# 3.04 Chronic disease management

**The management of chronic disease among the Aboriginal and Torres Strait Islander population**

## Data sources

Data on chronic disease management come from the Service Activity Reporting (SAR) data collection and the Healthy for Life data collection.

### Healthy for Life program

The Healthy for Life (HfL) program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal, children's and chronic disease care to Aboriginal and Torres Strait Islander people. This is carried out through population health approaches using best-practice and quality improvement principles.

Services participating in the HfL program are required to submit de-identified, aggregate service data for 11 essential indicators. These indicators cover maternal health, child health and chronic disease care on a regular basis (6 and 12 months), as well as information about the characteristics of their service and organisational infrastructure. For the reporting period ending June 2009, 72 HfL services submitted data to the AIHW.

### Divisions of General Practice National Performance Indicators

The National Performance Indicators (NPIs) are reported in the Divisions of General Practice Annual Reports submitted to DoHA, and are part of the National Quality Performance System (NQPS). The NQPS is an integral aspect of the Government's primary health policy framework. The framework focuses on five National Priority Areas (NPAs): governance; prevention and early intervention; access; integration; and chronic disease (diabetes, mental health and asthma). The NPAs are tackled through 51 NPIs, which reflect expectations of the Divisions network, and assist members to measure progress and improve planning processes. Data on the first full cycle of reporting were submitted in the 2007–08 Annual Reports, and provide a benchmark for Division performance.

### OATSIH Services Reporting data collection

In 2008–09, the Australian Institute of Health and Welfare (AIHW) collected the data from the Aboriginal and Torres Strait Islander primary health-care, substance use, and Bringing Them Home and Link Up counselling services funded by the Australian Government through the Office for Aboriginal and Torres Strait Islander Health (OATSIH). OATSIH-funded services include both Indigenous community controlled health organisations and non-community controlled health organisations. Note that the OATSIH Services Reporting (OSR) only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

This collection, referred to as the OSR data collection replaces the Service Activity Reporting (SAR), Drug and Alcohol Services Reporting (DASR), and Bringing Them Home and Link Up counselling data collections previously collected by the OATSIH.

The counting rules used in OSR data analyses treats each auspice service as a single service and this yields a larger numerator and denominator when calculating rates whereas in earlier collections (SAR and DSAR) only the higher level service was counted. For example, a higher level service could have five auspice services under it and in OSR these will be counted as five individual services whereas in SAR and DSAR it was counted as a single service. While this change only marginally affects the aggregate rates, caution should be exercised when comparing rates with earlier data collection periods.

The OSR data collection included 211 Australian Government-funded Aboriginal and Torres Strait Islander primary health-care services. Service-level data on health care and health-related activities were collected by survey questionnaire for the 2008–09 financial year reporting period and provided data on episodes of care, service population, clients and staffing. Response rates to the OSR questionnaire by Aboriginal and Torres Strait Islander primary health-care services in 2008–09 were around 97%.

Of the 86 Bringing Them Home and Link Up counselling services, 81 (94%) responded to the OSR questionnaire, as well as five auspiced services. Many services providing Bringing Them Home and Link Up counselling are part of existing primary health-care or substance-use disorder specific services.

Forty five (90%) out of 50 substance use disorder specific services as well as three auspiced services responded to the OSR questionnaire.

Data on the management of specific chronic diseases, such as rheumatic heart disease, coronary artery disease and Type II diabetes, were unable to be provided at present. For the purpose of this measure, chronic disease management is defined as the clinical management of a disease that has been diagnosed.

# Analyses

## Aboriginal and Torres Strait Islander primary health-care services

### Healthy for Life data

For the reporting period July 2008 to June 2009, 57 services that were funded through the Healthy for Life program provided data on chronic disease management.

In the period ending June 2009:

- The most commonly used strategies for chronic disease management by HfL services were emotional wellbeing behavioural risk reduction (89%) and physical activity advice (88%) (Table 3.04.1).
- Client education (80%) was the most common strategy for client self-management of chronic disease, followed by goal setting (74%) and staff training (72%). This shows an increase in the use of these strategies since the reporting period ending June 2007 where they were 68%, 58% and 54%, respectively (Table 3.04.1).
- Over three-quarters (78%) of services provided routine clinical reviews and 87% provided a team-based approach to chronic disease management.

