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Australian Institute of Health and Welfare

National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care

Results from June 2016

National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care series no. 4



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The Department of Health provided all text dealing with policy implications of the data based on AIHW's analysis of the data, as presented in the 'Opportunities for action' boxes throughout the report and in Chapter 8: Discussion.

The Department of Health funds the national Key Performance Indicators for Indigenous primary health care (nKPI) project.

Abbreviations

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
ACR	albumin/creatinine ratio
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
AIR	Australian Immunisation Register
ASGS	Australian Statistical Geography Standard
BMI	body mass index
CKD	chronic kidney disease
COAG	Council of Australian Governments
COPD	chronic obstructive pulmonary disease
CQI	continuous quality improvement
CVD	cardiovascular disease
eGFR	estimated glomerular filtration rate
ERP	estimated resident population
GFR	glomerular filtration rate
GP	general practitioner
GPMP	General Practitioner Management Plan
HSA-limited	health service area-limited
HbA1c	glycosylated haemoglobin
HPV	human papillomavirus
IF	Improvement Foundation
IP	Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023
KPI	Key Performance Indicator
MBS	Medicare Benefits Schedule
METeOR	Metadata Online Registry
min	minute
mL	millilitre
mmHg	millimetres of mercury
MMR	measles, mumps and rubella
NACCHO	National Aboriginal Community Controlled Health Organisation

NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NCSP	National Cervical Screening Program
nKPIs	National Key Performance Indicators
NPDC	National Perinatal Data Collection
NSW	New South Wales
NT	Northern Territory
NTG	Northern Territory Government
PCIS	Primary Care Information System
PHN	Primary Health Network
PIRS	Patient Information Recall System
Qld	Queensland
RACGP	Royal Australian College of General Practitioners
RFDS	Royal Flying Doctors Service
SA	South Australia
STIs	sexually transmitted infections
Tas	Tasmania
TCA	Team Care Arrangement
Vic	Victoria
WA	Western Australia

Symbols

—	nil or rounded to zero
..	not applicable
↑	increased (favourable trend)
↓	decreased (favourable 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
n.a.	not available
n.s.	not significant

Summary

This fourth national report on the Indigenous primary health care **national Key Performance Indicators** (nKPIs) data collection presents annual data on indicators collected from the June 2012 to the June 2016 reporting period. Data for this collection are provided to the AIHW by primary health care organisations that receive funding from the Department of Health to provide services to Aboriginal and Torres Strait Islander people. Some primary health care organisations that report receive additional funding from other sources, including state and territory health departments, while a small number are funded solely by the Northern Territory Government (see 'Chapter 1 Introduction').

The purpose of the nKPIs is to support policy and service planning at the national and state/territory levels, 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.

Over the period June 2012 to May 2015 (the period for which time trend data are available), improvements continue to be made across the majority of measures—indicating that health organisations continue to show progress in service provision.

The good news

Improvements were seen in 12 of the 16 process-of-care measures for which time trend data were available (Table S1). For 10 of these measures, the change was statistically significant. The largest improvements (between 16 and 19 percentage points) were seen in data recording practices for the measurement of:

- alcohol consumption, which rose from 38% in June 2012 to 57% in May 2015
- birthweight, which rose from 51% in June 2012 to 69% in May 2015
- smoking status, which rose from 64% in June 2012 to 80% in May 2015.

Results for process-of-care measures related to Medicare Benefits Schedule (MBS) health assessments (for children and adults) exceeded the 2016 trajectory of the Implementation Plan goals for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023.

Improvements were also seen in 3 of the 5 health outcomes measures for which time trend data were available. For 1 of these, the change was statistically significant:

- Health of clients with type 2 diabetes—those with an HbA1c (glycosylated haemoglobin), with a result of $\leq 7\%$ in the previous 6 months, rose from 32% in June 2012 to 35% in May 2015. (An HbA1c result of $\leq 7\%$ is the optimum target encouraged by Diabetes Australia to ensure good glycaemic control and reduce the incidence of diabetes-related illness.)

Things to work on

Results for 3 process-of-care measures related to immunisation against influenza—clients aged 50 and over; clients with type 2 diabetes; and clients with chronic obstructive pulmonary disease (COPD)—and for the 1 process-of-care measure relating to cervical screening saw small decreases of between 1.3 and 2.6 percentage points. However, these were not statistically significant.

Results for 2 health outcome measures showed increases: the proportion of babies born with a low birthweight increased by 0.9 percentage points and people whose body mass index (BMI) score classified them as overweight or obese increased by 4.3 percentage points. However, these increases were not statistically significant. These results also remain in line with national data for Indigenous Australians.

Table S1: Summary results of nKPIs, May 2015: the good news

Indicator group	First reporting period			May 2015			Change in national proportion over time ^(a)
	Numerator	Denominator	Proportion (%)	Numerator	Denominator	Proportion (%)	
Maternal and child health indicators							
P113: First antenatal visit (before 13 weeks) ^(b)	1,277	3,674	34.8	1,923	5,160	37.3	↑ n.s.
P101: Birthweight recorded ^(c)	1,889	3,694	51.1	5,259	7,592	69.3	↑
P103: MBS health assessment—aged 0–4 ^(c)	3,658	15,864	23.1	11,256	34,180	32.9	↑
Preventative health indicators							
P109: Smoking status recorded ^(c)	59,417	92,641	64.1	152,930	190,899	80.1	↑
P116: Alcohol consumption recorded ^(c)	34,908	91,194	38.3	108,537	190,899	56.9	↑
P103: MBS health assessment—aged 25 and over ^(c)	21,647	69,330	31.2	65,573	142,395	46.1	↑
P110: Smoking status result—current smoker ^(b)	58,187	108,159	53.8	80,431	152,930	52.6	↓ n.s.
Chronic disease management indicators							
P107: General Practitioner Management Plan—clients with type 2 diabetes ^(c)	6,063	15,553	39.0	16,859	32,930	51.2	↑
P108: Team Care Arrangement—clients with type 2 diabetes ^(c)	5,339	15,553	34.3	15,914	32,930	48.3	↑
P123: Blood pressure result recorded—clients with type 2 diabetes ^(c)	10,478	15,667	66.9	22,456	32,930	68.2	↑ n.s.
P105: HbA1c result recorded (6 months)—clients with type 2 diabetes ^(c)	7,780	15,566	50.0	17,275	32,930	52.5	↑
P118: Kidney function test recorded—clients with ^(b) :							
Type 2 diabetes	16,503	26,180	63.0	21,656	32,284	67.1	↑
CVD	6,681	11,982	55.8	9,255	14,722	62.9	↑
P124: Blood pressure result of ≤130/80mmHg—clients with type 2 diabetes ^(c)	4,208	10,478	40.2	9,565	22,456	42.6	↑ n.s.
P106: HbA1c result (6 months, ≤7%)—clients with type 2 diabetes ^(c)	2,501	7,780	32.1	6,106	17,275	35.3	↑

Key: ↑ = increased; ↓ = decreased; n.s. = not significant.

(a) Significance of trend over time, tested at 95% confidence level; for further details refer to Appendix 2.

(b) Indicator first reported in June 2013.

(c) Indicator first reported in June 2012.

Notes

1. Health outcome indicators are shaded blue.
2. The indicators 'P111: Smoking status of women who gave birth within the previous 12 months—current smoker' and 'P119: Kidney function test results' are not included, as data were collected for the first time in December 2014.
3. The indicator 'P120: Risk factors assessed to enable CVD assessment' is not presented in this table, as data were collected for the first time in December 2015.
4. The indicator 'P104: Child immunisation' is excluded due to concerns over data validity.

Table S2: Summary results of nKPIs, May 2015: things to work on

Indicator group	First reporting period			May 2015			Change in national proportion over time ^(a)
	Numerator	Denominator	Proportion (%)	Numerator	Denominator	Proportion (%)	
Maternal and child health indicators							
P102: Birthweight result—low ^(b)	477	3,826	12.5	702	5,249	13.4	↑ n.s.
Preventative health indicators							
P122: Cervical screening—previous 2 years ^(b)	23,122	73,463	31.5	26,856	88,935	30.2	↓ n.s.
P114: Immunised against influenza—clients aged 50 and over ^(b)	14,699	40,418	36.4	16,765	48,954	34.2	↓ n.s.
P112: BMI classified as overweight or obese ^(c)	29,897	45,527	65.7	72,867	104,103	70.0	↑
Chronic disease management indicators							
P115: Immunised against influenza—clients with ^(b) :							
Type 2 diabetes	4,311	11,642	37.0	4,640	13,482	34.4	↓ n.s.
COPD	507	1,348	37.6	536	1,515	35.4	↓ n.s.

Key: ↑ = increased; ↓ = decreased; n.s. = not significant.

(a) Significance of trend over time tested at 95% confidence level; for further details refer to Appendix 2.

(b) Indicator first reported in June 2013.

(c) Indicator first reported in June 2012.

Notes

1. Health outcome indicators are shaded blue.
2. The indicators 'P111: Smoking status of women who gave birth within the previous 12 months—current smoker' and 'P119: Kidney function test results' are not included as data were collected for the first time in December 2014.
3. The indicator 'P120: Risk factors assessed to enable CVD assessment' is not presented in this table as data were collected for the first time in December 2015.
4. The indicator 'P104: Child immunisation' is excluded due to concerns over data validity.



Chapter 1

Introduction

This is the fourth report in a series about the Indigenous primary health care **national Key Performance Indicators** (nKPIs) data collection, and includes data for the period ending 30 June 2016. The data were collected from 241 primary health care organisations that receive funding from the Department of Health to provide primary health care services, mainly to Aboriginal and Torres Strait Islander people. Some primary health care organisations that report receive additional funding from other sources, including state and territory health departments, while a small number are funded solely by the Northern Territory Government (NTG). The primary health care organisations include Aboriginal Community Controlled Health Services (ACCHSs), state and territory-managed organisations, Primary Health Networks (PHNs), and other non-government organisations.

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

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 continuous quality improvement (CQI) strategies (Bailie et al. 2007). CQI is 1 component of a broader health system response that is required to improve primary health care delivery. The nKPI data submitted to the Australian Institute of Health and Welfare (AIHW) are reported back to the health organisations to support CQI processes that help improve the delivery of primary health care and health outcomes for Aboriginal and Torres Strait Islander people.

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 putting processes in place to collect high-quality data. Taking the time to review and make sense of the data, and to adopt CQI practices, requires organisational commitment, capability and capacity.

The nKPI data are also intended to support progress towards the Council of Australian Governments (COAG) Closing the Gap targets, in particular in the areas of child health and chronic diseases. Further, these will support the national health goals set out in the Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023.

The nKPI collection

Altogether, 24 nKPIs have received approval and endorsement for reporting from the National Health Information Standards and Statistics Committee (NHISSC), the National Health Information and Performance Principal Committee (NHIPPC) and the Australian Health Ministers' Advisory Council (AHMAC). The indicators focus on maternal and child health, preventative health and chronic disease management (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 and non-Indigenous Australians by 2031, and of halving the gap in child mortality by 2018.

Presently, data are collected on 22 of the 24 indicators. These 22 indicators are included in this report. The 2 remaining indicators are to be added to the data collection in June 2017 (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 effectiveness 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.

Changes since December 2014

On 1 July 2015, the Australian Government established 31 Primary Health Networks (PHNs) to replace 61 Medicare Locals that had previously been in operation. The purpose of the PHNs is to increase the efficiency and effectiveness of medical services for patients, and to improve the coordination of care (see 'Chapter 6: Organisations by Primary Health Networks' for more information.)

In October 2015, the Australian Government released the Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023. The Implementation Plan outlines 106 actions to be taken by the Australian Government, the Aboriginal community controlled health sector, and other key stakeholders, to give effect to the vision, principles, priorities and strategies of the National Aboriginal and Torres Strait Islander Health Plan 2013–2023. For more information on the Implementation Plan, its vision and the context for its goals, see the *National Aboriginal and Torres Strait Islander Health Plan 2013–2023*.

The Implementation Plan has set a number of goals to be achieved by 2023, for a set of 20 indicators for Indigenous health care processes and outcomes at the national level. These goals complement the existing COAG Closing the Gap targets and focus on prevention and early intervention across the life course. As some of the Implementation Plan goals are for indicators similar to those of the nKPIs, Chapter 7 includes analysis of the progress of the relevant national nKPIs against these goals.

nKPI data quality

Since the release of the previous national report in October 2015 (based on December 2014 data), a number of changes have occurred within the data collection process which may impact on data quality. The June 2015 data collection was brought forward by a month and so the reference date for this collection is May 2015 rather than June 2015. While it was expected that data would be submitted for the full reference period of the indicator, some health organisations may not have done so. For example, when extracting data for clients who had received health care processes over the 12-month period from June 2014 to May 2015, the data may only have been submitted for 11 months, from July 2014 to May 2015.

Due to some concerns around the quality of data collected for the December 2015 reporting period, this report presents annual data from the June 2012 reporting period to the June 2016 reporting period rather than 6-monthly data.

Commencing from the December 2015 reporting period, the way in which the Indigenous regular client definition has been applied to the NTG data has changed (see 'Regular client definition for Northern Territory Government organisations' on page 7 for further information). As the Indigenous regular client definition guides the type of data collected, this change improves the consistency of nKPI data collected and represents an improvement to overall nKPI data quality. Notwithstanding this improvement, the change has implications

for making comparisons between current and previous reporting periods. From a statistical perspective, the change means that comparisons with previous periods cannot be made. This means that June 2016 data are provided alongside previously reported data, but are not (and should not be) compared with the previous data. To reflect this issue, the June 2016 period has been shaded a darker colour of blue in relevant time series figures.

For the June 2016 collection, of the 241 organisations that submitted data, 48 organisations used either the manual submission form or MMeX. Of the remaining 193 organisations, 172 submitted data using both the Canning and the Pen CS CAT4 tools. In order to present analyses that would be comparable with previous reporting periods, only data submitted using the Pen CAT tool, the manual submission form or MMeX were used in this report. As the organisations using the Pen CS CAT4 extraction tool were not required to submit the total number of clients attending the service, the figures that draw on client numbers in Chapter 1 (figures 1.3–1.6 and 1.8–1.9) report data from the May 2015 reporting period rather than the June 2016 reporting period.

A number of other limitations in the nKPI data 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 1 service regularly. Additionally, some internal inconsistencies were noted in data for some organisations. These data were excluded from the national analysis.

In 2014, an independent review of the quality of the nKPI dataset was conducted to find any sources of potential error in the data collection process and to provide advice on strategies to eliminate any errors (DoH 2015a). Overall, the review 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. The review 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 because they had no clients to whom they could provide the particular services relevant to the indicator, 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 241 in June 2016, 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 the new organisations included in reporting had, on average, 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. This has significantly increased the number of Northern Territory organisations, from 32 to 54. As a result, changes in the Northern Territory average between June 2014 and May 2015, and to a lesser extent changes in the *Very remote* and national averages between these periods, 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 Australians. The extent of this, nationally, is unknown and difficult to quantify.
- Organisations use various Patient Information Recall Systems (PIRS), with Communicare, Medical Director, Best Practice, and Primary Care Information System (PCIS) being the most commonly used. 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 with components of the electronic data transfer system used by organisations to report data.

In addition to these broader 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 discussed in the section below, with expanded explanations available in Appendix 2.

Things to consider when interpreting nKPI data

- **Babies' records** provide data for indicators on birthweight recorded and results. The standard nKPI Indigenous regular client definition does not apply to these indicators because many babies will not have visited a health service 3 times in the last 2 years. A baby is considered a client if they attended only once. 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 from data 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 within the previous 12 months** records smoking status during pregnancy retrospectively and the information is updated only when women's smoking status category is changed.
- **Medicare Benefits Schedule (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. These indicators include MBS health assessment (item 715) for children aged 0–4 and for adults aged 25 and over, as well as General Practitioner Management Plan—clients with type 2 diabetes, and Team Care Arrangement—clients with type 2 diabetes.
- **Small organisation denominators**—that is, <20 Indigenous regular clients—can have a large impact on the overall proportion for an organisation, even with a small change in the numerator. For maternal and child health indicators, 11%–67% of organisations contributing to these indicators had denominators of <20 clients. For preventative health indicators, 1%–6% of organisations contributing to these indicators, and 11%–86% of organisations contributing to chronic disease management indicators, had denominators of <20 clients. For the indicator Immunised against influenza—clients with COPD, 90% of organisations had a denominator of <20 clients. See Table A2.1 for organisation proportions by indicator.
- **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 (that is, treated as having been updated in the past 24 months), regardless of how old that record is. Therefore, the indicator may not reflect the current smoking status of the Indigenous 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 Indigenous regular 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.
- **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 Indigenous 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 AUDIT or AUDIT-C, or simply record whether or not the client consumes alcohol.

- **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.
- **GP availability** may be limited in some areas, making it difficult for organisations to provide General Practice Management Plans (GPMPs) and TCAs.

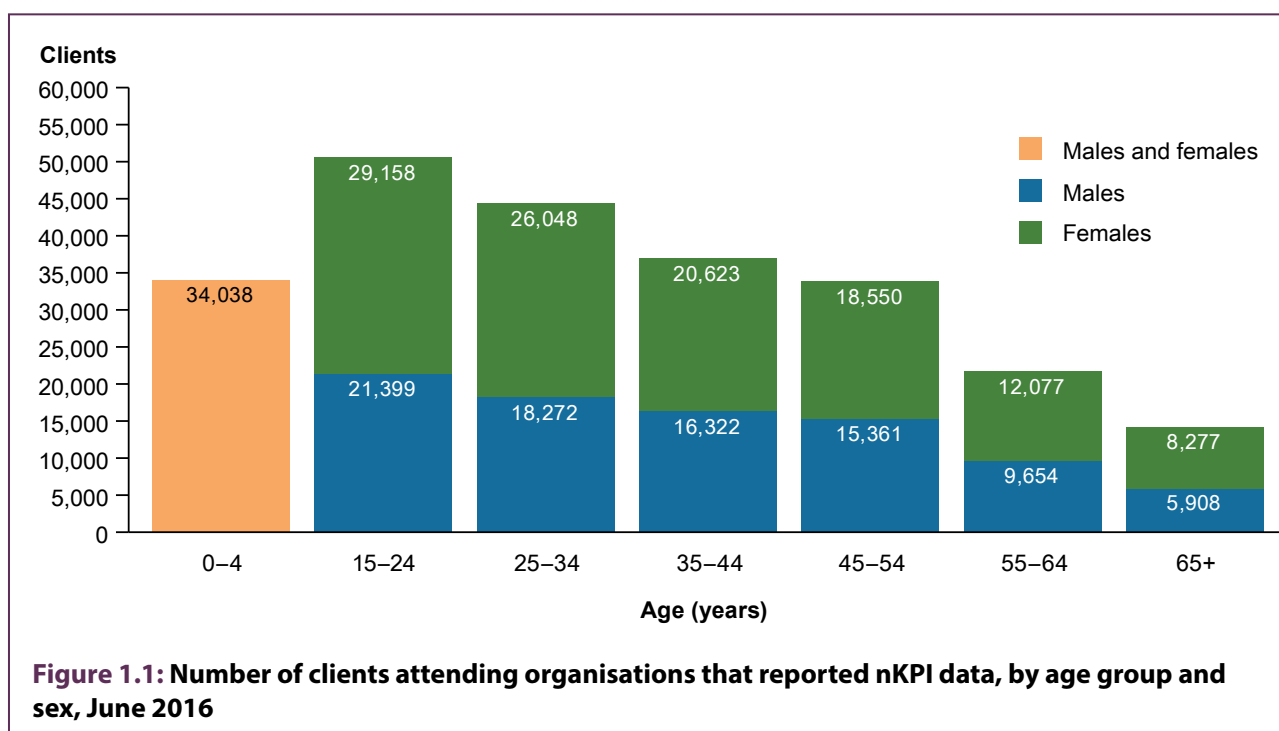
Clients

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. Tables and figures in this report use the term ‘client’ in place of ‘Indigenous regular client’. Nevertheless, the stated definition of Indigenous regular client applies to data presented in tables and figures.

The definition of Indigenous regular client used for this report is in line with the Royal Australian College of General Practitioners’ (RACGP) definition of a patient with an active medical record (RACGP 2010). This definition does have limitations, though, 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 ‘Indigenous regular client’ criteria in a particular organisation, they may not receive the majority of their health care from that organisation.

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

In May 2015, around 297,000 Indigenous regular clients attended the Indigenous primary health care organisations. For the June 2016 reporting period, client numbers for the 5–14 age group are not available (see ‘nKPI data quality’). However, there were approximately 34,000 clients aged 0–4 and around 202,000 Indigenous regular clients aged 15 and over attending organisations that reported nKPI data. For clients aged 15 and over, where information on sex was available, the data shows that the majority of clients (57%) were female. The 15–24 age group had the highest number of clients (50,577), and the 65-and-over age group had the fewest clients (14,185) (Figure 1.1).



Regular client definition for Northern Territory Government organisations

Beginning with the December 2015 collection, there has been a change in how the Indigenous regular client definition has been applied to data for NTG health clinics; this has improved the comparability of data across the nKPI collection.

From December 2015, data for NTG health clinics has been reported using the nKPI definition of an Indigenous regular client. Prior to this, data from NTG health clinics defined regular clients as clients who attended the health clinic *as their usual health centre* at least 3 times in the last 2 years. The intent of this restriction was to prevent possible double-counting of clients who attend multiple organisations. As the vast majority of NTG health clinics use PCIS, which is designed to only contain 1 health record per person, NTG health clinics are able to track clients who attend health clinics other than their usual health centre. For nKPI reporting purposes, however, data for NTG health clinics only counted services provided to a client at their usual health centre, regardless of whether they had visited another health clinic 3 times in 2 years and had also received services there. Consequently, prior to December 2015 some clients who attended an NTG health clinic 3 times in 2 years were not counted as regular clients. This reduced the comparability of results between NTG health clinics and other health clinics, particularly for those that had a large number of transient clients. The change in how the NTG data is reported means that, from December 2015 onwards, the national nKPI data quality has improved.

An analysis of the impact of using the nKPI Indigenous regular client definition on the NTG time trend data for the June 2016 collection was conducted for 20 indicators (24 measures). Results indicate that, because of the change in definition, the NTG data from June 2016 are not comparable to previously published data. In other words, changes identified in the June 2016 data are a result of data reporting practices rather than a 'real world' change in patient outcomes (see 'Appendix 7: Analysis of Northern Territory Government services' data' for more details).

Box 1.1: Impact of different Indigenous regular client definitions

An analysis was undertaken to directly compare data obtained using two different definitions of an Indigenous regular client:

- A client who attended a given primary health care organisation at least 3 times in the last 2 years. This is the definition currently used for the nKPI collection.
- A client who attended a given primary health care organisation at least 3 times in the last 2 years and who lived in the health service area (HSA) served by the organisation.

The extra stipulation in the second definition excludes clients who do not live in the local HSA and are therefore considered to be visitors. These visitors may not receive the full suite of care received by a person who is considered to be a regular patient of the health service. It was anticipated that the definition with the HSA stipulation would pick up fewer clients (i.e. a smaller denominator) and that consequently the resulting proportions would be more favourable.

The analysis was done on 2015 calendar data for one health care organisation located in the Northern Territory. The results of the comparison showed that when the second (HSA-limited) definition was used, the organisation performed better on 15 of the 16 processes-of-care measures, and better on 6 of the 8 health outcome measures compared to when the first (nKPI) definition was used. However, the magnitude of the difference was not consistent across indicators (See 'Appendix 8: Comparison of nKPI definition result, 2015' for more details).

In interpreting these findings, it should be noted that:

- the above analysis was based on data from a single organisation and therefore should not be interpreted as quantifying definitional differences across the broader nKPI collection
- for the current reporting period, all services are now reporting using the same definition.

Organisations contributing nKPI data

The nKPI data have been collected for 9 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 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. In May 2015, the total was 242; in December 2015, it was 240; and in June 2016, it was 241. The number of organisations included in the analyses varies for each period by indicator, depending on the quality of the data submitted (see Table A2.2 in Appendix 2). This means the national averages reported are based on differing numbers of organisations, which could limit comparability for some purposes.

Main characteristics

Organisations reporting nKPI data in June 2016 included ACCHSs, including ‘auspiced’ organisations (59%); state and territory government-managed organisations (34%); PHNs (4%); and other non-government organisations (2%) (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 by PHNs to deliver services, aggregated data can be reported through PHNs (the fund-holder organisation).

Table 1.1: Number of organisations, by type of governance arrangement and jurisdiction, June 2016

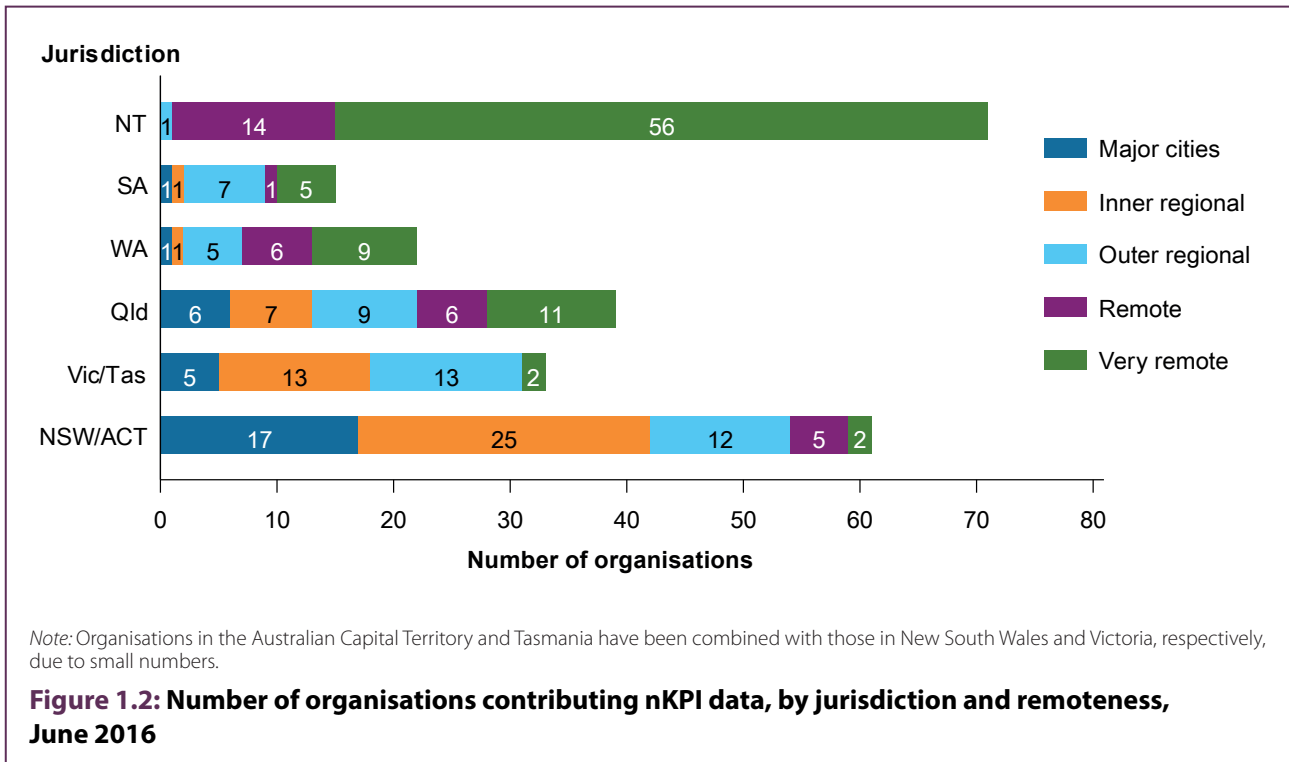
Governance arrangement	NSW/ACT	Vic/Tas	Qld	WA	SA	NT	Total	%
Aboriginal and Torres Strait Islander Community Controlled Health Services	38	29	33	16	10	16	142	58.9
State and territory government	14	1	3	6	5	54	83	34.4
Primary Health Networks	9	1	0	0	0	0	10	4.1
Other non-government	0	1	3	0	0	0	4	1.7
Unknown	0	1	0	0	0	1	2	0.8
Total	61	33	39	22	15	71	241	100.0

Organisation and client characteristics

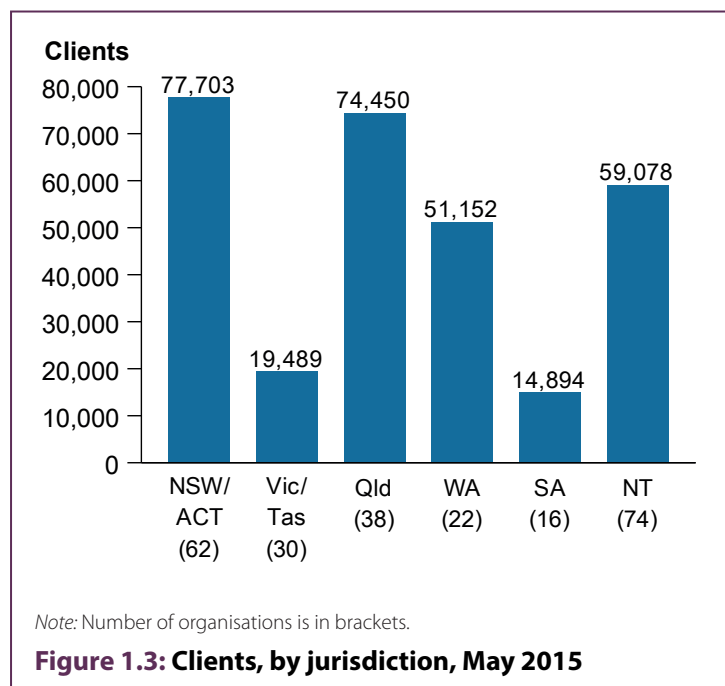
For the June 2016 reporting period, complete data on the number of clients seen by organisations were not made available for all organisations. For this reason, data on client numbers and organisational size (which is based on client numbers) are for the May 2015 reporting period. As noted by some organisations, in the May 2015 reporting period, organisations may have included data only for 11 months—from July 2014 to May 2015—instead of a full year from June 2014 to May 2015. This may under-report the number of total clients that attended the organisations, but it is not possible to determine the extent of this impact, as not all organisations indicated the data reference period used.

In June 2016:

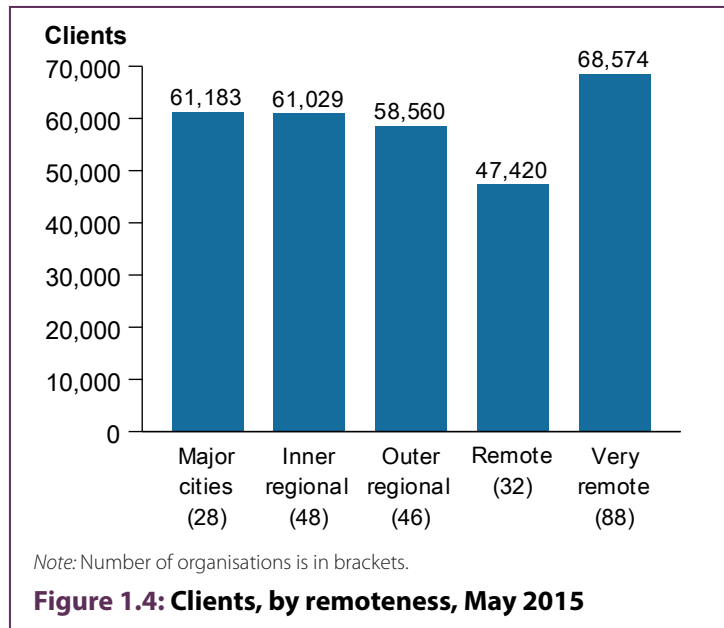
- the Northern Territory had the most organisations (71)
- most Northern Territory organisations (56) were in *Very remote* areas
- New South Wales/the Australian Capital Territory had the largest number of organisations in *Major cities* (16) (Figure 1.2).



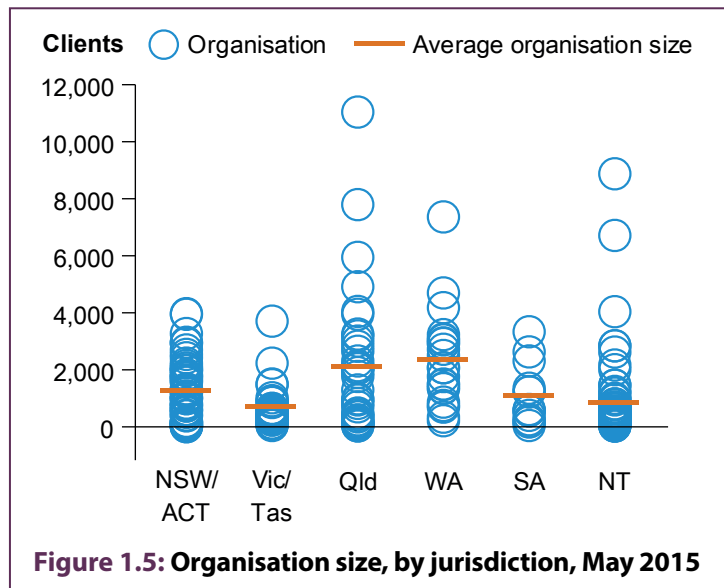
- In May 2015, organisations reporting nKPI data saw a combined total of around 297,000 clients for relevant health conditions or disease management. New South Wales/the Australian Capital Territory (26%) and Queensland (25%) together accounted for over half of these clients (Figure 1.3). South Australia had the lowest number of clients (14,894, or 5%).



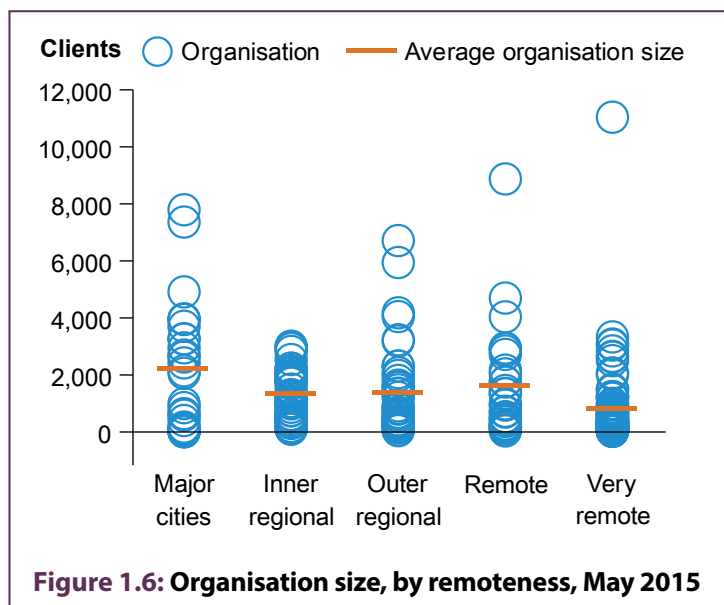
- In May 2015, the number of Indigenous regular clients was highest in organisations in *Very remote* areas and lowest in *Remote* areas (Figure 1.4).



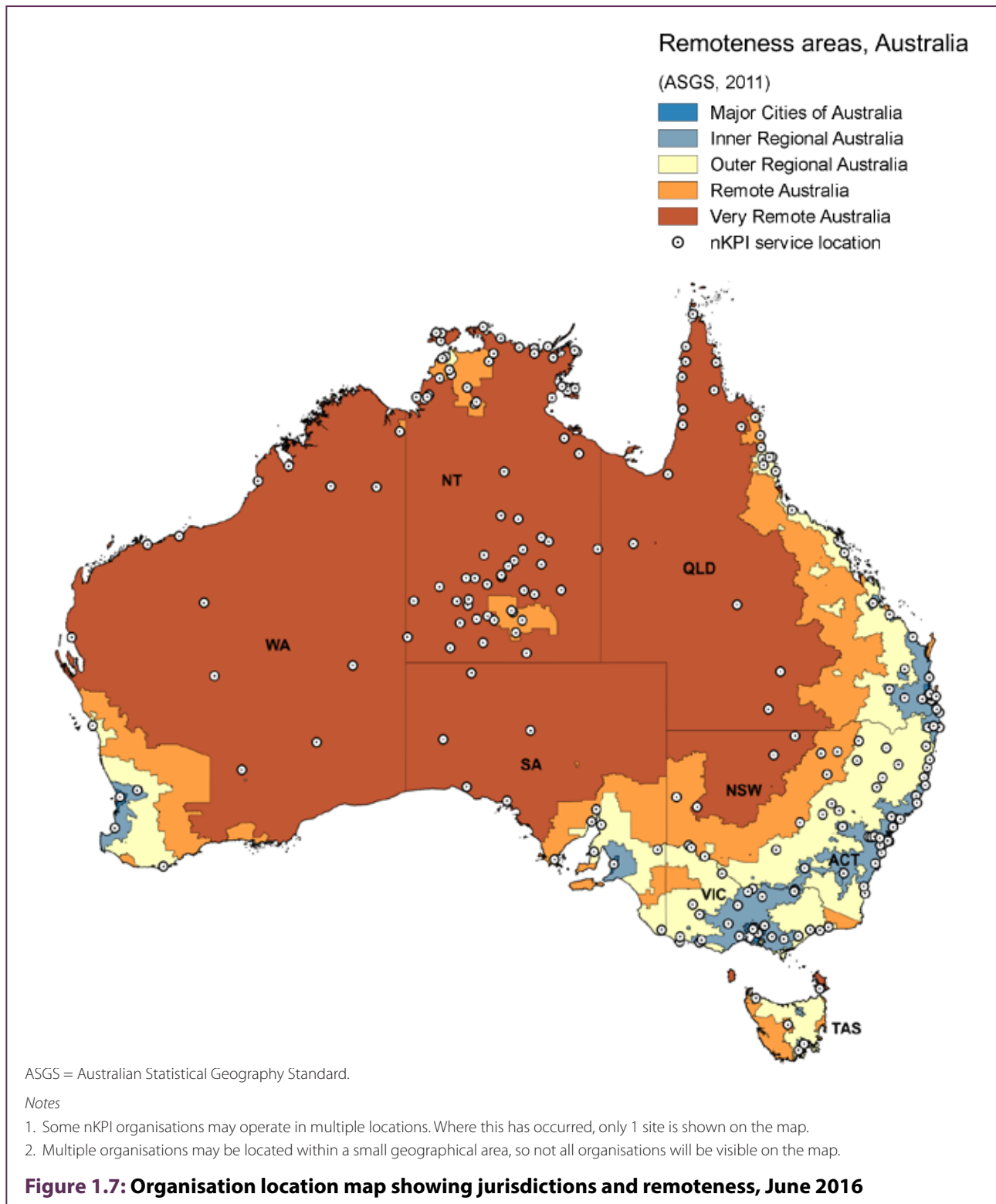
- The size of organisations varied by state and territory. The average number of Indigenous regular clients at each organisation was highest in Western Australia (2,325) and lowest in Victoria/Tasmania (672) (Figure 1.5). In the Northern Territory, 50% of organisations had fewer than 365 Indigenous regular clients, while 50% of organisations in Western Australia had more than 2,073 Indigenous regular clients.



- Organisation size also varied by remoteness. The average number of clients at each organisation was highest in *Major cities* (2,185) and lowest in *Very remote* areas (779) (Figure 1.6).
- 50% of organisations in *Very remote* areas had fewer than 349 Indigenous regular clients, while 50% of organisations in *Major cities* had more than 2,102 Indigenous regular clients.



Organisations reporting nKPI data are located across all jurisdictions and remoteness areas (Figure 1.7).



- The remoteness distribution of the nKPI Indigenous regular client population in each jurisdiction does not necessarily reflect the remoteness distribution of the estimated resident Indigenous populations in respective jurisdictions (Figure 1.8). 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, nKPI Indigenous regular clients represented over 90% of the estimated resident population in *Remote* areas. This may be a reflection of a high proportion of visitors in *Remote* areas.

- The nKPI client population shown in Figure 1.9 represents about one-quarter (25%) of the total Indigenous population in Victoria/Tasmania, while in the Northern Territory, the nKPI client population represents 80% of the Indigenous population. These figures need to be treated cautiously, as clients attending more than 1 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, and this could also contribute to differences between jurisdictions.

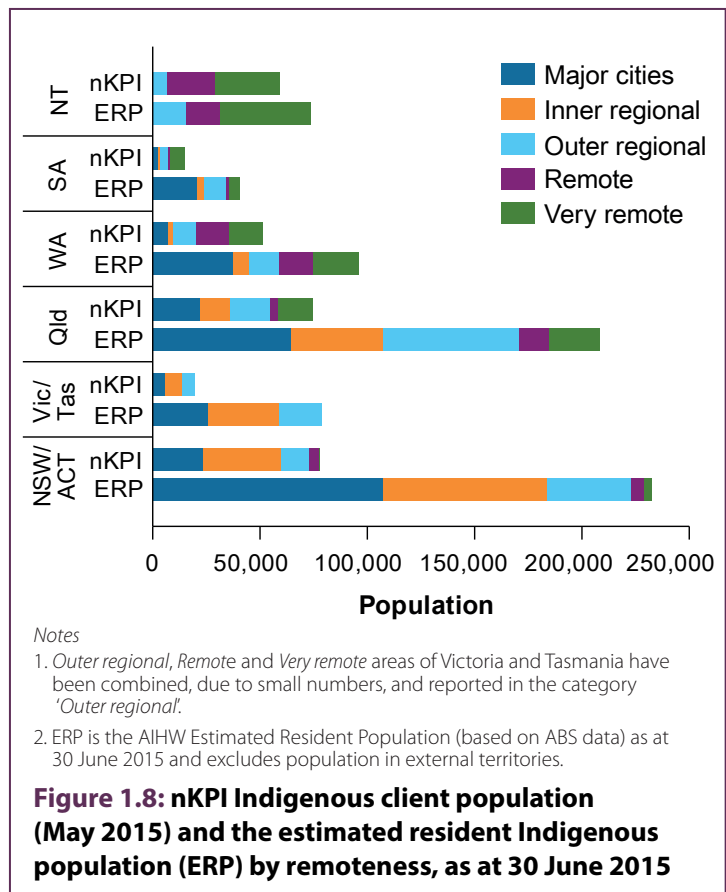


Figure 1.8: nKPI Indigenous client population (May 2015) and the estimated resident Indigenous population (ERP) by remoteness, as at 30 June 2015

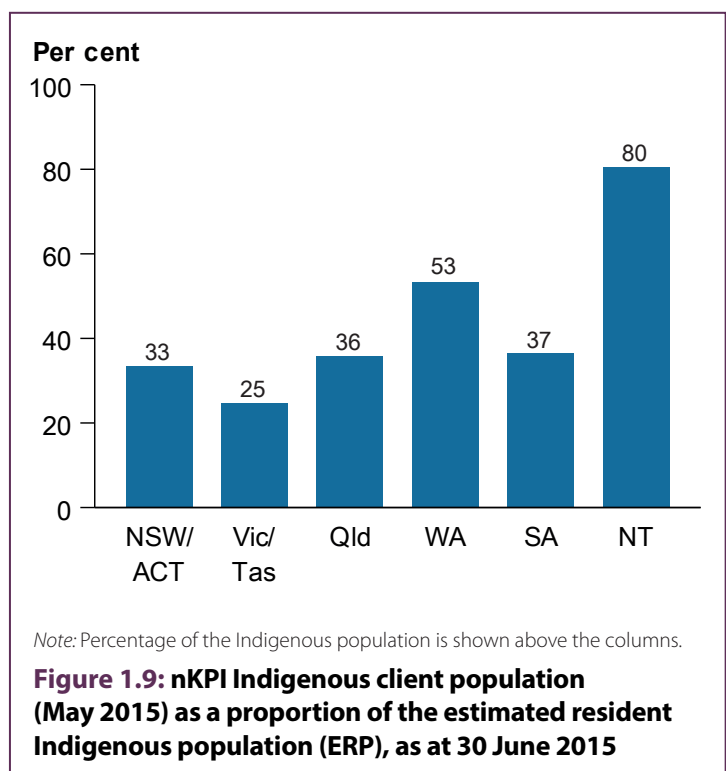


Figure 1.9: nKPI Indigenous client population (May 2015) as a proportion of the estimated resident Indigenous population (ERP), as at 30 June 2015

Structure of this report

Following this introductory chapter, the remaining chapters of this report are organised as follows:

- **Chapter 2** presents a demographic profile of nKPI clients with 1 of the following chronic diseases: type 2 diabetes, cardiovascular disease (CVD), and chronic obstructive pulmonary disease (COPD).
- **Chapters 3–5** 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 level, by reporting period, and by age and sex where applicable. The data, as presented, show where results are strongest and areas that need further improvements. Data quality and interpretation issues are also discussed.
- **Chapter 6** presents organisation results by PHNs.
- **Chapter 7** discusses the progress being made by most primary health organisations against Implementation Plan (IP) goals.
- **Chapter 8**, 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 results across the nKPIs and, where possible, compares them with national data for Aboriginal and Torres Strait Islander people and then with 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 indicator Risk factors assessed to enable CVD risk assessment 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 by remoteness categories.
- **Appendix 7** provides an analysis of the impact of using the nKPI Indigenous regular client definition on the NTG data.
- **Appendix 8** provides a comparison of 2015 data using the nKPI (all localities) and nKPI (HSA-limited) definitions for 1 Northern Territory service.
- **Appendix 9** provides an explanatory guide to the figures (graphs) presented in chapters 2–5, and 7 of the report.

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 shown in tables.

Chapter 2

Chronic disease profile

2.1 Why is this important?

As the nKPIs are largely focused on risk factors and screening for chronic disease, and on chronic disease management, this chapter provides a chronic disease profile of clients attending Indigenous primary health care organisations.

Chronic diseases were responsible for 64% of the total disease burden among Indigenous Australians in 2011 (AIHW 2016a). Cardiovascular disease (CVD), respiratory diseases, and diabetes are important contributors to the total burden of disease experienced by Indigenous Australians. CVD accounted for the third-greatest proportion of the disease burden; respiratory conditions (including COPD) accounted for the fifth-greatest proportion; and endocrine diseases (including type 2 diabetes) accounted for the eighth-greatest proportion (AIHW 2016a).

Data relating to 3 chronic disease categories—type 2 diabetes, CVD, and COPD—are available as part of the nKPI collection. By monitoring these chronic conditions using the nKPI data, it is possible to gain insight into how well the conditions are managed by Indigenous-specific primary health care services.

Type 2 diabetes, CVD, and COPD each impact on the health of Indigenous Australians, and rates of hospitalisations for these disease categories are higher in the Indigenous population than in the non-Indigenous population.

- The total burden of disease from endocrine diseases experienced by Indigenous Australians was around 5 times that of non-Indigenous Australians, accounting for 4% of the total burden of disease in Indigenous Australians. Diabetes accounted for the vast majority (98%) of the endocrine disease-related burden (AIHW 2016a).
- The total burden of disease experienced by Indigenous Australians from CVDs was around 3 times that of non-Indigenous Australians, accounting for around 12% of the total burden of disease in Indigenous Australians (AIHW 2016a).
- The total burden of disease experienced by Indigenous Australians from respiratory diseases was around 2.5 times that of non-Indigenous Australians, accounting for around 8% of the total burden of disease in Indigenous Australians. Following asthma (41%), COPD (38%) accounted for the next-largest portion of the respiratory disease-related burden (AIHW 2016a).
- Age-standardised rates of hospitalisation for these chronic diseases were greater for Indigenous Australians than for non-Indigenous Australians. Including type 1 and type 2 diabetes, age-standardised hospitalisation rates for Indigenous Australians were 4.2 times the rate for non-Indigenous Australians (AIHW 2015a). Rates of hospitalisation for type 2 diabetes specifically, as a primary or additional diagnosis, were around 4 times as high for Indigenous Australians as for non-Indigenous Australians (AIHW 2015b). Age-standardised hospitalisation rates for Indigenous Australians were around 1.5 times greater than for non-Indigenous Australians for hospitalisations involving a principal diagnosis of diseases of the circulatory system (AIHW 2015a). The age-standardised hospitalisation rate for COPD for Indigenous Australians was around 3.5 times that for non-Indigenous Australians (AIHW 2015a).

There are known risk factors for type 2 diabetes, CVD, and COPD. Evidence indicates that the most important risk factors causing lost years of life in Indigenous Australians are tobacco use (12%), dietary factors (10%), alcohol (8%), too much weight (8%), too little exercise (6%), high blood pressure (5%), and high blood sugar (5%) (AIHW 2016a). By addressing these and other risk factors, it may be possible to reduce hospitalisations due to these chronic diseases and to reduce the burden of disease within the Australian Indigenous population. Primary health care services support Indigenous Australians in addressing these risk factors and are the first port of call for providing this care.

Primary health care is typically an individuals' first point of contact with the health system. Primary health care services—including general practices, allied health services, community health centres, and community pharmacies—treat patients who are not currently admitted to hospital (DoH 2015c). Indigenous Australians

are able to access both general and Indigenous-specific primary health care services. In 2014–15, Aboriginal and Torres Strait Islander-specific primary health care services delivered around 3.5 million episodes of care (AIHW 2016b).

Nationally, primary health care services are available from 7,601 GP, 5,776 pharmacy, 747 public hospital, and 334 Royal Flying Doctor Service locations for both Indigenous and non-Indigenous Australians. An additional 305 services are directly funded by the Australian Government to provide health services to Aboriginal and Torres Strait Islander people (AIHW 2016d). Of these services, 241 reported data for the June 2016 reporting period as part of the nKPI collection. Over 150 ACCHSs operate across Australia. ACCHSs are primary health care services which provide for, and are operated by, the local Aboriginal community.

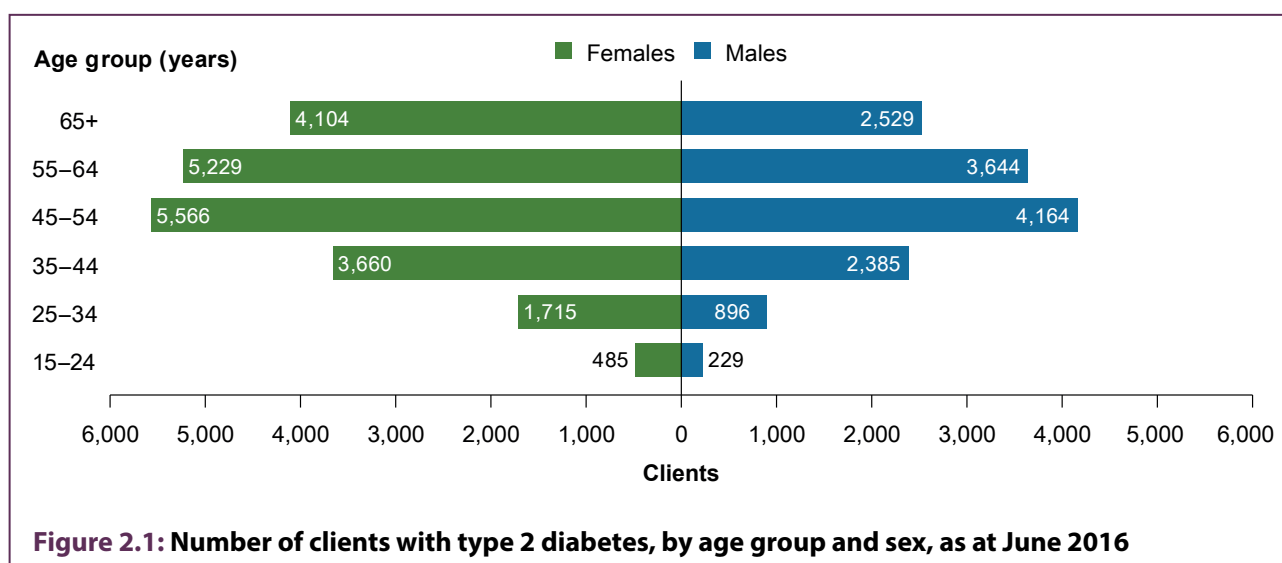
2.2 Chronic disease profile

The nKPI data allows us to build a chronic disease profile relating to type 2 diabetes, CVD, and COPD for Indigenous regular clients attending nKPI reporting organisations. For the June 2016 reporting period, 34,606 (17%) of Indigenous regular clients aged 15 and over had type 2 diabetes; 15,136 (8%) of Indigenous clients aged 15 and over had CVD; and 1,527 clients aged 15 to 49 had COPD. Note that data on COPD clients as a proportion of total Indigenous regular clients is not available, as data on the total Indigenous regular clients for the age subgroup 45–49 is not available (data is collected for 10-year age groups). Self-reported national data show that, in 2012–13, 11% of Indigenous adults had diabetes, 13% had a circulatory condition, and 31% reported long-term respiratory illnesses that included COPD (AIHW 2015a). One limitation of the nKPI collection is that the aggregated nature of the data prevents analysis of how many Indigenous regular clients have 2 or 3 of these chronic diseases as co-morbid. For example, it is not possible to analyse how many Indigenous regular clients have been reported as having both type 2 diabetes and CVD.

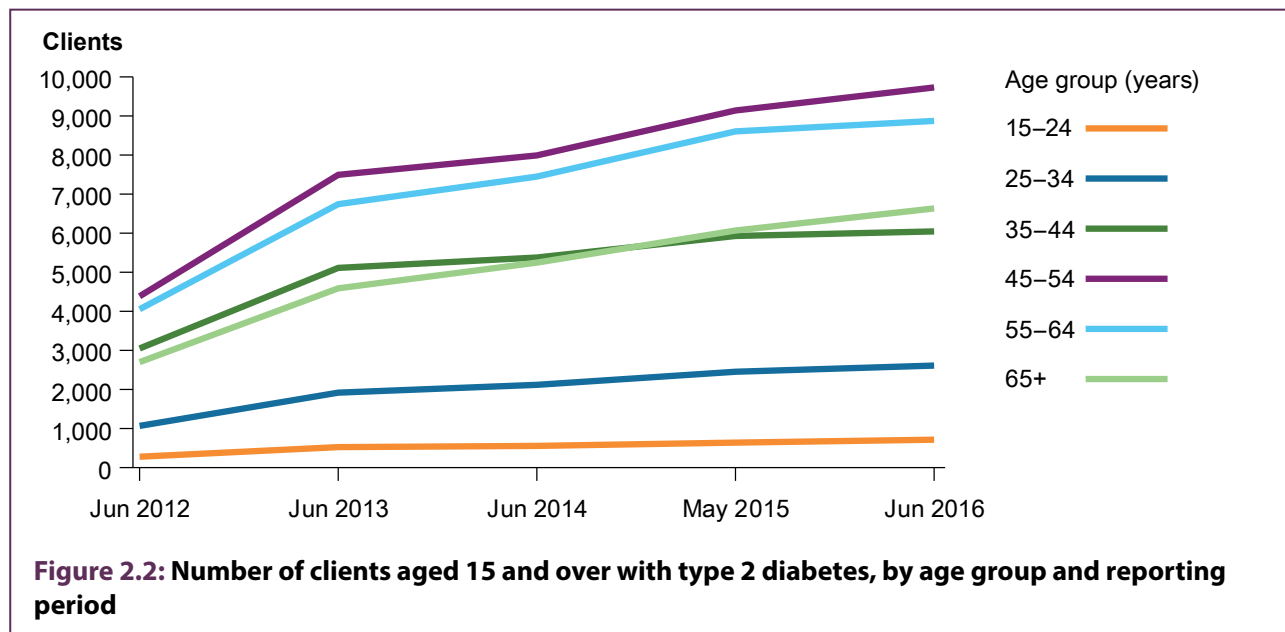
There was an increase in the number of Indigenous regular clients with type 2 diabetes, CVD, and COPD between the June 2012 and June 2016 reporting periods. However, the overall nKPI Indigenous regular client population also increased over this period, largely due to the increasing number of services introduced progressively into the collection, from 90 in June 2012 to 241 in June 2016. For type 2 diabetes and CVD, there was no change in the proportion of Indigenous regular clients with these chronic conditions between the June 2012 (type 2 diabetes) or June 2013 (CVD) and the June 2016 reporting periods. The corresponding proportions for COPD are not currently available.

A. Type 2 diabetes

For the June 2016 reporting period, the 45–54 age group had the greatest number of male (4,164) and female (5,566) clients with type 2 diabetes. For both males (3,644) and females (5,229), the 55–64 age group had the next highest number of clients with type 2 diabetes. In general, in all age groups, more females than males were recorded as having diabetes (Figure 2.1).

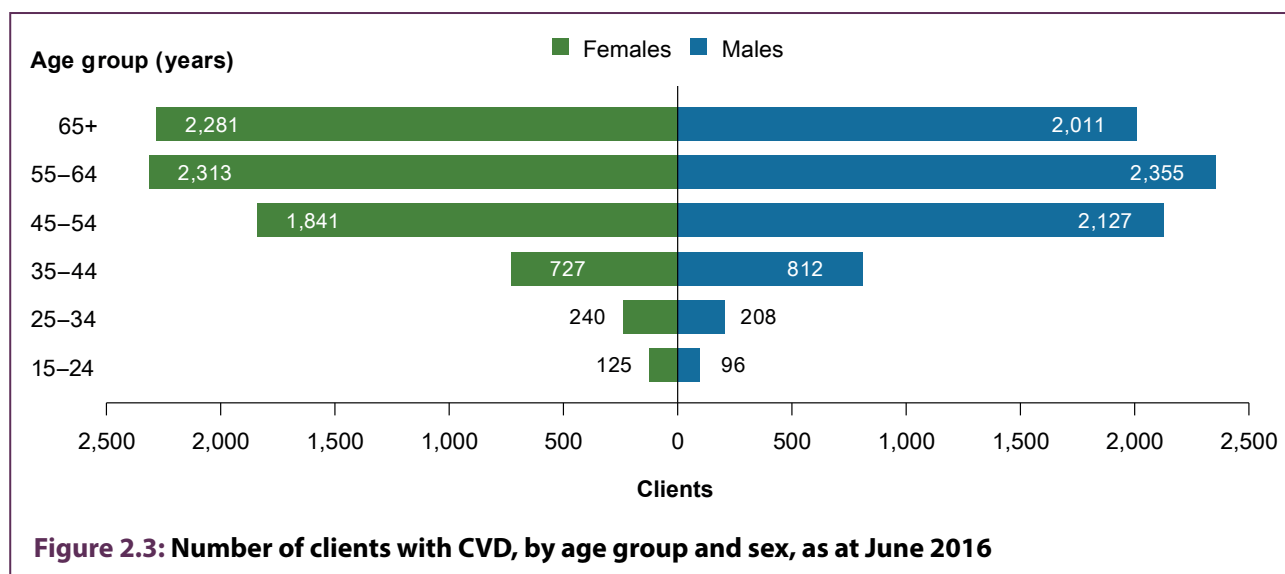


There was a general increase in the number of Indigenous regular clients with type 2 diabetes from June 2012 (15,530) to June 2016 (34,606). Over this period, the increase was largest for the 45–54 age group (5,346, or 1 percentage point). Although the number of Indigenous regular clients with type 2 diabetes in the 55–64 age group also increased over this period, there was an overall 1 percentage-point decrease in the corresponding proportion of Indigenous regular clients with type 2 diabetes in this age group. This was the only age group for which a decline was observed from the June 2012 to the June 2016 reporting periods (Figure 2.2).

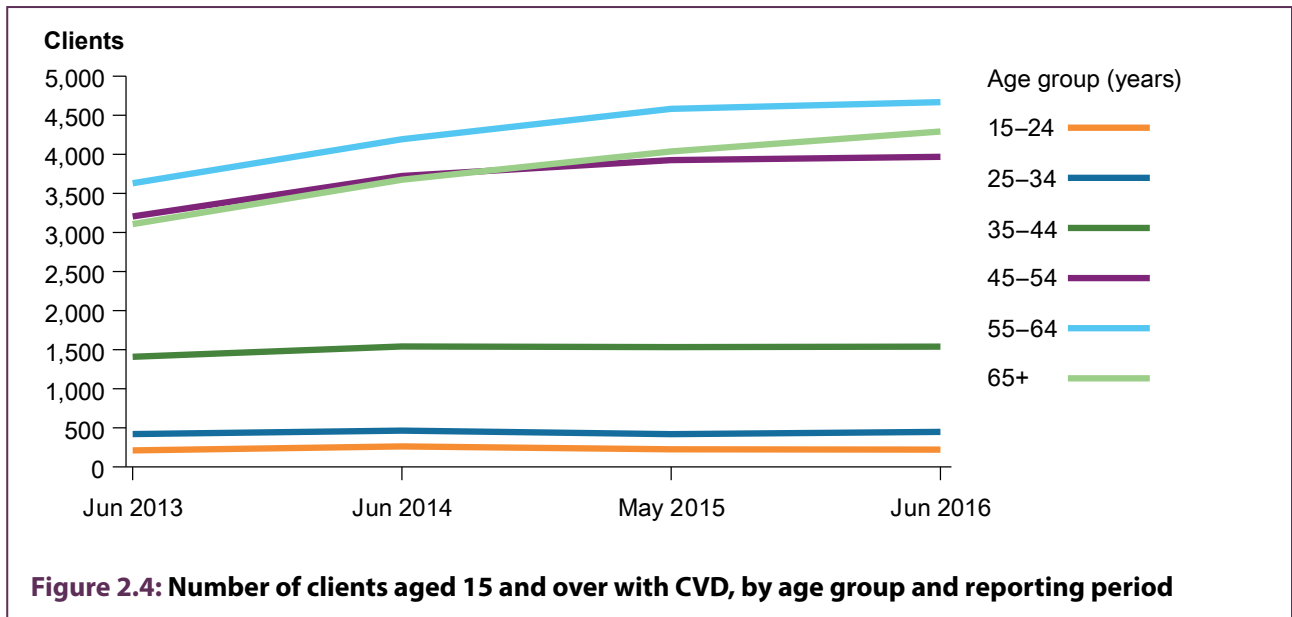


B. CVD

The 55–64 age group had the greatest number of both male (2,355) and female (2,313) Indigenous regular clients with CVD. The age group with the next-greatest number of Indigenous regular clients with CVD was the 45–54 age group for males (2,127) and the 65-and-over age group for females (2,281). In general, more females than males were recorded as having CVD (Figure 2.3).

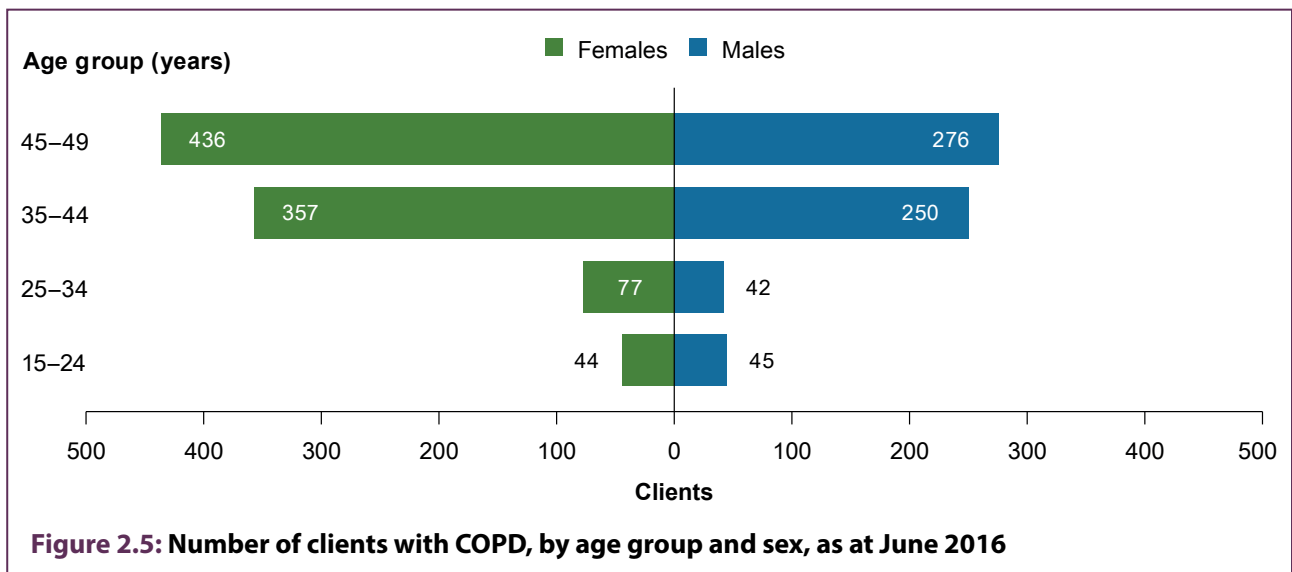


All age groups showed an increase in the number of Indigenous regular clients with CVD from the June 2013 to the June 2016 reporting periods. This increase was greater for the older age groups, with the 65-and-over age group showing the largest increase (1,185), followed by the 55–64 age group (1,038). In the more recent reporting periods (May 2015 and June 2016), the increase in the number of 65-and-over clients with CVD outpaced the respective increase in the 45–54 age group (Figure 2.4).

