Australian Government
Australian Institute of Health and Welfare

National Key Performance Indicators

for Aboriginal and Torres Strait Islander primary health care

Results from December 2014

National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care series no.3

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We thank the Aboriginal and Torres Strait Islander primary health care organisations that provided data for, or feedback on, this report and the OCHREStreams Advisory Group for their constructive suggestions.

Abbreviations

AATSIHS	Australian Aboriginal and Torres Strait Islander Health Survey
ABS	Australian Bureau of Statistics
ACIR	Australian Childhood Immunisation Register
ACR	albumin/creatinine ratio
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
ASGS	Australian Statistical Geography Standard
BMI	body mass index
BP	blood pressure
CKD	chronic kidney disease
COPD	chronic obstructive pulmonary disease
CQI	continuous quality improvement
CVD	cardiovascular disease
eGFR	estimated glomerular filtration rate
GFR	glomerular filtration rate
GP	general practitioner
GPMP	General Practitioner Management Plan
HbA1c	glycosylated haemoglobin
HPV	human papillomavirus
IF	Improvement Foundation
KPI	Key Performance Indicator
MBS	Medicare Benefits Schedule
METeOR	Metadata Online Registry
min	minute
mL	millilitre
mmHg	millimetres of mercury
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
nKPIs	National Key Performance Indicators
NPDC	National Perinatal Data Collection
NSW	New South Wales

NT	Northern Territory
NTAHKPI	Northern Territory Aboriginal Health Key Performance Indicators
NTG	Northern Territory Government
PCIS	Primary Care Information System
PIRS	Patient Information Record System
Qld	Queensland
SA	South Australia
STIs	sexually transmitted infections
T2D	type 2 diabetes
Tas	Tasmania
TCA	Team Care Arrangement
Vic	Victoria
WA	Western Australia

Symbols

—	nil or rounded to zero
. .	not applicable
↑	increased (favourable trend)
↑	increased (unfavourable trend)
↓	decreased (favourable trend)
↓	decreased (unfavourable trend)
<	less than
≤	less than or equal to
≥	greater than or equal to
†	nKPIs are the only source of national data for Indigenous Australians for these indicators
0	zero

Summary

This third national report on the Indigenous primary health care **national Key Performance Indicators** (nKPIs) data collection presents information on indicators collected over 6 reporting periods between June 2012 and December 2014. Data for this collection are provided to the AIHW 6-monthly by primary health care organisations who receive funding from the Australian Government Department of Health and state and territory health departments to provide services to Aboriginal and Torres Strait Islander people. The number of organisations reporting increased substantially over the 6 reporting periods, from 90 in June 2012 to 233 in December 2014.

The purpose of the nKPIs is to support policy and planning at the national and state/territory level by monitoring progress and highlighting areas for improvement. The nKPIs can also be used to improve the delivery of primary health care services by supporting continuous quality improvement (CQI) activity among service providers.

Information is presented against 21 indicators (and 27 key indicator measures—19 process-of-care measures and 8 health outcomes measures) that focus on maternal and child health, preventative health and chronic disease management.

Processes of care are largely under the control of organisations, so process-of-care measures are used to assess primary health care practices. However, the ability of some organisations to undertake some process-of-care functions can be affected by external factors such as staffing levels, funding constraints or access to shared information.

Many of the wide range of factors influencing health outcomes, on the other hand, are beyond the immediate control of primary health care organisations.

Improvements were seen in 17 of the 19 process-of-care measures (Table S1). Organisations in Western Australia in particular showed improvements against most process-of-care indicators, as did those in *Very remote* areas.

Improvements were also seen in 3 of the 8 health outcomes measures (note that trend data were available for only 5 of the 8 health outcome measures):

- **smoking status results**—the proportion of current smokers declined from 54% in June 2013 to 52% in December 2014
- **health of clients with type 2 diabetes**—those who had an HbA1c (glycosylated haemoglobin) result of ≤7% in the previous 6 months rose from 32% in June 2012 to 35% in December 2014. (An HbA1c result of ≤7% is the optimum target encouraged by Diabetes Australia to ensure good glycaemic control and reduce the incidence of diabetes-related illness.)
- **blood pressure result for clients with type 2 diabetes**—the proportion who had a blood pressure result of ≤130/80 mmHg increased from 40% in June 2012 to 44% in December 2014.

A group of organisations that were followed up through 4 reporting periods show significant improvements for many process-of-care indicators. For example, on average, every 6 months 'Smoking status recorded' increased by 5.8 percentage points, 'MBS health assessments—adults aged 25 and over' increased by 2.7 percentage points and 'General Practitioner Management Plan—clients with type 2 diabetes' increased by 2.5 percentage points.

Table S1: Summary results of nKPIs, December 2014

Indicator group	Change in national proportion over time[a]
Maternal and child health indicators	
First antenatal visit (at <13 weeks)[b]	↑
Birthweight recorded[c]	↑
Birthweight result (low) [b,d]	↑
MBS health assessment—children aged 0–4[c]	↑
Child immunisation[b]	
12 to <24 months	↑
24 to <36 months	↓
60 to <72 months	↑
Preventative health indicators	
Smoking status recorded[c]	↑
Alcohol consumption recorded[c]	↑
MBS health assessment—adults aged 25 and over[c]	↑
Cervical screening[b]	
2 years	↓
Clients aged 50 and over who were immunised against influenza[b]	↑
Smoking status result[b]	
Current smoker[e]	↓
BMI classified as overweight and obese[c,d]	↑
Chronic disease management indicators	
General Practitioner Management Plan—clients with type 2 diabetes[c]	↑
Team Care Arrangement—clients with type 2 diabetes[c]	↑
Blood pressure recorded—clients with type 2 diabetes[c]	↑
HbA1c result recorded (6 months)—clients with type 2 diabetes[c]	↑
Kidney function test recorded for clients with[b]	
Type 2 diabetes	↑
CVD	↑
Immunised against influenza, clients with[b]	
Type 2 diabetes	↑
COPD	↑
Blood pressure result is ≤130/80mmHg—clients with type 2 diabetes[c]	↑
HbA1c result (6 months, ≤7%)—clients with type 2 diabetes[c]	↑

(a) Number of organisations reporting in each period: 90 in June 2012, 173 in December 2012, 206 in June 2013, 207 in December 2013, 210 in June 2014 and 233 in December 2014.

(b) Change between the reporting periods June 2013 and December 2014.

(c) Change between the reporting periods June 2012 and December 2014.

(d) For this measure, an increase indicates an unfavourable trend.

(e) For this measure, a decrease indicates a favourable trend.

Note: Indicators collected for the first time in December 2014 are not included ('Smoking status of women who gave birth in the previous year'; 'Kidney function test results').

See 'Abbreviations and symbols' section for an explanation of abbreviations and symbols used.

Implications

The Department of Health noted the following implications of the results outlined in this report

Trend data are now available on most of the nKPIs included in this report, with at least 4–6 data points available for the majority of indicators. The data show that there has been continued improvement by organisations across the majority of process-of-care indicators. These improvements should result in better health outcomes for Aboriginal and Torres Strait Islander people.

Organisations with better results are spread across diverse geographic and service delivery environments. Small organisations can and often do perform well, as do a number of larger organisations. The wide variation within and between indicators suggests further improvements are possible, therefore ongoing action and consistent efforts to identify opportunities for improvement of current results will support the development of strategies to improve the quality of services.

The report highlights the need to continue to focus on a Continuous Quality Improvement (CQI) approach to support organisations in improving primary health care delivery for Aboriginal and Torres Strait Islander people.

Chapter 1

Introduction

This is the third report in a series about the Indigenous primary health care national Key Performance Indicators (nKPIs) data collection, and includes data for the period ending 31 December 2014. The data were collected from 233 primary health care organisations that receive funding from the Australian Government Department of Health to provide primary care services mainly to Aboriginal and Torres Strait Islander people. These include Aboriginal Community Controlled Health Organisations, state and territory-managed organisations, Medicare Locals and other non-government organisations.

This report is designed to highlight the major areas of achievement against the nKPIs by primary health care providers, as well as the areas where improvements are needed by organisations in the delivery of services to their clients. These findings need to be understood in the context of the constraints within which organisations operate (for example, limited resources) and the possibility that some results may relate to data collection issues rather than to service delivery issues.

The nKPI data submitted to the Australian Institute of Health and Welfare (AIHW) are reported back to the health organisations to support their continuous quality improvement (CQI) processes that help improve the delivery of primary health care and health outcomes for Aboriginal and Torres Strait Islander people. These data are also intended to support progress towards the Council of Australian Government's Closing the Gap targets, in particular in the areas of child health and chronic diseases.

There is sound evidence to support the contribution that performance indicator systems can make to the delivery of effective primary health care when they are integrated with sound CQI strategies (Bailie et al. 2007). CQI is one component of a broader health system response that is required to improve primary health care delivery. The nKPIs contribute to CQI processes in organisations by providing standardised data and indicator-based reporting for continuous monitoring and consequent improvement of organisational performance.

On their own, the nKPI data will not lead to positive change, improvements in service delivery or improved outcomes. However, nKPIs and other data sets can make an important contribution when they are used by health service providers at the local level as part of broader CQI processes to identify opportunities and to measure progress towards achieving change. For some organisations, getting the most value out of the nKPIs will require substantial change to their internal management and clinical systems, and processes in place to collect high-quality data. The process of taking the time to review, make sense of the data and adopt CQI practices, requires organisational commitment, capability and capacity.

The nKPI collection

Altogether 24 nKPIs have received in-principle approval from the Australian Health Ministers' Advisory Council (AHMAC) for reporting. These focus on maternal and child health, preventative health and chronic disease risk factors (see Appendix 1 for details of the development of the nKPIs). These are some of the key focus areas in achieving the objectives of closing the gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous Australians, and of halving the gap in child mortality by 2018.

Presently, data are collected on 21 of these 24 indicators and these are included in this report. One indicator will be added to the data collection in December 2015 ('Patients who had the necessary risk factors assessed to enable cardiovascular assessment'). The remaining 2 indicators will be added to the data collection in June 2016 ('Risk of harm from alcohol consumption' and 'Absolute cardiovascular risk result').

The nKPIs build on a body of work in Australia that integrates primary health care performance data with quality improvement methods. This work includes the Australian Primary Care Collaboratives program, the Audit and Best Practice for Chronic Disease program, the Northern Territory Aboriginal Health Key Performance Indicators project, the Queensland Aboriginal and Islander Health Council Health Information System, and the Healthy for Life program.

nKPI data quality

As with any data collection, there are some limitations in the nKPI data that should be taken into account when interpreting the information provided in this report. These limitations include the fact that data are captured as part of service delivery processes and there may be double-counting of clients who attend more than one service regularly. Additionally, some internal inconsistencies were noted in data for some organisations. These data were excluded from the national analysis.

In view of the wide variation in the results found in the nKPI report for the June 2012 to June 2013 period (AIHW 2014c), and in response to stakeholder perceptions about aspects of the data collection process, the Department of Health engaged independent analysts in March 2014 to review the quality of the nKPI dataset, find any sources of potential error in the data collection process and provide advice on strategies to eliminate any errors. The review was conducted in consultation with key stakeholders and these stakeholders have since been informed of the findings of this project.

Overall the review (DoH 2015c) found that the data set is of high quality and fidelity, and confirmed the value of publishing and disseminating the findings captured in the report. While the review named some areas for possible improvement in future nKPI data collections, it did not find any evidence of system-wide technical problems affecting nKPI data quality.

Nevertheless, the following data issues relevant to most nKPIs should be considered when interpreting the results in this report:

- The number of organisations that provided valid data is different for different indicators. For example, organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted, or organisations with inconsistent data, are excluded from the relevant indicator analysis.
- The number of organisations reporting nKPI data has increased from 90 in June 2012 to 233 in December 2014, which can sometimes affect the indicator results in unexpected ways. For example, the proportion of babies whose birthweight was recorded decreased in South Australia in December 2012 compared with June 2012. This decrease was primarily because a number of new organisations were included in reporting, which, on average, had a lower proportion of babies whose birthweight was recorded.
- As part of the roll-out of the nKPI collection to state- and territory-funded organisations, an additional 22 Northern Territory Government primary health care organisations reported for the first time in December 2014, significantly increasing the number of Northern Territory organisations that reported. As a result, changes in the Northern Territory average, and to a lesser extent changes in the *Very remote* and national averages, should be interpreted with caution.
- There may be double-counting of the same client at multiple organisations due to a high level of mobility among Indigenous people. The extent of this nationally is unknown and difficult to quantify.
- Organisations used various Patient Information Recall Systems (PIRS). Depending on which system is used, recording of information related to particular indicators may be better on some systems than others, and vice versa. Additionally, some of these systems were less compatible than others with components of the electronic data transfer system used by organisations to report data.

In addition to these more universal considerations, many of the indicators discussed in this report should also be interpreted in light of contextual information applying to a particular indicator or group of indicators only—this kind of information is noted at the beginning of each chapter, with expanded explanations available in Appendix 2.

Clients

The population of interest in the nKPIs is the Indigenous regular client population of those primary health care organisations that are required to report against the nKPIs. A regular client is defined as a person who has an active medical record—that is, a client who attended the primary health care organisation at least 3 times in the last 2 years.

While this definition is in line with the Royal Australian College of General Practitioners' definition of a patient with an active medical record (RACGP 2010), it has limitations, including for clients who attend multiple health

organisations. Organisations in metropolitan and regional centres are likely to have larger transient client populations due to temporary mobility between remote communities and urban centres (Kainz et al. 2012). Although visiting Indigenous people may meet the 'regular client' criteria in a particular organisation, they may not receive the majority of their healthcare from that organisation.

Two indicators covered in this report do not involve regular clients (as defined): babies whose birthweight was recorded, and birthweight result. This is because many babies will not have visited a health service 3 times in the last 2 years.

Regular client definition for Northern Territory Government organisations

All organisations reporting data are required to use the nKPI definition of a regular client, that is, clients who have attended the primary health care organisation at least 3 times in the last 2 years. However, the definition used by Northern Territory Government (NTG) organisations has an additional dimension to the nKPI definition, namely, regular clients are clients who have attended the organisation *as their usual health centre* and have attended at least 3 times in the last 2 years. This is intended to prevent possible double-counting of clients who attend multiple organisations. As the vast majority of NTG services use the Primary Care Information System (PCIS), which is designed to only contain 1 health record per person, NTG organisations are able to track clients who attend organisations other than their 'usual health centre'. For nKPI reporting purposes, however, NTG organisations only count services provided to a client at their usual health centre, regardless of whether they had visited another organisation 3 times in 2 years.

This definition means that some clients who attended an NTG health organisation 3 times in 2 years are not counted as regular clients. This reduces the comparability of results between NTG organisations and other organisations.

Organisations contributing nKPI data

The nKPI data have been collected for 6 reporting periods, after an initial trial involving about 80 organisations with previous data collection experience. The number of participating organisations increased from 90 in June 2012 to 173 in December 2012. In June 2013, the NTG organisations that received funding from the Australian Government Department of Health reported for the first time, increasing the total number of organisations reporting to 206. The total was 207 in December 2013 and 210 in June 2014. In December 2014, the remaining NTG organisations began reporting, which brought the total number of organisations to 233 (Appendix Table A2.2 shows organisations reporting in each period by indicator). This means the national averages reported are based on differing numbers of organisations, which could limit comparability for some purposes.

The substantial increase in the number of organisations reporting makes it difficult to interpret changes in results over time as actual improvements or decreases. For example, the changes could be due to differences in the results of individual organisations between periods. Alternatively, they could reflect that new organisations are reporting and these new organisations have different results. For instance, when a lot of organisations with good results report data for the first time, as in June 2013 and December 2014 with the inclusion of the NTG organisations, this would lift the national average even if the performance of other organisations did not change. To better understand how the performance of individual organisations changed over time, Chapter 5 analyses a subset of organisations that reported valid data for an indicator in every period since June 2013.

Main characteristics

Organisations reporting include Aboriginal Community Controlled Health Organisations, including 'auspiced' organisations (58%), state and territory government-managed organisations (36%), Medicare Locals (6%) and other non-government organisations (1%) (Table 1.1). (Note that an auspiced organisation is an independent or semi-independent body funded by an Australian Government-funded organisation to provide health services.)

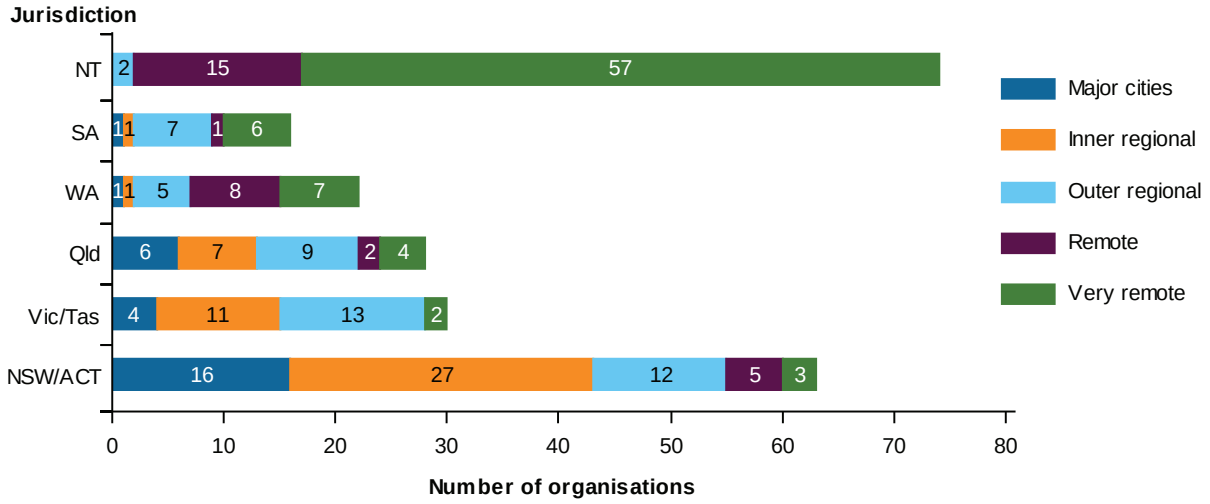
Organisations may report nKPI data directly to OCHREStreams, a web portal designed to reduce reporting burden through which organisations submit data to the AIHW. Other organisations may report through an intermediary—for example, where organisations are funded to deliver services by Medicare Locals, data can be reported through Medicare Locals (the fund holder organisation).

Table 1.1: Number of organisations, by type of governance arrangement and jurisdiction, December 2014

Governance arrangement	NSW/ACT	Vic/Tas	Qld	WA	SA	NT	Total	%
Aboriginal and Torres Strait Islander Community Controlled Health Organisation	40	26	21	17	10	20	134	57.5
State and territory government	13	2	3	5	6	54	83	35.6
Medicare Locals	10	1	2	0	0	0	13	5.6
Other non-government	0	1	2	0	0	0	3	1.3
Total	**63**	**30**	**28**	**22**	**16**	**74**	**233**	**100.0**

Organisation and client characteristics

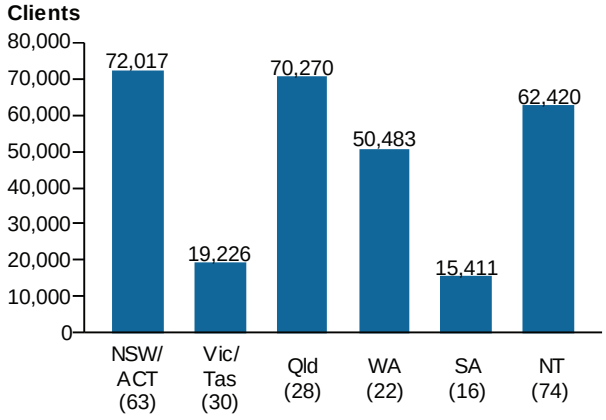
- The Northern Territory had the most organisations (74). This is due, in part, to the addition of 22 NTG funded primary health care organisations in December 2014 as part of the roll-out of the nKPI collection to state- and territory-funded organisations.
- New South Wales/Australian Capital Territory had the largest number of organisations in Major cities (16), while most Northern Territory organisations (57) were in *Very remote* areas (Figure 1.1).



Note: Organisations in the Australian Capital Territory and Tasmania have been combined with those in New South Wales and Victoria, respectively, due to small numbers.

Figure 1.1: Number of organisations contributing nKPI data by jurisdiction and remoteness, December 2014

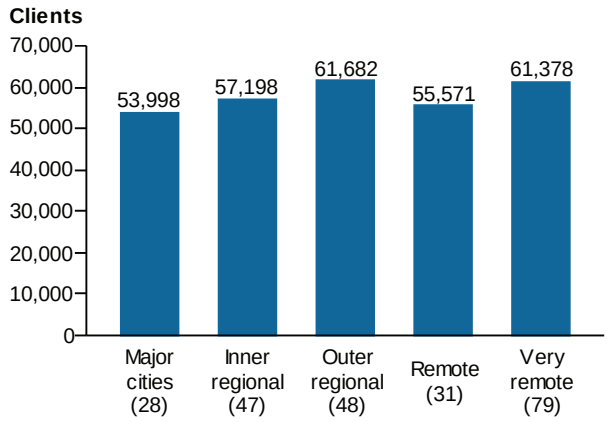
- In December 2014, the organisations reporting nKPI data saw a combined total of around 290,000 Indigenous clients who met the regular client definition for relevant health conditions or disease management. New South Wales/Australian Capital Territory (25%) and Queensland (24%) together accounted for nearly one-half of these clients (Figure 1.2). South Australia had the lowest number of clients.



Note: Number of organisations is in brackets.

Figure 1.2: Clients by jurisdiction, December 2014

- The number of Aboriginal and Torres Strait Islander regular clients was highest in organisations in *Outer regional* areas and lowest in *Major cities* (Figure 1.3).



Note: Number of organisations is in brackets.

Figure 1.3: Clients by remoteness, December 2014

- The number of Aboriginal and Torres Strait Islander regular clients per organisation was highest in Queensland and lowest in Victoria/ Tasmania (Figure 1.4).
- 50% of organisations in the Northern Territory had fewer than 342 clients per organisation, while 50% of organisations in Western Australia had more than 2,061 clients per organisation.

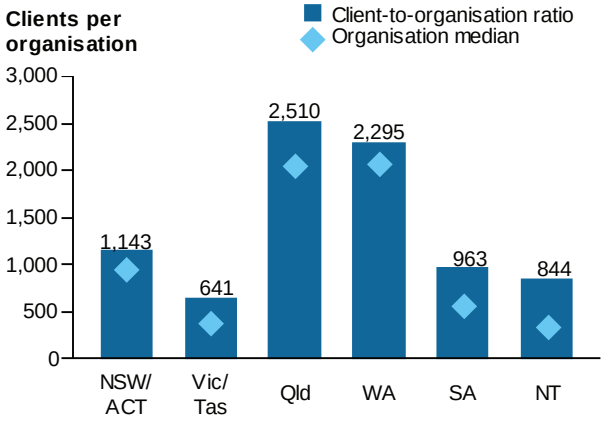


Figure 1.4: Client-to-organisation ratio by jurisdiction, December 2014

- Organisations in *Major cities* had a higher client-to-organisation ratio than organisations in all other remoteness areas, while *Very remote* organisations had the lowest ratio (Figure 1.5).
- 50% of organisations in *Very Remote* areas had fewer than 338 clients per organisation, while 50% of organisations in *Major cities* had more than 1,656 clients per organisation.

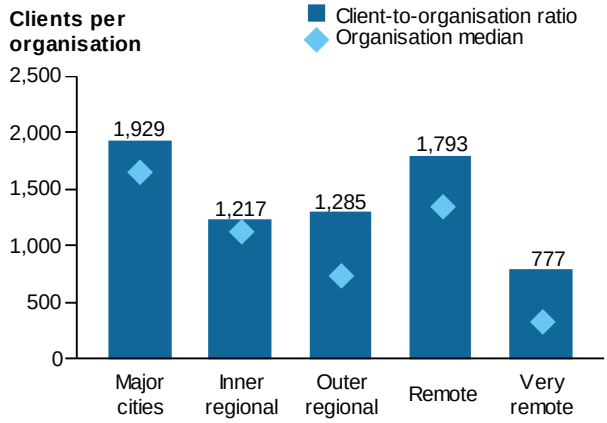
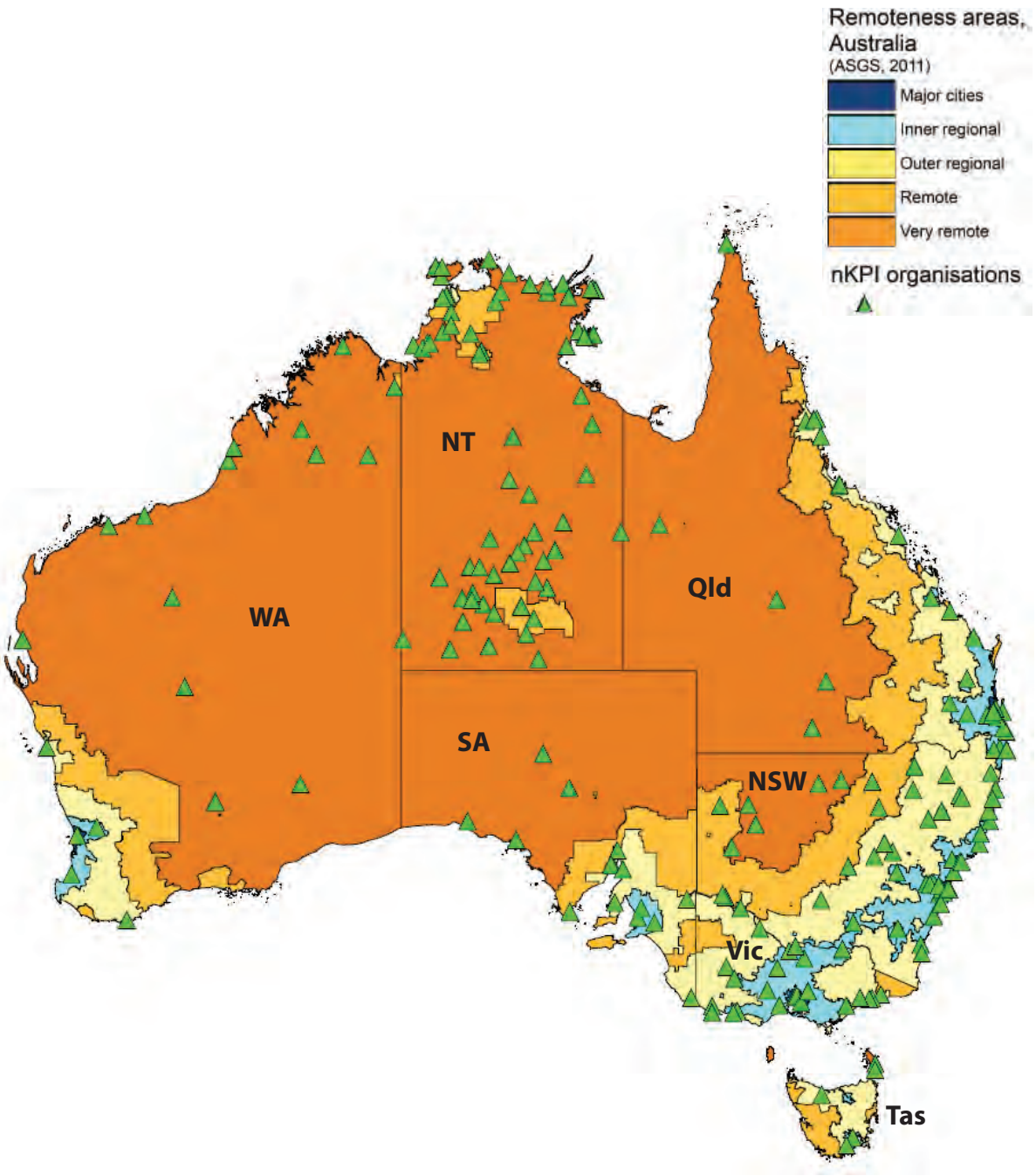


Figure 1.5: Client-to-organisation ratio by remoteness, December 2014

- Organisations reporting nKPI data are located across all jurisdictions and remoteness areas (Figure 1.6).



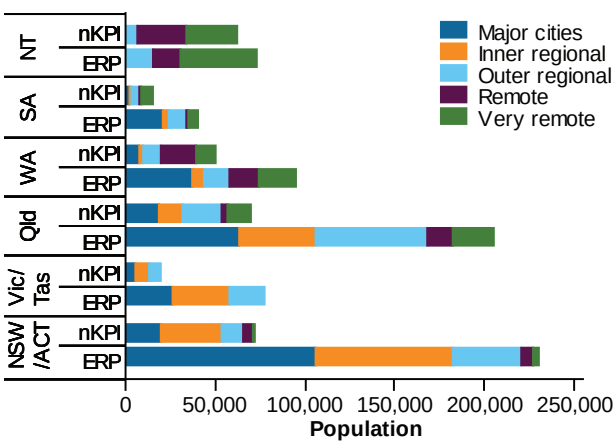
ASGS = Australian Statistical Geography Standard.

Notes

1. Some nKPI organisations may operate in multiple locations. Where this has occurred, only 1 site is shown on the map.
2. Multiple organisations may be located within a small geographical area, so not all organisations will be visible on the map.

Figure 1.6: Organisation location map showing jurisdictions and remoteness, December 2014

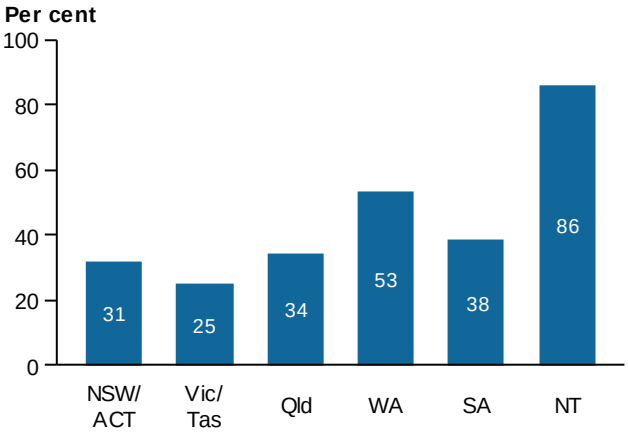
- The remoteness distribution of the nKPI regular client population in each jurisdiction does not necessarily reflect the remoteness distribution of the estimated resident Indigenous populations in respective jurisdictions (see Figure 1.7). Also, there are likely to be differences in the level of Indigenous identification between the Census-based population estimates and the nKPI client population—Indigenous status in the Census is based on self-identification alone, while Aboriginal primary health care organisations may also consider communal recognition and descent. These factors should be taken into account when comparing data across jurisdictions and remoteness areas.
- Note that Aboriginal and Torres Strait Islander people living in *Major cities* and some regional areas may have access to more health service options than those living in *Remote* and *Very remote* areas.
- Overall, there were more nKPI clients than the estimated resident population in *Remote* areas. This may be a reflection of a high proportion of visitors in *Remote* areas.



Notes
1. *Outer regional*, *Remote* and *Very remote* areas of Victoria and Tasmania have been combined, due to small numbers, and reported in the category '*Outer regional*'.
2. ERP is the AIHW Estimated Resident Population (based on ABS data) as at 31 December 2014 and excludes population in external territories.

Figure 1.7: nKPI Indigenous client population (December 2014) and the estimated resident Indigenous population (ERP) by remoteness, as at 31 December 2014

- The nKPI client population shown in Figure 1.8 represents about one-quarter (25%) of the total Indigenous population in Victoria/Tasmania, while in the Northern Territory the nKPI client population represents 86% of the Indigenous population. These figures need to be treated cautiously as clients attending more than one organisation in a particular state or territory can be counted more than once, though the extent of over-counting is unknown. There is also a greater choice of primary health care organisations in more urban areas, including those that do not report against the nKPIs, which could also contribute to differences between jurisdictions.



Note: Percentage of the Indigenous population is shown in the columns.

Figure 1.8: nKPI Indigenous client population (December 2014) as a proportion of the estimated resident Indigenous population (ERP), as at 31 December 2014

Structure of this report

Following this introductory chapter, the remaining chapters of this report are organised as below. Note that figures and text contain numbers that have been rounded. Percentages and changes over time presented in tables are without rounding. Therefore, caution should be taken if differences are calculated using rounded numbers in the figures, which may be different to those in shown in tables.

- **Chapters 2–4** present data for groups of indicators organised into 3 related themes: maternal and child health, preventative health and chronic disease management. Results are presented at the national and jurisdictional level, and by remoteness. The data, as presented, show areas where performance is strongest and areas that need further improvements. Data quality and interpretation issues are also discussed.
- **Chapter 5** presents results on performance over time for a group of organisations that submitted data for all reporting periods since June 2013. Trends in numbers and proportions for all indicators are included and these can be compared to the data presented in Chapters 2–4 for all participating organisations.
- **Chapter 6** presents performance over time for organisations against the 19 process-of-care measures.
- **Chapter 7**, written by the Department of Health, sets out the Department's view of the main findings in forming an overall conclusion.

This report also has the following appendixes.

- **Appendix 1** lists the 24 approved nKPIs with a background to the development of the data collection.
- **Appendix 2** presents a detailed discussion of data quality issues that should be considered when interpreting the data.
- **Appendix 3** includes a summary of performance across the nKPIs and compares the results where possible with, firstly, national data for Aboriginal and Torres Strait Islander people and secondly, national data for all Australians.
- **Appendix 4** presents tables showing time trend results by jurisdiction, remoteness and relevant measure for each indicator across each reporting period. Results for the 2 new indicators are not included as trend data are not available.
- **Appendix 5** presents tables showing age and sex result breakdowns for those indicators where age and sex data were collected.
- **Appendix 6** presents graphs showing organisational variation, with median and quartile boundaries of organisations by jurisdiction and remoteness categories.
- **Appendix 7** provides an explanatory guide to the figures (graphs) presented in Chapters 2–5 of the report.

Chapter 2

Organisation performance on maternal and child health indicators

Indicators of maternal and child health included in the nKPIs cover both process-of-care indicators (first antenatal visit, birthweight recorded, MBS health assessment [aged 0–4], and child immunisation) and health outcome indicators (birthweight result, and smoking status of women who gave birth in the previous year). The number of organisations contributing data on these indicators ranged from 191 to 221 (Table 2.1) and organisations were located across all jurisdictions and remoteness areas.

2.1 Why are these important?

Antenatal care during pregnancy provides an opportunity to find and treat or provide advice on existing health risks in women, including chronic conditions such as hypertension, diabetes, mental health problems, STIs, tobacco and alcohol abuse, inadequate nutrition and unhealthy weight. It also aids in improving health outcomes and preventing future health problems for women and their babies. The risk of pregnancy-related complications and adverse birth outcomes, such as premature and low birthweight babies, can be reduced through early and ongoing antenatal care (Kelly et al. 2010; Office of Disease Prevention and Health Promotion 2015). However, socioeconomic factors such as income, occupation, education, housing, and access to health care, which can increase the risk of low birthweight babies, cannot be improved through antenatal care (CDC 2015).

Low birthweight babies are more likely to die in infancy or be at increased risk of morbidity and disability in infancy. Long term health effects of low birthweight can include risk of developing chronic diseases in adulthood (OECD 2011; Scott 2014). Maternal smoking in pregnancy is a risk factor for low birthweight, as well as contributing to fetal growth restriction, pre-term birth, congenital anomalies and perinatal deaths (Sullivan et al. 2006; WHO et al. 2012).

Child health assessments provide an opportunity for primary health care teams to find any health issues that require treatment or appropriate referral and follow-up (University of Colorado School of Medicine 2013).

Immunisation is important in reducing morbidity and mortality caused by vaccine preventable diseases and has been important in preventing disease in Aboriginal and Torres Strait Islander children (Menzies et al. 2008).

2.2 Summary of progress

- **First antenatal visit** before 13 weeks of pregnancy remained stable over time for Aboriginal and Torres Strait Islander women nationally.
- **Birthweight** of Aboriginal and Torres Strait Islander babies was recorded for 69% of babies born in the previous year, an increase of around 18 percentage points between June 2012 and December 2014 (Table 2.1).
- **MBS health assessments** were received by 32% of Aboriginal and Torres Strait Islander children aged 0–4 at December 2014, an increase of around 9 percentage points since June 2012 (Table 2.1). The Northern Territory, and *Inner regional* and *Very remote* areas had the highest increases over time.

Table 2.1: Summary of maternal and child health indicators, December 2014 and change over time

Indicator[a]	Clients seen[b]	% clients seen	Number of organisations included in the analyses	Variation across organisations (%)	Change over time (%)
First antenatal visit before 13 weeks	1,768	35.9	191	0–100	1.1[c]
Birthweight recorded	5,155	69.4	218	0–100	18.3[d]
MBS health assessment—aged 0–4	10,958	31.6	221	0–100	8.6[d]
Birthweight result—low	650	12.6	200	0–100	0.2[c]
Smoking status of women who gave birth in the previous year—current smoker[e]	2,687	49.1	200	0–100	. .

(a) 16%–67% of organisations contributing to these indicators had denominators of <20 clients. See Table A2.1 for organisation proportions by indicator.
(b) 'Clients seen' is the total clients (sum of denominator) for all organisations with valid data.
(c) Change in percentage points between the reporting periods June 2013 and December 2014.
(d) Change in percentage points between the reporting periods June 2012 and December 2014.
(e) Collected for the first time in December 2014.
. . Not applicable.

Notes
1. 'Number of organisations included in the analyses' excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.
2. The 'Child immunisation' indicator is not included in this table due to apparent issues with data validity.

Source: AIHW analyses of the nKPI data collection.

Things to consider when interpreting data for these indicators

- **Babies' records** provide data for indicators on birthweight recorded and results. A baby is considered a client and counted in the nKPIs even if they attended only once and their parents are not regular clients of the organisation. Babies without a medical record, whose information is only recorded in their mother's record, are not counted.
- **Multiple births** should not be included in birthweight results, as babies born as part of multiple births are more likely to have a lower birthweight. However, anecdotal evidence suggests that exclusion of multiple births may not always have occurred.
- **Shared care arrangements** between hospitals and primary health organisations, between primary care organisations or between primary health care organisations and other providers of similar care are not consistently supported by automatic data sharing. This could lead to lower rates of data recording for some indicators such as birthweight results and antenatal care.
- **Smoking status of women who gave birth in the previous year** relates to Indigenous regular clients who gave birth in the previous year who had their smoking status recorded retrospectively. This is the first time data have been reported for this indicator, therefore no time trend data are available.
- **MBS items** are not claimed by all organisations, either because they do not have a general practitioner (GP) present, they are not eligible to claim them, or because they choose not to do so. Therefore, the indicators based on MBS items may not reflect all related health care activities carried out in an organisation.
- **Small organisation denominators,** that is, <20 clients, can have a large impact on the overall proportion for an organisation even with a small change in the numerator. For many indicators, several organisations contributing data had denominators of <20 clients (see Table 2.1 and Table A2.1).

A. First antenatal visit

Nationally, 36% of Aboriginal and Torres Strait Islander regular clients had their first antenatal visit before 13 weeks of pregnancy as at December 2014 (Figure 2.A1).

Trend showed an overall increase of 1 percentage point from June 2013 to December 2014 in the proportion of clients who had their first antenatal visit before 13 weeks of pregnancy (Figure 2.A1). The largest increases were in South Australia (13 percentage points) and *Outer regional* areas, which had an increase of 3 percentage points. The largest decreases were in Victoria/Tasmania and the Northern Territory (5 percentage points and 4 percentage points, respectively) (figures 2.A2 and 2.A3, and tables A4.1 and A4.2).

Age distribution showed that the proportion of women who had their first antenatal visit before 13 weeks of pregnancy was highest for those aged 35 and over (Table A5.1).

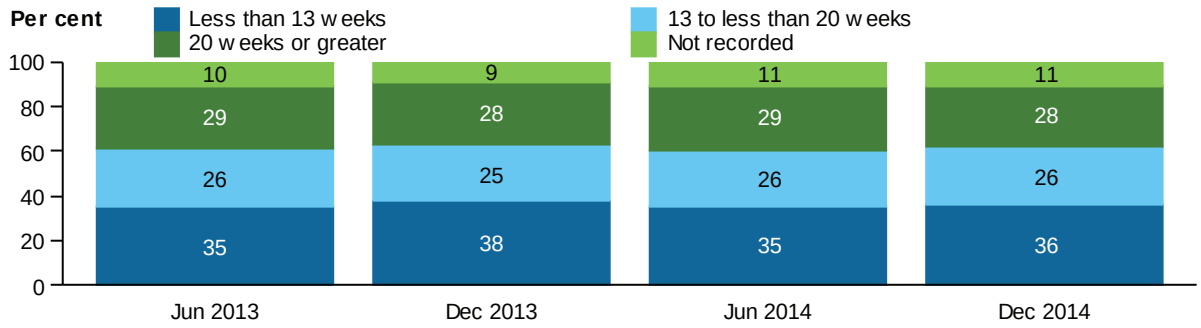


Figure 2.A1: Timing of first antenatal visit, by reporting period

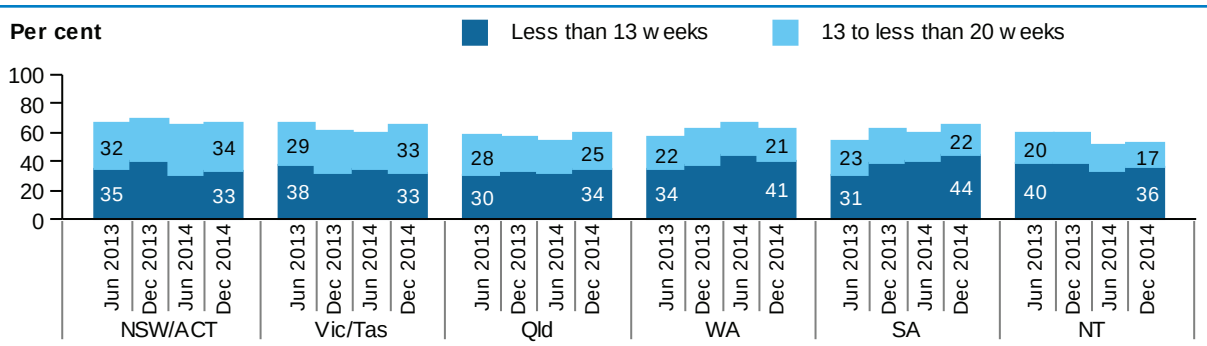


Figure 2.A2: Timing of first antenatal visit, by jurisdiction

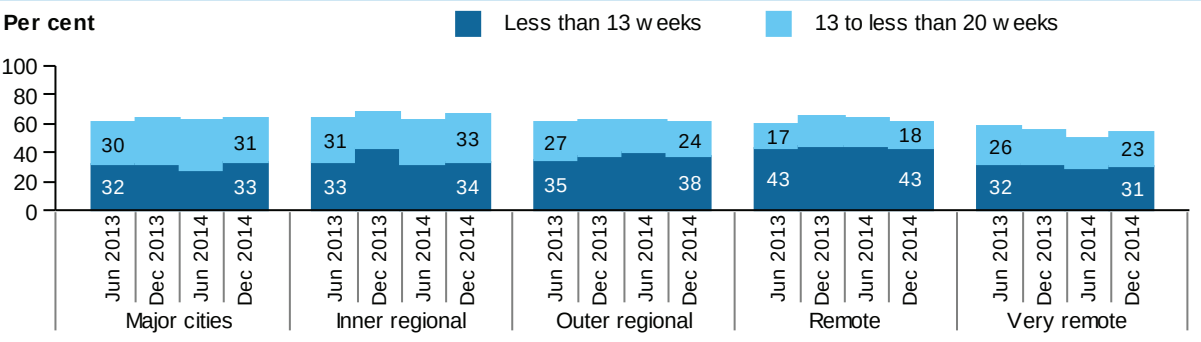


Figure 2.A3: Timing of first antenatal visit, by remoteness

National variation was large, and most organisations had fewer than 20 clients for this indicator. About one-half of the organisations had 28% of the clients attending their first antenatal visit before 13 weeks of pregnancy (Figure 2.A4).

- Six organisations (3%) had 100% of clients attending their first antenatal visit before 13 weeks of pregnancy.
- Forty-two organisations (22%) had no pregnant women attending before 13 weeks of pregnancy. Most of these organisations are small with fewer than 20 clients.
- In the top 25% of organisations, at least 49% of women had their first antenatal visit before 13 weeks of pregnancy.
- In the bottom 25% of organisations, fewer than 11% of women had their first antenatal visit before 13 weeks of pregnancy.

Variation within states/territories shows that the proportion of women who had their first antenatal visit before 13 weeks of pregnancy varied greatly in Victoria/Tasmania, South Australia and the Northern Territory (Figure A6.1).

Variation within remoteness shows that most remoteness areas had a similar amount of variation among organisations, but it was smallest for organisations in *Major cities*. The median value for organisations was lowest in *Very remote* areas (Figure A6.2).

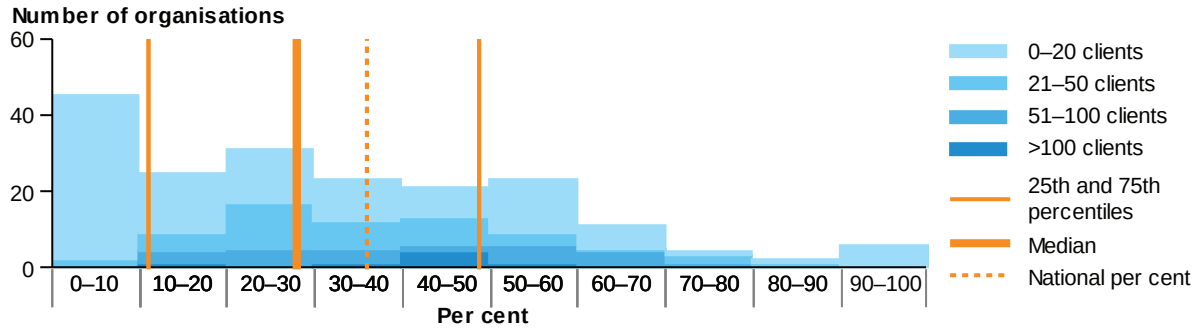


Figure 2.A4: Distribution of percentage of clients whose first antenatal visit was before 13 weeks of pregnancy, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected on this indicator. There has been an improvement for this indicator nationally and in most jurisdictions.
- The degree of organisational influence is likely to have been affected by women's health literacy and other reasons, including access to staff qualified to provide antenatal care.
- Completeness of recording of antenatal visits is important—nationally, first antenatal visit was not recorded for 11% of clients.
- All organisations could work towards achieving 49% of women having their first antenatal visit within 13 weeks of pregnancy, as this was achieved by 25% of organisations in the December 2014 period.

B. Birthweight recorded

Nationally, 69% of Aboriginal and Torres Strait Islander babies born in the previous year had their birthweight recorded at the primary health care organisation as at December 2014 (Figure 2.B1).

Trend showed a fairly steady increase totalling 18 percentage points between June 2012 and December 2014, with a small increase of 1 percentage point between June and December 2014 (Figure 2.B1). Of all jurisdictions, Northern Territory organisations had the largest improvement (25 percentage points). Organisations in *Outer regional* areas improved by 31 percentage points while organisations in *Remote* areas decreased by 2 percentage points (figures 2.B2 and 2.B3, and tables A4.3 and A4.4).

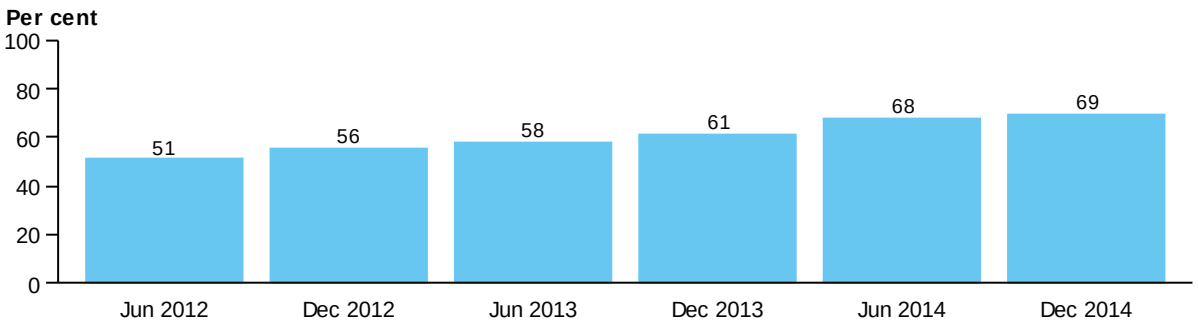


Figure 2.B1: Birthweight recorded, by reporting period

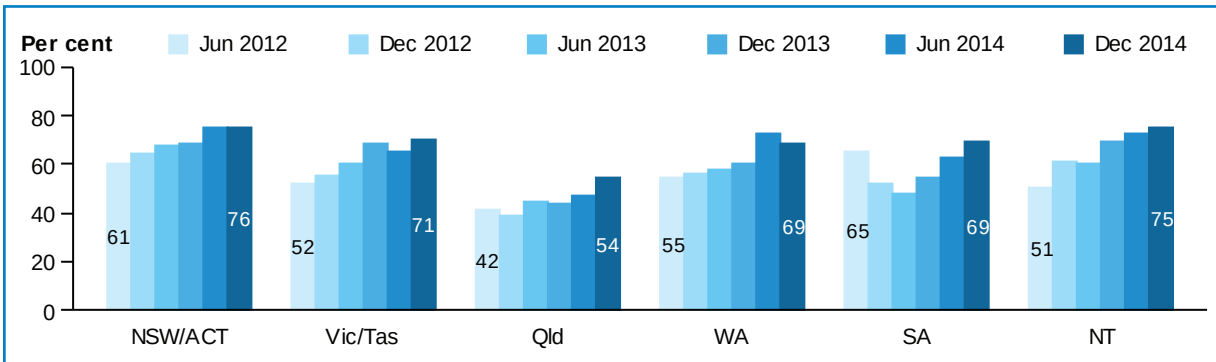


Figure 2.B2: Birthweight recorded, by jurisdiction

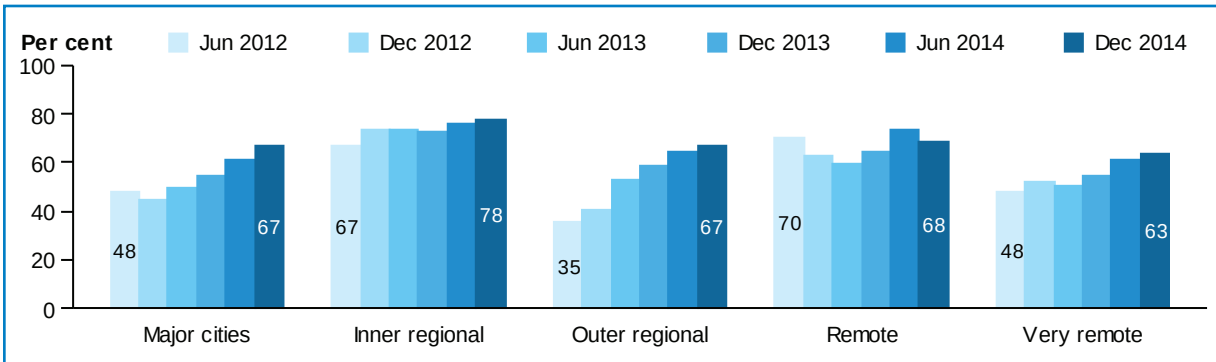


Figure 2.B3: Birthweight recorded, by remoteness

National variation in the recording of birthweight was large, but a substantial number of organisations recorded the birthweight of 90–100% of babies (Figure 2.B4). A high proportion of organisations had 20 or fewer babies born, which may increase the volatility of results.

- Fifty-seven organisations (26%) recorded the birthweight of all babies born.
- Seventeen organisations (8%) did not record birthweight for any babies.
- The top 25% of organisations recorded birthweight for 100% of babies born.
- The bottom 25% of organisations recorded birthweight for 46% or fewer of babies born.

Variation within states/territories shows large variations within most jurisdictions. Organisations in New South Wales/Australian Capital Territory had the largest variation and the Northern Territory organisations had the smallest variation (Figure A6.3).

Variation within remoteness shows that organisations in *Inner regional*, *Outer regional* and *Remote* areas had large variations, while *Very remote* areas had a smaller variation (Figure A6.4).