**Table 3.04.1: Chronic disease: management, reporting periods ending 30 June 2007–09**

| HfL services had strategies for chronic disease management[(a)] for their clients with chronic disease that included: | Jun-07 | | | Jun-08 | | | Jun-09 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response |
| 1. A population-based approach | | | | | | | | | |
| a. condition register used for recall and reminder | 64.4 | 15.3 | 20.3 | 83.6 | 9.0 | 7.5 | 81.1 | 8.1 | 10.8 |
| b. Use of recognised guidelines | 76.3 | 5.1 | 18.6 | 88.1 | 3.0 | 9.0 | 85.1 | 4.1 | 10.8 |
| 2. A team-based approach | 71.2 | 11.9 | 16.9 | 92.5 | 1.5 | 6.0 | 86.5 | 2.7 | 10.8 |
| 3. Clinical review, behavioural, social and environmental risk assessment | | | | | | | | | |
| a. Systematic | 61.0 | 22.0 | 16.9 | 67.2 | 25.4 | 7.5 | 74.3 | 14.9 | 10.8 |
| b. Opportunistic | 69.5 | 10.2 | 20.3 | 91.0 | 1.5 | 7.5 | 81.1 | 5.4 | 13.5 |
| 4. Behavioural risk reduction | | | | | | | | | |
| a. Smoking | | | | | | | | | |
| – Brief intervention | 76.3 | 6.8 | 16.9 | 88.1 | 3.0 | 9.0 | 85.1 | 4.1 | 10.8 |
| – Other advice | 69.5 | 11.9 | 18.6 | 86.6 | 6.0 | 7.5 | 83.8 | 5.4 | 10.8 |
| b. Nutrition | 74.6 | 6.8 | 18.6 | 91.0 | 1.5 | 7.5 | 83.8 | 4.1 | 12.2 |
| c. Alcohol | | | | | | | | | |
| – Brief intervention | 74.6 | 8.5 | 16.9 | 88.1 | 4.5 | 7.5 | 85.1 | 4.1 | 10.8 |
| – Other advice | 66.1 | 13.6 | 20.3 | 83.6 | 9.0 | 7.5 | 81.1 | 8.1 | 10.8 |
| d. Physical activity | 74.6 | 8.5 | 16.9 | 91.0 | 1.5 | 7.5 | 87.8 | 1.4 | 10.8 |

*(continued)*

**Table 3.04.1 (continued): Chronic disease: management, reporting periods ending 30 June 2007–09**

| HfL services had strategies for chronic disease management[(a)] for their clients with chronic disease that included: | Jun-07 | | | Jun-08 | | | Jun-09 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response |
| e. Emotional wellbeing | 69.5 | 11.9 | 18.6 | 91.0 | 1.5 | 7.5 | 89.2 | . . | 10.8 |
| f. Other | 28.8 | 30.5 | 40.7 | 14.9 | 46.3 | 38.8 | 21.6 | 44.6 | 33.8 |
| 5. Care planning | 64.4 | 16.9 | 18.6 | n.a. | n.a. | n.a. | . . | . . | 100.0 |
| 6. Routine clinical reviews | 67.8 | 13.6 | 18.6 | 70.1 | 19.4 | 10.4 | 78.4 | 6.8 | 14.9 |
| 7. Follow-up of abnormal results | | | | | | | | | |
| a. Systematic | 74.6 | 8.5 | 16.9 | 80.6 | 10.4 | 9.0 | 78.4 | 8.1 | 13.5 |
| b. Opportunistic | 74.6 | 5.1 | 20.3 | 79.1 | 10.4 | 10.4 | 68.9 | 14.9 | 16.2 |
| 8. Immunisation | | | | | | | | | |
| a. Systematic | 64.4 | 18.6 | 16.9 | 74.6 | 14.9 | 10.4 | 73.0 | 12.2 | 14.9 |
| b. Opportunistic | 72.9 | 8.5 | 18.6 | 83.6 | 4.5 | 11.9 | 75.7 | 6.8 | 17.6 |
| 9. Systematic approach to client self-management | | | | | | | | | |
| a. Staff training | 54.2 | 27.1 | 18.6 | 70.1 | 20.9 | 9.0 | 71.6 | 13.5 | 14.9 |
| b. Goal setting | 57.6 | 23.7 | 18.6 | 70.1 | 20.9 | 9.0 | 74.3 | 12.2 | 13.5 |
| c. Client education | 67.8 | 15.3 | 16.9 | 80.6 | 10.4 | 9.0 | 79.7 | 6.8 | 13.5 |
| d. Hand held records | 27.1 | 52.5 | 20.3 | 35.8 | 53.7 | 10.4 | 37.8 | 47.3 | 14.9 |
| e. Support for involvement of family | 49.2 | 28.8 | 22.0 | 70.1 | 20.9 | 9.0 | 70.3 | 13.5 | 16.2 |
| f. Peer support | 30.5 | 45.8 | 23.7 | 44.8 | 43.3 | 11.9 | 41.9 | 31.1 | 27.0 |

