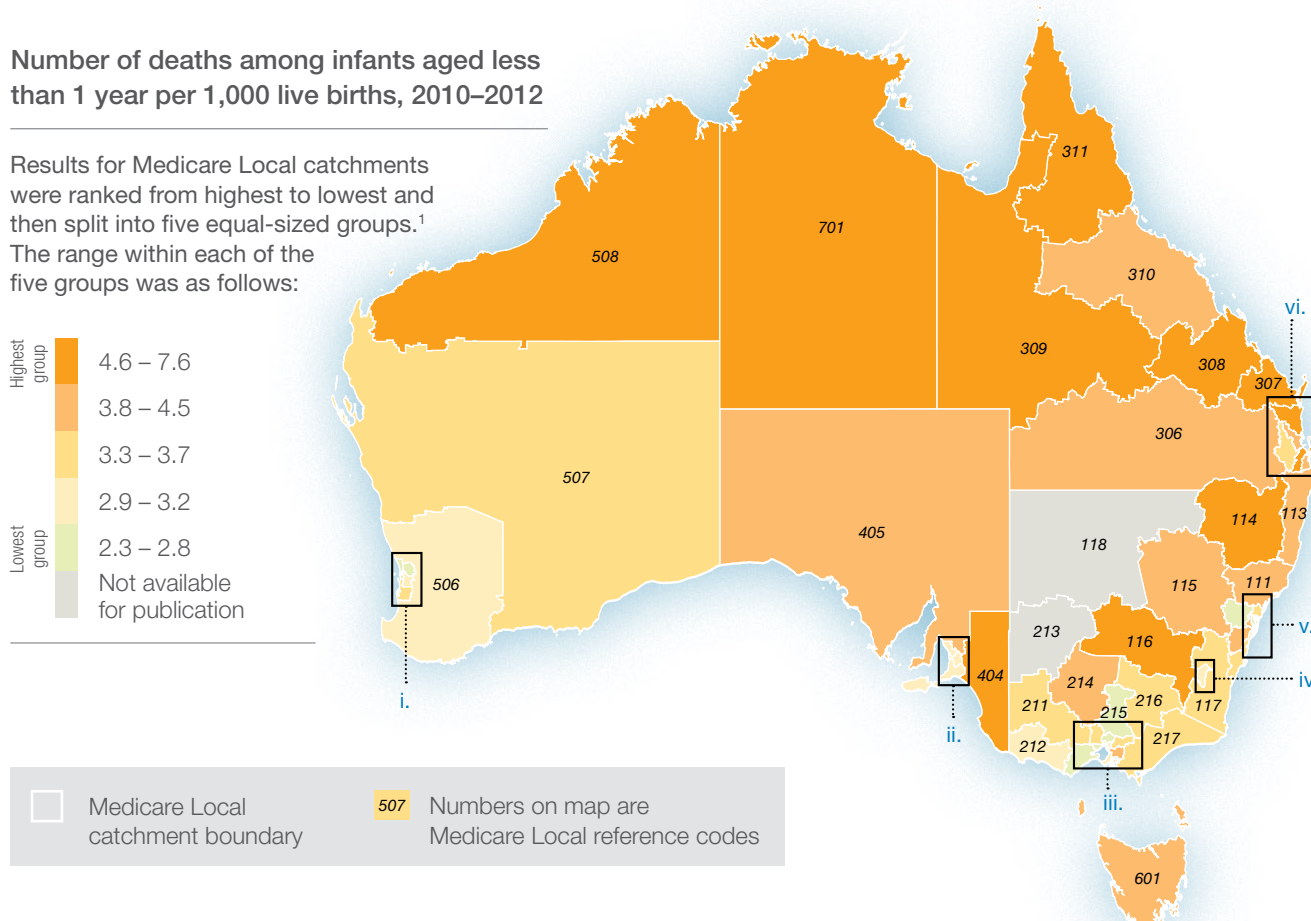
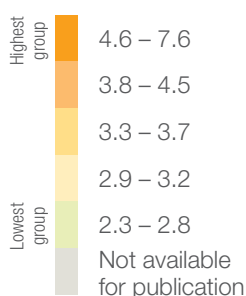
Infant mortality rate

Years of data: 2010–2012

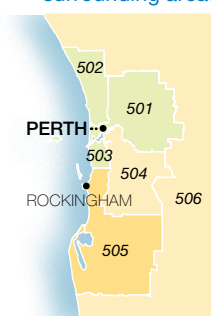
During 2010–2012, the infant mortality rate varied across Medicare Local catchments and across peer groups, ranging from 2.3 deaths per 1,000 live births in Sydney North Shore & Beaches and Bayside (Vic) to 7.6 deaths per 1,000 live births in the Northern Territory.

Number of deaths among infants aged less than 1 year per 1,000 live births, 2010–2012

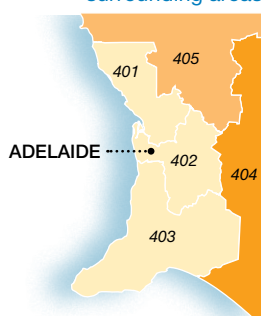
Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



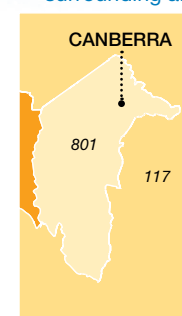
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

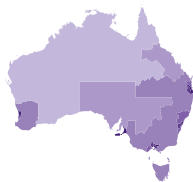
2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

Notes: Deaths are attributed to the Medicare Local catchment in which the infant usually resided, irrespective of where they died. Births are attributed to the Medicare Local catchment in which the mother usually resided, irrespective of where the birth occurred.

Sources: National Health Performance Authority analysis of Australian Bureau of Statistics Death Registrations Collection 2010–2012 and Australian Bureau of Statistics Birth Registrations Collection 2010–2012.

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

Fair comparisons



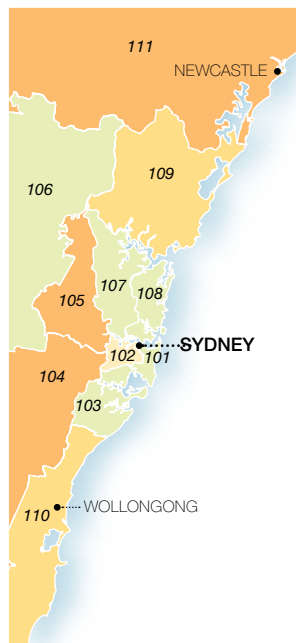
To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

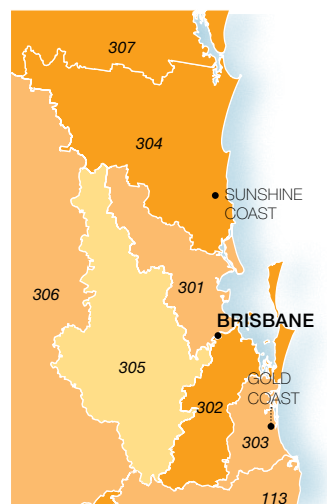
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas

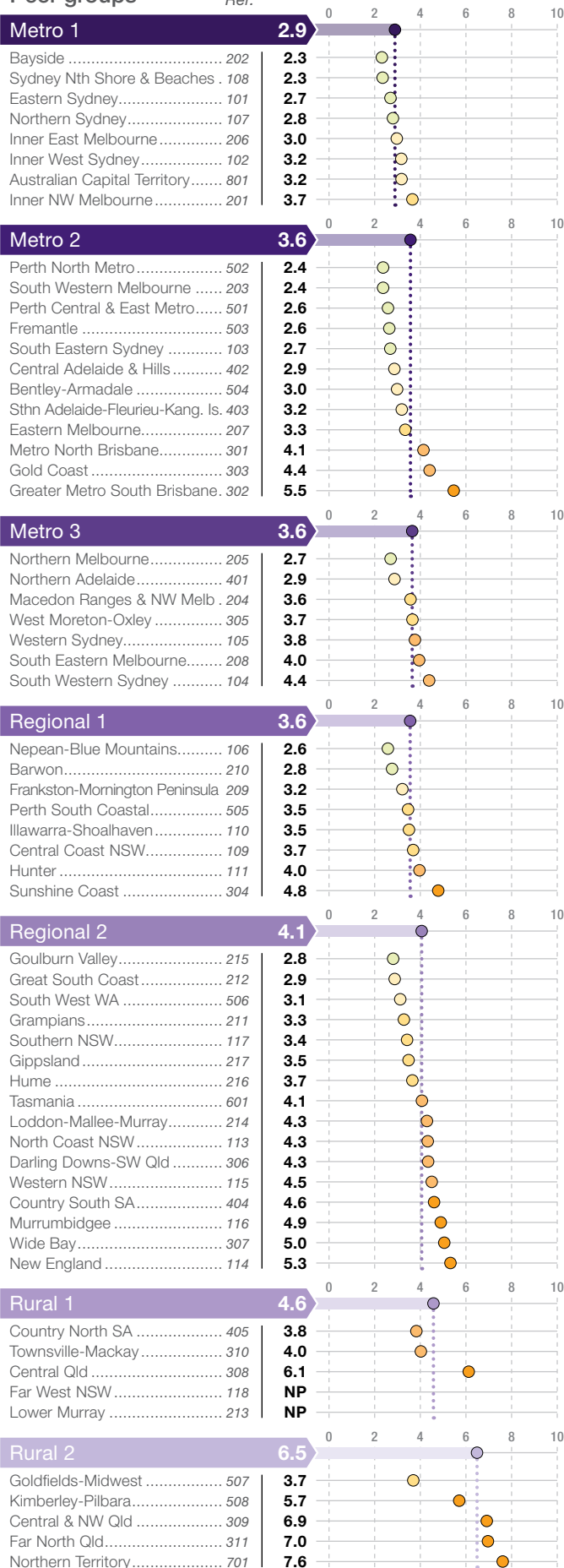


vi. Brisbane and surrounding areas



NP Not available for publication.
More information can be found at www.myhealthycommunities.gov.au and in this report's Technical Supplement.