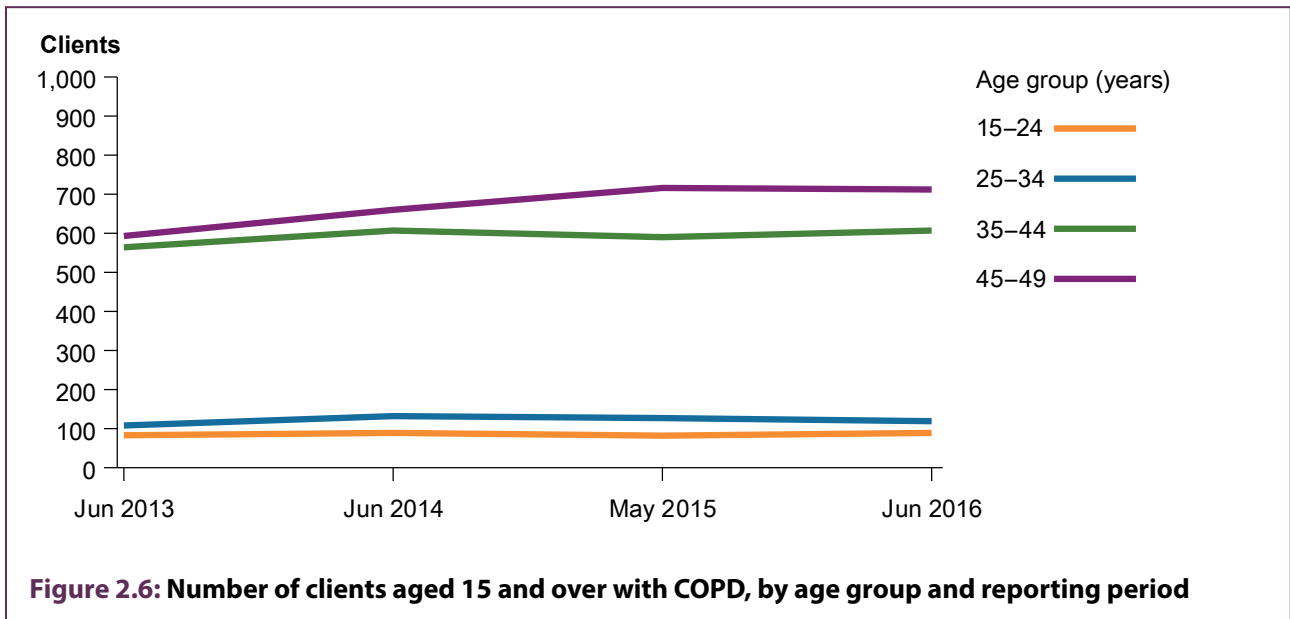


C. COPD

The 45–49 age group had the greatest number of both male (276) and female (436) Indigenous regular clients with COPD. The 35–44 age group had the next-greatest number of male (250) and female (357) Indigenous regular clients with COPD. In general, more females than males were recorded as having COPD (Figure 2.5).



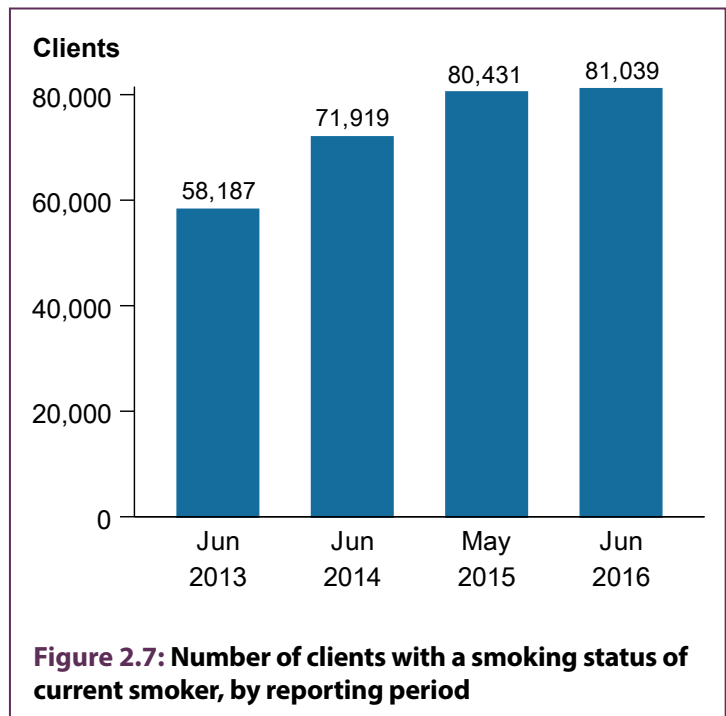
Across all age groups, there was an increase in the number of Indigenous regular clients with COPD from the June 2013 to the June 2016 reporting periods. The 45–49 age group had the greatest number (712) of clients with COPD for the June 2016 reporting period, followed by the 35–44 age group (607 clients). This pattern of results was consistent across all reporting periods (Figure 2.6).



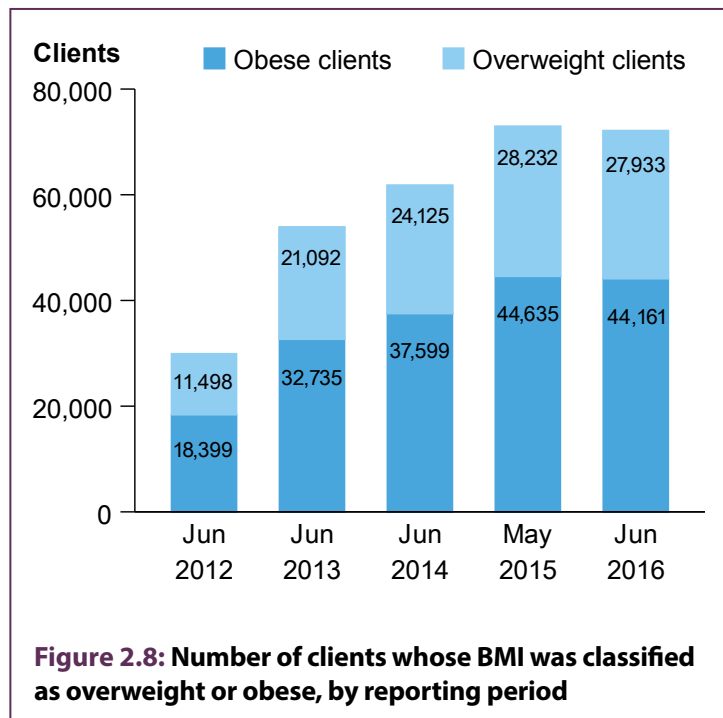
2.3. Chronic disease risk factors

Analyses of the burden of disease within the Australian Indigenous population for endocrine diseases, including diabetes, CVD and respiratory diseases, reveal the risk factors to which the burden of these diseases may be attributed. For endocrine diseases, the greatest proportions of the burden of disease were attributable to high blood plasma glucose, high body mass, physical inactivity, tobacco use, and alcohol use. For CVD, the risk factors of tobacco use, high blood pressure, high body mass, physical inactivity, high cholesterol, a diet low in fruit and vegetables, high blood plasma glucose, air pollution, and alcohol use had the greatest attributable proportions. For respiratory diseases, tobacco use, occupational exposures and air pollution were the most influential risk factors (AIHW 2016a).

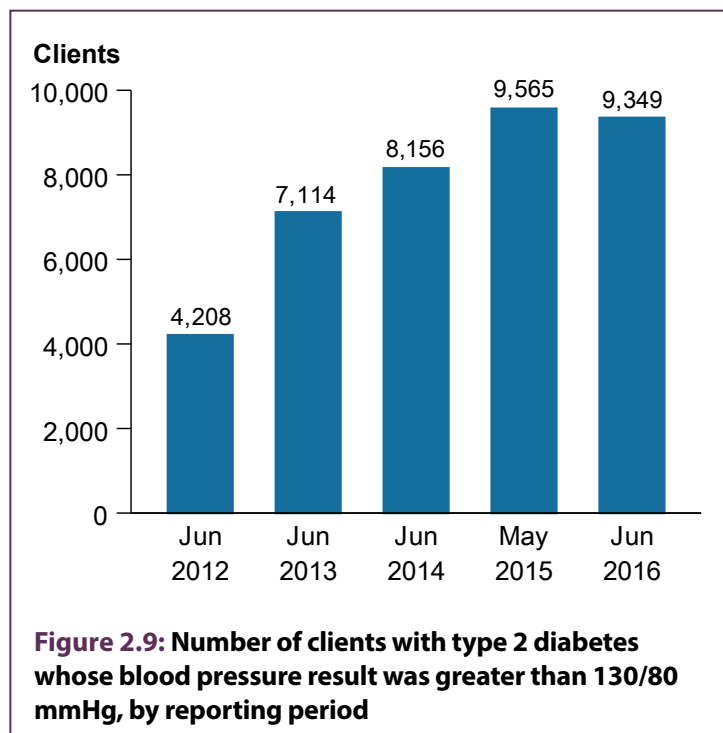
- From the June 2013 to June 2016 reporting periods, there was an increase in the number of clients who were current smokers (Figure 2.7).



- Between the June 2012 and June 2016 reporting periods, there was a general increase in the number of clients whose BMI was classified as overweight or obese. However, from the May 2015 to June 2016 reporting periods, there was a decrease in the number of clients whose BMI was classified as overweight or obese (Figure 2.8).



- Between the June 2012 and June 2016 reporting periods, there was a general increase in the number of clients with type 2 diabetes whose blood pressure result was greater than 130/80 mmHg. However, from the May 2015 to June 2016 reporting periods, there was a decline in the number of clients with a blood pressure result of greater than 130/80 mmHg (Figure 2.9).



Chapter 3

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 for children aged 0–4; and child immunisation), and health outcome indicators (birthweight result; and smoking status of women who gave birth within the previous 12 months). The number of organisations contributing data on these indicators ranged from 181 to 208 (Table 3.1), and organisations were located across all jurisdictions and remoteness areas.

3.1 Why are these indicators 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; ODPHP 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 2016).

Low birthweight babies are more likely to die in infancy or to be at increased risk of morbidity and disability in infancy. Long-term health effects of low birthweight can include the risk of developing chronic diseases such as CVD and diabetes in adulthood (OECD 2011; Scott 2014). Maternal smoking in pregnancy and poor antenatal care are risk factors for low birthweight, as well as contributing to fetal growth restriction, pre-term birth, congenital anomalies, and perinatal deaths (AIHW: Sullivan et al. 2006; Brown et al. 2016; WHO et al. 2012). Data for 2014 indicates that the proportion of babies born with low birthweight to Aboriginal and Torres Strait Islander mothers (12%) was twice that of those born to non-Indigenous mothers (6%) (AIHW 2016c). According to 2014 perinatal data, 45% of Aboriginal and Torres Strait Islander mothers smoked during pregnancy. Age-standardised rates of smoking during pregnancy indicate that, relative to non-Indigenous mothers, Indigenous mothers were 3.5 times more likely to smoke during pregnancy (AIHW 2016c).

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 (Fernald et al. 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). In Australia, children are expected to have received immunisations by the time they are aged 1, 2, and 5. Data from November 2016 show that, compared with other Australian children, a lower proportion of Aboriginal and Torres Strait Islander children have had these vaccinations at age 1 (91% compared with 93%) and 2 (88% compared with 91%), but the pattern is reversed at age 5 (95% of Aboriginal and Torres Strait Islander children compared with 93% of other Australian children) (DoH 2016a, 2016b).

3.2 Summary of progress

Note: As a result of the change in definition for 'Indigenous regular client' implemented for NTG services (see 'nKPI data quality' in Chapter 1), June 2016 data are provided alongside previously reported data but are not (and should not be) compared with this previous data.

- **First antenatal visit** before 13 weeks of pregnancy increased by around 3 percentage points for Aboriginal and Torres Strait Islander women nationally between June 2013 and May 2015. As at June 2016, 41% of women had their first antenatal visit before 13 weeks of pregnancy (Table 3.1).
- **Birthweight recorded** for Aboriginal and Torres Strait Islander babies increased by around 18 percentage points between June 2012 and May 2015, and 75% of babies born in the previous year had their birthweight recorded, as at June 2016 (Table 3.1). Between June 2013 and May 2015, there was a slight increase in the percentage of babies born with low birthweight (less than 1 percentage point). There were 13% of babies born with low birthweight in June 2016 (Table 3.1).
- **MBS health assessments** increased by around 10 percentage points between June 2012 and May 2015. In June 2016, 35% of Aboriginal and Torres Strait Islander children aged 0–4 received MBS health assessments (Table 3.1).
- **Smoking status of women who gave birth in the previous 12 months**—data are not available for the full year as the data were only collected from December 2014. Between December 2014 and May 2015, the proportion increased slightly (less than 1 percentage point). In June 2016, the proportion of women who gave birth in the previous 12 months who were current smokers was 50% (Table 3.1).
- **Variation within jurisdictions and remoteness areas** in June 2016 tended to be greatest for the indicators First antenatal visit before 13 weeks of pregnancy and Birthweight recorded, and smallest for the indicator Birthweight result—low (Figures A6.1–A6.10).
- **Organisational size** (measured in terms of client numbers) generally showed a weak association with results for the indicators in this chapter. As this indicates that the size of an organisation does not align with its capacity to provide higher-quality services, analysis by organisational size is not discussed further.

Table 3.1: Summary of maternal and child health indicators, June 2016 and change over time

Indicator ^(a)	Clients seen ^(b)	% clients seen	Number of organisations included in the analyses	Minimum–maximum organisation result (%)	Change to May 2015 (%)
PI13: Antenatal visit before 13 weeks	1,820	40.6	181	0.0–100.0	2.5 ^(c)
PI01: Birthweight recorded	5,468	75.1	208	0.0–100.0	18.1 ^(d)
PI03: MBS health assessment—aged 0–4	11,895	34.9	203	0.0–100.0	9.9 ^(d)
PI02: Birthweight result—low	717	13.2	200	0.0–100.0	0.9 ^(c)
PI11: Smoking status of women who gave birth in the previous 12 months—current smoker ^(e)	2,650	50.3	196	0.0–100.0	..

.. not applicable

(a) 11%–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 numerators) for all organisations with valid data.

(c) Change in percentage points between the reporting periods June 2013 and May 2015.

(d) Change in percentage points between the reporting periods June 2012 and May 2015.

(e) This indicator was first collected in December 2014. As less than 12 months of data are available, no comparison has been made.

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 whom they could provide the services to be counted in those indicators.

2. The indicator 'PI04: Child immunisation' is not included in this table due to apparent issues with data validity.

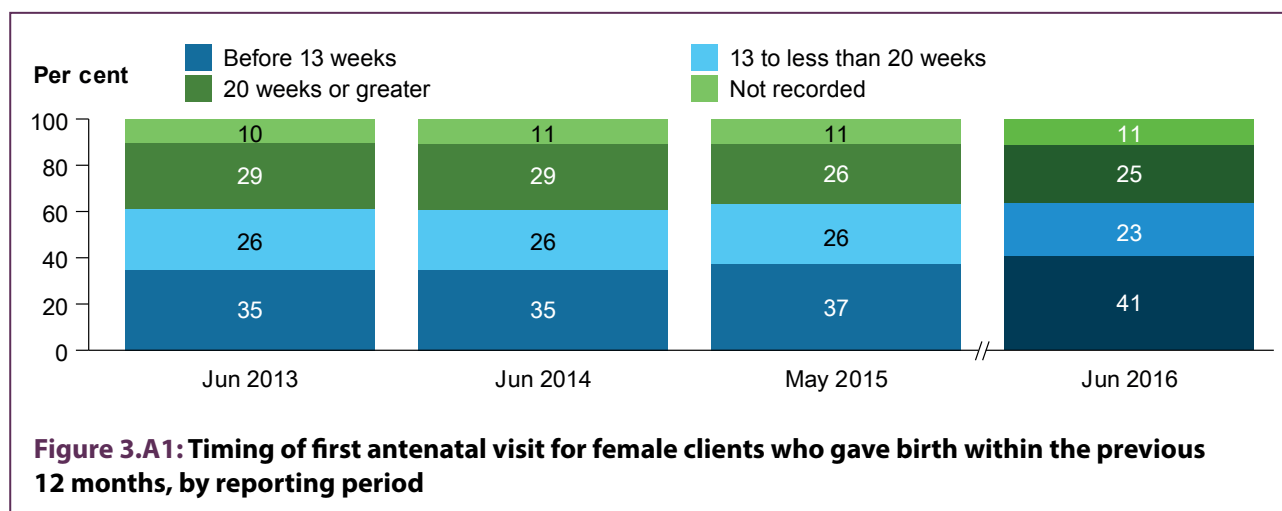
Source: AIHW analyses of the nKPI data collection.

A. First antenatal visit

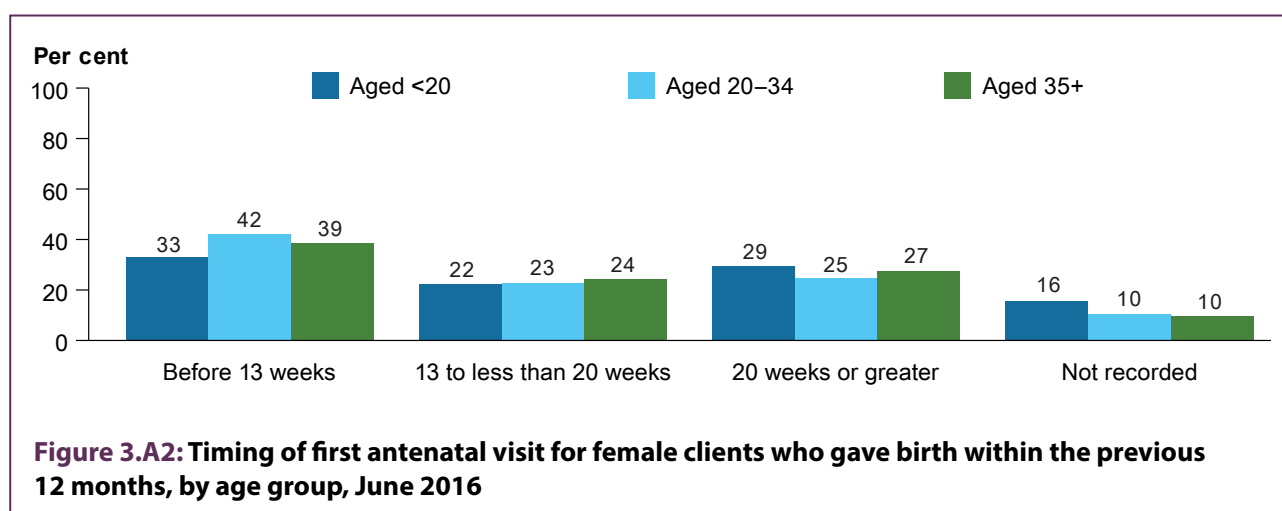
PI13—Proportion of Indigenous regular clients who had their first antenatal care visit within specified periods

Nationally, 41% of female Aboriginal and Torres Strait Islander regular clients who gave birth within the previous 12 months had their first antenatal visit before 13 weeks of pregnancy, as at June 2016 (Figure 3.A1).

Trend analysis showed an overall increase of around 3 percentage points, from June 2013 to May 2015, in the proportion of Indigenous regular clients who had their first antenatal visit before 13 weeks of pregnancy (Figure 3.A1). The largest increase across the jurisdictions was for organisations in Western Australia (7 percentage points), but those in the Northern Territory had a decrease of 3 percentage points. Across remoteness areas, organisations in *Very remote* areas had an increase of 8 percentage points, and those in *Remote* areas had a decrease of 7 percentage points (tables A4.1 and A4.2).

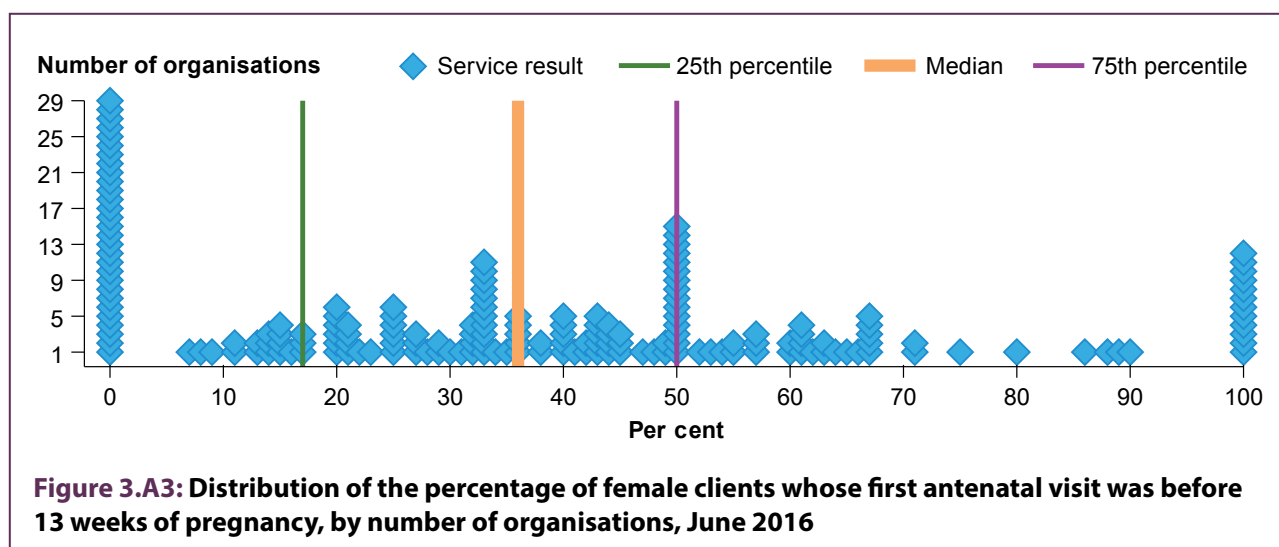


Age distribution showed that, in June 2016, the proportion of women who had their first antenatal visit before 13 weeks of pregnancy was highest for those aged 20–34 (Figure 3.A2 and Table A5.1).



National variation data revealed a more broadly spread pattern of results. About half of the organisations (90 of 181) had at least 36% of women attending their first antenatal visit before 13 weeks of pregnancy (Figure 3.A3).

- In 13 organisations (7%), at least 90% of women attended their first antenatal visit before 13 weeks of pregnancy.
- In 32 organisations (18%), fewer than 10% of women attended their first antenatal visit before 13 weeks of pregnancy.
- In the top 25% of organisations, at least 50% of women had their first antenatal visit before 13 weeks of pregnancy.
- In the bottom 25% of organisations, 17% of women or fewer had their first antenatal visit before 13 weeks of pregnancy.



Variation within states/territories in June 2016 showed the proportion of women who had their first antenatal visit before 13 weeks of pregnancy was largest among organisations in New South Wales/the Australian Capital Territory and smallest in Western Australia (Figure A6.1).

Variation within remoteness areas in June 2016 showed the proportion of women who had their first antenatal visit before 13 weeks was smallest for organisations in *Major cities*, but was larger in *Very remote* areas and *Inner regional* areas (Figure A6.2).

Opportunities for action

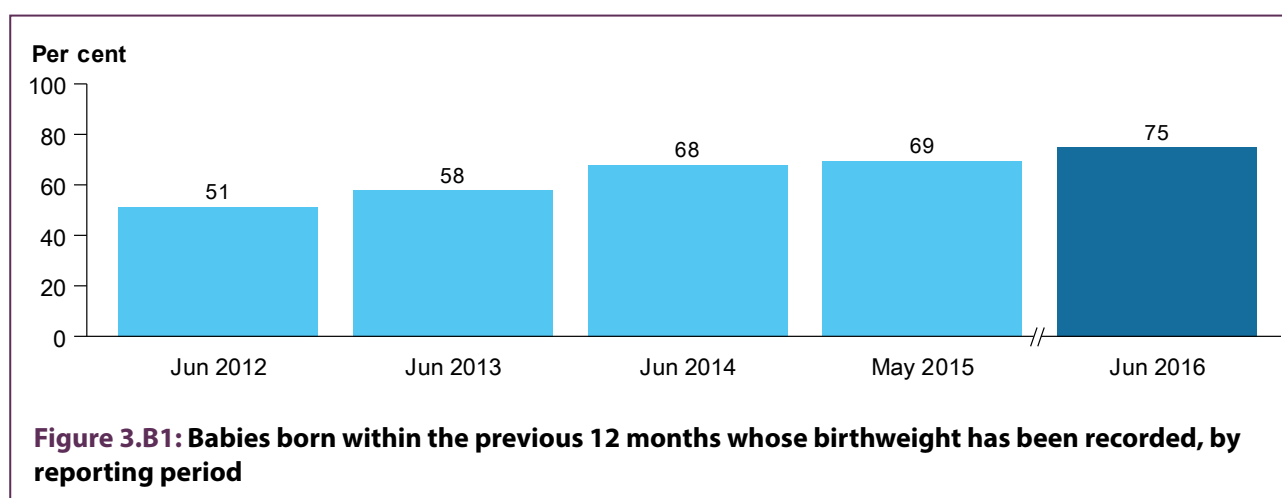
- There has been an improvement for this indicator nationally since June 2013, and in most jurisdictions. There has been some fluctuation in the intervening years.
- The degree of organisational influence is likely to have been affected by women’s health literacy and other factors, including access to staff qualified to provide antenatal care.
- Completeness of recording of antenatal visits is important—nationally, First antenatal visit continues to not be recorded for 11% of organisations.
- Increasing the rates of pregnant women attending their first antenatal visit within 13 weeks of pregnancy is important. While the median percentage of organisations with attendance within 13 weeks of pregnancy has increased from 2014, this could improve further.
- Increasing the rates of women aged less than 20 attending their first antenatal visit within 13 weeks of pregnancy is another area that could improve.

B. Birthweight recorded

PI01—Proportion of Indigenous babies born within the previous 12 months whose birthweight has been recorded

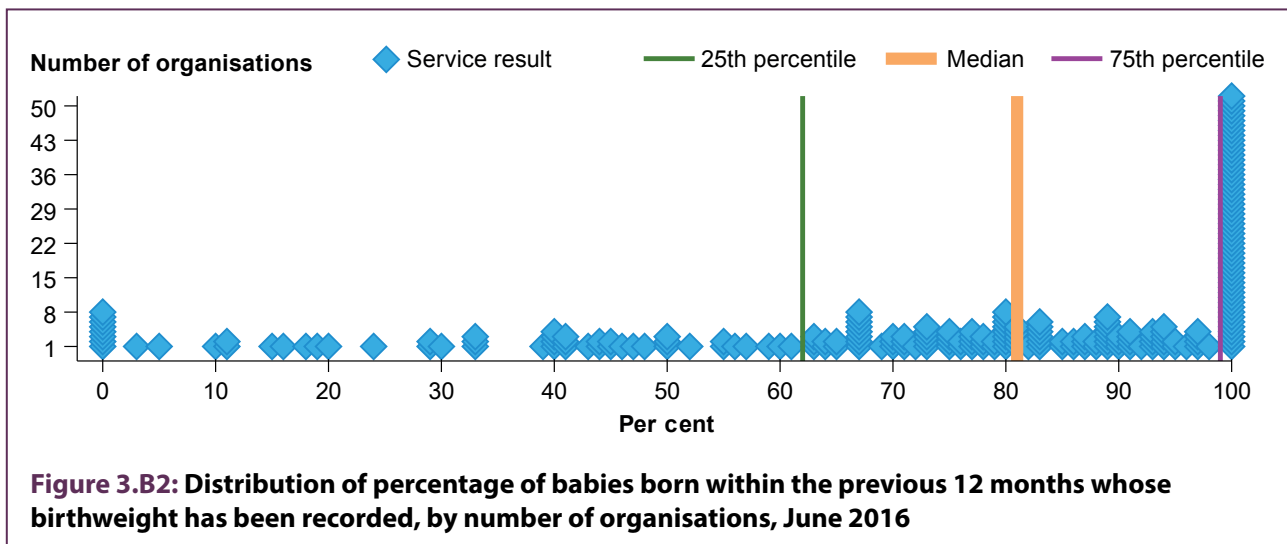
Nationally, 75% of Aboriginal and Torres Strait Islander babies born within the previous 12 months had their birthweight recorded at the primary health care organisation, as at June 2016 (Figure 3.B1).

Trend analysis showed a fairly steady increase totalling 18 percentage points between June 2012 and May 2015 (Figure 3.B1). Increases were seen across all jurisdictions, ranging from 10 percentage points for organisations in Queensland to 31 percentage points for organisations in Victoria/Tasmania. Improvements were also seen across all remoteness areas, from an increase of 4 percentage points for organisations in *Remote* areas to an increase of 35 percentage points for organisations in *Outer regional* areas (tables A4.3 and A4.4).



National variation data showed that organisation results were broadly distributed, with the exception of a peak towards the higher end of the distribution. Less than half of the organisations (102 of 208) recorded at least 81% of all babies born (Figure 3.B2).

- Seventy-six organisations (36%) recorded the birthweight of at least 90% of all babies born.
- Ten organisations (5%) recorded the birthweight of less than 10% of all babies born.
- The top 25% of organisations recorded birthweight for almost 100% of babies born.
- The bottom 25% of organisations recorded birthweight for 62% of babies born or fewer.



Variation within states/territories in June 2016 was largest among organisations in New South Wales/the Australian Capital Territory and Victoria/Tasmania, while organisations in the other jurisdictions had smaller variations (Figure A6.3).

Variation within remoteness areas in June 2016 was smaller among organisations in *Very remote* areas, while those in all other remoteness areas had larger variations (Figure A6.4).

Opportunities for action

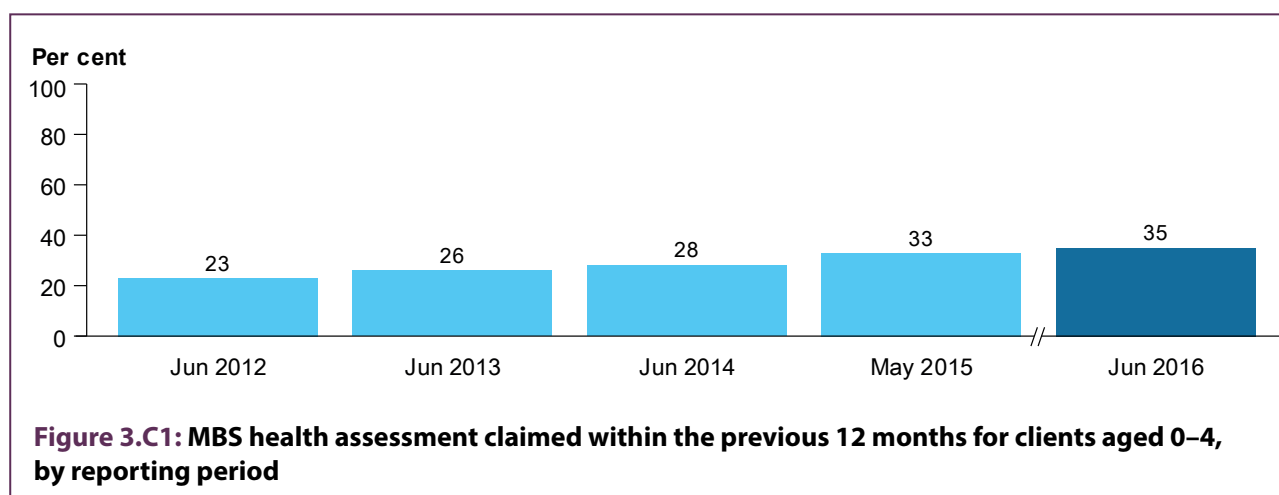
- There have been strong improvements at the national level and in all jurisdictions from June 2012, demonstrating that many organisations have improved their reporting against this indicator.
- All organisations could work towards achieving 90% or higher recording of birthweight, as this was achieved by 36% of organisations in June 2016.
- 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

PI03—Proportion of Indigenous regular clients for whom an MBS health assessment for Aboriginal and Torres Strait Islander People (MBS item 715) was claimed

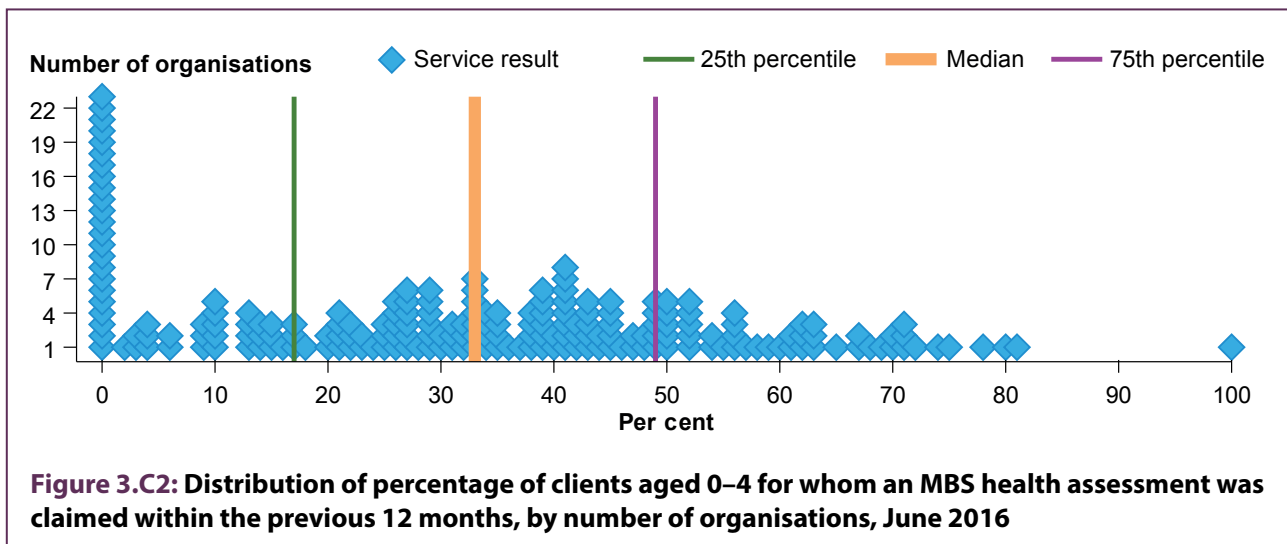
Nationally, 35% of Aboriginal and Torres Strait Islander regular clients aged 0–4 had an MBS health assessment claimed for them within the previous 12 months to June 2016 (Figure 3.C1).

Trend analysis showed a 10 percentage-point increase between June 2012 and May 2015 (Figure 3.C1). Improvements were seen across all jurisdictions, from 3 percentage points for organisations in South Australia to 16 percentage points for organisations in the Northern Territory. Across remoteness areas, improvements ranged from 4 percentage points for organisations in *Outer regional* areas to 15 percentage points for those in *Remote* areas (tables A4.5 and A4.6).



National variation data showed that there was a peak in results for organisation towards the bottom of the distribution, with a substantial number of organisations claimed MBS health assessments for less than 10% of clients. More than half of the organisations (105 of 203) claimed an MBS health assessment for least 33% of clients aged 0–4 (Figure 3.C2).

- One organisation (<1%) claimed a health assessment for at least 90% of clients aged 0–4.
- Thirty-five organisations (17%) claimed a health assessment for fewer than 10% of clients aged 0–4.
- The top 25% of organisations claimed an MBS health assessment for at least 49% of clients aged 0–4.
- The bottom 25% of organisations claimed an MBS health assessment for 17% of clients aged 0–4 or fewer.



Variation within states/territories in June 2016 was smaller for Northern Territory and South Australian organisations, while New South Wales/the Australian Capital Territory and Victoria/Tasmania had larger variations (Figure A6.5).

Variation within remoteness areas in June 2016 was largest among organisations in *Major cities* and smallest in *Remote areas* (Figure A6.6).

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 10 percentage points and an increase in all jurisdictions.
- Consideration of clinical practice in *Outer regional* areas may assist in increasing rates against this indicator, as *Outer regional* areas have seen the smallest increase since 2012.

D. Child immunisation

PI04—Proportion of Indigenous children who are fully immunised

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

Australian Immunisation Register (AIR) (formerly the Australian Childhood Immunisation Register) records indicate that in 2016, about 95% of Aboriginal and Torres Strait Islander children were fully immunised at age 5, nationally (DoH 2016b). This was similar to the national immunisation rate for all 5 year old children, at 93% (DoH 2016a). For Indigenous children aged 12 months to less than 15 months in June 2016, the proportion who were fully immunised ranged from 85% in Western Australia to 95% in the Australian Capital Territory. For all children in this age group, the proportion who were fully immunised ranged from 93% in 6 jurisdictions to 95% in the Australian Capital Territory (DoH 2016b).

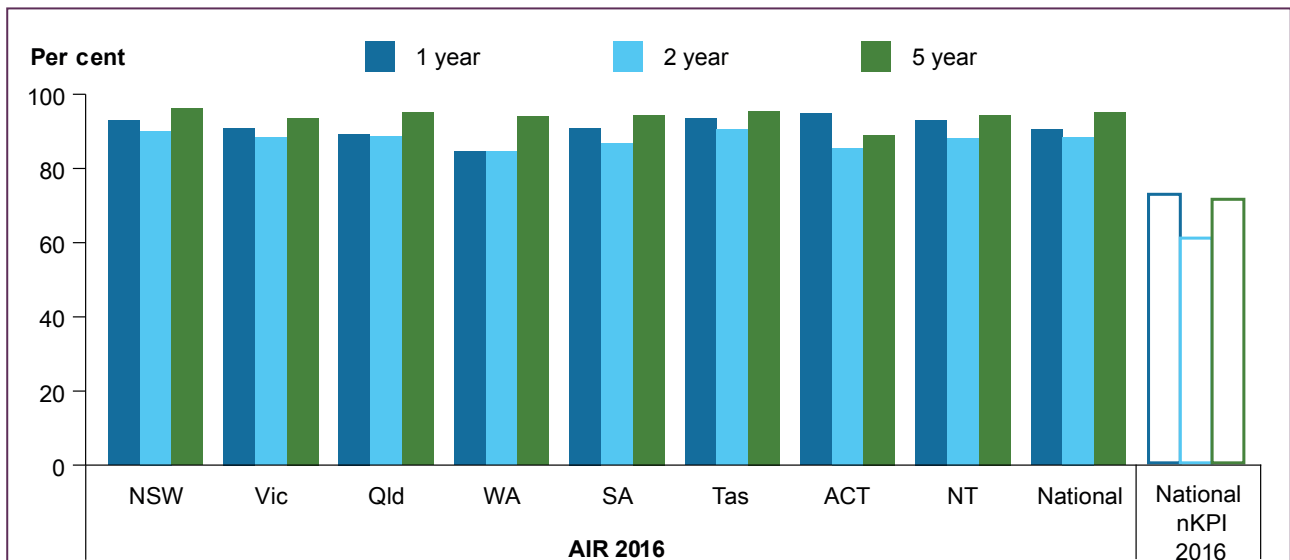
This nKPI indicator relates to the proportion of Indigenous children recorded by the health care organisations as being fully immunised. For June 2016, the nKPI data indicate that primary health care records are capturing far fewer cases of fully immunised Indigenous children than AIR records (approximately 17 to 27 percentage points less at the national level) (Figure 3.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 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, which might reduce the priority that some organisations give to maintaining immunisation status information within their PIRS.

The nKPI data show large variations among jurisdictions in the proportion of children (aged 24 to less than 36 months) recorded as being fully immunised, from 39% in Northern Territory to 89% in South Australia. This variation was not found in the AIR data (see Figure 3.D1 and Table A3.1 in Appendix 3). In only 1 jurisdiction (South Australia) was the proportion of immunised children for this age group roughly similar in both the nKPI collection and the AIR 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 3.D2, 3.D3 and 3.D4). This suggests that the issue may be limited to particular organisations. It is thought that data extracted for some health services only counts children aged 24 to less than 36 months as being fully immunised if they have had 2 doses of for measles, mumps and rubella (MMR) (rather than 1 dose, as per the nKPI specifications).

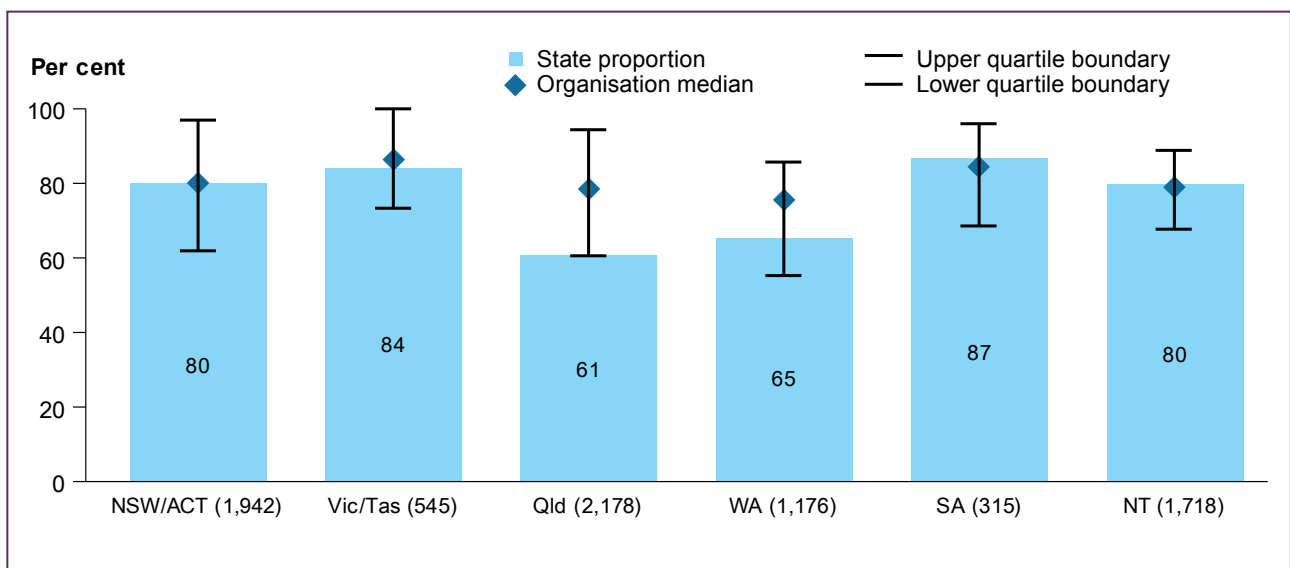
Investigation into how different organisations record childhood immunisations—and how this relates to variation in roles and responsibilities for immunisation provision between different providers—may be useful for informing future data collections.

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



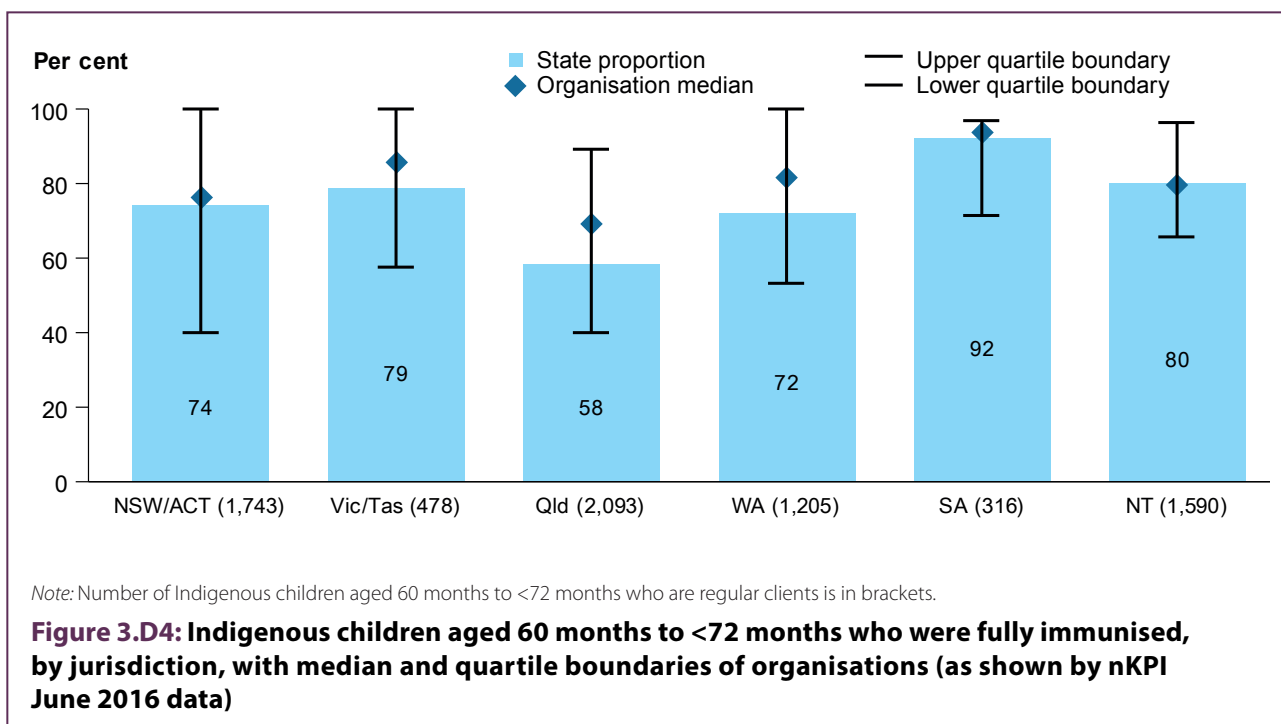
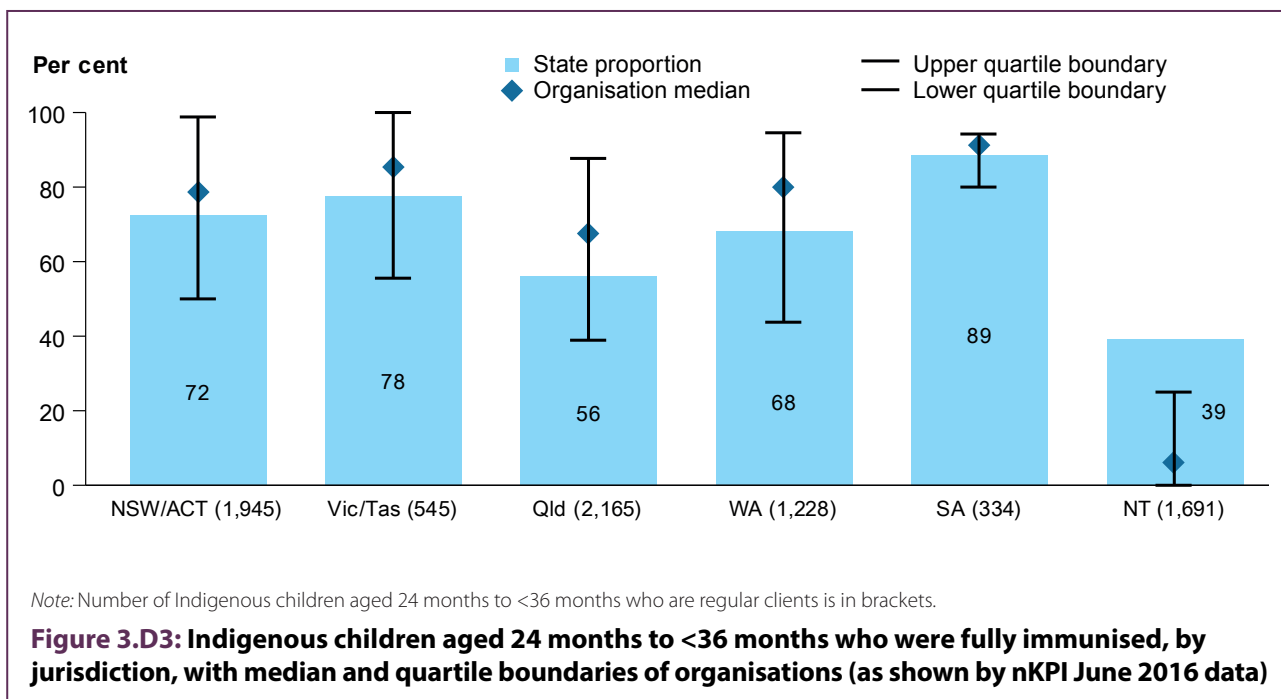
Sources: AIR annualised quarterly report on childhood immunisation coverage for the December 2015, March 2016, June 2016 and September 2016 assessment quarters and nKPI June 2016.

Figure 3.D1: Australian Immunisation Register Indigenous childhood immunisation rates, by states and territories, compared with national level nKPI June 2016 records



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

Figure 3.D2: Indigenous children aged 12 months to <24 months who were fully immunised, by jurisdiction, with median and quartile boundaries of organisations (as shown by nKPI June 2016 data)

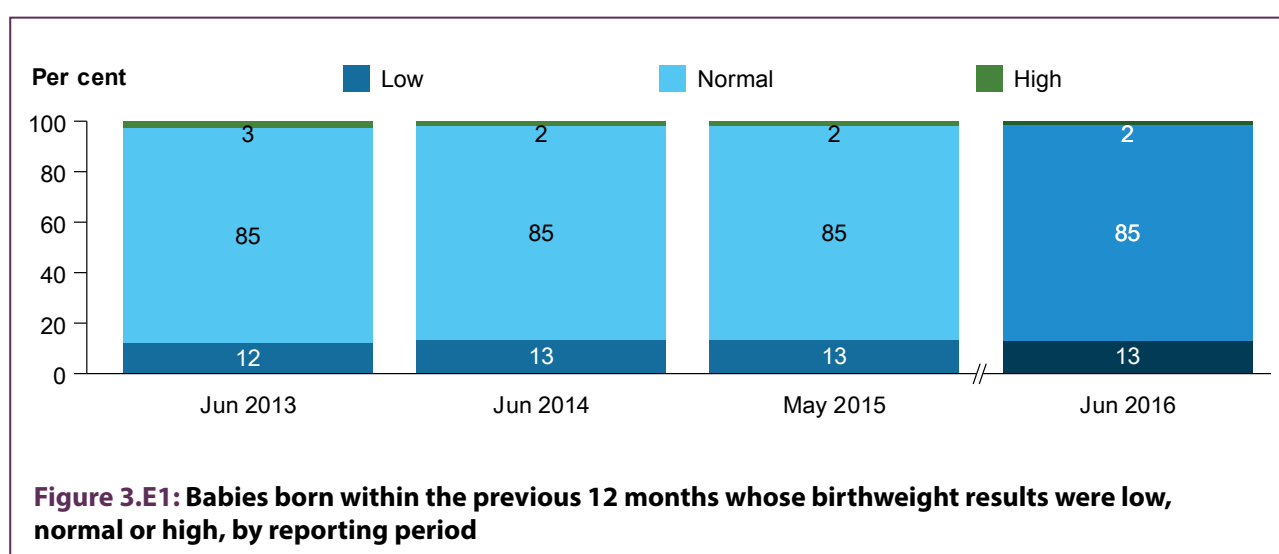


E. Birthweight result

PI02—Proportion of Indigenous babies born within the previous 12 months whose birthweight results were low, normal or high

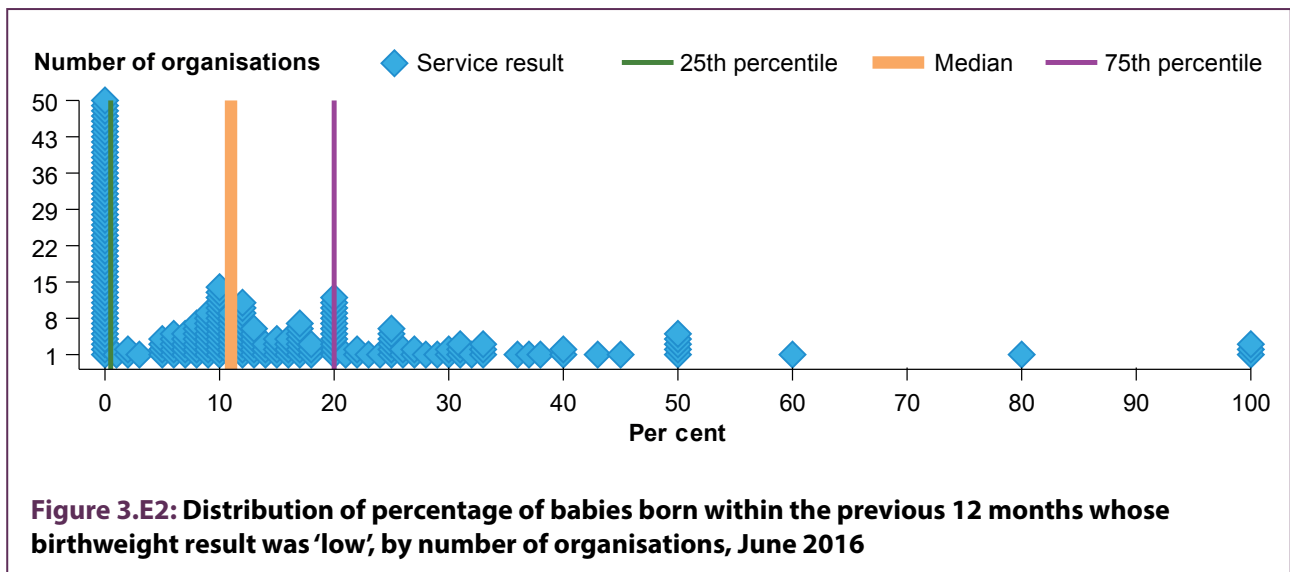
Nationally, as at June 2016, 13% of Aboriginal and Torres Strait Islander babies born within the previous 12 months were categorised as being of low birthweight (Figure 3.E1).

Trend analysis showed little change between June 2013 and May 2015, with an increase of less than 1 percentage point across the period for babies born with a low birthweight (Figure 3.E1). Proportions of low birthweight babies in most jurisdictions and remoteness categories were fairly stable or slightly decreased. Organisations in South Australia had the largest decrease (2 percentage points), but the proportion increased by 4 percentage points in Queensland. There was a small decrease, of about 0.5 percentage points, for organisations in *Major cities*, but for organisations in both *Outer regional* and *Remote* areas, there was an increase of 2 percentage points (tables A4.7 and A4.8).



National variation data showed that most organisations were clustered towards the lower percentages. Less than half of the organisations (97 of 200) categorised at least 11% of babies born as being of low birthweight (Figure 3.E2).

- Three organisations (<2%) categorised at least 90% of babies as being of low birthweight.
- Ninety organisations (45%) categorised fewer than 10% of babies as being of low birthweight.
- In the top quartile of organisations—that is, those that had the best results—fewer than 1% of babies were of low birthweight.
- In the bottom quartile of organisations, 20% of babies or more were of low birthweight.



Variation within states/territories in June 2016 was lowest among organisations in New South Wales/the Australian Capital Territory and highest among organisations in the Northern Territory (Figure A6.7).

Variation within remoteness areas in June 2016 was greatest among organisations in *Remote* and *Very remote* areas (Figure A6.8).

Opportunities for action

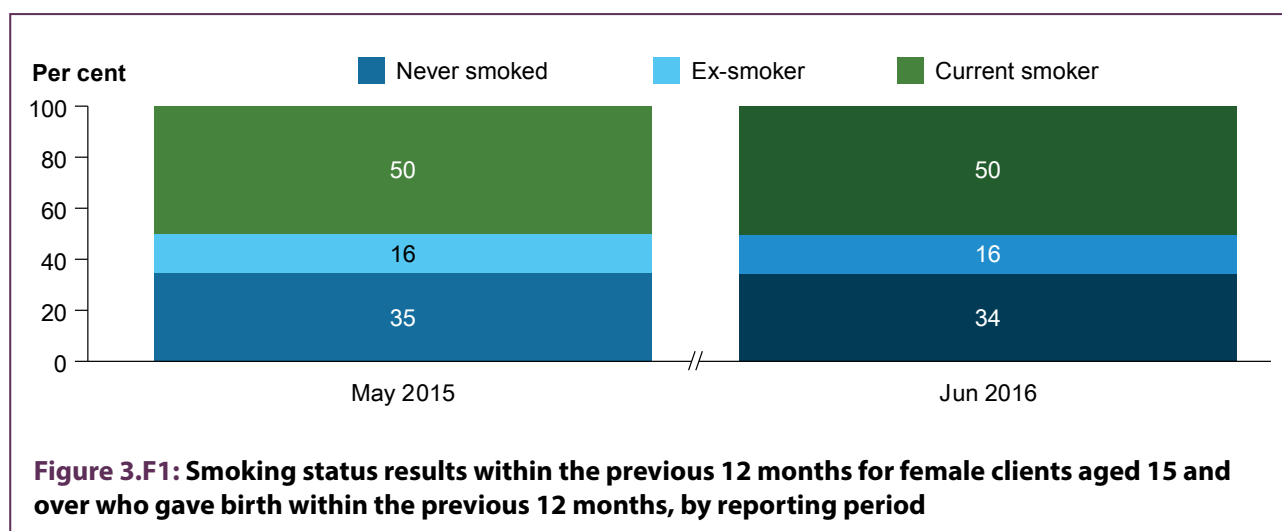
- Low birthweight is influenced by a range of social determinants, mostly outside the control of organisations. A high number or proportion of low birthweight babies does not indicate poor organisational service delivery, but it does point to an area of need.
- Organisations with a high percentage of 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 within the previous 12 months

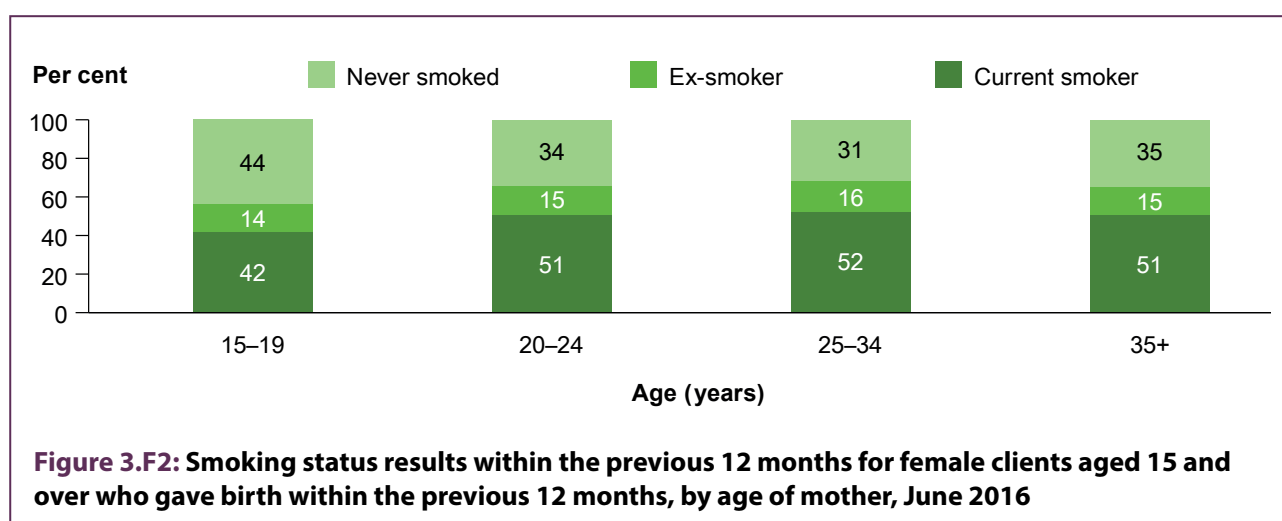
PI11—Proportion of female Indigenous regular clients who gave birth within the previous 12 months with a smoking status of current smoker, ex-smoker or never smoked

Nationally, as at June 2016, 50% of female Aboriginal and Torres Strait Islander regular clients aged 15 and over who gave birth within the previous 12 months had their smoking status recorded within the previous 12 months as current smoker (Figure 3.F1).

Trend analysis data (tables A4.9 and A4.10) are not available for a full year for this indicator, as the data were only collected from December 2014. Between December 2014 and May 2015, the proportion increased slightly (by less than 1 percentage point) (Table 3.1).

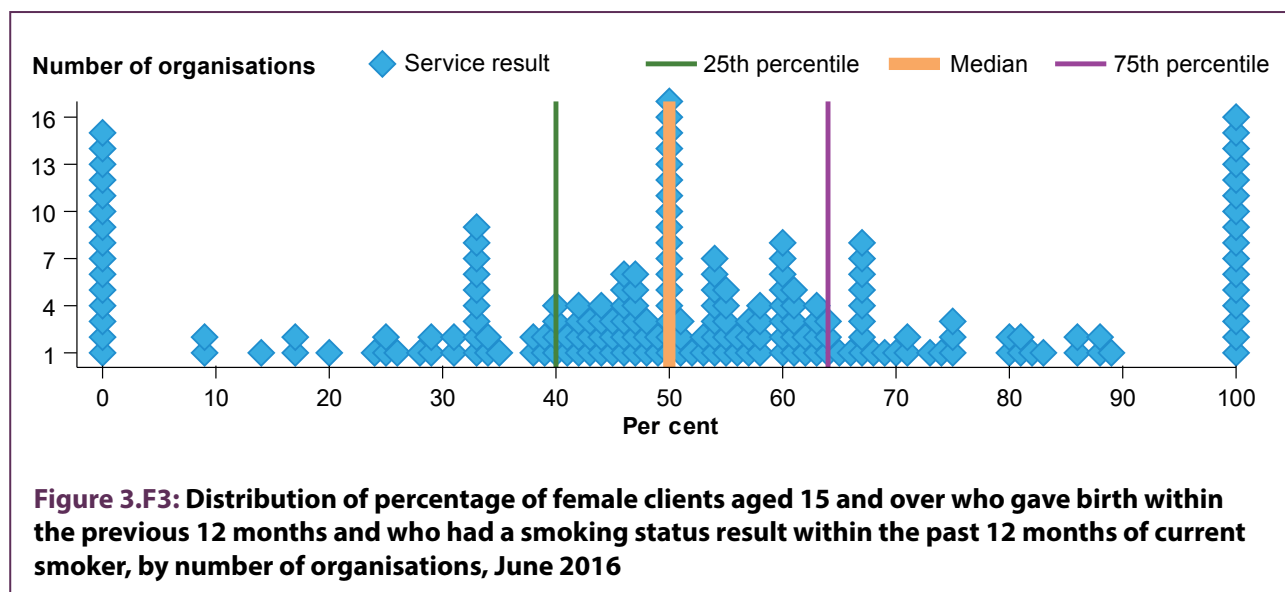


Mother's age distribution indicated that in June 2016, the proportion of women who gave birth within the previous 12 months and who identified as current smokers was lowest for the 15–19 age group, and then increased and remained stable for the older age groups (Figure 3.F2 and Table A5.2).



National variation data showed a more broadly spread pattern of results, with most organisations being concentrated around the median. More than half of the organisations (113 of 196) had at least 50% of women who gave birth within the previous 12 months who were current smokers (Figure 3.F3).

- In 16 organisations (8%), at least 90% of the women who gave birth within the previous 12 months were recorded as current smokers.
- In 17 organisations (9%), fewer than 10% of the women who gave birth within the previous 12 months were recorded as current smokers.
- In the top 25% of organisations (those that had the best results), 40% of women or fewer were recorded as a current smoker.
- In the bottom 25% of organisations, at least 64% of women were recorded as a current smoker.



Variation within states/territories in June 2016 was largest among organisations in the Northern Territory (Figure A6.9).

Variation within remoteness areas in June 2016 was largest among organisations in *Very remote* areas, and *Inner regional* areas had the smallest variation (Figure A6.10).

Opportunities for action

- Smoking prevalence among female Aboriginal and Torres Strait Islander regular clients aged 15 and over who gave birth within the previous 12 months remains high at approximately 50%.
- Smoking causes obstetric and fetal complications, and organisations with consistently high rates of clients who smoke could review whether sufficient attention is being paid to recording smoking status and using evidence-based smoking cessation interventions and treatments for expectant mothers.

Chapter 4

Preventative health indicators

Indicators of preventative health included in the nKPIs cover several process-of-care and health outcome indicators.

Process-of-care indicators:

- smoking status recorded
- alcohol consumption recorded
- MBS health assessment for adults aged 25 and over
- CVD risk assessment
- cervical screening
- immunisation against influenza for clients aged 50 and over.

Health outcome indicators:

- smoking status result
- BMI classified as overweight or obese.

The number of organisations contributing data on these indicators ranged from 195 to 210 (Table 4.1), and organisations were located across all jurisdictions and remoteness areas.

4.1 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 (Fernald et al. 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 2014a; 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). Data from the 2014–15 National Aboriginal and Torres Strait Islander Social Survey indicate that 42% of Indigenous Australians aged 15 or over reported being current smokers. The age-adjusted rate shows that Indigenous Australians were 2.7 times more likely to be current smokers than non-Indigenous Australians (ABS 2016). Tobacco use was responsible for 23% of the total gap in disease burden between Indigenous and non-Indigenous Australians in 2011 (AIHW 2016a).

Alcohol consumption is common in Australia, but excessive consumption can lead to severe health problems such as CVD, 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). In 2014–15, 15% of Indigenous Australians aged 15 and over consumed alcohol at a rate that exceeded lifetime risk guidelines from the National Health and Medical Research Council (ABS 2016). 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 cancer incidence and mortality in Aboriginal and Torres Strait Islander women are both substantially higher than for non-Indigenous Australian women (Saville 2014). As at June 2016, cervical screening was still recommended for women aged 18–69 to detect pre-cancerous abnormalities and to reduce cervical cancer incidence and mortality. Tests were recommended every 2 years, including for women who have been immunised against the human papillomavirus (HPV) (AIHW 2015c).

A new program for the National Cervical Screening Program (NCSP) will be implemented on 1 December 2017. Under the new program, the test for cervical cancer, the Pap test, will change to a test for HPV. The new cervical screening test will be offered every 5 years (rather than 2 years as for the Pap test). The recommended screening age will change from those aged 18–69 to those aged 25–74 (DoH 2017).

The change is being made because of new evidence about screening. While the current Pap test can detect abnormal cell changes, the new Cervical Screening Test will detect the persistent HPV infection that causes the abnormal cell changes prior to the development of cancer. Clinical trials have demonstrated that screening for HPV every 5 years is more effective than, and just as safe as, screening with a Pap test every 2 years (DoH 2017). The nKPI cervical screening indicator is being reviewed in line with these changes.

Influenza is most prevalent in the elderly, with Australian influenza notification rates for 2016 being highest in adults aged 75 or older (DoH 2016c). 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—so immunisation against influenza is recommended for Indigenous people aged 15 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, CVD, and hypertension (ABS 2012). Although many different factors can reduce the efficacy of GPs influencing a client's weight (Walsh & Fahy 2011), periodic BMI measurement 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). Data from the 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey show that 66% of Indigenous Australians aged 15 and over could be classified as overweight or obese (AIHW 2015d).

There are multiple causal factors that contribute to CVD. This means that the assessment of absolute CVD risk based on multiple risk factors is more accurate than that based on individual risk factors, due to the cumulative nature of risk effects. In view of this combined predictive power, basing management decisions using this approach should improve CVD outcomes (NVDPA 2012).

4.2 Summary of progress

Note: As a result of the change in definition for 'Indigenous regular client' implemented for NTG services (see 'nKPI data quality' in Chapter 1), June 2016 data are provided alongside previously reported data but are not (and should not be) compared with this previous data.

