



**Australian Government**

**Australian Institute of  
Health and Welfare**

*Better information and statistics  
for better health and wellbeing*

# **A set of performance indicators across the health and aged care system**

**Prepared by the  
Australian Institute of Health and Welfare  
for  
Health Ministers**

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# Executive summary

## Context

At the Australian Health Ministers' Conference of 29 February 2008, Ministers agreed to commission the Australian Institute of Health and Welfare (AIHW) to develop performance indicators to support the agreements that will replace the 2003–2008 Australian Health Care Agreements. The indicators were to allow for reciprocal public performance reporting and to cover the entire health and aged care system comprehensively.

The objective of the work was to develop a performance indicator set by which the community could judge the performance of the system as a whole. A focus has been on performance indicators that relate to outcomes for patients and clients, which would be suitable for public reporting, and for which data are mostly already available and reported.

In addition, a priority has been to ensure that the performance indicators reflect reform directions announced to date by Health Ministers, by the Council of Australian Governments and by the National Health and Hospitals Reform Commission.

Noting that 'we manage what we measure', stakeholders have emphasised that the performance indicators should be capable of driving positive changes that are appropriate to reform goals.

The AIHW first identified a set of organising 'principles' for the performance indicator set, based on priorities expressed by Health Ministers and other stakeholders for health sector reform and ongoing service provision, and taking into consideration the National Health Performance Framework. The development of the performance indicator set included reviewing indicators currently in use in the health and aged care system in Australia and elsewhere; and undertaking an extensive consultation with health and aged care sector stakeholders, including all governments.

As part of the development process, the AIHW provided early advice on its draft performance indicator set to the National Health and Hospitals Reform Commission and, in turn, considered the performance indicators proposed by the Reform Commission.

## The performance indicator set

The set consists of 40 performance indicators, some of which are 'composite' indicators (Table 1). It is suitable for public reporting, and can be used as a 'menu' from which performance indicators could be selected for different reporting purposes. Some, but not all, are amenable to benchmarks and targets.

The set aligns with reform priorities announced by Health Ministers in their communiqué of 29 February 2008, with the objectives of COAG's Health and Ageing Working Group, and with the health and aged care challenges identified by the National Health and Hospitals Reform Commission. There are considerable overlaps between this set and the Reform Commission's proposed performance indicators. There are also intersections between this set and the National Health Sector Performance Indicators reported to Health Ministers by AHMAC in 2003, and most recently reported, at the request of Health Ministers, in *Australia's Health 2008* (AIHW 2008).

The set reflects the range of major services provided including public and private hospitals, general practice, community health, public health, maternal and child health, aged care, dental health and mental health (Table 2).

The set covers responsibilities of both the Commonwealth and state and territory governments. For many indicators, responsibilities overlap and changes in indicator levels could reflect actions of both levels of government.

Almost all of the performance indicators could be used to demonstrate differences between Indigenous and other Australians, among Australians from different socio-economic groups, and among residents of cities, rural and remote areas. Breakdowns by state and territory would be feasible for almost all indicators, and advice is provided on whether breakdowns at other levels (such as General Practice Networks and individual hospitals) could be feasible.

About 60% of the performance indicators are already reported nationally (Table 1) and some others are reported by jurisdictions. The indicators that are already reported are based on currently available data, albeit in need of improvement in some cases. Other indicators are new and, for some, new data would be required. Estimates of the costs of making new data available have been included in the report.

Annual reporting would be appropriate for most of the indicators to monitor reforms, but less frequent reporting may be appropriate for indicators that monitor longer-term population health changes.

### **Links with other health information**

The performance indicator set sits within the broader national health information environment that includes other performance indicators and underlying national data collections from which they are derived.

Other sets of performance indicators endorsed by Health Ministers and/or developed under the auspices of Health Ministers (such as the Aboriginal and Torres Strait Islander Health Performance Framework) could be regarded as ‘cascading’ from the performance indicator set described in this report, and providing more detail on specific areas.

The performance indicator set in this report, or a selection of the indicators, could be considered as a replacement for the National Health Sector Performance Indicators (as reported in *Australia's Health 2008*).

The frequency with which the performance indicators could be reported, and the timeliness of reporting, would largely depend on the processes for the underlying data collections.

Consistent and agreed definitions will be vital to the credibility and usefulness of the performance indicators and, for this purpose, a single authoritative repository for the performance indicator data set and definitions will be required, no matter the reporting vehicle(s).

<b>Table 1: The health and aged care performance indicator set: current reporting, data availability, development work, estimated costs</b>		Currently reported nationally	Data already available	Development work desirable	Cost of new data <sup>(a)</sup>
(a) Cost of new data: Low <\$100k; Medium \$100k–\$1m; High \$1m to \$5m; Very high >\$5m. Costs do not include costs of data collation or analysis.					
<b>Better health</b>					
1	Life expectancy (incl. gap b/w Indigenous & non-Indigenous)	✓	✓	Yes	Nil
2	Infant/young child mortality rate (incl. gap b/w Indigenous & non-Indigenous)	✓	✓	Yes	Nil
3	Incidence and prevalence of important preventable diseases and injury	✓	✓	Yes	High
4	Potentially avoidable deaths	✓	✓	No	Nil
<b>Focus on prevention</b>					
5	Risk factor prevalence	Most	Most	Yes	V. High
6	Prop. of children with all developmental health checks (6, 12, 18 months, 4yrs)	✗	✗	Yes	High
7	Cancer screening rates (breast, cervical, bowel)	✓	✓	No	Nil
8	Prop. of babies who are low birthweight, incl. Indigenous status	✓	✓	No	Nil
9	Immunisation rates for vaccines in the national schedule	✓	✓	Yes	Low
10	Public health program expenditure as a proportion of total health expenditure	✓	✓	Yes	Low
<b>Access</b>					
11	Health service use differentials	Some	Most	Yes	Medium
12	Selected potentially preventable hospitalisations	✓	✓	No	Nil
13	Waiting times for services (elective surgery, EDs, GPs, public dental services)	Most	Some	Yes	Medium
14	Treated prevalence rates for mental illness	✗	✓	Yes	High
15	Residential and community aged care services per 1,000 pop aged 70+ yrs	✓	✓	No	Nil
16	No. hospital patient days by those ACAT assessed, waiting for residential aged care	✗	✓	Yes	Low
17	Out-of-pocket costs as a prop. service cost	✓	✓	Yes	Low
18	People deferring recommended treatment due to financial barriers	✓	✓	Yes	Low
<b>High quality—Appropriate</b>					
19	Prop. of diabetics with GP annual cycle of care; prop. with HbA1c below 7%	Most	✓	No	Nil
20	Proportion of pregnancies with an antenatal visit in the first trimester	Some	Some	Yes	Medium
21	Survival of people diagnosed with cancer (5 year relative rates)	✓	✓	No	Nil
22	In-hospital mortality for selected procedures	✗	✓	No	Nil
23	Proportion of asthmatics with a written asthma plan	✓	✓	Yes	Medium
24	Unplanned readmissions w/in 28 days of surgical/mental health admission	Some	✓	Yes	Medium
25	Prop. of health/aged care services accredited	✓	✓	No	Nil
<b>High quality—Safe</b>					
26	Selected adverse events in acute and other care settings	Some	Some	Yes	Medium
27	Independent peer review of surgical deaths	✗	✗	Yes	Low
28	Prop. of admitted adult patients assessed for venous thromboembolism risk	✗	✗	Yes	Medium
<b>Integration and continuity of care</b>					
29	Prop. discharge summaries transmitted electronically w/in 1 day of discharge	✗	✗	Yes	Medium
30	Discharge plans for complex care needs within 5 days of discharge	✗	✗	Yes	Medium
31	Prop. of GPs with register/recall system for patients with chronic disease	✗	✓	Yes	Nil
32	Post-discharge community care for mental health patients	✓	✓	Yes	Low
<b>Patient-centred</b>					
33	Patient experience (based on domains of concern to patients)	✗	✗	Yes	V. High
<b>Efficiency/value for money</b>					
34	Cost per casemix-adjusted separation for acute care hospitals	✓	✓	No	Nil
35	Total cost per medical specialist (MBS) service	✗	✓	No	Nil
<b>Sustainable</b>					
36	Health/aged care workforce in/outflows as % of health workforce	Some	Some	Yes	Nil
37	Cwealth/State/Territory expenditure on health & aged care as % of GDP	✗	✓	No	Nil
38	No. of accredited/filled clinical training positions	✗	✗	Yes	Low
39	Capital expenditure as a prop. of total health/ aged care expenditure	✓	✓	Yes	Low
40	Prop. of GDP (or health expenditure) spent on health R&D	✓	✓	No	Nil

<b>Table 2: The health and aged care performance indicator set: coverage of the health and aged care sectors<sup>(a)</sup></b>		Public hospitals	Private hospitals	Primary care & community health	Public health	Aged care	Maternal/child health	Mental health	Dental health
(a) Dark shading denotes health and aged care system wide coverage.									
<b>Better health</b>									
1	Life expectancy (incl. gap b/w Indigenous & non-Indigenous)								
2	Infant/young child mortality (incl. gap b/w Indigenous & non-Indigenous)								
3	Incidence and prevalence of important preventable diseases and injury								
4	Potentially avoidable deaths								
<b>Focus on prevention</b>									
5	Risk factor prevalence			*	*				
6	Children with all developmental health checks (6, 12, 18 months, 4yrs)			*			*		
7	Cancer screening rates (breast, cervical, bowel)			*	*				
8	Prop. of babies who are low birthweight, incl. Indigenous status			*	*		*		
9	Immunisation rates for vaccines in the national schedule			*	*	*	*		
10	Public health program expenditure as a proportion of total health expenditure			*	*				
<b>Access</b>									
11	Health service use differentials	*	*	*		*		*	*
12	Selected potentially preventable hospitalisations			*	*	*	*		*
13	Waiting times (elective surgery, EDs, GPs, public dental services)	*		*					*
14	Treated prevalence rates for mental illness	*	*	*				*	
15	Residential and community aged care services per 1,000 pop aged 70+ yrs					*			
16	Hospital patient days by those ACAT assessed, waiting for residential aged care					*			
17	Out-of-pocket costs as a prop. service cost			*					*
18	People deferring recommended treatment due to financial barriers			*					*
<b>High quality—Appropriate</b>									
19	Diabetics with GP annual cycle of care, prop. with HbA1c below 7%			*					
20	Proportion of pregnancies with an antenatal visit in the first trimester	*	*	*			*		
21	Survival of people diagnosed with cancer (5 year relative rates)	*	*	*					
22	In-hospital mortality for selected procedures	*	*						
23	Proportion of asthmatics with a written asthma plan			*					
24	Unplanned readmissions w/in 28 days of surgical/mental health admission	*	*					*	
25	Prop. of health/aged care services accredited	*	*	*		*			
<b>High quality—Safe</b>									
26	Selected adverse events in acute and other care settings	*	*	*		*		*	
27	Independent peer review of surgical deaths	*	*						
28	Admitted adult patients assessed for risk of venous thromboembolism	*	*						
<b>Integration and continuity of care</b>									
29	Prop. discharge summaries transmitted electronically w/in 1 day of discharge	*	*	*		*			
30	Discharge plans for complex care needs within 5 days of discharge	*	*	*		*		*	
31	Prop. of GPs with register/recall system for patients with chronic disease			*					
32	Post-discharge community care for mental health patients			*				*	
<b>Patient-centred</b>									
33	Patient experience (based on domains of concern to patients)	*	*	*	*	*	*	*	*
<b>Efficiency/value for money</b>									
34	Cost per casemix-adjusted separation for acute care hospitals	*	*						
35	Total cost per medical specialist (MBS) service			*					
<b>Sustainable</b>									
36	Health/aged care workforce in/outflows as % of health workforce								
37	C'wealth/State/Territory expenditure on health & aged care as % of GDP								
38	No. of accredited/filled clinical training positions								
39	Capital expenditure as a prop. of total health/ aged care expenditure								
40	Prop. of GDP (or health expenditure) spent on health R&D								

# Structure of report

Chapter 1 outlines the issues for discussion, and includes an overview of the performance indicator set and its links to other health information.

Chapter 2 details the AIHW organising principles, and then presents the performance indicators grouped using the principles. Included for each group is a description of the rationale behind the selection of the indicators, information on estimated costs of developing new indicators and how the indicators could be used in equity comparisons.

Chapter 3 outlines ideas for how the indicators could be presented in a way that is useful to the community in public reports.

The Attachment to the report presents details of each indicator. Included are separate details for each component of the composite indicators.

The methods used to develop the performance indicator set are presented in Appendix A. This appendix also includes details of organisations and groups consulted by the AIHW for this task.

Appendix B lists indicators that were not included in the set but that were considered during the consultation and for which there was some stakeholder support.

Appendix C presents mappings of the performance indicators to the AIHW organising principles, to Health Ministers' priorities, to the National Health and Hospitals Reform Commission's Health and Aged Care Challenges and performance indicators, and to the National Health Sector Performance Indicators and Framework.

Appendix D is the Health Ministers' communiqué of 29 February 2008.

# 1. Issues for consideration

## The task

At the Australian Health Ministers' Conference of 29 February 2008, Ministers agreed to commission the Australian Institute of Health and Welfare (AIHW) to develop performance indicators to support the new health care agreements that are to be negotiated following the expiry of the 2003–2008 Australian Health Care Agreements. The Ministers' communiqué that followed that meeting (Attachment D) included:

- Ministers agreed on the need for reciprocal public performance reporting
- For the first time, this will mean the Commonwealth and state and territory governments have agreed on building and reporting a comprehensive set of performance measures across the entire health system
- For example, this will include hospital performance reporting and measures of access to GPs by region
- This will build on existing performance requirements.

The AIHW was requested to develop the performance indicator set by 30 June 2008. The development has incorporated:

- Identification of a set of 'principles' for the health and aged care system for use as an organising framework for the indicators, drawing on priorities expressed by Health Ministers and others for health sector reform and ongoing management of the sector
- Review of health and aged care system performance indicators currently in use in Australia and overseas
- Development of a draft set of performance indicators for consultation with stakeholders
- Refinement of the set based on extensive consultation with government and non-government stakeholders
- Provision of the finalised performance indicator set as this report to Health Ministers.

As part of the development process, the AIHW provided early advice on its draft performance indicator set to the National Health and Hospitals Reform Commission and, in turn, considered the performance indicators proposed by the Reform Commission (NHHRC 2008).

## Objectives for the performance indicator set

The overall objective of the work was to develop a performance indicator set by which the community could judge the performance of the system as a whole. This means that the set would be

- suitable for public reporting
- reflect the range of activity across the health and aged care system, and the responsibilities of both the Commonwealth and state and territory governments, and
- focus on outcomes for patients and clients, and on other major issues for stakeholders, including equity.

In addition, a priority has been to ensure that the performance indicators

- reflect reform directions announced to date by Health Ministers
- encourage positive changes within a 'balanced scorecard' assessment of performance
- are amenable, as appropriate, to performance benchmarks and targets
- are robust measures, and
- largely draw on current health and aged care information infrastructure.

An aim was also to ensure that the performance indicator set specifically reflected reform priorities outlined to date by the Council of Australian Governments and by the National Health and Hospitals Reform Commission.

## Consultation

An extensive consultation process was undertaken between March and June 2008 to develop and refine the performance indicator set. During this process (detailed in Appendix A), the AIHW consulted with over 50 stakeholder organisations and groups in the health and aged care system, discussing with them the AIHW principles used as an organising framework for the development of the performance indicator set, draft sets of performance indicators, and stakeholder views on priority issues for coverage by the set.

Included in the consultations were:

- The Department of Health and Ageing and the health departments of each of the states and territories
- Other Commonwealth government agencies, such as the National Health and Medical Research Council
- Organisations and committees established under the auspices of Health Ministers, including the Australian Commission on Safety and Quality in Health Care and the National e-Health and Information Principal Committee
- Professional organisations such as the Royal Australian College of General Practitioners, and the Royal College of Nursing Australia
- Service provider representative bodies such as the Australian Medical Association, the Australian Private Hospitals Association and the Australian General Practice Network
- The National Health and Hospitals Reform Commission, and
- The Consumers' Health Forum of Australia.

The stakeholders provided an extensive range of detailed comments on the organising principles, on the usefulness of the proposed performance indicators and on the feasibility of implementing them. The comments were used by the AIHW to prioritise and balance the performance indicator set.

## Characteristics of the performance indicator set

The performance indicator set consists of 40 performance indicators, some of which are 'composite' indicators (Table 1 of Executive Summary). The set is a manageable number that would be suitable for public reporting. The indicators are detailed in the Attachment to this report.

The performance indicator set could also be used, as Health Ministers requested, in whole or in part, to support the new health care agreements that are to be negotiated following the expiry of the 2003–2008 Australian Health Care Agreements.

The set could also be regarded as a resource that encapsulates current stakeholder priorities for performance indicators for the health and aged care system, that could be used as a 'menu' from which performance indicators could be selected for different reporting purposes. Some, but not all, are amendable to benchmarks or targets.

Annual reporting would be appropriate for most of the performance indicators to monitor reforms, but less frequent reporting may be appropriate for indicators that monitor longer-term population health changes.

### The set spans the AIHW's organising principles for the performance indicators

The performance indicators span the AIHW's organising principles for the health and aged care system, thus encompassing priorities expressed by Ministers and others for health sector reform and ongoing service provision, and reflecting the National Health Performance Framework.

Most performance indicators could be used in **equity** comparisons for Indigenous and other Australians, for Australians from different socio-economic groups, and for residents of cities, rural and remote areas.

Selected performance indicators could be used in **international** comparisons.

As detailed in Chapter 2, the AIHW principles are each represented by a number of performance indicators. In summary:

**Better health** is the overriding principle, and is represented by four high level outcome indicators. These indicators reflect the performance of the health and aged care system as a whole, and also reflect actions of other sectors. Importantly, they include the *Closing the Gap* indicators of life expectancy, and infant and young child mortality rates for Indigenous and other Australians.

**Focus on prevention** includes six performance indicators. The first is a composite indicator reflecting the behavioural and lifestyle risk factors that are important determinants of many chronic diseases. Others focus on realising a healthy start to life and prevention of cancer. The last summarises the extent of prevention efforts as the proportion of the health dollar that is spent on prevention programs.

Equitable and timely **Access** to care is represented by eight indicators. Potentially preventable hospitalisations and emergency department presentations provide a powerful measure of access to (and quality of) non-hospital care. Composite indicators covering differences in rates of use of a range of health services (including general practice and hospital services), by Indigenous status, socioeconomic status and remoteness of residence, are teamed with

measures of waiting times for major health services to provide a comprehensive and balanced picture of accessibility. Financial barriers to accessing care are also included.

**High quality care** has been defined for this performance indicator set as care that is appropriate (provided according to established standards) and safe. The seven performance indicators for **appropriateness** include process and outcomes measures for selected services provided by general practitioners, and important outcome measures for hospital care. Accreditation of major health and aged care services is also included, with the usefulness of this indicator set to improve with changing accreditation arrangements.

The three performance indicators for **safety** of care include outcome measures for the major adverse events that occur in hospitals and other care settings (including aged care). Two process indicators relating to good safety practice in hospitals are also included.

The four performance indicators for **integration and continuity of care** have a patient- or client-focus. Included is a performance indicator that can be used to assess progress with the implementation of e-health. The three other performance indicators relate to clients with chronic and/or complex care needs.

**Patient experience** is represented by a composite performance indicator of measured patient/carer experience, expected to include multiple sub-indicators such as being treated with respect and dignity, and being involved in decision-making.

**Efficiency/value for money** is to be assessed using two performance indicators, one relevant to hospital service provision and the other to private specialist services subsidised through Medicare.

The **sustainability** of the health and aged care system is covered by five performance indicators. Two focus on the health and aged care workforce and three can be used to assess the levels, sources and mix of expenditure on health and aged care.

## **The set aligns with priorities of Health Ministers and others**

As detailed in Appendix C, the performance indicator set aligns with:

- priorities for inclusion in the next health care agreement and reform areas for immediate focus announced by Health Ministers in their communiqué of 29 February 2008
- the health and aged care challenges identified by the National Health and Hospitals Reform Commission.

There are considerable overlaps between this set and the Reform Commission's proposed performance indicators. There are also intersections between this set and the National Health Sector Performance Indicators reported to Health Ministers by AHMAC in 2003, and most recently reported, at the request of Health Ministers, in *Australia's Health 2008* (AIHW 2008).

## **The set reflects the range of services provided**

The performance indicator set covers the major health services provided in Australia and, for each of the major service areas, the performance indicators relate to a number of the AIHW organising principles. These two features ensure that the set does not create incentives to focus efforts on particular health service types or particular aspects of service provision within a type of service.

In summary, and as detailed in Table 2 of the Executive summary:

- 15 performance indicators are relevant to **public hospitals** and 14 to **private hospitals**

- 24 performance indicators are relevant to **primary care and community health**
- Seven performance indicators relate to **public health** activities
- **Aged care** is represented by ten performance indicators.
- **Maternal and child health services** are represented by six performance indicators.
- There are seven performance indicators that relate to **mental health services**.
- There are six performance indicators relevant to **dental health services**.

The performance indicators reflect both Commonwealth and state and territory government responsibilities and so can facilitate reciprocal performance reporting. For many indicators, responsibilities overlap and changes in indicator levels could reflect actions of both levels of government. This would be the case, for example, for performance indicators for cancer screening and for smoking, where the Commonwealth Government and state and territory governments contribute to outcomes. Attribution of responsibility for these types of indicators would need to be undertaken with care.