*(continued)*

**Table 3.04.1 (continued): Chronic disease: management, reporting periods ending 30 June 2007–09**

| HfL services had strategies for chronic disease management[(a)] for their clients with chronic disease that included: | Jun-07 | | | Jun-08 | | | Jun-09 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response | Per cent yes | Per cent no | Per cent no response |
| 10. Health service linkages | | | | | | | | | |
| a. Hospital admission communication | 66.1 | 15.3 | 18.6 | 62.7 | 25.4 | 11.9 | 70.3 | 14.9 | 14.9 |
| b. Hospital discharge communication | 67.8 | 13.6 | 18.6 | 71.6 | 16.4 | 11.9 | 71.6 | 13.5 | 14.9 |
| c. Care provided in residential aged care services | 54.2 | 27.1 | 18.6 | 40.3 | 49.3 | 10.4 | 43.2 | 41.9 | 14.9 |
| 11. Social service linkages, referrals and client advocacy | | | | | | | | | |
| a. Social services | 64.4 | 13.6 | 22.0 | 68.7 | 17.9 | 13.4 | 74.3 | 10.8 | 14.9 |
| b. Housing | 59.3 | 20.3 | 20.3 | 65.7 | 22.4 | 11.9 | 62.2 | 21.6 | 16.2 |
| c. Employment | 52.5 | 27.1 | 20.3 | 61.2 | 26.9 | 11.9 | 56.8 | 28.4 | 14.9 |
| d. Income support | 57.6 | 20.3 | 22.0 | 62.7 | 25.4 | 11.9 | 63.5 | 21.6 | 14.9 |
| e. Domestic violence | 67.8 | 11.9 | 20.3 | 79.1 | 9.0 | 11.9 | 74.3 | 10.8 | 14.9 |
| f. Legal aid | 57.6 | 22.0 | 20.3 | 64.2 | 23.9 | 11.9 | 60.8 | 24.3 | 14.9 |
| g. Other | 22.0 | 33.9 | 44.1 | 16.4 | 49.3 | 34.3 | 14.9 | 40.5 | 44.6 |

(a) 'Management' includes health promotion, prevention of complications, clinical care and advocacy.

*Source:* AIHW Healthy for Life data collection.

**Type II diabetes clients—HbA1c levels**

HbA1c levels reflect the mean glycaemia over the preceding 2–3 months and the test is performed in accredited laboratories.

HbA1c levels are defined as:

a. Less than or equal to 7.0% (recommended level for diabetics)

b. Greater than 7.0% but less than or equal to 8.0%

c. Greater than 8.0% but less than 10%

d. Greater than or equal to 10%.

The recommended HbA1c levels are less than or equal to 7.0% for diabetics—a higher target is to be expected for the elderly (65 years and over), pregnant women, and for patients with severe hypoglycaemia.

For the period 1 January to 30 June 2009, 68 services that were part of the HfL program provided valid data on whether HbA1c tests were undertaken for Indigenous clients with Type II diabetes in the last 6 months and 11 of these were urban services, 33 were regional services and 24 were remote services.

- Of the 9,960 Indigenous adults with Type II diabetes who were regular clients of the HfL services, 4,991 (50%) had an HbA1c test in the last 6 months. The proportion of Indigenous adults with Type II diabetes who had an HbA1c test in the last 6 months varied by remoteness, from 40% in urban areas to 53% in remote areas (Table 3.04.2).

**Table 3.04.2: Number and proportion of Indigenous regular clients[(a)] with Type II diabetes and had an HbA1c test in the last 6 months, by region, 1 January–30 June 2009**

| | Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] |
| HbA1c test in the last 6 months | 39.9 | 520/1,302 | 48.7 | 1,467/3,015 | 53.2 | 3,004/5,643 | 50.1 | 4,991/9,960 |

(a) Indigenous regular clients aged 15 years and over.

(b) N (numerator) is the number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months. D (denominator) is the total number of Indigenous regular clients with Type II diabetes.

*Notes*

1. Valid data for this indicator were provided by 68 services (11 urban services, 33 regional services and 24 remote services).
2. Services used their own definition of regular client.

*Source*: AIHW Healthy for Life data collection.

- Of the 4,482 Indigenous adults with Type II diabetes who were regular clients of the HfL services and had an HbA1c test in the last 6 months (and for whom information was available on their HbA1c result), 30% had an HbA1c result less than or equal to 7%, and 26% had a result greater than or equal to 10% (Table 3.04.3).
- Clients living in remote areas had the highest proportion of HbA1c results that were greater than or equal to 10% (31%).

**Table 3.04.3: Number and proportion of Indigenous regular clients[(a)] with Type II diabetes who had an HbA1c test in the last 6 months, by HbA1c result[(b)] and region, 1 January–30 June 2009**

| | Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|---|
| **HbA1c result** | **Per cent** | **N/D[(c)]** | **Per cent** | **N/D[(c)]** | **Per cent** | **N/D[(c)]** | **Per cent** | **N/D[(c)]** |
| ≤7% | 30.6 | 199/650 | 33.2 | 485/1,460 | 27.6 | 655/2,372 | 29.9 | 1,339/4,482 |
| >7% to ≤8% | 23.4 | 152/650 | 21.9 | 320/1,460 | 17.5 | 416/2,372 | 19.8 | 888/4,482 |
| >8% to <10% | 23.7 | 154/650 | 24.6 | 359/1,460 | 23.8 | 564/2,372 | 24.0 | 1,077/4,482 |
| ≥10% | 22.3 | 145/650 | 20.3 | 296/1,460 | 31.1 | 737/2,372 | 26.3 | 1,178/4,482 |
| **Total** | **100.0** | **650/650** | **100.0** | **1,460/1,460** | **100.0** | **2,372/2,372** | **100.0** | **4,482/4,482** |

(a) Indigenous regular clients aged 15 years and over.