- **Smoking status** recorded for Aboriginal and Torres Strait Islander regular clients aged 15 and over increased by 16 percentage points between June 2012 and May 2015. As at June 2016, 78% of clients had their smoking status recorded within the previous 24 months. Of those whose smoking status was recorded in June 2016, 52% were current smokers (Table 4.1), and 33% had never smoked.
- **Alcohol consumption** recorded for Aboriginal and Torres Strait Islander regular clients aged 15 and over improved by 19 percentage points between June 2012 and May 2015. In June 2016, 58% of clients had their alcohol consumption recorded within the previous 24 months (Table 4.1).
- **MBS health assessments** were claimed for 46% of Aboriginal and Torres Strait Islander regular clients aged 25 and over in May 2015, an increase of 15 percentage points from June 2012. In June 2016, 48% of clients had an MBS health assessment claimed for them within the previous 24 months (Table 4.1).
- **Risk factors assessed** were recorded for 40% of Aboriginal and Torres Strait Islander regular clients aged 35–74 with no known CVD, to enable a CVD assessment, as at June 2016 (Table 4.1). Time trend data are not available, as this indicator was introduced for collection in December 2015.
- **Cervical screening** within the previous 2 years was undertaken by 30% of female Aboriginal and Torres Strait Islander clients in May 2015, a decline of 1 percentage point from June 2013. In June 2016, 28% of Indigenous women had a cervical screening within the previous 2 years (Table 4.1).
- **Immunised against influenza** for Aboriginal and Torres Strait Islander regular clients aged 50 and over decreased by 2 percentage points between June 2013 and May 2015. Thirty-three per cent of clients were immunised against influenza, as at June 2016 (Table 4.1).
- **BMI classified as overweight or obese** for Aboriginal and Torres Strait Islander regular clients aged 25 and over showed an increase of 4 percentage points between June 2012 and May 2015. In June 2016, 70% of clients had their BMI classified as overweight or obese (Table 4.1), with 27% of these having a BMI classified as overweight and 43% having a BMI classified as obese.
- **Variation within jurisdictions and remoteness areas** in June 2016 tended to be greatest for the indicators MBS health assessments—aged 25 and over and Alcohol consumption recorded, and smallest for the indicators BMI classified as overweight or obese and Smoking status result (figures A6.11–A6.26).
- **Organisational size** (measured in terms of client numbers) generally showed a weak association with results for the indicators in this chapter. As this indicates that the size of an organisation does not align with its capacity to provide higher quality services, analysis by organisational size is not discussed further.

Table 4.1: Summary of preventative health indicators, June 2016 and change over time

Indicator ^(a)	Clients seen ^(b)	% clients seen	Number of organisations included in the analyses	Minimum–maximum organisation result (%)	Change to May 2015 (%)
PI09: Smoking status recorded	156,591	77.7	210	3.5–100.0	16.0 ^(c)
PI16: Alcohol consumption recorded	115,493	57.5	210	0.0–100.0	18.6 ^(c)
PI03: MBS health assessment—aged 25 and over	71,331	48.0	207	0.0–90.3	14.8 ^(c)
PI20: CVD risk factors assessed ^(d)	35,551	39.8	195	0.0–89.9	..
PI22: Cervical screening—previous 2 years	25,775	27.6	199	0.1–100.0	-1.3 ^(e)
PI14: Immunised against influenza—aged 50 and over	17,161	33.3	198	0.0–100.0	-2.1 ^(e)
PI10: Smoking status result—current smoker	81,039	51.8	210	9.4–89.3	-1.2 ^(e)
PI12: BMI classified as overweight or obese	72,094	70.4	200	12.5–100.0	4.3 ^(c)

.. not applicable

(a) 1%–6% 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 numerators) for all organisations with valid data.

(c) Change in percentage points between the reporting periods June 2012 and May 2015.

(d) This indicator was first reported on in June 2016, so no comparison data is available.

(e) Change in percentage points between the reporting periods June 2013 and May 2015.

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

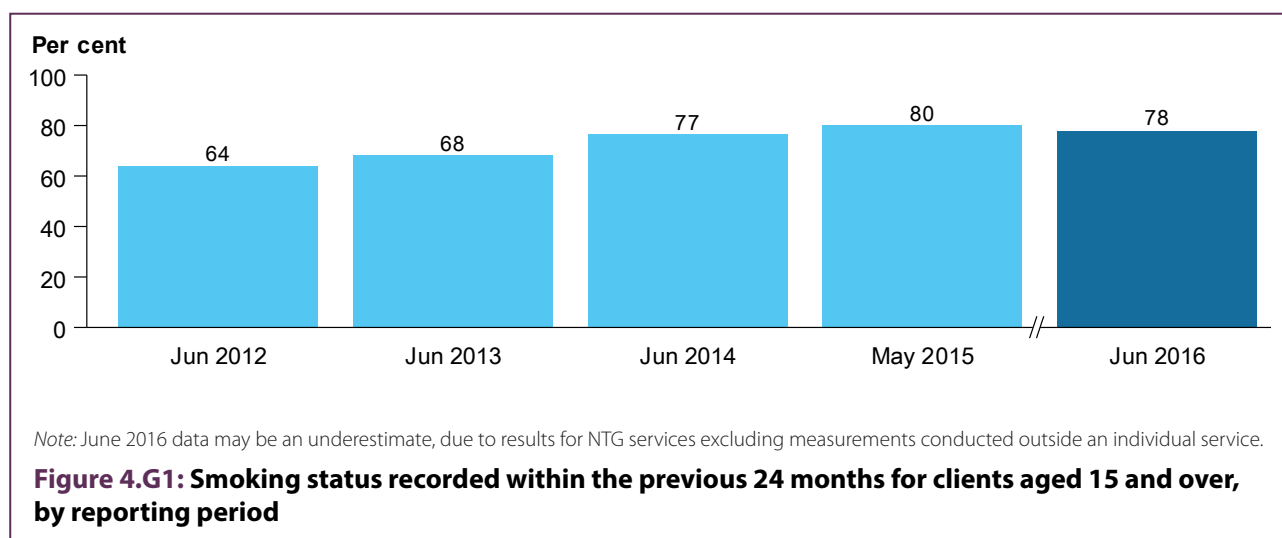
Source: AIHW analyses of the nKPI data collection.

G. Smoking status recorded

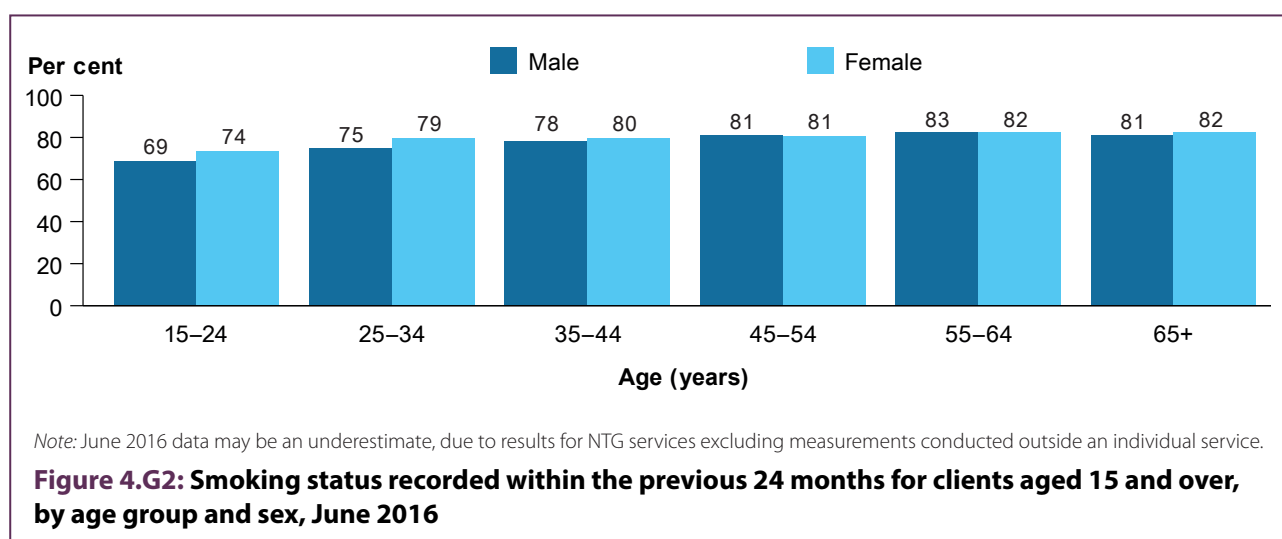
PI09—Proportion of Indigenous regular clients whose smoking status has been recorded

Nationally, 78% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had their smoking status recorded within the previous 24 months at the primary health care service, as at June 2016 (Figure 4.G1).

Trend analysis showed an increase of 16 percentage points between June 2012 and May 2015 (Figure 4.G1). Increases were seen across all jurisdictions, from 6 percentage points for organisations in Queensland to 28 percentage points for organisations in Western Australia. There were also improvements across all remoteness areas, from 10 percentage points for organisations in *Outer regional* areas to 26 percentage points for organisations in *Remote* areas (tables A4.11 and A4.12).

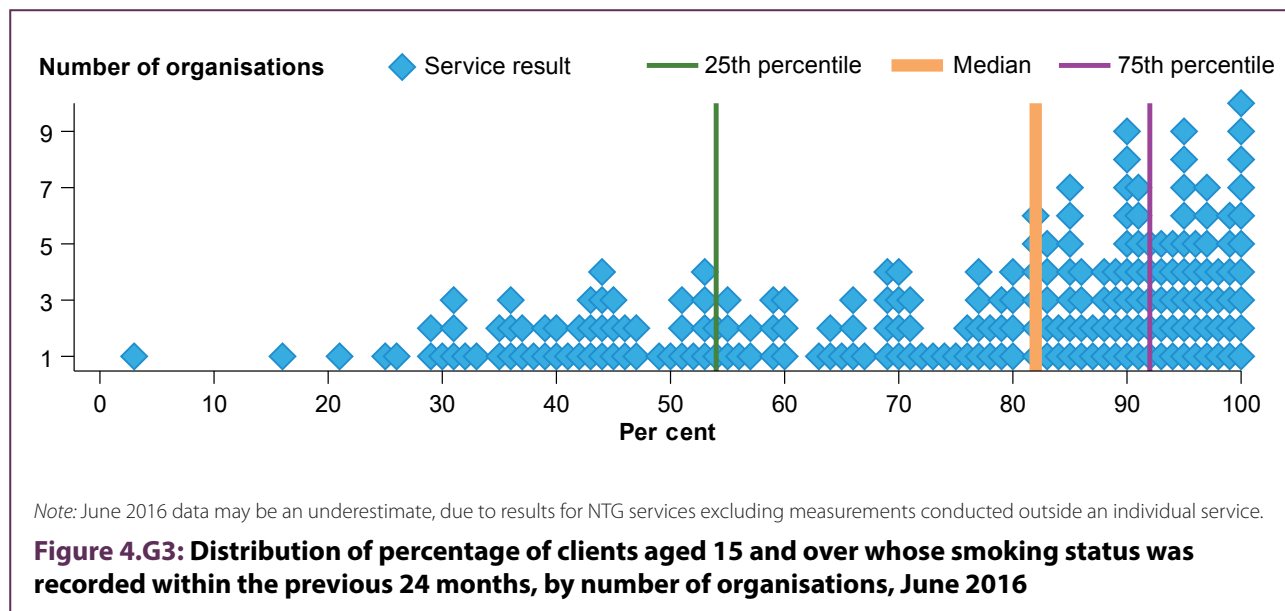


Age and sex distribution in June 2016 showed the recording of smoking status increased with age until age 64 for both males and females, but decreased slightly thereafter for males. Males between the ages of 15 and 44 and those over 65 were less likely to have their smoking status recorded than females (Figure 4.G2 and Table A5.3).



National variation in the recording of smoking status showed that a substantial number of organisations recorded the smoking status of over 90% of their clients. Around half of the organisations (104 of 210) recorded smoking status for at least 82% of their clients (Figure 4.G3).

- Sixty-nine organisations (33%) recorded smoking status for more than 90% of their clients.
- One organisation (0.5%) recorded smoking status for less than 10% of their clients.
- The top 25% of organisations recorded smoking status for 92% of their clients or more.
- The bottom 25% of organisations recorded smoking status for 54% of their clients or fewer.



Variation within states/territories in June 2016 was highest in the Northern Territory and lowest in Victoria/Tasmania (Figure A6.11).

Variation within remoteness areas was highest in *Very remote* areas and lowest in *Inner regional* areas (Figure A6.12).

Opportunities for action

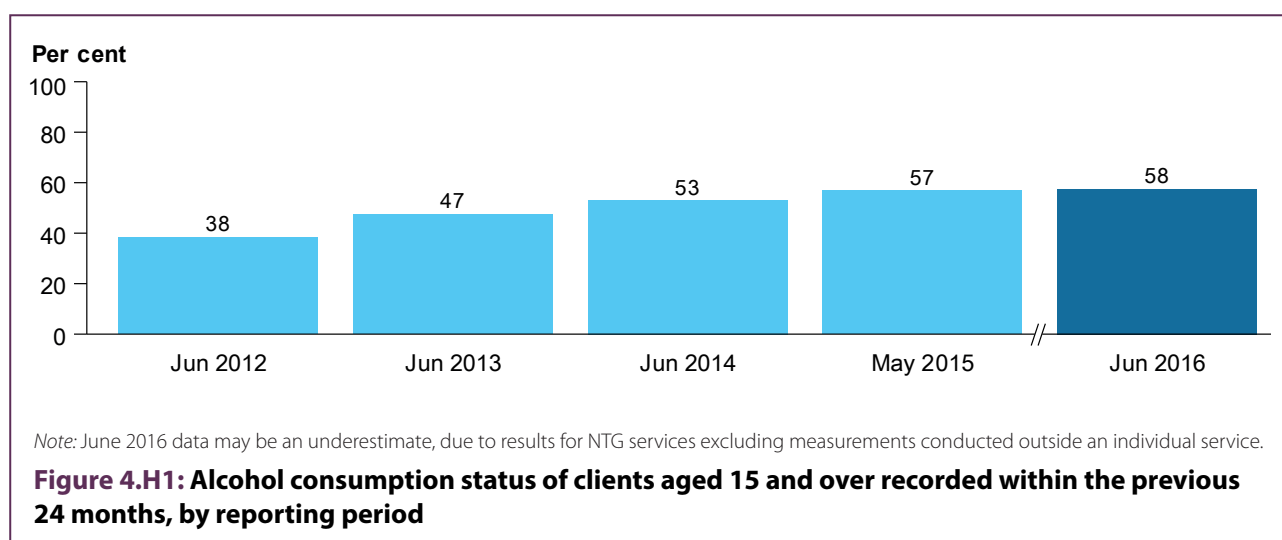
- Improvement on this indicator, nationally and across all jurisdictions, shows good work by many organisations. As one-third (33%) of organisations are achieving 90% or more clients with smoking status recorded, this would appear to be achievable by organisations regardless of location.
- Organisations with consistently low results could review whether sufficient attention is being paid to recording smoking status. There may be opportunities to improve standard data collection on smoking status.

H. Alcohol consumption recorded

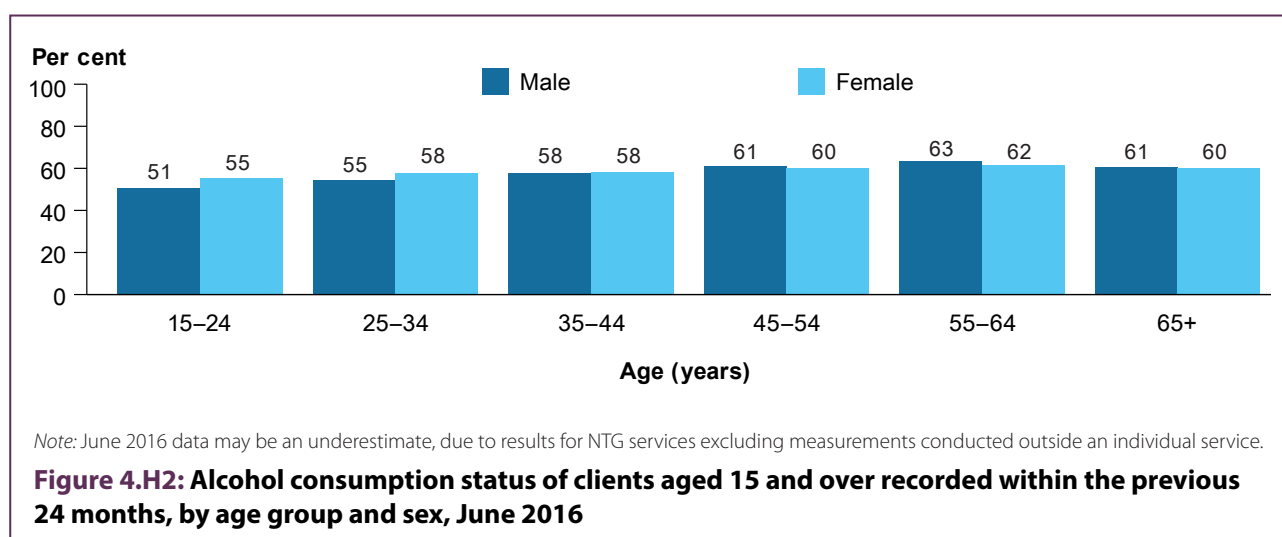
PI16—Proportion of Indigenous regular clients whose alcohol consumption status has been recorded

Nationally, 58% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had their alcohol consumption status recorded within the previous 24 months, as at June 2016 (Figure 4.H1).

Trend analysis showed an increase of 19 percentage points, from June 2012 to May 2015 (Figure 4.H1). There were improvements across all jurisdictions and remoteness areas, from 12 percentage points for organisations in New South Wales/the Australian Capital Territory to 27 percentage points for organisations in Western Australia. Across remoteness areas, increases ranged from 6 percentage points for organisations in *Outer regional* areas to 31 percentage points for organisations in *Very remote* areas (tables A4.13 and A4.14).

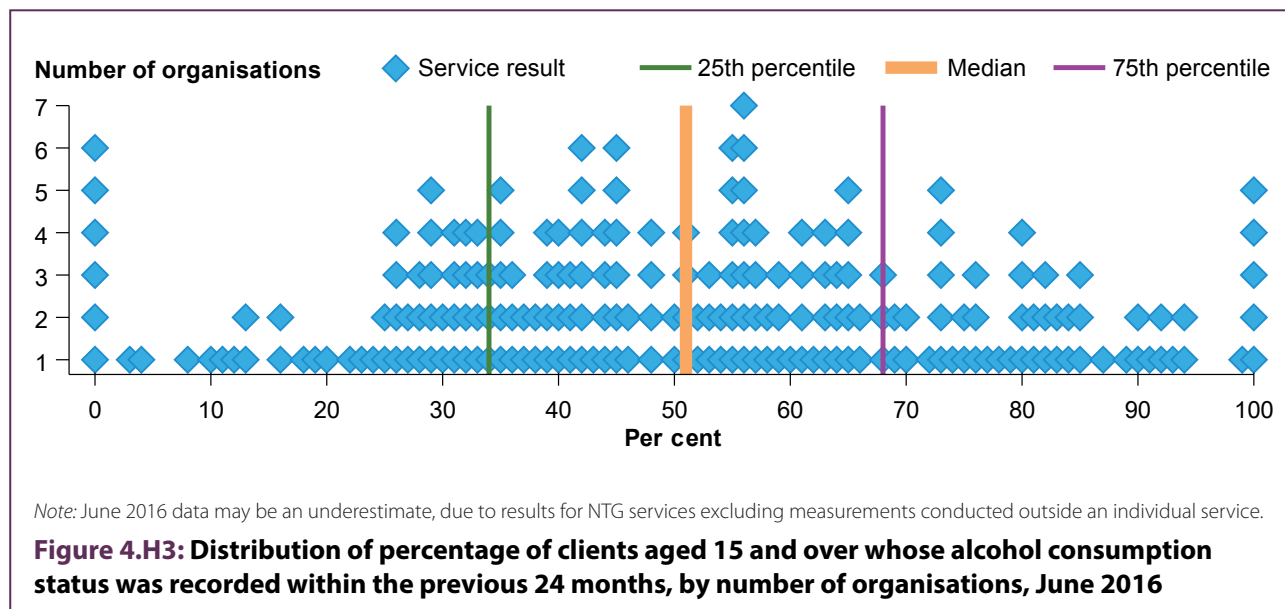


Age and sex distribution in June 2016 showed the recording of alcohol consumption increased with age to age 64, then decreased slightly for both males and females (Figure 4.H2 and Table A5.4).



National variation data showed that most organisations were concentrated around the median. About half of the organisations (104 of 210) recorded the alcohol consumption of at least 51% of their clients (Figure 4.H3).

- Fourteen organisations (7%) recorded the alcohol consumption of more than 90% of their clients.
- Nine organisations (4%) recorded the alcohol consumption of less than 10% of their clients.
- The top 25% of organisations recorded alcohol consumption for 68% of their clients or more.
- The bottom 25% of organisations recorded alcohol consumption for 34% of their clients or fewer.



Variation within states/territories in June 2016 was largest among organisations in Queensland and smallest among organisations in the Northern Territory (Figure A6.13).

Variation within remoteness areas in June 2016 was largest among organisations in *Major cities* and smallest in *Remote* areas (Figure A6.14).

Opportunities for action

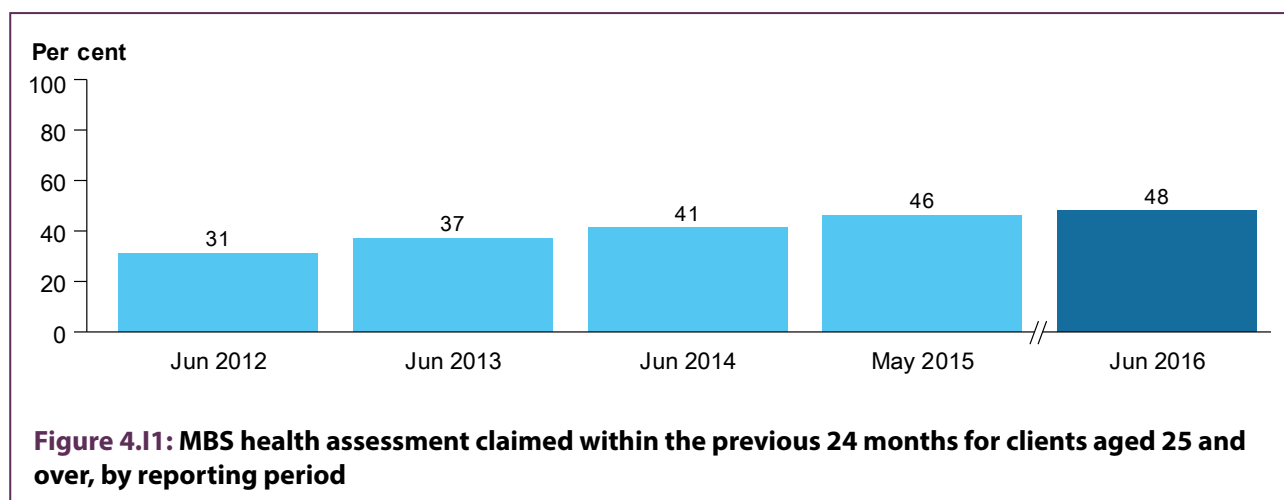
- Improvement against this indicator, nationally and across all jurisdictions, since June 2012 indicates better reporting by many organisations.
- Better recording of alcohol consumption may create increased opportunities for evidence-based brief interventions.

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

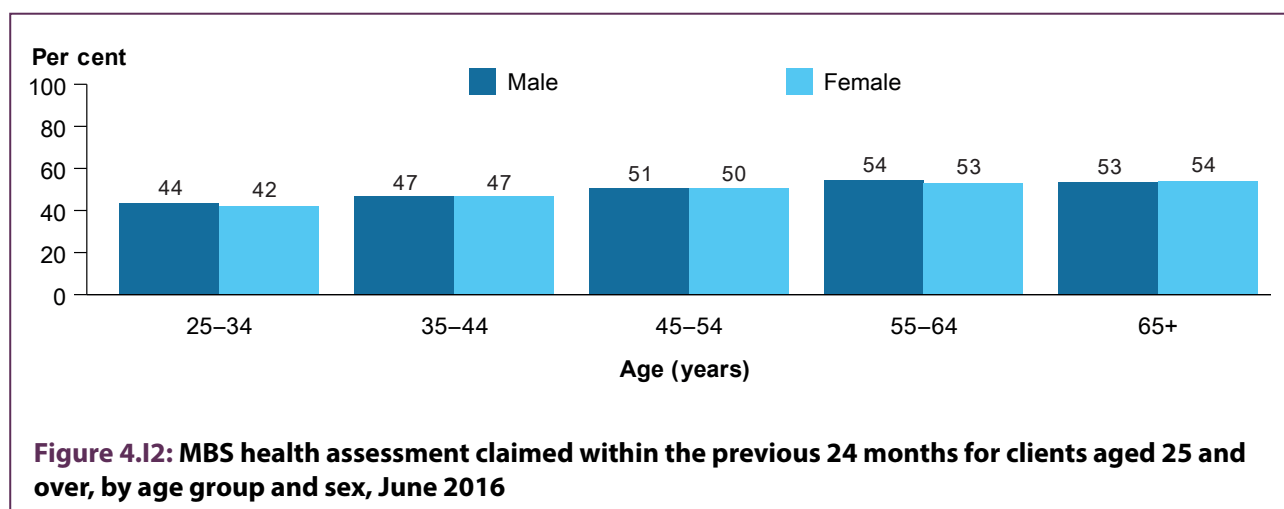
PI03—Proportion of Indigenous regular clients for whom an MBS health assessment for Aboriginal and Torres Strait Islander People (MBS item 715) was claimed

Nationally, 48% of Aboriginal and Torres Strait Islander regular clients aged 25 and over had an MBS health assessment claimed for them within the previous 24 months, as at June 2016 (Figure 4.11).

Trend analysis showed an increase of 15 percentage points from June 2012 to May 2015 (Figure 4.11). Improvements were seen across organisations in all jurisdictions, from 5 percentage points in New South Wales/the Australian Capital Territory and the Northern Territory, to 27 percentage points in Western Australia. Across remoteness areas, increases ranged from 9 percentage points for organisations in *Major cities* and in *Outer regional* areas to 24 percentage points for organisations in *Very remote* areas (tables A4.15 and A4.16).

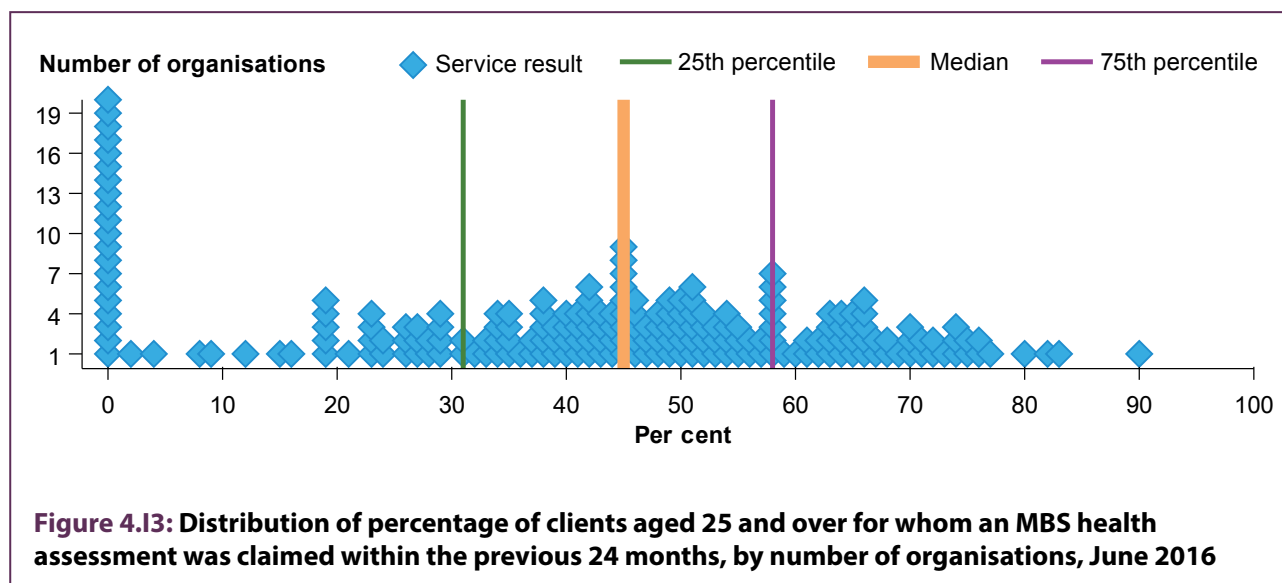


Age and sex distribution in June 2016 showed the percentage of Indigenous regular clients aged 25 and over who had a health assessment claimed for them in the previous 24 months increased with age, up to age 64, for both males and females. Females in most age categories were less likely to have had an MBS health assessment claimed for them than males (Figure 4.12 and Table A5.5).



National variation data showed that, although there was a broad spread of results, most organisations were concentrated around the median. More than half of the organisations (107 of 207) claimed an MBS health assessment for at least 45% of their clients (Figure 4.I3).

- One organisation (0.5%) claimed an MBS health assessment for more than 90% of their clients.
- Twenty-four organisations (12%) claimed an MBS health assessment for less than 10% of their clients.
- The top 25% of organisations claimed an MBS health assessment for at least 58% of their clients aged 25 and over.
- The bottom 25% of organisations claimed an MBS health assessment for 31% or fewer of their clients aged 25 and over.



Variation within states/territories in June 2016 was at similar levels among organisations across jurisdictions, except in New South Wales/the Australian Capital Territory, where it was highest, and the Northern Territory, where the variation was less (Figure A6.15).

Variation within remoteness areas in June 2016 showed *Major cities* had the largest variation among organisations and *Very remote* areas had the least variation (Figure A6.16).

Opportunities for action

- Improvements for this indicator have been sustained, as shown by the improving results at the national level since June 2012.
- Given the 8 to 10 percentage point difference in the rates of health assessments claimed for the 25–34 age group, compared with the 65 and over age group, there is an opportunity to examine how to improve the rates of health assessments for younger people to support early detection of health problems.
- Attention should also be given to why females in most age categories are less likely to have a health assessment than males.
- As more than half of the organisations are claiming health assessments for at least 45% of their clients, there is an opportunity to review current practices and priorities of organisations that are doing well, to share experiences with others to improve their rates of health assessments.

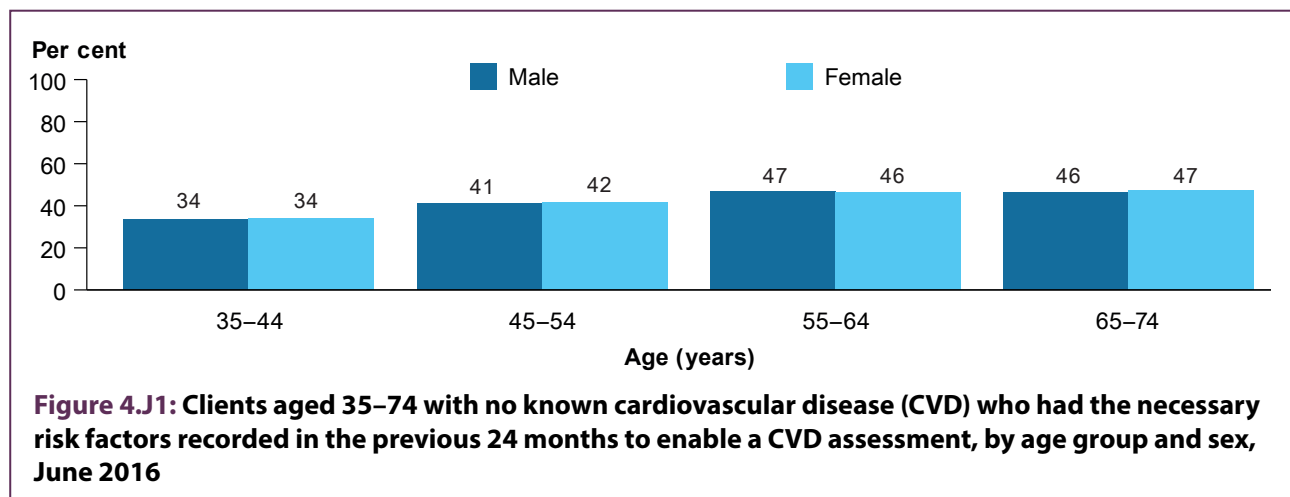
J. Risk factors assessed to enable cardiovascular disease (CVD) risk assessment

PI20—Proportion of Indigenous regular clients who have had the necessary risk factors assessed to enable CVD assessment

Nationally, 40% of Aboriginal and Torres Strait Islander regular clients aged 35–74 with no known CVD had the necessary risk factors recorded in the previous 24 months to enable a CVD assessment, as at June 2016 (Figure 4.J1).

Trend analysis data are not available for this indicator.

Age and sex distribution in June 2016 showed that the percentage of Indigenous regular clients aged 35–74 with no known CVD who had the necessary risk factors recorded in the previous 24 months to enable a CVD assessment increased with age, with a slight decrease for males aged 65–74. Also, more female clients had the necessary risk factors recorded in the previous 24 months, compared with males for all age groups—except for those aged 55–64 (Figure 4.J1 and Table A5.6).



National variation results showed that most organisations recorded the necessary risk factors for fewer than 50% of their clients. About half of the organisations (98 of 195) recorded the necessary risk factors to enable a CVD assessment for at least 40% of their clients (Figure 4.J2).

- No organisations recorded the necessary risk factors to enable a CVD assessment for more than 90% of their clients.
- Twenty organisations (10%) recorded the necessary risk factors to enable a CVD assessment for less than 10% of their clients.
- In the top 25% of organisations, 53% of clients or more had the necessary risk factors recorded to enable a CVD assessment.
- In the bottom 25% of organisations, 29% of clients or fewer had the necessary risk factors recorded to enable a CVD assessment.

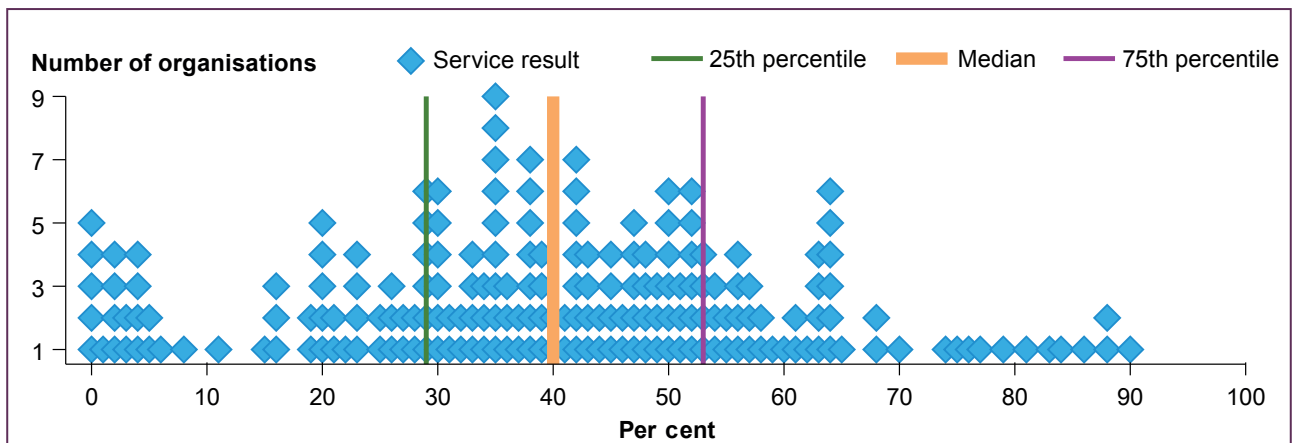


Figure 4.J2: Distribution of percentage of clients aged 35–74 with no known cardiovascular disease (CVD) who had the necessary risk factors recorded in the previous 24 months to enable a CVD assessment, by number of organisations, June 2016

Variation within states/territories in June 2016 was highest among organisations in Western Australia and lowest in Victoria/Tasmania (Figure A6.17).

Variation within remoteness areas in June 2016 showed *Outer regional* and *Very remote* areas had the largest variation, and *Major cities* had the smallest variation (Figure A6.18).

Opportunities for action

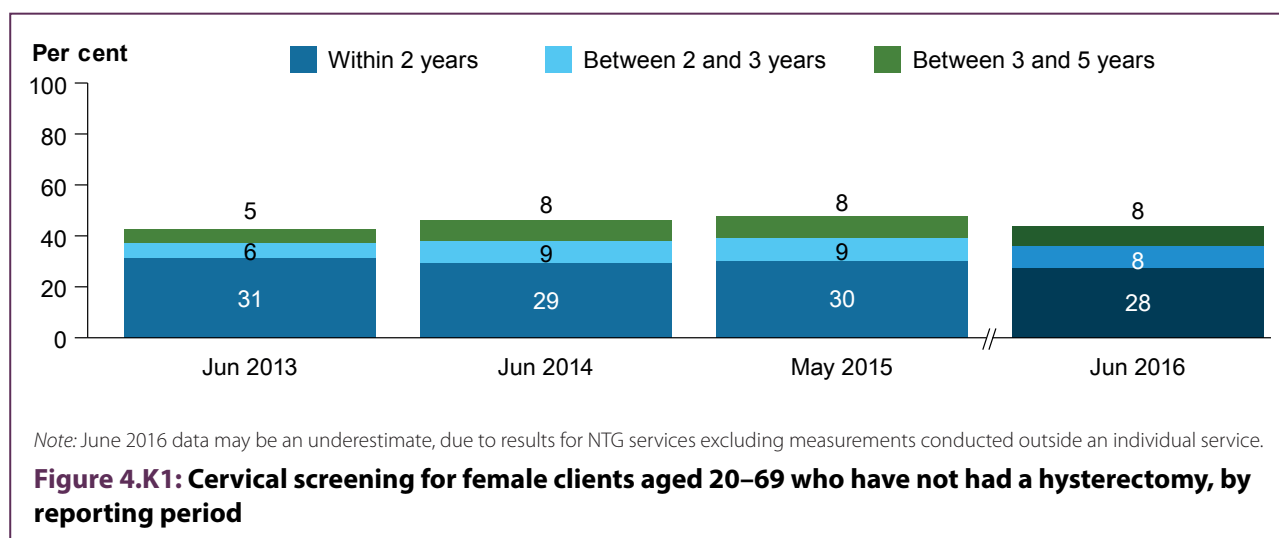
- Most health services reported in the lower percentage for this indicator, highlighting that, nationally, a significant percentage of Aboriginal and Torres Strait Islander people are not aware of their risk of developing CVD.
- CVD remains the leading cause of death for Aboriginal and Torres Strait Islander people. Early detection of risk and the introduction of relevant lifestyle interventions are required to reduce rates of this largely preventable condition.
- Health services have the opportunity to contribute to the reduction in CVD for Aboriginal and Torres Strait Islander people by collecting the information required to calculate CVD risk for clients from age 35 onwards. A range of tools exists for GPs to calculate a patient’s CVD risk and to put in place early lifestyle interventions to reduce the client’s CVD risk.

K. Cervical screening

PI22—Proportion of Indigenous regular clients who have had a cervical screening

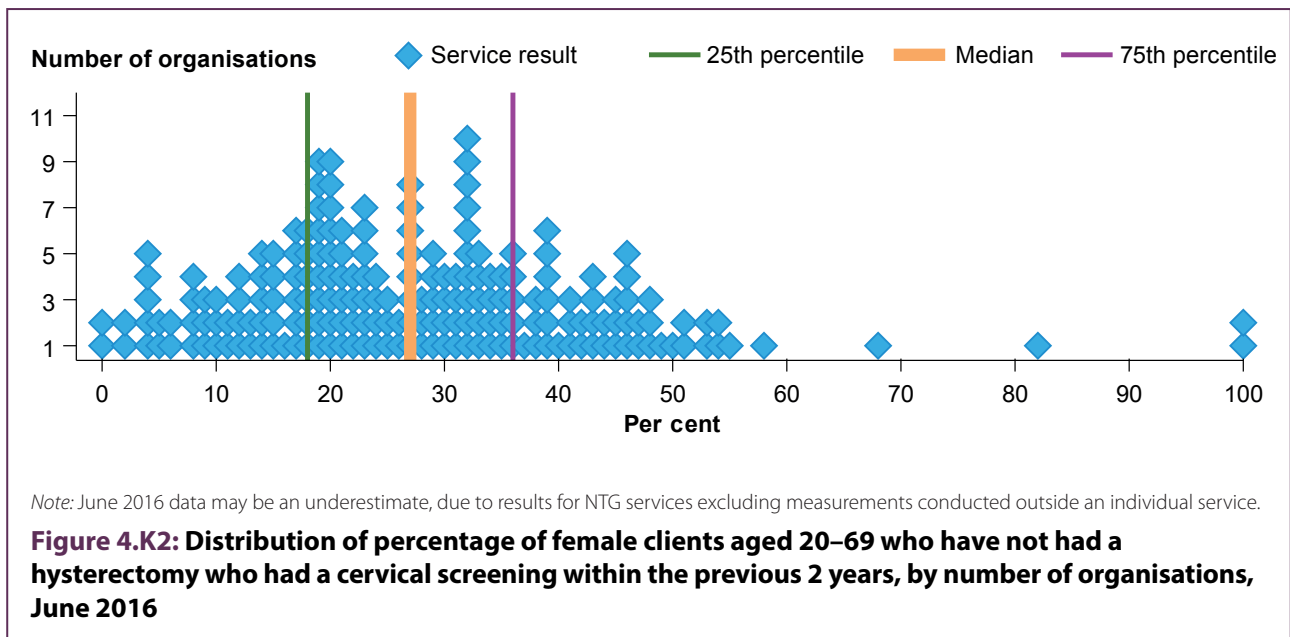
Nationally, 28% of female Aboriginal and Torres Strait Islander regular clients aged 20–69 who have not had a hysterectomy had a cervical screening within the previous 2 years, as at June 2016 (Figure 4.K1).

Trend analysis showed a decrease of 1 percentage point from June 2013 to May 2015 for females who had a cervical screening within the previous 2 years (Figure 4.K1). Cervical screenings completed in the previous 2 years increased by 3 percentage points over this period for organisations in Queensland but decreased by 8 percentage points for organisations in Victoria/Tasmania. Organisations in *Outer regional* areas improved slightly, by around 1.5 percentage points, but those in either *Inner regional* or *Remote* areas decreased by 4 percentage points (tables A4.17 and A4.18).



National variation data revealed most organisations recorded a cervical screening for 50% or fewer of their female clients. Less than half of the organisations (97 of 199) recorded a cervical screening within the previous 2 years for at least 27% of their female clients (Figure 4.K2).

- Two organisations (1%) recorded a cervical screening within the previous 2 years for more than 90% of their female clients.
- Twenty-two organisations (11%) recorded a cervical screening within the previous 2 years for less than 10% of their female clients.
- The top 25% of organisations recorded a cervical screening within the previous 2 years for 36% or more of their female clients.
- The bottom 25% of organisations recorded a cervical screening within the previous 2 years for 18% of their female clients or fewer.



Variation within states/territories in June 2016 was largest among organisations in Victoria/Tasmania, and smallest in South Australia (Figure A6.19).

Variation within remoteness areas in June 2016 was smallest in *Inner regional* areas and *Major cities* (Figure A6.20).

Opportunities for action

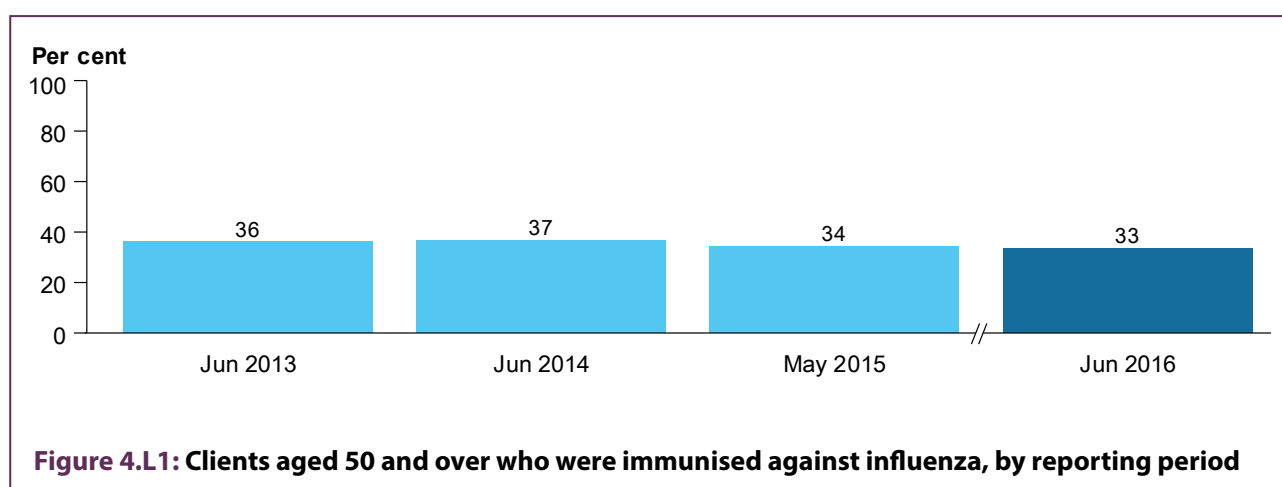
- Improving access for Indigenous people to screening procedures—a priority identified in the Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023—is essential to improve health outcomes for Indigenous people. Given that less than half of the organisations recorded a cervical screening for at least 27% of their clients in the previous 2 years, an opportunity exists for health services to increase the rates of cervical screening for Indigenous people through education, promotion and improved access to services.

L. Immunised against influenza—Indigenous regular clients aged 50 and over

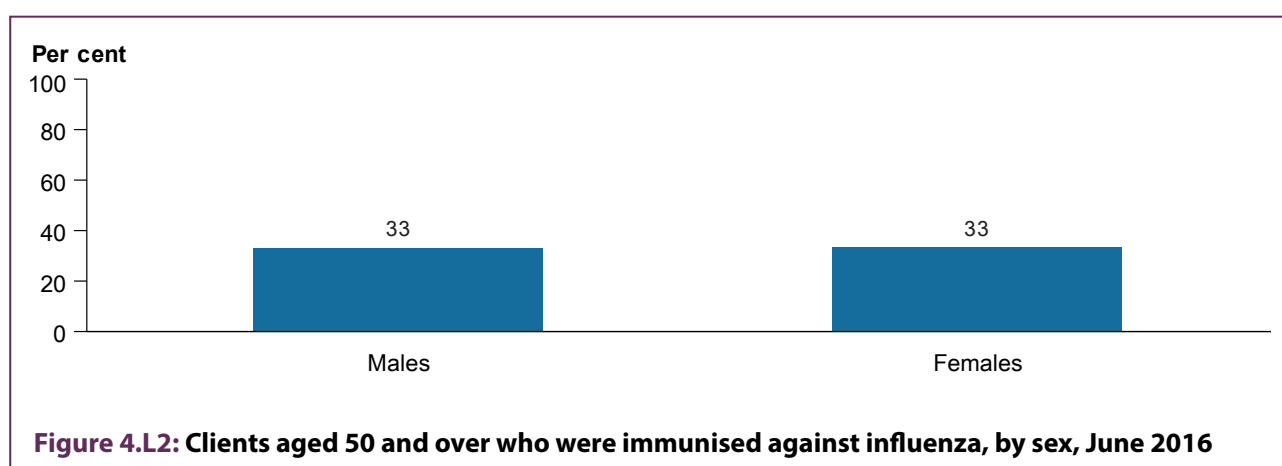
PI14—Proportion of Indigenous regular clients aged 50 and over who are immunised against influenza

Nationally, 33% of Aboriginal and Torres Strait Islander regular clients aged 50 and over were immunised against influenza, as at June 2016 (Figure 4.L1).

Trend analysis showed a decrease of 2 percentage points between June 2013 and May 2015 (Figure 4.L1). Across jurisdictions, the greatest increase was for organisations in New South Wales/the Australian Capital Territory (1 percentage point), while immunisations against influenza for organisations in Queensland decreased by 7 percentage points. Decreases were seen in immunisations against influenza for clients aged 50 and over across all remoteness areas except for organisations in *Inner regional* areas, which increased influenza immunisations by 3 percentage points. The largest decrease was of 6 percentage points for organisations in *Very remote* areas (tables A4.19 and A4.20).

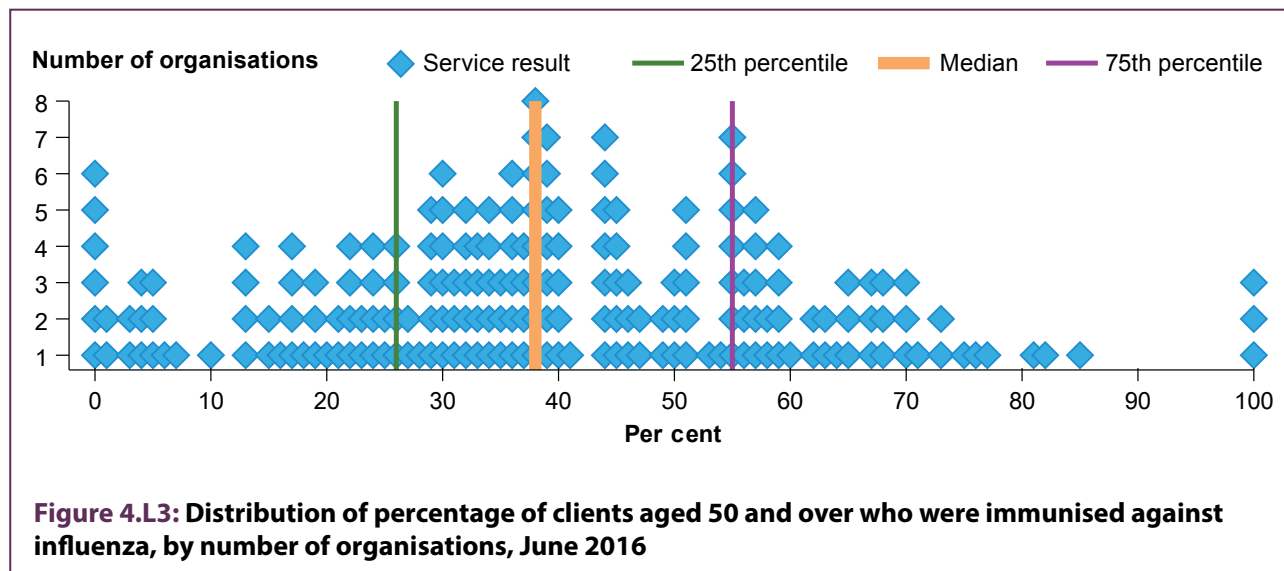


Sex distribution in June 2016 showed that the proportion of Indigenous regular clients aged 50 and over who were immunised against influenza was the same for males and for females (Figure 4.L2 and Table A5.7).



National variation data showed a more broadly spread pattern of results, with a peak in the number of organisations immunising 30–40% of their clients. About half of the organisations (98 of 198) immunised at least 38% of their clients aged 50 and over against influenza (Figure 4.L3).

- Three organisations (2%) immunised more than 90% of their clients aged 50 and over against influenza.
- Eighteen organisations (9%) immunised less than 10% of their clients aged 50 and over against influenza.
- In the top 25% of organisations, 55% of clients or more were immunised against influenza.
- In the bottom 25% of organisations, 26% of clients or fewer were immunised against influenza.



Variation within states/territories in June 2016 was largest among organisations in Queensland, and smallest in Western Australia (Figure A6.21).

Variation within remoteness areas in June 2016 was largest among organisations in *Very remote* areas, while those in *Inner regional* areas had the smallest variation (Figure A6.22).

Opportunities for action

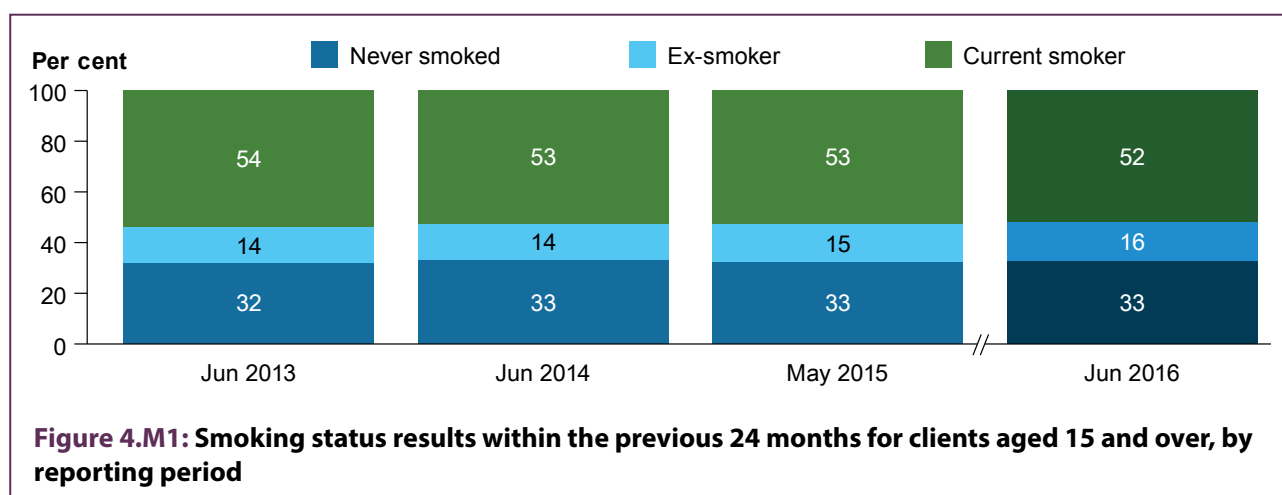
- Influenza viruses can cause a range of disease symptoms that are often severe in the 75 and over age group, which can lead to morbidity and/or mortality.
- All organisations should take responsibility for monitoring the immunisation status of their clients, and for using their recall systems to assist with vaccination, as per National Immunisation Programme Schedule Guidelines.
- Organisations need to ensure their records of adult immunisation status are accurate. CQI efforts could focus initially on this.
- An opportunity exists for health services to work towards reducing the incidence of influenza and associated complications through education and promotion activities.

M. Smoking status result

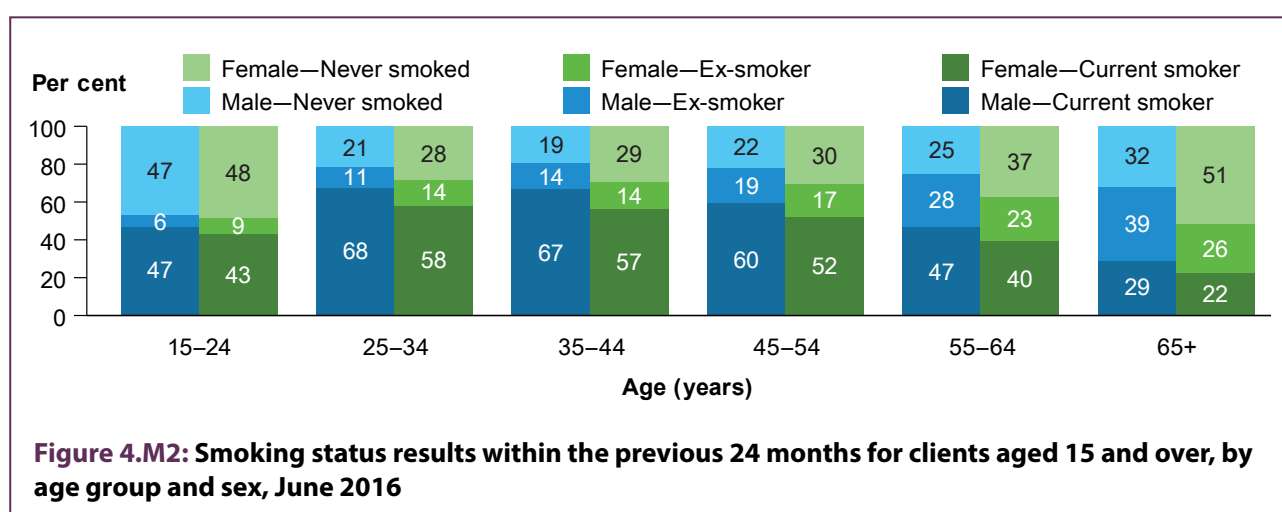
PI10—Proportion of Indigenous regular clients with a smoking status result

Nationally, 33% of Aboriginal and Torres Strait Islander regular clients aged 15 and over had a smoking status result within the previous 24 months of never smoked, while 52% were recorded as being a current smoker, as at June 2016 (Figure 4.M1).

Trend analysis showed stability in the proportion of clients who never smoked (an increase of less than 0.5 percentage points) and a decrease in the proportion who were current smokers (1 percentage point) between June 2013 and May 2015 (Figure 4.M1). The proportion of current smokers decreased slightly for organisations in most jurisdictions, with the greatest decrease seen for organisations in Victoria/Tasmania (3 percentage points). However, the proportion of current smokers increased by 1 percentage point for organisations in the Northern Territory. The proportion of current smokers decreased across most remoteness areas, with the largest decrease seen for organisations in *Inner regional* areas and in *Major cities* (2 percentage points). Organisations in *Remote* areas had the largest increase, but this was an increase of just 0.6 percentage points (tables A4.21 and A4.22).

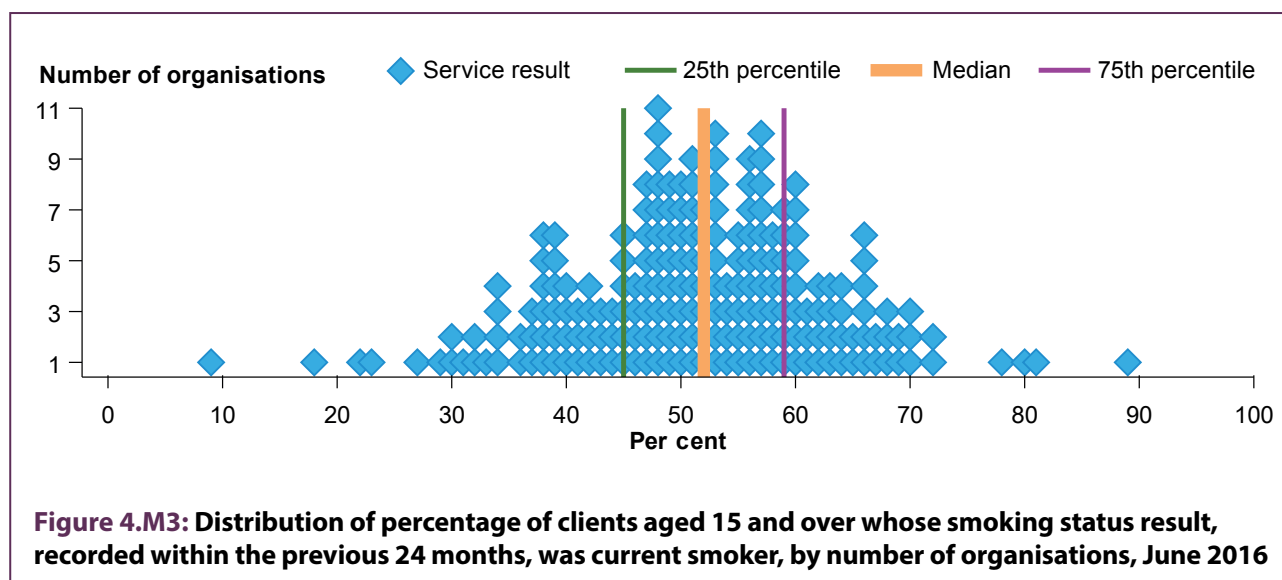


Age and sex distribution showed that, in June 2016, the percentage of current smokers was highest for males and females aged 25–34, and a higher percentage of males were current smokers, compared with females, across all age groups. Less than one-half (47%) of young people aged 15–24 were current smokers, but the same proportion of people in this age group had never smoked (Figure 4.M2 and Table A5.8).



National variation data showed that results for most organisations were clustered around the median. About half of the organisations (104 of 210) recorded a status of current smoker for at least 52% of their clients (Figure 4.M3).

- No organisations recorded a status of current smoker for more than 90% of their clients.
- One organisation (0.5%) recorded a status of current smoker for less than 10% of their clients.
- In the top 25% of organisations—that is, those that had the best results—45% of their clients or fewer had a recorded status of current smoker.
- In the bottom 25% of organisations, at least 59% of their clients had a recorded status of current smoker.



Variation within states/territories in June 2016 was highest among organisations in the Northern Territory (Figure A6.23).

Variation within remoteness areas in June 2016 was highest among organisations in *Very remote* areas and lowest in *Inner regional* areas (Figure A6.24).

Opportunities for action

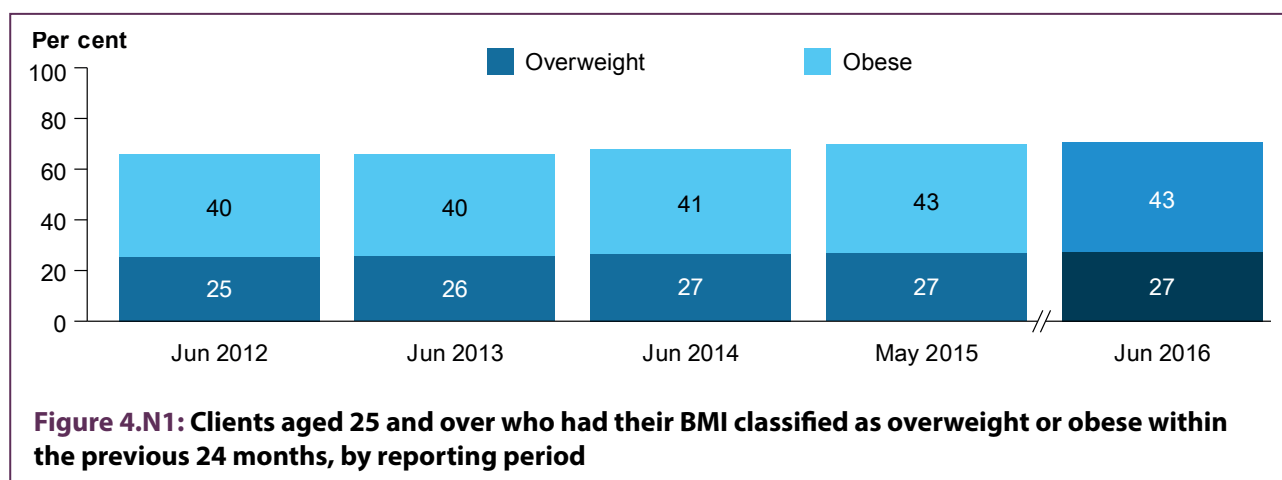
- A high number or proportion of clients who are current smokers does not necessarily indicate poor organisational service delivery. The high number or proportion of clients who are current smokers is influenced by a range of social determinants and tobacco control policies and activities outside the control of organisations, as well as by activities undertaken by organisations. Regular clients are also more likely to be unwell and seeking medical attention and therefore may be more likely to be smokers.
- A comprehensive approach to tobacco control that is targeted and culturally appropriate for Indigenous Australians is necessary to reduce smoking prevalence. As part of a comprehensive approach, organisations could review whether sufficient tobacco clinical programs are in place.
- More research is required to build the evidence base on effective programs to reduce smoking rates in Aboriginal and Torres Strait Islander communities.

N. BMI classified as overweight or obese

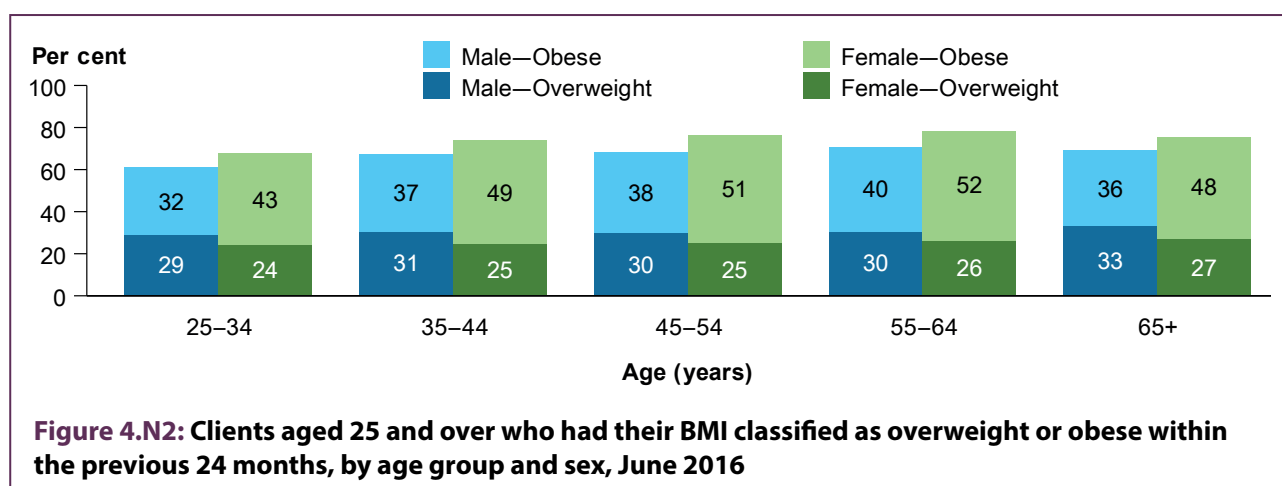
PI12—Proportion of Indigenous regular clients who are classified as overweight or obese

Nationally, an estimated 70% of Aboriginal and Torres Strait Islander regular clients aged 25 and over had their BMI classified as overweight (BMI of 25 to less than 30) or obese (BMI of 30 or more) within the previous 24 months, as at June 2016. Of these, 27% were overweight and 43% were obese, as at June 2016 (Figure 4.N1).

Trend analysis showed an increase of around 5 percentage points in the proportion of clients whose BMI was classified as overweight or obese from June 2012 to May 2015 (Figure 4.N1). The largest decrease among jurisdictions was 7 percentage points for organisations in the Northern Territory, and the largest increase was 15 percentage points for organisations in Queensland. Across remoteness areas, the largest decrease was 2 percentage points for organisations in *Outer regional* areas, but there was a 16 percentage point increase for organisations in *Very remote* areas (tables A4.23 and A4.24).