Peer groups



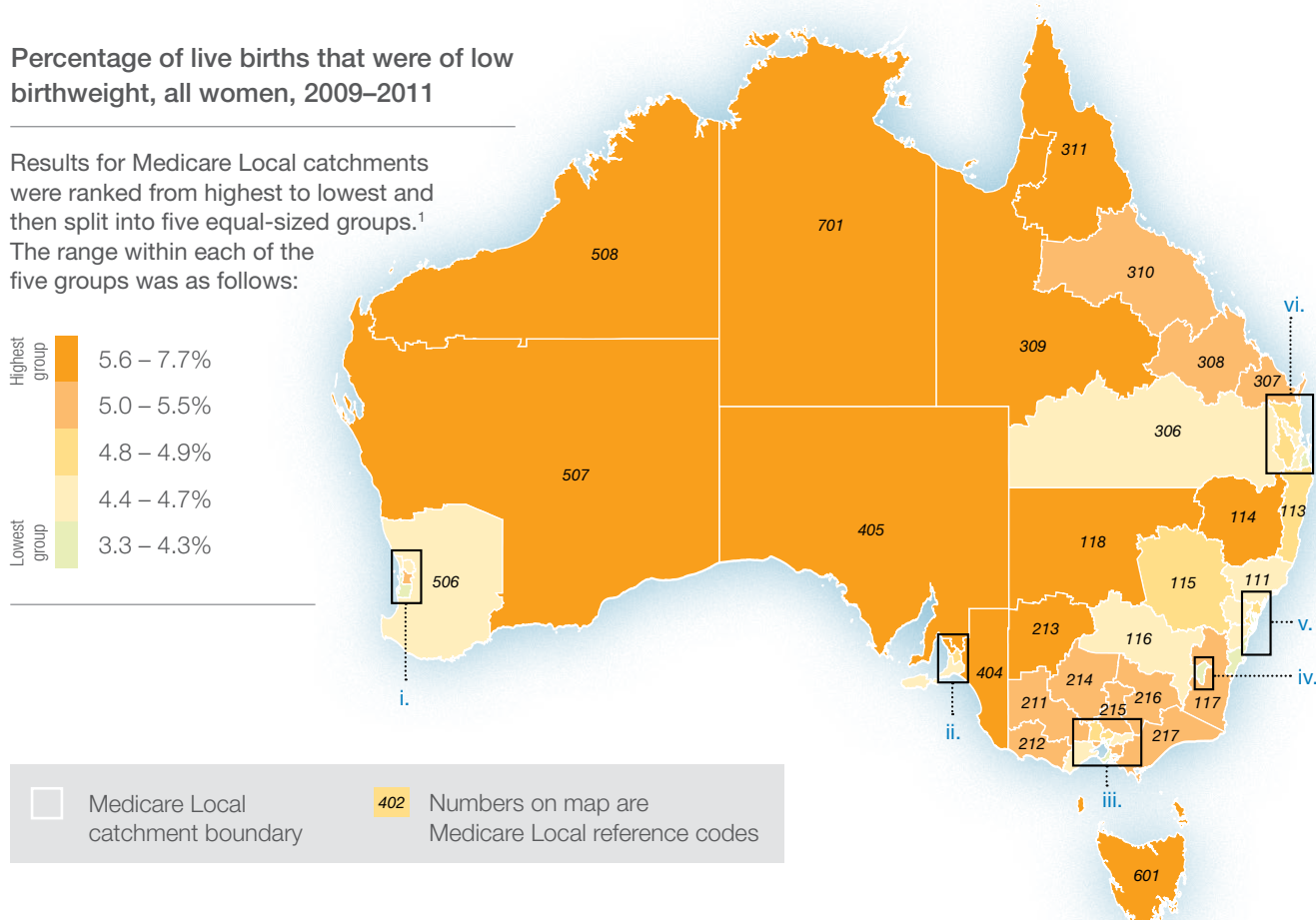
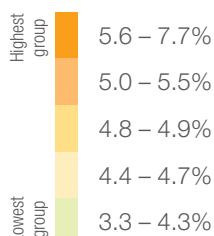
Low-birthweight babies, all women

Years of data: 2009–2011

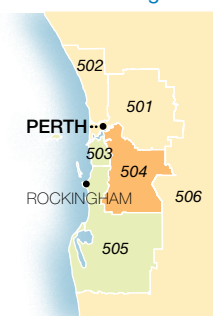
During 2009–2011, the percentage of liveborn babies of low birthweight varied across Medicare Local catchments and across peer groups, ranging from 3.3% in Sydney North Shore & Beaches to 7.7% in Northern Territory.

Percentage of live births that were of low birthweight, all women, 2009–2011

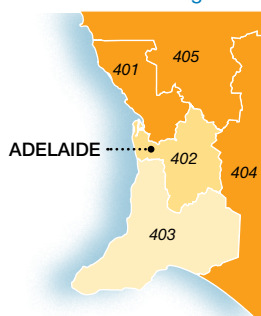
Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



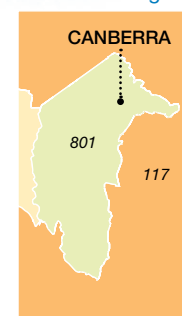
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas

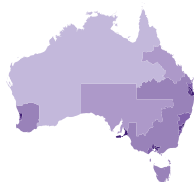


iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.
 2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.
Notes: Multiple births and stillbirths are excluded. Births are attributed to the Medicare Local catchment in which the mother usually resided, irrespective of where the birth occurred. Data exclude births to Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.
Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2009–2011.
 Data can be downloaded from www.myhealthycommunities.gov.au

Fair comparisons



To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

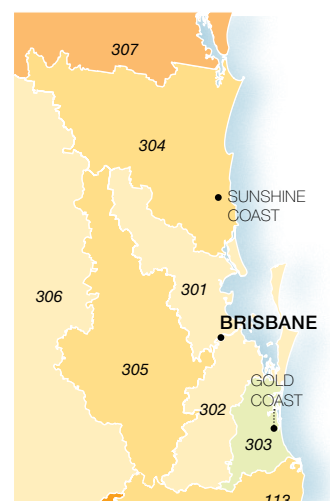
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas

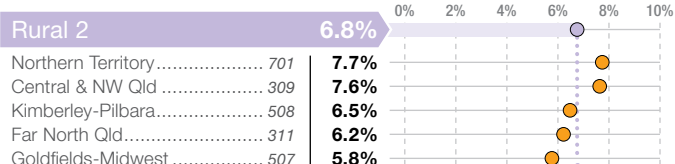
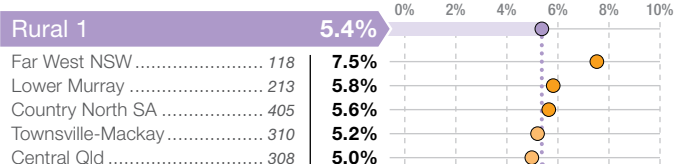
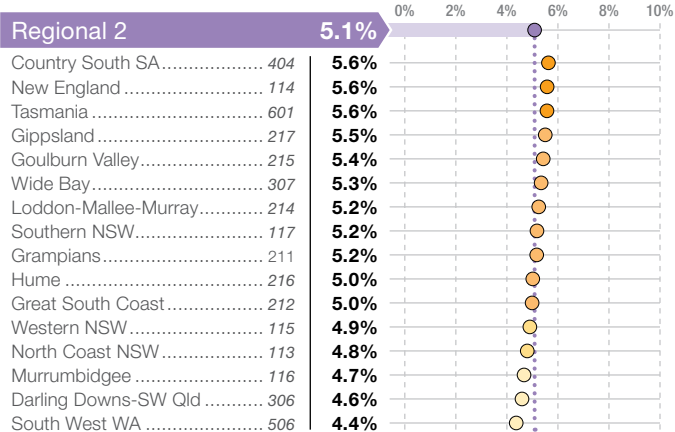
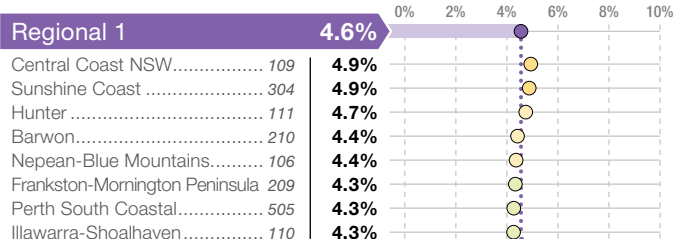
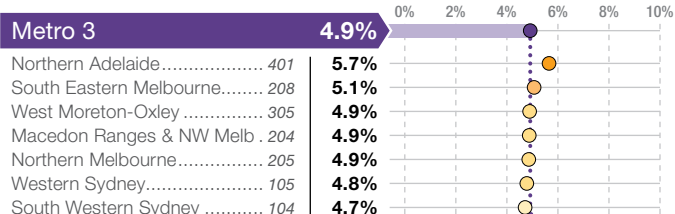
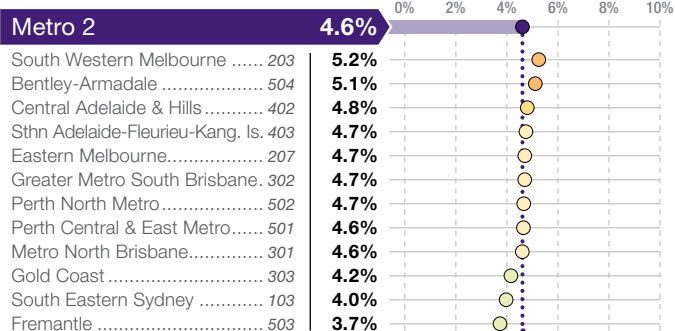
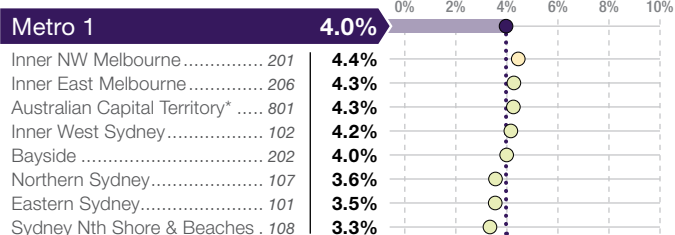


* In 2009–2011, there were 202 liveborn babies of women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

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

Peer groups

Map
Ref.