(b) HbA1c results in the last 6 months.

(c) N (numerator) is the number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months by HbA1c result. D (denominator) is the total number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months.

*Notes*

1. Valid data for this indicator were provided by 68 services (12 urban services, 33 regional services and 23 remote services).
2. Services used their own definition of regular client.

*Source:* AIHW Healthy for Life data collection.

For the 6 month reporting period ending June 2009, 69 HfL services reported information on the average HbA1c result of clients with Type II diabetes who had an HbA1c test in the last 6 months. These data are presented in Table 3.04.4 below.

- Of the 4,981 Indigenous regular clients of HfL services with Type II diabetes who had an HbA1c test in the last 6 months whose last HbA1c result was recorded, the average HbA1c result was 8.5%.
- The average HbA1c result was 8.3% in urban areas, 8.7% in remote areas and 8.2% in regional areas.

**Table 3.04.4: Average HbA1c result for Indigenous regular clients[(a)] with Type II diabetes who had an HbA1c test in the last 6 months, by region, 1 January–30 June 2009**

| | Urban | Regional | Remote | Total |
|---|---|---|---|---|
| | | Per cent | | |
| Average HbA1c result | 8.3 | 8.2 | 8.7 | 8.5 |
| Number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months | 652 | 1,484 | 2,845 | 4,981 |

(a) Indigenous regular clients aged 15 years and over.

*Notes*

1. Valid data for this indicator were provided by 69 services (12 urban services, 33 regional services and 24 remote services).
2. Services used their own definition of regular client.

*Source:* AIHW Healthy for Life data collection.

### Type II diabetes clients —blood pressure tests

Blood pressure is elevated in many people with Type II diabetes. Increased blood pressure levels have been associated with a spectrum of health problems occurring later in people with diabetes—notably cardiovascular disease (especially stroke), eye damage and kidney damage.

The target blood pressure for people with Type II diabetes is less than or equal to 130/80 mmHg (NHMRC 2004).

For the period 1 January to 30 June 2009, 68 services that were part of the HfL program provided data on whether blood pressure tests were undertaken for Indigenous clients with Type II diabetes in the last 6 months.

- Of the 9,960 Indigenous adults with Type II diabetes who were regular clients of the HfL services, 5,902 (59%) had a blood pressure test in the last 6 months. In remote areas, 60% of Indigenous adults with Type II diabetes had a blood pressure test in the last 6 months, compared with 59% in regional areas and 55% in urban areas (Table 3.04.5).

**Table 3.04.5: Number and proportion of Indigenous regular clients[(a)] diagnosed with Type II diabetes who had a blood pressure test in the last 6 months, by region, 1 January–30 June 2009**

| Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|
| Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] |
| 55.1 | 717/1,302 | 59.2 | 1,785/3,015 | 60.3 | 3,400/5,643 | 59.3 | 5,902/9,960 |

(a) Indigenous regular clients aged 15 years and over.

(b) N (numerator) is the number of Indigenous regular clients with Type II diabetes who had a blood pressure test in the last 6 months. D (denominator) is the total number of Indigenous regular clients with Type II diabetes.

*Notes*

1. Valid data for this indicator were provided by 68 services (11 urban services, 33 regional services and 24 remote services).
2. Services used their own definition of regular client.

*Source:* AIHW Healthy for Life data collection.

- Of the 6,299 Indigenous adults with Type II diabetes who were regular clients of the HfL service and had a blood pressure test in the last 6 months, 2,666 (42%) had a blood pressure result less than or equal to 130/80 mmHg. The proportion of Indigenous adults with Type II diabetes who had a blood pressure result less than or equal to 130/80 mmHg was highest for clients living in remote areas (45%), followed by urban (42%) and regional areas (38%) (Table 3.04.6).

**Table 3.04.6: Number and proportion of Indigenous regular clients[(a)] with Type II diabetes who had a blood pressure test in the last 6 months with a result less than or equal to 130/80mmHg, by region, 1 January–30 June 2009**

| Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|
| Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] |
| 42.3 | 464/1,096 | 38.1 | 687/1,803 | 44.6 | 1,515/3,400 | 42.3 | 2,666/6,299 |

(a) Indigenous regular clients aged 15 years and over.

(b) N (numerator) is the number of Indigenous regular clients with Type II diabetes who had a blood pressure test in the last 6 months with a result less than or equal to 130/80mmHg. D (denominator) is the total number of Indigenous regular clients with Type II diabetes who had a blood pressure test in the last 6 months.

*Notes*

1. Valid data for this indicator were provided by 70 services (12 urban services, 34 regional services and 24 remote services).
2. Services used their own definition of regular client.

*Source:* AIHW Healthy for Life data collection.