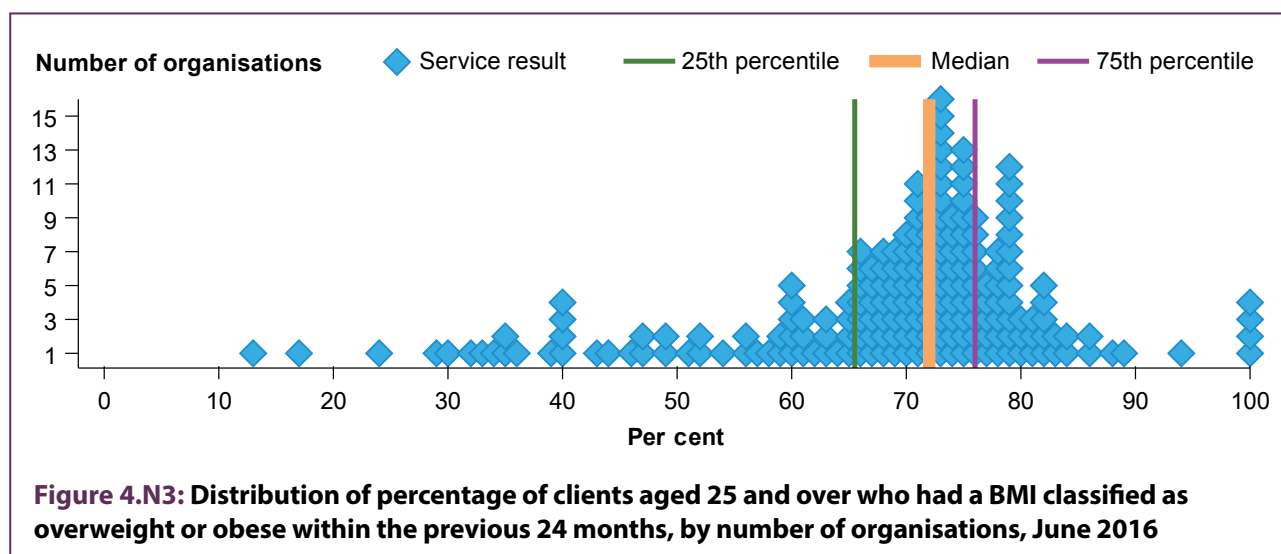
Age and sex distribution in June 2016 showed females comprised a higher percentage of total Indigenous regular clients whose BMI was classified as overweight or obese than males across all age groups. There was no consistent pattern of increase in the percentage of clients who were obese, by age, although a higher percentage of males and females aged 55–64 were obese (Figure 4.N2 and Table A5.9).



National variation data showed results for most organisations were concentrated around the median, with a peak in organisation numbers between 70% and 80%. About half of the organisations (99 of 200) recorded a BMI classified as overweight or obese for least 72% of their clients (Figure 4.N3).

- Five organisations (3%) recorded a BMI classified as overweight or obese for more than 90% of their clients.
- No organisations recorded a BMI classified as overweight or obese for less than 10% of their clients.

- In the top 25% of organisations—that is, those who had the best results—66% of their clients or fewer were recorded as overweight or obese.
- In the bottom 25% of organisations, at least 76% of their clients were recorded as overweight or obese.



Variation within states/territories in June 2016 was largest in the Northern Territory (Figure A6.25).

Variation within remoteness areas in June 2016 was larger among organisations in *Remote* and *Very remote* areas, relative to organisations in other remoteness areas (Figure A6.26).

Opportunities for action

- BMI is influenced by a range of lifestyle factors linked to social and economic determinants. A high number or proportion of clients who are overweight or obese does not necessarily indicate poor organisational performance, but may reflect the health care demands associated with overweight and obesity, as well as the complexities and challenges of addressing this issue.
- 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).
- Organisations could review whether sufficient attention is being paid to preventative programs that target nutrition and physical activity and to the need for adherence and outcomes which take into account what is realistic for individual clients. Age, gender, and priorities such as family and community responsibilities should be considered in preventative advice and programs. Understanding the interaction between individual behaviour change and the wider systems of family, community and society is essential for primary prevention and for the clinical management of diseases and conditions related to overweight and obesity (Thompson and Gifford 2000).
- Research indicates that, even in overweight and obese individuals, the adoption of 1 or more low-risk lifestyle behaviours significantly reduces the risk of premature mortality (Veronese et al. 2016). Organisations should ensure that information and advice are tailored to clients' level of health literacy and level of motivation or readiness to change (Harris and Lloyd 2012).
- Weight loss itself may not be a sufficient or effective motivator for behaviour change. While health is not irrelevant, 'feeling good' and looking good may be better motivators than weight loss and/or better health. This may be especially true for clients who concentrate on the present because they have little control over the future (Thompson and Gifford 2000).
- Organisations should ensure that clients' BMI is measured at least annually. For children and adolescents, BMI percentile charts should be used to monitor growth.

Chapter 5

Chronic disease management indicators

Indicators of chronic disease management included in the nKPIs cover both process-of-care indicators and health outcome indicators.

Process-of-care indicators:

- General Practitioner Management Plan
- Team Care Arrangement
- blood pressure recorded
- HbA1c result recorded
- kidney function test recorded
- immunised against influenza.

Health outcome indicators:

- blood pressure result
- HbA1c result
- kidney function test result.

The number of organisations contributing data on these indicators ranged from 158 to 195 (Table 5.1), and were located across all jurisdictions and remoteness areas.

5.1 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 GPMPs and 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 for peripheral vascular disease that leads to leg ulcers and gangrene. Reducing the prevalence of high blood pressure is 1 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). Data from the 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey showed that, after adjusting for differences in the age structure, Indigenous adult Australians were 1.2 times more likely than non-Indigenous Australian adults to have high blood pressure (AIHW 2015d).

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 2013).

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 eGFR to assess kidney function in clients with diabetes or CVD, are recommended (Kidney Health Australia 2015a; RACGP & Diabetes Australia 2014). An eGFR result of ≥ 90 mL/min/1.73 m² indicates normal kidney function, while an eGFR of 60–89 mL/min/1.73 m² indicates mildly reduced kidney function. An eGFR below that indicates moderately to severely reduced kidney function (Kidney Health Australia 2015b).

Although an eGFR of ≥ 90 mL/min/1.73 m² is the ideal result, an eGFR result of ≥ 60 mL/min/1.73 m² 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. Australian Aboriginal and Torres Strait Islander Health Survey data for 2012–13 show that 18% of Indigenous Australian adults had kidney function test results that showed signs of kidney problems (AIHW 2015d).

Immunisation against influenza is recommended for all Aboriginal and Torres Strait Islander people aged 15 and over, because 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).

5.2 Summary of progress

Note: As a result of the change in definition for 'Indigenous regular client' implemented for NTG services (see 'nKPI data quality' in Chapter 1), June 2016 data are provided alongside previously reported data but are not (and should not be) compared with this previous data.

- **General Practitioner Management Plans (GPMPs)** provided for Aboriginal and Torres Strait Islander regular clients with type 2 diabetes increased by around 12 percentage points between June 2012 and May 2015, and 54% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a GPMP claimed for them, as at June 2016 (Table 5.1).
- **Team Care Arrangements (TCA)** claimed for Aboriginal and Torres Strait Islander regular clients with type 2 diabetes increased by around 14 percentage points between June 2012 and May 2015. In June 2016, 50% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a TCA claimed for them (Table 5.1).
- **Blood pressure** recorded for Aboriginal and Torres Strait Islander regular clients with type 2 diabetes in the past 6 months increased by around 1 percentage point between June 2012 and May 2015. In that period, there was an increase of around 2 percentage points in the number of clients with type 2 diabetes who had a blood pressure result of $\leq 130/80$ mmHg. Of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes, 63% had their blood pressure recorded, as at June 2016, and 43% had a blood pressure result of $\leq 130/80$ mmHg (Table 5.1).
- **HbA1c** recorded within the previous 6 months for Aboriginal and Torres Strait Islander regular clients with type 2 diabetes increased by around 2 percentage points between June 2012 and May 2015, and increased by around 3 percentage points in that period for those with a result of $\leq 7\%$. The proportion who had an HbA1c recorded, as at June 2016, was 49% and the proportion with a result of $\leq 7\%$ was 37% (Table 5.1).
- **Kidney function tests** completed for Aboriginal and Torres Strait Islander regular clients aged 15 and over with type 2 diabetes or CVD increased by around 4 percentage points and 7 percentage points, respectively, between June 2013 and May 2015. In June 2016, 62% of kidney function tests were completed for clients with type 2 diabetes and 59% for clients with CVD. The proportion of Indigenous regular clients with type 2 diabetes who had an eGFR result of ≥ 60 mL/min/1.73 m² was 80%, and was 75% for clients with CVD. Data are not available for a full year for this indicator, as the data were only collected from December 2014, but between December 2014 and May 2015, clients with type 2 diabetes or CVD who had an eGFR result of ≥ 60 mL/min/1.73 m² decreased slightly (Table 5.1).
- **Immunised against influenza** for Aboriginal and Torres Strait Islander regular clients aged 15–49 with type 2 diabetes or COPD decreased by 3 percentage points and 2 percentage points, respectively between June 2013 and May 2015. As at June 2016, 35% of clients with type 2 diabetes were immunised against influenza, and 37% of clients with COPD were immunised against influenza (Table 5.1).
- **Variation within jurisdictions and remoteness areas** in June 2016 tended to be greatest for the indicator Immunised against influenza—clients with COPD, and smallest for the indicators Blood pressure result—clients with type 2 diabetes and Kidney test result—clients with type 2 diabetes (figures A6.27–A6.50).
- **Organisational size** (measured in terms of client numbers) generally showed a weak association with results for the indicators in this chapter. As this indicates that the size of an organisation does not align with its capacity to provide higher quality services, analysis by organisational size is not discussed further.

Table 5.1: Summary of chronic disease management indicators, June 2016 and change over time

Indicator ^(a)	Clients seen ^(b)	% clients seen	Number of organisations included in the analyses	Minimum–maximum organisation result (%)	Change to May 2015 (%)
PI07: General Practitioner Management Plan—clients with type 2 diabetes	18,269	53.6	193	0.0–100.0	12.2 ^(c)
PI08: Team Care Arrangement—clients with type 2 diabetes	17,382	50.3	194	0.0–100.0	14.0 ^(c)
PI23: Blood pressure recorded—clients with type 2 diabetes	21,970	63.3	195	5.3–100.0	1.3 ^(c)
PI05: HbA1c result recorded—clients with type 2 diabetes					
6 months	16,905	48.7	195	0.0–100.0	2.5 ^(c)
PI18: Kidney function test—clients with:					
Type 2 diabetes (total)	21,263	61.6	194	0.0–100.0	4.0 ^(d)
CVD	8,981	59.3	193	0.0–100.0	7.1 ^(d)
PI15: Immunised against influenza—clients with:					
Type 2 diabetes	4,894	34.7	190	0.0–100.0	-2.6 ^(d)
COPD	560	36.7	158	0.0–100.0	-2.2 ^(d)
PI24: Blood pressure result of ≤130/80 mmHg—clients with type 2 diabetes	9,349	42.6	195	0.0–100.0	2.4 ^(c)
PI06: HbA1c result—clients with type 2 diabetes					
6 months, ≤7%	6,324	37.4	190	0.0–100.0	3.2 ^(c)
PI19: Kidney function test result of ≥60 mL/min/1.73 m ² —clients with ^(e) :					
Type 2 diabetes	16,213	79.8	189	28.6–100.0	..
CVD	6,717	74.8	186	0.0–100.0	..

.. not applicable

(a) 11%–86% of organisations contributing to these indicators had denominators of <20 clients. The indicator 'Immunised against influenza—clients with COPD' 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 clients (sum of numerators) for all organisations with valid data.

(c) Change in percentage points between the reporting periods June 2012 and May 2015.

(d) Change in percentage points between the reporting periods June 2013 and May 2015.

(e) This indicator was first collected in December 2014. As less than 12 months of data are available, no comparison has been made.

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

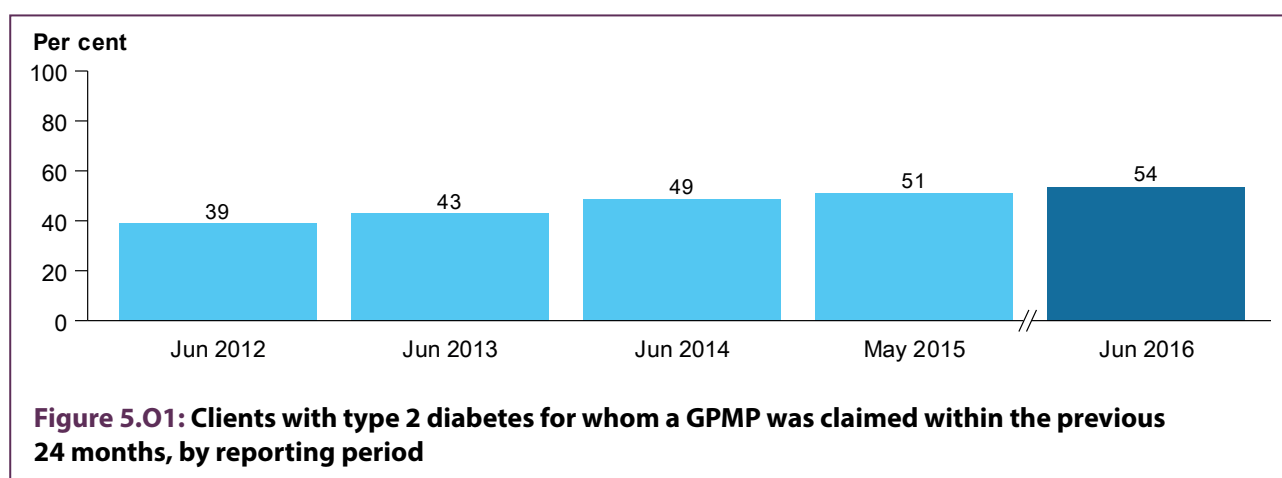
Source: AIHW analyses of the nKPI data collection.

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

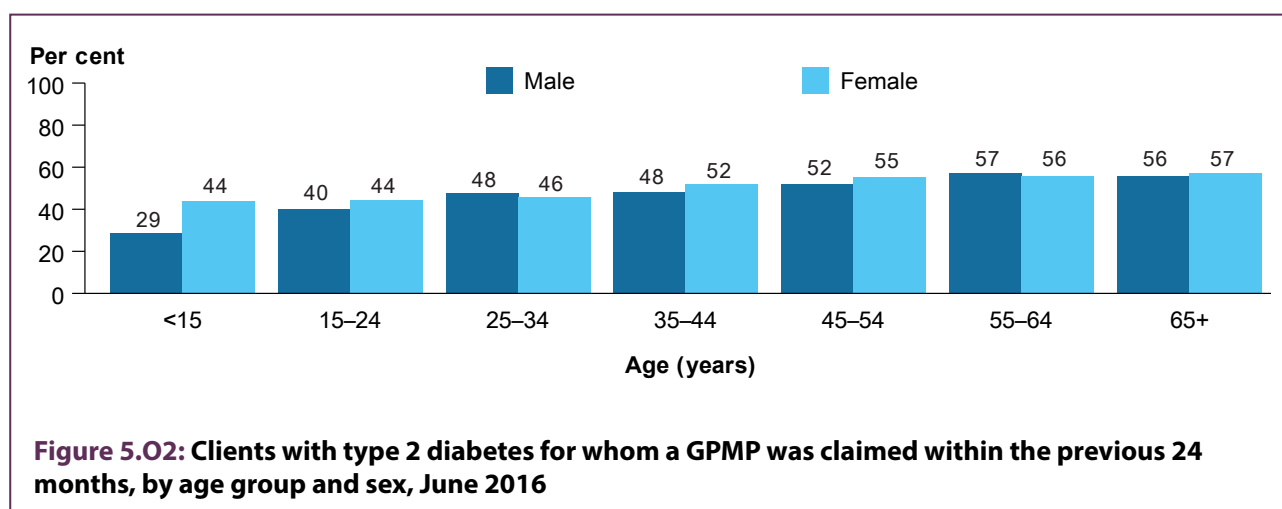
PI07—Proportion of regular Indigenous regular clients with a chronic disease for whom a GP Management Plan (MBS item 721) was claimed

Nationally, 54% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a GPMP (MBS item 721) claimed for them within the previous 24 months, as at June 2016 (Figure 5.O1).

Trend analysis showed an increase of 12 percentage points from June 2012 to May 2015 (Figure 5.O1). The largest increase among jurisdictions were in Western Australia and Queensland, with 18 and 14 percentage points, respectively, while organisations in South Australia increased by around 6 percentage points. Among remoteness areas, *Very remote* and *Inner regional* areas had the largest improvements (21 percentage points and 13 percentage points, respectively) and those in *Major cities* improved by around 8 percentage points (tables A4.25 and A4.26).

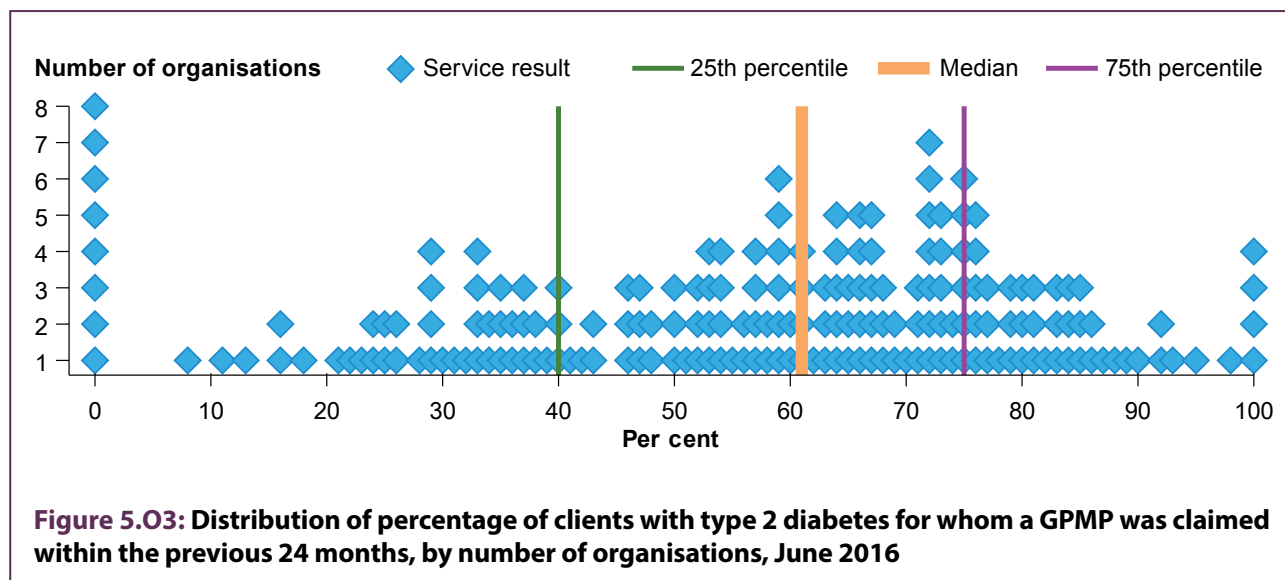


Age and sex distribution in June 2016 showed the proportion of Indigenous regular clients with type 2 diabetes who had a GPMP claimed for them within the previous 24 months increased with age until age 64 for males, but decreased slightly thereafter. For females, the proportion increased in all age groups (Figure 5.O2 and Table A5.10).



National variation data showed a broad dispersion of results. Less than half of the organisations (94 of 193) claimed a GPMP for at least 61% of their clients (Figure 5.O3).

- Ten organisations (5%) claimed a GPMP for more than 90% of their clients.
- Nine organisations (5%) claimed a GPMP for less than 10% of their clients.
- The top 25% of organisations claimed a GPMP for 75% of their clients or more.
- The bottom 25% of organisations claimed a GPMP for 40% of their clients or fewer.



Variation within states/territories in June 2016 was largest among organisations in New South Wales/the Australian Capital Territory, and smallest among organisations in South Australia (Figure A6.27).

Variation within remoteness areas in June 2016 was higher among organisations in *Outer regional* areas relative to other remoteness areas (Figure A6.28).

Opportunities for action

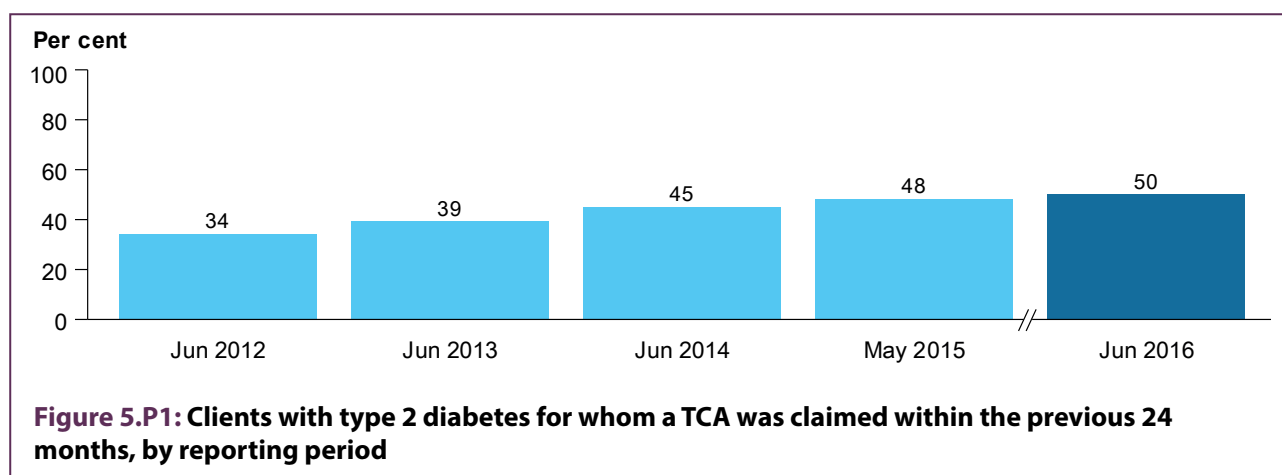
- Improvements against this indicator, nationally and in all jurisdictions, show effective action by many organisations.
- Younger clients (under 15 and 15–24) have lower rates of GPMPs than older clients (25–34 and older). More attention should be given to ensuring younger clients have GPMPs in place, especially males aged under 15, to better manage their diabetes and prevent further complications later in life.
- 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.

P. Team Care Arrangement—clients with type 2 diabetes

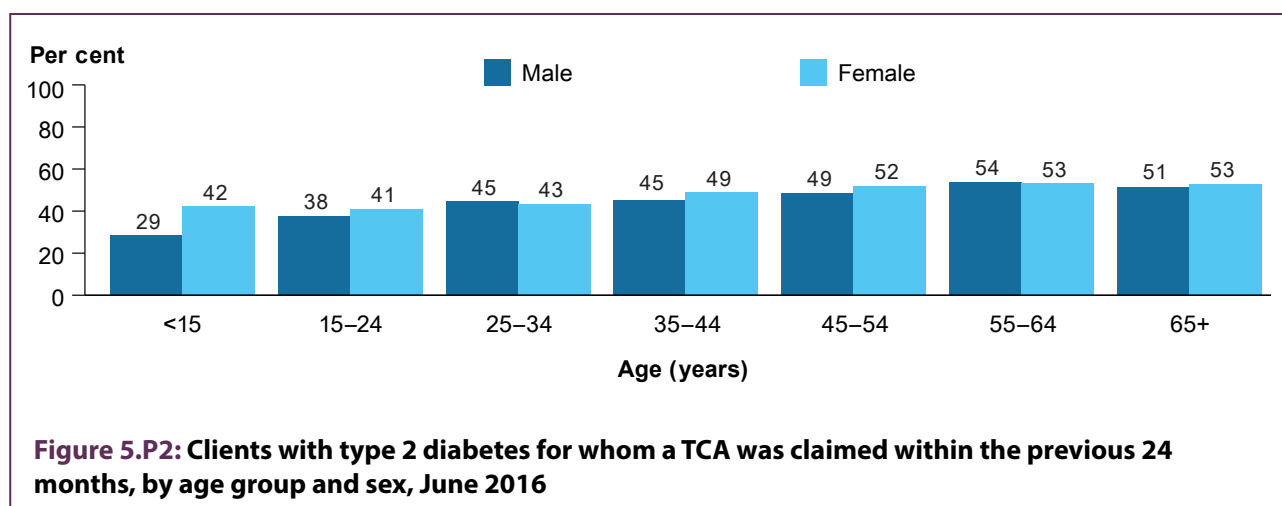
PI08—Proportion of Indigenous regular clients with a chronic disease for whom a Team Care Arrangement (MBS item 723) was claimed

Nationally, 50% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a TCA (MBS item 723) claimed for them within the previous 24 months, as at June 2016 (Figure 5.P1).

Trend analysis showed an increase of 14 percentage points from June 2012 to May 2015 (Figure 5.P1). The highest increases in jurisdictions occurred in Western Australia (16 percentage points) and the Northern Territory (15 percentage points). Organisations in South Australia increased by around 7 percentage points. Across remoteness areas, the largest increase was 20 percentage points in *Very remote* areas, and *Outer regional* areas increased by around 10 percentage points (tables A4.27 and A4.28).

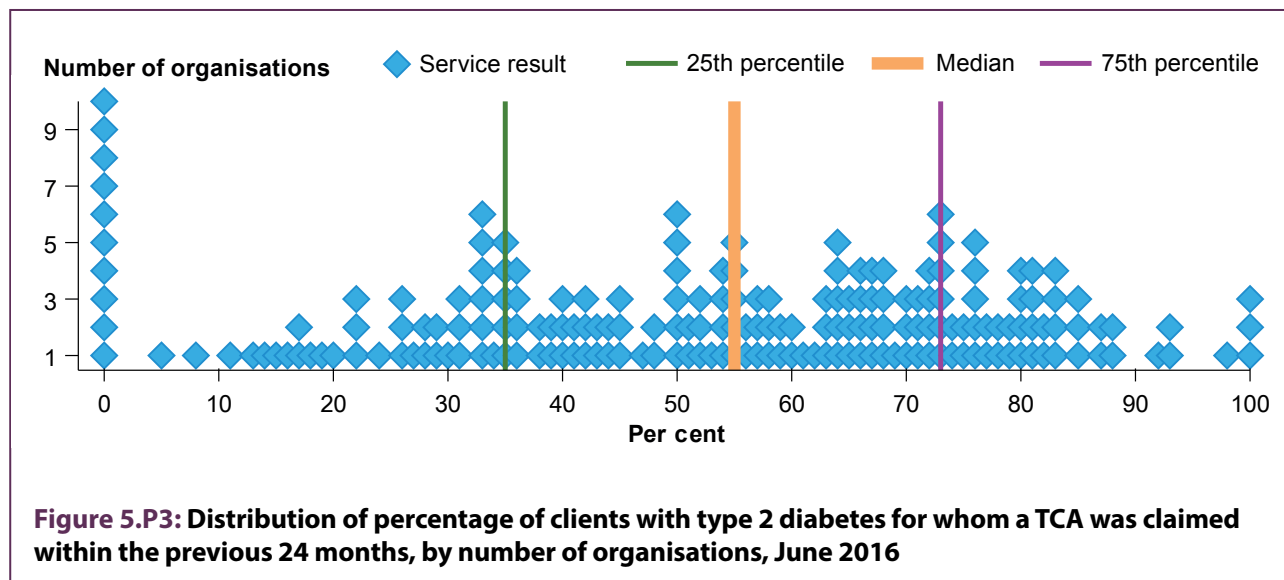


Age and sex distribution in June 2016 showed that the proportion of Indigenous regular clients with type 2 diabetes who had a TCA claimed for them within the previous 24 months increased with age for males and females until age 64, but decreased slightly from age 65 (Figure 5.P2 and Table A5.11).



National variation data showed that organisations' results were broadly dispersed. More than half of the organisations (100 of 194) claimed a TCA for at least 55% of their clients (Figure 5.P3).

- Seven organisations (4%) claimed a TCA for more than 90% of their clients.
- Twelve organisations (6%) claimed a TCA for less than 10% of their clients.
- The top 25% of organisations claimed a TCA for 73% of their clients or more.
- The bottom 25% of organisations claimed a TCA for 35% of their clients or fewer.



Variation within states/territories in June 2016 was largest among organisations in New South Wales/the Australian Capital Territory and smallest among organisations in Western Australia (Figure A6.29).

Variation within remoteness areas in June 2016 among organisations was highest in *Remote* areas and lowest in *Major cities* (Figure A6.30).

Opportunities for action

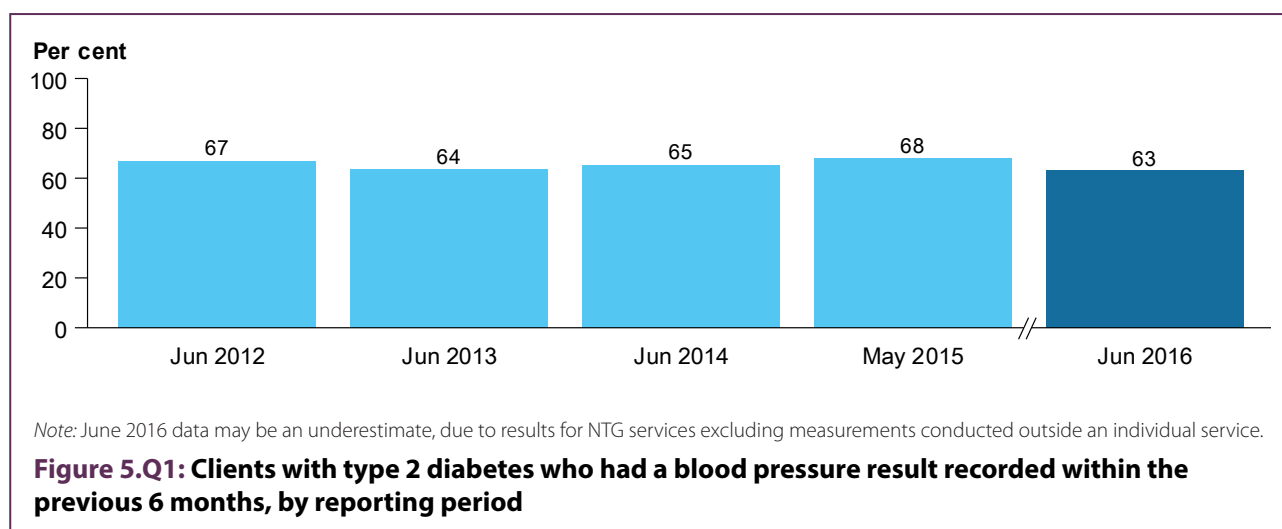
- There has been improvement at the national level and across most jurisdictions from June 2012, however this improvement is slowing. This indicates that there is room for improvement for many organisations against this indicator and there is an opportunity to determine why improvement is slowing and to ensure it does not plateau or reverse. It is possible that improvement is slowing because not all patients with type 2 diabetes are classed as chronic and complex and therefore do not have a TCA in place.
- The bottom 25% of organisations have TCAs in place for 35% of clients, compared with the top 25% of organisations that have TCAs in place for 73% of clients (Table A3.1). Health services have the opportunity to review current practices and priorities and increase the number of TCAs they have in place.

Q. Blood pressure result recorded—clients with type 2 diabetes

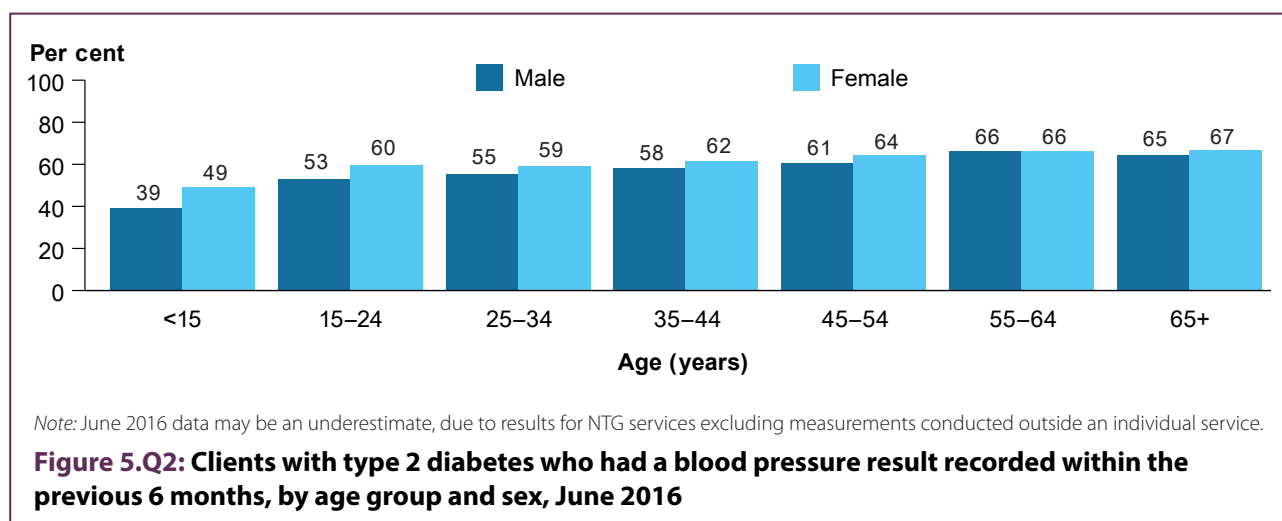
PI23—Proportion of Indigenous regular clients with type 2 diabetes who have had a blood pressure measurement result recorded

Nationally, 63% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had a blood pressure result recorded within the previous 6 months, as at June 2016 (Figure 5.Q1).

Trend analysis showed a decline of 3 percentage points from June 2012 to June 2013, followed by an increase of 5 percentage points to May 2015 (Figure 5.Q1). Western Australia improved by 6 percentage points between June 2012 and May 2015, while South Australia decreased by 2 percentage points. *Very remote* areas increased by 7 percentage points. All other remoteness areas decreased by around 2 to 4 percentage points over the period (tables A4.29 and A4.30).

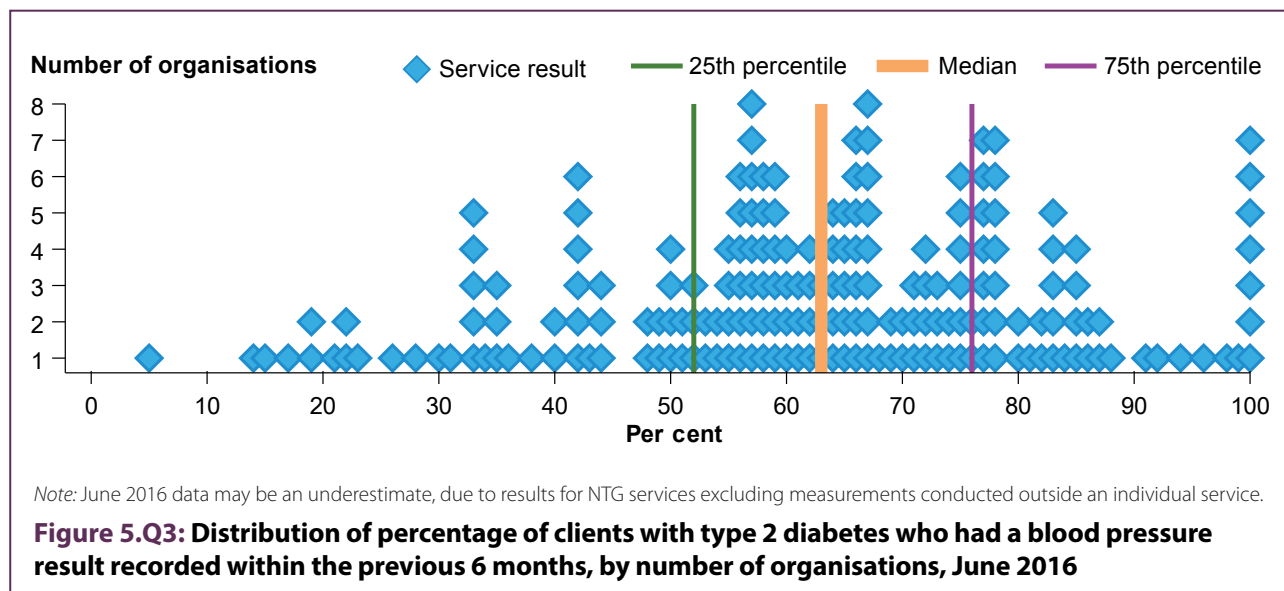


Age and sex distribution in June 2016 showed the percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the past 6 months increased with age up to age 64 for males, and increased for females in all age groups apart from a slight decrease for those aged 25–34 (Figure 5.Q2 and Table A5.12).



National variation data revealed that most organisations recorded blood pressure for 50–80% per cent of their clients. More than half of the organisations (99 of 195) recorded blood pressure for at least 63% of their clients (Figure 5.Q3).

- Thirteen organisations (7%) recorded blood pressure for more than 90% of their clients.
- One organisation (0.5%) recorded blood pressure for less than 10% of their clients.
- The top 25% of organisations recorded blood pressure for at least 76% of their clients.
- The bottom 25% of organisations recorded blood pressure for 52% of their clients or fewer.



Variation within states/territories in June 2016 was largest among organisations in the Northern Territory and smallest in Western Australia and South Australia (Figure A6.31).

Variation within remoteness areas in June 2016 was largest among organisations in *Very remote* areas. Organisations in *Remote* areas had the smallest variation (Figure A6.32).

Opportunities for action

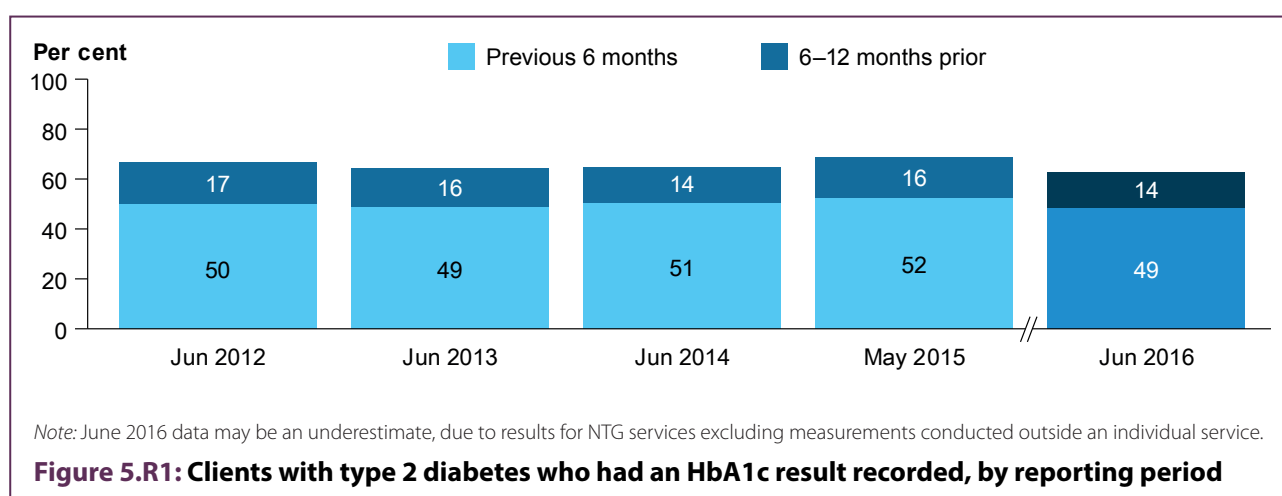
- High blood pressure is a major risk factor for stroke, coronary heart disease, heart failure, kidney disease, deteriorating vision, and for peripheral vascular disease that leads to leg ulcers and gangrene. Reducing the prevalence of high blood pressure is 1 of the most important means of reducing circulatory diseases, which were the leading cause of death among Indigenous Australians in 2008–2012 (AHMAC 2015).
- More than half of organisations recorded blood pressure for at least 63% of their clients. There is an opportunity for health services to continue to improve the health outcomes of clients with type 2 diabetes through ongoing monitoring and recording of blood pressure/blood glucose levels readings at all health checks.

R. HbA1c result recorded—clients with type 2 diabetes

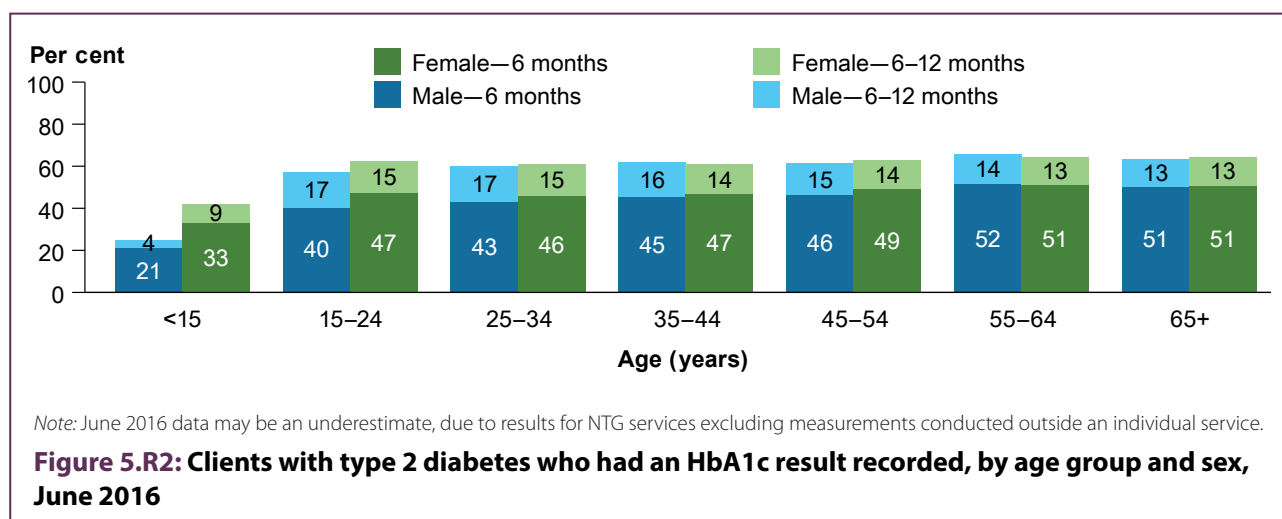
PI05—Proportion of Indigenous regular clients with type 2 diabetes who have had an HbA1c measurement result recorded

Nationally, 49% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had their glycosylated haemoglobin (HbA1c) result recorded within the previous 6 months, as at June 2016, and a further 14% had a result recorded between 6 and 12 months prior—a total of 63% who had a result recorded within the previous 12 months (Figure 5.R1).

Trend analysis showed an increase of 2 percentage points between June 2012 and May 2015 in the proportion of Indigenous regular clients who had their HbA1c recorded within the previous 6 months (Figure 5.R1). Organisations in Queensland had the highest increase (9 percentage points) and those in Victoria/Tasmania had a decrease of 7 percentage points. *Major cities* and *Very remote* areas increased by 8 percentage points and 6 percentage points, respectively, and *Inner regional* and *Outer regional* areas decreased by 3 percentage points and 2 percentage points, respectively (tables A4.31 and A4.32).

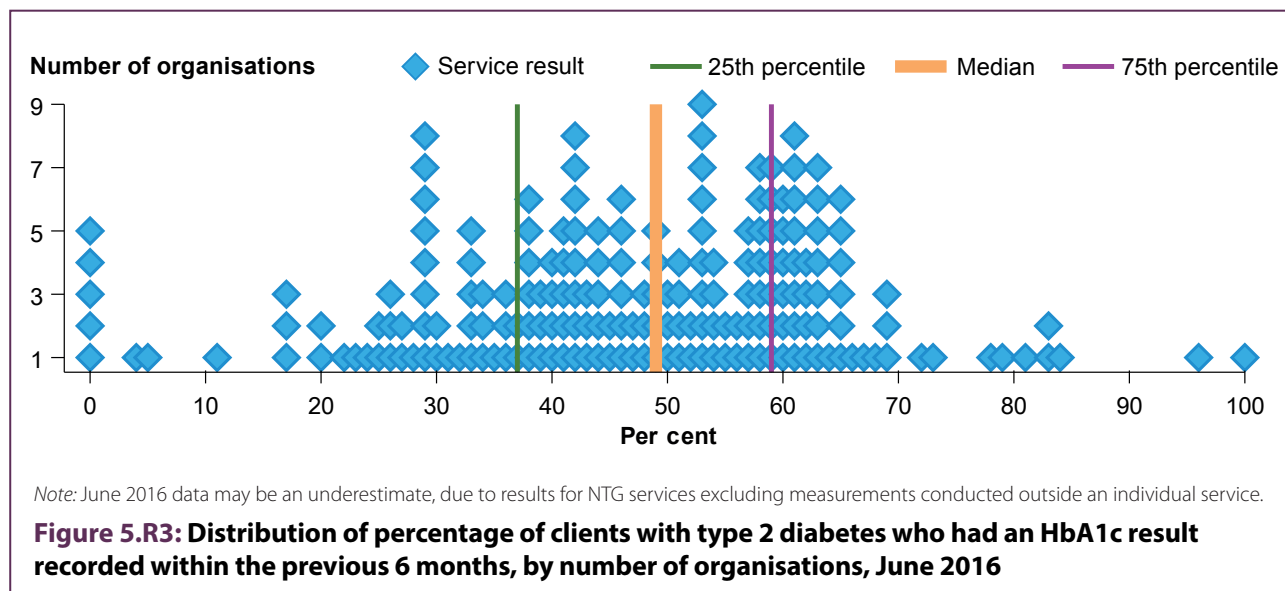


Age and sex distribution in June 2016 showed higher proportions of females in all age groups had HbA1c results recorded within the previous 6 months, compared with males. Males aged 35–44 and 55–64 had a slightly higher proportion for HbA1c results recorded within the previous 12 months (Figure 5.R2 and Table A5.13).



National variation data showed that most organisations were clustered towards the centre of the distribution. Less than half of the organisations (93 of 195) had an HbA1c result recorded within the previous 6 months for at least 49% of their clients (Figure 5.R3).

- Two organisations (1%) had an HbA1c result recorded for more than 90% of their clients.
- Seven organisations (4%) had an HbA1c result recorded for less than 10% of their clients.
- The top 25% of organisations recorded an HbA1c result for 60% of their clients or more.
- The bottom 25% of organisations recorded an HbA1c result for 37% of their clients or fewer.



Variation within states/territories in June 2016 was highest among organisations in Victoria/Tasmania and lowest in Western Australia (Figure A6.33).

Variation within remoteness areas in June 2016 was smallest among organisations in *Major cities*, and *Very remote* areas had the largest variation (Figure A6.34).

Opportunities for action

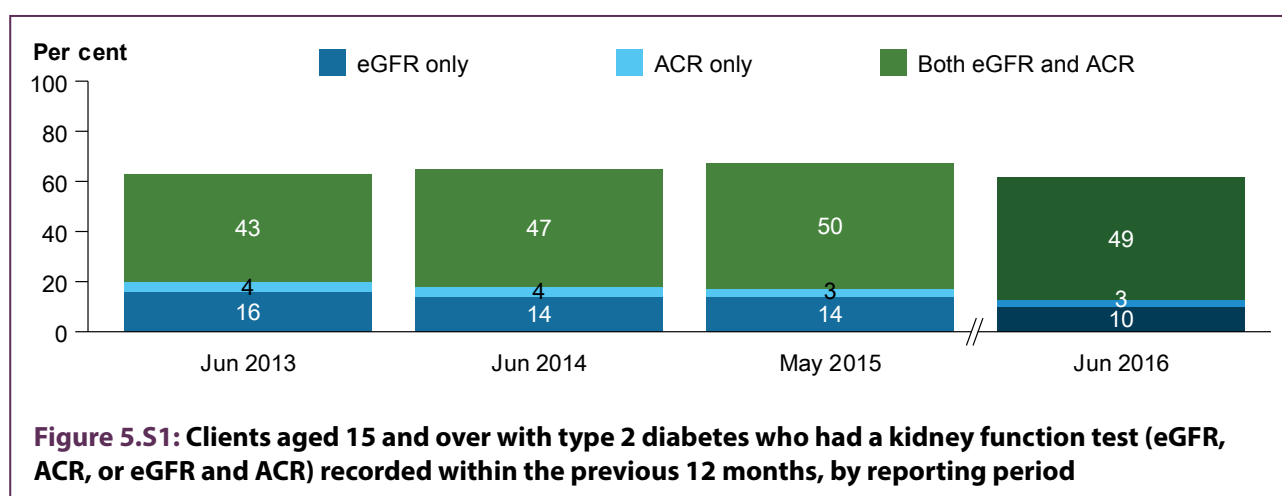
- National variation showed that less than half of organisations had an HbA1c result recorded within the previous 6 months for at least 49% of their clients. Nationally, there has been little change in results over time. There is an opportunity to examine what else can be done to improve HbA1c recording rates.
- Young people (aged <15) had the lowest rate of HbA1c results recorded, with males having lower rates of results recorded than females. Attention should be given to why a lower rate of results is being recorded for young clients with type 2 diabetes, in order to improve early detection of problems and to start management sooner.

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

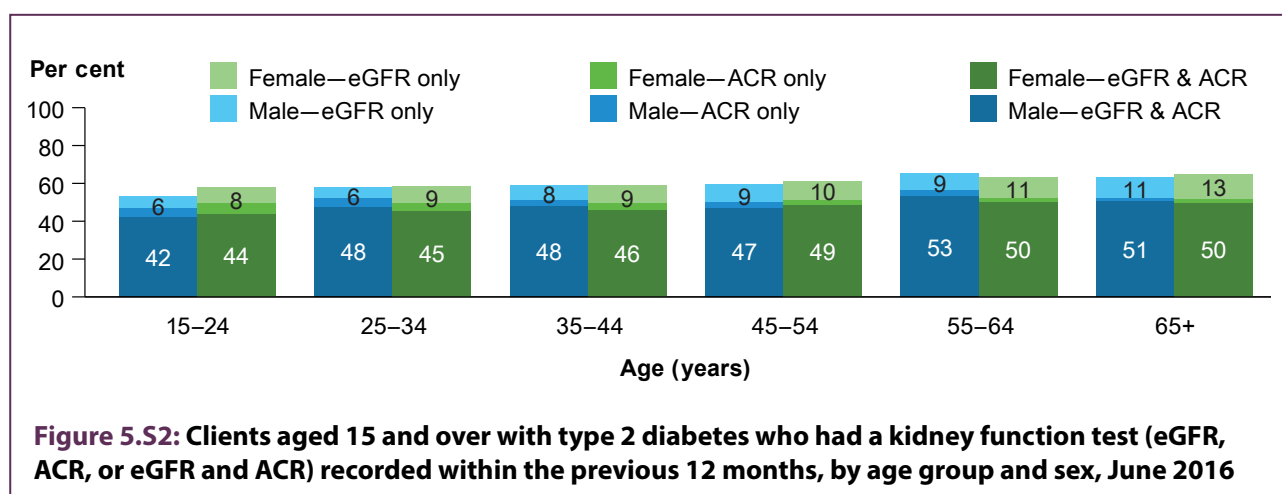
PI18—Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test

Nationally, 62% of Aboriginal and Torres Strait Islander regular clients aged 15 and over with type 2 diabetes had either had an eGFR or albumin/creatinine ratio (ACR) recorded, or both an eGFR and an ACR recorded, within the previous 12 months, as at June 2016 (Figure 5.S1).

Trend analysis showed an increase of 4 percentage points in the total number of Indigenous regular clients who had a kidney function test from June 2013 to May 2015 (Figure 5.S1). The highest increase among jurisdictions was 6 percentage points in the Northern Territory. Across remoteness areas, organisations in *Very remote* areas had the highest increase (7 percentage points) (tables A4.33 and A4.34).

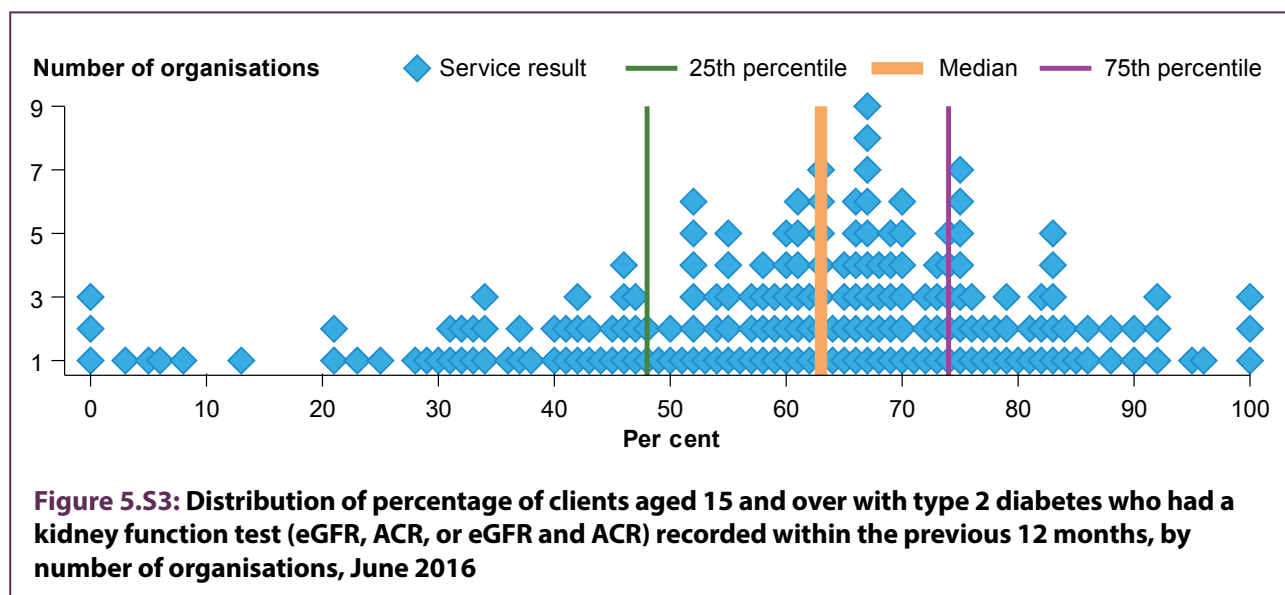


Age and sex distribution in June 2016 showed that a higher percentage of females aged 15–24 with type 2 diabetes had a kidney function test (eGFR, ACR, or both eGFR and ACR) recorded in the past 12 months than males. In all other age groups, percentages were fairly equal between males and females (Figure 5.S2 and Table A5.14).



National variation data revealed that organisation results were concentrated around the median. More than half of the organisations (100 of 194) had a kidney function test (eGFR, ACR, or eGFR and ACR) recorded for clients with type 2 diabetes for at least 63% of their clients (Figure 5.S3).

- Nine organisations (5%) had a kidney function test recorded for more than 90% of their clients.
- Seven organisations (4%) had a kidney function test recorded for less than 10% of their clients.
- In the top 25% of organisations, at least 74% of clients with type 2 diabetes had a kidney function test recorded.
- In the bottom 25% of organisations, 48% of clients with type 2 diabetes or fewer had a kidney function test recorded.



Variation within states/territories in June 2016 was highest among organisations in Victoria/Tasmania and the Northern Territory, while Western Australia had lower variation (Figure A6.35).

Variation within remoteness areas in June 2016 was least in *Inner regional* areas, compared with other remoteness areas (Figure A6.36).

Opportunities for action

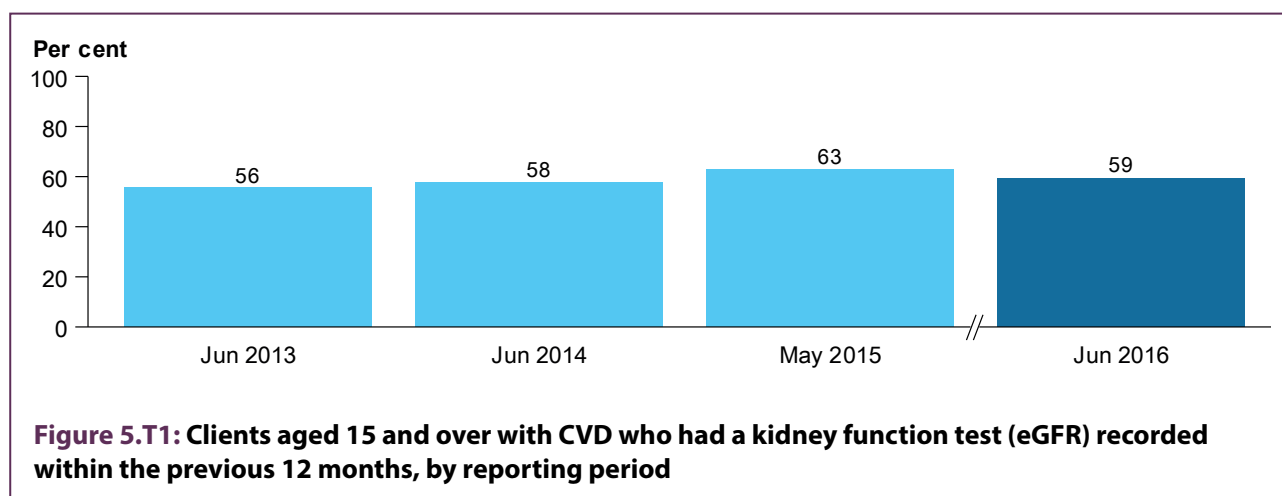
- Indigenous young people aged 15–24 were less likely to have a kidney function test recorded than those aged 65 and over (a difference of 10 percentage points for males and around 7 percentage points for females).
- Diabetes is the most common cause of kidney failure. Clients can lose up to 90% of kidney function and enter end-stage renal disease, or near kidney failure, before they feel sick. If a decrease in kidney function is found early—including early in life—medication and life style interventions can prolong healthy kidney function. Health services have the opportunity to prioritise and improve early detection of kidney disease, and provide or manage the relevant medication, lifestyle interventions, and follow-on treatment when required.

T. Kidney function test recorded—clients with cardiovascular disease

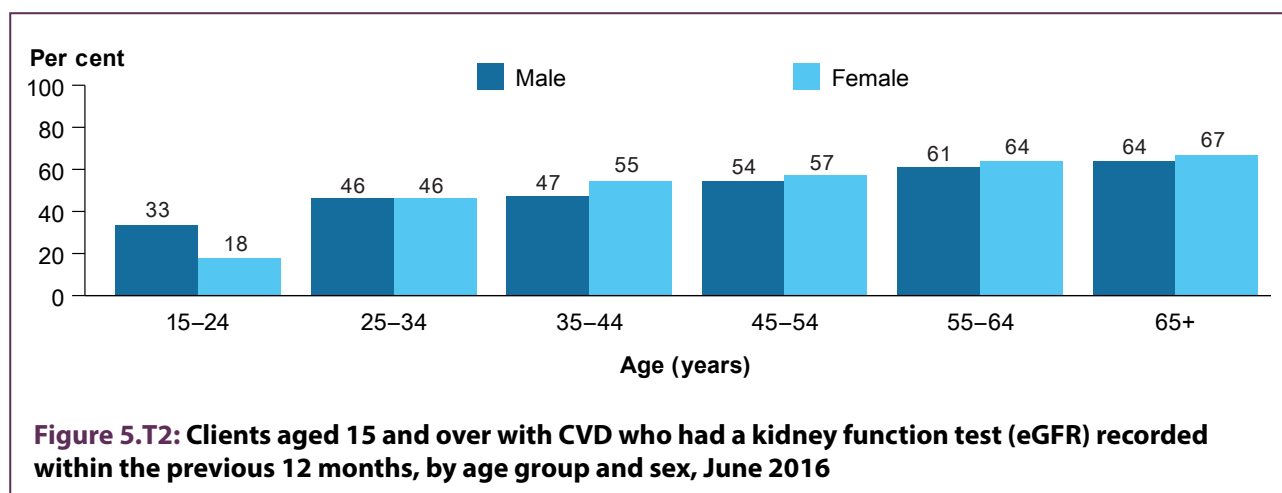
PI18—Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test

Nationally, 59% of Aboriginal and Torres Strait Islander regular clients with CVD aged 15 and over had an eGFR recorded within the previous 12 months, as at June 2016 (Figure 5.T1).

Trend analysis showed a steady increase, totalling 7 percentage points, between June 2013 and May 2015 (Figure 5.T1). The proportion increased by 16 percentage points in Queensland and decreased by 4 percentage points in South Australia. In *Very remote* areas, the proportion increased by 24 percentage points, and decreased by 3 percentage points in *Major cities* (tables A4.35 and A4.36).

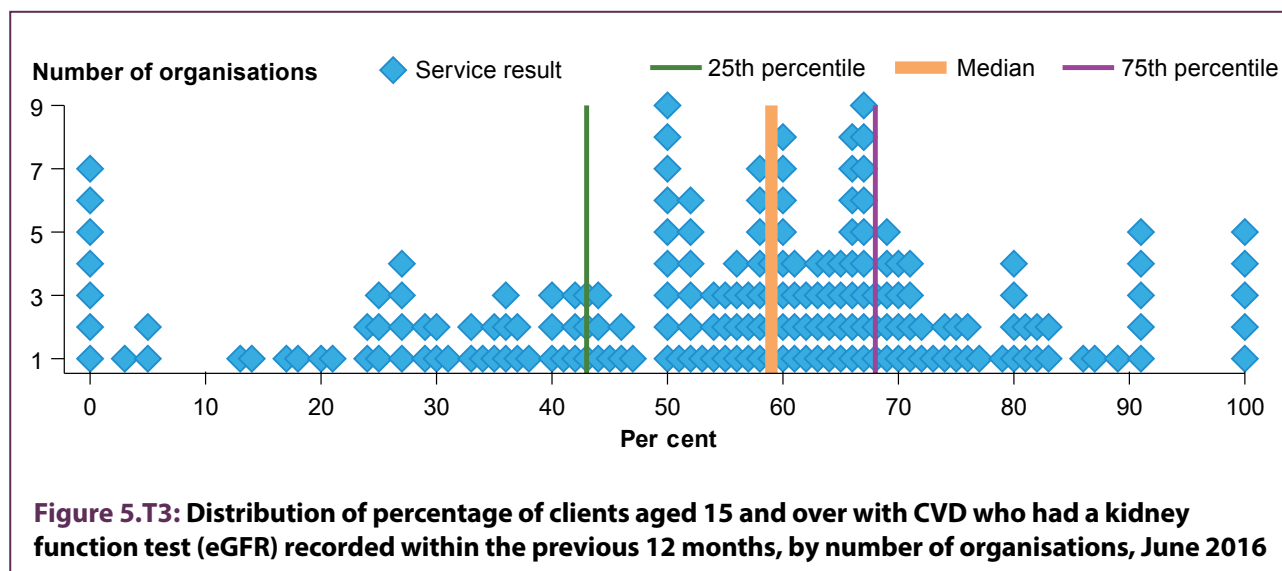


Age and sex distribution in June 2016 showed that the percentage of males and females with CVD who had an eGFR recorded within the previous 12 months increased with age (Figure 5.T2 and Table A5.15).



National variation data revealed a broadly spread pattern of results, with many organisations being clustered around the median. Less than half of the organisations (95 of 193) had a kidney function test (eGFR) recorded for clients with CVD for at least 59% of their clients (Figure 5.T3).

- Ten organisations (5%) had a kidney function test recorded for more than 90% of their clients.
- Ten organisations (5%) had a kidney function test recorded for less than 10% of their clients.
- In the top 25% of organisations, at least 68% of clients with CVD had a kidney function test recorded.
- In the bottom 25% of organisations, 43% of clients with CVD or fewer had a kidney function test recorded.



Variation within states/territories in June 2016 was higher for organisations in the Northern Territory and lower for organisations in New South Wales/the Australian Capital Territory and Western Australia (Figure A6.37).

Variation within remoteness areas in June 2016 was higher in *Very remote* areas, but lower for organisations in *Major cities* (Figure A6.38).

Opportunities for action

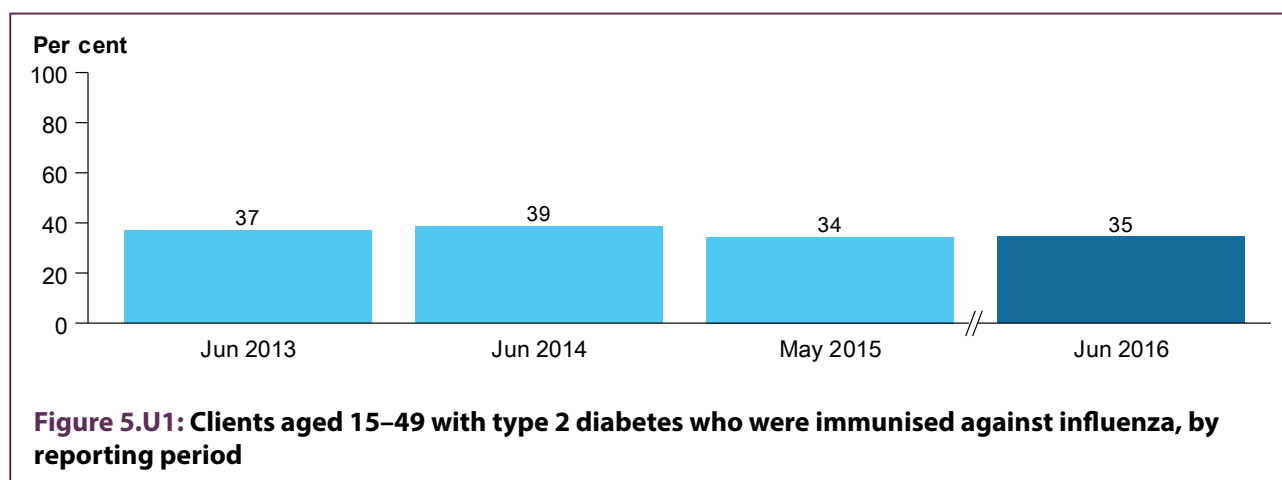
- Variation for this indicator is significant across age groups: clients aged in their mid-60s with CVD are twice as likely as those in their early 20s to have a kidney function test recorded.
- CVD, especially high blood pressure, is a leading cause of CKD. Clients can be unaware they have kidney disease, lose up to 90% of kidney function and enter end-stage renal disease, or near kidney failure, before they feel sick. If a decrease in kidney function is found early—including early in life—medication and life style interventions can prolong healthy kidney function.
- Health services have the opportunity to prioritise and improve early detection of kidney disease, and to provide or manage the relevant medication, lifestyle interventions, and follow-on treatment when required.