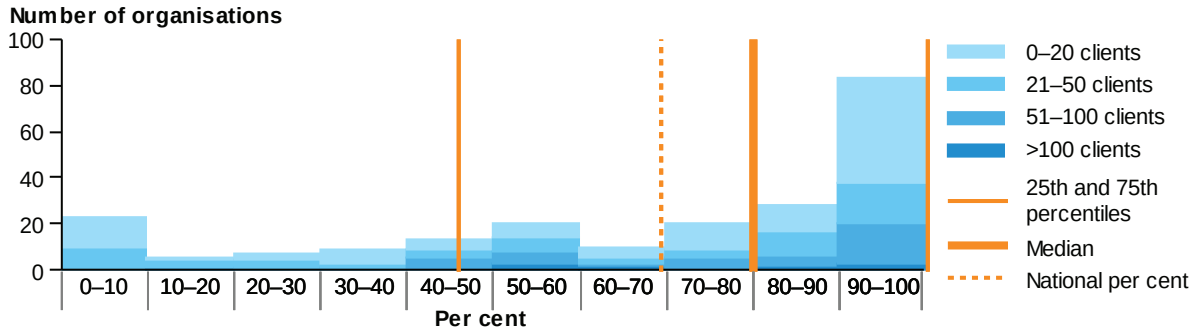


Figure 2.B4: Distribution of percentage of birthweight recorded, by organisation and client numbers

Opportunities for action

- Improvements at the national level and in all jurisdictions over the 6 data collections from June 2012 demonstrate that many organisations have improved their performance against this indicator.
- The bottom 25% of organisations have the opportunity to improve against this indicator—they are recording birthweight for fewer than 46% of the babies who had a record at the organisation. This level of performance is unrelated to organisation size or location and indicates an area of potential CQI activity.
- All organisations could work towards achieving 100% recording of birthweight, as this was achieved by 25% of organisations in December 2014. There has been a large improvement in meeting this benchmark since June 2012.
- Organisations with poor results may want to review whether their data are being captured within their Patient Information Recall Systems but not in a way that is electronically extracted for nKPI reporting.

C. MBS health assessment (item 715) for children aged 0–4

Nationally, 32% of Aboriginal and Torres Strait Islander regular clients aged 0–4 received an MBS health assessment in the past 12 months to December 2014 (Figure 2.C1).

Trend showed a 9 percentage point increase between June 2012 and December 2014 (Figure 2.C1). The highest increases were 16 percentage points in the Northern Territory and 13 percentage points in *Inner regional* and *Very remote* areas, respectively (figures 2.C2 and 2.C3, and tables A4.5 and A4.6).

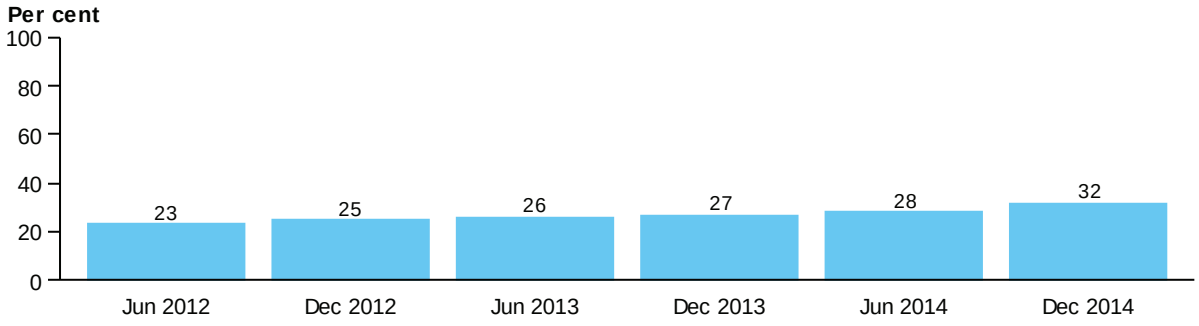


Figure 2.C1: MBS health assessment in the past 12 months (aged 0–4), by reporting period

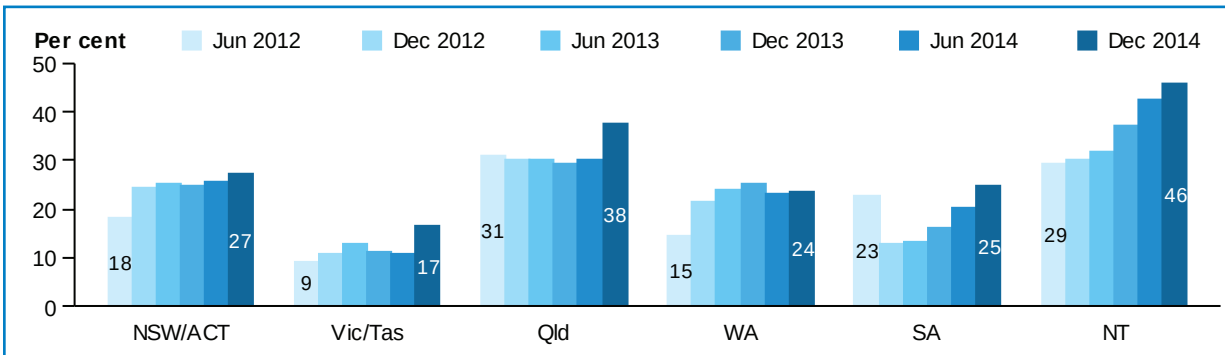


Figure 2.C2: MBS health assessment in the past 12 months (aged 0–4), by jurisdiction

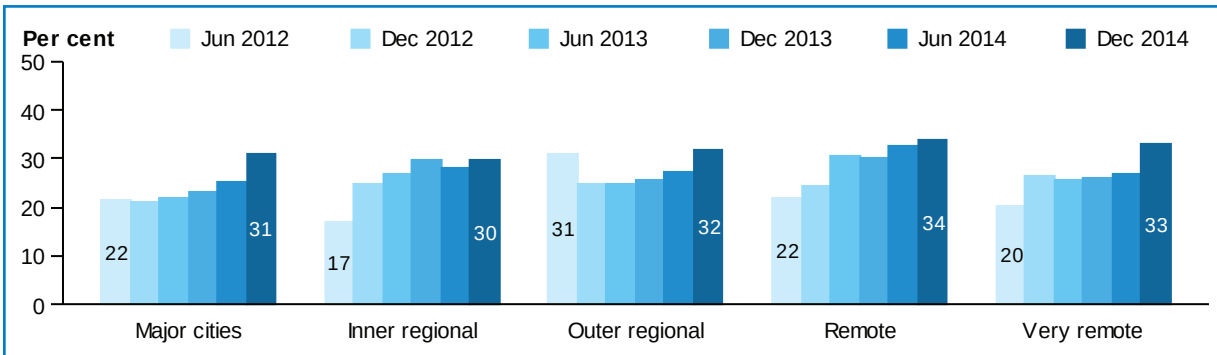


Figure 2.C3: MBS health assessment in the past 12 months (aged 0–4), by remoteness

National variation was high, and a substantial number of organisations with 101–1,000 clients provided MBS health assessments to less than one-half of their clients aged 0–4 (Figure 2.C4).

- Three organisations (1%) provided MBS health assessments to all clients aged 0–4.
- Thirty organisations (14%) did not provide any MBS health assessments to clients aged 0–4.
- The top 25% of organisations provided MBS health assessments for 48% or more of their clients aged 0–4.
- The bottom 25% of organisations provided MBS health assessments for 14% or less of their clients aged 0–4.

Variation within states/territories was similar within jurisdictions; one-half of the Northern Territory organisations provided health assessments to about 45% of children (Figure A6.5).

Variation within remoteness showed little difference among organisations within each category; however, it was slightly wider in *Remote* areas (Figure A6.6).

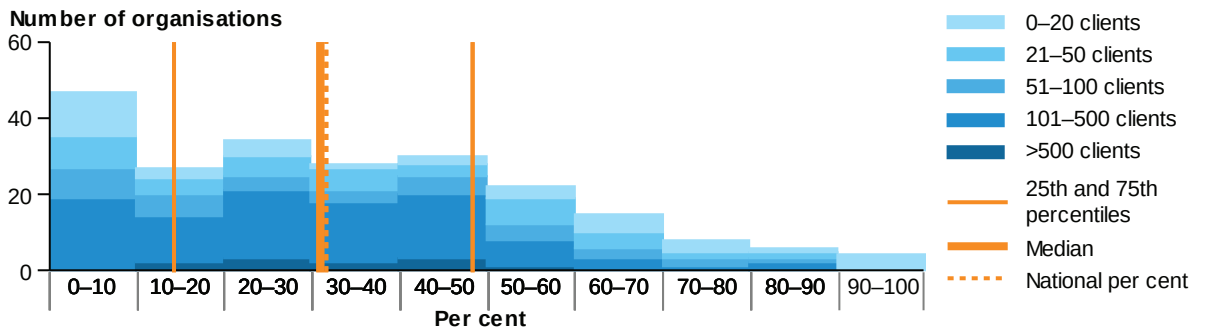


Figure 2.C4: Distribution of percentage of MBS health assessment in the past 12 months (aged 0–4), by organisation and client numbers

Opportunities for action

- Improvements for this indicator are achievable, as shown by the steadily improving results at the national level. Since June 2012, there has been an overall increase of 9 percentage points and an increase in all jurisdictions.
- All organisations could work towards achieving 48% of clients aged 0–4 with an MBS health assessment, as this was achieved by 25% of organisations in December 2014.

D. Child immunisation

This indicator is presented differently to the others because of apparent issues with data validity.

Australian Childhood Immunisation Register (ACIR) records indicate that in 2014, about 90% of Aboriginal and Torres Strait Islander children were fully immunised at age 5, nationally (Department of Health 2015b). This was similar to the national immunisation rate for all children, at 91% (Department of Health 2015a). For Indigenous children aged 12 months to 15 months in 2014, the proportion who were fully immunised ranged from 84% in South Australia and Western Australia to 95% in the Australian Capital Territory. For all children in this age group, the proportion who were fully immunised ranged from 90% in 4 jurisdictions to 93% in the Australian Capital Territory (Department of Health 2015b).

The nKPI indicator relates to the proportion of children recorded by the organisations as being fully immunised. For December 2014, the nKPI data indicate that primary health care records are capturing far fewer cases of fully immunised children than ACIR records (approximately 21 to 34 percentage points less at the national level) (Figure 2.D1). This suggests there are data quality issues with the childhood immunisation data collected from primary health care organisations.

Anecdotal evidence indicates that some organisations may not rely on their internal Patient Information Record Systems (PIRS) to track immunisation status. Also, in some instances, the primary health care providers participating in the nKPI collection may not be the only or major immunisation provider. This would reduce the priority that some organisations may give to maintaining immunisation status information within their PIRS.

The nKPI data show large variations among jurisdictions in the proportion of children recorded as being fully immunised, from 48% in Queensland to 84% in South Australia for children aged 24–36 months. This variation was not found in the ACIR data (see Figure 2.D1 and Table A3.1 in Appendix 3). In only 1 jurisdiction was the proportion of immunised children roughly similar in both the nKPI collection and the ACIR collection. Furthermore, jurisdictions with lower rates of immunisation tend to have a wider spread of recorded immunisation rates across organisations in the nKPI collection (see figures 2.D2, 2.D3 and 2.D4). This suggests that the systematic issue may be limited to particular organisations.

Investigation into how different organisations record childhood immunisations and how this relates to variation in roles and responsibilities for immunisation provision between different providers may be useful for informing future data collections.

While ACIR is the primary source of data for immunisation nationally, there is value in recording immunisation in a primary health care setting.

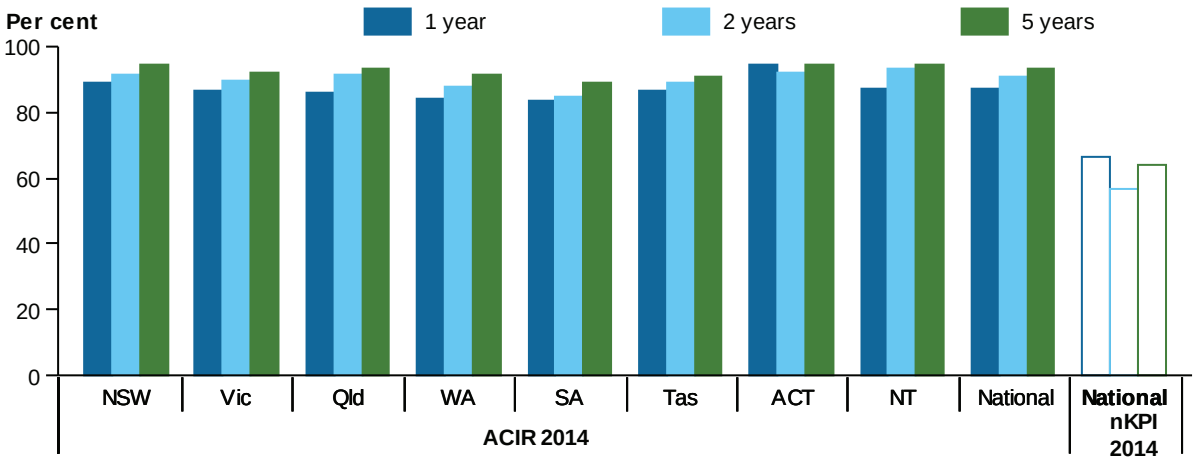
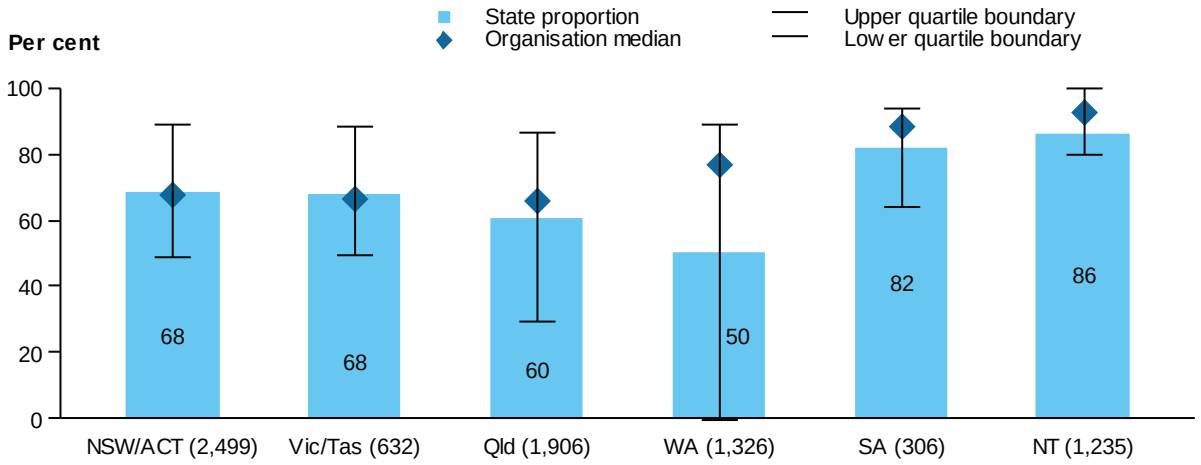
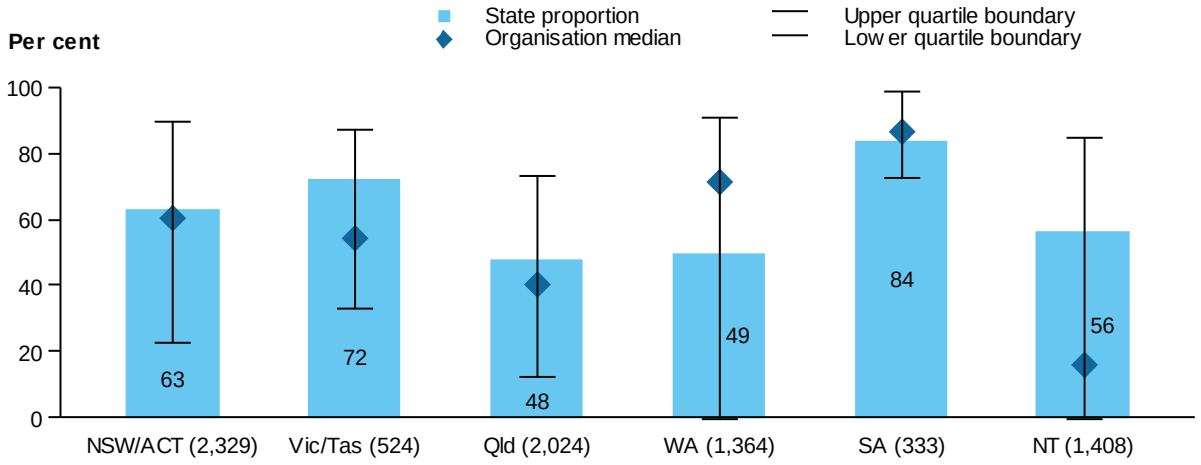


Figure 2.D1: Australian Childhood Immunisation Register 2014 Indigenous childhood immunisation rates, by states and territories, compared with national level nKPI December 2014 records



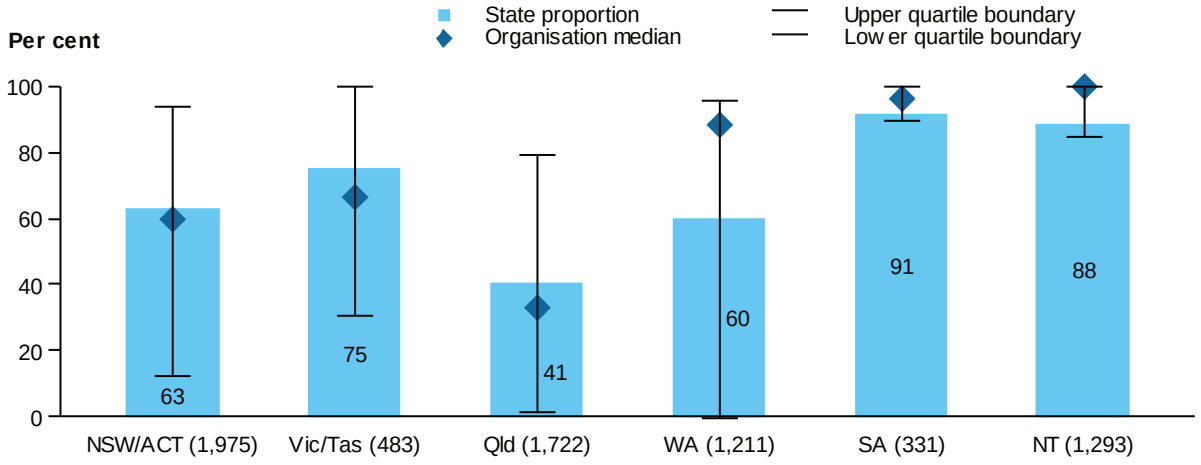
Note: Number of Indigenous children aged 12 months to <24 months who are regular clients is in brackets.

Figure 2.D2: Proportion of children aged 12 months to <24 months recorded as being fully immunised, by jurisdiction, with median and quartile boundaries of organisations (as shown by nKPI December 2014 data)



Note: Number of Indigenous children aged 24 months to <36 months who are regular clients is in brackets.

Figure 2.D3: Proportion of children aged 24 months to <36 months recorded as being fully immunised, by jurisdiction, with median and quartile boundaries of organisations (as shown by nKPI December 2014 data)



Note: Number of Indigenous children aged 60 months to <72 months who are regular clients is in brackets.

Figure 2.D4: Proportion of children aged 60 months to <72 months recorded as being fully immunised, by jurisdiction, with median and quartile boundaries of organisations (as shown by nKPI December 2014 data)

E. Birthweight result

Nationally, as at December 2014, 13% of Aboriginal and Torres Strait Islander babies born in the previous year had a low birthweight (Figure 2.E1).

Trend showed little change between June 2013 and December 2014, with an increase of 1 percentage point across the periods for babies born with a low birthweight (Figure 2.E1). Proportion of low birthweight babies in most jurisdictions and remoteness categories were fairly stable. However, the proportion of low birthweight babies decreased by 5 percentage points in South Australia while it increased by 2 percentage points in *Remote* areas (figures 2.E2 and 2.E3, and tables A4.7 and A4.8).

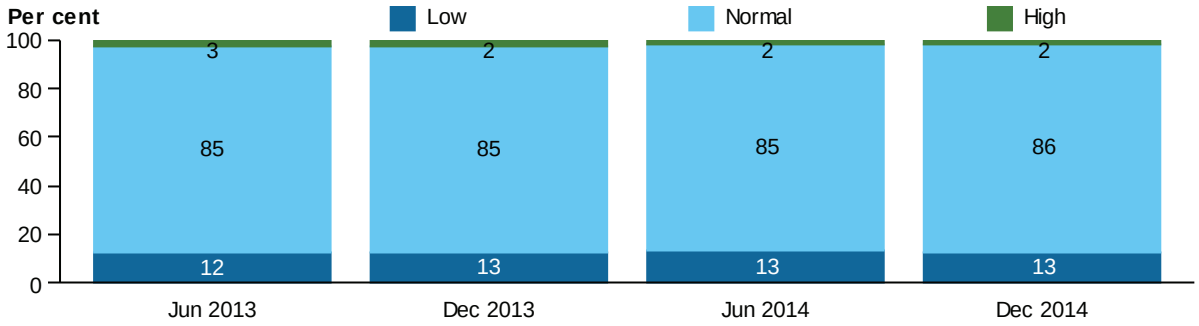


Figure 2.E1: Birthweight result, by reporting period

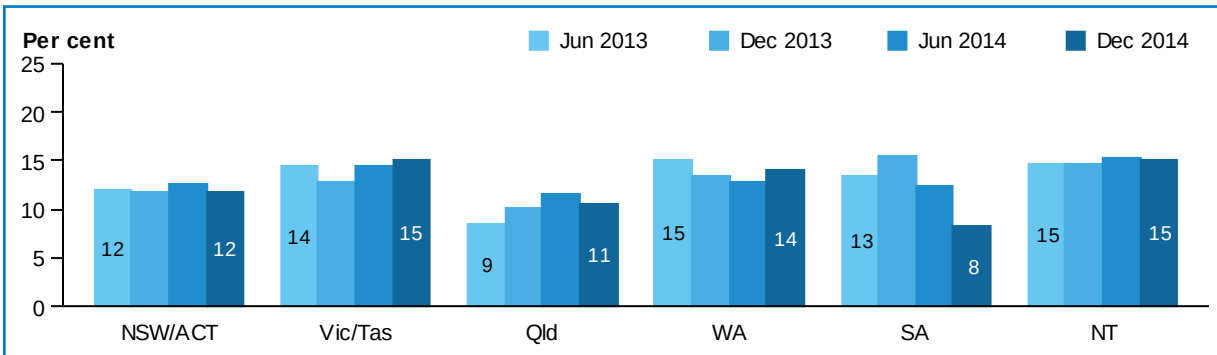


Figure 2.E2: Birthweight result (low), by jurisdiction

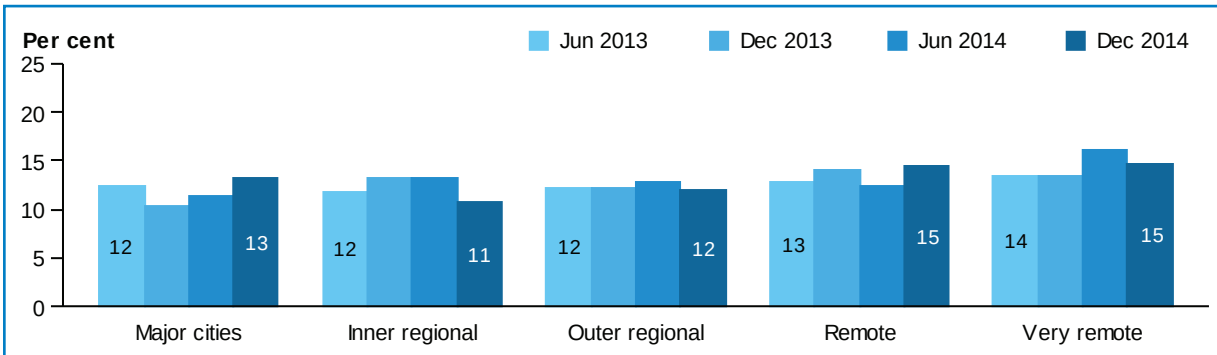


Figure 2.E3: Birthweight result (low), by remoteness

National variation was relatively little, with most organisations reporting 0–20% of babies as being of low birthweight. A high proportion of low birthweight babies is often associated with relatively few births in the organisations (Figure 2.E4).

- In the top quartile of organisations, that is, those that had the best results, no babies were of low birthweight. Note that this result is for a small number of organisations involving very few births.
- In the bottom quartile of organisations, 17% or more of babies were low birthweight.

Variation within states/territories was not large, but was lowest in Western Australia and highest in the Northern Territory and Victoria/Tasmania (Figure A6.7).

Variation within remoteness was greatest among organisations in *Remote* and *Very remote* areas (Figure A6.8).

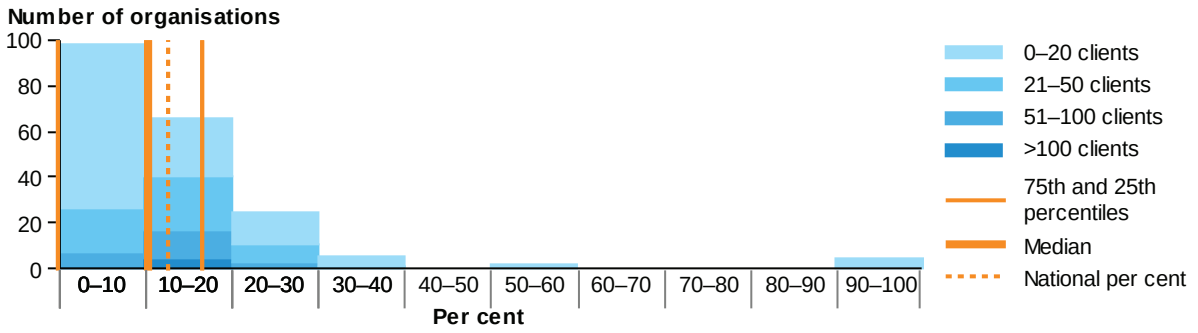


Figure 2.E4: Distribution of percentage of low birthweight babies, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator. There has been little variation over these reporting periods.
- Low birthweight is influenced by a range of social determinants mostly outside the control of organisations. A high number or proportion of low birthweight babies does not indicate poor organisational performance, but it does point to an area of need.
- Organisations with a high percentage of low birthweight babies, or a worsening trend, could review whether their current maternal and child health care services are effectively targeting vulnerable mothers and babies for prevention and follow-up activities.

F. Smoking status of women who gave birth in the previous year

Nationally, 49% of Aboriginal and Torres Strait Islander women who gave birth in the previous year had their smoking status recorded as 'current smoker' as at December 2014 (Figure 2.F1).

Trend data are not available for this indicator as data were collected for the first time in this reporting period.

Mother's age distribution indicated that women who were identified as current smokers during pregnancy rose with increasing age (Figure 2.F1 and Table A5.2).

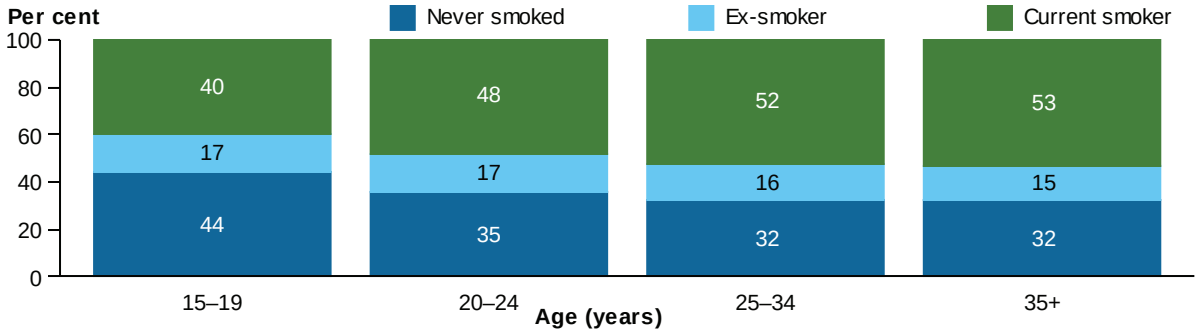


Figure 2.F1: Smoking status of women who gave birth in the previous year, by age of mother, as at December 2014

National variation showed that most organisations recorded a current smoker status for 40%–70% of their clients who gave birth in the previous year (Figure 2.F2). Most of these organisations had 20 or fewer clients, which may increase the volatility of the results.

- Thirteen organisations (7%) recorded that 100% of their clients who gave birth in the previous year were current smokers.
- Twenty-two organisations (11%) recorded that none of their clients who gave birth in the previous year were current smokers.
- In the top 25% of organisations, fewer than 35% of women had a status of current smoker recorded.
- In the bottom 25% of organisations, more than 61% of women had a status of current smoker recorded.

Variation within states/territories was largest for organisations in Victoria/Tasmania. There was little variation among organisations in Queensland (Figure A6.9).

Variation within remoteness shows *Very remote* areas had the largest variation among organisations and *Remote* areas had the smallest amount of variation (Figure A6.10).

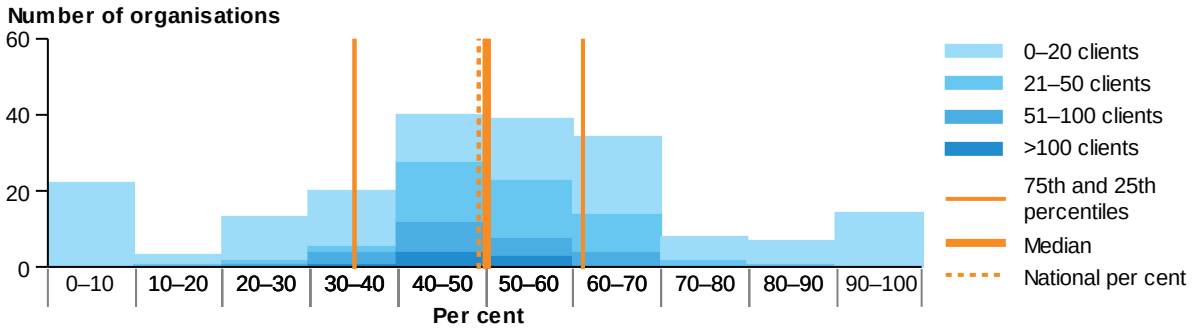


Figure 2.F2: Distribution of percentage of smoking status of women who gave birth in the previous year (current smoker), by organisation and client numbers

Opportunities for action

- December 2014 was the first time data were collected for this indicator and as such there are no trend data available.
- Smoking causes obstetric and fetal complications. Organisations with consistently high results could review whether sufficient attention is being paid to recording smoking status and could use evidence-based brief interventions and smoking cessation treatments for expectant mothers.

Chapter 3

Organisation performance on preventative health indicators

Indicators of preventative health included in the nKPIs cover several process-of-care indicators (smoking status recorded, alcohol consumption recorded, MBS health assessment [aged 25 and over], cervical screening, and immunised against influenza [aged 50 and over]) and health outcome indicators (smoking status result, and BMI recorded as overweight and obese). The number of organisations contributing data on these indicators ranged from 208 to 222 (Table 3.1), and organisations were located across all jurisdictions and remoteness areas.

3.1 Why are these important?

Routine health assessments can yield valuable information on a patient's current health status (including chronic conditions and issues requiring referral and follow-up care), and information on behaviours that affect health status (such as physical activity, smoking, stress and quality of life). Although health assessments are not intended to be diagnostic tools, nor complete health histories, they do provide a mechanism to engage patients in their own health, leading to better health choices and improved health behaviours in the long term (University of Colorado School of Medicine 2013).

It is widely known that tobacco smoking is a major contributor to serious diseases such as cancer, chronic lung disease and heart disease (AIHW 2014b; IGCD 2012). The collection of smoking status information can influence a client's intention to quit smoking. GPs can provide advice about and access to smoking cessation treatment and encourage action on previous intentions to quit (Gould et al. 2015; Rothemich et al. 2008).

Alcohol consumption is common in Australia, but excessive consumption can lead to severe health problems such as cardiovascular disease, liver disease, pancreatitis, mental health conditions and cancer. It also increases injuries from traffic and other accidents, and contributes to social problems such as violence, child abuse, assault and imprisonment (NHMRC 2009). Monitoring alcohol use in the primary health setting can lead to earlier recognition of high-level drinking and earlier intervention. Clients are able to receive advice on reducing their alcohol intake and guidance on the most effective treatment procedures (Haber et al. 2009; Seale et al. 2010).

Cervical screening is recommended for women aged 18–69 to detect pre-cancerous abnormalities and to reduce cervical cancer incidence and mortality. Tests are currently recommended every 2 years, including for women who have been immunised against the human papillomavirus (HPV) (AIHW 2015a). Cervical cancer incidence and mortality in Aboriginal and Torres Strait Islander women are both substantially higher than for non-Indigenous Australian women (Saville 2014).

Influenza is most prevalent in the elderly, and influenza viruses can cause a range of disease symptoms that are often more severe in this population group. Complications of influenza such as pneumonia have historically been major causes of morbidity and mortality among Indigenous people—immunisation against influenza is therefore recommended for Indigenous people 15 years and over (ATAGI 2013).

The rate of overweight and obesity has grown rapidly in Australia, with 35% of people over the age of 15 recorded as overweight and more than 28% as obese (ABS 2012; OECD 2014). Overweight and obesity contribute to a number of health issues including type 2 diabetes, cardiovascular disease and hypertension (ABS 2012). Although many different factors can inhibit the efficacy of GPs influencing a client's weight (Walsh & Fahy 2011), periodic measurement of body mass index (BMI) is recommended for all adults to determine whether a client is overweight or obese, and to monitor the effectiveness of behaviours such as healthy diet and exercise in controlling weight and promoting health (Nawaz & Katz 2001).

3.2 Summary of progress

- **Smoking status** was recorded for 78% of Aboriginal and Torres Strait Islander regular clients aged 15 and over, an increase of 14 percentage points between June 2012 and December 2014. Of those whose smoking status was recorded, 52% were current smokers, a decrease of around 1 percentage point since June 2012 (Table 3.1); 33% had never smoked.
- **Alcohol consumption** was recorded for 55% of Aboriginal and Torres Strait Islander clients aged 15 and over, which was an improvement in recording by around 16 percentage points since June 2012 (Table 3.1). The proportion increased across all jurisdictions and remoteness areas.
- **MBS health assessments** were provided for 44% of Aboriginal and Torres Strait Islander adults aged 25 and over. The proportion increased by around 13 percentage points since June 2012 (Table 3.1).
- **Cervical screening** in the previous 2 years was undertaken by 31% of Aboriginal and Torres Strait Islander women in December 2014, a slight decline (<1 percentage point) from June 2013 (Table 3.1).
- **Immunised against influenza** was recorded at 40% for Aboriginal and Torres Strait Islander people aged 50 and over. There was an increase of around 3 percentage points between June 2013 and December 2014 (Table 3.1).
- **BMI classified as overweight and obese** showed that 27% of Aboriginal and Torres Strait Islander clients aged 25 and over who had their BMI recorded were overweight and 43% were obese. The proportion of people who were overweight or obese increased by around 4 percentage points since June 2012 (Table 3.1).

Things to consider when interpreting data for these indicators

- **Smoking status categories** are not yet fully agreed. For example, there is not yet universally accepted guidance on how long a person needs to have quit smoking to be considered an ex-smoker rather than a smoker.
- **Time-stamped records** normally ensure that a record or activity is fairly recent. However, the smoking status recorded and smoking status result indicators are based on the most recent record for the client, regardless of how old that record is. Therefore, the indicator may not reflect current smoking status of the regular client population unless the data have been collected recently for all or most clients.
- **Differential body mass index (BMI) testing** may occur in some organisations where BMI may be more likely to be measured in clients who look underweight, overweight or obese. This would result in the proportion of overweight or obese clients being higher than it actually is.
- **Influenza vaccination** does not include clients who are offered a vaccination but refuse. Also, organisations may not have records of immunisations that occurred at other places, such as workplaces.
- **MBS items** are not claimed by all organisations, either because they do not have a GP present, are not eligible to claim them or because they choose not to do so. Therefore, the indicators based on MBS items may not reflect all related health care activities carried out in an organisation.
- **Non-Indigenous comparison data** are available for some indicators. The comparisons can be with either non-Indigenous Australians or all Australians (see Appendix 3, Table A3.2.)
- **Pathology results** held at an organisation may not reflect all pathology tests that have occurred for its regular clients. Organisations without systems in place may not have recorded the information, or results may not have been picked up accurately.
- **Recording of alcohol consumption** is not restricted to a particular test or format for this indicator. Organisations can use tests such as the AUDIT or AUDIT-C or simply record whether or not the client consumes alcohol.

- **Small organisation denominators,** that is, <20 clients, can have a large impact on the overall proportion for an organisation with a small change in the numerator. For preventative health indicators, some organisations contributing data had denominators of <20 clients (see Table 3.1 and Table A2.1).
- **Shared care arrangements** between hospitals and primary health organisations, between primary care organisations, or between primary health care organisations and other providers of similar care, are not consistently supported by automatic data sharing. This can lead to lower rates of data recording for some indicators.

Table 3.1: Summary of preventative health indicators, December 2014 and change over time

Indicator[a]	Clients seen[b]	% clients seen	Number of organisations included in the analyses	Variation across organisations (%)	Change over time (%)
Smoking status recorded	149,677	78.4	221	0–100	14.3[c]
Alcohol consumption recorded	104,320	54.6	222	0–100	16.3[c]
MBS health assessment—aged 25+	62,684	43.9	222	0–95.6	12.6[c]
Cervical screening at 2 years	27,341	30.9	213	0–100	–0.6[d]
Immunised against influenza—aged 50+	18,976	39.6	208	0–100	3.3[d]
Smoking status result—current smoker	78,463	52.4	220	13.3–100	–1.4[d]
Overweight and obese	70,168	70.1	215	8.8–100	4.4[c]

(a) 1%–11% of organisations contributing to these indicators had denominators of <20 clients. See Table A2.1 for organisation proportions by indicator.

(b) 'Clients seen' is the total (national) denominator for all organisations with valid data.

(c) Change in percentage points between the reporting periods June 2012 and December 2014.

(d) Change in percentage points between the reporting periods June 2013 and December 2014.

Note: 'Number of organisations included in the analyses' excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.

Source: AIHW analyses of the nKPI data collection.

G. Smoking status recorded

Nationally, 78% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had their smoking status recorded as at December 2014 (Figure 3.G1).

Trend showed an increase of 14 percentage points between June 2012 and December 2014 (Figure 3.G1). Western Australia and *Remote* areas had the greatest improvements, increasing by 28 percentage points and 23 percentage points, respectively (figures 3.G2 and 3.G3, and tables A4.9 and A4.10).

Age and sex distribution showed the recording of smoking status increased with age until age 64 for both males and females, but decreased slightly thereafter. Young males were less likely to have their smoking status recorded than young females (Table A5.3).

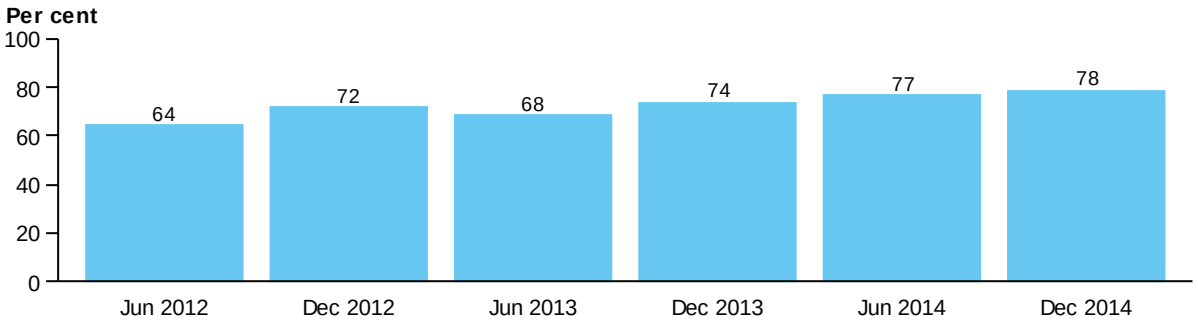


Figure 3.G1: Smoking status recorded, by reporting period

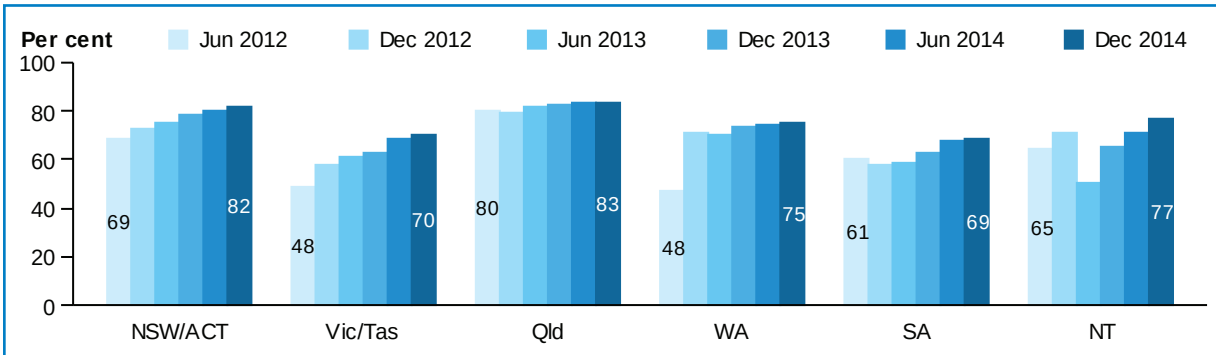


Figure 3.G2: Smoking status recorded, by jurisdiction

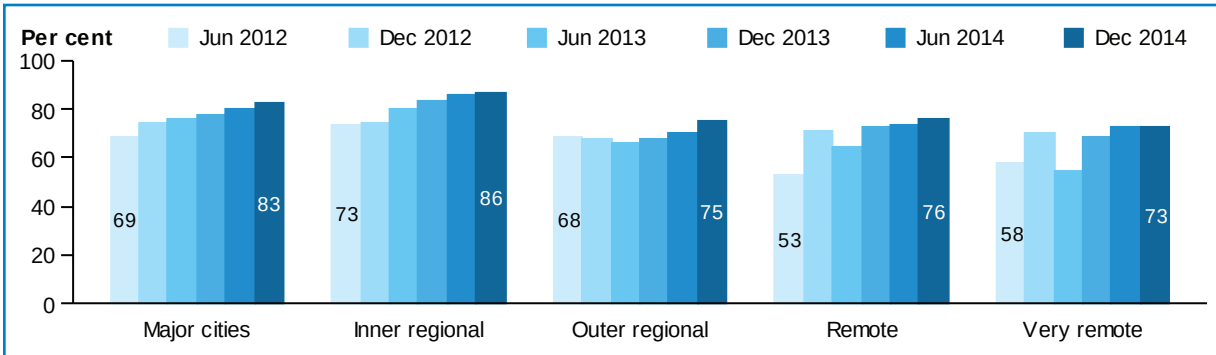


Figure 3.G3: Smoking status recorded, by remoteness

National variation indicates that a large number of organisations recorded a smoking status for 80% or more of their clients (Figure 3.G4).

- Eleven organisations (5%) recorded a smoking status for 100% of their clients.
- One organisation (0.5%) did not record a smoking status for any of their clients.
- The top 25% of organisations recorded a smoking status for 90% or more of their clients.
- The bottom 25% of organisations recorded a smoking status for 69% or less of their clients.

Variation within states/territories was relatively low among organisations in all jurisdictions, but was highest in Western Australia and lowest in Queensland (Figure A6.11).

Variation within remoteness was also relatively low in all remoteness areas, but was highest in *Outer regional* areas and lowest in *Very remote* areas (Figure A6.12).

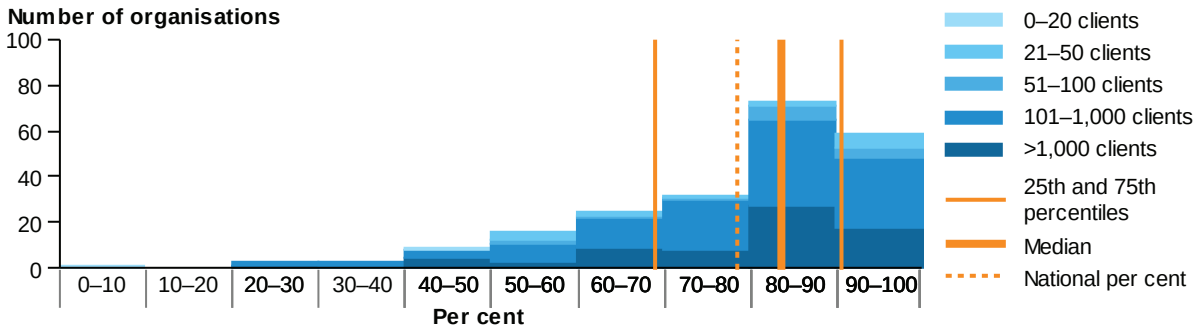


Figure 3.G4: Distribution of percentage of smoking status recordings, by organisation and client numbers

Opportunities for action

- Improvement on this indicator nationally and across all jurisdictions shows good work by many organisations. One-quarter of organisations are achieving 90% or more clients with smoking status recorded, and a small number of organisations are achieving 100%. This would appear to be achievable by organisations regardless of size or location.
- There are particular opportunities for action on this indicator for the 25% of organisations recording smoking status for fewer than 69% of their clients and for their younger clients. The high rates of smoking among regular clients across all organisations make this a high priority.
- Organisations with consistently low results could review whether sufficient attention is being paid to recording smoking status. There may be opportunities to improve standard practice data collection on smoking status.

H. Alcohol consumption recorded

Nationally, 55% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had their alcohol consumption status recorded in the past 24 months as at December 2014 (Figure 3.H1).

Trend showed an increase of 17 percentage points since June 2012 (Figure 3.H1). There were improvements across all jurisdictions and remoteness areas, with an increase of 28 percentage points in Western Australia, and in *Very remote* areas, respectively (figures 3.H2 and 3.H3 and tables A4.11 and A4.12).

Age and sex distribution showed the recording of alcohol consumption increased with age to age 64 then decreased for both males and females (Table A5.4).

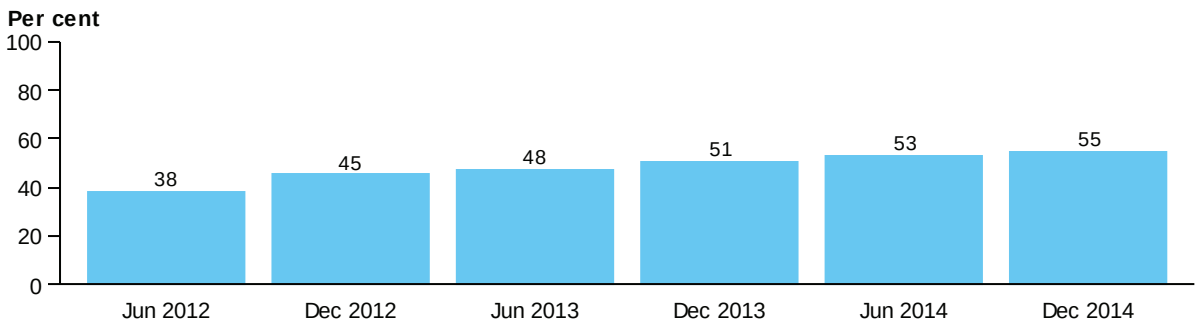


Figure 3.H1: Alcohol consumption status recorded, by reporting period

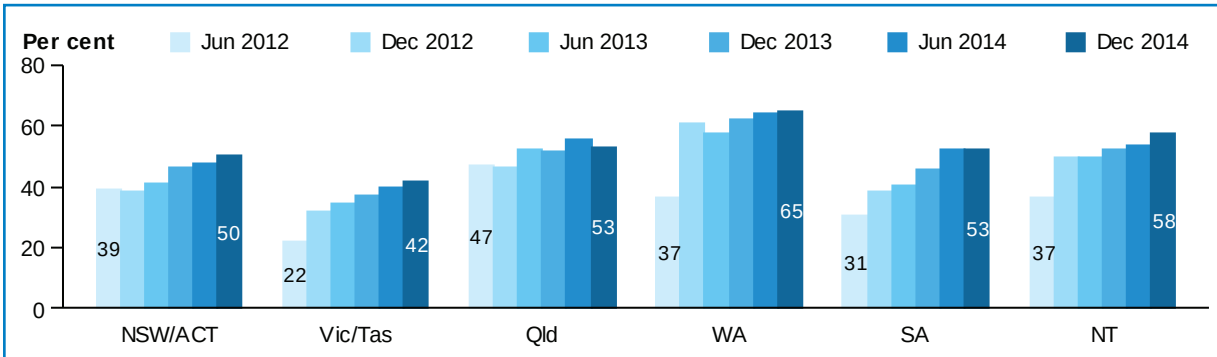


Figure 3.H2: Alcohol consumption status recorded, by jurisdiction

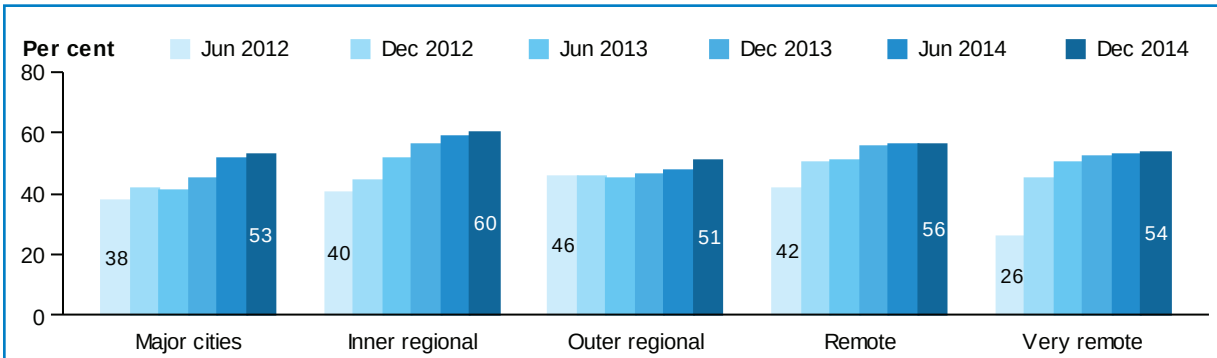


Figure 3.H3: Alcohol consumption status recorded, by remoteness

National variation was high; however a substantial number of organisations recorded alcohol consumption for more than one-half of their clients (Figure 3.H4).

- Five organisations (2%) recorded alcohol consumption for 100% of their clients.
- Four organisations (2%) did not record alcohol consumption for any of their clients.
- The top 25% of organisations recorded alcohol consumption for 75% or more of their clients.
- The bottom 25% of organisations recorded alcohol consumption for 40% or less of their clients.

Variation within states/territories shows that organisations in Queensland had the largest variation. There was little variation among organisations in the Northern Territory (Figure A6.13).

Variation within remoteness shows that the largest variation was among organisations located in *Major cities* and *Inner regional* areas (Figure A6.14).

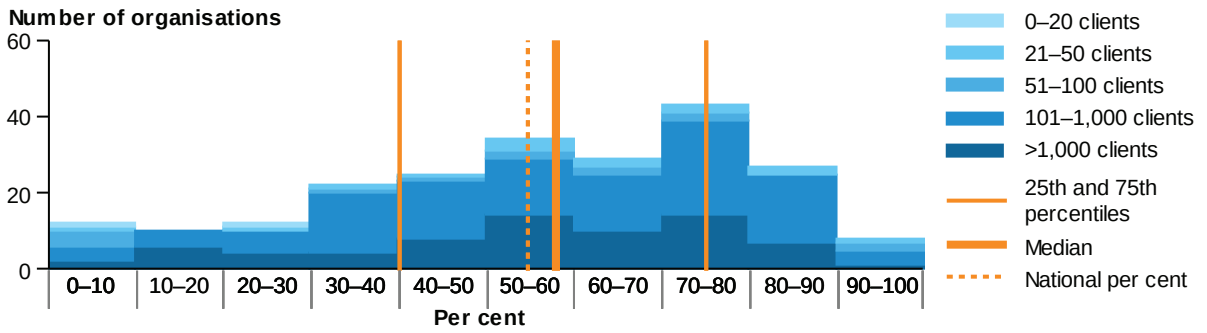


Figure 3.H4: Distribution of percentage of alcohol consumption status recordings, by organisation and client numbers

Opportunities for action

- Improvement against this indicator nationally and across all jurisdictions since June 2012 indicates better performance by many organisations.
- There is especially room for improvement for the bottom 25% of organisations recording alcohol status for 40% or less of their regular clients.
- All organisations could work towards achieving at least 75% recording of alcohol status as currently one-quarter of organisations are recording this for 75% or more of their clients. The data suggest that 100% is achievable.
- Better recording of alcohol consumption may create increased opportunities for evidence-based brief interventions.