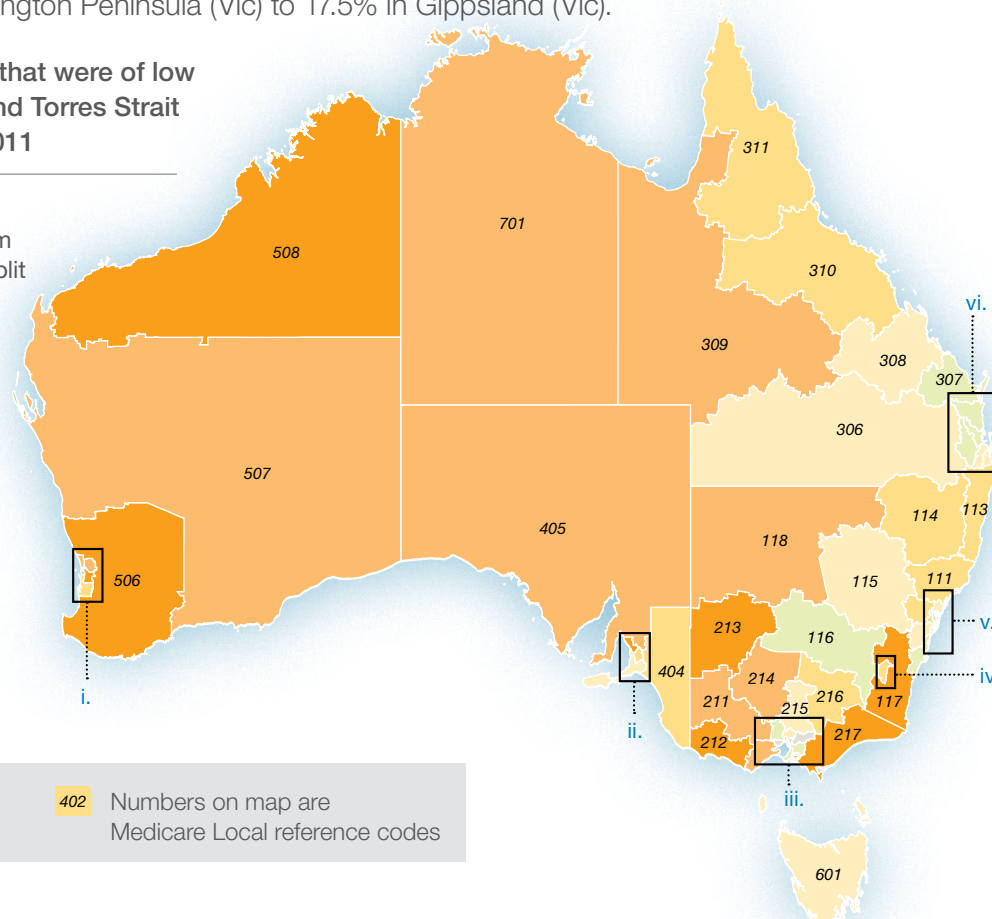
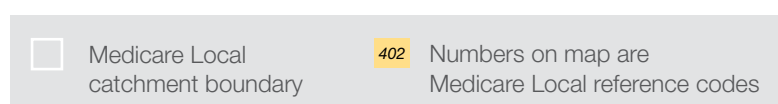
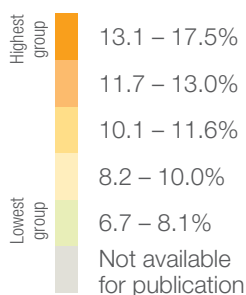
Low-birthweight babies, Aboriginal and Torres Strait Islander women

Years of data: 2007–2011

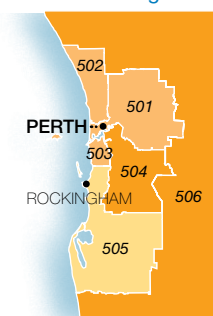
During 2007–2011, the percentage of liveborn babies of low birthweight born to Aboriginal and Torres Strait Islander women varied across Medicare Local catchments and across peer groups, ranging from 6.7% in Frankston-Mornington Peninsula (Vic) to 17.5% in Gippsland (Vic).

Percentage of live births that were of low birthweight, Aboriginal and Torres Strait Islander women, 2007–2011

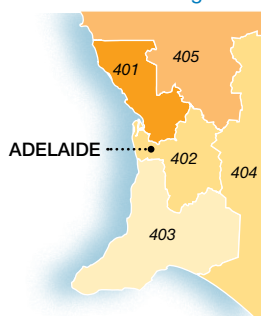
Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

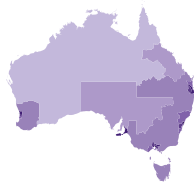
2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

Notes: Multiple births and stillbirths are excluded. Births are attributed to the Medicare Local catchment in which the mother usually resided, irrespective of where the birth occurred. Data exclude births to Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.

Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2007–2011.

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

Fair comparisons



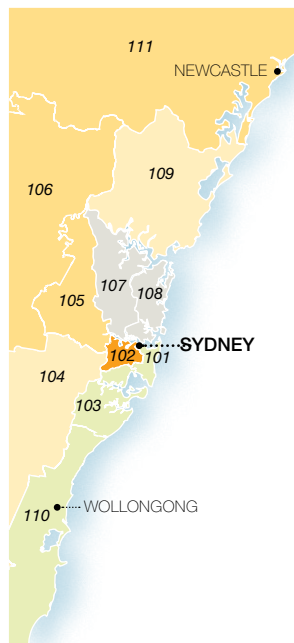
To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

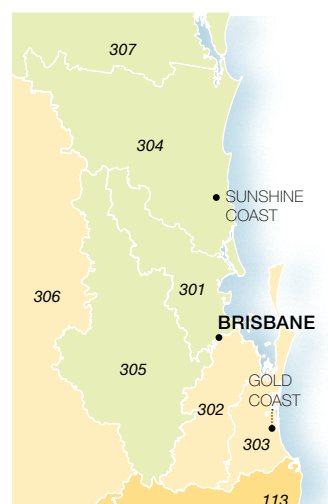
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



* In 2007–2011, there were eight liveborn babies of Aboriginal and Torres Strait Islander women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

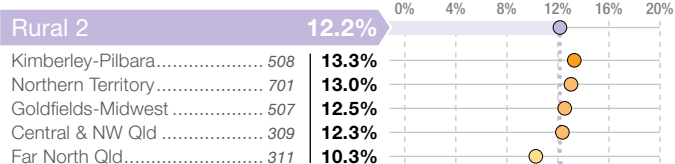
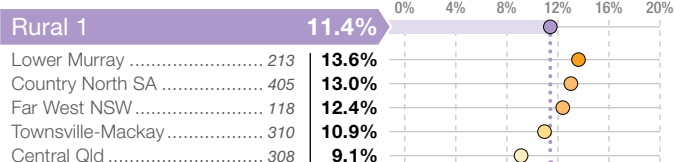
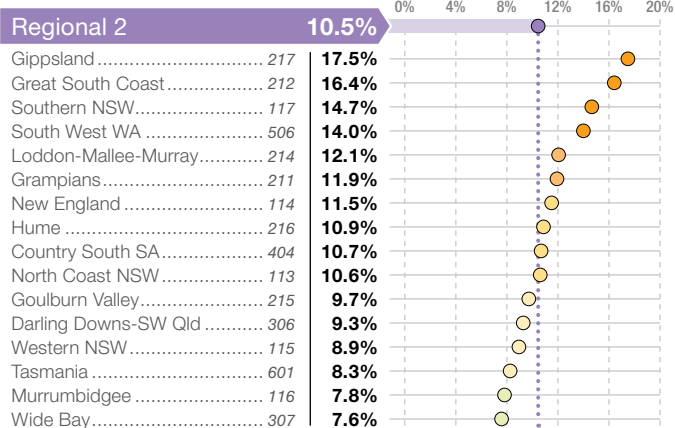
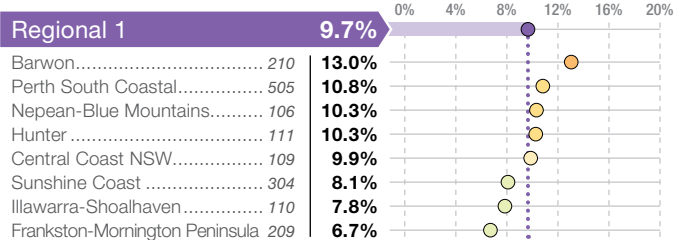
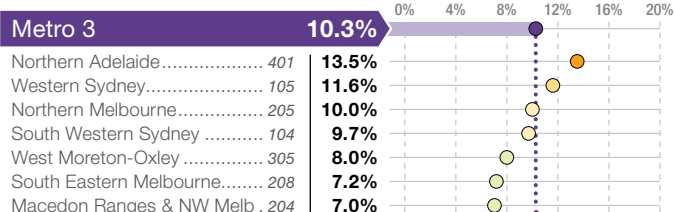
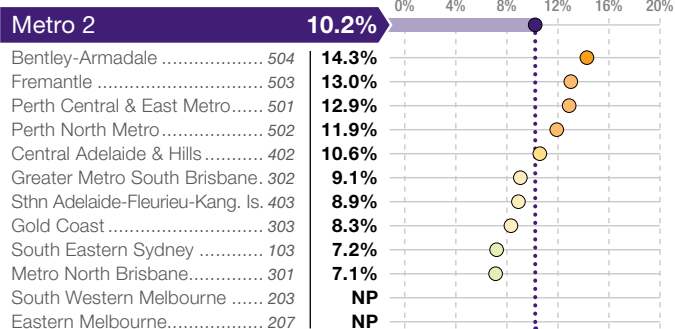
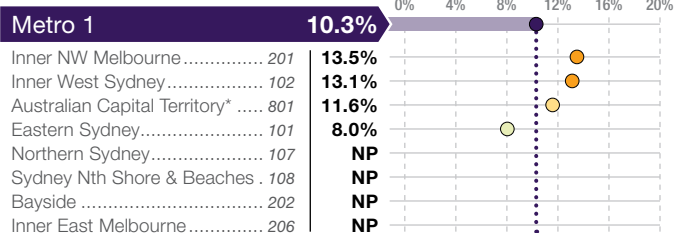
NP