U. Immunised against influenza—clients with type 2 diabetes

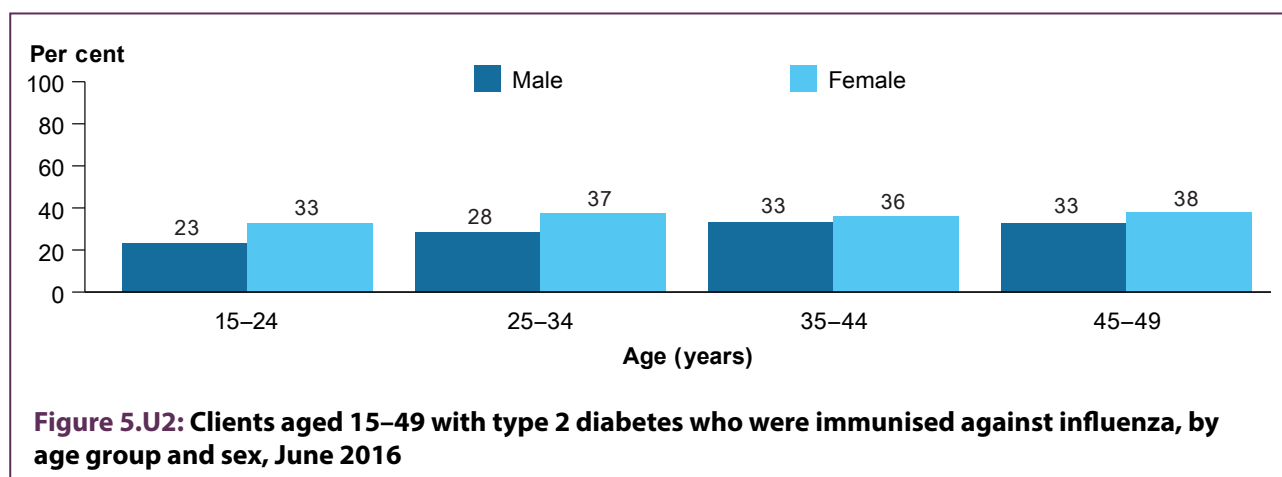
PI15—Proportion of Indigenous regular clients with type 2 diabetes who are immunised against influenza

Nationally, 35% of Aboriginal and Torres Strait Islander regular clients aged 15–49 with type 2 diabetes were immunised against influenza, as at June 2016 (Figure 5.U1).

Trend analysis showed a decrease of 3 percentage points from June 2013 to May 2015 (Figure 5.U1). New South Wales/the Australian Capital Territory and Western Australia increased by 2 percentage points, but all other jurisdictions decreased, with Queensland showing the greatest decrease (9 percentage points). *Inner regional* and *Outer regional* areas increased by 4 and 1 percentage point(s), respectively. All other remoteness areas showed decreases, with the largest decrease (7 percentage points) in *Very remote* areas (tables A4.37 and A4.38).

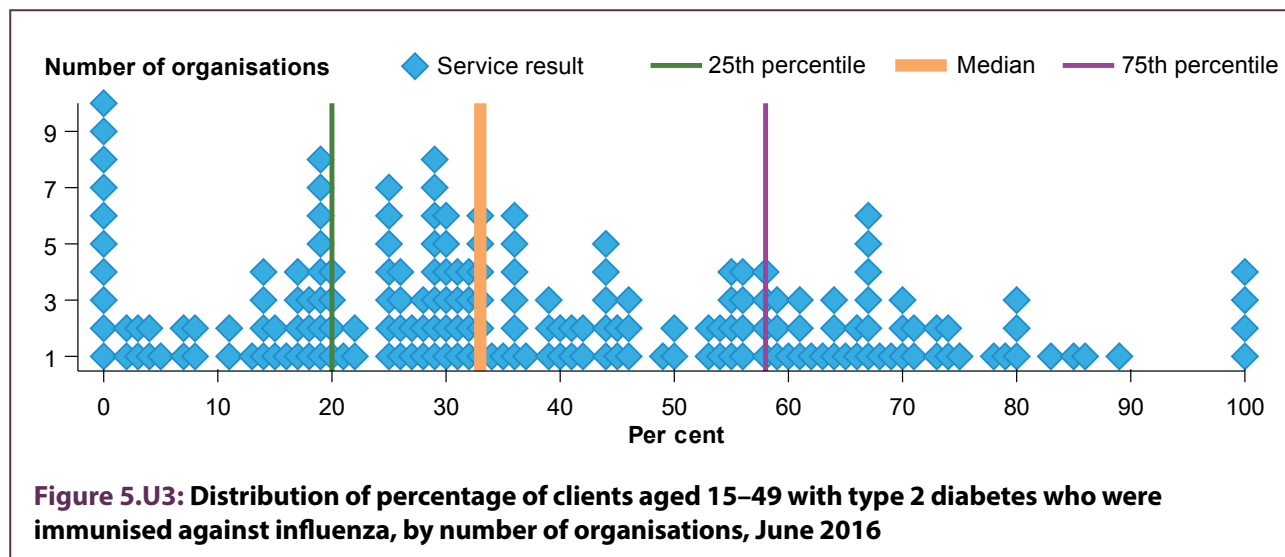


Age and sex distribution in June 2016 showed that other than for females aged 35–44 and males aged 45–49, proportions of both males and females with type 2 diabetes who were immunised against influenza increased with age (Figure 5.U2 and Table A5.16).



National variation data showed that although there was a broad spread of results, more organisations tended to immunise fewer than 50% of their clients. More than half of the organisations (99 of 190) had at least 33% of clients with type 2 diabetes who were immunised against influenza (Figure 5.U3).

- Four organisations (2%) had more than 90% of their clients who were immunised against influenza.
- Twenty-one organisations (11%) had less than 10% of their clients who were immunised against influenza.
- In the top 25% of organisations, at least 58% of clients with type 2 diabetes were immunised against influenza.
- In the bottom 25% of organisations, 20% clients with type 2 diabetes or fewer were immunised against influenza.



Variation within states/territories in June 2016 was largest among organisations in Victoria/Tasmania. The variation among organisations in Western Australia was lower than other jurisdictions (Figure A6.39).

Variation within remoteness areas in June 2016 was higher among organisations in *Remote* and *Very remote* areas than in other remoteness areas. Variation was lowest for organisations in *Major cities* (Figure A6.40).

Opportunities for action

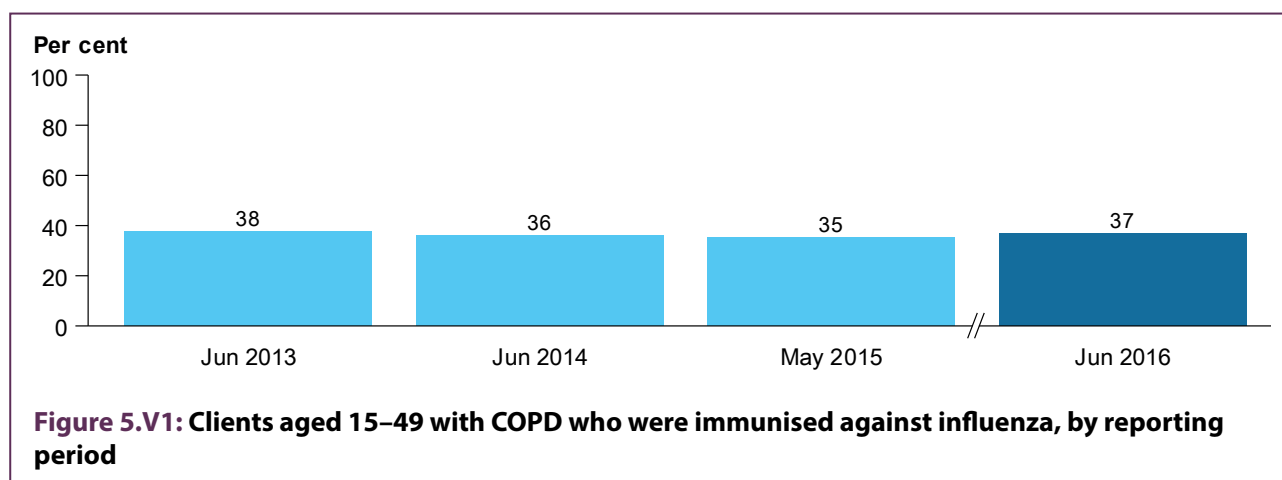
- Influenza viruses can cause a range of disease symptoms that are often severe, leading to hospitalisation and/or death.
- All organisations should take responsibility for monitoring the immunisation status of their clients, and for using their recall systems to assist with vaccinating as per guidelines in the National Immunisation Programme Schedule.
- Organisations need to ensure their records of adult immunisation status are accurate. CQI efforts could focus initially on this.
- Health services have the opportunity to provide influenza vaccinations to clients with type 2 diabetes and aid in reducing the risk of hospitalisation and death from influenza and pneumonia through promotion and education activities.

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

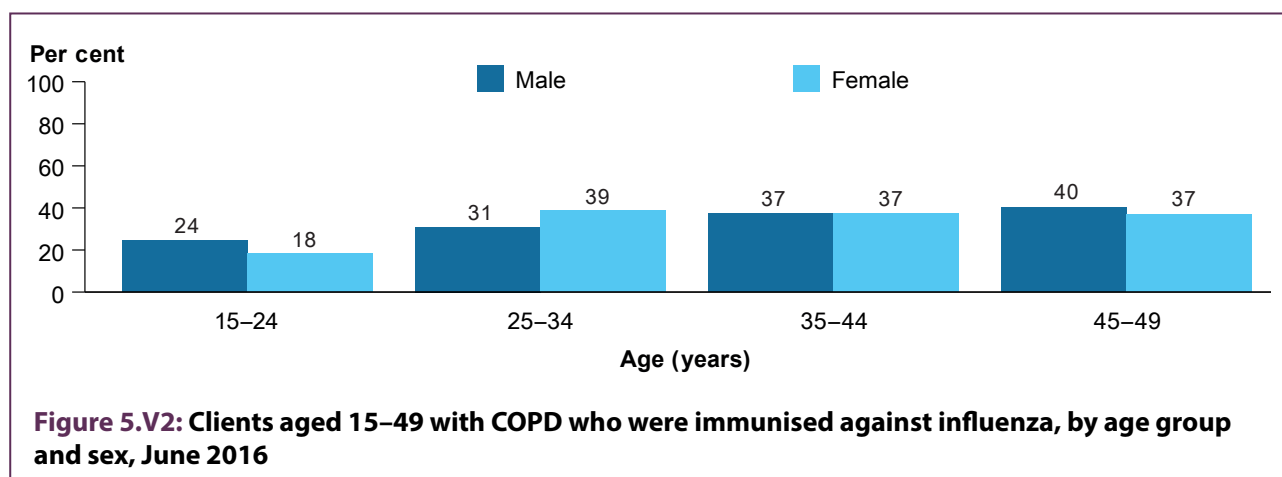
PI15—Proportion of Indigenous regular clients with COPD who are immunised against influenza

Nationally, 37% of Aboriginal and Torres Strait Islander regular clients aged 15–49 with COPD were immunised against influenza, as at June 2016 (Figure 5.V1).

Trend analysis showed a decrease of 2 percentage points nationally over the period June 2013 to May 2015 (Figure 5.V1). Immunisation rates in all jurisdictions decreased, with the Northern Territory showing the largest decrease (9 percentage points). Among remoteness areas, *Inner regional* and *Outer regional* areas, immunisation rates increased (2 percentage points and 1 percentage point, respectively), while immunisation rates in all other areas decreased, with *Very remote* areas showing the largest decrease (10 percentage points) (tables A4.39 and A4.40).

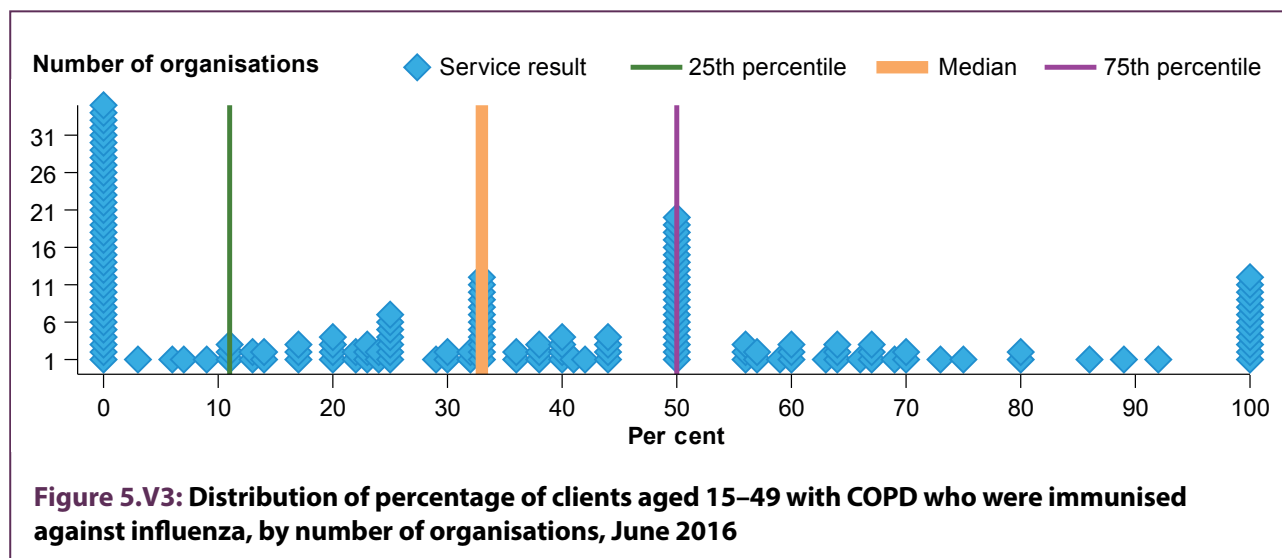


Age and sex distribution in June 2016 showed the percentage of males with COPD who were immunised against influenza increased with age. For females with COPD, the percentage immunised against influenza stabilised for the 2 older age groups (Figure 5.V2 and Table A5.16).



National variation data showed a broadly dispersed pattern of results, with the largest peak in organisation numbers being immunising fewer than 10% of clients. More than half of the organisations (86 of 158) had at least 33% of clients with COPD who were immunised against influenza (Figure 5.V3).

- Thirteen organisations (8%) had more than 90% of their clients who were immunised against influenza.
- Thirty-nine organisations (25%) had less than 10% of their clients who were immunised against influenza.
- In the top 25% of organisations, at least 50% of clients with COPD were immunised against influenza.
- In the bottom 25% of organisations, 11% of clients with COPD or fewer were immunised against influenza.



Variation within states/territories in June 2016 was smallest among organisations in South Australia (Figure A6.41).

Variation within remoteness areas in June 2016 was largest among organisations in *Very remote* areas. Variation was smallest in *Major cities* (Figure A6.42).

Opportunities for action

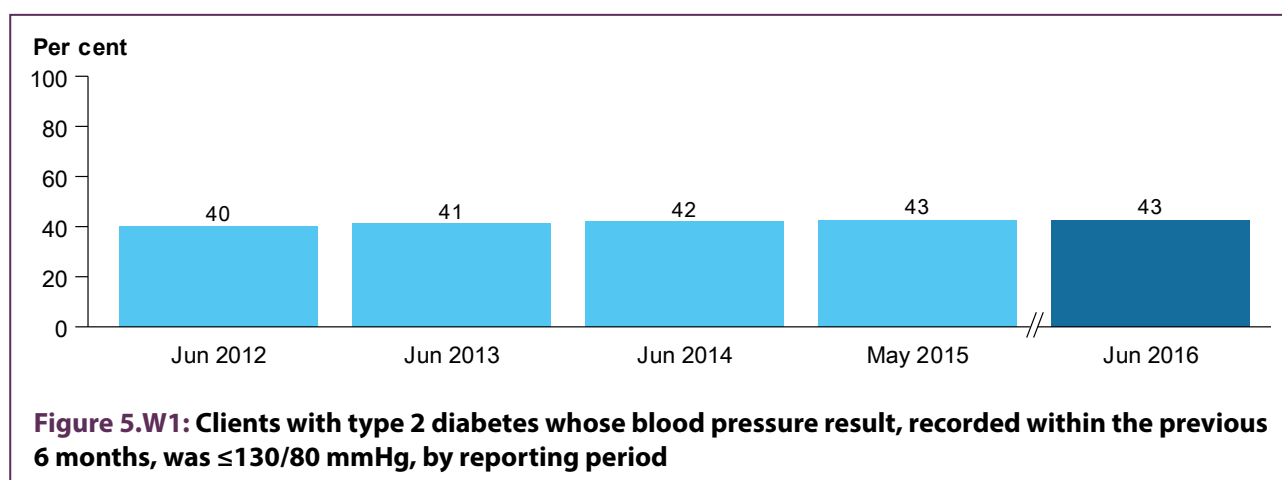
- Influenza viruses can cause a range of disease symptoms that are often severe, leading to hospitalisation and/or death.
- All organisations should take responsibility for monitoring the immunisation status of their clients, and for using their recall systems to assist with vaccination, as per National Immunisation Programme Schedule Guidelines.
- Organisations need to ensure their records of adult immunisation status are accurate. CQI efforts could focus initially on this.
- Health services have the opportunity to provide influenza vaccinations to clients who have COPD and to aid in reducing the risk of hospitalisation and death from influenza and pneumonia through promotion and education activities.

W. Blood pressure result—clients with type 2 diabetes

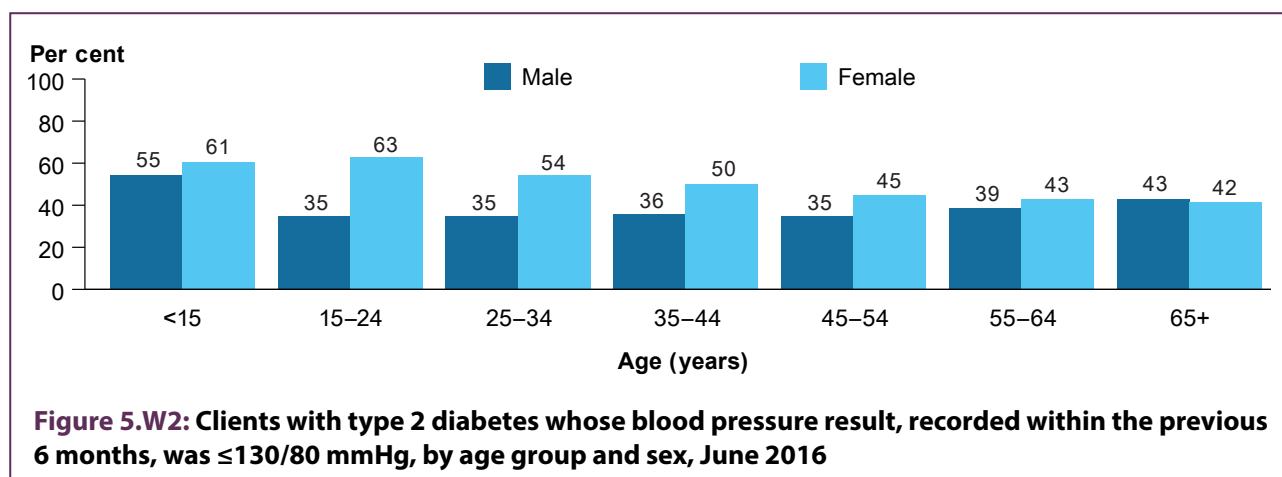
PI24—Proportion of Indigenous regular clients with type 2 diabetes whose blood pressure measurement result was less than or equal to 130/80 mmHg

Nationally, 43% 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 recorded within the previous 6 months, as at June 2016 (Figure 5.W1).

Trend analysis showed increases between most reporting periods, with an overall change of 2 percentage points between June 2012 and May 2015 (Figure 5.W1). There were improvements in New South Wales/the Australian Capital Territory (7 percentage points) and the Northern Territory (6 percentage points), but South Australia and Victoria/Tasmania decreased (12 percentage points and 2 percentage points, respectively). *Inner regional* areas increased by 4 percentage points, while *Major cities* increased by 1 percentage point (tables A4.41 and A4.42).

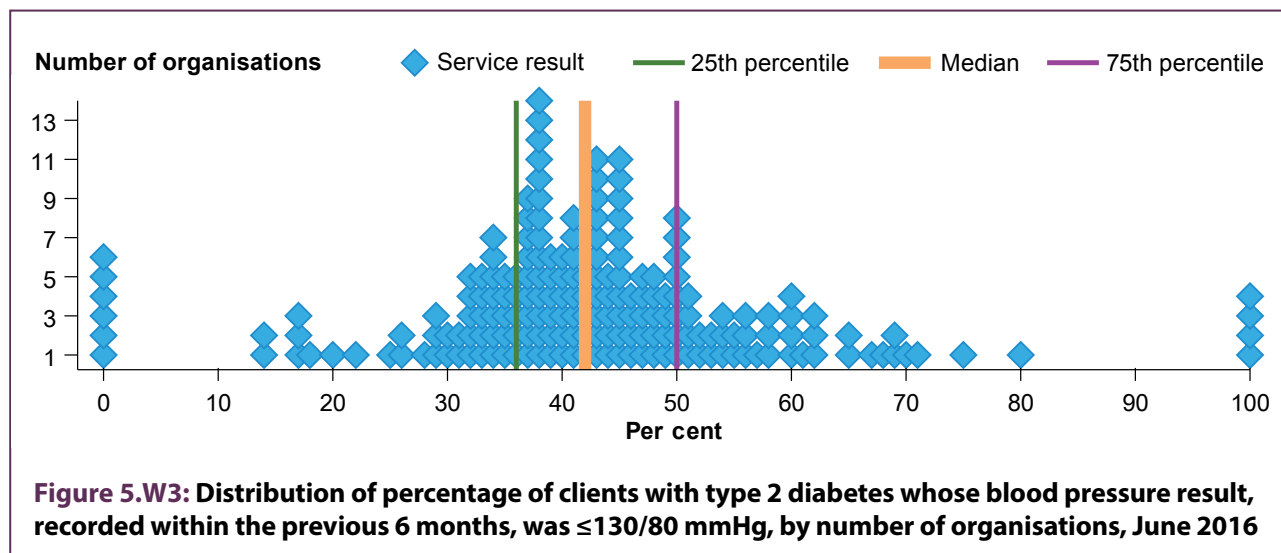


Age and sex distribution in June 2016 showed that, in all age groups up to age 64, a higher percentage of female than male Indigenous regular clients had a blood pressure result of $\leq 130/80$ mmHg (Figure 5.W2 and Table A5.17).



National variation data revealed that organisation numbers tended to cluster around the median. About half of the organisations (98 of 195) had at least 42% of clients with type 2 diabetes who had a recorded blood pressure result of $\leq 130/80$ mmHg (Figure 5.W3).

- Four organisations (2%) had a blood pressure result of $\leq 130/80$ mmHg recorded for more than 90% of their clients.
- Six organisations (3%) had a blood pressure result of $\leq 130/80$ mmHg recorded for less than 10% of their clients.
- In the top 25% of organisations, at least 50% of clients had a blood pressure result of $\leq 130/80$ mmHg recorded.
- In the bottom 25% of organisations, 36% of clients or fewer had a blood pressure result of $\leq 130/80$ mmHg recorded.



Variation within states/territories in June 2016 between organisations was highest in Victoria/Tasmania, and lowest in Queensland and New South Wales/the Australian Capital Territory (Figure A6.43).

Variation within remoteness areas in June 2016 was lowest for organisations in *Inner regional* areas (Figure A6.45).

Opportunities for action

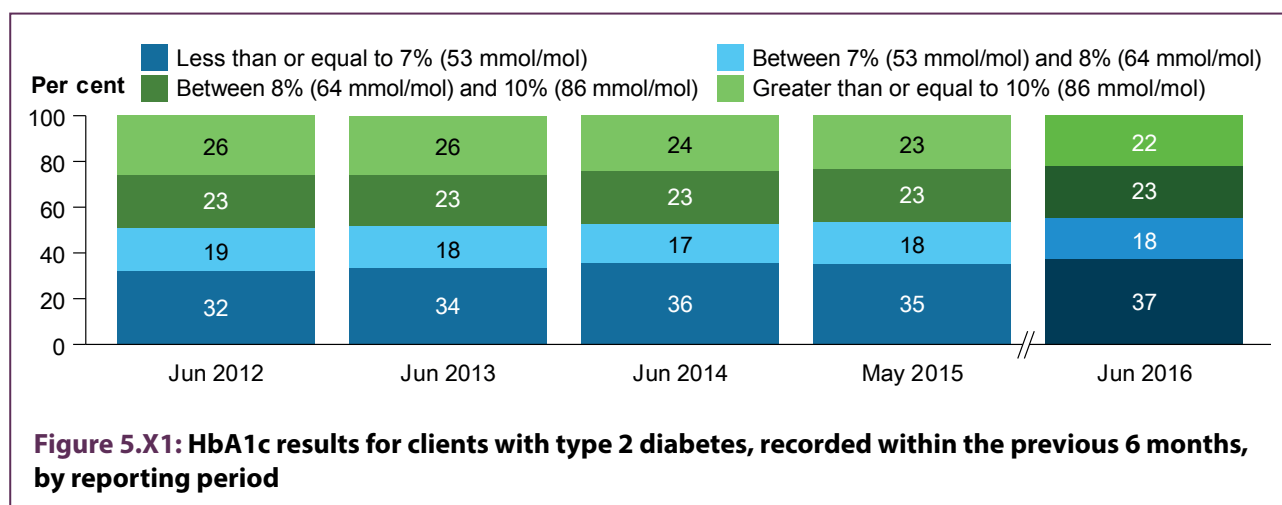
- High blood pressure is a major risk factor for stroke, coronary heart disease, heart failure, kidney disease, deteriorating vision, and for peripheral vascular disease that leads to leg ulcers and gangrene (AHMAC 2015).
- Organisations with a high percentage of clients who have type 2 diabetes and high blood pressure have the opportunity to review current practices for their management.

X. HbA1c result—clients with type 2 diabetes

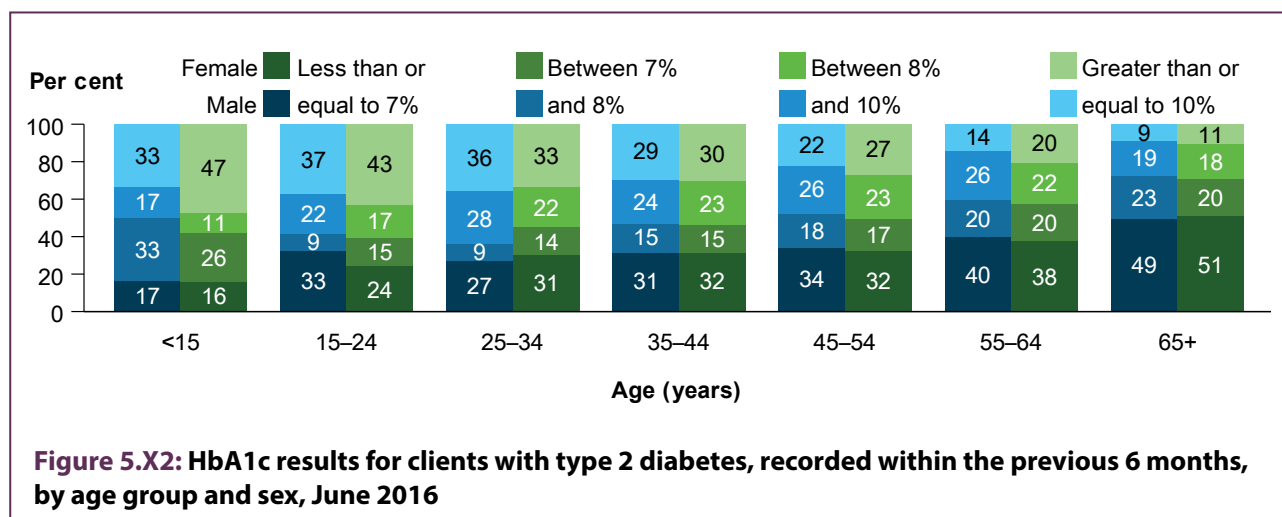
PI06—Proportion of Indigenous regular clients with type 2 diabetes whose HbA1c measurement result was within a specified level

Nationally, 37% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had an HbA1c result of less than or equal to 7% recorded within the previous 6 months, as at June 2016 (Figure 5.X1).

Trend analysis showed an increase of 3 percentage points between June 2012 and May 2015 for clients with an HbA1c result of $\leq 7\%$ (Figure 5.X1). Queensland had the greatest improvement among jurisdictions over the period (7 percentage points) and Victoria/Tasmania decreased by 3 percentage points. *Outer regional* areas had the highest increase (6 percentage points) and *Inner regional* areas showed a slight decrease (tables A4.43 and A4.44).

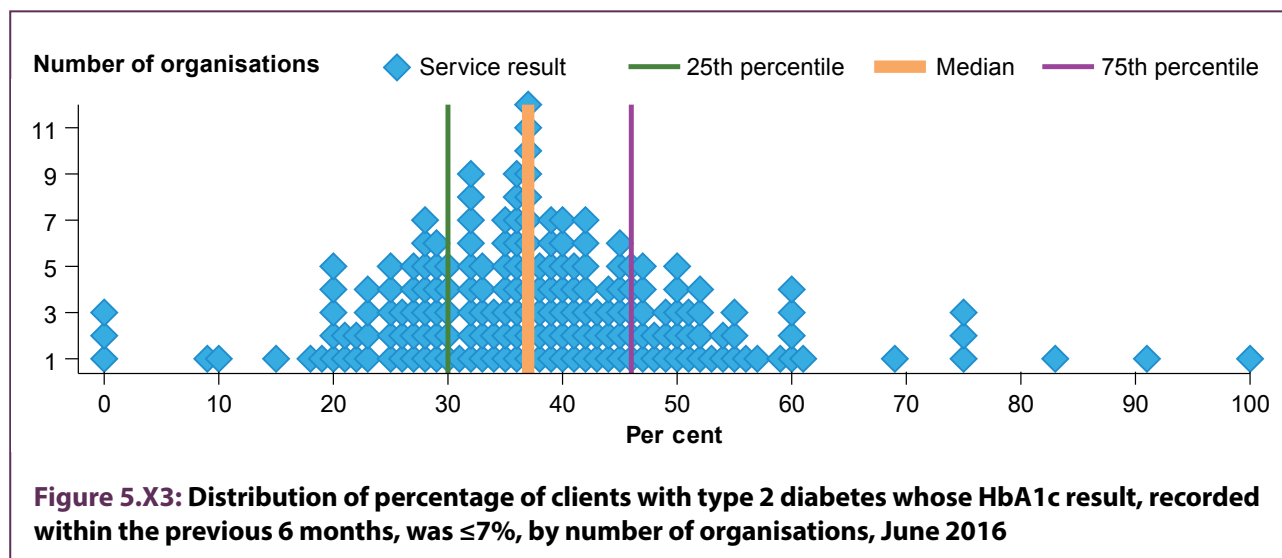


Age and sex distribution in June 2016 showed a higher proportion of males aged 55–64 and 65 and over with an HbA1c result of $\leq 7\%$ in the previous 6 months. Females with an HbA1c result of $\leq 7\%$ increased with age. A higher proportion of female Indigenous regular clients aged less than 15 had an HbA1c result of $\geq 10\%$ in the previous 6 months, compared with Indigenous regular clients aged 15 and over (Figure 5.X2 and Table A5.18).



National variation data revealed that results for most organisations were concentrated around the median. More than half of the organisations (98 of 190) had at least 37% of clients with type 2 diabetes who had an HbA1c result of $\leq 7\%$ (Figure 5.X3).

- Two organisations (1%) had an HbA1c result of $\leq 7\%$ for more than 90% of their clients.
- Four organisations (2%) had an HbA1c result of $\leq 7\%$ for less than 10% of their clients.
- In the top 25% of organisations, 46% of clients or more had an HbA1c result of $\leq 7\%$.
- In the bottom 25% of organisations, 30% of clients or fewer had an HbA1c result of $\leq 7\%$.



Variation within states/territories in June 2016 was largest among organisations in Victoria/Tasmania. There was less variation among organisations in Western Australia (Figure A6.45).

Variation within remoteness areas in June 2016 was smallest among organisations in *Major cities* (Figure A6.46).

Opportunities for action

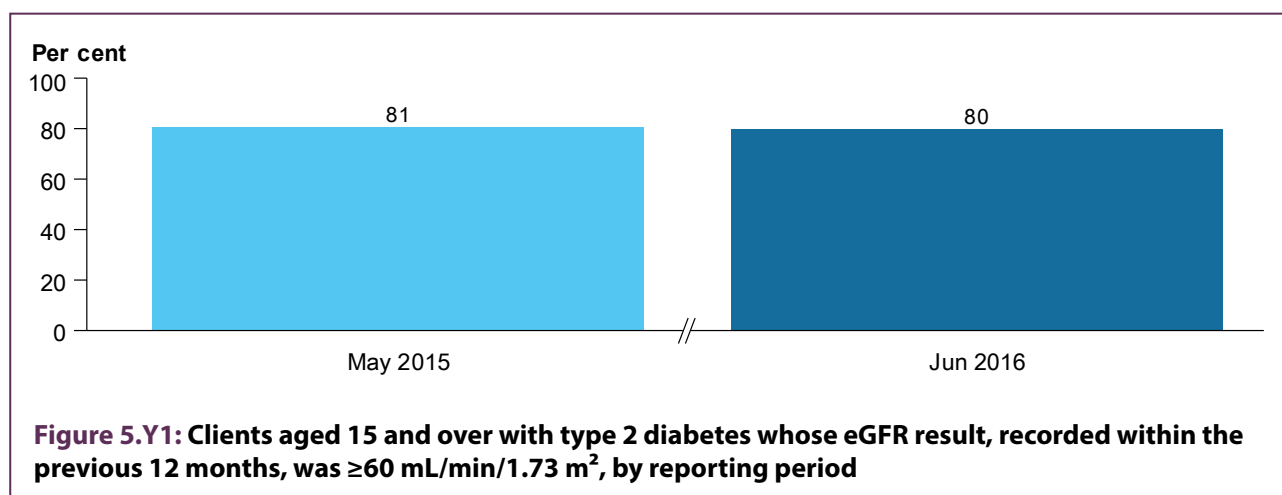
- At the national level, 37% of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had an HbA1c result of $\leq 7\%$. This indicates that there is an opportunity to review whether current practices are effectively targeting and managing clients with type 2 diabetes.
- Young people (aged <15) had a higher proportion than other age groups of an HbA1c result of $\geq 10\%$. Health organisations can focus on more activities to assist clients who have type 2 diabetes—*young clients in particular*—to manage their HbA1c levels.

Y. Kidney function test result—clients with type 2 diabetes

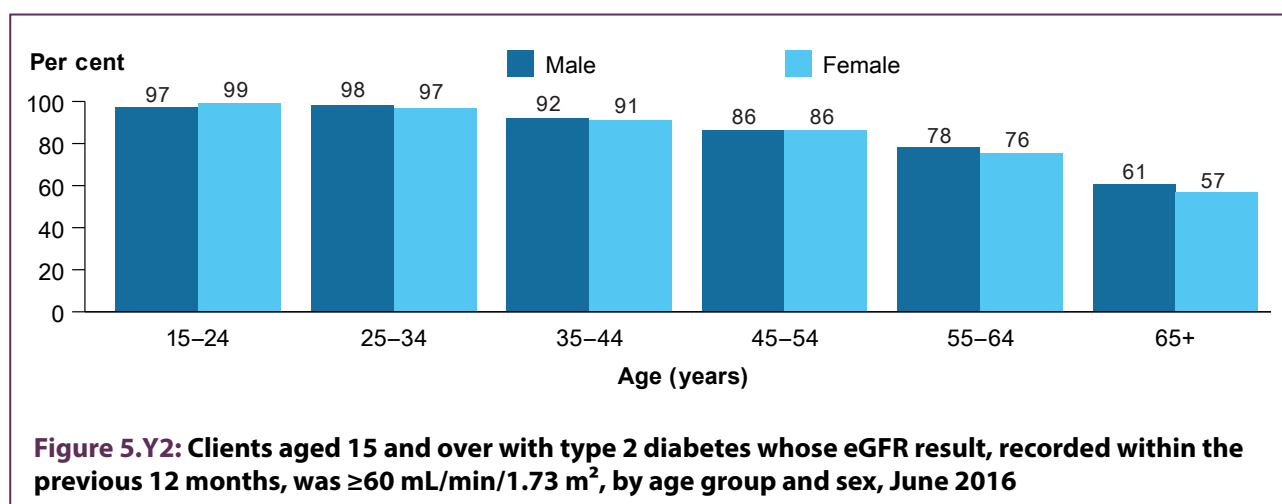
PI19—Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test with results within specified levels

Nationally, 80% of Aboriginal and Torres Strait Islander regular clients aged 15 and over with type 2 diabetes had an eGFR recorded within the previous 12 months, with a result of greater than or equal to 60 mL/min/1.73 m², as at June 2016 (Figure 5.Y1).

Trend analysis data (tables A4.45 and A4.46) are not available for a full year for this indicator as the data were only collected from December 2014.

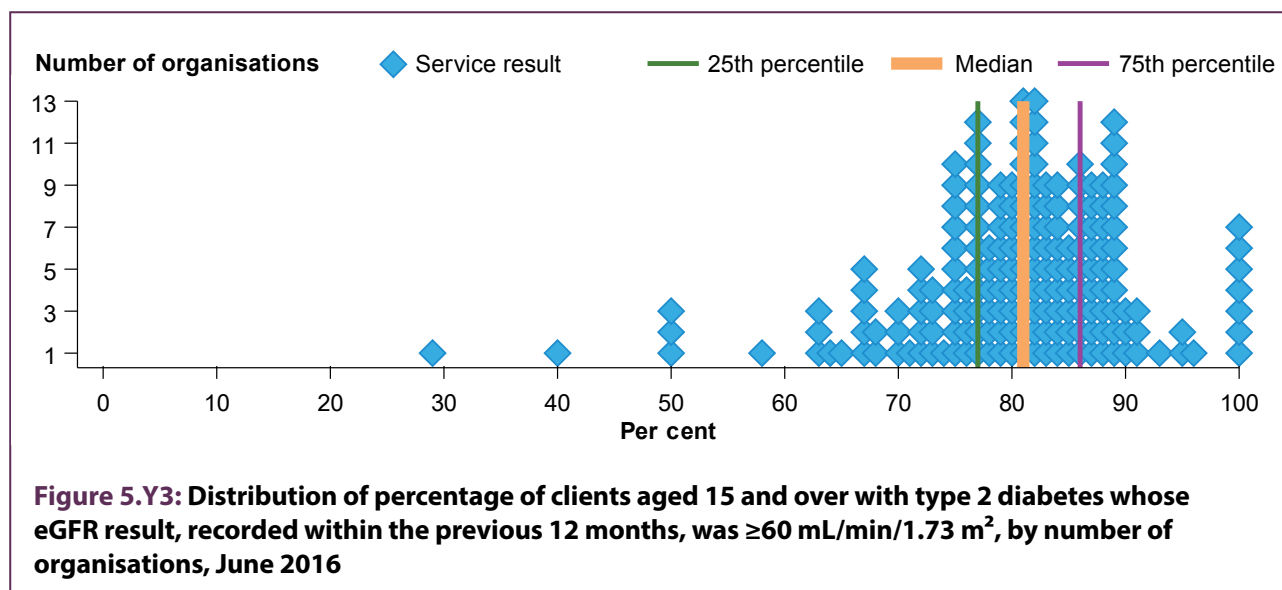


Age and sex distribution in June 2016 for Indigenous regular clients with type 2 diabetes who had an eGFR result of ≥ 60 mL/min/1.73 m² showed higher proportions for males and females aged 15–44. Proportions decreased for those aged 45 to 65 and over, indicating that kidney function decreased with age (Figure 5.Y2 and Table A5.19).



National variation data showed a narrower distribution of results, with most organisations clustered around the median. More than half of the organisations (99 of 189) had at least 81% of clients with type 2 diabetes with an eGFR result of ≥ 60 mL/min/1.73 m² (Figure 5.Y3).

- Fifteen organisations (8%) had a result of ≥ 60 mL/min/1.73 m² for more than 90% of their clients.
- One organisation (less than 1%) had a result of ≥ 60 mL/min/1.73 m² for less than 30% of their clients.
- In the top quartile of organisations, at least 86% of clients with type 2 diabetes had a result of ≥ 60 mL/min/1.73 m².
- In the bottom quartile of organisations, 77% of clients with type 2 diabetes or fewer had a result of ≥ 60 mL/min/1.73 m².



Variation within states/territories in June 2016 was highest among organisations in Victoria/Tasmania (Figure A6.47).

Variation within remoteness areas in June 2016 was larger in *Outer regional* and *Very remote* areas compared with other remoteness areas (Figure A6.48).

Opportunities for action

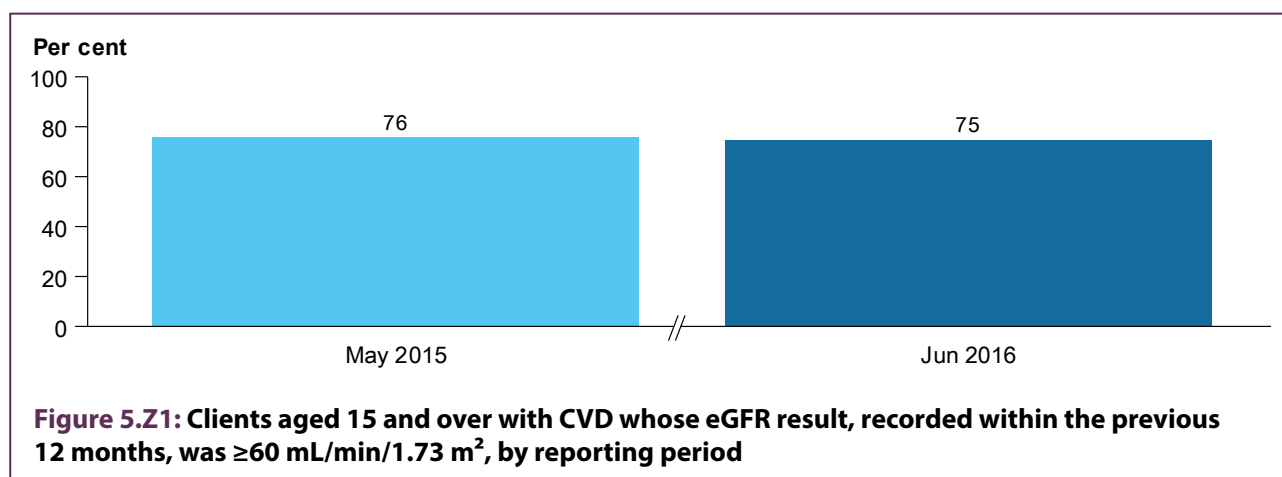
- Diabetes is the most common cause of kidney failure. Clients can lose up to 90% of kidney function and enter end-stage renal disease, or near kidney failure before they feel sick. If a decrease in kidney function is found early—including early in life—medication and life style interventions can prolong healthy kidney function.
- Health services have the opportunity to reduce the incidence of kidney disease for Aboriginal and Torres Strait Islander people with diabetes, particularly those who live in *Outer regional* and *Very remote* areas, by working with clients to manage their diabetes and improve their kidney function.

Z. Kidney function test result—clients with cardiovascular disease

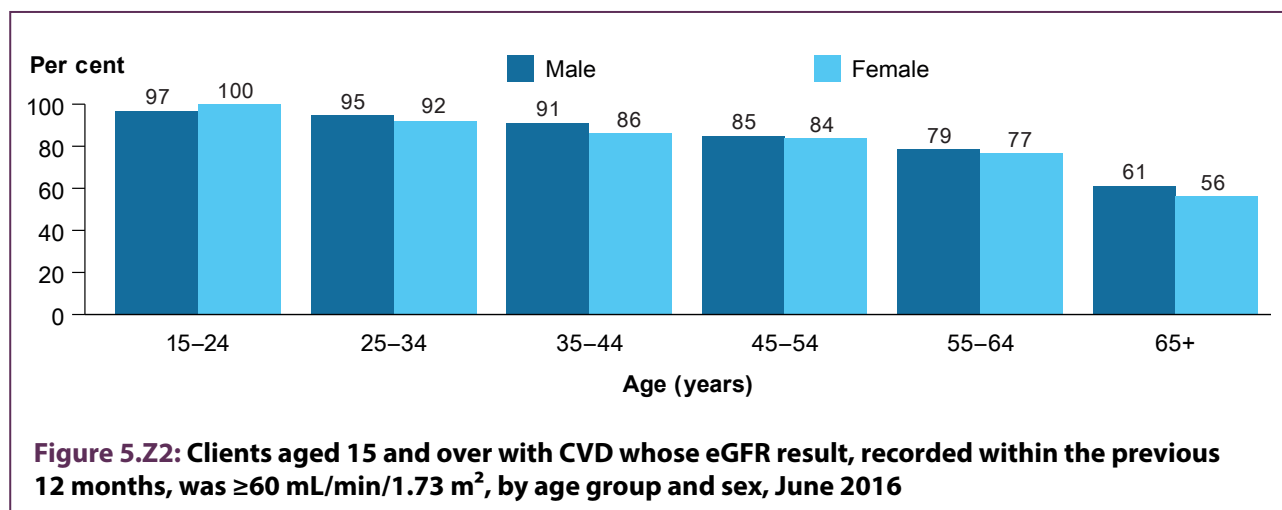
PI19—Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test with results within specified levels

Nationally, 75% of Aboriginal and Torres Strait Islander regular clients aged 15 and over with CVD had an eGFR recorded within the previous 12 months with a result of greater than or equal to 60 mL/min/1.73 m², as at June 2016 (Figure 5.Z1).

Trend analysis data (tables A4.47 and A4.48) are not available for a full year for this indicator, as the data were only collected from December 2014.

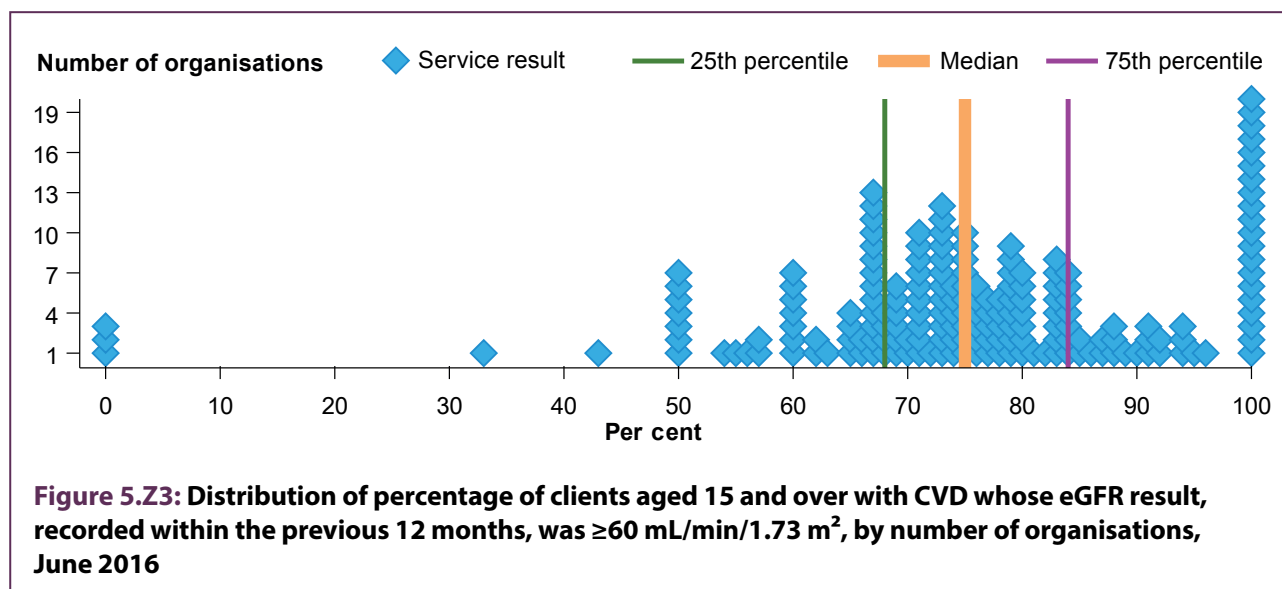


Age and sex distribution in June 2016 for Indigenous regular clients with CVD who had an eGFR result of ≥ 60 mL/min/1.73 m² showed higher proportions for males and females aged 15–44. Proportions decreased for those aged 45 to 65 and over, indicating that kidney function decreased with age (Figure 5.Z2 and Table A5.20).



National variation data revealed that most organisations recording results of ≥ 60 mL/min/1.73 m² for more than 50% of clients. More than half of the organisations (99 of 186) had at least 75% of clients with CVD with a result of ≥ 60 mL/min/1.73 m² (Figure 5.Z3).

- Thirty-one organisations (17%) had a result of ≥ 60 mL/min/1.73 m² for more than 90% of their clients.
- Three organisations (2%) had a result of ≥ 60 mL/min/1.73 m² for less than 10% of their clients.
- In the top quartile of organisations, at least 84% of clients with CVD had a result of ≥ 60 mL/min/1.73 m².
- In the bottom quartile of organisations, 68% of clients with CVD or fewer had a result of ≥ 60 mL/min/1.73 m².



Variation within states/territories in June 2016 was highest among organisations in Victoria/Tasmania and lowest in Western Australia (Figure A6.49).

Variation within remoteness areas in June 2016 was higher among organisations in *Very remote* areas compared with organisations in other remoteness areas (Figure A6.50).

Opportunities for action

- The most significant variation in kidney function test results occurred in *Outer regional* and *Very remote* areas; 3 organisations reported a normal kidney function test result for less than 10% of clients with CVD.
- CVD, especially high blood pressure, is a leading cause of CKD, and is a largely preventable condition. Health services have the opportunity to reduce the incidence of CKD for Aboriginal and Torres Strait Islander people with CVD—particularly those who live in *Outer regional* and *Very remote* areas—by working with clients on lifestyle interventions to prevent CVD and to improve their kidney function.
- Health services can also work with communities and other organisations to address the most significant risk factors for CVD: smoking, and health behaviours associated with high blood pressure and high cholesterol.

Chapter 6

Organisations by Primary Health Networks

6.1 Why is this important?

On 1 July 2015, the Australian Government established 31 Primary Health Networks (PHNs). The purpose of the PHNs is to (a) increase the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and (b) improve upon the coordination of care so as to ensure that patients receive the right care in the right place at the right time. The PHNs replaced the 61 Medicare Locals that had previously been in operation. These Medicare Locals had, in turn, been the replacement for 112 Divisions of General Practice. The change to PHNs emerged from the *2014 Horvath review of Medicare Locals*. Recommendations arising from the review included, among other things, a restructuring of the existing Medicare Locals system to reduce fragmentation of services. Although PHNs work directly with primary health care providers, such as general practitioners, secondary care providers, and hospitals in the interests of all patients, the Australian Government has agreed to 6 key priorities for targeted work by PHNs. Aboriginal and Torres Strait Islander health has been identified as 1 of the key priority areas for PHNs (DoH 2015b).

In this chapter, the distribution of services within PHNs is described. However, nKPI results for PHNs have not been included in this report for 2 reasons:

- The number of nKPI services varies (a range of 0–71) across PHNs (Table 6.1). In the interests of confidentiality, analysis of nKPI data excludes PHNs where there are fewer than 3 organisations. Given that there are 31 PHNs in total, preserving confidentiality necessitates an omission of approximately one-third (between 9 and 11 PHNs, depending on the indicator) of all PHNs from nKPI analysis. This issue is exacerbated at lower levels of analysis, such as when considering nKPI results by SA3 region within a single PHN.
- It is not possible to attribute the results (positive or otherwise) of Indigenous-specific primary health care services within a PHN to that particular PHN. That is because PHNs have other health services, such as GPs, that may contribute to the health outcomes observed for clients attending nKPI services.

6.2 Distribution of services across PHNs

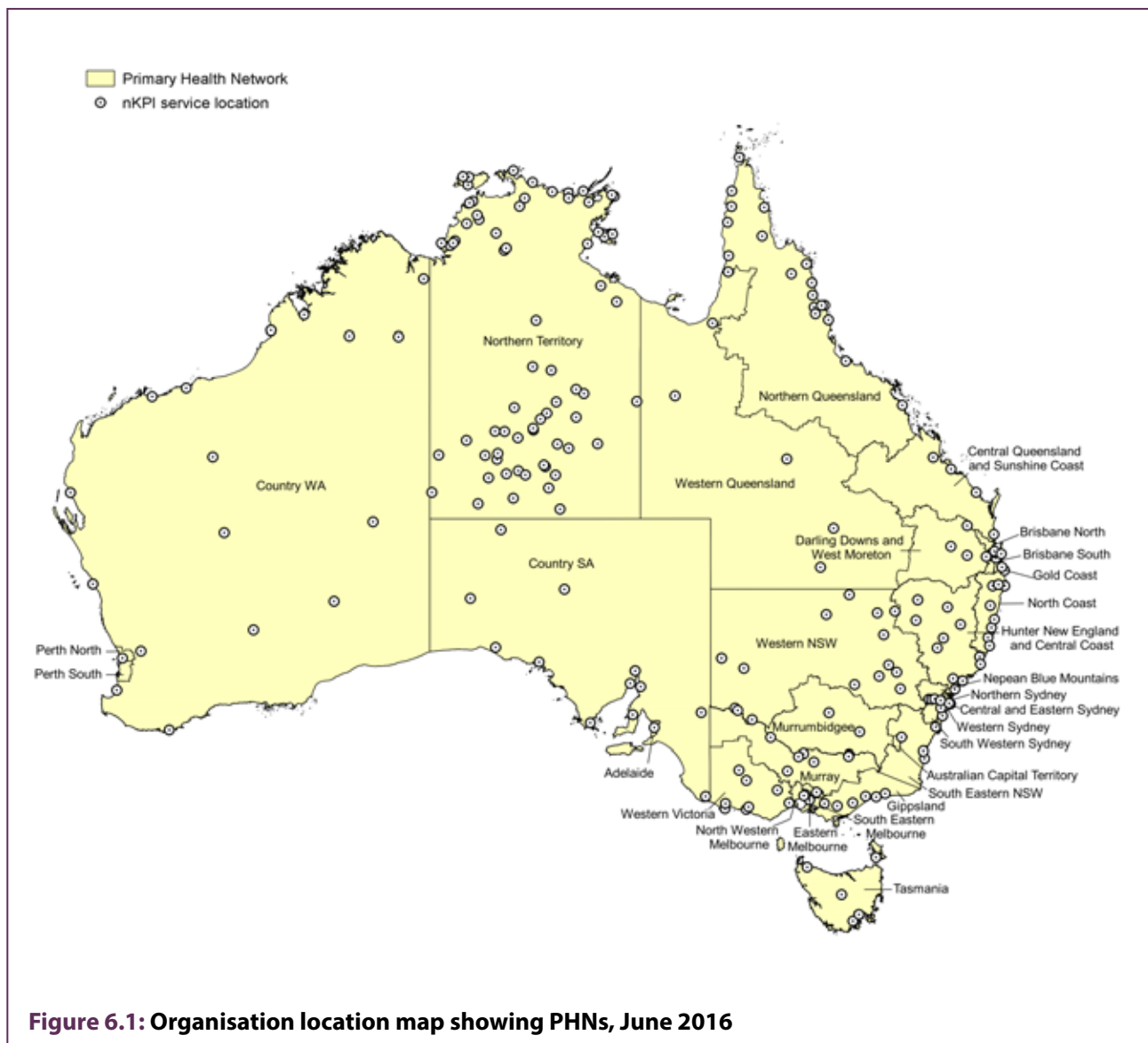
Services reporting nKPI data for the June 2016 period were distributed across PHNs. The PHN with the largest number (71) of reporting organisations was the Northern Territory, whereas 16 PHNs had less than 5 organisations reporting (Table 6.1):

- 16 PHNs had <5 services
- 6 PHNs had ≥ 5 and ≤ 9 services
- 4 PHNs had ≥ 10 and ≤ 19 services
- 3 PHNs had ≥ 20 services.

Table 6.1: Number of services, by Primary Health Network (PHN), June 2016

Primary Health Network name	Number of services
Central and Eastern Sydney (PHN101 NSW)	<5
Western Sydney (PHN103 NSW)	<5
Nepean Blue Mountains (PHN104 NSW)	5
South Western Sydney (PHN105 NSW)	<5
South Eastern NSW (PHN106 NSW)	7
Western NSW (PHN107 NSW)	14
Hunter New England and Central Coast (PHN108 NSW)	14
North Coast (PHN109 NSW)	10
Murrumbidgee (PHN110 NSW)	<5
North Western Melbourne (PHN201 Vic)	<5
Eastern Melbourne (PHN202 Vic)	<5
South Eastern Melbourne (PHN203 Vic)	<5
Gippsland (PHN204 Vic)	6
Murray (PHN205 Vic)	8
Western Victoria (PHN206 Vic)	8
Brisbane North (PHN301 Qld)	<5
Brisbane South (PHN302 Qld)	<5
Gold Coast (PHN303 Qld)	<5
Darling Downs and West Moreton (PHN304 Qld)	<5
Western Queensland (PHN305 Qld)	<5
Central Qld, Wide Bay, Sunshine Coast (PHN306 Qld)	<5
Northern Queensland (PHN307 Qld)	20
Adelaide (PHN401 SA)	<5
Country SA (PHN402 SA)	14
Perth North (PHN501 WA)	<5
Country WA (PHN503 WA)	21
Tasmania (PHN601 Tas)	6
Northern Territory (PHN701 NT)	71
Australian Capital Territory (PHN801 ACT)	<5

In addition to a relatively large number of services being located in the Northern Territory PHN, a greater number of services were located in PHNs located on the eastern seaboard of Australia (Figure 6.1).



Chapter 7

Progress against the Implementation Plan goals

7.1 Why is this important?

In October 2015, the Australian Government released the Implementation Plan (IP) for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023. The IP outlines the actions to be taken by the Australian Government, the Aboriginal community controlled health sector, and other key stakeholders to give effect to the vision, principles, priorities, and strategies of the National Aboriginal and Torres Strait Islander Health Plan 2013–2023. For more information on the IP, its vision and the context for its goals, see *National Aboriginal and Torres Strait Islander Health Plan 2013–2023*.

The IP has set goals to be achieved by 2023 for a set of 20 indicators for Indigenous health care processes and outcomes at the national level. They were developed to complement the existing COAG Closing the Gap targets:

- close the gap in life expectancy within a generation (by 2031)
- halve the gap in mortality rates for Indigenous children under five within a decade (by 2018)
- ninety-five percent of all Indigenous four-year-olds enrolled in early childhood education (by 2025)—renewed target
- close the gap between Indigenous and non-Indigenous school attendance within five years (by 2018)
- halve the gap for Indigenous children in reading, writing and numeracy achievements within a decade (by 2018)
- halve the gap for Indigenous Australians aged 20–24 in Year 12 attainment or equivalent attainment rates (by 2020)
- halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade (by 2018) (PM&C 2017).

The IP goals focus on prevention and early intervention across the life course and were agreed through a comprehensive consultation process with the National Health Leadership Forum, the Department of Health, the AIHW, and the Department of the Prime Minister and Cabinet. The 2023 IP goal for each indicator was set based on historical trend analyses of several national datasets undertaken by the AIHW. For a summary of the national IP goals, information on how they were selected, and technical details, such as data sources and baseline measures, see *Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013–2023: technical companion document 2015*.

Some of the indicators developed to measure the IP goals are similar to the nKPIs, making it useful to compare nKPI results at a national level with indicators for the relevant IP goals. Box 7.1 shows relevant IP goal indicators mapped to similar nKPIs. There are 13 IP goal indicators that can be mapped to 9 nKPIs, based on data available for this current nKPI national report (the 3 IP goal indicators on child immunisation map to 1 nKPI indicator, and 3 IP goal indicators on health checks map to 1 nKPI indicator). In the figures presented below, the corresponding nKPI indicator number is included in brackets next to the IP goal. Note that specifications for the IP goal indicators and the nKPI indicators are not identical in all cases. Any comparisons should be interpreted with this non-equivalence in mind.

The 9 nKPIs can be classified into 3 categories (A, B, and C), based on the type of data reported on and the quality of this data. Category A nKPIs are process-of-care indicators and generally accepted to have good quality data. Category B nKPIs are process-of-care indicators with data of a lesser, more questionable quality. Category C nKPIs are related to smoking status indicators, which are classified as health outcome indicators (Box 7.1).

Only indicators from Category A (that is, 7 IP goals mapped to 5 process-of-care indicators with good quality data) are presented within this chapter. Processes-of-care indicators are largely under the control of organisations, which is why these indicators can be used to review the results of 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. This information is not collected with the nKPI data. Detailed information on any known data-quality issues impacting on the interpretation of these indicators are provided in Chapter 1, 'nKPI data quality'.

Improvements in health outcome indicators take longer to be observed at a population level, as these depend more on clients' circumstances and, usually, on behaviour and lifestyle changes. These indicators are important to measure, to inform patient care and population health policies and programs at the local and national level. However, many of these factors are beyond the immediate control of primary health care organisations. Therefore, health outcome indicators are not reasonable measures against which an organisation's results should be assessed (Category C nKPIs).

Box 7.1: IP goals and nKPIs

Category A—7 IP goal indicators mapped against 5 process-of-care nKPIs

Adult immunisation

- i. Rate of Indigenous adults aged 50 and over who are immunised for influenza (PI14).

Diabetes care

- ii. Rate of Indigenous Australians with type 2 diabetes who have regular HbA1c tests (12 months) (PI05).
- iii. Rate of Indigenous Australians with type 2 diabetes who have regular blood pressure tests (PI23).
- iv. Rate of Indigenous Australians with type 2 diabetes who have renal function tests (PI18).

Health checks

- v. Rate of children aged 0–4 who have at least 1 Indigenous health check annually (PI03 aged 0–4).
- vi. Rate of Indigenous Australians aged 25–54 who have at least 1 health check in a year (part of PI03 aged 25 and over).
- vii. Rate of Indigenous Australians aged 55 and over who have at least 1 health check in a year (part of PI03 aged 25 and over).

Category B—4 IP goal indicators mapped against 2 process-of-care nKPIs

Child immunisation

- viii. Rate of Indigenous children at age 1 who are fully immunised (part of PI04).
- ix. Rate of Indigenous children at age 2 who are fully immunised (part of PI04).
- x. Rate of Indigenous children at age 5 who are fully immunised (part of PI04).

Antenatal care

- xi. Rate of Indigenous women attending at least 1 antenatal visit in the first trimester of pregnancy (PI13)

Category C—2 IP goal indicators mapped against 2 health outcome nKPIs

Smoking outcomes

- xii. Rate of smoking among Indigenous women during pregnancy (PI11).
- xiii. Rate of tobacco smoking among Indigenous Australians aged 18 and over (PI10 with a different age group).

7.2 Summary of progress

In the interests of presenting data that are historically comparable, the following comparison of nKPI June 2016 results with the IP goals excludes data for NTG health care organisations. The setting of the IP goals took place prior to December 2015, when NTG health care organisations used a definition of Indigenous regular client that differed from that used by other organisations (for more information see Chapter 1).

The data presented in Table 7.1 show a generally positive pattern of results, indicating that, at the national level, nKPI health organisations are generally on track to meet the 2023 IP goals. Nationally, results for 3 of the 7 measures in the nKPI collection exceeded the respective 2016 IP goal trajectories: MBS health assessment—aged 0–4; aged 25–54; and aged 55 and over. Nationally, a further 3 indicators fell short of 2016 IP goal trajectories by less than 1 percentage point (HbA1c result recorded (12 months)—clients with type 2 diabetes; Blood pressure result recorded—clients with type 2 diabetes) or by 2 percentage points (Kidney function test recorded—clients with type 2 diabetes). The indicator Immunisation against influenza—clients aged 50 and over fell short of the target by almost 26 percentage points.