Better health	Focus on prevention	Appropriate care
Life expectancy	Risk factor prevalence (smoking, inactivity, high blood pressure etc)	Diabetes annual cycle of care
Infant and child mortality	Child developmental health checks	Antenatal checks
Incidence and prevalence of important preventable diseases	Cancer screening rates	Cancer survival
Potentially avoidable deaths	Low birthweight babies	In-hospital death rates
<b>Accessible</b>	Immunisation	Asthma plans
Service use differentials	Public health \$ (%)	Unplanned readmissions to hospital
Preventable hospitalisations and ED attendances	<b>Integration and continuity</b>	Health and aged care accreditation
Waiting times for services	Discharge summaries electronically transmitted	<b>Sustainable</b>
People receiving mental health care	Hospital discharge plans	Workforce inflows and outflows
Aged care services per disabled persons 70+ yrs	GP register and recall system for chronic disease	Commonwealth and State funding of health and aged care
Hospital patients awaiting nursing home care	Post discharge community mental health care	Training places
Out-of-pocket costs	<b>Safe</b>	Capital expenditure
Deferring treatment due to cost	Adverse events in care settings	R&D expenditure
<b>Efficient</b>	Independent review of surgical deaths	<b>Patient-centred</b>
Cost per hospital separation	VTE risk assessment	Patient experience surveys
Cost per specialist service		

**KEY:**

State/Territory accountability	Joint accountability	Commonwealth accountability
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**Figure 1.1: The health and aged care performance indicator set; primary Commonwealth and state and territory accountabilities**

Figure 1.1 illustrates primary Commonwealth and state and territory accountabilities for each indicator. In the figure, joint accountabilities reflect areas of joint responsibility such as cancer screening. They also reflect composite indicators (such as service use differentials) that include components relating to Commonwealth responsibilities and components relating to state and territory responsibilities.

Accountability for the four **better health** outcome indicators is with the health sector and other sectors. Whilst these indicators are not as well related to health and aged care sector accountabilities as the others, they provide important ‘whole-of-government’ health measures.

### **Breakdown of performance indicators for reporting**

Breakdowns by state and territory would be feasible for almost all indicators, and advice is provided in the Attachment on whether breakdowns at other levels (such as Networks of General Practice, and individual hospitals) would be feasible. This advice is informed by the primary accountabilities noted above and the levels of the system at which behavioural change would be driven. For example,

- Public hospital performance indicators could be reported at the state/territory level and at the public hospital peer group level, and also at the level of individual hospitals for some indicators.
- For private hospitals, reporting could be at the state/territory level (which is the level likely to be relevant for reporting to the public) but with consideration of the ownership and management arrangements of private hospitals and related commercial-in-confidence issues.
- For general practice performance indicators such as proportion of general practices that have a register and recall system for patients with chronic disease (an indicator used for the Australian General Practice Network), reporting could be at the level of General Practice Networks.

### **The set could be used as a performance indicator ‘menu’ for different performance reporting purposes**

The performance indicators in the set could be used either in total, or they could be used as a ‘menu’ of documented performance indicators that could be selected for different purposes.

The set as a whole could be used for public reporting in a way that would provide a balanced overview of the health and aged care system as a whole.

Components of the set could be used to report on **specific aspects** of service provision. For example, the performance indicators grouped under the Access principle could be reported separately to provide a detailed assessment of access to services, perhaps accompanied by information available on needs for services for particular population groups.

Performance indicators could be selected on the basis of whether they related to overall **outcomes** for patients and clients, or to **process and structural issues** that may be more directly relevant to specific accountabilities and more sensitive to changing service delivery practices. An outcomes focus, for example, could focus on the Better Health indicators, potentially preventable hospitalisations, and appropriateness and safety indicators such as cancer survival and adverse events. A focus on process and structural issues could see a choice of indicators such as cancer screening rates, proportion of pregnancies with first-trimester antenatal care, timely transmission of electronic discharge summaries and accreditation of health and aged care services.

Performance indicators could be selected that focus specifically on **reform objectives** or on issues considered to relate to **maintenance of effort** in health and aged care service provision. A subset focussed on reform objectives announced to date by Health Ministers would be selected on the basis that they could drive reform. They could include patient experience sub-

indicators, and the integration and continuity of care indicators. Indicators of maintenance of effort could include immunisation rates, health service use differentials and adverse events.

Performance indicators could also be selected to link to **specific reporting or accountability** frameworks or purposes.

## **The set draws on already reported performance indicators and available health and aged care data**

The performance indicator set largely draws on current health and aged care data and includes many performance indicators that are currently routinely reported or have been reported in the past. However, reflecting the focus of the set on reform directions, it also includes performance indicators for which data have not been available nation-wide or for which no data have been available at all.

About 60% of the performance indicators are already reported nationally (Table 1 in Executive Summary) and some others are reported by jurisdictions. The indicators that are already reported are based on currently available data, albeit in need of some improvement in some cases. Other indicators are new and, for some, data or infrastructure development work would be required for national reporting to be established. If development work would be required, broad estimates of possible costs are included. Chapter 2 includes information on the level(s) of government which would be likely to have responsibility for developing and collecting new data.

In summary:

- 21 performance indicators have been mostly or completely reported in the past in national reports. They are based entirely or largely on data that are currently available at a national level. They include some of the risk factor prevalence measures and the performance indicators based on the National Minimum Data Sets. Some would require some refinement for optimisation.
- Twelve performance indicators are based on data that are currently available in the system but would require national collation, or are available for some parts of the nation or the indicator only and would need to be developed for other parts. They include peer review of surgical deaths, and public dental waiting times.
- Seven performance indicators are based on data that are not currently available for Australia and in some cases require significant data and infrastructure development. They include proportion of discharge summaries transmitted electronically, child developmental health checks and patient experience indicators.

Estimates of costs are necessarily broad, given that detailed specifications are not available for all the indicators. They are based on discussions with the Australian Bureau of Statistics on possible costs of population surveys and advice from jurisdictions on the costs to governments of enhancing existing administrative data sources or conducting new or enhanced surveys.

The cost estimates do not include collation or analysis costs at the national level and they do not generally include costs of improving data quality, unless this would prohibit national reporting. Although the quality of Indigenous identification in many data sets is in need of improvement, estimates of costs to improve the data have not been incorporated, as the improvement work is planned to occur independently of any reporting of this performance indicator set. Similarly, costs for other data development work that is occurring through separate processes (such as for national health profession registration arrangements) have not been included.

Cost estimates are presented as dollars per annum over four years, using the broad range categories:

- Low (less than \$100,000)
- Medium (\$100,000 to \$1 million)
- High (\$1 million to \$5 million)
- Very high (greater than \$5 million)

Costs for new data are estimated to be nil or low for 26 performance indicators, medium for nine indicators and high or very high for five indicators.

### **Sourcing of data from non-government service providers**

Sourcing of data on service provision by non-government service providers could be managed by either the Commonwealth or state/territory governments, for example, building on existing funding, regulatory or collaborative arrangements or on separate agreements for data provision for the purposes of national health and aged care performance indicator reporting.

For example, for private hospitals, data for the indicator on admitted patients who are assessed for risk of venous thromboembolism could be collected by states and territories through enhancements to the National Minimum Data Set for Admitted Patient Care (for which private hospitals already provide other data on admitted patients through state/territory-based arrangements and onto the AIHW and Department of Health and Ageing). Alternatively, the data could be collected by the Commonwealth through changes to arrangements requiring private hospitals to report data for the Private Hospitals Data Bureau.

Such mechanisms could support data flows to an independent repository for the performance indicator data.

## Management of the performance indicators and associated data

The performance indicator set sits within the broader national health information environment, that includes other performance indicators, statistical reports and underlying national data collections from which they are derived.

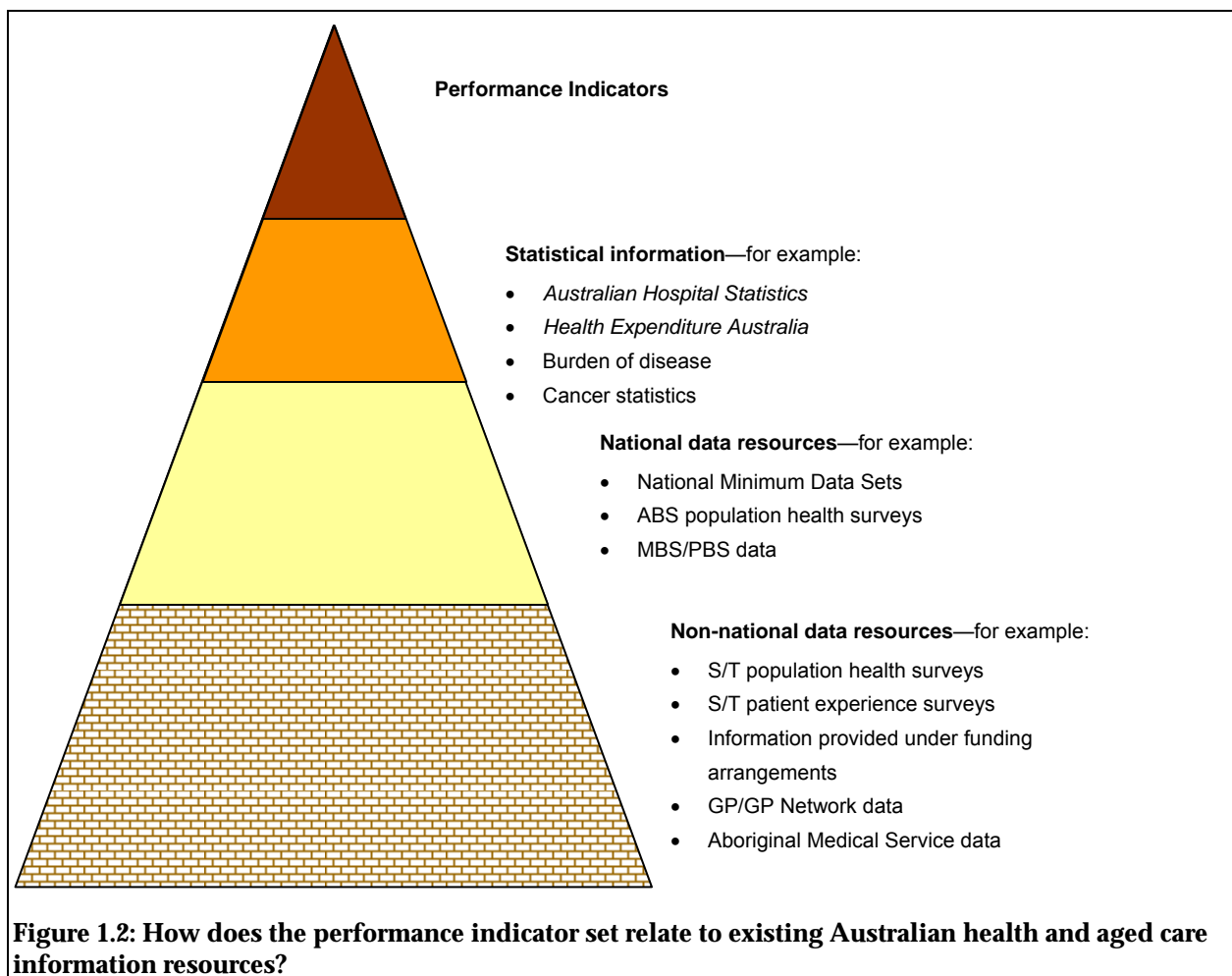
As illustrated in Figure 1.2, performance indicators can be seen to be at the peak of national health information resources. The indicators are supported by other statistical information (that can, for example, be used to assist interpretation of the indicators) and can sometimes be reported as part of broader statistical reports. The performance indicators and the statistical reports are built on national data resources such as the National Minimum Data Sets and MBS data. Non-national data resources, such as state and territory-based data collections, underpin some of the national data resources and can be sources of detail not available at the national level.

The performance indicator set has been developed to align with current priorities for the health and aged care system and should evolve at the margins to reflect new reform priorities, for example, following future work of the National Health and Hospitals Reform Commission. The set should drive and prioritise information development work and, in turn, may also evolve with improving data availability.

Last, as noted above, some work to refine the performance indicators would be required before they could all be reported optimally.

These issues mean that there may be a need for ongoing management arrangements for the performance indicator set, including mechanisms for endorsement by Health Ministers of changes to the indicators.

- AHMAC's National e-Health and Information Principal Committee could be given the role of managing the set, and providing advice to AHMAC and onto Ministers on changes and reporting of the set.
- The management role could include ensuring the quality, timeliness and availability of national data collections from which the performance indicators are derived.
- The management role could also include management of the set as the pinnacle of a set of 'cascading' performance indicator sets (described below), for example, through liaison with other AHMAC groups that manage performance indicator sets.



## Further development of the performance indicator set

While there has been substantial work undertaken to develop the performance indicator set, there are a number of issues to be resolved before all the indicators could be optimally introduced into the health and aged care system. These issues are detailed in the Attachment and include data development work to alleviate important gaps and the refinement and improvement of analysis methods for existing indicators. Items for particular attention would include:

### New or improved data collections

- A biomedical risk factor survey would improve the accuracy of data on health risk factors. The cost of a comprehensive survey (including information about diet, physical activity and measured blood pressure and serum cholesterol) is estimated at between \$10 and \$15 million per survey.
- A patient experience survey, covering hospital and non-hospital services, is estimated as costing between \$5 and \$10 million, for a new, standalone survey. It would build on the experiences of states already conducting such surveys. Alternatively, enhancement and/or harmonisation of state surveys could be pursued.
- Enhancement of national data linkage capacity could allow linkage between records from the National Hospital Morbidity Database and ACAT data for accurate

measurement of hospital patient days used by patients assessed as needing residential aged care placement. Similarly, improved national linkage capacity would allow more accurate measurement of the proportion of people with severe mental illness receiving mental health care, and unplanned hospital readmissions following surgical or mental health admissions.

- The addition of new data items or codes to hospital-related National Minimum Data Sets (for example, *Staphylococcus aureus* (including MRSA) bacteraemia, discharge plans for patients with complex care needs) are each individually estimated to have medium costs.
- Availability of information about post-discharge community care for mental health patients hinges largely on the implementation of uniform client identifiers within states and territories. The costs of implementing this or similar mechanisms nationally is estimated to be medium.
- While improvement to Indigenous identification continues for many data collections, and the quality of identification is considered to be acceptable for some analysis purposes, it is not acceptable for other purposes, including some state and territory breakdowns. Ongoing efforts to improve the quality of the underlying data will improve the usefulness of many of the performance indicators in this set.

### **New collation of data**

- Data are collected locally on child developmental health checks, but efforts would need to be made to collate the data nationally. This would apply particularly to health checks for children at 6, 12 and 18 months, as checks at 4 years are now available as an MBS item. Harmonisation of the data may also be required. Similar collation (and harmonisation) of data would be required for performance indicators such as public dental waiting times.
- Data on clinical training positions (at least for undergraduate medical trainees) are available through universities, but arrangements would need to be made to source the data.
- The HbA1c data which forms part of the indicator about diabetes management by GPs is collected by the GP Networks, but the Networks do not cover all GPs, so estimates would need to be made of the impact of this missing data.

### **Development of analysis methods**

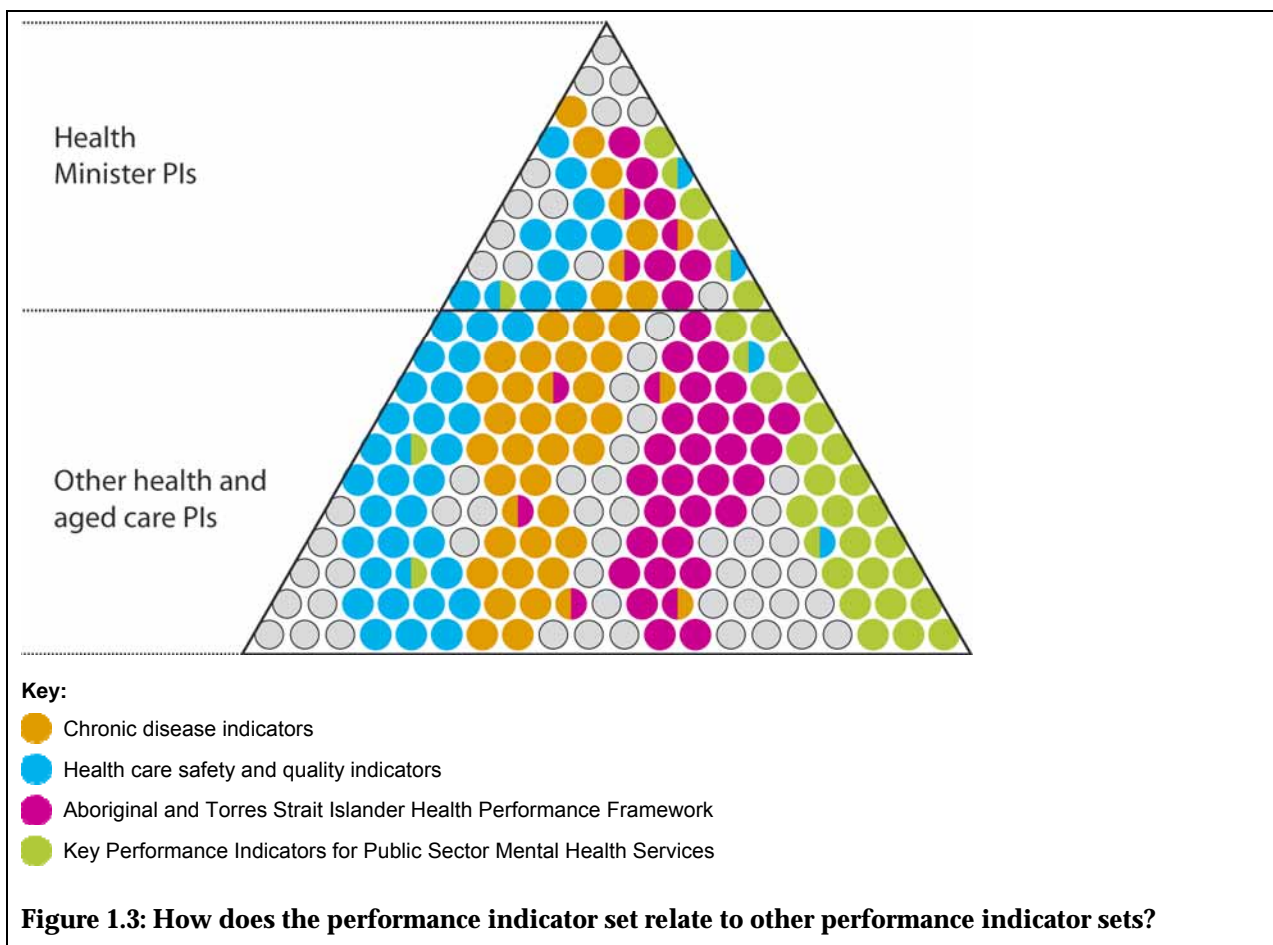
- Some of the proposed indicators are composites – a combination of existing indicators. Work may be required to determine whether and how to combine data on the component parts into a single summary figure. This applies, for example, to risk factor prevalences and immunisation rates.
- The specifications for the potentially preventable hospitalisations indicator could be refined to ensure that they accurately reflect current efforts to avoid hospitalisations and current admission practices.
- Analysis methods to enable the comparison of service use rates to estimated needs would enhance the usefulness of the health service use differentials indicator.

## The pinnacle of ‘cascading’ performance indicator sets

Necessarily, the performance indicators in this report do not provide a detailed view of all aspects of performance of all areas of the health and aged care system. Other indicator sets will remain important to provide more comprehensive views of the performance of specific parts of the health and aged care system, for specific population groups, for specific diseases or conditions, or for specific performance aspects of the system of interest.

Examples of such indicator sets are, respectively, the Key Performance Indicators for Public Sector Mental Health Services, the Aboriginal and Torres Strait Islander Health Performance Framework, the chronic disease indicator set being developed by AHMAC’s Population Health Information Development Group and the health care safety and quality indicator set being developed by the Australian Commission on Safety and Quality of Health Care.

Figure 1.3 provides an illustration of how such sets of performance indicators (particularly those endorsed by Health Ministers and/or developed under the auspices of Health Ministers) could be regarded as ‘cascading’ from the performance indicator set described in this report. This would commonly mean that a small number of indicators from a ‘cascading’ set would be included in the set in this report, and the relationship and overlaps between the indicator sets would be well described. The indicators would commonly be specified in the same way in each set, but variations could occur to suit varying purposes of the indicator sets.



Similarly, there could be clarification of the relationship between this set and the National Health Sector Performance Indicators developed by the National Health Performance

Committee for Health Ministers in 2003 (NHPC 2004) and most recently published, at the request of Health Ministers, in *Australia's Health 2008* (AIHW 2008). This current set, or a selection of the indicators, could be considered as a replacement for the set developed in 2003.

## Frequency and timeliness of data for the performance indicators

The frequency with which the performance indicators could be reported, and the timeliness of reporting, would largely depend on the processes for the underlying data collections.

As detailed in the Attachment, annual reporting would be feasible for most of the performance indicators but, for those dependent on ABS National Health Surveys, for example, updated information would only be available every three years. On the other hand, data could be available on a quarterly basis for indicators based on data underpinning quarterly public reporting by states and territories (for example for elective surgery) and by the Commonwealth (for example for MBS items).