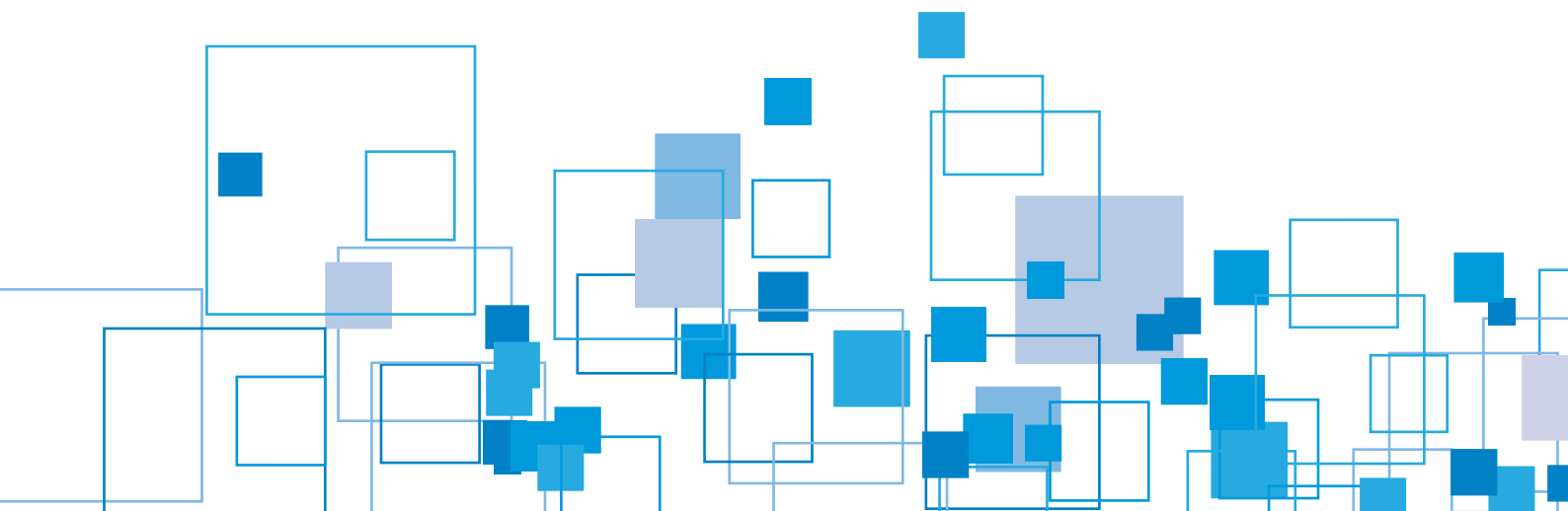
Not available for publication.

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

Peer groups

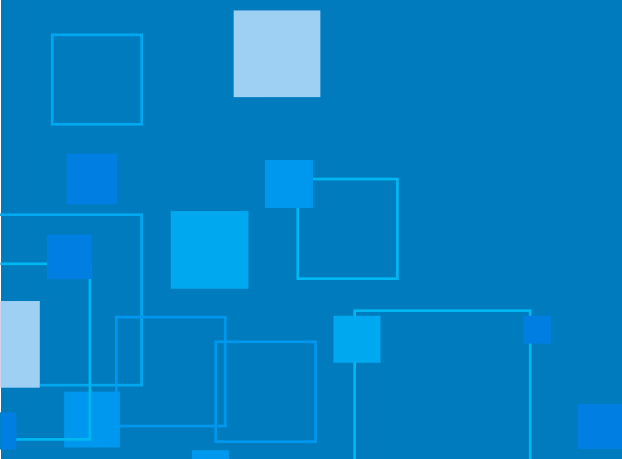
Map
Ref.





Prevention

Child and maternal health in 2009–2012



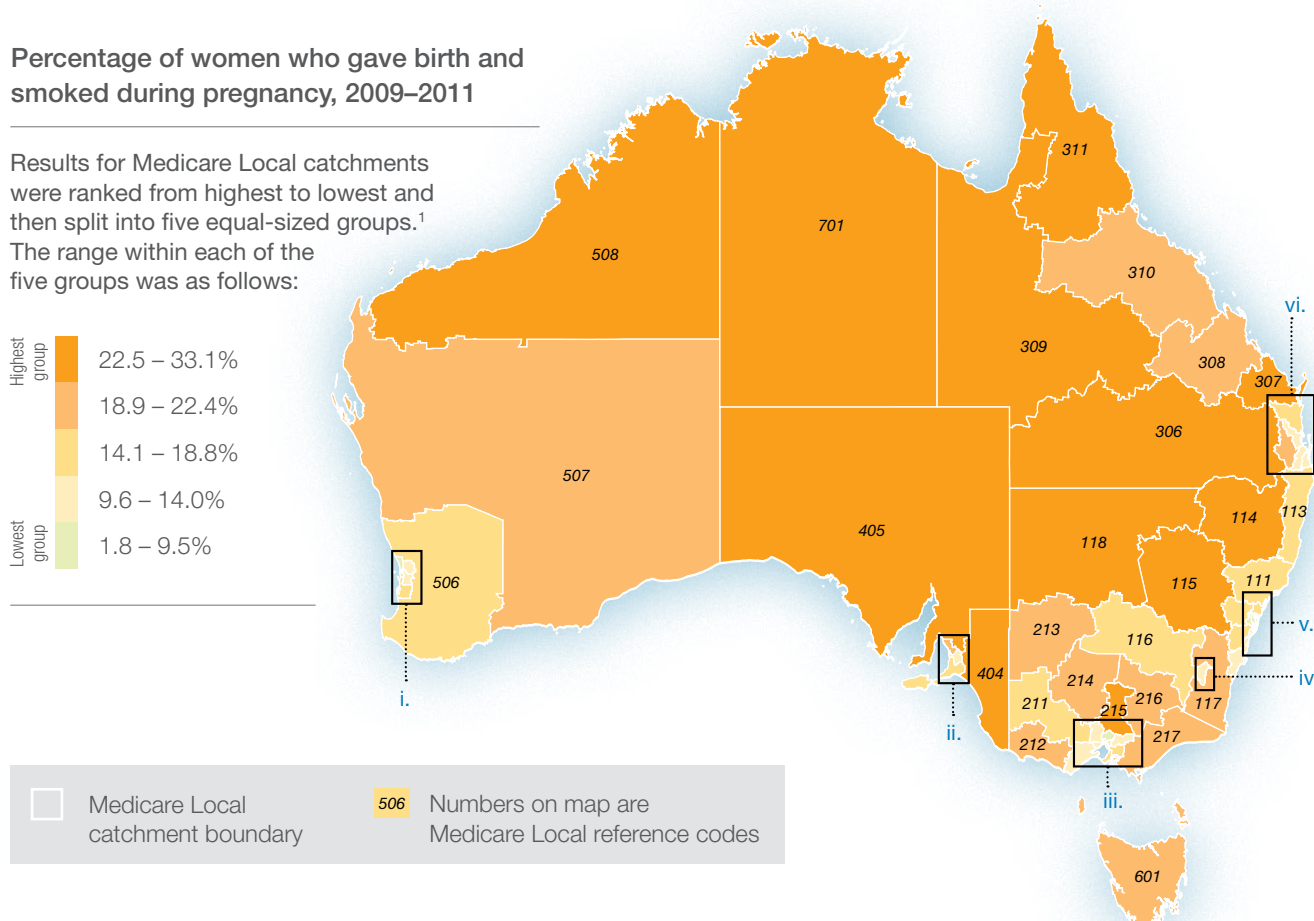
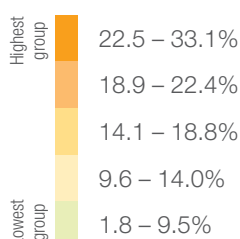
Smoking during pregnancy, all women

Years of data: 2009–2011

During 2009–2011, the percentage of women who gave birth and smoked during pregnancy varied across Medicare Local catchments and across peer groups, ranging from 1.8% in Sydney North Shore & Beaches to 33.1% in Far West NSW.

Percentage of women who gave birth and smoked during pregnancy, 2009–2011

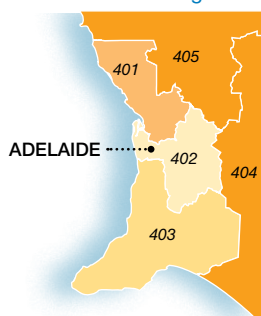
Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



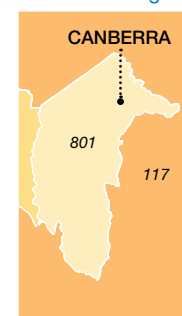
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

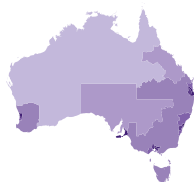
2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

Notes: Data exclude women whose smoking status was not stated, Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.

Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2009–2011.

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

Fair comparisons



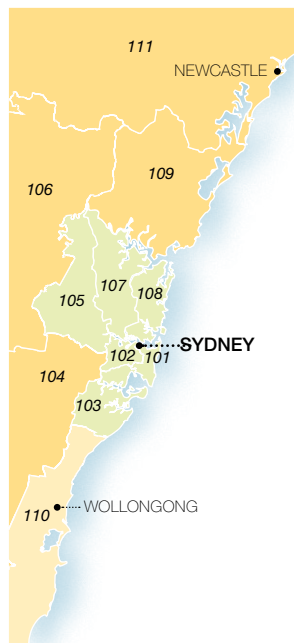
To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

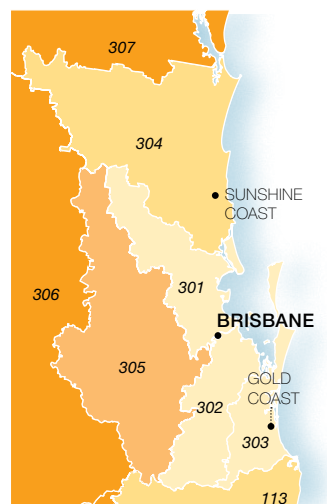
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas

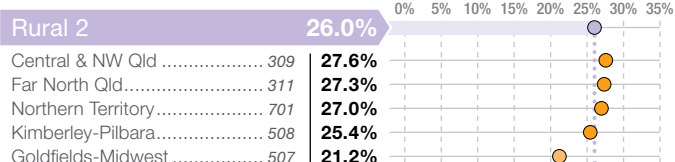
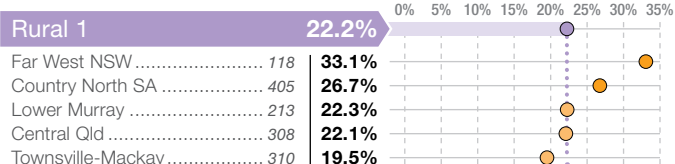
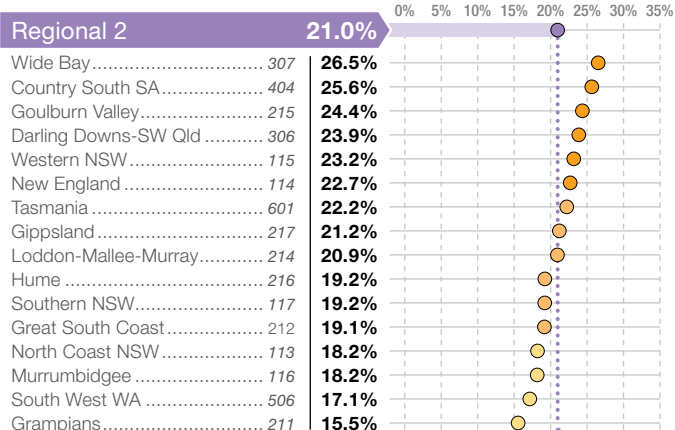
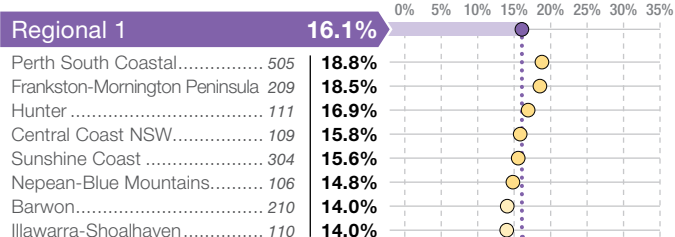
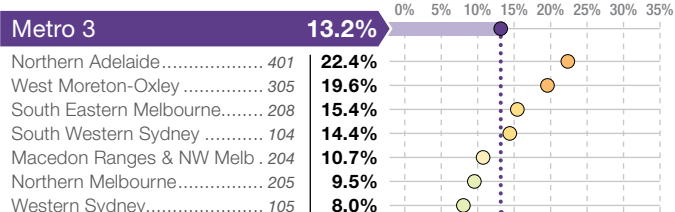
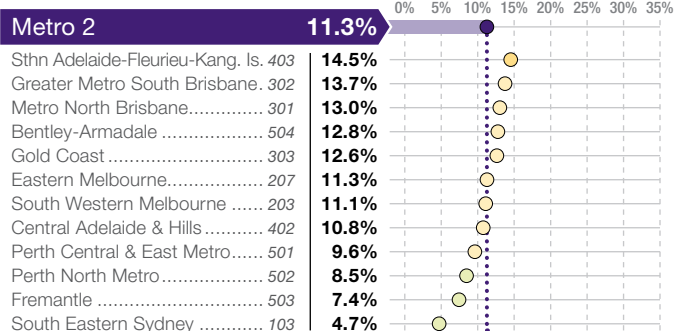
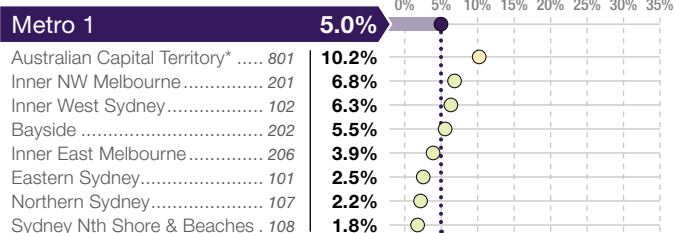


* In 2009–2011, there were 205 women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

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

Peer groups

Map
Ref.



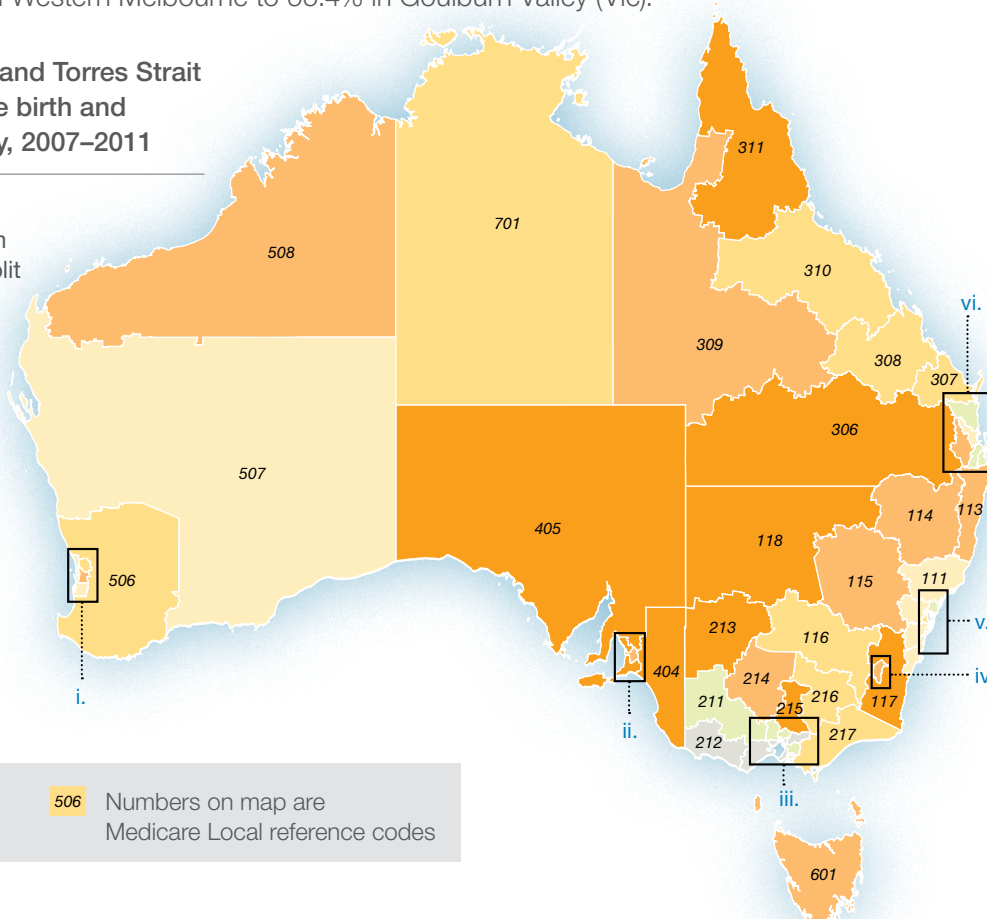
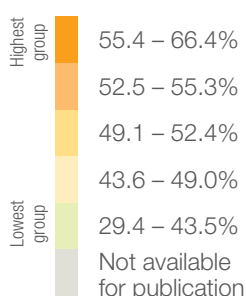
Smoking during pregnancy, Aboriginal and Torres Strait Islander women

Years of data: 2007–2011

During 2007–2011, the percentage of Aboriginal and Torres Strait Islander women who gave birth and smoked during pregnancy varied across Medicare Local catchments and across peer groups, ranging from 29.4% in Macedon Ranges & North Western Melbourne to 66.4% in Goulburn Valley (Vic).

Percentage of Aboriginal and Torres Strait Islander women who gave birth and smoked during pregnancy, 2007–2011

Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



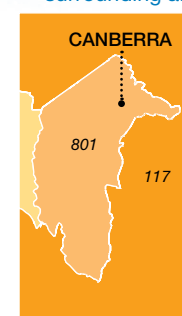
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

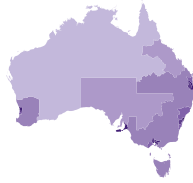
Notes: Data exclude women whose smoking status was not stated, Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.

Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2007–2011.

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

Fair comparisons



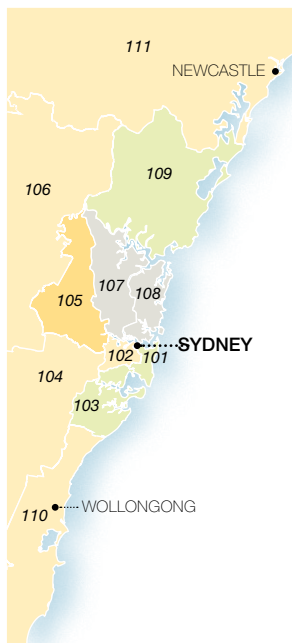
To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

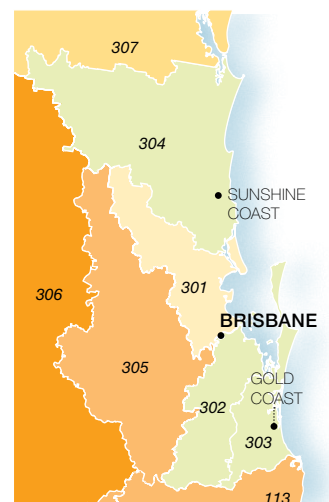
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



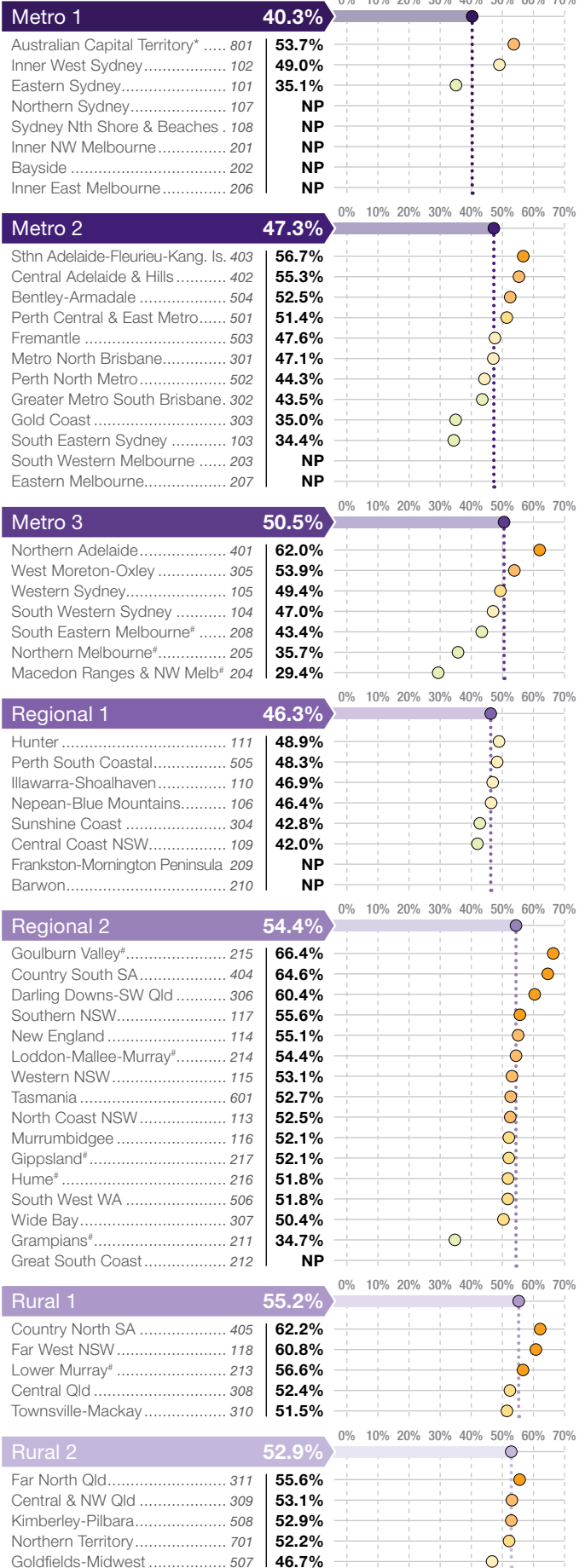
* In 2007–2011, there were eight Aboriginal and Torres Strait Islander women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