Table 7.1: 2023 IP goals and 2016 IP goal trajectories, mapped against Category A nKPI national results

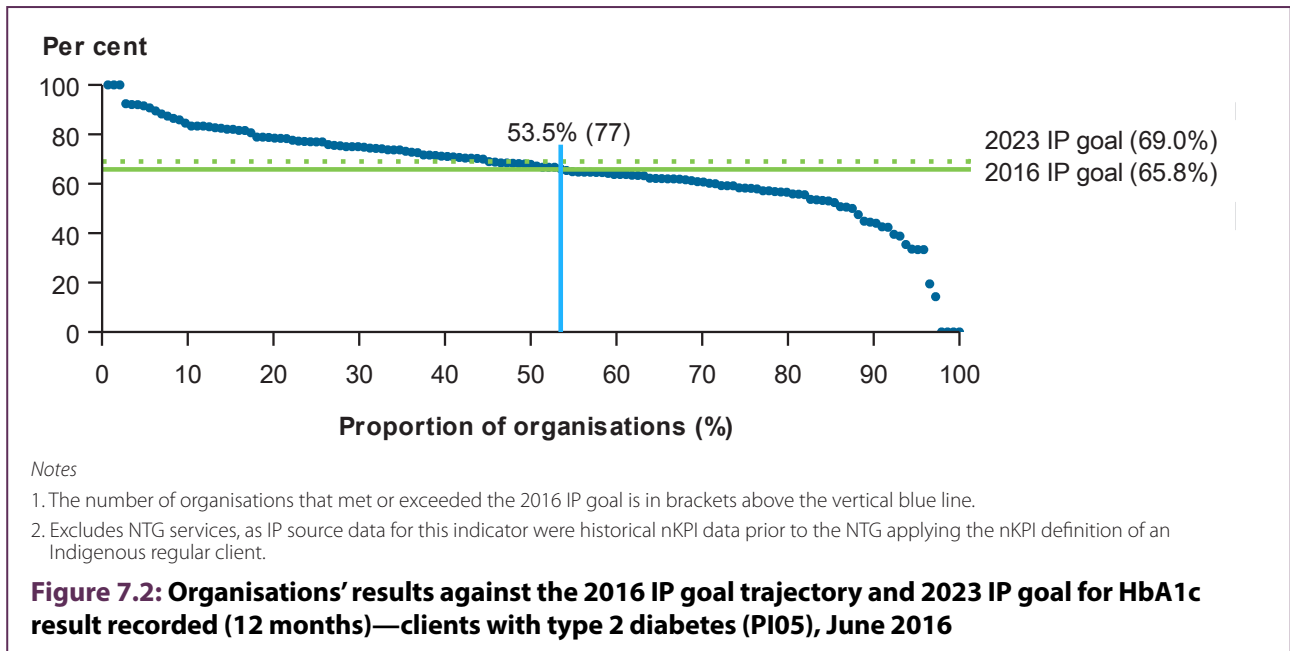
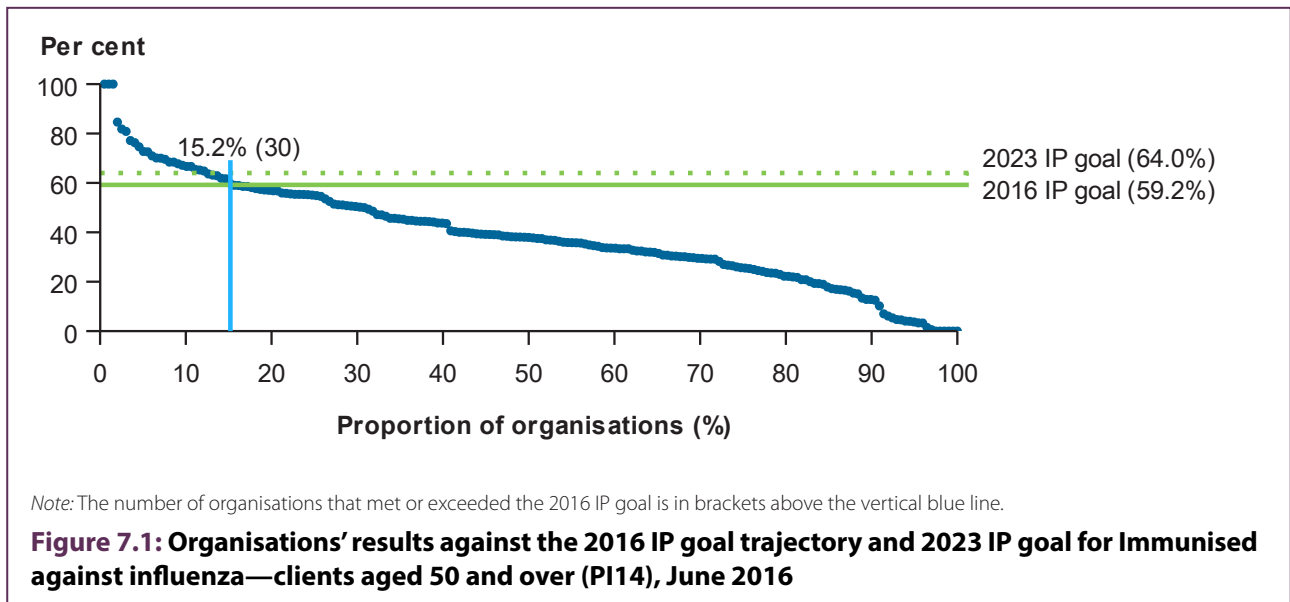
Indicator	2023 IP goal (%)	2016 IP goal (%)	nKPI result June 2016
Adult immunisation			
PI14: Immunised against influenza—clients aged 50 and over	64.0	59.2	33.3
Diabetes care			
PI05: HbA1c result recorded (12 months)—clients with type 2 diabetes ^(a)	69.0	65.8	64.9
PI23: Blood pressure result recorded—clients with type 2 diabetes ^(a)	70.0	66.3	65.9
PI18: Kidney function test recorded—clients with type 2 diabetes ^(a)	69.0	65.6	63.5
Health checks			
PI03: MBS health assessment—aged 0–4	69.0	33.1	34.9
PI03: MBS health assessment—aged 25–54	63.0	31.7	46.3
PI03: MBS health assessment—aged 55 and over	74.0	41.7	53.6

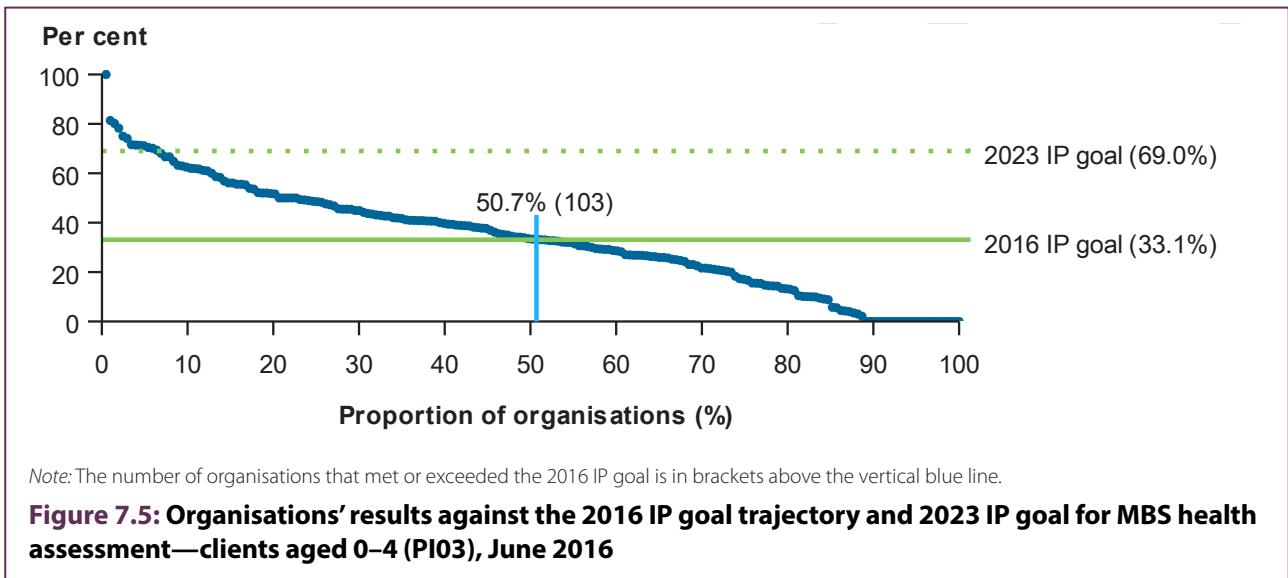
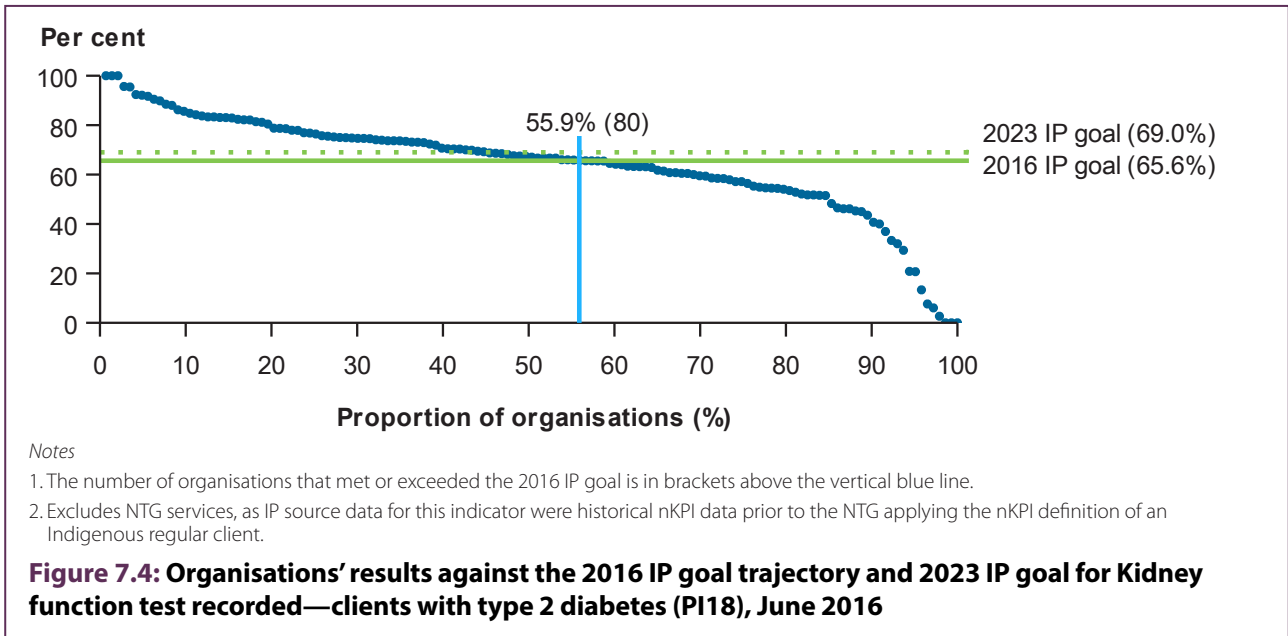
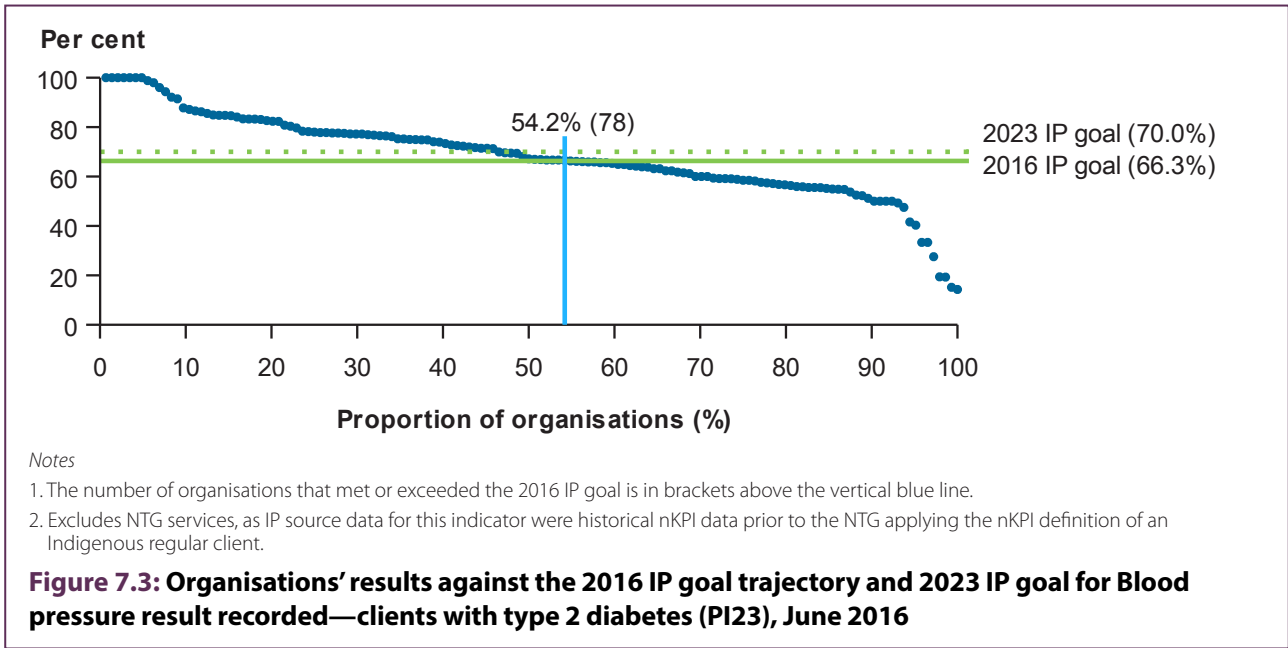
(a) nKPI June 2016 results exclude NTG services, as IP source data for this indicator were historical nKPI data prior to the NTG applying the nKPI definition of an Indigenous regular client.

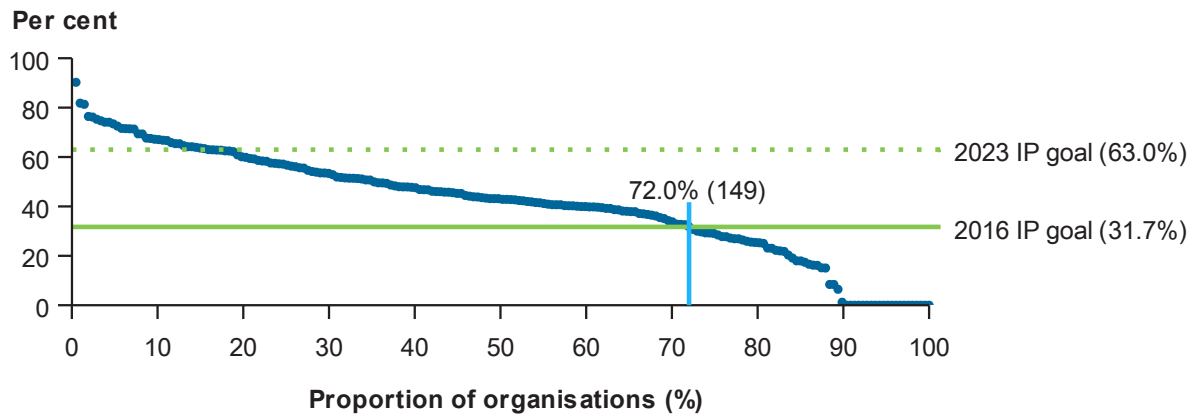
The following figures (figures 7.1–7.7) show organisations’ results on the 7 Category A indicators relative to 2023 IP goals and 2016 IP goal trajectories. The dark blue line shows the proportion of organisations (x-axis) that have reached or exceeded IP goals on the given indicator (y-axis). The 2016 IP goal (solid green line) and 2023 IP goal (dotted green line) are included as relevant trajectory points. The vertical light blue line represents the proportion of organisations that met, or exceeded, the 2016 IP goal trajectory. Only organisations providing valid data are represented in the figures.

Less than 1 out of every 5 organisations (15%, or 30 organisations) met or exceeded the 2016 IP goal trajectory relating to Immunisation against influenza—aged 50 and over (Figure 7.1). However, around half of organisations met or exceeded the diabetes care 2016 IP goal trajectories for HbA1c result recorded (12 months)—clients with type 2 diabetes (54% or 77 organisations), Blood pressure result recorded—clients with type 2 diabetes (54% or 78 organisations) and Kidney function test recorded—clients with type 2 diabetes (56% or 80 organisations) (figures 7.2–7.4).

For IP goals relating to health checks, just over half of organisations (51% or 103 organisations) met or exceeded the 2016 IP goal trajectory for MBS health assessment—children aged 0–4 (Figure 7.5), while well over two-thirds met or exceeded the 2016 IP goal trajectories for MBS health assessment—clients aged 25–54 (72% or 149 organisations), and 55 and over (70% or 137 organisations) (figures 7.6 and 7.7). The nKPI results were also higher than the 2015–2016 MBS health assessment results for the national Indigenous population across all 3 age ranges (27% for children aged 0–4; 28% for clients aged 25–54; and 38% for clients aged 55 and over) (AIHW analysis of MBS data).

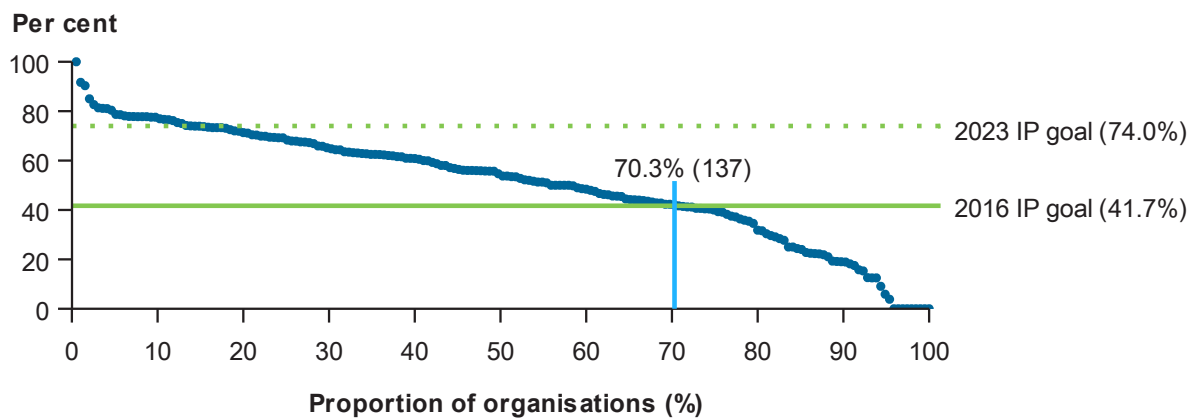






Note: The number of organisations that met or exceeded the 2016 IP goal is in brackets above the vertical blue line.

Figure 7.6: Organisations' results against the 2016 IP goal trajectory and 2023 IP goal for MBS health assessment—clients aged 25–54 (part of PI03), June 2016



Note: The number of organisations that met or exceeded the 2016 IP goal is in brackets above the vertical blue line.

Figure 7.7: Organisations' results against the 2016 IP goal trajectory and 2023 IP goal for MBS health assessment—clients aged 55 and over (part of PI03), June 2016

Chapter 8

Discussion

This chapter was written by the Department of Health

This chapter presents key messages emerging from this fourth comprehensive analysis of the nKPI data reported by primary health care organisations that are funded to deliver services to Aboriginal and Torres Strait Islander people.

The nKPIs have been collected by organisations since June 2012 and reported by AIHW since 2014. The indicators have been progressively developed and will include the full set of 24 reporting by June 2017. While there was initial apprehension about publishing nKPI results, it has become an important element of transparency and supports improvements in data quality and in focusing efforts and performance outcomes in specific areas. The first nKPI report was published in May 2014 and, since then, there have been strong improvements in results across a number of indicators—such as an 18 percentage-point increase in recording of birthweight, demonstrating that health services are using their data to drive improved health processes. The Department of Health has also been able to use this data to inform policy development and to manage programs to improve Aboriginal and Torres Strait Islander health.

While there has been sustained improvement across a number of indicators, for some, there have been no significant improvements, and others have shown declines over time (see tables S1 and S2). The indicators which have not improved are a mix of both process-of-care and health outcome indicators. It is understood that health outcome indicators are difficult areas for health organisations to influence and require patient participation and, usually, behaviour and lifestyle changes that will take time to see at a population level. For those process-of-care indicators that have shown no improvement, however, further investigation may be required, by individual services and at jurisdictional level, to better understand these results and to improve future outcomes.

To date, the Department has not developed trajectories for each nKPI and this has made it difficult for organisations at an individual level, and for government/stakeholders at a national level, to understand and assess what is an acceptable or unacceptable result. In this report, the Implementation Plan (IP) for the National Aboriginal and Torres Strait Islander Health Plan 2013–2023 goals have been included to provide context for some of the process-of-care indicators. The IP was developed and agreed to through a comprehensive consultative partnership between the Australian Government and the members of the National Health Leadership Forum and launched in October 2015. The IP represents the blueprint for the agreed strategies, actions and goals to be achieved in Aboriginal and Torres Strait Islander health through to 2023, and they have an agreed annual pathway or trajectory for each year from 2013 to 2023, based on historical trend analyses undertaken by the AIHW. Using the IP goals, we can see that further work needs to be done to look at how influenza immunisation rates can be improved for clients aged 50 and over, as results show that, as a whole, nKPI organisations are not on track to meet these.

With the approaching deadline and expiration of a number of the COAG National Indigenous Reform Agreement Closing the Gap 2018 targets, the Government is looking at how these can be renewed in the year ahead to make better gains in improving the health of Aboriginal and Torres Strait Islander people. It is important to consider the role that the nKPIs can have in this process, given that they aim to support progress towards the Closing the Gap targets.

It may be timely to review and refine the nKPI dataset specifications, which are on AIHW's Metadata Online Registry (METeOR), to ensure that they continue to be used to drive service delivery and to inform, monitor and influence government investments to improve the health and wellbeing for Aboriginal and Torres Strait Islander people.

AHMAC is also currently considering national revision of Australia's health system performance information and reporting frameworks, and changes to that overarching framework may also drive nKPI adjustments. Therefore, it is proposed that a review of the nKPIs commence in 2018.

The Department is also looking to streamline, and reduce the vulnerabilities in, the reporting system. To achieve this, the Department has funded a number of projects that will:

- simplify the nKPI and Online Service Report (OSR) reporting chain, to eliminate the need for an extraction tool in time for the June 2017 reporting period through the Direct Load project
- verify the data transformation process that will occur during the direct load process through the Data Validation project
- develop a Health Service Data Portal for the collection of nKPI and OSR data that will allow Department of Health users and their external authorised stakeholders to effectively and efficiently share and use health sector data and information.

Table 8.1: Change in indicator result between first reporting period and May 2015 for all organisations, listed in order of decreasing approximate change in percentage points within each thematic group

Favourable change	Changes to May 2015	
	National proportion over time ^(a)	From first reporting period (percentage points)
Maternal and child health indicators		
PI01: Birthweight recorded ^(b)	↑	18.1
PI03: MBS Health assessment—aged 0–4 ^(b)	↑	9.9
PI13: First antenatal visit before 13 weeks ^(c)	n.s.	2.5
Preventative health indicators		
PI16: Alcohol consumption recorded ^(b)	↑	18.6
PI09: Smoking status recorded ^(b)	↑	16.0
PI03: MBS Health assessment—aged 25 and over ^(b)	↑	14.8
PI10: Smoking status result—current smoker ^(c)	n.s.	-1.2
Chronic disease management indicators		
PI08: Team Care Arrangement—clients with type 2 diabetes ^(b)	↑	14.0
PI07: General Practitioner Management Plan—clients with type 2 diabetes ^(b)	↑	12.2
PI18: Kidney function test recorded—clients with CVD ^(c)	↑	7.1
PI18: Kidney function test recorded—clients with type 2 diabetes ^(c)	↑	4.0
PI06: HbA1c result (6 months, ≤7%)—clients with type 2 diabetes ^(b)	↑	3.2
PI05: HbA1c result recorded (6 months)—clients with type 2 diabetes ^(b)	↑	2.5
PI24: Blood pressure result of ≤130/80 mmHg—clients with type 2 diabetes ^(b)	n.s.	2.4
PI23: Blood pressure result recorded—clients with type 2 diabetes ^(b)	n.s.	1.3

(continued)

Table 8.1 (continued): Change in indicator result between first reporting period and May 2015 for all organisations, listed in order of decreasing approximate change in percentage points within each thematic group

Unfavourable change	Changes to May 2015	
	National proportion over time ^(a)	From first reporting period (percentage points)
Maternal and child health indicators		
PI02: Birthweight result—low ^(c)	n.s.	0.9
Preventative health indicators		
PI12: BMI assessed as overweight or obese ^(c)	↑	4.3
PI14: Immunised against influenza—clients aged 50 and over ^(c)	n.s.	-2.1
PI22: Cervical screening—previous 2 years ^(c)	n.s.	-1.3
Chronic disease management indicators		
PI15: Immunised against influenza—clients with type 2 diabetes ^(c)	n.s.	-2.6
PI15: Immunised against influenza—clients with COPD ^(c)	n.s.	-2.2

Key: ↑ = increased; n.s. = not significant

(a) Statistically significant trend over time at 95% confidence level. For further details refer to Appendix 2.

(b) Indicator first reported in June 2012.

(c) Indicator first reported in June 2013.

Notes

1. The indicator 'PI04: Child immunisation' is excluded due to concerns over data validity.
2. Indicators collected for the first time in December 2014 are not included, as there are less than 12 months of data to analyse (PI11: Smoking status of women who gave birth within the previous 12 months and PI19: Kidney function test result).
3. An indicator collected for the first time in December 2015 is not included (PI20: Risk factors assessed to enable CVD assessment).

Source: AIHW analysis of nKPI data collection.

Appendix 1

Background to the nKPI collection and indicator technical specifications

Background

The set of 24 nKPIs were developed in 2010 under the mandate of the National Indigenous Reform Agreement at the request of COAG, which subsequently received in principle approval from AHMAC in 2011. The National Indigenous Reform Agreement stipulates that the approval of data elements will be sought through the National Health Information Agreement governance process.

Development of data specifications

A Technical Working Group, chaired by the Department of Health, provided expert advice on developing the data specification for the KPIs and for 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 NACCHO 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 established the Aboriginal and Torres Strait Islander Health Services Data Advisory Group (known until June 2016 as 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.

Approval

The draft set of indicators was supported by the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data. The indicators and data specifications were approved and endorsed by NHISSC, NHIPPC and AHMAC between 2011 and 2015 as the indicators were finalised.

The nKPIs in June 2016

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

A full list of the nKPIs is available on METeOR at <<http://meteor.aihw.gov.au/content/index.phtml/itemId/663886>>.

Table A1 shows the indicators included in this report, as well as the 2 indicators that are expected to be added to the data collection in June 2017. Each indicator is presented with its identification number as assigned in METeOR: for example, 'PI01', together with an expanded description of what it is meant to measure. The technical specifications for the 2 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
PI01: Proportion of Indigenous babies born within the previous 12 months whose birthweight has been 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.
PI02: Proportion of Indigenous babies born within the previous 12 months whose birthweight results were 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: <ul style="list-style-type: none"> • low (less than 2,500 grams) • normal (2,500 grams to less than 4,500 grams) • high (4,500 grams and over).
PI03: Proportion of regular clients for whom an MBS Health Assessment for Aboriginal and Torres Strait Islander People (MBS item 715) was claimed	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.
PI04: Proportion of Indigenous children who are fully immunised	Proportion of Aboriginal and/or Torres Strait Islander children who are regular clients, aged: <ul style="list-style-type: none"> • 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'.
PI05: Proportion of regular clients with type 2 diabetes who have had an HbA1c measurement result recorded	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.
PI06: Proportion of regular clients with type 2 diabetes whose HbA1c measurement result was within a specified level	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have type 2 diabetes and whose HbA1c measurement result was categorised as one of the following: As recorded in the previous 6 months AND as recorded in the previous 12 months: <ul style="list-style-type: none"> • 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%.
PI07: Proportion of regular clients with a chronic disease for whom a GP Management Plan (MBS item 721) was claimed	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have a chronic disease and for whom a GPMP was claimed within the previous 24 months.
PI08: Proportion of regular clients with a chronic disease for whom a Team Care Arrangement (MBS item 723) was claimed	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, have a chronic disease and for whom a TCA was claimed within the previous 24 months.
PI09: Proportion of regular clients whose smoking status has been 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 within the previous 24 months.

(continued)

Table A1 (continued): nKPIs and their description

Indicator	Description
PI10: Proportion of regular clients with a 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 within the previous 24 months as 1 of the following: <ul style="list-style-type: none"> • current smoker • ex-smoker • never smoked.
PI11: Proportion of regular clients who gave birth within the previous 12 months with a smoking status of current smoker, ex-smoker or never smoked	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 and over, who gave birth within the previous 12 months and whose smoking status has been recorded within the previous 12 months as 1 of the following: <ul style="list-style-type: none"> • current smoker • ex-smoker • never smoked.
PI12: Proportion of regular clients who are classified as 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.
PI13: Proportion of regular clients who had their first antenatal care visit within specified periods	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: <ul style="list-style-type: none"> • less than 13/40 weeks • 13/40 weeks to less than 20/40 weeks • at or after 20/40 weeks • no result.
PI14: Proportion of regular clients aged 50 and over who are immunised against influenza	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 50 and over and who are immunised against influenza.
PI15: Proportion of regular clients with type 2 diabetes or COPD who are immunised against influenza	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.
PI16: Proportion of regular clients whose alcohol consumption status has been 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.
PI17: Proportion of regular clients who had an AUDIT-C with result within specified levels ^(a)	Proportion of regular Aboriginal and/or Torres Strait Islander clients, aged 15 and over, who have had an AUDIT-C result recorded in the previous 24 months with a score of either: <ul style="list-style-type: none"> • greater than or equal to 4 in males and 3 in females • less than 4 in males and 3 in females.
PI18: Proportion of regular clients with a selected chronic disease who have had a kidney function test	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 albumin/creatinine ratio (ACR) or other micro albumin 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
PI19: Proportion of regular clients with a selected chronic disease who have had a kidney function test with results within specified levels	Proportion of regular clients who are Aboriginal and/or Torres Strait Islander, aged 15 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/1.73 m ²): <ul style="list-style-type: none"> • 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.
PI20: Proportion of regular clients who have had the necessary risk factors assessed to enable CVD assessment	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.
PI21: Proportion of regular clients aged 35 to 74 who have had an absolute cardiovascular disease risk assessment with results within specified levels ^(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: <ul style="list-style-type: none"> • 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).
PI22: Proportion of regular clients who have had a cervical screening	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.
PI23: Proportion of regular clients with type 2 diabetes who have had a blood pressure measurement result recorded	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.
PI24: Proportion of regular clients with type 2 diabetes whose blood pressure measurement result was less than or equal to 130/80 mmHg	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 data 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, where 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 would have 200 organisations contributing data. However, some of the same 200 organisations may not have valid data for PI03 and this would 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 June 2016 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 1 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/672769>>.

Table A2.1: Number of organisations contributing valid data and number of Indigenous regular clients, by indicator, June 2016

Indicator	Number of organisations with valid data ^(a)	Number of organisations included in the analyses ^(b)	Number of clients	Organisations with denominators of <20 clients (%) ^(c)
Maternal and child health indicators				
PI13: First antenatal visit	199	181	4,480	66.9
PI01: Birthweight recorded	214	208	7,283	49.5
PI03: MBS health assessment—aged 0–4	204	203	34,038	11.3
PI02: Birthweight result	214	200	5,448	58.0
PI11: Smoking status of women who gave birth within the previous 12 months	206	196	5,266	58.2
PI04: Child immunisation				
12 to less than 24 months	207	204	7,874	43.6
24 to less than 36 months	207	203	7,908	45.8
60 to less than 72 months	207	201	7,425	46.8
Preventative health indicators				
PI09: Smoking status recorded	210	210	201,649	1.0
PI16: Alcohol consumption recorded	210	210	200,704	1.0
PI03: MBS health assessment—aged 25 and over	207	207	148,489	1.9
PI20: Risk factors assessed to enable CVD assessment	195	195	89,361	1.5
PI22: Cervical screening	211	199	93,554	1.5
PI14: Immunised against influenza—clients aged 50 and over	198	198	51,525	6.1
PI10: Smoking status result	210	210	156,591	2.9
PI12: BMI classified as overweight or obese	200	200	102,351	3.5
Chronic disease management indicators				
PI07: General Practitioner Management Plan—clients with type 2 diabetes	194	193	34,107	10.9
PI08: Team Care Arrangement—clients with type 2 diabetes	195	194	34,549	10.8
PI23: Blood pressure recorded—clients with type 2 diabetes	196	195	34,691	10.8
PI05: HbA1c test recorded (6 months)—clients with type 2 diabetes	196	195	34,691	10.8

(continued)

Table A2.1 (continued): Number of organisations contributing valid data and number of Indigenous regular clients, by indicator, June 2016

Indicator	Number of organisations with valid data ^(a)	Number of organisations included in the analyses ^(b)	Number of clients	Organisations with denominators of <20 clients (%) ^(c)
Chronic disease management indicators <i>(continued)</i>				
PI18: Kidney function test recorded—clients with:				
Type 2 diabetes	195	194	34,512	10.8
CVD	195	193	15,136	32.6
PI15: Immunised against influenza—clients with:				
Type 2 diabetes	196	190	14,109	24.7
COPD	183	158	1,527	86.1
PI24: Blood pressure result of $\leq 130/80$ mmHg—clients with type 2 diabetes				
	196	195	21,970	16.9
PI06: HbA1c result (6 months)—clients with type 2 diabetes				
	196	190	16,905	18.9
PI19: Kidney function test result—clients with:				
Type 2 diabetes	195	189	20,308	18.5
CVD	195	186	8,981	47.3

(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 whom they could provide the services to be counted in those indicators.

(c) Proportion of services that had fewer than 20 clients but were included in the analysis for each indicator.

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 their 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 Indigenous 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.

Medicare Benefits Schedule (MBS) items are not claimed by all organisations, either because they do not have a 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.

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 and have an effect on the results reported by organisations. For example, limited GP availability may impact upon an organisation being able to claim MBS items.

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.

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 Indigenous regular clients exceeded 10% of all contributing organisations for 15 of the 22 indicators (see Table A2.1). One indicator measure, Immunised against influenza—clients with COPD, had 86% of organisations with a denominator of fewer than 20 Indigenous regular clients. This was higher than for 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 ex smoker 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 CQI program for organisations providing care to Indigenous people, funded by the Australian Government. Organisations reported to the AIHW on a number of indicators, 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 CQI processes. Previous participation in Healthy for Life was associated with better results against the nKPIs (AIHW 2014b).

The number of organisations that reported in the nKPI process increased to 206 in June 2013, 210 in June 2014, 242 in May 2015, and 241 in June 2016. There was also an increase over this period in the number of organisations included in the analyses. For indicators that were reported against in June 2012 and June 2016, the largest increases in organisations included in the analyses were for Alcohol consumption recorded (PI16) and Smoking status recorded (PI09) (see Table A2.2). The inclusion of additional organisations could lead to changes in national results 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. Only 2 NTG organisations reported in June 2012 and 29 began reporting in June 2013. The number reporting increased to 54 in June 2016. 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 nKPI Indigenous regular client definition does not apply to the birthweight indicators because many babies will not have visited a health service 3 times in the last 2 years. See Chapter 1 for information on the definition of a regular client.

Table A2.2: Number of organisations included in analyses^(a), by indicator, June 2012–June 2016

Indicator	Jun 2012	Jun 2013	Jun 2014	May 2015	Jun 2016
Maternal and child health indicators					
PI13: First antenatal visit	..	141	167	189	181
PI01: Birthweight recorded	79	158	196	225	208
PI03: MBS health assessment—aged 0–4	76	183	191	216	203
PI02: Birthweight result	..	141	177	212	200
PI11: Smoking status of women who gave birth within the previous 12 months	..	..	..	205	196
PI04: Child immunisation					
12 to less than 24 months	..	185	183	214	204
24 to less than 36 months	..	186	184	209	203
60 to less than 72 months	..	182	181	207	201
Preventative health indicators					
PI09: Smoking status recorded	78	189	196	223	210
PI16: Alcohol consumption recorded	77	191	196	223	210
PI03: MBS health assessment—aged 25 and over	77	183	195	223	207
PI20: Risk factors assessed to enable CVD assessment	..	..	..	..	195
PI22: Cervical screening	..	178	182	209	199
PI14: Immunised against influenza—clients aged 50 and over	..	181	185	209	198
PI10: Smoking status result	..	158	196	222	210
PI12: BMI classified as overweight or obese	81	177	188	214	200

(continued)

Table A2.2 (continued): Number of organisations included in analyses^(a), by indicator, June 2012–June 2016

Indicator	Jun 2012	Jun 2013	Jun 2014	May 2015	Jun 2016
Chronic disease management indicators					
PI07: General Practitioner Management Plan—clients with type 2 diabetes	75	177	184	209	193
PI08: Team Care Arrangement—clients with type 2 diabetes	75	177	184	209	194
PI23: Blood pressure recorded—clients with type 2 diabetes	78	175	184	209	195
PI05: HbA1c test recorded (6 months)—clients with type 2 diabetes	77	171	182	209	195
PI18: Kidney function test recorded—clients with:					
Type 2 diabetes	..	173	182	207	194
CVD	..	172	179	203	193
PI15: Immunised against influenza—clients with:					
Type 2 diabetes	..	169	174	202	190
COPD	..	140	146	155	158
PI24: Blood pressure result of $\leq 130/80$ mmHg—clients with type 2 diabetes	77	174	184	209	195
PI06: HbA1c result (6 months)—clients with type 2 diabetes	75	165	178	204	190
PI19: Kidney function test result—clients with:					
Type 2 diabetes	..	..	..	201	189
CVD	..	..	..	194	186

.. 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 whom they could provide the 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 and/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 (Baillie 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 proportion of transient clients that are counted as regular clients may appear to have poorer results than other organisations, as 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 (see Box 1.1, Chapter 1).

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 (Baillie 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 results of an organisation depend 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 the rate of data quality improvement over the 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 has also undertaken an analysis 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 results of this analysis are available at <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129551072>.

Time trend analysis

Linear regression was used to examine potential change over time in indicator results at the national level. Change over time was examined using the slope parameter estimate, which was calculated separately for each indicator. Change over time was assessed as statistically significant at the $p < 0.05$ level. The results of this analysis are presented in tables S1 and 8.1.

Prior to analysis, 2 indicators were excluded, namely Kidney function test results (PI19) and Smoking status of women who gave birth within the previous 12 months (PI11), which had an insufficient number of data points (less than 4) necessary for robust time trend analysis. The Child immunisation (PI04) indicator was also excluded, due to concerns about data validity (see Chapter 3).

The analysis used data points beginning with the first period each indicator was collected and ending at the May 2015 collection period (See Chapter 1 for further information on why June 2016 data are not comparable to previous data).

In the interests of using all available data points, data from previous collection periods that had previously been reported on, but are not republished in the present report (December 2012, December 2013, and December 2014), were also included in the analysis.

Appendix 3

Comparison of nKPI results

This appendix includes a summary of organisations' results 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 for the general Australian population, including both Indigenous and non-Indigenous people. When a data collection also has Indigenous-specific data, these are included, to enable 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 result recorded (6 months)—clients with type 2 diabetes, Clients with type 2 diabetes for whom an MBS GPMP or TCA was claimed, Smoking status result—current smoker, First antenatal visit, and Immunised against influenza—clients aged 50 and over.

Results for the indicator HbA1c result recorded (6 months)—clients with type 2 diabetes 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 for whom a GPMP or a TCA was claimed 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.

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 2012–13 NATSIHS, 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 NATSIHS may be reluctant to admit to smoking—but 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 was 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 2012–13 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 (41% and 56%, respectively), and more than twice the proportion of Indigenous babies (13%) 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 28% of relevant Indigenous regular clients having received the screening in the past 2 years, compared with 58% of women in the general population.

Among nKPI Indigenous regular clients aged 50 years and over, around 33% 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 with those of all Australians from population surveys suggests that smoking rates among Indigenous people might be about 2.5 times as high as for the non-Indigenous population. A lower proportion of Indigenous people than non-Indigenous people have a BMI classified as overweight, but a larger proportion of Indigenous people have a BMI classified as obese.

Table A3.1: National Key Performance Indicator results, June 2016

Indicator	Subcomponent	Numerator	Denominator	Mean (%)	Bottom quartile (%)	Top quartile (%)	Comparable national data (%)	Comparable national data collection
Maternal and child health indicators								
P113: First antenatal visit	Before 13 weeks	1,820	4,480	40.6	16.7	50.0	49.0 ^(a)	NPDC
P101: Birthweight recorded		5,468	7,283	75.1	61.7	99.2	†	
P103: MBS health assessment	Aged 0–4	11,895	34,038	34.9	16.7	48.5	27.6	Medicare Australia
P104: Child immunisation ^(b)	12 to less than 24 months	5,751	7,874	73.0	63.0	92.6	90.5	AIR
	24 to less than 36 months	4,842	7,908	61.2	11.1	91.5	88.5	AIR
	60 to less than 72 months	5,323	7,425	71.7	53.5	97.2	95.1	AIR
P102: Birthweight result	Low	717	5,448	13.2	0.5	20.0	10.5	NPDC
	Normal	4,645	5,448	85.3	80.0	97.4	88.1	NPDC
	High	86	5,448	1.6	0.0	0.7	1.5	NPDC
P111: Smoking status of women who gave birth within the previous 12 months	Current smoker	2,650	5,266	50.3	40.0	63.6	46.0 ^(c)	NPDC
	Ex-smoker	820	5,266	15.6	0.0	20.0	†	
	Never smoked	1,796	5,266	34.1	18.2	45.2	†	
Preventative health indicators								
P109: Smoking status recorded		156,591	201,649	77.7	54.1	91.9	†	
P116: Alcohol consumption recorded		115,493	200,704	57.5	33.5	67.9	†	
P103: MBS health assessment	Aged 25 and over	71,331	148,489	48.0	30.9	58.0	28.6	Medicare Australia
P120: Risk factors assessed to enable CVD assessment		35,551	89,361	39.8	28.9	52.6	†	
P122: Cervical screening	Previous 2 years	25,775	93,554	27.6	18.3	36.4	†	
	Previous 3 years	33,705	93,554	36.0	24.3	46.7	†	
	Previous 5 years	40,899	93,554	43.7	30.3	55.4	†	
P114: Immunised against influenza—clients aged 50 and over		17,161	51,525	33.3	25.5	54.9	56.8	NATSIHS 2012–13
P110: Smoking status result	Current smoker	81,039	156,591	51.8	44.8	58.8	43.7 ^(d)	NATSIHS 2012–13
	Ex-smoker	24,357	156,591	15.6	11.4	17.8	20.4	NATSIHS 2012–13
	Never smoked	51,195	156,591	32.7	26.3	39.6	35.9	NATSIHS 2012–13
P112: BMI classified as overweight or obese	Overweight or obese	72,094	102,351	70.4	65.6	76.3	73.5	NATSIHS 2012–13

(continued)

Table A3.1 (continued): National Key Performance Indicator results, June 2016

Indicator	Subcomponent	Numerator	Denominator	Mean (%)	Bottom quartile (%)	Top quartile (%)	Comparable national data (%)	Comparable national data collection
Chronic disease management indicators								
P107: General Practitioner Management Plan—clients with type 2 diabetes		18,269	34,107	53.6	40.0	74.6	32.0	Healthy for Life
P108: Team Care Arrangement—clients with type 2 diabetes		17,382	34,549	50.3	35.3	72.6	27.2	Healthy for Life
P123: Blood pressure recorded—clients with type 2 diabetes		21,970	34,691	63.3	52.3	76.1	65.4	Healthy for Life
P105: HbA1c result recorded—clients with type 2 diabetes	6 months	16,905	34,691	48.7	37.3	59.5	53.9	Healthy for Life
	12 months	21,784	34,691	62.8	50.5	73.7	†	
P118: Kidney function test recorded—clients with a selected chronic disease	Type 2 diabetes	21,263	34,512	61.6	48.3	73.7	†	
	CVD	8,981	15,136	59.3	42.9	68.1	†	
P115: Immunised against influenza—clients with type 2 diabetes or COPD	Type 2 diabetes	4,894	14,109	34.7	20.0	58.3	†	
	COPD	560	1,527	36.7	11.1	50.0	†	
P124: Blood pressure result of $\geq 130/80$ mmHg—clients with type 2 diabetes		9,349	21,970	42.6	35.7	50.0	42.0	Healthy for Life
P106: HbA1c result—clients with type 2 diabetes	6 months, $\leq 7\%$	6,324	16,905	37.4	30.1	45.8	30.6	Healthy for Life
	Type 2 diabetes							
P119: Kidney function test result—clients with a selected chronic disease	<15	959	20,308	4.7	0.0	4.8	†	
	≥ 15 –<30	668	20,308	3.3	0.0	4.3	†	
	≥ 30 –<60	2,468	20,308	12.2	8.6	15.4	†	
	≥ 60	16,213	20,308	79.8	76.6	86.2	†	
	CVD							
	<15	478	8,981	5.3	0.0	6.3	†	
≥ 15 –<30	349	8,981	3.9	0.0	5.3	†		
	≥ 30 –<60	1,437	8,981	16.0	8.6	21.1	†	
≥ 60	6,717	8,981	74.8	67.7	83.6	†		

(continued)

Table A3.1 (continued): National Key Performance Indicator results, June 2016

† 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 in June 2016 was 241.
2. AIR data are as at 26 October 2016 (Department of Health 2016b); Healthy for Life data are as at 30 June 2011 (AIHW 2013); Medicare Australia data are for July 2015–June 2016 (PI03 aged 0–4) or July 2014–June 2016 (PI03 aged 25 and over) (DHS 2016); NATSIHS data are for 2012–13 (ABS 2014) or 2004–05 (ABS 2006); NPDC data are for 2014 (AIHW analysis of the National Perinatal Data Collection—unpublished).
3. AIR 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: AIR; AIHW Healthy for Life data collection; AIHW nKPI data collection; AIHW NPDC; DHS; NATSIHS.

Table A3.2: National Key Performance Indicator results, June 2016, with non-Indigenous comparisons

Indicator	Subcomponent	nKPI result (%)	Indigenous comparison (%)	Non-Indigenous comparison (%)	General population comparison (%)	Comparison source
Maternal and child health indicators						
P113: First antenatal visit	Before 13 weeks	40.6	49.0	55.8	55.5 ^(a)	National Perinatal Data Collection ^(b)
P102: Birthweight result	Low	13.2	10.5	4.5	4.8 ^(c)	National Perinatal Data Collection ^(c)
P111: Smoking status of women who gave birth within the previous 12 months	Current smoker	50.3	46.0	9.5	11.0 ^(a)	National Perinatal Data Collection ^(a)
Preventative health indicators						
P122: Cervical screening	Previous 2 years	27.6	†	..	57.8	National Cervical Screening Program ^(e)
	Previous 3 years	36.0	†	..	70.7	National Cervical Screening Program ^(e)
	Previous 5 years	43.7	†	..	83.0	National Cervical Screening Program ^(e)
P114: Immunised against influenza—clients aged 50 and over		33.3	†	..	74.6	Adult Vaccination Survey ^(f)
P110: Smoking status result	Current smoker	51.8	43.0	16.9	..	NATSIHS 2012–13 ^(g) and
	Ex-smoker	15.6	20.5	29.8	..	Australian Health Survey 2011–13 ^(g)
	Never smoked	32.7	36.5	53.2	..	
P112: BMI classified as overweight or obese	Overweight	27.3	29.8	37.5	..	NATSIHS 2012–13 ^(g) and
	Obese	43.1	42.8	29.2	..	Australian Health Survey 2011–13 ^(g)

(continued)

Table A3.2 (continued): National Key Performance Indicator results, June 2016, with non-Indigenous comparisons

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

.. Not applicable

Notes

- (a) Comparison data are from 2014 and include mothers/births to mothers whose Indigenous status was not stated.
- (b) Comparison data are from 2014 and are for mothers who gave birth to a baby of at least 20 weeks' gestation, and exclude women whose gestation at first antenatal visit was not stated.
- (c) Comparison data are from 2014 and relate to live singleton births of at least 20 weeks' gestation. Low birthweight is defined as less than 2,500 grams.
- (d) Comparison data are from 2014 and are for mother's smoking status at any time during pregnancy and women who gave birth to a baby of at least 20 weeks' gestation, and exclude women whose smoking status during pregnancy was not stated.
- (e) Comparison data are from 2014 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: AHS; AIHW NPDC; AVS; NATSIHS; NCSP.

Appendix 4

nKPI time trend results by jurisdiction and remoteness

This appendix presents time trend results by jurisdiction and remoteness area 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 gestational age recorded at 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
Before 13 weeks	June 2013	34.8	37.9	30.2	34.3	31.2	39.8
	June 2014	30.9	34.6	31.8	44.3	39.8	33.2
	May 2015	36.9	38.5	32.7	41.3	36.5	37.3
	June 2016	43.0	42.7	39.3	42.8	39.6	36.8
13 to 19 weeks	June 2013	32.4	28.6	27.5	22.9	23.3	18.9
	June 2014	34.6	25.1	22.9	21.4	20.1	18.0
	May 2015	32.1	30.0	25.9	22.4	26.6	17.5
	June 2016	25.2	30.5	22.7	20.6	27.3	18.8
20 weeks or later	June 2013	27.8	23.8	32.1	25.5	29.6	31.0
	June 2014	29.0	37.4	35.5	23.2	31.3	26.1
	May 2015	24.8	25.2	33.4	25.4	26.3	23.5
	June 2016	23.8	24.1	28.0	24.7	26.9	25.3
Timing not recorded	June 2013	4.9	9.7	10.2	17.4	15.9	10.2
	June 2014	5.5	2.8	9.7	11.1	8.8	22.6
	May 2015	6.2	6.2	7.9	10.9	10.6	21.8
	June 2016	8.0	2.7	9.9	11.9	6.2	19.1

Source: AIHW nKPI data collection.

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

Timing of first antenatal visit	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Before 13 weeks	June 2013	31.5	33.7	33.7	48.0	29.2
	June 2014	28.5	32.0	38.2	44.0	33.6
	May 2015	29.6	40.0	37.4	41.1	37.4
	June 2016	25.6	51.6	40.8	43.7	40.6
13 to 19 weeks	June 2013	30.0	30.8	27.4	18.4	22.3
	June 2014	34.5	30.1	22.9	19.6	19.8
	May 2015	32.9	29.6	24.6	20.7	20.4
	June 2016	29.0	20.0	23.5	22.5	19.5
20 weeks or later	June 2013	30.1	28.2	29.4	26.6	27.8
	June 2014	29.6	30.8	32.7	23.4	24.5
	May 2015	25.5	24.8	31.0	25.8	23.7
	June 2016	30.9	19.3	29.0	24.4	22.6
Timing not recorded	June 2013	8.4	7.3	9.5	7.0	20.7
	June 2014	7.5	7.1	6.1	13.0	22.1
	May 2015	12.1	5.7	7.0	12.4	18.6
	June 2016	14.6	9.1	6.8	9.5	17.2

Source: AIHW nKPI data collection.

Table A4.3: Percentage of Indigenous babies born in the previous year whose birthweight had been 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	56.3	65.5	49.0
June 2013	67.9	60.7	43.5	58.6	49.8	59.4
June 2014	75.3	65.5	46.0	73.1	62.0	72.5
May 2015	73.6	83.5	51.8	67.5	76.1	74.3
June 2016	79.0	74.6	62.7	78.3	80.5	76.8

Source: AIHW nKPI data collection.

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

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	48.5	67.0	33.4	68.1	52.9
June 2013	48.9	75.4	50.9	56.6	53.1
June 2014	60.4	77.9	60.6	71.8	65.3
May 2015	56.2	78.3	68.7	71.7	69.1
June 2016	74.8	79.1	70.9	76.9	72.7

Source: AIHW nKPI data collection.

Table A4.5: Percentage of Indigenous regular clients aged 0–4 for whom a Medicare Benefits Schedule (MBS) health assessment (MBS item 715) was claimed within the previous 12 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	18.4	9.1	31.1	14.6	25.6	30.1
June 2013	25.3	12.9	30.0	23.7	13.9	32.0
June 2014	25.5	10.9	30.3	22.7	21.9	43.7
May 2015	27.5	22.9	40.7	24.2	28.3	46.4
June 2016	32.3	23.5	38.4	27.8	29.9	42.9

Source: AIHW nKPI data collection.

Table A4.6: Percentage of Indigenous regular clients aged 0–4 for whom a Medicare Benefits Schedule (MBS) health assessment (MBS item 715) was claimed within the previous 12 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	21.3	17.0	31.1	22.2	20.8
June 2013	22.5	26.6	25.4	31.8	25.3
June 2014	25.4	28.4	27.4	35.0	25.3
May 2015	30.8	30.7	35.3	37.0	32.4
June 2016	38.5	33.3	34.2	36.1	33.2

Source: AIHW nKPI data collection.

Table A4.7: Percentage of Indigenous babies born within the previous 12 months whose birthweight results were categorised as low, normal or high, by birthweight result, by 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	14.9	13.4	14.8
	June 2014	12.6	14.4	12.1	12.8	13.1	15.5
	May 2015	12.6	15.5	12.7	13.8	11.4	14.4
	June 2016	11.3	13.3	10.1	14.7	9.8	18.2
Normal	June 2013	85.1	84.6	88.7	81.5	85.1	83.8
	June 2014	85.1	84.0	86.1	85.8	86.1	83.2
	May 2015	84.9	83.1	85.7	84.8	85.4	84.7
	June 2016	86.2	85.7	88.6	84.1	88.6	80.9
High	June 2013	3.0	1.0	2.7	3.6	1.5	1.4
	June 2014	2.3	1.6	1.8	1.5	0.8	1.4
	May 2015	2.5	1.3	1.6	1.3	3.2	0.8
	June 2016	2.4	1.1	1.3	1.2	1.6	0.9

Source: AIHW nKPI data collection.

Table A4.8: Percentage of Indigenous babies born within the previous 12 months whose birthweight results were categorised as low, normal or high, by birthweight result, by reporting period and remoteness

Birthweight result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Low	June 2013	12.6	11.9	12.0	12.9	13.7
	June 2014	11.7	13.1	13.2	12.7	15.8
	May 2015	12.2	12.5	13.7	14.5	14.6
	June 2016	12.5	11.1	11.3	15.9	17.3
Normal	June 2013	85.6	85.0	85.9	83.2	84.1
	June 2014	85.7	85.5	84.9	85.7	82.7
	May 2015	84.6	86.1	84.4	84.4	83.7
	June 2016	86.2	86.4	87.7	82.6	81.8
High	June 2013	1.8	3.1	2.0	3.8	2.2
	June 2014	2.6	1.4	2.0	1.6	1.6
	May 2015	3.2	1.5	1.9	1.0	1.7
	June 2016	1.3	2.6	1.0	1.5	0.9

Source: AIHW nKPI data collection.

Table A4.9: Percentage of Indigenous regular clients aged 15 and over who gave birth within the previous 12 months and whose smoking status had been recorded as current smoker, ex-smoker or never smoked, by reporting period and jurisdiction

Smoking status result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Current smoker	May 2015	48.0	56.9	52.1	49.6	50.6	48.3
	June 2016	50.9	52.7	49.6	48.3	59.1	48.8
Ex-smoker	May 2015	14.7	18.9	19.2	16.0	11.3	13.5
	June 2016	11.1	21.2	21.3	17.7	9.7	12.9
Never smoked	May 2015	37.2	24.2	28.8	34.5	38.1	38.3
	June 2016	38.0	26.1	29.2	34.1	31.2	38.3

Source: AIHW nKPI data collection.

Table A4.10: Percentage of Indigenous regular clients aged 15 and over who gave birth within the previous 12 months and whose smoking status had been recorded as current smoker, ex-smoker or never smoked, by reporting period and remoteness

Smoking status result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Current smoker	May 2015	46.8	48.8	52.8	51.3	49.0
	June 2016	48.2	49.1	52.2	51.2	50.2
Ex-smoker	May 2015	21.3	13.9	14.3	15.9	13.6
	June 2016	17.6	14.4	15.8	15.9	14.0
Never smoked	May 2015	31.9	37.3	32.9	32.9	37.4
	June 2016	34.2	36.6	31.9	32.9	35.9

Source: AIHW nKPI data collection.

Table A4.11: Percentage of Indigenous regular clients aged 15 and over who had their smoking status 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	68.5	48.4	80.2	48.6	59.0	64.1
June 2013	74.8	61.2	81.9	71.0	58.6	49.7
June 2014	80.5	68.8	83.7	74.2	67.5	70.8
May 2015	83.4	71.9	86.3	76.2	70.9	78.3
June 2016	84.3	79.7	85.9	78.1	75.9	63.2

Source: AIHW nKPI data collection.

Table A4.12: Percentage of Indigenous regular clients aged 15 and over who had their smoking status recorded at the primary health care organisation, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	69.3	73.0	68.4	51.4	58.5
June 2013	76.5	80.3	66.7	63.9	54.0
June 2014	80.3	86.2	71.7	74.0	71.0
May 2015	81.8	87.4	78.3	77.7	74.5
June 2016	86.7	89.3	81.6	76.5	59.8

Source: AIHW nKPI data collection.

Table A4.13: Percentage of Indigenous regular clients aged 15 and over who had their alcohol consumption status recorded at the primary health care organisation within the previous 24 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	39.1	22.0	46.9	37.9	30.6	35.1
June 2013	40.7	34.4	51.6	58.1	42.1	48.8
June 2014	47.7	39.7	55.0	64.0	51.5	53.0
May 2015	51.1	44.1	61.2	64.7	54.5	57.5
June 2016	56.2	52.0	64.6	68.6	56.4	45.8

Source: AIHW nKPI data collection.

Table A4.14: Percentage of Indigenous regular clients aged 15 and over who had their alcohol consumption status recorded at the primary health care organisation within the previous 24 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	38.1	39.9	46.1	40.4	27.4
June 2013	40.9	51.3	45.2	50.1	51.1
June 2014	51.1	58.3	47.3	56.4	53.4
May 2015	55.8	59.8	51.8	59.0	58.4
June 2016	68.3	63.3	59.5	57.5	43.1

Source: AIHW nKPI data collection.

Table A4.15: Percentage of Indigenous regular clients aged 25 and over for whom a Medicare Benefits Schedule (MBS) health assessment (MBS item 715) was claimed within the previous 24 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	35.8	19.6	35.0	19.9	30.6	41.6
June 2013	33.7	23.1	49.0	35.8	29.4	38.0
June 2014	36.3	27.7	47.6	44.7	35.6	44.0
May 2015	41.3	32.2	57.1	47.3	38.4	46.4
June 2016	43.5	40.9	57.2	47.9	40.0	46.7

Source: AIHW nKPI data collection.

Table A4.16: Percentage of Indigenous regular clients aged 25 and over for whom a Medicare Benefits Schedule (MBS) health assessment (MBS item 715) was claimed within the previous 24 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	37.8	30.2	37.8	31.8	15.7
June 2013	36.1	40.9	37.6	40.9	31.8
June 2014	42.4	44.5	40.5	46.5	34.3
May 2015	46.7	48.8	46.7	48.4	39.9
June 2016	55.3	48.1	50.8	47.3	39.7

Source: AIHW nKPI data collection.

Table A4.17: Percentage of female Indigenous regular clients aged 20–69 who have not had a hysterectomy and who have had a cervical screening in the previous 2 years, 3 years and 5 years, by timing of cervical screening, by reporting period and jurisdiction

Timing	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Within previous 2 years	June 2013	29.6	35.1	25.7	24.2	24.9	46.4
	June 2014	29.7	32.1	19.7	24.4	27.3	44.5
	May 2015	28.7	26.8	28.5	21.6	27.3	43.5
	June 2016	25.8	31.1	26.5	21.2	26.8	33.7
Within previous 3 years	June 2013	36.4	39.5	32.7	26.7	31.1	53.8
	June 2014	37.8	38.6	27.2	34.0	33.2	55.0
	May 2015	37.2	39.4	35.3	30.2	33.6	55.5
	June 2016	34.2	39.2	34.5	29.7	35.0	42.8
Within previous 5 years	June 2013	42.1	43.7	38.6	29.3	35.7	61.8
	June 2014	45.3	43.8	35.2	42.5	41.3	64.7
	May 2015	44.7	45.4	41.1	41.3	40.4	65.7
	June 2016	41.7	50.3	40.3	39.2	41.2	50.7

Source: AIHW nKPI data collection.

Table A4.18: Percentage of female Indigenous regular clients aged 20–69 who have not had a hysterectomy and who had a cervical screening in the previous 2 years, 3 years and 5 years, by timing of cervical screening, by reporting period and remoteness

Timing	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Within previous 2 years	June 2013	31.1	33.4	21.3	33.3	40.4
	June 2014	30.9	29.4	23.5	28.3	34.7
	May 2015	29.2	29.1	22.8	29.2	39.7
	June 2016	27.5	29.3	22.2	29.2	29.7
Within previous 3 years	June 2013	35.8	40.0	26.2	38.9	48.6
	June 2014	37.8	37.5	30.0	37.8	46.2
	May 2015	38.2	37.1	29.3	39.1	51.4
	June 2016	35.9	37.9	28.8	38.3	39.3
Within previous 5 years	June 2013	40.4	45.4	30.3	45.3	55.9
	June 2014	43.4	44.5	37.0	46.8	58.2
	May 2015	43.6	44.4	36.4	50.5	61.9
	June 2016	43.2	45.5	35.0	47.5	47.5

Source: AIHW nKPI data collection.

Table A4.19: 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	30.2	31.9	50.9
June 2014	30.6	31.1	30.5	41.8	32.3	51.4
May 2015	31.7	31.3	30.6	30.7	31.6	47.1
June 2016	27.8	33.6	30.0	26.8	28.5	47.9

Source: AIHW nKPI data collection.

Table A4.20: 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	30.8	32.4	32.2	38.3	48.0
June 2014	31.8	32.5	29.5	46.3	45.5
May 2015	27.0	35.5	31.4	35.9	42.3
June 2016	27.1	31.3	31.0	35.0	41.1

Source: AIHW nKPI data collection.

Table A4.21: Percentage of Indigenous regular clients aged 15 and over whose smoking status was recorded as current smoker, ex-smoker or never smoked, by smoking status result, by 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	52.9	58.7	52.7
	June 2014	51.8	58.0	50.5	53.2	57.7	53.3
	May 2015	51.1	56.5	50.6	53.1	58.3	53.8
	June 2016	51.3	56.9	47.4	52.9	58.8	54.0
Ex-smoker	June 2013	17.0	13.9	14.6	12.0	10.3	11.0
	June 2014	17.4	13.6	14.7	12.3	10.7	11.8
	May 2015	17.6	15.4	16.6	12.9	11.4	11.3
	June 2016	17.6	15.8	18.4	13.8	12.0	11.4
Never smoked	June 2013	29.4	26.8	32.6	35.1	30.9	36.3
	June 2014	30.8	28.4	34.8	34.5	31.6	35.0
	May 2015	31.3	28.2	32.8	34.1	30.4	34.9
	June 2016	31.1	27.3	34.1	33.3	29.2	34.6

Source: AIHW nKPI data collection.

Table A4.22: Percentage of Indigenous regular clients aged 15 and over whose smoking status was recorded as current smoker, ex-smoker or never smoked, by smoking status result, by reporting period and remoteness

Smoking status result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Current smoker	June 2013	53.1	53.1	54.1	53.3	55.8
	June 2014	51.8	51.2	54.3	53.7	52.9
	May 2015	50.7	50.7	54.2	53.9	54.4
	June 2016	49.0	50.3	53.1	54.3	52.7
Ex-smoker	June 2013	16.4	15.7	14.2	12.6	9.3
	June 2014	16.6	16.0	14.2	12.8	10.8
	May 2015	17.3	16.6	13.5	13.2	12.4
	June 2016	18.1	17.4	14.3	13.6	13.9
Never smoked	June 2013	30.5	31.2	31.7	34.1	34.9
	June 2014	31.6	32.7	31.5	33.5	36.3
	May 2015	32.0	32.7	32.3	32.9	33.3
	June 2016	33.0	32.3	32.6	32.2	33.4

Source: AIHW nKPI data collection.

Table A4.23: Percentage of Indigenous regular clients aged 25 and over who had their BMI classified as overweight or obese within the previous 24 months, by BMI category, reporting period and jurisdiction

BMI result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Overweight	June 2012	22.3	26.5	22.0	29.1	28.4	28.2
	June 2013	25.8	26.0	23.0	26.5	26.9	28.7
	June 2014	26.1	25.9	27.2	25.4	27.4	27.5
	May 2015	26.3	26.4	27.5	28.2	26.9	26.8
	June 2016	27.1	26.7	26.9	28.3	27.1	27.3
Obese	June 2012	39.2	46.5	38.3	43.9	45.4	38.5
	June 2013	45.2	44.5	38.6	40.6	42.5	34.1
	June 2014	45.6	46.7	46.1	39.8	43.3	32.0
	May 2015	45.7	45.2	47.6	44.5	43.5	32.5
	June 2016	47.1	44.9	48.1	43.3	42.7	32.6

Source: AIHW nKPI data collection.

Table A4.24: Percentage of Indigenous regular clients aged 25 and over who had their BMI classified as overweight or obese within the previous 24 months, by BMI category, reporting period and remoteness

BMI result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Overweight	June 2012	27.5	26.3	27.8	25.5	19.8
	June 2013	26.4	26.2	27.2	27.0	23.2
	June 2014	27.0	26.6	27.4	25.9	25.8
	May 2015	27.4	26.6	27.7	27.7	26.4
	June 2016	27.8	26.9	27.4	28.3	26.0
Obese	June 2012	47.3	42.7	46.0	37.8	29.3
	June 2013	45.7	43.7	44.7	41.2	28.1
	June 2014	46.7	44.7	44.8	37.5	33.9
	May 2015	46.7	44.6	44.5	40.1	38.3
	June 2016	45.8	47.6	44.1	39.7	38.8

Source: AIHW nKPI data collection.

Table A4.25: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS General Practitioner Management Plan (GPMP) (MBS item 721) was claimed within the previous 24 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	45.0	32.9	39.2	31.6	33.2	45.5
June 2013	49.3	37.8	49.6	33.1	24.3	49.6
June 2014	49.1	36.6	50.7	47.2	35.8	53.5
May 2015	52.1	40.2	53.3	49.8	39.6	54.8
June 2016	46.6	44.7	58.3	53.9	41.4	57.2

Source: AIHW nKPI data collection.

Table A4.26: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS General Practitioner Management Plan (GPMP) (MBS item 721) was claimed within the previous 24 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	37.2	45.4	45.7	41.8	28.7
June 2013	41.4	55.1	43.2	38.2	41.8
June 2014	46.4	55.6	47.0	50.1	45.9
May 2015	44.9	58.6	54.0	50.6	49.3
June 2016	53.2	51.3	53.8	53.8	54.4

Source: AIHW nKPI data collection.

Table A4.27: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS Team Care Arrangement (TCA) (MBS item 723) was claimed within the previous 24 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	39.5	30.9	37.7	28.1	23.0	36.9
June 2013	46.0	36.0	44.5	29.6	20.9	45.6
June 2014	46.0	34.6	49.5	41.4	32.1	49.4
May 2015	50.0	37.4	52.4	44.3	36.8	52.1
June 2016	45.3	40.1	54.4	48.9	38.1	54.5

Source: AIHW nKPI data collection.

Table A4.28: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS Team Care Arrangement (TCA) (MBS item 723) was claimed within the previous 24 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	31.7	40.3	42.5	31.8	26.7
June 2013	39.3	52.1	40.7	32.7	36.7
June 2014	44.5	51.6	44.7	43.8	42.6
May 2015	42.4	55.7	52.0	46.3	46.7
June 2016	50.1	49.0	52.5	50.4	49.4

Source: AIHW nKPI data collection.

Table A4.29: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded at the primary health care organisation within the previous 6 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	63.5	63.2	66.2	62.1	66.3	75.2
June 2013	63.9	64.0	63.4	55.0	66.8	70.8
June 2014	67.8	60.5	60.7	61.3	64.2	71.6
May 2015	62.9	63.5	71.4	68.0	63.8	71.3
June 2016	63.8	65.9	67.0	65.7	65.1	58.0

Source: AIHW nKPI data collection.

Table A4.30: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded at the primary health care organisation within the previous 6 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	65.3	70.0	69.9	62.8	67.5
June 2013	62.2	68.0	66.6	62.2	61.1
June 2014	63.7	71.0	65.3	61.9	65.4
May 2015	61.1	66.4	67.4	67.4	74.3
June 2016	64.7	66.8	66.2	63.3	59.3

Source: AIHW nKPI data collection.