Under current data collection arrangements, the performance indicators could generally be reported one to two years after the year to which they relate, although data for some indicators would be available earlier. Data for the National Minimum Data Sets for hospitals, for example, are provided to the AIHW six months after the end of the financial year, and published in *Australian Hospital Statistics* five months after that. Data for mental health NMDSSs has generally been published with longer delays, due in part to the newness of some of the data collections. In contrast, state and territory elective surgery data and MBS data are generally available about three months after the end of each quarter.

It may be that changed data collection arrangements could mean that more indicators could be reported in a more timely fashion.

Currently, national collation and analysis of data cannot commence until the slowest jurisdiction has provided complete data. The time taken for provision of complete data is generally six to nine months but resubmissions of late data are relatively common. The remaining processes (for example, cleaning and validating data, analysis, report writing and providing reports to jurisdictions for comment) can be completed within three months, with sufficient resources.

## Public reporting arrangements

Whilst the uses of the performance indicator set in this report are yet to be decided, as are arrangements for any public reporting of the set (in whole or in part), a number of relevant issues can be considered:

- In late 2006, Health Ministers requested that the current National Health Sector Performance Indicators (as reported by AHMAC to AHMC in 2003) be included in the AIHW's biennial *Australia's Health*. They were included in the report for the first time in *Australia's Health 2008*, published on 24 June 2008. Under current arrangements, they will be published again in June 2010. Future publication of the performance indicator set outlined here could also be through *Australia's Health*, particularly if it were decided that the set was to replace the 2003 indicator set.
- Consistent and agreed definitions will be vital to the credibility and usefulness of the performance indicators and, for this purpose, a single authoritative repository for the performance indicator data set and definitions will be required, no matter the reporting vehicle(s).

- Such an arrangement exists at present for national hospital statistics reporting. Statistics and performance indicators reported in the AIHW's *Australian Hospital Statistics*, in the Department of Health and Ageing's *State of Our Public Hospitals* report and in the *Report on Government Services* are all sourced from the AIHW's collections of hospital data based on the hospitals National Minimum Data Sets. For the latter two reports, the AIHW has been contracted to provide the performance indicator data.

The AIHW is well placed to expand this role as an independent and authoritative repository for performance indicator data.

- The *AIHW Act 1987* provides for confidentiality of the data that is held by the AIHW, for the functions of the AIHW to include collecting health-related and welfare-related information and statistics, and for AHMAC representation on its Board.
- The AIHW already has a role as national data custodian for a number of the data collections from which the performance indicators would be derived.
- The performance indicators are built on the nation's health and aged care information resources. The AIHW could apply its expertise in compiling and analysing those information resources to work to prepare performance indicators. In this way, the preparation of performance indicators would be strongly and usefully linked to the broader national health information environment, for example ensuring consistency with other outputs of national data collections, such as statistical reports.
- The AIHW has infrastructures to support the maintenance of data collections and definitions. The infrastructures include Meteor, the Internet-based repository of nationally endorsed definitions for health and welfare data. Meteor is ideally suited to become the national repository of performance indicator definitions.

## 2. The indicator set

This chapter provides a detailed discussion of the rationale for choosing the performance indicators, grouped under the AIHW organising principles presented below. The costs of developing new indicators and how the performance indicators for the equity groups are managed are also outlined. For further details of specific indicators see the Attachment to this report.

### AIHW organising principles

Based on reference to COAG and Health Ministers' communiqués, consideration of draft principles and reform goals and early consultation, the AIHW developed the following organising principles to guide work on the project, including grouping and presentation of the indicators.

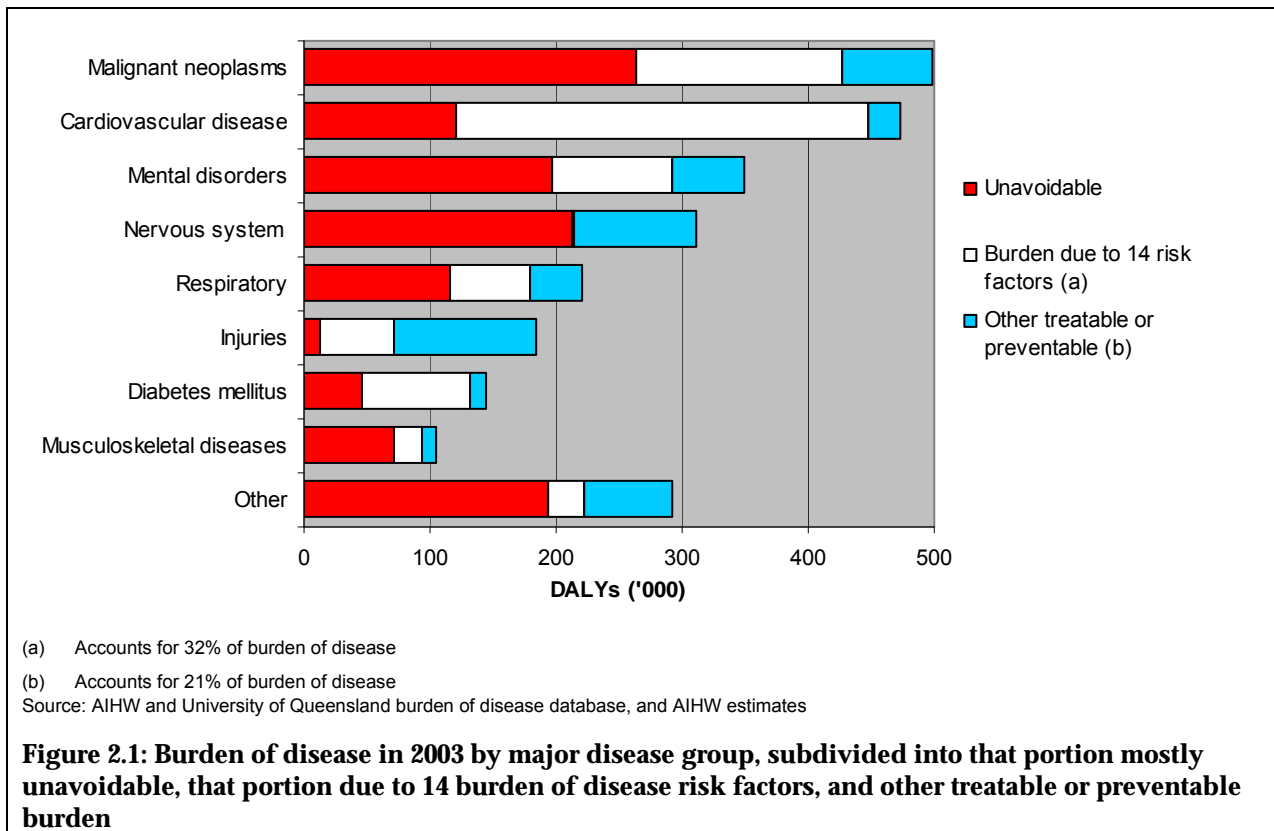
1. The overarching goal of the health and aged care system is **better health** for all Australians.
2. There will be **universal access to the health system** via Medicare, the Pharmaceutical Benefits System and public hospital services. Access to the public health system will be based on health needs, not a person's ability to pay. This includes access for:
  - a. Indigenous persons as the highest priority
  - b. Persons living in rural and remote areas
  - c. Other special needs groups.
3. There will be an increased **focus on prevention**, delivered through existing channels of population-focussed health promotion and disease prevention, and also through enhanced efforts in the primary care and community health sectors. Included is:
  - a. prevention aimed at reducing risk factors and thus the onset of disease, and
  - b. prevention aimed at reducing the progression of disease through early intervention.
4. **High quality care** will be delivered in all health care settings, with a particular focus on primary care and community health, aged care, and hospitals. High quality means effective, appropriate (including in the appropriate setting, and according to standards) and safe.
5. There will be a focus on increasing **integration and continuity** of care. This includes improving transitions between:
  - a. community/primary care and acute care
  - b. acute care and aged care.
6. There will be a focus on delivering care that is **patient-centred**, shaped around the health needs of patients, their families and communities. The system will be respectful, ethical and shaped with public input.
7. Care will be provided **efficiently**.

8. The health and aged care system will be **sustainable**, meaning that there is:
  - a. a well-qualified workforce into the future,
  - b. a culture of reflective improvement,
  - c. maintenance of the health and aged care system as a national asset,
  - d. adequate, stable and predictable funding,
  - e. funding and other decisions are made transparently and with accountability,
  - f. governments work in partnership, and
  - g. there is personal responsibility for health as well as mutual responsibility for our health and aged care system.

# Better health

## Rationale

The overall objective of the health and aged care system is to reduce disease, disability and death. A substantial improvement in the health of Australians is an eminently achievable goal. As Figure 2.1 shows, we could potentially halve our existing burden of disease – either through prevention of the disease, or better treatment of the disease when it is diagnosed.



Burden of disease is measured by Disability adjusted life years – a measure which combines the impact of premature mortality and the illness and disability that arises due to disease. In 2003, the burden of disease and injury for Australians was 2.6 million DALYs, 1.25 million years lost due to premature mortality and 1.35 million years of healthy life lost due to illness and disability (Begg et al. 2007).

The better health indicators measure the progress we are making in achieving the overall objective of reducing disease, disability and death. It is not always possible to know what portion of the improvements in health have been due to services provided by the health and aged care system and what portion is due to other sectors and other factors. However, the change in these summary better health indicators gives us the best picture as to how the health and aged care system is performing as a whole.

Life expectancy is our most prominent better health measure. However, it only measures the mortality side of health. If we want to understand the disability and continuing illness that we are subject to, we need to know the prevalence of important diseases. The prevalence indicator in this section focuses on important preventable diseases, as it is the preventable diseases that are amenable to interventions that will reduce their occurrence.

When mortality and prevalence of disease data are combined with information about the severity of the disease, we can produce a summary measure called 'healthy life expectancy'. It is not possible to currently produce this measure for all states and territories, but it could be produced in the future, and would be a way of monitoring the overall impact of disease and injury. South Australia has this measure in its strategic plan as a key outcome measure.

## Cost of developing new indicators

The mortality indicators and life expectancy measures are available, but further work will be required to improve the quality of Indigenous identification so as to enable state and territory presentation of the Indigenous dimension of these indicators.

Data on the incidence and prevalence of a number of important diseases are available, but we are missing data for some. The incidence of some diseases like heart disease can be measured using data linkage techniques. Other diseases like mental illness are measured through surveys, but the current frequency of the mental health survey of every 10 years is not sufficient for use as a performance indicator.

## Equity dimension

All of the indicators below can be analysed by Indigenous status and by the remoteness and socioeconomic status of the area where individuals reside.

**Table 2.1: Summary of Better Health indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(1) Life expectancy (incl. Indigenous and non-Indigenous gap)	✓	Nil	ABS mortality data	✓	✓	✓	Yes	Annually
(2) Infant and young child mortality rate (incl. Indigenous and non-Indigenous gap)	✓	Nil	ABS mortality data	✓	✓	✓	Yes	Annually
(3) Incidence and prevalence of important preventable diseases and injury	✓	High	Various (Disease registers, hospital data, ABS)	✓	✓	✓	Yes	Varied, annually, 3-yearly, 10-yearly
(4) Potentially avoidable deaths	✓	Nil	ABS mortality data	✓	✓	✓	Yes	Annually

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

# Focus on prevention

## Rationale

Health Ministers have declared it is a priority to focus the system on prevention.

The burden of chronic diseases and the cost of managing them, can be reduced through primary prevention and secondary prevention. About 32% of the burden of disease is due to 14 largely preventable risk factors including smoking, excess alcohol consumption and hypertension (Begg et al. 2007).

The key outcome variable selected for this principle is the prevalence of selected risk factors for chronic disease, as a reduction in the level of any of these risk factors would create considerable benefits for all Australians, in terms of individuals' health status and productivity and in terms of health system costs. This indicator would be presented for population equity groups either as individual rates for key risk factors (e.g. obesity, smoking, elevated blood pressure) or as an overall risk factor index.

The success of selected public health program activities is measured in the indicator set through the inclusion of two screening indicators (one on early developmental health checks for children and one on cancer screening programs) and immunisation rates for selected vaccines.

Low birthweight has been selected as a key progress measure because infants born with low birthweight are at significantly greater risk of a range of poor health and wellbeing outcomes, including death.

Finally, in light of the considerable policy interest in shifting the balance of health expenditure towards primary and secondary prevention activities, we have included an indicator on public health program expenditure as a percentage of total health expenditure. Public health activities accounted for about 2% of recurrent health expenditure in Australia in 2005–06 and this proportion has remained virtually constant since 1999–00 (AIHW 2008c).

## Cost of developing new indicators

With the exception of information on early childhood developmental health checks and biomedical risk factors, all of the proposed indicators rely on data that are already collected and collated nationally.

However, improvements in the frequency and accuracy of risk factor data would be greatly assisted by the establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine). This type of information would complement existing information collected in national and state population health surveys, in which related self-reported information is collected.

Some developmental work would be required to develop a risk factor index (combining information about several risk factors), should this be a preferred reporting option.

Effort may also be required to improve the data quality of some of the indicators should reporting be required more frequently than current collection arrangements allow, or for accurate disaggregation by equity population groups or small jurisdictions.

The costs of developing and collating existing data about early childhood developmental health checks is estimated to be likely less than \$5 million. In the interim, data about the 4-year-olds health check could be presented, using MBS data.

The costs of a comprehensive health risk factor survey (including information about diet, physical activity and measured blood pressure and serum cholesterol), is estimated at between \$10 to \$15 million per survey, depending on the sample size and range of measures taken.

## Equity dimension

All of the indicators below can be analysed by Indigenous status and by the remoteness and socioeconomic status of the area where individuals reside. The exception is public health program expenditure, where it is not possible to split by these equity dimensions, as most public health expenditure has a population wide focus.

**Table 2.2: Summary of Prevention indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(5) Risk factor prevalence	✓	Very high <sup>(b)</sup>	ABS	✓	✓	✓	Yes	Currently 3-yearly
(6) Child developmental health checks (6, 12 and 18 months, 4 yr)	✗	High	4yr check data from C'wealth MBS. States for other ages.	✓	✓	✓	No	Annually
(7) Cancer screening rates	✓	Nil	C'wealth & State	✓	✓	✓	Yes (breast cancer & cervical screening)	Annually or bi-annually
(8) Low birthweight babies	✓	Nil	State	✓	✓	✓	Yes	Annually
(9) Immunisation rates	✓	Low	C'wealth	✓	✓	✓	Yes (for some vaccines)	Annually
(10) Public health program expenditure	✓	Low	C'wealth & State				✓	Annually

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

(b) This indicator is ready to go in the sense that self-reported information is available about most health risk factors at least 3-yearly, and for most states and territories, annually via CATIs. For more comprehensive and accurate information, a physical examination household survey, including measurement of blood pressure and blood cholesterol, is needed.

# Access

## Rationale

Access to health and aged care services in relation to need is an important principle in the Australian system. Stakeholders have indicated they want a focus on differentials in service use for people living in rural and remote areas relative to city-dwellers, for Indigenous people compared to non-Indigenous people and for lower-income persons as compared to higher-income persons.

The first indicator proposed for this theme focuses on narrowing the health service use differentials for these key equity groups. This composite indicator will present comparative health service utilisation rates for a range of selected health care service types. This will provide information about the differences for key equity groups in access to individual health care service as well as information about possible substitution of one type of service for another. In the longer-term, further analysis could be conducted to relate service use patterns to the relative health needs of these population groups.

We have selected two indicators that explore potentially avoidable use of hospital services; potentially preventable hospital use (viewed both in terms of potentially avoidable hospital admissions and potentially avoidable emergency department attendances) and use of hospital beds by older people who have been assessed as requiring a residential aged care place. As complementary information about supply of substitute services, we have selected an indicator of the supply of residential aged care places, and information about timely access to GPs.

Waiting times for elective surgery and emergency department care also provide valuable information about access.

Mental disorders were responsible for 13% of the total burden of disease and injury in Australia in 2003 (Begg et al 2007) and expenditure on all mental disorders was estimated at 7.8% of total allocated health system expenditure in 2004–05 (AIHW 2008a). People with serious mental illness and their families experience particular challenges in accessing and navigating through the health and aged care system. The treatment of severe mental illness has therefore been selected as a priority indicator for this principle.

Finally, access to oral health services has been an issue of considerable public and policy interest in recent years, with concern that dental services are largely inaccessible for those without private health insurance and/or high incomes. Waiting times for public dentistry has been proposed as the most feasible indicator for accessing access to dental services for those unlikely to be able to access services because of low-income.

In Australia, about one-third of all health expenditure is funded by individuals and two-thirds by governments. Over the decade to 2005–06, medical out-of-pocket expenditure by individuals increased in real terms on average 4.2% per year (AIHW 2007c). Given the growth over time in individuals' contribution to health care expenditure, and the different capacity of various equity groups to meet these costs, two of the indicators proposed for this theme focus on individual expenditure on health care (deferring required treatment due to cost barriers, and out-of-pocket costs).

## Cost of developing new indicators

A number of the proposed indicators rely on data that are already collected nationally.

## Equity dimension

All of the indicators below can be analysed by Indigenous status, remoteness and socioeconomic status of the area where the patient resides.

**Table 2.3: Summary of Access indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(11) Health service differentials	✓ x <sup>(b)</sup>	Med <sup>(c)</sup>	C'wealth, State, ABS	✓	✓	✓	No	Annual or 3-yearly (depending on service type)
(12a) Selected potentially preventable hospitalisations	✓	Nil	State	✓	✓	✓	Yes (some countries)	Annual
(12b) Selected potentially preventable ED attendances	✓	Nil	State	✓	✓	✓	No	Annual
(13) Waiting times (elective surgery, ED, GPs, public dental)	✓ x <sup>(d)</sup>	Med <sup>(d)</sup>	C'wealth <sup>(d)</sup> , State	✓	✓	✓	No	Annual (where data currently available)
(14) Treated prevalence rates for mental health	x	High	C'wealth, State & private hospitals, other State services	✓	✓	✓	No	Annual
(15) Residential and community aged care services	✓	Nil	C'wealth	✓	✓	✓	Yes	Annual
(16) Hospital days for patients needing residential aged care	x	Low	C'wealth & State & private hospitals	✓	✓	✓	No	Annual
(17) Out-of-pocket costs	✓	Low	C'wealth	✓	✓	✓	Yes	Annual
(18) Deferred treatment due to cost	✓	Low <sup>(d)</sup>	ABS <sup>(d)</sup>	✓	✓	✓	Yes	3-yearly

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

(b) It is proposed to measure differentials in the following service areas: GP type care, specialists, hospital acute care, hospital non-acute care, public hospital ED attendances, pharmaceuticals, dental services, pathology and imaging services, allied health, other community health, community mental health, community aged care, AODTS, optometry. Data are ready to go in all of these areas except pharmaceuticals and medical & allied health services in outpatients where some extra data collection required.

(c) Costs for this indicator are associated with pharmaceutical and outpatient NMDS data (data development on demographics and scope of collections).

(d) Medium costs would be associated with collating public dental health waiting information. Information on GP waiting times and deferment of required treatment due to cost would be obtained as part of the proposed Patient Experience Survey. These costs are included under the principle of patient experience.

# High quality—Appropriate

## Rationale

The quality of health services can be measured by examining certain key processes, and by examining outcomes.

Survival of cancer patients is a key outcome indicator of the effectiveness of overall cancer treatment. Improvements in cancer treatment have saved hundreds of lives in Australia in recent years, but there is room for improvement as Australia does not yet have the best cancer survival rates in the world. Another measure of outcome is the extent of unplanned hospital readmissions and in-hospital death rates for selected procedures.

Measures of process we have chosen are antenatal visits in the first trimester and the existence of asthma plans.

For diabetes, an indicator was chosen which measures both process and outcomes i.e. was the diabetic patient given the agreed treatment set out in the annual cycle of care, and was the HbA1c level below 7%.

Accreditation of health and aged care facilities care is included. As accreditation of the facilities specified is now close to 100%, this indicator is no longer a major driver of reform. However, it is considered necessary to include this as a broad indicator of process quality to ensure that levels of accreditation remain high. In addition, as reforms to accreditation arrangements flow through, this measure may become more relevant to reform.

## Cost of developing new indicators

Most of the data for the indicators in this area are already available.

Whether the first antenatal visit occurred in the first trimester or later is only recorded in the midwives collection by New South Wales, Australian Capital Territory and the Northern Territory, so substantial expansion of the collection of this information would be required, which would be of medium cost. Unplanned hospital readmission data are available but substantial resources including national data linkage work is required in order to make this a robust and consistent measure. Currently, it is mostly unplanned readmissions to the same hospital that is recorded, not readmissions to another hospital. And there are differences in how 'unplanned' is defined and recorded. The cost of improving this measure is medium.

## Equity dimension

All of the indicators below can be analysed by Indigenous status, remoteness and socioeconomic status of the area where the patient resides.