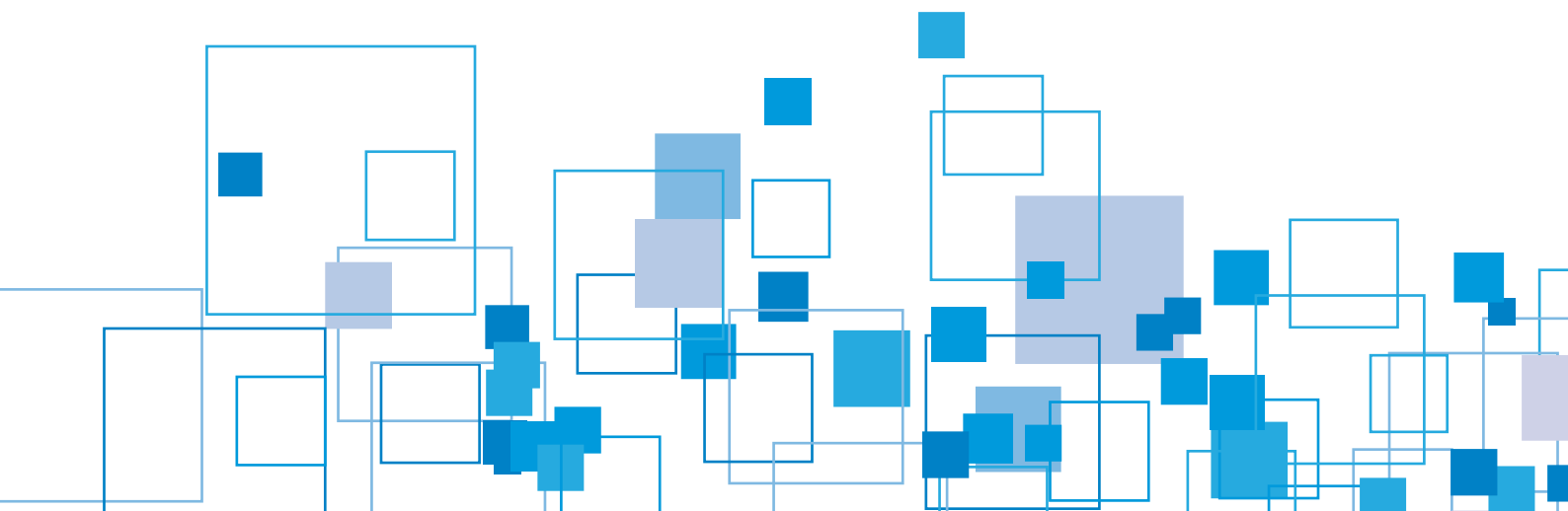
Interpret with caution. Data on smoking during pregnancy are not available for women who gave birth in Victoria in 2007 or 2008. Therefore, the data presented do not include Aboriginal and Torres Strait Islander women who usually resided in Victoria and gave birth in Victoria in 2007 or 2008.

NP Not available for publication.

Peer groups

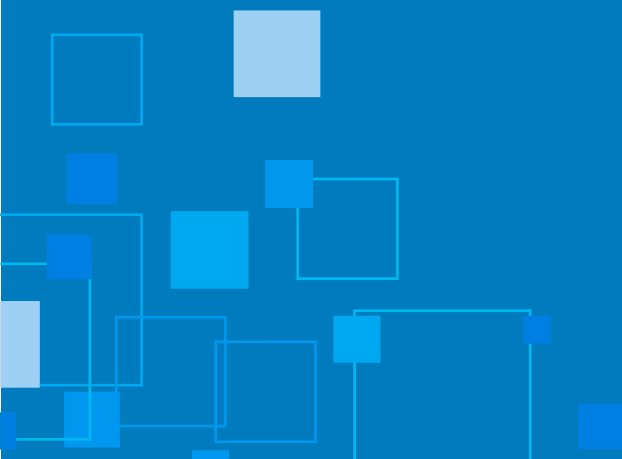
Map
Ref.





Use of health services

Child and maternal health in 2009–2012



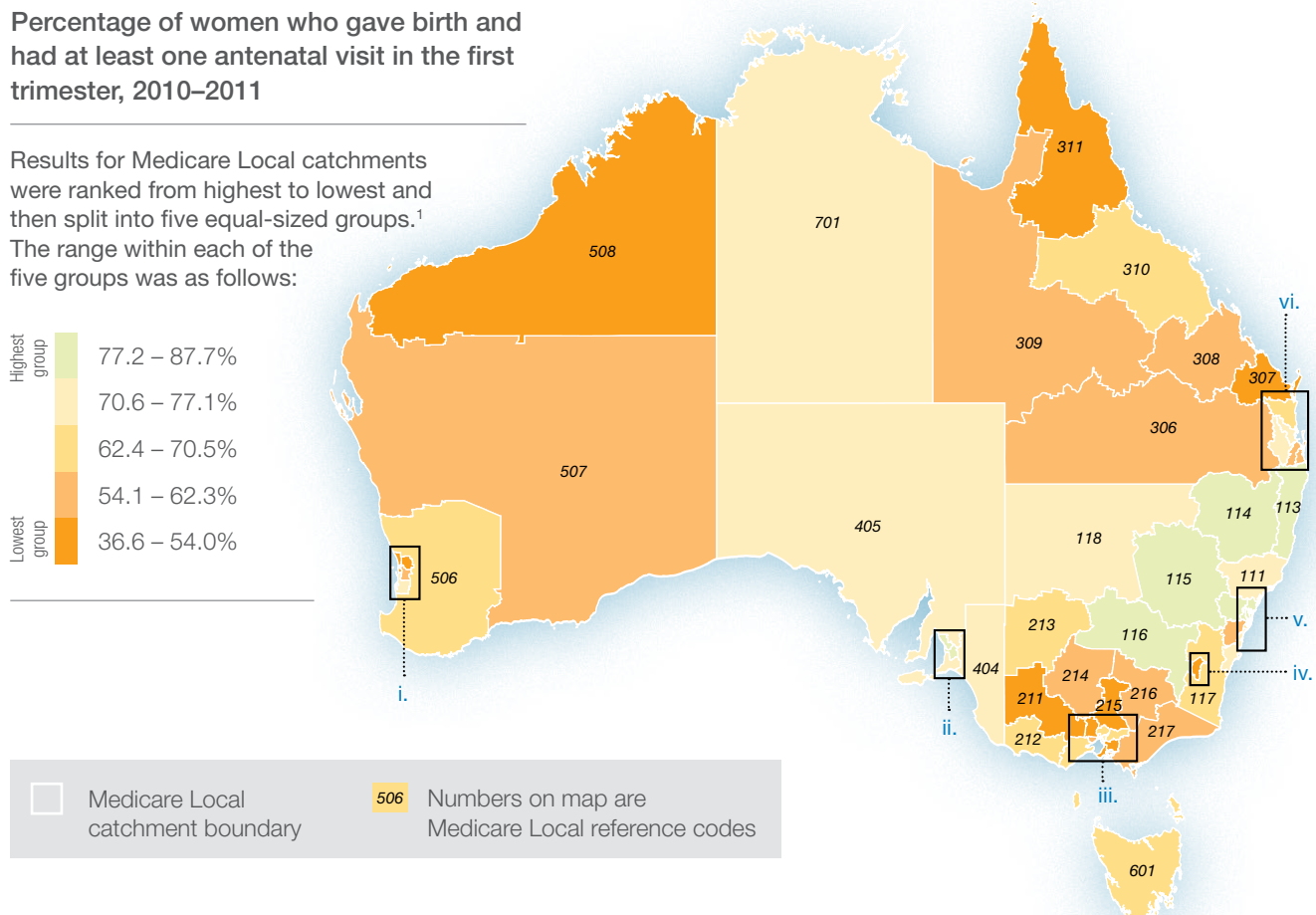
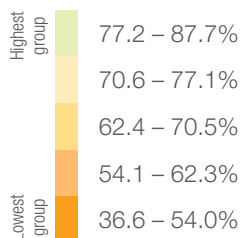
Antenatal visits in the first trimester, all women

Years of data: 2010–2011

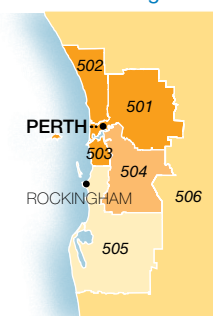
During 2010–2011, the percentage of women who gave birth and had at least one antenatal visit in the first trimester varied across Medicare Local catchments and across peer groups, ranging from 87.7% in Western Sydney to 36.6% in Grampians (Vic).