Table A4.31: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded at the primary health care organisation within the previous 6 or 12 months, by timing of test, by reporting period and jurisdiction

Timing	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
Previous 6 months	June 2012	46.6	53.5	44.4	48.2	51.1	58.6
	June 2013	43.2	50.6	47.3	47.1	49.5	55.5
	June 2014	48.4	47.7	46.2	51.2	49.8	55.8
	May 2015	47.8	46.1	53.4	52.5	48.6	56.8
	June 2016	45.8	51.8	47.7	52.5	49.2	48.0
Previous 12 months	June 2012	65.3	70.1	63.4	62.4	65.0	74.5
	June 2013	61.8	66.9	64.4	60.6	63.9	69.9
	June 2014	62.7	60.7	58.6	66.9	62.8	70.6
	May 2015	63.7	60.8	70.1	69.8	62.3	72.2
	June 2016	61.0	66.8	64.2	68.4	62.5	58.4

Source: AIHW nKPI data collection.

Table A4.32: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded at the primary health care organisation within the previous 6 or 12 months, by timing of test, by reporting period and remoteness

Timing	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
Previous 6 months	June 2012	37.4	54.1	53.5	49.7	53.6
	June 2013	42.4	51.7	49.1	46.2	52.6
	June 2014	47.0	52.6	50.3	47.3	54.1
	May 2015	45.8	50.8	51.3	50.5	59.4
	June 2016	49.1	47.3	48.5	49.3	48.8
Previous 12 months	June 2012	51.4	69.8	70.1	65.6	72.3
	June 2013	58.6	67.9	65.7	60.5	67.7
	June 2014	60.2	66.6	65.4	62.6	67.5
	May 2015	62.3	65.9	67.1	66.8	75.8
	June 2016	62.7	61.6	64.7	64.3	60.9

Source: AIHW nKPI data collection.

Table A4.33: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who had either an eGFR or ACR recorded or both an eGFR and an ACR recorded within the previous 12 months, by test type, by reporting period and jurisdiction

Test type	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
eGFR only	June 2013	20.7	24.5	15.4	16.4	17.2	10.3
	June 2014	18.6	26.1	14.4	11.4	14.6	10.2
	May 2015	16.6	22.8	15.2	14.5	16.8	9.3
	June 2016	13.5	17.7	13.5	10.4	9.0	4.3
ACR only	June 2013	2.9	4.2	5.1	5.6	3.3	3.9
	June 2014	2.6	0.9	6.8	4.7	2.9	3.5
	May 2015	2.4	2.3	2.3	3.2	3.2	3.4
	June 2016	2.1	1.9	3.3	3.6	3.7	2.1
Both eGFR and ACR	June 2013	33.6	32.2	43.4	43.9	41.5	50.1
	June 2014	37.9	32.3	40.8	50.9	45.0	56.4
	May 2015	41.3	37.4	51.3	51.2	42.1	58.0
	June 2016	45.0	47.9	47.9	51.2	48.1	50.5

Source: AIHW nKPI data collection.

Table A4.34: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who had either an eGFR or ACR recorded or both an eGFR and an ACR recorded within the previous 12 months, by test type, by reporting period and remoteness

Test type	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
eGFR only	June 2013	18.6	18.5	13.7	18.8	12.7
	June 2014	16.9	17.0	14.8	14.6	9.4
	May 2015	12.7	17.2	16.8	14.0	11.7
	June 2016	11.6	14.6	8.0	11.1	7.4
ACR only	June 2013	3.6	2.9	3.2	4.1	6.2
	June 2014	5.5	2.6	2.8	8.0	2.2
	May 2015	4.2	2.3	2.3	3.3	2.6
	June 2016	4.4	2.2	2.8	2.9	2.1
Both eGFR and ACR	June 2013	37.2	37.0	44.5	39.6	49.4
	June 2014	38.6	40.7	46.7	42.5	57.4
	May 2015	42.9	42.3	45.8	49.4	61.5
	June 2016	44.4	46.0	52.0	48.8	50.5

Source: AIHW nKPI data collection.

Table A4.35: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who had an eGFR recorded within the previous 12 months, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	56.9	58.1	46.8	60.7	60.7	66.7
June 2014	58.4	55.6	47.5	61.4	57.9	67.7
May 2015	57.2	57.6	63.0	66.9	56.5	67.4
June 2016	58.0	63.3	59.6	63.7	53.9	55.5

Source: AIHW nKPI data collection.

Table A4.36: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who had an eGFR recorded within the previous 12 months, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2013	57.8	56.6	56.2	62.7	50.2
June 2014	56.0	60.3	61.5	59.0	53.7
May 2015	54.7	60.6	58.5	67.5	74.2
June 2016	55.7	59.7	59.1	63.4	58.6

Source: AIHW nKPI data collection.

Table A4.37: Percentage of Indigenous regular clients aged 15–49 with type 2 diabetes who were immunised against influenza, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	25.7	29.7	35.5	27.2	40.4	51.1
June 2014	26.7	23.3	26.2	41.0	37.3	51.0
May 2015	28.1	24.3	26.3	28.8	37.9	46.7
June 2016	24.2	24.6	24.6	25.9	34.2	49.8

Source: AIHW nKPI data collection.

Table A4.38: Percentage of Indigenous regular clients aged 15–49 with type 2 diabetes 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	24.8	25.6	28.7	36.0	49.8
June 2014	26.1	27.7	27.3	44.5	49.3
May 2015	22.6	29.2	29.4	35.7	43.0
June 2016	20.4	27.1	28.0	34.7	45.1

Source: AIHW nKPI data collection.

Table A4.39: Percentage of Indigenous regular clients aged 15–49 with chronic obstructive pulmonary disease (COPD) who were immunised against influenza, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2013	29.0	35.5	28.8	30.6	50.0	61.3
June 2014	25.5	21.5	26.4	37.2	38.7	63.7
May 2015	28.4	35.2	27.9	27.5	46.5	51.9
June 2016	23.7	33.0	31.9	26.2	38.3	60.6

Source: AIHW nKPI data collection.

Table A4.40: Percentage of Indigenous regular clients aged 15–49 with chronic obstructive pulmonary disease (COPD) 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	29.1	33.5	28.9	34.2	58.6
June 2014	31.0	24.5	23.1	42.3	57.4
May 2015	27.1	35.1	29.7	33.0	48.7
June 2016	26.3	33.1	28.7	35.1	53.4

Source: AIHW nKPI data collection.

Table A4.41: Percentage of Indigenous regular clients with type 2 diabetes whose blood pressure result, recorded within the previous 6 months, was less than or equal to 130/80 mmHg, by reporting period and jurisdiction

Reporting period	Jurisdiction					
	NSW/ACT	Vic/Tas	Qld	WA	SA	NT
June 2012	33.4	44.3	37.2	39.1	50.9	44.7
June 2013	37.2	43.1	38.3	38.1	41.8	48.4
June 2014	40.6	39.0	36.6	40.0	41.2	48.8
May 2015	40.8	42.2	37.8	39.7	39.5	50.7
June 2016	40.6	40.9	40.4	40.2	39.4	48.3

Source: AIHW nKPI data collection.

Table A4.42: Percentage of Indigenous regular clients with type 2 diabetes whose blood pressure result, recorded within the previous 6 months, was less than or equal to 130/80 mmHg, by reporting period and remoteness

Reporting period	Remoteness area				
	Major cities	Inner regional	Outer regional	Remote	Very remote
June 2012	38.1	34.6	38.1	44.0	43.1
June 2013	38.9	35.8	38.3	44.4	45.7
June 2014	38.7	38.4	37.9	48.1	44.3
May 2015	39.1	38.9	40.2	45.9	45.3
June 2016	38.5	40.8	41.5	44.4	44.9

Source: AIHW nKPI data collection.

Table A4.43: Percentage of Indigenous regular clients with type 2 diabetes whose HbA1c measurement result, recorded within the previous 6 months, was within a specified level, by test result, by reporting period and jurisdiction

HbA1c result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
≤7%	June 2012	37.4	42.0	28.4	30.9	33.3	32.1
	June 2013	40.7	38.5	32.3	30.9	31.2	33.0
	June 2014	41.3	38.4	35.5	33.0	32.2	34.4
	May 2015	38.4	39.2	35.7	36.3	33.2	32.5
	June 2016	42.7	46.8	35.8	38.7	27.9	35.9
>7% to ≤8%	June 2012	18.7	23.1	19.9	17.2	20.6	18.1
	June 2013	18.8	22.9	20.2	16.6	16.4	17.0
	June 2014	19.1	21.9	17.9	17.1	16.0	15.6
	May 2015	21.6	20.9	19.8	16.9	16.7	16.7
	June 2016	21.3	15.6	19.6	17.3	17.4	16.1
>8% to <10%	June 2012	26.7	19.1	24.9	24.4	22.0	20.2
	June 2013	23.5	20.1	23.5	23.5	21.5	21.3
	June 2014	23.3	21.7	24.9	22.5	21.9	22.4
	May 2015	23.7	23.2	25.1	22.2	21.4	22.1
	June 2016	21.6	21.4	25.0	21.3	23.9	22.6
≥10%	June 2012	17.3	15.8	26.8	27.5	24.1	29.6
	June 2013	17.0	18.6	24.0	29.1	31.0	28.7
	June 2014	16.2	18.0	21.7	27.4	29.9	27.5
	May 2015	16.3	16.8	19.4	24.6	28.6	28.6
	June 2016	14.4	16.2	19.6	22.7	30.9	25.3

Source: AIHW nKPI data collection.

Table A4.44: Percentage of Indigenous regular clients with type 2 diabetes whose HbA1c measurement result, recorded within the previous 6 months, was within a specified level, by test result, by reporting period and remoteness

HbA1c result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
≤7%	June 2012	32.5	38.2	32.7	33.5	28.1
	June 2013	36.0	39.5	34.6	32.9	29.7
	June 2014	38.4	40.2	35.8	36.1	31.3
	May 2015	37.2	37.9	38.4	36.1	31.0
	June 2016	38.5	44.7	40.1	37.6	32.0
>7% to ≤8%	June 2012	19.4	21.1	20.4	18.7	16.4
	June 2013	19.7	19.9	19.8	16.5	16.3
	June 2014	18.3	19.7	19.0	15.5	15.6
	May 2015	20.0	21.0	19.8	17.6	16.2
	June 2016	20.4	18.5	19.7	17.3	15.9
>8% to <10%	June 2012	26.0	23.3	22.9	22.5	22.5
	June 2013	23.6	23.5	22.7	22.6	21.6
	June 2014	24.5	23.0	23.7	22.5	22.0
	May 2015	23.6	24.9	23.9	22.5	21.7
	June 2016	22.9	23.2	23.5	22.4	22.3
≥10%	June 2012	22.1	17.3	24.0	25.3	33.0
	June 2013	20.6	17.1	22.9	28.0	32.5
	June 2014	18.8	17.1	21.5	25.9	31.1
	May 2015	19.2	16.3	17.9	23.8	31.1
	June 2016	18.2	13.6	16.7	22.7	29.9

Source: AIHW nKPI data collection.

Table A4.45: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by test result, by reporting period and jurisdiction

eGFR result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
<15	May 2015	2.5	3.3	4.3	6.6	4.2	3.8
	June 2016	3.3	3.3	3.1	8.2	3.7	4.7
≥15 to <30	May 2015	2.3	2.5	2.7	3.7	3.6	3.4
	June 2016	2.1	1.9	3.1	3.8	3.9	3.8
≥30 to <60	May 2015	13.1	12.0	12.6	11.0	11.7	10.9
	June 2016	11.6	11.3	13.4	10.5	13.0	12.6
≥60	May 2015	82.0	82.2	80.3	78.7	80.5	81.9
	June 2016	83.0	83.5	80.4	77.6	79.4	78.9

Source: AIHW nKPI data collection.

Table A4.46: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by test result, by reporting period and remoteness

eGFR result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
<15	May 2015	3.7	3.4	4.3	5.9	4.0
	June 2016	2.8	3.3	4.8	7.4	4.1
≥15 to <30	May 2015	2.4	2.2	3.1	3.3	3.7
	June 2016	2.8	2.2	3.1	3.8	3.7
≥30 to <60	May 2015	10.9	13.1	12.2	11.7	11.3
	June 2016	11.7	10.9	12.3	12.1	12.9
≥60	May 2015	82.9	81.3	80.4	79.0	80.9
	June 2016	82.7	83.5	79.7	76.6	79.3

Source: AIHW nKPI data collection.

Table A4.47: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by test result, by reporting period and jurisdiction

eGFR result	Reporting period	Jurisdiction					
		NSW/ACT	Vic/Tas	Qld	WA	SA	NT
<15	May 2015	2.9	4.3	4.3	8.2	5.9	3.9
	June 2016	3.3	4.7	3.4	9.2	6.3	4.7
≥15 to <30	May 2015	3.1	2.4	2.8	4.7	5.4	4.5
	June 2016	2.9	2.0	3.2	4.9	4.9	4.7
≥30 to <60	May 2015	17.3	15.6	15.4	14.9	16.4	14.6
	June 2016	17.0	14.4	17.1	14.5	13.8	16.4
≥60	May 2015	76.7	77.7	77.6	72.2	72.3	77.0
	June 2016	76.9	78.9	76.2	71.4	75.1	74.2

Source: AIHW nKPI data collection.

Table A4.48: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by test result, by reporting period and remoteness

eGFR result	Reporting period	Remoteness area				
		Major cities	Inner regional	Outer regional	Remote	Very remote
<15	May 2015	3.4	3.8	5.3	6.9	5.1
	June 2016	3.2	4.1	5.7	7.3	5.6
≥15 to <30	May 2015	3.3	2.7	3.5	4.1	5.0
	June 2016	3.2	2.5	4.0	4.4	5.0
≥30 to <60	May 2015	15.1	16.9	14.7	15.9	15.2
	June 2016	16.4	15.9	14.8	16.6	16.2
≥60	May 2015	78.3	76.7	76.5	73.1	74.6
	June 2016	77.2	77.4	75.6	71.7	73.2

Source: AIHW nKPI data collection.

Appendix 5

nKPI results by age group and sex

This appendix presents data for each measure by age group (in years) 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 gestational age recorded at their first antenatal visit, by timing of first antenatal visit and age group, June 2016

Timing of first antenatal visit	<20	20–34	35+
Before 13 weeks	32.9	42.2	38.7
13 to 19 weeks	22.3	22.8	24.3
20 weeks or later	29.3	24.6	27.4
Timing not recorded	15.5	10.5	9.5

Source: AIHW nKPI data collection.

Table A5.2: Percentage of Indigenous regular clients aged 15 and over who gave birth within the previous 12 months and whose smoking status had been recorded as current smoker, ex-smoker or never smoked, by smoking status and age group, June 2016

Smoking status	15–19	20–24	25–34	35+
Current smoker	42.0	50.8	52.1	50.6
Ex-smoker	14.2	15.0	16.5	14.9
Never smoked	43.8	34.1	31.4	34.5

Source: AIHW nKPI data collection.

Table A5.3: Percentage of Indigenous regular clients aged 15 and over who had their smoking status recorded at the primary health care organisation, by age group and sex, June 2016

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	68.6	74.8	78.0	81.1	82.5	81.1
Females	73.6	79.5	79.6	80.5	82.3	82.3

Source: AIHW nKPI data collection.

Table A5.4: Percentage of Indigenous regular clients aged 15 and over who had their alcohol consumption status recorded at the primary health care organisation within the previous 24 months, by age group and sex, June 2016

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	50.7	54.6	57.7	61.1	63.5	60.5
Females	55.3	57.9	58.0	60.1	61.5	59.9

Source: AIHW nKPI data collection.

Table A5.5: Percentage of Indigenous regular clients aged 25 and over for whom a Medicare Benefits Schedule (MBS) health assessment (MBS item 715) was claimed within the previous 24 months, by age group and sex, June 2016

Sex	25–34	35–44	45–54	55–64	65+
Males	43.6	46.7	50.6	54.2	53.4
Females	42.2	46.8	50.4	53.2	53.8

Source: AIHW nKPI data collection.

Table A5.6: Percentage of Indigenous regular clients aged 35–74 with no known cardiovascular disease (CVD) with information available to calculate their absolute CVD risk, by age group and sex, June 2016

Sex	35–44	45–54	55–64	65–74
Males	33.6	41.1	46.9	46.4
Females	33.9	41.5	46.3	47.3

Source: AIHW nKPI data collection.

Table A5.7: Percentage of Indigenous regular clients aged 50 and over who were immunised against influenza, by sex, June 2016

Males	Females
33.1	33.5

Source: AIHW nKPI data collection.

Table A5.8: Percentage of Indigenous regular clients aged 15 and over whose smoking status was recorded as current smoker, ex-smoker or never smoked, by smoking status, by age group and sex, June 2016

Smoking status	15–24		25–34		35–44		45–54		55–64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Current smoker	46.9	42.9	67.5	58.1	67.0	56.6	59.5	52.5	46.8	39.7	29.1	22.4
Ex-smoker	6.3	9.0	11.2	13.8	13.7	14.2	18.7	17.0	28.0	23.0	39.1	26.2
Never smoked	46.8	48.1	21.3	28.0	19.3	29.2	21.8	30.5	25.2	37.3	31.8	51.3

Source: AIHW nKPI data collection.

Table A5.9: Percentage of Indigenous regular clients aged 25 and over who had their BMI classified as overweight or obese within the previous 24 months, by BMI category, by age group and sex, June 2016

BMI category	25–34		35–44		45–54		55–64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Overweight	28.8	24.3	30.6	24.5	29.9	25.1	30.3	26.4	33.2	27.3
Obese	32.1	43.4	36.7	49.3	38.3	50.9	40.0	52.0	35.7	48.0
Total overweight and obese	61.0	67.7	67.3	73.8	68.2	76.1	70.4	78.4	68.9	75.4

Source: AIHW nKPI data collection.

Table A5.10: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS General Practitioner Management Plan (GPMP) (MBS item 721) was claimed within the previous 24 months, by age group and sex, June 2016

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	28.6	40.0	47.6	48.1	51.8	57.4	55.6
Females	43.9	44.3	45.6	51.8	55.1	56.0	57.1

Source: AIHW nKPI data collection.

Table A5.11: Percentage of Indigenous regular clients with type 2 diabetes for whom an MBS Team Care Arrangement (TCA) (MBS item 723) was claimed within the previous 24 months, by age group and sex, June 2016

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	28.6	37.7	44.5	45.3	48.6	53.9	51.5
Females	42.1	40.7	43.2	49.0	51.7	53.2	52.9

Source: AIHW nKPI data collection.

Table A5.12: Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded at the primary health care organisation within the previous 6 months, by age group and sex, June 2016

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	39.3	52.8	55.4	58.3	60.7	66.4	64.6
Females	49.1	59.8	59.2	61.6	64.2	66.3	66.8

Source: AIHW nKPI data collection.

Table A5.13: Percentage of Indigenous regular clients with type 2 diabetes who had an HbA1c result recorded at the primary health care organisation within the previous 6 or 12 months, by timing of test, by age group and sex, June 2016

Timing	Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Previous 6 months	Males	21.4	40.2	43.2	45.5	46.2	51.6	50.6
	Females	33.3	47.4	46.0	46.8	49.1	51.4	50.7
Previous 12 months	Males	25.0	57.2	59.9	61.8	61.3	65.7	63.4
	Females	42.1	62.5	60.9	60.7	62.7	64.4	64.2

Source: AIHW nKPI data collection.

Table A5.14: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who had either an eGFR or ACR recorded or both an eGFR and an ACR recorded within the previous 12 months, by test type, by age group and sex, June 2016

Test type	15–24		25–34		35–44		45–54		55–64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
eGFR only	6.1	8.2	5.8	8.6	7.9	9.1	9.4	10.0	8.9	10.8	11.0	13.1
ACR only	4.8	5.8	4.7	4.1	3.1	3.7	3.1	2.3	2.9	2.2	1.7	1.9
Both eGFR and ACR	42.4	43.7	47.7	45.5	48.3	46.0	47.1	49.0	53.4	50.2	50.6	49.9
Total eGFR and/or ACR	53.3	57.7	58.2	58.2	59.2	58.9	59.6	61.2	65.2	63.1	63.3	64.9

Source: AIHW nKPI data collection.

Table A5.15: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who had an eGFR recorded within the previous 12 months, by age group and sex, June 2016

Sex	15–24	25–34	35–44	45–54	55–64	65+
Males	33.3	46.2	47.4	54.4	61.1	63.9
Females	17.6	46.3	54.6	57.2	64.0	66.7

Source: AIHW nKPI data collection.

Table A5.16: Percentage of Indigenous regular clients aged 15–49 with type 2 diabetes or chronic obstructive pulmonary disease (COPD) who were immunised against influenza, by chronic disease type, by age group, and sex, June 2016

Chronic disease	15–24		25–34		35–44		45–49	
	Male	Female	Male	Female	Male	Female	Male	Female
Type 2 diabetes	23.1	32.6	28.5	37.4	33.0	36.0	32.7	37.7
COPD	24.4	18.2	31.0	39.0	37.2	37.3	40.2	36.9

Source: AIHW nKPI data collection.

Table A5.17: Percentage of Indigenous regular clients with type 2 diabetes whose blood pressure result, recorded within the previous 6 months, was less than or equal to 130/80 mmHg, by age group and sex, June 2016

Sex	<15	15–24	25–34	35–44	45–54	55–64	65+
Males	54.5	34.7	34.9	35.6	34.9	38.5	42.9
Females	60.7	63.1	54.2	50.1	44.9	43.0	41.7

Source: AIHW nKPI data collection.

Table A5.18: Percentage of Indigenous regular clients with type 2 diabetes whose HbA1c measurement result, recorded within the previous 6 or 12 months, was within a specified level, by timing of test, test measurement result, by age group and sex, June 2016

Timing	Sex	HbA1c	<15	15–24	25–34	35–44	45–54	55–64	65+
Previous 6 months	Males	≤7%	16.7	32.6	27.1	31.5	34.4	39.9	49.5
		>7% to ≤8%	33.3	8.7	9.0	15.5	17.6	19.9	22.9
		>8% to <10%	16.7	21.7	28.2	23.6	25.9	25.8	18.8
		≥10%	33.3	37.0	35.7	29.4	22.1	14.4	8.8
	Females	≤7%	15.8	24.3	30.5	31.6	32.4	37.6	51.1
		>7% to ≤8%	26.3	15.2	14.4	14.7	17.2	19.7	19.8
		>8% to <10%	10.5	17.4	21.7	23.5	23.4	22.3	18.4
		≥10%	47.4	43.0	33.3	30.3	26.9	20.3	10.7
Previous 12 months	Males	≤7%	14.3	35.1	26.6	31.9	34.4	40.7	49.9
		>7% to ≤8%	28.6	9.9	10.8	15.3	16.9	19.7	22.6
		>8% to <10%	14.3	18.3	28.1	23.8	26.5	24.7	18.1
		≥10%	42.9	36.6	34.5	29.1	22.2	14.8	9.4
	Females	≤7%	20.8	27.4	30.8	32.3	32.8	38.6	51.5
		>7% to ≤8%	20.8	14.5	14.0	14.9	17.0	19.3	19.9
		>8% to <10%	16.7	17.8	21.1	22.7	22.5	21.5	18.4
		≥10%	41.7	40.3	34.1	30.1	27.7	20.6	10.2

Source: AIHW nKPI data collection.

Table A5.19: Percentage of Indigenous regular clients aged 15 and over with type 2 diabetes who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by result level, by age group and sex, June 2016

Result	15–24		25–34		35–44		45–54		55–64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<15	0.9	0.4	0.6	1.3	3.0	3.8	5.3	4.2	5.7	6.3	5.0	6.2
≥15 to <30	0.9	0.0	0.6	0.3	1.6	1.4	2.1	2.8	3.0	3.6	5.9	7.6
≥30 to <60	0.9	0.4	0.6	1.4	3.3	3.6	6.5	6.8	13.4	14.5	28.4	29.3
≥60	97.3	99.2	98.1	97.0	92.1	91.2	86.1	86.2	78.0	75.6	60.8	56.8

Source: AIHW nKPI data collection.

Table A5.20: Percentage of Indigenous regular clients aged 15 and over with cardiovascular disease (CVD) who have had an eGFR recorded within the previous 12 months with a result within specified levels (mL/min/1.73 m²), by result level, by age group and sex, June 2016

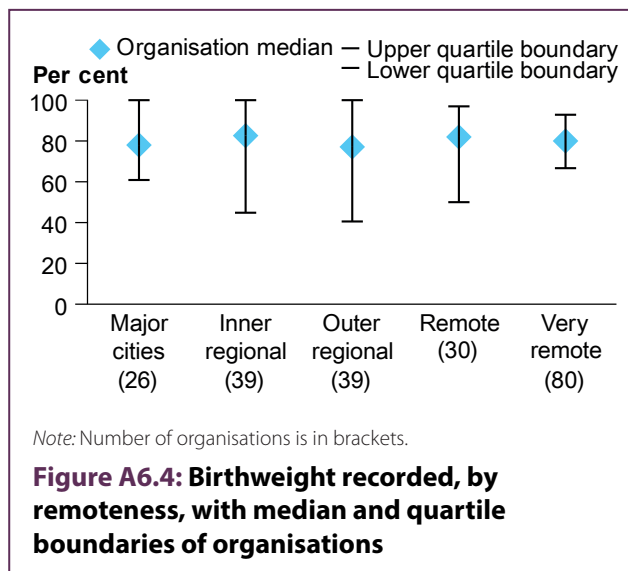
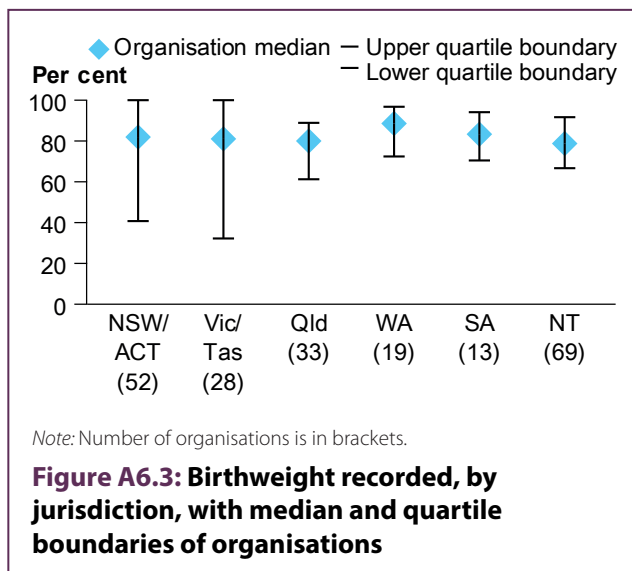
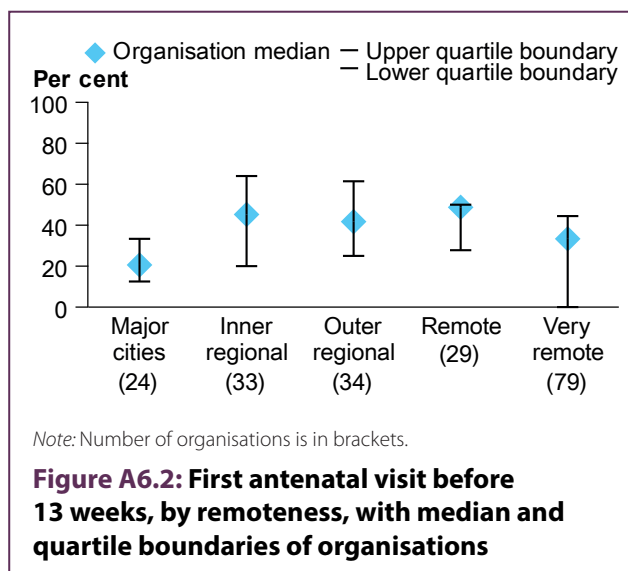
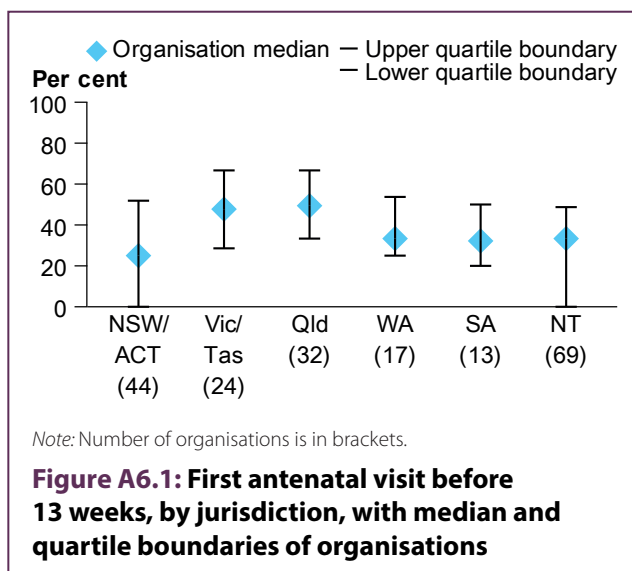
Result	15–24		25–34		35–44		45–54		55–64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<15	0.0	0.0	4.2	0.0	3.9	7.3	5.8	5.7	5.5	6.0	4.3	5.3
≥15 to <30	0.0	0.0	0.0	2.7	2.3	1.8	2.3	2.8	2.2	4.1	5.1	7.6
≥30 to <60	3.1	0.0	1.0	5.4	2.6	4.8	6.9	7.6	13.5	13.4	29.3	31.0
≥60	96.9	100.0	94.8	91.9	91.2	86.1	85.0	83.9	78.8	76.6	61.3	56.2

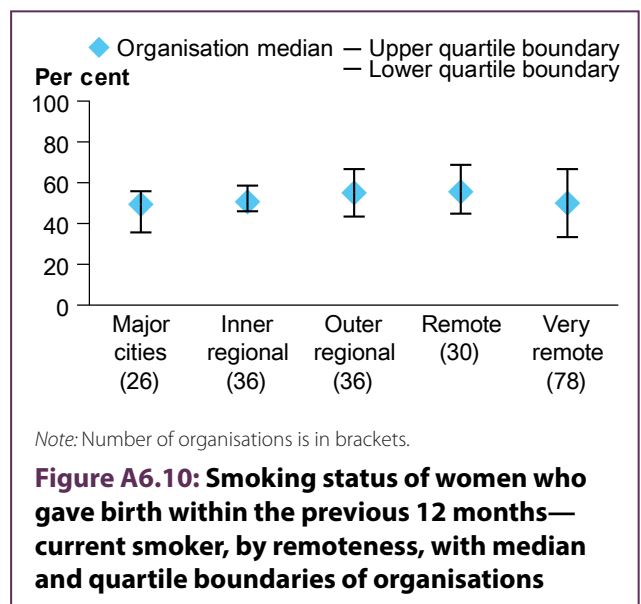
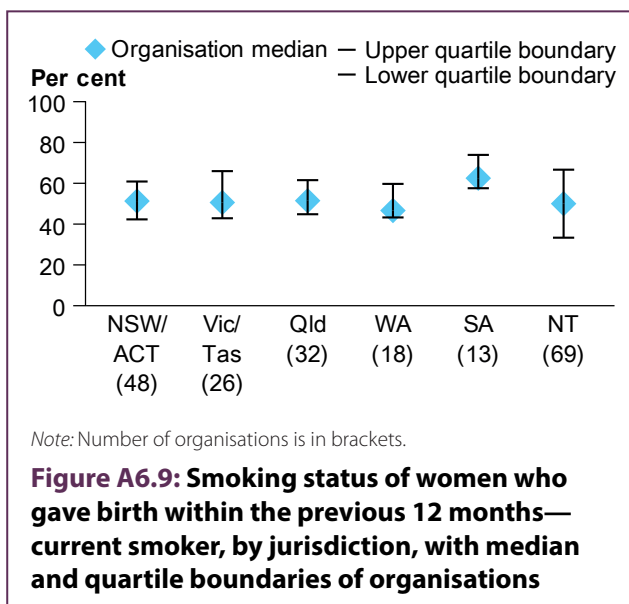
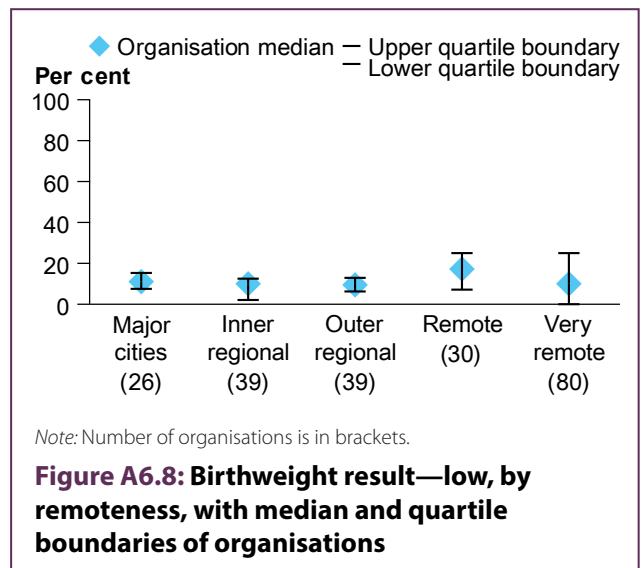
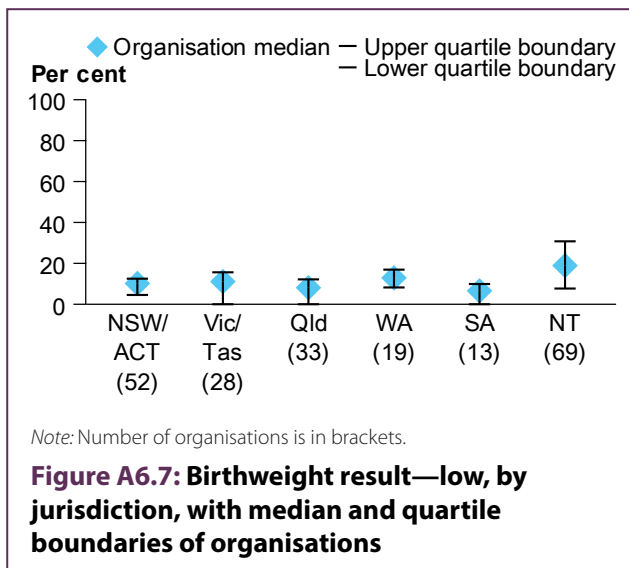
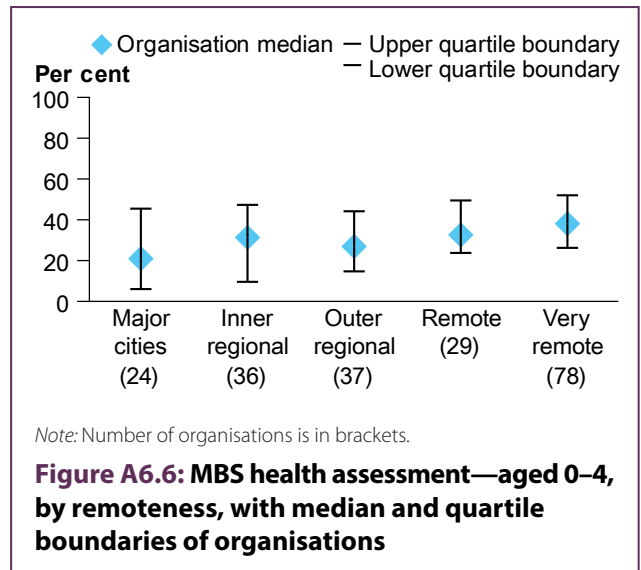
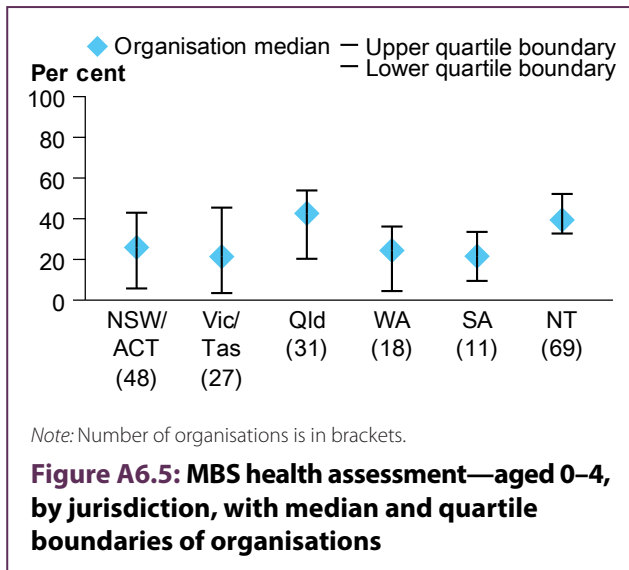
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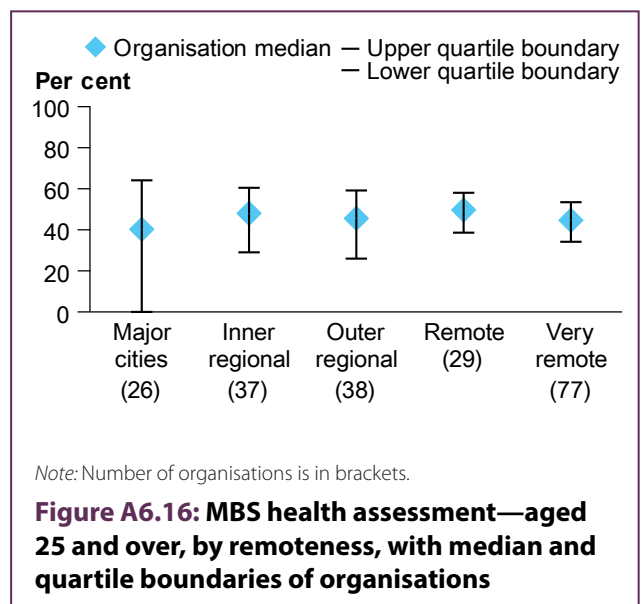
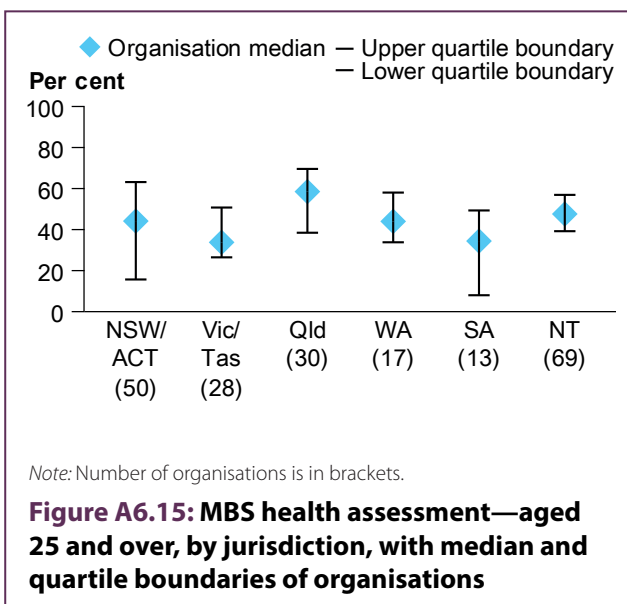
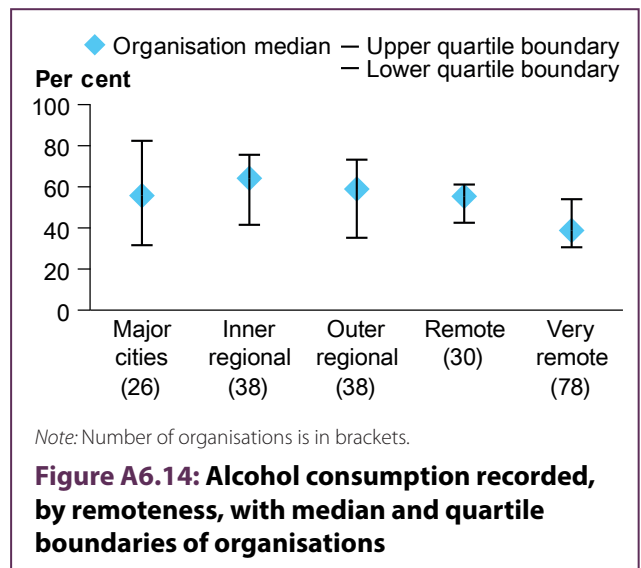
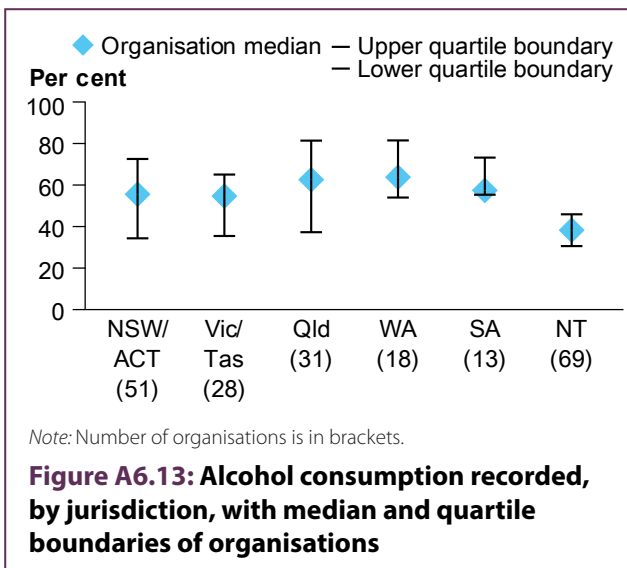
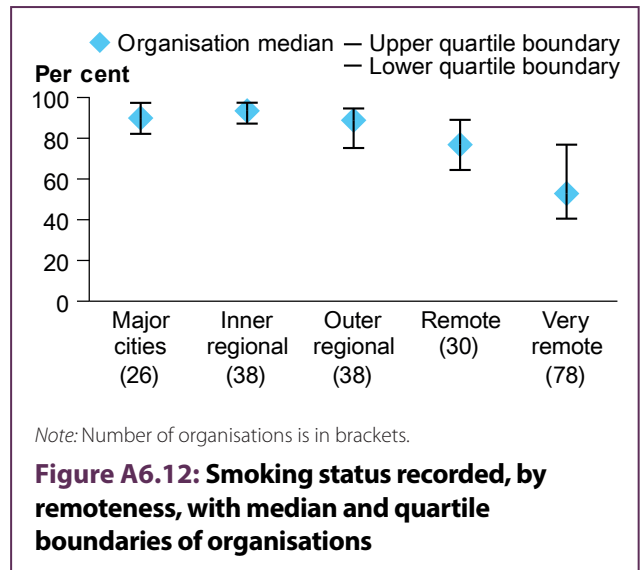
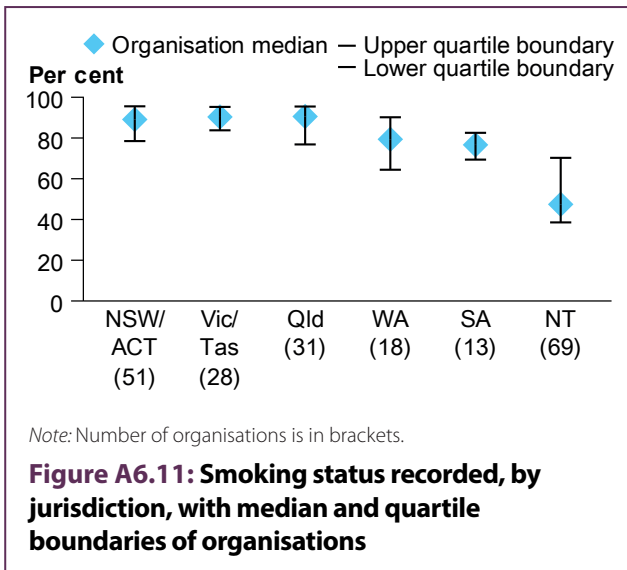
Appendix 6

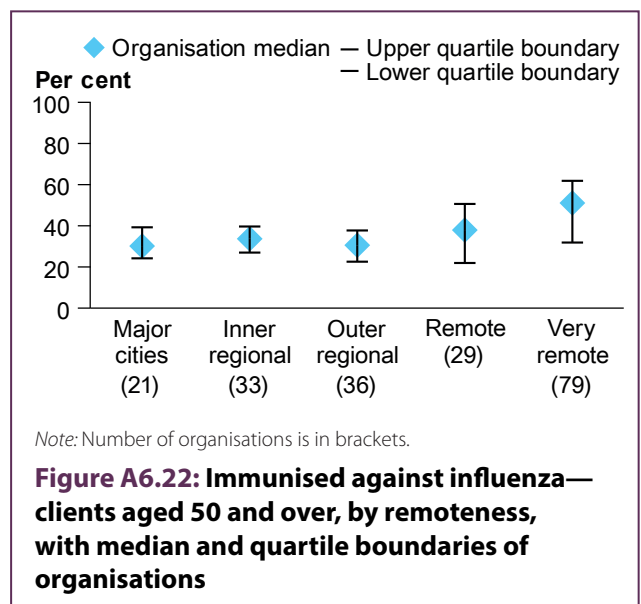
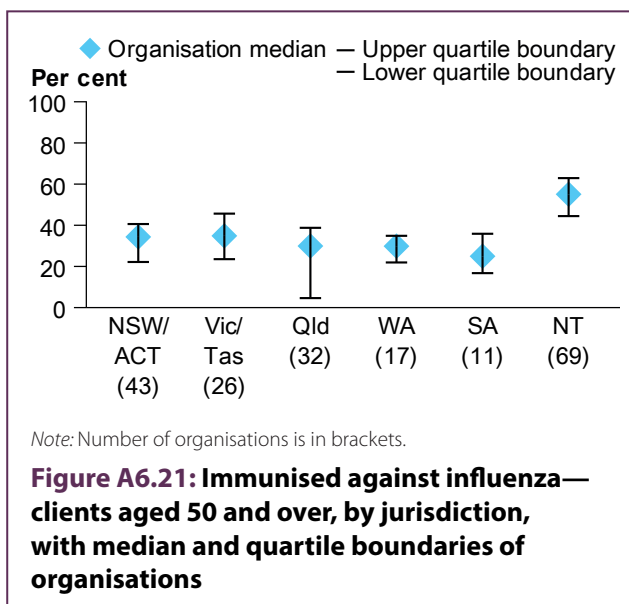
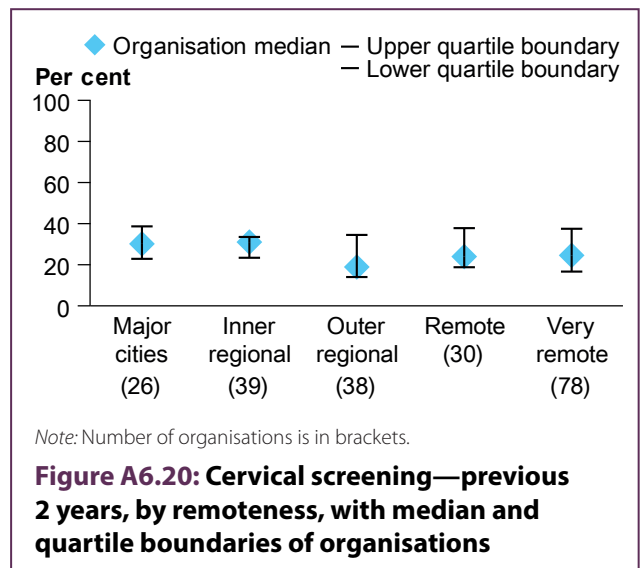
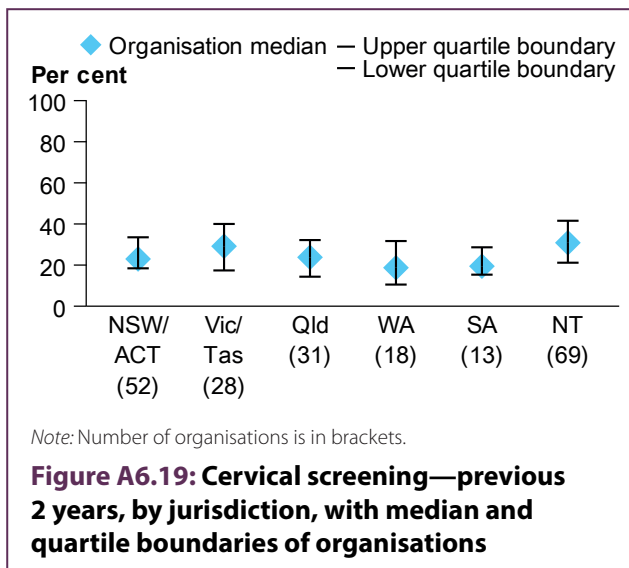
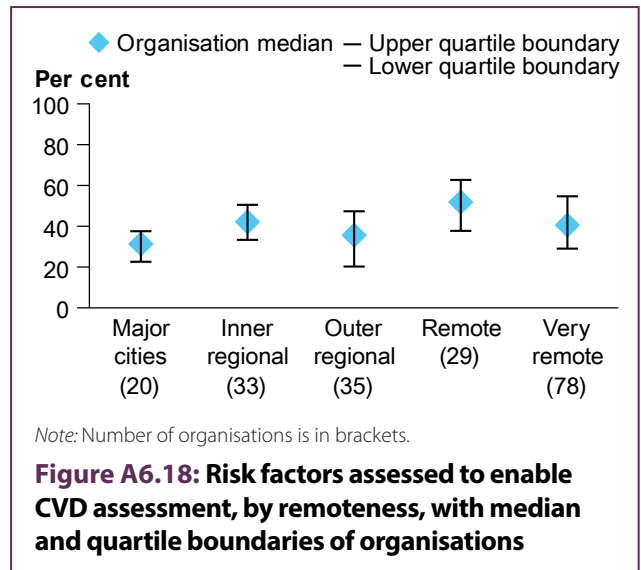
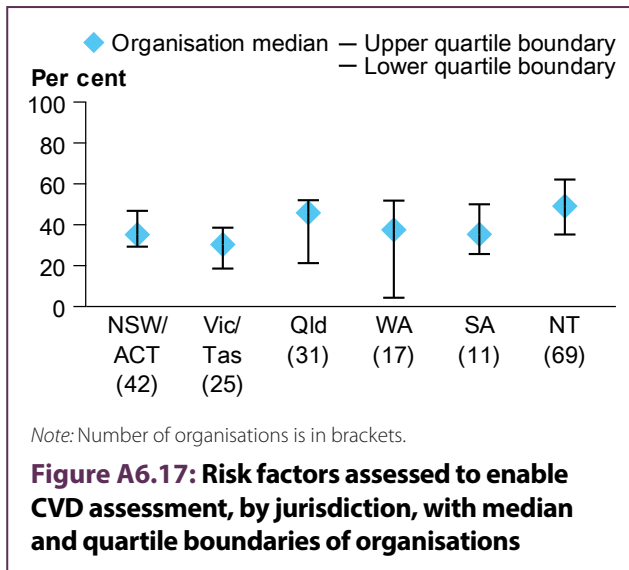
Jurisdiction and remoteness variation figures

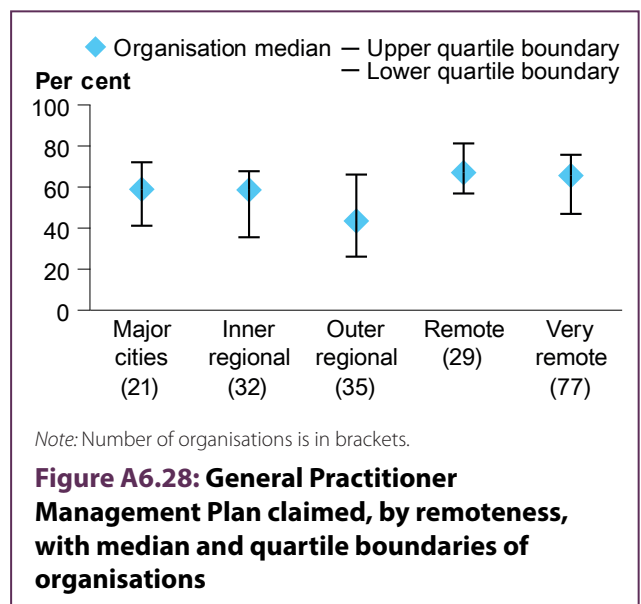
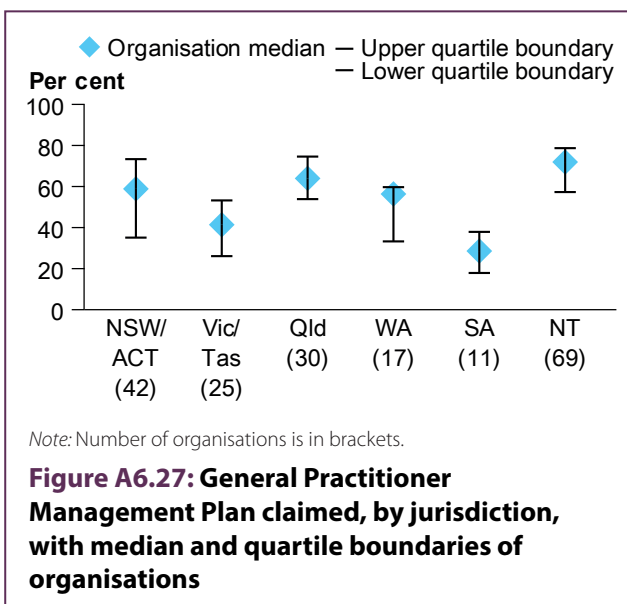
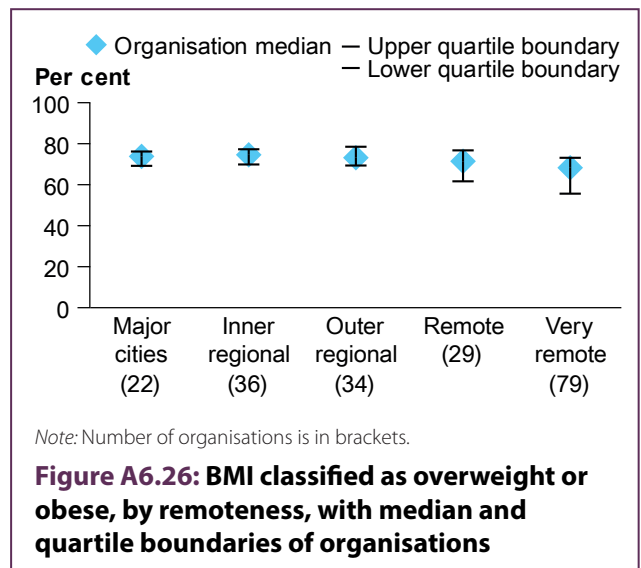
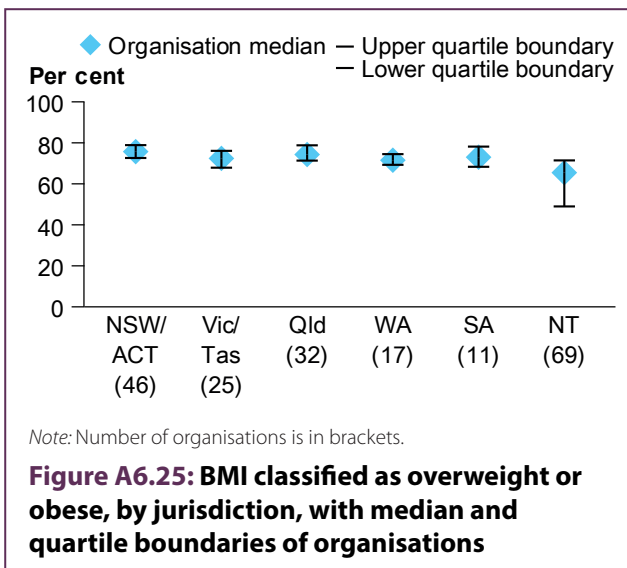
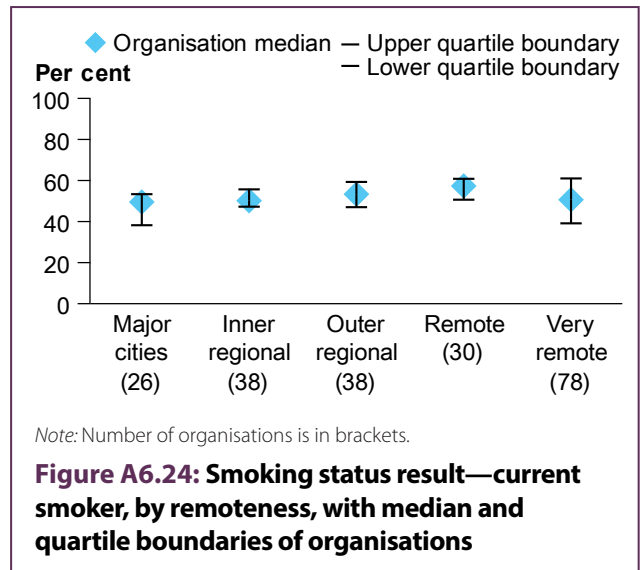
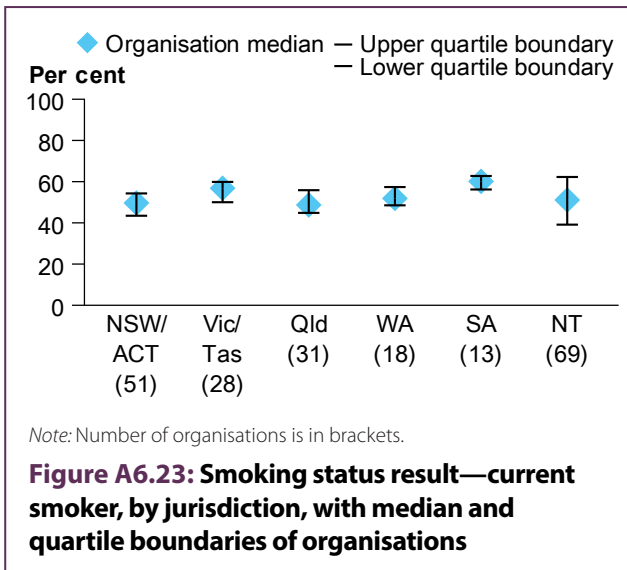
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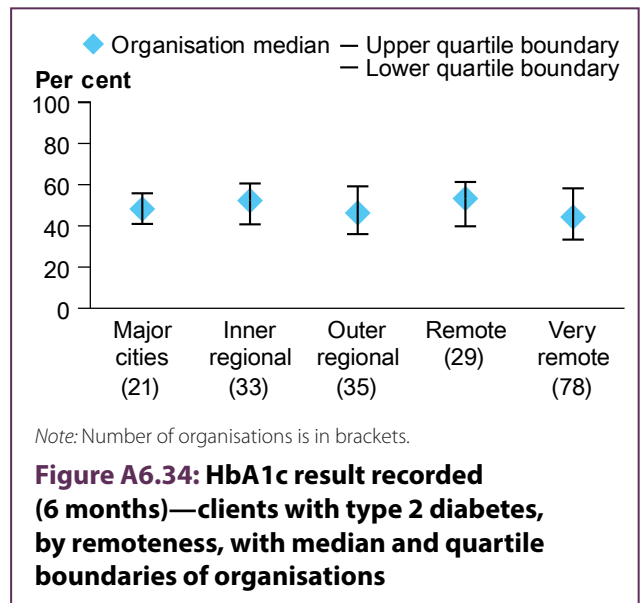
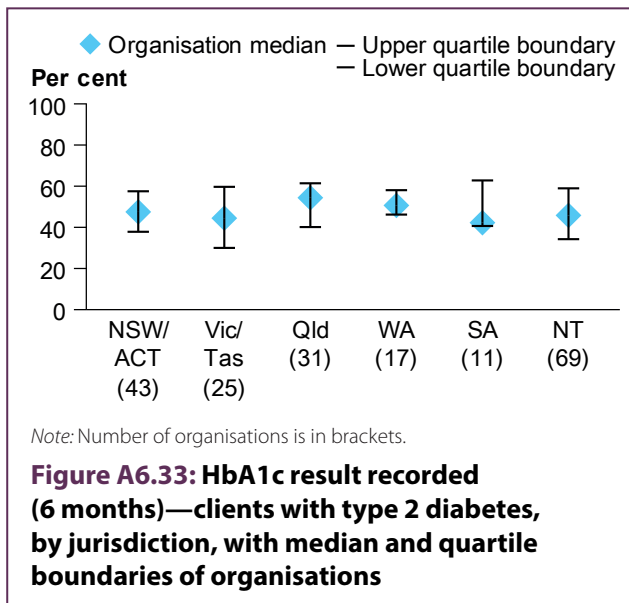
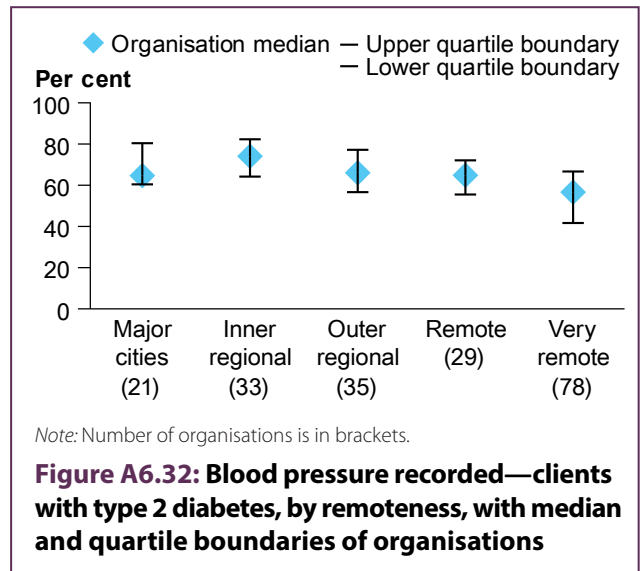
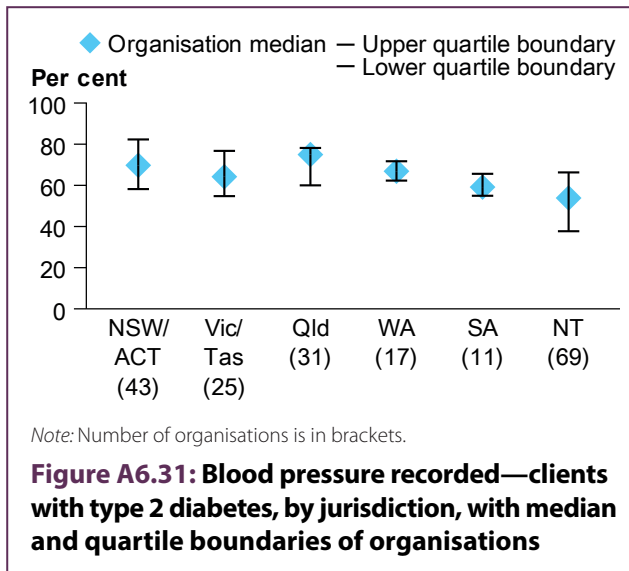
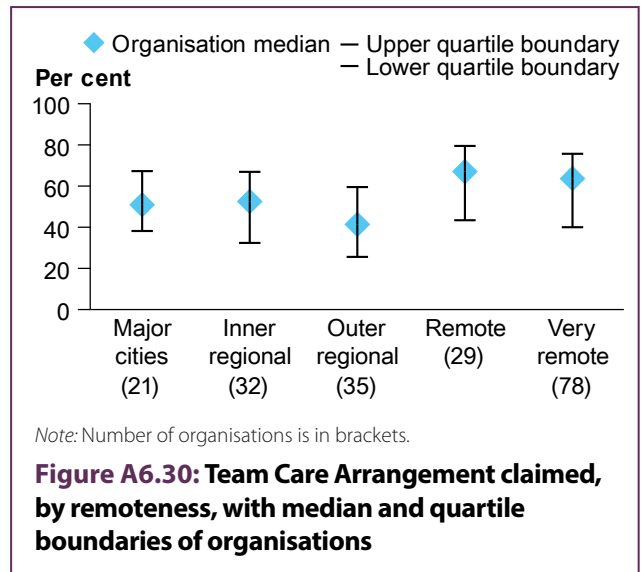
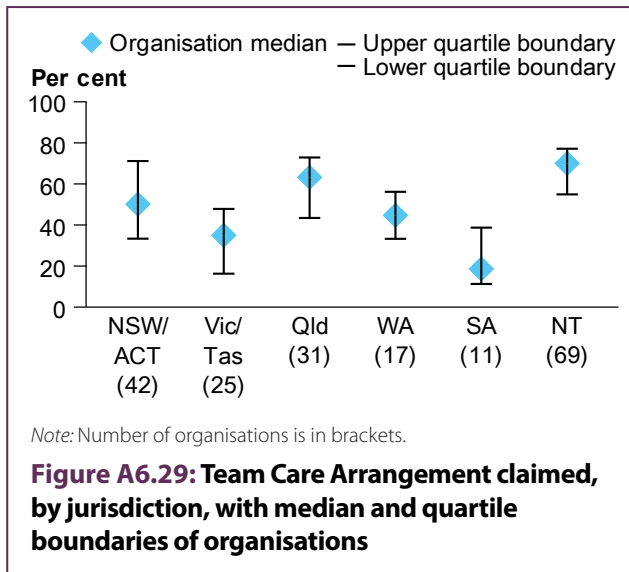