### Coronary heart disease clients—blood pressure tests

A client has high blood pressure if their systolic blood pressure is greater than or equal to 140 mmHg; or their diastolic blood pressure is greater than or equal to 90 mmHg.

For the period 1 January to 30 June 2009, 68 services that were part of the HfL program provided data on whether blood pressure tests were undertaken for Indigenous clients with coronary heart disease in the last 6 months and 69 services provided data on blood pressure test results of Indigenous clients.

- Of the 3,009 Indigenous adults with coronary heart disease who were regular clients of the HfL services, 1,911 (64%) had a blood pressure test in the last 6 months. The proportion of coronary heart disease clients who had a blood pressure test in the last 6 months was highest among clients living in regional areas (67%), followed by remote (66%) and urban areas (57%) (Table 3.04.7).

**Table 3.04.7: Number and proportion of Indigenous regular clients[(a)] with coronary heart disease who had a blood pressure test in the last 6 months, by region, 1 January–30 June 2009**

| Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|
| Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] |
| 57.2 | 537/939 | 66.7 | 678/1,017 | 66.1 | 696/1,053 | 63.5 | 1,911/3,009 |

(a) Indigenous regular clients aged 15 years and over.

(b) N (numerator) is the number of Indigenous regular clients with coronary heart disease who had a blood pressure test in the last 6 months. D (denominator) is the total number of Indigenous regular clients with coronary heart disease who had a blood pressure test.

*Notes*

1. Valid data for this indicator were provided by 68 services (12 urban services, 32 regional services and 24 remote services).
2. Services used their own definition of regular client.
3. Finalised data from one service was excluded on the basis that the numbers were inconsistent with other data provided and for this indicator the service wrote 'Recording paper based notes not always accurate.'

*Source:* AIHW Healthy for Life data collection.

- Of the 1,940 Indigenous adults with coronary heart disease who were regular clients of the HfL services and had a blood pressure test in the last 6 months, 1,220 (63%) had a blood pressure result less than 140/90 mmHg. Proportions were highest among clients living in remote areas (65%), followed by regional (63%) and urban areas (61%) (Table 3.04.8).

**Table 3.04.8: Number and proportion of Indigenous regular clients[(a)] with coronary heart disease who had a blood pressure test in the last 6 months with a result less than 140/90 mmHg, by region, 1 January–30 June 2009**

| Urban | | Regional | | Remote | | Total | |
|---|---|---|---|---|---|---|---|
| Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] | Per cent | N/D[(b)] |
| 60.9 | 327/537 | 62.8 | 444/707 | 64.5 | 449/696 | 62.9 | 1,220/1,940 |

(a) Indigenous regular clients aged 15 years and over.

(b) N (numerator) is the number of Indigenous regular clients with coronary heart disease who had a blood pressure test in the last 6 months with a result less than or equal to 140/90 mmHg. D (denominator) is the total number of Indigenous regular clients with coronary heart disease who had a blood pressure test in the last 6 months.

*Notes*

1. Valid data for this indicator were provided by 69 services (12 urban services, 33 regional services and 24 remote services).
2. Services used their own definition of regular client.

*Source:* AIHW Healthy for Life data collection.

## Divisions of General Practice National Performance Indicators data

Information on the management of patients with diabetes is available from the Divisions of General Practice National Performance Indicators.

Specific information on HbA1c and cholesterol results among patients with diabetes is available for the 2007–08 period and is presented below.

- Of the 108 Divisions for whom online reports were available in 2007–08, 105 reported on the diabetes domain. Of these 105, 53 (50%) reported data on the most recent HbA1c result in the past 12 months among patients with diabetes on practice reminder systems. Of these:
  - 58% had recorded their Indigenous diabetes patients' most recent HbA1c result. About 29% of Indigenous patients on the practice diabetes register had an HbA1c result of 7.0% or less (Table 3.04.9). When a patient for whom HbA1c was not measured or recorded was excluded, 51% of Indigenous patients on the practice diabetes register had a result of 7.0% or less.
  - 60% had recorded their non-Indigenous diabetes patients' most recent HbA1c status in the past 12 months. Approximately 39% of non-Indigenous patients on the practice diabetes register had an HbA1c result of 7.0% or less. When a patient for whom HbA1c was not measured or recorded was excluded, 64% of non-Indigenous patients on the practice diabetes register had a result of 7.0% or less (Table 3.04.9).
- Of the 105 Divisions who reported on the diabetes domain in 2007–08, 48 (46%) reported data on the most recent total cholesterol among patients with diabetes. Of these:
  - 56% had cholesterol results recorded for their Indigenous patients. About 22% of Indigenous patients on the practice diabetes register had a cholesterol result of less than 4.0 mmol/L. When a patient for whom cholesterol was not measured or recorded was excluded, 40% of Indigenous patients with diabetes had a cholesterol result of less than 4.0 mmol/L.
  - 65% of Divisions had cholesterol results recorded for their non-Indigenous patients. Approximately 16% had a cholesterol result of less than 4.0 mmol/L. When a patient for whom cholesterol was not measured or recorded was excluded, 25% of non-Indigenous patients with diabetes had a cholesterol result of less than 4.0 mmol/L (Table 3.04.10).