I. MBS health assessment (item 715) for adults aged 25+

Nationally, 44% of Aboriginal and Torres Strait Islander regular clients aged 25 and over received an MBS health assessment in the past 24 months as at December 2014 (Figure 3.I1).

Trend showed an increase of 13 percentage points since June 2012 (Figure 3.I1). Western Australia had the greatest improvement (28 percentage points) between June 2012 and December 2014 while *Very remote* organisations improved by 25 percentage points (figures 3.I2 and 3.I3, and tables A4.13 and A4.14).

Age and sex distribution showed the percentage of regular clients aged 25 and over who received a health assessment in the past 24 months increased with age up to age 64 for both males and females (Table A5.5).

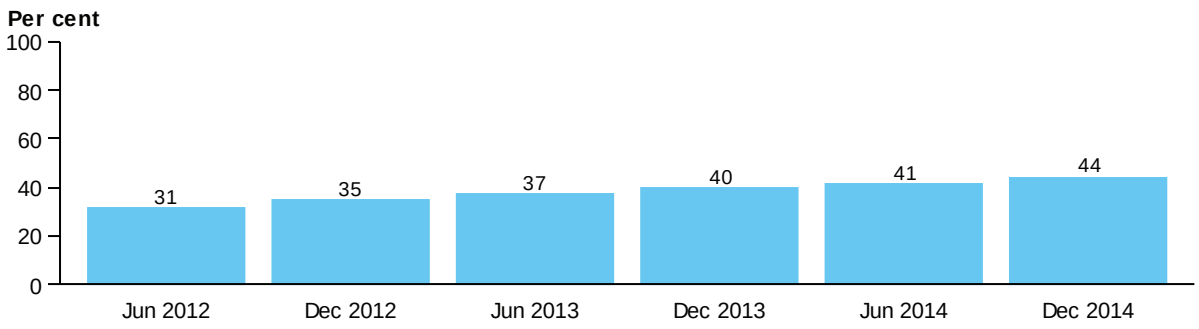


Figure 3.I1: MBS health assessment in the past 24 months (aged 25 and over), by reporting period

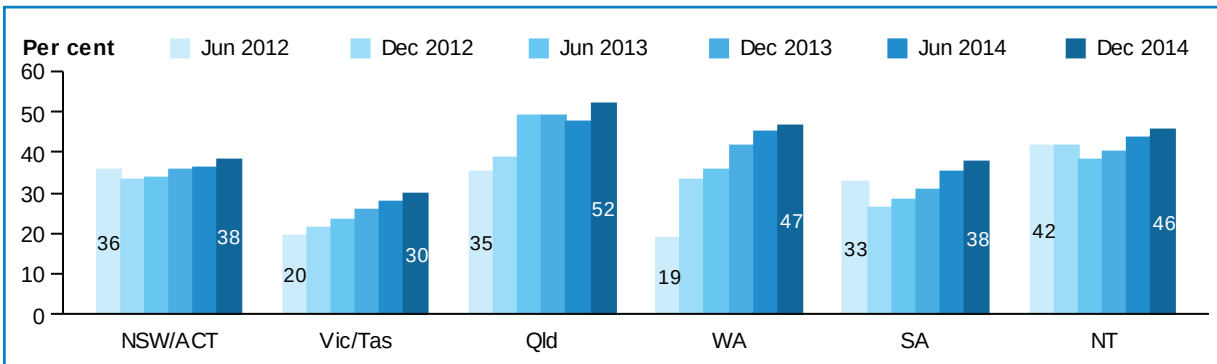


Figure 3.I2: MBS health assessment in the past 24 months (aged 25 and over), by jurisdiction

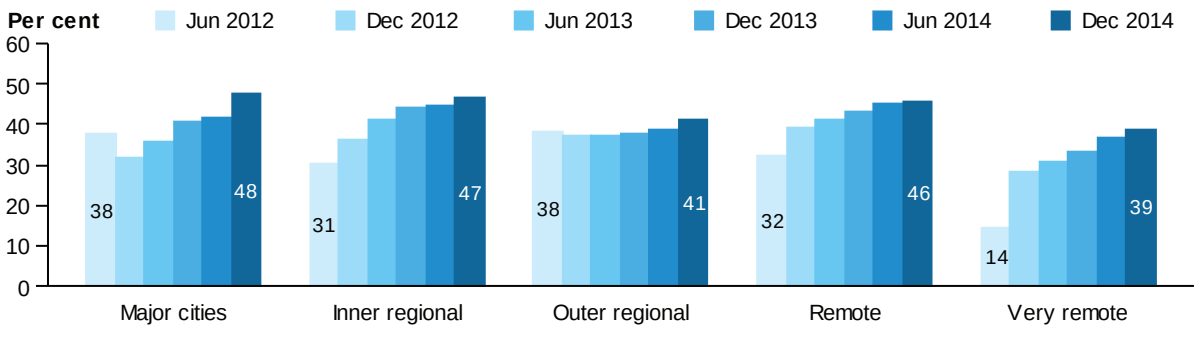


Figure 3.I3: MBS health assessment in the past 24 months (aged 25 and over), by remoteness

National variation was large, with most organisations falling between 30%–70%. A small number of organisations completed health assessments for more than 80% of their clients aged 25 and over (Figure 3.I4).

- No organisations completed a health assessment for 100% of their clients.
- Twenty-two organisations (10%) did not complete health assessments for any of their clients.
- The top 25% of organisations completed health assessments for 57% or more of their clients aged 25 and over.
- The bottom 25% of organisations completed health assessments for 25% or less of their clients aged 25 and over.

Variation within states/territories shows most jurisdictions had a similar level of variation among organisations, except in Victoria/Tasmania and the Northern Territory, where the variation was less (Figure A6.15).

Variation within remoteness shows *Major cities* and *Outer regional* areas had the largest variation among organisations and *Remote* areas had the least variation (Figure A6.16).

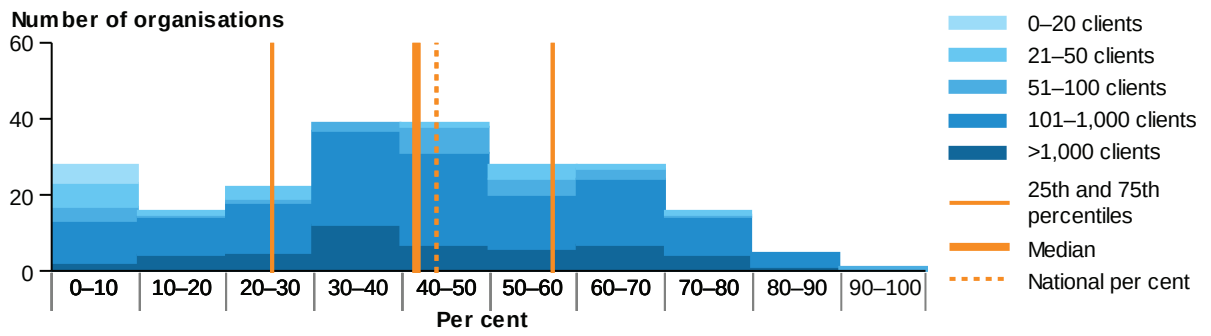


Figure 3.I4: Distribution of percentage of MBS health assessment in the past 24 months (aged 25 and over), by organisation and client numbers

Opportunities for action

- Improvements for this indicator are achievable, as shown by the improving results at the national level since June 2012.
- The bottom 25% of organisations that have health assessments in place for 25% or less of their clients have an opportunity to review current practices and priorities and the potential benefits from doing more. The data suggest that organisations can work towards achieving a benchmark of over 50% of their regular clients with MBS health assessments because 25% of organisations were able to achieve a 57% health assessment rate in December 2014.
- Development of a benchmark for this indicator is desirable and it may not necessarily be 100% of the population. Factors to consider include the prevalence of the main conditions identified through the assessment, the performance of the screening tools used and the availability of follow-up services.

J. Cervical screening

Nationally, 31% of female Aboriginal and Torres Strait Islander regular clients had a cervical screening in the previous 2 years as at December 2014 (Figure 3.J1).

Trend showed relatively little change since June 2013 (Figure 3.J1). Cervical screenings completed in the previous 2 years increased by 3 percentage points over the reporting periods in South Australia but decreased by 7 percentage points in Victoria/Tasmania. *Outer regional* areas improved slightly, by 1 percentage point, while other remoteness areas decreased slightly or remained the same (figures 3.J2 and 3.J3 and tables A4.15 and A4.16).

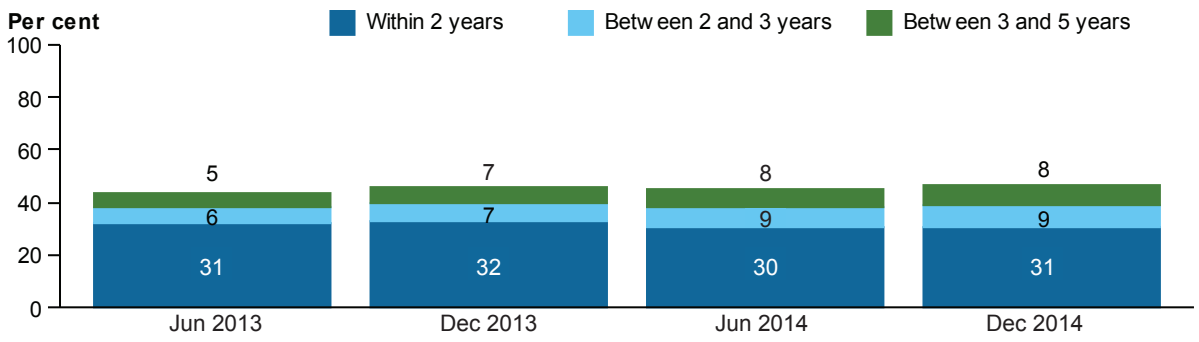


Figure 3.J1: Cervical screening, by reporting period

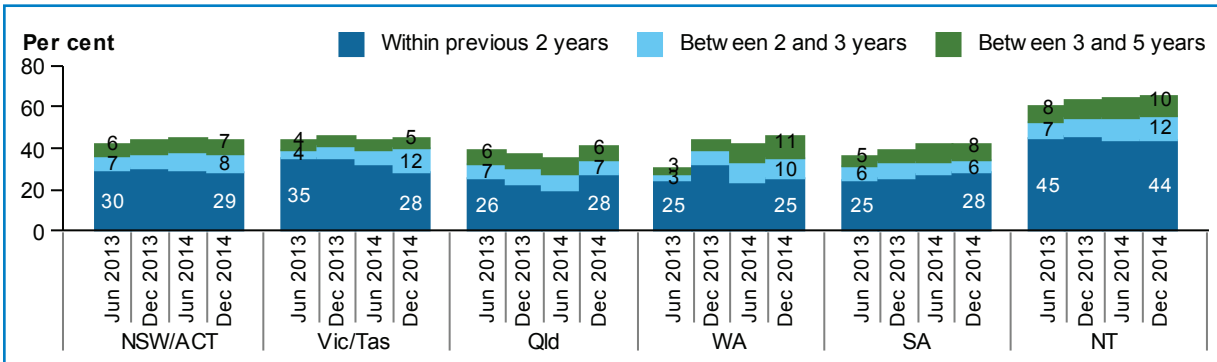


Figure 3.J2: Cervical screening, by jurisdiction

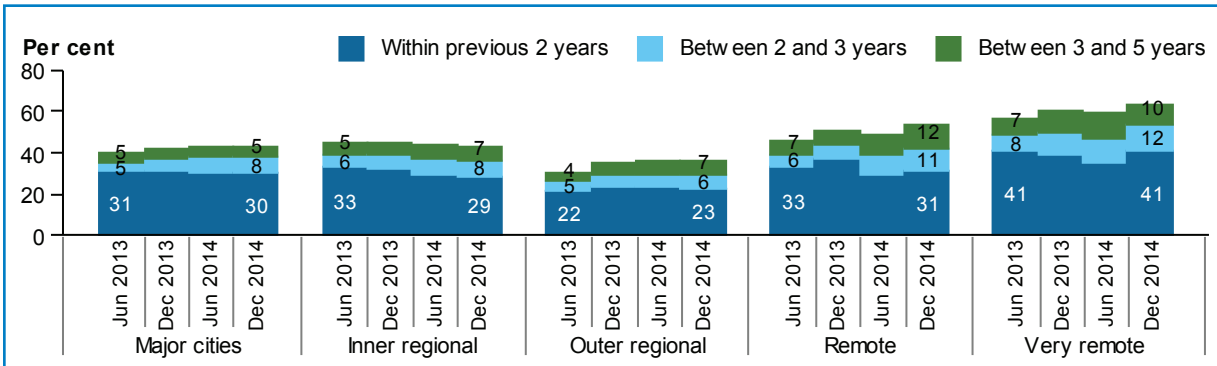


Figure 3.J3: Cervical screening, by remoteness

National variation was relatively large; most organisations recorded a cervical screening in the previous 2 years for less than 40% of their clients (Figure 3.J4).

- One organisation (0.5%) recorded a cervical screening in the previous 2 years for 100% of its female clients.
- Four organisations (2%) did not record a cervical screening for any of their female clients in the previous 2 years.
- The top 25% of organisations had 49% or more of their women who had received a cervical screening in the previous 2 years.
- The bottom 25% of organisations had 19% or less of their women who had received a cervical screening in the previous 2 years.

Variation within states/territories shows there was little variation among organisations in all jurisdictions (Figure A6.17).

Variation within remoteness shows that while organisations in *Very remote* and *Remote* areas had little variation, it was smallest in *Major cities* (Figure A6.18).

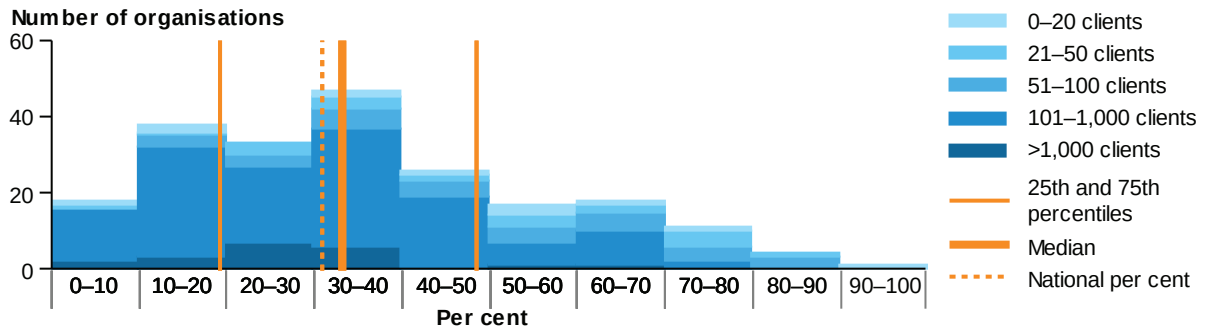


Figure 3.J4: Distribution of percentage of cervical screenings in the previous 2 years, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator.
- There appear to be opportunities for action for this indicator for the 25% of organisations that provided cervical screening for 19% or less of their clients. There may, however, be local factors that affect organisations' recording of screening status and performance of screening.
- During 2011–12, 57% of Australian women aged 20–69 were screened as part of the National Cervical Screening Program (AIHW 2014a).

K. Immunised against influenza—clients aged 50 and over

Nationally, 40% of Aboriginal and Torres Strait Islander regular clients aged 50 and over were immunised against influenza as at December 2014 (Figure 3.K1).

Trend showed an increase of 4 percentage points between June 2013 and December 2014, with most of the improvement between June and December 2014 (Figure 3.K1). The greatest increase was in Western Australia, with an increase of 16 percentage points from June 2013 to December 2014, while Queensland decreased by 7 percentage points. *Remote* and *Very remote* areas increased by 8 percentage points, respectively (figures 3.K2 and 3.K3, and tables A4.17 and A4.18).

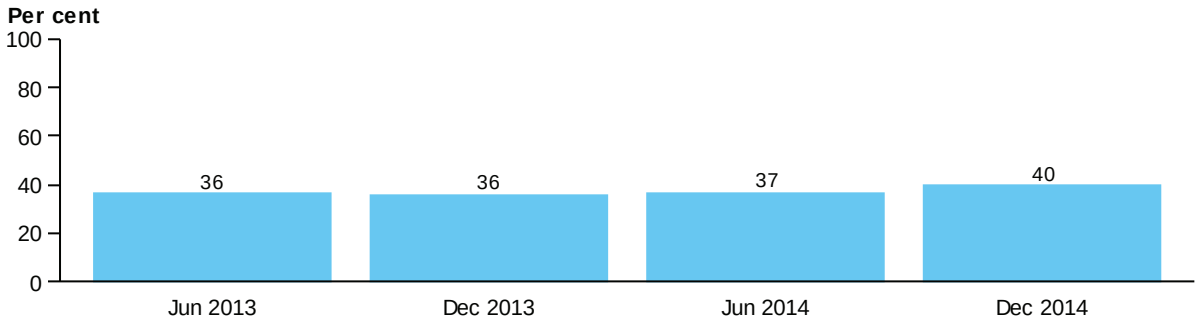


Figure 3.K1: Immunised against influenza (aged 50 and over), by reporting period

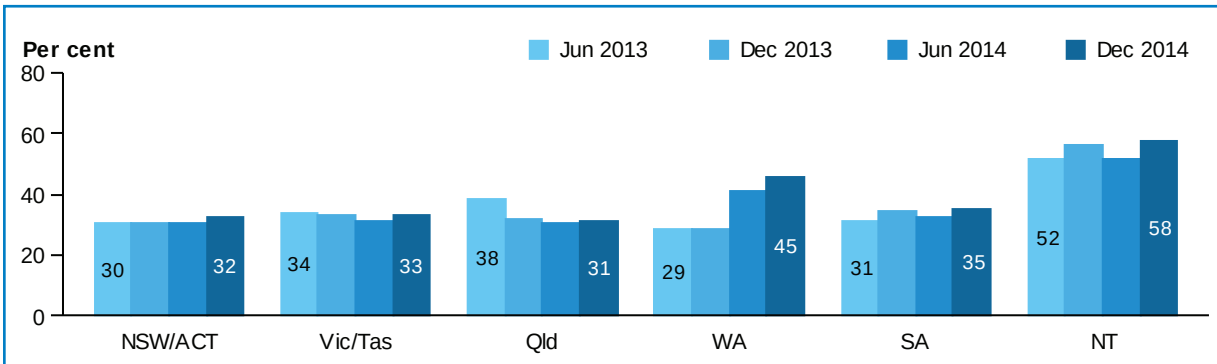


Figure 3.K2: Immunised against influenza (aged 50 and over), by jurisdiction

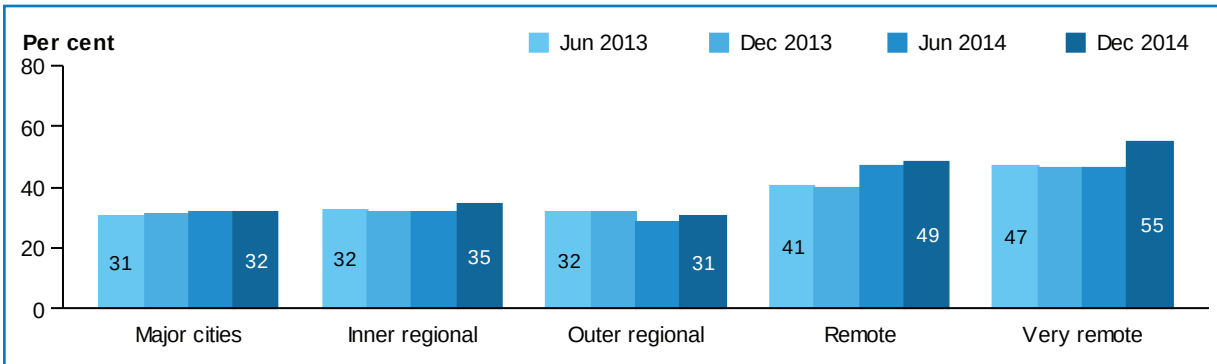


Figure 3.K3: Immunised against influenza (aged 50 and over), by remoteness

National variation shows that variation was large among organisations; most organisations immunised 20%–50% of their clients aged 50 and over against influenza (Figure 3.K4).

- Four organisations (2%) immunised 100% of their clients aged 50 and over against influenza.
- One organisation (0.5%) did not immunise any of its clients aged 50 and over against influenza.
- In the top 25% of organisations, 70% of clients or more were immunised against influenza.
- In the bottom 25% of organisations, 29% of clients or less were immunised against influenza.

Variation within states/territories shows Western Australia had the largest variation among organisations, and South Australia had the smallest variation (Figure A6.19).

Variation within remoteness shows organisations in *Remote* and *Very remote* areas had the largest variation (Figure A6.20).

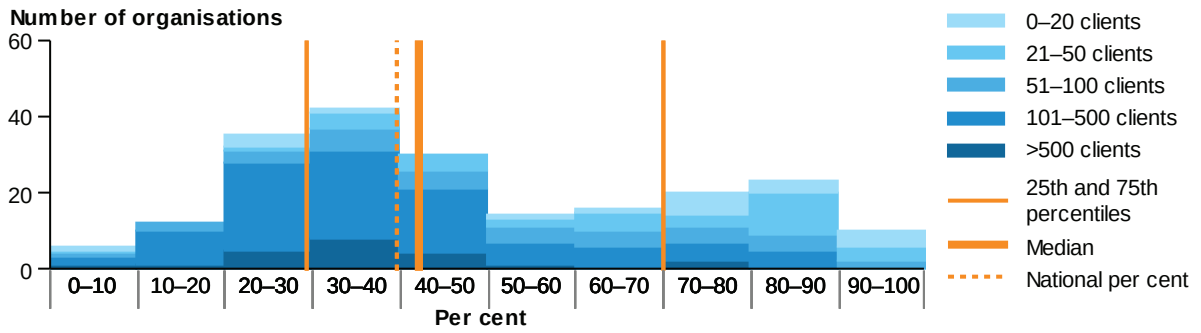


Figure 3.K4: Distribution of percentage of clients aged 50 and over who were immunised against influenza, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator and show a national increase of 4 percentage points since June 2013 and steady increases within jurisdictions.
- The data suggest that organisations can provide influenza vaccinations for at least 70% of their clients aged 50 and over (the figure achieved by the top one-quarter of organisations).

L. Smoking status result

Nationally, 33% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had never smoked, while 52% were current smokers as at December 2014 (Figure 3.L1).

Trend showed stability in the proportion of clients who never smoked and a slight decrease in the proportion who were current smokers (around 1.5 percentage points) between June 2013 and December 2014 (Figure 3.L1). The proportion of current smokers decreased slightly for most jurisdictions and remoteness areas (figures 3.L2 and 3.L3, and tables A4.19 and A4.20).

Age and sex distribution showed that the percentage of current smokers was highest for males and females aged 25–44 and that a higher percentage of males were current smokers than females across all age groups. About one-half of young people aged 15–24 were current smokers but a similar proportion had never smoked, which is the highest recorded for all age groups (with the exception of females aged 65+) (Table A5.7).

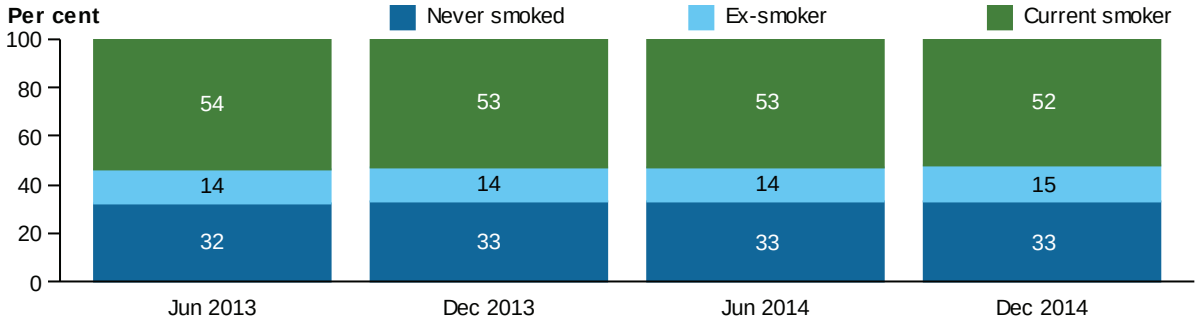


Figure 3.L1: Smoking status result, by reporting period

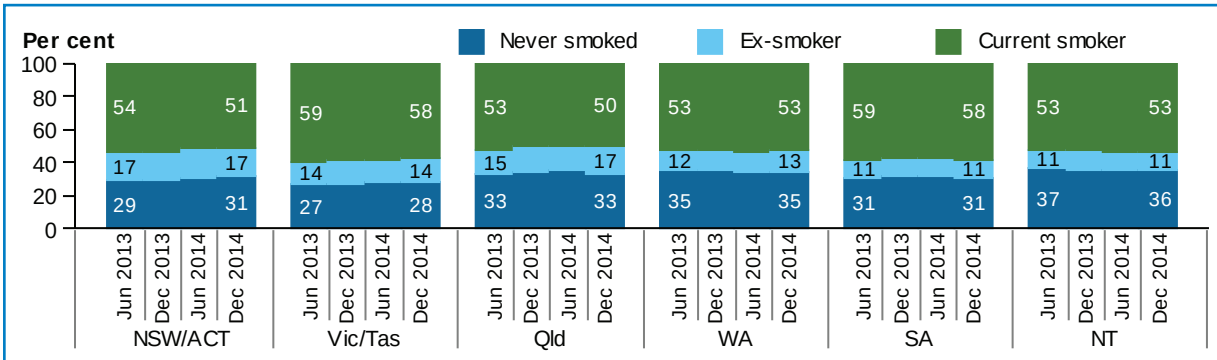


Figure 3.L2: Smoking status result, by jurisdiction

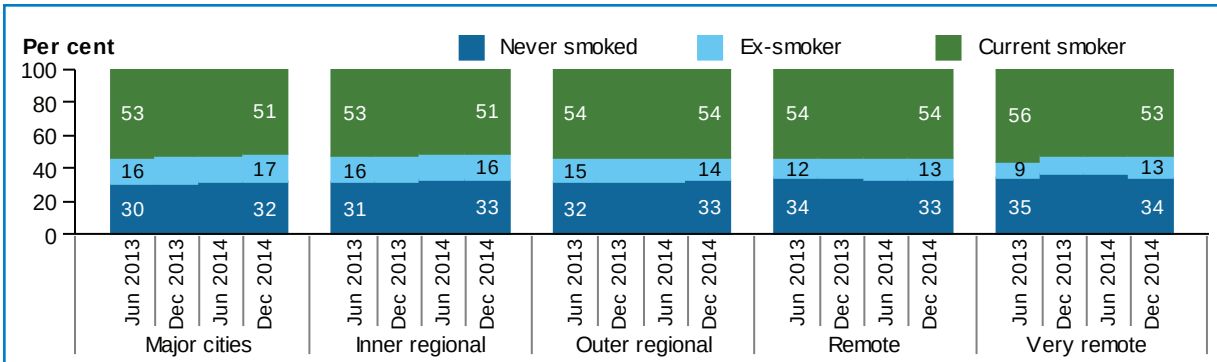


Figure 3.L3: Smoking status result, by remoteness

National variation was relatively low, with a substantial number of organisations recording a status of 'current smoker' for 50%–60% of their clients (Figure 3.L4).

- No organisation had 0 clients who were current smokers.
- One organisation (0.5%) had all of their clients aged 15 and over who were current smokers.
- In the top 25% of organisations, 47% or less of their clients were current smokers.
- In the bottom 25% of organisations, 59% or more of their clients were current smokers.

Variation within states/territories shows there was little variation among organisations across most jurisdictions, but it was highest in the Northern Territory (Figure A6.21).

Variation within remoteness shows that variation across most remoteness categories was fairly small but was highest in *Very remote* areas (Figure A6.22).

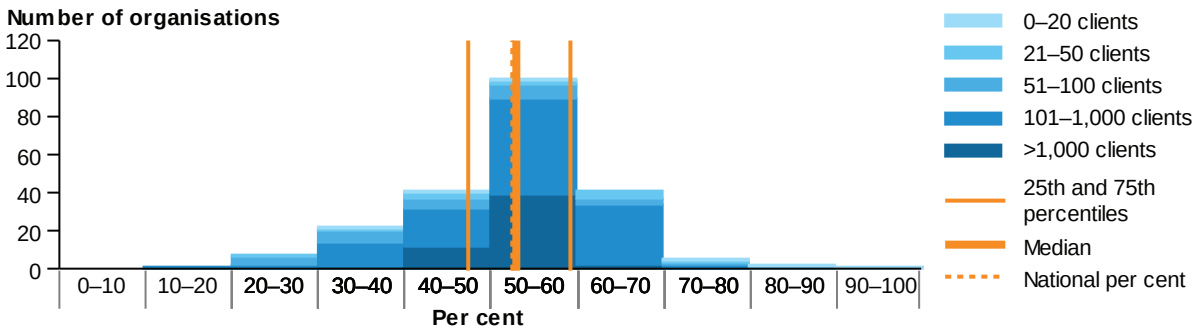


Figure 3.L4: Distribution of percentage of current smokers, by organisation and client numbers

Opportunities for action

- The high number or proportion of clients who are current smokers is influenced by a range of social determinants and tobacco control policies and activities outside the control of organisations, as well as by activities undertaken by organisations. A comprehensive approach to tobacco control is necessary to reduce smoking prevalence.
- A high number or proportion of clients who are current smokers does not necessarily indicate poor organisational performance. Regular clients are more likely to be unwell and seeking medical attention and therefore may be more likely to be smokers.
- More research is required to build the evidence base on effective programs to reduce smoking rates in Aboriginal and Torres Strait Islander communities.
- Smoking prevention efforts that are focused on younger age groups, as well as cultural and social factors, are important to reduce and prevent smoking.

M. BMI classified as overweight and obese

Nationally, an estimated 70% of Aboriginal and Torres Strait Islander regular clients aged 25 and over had their BMI recorded. Of them, 27% were overweight (BMI of 25 to less than 30) and 43% were obese (BMI of 30 or more) as at December 2014 (Figure 3.M1).

Trend showed an increase of 5 percentage points in the proportion who were overweight or obese since June 2012 (Figure 3.M1). The highest increase among jurisdictions was 15 percentage points in Queensland and the highest increase among remoteness areas was 19 percentage points in *Very remote* areas (figures 3.M2 and 3.M3, and tables A4.21 and A4.22). Further investigation of the trend data found that changes in recording practices of some organisations in *Very remote* areas of Queensland contributed to this increase.

Age and sex distribution showed females comprised a higher percentage of total overweight and obese regular clients than males across all age groups. There was a noticeable increase in the percentage of obese clients at age 35–44, then a decrease from age 65 and over (Table A5.8).

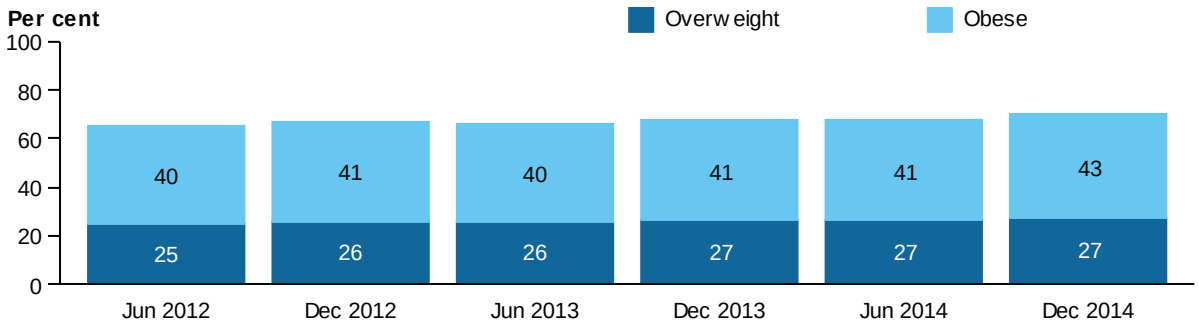


Figure 3.M1: BMI classified as overweight or obese, by reporting period

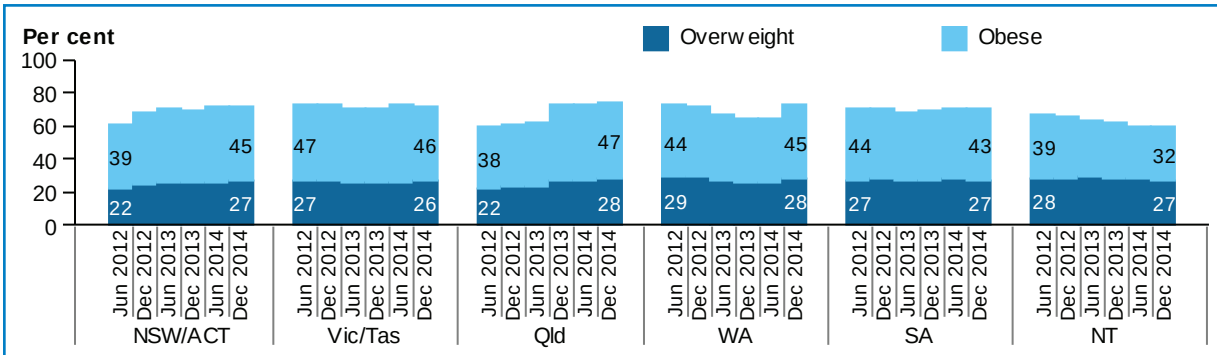


Figure 3.M2: BMI classified as overweight and obese, by jurisdiction

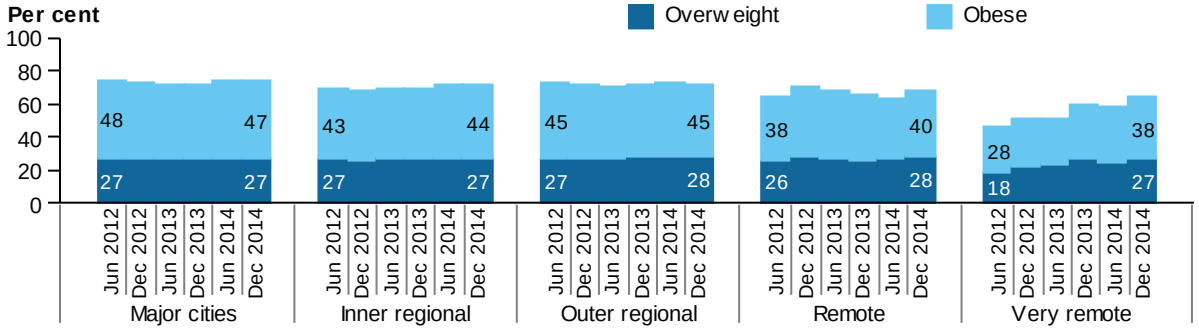


Figure 3.M3: BMI classified as overweight and obese, by remoteness

National variation was relatively low, and most organisations recorded 60%–80% of their clients as overweight or obese (Figure 3.M4).

- There were no organisations that did not have at least 1 overweight or obese client.
- Two organisations (1%) had all of their clients overweight or obese.
- In the top 25% of organisations, 65% or less of their clients were overweight or obese.
- In the bottom 25% of organisations, 77% or more of their clients were overweight or obese.

Variation within states/territories shows that the Northern Territory had the largest variation among organisations. There was little variation among organisations in all other jurisdictions (Figure A6.23).

Variation within remoteness shows a larger variation within organisations in *Remote* and *Very remote* areas and a smaller variation in *Inner regional* areas (Figure A6.24).

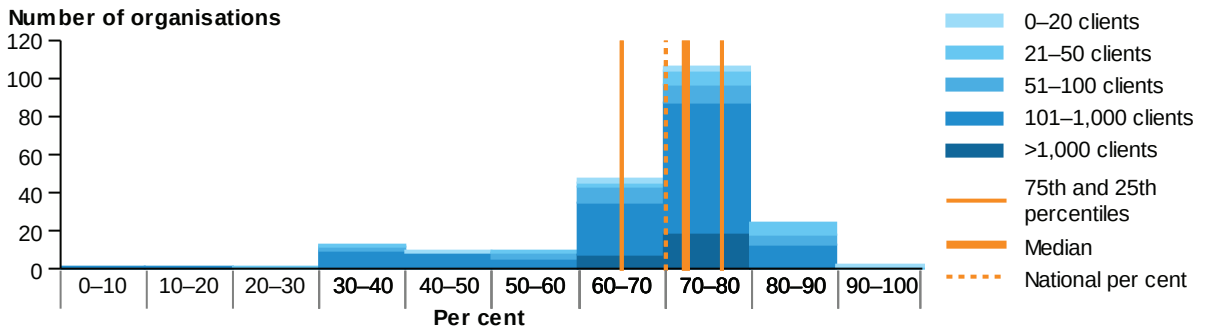


Figure 3.M4: Distribution of percentage of overweight and obese clients, by organisation and client numbers

Opportunities for action

- BMI is influenced by a range of social determinants and lifestyle factors outside the control of organisations. A high number or proportion of clients who are overweight or obese does not indicate poor organisational performance.
- Organisations could review whether sufficient attention is being paid to preventative programs that target nutrition and physical activity.
- Reversal of obesity is difficult, even in the absence of environmental and social barriers. Therefore, early intervention to prevent the onset of excessive weight gain is likely to be the most effective strategy (Thurber et al. 2014).
- Research shows that opportunities exist for obesity prevention in young children through practice-nurse brief interventions (Denney-Wilson et al. 2014).

Chapter 4

Organisation performance on chronic disease management indicators

Indicators of chronic disease management included in the nKPIs cover both process-of-care indicators (General Practitioner Management Plan, Team Care Arrangement, blood pressure recorded, HbA1c result recorded, kidney function test recorded, and immunised against influenza), and health outcome indicators (blood pressure result, HbA1c result, and kidney test result). The number of organisations contributing data on these indicators ranged from 155 to 211, and were located across all jurisdictions and remoteness areas (Table 4.1).

4.1 Why are these important?

Chronic diseases are major causes of morbidity and mortality among Aboriginal and Torres Strait Islander people. Effective management of chronic disease can delay the progression of disease, improve quality of life, increase life expectancy and decrease the need for high-cost interventions, leading to net savings (Thomas et al. 2014). Good quality care for people with chronic disease often involves multiple health care providers across multiple settings, and the engagement of the client and their family in self-management of the condition (NHPAC 2006). The MBS includes items for General Practitioner Management Plans (GPMPs) and Team Care Arrangements (TCAs) to support a structured, coordinated approach to management of patients with chronic conditions.

High blood pressure is a major risk factor for stroke, coronary heart disease, heart failure, kidney disease, deteriorating vision and peripheral vascular disease that leads to leg ulcers and gangrene. Reducing the prevalence of high blood pressure is one of the most important means of reducing serious circulatory diseases, which were the leading cause of death among Indigenous Australians in 2008–2012 (AHMAC 2015).

A client's HbA1c level reflects mean glycaemia over the last 2–3 months. Best-practice clinical guidelines recommend that clients with type 2 diabetes have an HbA1c test every 6 months (Diabetes Australia 2012).

Kidney dysfunction and chronic kidney disease (CKD) are often associated with an increased risk of adverse clinical outcomes, including cardiovascular risk and retinopathy. If the kidneys cease functioning entirely, waste products and excess water build up rapidly in the body. This can cause death within a few days or weeks unless kidney dialysis is available to filter the blood several times per week, or a new kidney is provided by transplant. Elevated albumin levels in the urine or a reduced glomerular filtration rate (GFR) increase the risk of morbidity and mortality. Annual screening for albuminuria by ACR (spot urine sample) and annual estimation of the glomerular filtration rate (eGFR) to assess kidney function in clients with diabetes or cardiovascular disease is recommended (Kidney Health Australia 2012; RACGP & Diabetes Australia 2014). An eGFR result of ≥90 mL/min/1.73 m^2 indicates normal kidney function, while an eGFR of 60–89 mL/min/1.73 m^2 indicates mildly reduced kidney function. An eGFR below that indicates moderately to severely reduced kidney function (Kidney Health Australia 2015).

Although an eGFR of ≥90 mL/min/1.73 m^2 is the ideal result, an eGFR result of ≥60 mL/min/1.73 m^2 was used in this report because results in this range indicate chronic kidney disease is not yet present in the client, and because treatment in the early stages of decreased kidney function can help prevent the onset of CKD.

Immunisation against influenza is recommended for all Indigenous people 15 years and over—Indigenous Australians have relatively high levels of chronic disease in general and people with chronic conditions are at risk of severe influenza infection. In particular, providing influenza vaccinations to people with type 2 diabetes and COPD substantially reduces their risk of hospitalisation and death from influenza and pneumonia (ATAGI 2013).

4.2 Summary of progress

- **General Practitioner Management Plans (GPMP)** were provided to 50% of Aboriginal and Torres Strait Islander clients with type 2 diabetes in the past 2 years, and the proportion of GPMPs provided increased by around 11 percentage points since June 2012 (Table 4.1).
- **Team Care Arrangements (TCA)** were claimed for 47% of Aboriginal and Torres Strait Islander clients with type 2 diabetes in the past 2 years. This is an increase of around 13 percentage points since June 2012 (Table 4.1).
- **Blood pressure** was recorded for 68% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes in the past 6 months, and 44% of these clients had a blood pressure result of ≤130/80 mmHg. The proportions increased by around 1 percentage point and 4 percentage points over time, respectively (Table 4.1).
- **HbA1c** was recorded for 51% of Aboriginal and Torres Strait Islander clients with type 2 diabetes within the past 6 months and 35% of these clients had a result of ≤7%. These proportions increased over the period from June 2012 to December 2014 (Table 4.1).
- **Kidney function tests** were completed for 66% and 63% of Aboriginal and Torres Strait Islander clients aged 15 and over with type 2 diabetes or CVD, respectively. Just over 81% of clients with type 2 diabetes had an eGFR result of ≥ 60 mL/min/1.73 m^2 and 76% of clients with CVD had the same result (Table 4.1). The proportion of kidney function tests recorded improved over time. Time trend results are not available for eGFR results.
- **Immunised against influenza** 42% and 41% of Aboriginal and Torres Strait Islander clients aged 15–49 with type 2 diabetes or COPD, respectively, were immunised against influenza. The proportion of clients with type 2 diabetes having an influenza immunisation increased from June 2013 to December 2014 (Table 4.1).

Things to consider when interpreting data for these indicators

- **Access to allied health providers** may be limited in some areas, in which case TCAs may not be practical. This is often the case in remote regions.
- **GP availability** may be limited in some areas, making it difficult for organisations to provide GPMPs and TCAs.
- **Influenza vaccination** does not include clients who are offered a vaccination but refuse. Also, organisations may not have records of immunisations that occurred at other places, such as workplaces.
- **MBS items** are not claimed by all organisations, either because they do not have a GP present, are not eligible to claim them, or because they choose not to do so. Therefore, the indicators based on MBS items may not reflect all related health-care activities carried out in an organisation.
- **Pathology results** held at the organisation may not reflect all pathology tests that have occurred for its regular clients. Organisations without systems in place may not have recorded the information, or results may not have been picked up accurately.
- **Small organisation denominators,** that is, <20 clients, can have a large impact on the overall proportion for an organisation with a small change in the numerator. For several indicators, many organisations contributing data had denominators of <20 clients (see Table 4.1 and Table A2.1).

Table 4.1: Summary of chronic disease management indicators, December 2014 and change over time

Indicator[a]	Clients seen[b]	% clients seen	Number of organisations included in the analyses	Variation across organisations (%)	Change over time (%)
General Practitioner Management Plan (GPMP)	16,515	50.3	211	0–100	11.2[c]
Team Care Arrangement (TCA)	15,471	47.2	211	0–100	12.7[c]
Blood pressure recorded	22,216	67.7	210	0–100	0.9[c]
HbA1c result recorded					
6 months	16,849	51.4	209	0–100	1.3[c]
Kidney function test recorded					
Type 2 diabetes, total	21,004	66.1	203	0–100	3.6[d]
CVD	9,224	63.5	196	0–100	8.8[d]
Immunised against influenza					
Type 2 diabetes	5,632	41.6	204	0–100	5.1[d]
COPD	667	41.3	155	0–100	7.7[d]
Blood pressure result	9,776	44.0	209	0–100	3.8[c]
HbA1c result					
6 months, ≤7%	5,912	35.1	205	0–100	2.9[c]
Kidney test result[e]					
Type 2 diabetes, ≥60 mL/min/1.73 m^2	16,329	81.1	197	0–100	. .
CVD, ≥60 mL/min/1.73 m^2	7,010	76.0	191	0–100	. .

(a) 14%–90% of organisations contributing to these indicators had denominators of <20 clients. Clients with COPD immunised against influenza had 90% of organisations with a denominator of <20 clients. See Table A2.1 for organisation proportions by indicator.

(b) 'Clients seen' is the total (national) denominator for all organisations with valid data.

(c) Change in percentage points between the reporting periods June 2012 and December 2014.

(d) Change in percentage points between the reporting periods June 2013 and December 2014.

(e) Collected for the first time in December 2014.

. . Not applicable.

Note: 'Number of organisations included in the analyses' excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.

Source: AIHW analyses of the nKPI data collection.

N. General Practitioner Management Plan—clients with type 2 diabetes

Nationally, 50% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a General Practitioner Management Plan (GPMP) (MBS item 721) provided in the past 2 years as at December 2014 (Figure 4.N1).

Trend showed an increase of 11 percentage points since June 2012 (Figure 4.N1). The largest improvements among jurisdictions were in Western Australia and Queensland, with 20 and 12 percentage points, respectively. Among remoteness areas, *Very remote* and *Inner regional* areas had the largest improvements, with 29 percentage points and 14 percentage points, respectively (figures 4.N2 and 4.N3, and tables A4.23 and A4.24).

Age and sex distribution showed the proportion of regular clients with type 2 diabetes who received a GPMP in the last 2 years increased with age for males and females (Table A5.9).

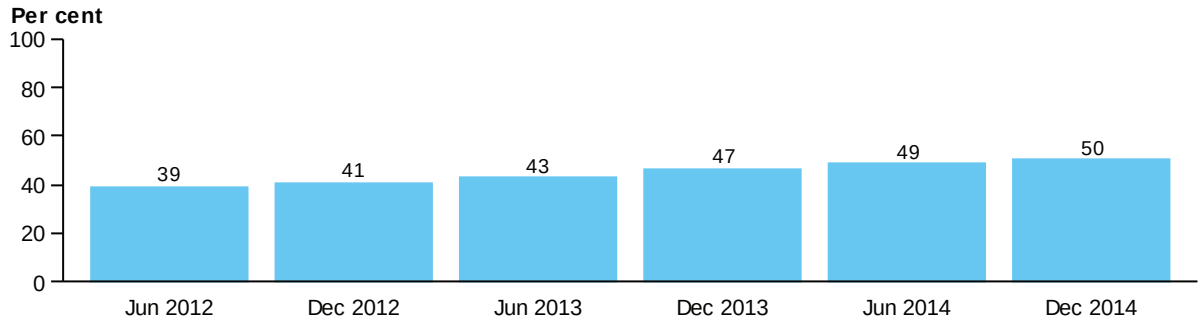


Figure 4.N1: GPMP provided, by reporting period

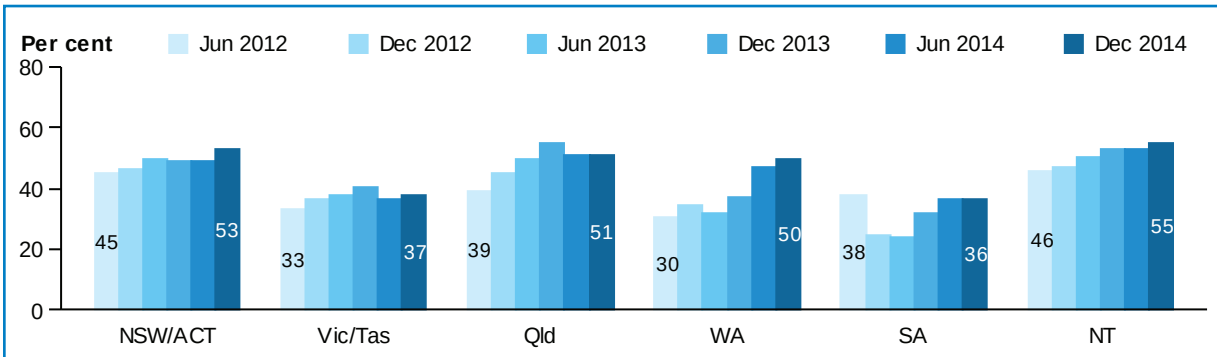


Figure 4.N2: GPMP provided, by jurisdiction

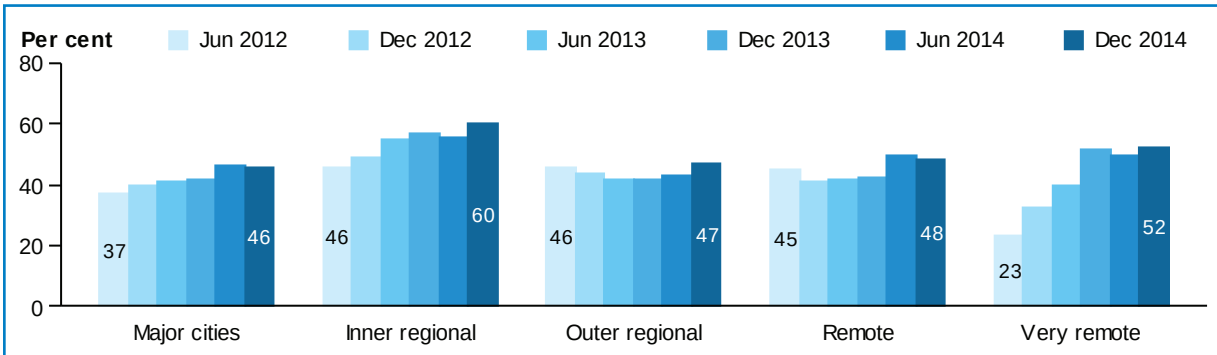


Figure 4.N3: GPMP provided, by remoteness

National variation was high, with GPMPs provided inconsistently across organisations (Figure 4.N4).

- Five organisations (2%) provided GPMPs for 100% of their clients with type 2 diabetes.
- Ten organisations (5%) did not provide a GPMP for any of their clients with type 2 diabetes.
- In the top 25% of organisations, 77% or more of clients with type 2 diabetes had a GPMP provided.
- In the bottom 25% of organisations, 37% of clients or less with type 2 diabetes had a GPMP provided.

Variation within states/territories shows relatively little variation among jurisdictions (Figure A6.25).

Variation within remoteness shows that most remoteness categories had similar levels of variation among organisations (Figure A6.26).

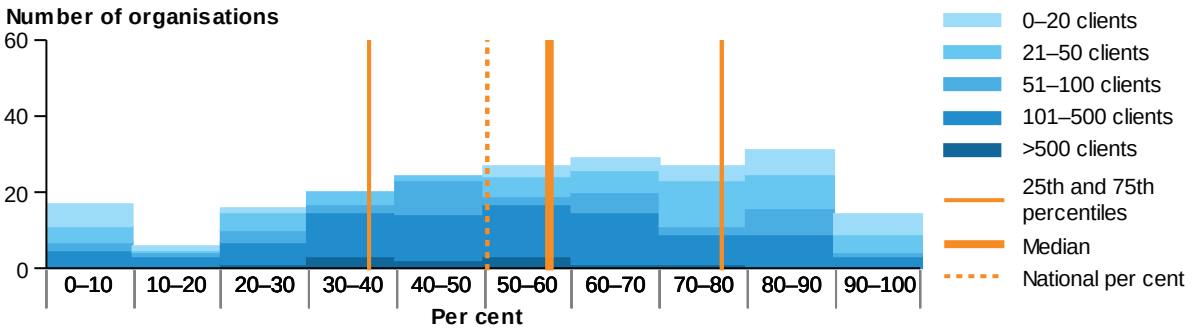


Figure 4.N4: Distribution of percentage of GPMPs provided, by organisation and client numbers

Opportunities for action

- Improvements against this indicator nationally and in all jurisdictions over the 6 collections show effective action by many organisations.
- There would appear to be many clients missing out on a GPMP—one-quarter of organisations have GPMPs in place for 37% or less of their clients with type 2 diabetes.
- An achievable goal appears to be to have around three-quarters (77%) or more of clients with type 2 diabetes on a GPMP, as 25% of organisations were able to achieve 77% or higher.
- Some organisations may be undertaking care plans for their clients but are either not eligible to claim MBS items or are not completing them in a way that meets all the requirements for MBS billing. This may be caused by difficulties in establishing and sustaining the required business processes at the clinic, or lack of access to a GP or a preferred model of care. This indicator may need to have a variable benchmark depending on local circumstances. More information is required on the barriers faced by organisations.