Percentage of women who gave birth and had at least one antenatal visit in the first trimester, 2010–2011

Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



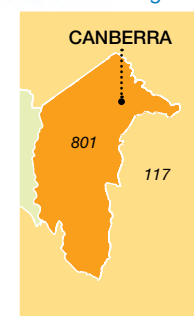
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas

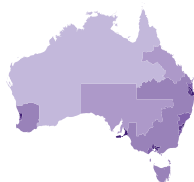


iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.
 2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.
Notes: Jurisdictional differences in definitions and methods used for data collection affect the comparability of these data across jurisdictions and lower levels of geography within jurisdictions. Data exclude women whose gestation at first antenatal visit was not stated, Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.
Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2010–2011.
 Data can be downloaded from www.myhealthycommunities.gov.au

Fair comparisons



To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

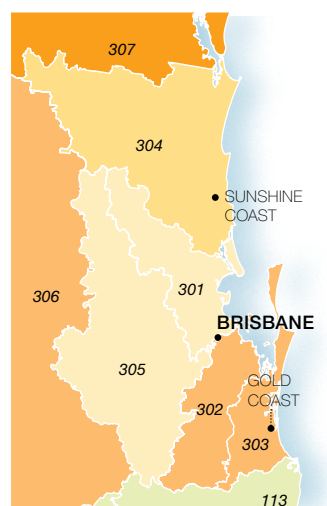
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



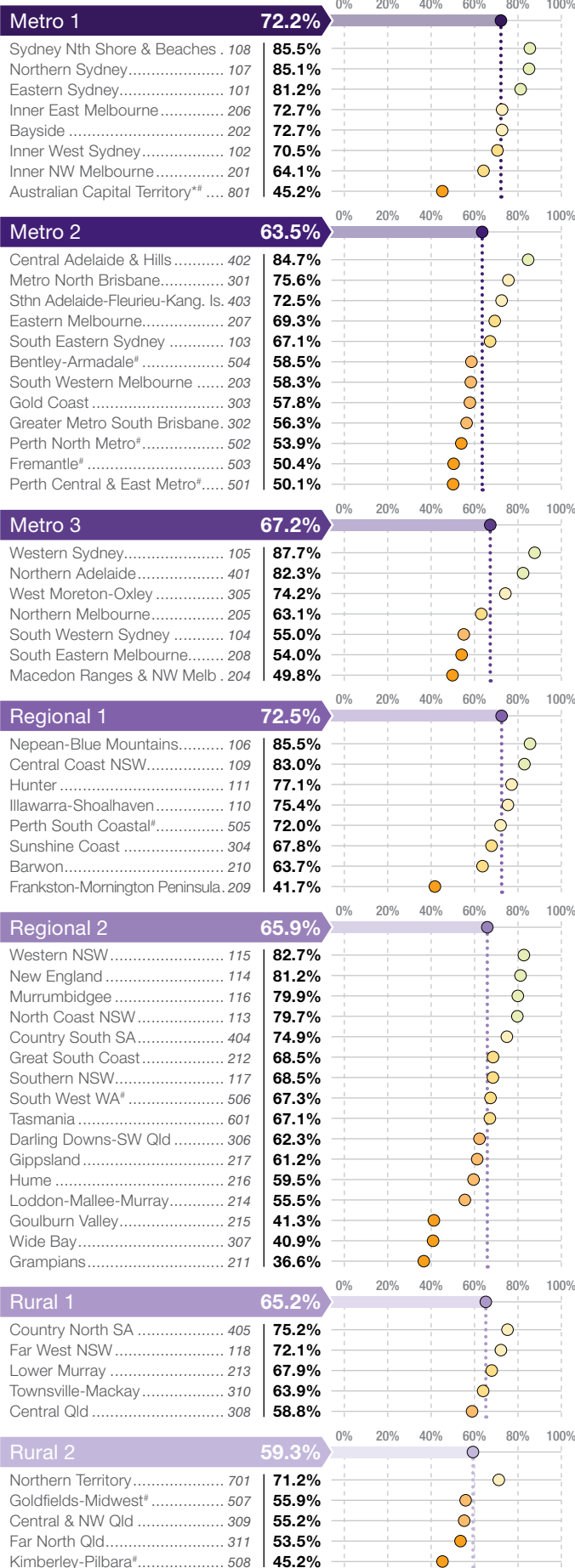
* In 2010–2011, there were 142 women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

Interpret with caution. In WA and ACT, first antenatal visits that occur outside of the hospital may not be included.

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

Peer groups

Map
Ref.



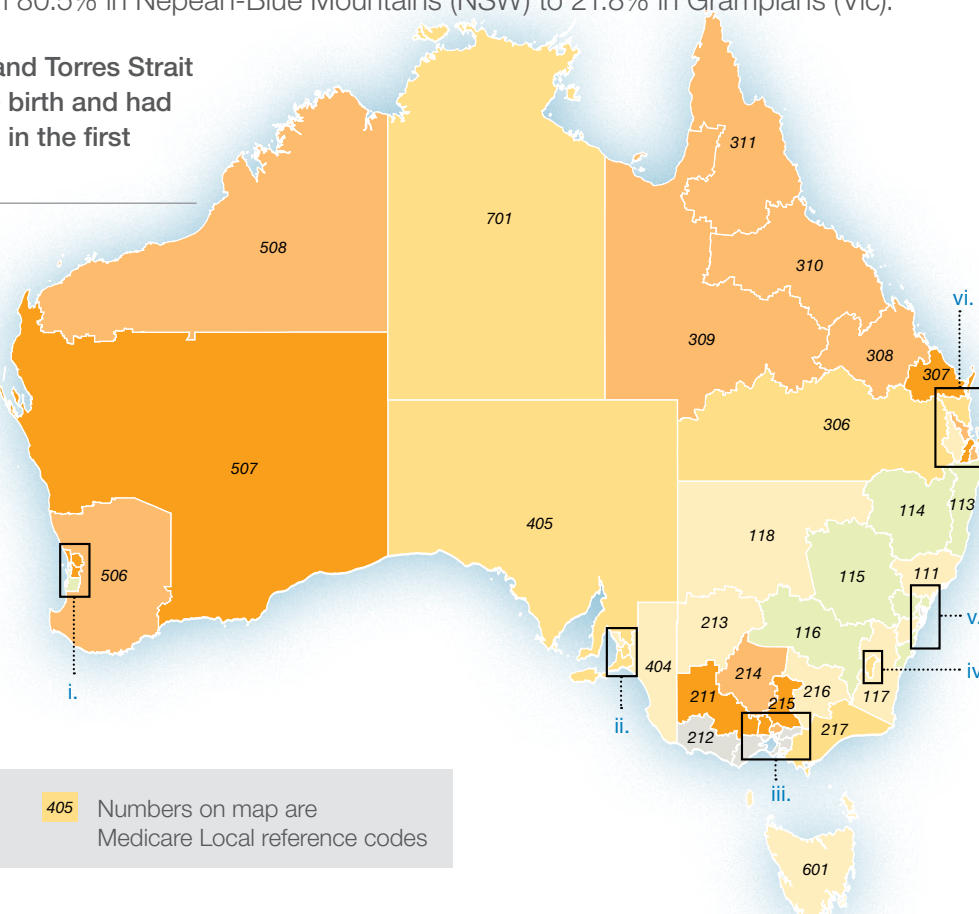
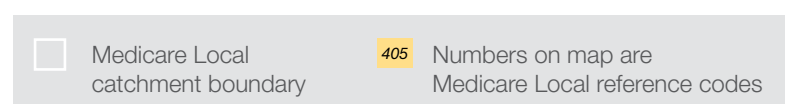
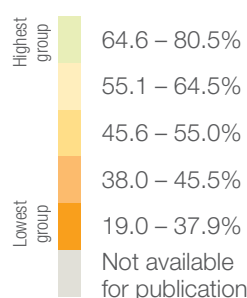
Antenatal visits in the first trimester, Aboriginal and Torres Strait Islander women

Years of data: 2010–2011

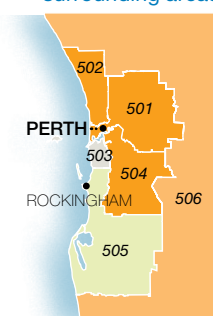
During 2010–2011, the percentage of Aboriginal and Torres Strait Islander women who gave birth and had at least one antenatal visit in the first trimester varied across Medicare Local catchments and across peer groups, ranging from 80.5% in Nepean-Blue Mountains (NSW) to 21.8% in Grampians (Vic).

Percentage of Aboriginal and Torres Strait Islander women who gave birth and had at least one antenatal visit in the first trimester, 2010–2011

Results for Medicare Local catchments were ranked from highest to lowest and then split into five equal-sized groups.¹ The range within each of the five groups was as follows:



i. Perth and surrounding areas



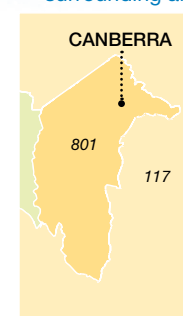
ii. Adelaide and surrounding areas



iii. Melbourne and surrounding areas



iv. Canberra and surrounding areas



1. Each Medicare Local has been assigned to a quintile group.

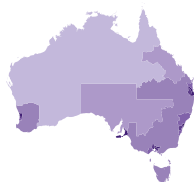
2. For more information on peer groups and the calculation of peer group results refer to this report's Technical Supplement.

Notes: Jurisdictional differences in definitions and methods used for data collection affect the comparability of these data across jurisdictions and lower levels of geography within jurisdictions. Data exclude women whose gestation at first antenatal visit was not stated, Australian non-residents, residents of external territories and women who could not be allocated to a Medicare Local catchment because their Statistical Local Area of usual residence was not stated or was not valid.

Source: Customised data report prepared for the National Health Performance Authority from the Australian Institute of Health and Welfare National Perinatal Data Collection 2010–2011.

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

Fair comparisons



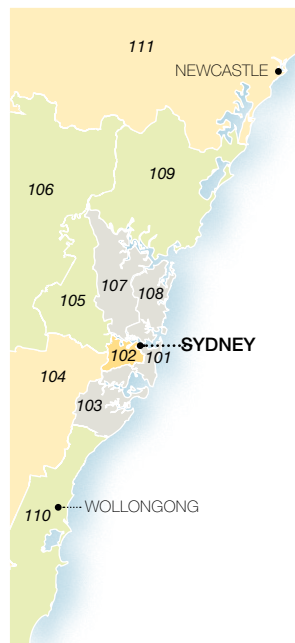
To compare Medicare Locals more fairly, each Medicare Local catchment has been grouped into one of seven peer groups², based on remoteness and socioeconomic status.

This allows:

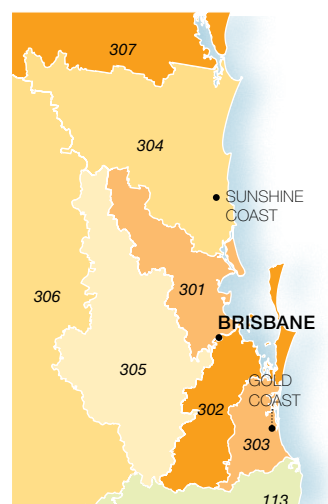
- Medicare Local catchments to be compared within the same metropolitan, regional or rural peer group, and
- Medicare Local catchments to be compared with the average for their peer group.