**Table 3.04.9: Most recent HbA1c in past 12 months among patients on practice diabetes register, by Indigenous status, 2007–08**

| | Indigenous | Non-Indigenous | Origin missing |
|---|---|---|---|
| | | Per cent | |
| 7.0% or less | 29.3 | 38.6 | 30.0 |
| Between 7.0% and 10% | 18.7 | 18.4 | 18.9 |
| 10% or more | 9.6 | 2.9 | 2.8 |
| **Total measured/ recorded** | **57.6** | **60.0** | **51.7** |
| Not measured/ recorded | 42.4 | 40.0 | 48.3 |

*Source*: Divisions of General Practice National Performance Indicators 2007–08.

**Table 3.04.10: Most recent cholesterol test in past 12 months among patients with diabetes on register, by Indigenous status, 2007-08**

| | Indigenous | Non-Indigenous | Origin missing |
|---|---|---|---|
| | | Per cent | |
| Less than 4.0mmol/L | 22.4 | 16.1 | 17.1 |
| 4.0mmol/L or more | 33.1 | 48.6 | 31.7 |
| **Total measured/ recorded** | **55.5** | **64.8** | **48.8** |
| Not measured/ recorded | 44.5 | 35.2 | 51.2 |

*Source*: Divisions of General Practice National Performance Indicators 2007–08.

## OATSIH Services Reporting

- In 2008–09, there were 200 respondent Aboriginal and Torres Strait Islander primary health-care services included in the OSR. Not all services provide clinical care. Approximately 65% of these services had a doctor working at the service, with 330 full-time doctors in total (AIHW 2010).
- Approximately 86% of Indigenous primary health-care services provided management of chronic illness, 71% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 73% reported they maintained health registers (for example, chronic disease register) and 74% used clinical practice guidelines. About 64% of Indigenous primary health-care services reported that they used Patient Information and Recall Systems (PIRS), which automatically provide reminders for follow-up and routine health checks (Table 3.04.11).
- Approximately half of Indigenous primary health-care services provided the chronic disease management activities of chronic disease management groups (48%), mothers and babies groups (58%), sport/ recreation/ exercise groups (52%), cooking and nutrition (59%), and men's groups (57%) (Table 3.04.11).
- There was an increase in the proportion of Indigenous primary health-care services providing management of chronic illness between 2001–02 and 2008–09 (from 74% to 89%) (Table 3.04.12; Figure 3.04.1). The proportion of services keeping track of clients needing follow-up fluctuated during this period beginning at 70% in 2001–02, dropping to 57% in 2005–06 but returning to 71% in 2008–09 (Table 3.04.12).

**Table 3.04.11: Percentage of respondent Indigenous primary health-care services providing chronic disease management activities and use of the Patient Information and Recall System, 2008–09**

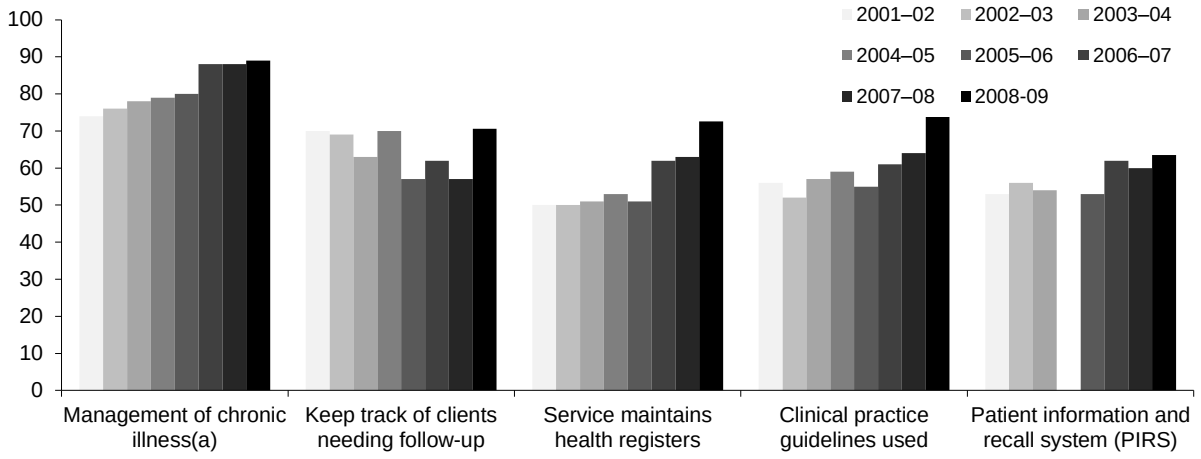
| | Per cent |
|---|---|
| Chronic disease management activities [(a)] | |
| Management of diabetes | 88.6 |
| Management of cardiovascular disease | 83.6 |
| Management of other chronic illness | 86.1 |
| Keep track of clients needing follow-up (e.g. through monitoring sheets/follow-up files) | 70.6 |
| Maintains health registers (e.g. chronic disease register) | 72.6 |
| Clinical practice guidelines used (e.g. Central Australian Remote Practitioners Association, diabetes guidelines) | 74.1 |
| **Patient Information and Recall Systems (PIRS) [(b)]** | |
| PIRS which automatically provides reminders for follow-up and routine health checks | 63.5 |
| **Chronic disease management groups [(c)]** | |
| Counselling groups | 26.7 |
| Chronic disease management groups | 48.3 |
| Antenatal groups | 33.9 |
| Mothers and babies group | 58.3 |
| Tobacco use treatment/prevention groups | 28.3 |
| Alcohol use treatment/prevention groups | 22.8 |
| Other substance use treatment/prevention | 12.2 |
| Cultural groups | 48.9 |
| Sport/recreation/physical exercise groups | 52.2 |
| Living skills groups (e.g. cooking and nutrition groups) | 59.4 |
| Men's groups | 56.7 |
| Women's groups | 66.1 |
| Youth groups | 44.4 |
| Other groups | 12.8 |