**Table 2.4: Summary of High quality—Appropriate indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(19) Diabetic management in general practice	✓	Nil	C'wealth	✓	✓	✓	No	Annual
(20) Antenatal visits in the first trimester	✗	Medium	State	✓	✓	✓	Limited	Annual
(21) Cancer survival (5 year relative rates)	✓	Nil	State	✓	✓	✓	Yes	At present every 3 years. Could be annual.
(22) In-hospital mortality	✓	Nil	State & private hospitals	✓	✓	✓	No. A few countries have similar indicators	At least annually
(23) Asthma plans	✓	Medium	C'wealth	✓	✓	✓	No	
(24) Unplanned hospital readmissions	✗	Medium	State & private hospitals	✓	✓	✓	No	Annual
(25) Health and aged care service accreditation	✓	Nil	C'wealth & State & private hospitals	n.a.	n.a.	n.a.	No	Annual

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

# High quality—Safe

## Rationale

The quality of health services can be measured by examining certain key processes, and by examining outcomes.

Adverse events in hospitals and residential aged care cost about \$2 billion annually (Ehsani, Jackson 2007). We have chosen indicators which focus on those adverse events which cause the most harm and are amenable to change such as falls, pressure ulcers, infection, intentional self harm and adverse effects of medications. In the case of infection, the occurrence of *Staphylococcus aureus* bacteraemia has been chosen as a sentinel indicator, as we were advised that the activities that lead to a reduction of *Staphylococcus aureus* bacteraemia would reduce all types of infection.

Venous thromboembolism (VTE) is a major cause of death in Australia causing perhaps 5,300 deaths in Australia in 2008 (3% of all deaths), with a large illness and disability burden (Access Economics 2008). Assessing patients for risk of VTE and then undertaking appropriate prophylaxis would substantially reduce this burden.

A suggested process indicator is the independent peer review of deaths of surgical patients in hospitals. This has been done in Western Australia for a number of years (Royal Australasian College of Surgeons 2008) and is being considered by other States. This independent peer review has led to improvements in practice and outcomes for surgical patients in WA.

## Cost of developing new indicators

A number of the proposed indicators rely on data that are already collected nationally.

Some of the safety indicators rely on data which are collected in almost all hospitals now, but which is not yet part of the national data sets, so some work is required to make that happen. In some cases it is simply a case of ensuring that data which are already in hospital data bases or other hospital records being added into the hospital morbidity record.

Overall the costs are expected to be less than \$5 million per year.

## Equity dimension

All of the indicators below can be analysed by Indigenous status, and remoteness and socioeconomic status of the area where the patient resides.

**Table 2.5: Summary of High quality—Safe indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(26a) Adverse drug events	✓	Medium (for 26 overall)	State; private hospitals	✓	✓	✓	No	At least annually
(26b) <i>S. aureus</i> bacteraemia	✗	Medium (for 26 overall)	State; private hospitals	✓	✓	✓	No	At least annually
(26c) Pressure ulcers	✗	Medium (for 26 overall)	State; private hospitals; C'wealth	✓	✓	✓	No	At least annually
(26d) Falls in hospitals & residential aged care	✓	Medium (for 26 overall)	State; private hospitals; C'wealth	✓	✓	✓	No. A few countries have similar indicators	At least annually
(26e) Intentional self harm while an admitted patient	✗	Medium (for 26 overall)	State; private hospitals	✓	✓	✓	No	At least annually
(27) Independent peer review of surgical deaths	✗	Low	State; private hospitals	✓	✓	✓	No	At least annually
(28) Admitted adult patients assessed for risk of VTE	✗	Medium	State; private hospitals	✓	✓	✓	No	At least annually

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

# Integration and continuity of care

## Rationale

High quality care requires integration of care across different health and aged care sectors and different professionals. Without such integration the patient may suffer unnecessary adverse events like medication interactions, there is potential for duplication of tests and procedures and delays, and this is not a patient centred-approach. Complex chronic conditions require the skills of many health professionals to manage well and without integration, the results for the patient will be less than optimal.

The time after discharge from hospital is particularly crucial for good quality care. If a discharge summary is not provided quickly to the service provider who will manage the patient care in the community, then the potential for adverse events, and in particular pharmaceutical adverse events, is high. For patients with complex care needs, a detailed plan for care on discharge is required. For people with mental illness, follow-up care in the community is very important.

In general practice it has been shown that practices that have systems for following up on the care of patients with chronic disease end up with better patient outcomes.

## Cost of developing new indicators

The indicators in this area are underdeveloped. For indicators 29 and 30, the data is mostly held by hospitals, but would need to be collected and collated nationally in a standardised manner. Data on register and recall systems used by GPs is held by the GP networks, so would need to be reported nationally, with estimates made for those practices who are not part of the networks.

Post-discharge care for mental health patients would require data linkage to collect.

Overall the costs could be up to \$5 million per year.

## Equity dimension

All of the indicators below can be analysed by Indigenous status, and remoteness and socioeconomic status of the area where the patient resides.

**Table 2.6: Summary of Integration and continuity of care indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(29) Hospital patient with a discharge summary transmitted electronically within 1 day of discharge	x	Medium	State & Private hospitals	✓	✓	✓	No	At least annually
(30) Discharge plans for patients with complex care needs within 5 days of discharge	x	Medium	State & Private hospitals	✓	✓	✓	No	At least annually
(31) General practices that have a register and recall system for patients with chronic disease	✓	Nil	C'wealth	n.a.	n.a.	n.a.	No	Annually
(32) Post-discharge community care for mental health patients	x	Medium	State	✓	✓	✓	No	Annually

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

# Patient-centred

## Rationale

The way health services are delivered is a key component of their quality.

The dimensions of care that patients value include:

- Access to care
- Coordination and integration of care
- Transitions and continuity of care
- Respect for patient’s values, preferences and expressed needs
- Information and education
- Physical comfort
- Emotional support
- Family and friends
- Continuity of care and transition after discharge (Picker Institute 2008).

## Cost of developing new indicators

A national patient experience survey—covering hospital and non-hospital patients is estimated as costing between \$5 and \$10 million. This would build on the experiences of states and territories already conducting such surveys.

## Equity dimension

The patient experience survey data can be analysed by Indigenous status, and remoteness and socioeconomic status of the area where the patient resides.

**Table 2.7: Summary of Patient-centred indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(33) Patient experience	✘	Very high	Patients	✓	✓	✓	✓	Not currently available

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

## **Efficiency/value for money**

Efficiency is about achieving the best possible outcomes from a limited set of resources. It means organising our work in the health and aged sector in such a way that we get the best possible health for our clients. Ministers have asked for a more efficient system.

The most common efficiency indicator used is the cost per case-mix weighted separation. This measures how many resources are used in providing treatment and care for hospital patients. If a hospital becomes more efficient, for example, if it can produce the same number of coronary bypasses and hip replacement operations for fewer resources, then this is of benefit as the resources saved can be used on other services which improve health.

But it is possible to reduce the resources used by reducing the quality of the services provided to patients and by discharging patients from hospital too early. So how does one prevent this hospital efficiency indicator creating incentives for hospitals to cost-cut and produce lower quality and poorer outcomes per unit output? One way to minimise the risk of this happening is by specifying other indicators (indicators 21, 22, 24, 26, 29, 30 and 33) which measure the quality of the hospital system, so that although inappropriate cost-cutting would lead to improvement on the efficiency indicator, it would worsen the quality indicators.

Another way of stopping this efficiency indicator being used to reduce quality, is to measure the cost per unit of health outcome, rather than the cost per unit of hospital output. For example, it would be possible to measure the health benefits achieved by cancer treatment compared to the costs of that treatment. An increase in health benefits per unit cost would indicate efficiency improvement. It is difficult and somewhat costly to measure cost per unit of health outcome, so it is not worthwhile having such efficiency measures as routine indicators. However, periodic analytical work to measure efficiency across the whole of the health and aged care system would be a useful supplement to the two recommended indicators which only relate to two sectors of the whole system.

The cost per case-mix weighted separation can be measured for both public and private hospitals. The numbers for the private and public hospitals are not comparable because of differing medical services and teaching and research components, but within each sector valid comparisons of efficiency can be made.

## **Cost of developing new indicators**

Data is available to measure the cost of acute care separations and specialist medical services.

## **Equity dimension**

For efficiency indicators, it is not appropriate to use an equity group split for assessment of performance. For example, if the efficiency of delivery of specialist medical services increased faster for low-income than high-income persons, then this could suggest discrimination of service delivery, rather than efficiency improvement.

**Table 2.8: Summary of Efficiency/value for money indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(34) Cost per acute care hospital separation	✓	Nil	State & private hospitals	n.a.	n.a.	n.a.	No	Annual
(35) Total cost per medical specialist (MBS) service	✓	Nil	C'wealth	n.a.	n.a.	n.a.	No	Annual

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

# Sustainable

## Rationale

The health and aged care system may presently be mostly meeting service expectations, but if this is coming at the cost of its stock of human capital and physical capital facilities, then it is not sustainable in the medium to long term.

Therefore, it is important to measure how much the health and aged care system is replacing its highly skilled workforce as they retire, how much the intellectual capital of the system is being updated and refreshed and how much the capital stock is being renewed.

It is also important to understand how many resources governments are investing in health and aged care relative to total societal resources. The policy interest in this issue is illustrated by the fact that the Commonwealth Government's intergenerational report is tasked with assessing 'the long term sustainability of current Government policies over ... 40 years' (Commonwealth of Australia 2007). Government health and aged care expenditures are important in this assessment.

## Cost of developing new indicators

It is anticipated that information for indicator 36 will be available following the implementation of the National Registration and Accreditation Scheme, and indicator 38 will be developed based on work by the National Health Workforce Taskforce. Therefore, there will be no extra cost for these indicators.

Until new information becomes available, workforce sustainability will be measured by the NHPC Indicator 3.25, which measures graduates in pharmacy, medicine and nursing as a percentage of the total pharmacy, medical and nursing workforce and the percentage of pharmacists, doctors and nurses aged 55 years and over.

## Equity dimension

These indicators are not directly related to patients, so it is not possible to apply a population group equity split. However for the health workforce, it is useful to measure Indigenous status and the regions in which health professionals practice. For students in training positions it is useful to measure Indigenous status and if possible, the region where a student has lived.

**Table 2.9: Summary of Sustainable indicators**

Indicator	Ready to go	Cost of new data <sup>(a)</sup>	Who supplies data?	Indigenous split	Remoteness split	Socio-economic status split	International comparisons	Frequency of reporting
(36) Health & aged care workforce inflows & outflows	✗	Nil <sup>(b)</sup>	C'wealth & States	✓	✓	✓	Yes (for selected professions)	Annual
(37) Government expenditure on health & aged care services as a % of GDP	✓	Nil	C'wealth & States	n.a.	n.a.	n.a.	Yes	Annual
(38) Accredited & filled clinical training positions	✗	Low	C'wealth & States	✗	✗	n.a.	No	Annual
(39) Capital expenditure as a proportion of total health and aged care expenditure	✓	Low	C'wealth & States	n.a.	n.a.	n.a.	Yes	Annual
(40) Expenditure on health research and development as a proportion of total health and aged care expenditure	✓	Nil	C'wealth & States	n.a.	n.a.	n.a.	Yes	Annual

(a) Cost of new data: Low < \$100k; Medium \$100k-\$1m; High \$1m-\$5m; Very high >\$5 m.

(b) It is anticipated that this information will be available following the implementation of the national health workforce registration scheme.

## Equity

Although recent decades have seen significant health improvements for all Australians, these benefits have not been distributed equally across all population groups. Aboriginal and Torres Strait Islander peoples, Australians of low socioeconomic status and those from remote locations tend to have higher levels of many risk factors and chronic diseases, as well as poorer access in relation to need to a range of health services. In view of these well-known differences, it is proposed that, wherever possible, every indicator in the set that relates to persons should be presented to highlight variations across these population groups.

Aboriginal and Torres Strait Islander people in particular experience significantly more ill health than other Australians. They typically have higher levels of health risk factors and associated chronic diseases, die at much younger ages and are more likely to experience disability and reduced quality of life because of ill health (AIHW 2008a). The gap in life expectancy between Indigenous and other Australians is currently estimated to be 17 years (AIHW 2008a), and reducing this difference is a primary objective of the *Closing the Gap* agenda. Reducing relative infant and young child mortality rates for Indigenous and non-Indigenous Australians is also part of this agenda.

Low birthweight has been selected as a key progress measure, as infants born with low birthweight are at significantly greater risk of a range of poor health and wellbeing outcomes, including death. Low birthweight is a particular issue for Indigenous communities.

Of the 48 health and aged care system related performance indicators in the Aboriginal and Torres Strait Islander Health Performance Framework (AIHW 2007a), 30 are included in the Institute performance indicator set. All of the person related indicators in the set of performance indicators can be split by Indigenous status, at least at the national level.

### **Cost of developing indicators for Indigenous health**

Resources would be required in order to reduce, or adjust for, the level of under-identification of Indigenous Australians (for example, through improvements in deaths and other administrative records and/or through data linkage). These data quality improvements would lead to more accurate life expectancy and mortality data. Such data improvements would have flow on effects across the whole indicator set and the capacity to present this information separately for all states and territories. Costs for such improvements are not estimated in this report, as these improvement activities are occurring separately.

### **Cost of developing indicators for the rural and remote population, and for those living in socio-economically disadvantaged areas**

For most indicators, the address of the patient is known, so in these cases the cost involved in producing a remoteness or socio-economic disadvantage dimension to the indicator is the analysis cost only. In certain datasets, the address and demographics of the patient is not collected, for example, patients using Section 100 drugs distributed in remote areas, and patient services in the Outpatients NMDS. In these cases, the socio-demographic information needs to be collected in order to be able to split the indicator by remoteness and by area of socio-economic disadvantage.

For indicators which derive from surveys, such as risk factors, the incidence and prevalence of certain diseases and the patient experience survey, the level of accuracy of the indicator in remote areas is often a problem, especially if jurisdictional data are required. This accuracy problem can be rectified by increasing the sample size of surveys, which is expensive.

### 3. Connecting with the community

As outlined in Chapter 1, the set of health and aged care performance indicators proposed by the AIHW is designed to serve multiple possible reporting purposes. This chapter focuses on one of the critical objectives of the indicator set—informing the community about how governments are progressing towards achieving stated objectives. Specifically, it focuses on possible ways that complex performance indicators could be presented to suit the information needs of the community. In developing the presentation ideas, a range of national and international reports on health sector performance were reviewed as well as input from consultations.

Over the following pages, a ‘mock up’ of a selection of performance indicators and themes have been included as an illustration of how they could be presented. Five examples are presented:

- Trends over time
- Better health—Infant mortality
- Access—Potentially preventable hospitalisations
- Indigenous Australians
- How does Australia compare internationally?

Examples do not include the full range of text that would be included but rather aim to illustrate the layout envisaged and the type of tables and figures that would provide the public with clear information about the performance of the health and aged care system.

These examples highlight that the most effective presentation style is one that maximises the prominence of the key messages and minimises the prominence of technical detail (while still including enough technical information to assist in interpretation). The examples present each indicator or theme over two pages, with the first page devoted to text and the facing page devoted to selected figures and tables. Where appropriate, vignettes or pictures could also be used to highlight key points. For examples of this presentation style, see *OECD Health at Glance 2007*, *Older Australia at a Glance 2007* or *Diabetes Australian Facts 2008* (via [www.aihw.gov.au](http://www.aihw.gov.au)).

Such national material could also provide the public with links to information broken down to the state/territory, GP Network, public hospital peer group or hospital level, where appropriate, and to further technical material. This could be achieved via website links as per the Aboriginal and Torres Strait Islander health performance framework 2006 report: detailed analyses (AIHW 2007b) and the NSW Chief Health Officer’s Report.

A key to the success of such flexible and useful reporting would be the credibility and comparability of the underlying data (see Chapter 1 for further discussion).

## How are we performing over time?

While the health system is not the only influence on the health of Australians, it does play a substantial role (see Box). In this section, we provide an overview of how we are progressing against the agreed performance indicators for our health system. The key findings are that, since 2003:

- Australians are generally living longer and outcomes have improved for most of our other 'better health' performance indicators, with one exception. The incidence of cancer, covering all cancers except non-melanoma skin cancers, has shown an unfavourable change over the period between 1999 and 2004, although the level in 2004 was slightly lower than in 1994.
- We are having mixed success in tackling risk factors for serious disease. While smoking rates continue to decline, there is an unfavourable trend in overweight and obesity rates.
- Cancer survival rates continue to improve.
- The sustainability of our health workforce is an issue of concern, with a growing number of our health professionals approaching likely retirement age.

(Based on *Australia's Health 2008*)

### The health system and outcomes

*How much credit or blame can the health system take for our health? Health status and health determinants are often described as 'outcomes' because the health system aims at improving them.*

*Many factors can influence health. The health system is one influence, and probably a major one for many people. However, the system itself has many parts, involving many forms of prevention and treatment, and health can also be influenced by factors outside the health system such as transport safety.*

*At a broad level, this makes it difficult to know which aspects of our health status can be attributed to the health system rather than to other influences in our lives, to what extent, and to which parts of the health system.*

*Outcomes can be clear when the focus is narrow. For example, a clinical trial can show the benefit of a particular medication or surgical procedure for a particular health condition. In contrast, some 'outcome' indicators aim at providing information about the performance of the health system as a whole and cannot be used to assess the extent to which the health system, or any particular component of the system, can take the credit or blame.*

*Despite these complexities, we know that preventive and treatment approaches are increasingly being based on strong scientific evidence that they work. This makes it reasonable to conclude that many of the health improvements shown through these indicators do indeed reflect the health system to some extent. (Edited extract from *Australia's Health 2008*)*

## TRENDS OVER TIME

**Table 3.1: Selected health and aged care performance indicators—trends between 2003 and now**

Principle/Indicator	Favourable trend	No trend	Unfavourable trend	Other
<b>Better health</b>				
Life expectancy	✓			
Infant mortality		✓		
Incidence of heart attacks	✓			
Incidence of cancer			✓	
<b>Focus on prevention</b>				
Risk factor prevalence				
Adult smoking	✓			
Risky alcohol consumption		✓		
Fruit intake		✓		
Vegetable intake				(a)
Physical activity		✓		
Overweight			✓	
Obesity			✓	
High blood pressure				(a)
Low birthweight babies		✓		
Cervical screening		✓		
Breast cancer screening		✓		
Childhood immunisation		✓		
Influenza vaccination		✓		
<b>Access</b>				
Potentially preventable hospitalisations		✓		
Waiting times in emergency departments		✓		
<b>High quality—appropriate</b>				
Cancer survival	✓			
Management of diabetes				(a)
<b>High quality—safe</b>				
Adverse events treated in hospitals				(a)
Accreditation in general practice		✓		
<b>Sustainability</b>				
Health workforce—graduates		✓		
Health workforce aged over 55 years			✓	

(a) Data unavailable or not comparable.

## INFANT AND YOUNG CHILD MORTALITY

### Why is this important?

- ‘The infant mortality rate, the rate at which babies of less than one year of age die, reflects the effect of economic and social conditions on the health of mothers and newborns as well as the effectiveness of health systems’.
- The mortality rate among Indigenous infants and young children is higher than for other Australian infants and improving this disparity is a focus of the *Closing the Gap* agenda.
- Internationally, Australia’s infant mortality rates place us in the worst third of all OECD countries.