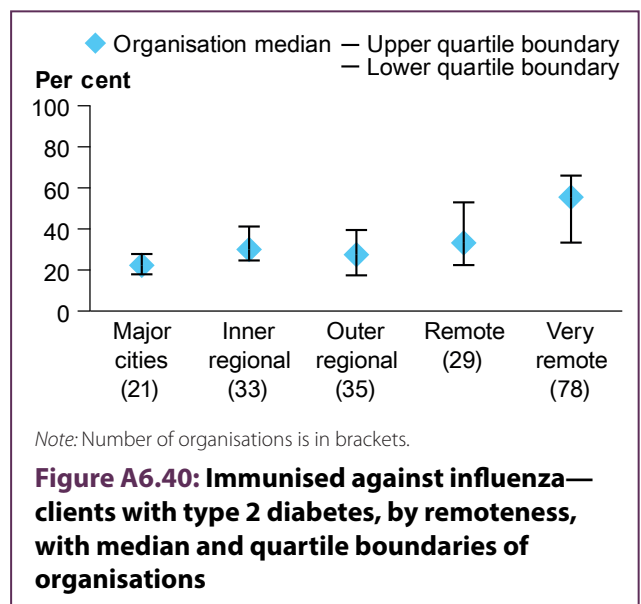
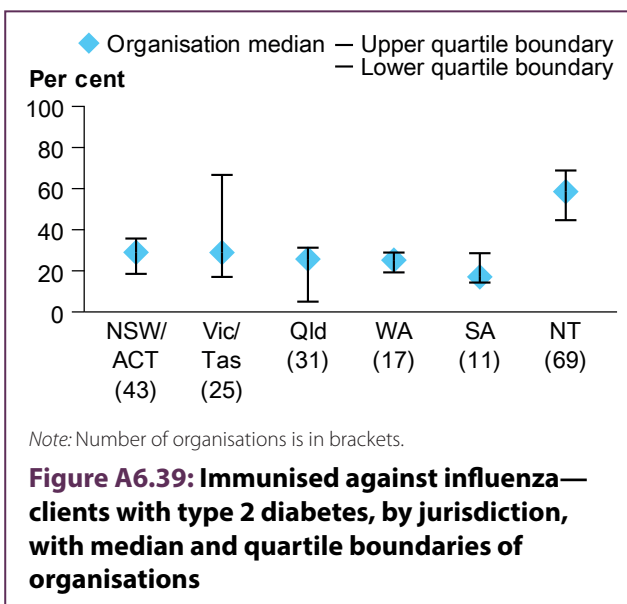
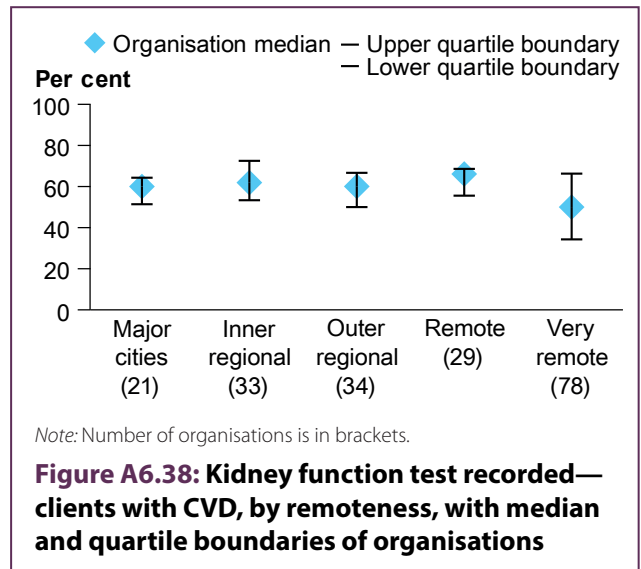
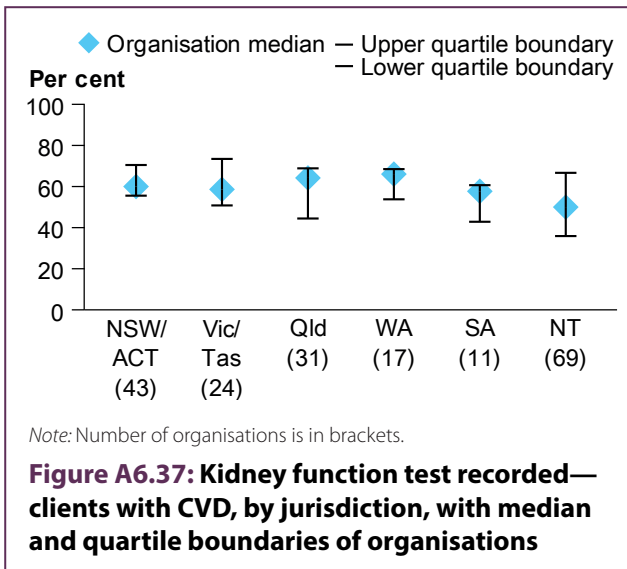
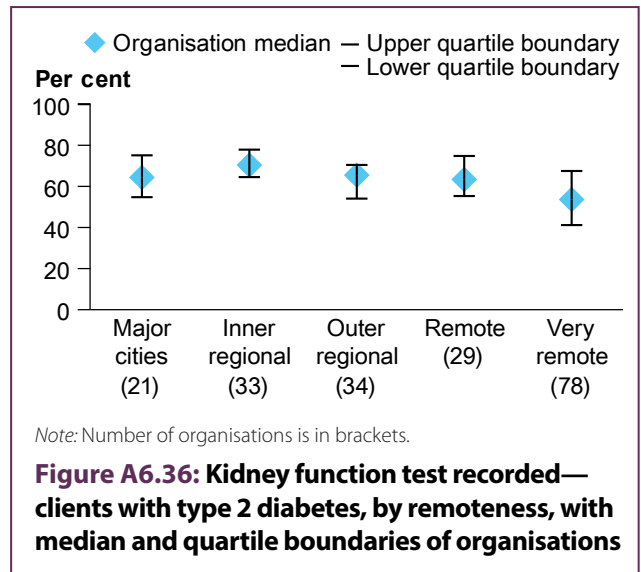
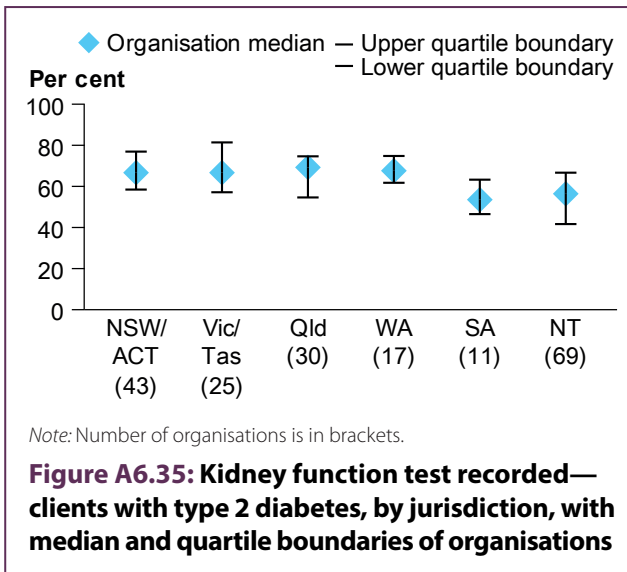


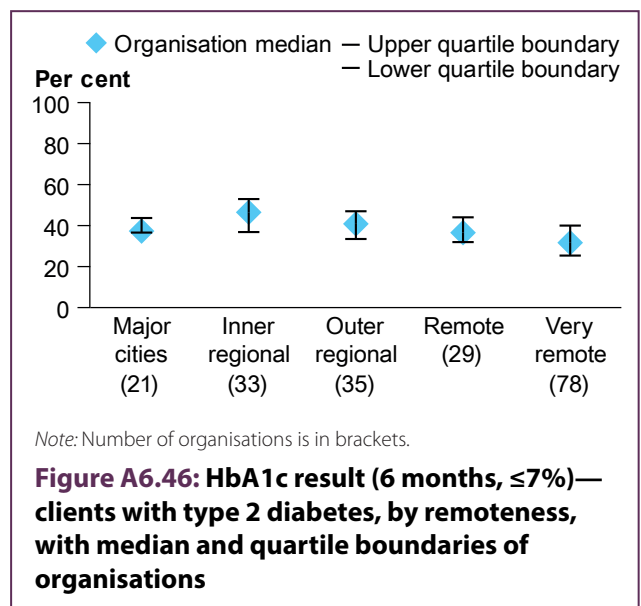
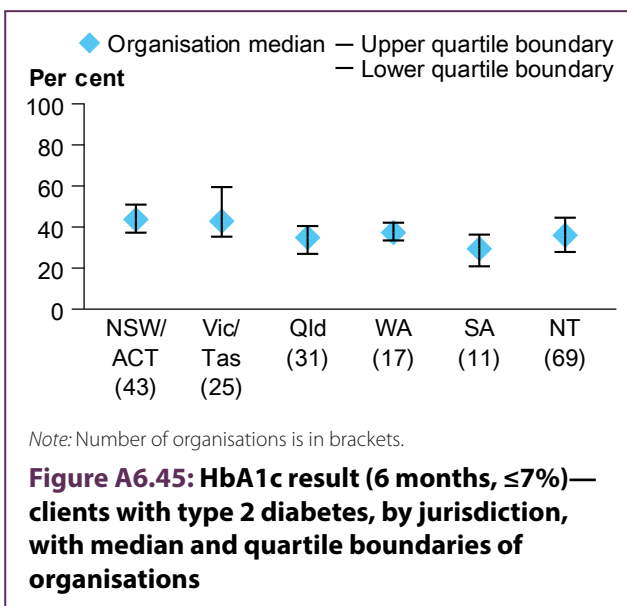
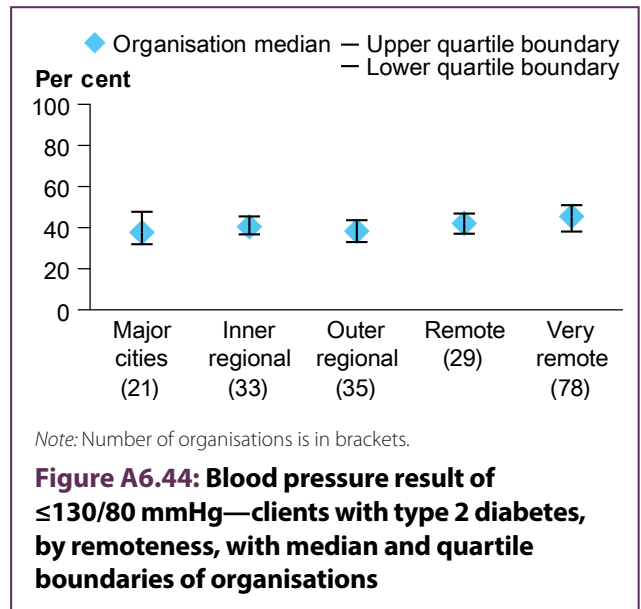
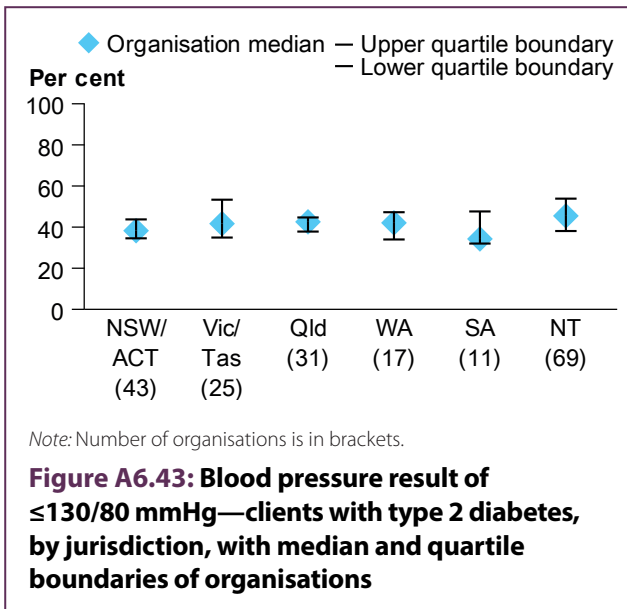
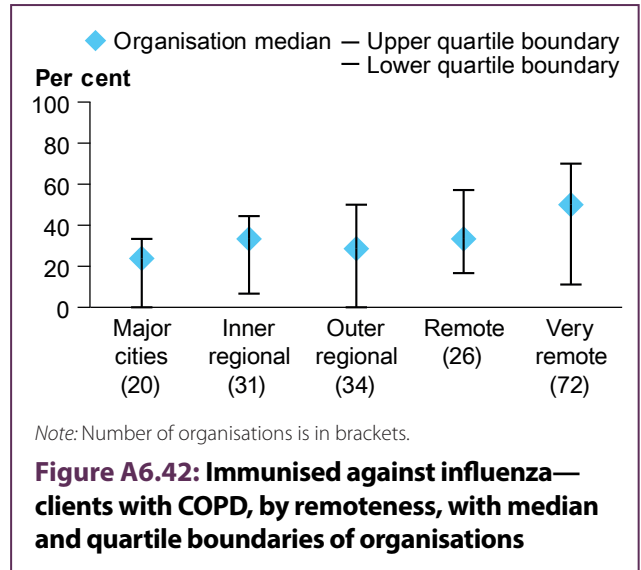
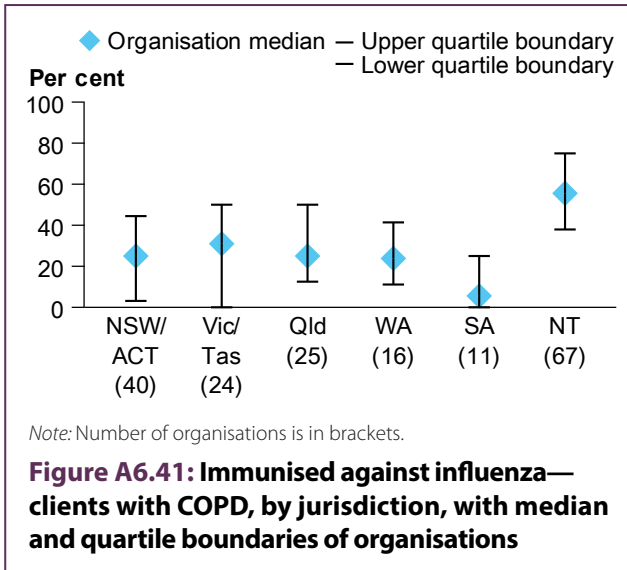


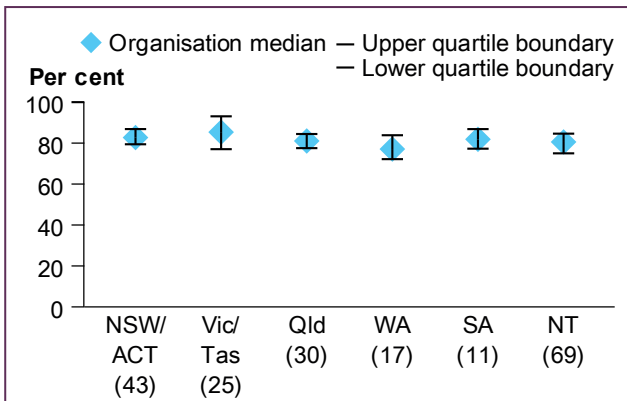






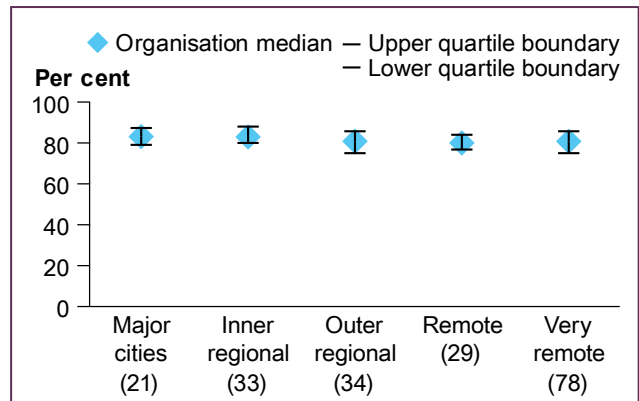






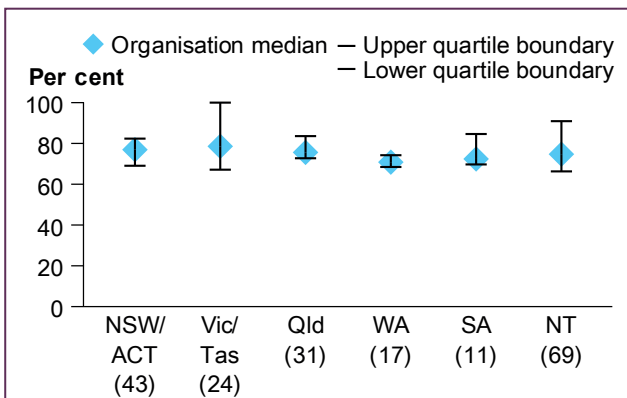
Note: Number of organisations is in brackets.

Figure A6.47: Kidney test result of ≥ 60 mL/min/ 1.73 m²—clients with type 2 diabetes, by jurisdiction, with median and quartile boundaries of organisations



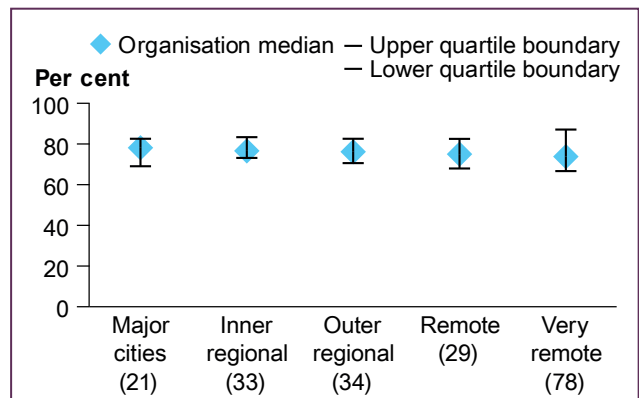
Note: Number of organisations is in brackets.

Figure A6.48: Kidney test result of ≥ 60 mL/min/ 1.73 m²—clients with type 2 diabetes, by remoteness, with median and quartile boundaries of organisations



Note: Number of organisations is in brackets.

Figure A6.49: Kidney test result of ≥ 60 mL/min/ 1.73 m²—clients with CVD, by jurisdiction, with median and quartile boundaries of organisations



Note: Number of organisations is in brackets.

Figure A6.50: Kidney test result of ≥ 60 mL/min/ 1.73 m²—clients with CVD, by remoteness, with median and quartile boundaries of organisations

Appendix 7

Analysis of Northern Territory Government services' data

An analysis of the impact of using the nKPI Indigenous regular client definition on NTG data was conducted for 20 indicators (24 measures). Results indicate that because of the change, the NTG data from June 2016 are not comparable to previously published data; that is, changes identified in the June 2016 data are a result of a data reporting change rather than a 'real world' change in patient outcomes (Table A7.1).

Percentage change for numerators, denominators and proportions between all June reporting periods from 2013 (when NTG services first reported data) to 2016 were examined. As indicators were progressively introduced, not all indicators had data available for the June 2013 reporting period. Therefore, some indicators had a shorter time period for which data could be compared. As the number of NTG services reporting on nKPIs also increased over time, only services that had reported for all June periods were included in the analysis.

The analysis found variation in how the numerators, denominators and results changed following the use of the nKPI Indigenous regular client definition for NTG data. However, there was no clear indication that any specific overarching group of indicators, such as chronic disease management, were more affected than other groups of indicators.

Process-of-care measures: Denominators increased by between 50% and 77% between 2015 and 2016. In comparison, the percentage change observed in the numerators over this period was more varied. Subsequently, the percentage point change in the proportions between 2015 and 2016 also varied.

- The largest impact on proportions was for 5 measures relating to tests recorded: HbA1c result recorded—clients with type 2 diabetes (PI05), Smoking status recorded (PI09), Alcohol consumption recorded (PI16), Cervical screening (PI22), and Blood pressure recorded—clients with type 2 diabetes (PI23). The increase in the numerator was considerably lower (between 1% and 13%) than the denominator increase (between 69% and 76%) for these indicators. Consequently, proportions for these measures saw a substantial unfavourable decrease between 2015 and 2016 (between 21% and 35% percentage points). The NTG have advised that for these measures, results arising from processes conducted outside a client's regular health service are not included in the calculation, and so numerator data, and therefore proportions, are likely to be underestimates.
- Kidney function tests recorded for type 2 diabetes and CVD (PI18) saw increases in their denominators of 73% and 52%, respectively, in line with other process-of-care denominators. However, the numerators decreased by 1% and 7%, respectively. This led to substantial unfavourable decreases in the proportions (39 percentage points for type 2 diabetes, and 32 percentage points for CVD). These decreases were substantially greater than previous decreases (0.5 and 0.05 percentage points, respectively).
- For 4 measures related to MBS items (Health assessment—clients aged 0–4 (PI03), Health assessment—clients aged 25 and over (PI03), General Practitioner Management Plan—clients with type 2 diabetes (PI07), Team Care Arrangement—clients with type 2 diabetes (PI08)), and 2 measures relating to immunisation against influenza, including Clients aged 50 and over (PI14), and Clients with type 2 diabetes (PI15), denominators increased by between 60% and 77%. However, the numerators also increased substantially (between 38% and 73%) for these indicators. Consequently, while this impacted unfavourably on the June 2016 proportions, the magnitude of impact was less than that observed for the 5 measures relating to tests recorded (as described above). More specifically, the results revealed:
 - a reversal of the positive trend observed between 2014 and 2015, with a decrease of between 6 and 8 percentage points for MBS health assessment—clients aged 0–4 (PI03), General Practitioner Management Plan (PI07), and Team Care Arrangement (PI08) from 2015 to 2016
 - a larger decrease than observed between 2014 and 2015 for Immunised against influenza—clients aged 50 and over (PI14) (7 compared with 6 percentage points)

- a smaller increase (0.2 percentage points) than between 2013 and 2014 (15 percentage points) or between 2014 and 2015 (9 percentage points) for MBS health assessment—clients aged 25 and over (PI03)
- a smaller decrease (2 percentage points) for Immunised against influenza—clients with type 2 diabetes (PI15) between 2015 and 2016, compared with the previous decrease (12 percentage points) between 2014 and 2015.
- For the indicator Immunised against influenza—clients with COPD (PI15), the denominator and numerator increased by almost the same proportion (24% and 23%, respectively) resulting in minimal change (0.2 percentage points) in the proportion between 2015 and 2016. This may be due to small numbers generally associated with this indicator.
- It was not anticipated that Birthweight recorded (PI01) would be affected by the changes in the Indigenous regular client definition used, as the definition is not applicable to newborn babies and therefore not included in the specifications for this indicator. However, the numerator increased by 51% and the denominator increased by 60% between 2015 and 2016. This resulted in a decline of 5 percentage points in the proportion for this indicator—a decline which was 3 times greater than the decline observed between 2014 and 2015.

Health outcome measures generally had smaller increases in the denominator (between 1% and 13%) compared with the process-of-care measures, or a decrease in the denominator between 2015 and 2016. This had a mixed effect on the resulting proportions:

- For 3 outcome indicators (HbA1c result—clients with type 2 diabetes (PI06), Smoking status result (PI10), and BMI classified as overweight or obese (PI12)), the increase in the denominator (between 5% and 13%) was smaller than the increase in the numerator (between 5% and 16%). This impacted favourably on HbA1c result—clients with type 2 diabetes (PI06) with a favourable 3 percentage point increase. The impact on proportions for Smoking status recorded (PI10) and BMI classified as overweight or obese (PI12), the unfavourable increases were similar to the previous unfavourable increases between 2014 and 2015 (Smoking status recorded (PI10): 1.2 percentage points between 2015 and 2016 compared with 1 percentage points between 2014 and 2015; BMI classified as overweight or obese (PI12): 0.2 percentage points between 2015 and 2016 compared with 0.3 percentage points between 2014 and 2015).
- For the indicator First antenatal visit before 13 weeks (PI13), the denominator decrease of 2% and numerator increase of 28% resulted in a favourable 9 percentage point increase in the proportion.
- For the indicator Blood pressure result of $\geq 130/80$ mmHg—clients with type 2 diabetes (PI24), the denominator increased by 1% while the numerator decreased by 6%, leading to a 4 percentage point decrease in the proportion.
- It was not anticipated that Birthweight result (PI02) would be affected by the changes in the Indigenous regular client definition as this definition is not included in the specifications for these indicators. However, Birthweight result had an increase of 52% in the denominator and 128% in the numerator, leading to an unfavourable 8 percentage point increase in the proportion.
- For Smoking status of women who gave birth within the previous 12 months (PI11) and Kidney function test results—clients with a selected chronic disease (PI19), only 2 annual time periods were available for analysis. While PI11 saw little change in the proportion (0.7 percentage points) between May 2015 and June 2016, PI19 saw greater declines in the numerators than in the denominators, leading to a decrease in proportions (2 to 3 percentage points) for both measures.

The measure Child immunisation (PI04) was not included in the analysis, as a potential data quality issue is still being investigated. Risk factors assessed to enable CVD assessment (PI20) were not included, as data were not collected in May 2015.

Table A7.1: Indicator results (proportions) for 2013 to 2016 and percentage point changes between periods for NTG services' data

Indicator group	Result (%)					Percentage point change			Number of clinics
	2013	2014	2015	2016	2016	2013 to 2014	2014 to 2015	2015 to 2016	
Process-of-care measures									
PI05: HbA1c result recorded (6 months)—clients with type 2 diabetes	75.9	80.4	73.7	43.7	43.7	4.5	-6.7	-30.0	23
PI09: Smoking status recorded	..	67.8	76.9	51.4	51.4	..	9.1	-25.5	29
PI16: Alcohol consumption recorded	47.7	61.5	64.5	42.5	42.5	13.8	2.9	-22.0	29
PI22: Cervical screening—previous 2 years	53.5	57.9	55.2	34.7	34.7	4.4	-2.6	-20.5	29
PI23: Blood pressure result recorded—clients with type 2 diabetes	86.1	88.7	84.0	48.8	48.8	2.6	-4.7	-35.2	24
PI18: Kidney function test recorded—clients with:									
Type 2 diabetes	59.4	90.6	90.1	51.6	51.6	31.2	-0.5	-38.6	26
CVD	82.7	83.7	83.7	51.5	51.5	1.0	-0.1	-32.2	29
PI03: MBS health assessment—aged 0–4	37.6	56.5	59.6	51.3	51.3	18.9	3.1	-8.3	29
PI03: MBS health assessment—aged 25 and over	25.9	40.9	49.6	49.8	49.8	15.1	8.7	0.2	29
PI07: General Practitioner Management Plan—clients with type 2 diabetes	70.0	75.2	78.6	72.2	72.2	5.2	3.4	-6.4	26
PI08: Team Care Arrangement—clients with type 2 diabetes	73.3	70.0	75.4	69.1	69.1	-3.3	5.3	-6.3	26
PI14: Immunised against influenza—clients aged 50 and over	73.3	73.1	67.1	60.2	60.2	-0.2	-6.0	-6.9	29
PI15: Immunised against influenza—clients with:									
Type 2 diabetes	70.8	77.2	65.2	63.3	63.3	6.3	-12.0	-1.8	27
COPD	74.2	81.0	62.7	62.9	62.9	6.8	-18.4	0.2	29
PI01: Birthweight recorded	..	88.7	87.2	82.5	82.5	..	-1.5	-4.7	30

(continued)

Table A7.1 (continued): Indicator results (proportions) for 2013 to 2016 and percentage point changes between periods for NTG services' data

Indicator group	Result (%)					Percentage point change			Number of clinics
	2013	2014	2015	2016	2013 to 2014	2014 to 2015	2015 to 2016		
Health outcome measures									
PI06: HbA1c result (6 months, ≤7%)—clients with type 2 diabetes	31.2	33.4	28.2	30.9	2.3	-5.3	2.8	23	
PI10: Smoking status result—current smoker	..	54.0	55.1	56.3	..	1.0	1.2	29	
PI12: BMI classified as overweight or obese	54.7	49.2	49.5	49.6	-5.5	0.3	0.2	29	
PI13: First antenatal visit (before 13 weeks)	..	20.6	28.2	36.8	..	7.7	8.6	29	
PI24: Blood pressure result of ≤130/80mmHg—clients with type 2 diabetes	65.1	47.9	51.7	47.9	-17.2	3.7	-3.8	24	
PI02: Birthweight result—low	..	15.6	15.2	22.8	..	-0.3	7.6	30	
PI11: Smoking status of women who gave birth in the previous 12 months—current smoker	..	..	51.4	52.1	..	..	0.7	50
PI19: Kidney function test result (eGFR result > 60)—clients with a selected chronic disease	..	..	..	..	..	..	..	..
Type 2 diabetes	..	..	82.3	79.6	..	..	-2.6	51
CVD	..	..	77.3	75.1	..	..	-2.2	51

.. not applicable

Note: Data for 2016 cannot be compared with previous years due to a change in how the definition of an Indigenous regular client has been applied in June 2016. For June 2013 to May 2015, data from NTG services was restricted to Indigenous regular clients who attended the health clinic as their usual health centre. June 2016 data has had the restriction of the usual health centre removed.

Appendix 8

Comparison of nKPI definition results, 2015

The nKPI definition of an Indigenous regular client is a client who has attended a given primary health care organisation at least 3 times in the last 2 years, regardless of where they live. An analysis was undertaken to examine the impact of restricting the definition to exclude clients who do not live in the health service area (HSA) and are therefore considered to be visitors. These visitors may not receive the full suite of care received by a person who is considered to be a regular patient of the health service.

It was anticipated that collecting data using the nKPI definition would pick up more clients, compared with a narrower definition that is restricted to clients living in a particular health service area. Although differences in numerators and denominators may be observed, it was expected that the resulting proportions would be higher under the definition that is restricted to clients living in a particular HSA.

The impact of these different definitions was examined for a single health organisation located in the Northern Territory using 2015 calendar year indicator results. Results were compared for the nKPI definition (3 visits in the last 2 years regardless of locality) and the nKPI definition which is HSA-limited (that is, 3 visits in the last 2 years and lives within the health service area associated with that clinic).

For measures related to process-of-care, findings showed that, when the nKPI definition is HSA-limited, the organisation performed:

- better by <5 percentage points on Smoking status recorded (PI09), and First antenatal care visit (PI13)
- better by between 5–10 percentage points on MBS health assessment (item 715)—clients aged 0–4 (PI03), Alcohol consumption recorded (PI16) and Cervical screening (PI22)
- better by >10 percentage points on Birthweight recorded (PI01), MBS health assessment (item 715)—clients aged 25 and over (PI03), HbA1c result recorded—clients with type 2 diabetes (PI05), General Practitioner Management Plan—clients with type 2 diabetes (PI07), Team Care Arrangement—clients with type 2 diabetes (PI08), Immunised against influenza—clients aged 50 and over (PI14), Immunised against influenza—clients with type 2 diabetes (PI15), Kidney function test recorded—clients with type 2 diabetes or CVD (PI18), and Blood pressure result recorded—clients with type 2 diabetes (PI23)
- worse by >10 percentage points on Immunised against influenza—clients with COPD (PI15).

For measures related to health outcomes, findings showed that, when the HSA-limited definition was used, the organisation performed:

- better by <5 percentage points on Birthweight result—low (PI02), HbA1c result within a specified level—clients with type 2 diabetes (PI06), BMI classified as overweight or obese (PI12), Kidney function test within specified levels—clients with diabetes or CVD (PI19), and Blood pressure result $\leq 130/80$ mmHg—clients with type 2 diabetes (PI24)
- worse by <5 percentage points on Smoking status result (PI10), and Smoking status of women who gave birth within the previous 12 months—current smoker (PI11).

The above results show that, in general, and consistent with the expected impact, there was an increase in the proportion of clients receiving processes-of-care and clients with various health outcomes under the HSA-limited definition. However, the magnitude of change for different indicators was mixed.

Differences were evident in numerator and denominator numbers. For all measures, numerator and denominator numbers under the nKPI definition were equal to or greater than the HSA-limited definition. The relative increase in numerators ranged from 9% to 44%, and in denominators, from 0% to 48%. For all but 3 measures (Birthweight result—low (PI02), BMI classified as overweight or obese (PI12), and Immunised against influenza—clients with COPD (PI15)), the increase in denominator numbers was greater than the increase in the numerator numbers. It is important to note that:

- PI02 relates to babies, and the proportion of low birthweight babies is similar among regular clients and visitors, and this is also the case for P112 on overweight and obesity, whereby the prevalence among regular clients and visitors is similar
- PI15 numbers are substantially lower than many other measures, reflecting the relative rarity of this condition in the nKPI population
- These findings provide some insight into the effect of adopting different Indigenous regular client definitions; however, further clarity is needed to understand the different impact it has on different indicators.

It is also important to note that:

- for the current reporting period, all services are now reporting using the same definition
- the above analysis was based on data from a single organisation and therefore should not be interpreted as quantifying definitional differences across the broader nKPI collection.

Table A8.1: Comparison of data for 1 Northern Territory organisation using the definitions nKPI (all localities) and nKPI (HSA-limited), 2015

Indicator	Subcomponent	nKPI regular client	
		All localities ^(a) (%)	HSA-limited ^(b) (%)
PI01: Birthweight recorded		70.7	86.9
PI02: Birthweight result	Low	14.5	12.6
PI03: MBS health assessment	Aged 0–4	46.6	54.4
	Aged 25 and over	43.7	53.8
PI05: HbA1c result recorded—clients with type 2 diabetes	Previous 6 months	37.5	51.5
PI06: HbA1c result—clients with type 2 diabetes	Previous 6 months, ≤7%	30.8	31.6
PI07: General Practitioner Management Plan—clients with type 2 diabetes		29.8	41.7
PI08: Team Care Arrangement—clients with type 2 diabetes		29.5	41.1
PI09: Smoking status recorded		80.3	84.4
PI10: Smoking status result	Current smoker	48.0	48.7
PI11: Smoking status of women who gave birth within the previous 12 months	Current smoker	42.2	44.6
PI12: BMI classified as overweight or obese	Overweight	29.2	29.4
	Obese	44.3	44.0
PI13: First antenatal visit	Before 13 weeks	47.9	52.8
PI14: Immunised against influenza—clients aged 50 and over		45.0	57.3
PI15: Immunised against influenza—clients with type 2 diabetes or COPD	Type 2 diabetes	45.9	59.7
	COPD	76.5	64.7

(continued)

Table A8.1 (continued): Comparison of data for 1 Northern Territory organisation using the definitions nKPI (all localities) and nKPI (HSA-limited), 2015

Indicator	Subcomponent	nKPI regular client	
		All localities ^(a) (%)	HSA-limited ^(b) (%)
PI16: Alcohol consumption recorded		54.4	62.2
PI18: Kidney function test recorded—clients with a selected chronic disease	Type 2 diabetes	53.1	72.8
	CVD	57.8	72.3
PI19: Kidney function test result—clients with a selected chronic disease	Type 2 diabetes, ≥ 90	54.5	54.3
	CVD, ≥ 90	36.7	35.9
PI22: Cervical screening	Previous 2 years	41.8	49.7
PI23: Blood pressure recorded—clients with type 2 diabetes		56.2	71.5
PI24: Blood pressure result of $\geq 130/80$ mmHg—clients with type 2 diabetes		45.8	46.8

(a) nKPI (all localities) is the standard nKPI definition—that is, clients who have attended the primary health care organisation at least 3 times in the last 2 years regardless of where they live.

(b) nKPI (HSA-limited) is defined as clients who have attended the primary health care organisation at least 3 times in the last 2 years and live within the HSA associated with that organisation (see Box 1.1 in Chapter 1 for more information).

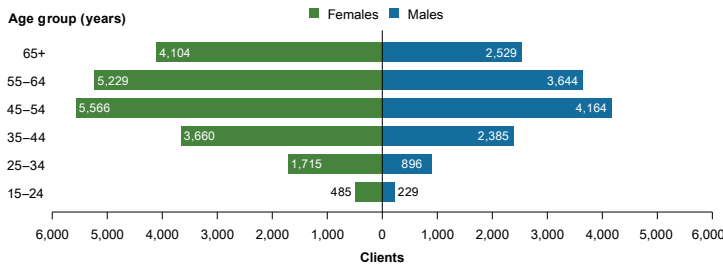
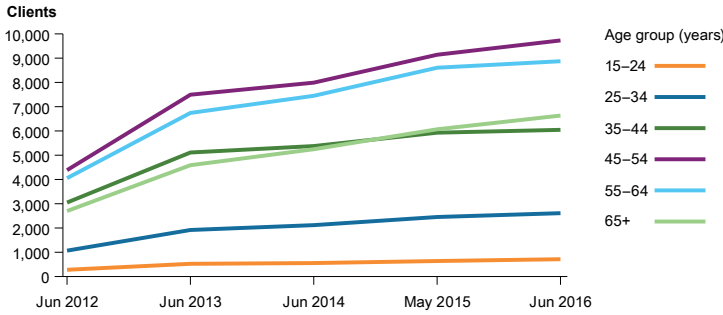
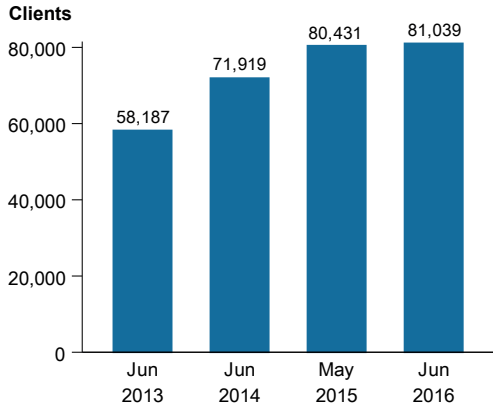
Notes

1. The indicator 'PI20: Risk factors assessed to enable CVD assessment' is not presented in this table, as data was collected for the first time in December 2015.
2. The indicator 'PI04: Child immunisation' is excluded due to concerns over data validity.

Appendix 9

Guide to the figures

Table A9.1: Explanatory guide to figures in chapters 2–5, and 7

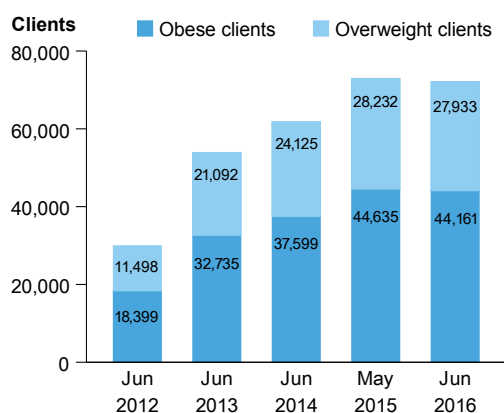
Reference figures with example	Description																																										
<p>Figures 2.1; 2.3; 2.5</p>  <table border="1"> <caption>Data for Figure 2.1, 2.3, 2.5: Clients by Age Group and Sex</caption> <thead> <tr> <th>Age group (years)</th> <th>Females</th> <th>Males</th> </tr> </thead> <tbody> <tr> <td>65+</td> <td>4,104</td> <td>2,529</td> </tr> <tr> <td>55-64</td> <td>5,229</td> <td>3,644</td> </tr> <tr> <td>45-54</td> <td>5,566</td> <td>4,164</td> </tr> <tr> <td>35-44</td> <td>3,660</td> <td>2,385</td> </tr> <tr> <td>25-34</td> <td>1,715</td> <td>896</td> </tr> <tr> <td>15-24</td> <td>485</td> <td>229</td> </tr> </tbody> </table>	Age group (years)	Females	Males	65+	4,104	2,529	55-64	5,229	3,644	45-54	5,566	4,164	35-44	3,660	2,385	25-34	1,715	896	15-24	485	229	<p>These horizontal bar charts show the number of clients with a specified chronic disease by age group and sex. Data are presented at the national level.</p> <p>For example, this figure shows that there were more female Aboriginal and Torres Strait Islander clients than male Aboriginal and/or Torres Strait Islander clients with type 2 diabetes in June 2016 across all age groups. There were 485 females and 229 males aged 15–24; 1,715 females and 896 males aged 25–34; 3,660 females and 2,385 males aged 35–44; 5,566 females and 4,164 males aged 45–54; 5,229 females and 3,644 males aged 55–64 and 4,104 females and 2,529 males aged 65 and over.</p>																					
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65+	4,104	2,529																																									
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15-24	485	229																																									
<p>Figures 2.2; 2.4; 2.6</p>  <table border="1"> <caption>Data for Figure 2.2, 2.4, 2.6: Clients by Age Group and Reporting Period</caption> <thead> <tr> <th>Age group (years)</th> <th>Jun 2012</th> <th>Jun 2013</th> <th>Jun 2014</th> <th>May 2015</th> <th>Jun 2016</th> </tr> </thead> <tbody> <tr> <td>15-24</td> <td>278</td> <td>714</td> <td>714</td> <td>714</td> <td>714</td> </tr> <tr> <td>25-34</td> <td>1,067</td> <td>2,611</td> <td>2,611</td> <td>2,611</td> <td>2,611</td> </tr> <tr> <td>35-44</td> <td>3,049</td> <td>6,045</td> <td>6,045</td> <td>6,045</td> <td>6,045</td> </tr> <tr> <td>45-54</td> <td>4,384</td> <td>9,730</td> <td>9,730</td> <td>9,730</td> <td>9,730</td> </tr> <tr> <td>55-64</td> <td>4,053</td> <td>8,873</td> <td>8,873</td> <td>8,873</td> <td>8,873</td> </tr> <tr> <td>65+</td> <td>2,699</td> <td>6,633</td> <td>6,633</td> <td>6,633</td> <td>6,633</td> </tr> </tbody> </table>	Age group (years)	Jun 2012	Jun 2013	Jun 2014	May 2015	Jun 2016	15-24	278	714	714	714	714	25-34	1,067	2,611	2,611	2,611	2,611	35-44	3,049	6,045	6,045	6,045	6,045	45-54	4,384	9,730	9,730	9,730	9,730	55-64	4,053	8,873	8,873	8,873	8,873	65+	2,699	6,633	6,633	6,633	6,633	<p>These line charts show the number of clients with a specified chronic disease by age group and reporting period. Data are presented at the national level.</p> <p>For example, this figure shows that there has been an increase in the number of Aboriginal and Torres Strait Islander clients aged 15 and over with type 2 diabetes across all 12-month reporting periods from June 2012 or June 2013 to June 2016. The number of clients aged 15–24 has increased from 278 in June 2012 to 714 in June 2016; those aged 25–34 have increased from 1,067 to 2,611; those aged 35–44 have increased from 3,049 to 6,045; those aged 45–54 have increased from 4,384 to 9,730; those aged 55–64 have increased from 4,053 to 8,873; and the number of clients aged 65 and over have increased from 2,699 to 6,633.</p>
Age group (years)	Jun 2012	Jun 2013	Jun 2014	May 2015	Jun 2016																																						
15-24	278	714	714	714	714																																						
25-34	1,067	2,611	2,611	2,611	2,611																																						
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65+	2,699	6,633	6,633	6,633	6,633																																						
<p>Figures 2.7; 2.9</p>  <table border="1"> <caption>Data for Figure 2.7, 2.9: Clients with Risk Factors</caption> <thead> <tr> <th>Reporting Period</th> <th>Number of Clients</th> </tr> </thead> <tbody> <tr> <td>Jun 2013</td> <td>58,187</td> </tr> <tr> <td>Jun 2014</td> <td>71,919</td> </tr> <tr> <td>May 2015</td> <td>80,431</td> </tr> <tr> <td>Jun 2016</td> <td>81,039</td> </tr> </tbody> </table>	Reporting Period	Number of Clients	Jun 2013	58,187	Jun 2014	71,919	May 2015	80,431	Jun 2016	81,039	<p>This vertical bar chart shows the number of clients across all 12-month reporting periods, from June 2012 or June 2013 to June 2016, with specified chronic disease risk factors, by risk factor and reporting period. Data are presented at the national level.</p> <p>The chart shows the change in numbers of clients who are current smokers, or have type 2 diabetes and a blood pressure result of greater than 130/80 mmHg.</p> <p>For example, this chart shows that the number of Aboriginal and Torres Strait Islander regular clients aged 15 and over who were current smokers increased from 58,187 in June 2013 to 81,039 in June 2016.</p>																																
Reporting Period	Number of Clients																																										
Jun 2013	58,187																																										
Jun 2014	71,919																																										
May 2015	80,431																																										
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(continued)

Table A9.1 (continued): Explanatory guide to figures in chapters 2–5, and 7

Reference figures with example	Description
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Figure 2.8

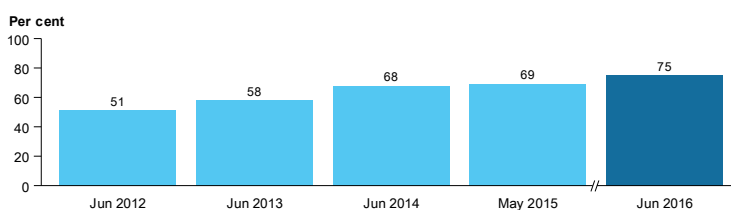


This vertical bar chart shows the number of clients across all 12-month reporting periods, from June 2012 or June 2013 to June 2016, with specified chronic disease risk factors by risk factor and reporting period. Data are presented at the national level.

The chart shows the change in numbers of clients who had a BMI classified as either overweight or obese.

This chart shows that the number of Aboriginal and Torres Strait Islander clients aged 25 and over whose BMI was classified as overweight increased from 11,498 in June 2012 to 27,933 in June 2016. The number whose BMI was classified as obese increased from 18,399 in June 2012 to 44,161 in June 2016. The total number of clients whose BMI was classified as overweight or obese increased from 29,897 in June 2012 to 72,094 in June 2016.

Figure 3.B1

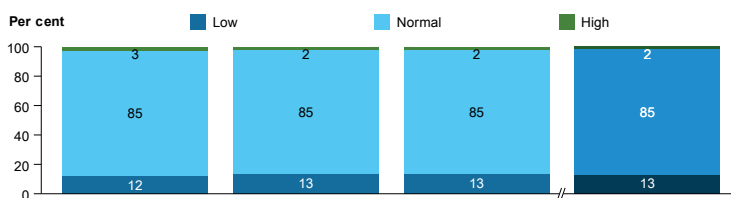


This vertical bar chart and stacked vertical bar chart show the proportion of babies born within the previous 12 months whose birthweight has been recorded at the primary health care service, and the proportion of babies born within the previous 12 months whose birthweight results were low, normal or high. Data are presented at the national level.

Data are provided for all 12-monthly reporting periods from June 2012 to June 2016.

For example, the first chart shows that the proportion of Aboriginal and Torres Strait Islander babies born in the previous 12 months who had their birthweight recorded was 51% in June 2012, 58% in June 2013, 68% in June 2014, 69% in May 2015, and 75% in June 2016.

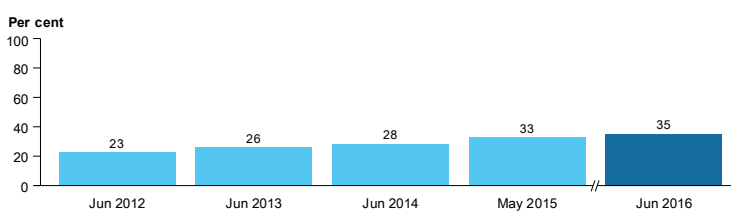
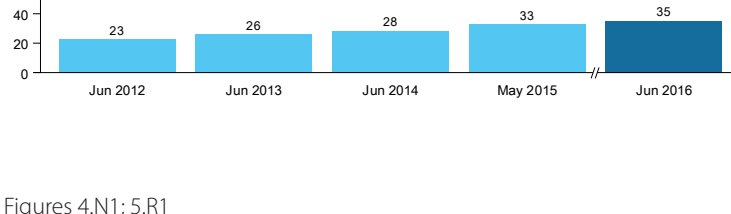
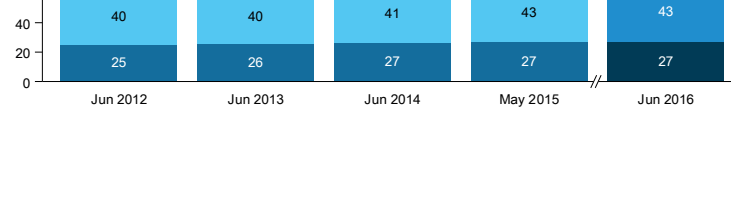
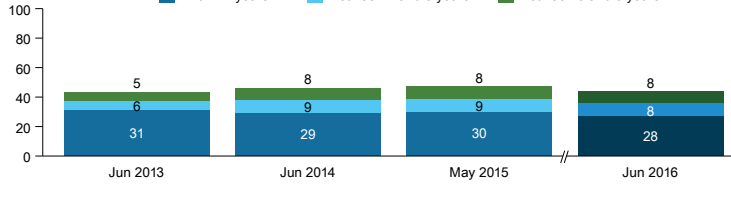
Figure 3.E1



The second chart shows the proportion of Aboriginal and Torres Strait Islander babies whose birthweight result was low, normal, or high for each 12-monthly reporting period. For example, in June 2016, 13% of Aboriginal and Torres Strait Islander babies had a low birthweight, 85% had a normal birthweight and 2% had a high birthweight.

(continued)

Table A9.1 (continued): Explanatory guide to figures in chapters 2–5, and 7

Reference figures with example	Description
<p>Figures 3.C1; 4.G1; 4.H1; 4.I1; 4.L1; 5.O1; 5.P1; 5.Q1; 5.T1; 5.U1; 5.V1; 5.W1; 5.Y1; 5.Z1</p> 	<p>These vertical bar charts and stacked vertical bar charts show either: (i) the proportion of clients who had a health care process recorded, or (ii) health outcomes. Data are presented at the national level.</p>
<p>Figures 4.N1; 5.R1</p> 	<p>Data are provided for all 12-monthly reporting periods for which time series data are available. Note that, due to a change in the definition of an 'Indigenous regular client' by the NTG, comparisons with previous periods cannot be made with requisite precision. On this basis, a break in series has been implemented for the current reporting period. This means that June 2016 data are provided alongside previously reported data, but are not (and should not be) compared with this previous data. The '//' symbol appearing on the x-axis of these figures indicates a break in series.</p>
<p>Figures 3.F1; 4.K1; 4.M1; 5.S1</p> 	<p>For indicators for which data were collected for different reference periods, or for different categories of outcomes, the details are shown as stacked columns.</p>
<p>Figures 3.A1; 5.X1</p> 	<p>These figures are useful in understanding the results of services or the outcomes for clients attending health organisations.</p>
	<p>For example, the first chart shows that the proportion of Aboriginal and Torres Strait Islander clients aged 0–4 who had an MBS health assessment (item 715) claimed for them within the previous 12 months was 23% in June 2012, 26% in June 2013, 28% in June 2014, and 33% in May 2015. Of clients in this age group, 35% had an MBS health assessment claimed for them within the previous 12 months in June 2016.</p>
	<p>The second chart shows that, in May 2015, 27% of Aboriginal and Torres Strait Islander clients aged 25 and over had their BMI classified as overweight within the previous 24 months and 43% had their BMI classified as obese.</p>
	<p>The third chart shows that 30% of female Aboriginal and Torres Strait Islander clients had a cervical screening within the previous 2 years, 9% had a cervical screening within the previous 3 years, and 8% had a cervical screening within the previous 5 years.</p>
	<p>The fourth chart shows that, of pregnant female Aboriginal and Torres Strait Islander clients in May 2015, 37% had their first antenatal visit before 13 weeks of pregnancy, 26% had their first visit between 13 weeks and 20 weeks of pregnancy, 26% 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.</p>

(continued)

Table A9.1 (continued): Explanatory guide to figures in chapters 2–5, and 7

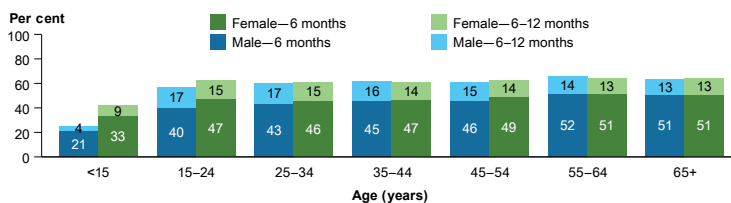
Reference figures with example	Description																					
<p>Figure 4.L2</p>  <table border="1"> <caption>Data for Figure 4.L2</caption> <thead> <tr> <th>Sex</th> <th>Per cent</th> </tr> </thead> <tbody> <tr> <td>Males</td> <td>33</td> </tr> <tr> <td>Females</td> <td>33</td> </tr> </tbody> </table>	Sex	Per cent	Males	33	Females	33	<p>This vertical bar chart shows the proportion of clients aged 50 and over who were immunised against influenza in the current reporting period by sex. Data are presented at the national level.</p> <p>For example, 33% of both male and female Aboriginal and Torres Strait Islander clients had been immunised against influenza, as at June 2016.</p>															
Sex	Per cent																					
Males	33																					
Females	33																					
<p>Figures 4.G2; 4.H2; 4.I2; 4.J1; 5.O2; 5.P2; 5.Q2; 5.T2; 5.U2; 5.V2; 5.W2; 5.Y2; 5.Z2</p>  <table border="1"> <caption>Data for Figures 4.G2; 4.H2; 4.I2; 4.J1; 5.O2; 5.P2; 5.Q2; 5.T2; 5.U2; 5.V2; 5.W2; 5.Y2; 5.Z2</caption> <thead> <tr> <th>Age (years)</th> <th>Male (%)</th> <th>Female (%)</th> </tr> </thead> <tbody> <tr> <td>15-24</td> <td>69</td> <td>74</td> </tr> <tr> <td>25-34</td> <td>75</td> <td>79</td> </tr> <tr> <td>35-44</td> <td>78</td> <td>80</td> </tr> <tr> <td>45-54</td> <td>81</td> <td>81</td> </tr> <tr> <td>55-64</td> <td>83</td> <td>82</td> </tr> <tr> <td>65+</td> <td>81</td> <td>82</td> </tr> </tbody> </table>	Age (years)	Male (%)	Female (%)	15-24	69	74	25-34	75	79	35-44	78	80	45-54	81	81	55-64	83	82	65+	81	82	<p>These vertical bar charts show the proportion of clients, by age group and sex distribution, for the current reporting period. Data are presented at the national level.</p> <p>For example, this chart shows that 69% of Aboriginal and Torres Strait Islander males aged 15–24 had their smoking status recorded within the previous 24 months; 75% of males aged 25–34; 78% of males aged 35–44; 81% of males aged 45–54; 83% of males aged 55–64; and 81% of males aged 65 and over, as at June 2016.</p>
Age (years)	Male (%)	Female (%)																				
15-24	69	74																				
25-34	75	79																				
35-44	78	80																				
45-54	81	81																				
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<p>Figure 3.A2</p>  <table border="1"> <caption>Data for Figure 3.A2</caption> <thead> <tr> <th>Timing of first antenatal visit</th> <th>Aged <20 (%)</th> <th>Aged 20-34 (%)</th> <th>Aged 35+ (%)</th> </tr> </thead> <tbody> <tr> <td>Before 13 weeks</td> <td>33</td> <td>42</td> <td>39</td> </tr> <tr> <td>13 to less than 20 weeks</td> <td>22</td> <td>23</td> <td>24</td> </tr> <tr> <td>20 weeks or greater</td> <td>29</td> <td>25</td> <td>27</td> </tr> <tr> <td>Not recorded</td> <td>16</td> <td>10</td> <td>10</td> </tr> </tbody> </table>	Timing of first antenatal visit	Aged <20 (%)	Aged 20-34 (%)	Aged 35+ (%)	Before 13 weeks	33	42	39	13 to less than 20 weeks	22	23	24	20 weeks or greater	29	25	27	Not recorded	16	10	10	<p>This vertical bar chart shows the proportion of clients, by timing of first antenatal visit and by age group distribution. Data are presented at the national level.</p> <p>For example, this chart shows that 33% of female Aboriginal and Torres Strait Islander clients aged less than 20, 42% of females aged 20–34, and 39% of females aged 35 and over had their first antenatal visit before 13 weeks of pregnancy.</p>	
Timing of first antenatal visit	Aged <20 (%)	Aged 20-34 (%)	Aged 35+ (%)																			
Before 13 weeks	33	42	39																			
13 to less than 20 weeks	22	23	24																			
20 weeks or greater	29	25	27																			
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<p>Figure 3.F2</p>  <table border="1"> <caption>Data for Figure 3.F2</caption> <thead> <tr> <th>Age (years)</th> <th>Current smoker (%)</th> <th>Ex-smoker (%)</th> <th>Never smoked (%)</th> </tr> </thead> <tbody> <tr> <td>15-19</td> <td>42</td> <td>14</td> <td>44</td> </tr> <tr> <td>20-24</td> <td>51</td> <td>15</td> <td>34</td> </tr> <tr> <td>25-34</td> <td>52</td> <td>16</td> <td>31</td> </tr> <tr> <td>35+</td> <td>51</td> <td>15</td> <td>35</td> </tr> </tbody> </table>	Age (years)	Current smoker (%)	Ex-smoker (%)	Never smoked (%)	15-19	42	14	44	20-24	51	15	34	25-34	52	16	31	35+	51	15	35	<p>This stacked vertical bar chart shows the proportion of clients by age group distribution. Different categories of smoking status outcomes are shown in the stacked columns: Never smoked, Ex-smoker, and Current smoker.</p> <p>For example, this chart shows that, for Aboriginal and Torres Strait Islander women aged 15–19 who gave birth within the previous 12 months, 42% were current smokers, 14% were ex-smokers, and 44% had never smoked.</p>	
Age (years)	Current smoker (%)	Ex-smoker (%)	Never smoked (%)																			
15-19	42	14	44																			
20-24	51	15	34																			
25-34	52	16	31																			
35+	51	15	35																			

(continued)

Table A9.1 (continued): Explanatory guide to figures in chapters 2–5, and 7

Reference figures with example	Description
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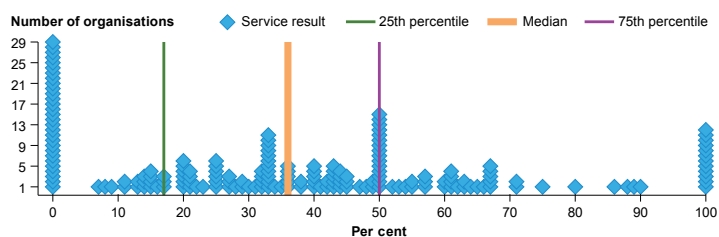
Figures 4.M2; 4.N2; 5.R2; 5.S2; 5.X2



These stacked vertical bar charts show the proportion of clients by sex and age group distribution. Different categories of smoking status outcomes are shown in the stacked columns: Never smoked, Ex-smoker and Current smoker.

For example, this chart shows that 45% of male Aboriginal and Torres Strait Islander clients aged 35–44 had an HbA1c result recorded within the previous 6 months, and 16% had a result recorded within the previous 6–12 months. For female Aboriginal and Torres Strait Islander clients in the same age group, 47% had an HbA1c result recorded within the previous 6 months, and 14% had a result recorded within the previous 6–12 months.

Figures 3.A3; 3.B2; 3.C2; 3.E2; 3.F3; 4.G3; 4.H3; 4.I3; 4.J2; 4.K2; 4.L3; 4.M3; 4.N3; 5.O3; 5.P3; 5.Q3; 5.R3; 5.S3; 5.T3; 5.U3; 5.V3; 5.W3; 5.X3; 5.Y3; 5.Z3

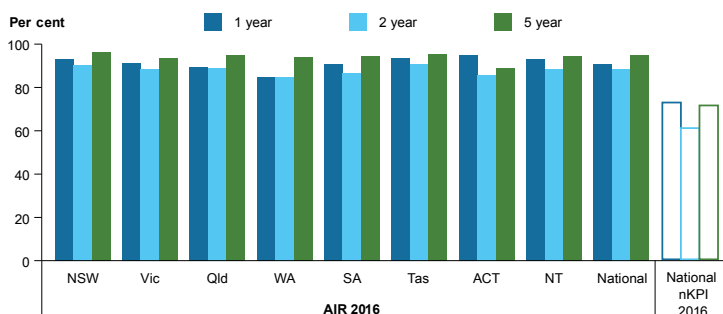


These histograms show the distribution of organisations by their achievement against a particular indicator. Results are rounded to a whole number and the diamonds show the number of organisations that recorded that result.

This distribution enables understanding of how widely the organisation results for clients differ across organisations. It enables the reader to see how many organisations have recorded information and also shows the median value of organisation performance or outcomes. Note: the y-axis value changes depending on the number of organisations that achieved a result.

For example, this chart shows the pattern of results for organisations who recorded the smoking status for their Aboriginal and Torres Strait Islander clients aged 15 and over within the previous 24 months. One organisation recorded smoking status for 3% of their clients and 10 organisations recorded smoking status for 100% of their clients. All other organisations fell between these outcomes. The median across all organisations was 82% of clients who had their smoking status recorded.

Figure 3.D1

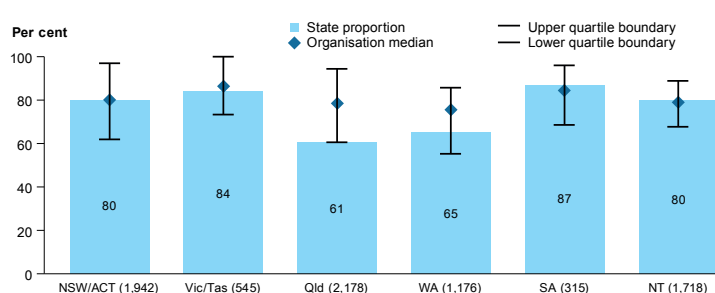


This vertical bar chart shows AIR child immunisation rates, by jurisdiction and with a national total. National nKPI data are outlined and presented to the far right due to issues with data validity.

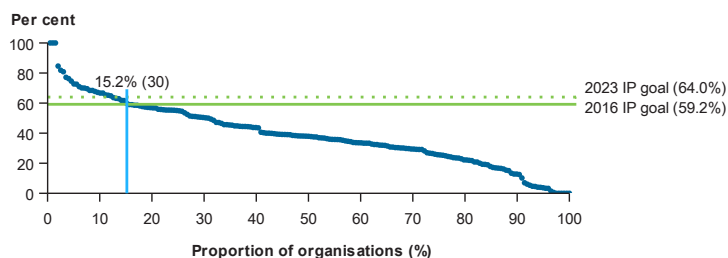
For example, this chart shows that, according to nKPI data, 67% of Aboriginal and Torres Strait Islander children are fully immunised at 1 year (12 to less than 24 months), 61% are fully immunised at 2 years (24 to less than 36 months), and 72% are fully immunised at 5 years (60 to less than 72 months). According to AIR data, the national proportions and those of every jurisdiction are considerably higher.

(continued)

Table A9.1 (continued): Explanatory guide to figures in chapters 2–5, and 7

Reference figures with example	Description																																										
<p>Figures 3.D2, 3.D3, 3.D4</p>  <table border="1"> <caption>Data for Figure 3.D2, 3.D3, 3.D4</caption> <thead> <tr> <th>Jurisdiction</th> <th>Client Count</th> <th>State proportion (%)</th> <th>Organisation median (%)</th> <th>Lower quartile boundary (%)</th> <th>Upper quartile boundary (%)</th> </tr> </thead> <tbody> <tr> <td>NSW/ACT</td> <td>1,942</td> <td>80</td> <td>80</td> <td>~65</td> <td>~95</td> </tr> <tr> <td>Vic/Tas</td> <td>545</td> <td>84</td> <td>84</td> <td>~75</td> <td>~95</td> </tr> <tr> <td>Qld</td> <td>2,178</td> <td>61</td> <td>80</td> <td>~60</td> <td>~95</td> </tr> <tr> <td>WA</td> <td>1,176</td> <td>65</td> <td>75</td> <td>~55</td> <td>~85</td> </tr> <tr> <td>SA</td> <td>315</td> <td>87</td> <td>87</td> <td>~70</td> <td>~95</td> </tr> <tr> <td>NT</td> <td>1,718</td> <td>80</td> <td>80</td> <td>~70</td> <td>~90</td> </tr> </tbody> </table>	Jurisdiction	Client Count	State proportion (%)	Organisation median (%)	Lower quartile boundary (%)	Upper quartile boundary (%)	NSW/ACT	1,942	80	80	~65	~95	Vic/Tas	545	84	84	~75	~95	Qld	2,178	61	80	~60	~95	WA	1,176	65	75	~55	~85	SA	315	87	87	~70	~95	NT	1,718	80	80	~70	~90	<p>These vertical bar charts show 3 types of information: 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.</p> <p>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 results 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.</p> <p>For example, this chart shows the proportion of Aboriginal and Torres Strait Islander children aged 12 to less than 24 months at South Australian organisations who were fully immunised was 87%. The median result for organisations was 84% of children. The lower quartile of organisations had 69% of children or fewer fully immunised, while the upper quartile of organisations had 96% or more of children fully immunised.</p> <p>There are instances when the interquartile limits for a jurisdiction sit above the overall average for all clients in a jurisdiction, for example in this chart, Queensland. In these cases, most organisations have higher results based on a smaller number of clients, while a few organisations with low results and large numbers of clients are pushing the overall jurisdiction result down.</p>
Jurisdiction	Client Count	State proportion (%)	Organisation median (%)	Lower quartile boundary (%)	Upper quartile boundary (%)																																						
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NT	1,718	80	80	~70	~90																																						

Figures 7.1–7.7



These scatterplot charts show 4 types of information (only results for the 7 Category A process-of-care indicators are presented): the proportion of services that have reached or exceeded certain levels of results on the specified indicator; the 2016 and 2023 IP goals; the proportion of organisations that met or exceeded the 2016 IP goal; and the number of organisations that met or exceeded the 2023 IP goal. Data are presented at a national level.

For example, this chart shows 15.2% of organisations met the 2016 IP goal, which was to immunise 59.2% of Aboriginal and Torres Strait Islander clients aged 50 and over against influenza. The 2023 IP goal is 64.0% of clients.

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 sponsored by an Australian Government-funded organisation to provide health services.

AUDIT-C: An Alcohol Use Disorders Identification Test screening tool which is sensitive to the early detection of risky and high-risk (or hazardous and harmful) drinking.

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 weight 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.

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.

fully immunised: Describes children who have received all immunisations according to the AIR. 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 age 4, with 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 to 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.

Pen CS CAT 4: A clinical audit tool that provides population health graphs, charts and reports to best assist staff to implement and drive process change to improve patient health outcomes.

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

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 refers to 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 refers to 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 June 2016, is the fourth 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 series 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 series no. 2. Cat. no. IHW 146. Canberra: AIHW.

AIHW 2015. Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2013–14. Aboriginal and Torres Strait Islander health services report no. 6. Cat. no. IHW 152. Canberra: AIHW.

AIHW 2015. 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. Cat. no. IHW 161. 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.

AIHW 2016. Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2014–15. Aboriginal and Torres Strait Islander health series no. 7. Cat. no. IHW 168. Canberra: AIHW.

This fourth national report on the national Key Performance Indicators (nKPIs) data collection is based on data from more than 240 primary health care organisations that received funding from the Australian Government Department of Health to provide services primarily to Aboriginal and Torres Strait Islander people. Information is presented for 22 'process-of-care' and 'health outcome' indicators for June 2016, which focus on maternal and child health, preventative health, and chronic disease management. The report shows continuous improvements for the majority of indicators.