(a) Two hundred and one of the 205 respondent Aboriginal and Torres Strait Islander primary health care services provided valid data about health-related activities provided by the service. The percentages in the table above are calculated as a proportion of these 201 services.

(b) Two hundred and three of the 205 respondent Aboriginal and Torres Strait Islander primary health care services provided valid data for using computers. The percentages in the table above are calculated as a proportion of these 200 services.

(c) One hundred and eighty of the 205 respondent Aboriginal and Torres Strait Islander primary health care services provided information on group activities offered by the service. The percentages in the table above are calculated as a proportion of these 180 services.

*Source*: AIHW OSR data collection.




(a) From 2006-07 the OSR response category 'Management of chronic illness' was replaced by the three categories 'Management of diabetes', 'Management of cardiovascular disease' and 'Management of other chronic illness'. 'Management of chronic illness' represents the percentage of services that provided or facilitated access to any one of those three categories

*Note:* 2008–09 OSR data counts all auspice services individually when calculating rates, therefore caution should be exercised when comparing rates with earlier data collection periods.

*Source:* DoHA Service Activity Report 2007–08, 2005–06, 2004–05, 2003–04, 2002–03, 2001–02, AIHW OSR data collection.

**Figure 3.04.1: Percentage of respondent Indigenous primary health-care services that provide management of chronic disease, 2001–02 to 2008–09**

**Table 3.04.12: Percentage of respondent Indigenous primary health-care services that provide management of chronic disease, 2001-02 to 2008-09**

| | 2001–02 | 2002–03 | 2003–04 | 2004–05 | 2005–06 | 2006–07 | 2007–08 | 2008-09 |
|---|---|---|---|---|---|---|---|---|
| **Management of chronic illness[(a)]** | 74.0 | 76.0 | 78.0 | 79.0 | 80.0 | 88.0 | 88.0 | 89.0 |
| **Keep track of clients needing follow-up** | 70.0 | 69.0 | 63.0 | 70.0 | 57.0 | 62.0 | 57.0 | 70.6 |
| **Service maintains health registers** | 50.0 | 50.0 | 51.0 | 53.0 | 51.0 | 62.0 | 63.0 | 72.6 |
| **Clinical practice guidelines used** | 56.0 | 52.0 | 57.0 | 59.0 | 55.0 | 61.0 | 64.0 | 74.1 |
| **Patient information and recall system (PIRS)** | 53.0 | 56.0 | 54.0 | n.a. | 53.0 | 62.0 | 60.0 | 63.5 |

(a) From 2006-07, the SAR response category 'Management of chronic illness' was replaced by the three categories: 'Management of diabetes', 'Management of cardiovascular disease' and 'Management of other chronic illness'. 'Management of chronic illness' represents the percentage of services that provided or facilitated access to any one of those three categories.

*Note:* 2008–09 OSR data counts all auspice services individually when calculating rates, therefore caution should be exercised when comparing rates with earlier data collection periods.

*Source:* DoHA Service Activity Report 2007–08, 2005–06, 2004–05, 2003–04, 2002–03, 2001–02, AIHW OSR data collection.

.

## Additional information

### Acute rheumatic fever and rheumatic heart disease

**Registrations of acute rheumatic fever**

- Between 2006 and 2009 there were 213 new and recurrent cases of acute rheumatic fever in the Northern Territory among Aboriginal and Torres Strait Islander people.
- The peak age group of incidence of acute rheumatic fever is 5–14 years. During the period 2006–2009, 58% of all new and recurrent cases of acute rheumatic fever occurred in this age group and very few of these cases occurred in non-Indigenous children.

For more information on acute rheumatic fever see Measure 1.06.

**Secondary prevention of rheumatic heart disease**

The immediate aim in the management of acute rheumatic fever/rheumatic heart disease (RHD) is to identify cases of acute rheumatic fever and, once identified, to prevent the progression to rheumatic heart disease through secondary prevention measures. Secondary prevention refers to the early detection of disease and implementation of measures to prevent recurrent and worsening of disease and poorer outcomes.