### What do the data show?

- Mortality rates for Indigenous infants are higher than those for other Australian infants and this has been the case over the period 1991 to 2005
- Mortality has been declining over time for Indigenous and other Australian infants (from 19 per 1,000 births to 9 per 1,000 births over this period)
- The gap between mortality rates for Indigenous and other Australian infants is narrowing

#### Definitions and deviations

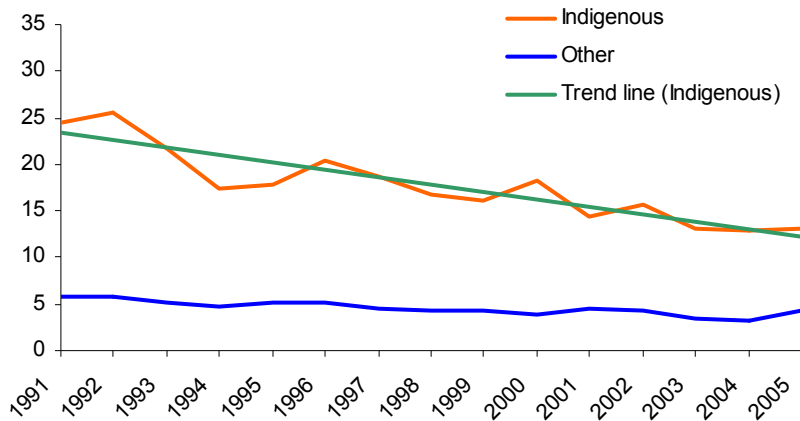
*The infant mortality rate is the number of deaths of children under one year of age in a given year, expressed per 1,000 live births.*

*The child mortality rate is the number of deaths of children aged one to four years of age in a given year, expressed per 1,000 children of that age.*

*The coverage of Indigenous Australians in birth registration is improving, but Indigenous deaths registrations are not yet complete enough in all states and territories to provide national estimates. Data from Western Australia, South Australia and the Northern Territory are used here to provide indicative information.*

(Based on or extracted from OECD *Health at a Glance 2007*, *Australia’s Health 2008*, unpublished AIHW material)

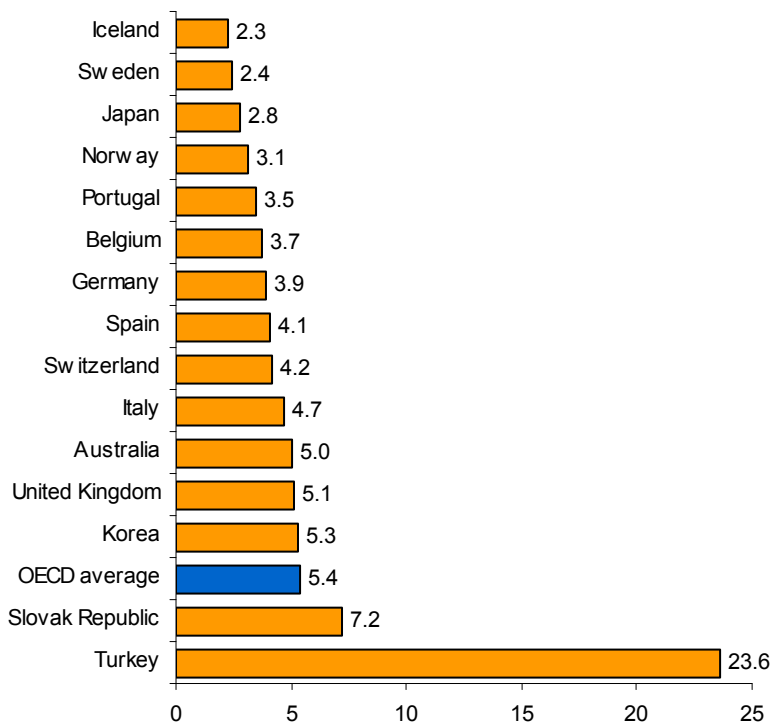
Deaths per  
1,000 live  
births



Infant mortality rates almost halved (1986-1998) and then stabilised recently at 5.0 deaths per 1,000 births in 2005

The gap between Indigenous and other Australian infants is narrowing

Figure 3.1: Infant mortality rates, by Indigenous status, Western Australia, South Australia and the Northern Territory, 1991-2005



Australia ranked 20<sup>th</sup> out of 30 OECD countries in 2005

Figure 3.2: Deaths per 1,000 live births, 2005

## POTENTIALLY PREVENTABLE HOSPITALISATIONS

### Why is this important?

- Potentially preventable hospitalisation (PPH) rates measure the effectiveness, timeliness and adequacy of non-hospital care (e.g. population health, primary care and outpatient services), preventing hospitalisations for certain health conditions.
- PPH rates vary substantially across different geographic areas, suggesting that there is considerable potential to strengthen the impact of non-hospital care in some locations.

### What do the data show?

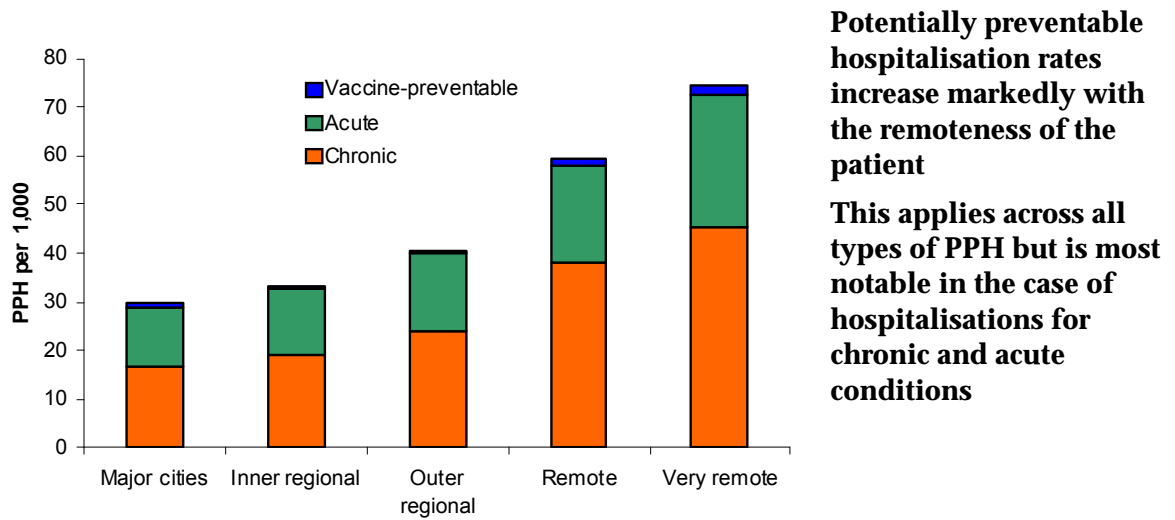
- Over 676,000 hospital separations in 2005–06 that were identified as potentially preventable (AIHW 2007a). These included:
  - almost 14,000 hospitalisations for vaccine-preventable conditions (mainly influenza and pneumonia)
  - almost 266,000 hospitalisations for acute conditions (with the largest numbers for dental, dehydration/gastroenteritis, and kidney conditions)
  - over 400,000 hospitalisations for chronic conditions, with diabetes complications (212,000) and chronic obstructive pulmonary disease (57,000) the conditions associated with the largest numbers of hospitalisations.
- Hospitalisation rates for PPHs were highest in very remote regions, with rates almost 2.3 times the national average (Figure 3.3). PPH rates consistently dropped with decreased remoteness and were lowest in the major cities.
- Rates also varied by socioeconomic status. Rates in the most disadvantaged areas were 64% higher than those of the most advantaged areas (AIHW 2007a).
- There has been little change in PPH rates in recent years (between 2001–02 and 2005–06).

#### Definitions and deviations

*A potentially preventable hospitalisation (PPH) is an admission that could have potentially been prevented through the provision of appropriate non-hospital health services. PPHs are reported for **vaccine-preventable conditions** (e.g. influenza, bacterial pneumonia, tetanus, measles, mumps, rubella, pertussis), **potentially preventable acute conditions** (e.g. dehydration/gastroenteritis, kidney infection, perforated ulcer, dental conditions) and **potentially preventable chronic conditions** (e.g. diabetes, asthma, hypertension). These health conditions are collectively known as ambulatory care sensitive conditions and are based on the Victorian Ambulatory Care Sensitive Conditions Study (Victorian Government DHS 2002).*

*A high rate of potentially preventable hospitalisation may also indicate an increased prevalence of the conditions in the community or an appropriate use of the hospital system to respond to greater need so it is important to consider this indicator in conjunction with others in this set (9, 11, 17, 18, 19, 23, 29–32).*

## ACCESS



**Figure 3.3: Potentially preventable hospitalisations (PPH) by remoteness of patient, 2005-06**

(Based on NHPC 2004 and *Australia's Health 2008*)

### How does the health and health care experience differ for Indigenous Australians?

Aboriginal and Torres Strait Islander people (Indigenous Australians) experience significantly more ill health than other Australians. They typically die at much younger ages and are more likely to experience disability and reduced quality of life because of ill health (AIHW 2007a).

Although there have been improvements in the mortality rates of Indigenous Australians in recent years, available data suggest that the relative gap in overall mortality between Indigenous and non-Indigenous Australians is widening. However, the gap in mortality rates between Indigenous and non-Indigenous infants is narrowing.

### What do the data show?

- The gap in life expectancy between Indigenous and non-Indigenous Australians is 17 years—with life expectancy at birth 59 years for Indigenous males and 65 years for Indigenous females (based on data for 1996–2001)

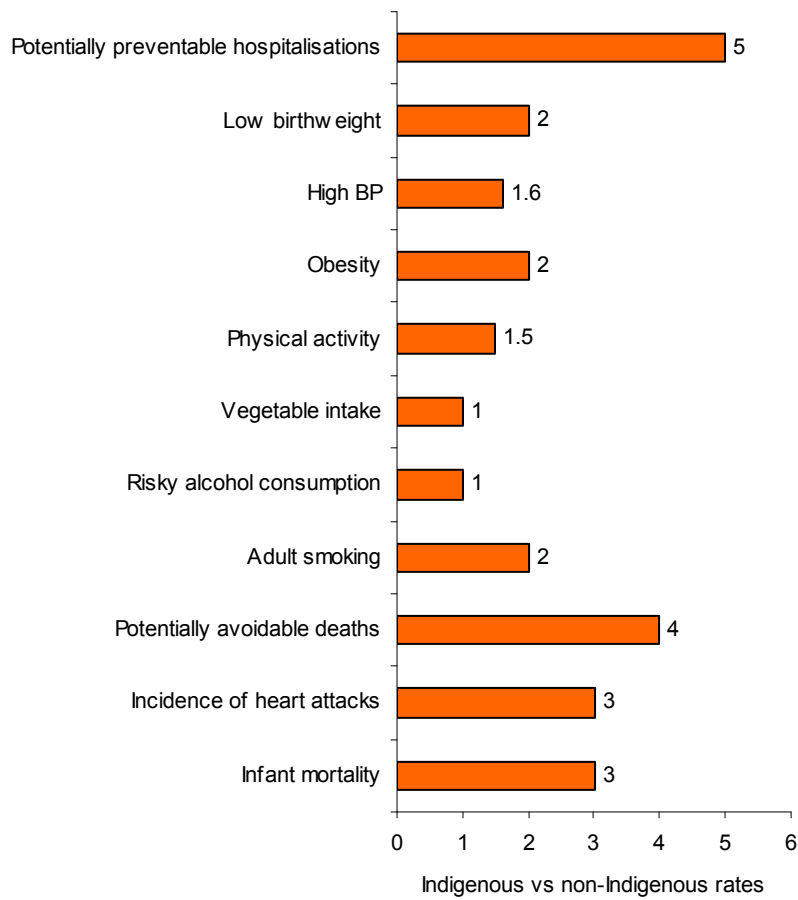
Compared to other Australians, Indigenous Australians are:

- 2 times as likely to be born with a low birthweight
- 3 times as likely to die during infancy
- 1.6 times as likely to have high blood pressure and 3 times as likely to experience heart attack
- As likely to have adequate vegetable intake
- 1.5 times as likely to have low levels of physical activity
- 2 times as likely to smoke
- 2 times as likely to be obese
- 4 times as likely to die from health conditions which are considered avoidable given our current health system and health knowledge
- 5 times as likely to present at hospital for conditions that are considered to be more appropriately treated in the community (Figure 3.4).

#### Definitions and deviations

*There has been much progress in collecting information on the health of Aboriginal and Torres Strait Islander peoples over the last decade, but many logistical, analytical and conceptual challenges remain. This is partly due to varying levels of identification of Indigenous people in administrative records and partly due to the statistical and practical challenges of surveying a population that is relatively small—2.5% of the total population—and one-quarter of whom (24%) live in remote or very remote areas.*

## INDIGENOUS AUSTRALIANS



**Figure 3.4: Indigenous vs. non-Indigenous rates for selected performance indicators (age-standardised rate ratios)**

(Extracted and based on *Australia's Health 2008*)

## Australia compares well

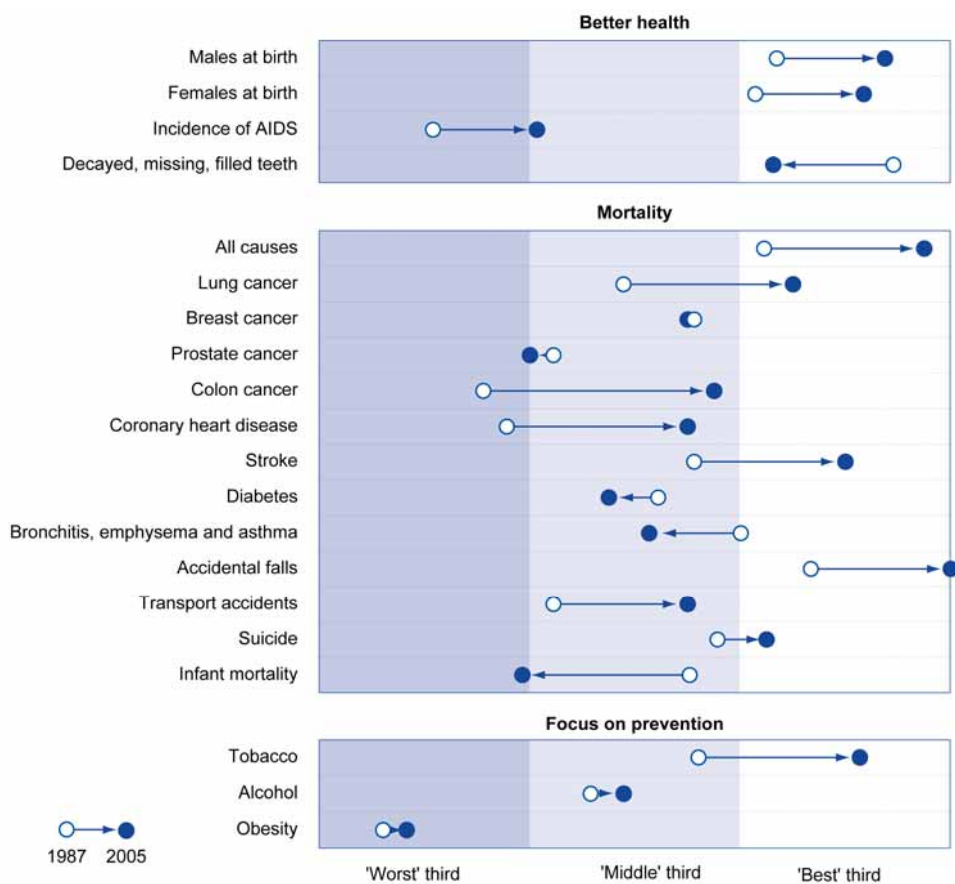
Australia's level of health continues to improve overall. Moreover, in most aspects of health Australia matches or leads other comparable countries (those from the Organisation for Economic Co-operation and Development: OECD). Figure 3.5 shows broadly how Australia ranked in 1987 and 2005 on various measures of health among 30 member countries of the OECD.

In 2005, Australia's life expectancy at birth had risen to be one of the highest in the world. Life expectancy at age 65 for males ranked equal first with Japan, and for females it was equal second with France. Between the years compared, Australia's ranking among OECD countries improved markedly for mortality rates from coronary heart diseases, stroke, lung and colon cancer, and transport accidents, and in 2005 we had the lowest death rates from accidental falls in the OECD. Our smoking rates have continued to fall, with the ranking improving from middle third to 'best' third. The ranking for lower alcohol consumption also improved a little. The dental health of our 12 year olds slipped in rank somewhat since 1987, though it remained in the 'best' third.

However, since 1987 our ranking fell in relation to death rates for respiratory diseases, diabetes and, to a lesser extent, prostate cancer. Although there has been a small improvement in Australia's ranking for adult obesity rates since 1987, Australia remains in the 'worst' third of all OECD countries on this measure. However, note that Australia is among a small number of countries that provide bodyweight estimates based on actual measures of people's height and weight rather than self-report. This difference in methods limits data comparability.

Australia now ranks in the 'worst' third of the OECD countries in terms of infant mortality rates.

(Extract from *Australia's Health 2008*)



*Notes*

- (a) Daily smokers as a proportion of population aged 15 years and over.
- (b) Litres of pure alcohol per capita aged 15 years and over.
- (c) Proportion of the population with a Body Mass Index greater than 30.

Source: OECD 2007 in Australia's Health 2008.

**Figure 3.5: Australia's ranking among OECD countries, selected performance indicators, 1987 and 2005**

(Extract from *Australia's Health 2008*)



# Attachment—A set of performance indicators across the health and aged care system

This attachment provides information about each of the proposed performance indicators for the health and aged care system. The indicator set was developed by the AIHW, in consultation with stakeholders, between March and June 2008.

The information contained in this attachment in some cases reflects a preliminary assessment of certain issues. Further work would be required in order to develop detailed technical specifications for these indicators.

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## 1—Life expectancy at birth (including the gap between Indigenous and non-Indigenous Australians)

Indicator details	
Description	The number of years persons could expect to live if they experienced mortality rates at each age that are currently experienced by the total population.
Rationale	One of the most widely used broad measures of population health outcomes. Relative Indigenous life expectancy is a key to the 'Closing the Gap' agenda.
Numerator	
Denominator	
Presentation	By Indigenous status, by sex.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, although Indigenous data only reliable for some jurisdictions (WA, NT, SA, Queensland) and the gap may therefore only be reported nationally and selected States
Health sector(s) covered	
Is this a current indicator?	NHPF Indicator 1.04 ATSI Health Performance Framework
Endorsement	COAG 'Closing the Gap' agenda (20/12/07 communiqué)
Is this indicator suitable for benchmarking?	COAG has committed to closing the life expectancy gap within a generation. NHHRC PI 1.1 (noting that the benchmark level will be set and measured as part of the Annual Prime Ministerial statement)
International comparisons available?	Yes
Data collection details	
Data source	ABS (Australian life tables and Experimental Indigenous life tables, based on Population Census and deaths registration information provided by state and territory Registrars of Births, Deaths and Marriages). Disaggregated results would need to be calculated using detailed data including SEIFA/ASGC values
Frequency of data availability	Indigenous life expectancy calculated for 5-year periods; overall life expectancy calculated for 3-year periods. Data available 1 year from the end of calculation period
Baseline year	Indigenous life expectancy for the period 2001–2006 available late 2008; overall life expectancy for the period 2004–2006 available now
Responsibility for providing data	States/Territories and ABS
Action required/issues	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Nil Costs associated with improving the quality of Indigenous identification in death records for the remaining jurisdictions and costs for improving or adjusting for completeness of SLA coverage in death records (required for SEIFA and remoteness breakdown) are not included here
Other issues and caveats	Health-adjusted life expectancy (HALE) is preferred to life expectancy as it takes into consideration the impact of disability among the population. The information required to estimate HALE is not currently available for all jurisdictions and therefore HALE is an 'aspirational' indicator at this stage. HALE 'provides an estimate of the average years of equivalent 'healthy' life that a person can expect to live at various ages'. Life expectancy provides an estimate of the average years of life a person can expect to live at various ages given the current risks of mortality. 'HALE extends this concept by reducing the estimated duration by the proportion of time spent at each age in states less than perfect health, adjusted for the relative severity of those health states'. (See Begg et al 2007 <i>Burden of disease in Australia 2003</i> ).

## 2—Infant and young child mortality (including the gap between Indigenous and non-Indigenous Australians)

<b>Indicator details</b>	
Description	Mortality rates for infants and children aged less than 5 years.
Rationale	High level of public interest. Key ' <i>Closing the Gap</i> ' indicator.
Numerator	Number of deaths among infants and children aged less than 5 years
Denominator	1,000 live births (infants); 100,000 population aged 0–4 years (young children)
Presentation	Report infant and young child rates separately, present rates by Indigenous status and sex.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, although Indigenous data only reliable for some jurisdictions (WA, NT, SA, Queensland) and the gap may therefore only be reported nationally
Health sector(s) covered	n.a.
Is this a current indicator?	ATSI Health Performance Framework (age-specific rates) NHPF Indicator 1.07 (infant mortality only)
Endorsement	COAG ' <i>Closing the Gap</i> ' agenda (20/12/07 communiqué)
Is this indicator suitable for benchmarking?	COAG has committed to halving the under 5 mortality gap between Indigenous and non-Indigenous children within a decade Not included in proposed NHHRC PIs
International comparisons available?	Yes (infant mortality) and child mortality from selected countries
<b>Data collection details</b>	
Data source	ABS (Australian life tables and Experimental Indigenous life tables, based on Population Census and deaths registration information provided by state and territory Registrars of Births, Deaths and Marriages). Disaggregated results would need to be calculated using detailed data including SEIFA/ASGC values
Frequency of data availability	Overall age-specific rates available annually. Indigenous death rates reported over a 3-year period. Data available 1 year from the end of the calculation period
Baseline year	Most recent death rates for Indigenous children cover the period 1999–2002
Responsibility for providing data	ABS
<b>Action required/issues</b>	
Is any data development required?	Combination of existing indicators (see notes on presentation).
Estimated additional costs for data development/collection	Nil Costs associated with improving the quality of Indigenous identification in death records for the remaining jurisdictions and costs for improving or adjusting for completeness of SLA coverage in death records (required for SEIFA and remoteness breakdown) are not included here.
Other issues and caveats	

### 3—Incidence and prevalence of important preventable diseases and injury

<b>Indicator details</b>	
Description	Incidence and prevalence of important preventable diseases and injury, by selected disease groups.
Rationale	The number of new cases of (mostly) preventable disease, and the cases prevalent in the community at a point in time are a key indicator of the health of Australians, and progress that is being made towards prevention.
Numerator	Incidence of important preventable diseases and injury Prevalence of important preventable diseases and injury
Denominator	Population
Presentation	Age-standardised or age-specific incidence and prevalence rates for selected disease and injury groups And/or Trend over time (favourable, no trend, unfavourable).
Equity and other breakdowns	Indigenous, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	Chronic disease indicators
Endorsement	No
Is this indicator suitable for benchmarking?	For some diseases yes. For most no Not included in proposed NHHRC PIs
International comparisons available?	Yes, for some diseases and injuries
<b>Data collection details</b>	
Data source	Various, including the burden of disease data base and the AIHW Chronic Disease Information Hub
Frequency of data availability	Varies
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional cost for data development/collection	High
Other issues and caveats	Selected diseases and injury could be those agreed by the National Public Health Partnership or those with highest burden of disease or those agreed during the new health care agreements as having the highest priority. Diseases could include; heart disease, stroke, anxiety & depression, diabetes, preventable cancers, chronic obstructive pulmonary disease, asthma, suicide, transport accidents, other injury, dental conditions, severe psychological distress, hearing loss, and alcohol & drug abuse. The list should include STIs (including HIV/AIDS and Hepatitis) which are important despite being currently low burden as control measures have been largely successful. Indicators of progress for chronic diseases in Australia are under review by the AIHW on behalf of the Population Health Information Development Group (PHIDG). The indicators approved as a result of the PHIDG project could be a 'cascading set' from those agreed for the national health performance indicator set. It would be helpful therefore to align the indicators in these two sets where possible.