O. Team Care Arrangement—clients with type 2 diabetes

Nationally, 47% of Aboriginal and Torres Strait Islander clients with type 2 diabetes had a Team Care Arrangement (TCA) (MBS item 723) provided in the past 2 years as at December 2014 (Figure 4.O1).

Trend showed an increase of 12 percentage points since June 2012 (Figure 4.O1). There were improvements in all jurisdictions and remoteness areas, with the highest increases occurring in the Northern Territory and Western Australia, and in *Very remote* areas (figures 4.O2 and 4.O3, and tables A4.25 and A4.26).

Age and sex distribution showed that the proportion of regular clients with type 2 diabetes who had a TCA in the last 2 years increased with age for males and females (Table A5.10).

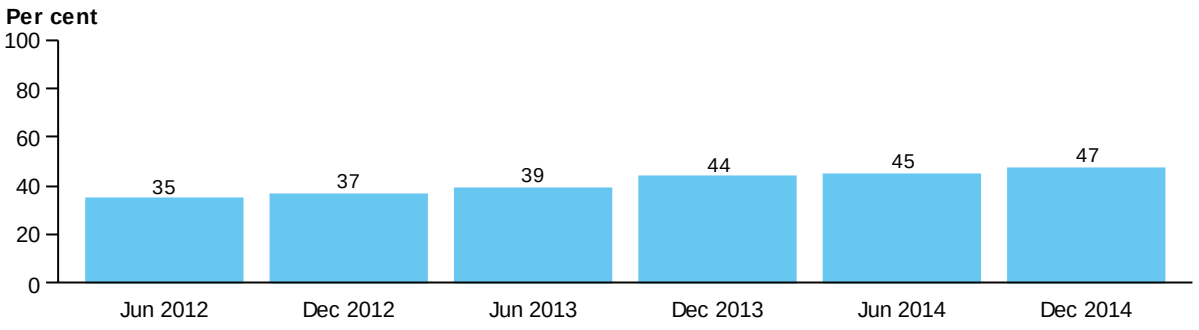


Figure 4.O1: TCA provided, by reporting period

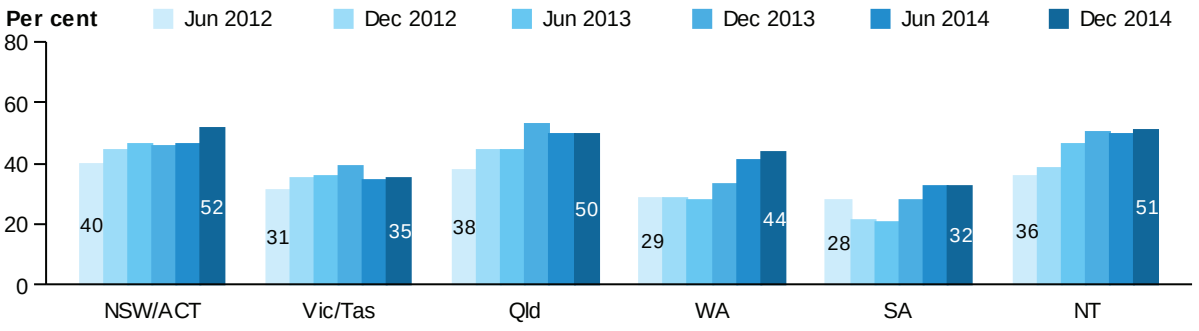


Figure 4.O2: TCA provided, by jurisdiction

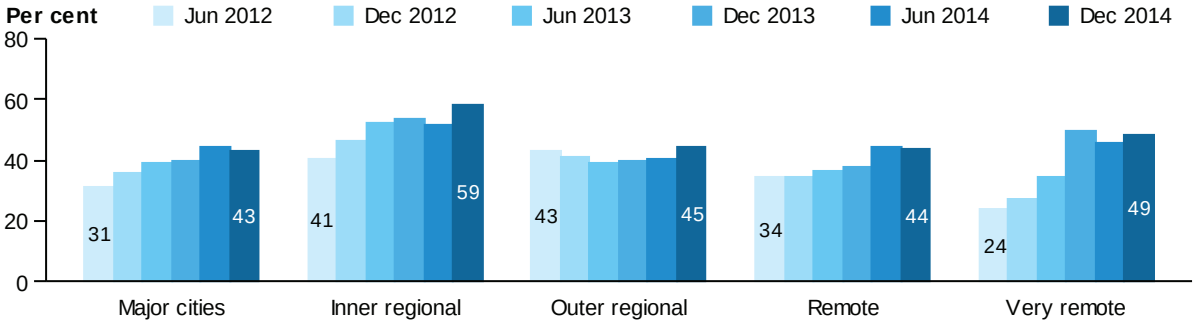


Figure 4.O3: TCA provided, by remoteness

National variation was large, but most organisations with 101–500 clients provided TCAs to 30%–70% of the clients (Figure 4.O4).

- Three organisations (1%) provided TCAs for 100% of their clients with type 2 diabetes.
- Fourteen organisations (7%) did not provide TCAs for any of their clients with type 2 diabetes.
- The top 25% of organisations provided a TCA to 73% or more of their clients with type 2 diabetes.
- The bottom 25% of organisations provided a TCA to 31% or less of their clients with type 2 diabetes.

Variation within states/territories shows that Victoria/Tasmania had the largest amount of variation among organisations. There was little variation among organisations in Western Australia (Figure A6.27).

Variation within remoteness shows most remoteness categories had a similar amount of variation among organisations, but it was highest in *Outer regional* areas (Figure A6.28).

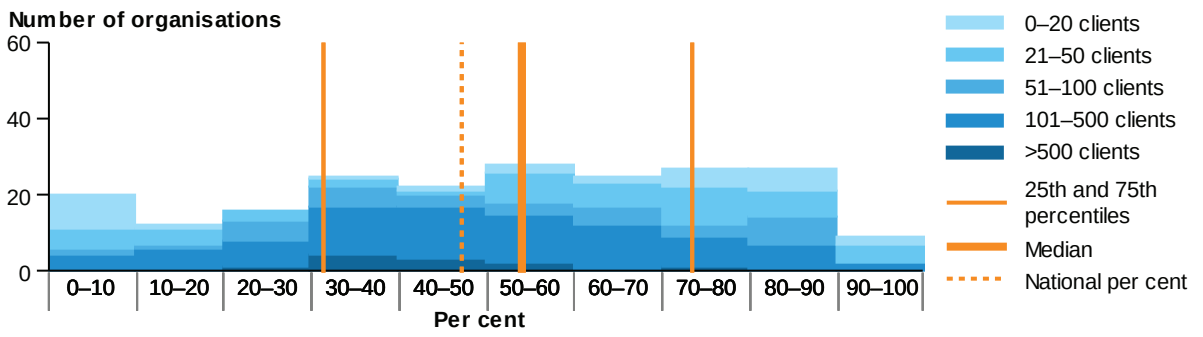


Figure 4.O4: Distribution of percentage of TCAs provided, by organisation and client numbers

Opportunities for action

- Improvement at the national level and across most jurisdictions over the 6 data collections from June 2012 indicates that there is room for improvement for many organisations against this indicator.
- The 25% of organisations that have TCAs in place for 31% or less of their clients have an opportunity to review current practices and priorities and the potential to do more.
- Some organisations may be undertaking TCAs for their clients with type 2 diabetes, but either might not be eligible to claim MBS items or are not completing them in a way that meets all the requirements for MBS billing. This may be due to their preferred models of care or to difficulties in establishing and sustaining the necessary business processes.
- A benchmark for this indicator of around 70% may be achievable as the top one-quarter of organisations achieved a result of 73%. This may be influenced by the relative need for these arrangements across the population.

P. Blood pressure recorded—clients with type 2 diabetes

Nationally, 68% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a blood pressure result recorded in the past 6 months as at December 2014 (Figure 4.P1).

Trend showed a decline of 4 percentage points from June 2012 to June 2013, followed by an increase of 5 percentage points to December 2014 (Figure 4.P1). Western Australia improved by 8 percentage points between June 2012 and December 2014,while South Australia decreased by 6 percentage points. The Northern Territory decreased by 5 percentage points, but this jurisdiction has been fairly stable across most reporting periods after June 2012. Most remoteness areas did not show improvements over the period, but *Very remote* areas increased by 7 percentage points (figures 4.P2 and 4.P3, and tables A4.27 and A4.28).

Age and sex distribution showed the percentage of regular clients with type 2 diabetes who had a blood pressure result recorded in the past 6 months increased with age up to age 64 for males and females (Table A5.11).

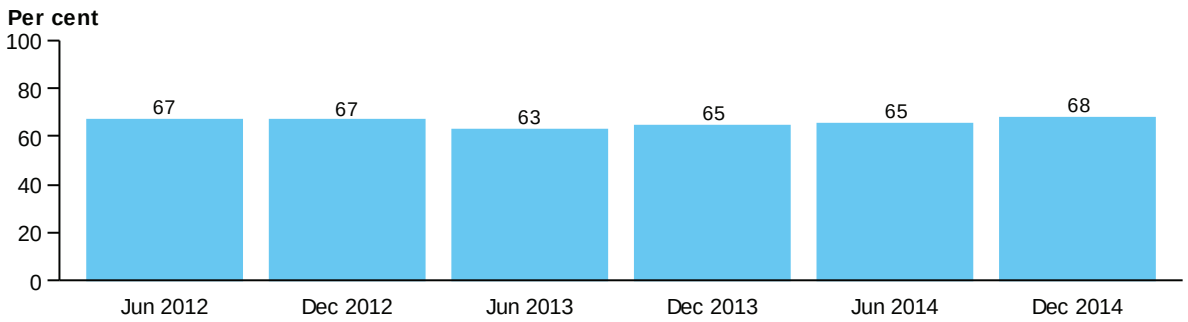


Figure 4.P1: Blood pressure recorded, by reporting period

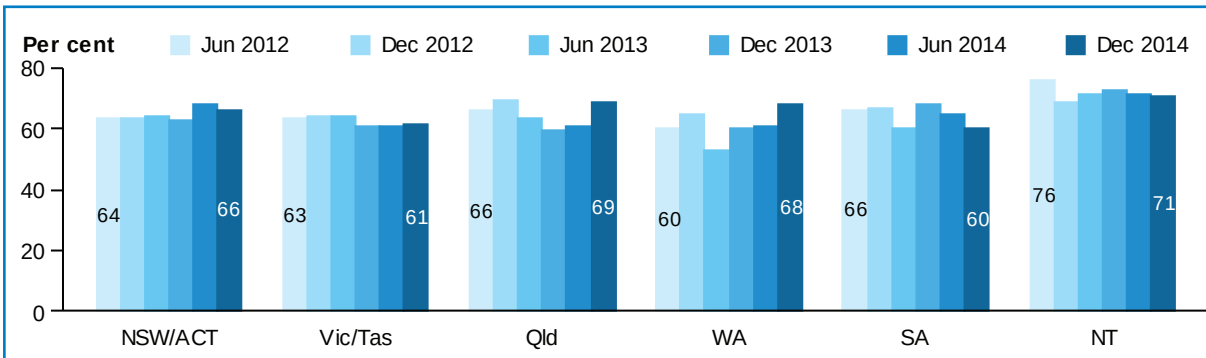


Figure 4.P2: Blood pressure recorded, by jurisdiction

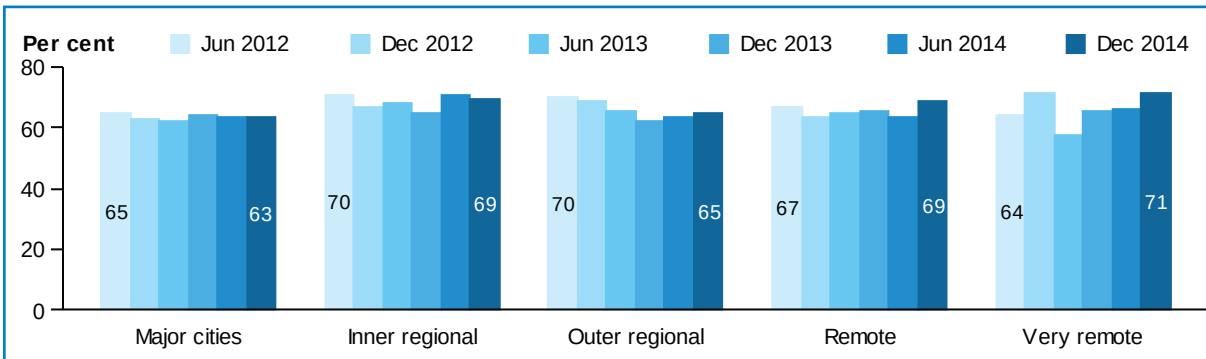


Figure 4.P3: Blood pressure recorded, by remoteness

National variation was relatively low; most organisations recorded blood pressure for 60% or more of their clients (Figure 4.P4).

- Thirteen organisations (6%) recorded blood pressure for 100% of clients with type 2 diabetes.
- One organisation (0.5%) did not record blood pressure for any clients with type 2 diabetes.
- The top 25% of organisations recorded blood pressure for 87% or more of their clients with type 2 diabetes.
- The bottom 25% of organisations recorded blood pressure for 63% or less of their clients with type 2 diabetes.

Variation within states/territories shows there was little variation among organisations across all jurisdictions (Figure A6.29).

Variation within remoteness shows *Remote* and *Inner regional* areas had the largest amount of variation among organisations. There was little variation among organisations in *Major cities* (Figure A6.30).

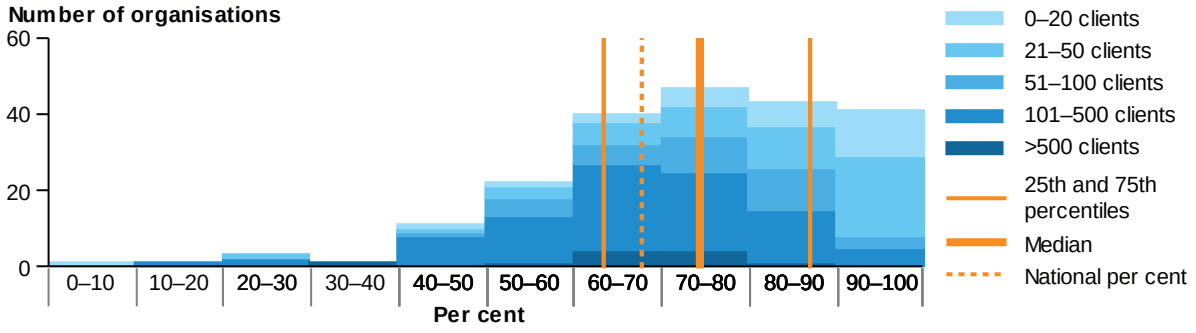


Figure 4.P4: Distribution of percentage of blood pressure recordings for clients with type 2 diabetes, by organisation and client numbers

Opportunities for action

- This indicator showed a slight increase at the national level (to 68%), though a decline in some jurisdictions.
- One-quarter of organisations are achieving 87% or more of clients with type 2 diabetes having a blood pressure test, which exceeds this target.
- Organisations with poor results may want to review whether their data are being captured, but not in a way suitable for the nKPI extraction process.

Q. HbA1c result recorded—clients with type 2 diabetes

Nationally, 51% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had their glycosylated haemoglobin (HbA1c) result recorded within the past 6 months as at December 2014; a further 17% had a result recorded between 6 and 12 months prior; therefore a total of 68% had a result recorded in the past 12 months (Figure 4.Q1).

Trend showed an increase of 1 percentage point in the proportion of clients who had their HbA1c recorded in the past 6 months between June 2012 and December 2014 (Figure 4.Q1). There were improvements in Queensland and Western Australia, as well as in *Major cities* and *Very remote* areas. There were decreases in South Australia and Victoria/Tasmania and in *Inner regional* and *Outer regional* areas (figures 4.Q2 and 4.Q3, and tables A4.29 and A4.30).

Age and sex distribution showed higher proportions of females up to age 64 had HbA1c results recorded in the past 6 months and past 12 months than did males. From age 65, this was reversed (Table A5.12).

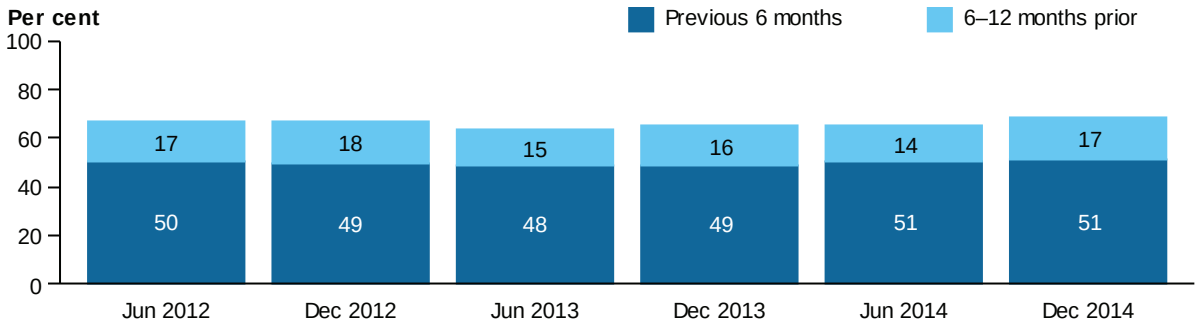


Figure 4.Q1: HbA1c result recorded, by reporting period

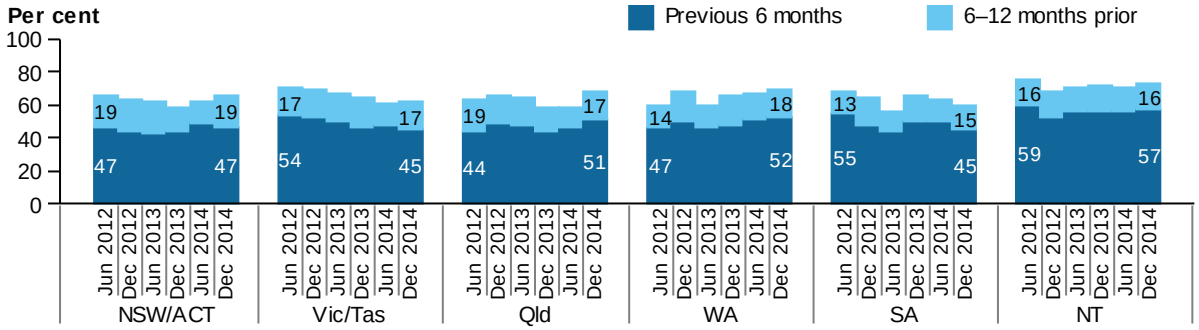


Figure 4.Q2: HbA1c result recorded, by jurisdiction

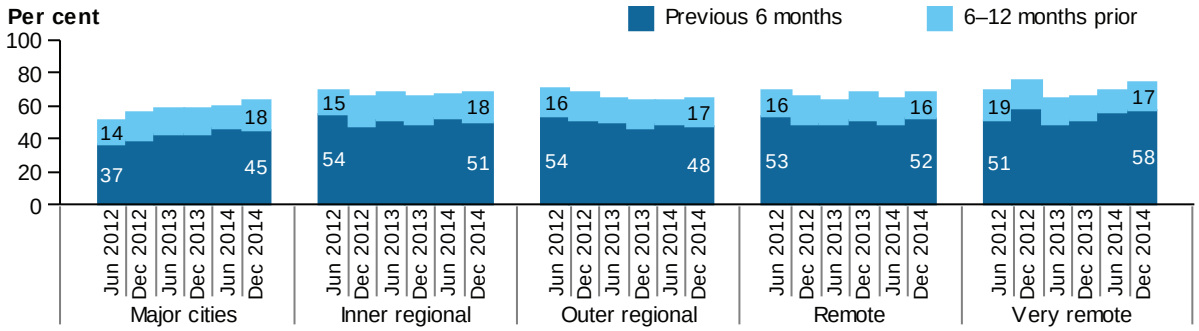


Figure 4.Q3: HbA1c result recorded, by remoteness

National variation was relatively large, although very few organisations recorded an HbA1c result for 30% or less of their clients with type 2 diabetes in the previous 6 months (Figure 4.Q4).

- Seven organisations (3%) recorded an HbA1c result for 100% of their clients with type 2 diabetes.
- Four organisations (2%) did not record an HbA1c result for any of their clients with type 2 diabetes.
- The top 25% of organisations recorded an HbA1c result for 74% or more of their clients.
- The bottom 25% of organisations recorded an HbA1c result for 41% or less of their clients.

Variation within states/territories shows that most jurisdictions had similar amounts of variation among organisations. Variation was highest in the Northern Territory and lowest in Western Australia (Figure A6.31).

Variation within remoteness shows there was little variation among organisations across most remoteness areas, but *Major cities* had the smallest amount of variation (Figure A6.32).

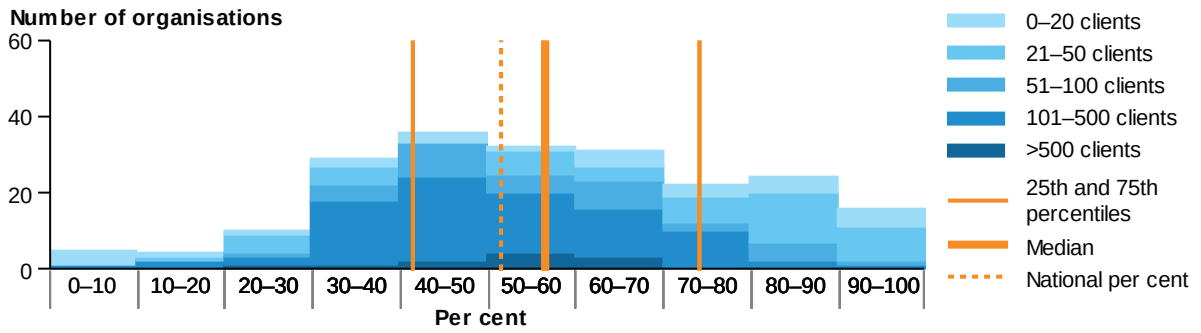


Figure 4.Q4: Distribution of percentage of HbA1c recordings in the past 6 months, by organisation and client numbers

Opportunities for action

- This indicator showed little change at the national level (51% in December 2014).
- One-quarter of organisations are achieving 74% or more of their clients with HbA1c result recorded.
- The bottom one-quarter of organisations are recording an HbA1c result for 41% or less of their clients, and there are large opportunities for improvement.

R. Kidney function test recorded—clients with type 2 diabetes

Nationally, 66% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes aged 15 and over had either an estimated glomerular filtration rate (eGFR) or albumin/creatinine ratio (ACR) recorded or both an eGFR and an ACR recorded in the past 12 months as at December 2014 (Figure 4.R1).

Trend showed an increase of 3 percentage points in the total number of clients who had a kidney function test since June 2013 (Figure 4.R1). The highest increases among jurisdictions and remoteness areas were 6 percentage points in the Northern Territory and 10 percentage points in *Very remote* areas. At the other end of the scale, South Australia and *Outer regional* areas decreased by 4 percentage points and 3 percentage points, respectively (figures 4.R2 and 4.R3, and tables A4.31 and A4.32).

Age and sex distribution showed that, up to age 54, a higher percentage of females with type 2 diabetes had a total eGFR and/or ACR recorded in the past 12 months than did males. From age 55, the percentages were fairly equal between males and females (Table A5.13).

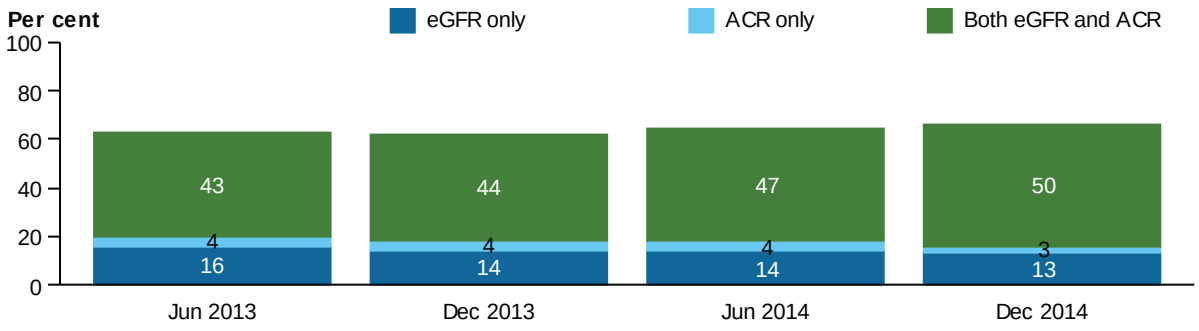


Figure 4.R1: Kidney function test recorded for clients with type 2 diabetes, by reporting period

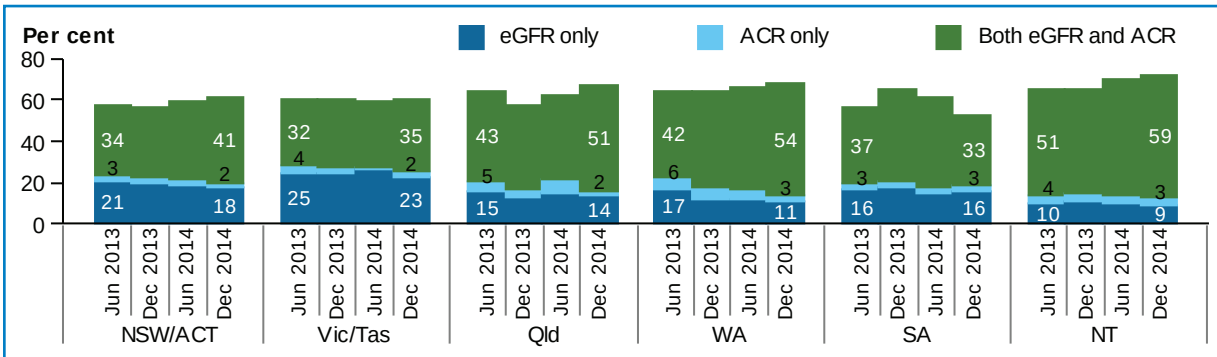


Figure 4.R2: Kidney function test recorded for clients with type 2 diabetes, by jurisdiction

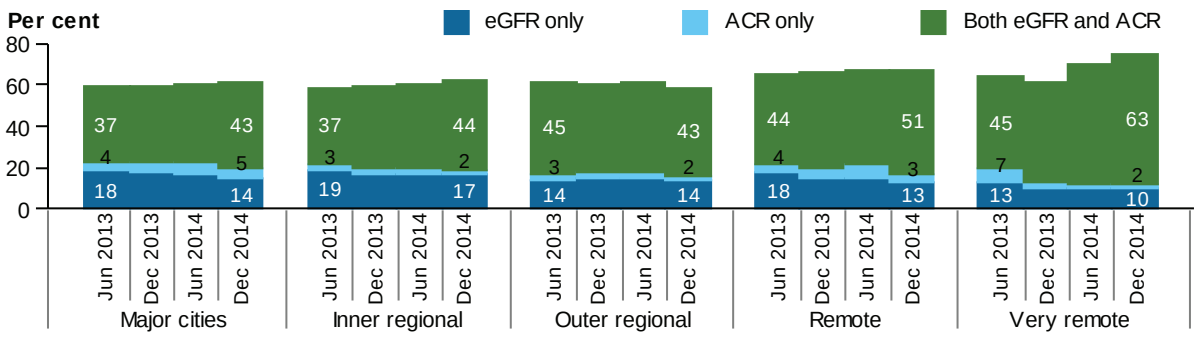


Figure 4.R3: Kidney function test recorded for clients with type 2 diabetes, by remoteness

National variation was relatively low; almost one-quarter of organisations recorded a kidney function test for 90–100% of their clients with type 2 diabetes (Figure 4.R4).

- Thirteen organisations (6%) recorded kidney function tests for 100% of their clients with type 2 diabetes.
- Five organisations (2%) did not record kidney function tests for any of their clients with type 2 diabetes.
- In the top 25% of organisations, 89% or more of clients with type 2 diabetes had a kidney function test recorded.
- In the bottom 25% of organisations, 62% or less of clients with type 2 diabetes had a kidney function test recorded.

Variation within states/territories shows Victoria/Tasmania had the highest amount of variation among organisations while the Northern Territory and Queensland had little variation (Figure A6.33).

Variation within remoteness shows most remoteness areas had little variation among organisations, but *Outer regional* areas had the highest amount of variation (Figure A6.34).

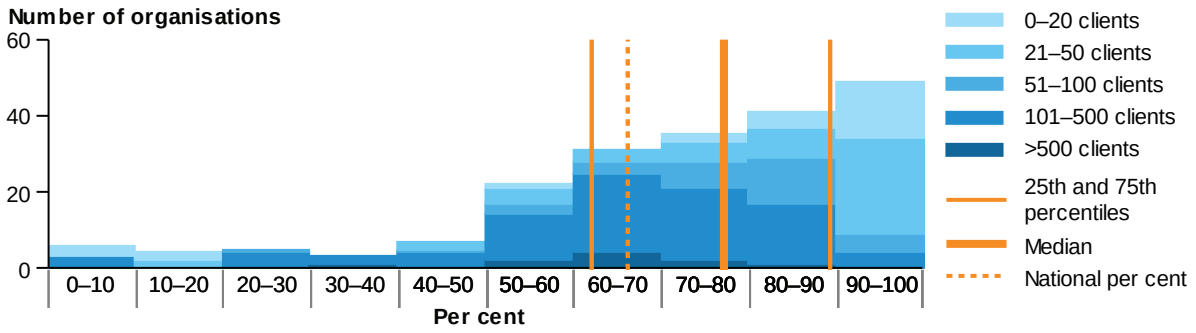


Figure 4.R4: Distribution of percentage of kidney function tests for clients with type 2 diabetes, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator and nationally, 66% of regular clients had a kidney function test recorded.
- The top one-quarter of organisations recorded a kidney function test for at least 89% of their clients with type 2 diabetes.
- Improvement against this indicator should be a high priority for the 25% of organisations in which 62% or less of their regular clients with type 2 diabetes had a kidney function test.
- All clients with type 2 diabetes should have a kidney function test to routinely screen for indications of renal disease.

S. Kidney function test recorded—clients with cardiovascular disease

Nationally, 63% of Aboriginal and Torres Strait Islander regular clients with CVD aged 15 and over had an eGFR recorded in the past 12 months as at December 2014 (Figure 4.S1).

Trend showed a steady increase totalling 8 percentage points between June 2013 and December 2014 (Figure 4.S1). The proportion increased by 15 percentage points in Queensland and 10 percentage points in South Australia, and by 26 percentage points in *Very remote* areas. *Major cities* decreased by 2 percentage points (figures 4.S2 and 4.S3, and tables A4.33 and A4.34).

Age and sex distribution showed that the percentage of males with CVD who had an eGFR recorded within the previous 12 months increased with age (Table A5.14).

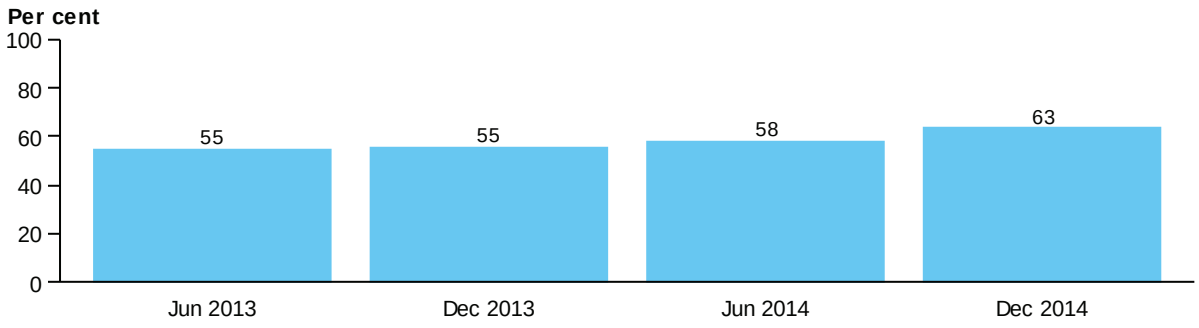


Figure 4.S1: Kidney function test recorded for clients with CVD, by reporting period

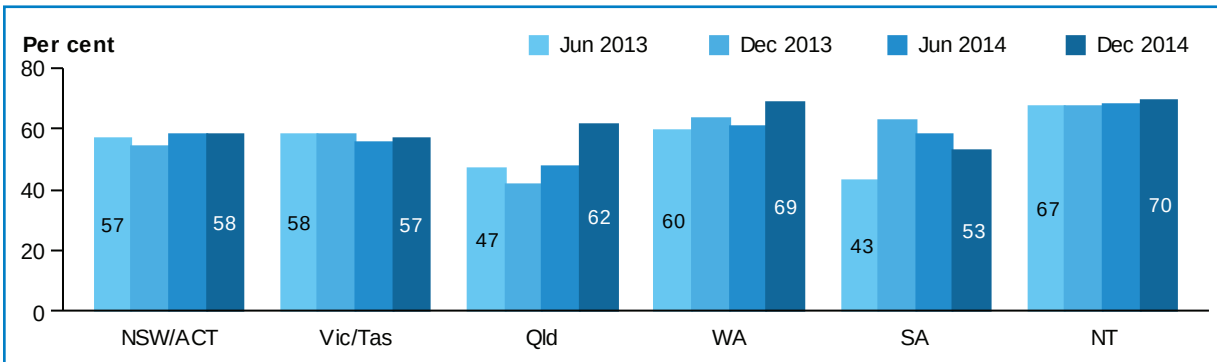


Figure 4.S2: Kidney function test recorded for clients with CVD, by jurisdiction

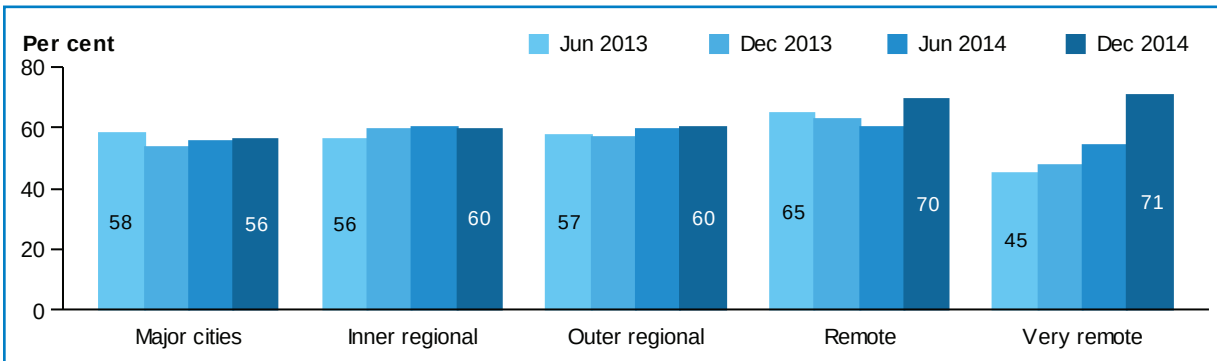


Figure 4.S3: Kidney function test recorded for clients with CVD, by remoteness

National variation was low, as more than 4 in 5 organisations recorded a kidney function test for over one-half of their clients with CVD (Figure 4.S4).

- Nineteen organisations (10%) recorded kidney function tests for 100% of their clients with CVD.
- Five organisations (2%) did not provide a kidney function test for any of their clients with CVD.
- In the top 25% of organisations, 86% of clients or more had a kidney function test recorded.
- In the bottom 25% of organisations, 56% of clients or less had a kidney function test recorded.

Variation within states/territories was highest for organisations in Victoria/Tasmania, with variation about twice as high as most other jurisdictions. There was little variation for organisations in Queensland and Western Australia (Figure A6.35).

Variation within remoteness was relatively low, but was lowest for organisations in *Major cities* and highest in *Outer regional* areas (Figure A6.36).

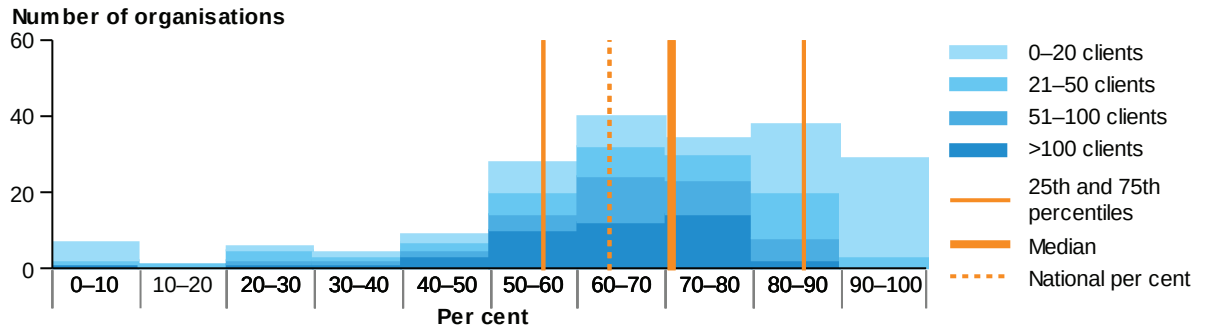


Figure 4.S4: Distribution of percentage of kidney function tests for clients with CVD, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator.
- The data suggest that organisations can provide kidney function tests for at least 86% of their clients with CVD, as 25% of organisations were able to achieve this.
- Improvement against this indicator should be a high priority for the 25% of organisations in which 56% or less of their regular clients with CVD had a kidney function test.

T. Immunised against influenza—clients with type 2 diabetes

Nationally, 42% of Aboriginal and Torres Strait Islander regular clients aged 15–49 with type 2 diabetes were immunised against influenza as at December 2014 (Figure 4.T1).

Trend showed an increase of 5 percentage points from June 2013 to December 2014 (Figure 4.T1). Most jurisdictions showed improvements, with Western Australia increasing by 19 percentage points, but Queensland decreased by 11 percentage points. All remoteness areas improved, with *Remote* areas increasing by 9 percentage points (figures 4.T2 and 4.T3, and tables A4.35 and A4.36).

Age and sex distribution showed that proportions of both males and females with type 2 diabetes who were immunised against influenza increased with age (Table A5.15).

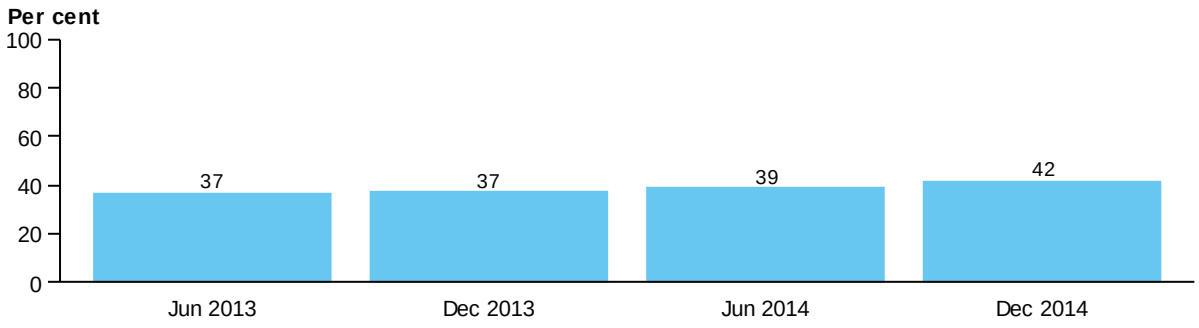


Figure 4.T1: Influenza immunisation for clients with type 2 diabetes, by reporting period

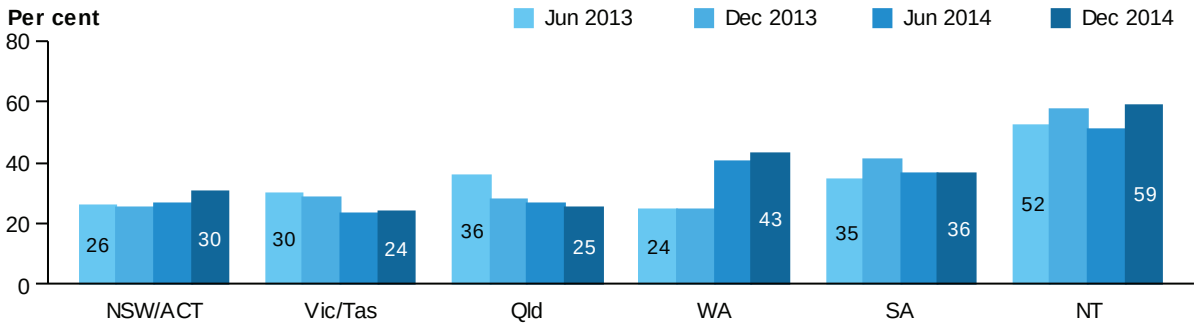


Figure 4.T2: Influenza immunisation for clients with type 2 diabetes, by jurisdiction

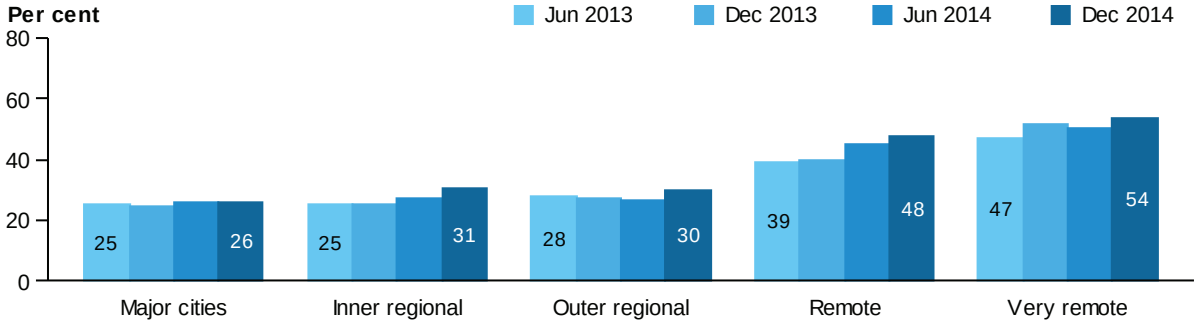


Figure 4.T3: Influenza immunisation for clients with type 2 diabetes, by remoteness

National variation by organisations was large. About one-fifth of organisations had 20%–30% of clients immunised against influenza (Figure 4.T4).

- Six organisations (3%) had 100% of their clients with type 2 diabetes immunised against influenza.
- Twelve organisations (6%) had no clients with type 2 diabetes immunised against influenza.
- In the top 25% of organisations, 74% or more clients with type 2 diabetes aged 15–49 were immunised against influenza.
- In the bottom 25% of organisations, 22% of clients or less with type 2 diabetes aged 15–49 were immunised against influenza.

Variation within states/territories shows that Western Australia had the largest amount of variation among organisations. There was little variation among organisations in South Australia and Queensland (Figure A6.37).

Variation within remoteness shows *Remote* and *Very remote* areas had the highest amount of variation among organisations (Figure A6.38).

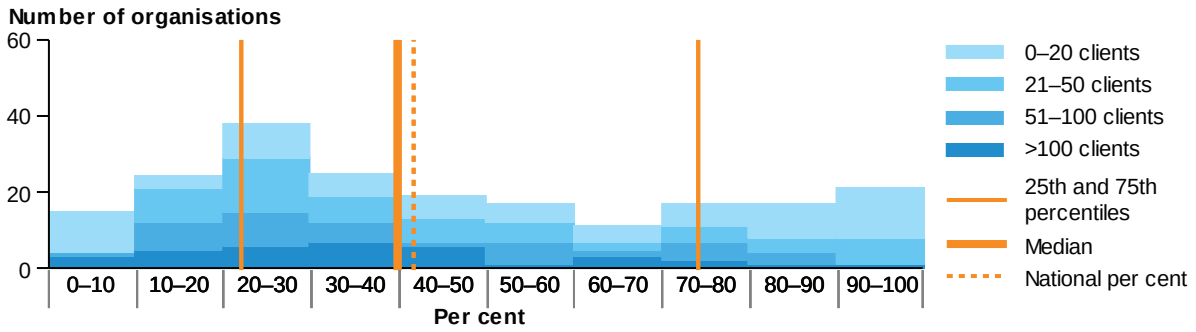


Figure 4.T4: Distribution of percentage of clients with type 2 diabetes who were immunised against influenza, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator and demonstrates an increase in clients aged 15–49 with type 2 diabetes who were immunised against influenza, from 37% to 42%, nationally.
- Organisations need to ensure their records of adult immunisation status are accurate. CQI efforts could focus initially on this.
- All organisations should take responsibility for monitoring the immunisation status of their clients, and for using their recall systems to assist with vaccinating as per guidelines in the National Immunisation Programme Schedule.
- The data suggest that organisations can provide influenza vaccinations for at least 74% of their clients with type 2 diabetes (the figure achieved by the top one-quarter of organisations).

U. Immunised against influenza—clients with chronic obstructive pulmonary disease

Nationally, 41% of Aboriginal and Torres Strait Islander regular clients aged 15–49 with COPD were immunised against influenza as at December 2014 (Figure 4.U1).

Trend showed an inconsistent overall increase of 7 percentage points nationally over the period June 2013 to December 2014 (Figure 4.U1). The largest improvements among jurisdictions were in South Australia and Western Australia and, among remoteness areas, in *Very remote* and *Remote* areas. Victoria/Tasmania and Queensland decreased, as did *Outer regional* areas (figures 4.U2 and 4.U3, and tables A4.37 and A4.38).

Age and sex distribution showed the percentage of males with COPD who were immunised against influenza increased with age. This did not occur for females with COPD (Table A5.15).

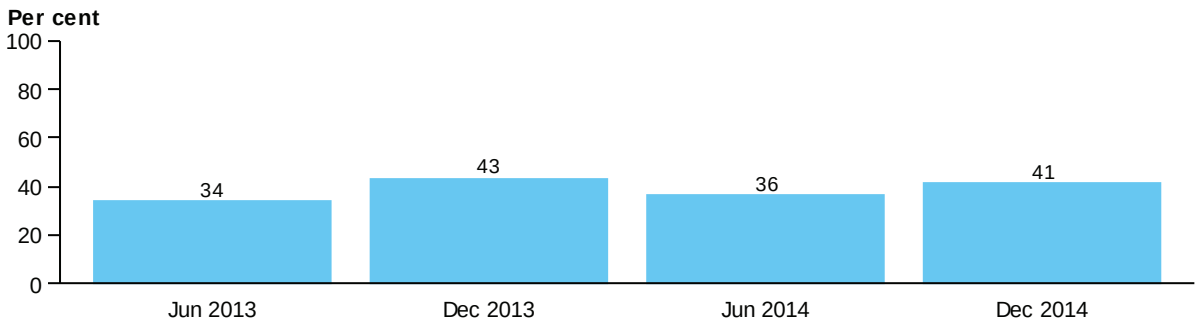


Figure 4.U1: Influenza immunisation for clients with COPD, by reporting period

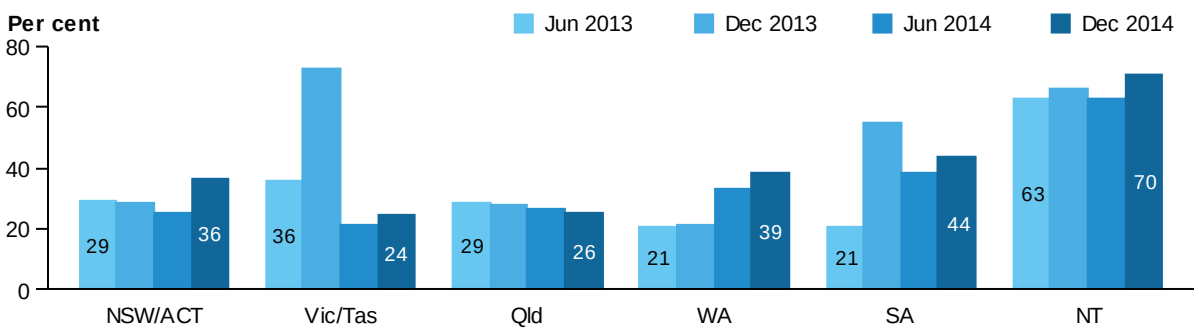


Figure 4.U2: Influenza immunisation for clients with COPD, by jurisdiction

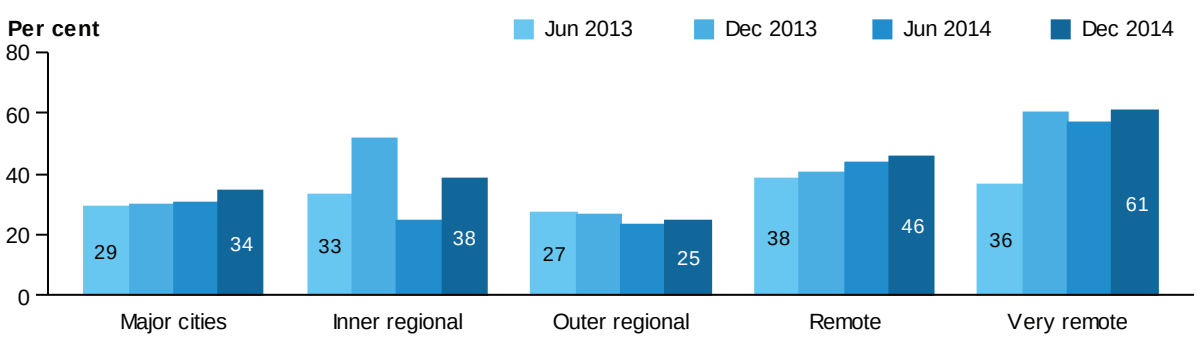


Figure 4.U3: Influenza immunisation for clients with COPD, by remoteness

National variation was high—however, as most organisations submitting data against this indicator had 20 or fewer clients, this may have increased the volatility of results and led to the distribution spread (Figure 4.U4).

- Twenty organisations (13%) had 100% of clients with COPD immunised against influenza.
- Twenty-nine organisations (19%) had no clients with COPD immunised against influenza.
- In the top 25% of organisations, at least 67% of clients with COPD were immunised against influenza.
- In the bottom 25% of organisations, less than 12% of clients were immunised against influenza.

Variation within states/territories shows Western Australia and the Northern Territory had the largest amount of variation and South Australia had the smallest amount of variation among organisations (Figure A6.39).

Variation within remoteness was relatively high, and largest in *Remote* and *Very remote* areas. It was smallest in *Major cities* (Figure A6.40).

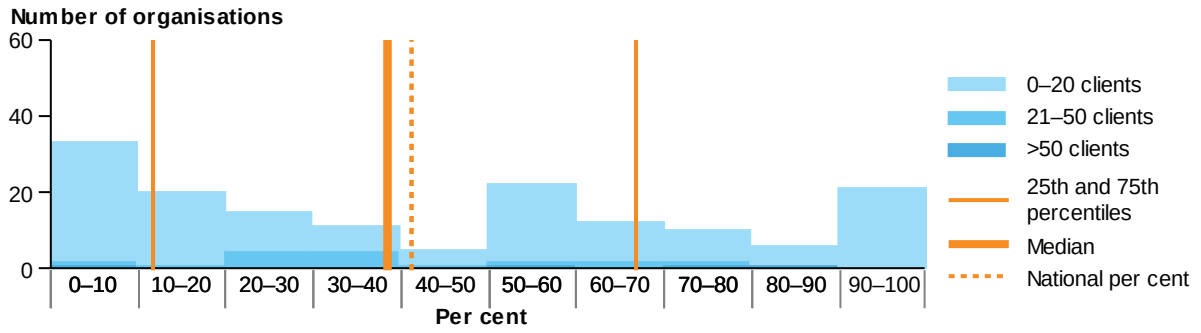


Figure 4.U4: Distribution of percentage of clients with COPD who were immunised against influenza, by organisation and client numbers

Opportunities for action

- December 2014 was the fourth time data were collected for this indicator, with the data showing no clear trend nationally.
- Organisations need to ensure their records of adult immunisation status are accurate. CQI efforts could initially focus on this.
- The data suggest that organisations can provide influenza vaccinations for at least 67% of their clients with chronic obstructive pulmonary disease (the figure achieved by the top one-quarter of organisations).