Secondary prophylaxis with benzathine penicillin G (BPG) is the only RHD control strategy shown to be cost effective at both community and population levels and is recommended for all people with a history of ARF or RHD. Four-weekly BPG dosages is the current treatment of choice, except in patients considered to be at high risk, for whom 3-weekly administration is recommended. Pharmacokinetic data suggest that prolonging the dosing interval beyond 4 weeks may increase the risk of breakthrough ARF, so regular and timely adherence to the dosing regimen is important. Where BPG is contraindicated, alternatives are available, although these are considered to be less effective. Secondary prophylaxis should be continued in all people with ARF or RHD for a minimum of 10 years after the last episode of ARF or until the age of 21 years (whichever is the longer period). Those with moderate or severe RHD should continue secondary prophylaxis up to the age of 35–40 years. The fundamental goal for the long-term management of chronic RHD is to prevent, or at least forestall, valve surgery. Prophylaxis with BPG to prevent recurrent ARF is therefore a crucial strategy in managing patients with a history of ARF and RHD (NHFA and CSANZ 2006).

Adherence to secondary prophylaxis has been problematic in remote Aboriginal and Torres Strait Islander communities. For example, in 2005 in the Top End of the Northern Territory, 28% of patients on secondary prophylaxis missed half or more of their scheduled BPG injections over a 12-month period, although around half of all episodes of ARF were recurrences. Poor adherence in remote Indigenous communities is thought to be related mainly to the availability and acceptability of health services, rather than personal factors such as injection refusal, pain of injections, or a lack of knowledge and understanding of ARF and RHD (NHFA and CSANZ 2006).

### Data quality issues

**Healthy for Life data**

For the July 2008 to June 2009 reporting period, 72 services submitted data as part of the Healthy for Life Program.

Services started submitting their data through an electronic interface (OSCAR) for the February 2008 reporting period. This has improved the quality of data submitted.

Not all of the services were able to provide data for all of the essential indicators and service profile questions. The number of services that were able to provide data varies across the qualitative and quantitative indicators.

**Divisions of General Practice National Performance Indicators (NPI)**

The NPI are reported in the Divisions of General Practice Annual Reports submitted to DoHA, and are part of the National Quality Performance System (NQPS). No single Division reported against all the NPIs, but all indicators were reported against in the 2007–08 Annual Report. Much of the data provided involved inconsistencies, errors or omissions, however, and could not be used. Divisions were required to report on at least one domain within the chronic disease priority area. Of the 108 divisions for whom online reports were available, 105 completed at least some part of the diabetes sections. Of the 105 divisions who reported on diabetes, 48 reported data on the most recent total cholesterol among patients with diabetes.

**OATSIH Services Reporting (OSR) data collection**

The data were collected using the OSR questionnaire, (surveying all auspiced services) which combined previously separate questionnaires for primary health, substance use, and Bringing Them Home and Link up counselling services.

OATSIH sent a paper copy of the 2008–09 OSR questionnaire to each participating service and asked the service to complete the relevant sections. The participating services sent their completed OSR questionnaires directly to the AIHW.

The AIHW examined all completed questionnaires received to identify any missing data and data quality issues. Where needed, AIHW staff contacted the relevant services to follow up and obtain additional or corrected data. After manually entering the data on the data repository system, staff conducted further data quality checks.

The AIHW identified three major problems with the data quality: missing data, inappropriate data provided for the question, and divergence of data from two or more questions. The majority of 2008–09 OSR questionnaires received had one or more of these data quality issues.

Further information can be found in the data quality statement in the *Aboriginal and Torres Strait Islander Health Services Report, 2008–09* (AIHW 2010b).

# List of symbols used in tables

| | |
|---|---|
| n.a. | not available |
| – | rounded to zero (including null cells) |
| 0 | zero |
| . . | not applicable |
| n.e.c. | not elsewhere classified |
| n.f.d. | not further defined |
| n.p. | not available for publication but included in totals where applicable, unless otherwise indicated |

# References

AIHW (Australian Institute of Health and Welfare) 2010. Aboriginal and Torres Strait Islander health services report, 2008/09. Cat. no. AIHW 31. Canberra: AIHW.

NHFA (National Heart Foundation of Australia) and CSANZ (Cardiac Society of Australia and New Zealand) 2006. Diagnosis and management of acute rheumatic fever and rheumatic heart disease in Australia: an evidence-based review. National Heart Foundation of Australia (RF/RHD Guideline Development Working Group).

NHMRC (National Health and Medical Research Council) 2004. National Evidence Based Guidelines for the Management of Type 2 Diabetes Mellitus: Part 4 Blood Pressure Control in Type 2 Diabetes. Prepared by the Australian Centre for Diabetes Strategies Prince of Wales Hospital, Sydney for the Diabetes Australia Guideline Development Consortium

# List of tables

# List of figures