## 4—Potentially avoidable deaths

<b>Indicator details</b>	
Description	The number of potentially avoidable deaths.
Rationale	Deaths are classified as 'avoidable' if most deaths within a particular ICD code could potentially avoided through the activities of the health and related sectors (Tobias and Jackson 2001). For a performance indicator it is better to focus on those deaths which are potentially avoidable rather than those deaths which are mostly unavoidable.
Numerator	Number of avoidable deaths (categorised as potentially avoidable within the present health system)
Denominator	Persons aged less than 75 years
Presentation	Rates per 100,000 population
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	n.a.
Health sector(s) covered	n.a.
Is this a current indicator?	NHPF Indicator 1.06 ATSI Health Performance Framework
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	ABS data on population and cause of death, based on Population Census and state/territory deaths registries respectively
Frequency of data availability	Annually, up to 3 years post reference period
Baseline year	1980
Responsibility for providing data	States/Territories and ABS
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional cost for data development/collection	Nil
Other issues and caveats	For more detail see the 2004 NHPC report ' <i>National report on health sector performance Indicators 2003</i> '.

## 5—Risk factor prevalence

### 5a—Proportion of persons overweight and obese

<b>Indicator details</b>	
Description	Prevalence of overweight and obesity in children and adults, as defined by international standards for BMI scores.
Rationale	High body mass accounted for 7.5% of burden of disease in 2003.
Numerator	Number of persons classified as 'overweight but not obese' or 'obese'
Denominator	Per 100 persons
Presentation	Prevalence rates (adults and children by age group), by sex, Indigenous status. Present rates for 'obese' and 'overweight but not obese' separately. Age- and sex-specific BMI scores should be used for children under 18 years.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories; health service area in some jurisdictions
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.09 (adults only) Children's national indicators Chronic disease indicators ATSI Health Performance Framework
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Included by NHHRC as a tracking indicator
International comparisons available?	Yes—for adults
<b>Data collection details</b>	
Data source	National Health Survey (adults); NATSIHS (Indigenous adults); National Children's Nutrition and Physical Activity Survey (2–14 year olds); State CATIs
Frequency of data availability	Adults survey every 3–4 years; Children's survey one-off. Data available ~18 months after completion of survey
Baseline year	Most recent national self report adult data 2004–05
Responsibility for providing data	ABS (NHS/NATSIHS), CSIRO (NCNPAS), States (CATIs)
<b>Action required/issues</b>	
Is any data development required?	Increased frequency of surveys with measured data (for calibration with self-report data) (i.e. less reliance on relatively infrequent self-report data alone).
Estimated additional costs for data development/collection	Very high (for risk factor prevalence overall)—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine).
Other issues and caveats	Which ages should be in scope? Clinical evidence suggests health risks mostly associated with 'obesity', not 'overweight but not obese' category. Limit indicator to obesity only?  Measured height and weight data for Australian adults were last collected nationally in 1999–2000 Australian Diabetes, Obesity and Lifestyle (AusDiab) Study. In 2007, measured data were collected nationally for children in the 'Kids Eat Kids Play' study conducted by CSIRO and University of SA. Findings from the study are due in mid-2008, the first update of data on this population group since the 1995 National Health Survey.

## FOCUS ON PREVENTION

### 5b—Proportion of persons underweight

<b>Indicator details</b>	
Description	Prevalence of underweight in children and adults, as defined by international standards for BMI scores.
Rationale	Underweight and malnourishment is of particular concern in the aged population.
Numerator	Number of persons classified as 'underweight'. For adults BMI less than 18.5
Denominator	Per 100 persons
Presentation	Prevalence rates (adults and children by age group), by sex, Indigenous status. Age- and sex-specific BMI scores should be used for children under 18 years.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories; health service area in some jurisdictions
Health sector(s) covered	All
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Health Survey (adults); NATSIHS (Indigenous adults); National Children's Nutrition and Physical Activity Survey (2–14 year olds); State CATIs.
Frequency of data availability	Adults survey every 3–4 years; Children's survey one-off. Data available ~18 months after completion of survey.
Baseline year	Most recent national self report adult data 2004–05
Responsibility for providing data	ABS (NHS/NATSIHS), CSIRO (NCNPAS), States (CATIs)
<b>Action required/issues</b>	
Is any data development required?	Increased frequency of surveys with measured data (for calibration with self-report data) (i.e. less reliance on relatively infrequent self-report data alone).
Estimated additional costs for data development/collection	High—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine).
Other issues and caveats	Measured height and weight data for Australian adults were last collected nationally in 1999–2000 Australian Diabetes, Obesity and Lifestyle (AusDiab) Study. In 2007, measured data were collected nationally for children in the 'Kids Eat Kids Play' study conducted by CSIRO and University of SA. Findings from the study are due in mid-2008, the first update of data on this population group since the 1995 National Health Survey. The NHS does not include those living in cared accommodation, so some separate method would be needed to measure height and weight in this population.

## FOCUS ON PREVENTION

### 5c—Proportion of persons who are daily smokers

<b>Indicator details</b>	
Description	Proportion of persons who are daily smokers.
Rationale	Tobacco use accounted for 7.8% of the burden of disease in 2003.
Numerator	Persons aged 14 years or over (including pregnant women) who smoke tobacco every day
Denominator	Persons aged 14 years or over
Presentation	Present rates by sex, age group, Indigenous status and for pregnant women.
Equity and other breakdowns	Indigenous status, SEIFA, Remoteness, Sex, Age group
Level of government/health sector breakdown	States/Territories; Health service areas (CATIs)
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.05 ATSI Health Performance Framework Chronic disease indicators
Endorsement	Yes
Is this indicator suitable for benchmarking?	Yes Included as a tracking indicator by NHHRC
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	National Drug Strategy Household Survey; State CATI surveys
Frequency of data availability	NDSHS every 3 years; CATI surveys annually in some jurisdictions. Data available 6–12 months after the end of the surveys
Baseline year	Most recent national data are from the 2007 NDSHS survey
Responsibility for providing data	AIHW, States
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	It would also be important to report information about smoking during pregnancy.

## FOCUS ON PREVENTION

### 5d—Proportion of adults with high blood pressure

<b>Indicator details</b>	
Description	Proportion of adults with high blood pressure.
Rationale	High blood pressure is a major risk factor for heart disease, stroke and renal failure and accounted for 7.6% of the burden of disease in 2003. High blood pressure is one of the most common problems managed by GPs.
Numerator	Persons aged 18 years and over with high blood pressure (defined in the AusDiab 1999 survey as $\geq 140$ mm Hg systolic pressure and/or $\geq 90$ mm Hg diastolic pressure as measured in surveys and/or receiving medication for high blood pressure
Denominator	Population aged 18 years and over
Presentation	Proportion of adults with high blood pressure.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.11
Endorsement	Yes
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	NHS 2004–05 (for self-reported diagnosed hypertension) or 1999 AusDiab study (for persons aged 25–64 years living in capital cities or urban centres with measured high BP)
Frequency of data availability	Every 3–4 years for self-reported data and ad hoc for measured data. Data available ~18 months after completion of survey
Baseline year	Most recent national self report adult data 2004–05
Responsibility for providing data	ABS (NHS, self-reported diagnosed hypertension)
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	High—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine)
Other issues and caveats	

## FOCUS ON PREVENTION

### 5e—Proportion of adults with high blood cholesterol

<b>Indicator details</b>	
Description	Proportion of adults with high blood cholesterol.
Rationale	High blood cholesterol accounted for 6.2% of burden of disease in 2003, due entirely to ischaemic heart disease and stroke.
Numerator	Persons aged 18 years and over with:  Elevated total cholesterol $\geq 5.5$ mmol/l OR Elevated Triglyceride $\geq 2.0$ mmol/l Elevated LDL cholesterol $\geq 3.5$ mmol/l Reduced HDL cholesterol $< 1.0$ mmol/l
Denominator	Persons aged 18 years or over
Presentation	Proportion of adults.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	Chronic disease indicators
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	1999 AusDiab study (for persons aged 25–64 years living in capital cities or urban centres with measured high blood cholesterol)
Frequency of data availability	Ad hoc
Baseline year	1999
Responsibility for providing data	Data not currently available on a regular basis
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Very high (for risk factor prevalence overall)—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine)
Other issues and caveats	

## FOCUS ON PREVENTION

### 5f—Proportion of adults who are physically inactive

<b>Indicator details</b>	
Description	Proportion of adults who are physically inactive.
Rationale	Accounted for 6.6% of burden of disease in 2003.
Numerator	Persons aged 18 years or over who do not exercise at least five times per week, for a total of 150 minutes, at moderate intensity
Denominator	Persons aged 18 years or over
Presentation	Present age-standardised rates by sex; or crude rates by sex and age group.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.08
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes (for selected countries)
<b>Data collection details</b>	
Data source	National Health Survey; State CATI surveys
Frequency of data availability	CATI surveys conducted annually in some jurisdictions; NHS every 3–4 years
Baseline year	Most recent national self report adult data 2004–05
Responsibility for providing data	ABS, States
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Very high (for risk factor prevalence overall)—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine).
Other issues and caveats	The NHS does not use the 'National Physical Activity Guidelines for Australians' definitions of 'insufficient physical activity'.

## FOCUS ON PREVENTION

### 5g—Low fruit and vegetable consumption

<b>Indicator details</b>	
Description	Proportion of persons whose daily consumption of fruit and vegetables is considered insufficient to protect against disease.
Rationale	Accounted for 2.1% of the burden of disease in 2003 and the subject of a national public health campaign to improve consumption habits.
Numerator	Number of persons consuming less than the recommended serves of fruit per day Number of persons consuming less than the recommended serves of vegetables per day
Denominator	Population
Presentation	Proportion with inadequate fruit consumption. Proportion with inadequate vegetable consumption.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.07
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Health Survey; State CATI surveys in some jurisdictions
Frequency of data availability	CATI surveys conducted annually; NHS every 3–4 years
Baseline year	Most recent national self-reported information from 2004–05 NHS
Responsibility for providing data	ABS, States
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Very high (for risk factor prevalence overall)—Establishment of a regular nationally-representative population survey that includes questions on health-related attitudes and behaviours, physical measurements, detailed dietary assessment, detailed physical activity assessment and biomedical measurements (for blood and urine).
Other issues and caveats	Consider whether feasible to also collect for children, who have different dietary guidelines for fruit and vegetables and other considerations in terms of estimating daily consumption.  Information should also be collected separately for pregnant and breastfeeding women.

## FOCUS ON PREVENTION

### 5h—Proportion of persons at risk of long-term harm from alcohol

<b>Indicator details</b>	
Description	Proportion of persons at risk of long-term harm from alcohol.
Rationale	Alcohol harm accounted for 3.2% of the burden of disease in 2003.
Numerator	Persons classified to a health risk level (low-risk, risky or high-risk), based on their estimated average daily consumption of alcohol during the previous week
Denominator	Persons aged 18 years or over
Presentation	Overall proportion age-standardised by sex for risky and high risk groups. May also present by sex and age group, and by Indigenous status, SEIFA and Remoteness.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	NHPF Indicator 2.06
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Included as a tracking indicator by NHHRC
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Health Survey; State CATIs; National Drug Strategy Household Survey
Frequency of data availability	CATI surveys conducted annually in some jurisdictions; NHS every 3–4 years; NDSHS every 3 years
Baseline year	Most recent NHS 2004–05 or NDSHS 2007
Responsibility for providing data	ABS, AIHW
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	The NHMRC will be releasing new guidelines that will lead to some changes in the definitions of 'risky' and 'high risk' alcohol consumption. Presentation of information about alcohol consumption during pregnancy should also be considered.

## FOCUS ON PREVENTION

### 6—Proportion of children with all developmental health checks

<b>Indicator details</b>	
Description	Proportion of children who have received all developmental health checks.
Rationale	Early intervention, especially for children from disadvantaged communities.
Numerator	Number of children aged at selected ages (6–9 months, 12 months, 18 months, 4 years) who have received a developmental health check
Denominator	Total number of children in age cohort
Presentation	Proportion at each age who have received the appropriate health check, by Indigenous status, SEIFA and remoteness of residence.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Maternal and child health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes NHHRC PI 3.1 (benchmark not yet specified)
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available nationally. There is a new MBS item (starting 1 July 2008) for developmental and health assessment of 4 year olds which will be an adequate source for 4 year olds
Frequency of data availability	
Baseline year	2007–08
Responsibility for providing data	Medicare Australia (for 4 year old checks)
<b>Action required/issues</b>	
Is any data development required?	Yes, to agree on scope, national data definitions and counting rules for existing States/Territories and other collections of this information.
Estimated additional costs for data development/collection	High (unless rely in the interim on new MBS item).
Other issues and caveats	There would need to be discussion about the inclusion of late checks, that is, whether to collect at or slightly after age for recommended check. Providers differ between jurisdictions (Child and Family Health Services in SA; Community health clinics and Maternal & Child health nurses in ACT).

## FOCUS ON PREVENTION

### 7—Cancer screening rates for national programs

<b>Indicator details</b>	
Description	Screening rates for breast, cervical and bowel cancer for people within national target groups.
Rationale	Bowel cancer is the second most common cause of cancer death and 2.4% of total DALYs. Breast cancer is the most common cause of cancer deaths in women, and responsible for 4.8% of DALYs for women, and 2.3% of total DALYs. Cervical cancer had an age-standardised mortality rate of 1.8 per 100,000 in 2004. Mortality from all three cancers has been shown to be significantly reduced by regular screening.
Numerator	Number of people in the target groups for each program who have been screened in the past 2 years <ul style="list-style-type: none"> <li>• Bowel cancer: Persons aged 50, 55 and 65 years</li> <li>• Breast cancer: Women aged 50–69 years</li> <li>• Cervical cancer: Women aged 20–69 years</li> </ul>
Denominator	Number of people in target groups for each screening program
Presentation	Participation rates for each program, by Indigenous status, remoteness of residence and SEIFA. Bowel cancer screening rates also by sex. Either age-standardised rates for all screening programs, or by 5-year age groups for breast and cervical and each of the three cohorts for bowel screening.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex (for bowel cancer screening), Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Public health Primary care and community health (majority of cervical screening)
Is this a current indicator?	NHPF Indicator 3.03 (cervical screening) and 3.04 (breast cancer screening) PHOFA (breast and cervical screening)
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes NHHRC PI and benchmark 2.3 (breast cancer only)
International comparisons available?	Yes, for cervical and breast cancer screening
<b>Data collection details</b>	
Data source	Bowel cancer screening and Cervical screening data from Medicare Australia. Breast cancer screening data from Breast Screen Australia state and territory services
Frequency of data availability	Bowel screening rates reported 6-monthly. Breast and cervical screening rates reported annually. Bowel screening: 3 months after the end of the collection period. Breast screening: 2.5-3 years after the end of the collection period. Cervical screening: 2 years after the end of the collection period
Baseline year	Bowel screening: 2006–07 for 55 and 65 year olds, 2008–09 for 50 year olds. Most recent available data on breast and cervical cancer screening from 2005 and 2006, respectively
Responsibility for providing data	Commonwealth, States/Territories
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Bowel cancer screening program guaranteed until 2010. Expected to expand to more age groups on a rolling basis.

## FOCUS ON PREVENTION

### 8—Low birthweight infants, by Indigenous status

<b>Indicator details</b>	
Description	The incidence of low birthweight among live-born babies, of Aboriginal and Torres Strait Islander mothers and other mothers.
Rationale	Low birthweight is associated with increased risk of poor health and death during infancy and increased prevalence of a number of chronic diseases in adulthood. Low birthweight is a particular issue for Indigenous communities.
Numerator	Low birthweight infants (<2500 grams)
Denominator	Total number of liveborn singleton infants
Presentation	Proportion of infants who are low birthweight.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Maternal and child health
Is this a current indicator?	ATSI Health Performance Framework (Low birthweight infants) NHPF Indicator 2.10 NT Aboriginal Health Key Performance Indicators (Birthweight)
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes NHHRC tracking indicator 2.4
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	AIHW National Perinatal Data Collection (NPDC)
Frequency of data availability	Annual. Data available 2 years from the end of the calculation period
Baseline year	Most recent comprehensive information from the NPDC is for 2005
Responsibility for providing data	AIHW
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	<p>Excludes births with unknown birthweight and births less than 20 weeks gestation and less than 400 grams.</p> <p>Based on Indigenous status of mother. Indigenous status of father is available in ABS births data but birthweight information not as complete as NPDC.</p> <p>Incidence of very low birthweight (&lt;1500g) could also be reported as a subset of low birthweight infants.</p> <p>There is some debate over the relative usefulness of birthweight vs. preterm birth (&lt;37 weeks gestation) as an indicator. Birthweight is the more commonly available measure internationally. Also standardising for gestational age makes the indicator more useful.</p>

## FOCUS ON PREVENTION

### 9—Immunisation rates

<b>Indicator details</b>	
Description	Proportion of children fully vaccinated and proportion of adults vaccinated against specific infections.
Rationale	Children's vaccination status an indicator of wider 'herd immunity'. Vaccine-preventable diseases currently <0.1% of burden of disease—indicates success of programs.
Numerator	Number of persons in target group (e.g. aged 65 or over; aged 50 or over and Indigenous; aged 6 years) who have received vaccines recommended by the NHMRC and listed on the National Immunisation Program Schedule
Denominator	Per 100 persons in target group
Presentation	Proportion of children aged 2 years and 6 years fully vaccinated.  Proportion of adults aged 65 or over who have received recommended vaccine(s).  Proportion of Indigenous Australians aged 50 or over who have received recommended vaccine(s).
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories; GP Network
Health sector(s) covered	Primary care, Community health
Is this a current indicator?	NHPF Indicator 3.05 (childhood vaccination) and 3.06 ((influenza vaccination) Children's national indicators (% children fully vaccinated) ATSI Health Performance Framework
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes NHHRC PI and benchmark 2.2 (propose 90% coverage)
International comparisons available?	Yes (for some vaccines)
<b>Data collection details</b>	
Data source	Australian Childhood Immunisation Register (childhood vaccinations); Adult vaccination survey (influenza and pneumococcal vaccinations)
Frequency of data availability	Childhood immunisation coverage provided quarterly to Australian Childhood Immunisation Register (ACIR). Adult vaccination survey conducted periodically (last done in 2006). Childhood immunisation data available ~1 month after the end of each quarter. Adult vaccination data available 1 year after survey year
Baseline year	2006 most recently available data on adult vaccination; childhood vaccination rates current to March 2008
Responsibility for providing data	Medicare Australia for ACIR data
<b>Action required/issues</b>	
Is any data development required?	Combination of existing data.
Estimated additional costs for data development/collection	Low
Other issues and caveats	Possible gaps in coverage due to unknown vaccination status of children less than 6 years migrating to Australia. This indicator is seen to be a more accurate and timely measure of health system performance per se than notification rates for vaccine-preventable diseases.

## FOCUS ON PREVENTION

### 10—Public health program expenditure as a proportion of total health expenditure

<b>Indicator details</b>	
Description	Public health program expenditure as a proportion of total health expenditure.
Rationale	The expenditure on public health programs as a proportion of total health expenditure is a marker of the relative priority attached to prevention programs.
Numerator	Public health program expenditure by governments as defined by the National Public Health Expenditure Project (AIHW 2008b)
Denominator	Total recurrent health expenditure
Presentation	Public health program expenditure by governments as proportion of total recurrent health expenditure over time (split according to the 9 public health expenditure categories).
Equity and other breakdowns	Not applicable
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Public health
Is this a current indicator?	Not endorsed as an indicator in this form. But the expenditure by State and Commonwealth governments on public health programs is a PHOFA reporting requirement.
Endorsement	PHOFAs
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes, but international comparability problematic due to varying definitions
<b>Data collection details</b>	
Data source	AIHW public health expenditure database
Frequency of data availability	Annually
Baseline year	1998–99
Responsibility for providing data	States and Commonwealth provide data to AIHW
<b>Action required/issues</b>	
Is any data development required?	No, but it would be desirable to collect information on public health program expenditure by local governments, so as to make this indicator more comparable across the jurisdictions.
Estimated additional costs for data development/collection	Low
Other issues and caveats	The data as reported at presented does not include local government expenditure for public health programs. It would also be useful to further standardise some of the public health expenditure categories such as 'selected health promotion'.