V. Blood pressure result—clients with type 2 diabetes

Nationally, 44% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a blood pressure result of less than or equal to 130/80 mmHg as at December 2014 (Figure 4.V1).

Trend showed increases between most reporting periods, with an overall change of 4 percentage points between June 2012 and December 2014 (Figure 4.V1). There were improvements in New South Wales/ Australian Capital Territory and the Northern Territory, but there were decreases in South Australia and Victoria/Tasmania. *Inner regional* areas increased by 6 percentage points (figures 4.V2 and 4.V3, and tables A4.39 and A4.40).

Age and sex distribution showed that a higher percentage of female than male clients aged 15–64 had a blood pressure result of ≤130/80 mmHg (Table A5.16).

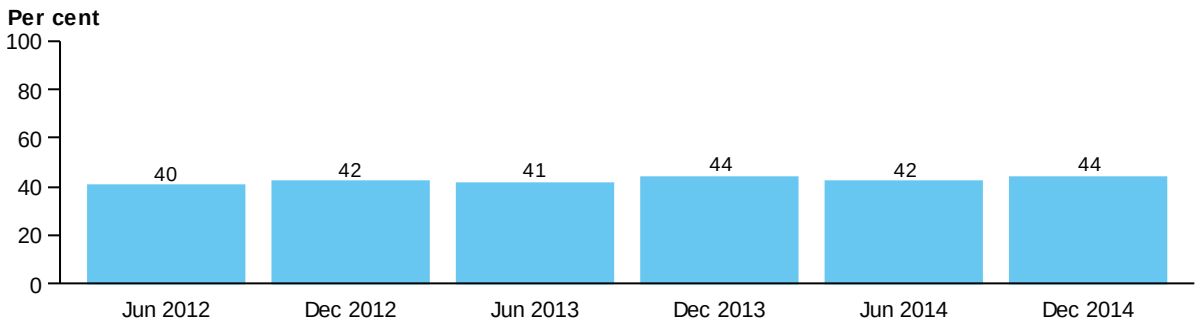


Figure 4.V1: Blood pressure result of ≤130/80 mmHg, by reporting period

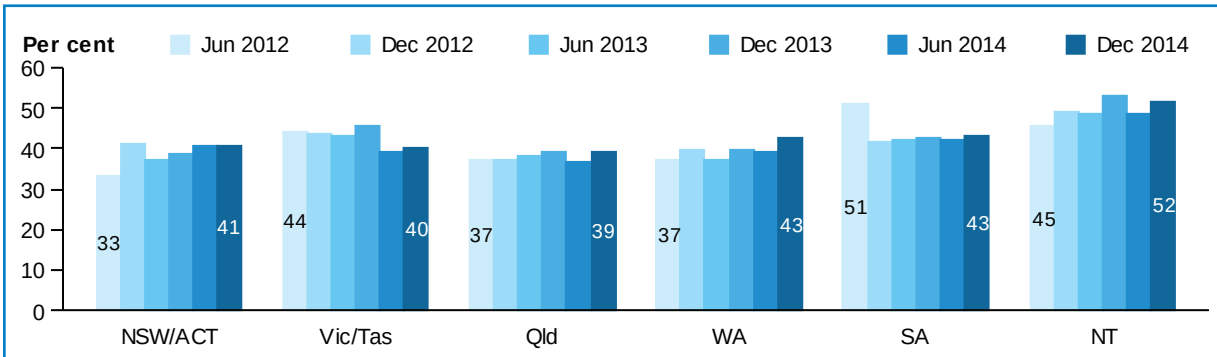


Figure 4.V2: Blood pressure result of ≤130/80 mmHg, by jurisdiction

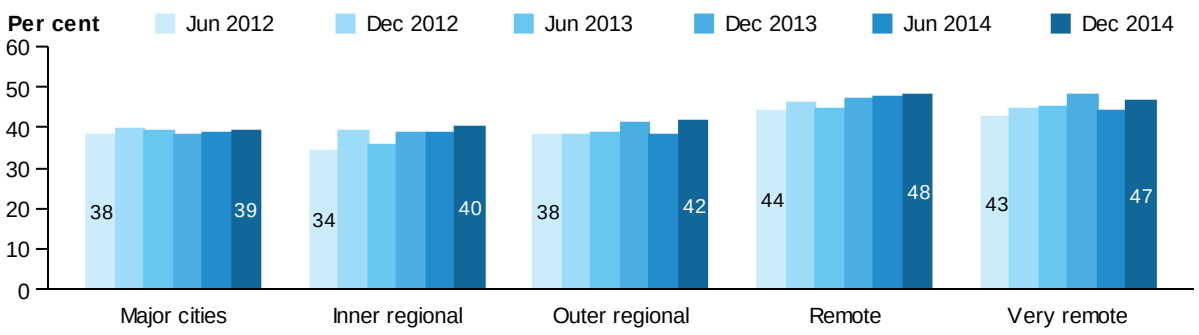


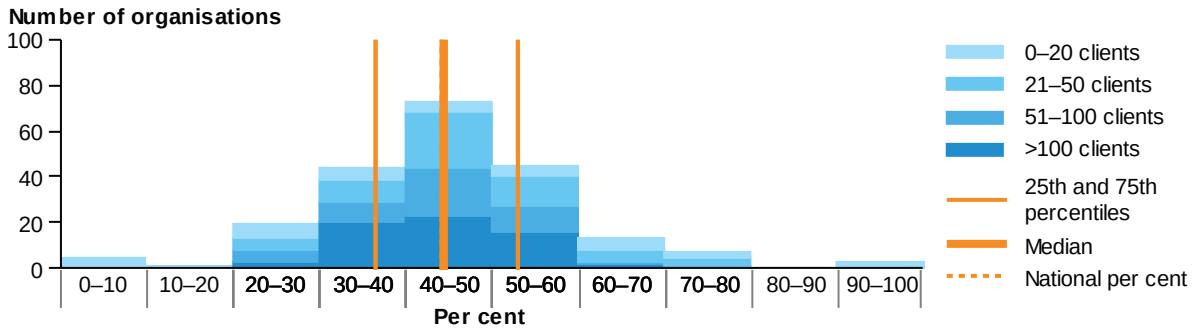
Figure 4.V3: Blood pressure result of ≤130/80 mmHg, by remoteness

National variation was low, with a substantial number of organisations recording a blood pressure result of ≤130/80 mmHg for 40%–50% of their clients (Figure 4.V4).

- Three organisations (1%) had a blood pressure result of ≤130/80 mmHg for 100% of their clients with type 2 diabetes.
- Four organisations (2%) did not have a blood pressure result of ≤130/80 mmHg for any of their clients with type 2 diabetes.
- In the top 25% of organisations, 53% of clients or more had a blood pressure result of ≤130/80 mmHg.
- In the bottom 25% of organisations, 36% of clients or less had a blood pressure result of ≤130/80 mmHg.

Variation within states/territories shows variation between organisations was relatively low in each jurisdiction (Figure A6.41).

Variation within remoteness shows there was little variation among organisations in all remoteness areas (Figure A6.42).



Note: The national per cent line is not visible as the median and the national per cent are the same proportion (44%).

Figure 4.V4: Distribution of percentage of blood pressure results of ≤130/80 mmHg, by organisation and client numbers

Opportunities for action

- Improvements nationally and across most jurisdictions on this indicator show good work by many organisations. High blood pressure is influenced by a range of social determinants and lifestyle factors as well as by effective primary health care.
- A high number or proportion of clients with type 2 diabetes with high blood pressure does not necessarily indicate poor organisational performance. It does, however, indicate opportunities for a greater focus on a population health approach and evidence-based care.
- Organisations with a high percentage of clients with type 2 diabetes with high blood pressure should review whether sufficient attention is being paid to effective management of clients with type 2 diabetes.

W. HbA1c result—clients with type 2 diabetes

Nationally, 35% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had an HbA1c result of less than or equal to 7% in the past 6 months as at December 2014 (Figure 4.W1).

Trend showed an increase of 3 percentage points between June 2012 and December 2014 for clients with an HbA1c result of ≤7% (Figure 4.W1). Queensland had the greatest improvement among jurisdictions over the period (7 percentage points) and *Remote* areas had the highest increase among remoteness areas (5 percentage points). There were decreases in Victoria/Tasmania and New South Wales/Australian Capital Territory and in *Inner regional* areas (3 percentage points, 1 percentage point and 2 percentage points, respectively) (figures 4.W2 and 4.W3, and tables A4.41 and A4.42).

Age and sex distribution showed that proportions of males and females with an HbA1c result of ≤7% in the previous 6 months increased with age for those aged 15 and over. Higher proportions of younger clients aged less than 15 had an HbA1c result of ≥10% in the previous 6 months than clients aged 15 and over (Table A5.17).

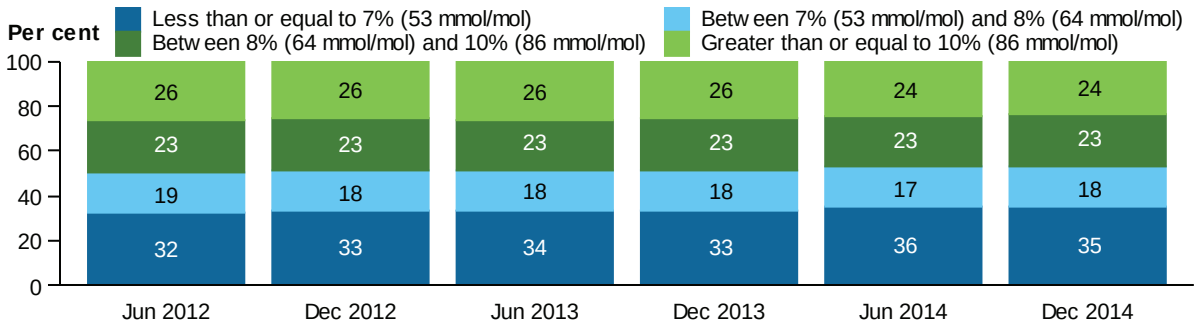


Figure 4.W1: HbA1c result in the previous 6 months, by reporting period

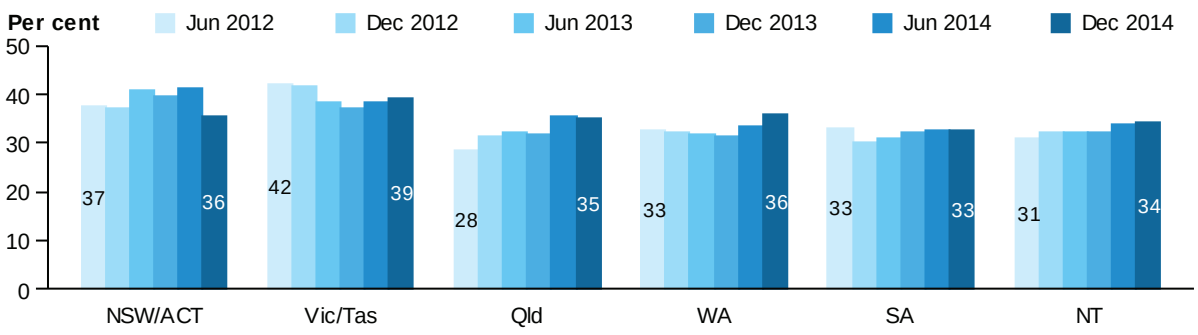


Figure 4.W2: HbA1c result in the previous 6 months (≤7%), by jurisdiction

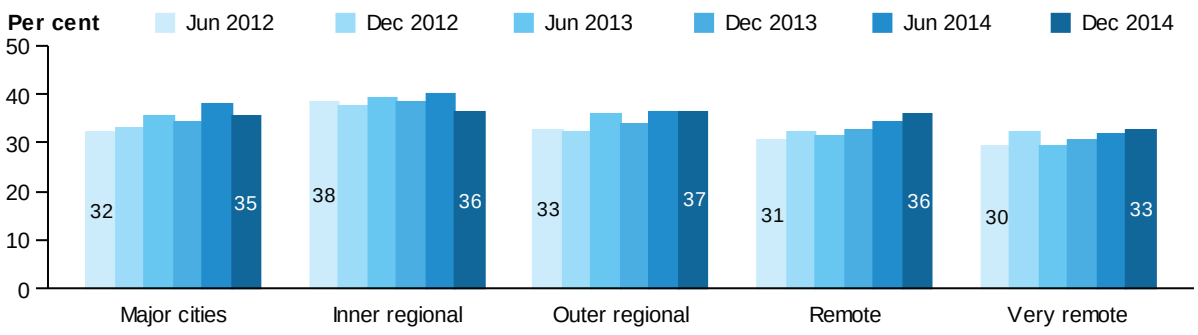


Figure 4.W3: HbA1c result in the previous 6 months (≤7%), by remoteness

National variation was low, with a high proportion of organisations recording an HbA1c result of ≤7% for 30%–40% of their clients (Figure 4.W4).

- Two organisations (1%) had 100% of clients with type 2 diabetes achieving an HbA1c result of ≤7%.
- Five organisations (2%) had none of their clients achieving an HbA1c result of ≤7%.
- In the top 25% of organisations, 43% of clients or more had an HbA1c result of ≤7%.
- In the bottom 25% of organisations, 30% of clients or less had an HbA1c result of ≤7%.

Variation within states/territories shows that Victoria/Tasmania and South Australia had the largest amount of variation among organisations. There was little variation among organisations in Western Australia (Figure A6.43).

Variation within remoteness shows there was little variation among organisations in most remoteness categories, but *Inner regional* and *Remote* areas had the highest amount of variation. *Outer regional* areas had the smallest amount of variation (Figure A6.44).

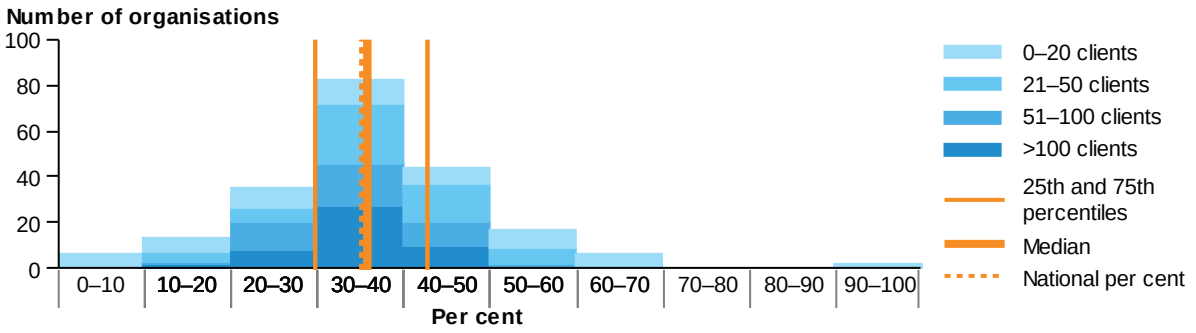


Figure 4.W4: Distribution of percentage of HbA1c result of ≤7% (53 mmol/mol) in the previous 6 months, by organisation and client numbers

Opportunities for action

- HbA1c results are influenced by primary health care, as well as by a range of social determinants and lifestyle factors.
- Organisations with a high percentage of regular clients with type 2 diabetes with HbA1c results greater than 7% (or a worsening trend) should review whether their current practices are effectively targeting and managing clients with type 2 diabetes and determine whether more resources are required to improve results.
- There is scope to focus on more activities to assist clients with type 2 diabetes to manage their HbA1c levels, in particular the young age groups.

X. Kidney function result—clients with type 2 diabetes

Nationally, 81% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had an eGFR result greater than or equal to 60 mL/min/1.73 m^2 as at December 2014.

Trend data are not available for this indicator as data were collected for the first time in the December 2014 reporting period.

Age and sex distribution indicated that, although kidney function decreased with age, there was minimal difference in eGFR results between males and females across all age groups (figures 4.X1 and 4.X2, and Table A5.18).

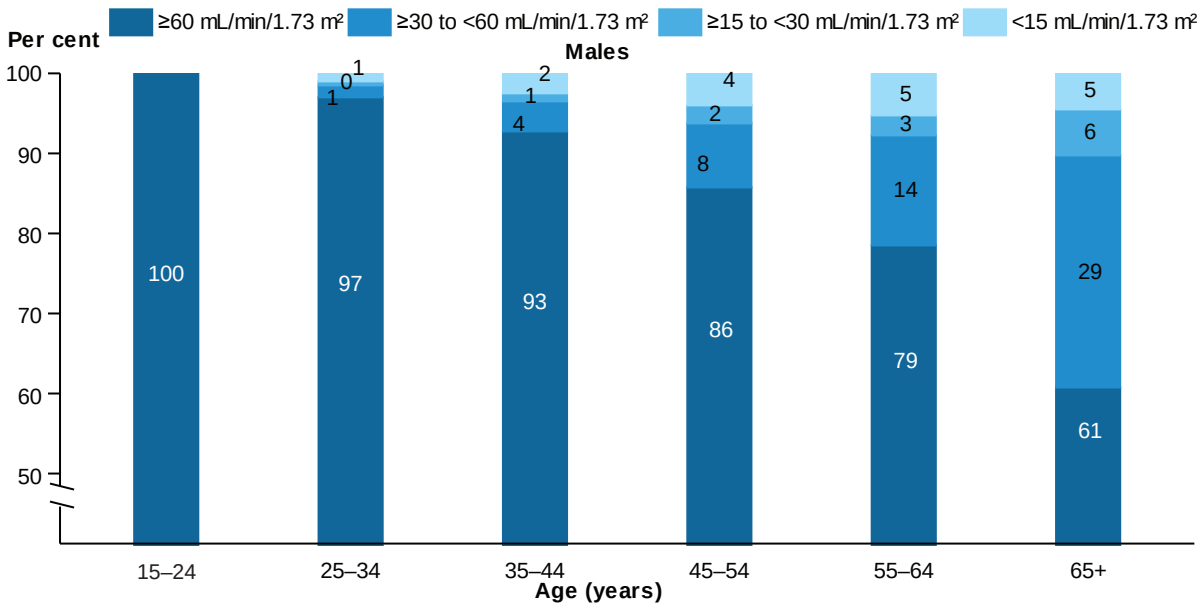


Figure 4.X1: eGFR results for males with type 2 diabetes, by age

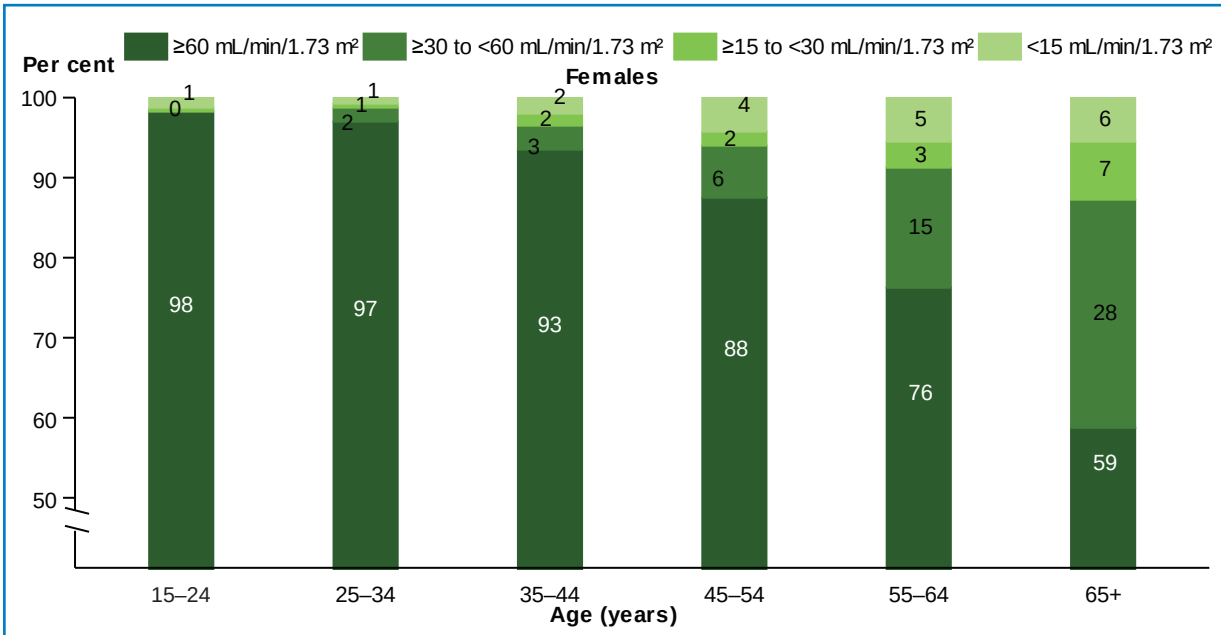


Figure 4.X2: eGFR results for females with type 2 diabetes, by age

National variation was small, with most organisations recording a result of ≥60 mL/min/1.73 m^2 for more than 70% of their clients with type 2 diabetes (Figure 4.X3).

- Eleven organisations (6%) had an eGFR result of ≥60 mL/min/1.73 m^2 for 100% of their clients with type 2 diabetes.
- Two organisations (1%) had no clients with type 2 diabetes whose eGFR result was ≥60 mL/min/1.73 m^2.
- In the top quartile of organisations, 86% of clients with type 2 diabetes or more had an eGFR result of ≥60 mL/min/1.73 m^2.
- In the bottom quartile of organisations, 78% of clients or less with type 2 diabetes had an eGFR result of ≥60 mL/min/1.73 m^2.

Variation within states/territories shows there was little variation among organisations for most jurisdictions, but it was highest in Victoria/Tasmania (Figure A6.45).

Variation within remoteness was small among organisations in most remoteness areas, but it was highest in *Outer regional* areas and lowest in *Major cities* (Figure A6.46).

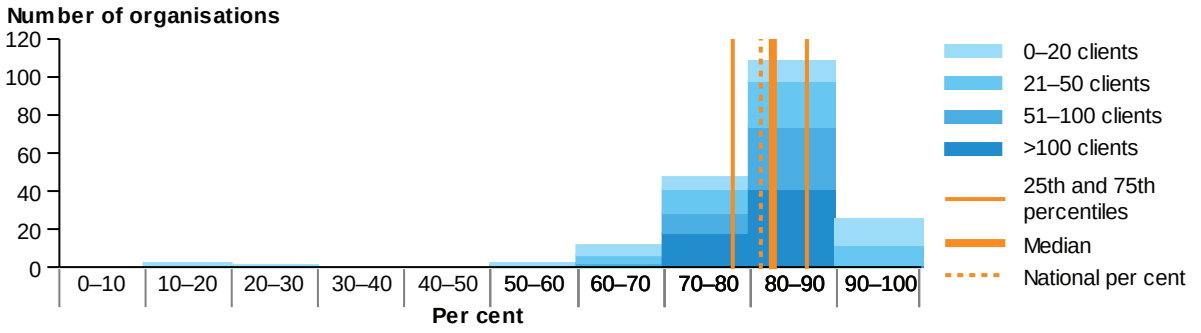


Figure 4.X3: Distribution of percentage of eGFR results of ≥60 mL/min/1.73 m^2 for clients with type 2 diabetes, by organisation and client numbers

Opportunities for action

- December 2014 was the first time data were collected for this indicator and trend data are therefore not available.
- There appears to be little variation among all organisations. As it is not possible for organisations to improve established kidney disease, the 1% of organisations that recorded no clients with type 2 diabetes whose eGFR result was ≥60 mL/min/1.73 m^2 can work toward stabilising and slowing ongoing kidney deterioration.
- All clients with type 2 diabetes should have a kidney function test to routinely screen for indications of renal disease.

Y. Kidney function result—clients with cardiovascular disease

Nationally, 76% of Aboriginal and Torres Strait Islander regular clients with CVD had an eGFR result greater than or equal to (≥) 60 mL/min/1.73 m^2 as at December 2014.

Trend data are not available for this indicator as data were collected for the first time in the December 2014 reporting period.

Age and sex distribution indicated that kidney function decreased with age. There was minimal difference in eGFR results between males and females across all age groups, although males had slightly better results in most result categories (figures 4.Y1 and 4.Y2, and Table A5.19).

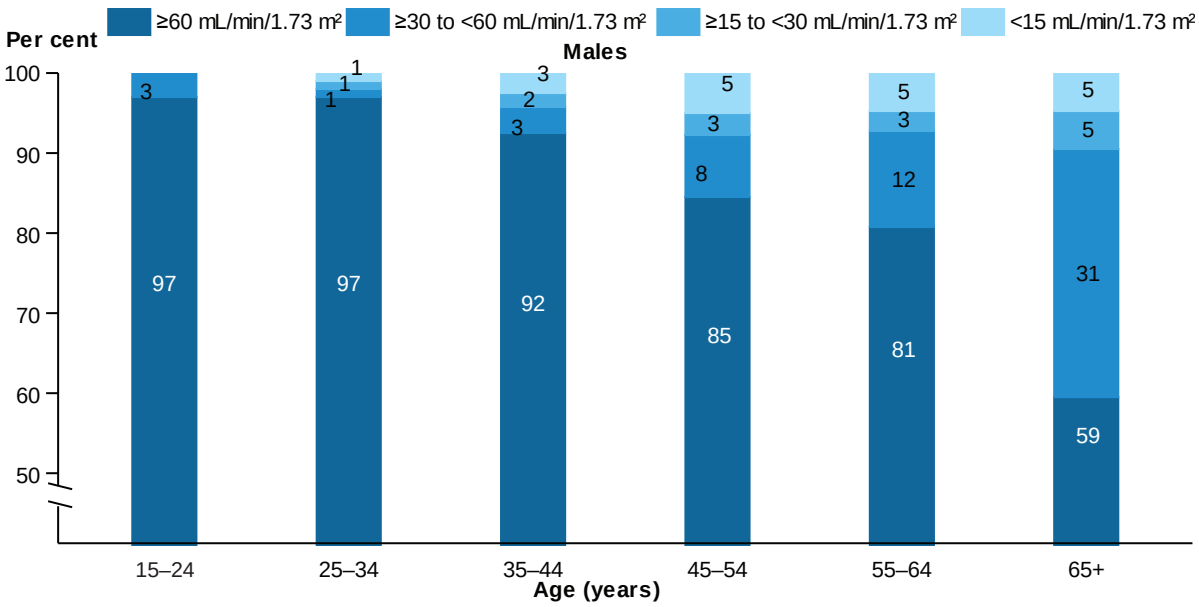


Figure 4.Y1: eGFR results for males with CVD, by age

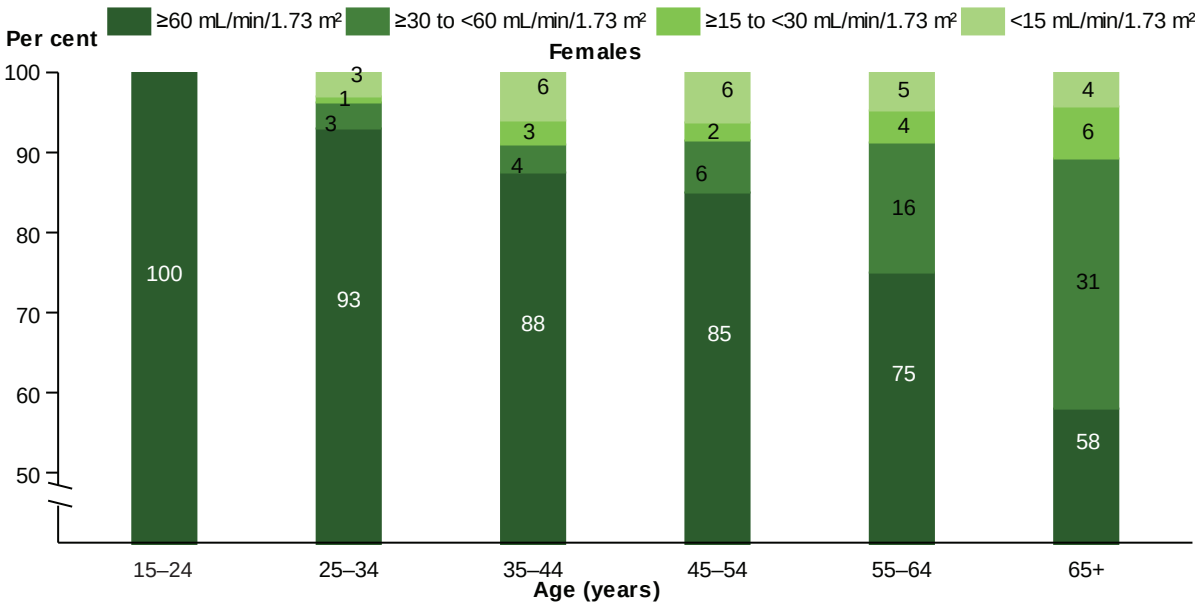


Figure 4.Y2: eGFR results for females with CVD, by age

National variation was quite small, as few organisations had an eGFR result of ≥60 mL/min/1.73 m^2 for less than 60% of their clients with CVD (Figure 4.Y3).

- Eighteen organisations (9%) had an eGFR result of ≥60 mL/min/1.73 m^2 for 100% of their clients with CVD.
- Three organisations (2%) had no clients with CVD whose eGFR result was ≥60 mL/min/1.73 m^2.
- In the top quartile of organisations, 84% of clients with CVD or more had an eGFR result of ≥60 mL/min/1.73 m^2.
- In the bottom quartile of organisations, 70% of clients or less with CVD had an eGFR result of ≥60 mL/min/1.73 m^2.

Variation within states/territories shows there was little variation among organisations among most jurisdictions but it was highest in the Northern Territory and lowest in Western Australia (Figure A6.47).

Variation within remoteness shows there was a similar amount of variation across most remoteness areas, but *Major cities* had the smallest variation and *Very remote* areas had the largest variation (Figure A6.48).

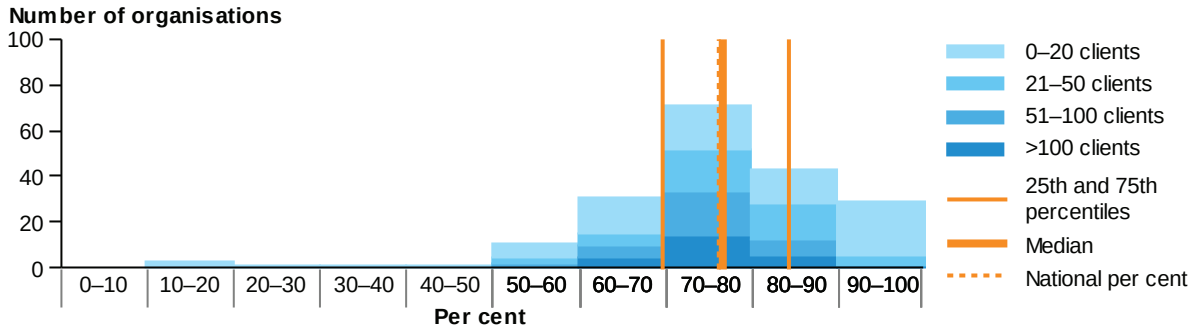


Figure 4.Y3: Distribution of percentage of eGFR results of ≥60 mL/min/1.73 m^2 for clients with CVD, by organisation and client numbers

Opportunities for action

- December 2014 was the first time data were collected for this indicator and trend data are therefore not available.
- There appears to be little variation among all organisations. As it is not possible for organisations to improve established kidney disease, the 2% of organisations that recorded no clients with CVD whose eGFR result was ≥60 mL/min/1.73 m^2 can work toward stabilising and slowing ongoing kidney deterioration.
- All clients with CVD should have a kidney function test to routinely screen for indications of renal disease.

Chapter 5

Analyses of trends in performance

This chapter looks at a panel of organisations that submitted nKPI data for each indicator over 4 reporting periods: June 2013, December 2013, June 2014 and December 2014. Analyses of data for a subset of organisations submitting data for all reporting periods enables better identification of changes over time because it excludes the changes in the mean performance that occur just due to the changes in the composition of organisations that report in different periods.

The 'balanced panel' of organisations that reported some data in every period between June 2013 and December 2014 consists of 192 health service providers. However, not all of these organisations reported data for every nKPI indicator. There are also a few instances where data for a specific period may be missing for an organisation, even when that organisation normally reports on that indicator. Where this occurs, additional analysis criteria are required to determine which organisations are included in the trend analyses and how the mean values for specific nKPI indicators are computed (see Box 5.1 for details).

Additionally, a composite nKPI score reflecting an aggregate performance over a subset of 16 process-of-care indicators has also been derived. Since the composite score is defined for an organisation if it reports on any of the 16 process-of-care indicators, the number of organisations with a composite score defined in each period is the same subset of 192 services in each period. Since not all organisations report on all indicators, the set of organisations that are included in the trend analyses will be fewer than 192 for most indicators. The indicator on clients with COPD immunised against influenza had the smallest number of organisations—134 organisations in total.

The changes over time analyses presented in Table 5.1 were done in two ways:

1. by assessing the change in the mean value of a particular nKPI indicator between June 2013 and December 2014 (represented in percentage points)
2. a regression-based estimate of the change in the mean nKPI value over the 4 time periods that takes account of the data in all 4 periods. The estimated value of the time trend represents the average increase or decrease, in percentage points, in the mean nKPI score over a 6-monthly reporting period.

Box 5.1: Estimation of mean nKPI values at organisation level

Even within the 'balanced panel' of 192 organisations that reported some data in every period between June 2013 and December 2014, the number of times they report data on a particular indicator can vary between 0–4 times. If the trend analysis is limited to a subset of organisations that provided data for all indicators in all reporting periods, this reduces the size of the 'balanced panel' considerably. Therefore, an additional criterion has been developed whereby the trend analysis in this chapter for specific nKPI indicators is based on the subset of these 192 organisations that report data on that indicator in at least 3 of the 4 reporting periods, including the last period of December 2014. The special condition that the organisations included in the trend analysis must report data for the last period of December 2014 has been imposed so that a common end point is defined in assessing trends over time.

Once the organisations to be included in the trend analysis in each period for specific indicators are identified, the mean values for each period are computed as simple averages over all eligible organisations. This method of deriving simple averages over all eligible services differs from the method used in reporting the national level nKPI results in Chapters 2–4 and elsewhere in this report. The national level results are weighted averages over all reporting services where the weights reflect the relative size of the organisation in terms of the number of clients included in a particular indicator. The weighted national level data are intended to be proxies for the relevant population health measure and hence require weighting by the number of clients.

The trend analysis reported in this chapter is intended more as a measure of average improvements in organisation-level performance for a common set of services, and therefore the use of simple averages will suffice. The organisation-level means will, in any case, differ from the national level means, even with weighting, because the analysis in this chapter is restricted to the balanced set of 192 organisations. The benefits of using a common set of services to measure changes in service level performance over time outweigh the benefits of trying to replicate the weighted national level data reported in Chapters 2–4. The use of unweighted data means that the averages can be affected by the expected higher levels of random fluctuations in outcomes measured for smaller organisations due to their smaller numbers of clients.

Change in the mean value over time

Mean organisational values for nKPIs were used in determining change in performance over time (see Box 5.1 for details on how mean values are derived). The mean values for each indicator show that, of the 25 process-of-care and outcome measures (including the composite score) noted in Table 5.1, the mean performance increased for 18 measures, including the composite score. There were decreases in 6 measures, while no change was detected for 1 indicator: HbA1c test recorded for clients with type 2 diabetes (see figures 5.1–5.3).

The largest increase of 17.8 percentage points was observed for the 'Smoking status recorded' indicator, which increased from a mean of 61.2% in June 2013 to 79.0% in December 2014. The next largest increase was 8.1 percentage points for 'MBS health assessment—aged 25+'. In both these instances, the mean value for organisations increased steadily across all 4 periods.

Child immunisation measures showed the largest decreases in mean values between June 2013 and December 2014: for those aged 2 (24 months to <36 months), the decrease was almost 20 percentage points, and for those aged 1 (12 months to <24 months), it was 3.2 percentage points. However, as noted in Chapter 2, the quality of the nKPI data on child immunisation can be quite poor, and are likely to be underestimates compared with results published in ACIR reports. Often records of immunisations provided by other service providers may not be accessible to organisations where the child is a new client.

Regression-based time trend estimates

The estimated time trend coefficients showed a positive trend for the same 18 measures that showed an increase in mean values between June 2013 and December 2014, as well as for the 1 indicator where the change was zero. However, of these 19 positive coefficients, only 7 (including the composite score) are statistically significant at the 5% level ($P<0.05$). In the less restrictive test for statistical significance at the 10% level ($P<0.10$), 2 other trend coefficients are significantly positive. (Tests of statistical significance make it very unlikely that observed changes over time can be attributed to just random fluctuations in the data being reported.)

The indicators where the estimated time trend is statistically significantly positive at the 5% level were:

- MBS health assessment—aged 0–4 (estimated change in time trend coefficient of 1.75 percentage points)
- MBS health assessment—aged 25+ (2.71 percentage points)
- General Practice Management Plan (2.52)
- Smoking status recorded (5.75)
- Alcohol consumption recorded (1.62)
- Clients with type 2 diabetes with kidney function test recorded (2.17)
- Composite score (2.39).

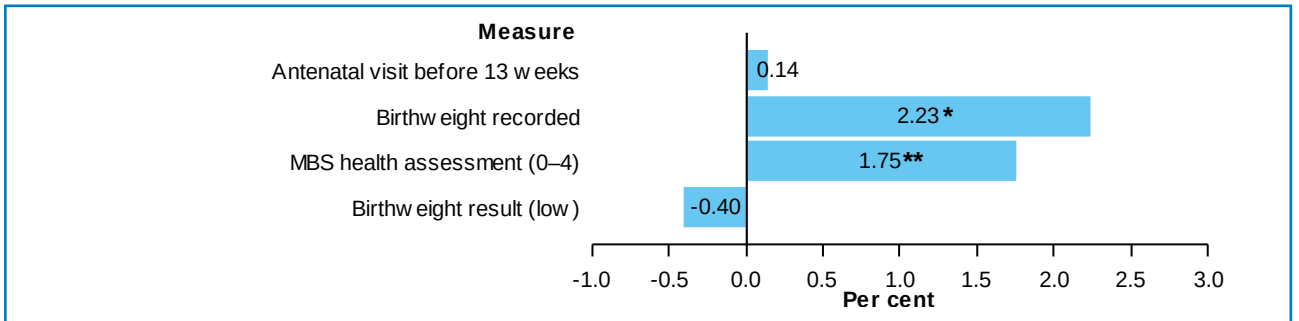
The additional 2 indicators with a statistically significantly positive trend at the 10% test level were:

- Birthweight recorded (2.23)
- Team Care Arrangement (1.79).

All time trend estimates by groups of nKPI measures are set out in figures 5.1, 5.2 and 5.3 (except for the child immunisation measures, due to the data quality issues described earlier, and the composite score).

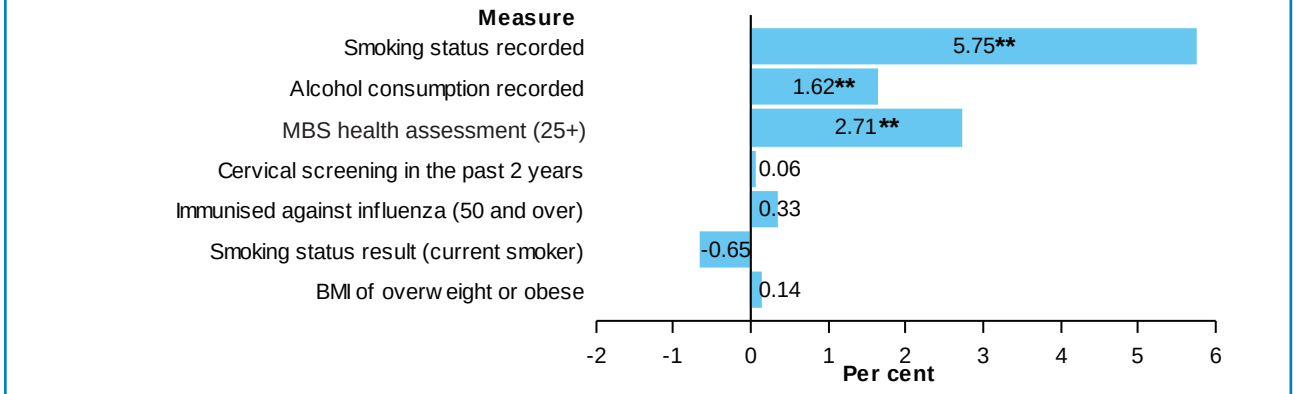
The largest positive trend coefficient is for the 'Smoking status recorded' indicator, showing that the average increase in the mean between 6-monthly reporting periods was 5.75 percentage points. This average value is very close to one-third of the change observed for the whole period between June 2013 and December 2014 (17.8 percentage points) because there was a consistent pattern of growth in each of the three 6-monthly reporting intervals.

Of the negative time trends estimated on the remaining 6 indicators, only one ('Child immunisation at age 2') is significant, indicating that the observed decrease over time on this indicator cannot be explained just by random fluctuations in the data reported. As noted before, the poor quality of data for the child immunisation measures must be kept in mind when assessing this sole instance of a significant decline in mean nKPI performance across the reporting organisations between June 2013 and December 2014.



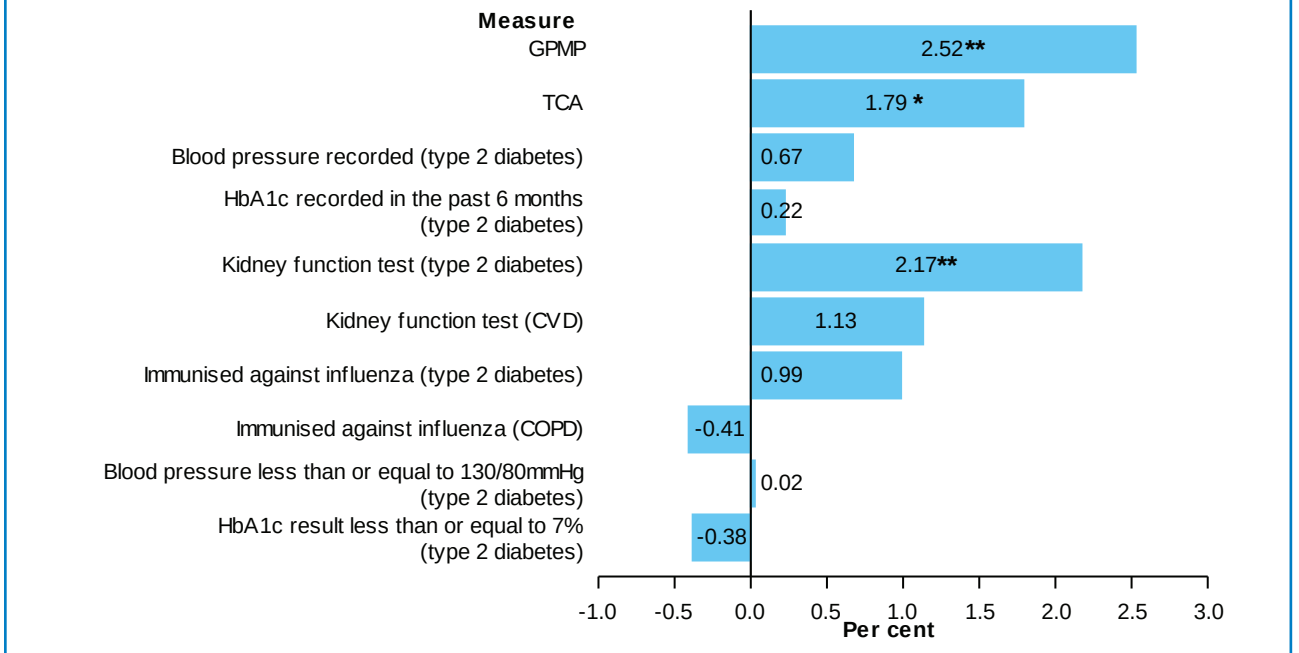
* Trend is significant at the 10% test level. ** Trend is significant at the 5% test level.

Figure 5.1: Average change each 6 months for maternal and child health measures, June 2013 to December 2014



** Trend is significant at the 5% test level.

Figure 5.2: Average change each 6 months for preventative health measures, June 2013 to December 2014



* Trend is significant at the 10% test level. ** Trend is significant at the 5% test level.

Figure 5.3: Average change each 6 months for chronic disease management measures, June 2013 to December 2014

Table 5.1: Change in mean proportions for organisations submitting data for all reporting periods, June 2013 to December 2014, by nKPI measure

Measure	Jun 2013	Dec 2013	Jun 2014	Dec 2014	Total change Jun 2013 to Dec 2014 [a] (percentage points)	Fitted trend and its significance [b]
First antenatal visit before 13 weeks	31.3	33.8	31.7	32.5	1.2	0.14
Birthweight recorded	55.9	59.8	62.8	62.3	6.4	2.23*
MBS health assessment—aged 0–4	27.6	27.8	29.7	32.8	5.2	1.75**
Child immunisation at age 1	72.8	71.1	71.0	69.6	–3.2	–0.98
Child immunisation at age 2	71.8	70.5	63.5	52.2	–19.7	-6.61**
Child immunisation at age 5	66.1	66.2	68.1	67.2	1.1	0.52
Birthweight result (low)[c]	13.8	13.8	14.2	12.4	–1.5	–0.40
Smoking status recorded	61.2	73.9	78.0	79.0	17.8	5.75**
Alcohol consumption recorded	49.4	55.1	55.1	54.8	5.4	1.62**
MBS health assessment—aged 25+	36.1	39.3	42.1	44.2	8.1	2.71**
Cervical screening (2 years)	33.5	34.7	34.5	33.8	0.3	0.06
Immunised against influenza—clients aged 50 and over	44.4	45.8	44.4	46.0	1.6	0.33
Smoking status result—current smoker[c]	54.1	52.8	52.0	52.1	–2.0	–0.65
BMI result—overweight/obese[c]	68.9	67.8	68.5	69.1	0.2	0.14
General Practice Management Plan	46.9	50.0	53.0	54.3	7.4	2.52**
Team Care Arrangement	44.8	46.4	48.0	50.3	5.5	1.79*
Blood pressure recorded—clients with type 2 diabetes	69.7	69.5	71.2	71.3	1.7	0.67
HbA1c test recorded—clients with type 2 diabetes	53.3	53.4	55.6	53.4	0.0	0.22
Kidney function test recorded						
Clients with type 2 diabetes	64.2	62.7	68.8	69.4	5.2	2.17**
Clients with CVD	62.7	64.4	65.5	66.1	3.4	1.13
Immunised against influenza						
Clients with type 2 diabetes	39.5	40.6	40.4	42.8	3.4	0.99
Clients with COPD	40.0	41.2	38.2	39.7	–0.4	–0.41
Blood pressure result—clients with type 2 diabetes	43.0	44.0	42.8	43.4	0.5	0.02
HbA1c test result—clients with type 2 diabetes	37.2	35.8	36.6	35.7	–1.6	–0.38
Composite score	*49.4*	*54.5*	*56.2*	*56.8*	*7.4*	*2.39***

* Trend is significant at the 10% test level.

** Trend is significant at the 5% test level.

(a) Change in the mean value between June 2013 and December 2014 not taking into account the data in the 2 middle periods.

(b) The fitted trend estimate takes account of the data values in all 4 reporting periods and represents the average increase or decrease in the mean nKPI score over a 6 month period in percentage points.

(c) Measures where decrease in value over time is desired.

Chapter 6

Organisation results against process-of-care indicators

Process-of-care indicators reflect whether clients have received a service appropriate for their care. This chapter examines the data covered in Chapters 2–4 at a finer level and shows where organisation results against the process-of-care measures fit within the national distribution over time.

In analysing the results of the organisations against process-of-care indicators, the following elements need to be considered:

- the extent of variation within each indicator across organisations contributing nKPI data—this can point to possible opportunities for improvement at a systemic level for each indicator
- the extent of variation between indicators—this can point to where the relative strengths and weaknesses are with the different processes of care, and inform priorities for action.

Data

This analysis focuses on the 16 process-of-care measures for services that organisations should have provided to their regular clients. (Note that data for 'HbA1c test recorded' are included for the previous 6 months only. The child immunisation indicator and its 3 measures were excluded due to data quality issues—see Chapter 2.)

Table 6.1 shows the 16 process-of-care measures and the total number of organisations that provided valid data for each of these measures. There were instances when an organisation with valid data had no relevant clients for a particular indicator. This was indicated as '0' clients in the denominator which is a valid data submission for an indicator. Organisations with 0 clients in the denominator were excluded from the analyses.

Table 6.1: Number of organisations contributing valid data, and number of clients, by each process-of-care measure, December 2014

Measure	Number of organisations with valid data[a]	Number of organisations included in the analyses[b]	Number of clients
First antenatal visit before 13 weeks	216	191	4,931
Birthweight recorded	227	218	7,426
MBS health assessment—aged 0–4	221	221	34,677
Smoking status recorded	221	221	190,829
Alcohol consumption recorded	222	222	191,189
MBS health assessment—aged 25+	222	222	142,674
Cervical screening (2, 3 and 5 years)	225	213	88,652
Clients aged 50 and over immunised against influenza	212	208	47,947
General Practitioner Management Plan (GPMP)	214	211	32,803
Team Care Arrangement (TCA)	214	211	32,803
Blood pressure recorded	213	210	32,800

(continued)

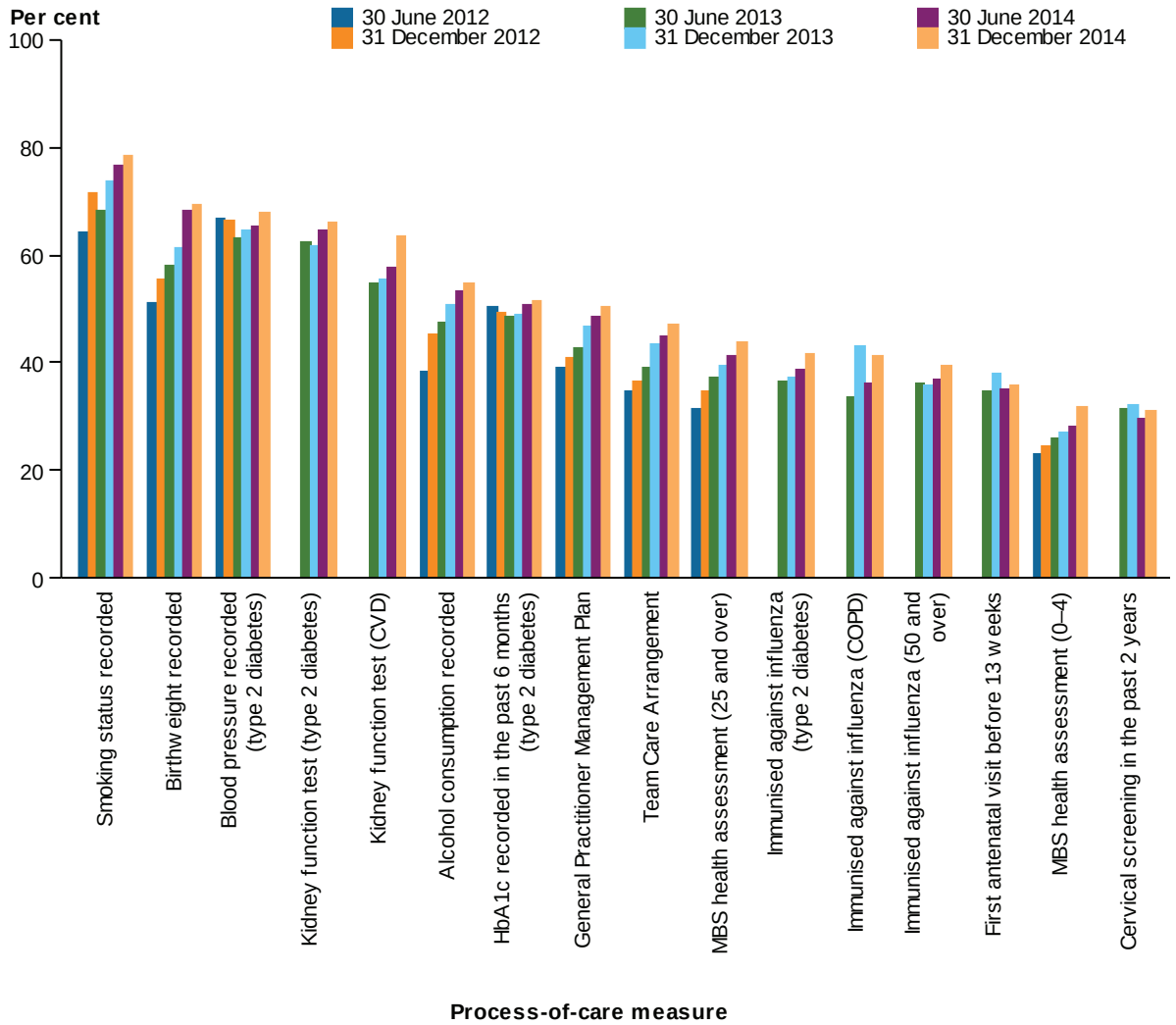
Table 6.1 (continued): Number of organisations contributing valid data, and number of clients, by each process-of-care measure, December 2014

Measure	Number of organisations with valid data[a]	Number of organisations included in the analyses[b]	Number of clients
HbA1c test recorded	212	209	32,770
Kidney function test recorded			
Type 2 diabetes, total	206	203	31,753
CVD	206	196	14,531
Immunised against influenza			
Type 2 diabetes	214	204	13,537
COPD	213	155	1,615

(a) Organisations with valid data after exclusion due to inconsistent data or organisation comments.