It also allows variation to be seen across peer groups that may be associated with remoteness and socioeconomic status.

v. Sydney and surrounding areas



vi. Brisbane and surrounding areas



* In 2010–2011, there were seven Aboriginal and Torres Strait Islander women who usually resided in the Australian Capital Territory and gave birth in New South Wales who were not counted in the result for the Australian Capital Territory Medicare Local catchment.

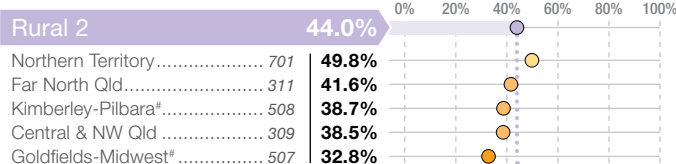
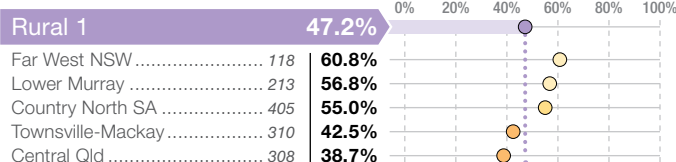
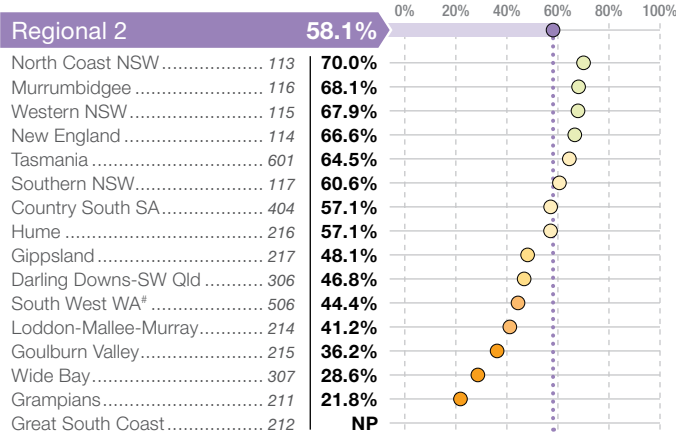
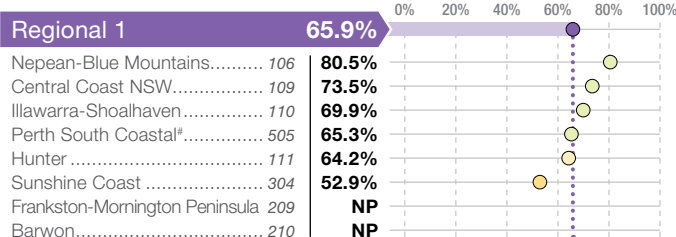
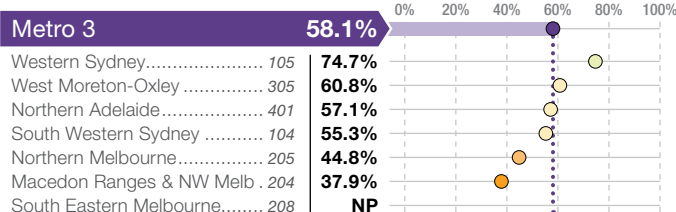
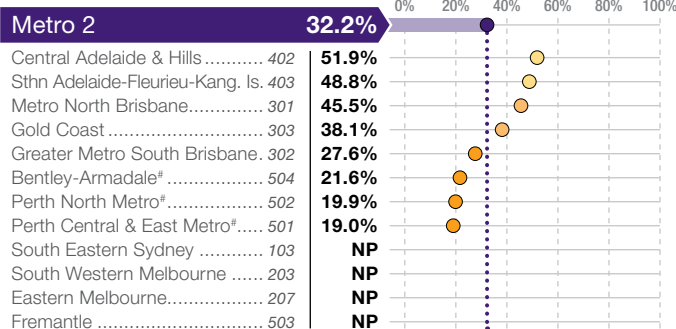
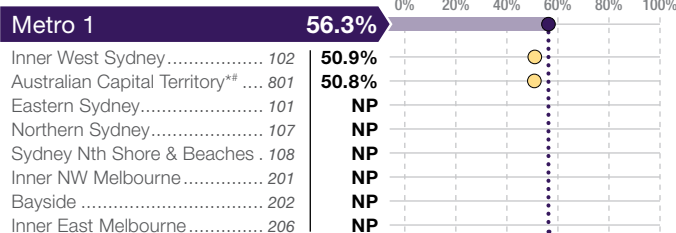
Interpret with caution. In WA and ACT, first antenatal visits that occur outside of the hospital may not be included.

NP Not available for publication.

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

Peer groups

Map
Ref.



Glossary

Antenatal	Pertaining to, or occurring in, the period covering conception up to the time of birth. Also known as prenatal.
Antenatal visit	An appointment with a health care professional for pregnancy-related care and advice after a pregnancy has been confirmed. An antenatal visit can be recorded by a variety of health professionals, such as a general practitioner, midwife or a doctor who specialises in pregnancy and birth (obstetrician). Visits at different stages of pregnancy can involve specific tests and health checks to assess and improve maternal and fetal wellbeing throughout pregnancy and prior to labour. Also referred to as antenatal care.
Birth	For the purposes of this report a birth is counted when a fetus of at least 20 weeks' gestation or weighing 400 grams or more is born. The fetus can be liveborn or stillborn.
Birthweight	The first weight of a baby measured after birth (usually rounded to the nearest 5 grams and recorded within 1 hour of birth).
Death	The definition in this report excludes all deaths prior to birth. For the purposes of the ABS Death Registration collection, a death refers to any death which occurs in or on the way to Australia and is registered with a state or territory Registry of Births, Deaths and Marriages.
Gestation	The process or period of carrying a baby in the womb from conception to delivery.
Infant	A child who is aged less than 1 year.
Live birth	A live birth is the birth of a child who, after delivery, breathes or shows any other evidence of life such as a heartbeat.
Low birthweight	Weight of a baby at birth that is less than 2,500 grams.
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 covered by a particular Medicare Local. See Medicare Local.

Mortality rate	For the purposes of this report, the number of deaths in a specified period per 1,000 live births in the same period.
Multiple birth	A pregnancy with multiple fetuses that remain in the womb until 20 weeks' gestation and are subsequently delivered.
NP – Not available for publication	This applies when data are not able to be published for reasons related to reliability, validity and/or confidentiality. Methods used to determine whether a statistic is published are included in each report's technical supplement or technical note.
Peer group	For some reports the Performance Authority groups Medicare Locals into peer groups based on factors such as remoteness, socioeconomic status and distance to hospitals. This allows Medicare Locals to be compared to other Medicare Locals with similar characteristics, and to the average for their peer group. See <i>Healthy Communities: Australians' experiences with primary health care in 2010–11, Technical Supplement</i> for more information.
Perinatal	Pertaining to, or occurring in, the period shortly before or after birth (usually up to 28 days after).
Quintile	Five equal parts of a distribution. For example, if 100 patients were ranked according to the number of times they visit a doctor, the top quintile will refer to the 20 patients with the most visits, and the bottom quintile to the 20 patients with the fewest visits.
Singleton birth	A pregnancy with a single fetus that remains in the womb until 20 weeks' gestation and is subsequently delivered.
Trimester	A period of about 3 months. Pregnancy is divided into three trimesters: first trimester (conception to 13 weeks), second trimester (13 to 26 weeks), third trimester (26 to 40 weeks).
Young child	For the purposes of this report a young child is aged between 1 year and less than 5 years.

References

1. Organisation for Economic Co-operation Development (OECD) Indicators [Internet]. OECDiLibrary. 2014 Jun [cited 2014 Jul 10]. Available from: http://www.oecd-ilibrary.org/social-issues-migration-health/infant-mortality_20758480-table9
2. World Health Organization (WHO). Chapter 1.6. Provision of effective antenatal care in standards for maternal and neonatal care [Internet]. Geneva. [cited 2014 Jun 26]. Available from: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/effective_antenatal_care.pdf
3. Australian Institute of Health and Welfare. Headline Indicators for children's health, development and wellbeing 2011 [Internet]. Cat. no. PHE 144. Canberra: AIHW. 2011 [cited 2014 Jun 26]. Available from: <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737419586>
4. Australian Bureau of Statistics. Deaths, Australia, 2012 [Internet]. 2013 Nov 11 [cited 2014 May 26]; ABS cat. no. 3302.0. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3302.0Explanatory%20Notes12012?OpenDocument>
5. Li Z, Zeki R, Hilder L & Sullivan EA. Australia's mothers and babies 2011. National Perinatal Epidemiology and Statistics Unit. Perinatal statistics series no. 28. Cat. no. PER 59. Canberra: AIHW; 2013.
6. Australian Health Ministers' Advisory Council 2012, Clinical Practice Guidelines: Antenatal Care – Module 1 [Internet]. Canberra: Australian Government Department of Health and Ageing. Updated 2014 Jan [cited 2014 Jun 26]. Available from: <http://www.health.gov.au/antenatal>
7. Australian Institute of Health and Welfare. Timing impact assessment of COAG Closing the Gap targets: Child mortality. Cat. no. IHW 124. Canberra: AIHW; 2014.
8. Australian Government. Closing the Gap Prime Minister's Report 2014 [Internet]. 2014 [cited 2014 Jul 9]. Available from: http://www.dpmc.gov.au/publications/docs/closing_the_gap_2014.pdf
9. Australian Health Ministers' Advisory Council. Aboriginal and Torres Strait Islander Health Performance Framework 2012 Report. Canberra: AHMAC; 2012.

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- Dr Jason Agostino
 - Data Clinician, National Aboriginal Community Controlled Health Organisation (NACCHO)
- Ms Sue Cornes
 - Executive Director, Health Statistics Branch, Health Commissioning Queensland, Department of Health, Queensland Government
- Ms Jan Donovan
 - Consumer representative nominated to bring a consumer perspective by the Consumers Health Forum of Australia
- Associate Professor Lynn Kemp
 - Director, Centre for Health Equity Training Research & Evaluation (CHETRE), part of the University of New South Wales (UNSW) Centre for Primary Health Care & Equity
- Professor Elizabeth Sullivan
 - Associate Dean (Research), Professor Public Health, Faculty of Health, University of Technology Sydney.

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This report relies on data provided by the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW). 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 the ABS and AIHW.

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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 a set of 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 these 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 Local catchments 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.

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