## 11—Health service use differentials

<b>Indicator details</b>	
Description	Differential rates of service use (for selected service types) for key equity groups (Indigenous, low socioeconomic status and rural/remote residents).
Rationale	This composite indicator will present comparative health service utilisation rates for a range of selected health care service types. This will provide information about the differences for key equity groups in access to individual health care service as well as information about possible substitution of one type of service for another. Further analysis would need to be conducted to relate service use patterns to the relative health needs of these population groups.
Numerator	<p>Estimate of the number of services used by service type:</p> <p>11a: GP type services provided through MBS</p> <p>11b: specialist consultations by speciality and whether MBS/public outpatients</p> <p>11c: acute care hospital separations (case-mix adjusted) by whether elective surgery/other surgery/other and by whether public/private</p> <p>11d: sub-acute hospital patient days by whether rehabilitation/palliative care/GEM/psychogeriatric/maintenance/other care type and whether public/private</p> <p>11e: public hospital emergency department presentations by triage category</p> <p>11f: dispensed prescribed pharmaceuticals</p> <p>11g: dental services</p> <p>11h: pathology and imaging services</p> <p>11i: allied health consultations by profession and whether private/public outpatients</p> <p>11j: Alcohol and Other Drug Treatment services</p> <p>11k: community mental health</p> <p>11l: optometry services</p>
Denominator	Total population
Presentation	<p>Age- and sex-standardised service use rates (for selected health care service types) by Indigenous status, remoteness of residence and socioeconomic status, per 1,000 population.</p> <p>A service use index could also be developed to summarise the above information into one indicator. The index could be weighted using information about the cost of each service type.</p>
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Various, see detailed indicators 11a-l
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	Various, see detailed indicators 11a-l
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes, see details following.
Estimated additional costs for data development/collection	Medium

## ACCESS

### Other issues and caveats

In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.

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## ACCESS

### 11a—Access to GP type services provided through MBS

Indicator details	
Description	Differential rates for GP type service use per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to specialists, acute and sub-acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of non-referred (GP) attendances
Denominator	Total population
Presentation	By remoteness of residence and socioeconomic status, per 1,000 population (and Indigenous status).
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, GP Networks
Health sector(s) covered	Primary care
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No However, OECD collects consultations with doctors (ambulatory contacts with physicians (both generalist and specialist), which may take place in doctors' offices or clinics, hospital outpatient departments and inpatients' own homes
Data collection details	
Data source	Medicare, DVA data, ABS population estimates (denominator)
Frequency of data availability	Medicare data updated monthly
Baseline year	Medicare data available since 1984
Responsibility for providing data	Commonwealth
Action required/issues	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.  The above data includes consultations with practice nurses and nurse practitioners. Consider whether to report it separately.

## ACCESS

### 11b—Access to specialists

<b>Indicator details</b>	
Description	Differential rates for specialist service use (public outpatient and out-of-hospital private patient) per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. GP consultations, acute and sub-acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of specialist consultations by whether public outpatient or out-of-hospital private patient (excluding pathology and imaging (see 11h))
Denominator	Total population
Presentation	By remoteness of residence and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Specialist medical care
Is this a current indicator?	Similar indicator in OECD Health Data
Endorsement	No
Is this indicator suitable for benchmarking?	No Not included in proposed NHHRC PIs
International comparisons available?	No However, OECD collects consultations with doctors (ambulatory contacts with physicians (both generalist and specialist), which may take place in doctors' offices or clinics, hospital outpatient departments and inpatients' own homes
<b>Data collection details</b>	
Data source	Medicare, DVA data (non-hospital numerator), National Outpatient Care Database (outpatient numerator), ABS population estimates (denominator)
Frequency of data availability	At least annually
Baseline year	Medicare data available since 1984 and hospital outpatients from 2005–06
Responsibility for providing data	Commonwealth and States/Territories
<b>Action required/issues</b>	
Is any data development required?	Yes, for outpatient data. The National Minimum Dataset for Outpatient Care has a limited number of data items, essentially an aggregate count of outpatient occasions of service and group sessions by outpatient clinic type. There is no demographic information about the occasions of service. For private specialist information, differential rates for remoteness of residence and socioeconomic status are available using Medicare/DVA and population data.
Estimated additional costs for data development/collection	Medium (for health service differentials overall).
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.  This type of analysis would only be possible for outpatient activity if demographic information were added to the National Minimum Data Set for Outpatient Care.  There is incomplete coverage of outpatient clinic activity in the National Outpatient Care Database (coverage about 73% in 2006–07).

## ACCESS

### 11c—Access to acute care public and private hospital services

Indicator details	
Description	Differential rates for case mix-weighted acute care separations per 1,000 population (elective surgery, other surgery, other) in the public and private sector.
Rationale	For use in conjunction with other health service use indicators (e.g. access to general practice, specialists, sub-acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of case mix-weighted acute care separations by whether elective surgery/other surgery/other and by whether in public/private hospital
Denominator	Total population
Presentation	By remoteness of residence and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
Data collection details	
Data source	AIHW National Hospital Morbidity Database (numerator) ABS population estimates (denominator)
Frequency of data availability	Annual (nationally). Data available within 12 months
Baseline year	2002–03 (data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and private hospitals
Action required/issues	
Is any data development required?	No However, to calculate case mix-adjusted (i.e. cost-weighted) separations for private hospitals would require the more regular provision of current private sector cost weights.
Estimated additional costs for data development/collection	Medium (for health service differentials overall)
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.  Analysis of need for admitted patients would require some developmental work, complicated by the fact that activity can be affected by differing or changing modes of service delivery.

## ACCESS

### 11d—Access to sub-acute hospital services by care type (rehabilitation, palliative, GEM, psychogeriatric, maintenance, other) and whether public and private

Indicator details	
Description	Differential rates of patient days per 1,000 population by care type (rehabilitation, palliative, GEM, psychogeriatric, maintenance, other) in the public and private sector.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of patient days by whether rehabilitation/palliative/GEM/psychogeriatric/maintenance/other care type and by whether in public/private hospital
Denominator	Total population
Presentation	By remoteness of residence and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
Data collection details	
Data source	AIHW National Hospital Morbidity Database (numerator) ABS population estimates (denominator)
Frequency of data availability	Annual (nationally). Data available within 12 months
Baseline year	2002–03 (data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and private hospitals
Action required/issues	
Is any data development required?	No, although improvements in scope and data comparability are desirable (see other issues and caveats).
Estimated additional costs for data development/collection	Nil
Other issues and caveats	<p>In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.</p> <p>This analysis would need to take into account that services may be delivered in another setting (e.g. non-admitted) and patients may also be having care in hospitals in other regions or interstate, particularly those from more remote areas.</p> <p>Coverage of private hospitals is not complete (data were not provided by some private free-standing hospitals in Tasmania, ACT and NT in 2006–07) and there is some variation across jurisdictions and the public/private sectors in care typing.</p>

## ACCESS

### 11e—Access to emergency department services by triage category

<b>Indicator details</b>	
Description	Differential rates for emergency department presentations per 1,000 population by triage category.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Total presentations to public hospital emergency departments And Presentations by triage category: <ul style="list-style-type: none"> <li>• triage category 1: patient needs resuscitation (seen immediately)</li> <li>• triage category 2: emergency (seen within 10 minutes)</li> <li>• triage category 3: urgent (seen within 30 minutes)</li> <li>• triage category 4: semi-urgent (seen within 60 minutes)</li> <li>• triage category 5: non-urgent (seen within 120 minutes)</li> </ul>
Denominator	Total population
Presentation	ED presentations (total and by triage category) by remoteness of residence and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	Hospital peer group, States/Territories and national
Health sector(s) covered	Hospitals
Is this a current indicator?	Related to NHPF Indicator 3.16
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	AIHW National Non-admitted Patient Emergency Department Database (numerator) ABS population estimates (denominator)
Frequency of data availability	Annual (nationally). Data available within 12 months
Baseline year	2002–03
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	<p>In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.</p> <p>There is incomplete coverage of ED activity in the Non-admitted Patient Emergency Care NMDS (coverage about 78% of all ED presentations to public hospitals in 2006–07). These data are available for hospitals in Peer Groups A and B and smaller hospitals in remote areas are less likely to provide these data. This also has implications for the quality of Indigenous identification which is known to vary across states and territories and likely to be less complete than for admitted patient care data.</p>

## ACCESS

### 11f—Access to prescription drugs

<b>Indicator details</b>	
Description	Differential rates for community prescriptions per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of community filled prescriptions (PRB, RPBS, under-copayment and private scripts and section 100 drugs in remote areas). Highly specialised drugs and pharmaceuticals purchased by hospitals not included
Denominator	Total population
Presentation	By remoteness of residence and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Pharmaceuticals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	PBS, RPBS and section 100 drugs data combined with the Pharmacy Guild Survey (to cover under-copayment and private scripts)
Frequency of data availability	Annual (nationally). Data available within 12 months
Baseline year	2007–08
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	Yes A suitable methodology would be required to ensure that socio-demographic information was collected about all recipients of relevant dispensed pharmaceuticals (i.e. PBS, RPBS, under-copayment, section 100 pharmaceuticals distributed to remote locations and ACCHOs, private scripts). Currently we only have socio-demographic information about recipients of PBS and RPBS drugs so it is only for those drugs that Indigenous status, remoteness and SEIFA can be calculated.
Estimated additional costs for data development/collection	Medium (for health service differentials overall)
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.

## ACCESS

### 11g—Access to dental services

<b>Indicator details</b>	
Description	Differential rates for use of dental services per 1,000 population.
Rationale	Access to dental services is an issue of public and policy interest. For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of persons who visited a dentist in the last 2 weeks
Denominator	Persons aged 2 years and over
Presentation	By remoteness of residence, socioeconomic status and Indigenous status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Socioeconomic status, Remoteness, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Dental health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Health Survey 2004–05 and National Aboriginal and Torres Strait Islander Health Survey 2004–05
Frequency of data availability	3-yearly. Data available after about 18 months
Baseline year	2004–05
Responsibility for providing data	ABS
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.

## ACCESS

### 11h—Access to pathology and imaging services

<b>Indicator details</b>	
Description	Differential rates for use of pathology and imaging services per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of pathology and imaging services
Denominator	Population
Presentation	By remoteness of residence, socioeconomic status and Indigenous status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Socioeconomic status, Remoteness, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care and community health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	MBS
Frequency of data availability	Annual
Baseline year	Medicare data available since 1984
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	Yes, with regard to improving accuracy of Indigenous identification.
Estimated additional costs for data development/collection	Medium (for health service differentials overall).
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.

## ACCESS

### 11i—Access to allied health services

<b>Indicator details</b>	
Description	Differential rates for use of allied health services per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of persons visiting allied health professionals in hospital outpatient departments and day clinics and number of people visiting selected other health professionals in other settings (e.g. audiologist/audiometrist, dietitian/nutritionist, occupational therapist, physiotherapist, psychologist) in the last 2 weeks
Denominator	All persons
Presentation	By remoteness of residence, socioeconomic status and Indigenous status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Socioeconomic status, Remoteness, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care and community health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	ABS National Health Survey
Frequency of data availability	3-yearly
Baseline year	Most recent data from 2004–05
Responsibility for providing data	ABS
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	In order to enhance the value of the differential service use data, it would be helpful to analyse service use in relation to estimated need for services. For example, actual and need-adjusted service use rates could be compared (e.g. van Doorslaer et al 2004, 2006; Mathers 1994) across socioeconomic areas, remoteness areas or by Indigenous status. Need could be estimated based on population health survey data about, for example, self-assessed health status and long-term health conditions.

## ACCESS

### 11j—Access to alcohol and other drug treatment services

<b>Indicator details</b>	
Description	Differential rates for alcohol and other drug treatment service use per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of closed treatment episodes received from government-funded alcohol and other drug treatment services
Denominator	Population aged 10 years and over
Presentation	By remoteness of residence, Indigenous and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care and community health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	Alcohol and Other Drug Treatment Services National Minimum Data Set
Frequency of data availability	Annually, 1 year to 18 months after the reference period
Baseline year	2001–02
Responsibility for providing data	States/Territories and Commonwealth
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional cost for data development/collection	Nil
Other issues and caveats	

## ACCESS

### 11k—Access to community mental health services

<b>Indicator details</b>	
Description	Differential rates for community mental health service use per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Total number of community mental health services provided by a public sector ambulatory or community residential service
Denominator	Total population
Presentation	By remoteness of residence, Indigenous and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Mental health,
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	Community Mental Health Care NMDS
Frequency of data availability	Collected annually, and currently reported 18 months after the reference period
Baseline year	Community Mental Health Care NMDS available from July 2001
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional cost for data development/collection	Nil
Other issues and caveats	

## ACCESS

### 11I—Access to optometry services

<b>Indicator details</b>	
Description	Differential rates for optometry service use per 1,000 population.
Rationale	For use in conjunction with other health service use indicators (e.g. access to primary care type services, specialists, acute hospital services, public hospital Emergency Departments) to describe access to health care services among different population equity groups (and compared to need).
Numerator	Number of optometry consultations
Denominator	Total population
Presentation	By remoteness of residence, Indigenous and socioeconomic status, per 1,000 population.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Allied health
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes, provided work is done on service use relative to need NHHRC PI 9.1, 9.2, 9.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	Medicare (numerator), ABS population estimates (denominator)
Frequency of data availability	Annually
Baseline year	Medicare data available since 1984
Responsibility for providing data	States/Territories and Commonwealth
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional cost for data development/collection	Nil
Other issues and caveats	

## ACCESS

### 12a—Selected potentially preventable hospitalisations (for ambulatory care sensitive conditions)

<b>Indicator details</b>	
Description	Admissions to hospital that could have potentially been prevented through the provision of appropriate non-hospital health services (NHPC 2004).
Rationale	Potentially preventable hospitalisation rates measure the effectiveness, timeliness and adequacy of non-hospital care, including population health, primary care and outpatient services, in preventing hospitalisations for particular conditions (NHPC 2004).
Numerator	Potentially preventable hospitalisations for: <ul style="list-style-type: none"> <li>• vaccine-preventable conditions (e.g. tetanus, measles, mumps, rubella)</li> <li>• potentially preventable acute conditions (e.g. ear, nose and throat infections, dehydration/gastroenteritis)</li> <li>• potentially preventable chronic conditions (e.g. diabetes, asthma, angina, hypertension, congestive heart failure and chronic obstructive pulmonary disease)</li> </ul>
Denominator	Total population
Presentation	Age-standardised rate per 1,000 population by patients' <ul style="list-style-type: none"> <li>• Indigenous status</li> <li>• Remoteness</li> <li>• Socioeconomic status.</li> </ul>
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, GP Practice Networks
Health sector(s) covered	Primary care and community health
Is this a current indicator?	NHPC Indicator 3.07 Potentially preventable hospitalisations
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes NHHRC PI and benchmark 2.1
International comparisons available?	Yes, for selected countries (e.g. NZ, Canada, US, UK, Italy)
<b>Data collection details</b>	
Data source	AIHW National Hospital Morbidity Database
Frequency of data availability	Nationally collated and presented annually 12 months after reporting period
Baseline year	2002–03 (data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Exact specification of the Ambulatory Care Sensitive conditions should be reviewed to ensure they reflect current needs, and are standardised across Australia.

## 12b—Potentially avoidable hospital emergency department attendances

Indicator details	
Description	Attendances at public hospital emergency departments that could have potentially been avoided through the provision of appropriate non-hospital services in the community.
Rationale	The indicator could improve the efficiency of the health care system by encouraging the provision of services in a more appropriate setting.
Numerator	Attendances at public hospital emergency departments that were allocated a triage category of 4 or 5, where the patient did not arrive by ambulance and was not admitted to the hospital
Denominator	Total population
Presentation	Age-standardised rates per 1,000 by patients' <ul style="list-style-type: none"> <li>• Indigenous status</li> <li>• Socioeconomic status</li> <li>• Remoteness.</li> </ul>
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer groups
Health sector(s) covered	Primary care and community health, Aged care
Is this a current indicator?	No
Endorsement	
Is this indicator suitable for benchmarking?	Yes NHHRC PI and benchmark 4.7
International comparisons available?	No
Data collection details	
Data source	AIHW National Non-admitted Emergency Department Care Database
Frequency of data availability	Nationally collated and presented annually 12 months after reporting period. Data available after 12 months
Baseline year	2002–03
Responsibility for providing data	States/Territories
Action required/issues	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	<p>This measure has been shown by a Booz Allen study in NSW to be a good approximation of the population that should be receiving service in the primary care sector.</p> <p>It would not be efficient or appropriate for all triage category 4 and 5 patients to be seen in community-based primary care settings, so it would not be appropriate for this number to be zero. But many still considered that the direction this indicator would move, correlate with primary care availability.</p> <p>Emergency Department data are available nationally but only for selected public hospital peer groups (about 78% of emergency department occasions in 2005–06).</p>

## 13—Waiting times for selected health services

### 13a—Waiting times for elective surgery

<b>Indicator details</b>	
Description	Median and 90th percentile waiting times for elective surgery in public hospitals, including by indicator procedure.
Rationale	Waiting times for elective surgery are an issue of considerable public concern and policy commitment.
Numerator	Waiting time for access to elective surgery—from the date the patient was added to the waiting list to the date they were admitted—at the 50th and 90th percentile
Denominator	
Presentation	Median and 90th percentile waiting times for elective surgery in days: overall and by indicator procedure.
Equity and other breakdowns	Remoteness (of hospital), SEIFA (of hospital)
Level of government/health sector breakdown	States/Territories, Public hospital peer group
Health sector(s) covered	Hospitals
Is this a current indicator?	NHPF indicator 3.19
Endorsement	AHMAC endorsed similar NHPF indicator 3.19
Is this indicator suitable for benchmarking?	Yes, NHHRC PI 6.1 with the following recommended benchmarks: <ul style="list-style-type: none"> <li>• Waiting time at 90th percentile for cardio-thoracic and cancer surgery (i.e. 90% should be treated in 30 days)</li> <li>• Median waiting time for all other surgery (i.e. 50% should be treated in 90 days)</li> <li>• Waiting time at 90th percentile for all other surgery (i.e. 90% should be treated in 365 days)</li> </ul>
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Elective Surgery Waiting Times Data Collections (managed by public hospitals in States/Territories)
Frequency of data availability	Annual (nationally). Data available after 12 months
Baseline year	1995–96
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	No, although it is not currently possible to transfer a patient's waiting time from one hospital to another (in cases where patients are transferred from a waiting list managed by one hospital to a waiting list managed by another).
Estimated additional costs for data development/collection	
Other issues and caveats	There is considerable debate about measures of waiting for elective surgery. See AIHW 2008 ' <i>Elective surgery in Australia: new measures of access</i> ' report for further background.

## ACCESS

### 13b—Waiting times in emergency departments

<b>Indicator details</b>	
Description	Percentage of patients who are treated within national benchmarks for waiting in public hospital emergency departments for each triage category.
Rationale	Emergency departments in public hospitals play a key role in enabling members of the public to access emergency medical care and also access to less urgent care where community-based medical care is either not appropriate or not available (NHPC 2004).
Numerator	Presentations to public hospital emergency departments that were treated within benchmarks for each triage category
Denominator	Presentations to public hospital emergency departments by triage category: <ul style="list-style-type: none"> <li>• Triage category 1: patient needs resuscitation (seen immediately)</li> <li>• Triage category 2: emergency (seen within 10 minutes)</li> <li>• Triage category 3: urgent (seen within 30 minutes)</li> <li>• Triage category 4: semi-urgent (seen within 60 minutes)</li> <li>• Triage category 5: non-urgent (seen within 120 minutes)</li> </ul>
Presentation	Percentage
Equity and other breakdowns	Remoteness (of hospital), SEIFA (of hospital)
Level of government/health sector breakdown	States/Territories, Public hospital peer group
Health sector(s) covered	Hospitals
Is this a current indicator?	NHPF Indicator 3.16
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes, NHHRC PI 6.2 with the following proposed benchmarks: <ul style="list-style-type: none"> <li>• Triage category 1 - 100% seen immediately</li> <li>• Triage category 2 at 80th percentile (i.e. 80% seen within 10 minutes)</li> <li>• Triage category 3 at 75th percentile (i.e. 75% seen within 40 minutes)</li> <li>• Triage category 4 at 70th percentile (i.e. 70% seen within 60 minutes)</li> <li>• Triage category 5 at 70th percentile (i.e. 70% seen within 120 minutes)</li> </ul>
International comparisons available?	No
<b>Data collection details</b>	
Data source	AIHW National Non-admitted Patient Emergency Department Database (numerator and denominator)
Frequency of data availability	Annual (nationally). Data available after 12 months
Baseline year	2003–04
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	There is incomplete coverage of ED activity in the Non-admitted Patient Emergency Care NMDS (coverage about 78% of all ED presentations to public hospitals in 2006–07). These data are available for hospitals in Peer Groups A and B and smaller hospitals in remote areas are less likely to provide these data.

### 13c—Waiting times for GPs

<b>Indicator details</b>	
Description	Length of time patient needs to wait to see a GP for an urgent appointment.
Rationale	Length of time patient must wait to see a GP will impact on health outcomes.
Numerator	
Denominator	
Presentation	
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care
Is this a current indicator?	No
Endorsement	
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available and would require a patient experience survey (see indicator 33)
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Low (if included as one additional question in the proposed Patient Experience Survey—see indicator 33).
Other issues and caveats	A standardised definition of urgency for GP appointments will need to be developed.