(b) Excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.

Figure 6.1 shows the proportion of organisations that provided valid data for each measure in each of the periods where data were reported.



Note: Kidney function test (type 2 diabetes and CVD), Immunised against influenza (50 and over, type 2 diabetes and COPD), Antenatal visit before 13 weeks, and Cervical screening in the past 2 years were not collected until the reporting period ending 30 June 2013.

Figure 6.1: National proportion of organisations providing data for each process-of-care measure, by reporting period

Figure 6.2 shows the detailed distribution of results across organisations for each process-of-care measure. The results of organisations can range from 0% to 100%, depending on what proportion of clients they provided a particular service to. In addition, the shape of the curve shows the extent to which organisations are reporting that they are providing the services. If all organisations are performing at 100%, it would be expected that a straight line parallel to the x-axis would be seen. The downward sloping lines indicate the deviation of organisations away from this optimal point.

The graphs show that the overall shape of the distribution differs considerably across measures. For some measures, clusters of organisations occur at the extremes of the distribution, for example for 'Birthweight recorded' and 'First antenatal visit before 13 weeks' measures. The graphs also show the extent to which organisations' results improved over the reporting periods—for example, 'General Practitioner Management Plan, 'Team Care Arrangement' and 'Smoking status recorded'.

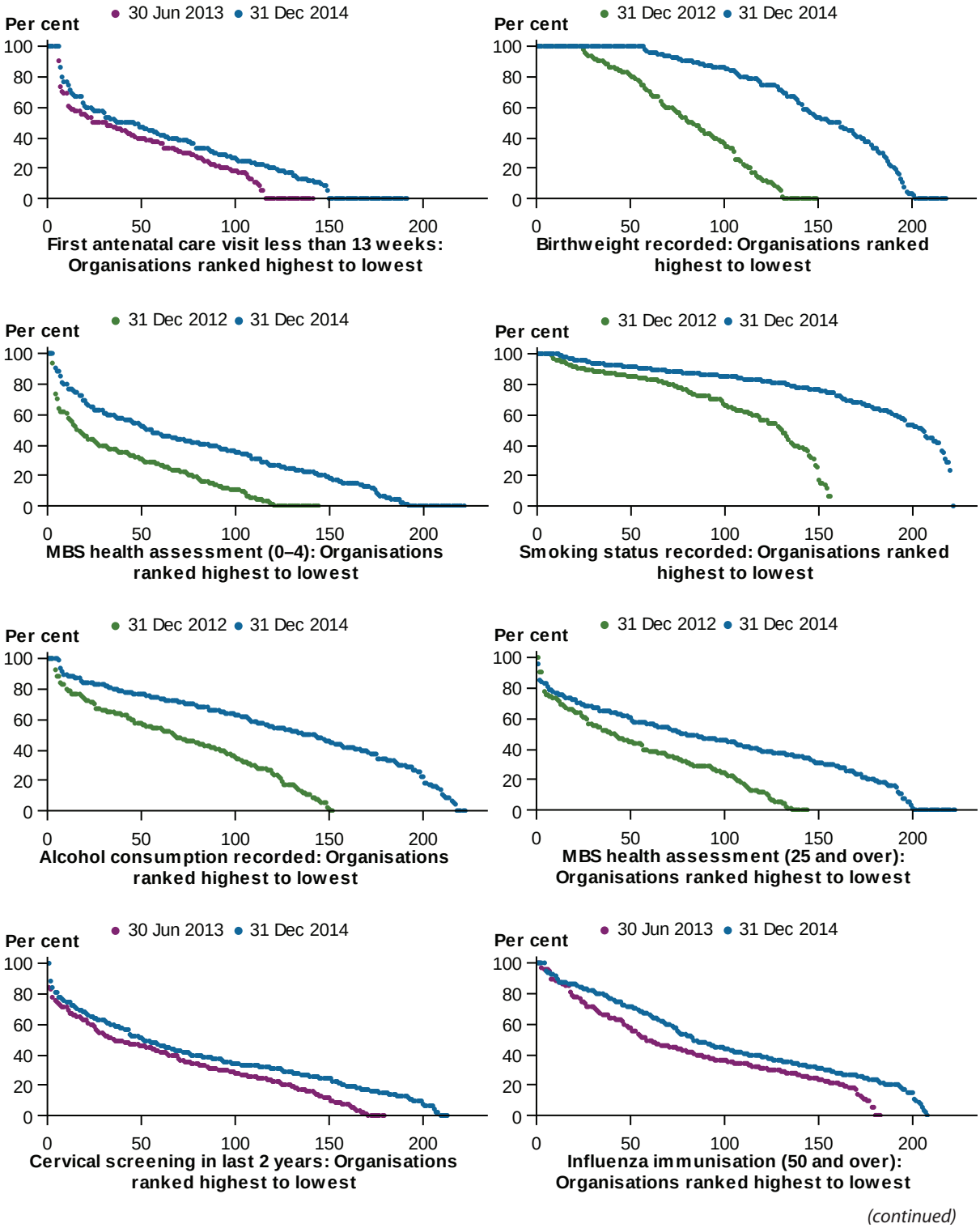


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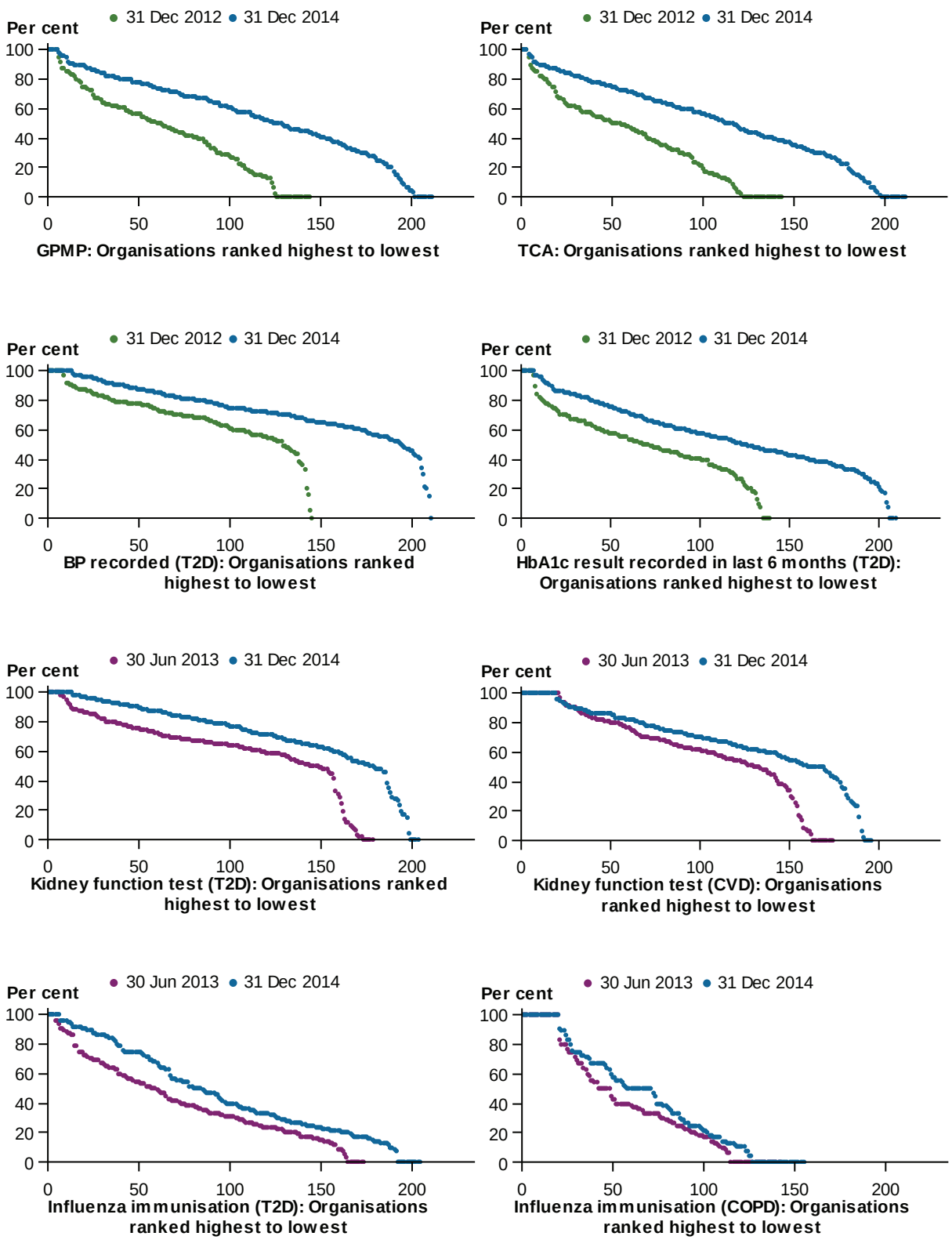
Figure 6.2: Distribution of performance across organisations for process-of-care measures



Notes

1. GPMP = General Practitioner Management Plan; TCA = Team Care Arrangement; BP = blood pressure; T2D = type 2 diabetes; CVD = cardiovascular disease; COPD = chronic obstructive pulmonary disease.
2. Data are not shown for 30 June 2012 due to the smaller number of services that reported in that period.

Figure 6.2 (continued): Distribution of performance across organisations for process-of-care measures

Chapter 7: Discussion

The Department of Health provided all text in this chapter

This chapter presents key messages emerging from this third comprehensive analysis of the nKPI data reported mainly by primary health care organisations funded by the Commonwealth to deliver services to Aboriginal and Torres Strait Islander people. A small number of NTG organisations that reported for the first time in December 2014 are also included in the analyses.

The nKPI data set is an invaluable information source, and the Australian Government believes this data will support the delivery of efficient and effective primary health care to Aboriginal and Torres Islander people. The collection of nKPI data aims to contribute to improved service delivery and supports Continuous Quality Improvement (CQI) activity.

In this report, data on 2 new indicators (smoking status of women who gave birth in the previous year and kidney function result—clients with Type 2 diabetes or cardiovascular disease) have been collected for the first time. The report also includes data from the staged roll-out of state- and territory-funded Indigenous primary health care services, with the collection of territory-funded Northern Territory data.

Improved results on individual indicators

There have been improvements across the majority of indicators over the 6 data reporting periods starting in June 2012. Table 7.1 summarises information on 24 measures for which data have been reported for 4 or more reporting periods. Organisations improved their results over the reporting periods in 20 of the 24 measures, with increases of up to 18 percentage points. Results did not improve for 4 measures. The largest decrease was noted for immunisation of children aged 24 months to less than 36 months. This highlights the data quality issues with the childhood immunisation data collected from primary health care organisations rather than an actual decline, as national data from the Australian Childhood Immunisation Register show high rates of immunisation for Aboriginal and Torres Strait Islander children.

The results in the December 2014 reporting period were consistent with the trends noted above, with improvements in 12 out of 14 process-of-care indicators. This included increases (of up to 7 percentage points) in the upper quartile boundaries of most indicators, indicating a very strong performance in the last 6 months. It is encouraging to see improvements in the lower quartile boundaries for over one-half of the indicators (with increases of up to 23 percentage points).

Improvements in the outcome indicators have shown mixed results and any improvements seen were minor. This is not an unexpected result as improvements in outcome indicators take longer to be observed at a population level as these depend more on patients' circumstances and, usually, behaviour and lifestyle changes. These are not easy factors for health service organisations to influence, but are important to measure to inform patient care and population health policies and programs at the local and national level.

Table 7.1: Change in indicator result between first reporting period and December 2014 for all organisations, listed in order of decreasing approximate change in percentage points within each thematic group

Improved	Approximate change in percentage points
Maternal and child health indicators	
Birthweight recorded[(a)]	18.3
MBS Health assessment—children aged 0–4[(a)]	8.6
Child immunisation—12 to <24 months[(b)]	2.4
First antenatal visit before 13 weeks[(b)]	1.1
Child immunisation—60 to <72 months[(a)]	0.8
Preventative health indicators	
Alcohol consumption recorded[(a)]	16.3
Smoking status recorded[(a)]	14.3
MBS Health assessment—adults aged 25+[(a)]	12.6
Immunised against influenza—clients aged 50 and over[(b)]	3.3
Smoking status result—current smoker[(b)]	–1.4
Chronic disease management indicators	
Team Care Arrangement—clients with type 2 diabetes[(a)]	12.7
General Practitioner Management Plan—clients with type 2 diabetes[(a)]	11.2
Kidney function test recorded—clients with CVD[(b)]	8.8
Immunised against influenza[(b)]	
Clients with COPD	7.7
Clients with type 2 diabetes	5.1
Blood pressure result (≤130/80 mmHg)—clients with type 2 diabetes[(a)]	3.8
Kidney function test recorded—clients with type 2 diabetes[(b)]	3.6
HbA1c result (6 months, ≤7%)—clients with type 2 diabetes[(a)]	2.9
HbA1c result recorded (6 months)—clients with type 2 diabetes[(a)]	1.3
Blood pressure recorded—clients with type 2 diabetes[(a)]	0.9

Declined	Approximate change in percentage points
Child immunisation—24 to <36 months[(b)]	–12.2
Not overweight or obese[(a)]	–4.4
Cervical screening—2 years[(b)]	–0.6
Birthweight result (low)[(b,c)]	0.2

(a) Change between the reporting periods June 2012 and December 2014.
(b) Change between the reporting periods June 2013 and December 2014.
(c) For this measure, an increase indicates an unfavourable change.

Improving nKPI data quality

The Australian Government is committed to the nKPIs and wants to ensure that the information being collected is of high quality and accurately reflects the services being delivered. Over the last 18 months, the Department of Health has invested in improving the data quality of the nKPIs. In March 2014, the Department engaged independent analysts to:

- review the data quality of the nKPIs to provide an assessment of the nature and extent of data quality issues and concerns in the overall system
- provide advice on strategies to improve data quality.

The review (DoH 2015c) made 35 recommendations to improve future nKPI data collections. To date, the Department has actioned 8 of the 10 recommendations named as the Department's responsibility. The review report is available on the Department's website,
< http://www.health.gov.au/internet/main/publishing.nsf/Content/irhd-nkpquality>.

The Department has also undertaken development of a Data Strategy, in consultation with the sector, following a request from the OCHREStreams Advisory Group. This Group advises the Department on the continuing development of OCHREStreams and its associated data collections. The Data Strategy will describe the framework involved in the collection, transmission, storage, access to and reporting of nKPI and Online Services Report data in the OCHREStreams environment. It will include the organisations, legislation, agreements and processes involved in the collections. Once finalised, this document will be available on the Department's website for organisations to access.

Looking ahead

It is anticipated that in the future, nKPI data will be used to monitor a number of Government initiatives, such as the Indigenous Australians' Health Programme.

The Department is also considering a range of other initiatives to enhance the effectiveness of service providers in Aboriginal and Torres Strait Islander primary health care.

The nKPI data show a wide variation in results across indicators and reporting organisations. The analyses in the first 2 published nKPI reports (May and December 2014) showed several factors were associated with better organisational results. One of the major contributing factors was strong involvement with CQI processes.

The Department is committed to embedding CQI processes in primary health care services and has commissioned the development of a National CQI Framework for Aboriginal and Torres Strait Islander primary health care to support improved primary health care and quality.

CQI could be used to support health services to improve nKPI results in the indicators that are CQI responsive (that is, process-of-care indicators) and where improvement is more easily achievable compared to other indicators.

Appendix 1

Background to the nKPI collection and indicator technical specifications

Background

The set of 24 nKPIs were developed under the mandate of the National Indigenous Reform Agreement at the request of the Council of Australian Governments, which subsequently received inprinciple approval from the Australian Health Ministers' Advisory Council. The National Indigenous Reform Agreement stipulates that the approval of data elements will be sought through the National Health Information Agreement governance process.

The draft set of indicators was supported by the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data and was endorsed by the National Health Information Standards and Statistics Committee.

A Technical Working Group, chaired by the Department of Health, provided expert advice on developing the data specification for the KPIs and their subsequent implementation. It was also a forum for reviewing information that had been brought together on KPIs already used in primary health care in states and territories, and for validating and providing assurance that the proposed national data set would be clinically appropriate.

The Group included representatives of the National Aboriginal Community Controlled Health Organisation and its state and territory affiliates, state governments, the AIHW and other technical experts. Membership was selected in order to ensure that the Group had the expertise required to:

- robustly develop evidence-based indicators
- confirm the clinical relevance and operability of the indicators in primary health care settings
- facilitate alignment with data collected through clinical information systems and reported through the web-based reporting system developed for this purpose by the Australian Government.

The Department of Health has established the OCHREStreams Advisory Group to provide advice on the continuing development of the OCHREStreams web portal and its associated data collections, including the nKPIs. (OCHREStreams is the web portal aimed at reducing the reporting burden for organisations that provide primary health care and other services to Aboriginal and Torres Strait Islander Australians.)

The nKPIs in December 2014

In order to ensure alignment with other reporting, we used, wherever possible, data definitions and specifications being used by other national and state collections, including those already in the AIHW's Metadata Online Registry (METeOR).

A full list of the nKPIs is available on METeOR at <http://meteor.aihw.gov.au/content/index.phtml/itemId/584983>.

Table A1 shows the indicators included in this report, as well as the 1 indicator that will be added to the data collection in December 2015 and the 2 indicators that will be added in June 2016. Each indicator is presented with its identification number as assigned in METeOR, for example, 'PI 01', together with an expanded description of what it is meant to measure. The technical specifications for the 3 other indicators have been finalised and have received necessary approvals and endorsement from relevant committees including AHMAC.

Table A1: nKPIs and their description

Indicator	Description
PI 01: Birthweight recorded	Proportion of Aboriginal and/or Torres Strait Islander babies born within the previous 12 months whose birthweight has been recorded at the primary health care service.
PI 02: Birthweight low, normal or high	Proportion of Aboriginal and/or Torres Strait Islander babies born within the previous 12 months whose birthweight results were categorised as 1 of the following: • low (less than 2,500 grams) • normal (2,500 grams to less than 4,500 grams) • high (4,500 grams and over).
PI 03: Health assessment (MBS item 715)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 0–4 and for whom an MBS health assessment for Aboriginal and Torres Strait Islander people was claimed within the previous 12 months AND proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 25 and over and for whom an MBS health assessment for Aboriginal and Torres Strait Islander people was claimed within the previous 24 months.
PI 04: Fully immunised children	Proportion of Aboriginal and/or Torres Strait Islander children who are regular clients, aged: • 12 months to less than 24 months • 24 months to less than 36 months • 60 months to less than 72 months and who are 'fully immunised'.
PI 05: HbA1c test recorded (clients with type 2 diabetes)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and who have had an HbA1c measurement result recorded at the primary health care service within the previous 6 months AND proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and who have had an HbA1c measurement result recorded at the primary health care service within the previous 12 months.
PI 06: HbA1c result (clients with type 2 diabetes)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and whose HbA1c measurement result was categorised as 1 of the following: As recorded in the previous 6 months AND as recorded in the previous 12 months: • less than or equal to 7% • greater than 7% but less than or equal to 8% • greater than 8% but less than 10% • greater than or equal to 10%.
PI 07: General Practitioner Management Plan (MBS item 721)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, with a chronic disease and for whom a GPMP was claimed within the previous 24 months.
PI 08: Team Care Arrangement (MBS item 723)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, with a chronic disease and for whom a TCA was claimed within the previous 24 months.
PI 09: Smoking status recorded	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over and whose smoking status has been recorded at the primary health care service.

(continued)

Table A1: (continued): nKPIs and their description

Indicator	Description
PI 10: Smoking status result	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over and whose smoking status has been recorded as 1 of the following: • current smoker • ex-smoker • never smoked.
PI 11: Smoking status result of regular clients who gave birth in the last 12 months	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 years and over, who gave birth within the previous 12 months and whose smoking status has been recorded as 1 of the following: • current smoker • ex-smoker • never smoked.
PI 12: BMI (overweight or obese)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 25 and over and who have had their BMI classified as overweight or obese within the previous 24 months.
PI 13: First antenatal care visit	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, who gave birth within the previous 12 months and who had gestational age recorded at their first antenatal care visit, with results either: • less than 13/40 weeks • 13/40 weeks to less than 20/40 weeks • at or after 20/40 weeks • no result.
PI14: Influenza immunisation (50 years and over)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 50 and over and who are immunised against influenza.
PI 15: Influenza immunisation (type 2 diabetes or COPD clients)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15–49, are recorded as having type 2 diabetes or COPD and are immunised against influenza.
PI 16: Alcohol consumption recorded	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over and who have had their alcohol consumption status recorded at the primary health care service within the previous 24 months.
PI 17: AUDIT-C result[(a)]	Proportion of regular Aboriginal and/or Torres Strait Islander clients, aged 15 years and over, who have had an AUDIT-C result recorded in the previous 24 months with a score of either: • greater than or equal to 4 in males and 3 in females • less than 4 in males and 3 in females.
PI 18: Kidney function test recorded (type 2 diabetes or CVD clients)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over who are recorded as having type 2 diabetes and have had an estimated glomerular filtration rate (eGFR) recorded AND/OR an ACR or other microalbumin test result recorded within the previous 12 months AND proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over who are recorded as having cardiovascular disease (CVD) and have had an eGFR recorded within the previous 12 months.

(continued)

Table A1: (continued): nKPIs and their description

Indicator	Description
PI 19: eGFR result	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 years and over, who are recorded as having type 2 diabetes or CVD and who have had an eGFR recorded within the previous 12 months with a result of (mL/min/1.73m^2): • greater than or equal to 90 • greater than or equal to 60 but less than 90 • greater than or equal to 45 but less than 60 • greater than or equal to 30 but less than 45 • greater than or equal to 15 but less than 30 • less than 15.
PI 20: Proportion of regular clients who have had the necessary risk factors assessed to enable CVD assessment [(a)]	Proportion of Aboriginal and/or Torres Strait Islander regular clients with no known CVD, aged 35–74, with information available to calculate their absolute CVD risk.
PI 21: Absolute cardiovascular risk result[(a)]	Proportion of Aboriginal and/or Torres Strait Islander regular clients, aged 35–74 and with no known history of CVD, who have had an absolute CVD risk assessment recorded within the previous 2 years and whose CVD risk was categorised as 1 of the following: • high (greater than 15% chance of a cardiovascular event in the next 5 years) • moderate (10%–15% chance of a cardiovascular event in the next 5 years) • low (less than 10% chance of a cardiovascular event in the next 5 years).
PI 22: Cervical screening recorded	Proportion of female regular clients who are Aboriginal and/or Torres Strait Islander, aged 20–69, who have not had a hysterectomy and who have had a cervical screening within the previous 2 years, 3 years and 5 years.
PI 23: Blood pressure recorded (clients with type 2 diabetes)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and who have had a blood pressure measurement result recorded at the primary health care service within the previous 6 months.
PI 24: Blood pressure less than or equal to 130/80 mmHg (clients with type 2 diabetes)	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and whose blood pressure measurement result, recorded within the previous 6 months, was less than or equal to 130/80 mmHg.

(a) Indicator has not yet been collected.

Appendix 2

Data quality

The quality and completeness of the data submitted by organisations are important determinations of the quality of the national analyses. Data may be incomplete for a number of reasons:

- internal inconsistency (for example, numerator is greater than denominator, numbers not matching between linked indicators, subgroup totals not adding up to the total)
- organisations commenting when submitting data that their data are incomplete or incorrect and could not be corrected
- organisations indicating that they did not provide a particular service so no data are available (that is, health assessments were not part of an organisation's regular service)
- an organisation sharing an information recording system with another organisation and hence unable to separate its clients from all clients of the combined organisations
- auspiced organisations that collect data from a number of organisations often sharing a single patient information recall system and a single governance body. The data for individual organisations are combined and include duplicate clients.

This means that data for some indicators must be excluded for organisations if unresolved data quality issues remain. This results in different numbers of organisations with valid data for different indicators. For example, if 200 organisations submitted data for all reporting periods and all organisations provided valid data for PI01, PI01 will have 200 organisations contributing data. However, some of the same 200 organisations may not have valid data for PI03 and this will result in fewer organisations contributing data to that indicator (see Table A2.1 for the number of organisations contributing valid data for each indicator for the December 2014 collection period).

In addition, when analysing and presenting data at the national level:

- there are some paired indicators where the numerator for one is the denominator for the other (for example: PI05 and PI06; PI09 and PI10; and PI23 and PI24). If data for one indicator in a pair are excluded due to data quality issues, data from the other indicator in the pair are also excluded
- some jurisdictions have an insufficient number of organisations to perform meaningful analysis. Therefore, Tasmanian data are combined with Victorian data and data from the Australian Capital Territory are combined with data from New South Wales
- it should be noted that some organisations (like the Queensland Aboriginal and Islander Health Council) use nKPI data to issue their own reports. These data may be reported differently because of different data 'cleaning' processes.

More information on data quality can be found on the AIHW's METeOR website <http://meteor.aihw.gov.au/content/index.phtml/itemId/615756>.

Table A2.1: Number of organisations contributing valid data and number of clients by indicator, December 2014

Measure	Number of organisations with valid data[a]	Number of organisations included in the analyses[b]	Number of clients	Organisations with denominators of <20 clients (%)
PI 01: Birthweight recorded	227	218	7,426	50
PI 02: Birthweight result	225	200	5,144	63
PI 03: MBS health assessments				
Aged 0–4	221	221	34,677	16
Aged 25+	222	222	142,674	2
PI 04: Child immunisation				
At age 1	221	216	7,904	48
At age 2	221	215	7,982	51
At age 5	221	215	7,015	52
PI 05: HbA1c test recorded	212	209	32,770	14
PI 06: HbA1c result				
6 months	212	205	16,849	24
PI 07: General Practitioner Management Plan	214	211	32,803	14
PI 08: Team Care Arrangement	214	211	32,803	14
PI 09: Smoking status recorded	221	221	190,829	1
PI 10: Smoking status result	221	220	149,677	3
PI 11: Smoking status of women who gave birth in the previous year	210	200	5,474	61
PI 12: BMI result	219	215	100,152	4
PI 13: First antenatal visit before 13 weeks	216	191	4,931	67
PI 14: Clients aged 50+ immunised against influenza	212	208	47,947	11
PI 15: Immunised against influenza for clients with type 2 diabetes or COPD				
Clients with type 2 diabetes	214	204	13,537	36
Clients with COPD	213	155	1,615	90
PI 16: Alcohol consumption recorded	222	222	191,189	1
PI 18: Kidney function test recorded for client with type 2 diabetes or CVD				
Clients with type 2 diabetes	206	203	31,753	14
Clients with CVD	206	196	14,531	39
PI 19: Kidney function result for clients with type 2 diabetes or CVD				
Clients with type 2 diabetes	206	197	20,129	22
Clients with CVD	206	191	9,224	48
PI 22: Cervical screening (2, 3 and 5 years)	225	213	88,652	11
PI 23: Clients with type 2 diabetes with blood pressure test recorded	213	210	32,800	14
PI 24: Clients with type 2 diabetes with blood pressure ≤130/80 mmHg	213	209	22,216	18

(a) Organisations with valid data after exclusion due to inconsistent data or organisation comments.

(b) Excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.

Issues to consider when interpreting indicator data

The nKPIs, like performance indicator systems generally, are useful but imperfect measures of system characteristics that are agreed to be important. In order to maximise the usefulness, data users need to understand where and how the nKPI data might depart from the reality that the indicators are attempting to measure. These notes are designed to help nKPI data users appreciate and work constructively with the data that appear in this report.

Babies' records The 2 indicators related to birthweight include any baby with a record at the health organisation. The baby is considered a client and counted in the nKPIs even if they attended only once and their parents are not regular clients of the organisation. This may lead to babies who visited the organisation purely for acute care, and whose carers may not have been able to confirm birthweight, being included. Babies without a medical record, whose information is only recorded in their mother's record, are not counted.

Multiple births should not be included in birthweight results, as babies born as part of multiple births are more likely to have a lower birthweight. However, anecdotal evidence suggests that exclusion of multiple births may not always have occurred.

Differential body mass index (BMI) testing may occur in some organisations where BMI may be more likely to be measured in clients who look underweight, overweight or obese. This would result in the proportion of overweight or obese clients being higher than it actually is.

Influenza vaccination does not include clients who are offered a vaccination but refuse. While some clients may be reluctant to have the vaccination, this does not change whether or not they are at increased risk from influenza. Organisations may not have records of immunisations that occurred at other places, such as workplaces.

MBS items are not claimed by all organisations, either because they do not have a general practitioner (GP) present, they are not eligible to claim them or because they choose not to do so. Therefore, the indicators based on MBS items may not reflect all related health care activities carried out in an organisation. For instance, children may receive comprehensive health checks but these may be provided within a model of care that does not suit or allow for the check to be claimed as an MBS item. Almost half of the organisations that responded indicated that they provided a service similar to the MBS item that was not claimed.

Pathology results held at the organisation may not reflect all pathology tests that have occurred for its regular clients. Organisations without systems in place may not have recorded the information or results may not have been picked up accurately.

GP availability may be limited in some areas, making it difficult for organisations to attract or retain GPs.

Access to allied health providers may be limited in some areas, in which case Team Care Arrangements (TCAs) may not be practical. This is often the case in remote regions.

Recording of alcohol consumption is not restricted to a particular test or format for this indicator. Organisations can use tests such as the AUDIT or AUDIT-C or simply record whether or not the client consumes alcohol.

Non-Indigenous comparison data are available for some indicators. The comparisons can be with either non-Indigenous Australians or all Australians. See Appendix 3 and Table A3.2.

Shared care arrangements between hospitals and primary health organisations, between primary care organisations or between primary health care organisations and other providers of similar care are not consistently supported by automatic data sharing. This could lead to lower rates of data recording for some indicators. For instance, organisations may find it more difficult to obtain antenatal records if antenatal care occurred elsewhere. Similarly, it will be difficult for organisations to obtain information on their regular clients who may choose to receive cervical screening elsewhere.

Small organisation denominators All relevant organisations were included in the analyses, without any differentiation for organisation size. This means that the set of organisation percentages used to compute quartiles (for example) are based on client sets that can range from very small to very large. Where an organisation has a small denominator, small changes in the numerator can have a large impact on the overall proportion for that organisation. This is true for all the indicator measures in this report. The proportion of organisations with a denominator of fewer than 20 clients exceeded 10% of all contributing organisations for 17 of the 21 indicators (see Table A2.1). One indicator measure, clients with COPD immunised against influenza, had 90% of organisations with a denominator of fewer than 20 clients. This was substantially higher than all other measures.

Smoking status categories are not yet fully agreed. For example, there is not yet universally accepted guidance on how long a person needs to have quit smoking to be considered an exsmoker rather than a smoker. An increased number of types of ex-smokers might enhance data quality and lead to more frequent updating of clients' records.

Time-stamped records normally ensure that a record or activity is fairly recent. However, the smoking status recorded and smoking status result indicators are based on the most recent record for the client, regardless of how old that record is. Therefore, the indicator may not reflect current smoking status of the regular client population unless the data have been collected recently for all or most clients.

Interpreting changes over time

There are a number of factors that should be kept in mind when interpreting changes over time. These are discussed below.

New organisations

The organisations that reported data for each indicator changed in each reporting period. In June 2012, 90 organisations participating in Healthy for Life reported data for nKPIs. Healthy for Life was a continuous quality improvement program for organisations providing care to Indigenous people funded by the Australian Government. Organisations reported on a number of indicators to the AIHW, many of which were similar to the nKPIs. In return, the AIHW provided organisations with reports and PowerPoint presentations to assist them in their local continuous quality improvement processes. Previous participation in Healthy for Life was associated with better performance against the nKPIs (AIHW 2014c).

The number of organisations that reported in the nKPI process increased to 173 in December 2012, 206 in June 2013, 207 in December 2013 and 233 in December 2014 (see Table A2.2). The inclusion of additional organisations could lead to changes in national performance over time even if there is no change in the performance of other organisations. This effect can be amplified for state, territory and remoteness averages. Twenty-six Northern Territory Government organisations began reporting in June 2013, while only 2 reported in the preceding period and 22 began reporting in December 2014. This addition should be kept in mind when interpreting time trend data, especially for the Northern Territory and *Very remote* areas, since most of the NTG organisations are in *Very remote* areas.

Role of improved data recording

Several issues have been suggested as possible impediments to data quality, such as the incomplete recording of client information, including Indigenous status; unfamiliarity with electronic information systems and extraction tools; possible flaws with these tools; inconsistent data entry; and lack of compatibility between electronic systems (Bailie et al. 2013).

As organisations become more familiar with the nKPI system, they will be able to improve their systems and processes. For example, some organisations may systematise the way that they record client data to facilitate or ensure electronic extraction when reporting the nKPIs while others may need only to improve recording of client data. Some of these issues can be solved in time for the first round of reporting while others may take more time.

In many cases, such improvement does not represent improved service delivery or client care, though systematising data storage may lead to more efficient or effective care in some instances.

Regular clients

All of the indicators, except the 2 on birthweight, are based on regular clients at the organisation. The definition of a regular client is anyone who has visited an organisation 3 or more times in the past 2 years, regardless of whether the visit was billed to Medicare. A single definition of a regular client has been agreed for reporting against the nKPIs to ensure national consistency. Although this definition can lead to double counting of clients who attend multiple services, it is consistent with that of the Royal Australian College of General Practitioners of someone with an active medical record (RACGP 2010).

Table A2.2: Number of organisations included in analyses[(a)] by indicator, June 2012–December 2014

Measure	Jun 2012	Dec 2012	Jun 2013	Dec 2013	Jun 2014	Dec 2014
PI 01: Birthweight recorded	80	148	160	193	198	218
PI 02: Birthweight result	..	..	142	176	179	200
PI 03: MBS health assessments						
Aged 0–4	77	143	185	193	192	221
Aged 25+	78	143	185	192	196	222
PI 04: Child immunisation						
At age 1	..	..	186	188	184	216
At age 2	..	..	187	191	185	215
At age 5	..	..	183	189	182	215
PI 05: HbA1c test recorded	78	138	172	183	183	209
PI 06: HbA1c result						
6 months	76	133	165	177	179	205
PI 07: GPMP	76	143	179	185	185	211
PI 08: TCA	76	142	179	185	185	211
PI 09: Smoking status recorded	79	155	190	190	197	221
PI 10: Smoking status result	..	..	159	190	197	220
PI 11: Smoking status of women who gave birth in the previous year	..	..	..	..	..	200
PI 12: BMI result	82	149	179	186	189	215
PI 13: First antenatal visit before 13 weeks	..	..	141	133	167	191
PI 14: Clients aged 50+ immunised against influenza	..	..	183	184	186	208
PI 15: Immunised against influenza for clients with type 2 diabetes or COPD						
Type 2 diabetes	..	..	171	178	175	204
COPD	..	..	142	146	146	155
PI 16: Alcohol consumption recorded	78	151	194	195	198	222
PI 18: Kidney function test recorded for clients with type 2 diabetes or CVD						
Type 2 diabetes	..	..	175	181	183	203
CVD	..	..	174	173	179	196
PI 19: Kidney function result for clients with type 2 diabetes or CVD						
Type 2 diabetes	..	..	..	..	..	197
CVD	..	..	..	..	..	191
PI 22: Cervical screening (2, 3 and 5 years)	..	..	179	180	183	213
PI 23: Clients with type 2 diabetes with blood pressure test recorded	78	144	176	177	185	210
PI 24: Clients with type 2 diabetes with blood pressure ≤130/80 mmHg	77	143	175	175	185	209

.. not applicable

(a) Excludes organisations that did not provide valid data for the indicator. Also excludes organisations providing data with a '0' denominator for indicators as they had no clients to provide services to be counted in those indicators.

There are a number of scenarios in which a client would or would not be considered a regular client which should be considered when interpreting the data. These may include scenarios as described below:

- Some clients may attend an organisation 3 times in 2 years but have another primary health care organisation as their primary source of care. This will lead to double-counting of that person. It will also provide an invalid measure of the extent to which that person is receiving appropriate care from the provider they visit 3 or more times, but which is not their main provider.
- Some clients may be the normal clients of an organisation but have not attended 3 times in a 2-year period for a number of reasons, including that the client could be in good health or did not regularly attend primary health care organisations when they were well. It is possible that the nKPI data may be biased towards less healthy clients, as people who are unwell are more likely to attend primary health care organisations.
- Clients may access different health care organisations within the same general location. Clients seeking health care may not use the same organisation consistently. They may use various organisations for different purposes, for example favouring 1 when they want increased privacy and another because it bulk bills (Bailie et al. 2013). This behaviour may be more common in regions with more health care options and less frequent in *Very remote* areas where local health care options are more limited. This could result in variations in the make-up of regular clients between regions. Relatively urban organisations in *Very remote* areas may have higher levels of regular clients who are not their normal clients than other *Remote* organisations. This is because they may be regional centres used in transit and because they provide a wider array of healthcare options.
- Some clients may be transient and stay in a community only temporarily. Organisations with a large fraction of transient clients that are counted as regular clients may appear to have poorer results than other organisations. They may have less capacity to follow up on patients, including those with chronic diseases. These organisations might also choose to allow a client's normal primary healthcare organisation to provide some MBS item services, including health checks, GPMPs and TCAs.

In addition, the nKPI 'regular client' definition may differ from what some organisations consider to be their normal clients. Analysis of data for some organisations has found that the nKPI definition leads to a higher count of regular clients compared with their local definition for some nKPIs. This is known to be the case in the Northern Territory where organisations also report against the Northern Territory Aboriginal Health Key Performance Indicators (NTAHKPI) which uses a qualifier residence in the community served by a health service in their definition of regular client. The definition used by the NTG organisations includes clients who have attended the organisation as their 'usual health centre' and have attended at least 3 times in the last 2 years. This is intended to prevent possible double counting of clients who attend multiple organisations.

Data collection and transmission

Data for most organisations are transmitted electronically from the organisation's Patient Information Record System to the Clinical Audit Tool. From there, data are transferred to the OCHREStreams web portal, from which the AIHW downloads data. Theoretically, this transmission could diminish data integrity and there have been reports of problems with data extraction (Bailie et al. 2013). However, organisations review their data on OCHREStreams before submission and receive reports on their data from the AIHW after the AIHW has accepted data. As with any information reporting system, the apparent performance of an organisation depends not only on performing the underlying activity, but also on accurately collecting and recording that information. On the whole, the nKPI data indicate that further investigation into data gathering and reporting processes is warranted, especially for some indicators.

Data quality review

A data quality review of the nKPIs undertaken by independent analysts on behalf of the Department of Health identified a number of areas of focus for improving future nKPI data collections. This review (available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/irhd-nkpquality>) made a number of recommendations which are aimed at improving the accuracy and completeness of data. The recommendations for the AIHW include:

- raise awareness of the data sources used for nKPI reporting of birthweight through a published user guide
- develop support materials to build health services' understanding of the specific data requirements of the nKPIs
- monitor rate of data quality improvement over next 2 collections from organisations which use MMeX as their PIRS
- monitor the ongoing need for exception reporting, as indicator data from health service systems improves, with a view to phasing them out over time
- monitor overall data quality improvements in MBS-related indicators as other recommendations are implemented.

In response to these recommendations, the AIHW has developed a user guide (available at <http://www.aihw.gov.au/indigenous-primary-health-care-nkpi/>) which provides additional information on the nKPIs for use by organisations. The AIHW will also undertake a project that looks at the circumstances in which organisations submit data with quality issues, with a view to reducing the amount of exception reports generated and data modifications over time. The AIHW will monitor improvements in MBS-related indicators as well as working with the Improvement Foundation (IF), which maintains OCHREStreams, to test the data for organisations using the MMeX system.

Appendix 3

Comparison of nKPI results

This appendix includes a summary of organisations' performance across nKPIs and compares the results with firstly, national data for Aboriginal and Torres Strait Islander people and secondly, with national data for all Australians.

Care must be taken in comparing other data sets with the nKPIs. Many are not directly comparable with the nKPI data because of different indicator definitions, collection periods and populations. For instance, regular clients may be less healthy than other clients of an organisation. The nKPIs are not suitable as estimates of population-level disease or activity prevalence, but, over time, they may contribute to these.

Table A3.1 provides comparison data with other national collections of data about Indigenous people. Table A3.2 provides comparisons with data collections that are for non-Indigenous people and the general Australian population, including both Indigenous and non-Indigenous people. When a data collection also has Indigenous-specific data, these are included to further comparisons between the nKPI data and other data collections.

Comparison with national Indigenous data

There are several indicators where the nKPI statistical mean differs appreciably from data from other national sources (Table A3.1). These include child immunisation, HbA1c test recorded (previous 6 months), proportion of clients with type 2 diabetes who had an MBS GPMP or TCA, current smokers, timing of the first antenatal visit and clients aged 50 and over who were immunised against influenza.

'HbA1c test recorded' was higher in the Healthy for Life data collection in June 2011 than in the nKPIs. However, there was some variability in the Healthy for Life data for this indicator over time, which ranged from 40% in the period ending December 2008 to 56% in the period ending June 2010. The nKPI data are close to the centre of this range. Once the variability of the Healthy for Life data between reporting periods is taken into account, there is little difference between the nKPI and Healthy for Life result for this indicator.

The proportion of clients with type 2 diabetes who had a GPMP or a TCA increased over the course of the Healthy for Life program, based on the subset of organisations that provided valid data in all of the examined periods. If this trend continued, the proportion in Healthy for Life would have been higher in 2013 than it was in 2011. Similarly, the proportion increased between June 2012 and December 2014 in the nKPIs. It is unsurprising that the proportions among clients in the nKPI data set from 2013 are higher than the proportions from 2011 for Healthy for Life.

There were more current smokers recorded among the nKPI organisations' regular clients than among Aboriginal and Torres Strait Islander people who took part in the AATSIHS, which is the closest national comparison. Regular clients have attended the organisations 3 times in the past 2 years and may be less healthy than the general population. Smoking causes negative health effects, so it is possible that smokers are more likely to be regular clients at nKPI organisations. People participating in surveys such as the self-reported AATSIHS may be reluctant to admit to smoking—they may be more willing to divulge this information to their regular primary care provider.

The National Perinatal Data Collection (NPDC) provides the closest national comparison data for the antenatal and perinatal nKPIs, but is different in that it is based on notification forms completed by midwives and other staff in hospitals. Also, the NPDC data cover babies whose mothers are Aboriginal and/or Torres Strait Islander while the nKPIs cover Aboriginal and Torres Strait Islander babies. Regarding comparative data, the proportion of women whose first antenatal care visit is before 13 weeks of pregnancy is higher in NPDC data than in data for the nKPIs. The difference in proportion may also indicate room for improvement in the quality of nKPI data.

The proportion of clients aged 50 and over who were immunised against influenza in the preceding year was higher in the NATSIHS than in the nKPI data. NATSIHS data are 'self-report' data, and may be subject to errors of memory about timing of vaccination. Many regular clients have been vaccinated against influenza outside of their primary care organisation. Organisations participating in the nKPI data may not have total visibility of immunisations that occur elsewhere or may not yet be consistently recording this information.

Comparison with national data for all Australians

Table A3.2 compares nKPI data with statistics for the non-Indigenous population in Australia or with the Australian total (which includes Indigenous people) when appropriate comparison data are available. When a data set includes Indigenous-specific information, these are included in Table A3.2 to facilitate comparison between data sets.

Comparison of results between the nKPI and NPDC results suggests that a lower proportion of mothers in the nKPI population attend antenatal visits in the first trimester than Australian mothers as a whole (36% and 57%, respectively), and that about twice the proportion of Indigenous babies (11%) have low birthweight than Australian babies (5%) as a whole.

The nKPI results suggest that a much lower proportion of Indigenous women have cervical screenings than the general population, with 31% of relevant Indigenous regular clients having received the screening in the past 2 years, compared with almost 58% of women in the general population.

Among Indigenous regular clients aged 50 years and over, around 40% were immunised against influenza. This compares with almost 75% of the general Australian population aged 65 and over in the Adult Vaccination Survey. However, the methodologies of the 2 collections differ. The nKPIs examine whether a primary healthcare organisation has a record that its regular client has been immunised. This likely underestimates the true rate of immunisation, as some clients would have received influenza vaccinations elsewhere and not informed the primary healthcare organisation. The Adult Vaccination Survey relies on people's recall of whether or not they have been immunised in the last year. If people conflate multiple years, this could lead to an overestimation of vaccination rates.

Comparing nKPI results to those of all Australians from population surveys suggests that smoking rates among Indigenous people might be about 3 times as high as for the general Australian population, while the proportion of people who are overweight or obese is similar among Indigenous and non-Indigenous people. However, a higher proportion of Indigenous people are obese than non-Indigenous people.

Table A3.1: National Key Performance Indicator results, December 2014

Indicator	Subcomponent	Numerator	Denominator	Mean (%)	Bottom quartile (%)	Top quartile (%)	Comparable national data (%)	Comparable national data collection
First antenatal visit	Within 13 weeks	1,768	4,931	35.9	11.1	48.8	46.0[a]	NPDC
Birthweight recorded	. .	5,155	7,426	69.4	46.0	100	†	
MBS health assessments	Aged 0–4	10,958	34,677	31.6	14.3	48.3	24.9	Medicare Australia
Child immunisation[b]	At age 1	5,250	7,904	66.4	59.3	94.2	86.7	ACIR
	At age 2	4,548	7,982	57.0	7.1	88.9	90.6	ACIR
	At age 5	4,474	7,015	63.8	33.3	100	93.2	ACIR
Birthweight result	Low	650	5,144	12.6	0	16.7	11.8	NPDC
	Normal	4,399	5,144	85.5	81.3	100	86.6	NPDC
	High	95	5,144	1.8	0	1.6	1.6	NPDC
Smoking status of women who gave birth in the previous year	Current smoker	2,687	5,474	49.1	35.1	61.0	48.8[c]	NPDC
	Ex-smoker	875	5,474	16.0	0	23.1	†	
	Never smoked	1,912	5,474	34.9	20	42.6	†	
Smoking status recorded	. .	149,677	190,829	78.4	68.9	90.3	†	
Alcohol consumption recorded	. .	104,320	191,189	54.6	40.0	75.0	†	
MBS health assessments	Aged 25 and over	62,684	142,674	43.9	25.2	57.1	26.4	Medicare Australia
Cervical screening	Last 2 years	27,341	88,562	30.9	19.3	48.6	†	
	Last 3 years	35,342	88,560	39.9	27.1	62.0	†	
	Last 5 years	42,465	88,560	48.0	36.2	74.1	†	
Clients aged 50+ immunised against influenza	. .	18,976	47,947	39.6	29.3	70.0	60	NATSIHS 2004–05
Smoking status result	Current smoker	78,463	149,677	52.4	47.2	59.2	43.7[d]	AATSIHS 2012–13
	Ex-smoker	22,016	149,677	14.7	11.0	17.3	20.4	AATSIHS 2012–13
	Never smoked	49,198	149,677	32.9	26.1	38.5	35.9	AATSIHS 2012–13

(continued)

Table A3.1 (continued): National Key Performance Indicator results, December 2014

Indicator	Subcomponent	Numerator	Denominator	Mean (%)	Bottom quartile (%)	Top quartile (%)	Comparable national data (%)	Comparable national data collection
BMI result	Overweight or obese	70,168	100,152	70.1	64.9	76.6	73.5	NATSIHS 2012–13
GPMP	..	16,515	32,803	50.3	37.0	76.9	32.0	Healthy for Life
TCA	..	15,471	32,803	47.2	31.4	73.3	27.2	Healthy for Life
Clients with type 2 diabetes with blood pressure test recorded		22,216	32,800	67.7	63.4	86.7	65.4	Healthy for Life
HbA1c test recorded	6 months	16,849	32,770	51.4	41.3	74.1	53.9	Healthy for Life
	12 months	22,413	32,770	68.4	62.2	89.3	†	
Kidney function test recorded for clients with chronic diseases	Type 2 diabetes	21,004	31,753	66.1	62.0	89.0	†	
	CVD	9,224	14,531	63.5	56.0	85.7	†	
Clients with chronic diseases, immunised against influenza	Type 2 diabetes	5,632	13,537	41.6	22.1	73.9	†	
	COPD	667	1,615	41.3	11.8	66.7	†	
Clients with type 2 diabetes with blood pressure ≤130/80 mmHg		9,776	22,216	44.0	36.4	52.9	42.0	Healthy for Life
HbA1c result	≤7% 6 months	5,912	16,849	35.1	29.7	42.7	30.6	Healthy for Life

(continued)

Table A3.1 (continued): National Key Performance Indicator results, December 2014

Indicator	Subcomponent	Numerator	Denominator	Mean (%)	Bottom quartile (%)	Top quartile (%)	Comparable national data (%)	Comparable national data collection
Kidney function result for clients with type 2 diabetes or CVD	Type 2 diabetes							
	<15	811	20,129	4.0	0	4.5	†	
	≥15–<30	585	20,129	2.9	0	3.6	†	
	≥30–<60	2,404	20,129	11.9	8.5	15.0	†	
	≥60	16,329	20,129	81.1	77.8	86.5	†	
	CVD							
	<15	439	9,224	4.8	0	5.4	†	
	≥15–<30	327	9,224	3.5	0	4.9	†	
	≥30–<60	1,448	9,224	15.7	10.0	21.6	†	
	≥60	7,010	9,224	76.0	69.6	84.2	†	

† The nKPIs are the only source of national data for Indigenous Australians for these indicators.

(a) Data are for mothers who gave birth to a baby of at least 20 weeks gestation and had stated information on duration of pregnancy at first antenatal visit.

(b) The nKPI collection currently underestimates the proportion of Aboriginal and Torres Strait Islander children who have been immunised because it relies on organisations' internal records.

(c) Data are for mothers who gave birth to a baby of at least 20 weeks gestation and had stated information on smoking status at any time in the pregnancy.

(d) Comparable national data refer to the proportion smoking daily and occasionally.

Notes

1. Data are for services that provided valid data. The total number of services that participated in the nKPI data collection process was 233 in December 2014.
2. ACIR (Australian Childhood Immunisation Register) data are as at 31 December 2014 (Department of Health 2015b); Healthy for Life data are as at 30 June 2011 (AIHW 2013); Medicare Australia data are for January 2014 to December 2014 (AIHW 2015b); NATSIHS data are for 2012–13 (ABS 2014) or 2004–05 (ABS 2006); NPDC (National Perinatal Data Collection) data are for 2012 (AIHW analysis of the National Perinatal Data Collection (unpublished)).
3. ACIR data are for children aged 12 to <15 months, 24 to <27 months, and 60 to <63 months, while nKPI data are for children 12 to <24 months, 24 to <36 months and 60 to <72 months.

Sources: ACIR; AIHW Healthy for Life data collection; AIHW nKPI data collection; AIHW NPDC; Medicare Australia; NATSIHS.

Table A3.2: National key performance indicator results, December 2014, with non-Indigenous comparisons

Indicator	Subcomponent	nKPI result (%)	Indigenous comparison (%)	Non-Indigenous comparison (%)	General population comparison (%)	Comparison source
First antenatal visit	Within 13 weeks	35.9	46.0	57.5	57.1[a]	National Perinatal Data Collection[b]
Birthweight result	Low	12.6	10.5	4.5	4.8[a]	National Perinatal Data Collection[c]
Smoking status of women who gave birth in the previous year	Current smoker	49.1	48.8	11.0	12.5[a]	National Perinatal Data Collection[d]
Cervical screening	Last 2 years	30.9	..	..	58.2	National Cervical Screening Program[e]
	Last 3 years	39.9	..	..	70.8	National Cervical Screening Program[e]
	Last 5 years	48.0	..	..	83.2	National Cervical Screening Program[e]
Influenza immunisation	Aged 50+	39.6	..	..	74.6	Adult Vaccination Survey[f]
Smoking status	Current smoker	52.4	43.0	16.9	..	NATSIHS 2012–13[g] and Australian Health Survey 2011–13[g]
	Ex-smoker	14.7	20.5	29.8	..	
	Never smoked	32.9	36.5	53.2	..	
BMI result	Overweight	27.4	29.8	37.5		NATSIHS 2012–3[g] and Australian Health Survey 2011–13[g]
	Obese	42.7	42.8	29.2		

Notes

(a) Comparison data are from 2012 and includes births to mothers whose Indigenous status was not stated.

(b) Comparison data are from 2012 and are for mothers who gave birth to a baby of at least 20 weeks gestation and had stated information on duration of pregnancy at first antenatal visit.

(c) Comparison data are from 2012, relate to live singleton births of 20 weeks gestation or more and are for babies of Indigenous and non-Indigenous mothers.

(d) Comparison data are from 2012 and are for mothers who gave birth to a baby of at least 20 weeks gestation and had stated information on smoking status at any time in the pregnancy.

(e) Comparison data are from 2013 and are not restricted to the 'regular client' definition.

(f) Comparison data are from 2009 and include people aged 65 and over. They are based on a population survey, not health organisation records.

(g) Comparison data are from 2012–13 and 2011–13 and are based on population surveys, not health organisation records.

Sources: AIHW NPDC; NCSP; AVS; NATSIHS; AHS.

Appendix 4

nKPI time trend results by jurisdiction and remoteness

This appendix presents time trend results by jurisdiction and remoteness for each measure in each reporting period.

Table A4.1: Percentage of Indigenous regular clients who gave birth within the previous 12 months and who had their first antenatal visit recorded, by timing of first antenatal visit, reporting period and jurisdiction

Timing of first antenatal visit	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Less than 13 weeks	June 2013	34.8	37.9	30.2	34.3	31.2	39.6
	December 2013	40.2	32.0	33.7	37.9	39.1	39.4
	June 2014	30.9	34.6	31.8	44.5	39.8	33.5
	December 2014	32.7	32.6	34.3	41.0	44.2	35.5
13 to less than 20 weeks	June 2013	32.4	28.6	27.5	22.3	23.3	19.6
	December 2013	29.2	28.8	23.3	24.7	23.1	19.9
	June 2014	34.6	25.1	22.9	21.5	20.1	18.1
	December 2014	34.0	32.9	25.1	21.1	21.7	17.2
20 weeks or greater	June 2013	27.8	23.8	32.1	25.3	29.6	30.9
	December 2013	27.6	32.9	29.1	25.2	26.0	30.0
	June 2014	29.0	37.4	35.5	22.7	31.3	26.6
	December 2014	27.6	30.6	32.5	25.6	26.4	25.1
Not recorded	June 2013	4.9	9.7	10.2	18.0	15.9	9.8
	December 2013	3.0	6.4	13.9	12.1	11.8	10.7
	June 2014	5.5	2.8	9.7	11.4	8.8	21.8
	December 2014	5.7	3.9	8.1	12.3	7.6	22.2

Source: AIHW nKPI data collection.

Table A4.2: Percentage of Indigenous regular clients who gave birth within the previous 12 months and who had their first antenatal visit recorded, by timing of first antenatal visit, reporting period and remoteness

Timing of first antenatal visit	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Less than 13 weeks	June 2013	31.7	33.0	34.5	42.8	31.8
	December 2013	32.4	42.8	36.9	44.1	32.5
	June 2014	28.3	31.9	39.7	44.3	29.9
	December 2014	32.9	33.5	37.5	43.3	31.3
13 to less than 20 weeks	June 2013	30.0	30.8	26.5	17.4	25.9
	December 2013	31.5	24.7	25.2	20.6	23.4
	June 2014	34.5	30.1	22.7	19.8	20.5
	December 2014	30.5	32.6	24.0	18.3	23.4
20 weeks or greater	June 2013	29.8	28.6	28.8	24.2	31.4
	December 2013	27.9	28.3	29.7	24.9	27.9
	June 2014	29.6	30.8	31.6	24.2	25.7
	December 2014	27.9	26.8	31.6	25.6	25.5
Not recorded	June 2013	8.5	7.5	10.1	15.6	10.8
	December 2013	8.2	4.2	8.2	10.4	16.2
	June 2014	7.6	7.2	6.0	11.7	23.8
	December 2014	8.7	7.2	6.9	12.7	19.8

Source: AIHW nKPI data collection.

Table A4.3: Percentage of Indigenous babies born in the previous year who had their birthweight recorded at the primary health care organisation, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	60.7	52.2	41.6	54.7	65.0	50.5
December 2012	64.2	55.5	39.1	56.5	52.0	61.3
June 2013	67.9	60.7	44.9	57.8	47.7	60.5
December 2013	68.3	68.6	43.5	60.3	54.8	69.8
June 2014	75.3	65.5	47.5	72.9	63.0	72.6
December 2014	75.6	70.6	54.2	68.7	69.1	75.4

Source: AIHW nKPI data collection.

Table A4.4: Percentage of Indigenous babies born in the previous year who had their birthweight recorded at the primary health care organisation, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	47.8	67.1	35.2	70.4	47.9
December 2012	44.5	73.3	40.5	62.5	52.5
June 2013	50.0	73.7	53.0	59.2	50.3
December 2013	54.5	72.8	58.5	64.5	54.3
June 2014	61.4	76.2	64.2	73.2	61.5
December 2014	66.8	77.8	67.1	68.2	63.3

Source: AIHW nKPI data collection.

Table A4.5: Percentage of Indigenous regular clients aged 0–4 who received an MBS health assessment in the past 12 months, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	18.4	9.1	31.1	14.6	22.7	29.4
December 2012	24.4	10.8	30.0	21.6	12.8	30.1
June 2013	25.3	12.9	30.0	23.8	13.3	31.7
December 2013	24.8	11.3	29.4	25.1	16.3	37.3
June 2014	25.5	10.9	30.3	23.3	20.4	42.4
December 2014	27.3	16.5	37.5	23.7	24.7	45.7

Source: AIHW nKPI data collection.

Table A4.6: Percentage of Indigenous regular clients aged 0–4 who received an MBS health assessment in the past 12 months, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	21.6	16.9	31.2	21.9	20.3
December 2012	21.0	24.9	25.0	24.5	26.3
June 2013	22.1	26.9	25.0	30.7	25.7
December 2013	23.1	29.6	25.7	30.0	26.0
June 2014	25.2	28.1	27.4	32.5	26.8
December 2014	30.8	29.6	31.8	33.7	32.9

Source: AIHW nKPI data collection.

Table A4.7: Percentage of Indigenous babies born in the previous year whose birthweight result was categorised as low, normal or high, by birthweight result, reporting period and jurisdiction

Birthweight result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Low	June 2013	11.9	14.4	8.5	15.0	13.4	14.6
	December 2013	11.7	12.9	10.1	13.4	15.4	14.7
	June 2014	12.6	14.4	11.6	12.8	12.5	15.3
	December 2014	11.8	15.1	10.5	14.1	8.2	15.1
Normal	June 2013	85.1	84.6	88.9	81.4	85.1	83.8
	December 2013	87.1	86.8	87.3	82.8	83.9	81.6
	June 2014	85.1	84.0	86.7	85.8	86.7	83.3
	December 2014	85.9	83.4	87.1	84.8	89.5	83.8
High	June 2013	3.0	1.0	2.6	3.5	1.5	1.5
	December 2013	1.1	0.3	2.6	3.8	0.7	3.7
	June 2014	2.3	1.6	1.7	1.4	0.8	1.4
	December 2014	2.3	1.4	2.3	1.2	2.3	1.1

Source: AIHW nKPI data collection.

Table A4.8: Percentage of Indigenous babies born in the previous year whose birthweight result was categorised as low, normal or high, by birthweight result, reporting period and remoteness

Birthweight result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Low	June 2013	12.4	11.8	12.2	12.9	13.5
	December 2013	10.3	13.2	12.1	14.1	13.4
	June 2014	11.4	13.3	12.8	12.5	16.2
	December 2014	13.2	10.8	12.0	14.5	14.7
Normal	June 2013	86.1	84.9	85.8	83.6	84.1
	December 2013	88.3	86.3	85.9	81.7	82.3
	June 2014	86.3	85.3	85.2	85.8	82.3
	December 2014	84.9	87.2	85.8	84.5	83.6
High	June 2013	1.4	3.3	2.0	3.5	2.4
	December 2013	1.3	0.6	2.0	4.3	4.3
	June 2014	2.4	1.4	1.9	1.8	1.5
	December 2014	1.9	2.0	2.2	1.0	1.7

Source: AIHW nKPI data collection.

Table A4.9: Percentage of Indigenous regular clients aged 15 and over who had their smoking status recorded, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	68.5	48.4	80.2	47.5	60.6	64.6
December 2012	72.7	58.1	79.0	71.2	57.6	70.9
June 2013	74.8	61.2	81.9	70.6	58.4	50.6
December 2013	78.7	63.1	82.7	73.3	62.9	65.4
June 2014	80.5	68.8	83.7	74.2	67.5	71.0
December 2014	81.8	70.4	83.4	75.4	68.5	76.7

Source: AIHW nKPI data collection.

Table A4.10: Percentage of Indigenous regular clients aged 15 and over who had their smoking status recorded, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	68.8	73.3	68.2	52.6	58.1
December 2012	74.4	74.5	67.6	71.3	70.0
June 2013	76.3	80.2	66.0	64.5	54.4
December 2013	77.5	83.6	67.8	72.5	68.2
June 2014	80.0	86.1	70.4	73.7	72.6
December 2014	82.7	86.4	75.2	76.0	72.5

Source: AIHW nKPI data collection.

Table A4.11: Percentage of Indigenous regular clients aged 15 and over who had their alcohol consumption status recorded, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	39.1	22.0	46.9	36.6	30.6	36.7
December 2012	38.1	31.8	46.6	60.8	38.7	49.6
June 2013	40.7	34.4	52.0	57.6	40.6	49.5
December 2013	46.1	37.1	51.4	62.0	45.9	52.5
June 2014	47.7	39.7	55.3	64.0	52.0	53.5
December 2014	50.1	41.7	53.2	64.6	52.5	57.6

Source: AIHW nKPI data collection.

Table A4.12: Percentage of Indigenous regular clients aged 15 and over who had their alcohol consumption status recorded, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	37.6	40.4	45.6	41.7	25.8
December 2012	41.8	44.6	45.8	50.3	45.0
June 2013	41.3	51.3	44.7	50.7	50.1
December 2013	45.3	55.9	46.1	55.3	52.3
June 2014	51.7	58.7	47.3	56.2	52.7
December 2014	53.0	59.9	50.7	56.2	53.5

Source: AIHW nKPI data collection.

Table A4.13: Percentage of Indigenous regular clients aged 25 and over who received an MBS health assessment in the past 24 months, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	35.8	19.6	35.0	18.9	32.6	41.5
December 2012	33.3	21.4	38.7	33.3	26.4	41.9
June 2013	33.7	23.1	49.0	35.5	28.5	38.2
December 2013	35.9	25.7	49.0	41.8	30.8	40.1
June 2014	36.3	27.7	47.6	45.1	35.2	43.6
December 2014	38.3	29.6	52.2	46.5	37.8	45.6

Source: AIHW nKPI data collection.

Table A4.14: Percentage of Indigenous regular clients aged 25 and over who received an MBS health assessment in the past 24 months, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	37.8	30.5	38.1	32.2	14.3
December 2012	31.6	36.3	37.1	39.1	28.1
June 2013	35.7	41.0	37.3	41.3	31.0
December 2013	40.8	44.0	37.8	42.9	33.0
June 2014	41.9	44.7	38.6	45.3	36.5
December 2014	47.6	46.6	41.4	45.8	38.9

Source: AIHW nKPI data collection.

Table A4.15: Percentage of female Indigenous regular clients who had a cervical screening in the previous 2 years, 3 years and 5 years, by timing of cervical screening, reporting period and jurisdiction

Timing	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Within 2 years	June 2013	29.6	35.1	25.7	24.8	24.7	45.3
	December 2013	29.9	34.9	22.7	32.3	25.2	46.3
	June 2014	29.7	32.1	19.7	23.6	27.6	44.3
	December 2014	28.8	27.9	27.6	25.1	28.3	43.8
Between 2 and 3 years	June 2013	36.4	39.5	32.7	27.3	30.8	52.5
	December 2013	36.9	41.0	30.0	38.6	32.8	54.9
	June 2014	37.8	38.6	27.2	33.2	33.5	54.8
	December 2014	36.6	39.8	34.6	34.8	34.2	55.8
Between 3 and 5 years	June 2013	42.1	43.7	38.6	30.1	35.7	60.3
	December 2013	43.9	45.9	36.6	43.7	39.2	63.8
	June 2014	45.3	43.8	35.2	41.7	41.6	64.6
	December 2014	43.6	44.8	40.5	45.8	41.8	65.8

Source: AIHW nKPI data collection.

Table A4.16: Percentage of female Indigenous regular clients who had a cervical screening in the previous 2 years, 3 years and 5 years, by timing of cervical screening, reporting period and remoteness

Timing	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Within 2 years	June 2013	30.9	32.9	21.5	33.3	40.6
	December 2013	31.1	32.3	23.3	36.8	39.3
	June 2014	30.7	28.9	23.2	29.1	35.4
	December 2014	29.8	28.6	22.9	31.1	41.4
Between 2 and 3 years	June 2013	35.6	39.3	26.4	39.0	49.0
	December 2013	36.7	38.7	29.7	44.0	50.0
	June 2014	37.6	36.8	29.5	39.1	46.9
	December 2014	38.2	36.4	29.0	41.6	53.6
Between 3 and 5 years	June 2013	40.2	44.6	30.3	45.7	56.3
	December 2013	41.8	44.7	35.5	51.0	60.2
	June 2014	43.2	43.8	36.1	48.5	59.1
	December 2014	43.3	43.0	35.8	53.5	63.6

Source: AIHW nKPI data collection.

Table A4.17: Percentage of Indigenous regular clients aged 50 and over who were immunised against influenza, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	30.3	33.7	38.1	28.8	31.2	51.5
December 2013	30.5	33.3	32.1	28.4	34.5	56.3
June 2014	30.6	31.1	30.5	41.2	32.4	51.5
December 2014	32.4	33.2	30.9	45.4	34.9	57.7

Source: AIHW nKPI data collection.

Table A4.18: Percentage of Indigenous regular clients aged 50 and over who were immunised against influenza, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2013	30.7	32.2	31.5	40.5	46.8
December 2013	30.9	32.1	31.6	39.8	46.2
June 2014	31.8	32.1	28.6	46.7	46.6
December 2014	31.5	34.6	30.7	48.5	54.6

Source: AIHW nKPI data collection.

Table A4.19: Percentage of Indigenous regular clients aged 15 and over who had a smoking status result of current smoker, ex-smoker or never smoked, by smoking status result, reporting period and jurisdiction

Smoking status result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Current smoker	June 2013	53.6	59.2	52.8	53.1	58.5	52.6
	December 2013	53.2	58.9	50.5	52.6	57.8	53.0
	June 2014	51.8	58.0	50.5	53.2	57.4	53.3
	December 2014	51.3	57.6	50.3	52.6	58.3	53.4
Ex-smoker	June 2013	17.0	13.9	14.6	12.1	10.5	10.9
	December 2013	17.3	13.8	14.8	12.3	11.0	11.6
	June 2014	17.4	13.6	14.7	12.4	10.9	11.7
	December 2014	17.4	14.4	16.8	12.9	11.1	11.1
Non-smoker	June 2013	29.4	26.8	32.6	34.9	31.0	36.5
	December 2013	29.5	27.3	34.7	35.1	31.2	35.4
	June 2014	30.8	28.4	34.8	34.4	31.7	35.0
	December 2014	31.3	28.0	32.9	34.5	30.6	35.5

Source: AIHW nKPI data collection.

Table A4.20: Percentage of Indigenous regular clients aged 15 and over who had a smoking status result of current smoker, ex-smoker or never smoked, by smoking status result, reporting period and remoteness

Smoking status result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Current smoker	June 2013	53.4	52.9	53.7	53.7	55.8
	December 2013	52.7	52.6	53.5	53.8	52.5
	June 2014	52.0	51.1	53.7	54.0	53.0
	December 2014	51.3	50.7	53.5	54.0	53.0
Ex-smoker	June 2013	16.3	15.7	14.5	12.3	9.4
	December 2013	16.6	16.1	14.9	12.5	10.3
	June 2014	16.4	16.1	14.7	12.6	10.6
	December 2014	16.8	16.3	13.9	13.1	13.0
Non-smoker	June 2013	30.4	31.3	31.8	34.0	34.7
	December 2013	30.7	31.2	31.6	33.8	37.2
	June 2014	31.5	32.8	31.6	33.4	36.4
	December 2014	31.8	33.0	32.6	33.0	34.0

Source: AIHW nKPI data collection.

Table A4.21: Percentage of Indigenous regular clients aged 25 and over who had their BMI recorded, by BMI category, reporting period and jurisdiction

BMI category	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Overweight	June 2012	22.3	26.5	22.0	29.0	26.7	28.3
	December 2012	24.8	26.5	23.0	28.8	28.5	28.6
	June 2013	25.8	26.0	23.0	26.3	26.4	28.8
	December 2013	26.0	26.0	27.2	25.2	26.6	28.6
	June 2014	26.1	25.9	27.2	25.2	27.5	27.6
	December 2014	26.7	26.3	27.5	28.4	27.2	27.3
Obese	June 2012	39.2	46.5	38.3	43.8	44.4	38.9
	December 2012	43.9	46.3	38.3	43.6	42.8	37.4
	June 2013	45.2	44.5	38.6	40.5	42.2	34.4
	December 2013	44.0	45.0	45.4	39.4	42.5	33.9
	June 2014	45.6	46.7	46.1	39.6	43.6	32.4
	December 2014	45.2	45.9	47.3	44.8	43.4	32.3

Source: AIHW nKPI data collection.

Table A4.22: Percentage of Indigenous regular clients aged 25 and over who had their BMI recorded, by BMI category, reporting period and remoteness

		Remoteness area				
BMI category	Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
Overweight	June 2012	27.4	26.5	27.3	26.1	18.4
	December 2012	26.6	25.8	27.3	28.5	21.5
	June 2013	26.4	26.3	26.7	27.4	23.0
	December 2013	26.6	26.6	27.6	26.2	26.7
	June 2014	27.0	26.7	27.6	26.6	25.0
	December 2014	27.4	27.1	27.8	28.1	26.6
Obese	June 2012	47.5	42.8	45.4	38.1	28.0
	December 2012	46.1	42.9	44.7	41.9	30.3
	June 2013	45.8	43.7	44.4	40.6	28.2
	December 2013	45.6	42.7	44.3	39.8	33.0
	June 2014	46.9	44.7	45.1	37.3	33.9
	December 2014	46.9	44.3	44.6	39.6	38.4

Source: AIHW nKPI data collection.

Table A4.23: Percentage of Indigenous regular clients with type 2 diabetes who had an MBS General Practitioner Management Plan (GPMP) provided in the past 2 years, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	45.0	32.9	39.2	30.2	37.5	45.7
December 2012	46.1	36.6	44.7	34.4	24.7	46.8
June 2013	49.3	37.8	49.6	31.7	23.7	50.1
December 2013	49.0	40.6	54.8	37.1	31.7	52.7
June 2014	49.1	36.6	50.7	47.1	36.1	53.2
December 2014	53.1	37.4	50.8	49.7	36.3	54.6

Source: AIHW nKPI data collection.

Table A4.24: Percentage of Indigenous regular clients with type 2 diabetes who had an MBS General Practitioner Management Plan (GPMP) provided in the past 2 years, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	36.9	45.5	45.9	44.9	23.4
December 2012	39.6	48.7	43.5	41.0	32.4
June 2013	41.2	55.0	41.5	41.6	39.9
December 2013	41.7	56.9	42.0	42.5	51.6
June 2014	46.4	55.3	42.7	49.9	49.3
December 2014	45.9	60.4	46.7	48.3	52.1

Source: AIHW nKPI data collection.

Table A4.25: Percentage of Indigenous regular clients with type 2 diabetes who had an MBS Team Care Arrangement (TCA) provided in the past 2 years, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	39.5	30.9	37.7	28.8	28.0	35.7
December 2012	44.0	35.1	44.1	28.7	21.4	38.3
June 2013	46.0	36.0	44.5	28.1	20.5	46.1
December 2013	45.8	39.3	53.2	32.8	27.7	50.0
June 2014	46.0	34.6	49.5	40.9	32.3	49.4
December 2014	51.7	34.8	49.5	43.8	32.3	51.2

Source: AIHW nKPI data collection.

Table A4.26: Percentage of Indigenous regular clients with type 2 diabetes who had an MBS Team Care Arrangement (TCA) provided in the past 2 years, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	31.3	40.5	42.7	34.2	23.6
December 2012	36.0	46.4	41.0	34.6	27.0
June 2013	39.1	52.0	38.9	36.5	34.7
December 2013	39.6	53.5	40.0	37.8	49.4
June 2014	44.5	51.4	40.4	44.3	45.6
December 2014	43.2	58.5	44.6	43.5	48.5

Source: AIHW nKPI data collection.

Table A4.27: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the past 6 months, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	63.5	63.2	66.2	59.9	66.3	76.1
December 2012	63.3	64.1	69.4	64.9	67.0	68.9
June 2013	63.9	64.0	63.4	53.2	60.2	71.5
December 2013	62.5	60.5	59.7	60.3	67.9	72.6
June 2014	67.8	60.5	60.7	60.6	64.7	71.6
December 2014	66.4	61.4	68.5	67.8	60.1	71.0

Source: AIHW nKPI data collection.

Table A4.28: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the past 6 months, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	64.9	70.4	69.9	66.9	64.4
December 2012	62.5	66.7	69.0	63.2	71.4
June 2013	62.2	68.0	65.7	64.9	57.7
December 2013	64.1	64.6	62.4	65.5	65.3
June 2014	63.4	70.8	63.7	63.7	65.8
December 2014	63.3	69.1	64.5	68.6	71.2

Source: AIHW nKPI data collection.

Table A4.29: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded within the past 6 or 12 months, by timing of test, reporting period and jurisdiction

		Jurisdiction					
Timing	Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Previous 6 months	June 2012	46.6	53.5	44.4	46.5	55.2	59.3
	December 2012	44.4	51.9	49.3	50.2	47.8	52.8
	June 2013	43.2	50.6	47.3	46.2	43.4	55.8
	December 2013	43.4	46.8	44.4	48.1	49.7	56.1
	June 2014	48.4	47.7	46.2	50.8	50.6	55.8
	December 2014	46.5	44.7	51.3	52.3	44.6	56.8
6–12 months prior	June 2012	18.7	16.6	19.1	13.8	12.8	16.1
	December 2012	19.5	18.1	16.9	18.1	17.1	16.0
	June 2013	18.6	16.3	17.1	13.3	12.7	14.5
	December 2013	15.7	17.3	14.0	17.8	15.7	16.3
	June 2014	14.3	12.9	12.4	15.9	12.8	14.7
	December 2014	18.8	17.3	17.0	17.5	14.7	15.9

Source: AIHW nKPI data collection.

Table A4.30: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded within the past 6 or 12 months, by timing of test, reporting period and remoteness

		Remoteness area				
Timing	Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
Previous 6 months	June 2012	36.9	54.3	54.1	53.4	50.9
	December 2012	38.5	47.6	50.7	48.4	58.7
	June 2013	42.2	51.5	49.5	48.9	48.7
	December 2013	43.2	49.2	46.8	50.7	51.8
	June 2014	46.7	52.6	48.2	48.9	55.7
	December 2014	45.0	50.6	47.6	52.1	57.7
6–12 months prior	June 2012	14.1	15.4	16.3	16.5	18.8
	December 2012	17.5	17.9	17.2	17.7	17.4
	June 2013	16.2	16.3	15.3	14.5	15.4
	December 2013	14.8	16.6	16.6	17.8	14.3
	June 2014	13.2	13.9	14.7	15.5	13.3
	December 2014	18.3	18.0	16.6	16.2	16.6

Source: AIHW nKPI data collection.

Table A4.31: Percentage of Indigenous regular clients with type 2 diabetes aged 15 and over who had either an eGFR or ACR recorded or both an eGFR and an ACR recorded in the past 12 months, by test type, reporting period and jurisdiction

		Jurisdiction					
Test type	Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
eGFR only	June 2013	20.7	24.5	15.4	16.9	16.2	10.2
	December 2013	19.2	24.9	13.0	11.9	18.0	10.4
	June 2014	18.6	26.1	14.4	11.6	14.4	10.1
	December 2014	17.7	22.9	13.9	11.0	15.8	9.2
ACR only	June 2013	2.9	4.2	5.1	5.8	2.9	3.9
	December 2013	3.0	2.5	3.6	5.6	2.5	3.8
	June 2014	2.6	0.9	6.8	4.8	2.9	3.5
	December 2014	2.3	2.1	2.2	2.9	3.1	3.4
Both eGFR and ACR	June 2013	33.6	32.2	43.4	41.9	37.4	51.4
	December 2013	34.0	32.6	41.2	46.6	44.6	50.9
	June 2014	37.9	32.3	40.8	50.0	44.3	56.8
	December 2014	41.3	35.3	50.7	54.0	33.4	59.4

Source: AIHW nKPI data collection.

Table A4.32: Percentage of Indigenous regular clients with type 2 diabetes who aged 15 and over who had either an eGFR or ACR recorded or both an eGFR and an ACR recorded in the past 12 months, by test type, reporting period and remoteness

		Remoteness area				
Test type	Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
eGFR only	June 2013	18.3	18.9	13.7	17.8	12.7
	December 2013	17.2	17.0	14.8	14.6	9.4
	June 2014	16.9	16.8	14.3	14.4	9.4
	December 2014	14.4	16.7	14.0	13.0	10.1
ACR only	June 2013	3.7	2.9	3.1	3.8	6.5
	December 2013	4.8	2.2	3.2	5.2	3.7
	June 2014	5.5	2.6	2.9	7.2	2.2
	December 2014	4.8	2.0	2.0	3.4	2.0
Both eGFR and ACR	June 2013	37.4	36.8	44.9	44.2	45.0
	December 2013	37.1	40.2	42.8	46.8	47.9
	June 2014	38.2	41.0	44.3	45.3	58.3
	December 2014	42.6	43.5	42.9	51.3	62.8

Source: AIHW nKPI data collection.

Table A4.33: Percentage of Indigenous regular clients with cardiovascular disease (CVD) aged 15 and over who had an eGFR recorded in the past 12 months, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	56.9	58.1	46.8	59.6	42.9	67.4
December 2013	54.3	58.5	41.7	63.4	63.0	67.7
June 2014	58.4	55.6	47.5	61.0	57.9	67.9
December 2014	58.0	56.8	61.8	68.6	53.0	69.5

Source: AIHW nKPI data collection.

Table A4.34: Percentage of Indigenous regular clients with cardiovascular disease (CVD) aged 15 and over who had an eGFR recorded in the past 12 months, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2013	58.0	56.2	57.4	64.5	45.3
December 2013	53.8	59.2	56.6	62.9	47.4
June 2014	55.8	59.9	59.8	60.2	54.3
December 2014	56.2	59.7	60.1	69.7	70.9

Source: AIHW nKPI data collection.

Table A4.35: Percentage of Indigenous regular clients aged 15–49 with type 2 diabetes who were immunised against influenza, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	25.7	29.7	35.5	24.4	34.7	52.2
December 2013	25.2	28.6	28.1	24.8	41.0	57.2
June 2014	26.7	23.3	26.2	40.5	36.5	50.8
December 2014	30.2	24.1	25.0	43.1	36.3	58.8

Source: AIHW nKPI data collection.

Table A4.36: Percentage of Indigenous regular clients aged 15–49 with type 2 diabetes who were immunised against influenza, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2013	24.9	25.4	28.1	39.0	46.8
December 2013	24.6	25.5	26.9	39.6	51.6
June 2014	26.0	27.4	26.6	44.7	50.1
December 2014	26.0	30.7	29.7	47.7	53.8

Source: AIHW nKPI data collection.

Table A4.37: Percentage of Indigenous regular clients aged 15–49 with chronic obstructive pulmonary disease (COPD) who were immunised against influenza, by reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	29.0	35.5	28.8	20.8	20.7	63.1
December 2013	28.2	73.0	28.1	21.4	55.2	66.2
June 2014	25.5	21.5	26.4	33.1	38.7	63.0
December 2014	36.1	24.2	25.5	38.5	43.7	70.4

Source: AIHW nKPI data collection.

Table A4.38: Percentage of Indigenous regular clients aged 15–49 with chronic obstructive pulmonary disease (COPD) who were immunised against influenza, by reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2013	29.1	33.4	27.2	38.3	36.4
December 2013	29.7	51.5	26.7	40.3	60.0
June 2014	30.7	24.8	23.4	43.4	56.6
December 2014	34.2	38.3	24.7	45.8	60.8

Source: AIHW nKPI data collection.

Table A4.39: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded, by test result, reporting period and jurisdiction

	Jurisdiction					
Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	33.4	44.3	37.2	37.3	50.9	45.4
December 2012	41.3	43.5	37.1	39.6	41.6	49.2
June 2013	37.2	43.1	38.3	37.0	42.2	48.5
December 2013	38.6	45.4	39.3	39.6	42.7	52.9
June 2014	40.6	39.0	36.6	39.3	42.3	48.7
December 2014	40.9	40.4	39.4	42.5	42.9	51.7

Source: AIHW nKPI data collection.

Table A4.40: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded, by test result, reporting period and remoteness

	Remoteness area				
Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	38.4	34.3	38.1	44.3	42.5
December 2012	39.8	39.1	38.3	46.2	44.4
June 2013	39.1	35.7	38.6	44.7	45.1
December 2013	38.4	38.8	41.4	47.3	48.3
June 2014	38.7	38.5	38.0	47.8	44.0
December 2014	39.0	40.0	41.8	48.1	46.7

Source: AIHW nKPI data collection.

Table A4.41: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded in the past 6 months, by test result, reporting period and jurisdiction

		Jurisdiction					
HbA1c result	Reporting period	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
≤7%	June 2012	37.4	42.0	28.4	32.5	33.2	30.9
	December 2012	37.3	41.9	31.3	32.3	30.2	32.1
	June 2013	40.7	38.5	32.3	32.0	31.2	32.1
	December 2013	39.8	37.1	32.0	31.6	32.2	32.2
	June 2014	41.3	38.4	35.5	33.5	32.7	34.0
	December 2014	35.7	39.2	35.2	35.8	32.8	34.1
>7% to ≤8%	June 2012	18.7	23.1	19.9	17.9	20.1	17.6
	December 2012	19.3	20.3	18.6	17.9	18.0	17.2
	June 2013	18.8	22.9	20.2	16.9	16.4	16.7
	December 2013	20.9	22.5	19.7	17.5	16.6	16.7
	June 2014	19.1	21.9	17.9	17.3	16.1	15.6
	December 2014	20.9	19.1	18.9	17.1	15.9	17.0
>8% to <10%	June 2012	26.7	19.1	24.9	24.2	22.9	20.7
	December 2012	25.3	19.6	24.1	23.7	22.2	20.9
	June 2013	23.5	20.1	23.5	23.3	21.5	21.5
	December 2013	22.5	22.3	24.6	22.4	23.1	21.9
	June 2014	23.3	21.7	24.9	22.7	21.7	22.2
	December 2014	27.1	22.6	25.2	22.7	21.1	20.9
≥10%	June 2012	17.3	15.8	26.8	25.4	23.8	30.9
	December 2012	18.1	18.3	25.9	26.0	29.5	29.8
	June 2013	17.0	18.6	24.0	27.8	31.0	29.6
	December 2013	16.8	18.0	23.7	28.5	28.0	29.2
	June 2014	16.2	18.0	21.7	26.5	29.5	28.1
	December 2014	16.3	19.1	20.7	24.4	30.2	28.0

Source: AIHW nKPI data collection.

Table A4.42: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded in the past 6 months, by test result, reporting period and remoteness

		Remoteness area				
HbA1c result	Reporting period	Major cities	Inner regional	Outer regional	Remote	Very remote
≤7%	June 2012	32.1	38.4	32.7	30.6	29.5
	December 2012	33.1	37.8	32.4	32.2	32.1
	June 2013	35.7	39.3	36.1	31.6	29.5
	December 2013	34.2	38.6	33.8	32.6	30.6
	June 2014	38.1	40.2	36.5	34.5	31.8
	December 2014	35.4	36.4	36.5	36.1	32.6
>7% to ≤8%	June 2012	19.3	21.1	20.3	17.6	16.9
	December 2012	20.5	19.3	20.3	17.5	15.3
	June 2013	20.0	19.7	19.3	16.3	16.9
	December 2013	20.0	20.8	19.8	16.8	16.3
	June 2014	18.4	19.4	19.0	15.5	15.8
	December 2014	18.9	20.8	20.9	16.2	16.1
>8% to <10%	June 2012	26.0	23.5	22.9	23.0	22.1
	December 2012	24.7	25.0	23.4	22.1	21.5
	June 2013	23.6	23.7	22.5	22.5	21.7
	December 2013	23.9	22.5	24.0	22.6	21.4
	June 2014	24.6	23.0	23.4	22.5	22.1
	December 2014	25.2	26.8	23.5	21.9	21.7
≥10%	June 2012	22.6	17.1	24.1	28.8	31.4
	December 2012	21.7	17.9	24.0	28.2	31.1
	June 2013	20.7	17.4	22.1	29.6	31.9
	December 2013	21.8	18.1	22.4	28.0	31.7
	June 2014	18.9	17.4	21.2	27.4	30.4
	December 2014	20.5	16.1	19.1	25.8	29.5

Source: AIHW nKPI data collection.

Appendix 5

nKPI results by age group and sex

This appendix presents data for each measure by age group and sex where the information is collected.

Table A5.1: Percentage of Indigenous regular clients who gave birth within the previous 12 months and who had their first antenatal care visit recorded, by timing of first antenatal visit and age group, December 2014

Timing of first antenatal visit	<20	20–34	35+
Before 13 weeks	32.1	36.5	37.3
13 to 19 weeks	22.2	26.6	26.7
20 weeks or later	34.2	26.6	24.9
Timing not recorded	11.5	10.3	11.1

Source: AIHW nKPI data collection.

Table A5.2: Percentage of Indigenous regular clients who gave birth within the previous 12 months who were recorded as current smokers, ex-smokers or never smoked, by age group, December 2014

Smoking status	15–19	20–24	25–34	35+
Current smoker	39.6	47.9	52.5	53.2
Ex-smoker	16.5	16.7	15.5	14.8
Never smoked	43.9	35.5	32.0	31.9

Source: AIHW nKPI data collection.

Table A5.3: Percentage of Indigenous regular clients whose smoking status had been recorded, by age group and sex, December 2014

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	66.2	75.2	79.2	82.9	84.4	82.5
Females	73.8	80.2	81.2	82.7	84.3	83.3

Source: AIHW nKPI data collection.

Table A5.4: Percentage of Indigenous regular clients who had their alcohol consumption status recorded within the previous 24 months, by age group and sex, December 2014

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	46.9	51.9	56.0	59.1	61.2	55.5
Females	51.7	54.9	56.0	57.6	57.6	54.6

Source: AIHW nKPI data collection.

Table A5.5: Percentage of Indigenous adults aged 25 and over for whom an MBS health assessment was claimed in the previous 24 months, by age group and sex, December 2014

Sex	25–34	35–44	45–54	55–64	65+
Males	39.7	42.7	46.7	51.4	48.4
Females	37.8	42.8	45.8	49.4	49.2

Source: AIHW nKPI data collection.

Table A5.6: Percentage of Indigenous regular clients aged 50 and over who were immunised against influenza within the previous 12 months, by sex, December 2014

Males	Females
39.4	39.7

Source: AIHW nKPI data collection.

Table A5.7: Percentage of Indigenous regular clients who were current smokers, ex-smokers or never smoked, by age group and sex, December 2014

Smoking status	15–24		25–34		35–44		45–54		55–64		65+	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Current smoker	49.1	46.2	68.0	59.2	66.4	56.9	59.4	51.9	44.6	38.8	29.4	22.3
Ex-smoker	5.3	8.5	10.4	12.5	12.9	13.6	17.9	16.4	27.9	21.7	38.1	24.8
Never smoked	45.6	45.3	21.6	28.3	20.7	29.5	22.7	31.8	27.5	39.4	32.4	52.9

Source: AIHW nKPI data collection.

Table A5.8: Percentage of Indigenous regular clients who had a BMI classified as overweight or obese, by age group and sex, December 2014

BMI category	25–34		35–44		45–54		55–64		65+	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Overweight	29.7	23.8	29.7	25.3	30.2	25.5	31.1	26.5	32.4	26.7
Obese	31.3	43.8	37.4	48.7	37.0	50.7	38.7	51.0	34.3	46.3
Total overweight and obese	**61.0**	**67.6**	**67.2**	**74.1**	**67.3**	**76.2**	**69.8**	**77.6**	**66.7**	**73.0**

Source: AIHW nKPI data collection.

Table A5.9: Percentage of Indigenous regular clients with type 2 diabetes for whom a General Practitioner Management Plan (MBS item 721) was claimed within the previous 24 months, by age group and sex, December 2014

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	18.0	39.8	47.2	47.7	49.4	53.3	53.4
Females	32.1	35.9	43.6	47.2	50.8	53.4	53.6

Source: AIHW nKPI data collection.

Table A5.10: Percentage of Indigenous regular clients with type 2 diabetes for whom a Team Care Arrangement (MBS item 723) was claimed within the previous 24 months, by age group and sex, December 2014

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	16.4	36.6	44.0	44.2	46.5	49.9	50.8
Females	29.5	33.8	40.8	44.1	47.8	49.7	50.1

Source: AIHW nKPI data collection.

Table A5.11: Percentage of Indigenous regular clients with type 2 diabetes who had their blood pressure result recorded within the previous 6 months, by age group and sex, December 2014

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	19.7	54.2	60.9	63.2	65.5	69.9	68.1
Females	47.4	58.6	66.4	69.7	68.6	70.5	69.4

Source: AIHW nKPI data collection.

Table A5.12: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c recorded within the specified periods, by age group and sex, December 2014

<15		15–24		25–34		35–44		45–54		55–64		65+	
Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Previous 6 months													
19.7	37.2	41.2	47.2	46.6	49.6	48.4	51.4	50.3	52.2	53.3	54.6	52.5	50.7
Previous 12 months													
23.0	50.0	59.3	64.4	65.8	68.6	66.2	68.8	67.7	68.6	69.8	70.8	68.9	67.8

Source: AIHW nKPI data collection.

Table A5.13: Percentage of Indigenous regular clients with type 2 diabetes who had an eGFR and/or an ACR recorded within the previous 12 months, by age group and sex, December 2014

	15–24		25–34		35–44		45–54		55–64		65+	
Test type	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
eGFR	7.7	9.1	10.5	11.6	11.6	12.2	11.7	12.0	14.1	14.2	15.5	16.7
ACR	3.4	3.8	3.7	3.8	3.5	2.8	3.0	2.5	2.3	3.0	1.5	2.3
Both eGFR and ACR	37.7	44.3	46.3	49.7	48.5	51.5	50.0	51.6	51.6	50.9	50.7	48.8
Total eGFR and/or ACR	**48.8**	**57.2**	**60.6**	**65.0**	**63.6**	**66.4**	**64.7**	**66.1**	**68.0**	**68.1**	**67.7**	**67.7**

Source: AIHW nKPI data collection.

Table A5.14: Percentage of Indigenous regular clients with CVD who had an eGFR recorded within the previous 12 months, by age group and sex, December 2014

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	32.7	52.3	56.2	60.5	65.4	67.5
Females	38.2	57.0	64.9	61.4	66.2	67.1

Source: AIHW nKPI data collection.

Table A5.15: Percentage of Indigenous regular clients with type 2 diabetes or COPD who were immunised against influenza within the previous 12 months, by age group and sex, December 2014

	15–24		25–34		35–44		45–49	
Chronic disease	Males	Females	Males	Females	Males	Females	Males	Females
Type 2 diabetes	25.9	37.9	35.0	43.0	39.7	43.7	40.9	44.5
COPD	33.3	24.1	40.6	40.8	43.4	42.4	43.9	40.7

Source: AIHW nKPI data collection.

Table A5.16: Percentage of Indigenous regular clients with type 2 diabetes whose blood pressure result within the previous 6 months was less than or equal to 130/80mmHg, by age group and sex, December 2014

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	83.3	47.0	40.5	37.5	35.6	38.2	46.2
Females	70.3	61.0	57.7	50.5	46.2	43.6	44.6

Source: AIHW nKPI data collection.

Table A5.17: Percentage of Indigenous regular clients with type 2 diabetes who had their HbA1c measured in the previous 6 or 12 months, whose result was within specified levels, by age group and sex, December 2014

Timing	Sex	HbA1c level	<15	15–24	25–34	35–44	45–54	55–64	65+
6 months	Males	≤7%	50.0	24.7	26.8	28.3	30.6	37.8	47.9
		>7% to ≤8%	16.7	12.4	10.7	17.9	19.8	19.4	21.4
		>8% to <10%	0.0	25.8	23.7	23.2	26.3	26.1	21.4
		≥10%	33.3	37.1	38.8	30.6	23.2	16.7	9.3
	Females	≤7%	27.6	20.8	27.6	29.5	30.8	37.3	48.7
		>7% to ≤8%	24.1	9.7	12.9	14.4	17.5	19.1	20.6
		>8% to <10%	10.3	25.5	21.9	23.3	23.1	22.2	20.5
		≥10%	37.9	44.0	37.6	32.8	28.6	21.4	10.1
12 months	Males	≤7%	57.1	25.0	28.5	28.9	31.2	38.6	49.2
		>7% to ≤8%	14.3	10.9	11.4	16.1	19.0	19.0	20.8
		>8% to <10%	0.0	23.4	23.0	23.6	25.8	25.6	21.1
		≥10%	28.6	40.6	37.1	31.4	24.0	16.7	9.0
	Females	≤7%	30.8	23.7	30.3	30.3	32.2	38.5	51.1
		>7% to ≤8%	17.9	10.5	12.9	14.0	16.5	18.5	19.9
		>8% to <10%	10.3	23.7	21.2	22.8	23.0	22.4	19.4
		≥10%	41.0	42.0	35.6	32.8	28.3	20.5	9.6

Source: AIHW nKPI data collection.

Table A5.18: Percentage of Indigenous regular clients with type 2 diabetes who had an eGFR result recorded within the previous 12 months, whose result was within specified levels, by age group and sex, December 2014

	15–24		25–34		35–44		45–54		55–64		65+	
Result	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<15	0.0	1.3	1.0	0.6	2.4	2.1	4.1	4.2	5.2	5.5	4.5	5.5
≥15 to <30	0.0	0.4	0.4	0.6	1.1	1.5	2.3	1.9	2.6	3.2	5.8	7.1
≥30 to <60	0.0	0.0	1.4	1.7	3.8	3.0	8.0	6.4	13.7	15.0	28.9	28.5
≥60	100.0	98.3	97.1	97.0	92.8	93.4	85.6	87.5	78.5	76.3	60.8	58.9

Source: AIHW nKPI data collection.

Table A5.19: Percentage of Indigenous regular clients with CVD who had an eGFR result recorded within the previous 12 months, whose result was within specified levels, by age group and sex, December 2014

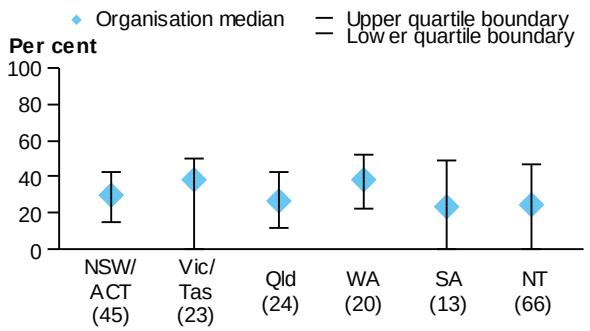
	15–24		25–34		35–44		45–54		55–64		65+	
Result	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<15	0.0	0.0	1.0	3.1	2.6	6.0	5.1	6.3	4.8	4.7	4.7	4.3
≥15 to <30	0.0	0.0	1.0	0.8	1.7	2.9	2.6	2.3	2.6	4.0	4.8	6.3
≥30 to <60	2.9	0.0	1.0	3.1	3.2	3.6	7.8	6.4	11.9	16.4	31.0	31.2
≥60	97.1	100.0	97.1	93.1	92.5	87.5	84.5	85.0	80.7	74.9	59.4	58.2

Source: AIHW nKPI data collection.

Appendix 6

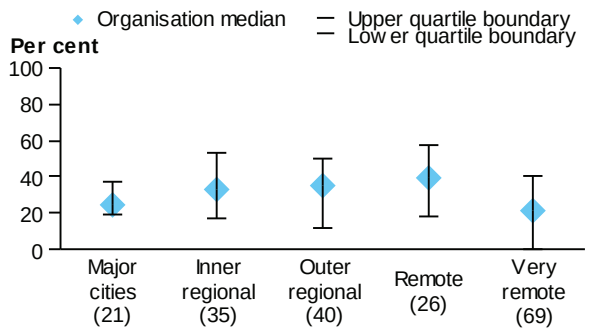
Jurisdiction and remoteness variation figures

Two types of information are presented in the figures in this appendix. The interquartile range of results indicates the variation of performance of organisations within a jurisdiction or level of remoteness. Organisation median values show the point above and below which 50% of organisations are performing.



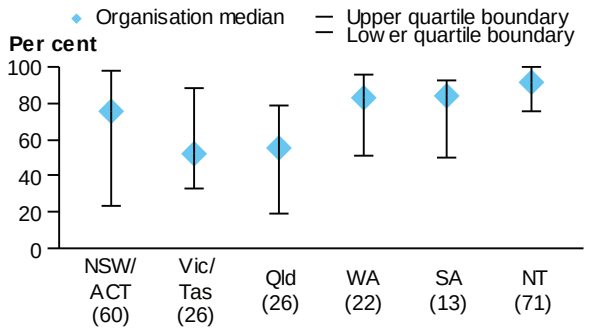
Note: Number of organisations is in brackets.

Figure A6.1: First antenatal visit before 13 weeks, by jurisdiction, with median and quartile boundaries of organisations



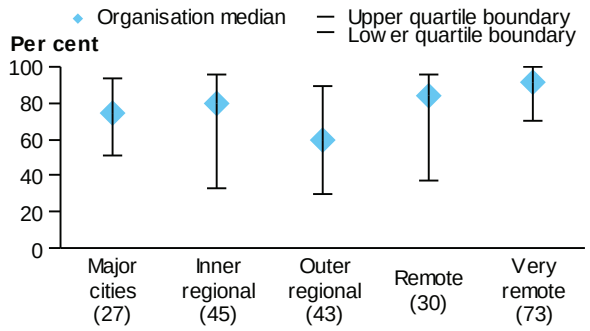
Note: Number of organisations is in brackets.

Figure A6.2: First antenatal visit before 13 weeks, by remoteness, with median and quartile boundaries of organisations



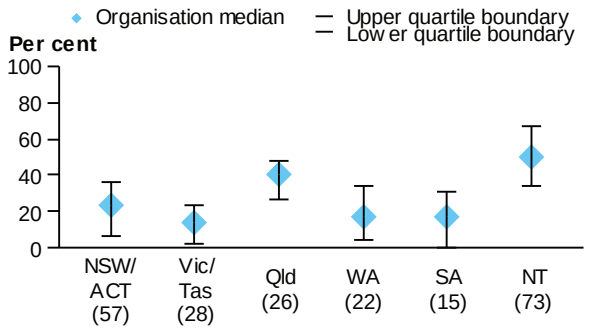
Note: Number of organisations is in brackets.

Figure A6.3: Birthweight recorded, by jurisdiction, with median and quartile boundaries of organisations



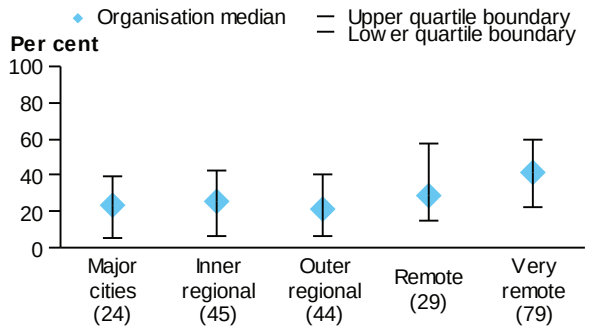
Note: Number of organisations is in brackets.

Figure A6.4: Birthweight recorded, by remoteness, with median and quartile boundaries of organisations



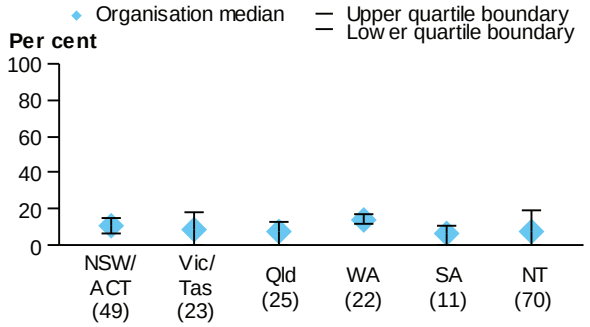
Note: Number of organisations is in brackets.

Figure A6.5: MBS health assessment (aged 0–4), by jurisdiction, with median and quartile boundaries of organisations



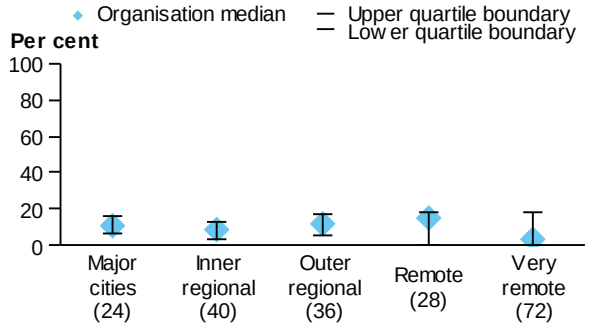
Note: Number of organisations is in brackets.

Figure A6.6: MBS health assessment (aged 0–4), by remoteness, with median and quartile boundaries of organisations



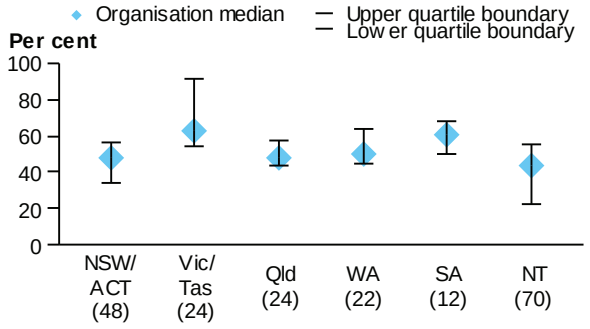
Note: Number of organisations is in brackets.

Figure A6.7: Birthweight result (low), by jurisdiction, with median and quartile boundaries of organisations



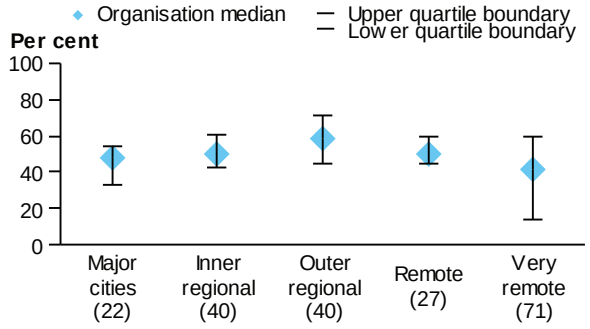
Note: Number of organisations is in brackets.

Figure A6.8: Birthweight result (low), by remoteness, with median and quartile boundaries of organisations



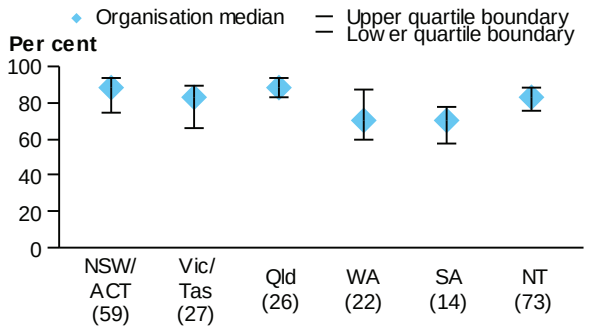
Note: Number of organisations is in brackets.

Figure A6.9: Smoking status of women who gave birth in the previous year (current smoker), by jurisdiction, with median and quartile boundaries of organisations



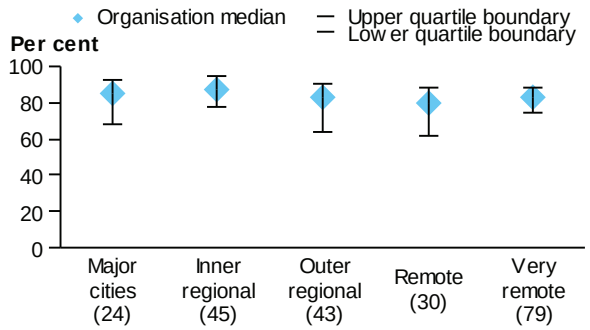
Note: Number of organisations is in brackets.

Figure A6.10: Smoking status of women who gave birth in the previous year (current smoker), by remoteness, with median and quartile boundaries of organisations



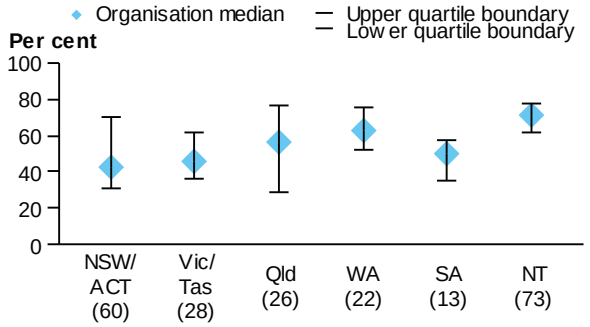
Note: Number of organisations is in brackets.

Figure A6.11: Smoking status recorded, by jurisdiction, with median and quartile boundaries of organisations



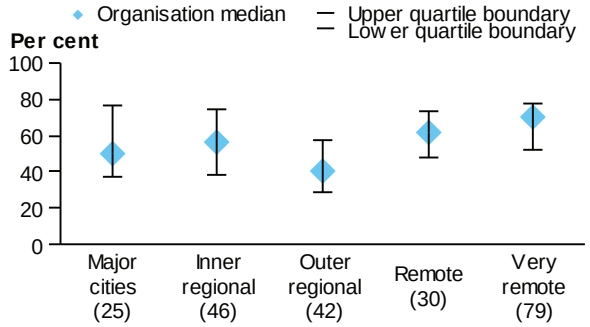
Note: Number of organisations is in brackets.

Figure A6.12: Smoking status recorded, by remoteness, with median and quartile boundaries of organisations



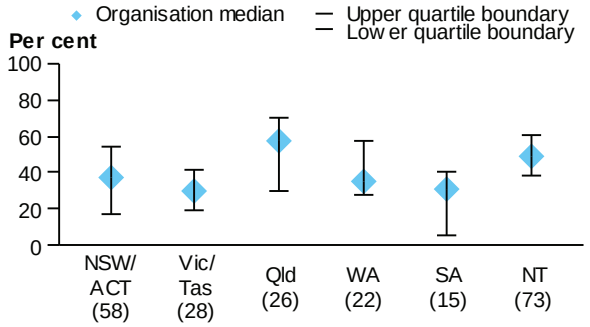
Note: Number of organisations is in brackets.

Figure A6.13: Alcohol consumption status recorded, by jurisdiction, with median and quartile boundaries of organisations



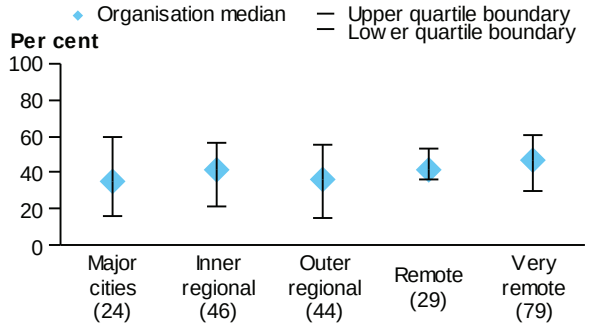
Note: Number of organisations is in brackets.

Figure A6.14: Alcohol consumption status recorded, by remoteness, with median and quartile boundaries of organisations



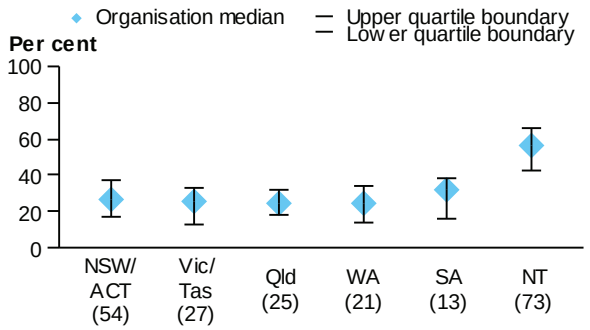
Note: Number of organisations is in brackets.

Figure A6.15: MBS health assessment (aged 25 and over), by jurisdiction, with median and quartile boundaries of organisations



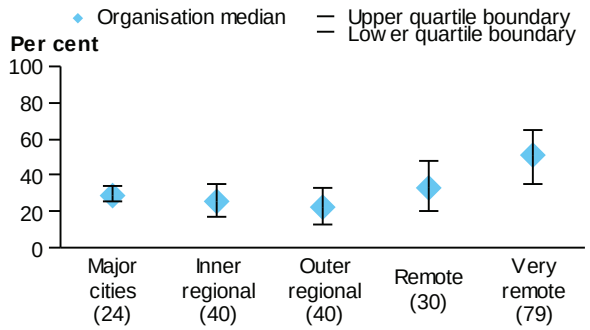
Note: Number of organisations is in brackets.

Figure A6.16: MBS health assessment (aged 25 and over), by remoteness, with median and quartile boundaries of organisations



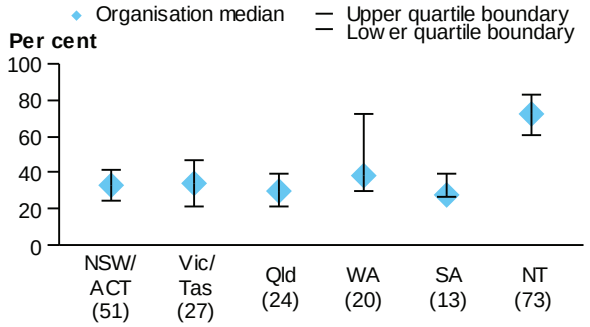
Note: Number of organisations is in brackets.

Figure A6.17: Cervical screening in the previous 2 years, by jurisdiction, with median and quartile boundaries of organisations



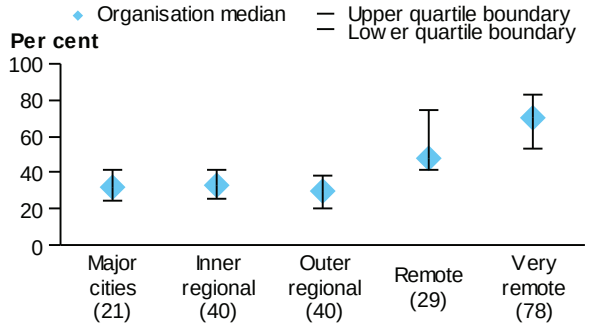
Note: Number of organisations is in brackets.

Figure A6.18: Cervical screening in the previous 2 years, by remoteness, with median and quartile boundaries of organisations



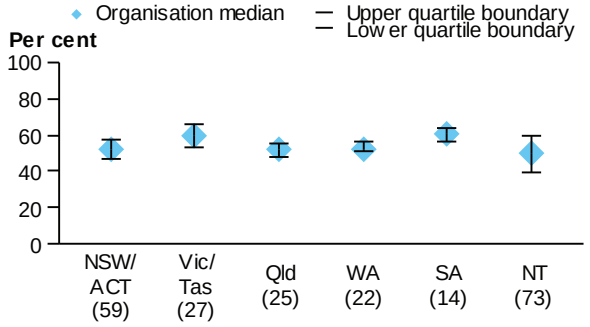
Note: Number of organisations is in brackets.

Figure A6.19: Immunised against influenza (aged 50 and over), by jurisdiction, with median and quartile boundaries of organisations



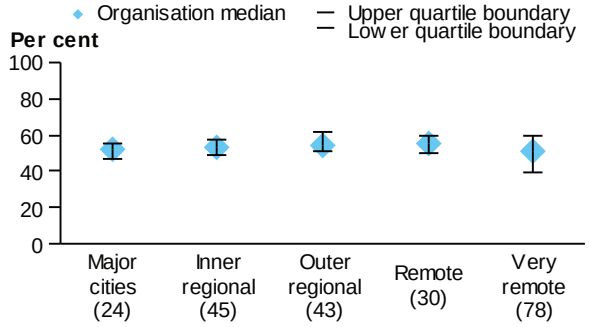
Note: Number of organisations is in brackets.

Figure A6.20: Immunised against influenza (aged 50 and over), by remoteness, with median and quartile boundaries of organisations



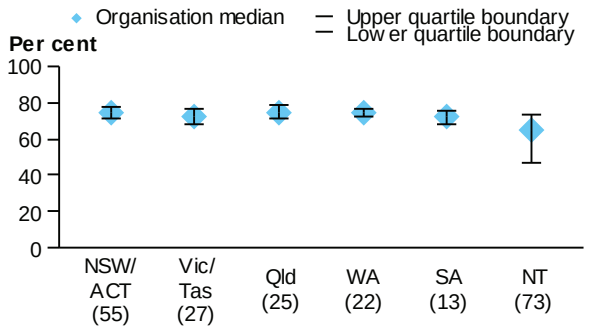
Note: Number of organisations is in brackets.

Figure A6.21: Smoking status result (current smoker), by jurisdiction, with median and quartile boundaries of organisations



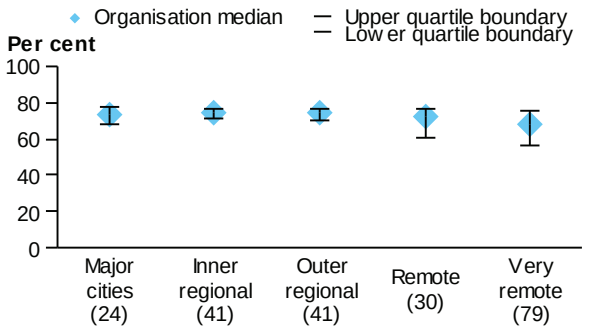
Note: Number of organisations is in brackets.

Figure A6.22: Smoking status result (current smoker), by remoteness, with median and quartile boundaries of organisations



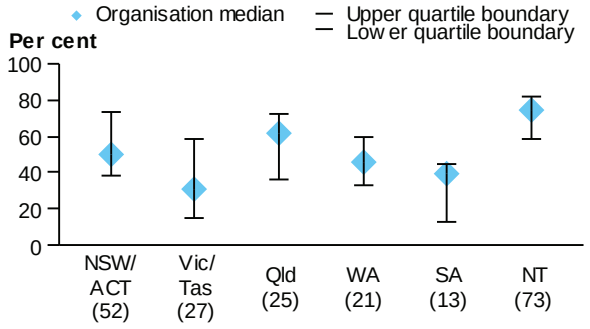
Note: Number of organisations is in brackets.

Figure A6.23: BMI classified as overweight and obese, by jurisdiction, with median and quartile boundaries of organisations



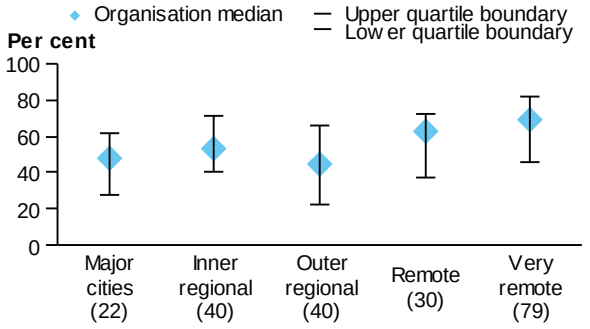
Note: Number of organisations is in brackets.

Figure A6.24: BMI classified as overweight and obese, by remoteness, with median and quartile boundaries of organisations



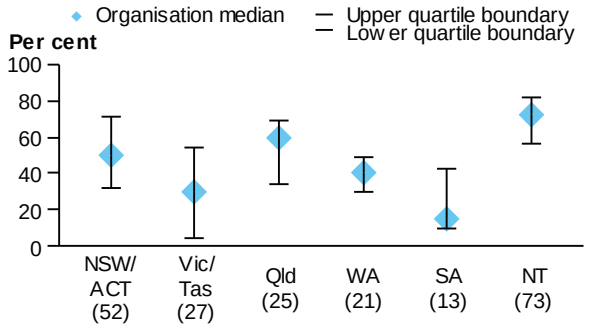
Note: Number of organisations is in brackets.

Figure A6.25: GPMP, by jurisdiction, with median and quartile boundaries of organisations



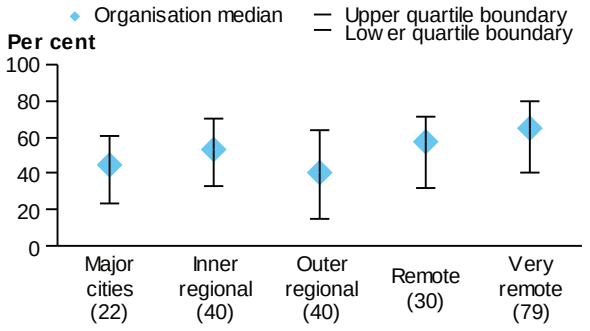
Note: Number of organisations is in brackets.

Figure A6.26: GPMP, by remoteness, with median and quartile boundaries of organisations



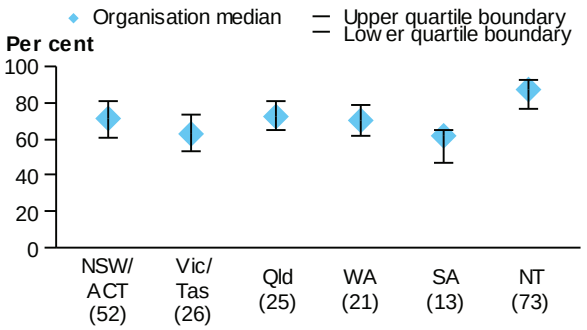
Note: Number of organisations is in brackets.

Figure A6.27: TCA, by jurisdiction, with median and quartile boundaries of organisations



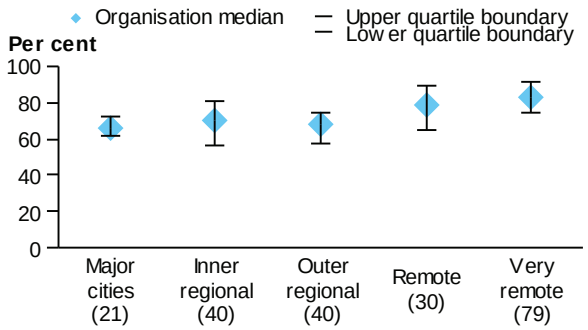
Note: Number of organisations is in brackets.

Figure A6.28: TCA, by remoteness, with median and quartile boundaries of organisations



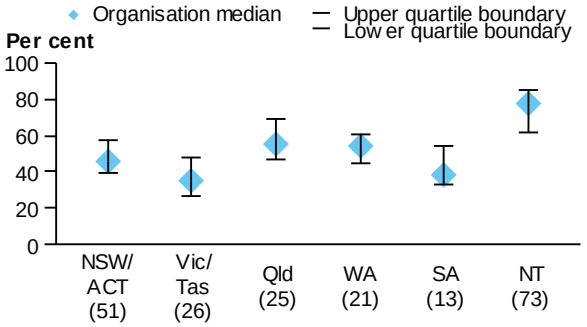
Note: Number of organisations is in brackets.

Figure A6.29: Blood pressure recorded, by jurisdiction, with median and quartile boundaries of organisations



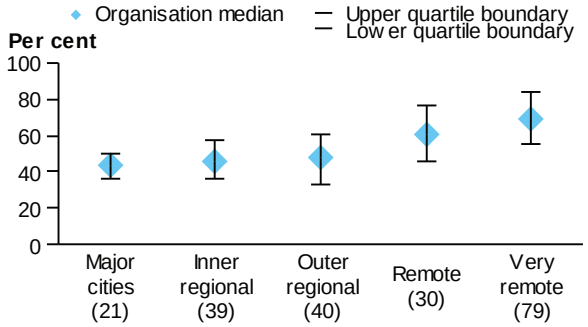
Note: Number of organisations is in brackets.

Figure A6.30: Blood pressure recorded, by remoteness, with median and quartile boundaries of organisations



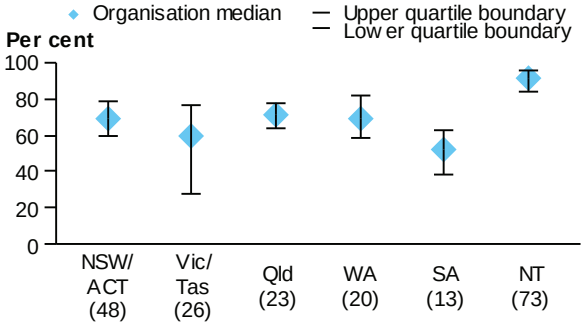
Note: Number of organisations is in brackets.

Figure A6.31: HbA1c result recorded, by jurisdiction, with median and quartile boundaries of organisations



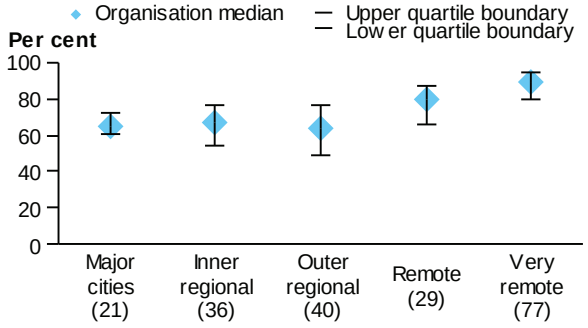
Note: Number of organisations is in brackets.

Figure A6.32: HbA1c result recorded, by remoteness, with median and quartile boundaries of organisations



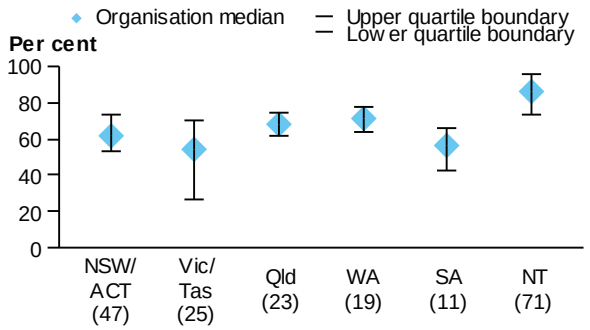
Note: Number of organisations is in brackets.

Figure A6.33: Kidney function test recorded for clients with type 2 diabetes, by jurisdiction, with median and quartile boundaries of organisations



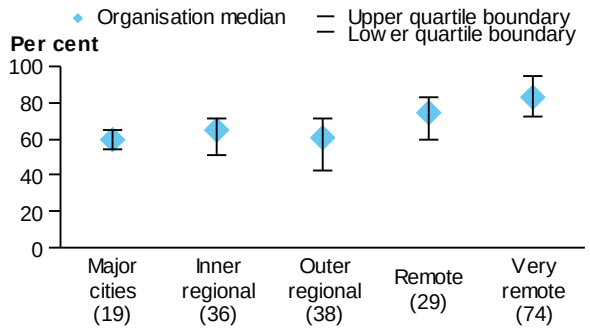
Note: Number of organisations is in brackets.

Figure A6.34: Kidney function test recorded for clients with type 2 diabetes, by remoteness, with median and quartile boundaries of organisations



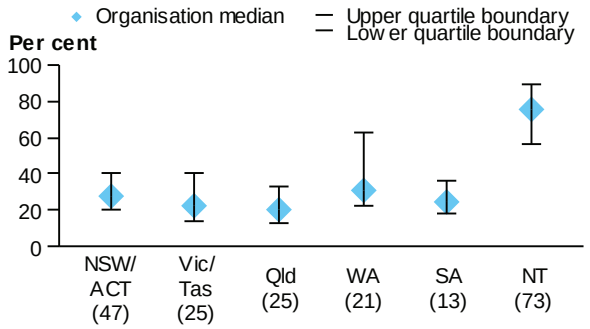
Note: Number of organisations is in brackets.

Figure A6.35: Kidney function test recorded for clients with CVD, by jurisdiction, with median and quartile boundaries of organisations



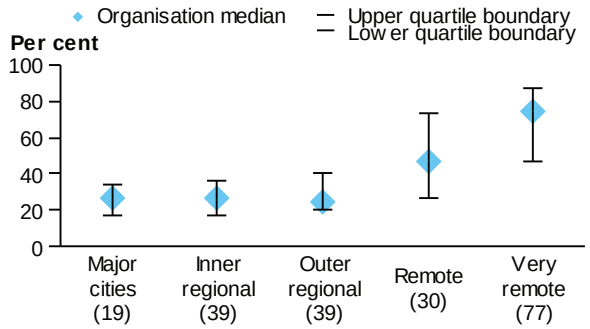
Note: Number of organisations is in brackets.

Figure A6.36: Kidney function test recorded for clients with CVD, by remoteness, with median and quartile boundaries of organisations



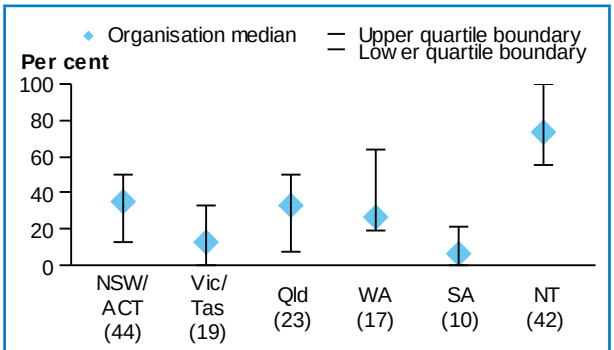
Note: Number of organisations is in brackets.

Figure A6.37: Influenza immunisation for clients with type 2 diabetes, by jurisdiction, with median and quartile boundaries of organisations



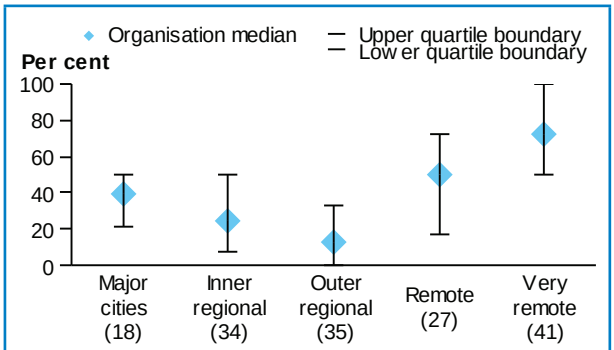
Note: Number of organisations is in brackets.

Figure A6.38: Influenza immunisation for clients with type 2 diabetes, by remoteness, with median and quartile boundaries of organisations



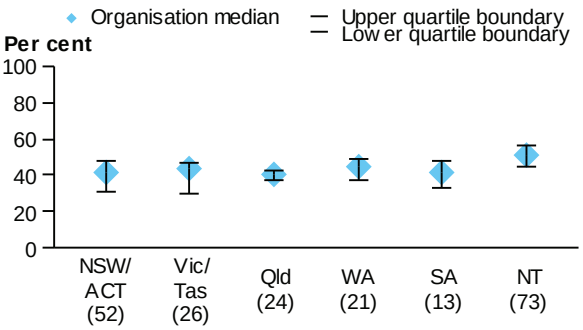
Note: Number of organisations is in brackets.

Figure A6.39: Influenza immunisation for clients with COPD, by jurisdiction, with median and quartile boundaries of organisations



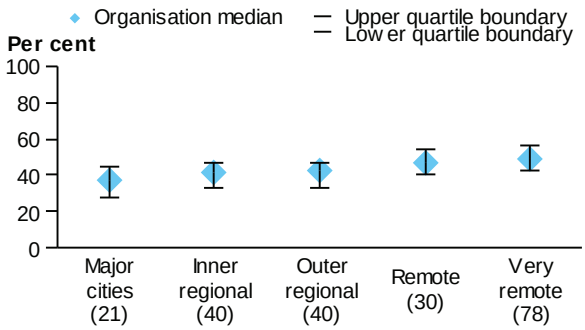
Note: Number of organisations is in brackets.

Figure A6.40: Influenza immunisation for clients with COPD, by remoteness, with median and quartile boundaries of organisations



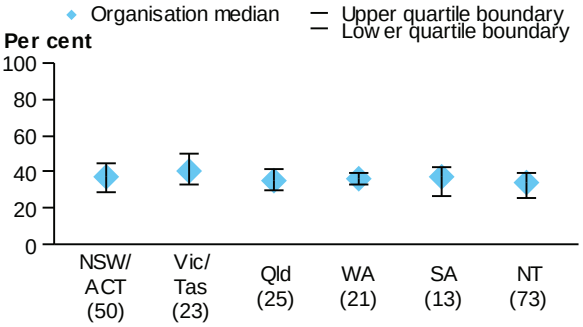
Note: Number of organisations is in brackets.

Figure A6.41: Blood pressure result of ≤130/80 mmHg, by jurisdiction, with median and quartile boundaries of organisations



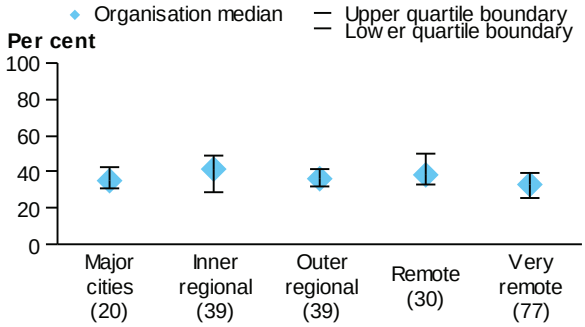
Note: Number of organisations is in brackets.

Figure A6.42: Blood pressure result of ≤130/80 mmHg, by remoteness, with median and quartile boundaries of organisations



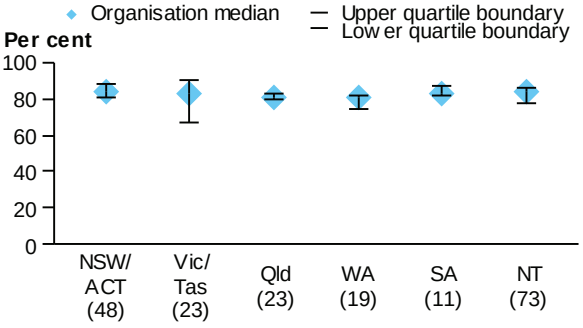
Note: Number of organisations is in brackets.

Figure A6.43: HbA1c ≤7% (53mmol/mol), by jurisdiction, with median and quartile boundaries of organisations



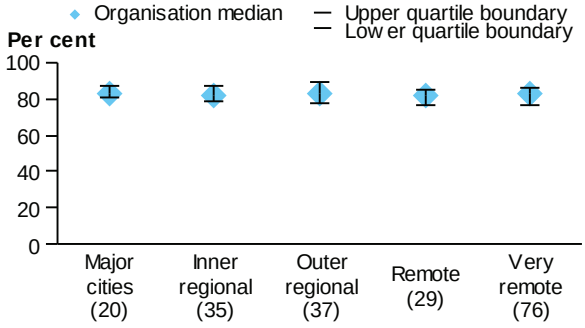
Note: Number of organisations is in brackets.

Figure A6.44: HbA1c ≤7% (53mmol/mol), by remoteness, with median and quartile boundaries of organisations



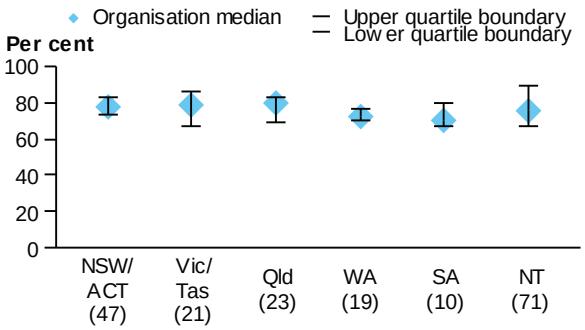
Note: Number of organisations is in brackets.

Figure A6.45: eGFR ≥60 mL/min/1.73m² for clients with type 2 diabetes, by jurisdiction, with median and quartile boundaries of organisations



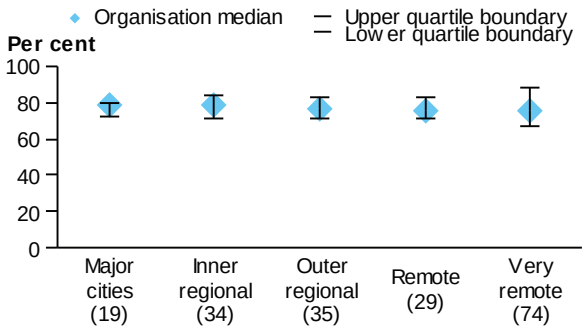
Note: Number of organisations is in brackets.

Figure A6.46: eGFR ≥60 mL/min/1.73m² for clients with type 2 diabetes, by remoteness, with median and quartile boundaries of organisations



Note: Number of organisations is in brackets.

Figure A6.47: eGFR ≥60 mL/min/1.73m² for clients with CVD, by jurisdiction, with median and quartile boundaries of organisations



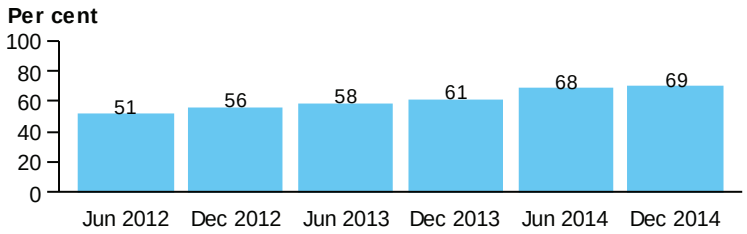
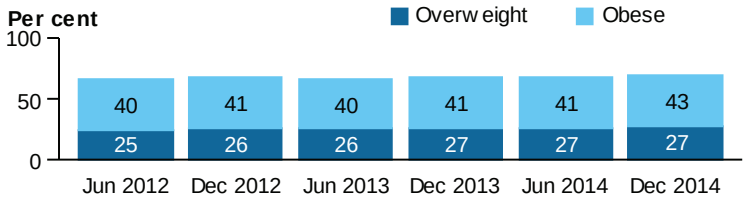
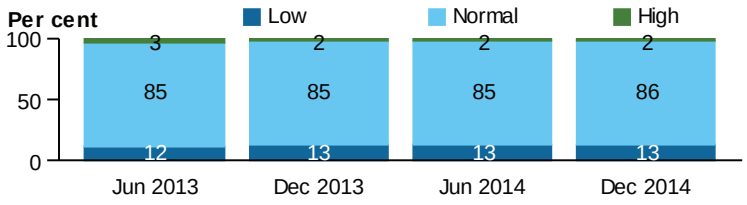
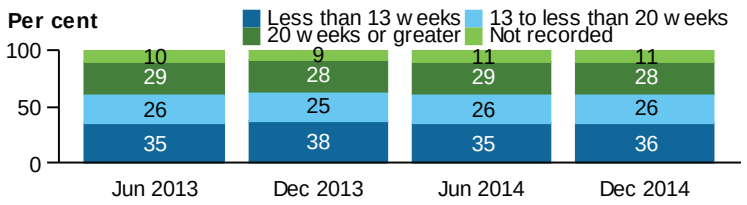
Note: Number of organisations is in brackets.

Figure A6.48: eGFR ≥60 mL/min/1.73m² for clients with CVD, by remoteness, with median and quartile boundaries of organisations

Appendix 7

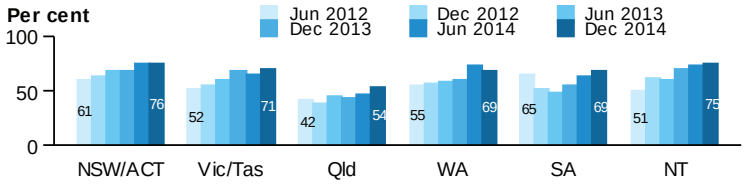
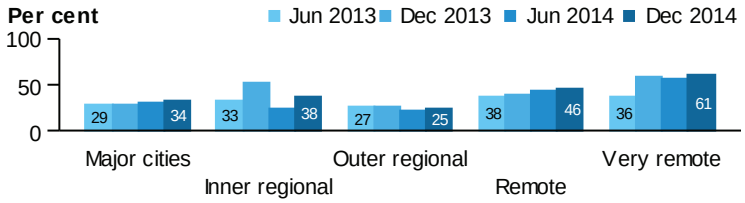
Guide to the figures

Table A6.1: Explanatory guide to figures in Chapters 2–5

Reference figures with example	Description
Figure 2.B1, 2.C1, 3.G1, 3.H1, 3.I1, 3.K1, 4.N1, 4.O1, 4.P1, 4.S1, 4.T1, 4.U1, 4.V1  	These vertical bar charts and stacked vertical bar charts present either: (i) the percentage of clients who had a health care process recorded or (ii) health outcomes at a national level. Data are presented at the national level. Data are provided for all reporting periods for which time series data are available. For indicators for which data were collected for different reference periods, or different categories of outcomes the details are shown as stacked columns. These figures are useful in understanding the performance of services or the outcomes for clients attending health organisations. For example, the first chart shows nationally, the percentage of Aboriginal and Torres Strait Islander babies born in the previous year who had their birthweight recorded was 51% as at June 2012, 56% as at December 2012, 58% as at June 2013, 61% as at December 2013, 68% as at June 2014 and 69% as at December 2014.
Figure 3.M1, 4.Q1  	The second chart shows the proportion of Aboriginal and Torres Strait Islander clients aged 25 and over whom had their BMI recorded as overweight or obese across all reporting periods. For example, 27% of Aboriginal and Torres Strait Islander clients recorded a BMI of overweight and 43% recorded a BMI of obese as at December 2014.
Figure 2.E1, 2.F1, 3.J1, 3.L1, 4.R1  	The third chart shows the proportion of Aboriginal and Torres Strait Islander babies whose birthweight result was low, normal or high for each reporting period. For example, in June 2013, 12% of Aboriginal and Torres Strait Islander babies had a low birthweight, 85% had a normal birthweight and 3% had a high birthweight.
Figure 2.A1, 4.W1  	The fourth chart shows, of Aboriginal and Torres Strait Islander clients in June 2014, 35% had their first antenatal visit before 13 weeks of pregnancy, 26% had their first visit between 13 weeks but before 20 weeks of pregnancy, 29% had their first visit when they were 20 weeks pregnant or later and for 11% of clients, the gestational period of their first antenatal visits was not recorded.

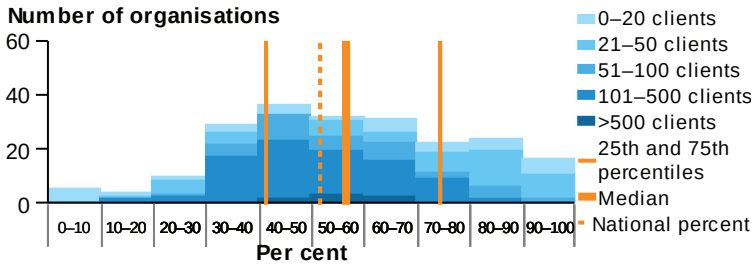
(continued)

Table A6.1 (continued): Explanatory guide to figures in Chapters 2–5

Reference figures with example	Description
Figure 2.A2, 2.B2, 2.C2, 2.E2, 3.G2, 3.H2, 3.I2, 3.J2, 3.K2, 3.L2, 3.M2, 4.N2, 4.O2, 4.P2, 4.Q2, 4.R2, 4.S2, 4.T2, 4.U2, 4.V2, 4.W2 	These vertical bar charts present either: (i) the percentage of clients who had a health care process recorded or (ii) health outcomes recorded. Data are presented by jurisdiction. Data are provided for all reporting periods for which time series data are available. Data are combined for New South Wales/ Australian Capital Territory and for Victoria/Tasmania to avoid individual services in smaller jurisdictions being identified. These figures are useful in understanding the performance of services or the outcomes for clients attending health organisations in different jurisdictions. For example, this chart shows that there were improvements in all jurisdictions between June 2012 and December 2014 in the proportion of Aboriginal and Torres Strait Islander babies born in the previous year whose birthweight was recorded.
Figure 2.A3, 2.B3, 2.C3, 2.E3, 3.G3, 3.H3, 3.I3, 3.J3, 3.K3, 3.L3, 3.M3, 4.N3, 4.O3, 4.P3, 4.Q3, 4.R3, 4.S3, 4.T3, 4.U3, 4.V3, 4.W3 	These vertical bar charts present either: (i) the percentage of clients who had a health care process recorded or (ii) health outcomes recorded. Data are presented by Australian Statistical Geography Standard remoteness categories in which organisation are located. Data are provided for all reporting periods for which time series data are available. These figures are useful in understanding the performance of services or the outcomes for clients attending health organisations in different locations. For example, this chart shows that there were improvements in most remoteness areas in the proportion of Aboriginal and Torres Strait Islander clients with COPD who were immunised against influenza between June 2013 and December 2014 but the proportion in *Outer regional* areas decreased by 2 percentage points.

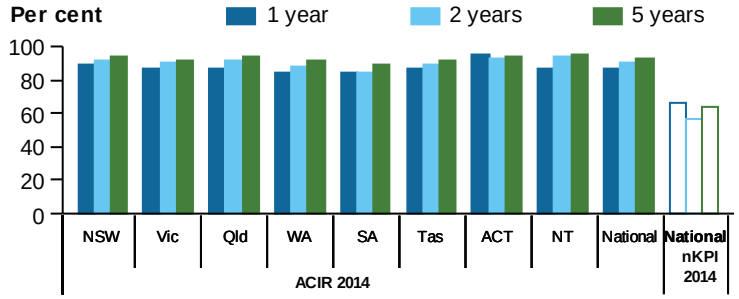
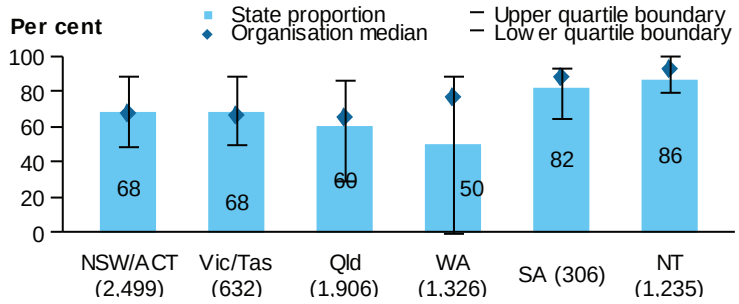
(continued)

Table A6.1 (continued): Explanatory guide to figures in Chapters 2–5

Reference figures with example	Description
Figure 2.A4, 2.B4, 2.C4, 2.E4, 2.F2, 3.G4, 3.H4, 3.I4, 3.J4, 3.K4, 3.L4, 3.M4, 4.N4, 4.O4, 4.P4, 4.Q4, 4.R4, 4.S4, 4.T4, 4.U4, 4.V4, 4.W4, 4.X2, 4.Y2  	These histograms show the distribution of organisations by their achievement against a particular indicator—for example, the number of services by the percentage of babies whose birthweight has been recorded or the number of services by the percentage of clients who had never smoked. This distribution enables the reader to understand how widely the organisation performance or outcomes for clients differ across organisations. It enables the reader to see how many organisations have recorded information for, for example, <10% clients or 100% of clients. This is aided by the break-down of client populations, which enables the reader to see the number of clients in the denominator within each percentile. The chart also presents median and interquartile values as these also show how different organisations are performing. For example, the lower quartile boundary shows the point below which 25% of the organisations are performing, the median shows where 50% of the organisations are performing and the upper quartile boundary shows the value above which 25% of the services are performing. The national percentage is also shown, and is based on the average of all clients, rather than all organisations (like the median and interquartile values). The chart also shows how far above or below the national percentage each organisation is performing. For example, this chart shows 5 organisations had recorded HbA1c results for 0–10% of their Aboriginal and Torres Strait Islander clients with type 2 diabetes in the past 6 months as at December 2014. Of these, 4 organisations had 0–20 Aboriginal and Torres Strait Islander regular clients with type 2 diabetes and 1 organisation had 101–500 Aboriginal and Torres Strait Islander regular clients with type 2 diabetes. The median proportion of clients who had an HbA1c result recorded was 57%. The lower quartile of organisations recorded an HbA1c result for 41% or fewer of their clients and the upper quartile recorded HbA1c results for 74% or more of their clients. The national average for all clients was 51%.

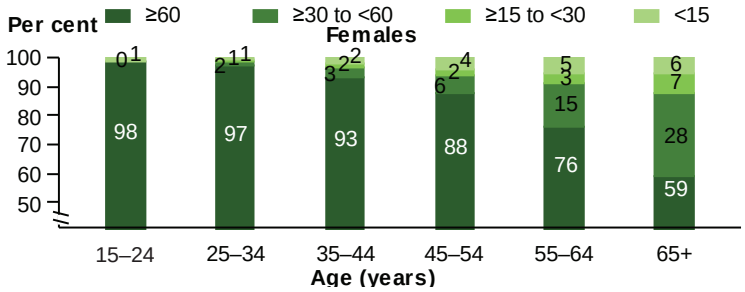
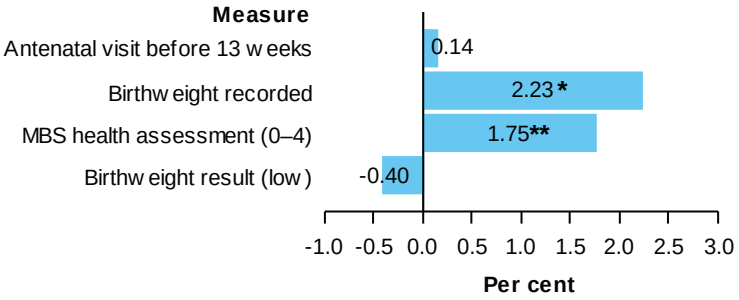
(continued)

Table A6.1 (continued): Explanatory guide to figures in Chapters 2–5

Reference figures with example	Description
Figure 2.D1 	This vertical bar chart shows ACIR child immunisation rates, by jurisdiction and with a national total. National nKPI data are outlined and presented to the far right due to issues with data validity. For example, this chart shows that, according to nKPI data, 67% of Aboriginal and Torres Strait Islander children are fully immunised at 1 year, 58% are fully immunised at 2 years and 65% are fully immunised at 5 years. According to ACIR data, the national proportions and those of every jurisdiction are considerably higher.
Figure 2.D2, 2.D3, 2.D4 	Three types of information are presented in these charts: the proportion of clients for whom information has been collected, the range of results for organisations within a jurisdiction and the median values for organisations within a jurisdiction. The percentage of clients is shown as a vertical bar with a data label. The interquartile range for a jurisdiction is included to indicate the variation in performance of organisations within a jurisdiction. Median values for organisations within a jurisdiction show the point above and below which 50% of the organisations are performing. For example, this chart shows the proportion of Aboriginal and Torres Strait Islander children aged 12 to less than 24 months in SA who were fully immunised was 82%. The median result for these organisations was 88%. The lower quartile of organisations had results of 64% or less, while the upper quartile organisations had results of 94% or more. There are instances when the interquartile limits for a jurisdiction sit above the overall average for all clients in a jurisdiction, for example, Queensland, WA, SA and NT in this chart. In these cases, most organisations have higher results based off a smaller number of clients, while a few organisations with low results and large numbers of clients are pushing the overall jurisdiction result down. Note that, as these figures present child immunisation data, issues around data validity remain.

(continued)

Table A6.1 (continued): Explanatory guide to figures in Chapters 2–5

Reference figures with example	Description
Figure 4.X1, 4.X2, 4.Y1, 4.X2 	These stacked vertical bar charts show the percentage of clients by age distribution. Different categories of kidney test result outcomes are shown in the stacked columns. For example, this chart shows for Aboriginal and Torres Strait Islander females aged 25–34 with type 2 diabetes, 97% had an eGFR result of greater than or equal to 60 mL/min/1.73m^2, 2% had an eGFR result of greater than or equal to 30 mL/min/1.73m^2 and less than 60 mL/min/1.73m^2, 1% had an eGFR result of greater than or equal to 15 mL/min/1.73m^2 and less than 30 mL/min/1.73m^2 and 1% had an eGFR result of less than 15 mL/min/1.73m^2.
Figure 5.1, 5.2, 5.3 	These horizontal bar charts show the estimated time trend coefficients for a subset of organisations that submitted nKPI data for each indicator over 4 reporting periods: June 2013, December 2013, June 2014 and December 2014. The statistical significance of the time trend estimates are shown by either * or **, where * indicates the trend is significant at the 10% test level and ** indicates where trend is significant at the 5% test level. For example, this chart shows birthweight recorded had a statistically significant time trend at the 10% test level of 2.23.

Glossary

Aboriginal: A person of Aboriginal descent who identifies as an Aboriginal and is accepted as such by the community in which he or she lives.

albumin/creatinine ratio (ACR): A measure of renal function that assesses albumin in the urine.

auspiced service: An independent or semi-independent body that has been funded by an Australian Government funded organisation to provide health services.

birth: Birth of a viable fetus, which is defined as a birth occurring after 20 weeks of pregnancy or the fetus weighing greater than 400 grams at birth (live, still, singleton, multiple).

birthweight: Birthweight is defined as low (birthweight of less than 2,500 grams), normal (birthweight of 2,500–4,499 grams) or high (birthweight of 4,500 grams and over).

body mass index (BMI): A measure of an adult's weight (body mass) relative to height used, to assess the extent of weigh deficit or excess where height and weight have been measured. BMI is the weight in kilograms divided by the square of the height in metres.

cardiovascular disease (CVD): Any disease of the circulatory system, namely the heart (cardio) or blood vessels (vascular).

cervical screening: A procedure involving a Pap test, which is used to detect cancer and pre-cancerous abnormalities of the cervix.

chronic obstructive pulmonary disease (COPD): Serious, progressive and disabling long term lung disease where damage to the lungs, usually because of both emphysema and chronic bronchitis, obstructs oxygen intake and causes increasing shortness of breath.

continuous quality improvement (CQI): A tool for improving the quality of services provided by organisations involving a systematic approach to collecting and reviewing data or information in order to identify areas for improvement.

estimated glomerular filtration rate (eGFR): A measure of how well the kidneys filter waste from the blood. The eGFR is the best measure of kidney function.

episode of health care: Client contact between an individual and a service by 1 or more staff to provide health care.

first antenatal visit: The contact at which the initial antenatal check-ups are done; for example, to confirm pregnancy, establish history and conduct blood tests.

full-time equivalent (FTE): An equivalent ratio that represents the number of hours a staff member works; for example, a service having 2 nurses, 1 working full-time and 1 working half-days would indicate 1.5 FTE for both nursing positions combined.

fully immunised: Describes children who have received all immunisations according to the ACIR. Children aged 12 months to less than 24 months are required to have received all immunisations that are due at 6 months of age—3 doses of DTPa, 3 doses of Polio, 2 or 3 doses of Hib and 2 or 3 doses of Hep B. Children aged 24 months to less than 36 months are required to have received all immunisations that are due at 12 months of age—3 doses of DTPa, 3 doses of Polio, 3 or 4 doses of Hib, 3 doses of Hep B and 1 dose of MMR. Children aged 60 months to less than 72 months are required to have received all immunisations that are due at 4 years of age—4 doses of DTPa, 4 doses of Polio and 2 doses of MMR.

General Practitioner Management Plan (GPMP): Chronic disease management plan carried out according to the MBS Schedule (Item 721).

haemoglobin A1c (HbA1c or glycated haemoglobin): A measurement that acts as an indicator of time-averaged blood glucose levels (over the previous 2–3 months). It is used as the best marker of long-term diabetes control (Jones et al. 2011).

indicator: See definition for national Key Performance Indicators.

Indigenous baby: A baby with at least 1 parent who identifies as Indigenous (born both to mothers who are Indigenous and mothers who are non-Indigenous).

influenza: An acute contagious viral respiratory infection marked by fever, muscle aches, headache, cough and sore throat.

MBS health assessment: Health assessment for those aged 0–4 and 25 and over carried out according to the MBS Schedule (Item 715).

measure: See definition for national Key Performance Indicator measure.

MMeX: An e-Health platform that includes a client information management system.

national Key Performance Indicators (nKPIs): A set of indicators that monitors the major health issues of the regular client population of Indigenous-specific primary health care services.

national Key Performance Indicator measure (nKPI measure): An nKPI or a part of an nKPI which was analysed and described separately from the other parts of the nKPI.

OCHREStreams: A web portal that aims to reduce the burden of reporting for organisations that provide primary health care and other services to Aboriginal and Torres Strait Islander Australians (health services).

regular client: A client who has visited a particular primary health care provider 3 or more times in the last 2 years.

remoteness: A measure in the Australian Statistical Geography Standard used to classify areas across Australia based on their distance from different services. The main categories are *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*.

smoking status: Current smoker—includes those who smoke daily, weekly or less often than weekly; ex-smoker—a person who does not smoke at all now, but has smoked at least 100 cigarettes, or a similar amount of other tobacco product, in his/her lifetime; never smoked—a person who does not smoke now and has smoked fewer than 100 cigarettes or a similar amount of other tobacco product in his/her lifetime.

Team Care Arrangement (TCA): Chronic disease management plan carried out according to the MBS Schedule (Item 723).

time-stamped records: Records that are associated with a particular time and/or date of the record being made or the activity being recorded.

type 2 diabetes: The most common form of diabetes, occurring mostly in people aged 40 or over, and marked by reduced or less effective insulin.

vaccination: The process of administering a vaccine to a person to produce immunity against infection.

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Related publications

This report, National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: results from December 2014, is the third national report on the national Key Performance Indicators (nKPIs) data collection.

The following recent AIHW publications relating to Aboriginal and Torres Strait Islander health might be of interest:

AIHW 2013. Aboriginal and Torres Strait Islander health services report 2011–12: Online Services Report—key results. Cat. no. IHW 104. Canberra: AIHW.

AIHW 2013. Healthy for life: results for July 2007–June 2011. Cat. no. IHW 84. Canberra: AIHW.

AIHW 2014. Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2012–13. Cat. no. IHW 139. Canberra: AIHW.

AIHW 2014. National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: First national results June 2012 to June 2013. National key performance indicators for Aboriginal and Torres Strait Islander primary health care no. 1. Cat. no. IHW 123. Canberra: AIHW.

AIHW 2014. National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: results from December 2013. National key performance indicators for Aboriginal and Torres Strait Islander primary health care. Cat. no. IHW 146. Canberra: AIHW.

AIHW 2015. Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2013–14. Cat. no. IHW 152. Canberra: AIHW.

AIHW 2015. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples: 2015. Cat. no. IHW 147. Canberra: AIHW.

AIHW 2015. The nKPI data collection: data quality issues working paper. Cat. no. IHW 153. Canberra: AIHW. Viewed 12 June 2015 <http://www.aihw.gov.au/publication-detail/?id=60129551074>.

This is the third national report on the national Key Performance Indicators (nKPIs) data collection. It captures data from more than 230 primary health care organisations that receive funding from the Australian Government Department of Health to provide services primarily to Aboriginal and Torres Strait Islander people. It presents data for 21 'process-of-care' and 'health outcome' indicators, which focus on maternal and child health, preventative health and chronic disease management. The report shows improvements against almost all of the indicators.