## ACCESS

### 13d—Waiting times for public dentistry

<b>Indicator details</b>	
Description	Waiting time in days between being placed on a public dentistry waiting list and receiving treatment.
Rationale	Access to dental services is an issue of increasing public and policy concern.
Numerator	Waiting time for access to public dental services—from the date the patient was added to the waiting list to the date they were admitted—at the 50th and 90th percentile
Denominator	
Presentation	Waiting time at 50th percentile (median) and 90th percentile.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories and possibly health region/area
Health sector(s) covered	Dental services
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes NHHRC PI 5.5
International comparisons available?	No
<b>Data collection details</b>	
Data source	Consistent comprehensive national data not available, but public dental access information is published by several jurisdictions, either as numbers on waiting lists or waiting times
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Data development would be required to determine, for example, the scope of dental services covered (e.g. general care, elective services, prosthetics, emergency) and to develop waiting list criteria and rules/methods for ensuring no double counting of patients on multiple lists. Eligibility criteria currently vary across jurisdictions.
Estimated additional costs for data development/collection	Medium
Other issues and caveats	

## ACCESS

### 14—Proportion of the population with severe mental illness receiving mental health care

<b>Indicator details</b>	
Description	Proportion of people with severe mental illness receiving mental health care.
Rationale	Access to public sector mental health services is of considerable public concern. This indicator captures a significant proportion of publicly provided mental health services but does not capture or consider the role of primary mental health care, the specialist private mental health sector or services provided through the Commonwealth-States/Territories Disability Agreement for psychiatric disability.
Numerator	Number of people receiving one or more services from a public sector mental health service by whether service provided in an ambulatory, inpatient or community residential setting
Denominator	Estimate of population diagnosed with severe mental illness
Presentation	Percentage of population treated per defined catchment area by whether setting is acute inpatient, community residential or ambulatory.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	Health service region/area; States/Territories
Health sector(s) covered	Mental health, Primary care and community health, Hospitals
Is this a current indicator?	Yes, but not yet published: Key Performance Indicators for Australian Public Mental Health Services; ISC Discussion Paper No. 6 Australian Government Department of Health and Ageing; COAG National Action Plan on Mental Health 2006–2011.
Endorsement	AHMAC and COAG
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	AIHW National Community Mental Health Care Database; National Minimum Data Set for Admitted Patient Mental Health Care; AIHW National Residential Mental Health Care Database; National Hospital Morbidity Database; State/Territory service collections to calculate number of unique service users (numerator) ABS Mental Health or National Health survey (denominator)
Frequency of data availability	Annual
Baseline year	2007–08
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	To estimate the number receiving 'one or more' services, a non-duplicated person count would be required (e.g. through inclusion of a unique identifier or statistical linkage key or similar). Statistical local area or postcode would need to be recorded and transmitted for all community contacts and hospital admissions to relate this information to mental health catchment areas.
Estimated additional costs for data development/collection	High
Other issues and caveats	Much of the above material is sourced from the document: NMHWG Information Strategy Committee Performance Indicators Drafting Group 2005. Key Performance Indicators for Australian Public Mental Health Services. ISC Discussion Paper No. 6 Australian Government Department of Health and Ageing.

## ACCESS

### 15—Residential and community aged care services

Indicator details	
Description	Residential aged care or equivalent places and community aged care hours per 1,000 people aged 70 years and over with a severe or profound disability (or Aboriginal and Torres Strait Islander people aged 50 and over).
Rationale	With an ageing population, there is intense interest in ensuring there is an adequate provision of aged care services, both in residential and community settings. Having the ratio relate to the numbers with severe or profound disability is a way of relating provision to a measure that correlates with need for services.
Numerator	(1) Residential aged care or equivalent places: Operational aged care places by whether in residential aged care facilities or community-based programs (currently Community Aged Care Packages (CACP), Extended Aged Care at Home (EACH), EACH Dementia, Transition Care Program, aged care places and packages delivered by Multi-Purpose Services, services receiving flexible funding under the Aboriginal and Torres Strait Islander Aged Care Strategy)  (2) Community aged care hours: Hours received from the Home and Community Care Program
Denominator	Population aged 70 years and over with a severe or profound disability (core activity limitation) Indigenous population aged 55 years and over with a severe or profound disability (core activity limitation)
Presentation	Per 1,000 people aged 70 years and over with a severe or profound disability (core activity limitation). Per 1,000 Indigenous people aged 55 years and over with a severe or profound disability (core activity limitation).
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Aged care
Is this a current indicator?	For residential and equivalent places, this is very similar to the current Commonwealth planning ratio for aged care places, with the only difference that this indicator adjusts for the level of disability in the population.
Endorsement	No
Is this indicator suitable for benchmarking?	Australian Government planning target for aged care provision is currently 112 places and packages per 1,000 persons aged 70 years and over to be achieved by June 2011. There is a specified breakdown: residential aged care (44 high-care places and 44 low-care places) and 25 community-based and transition places, including 4 for high level care. Not included in proposed NHHRC PIs
International comparisons available?	Yes. A related OECD Health Data item was introduced in 2008 but there are international comparability issues
Data collection details	
Data source	Australian Government Department of Health and Ageing (numerators) ABS Survey of Disability, Ageing and Carers, adjusted for population growth since survey using population estimates (denominator)
Frequency of data availability	Currently annually, 12 months after the collection period. However, residential aged care and community based packages information is generated from an ongoing data collection and HACC data from a quarterly collection. Data available currently every 12 months (AIHW reporting)
Baseline year	Residential aged care and packages from 1992 HACC from 2002–03
Responsibility for providing data	Commonwealth

## ACCESS

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**Action required/issues**

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Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Note that this indicator does not cover the whole range of HACC services because not all service types are recorded in hours (e.g. home modifications, meals, transport trips, linen deliveries, the provision of aids and equipment). These are counted by quantity or dollars as appropriate.

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## ACCESS

### 16—Hospital use by patients waiting for residential aged care

<b>Indicator details</b>	
Description	Number of hospital bed days used by patients who have been assessed by an Aged Care Assessment Team (ACAT) and approved for residential aged care.
Rationale	Patients in hospitals awaiting a residential aged care place can indicate an inappropriate type of service provision and may reflect unsatisfactory transition arrangements between acute and residential aged care sectors.
Numerator	Number of hospital bed days for patients aged 65 years or older who have been approved for residential aged care by an ACAT
Denominator	
Presentation	Number of hospital bed days by States/Territories.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Residential aged care
Is this a current indicator?	No. However, the Report on Government Services (ROGS) report has recently included similar data to populate an indicator of 'long term aged care in hospital'. The ROGS indicator only includes data about persons whose stay is 35 days+ and does not qualify the population by ACAT approval for residential aged care.
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Similar to NHHRC PI 4.2
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Hospital Morbidity Database, ACAP MDS (ACAP MDS data is collected and submitted by Aged Care Assessment Teams. The ACAP National Data Repository is based at La Trobe University)
Frequency of data availability	Annually. Data available after 12 months
Baseline year	Hospital and ACAP data available from 2002–03 (hospital data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and Commonwealth
<b>Action required/issues</b>	
Is any data development required?	Yes, data development would be required to connect ACAT and hospital data and to ensure that this indicator fits with other government initiatives such as the Commonwealth's Transition Care Program.
Estimated additional costs for data development/collection	Low
Other issues and caveats	The ACAT data (Commonwealth data) would need to be joined with hospital data (State or private hospital data) to measure for how many days an assessed patient had been waiting for residential aged care.

## 17— Out-of-pocket costs as a proportion of cost of service (GP and specialist medical services, pharmaceuticals and dental services)

<b>Indicator details</b>	
Description	Out-of-pocket costs as a proportion of cost of service.
Rationale	Out-of-pocket costs can restrict access to services for lower income people. 26% of Australians said they did not access health care they required because of cost (Schoen, C. et al, 2007 (Commonwealth fund survey)).
Numerator	Amount paid by consumers for a health service
Denominator	Total cost of the service. For private specialist medical, dental and GP services it will correspond to the fee charged. For pharmaceuticals it will be the total cost of the pharmaceutical which includes any government subsidy
Presentation	Out-of-pocket costs as a proportion of cost of service for these 4 service types.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care, specialist medical, pharmaceuticals and dental
Is this a current indicator?	Yes (available from the health expenditure database)
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	GP and specialist medical services data from MBS, Pharmaceutical out-of-pocket expenditure and government subsidy from PBS/RPBS & Pharmacy Guild survey, Dental data from AIHW health expenditure data base
Frequency of data availability	MBS data updated monthly, Pharmaceutical and dental data available annually
Baseline year	Medicare data available since 1984
Responsibility for providing data	Commonwealth and AIHW
<b>Action required/issues</b>	
Is any data development required?	No, but it would be useful to improve the collection of data about out-of-pocket payments for dental services.
Estimated additional costs for data development/collection	Low
Other issues and caveats	This indicators only includes out-of-pocket costs for four types of services, as for other types of services the meaning of out-of-pocket costs is not clear, or the data are not good enough to estimate what out-of-pocket expenses are. For example, the meaning of out-of-pocket costs for admitted patient services is unclear when all Australians can be treated free of charge in a public hospital.

## 18—Deferment of required treatment due to cost

<b>Indicator details</b>	
Description	Proportion of people who required treatment but deferred that treatment due to cost by type of health service.
Rationale	Equity of access to the Australian health care system. 26% of Australians said they did not access health care they required because of cost (Schoen, C. et al, 2007 (Commonwealth fund survey)).
Numerator	Number of people who deferred required treatment due to cost by type of health service (current NATSIHS categories are hospital and day clinic, general practitioner, dentist or dental professional, other health professional)
Denominator	People who required treatment
Presentation	Proportion, by type of health service and equity groups.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	
Health sector(s) covered	Primary care, Dental, Pharmaceutical
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes NHHRC PI 10.1
International comparisons available?	Yes (Commonwealth Fund Survey)
<b>Data collection details</b>	
Data source	For Aboriginal and Torres Strait Islander people there is the National Aboriginal and Torres Strait Islander Health Survey 2004–05. For the Australian population as a whole there is the Commonwealth Fund Survey
Frequency of data availability	3-yearly. Data available ~ 18 months
Baseline year	2007–08
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Low (if included as additional question in the proposed Patient Experience Survey—see indicator 33).
Other issues and caveats	The NATSIHS question can be used to estimate deferred treatment due to: cost, discrimination, service not culturally appropriate, language problems, transport/distance, waiting time too long or not available at time required, not available in area, too busy (including work, personal, family responsibilities), dislikes (service/professional, afraid, embarrassed), felt it would be inadequate, decided not to seek care, other).

## 19a— Proportion of people with diabetes mellitus who have received an annual cycle of care within general practice

<b>Indicator details</b>	
Description	Proportion of people with diabetes mellitus who have received an annual cycle of care within general practice.
Rationale	Diabetes is a major problem in the community, and appropriate treatment will improve outcomes for this disease.
Numerator	Number of people with diabetes mellitus who have received an annual cycle of care within general practice
Denominator	Estimated number of people with diabetes mellitus managed within general practice
Presentation	Proportion of people with diabetes mellitus who have received an annual cycle of care within general practice.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, GP networks
Health sector(s) covered	Primary care
Is this a current indicator?	Yes
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes NHHRC PI 4.9
International comparisons available?	US and UK both measure aspects of this indicator
<b>Data collection details</b>	
Data source	Medicare Australia data
Frequency of data availability	Medicare data updated monthly
Baseline year	Medicare data available since 1984
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Some level of uncertainty at present with the Indigenous breakdown of this indicator as the Voluntary Indigenous Identifier is not fully representative of the total Indigenous population, but this is improving.

## HIGH QUALITY—APPROPRIATE

### 19b—Proportion of people with diabetes mellitus who have an HbA1c (glycosylated haemoglobin) below 7%.

<b>Indicator details</b>	
Description	Proportion of people with diabetes mellitus who have a HbA1c (glycosylated haemoglobin) below 7%.
Rationale	A level of glycosylated haemoglobin below 7% is a marker of successful management of diabetes, and correlates with improved outcomes for the diabetic patient.
Numerator	Those with diabetes mellitus who have a HbA1c below 7%
Denominator	Estimated number of people with diabetes mellitus managed within general practice
Presentation	Proportion of people with diabetes mellitus who have an HbA1c (glycosylated haemoglobin) below 7%.
Equity and other breakdowns	Socioeconomic status, Remoteness, (Indigenous is not possible at this stage)
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Primary care and community health
Is this a current indicator?	Yes. Part of Divisions of General Practice Program National Performance Indicators.
Endorsement	Not endorsed by a Ministerial council at this stage
Is this indicator suitable for benchmarking?	Yes NHHRC PI 4.9
International comparisons available?	US and UK both measure aspects of this indicator
<b>Data collection details</b>	
Data source	GP Network collection (or pathology databases)
Frequency of data availability	Continuous data collection
Baseline year	
Responsibility for providing data	GP Networks
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	There is incomplete coverage of all general practices in the GP Network collection. Some analysis would be required to generate national estimates.

## **20—Proportion of pregnancies with an antenatal visit in the first trimester**

<b>Indicator details</b>	
Description	Proportion of pregnancies with an antenatal visit in the first trimester.
Rationale	Good antenatal care is associated with positive health outcomes for mothers and babies. In addition, accessing antenatal care in the first trimester can indicate 'connectedness' of the population with the health sector.
Numerator	Number of pregnancies where an antenatal visit was reported in the first trimester
Denominator	Total pregnancies
Presentation	Proportion, by Indigenous status, Remoteness and SEIFA of mother.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Maternal and child health
Is this a current indicator?	Yes NHHRC PI 3.2
Endorsement	Australian Council for Safety and Quality in Healthcare (ACSQHC): Charting the Safety and Quality of Healthcare Report and Women's Hospitals Australasia: Core Maternity Indicators.
Is this indicator suitable for benchmarking?	Yes
International comparisons available?	Yes—OECD and US
<b>Data collection details</b>	
Data source	Data not currently available nationally but a number of jurisdictions participating in the National Perinatal Data Collection currently collect information on gestation at first visit (NSW, ACT, NT)
Frequency of data availability	
Baseline year	
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium
Other issues and caveats	

## 21—Cancer survival

<b>Indicator details</b>	
Description	Five-year relative survival proportions for people diagnosed with cancer.
Rationale	
Numerator	Number of people diagnosed with cancer who survived for five years after diagnosis
Denominator	Number of similar people in the general population who survived for the same period in the absence of cancer
Presentation	Five-year relative survival proportions.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States
Health sector(s) covered	Primary care and community health, Hospitals
Is this a current indicator?	NHPF Indicator 3.09
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	AIHW national death index & AACR (Australasian Association of Cancer Registries)
Frequency of data availability	Currently produced about every 3 years, but could be done annually. Cost of the analysis and data linkage to produce the indicator and publication is \$200,000. Because 5 year survival is required, there is theoretically at least 5 years between incidence of cancer and measurement of deaths. But cancer survival modelling techniques enable this gap to be reduced, so the estimates for 5 year survival for cancers incident in the period 1998 to 2004 rely on death data up to 2006. (2006 deaths data were available at the end of 2007). Then the linkage of cancer registry data to deaths data is time consuming, so the 1998 to 2004 survival estimates were published in mid 2008. Time lag is therefore expect to be about 4 years
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	

## 22—In-hospital mortality for selected procedures

<b>Indicator details</b>	
Description	In-hospital mortality for selected procedures.
Rationale	In-hospital mortality rates for selected procedures may provide an indication of the safety, quality and appropriateness of acute care.
Numerator	Hospital separations where separation mode is 'died' (for selected procedures)
Denominator	All hospital separations (for selected procedures)
Presentation	Per 1,000 hospital separations.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	No Not included in proposed NHHRC PIs
International comparisons available?	Yes (UK & USA)
<b>Data collection details</b>	
Data source	National Hospital Morbidity Database
Frequency of data availability	Annually, within 12 months of the reference period
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Selection of appropriate procedures and possible risk adjustment techniques may need to be considered.

## 23—Asthmatics with a written asthma plan

<b>Indicator details</b>	
Description	Asthmatics with moderate to severe asthma with a written asthma plan.
Rationale	An asthma action plan helps the person with asthma and/or their carer recognise worsening asthma and gives clear instructions on what to do in response. The process of developing a written asthma action plan is important, as this should be a discussion of the person's individual asthma and its management. The written plan is a reminder of that discussion.  Asthma is a common condition with most hospitals involved in both outpatient and inpatient management. The condition affects approximately 8% of the population. There are approximately 700 deaths per year in Australia.
Numerator	Number of unique individuals who have received an asthma cycle of care MBS service ( or prior to November 2006 an Asthma 3+ visit plan)
Denominator	Australian population
Presentation	Percent of population who have received the recommended care for asthma including a written asthma plan.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, GP networks
Health sector(s) covered	Primary care and community health
Is this a current indicator?	Yes (Australian Council for Safety and Quality in Health Care Chart book)
Endorsement	Australian Council for Safety and Quality in Health Care
Is this indicator suitable for benchmarking?	Yes NHHRC PI 4.8
International comparisons available?	No
<b>Data collection details</b>	
Data source	MBS
Frequency of data availability	Medicare data updated monthly
Baseline year	The Medicare item was introduced in March 2001
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	Yes, to accurately estimate the prevalence of asthma.
Estimated additional costs for data development/collection	Medium
Other issues and caveats	Ideally this indicator would be related to the number of people with moderate to severe asthma, but this number is not known with any degree of accuracy. State CATI surveys often ask people with asthma whether they have a written asthma action plan, and this information in conjunction with the Medicare data can provide approximate estimates of the proportion of people with moderate and severe asthma who have action plans.

## HIGH QUALITY—APPROPRIATE

### 24—Unplanned hospital readmissions

<b>Indicator details</b>	
Description	Unplanned hospital readmissions within 28 days (for selected surgical or mental health admissions).
Rationale	Unplanned return to hospital may indicate ineffective care pre-discharge, post-discharge and/or during the transition between acute and community-based care.
Numerator	Unplanned hospital readmissions within 28 days for selected surgical or mental health admissions
Denominator	Number of separations for selected surgical or mental health conditions
Presentation	Per 1,000 separations (for selected surgical or mental health admissions).
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in proposed NHHRC PIs
International comparisons available?	Yes (UK, Canada, US)
<b>Data collection details</b>	
Data source	Admitted Patient Care National Minimum Data Set, with suitable methodology to link records of patient separations and/or the addition of new data items to flag returning patients
Frequency of data availability	Annually, within 12 months of the reference period
Baseline year	2002–03 (data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes, around definitions (e.g. planned vs. unplanned readmission), selection of surgical procedures to be included, data linkage and/or inclusion of new items.
Estimated additional costs for data development/collection	Medium
Other issues and caveats	

## HIGH QUALITY—APPROPRIATE

### 25—Health and aged care service providers that are accredited

<b>Indicator details</b>	
Description	The proportion of GP practices, residential aged care services and Aboriginal community controlled health organisations and hospitals that are accredited.
Rationale	Accreditation is considered a proxy for service quality.
Numerator	(1) General practices that are accredited (2) Residential aged care facilities that are accredited (3) Aboriginal community controlled health organisations that are accredited (4) Hospitals that are accredited
Denominator	(1) All general practices (2) All residential aged care facilities (3) All Aboriginal community controlled health organisations (4) All hospitals
Presentation	Number and proportion by type of facility.
Equity and other breakdowns	Not applicable
Level of government/health sector breakdown	States/Territories, Public/private hospitals
Health sector(s) covered	Primary care and community health, Aged care, Hospitals
Is this a current indicator?	Yes. GP accreditation is indicator 3.24 in the NHPF. Hospital accreditation in <i>Australian Hospital Statistics</i> . Residential aged care facility accreditation information reported on ACSA website, in ROGS report annually and in AIHW's <i>Australia's Welfare</i> report.
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	No Not included in proposed NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	GP: Either from DoHA and sourced through the accrediting agencies AGPAL, GPA, Accreditation Plus or from DoHA using the proxy information about the number and proportion of PIP practices in Australia RAC: Aged Care Standards and Accreditation Agency Hospitals: ABS Private Hospital Establishments Collection and Public Hospital Establishments Database
Frequency of data availability	Annual. Number of providers accredited at a point of time available at any time from accrediting organisations
Baseline year	Various (e.g. accreditation has been required in residential aged care facilities since 2001)
Responsibility for providing data	All
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	

## 26—Selected adverse events in acute and other care settings

<b>Indicator details</b>	
Description	Numbers of selected adverse events occurring in specified care settings.
Rationale	Adverse events are costly (about \$2 billion annually), and cause serious morbidity. Not all adverse events are preventable, but overseas experience and experience within Australia shows that the number of adverse events can be reduced substantially.
Numerator	<p>Estimate of the number of acute care hospital separations where an adverse event is recorded, split by whether the adverse event occurred as part of that episode of care, or before that admission.</p> <p>26a: Adverse drug events            26b: <i>Staphylococcus aureus</i> (including MRSA) bacteraemia in acute care hospitals            26c: Pressure ulcers            26d: Falls resulting in patient harm            26e: Intentional self-harm</p>
Denominator	Number of separations in acute care hospitals
Presentation	Proportion of hospital separations for which an adverse event was recorded, split by whether adverse event occurred during that hospital stay or prior to admission.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Hospitals, aged care
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	
Frequency of data availability	Annual
Baseline year	
Responsibility for providing data	States/Territories, private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	

## 26a—Adverse drug events

<b>Indicator details</b>	
Description	Adverse drug event serious enough to require hospital treatment.
Rationale	Separations involving adverse drug events account for about a quarter of all separations in hospital with adverse events. These adverse drug events are expensive and cause serious morbidity. Not all adverse drug events are preventable, but overseas experience and experience within Australia shows that the number of these adverse events can be reduced substantially.
Numerator	Separations from hospital with an adverse drug event as defined by ICD-10-AM external cause codes
Denominator	Separations from hospital
Presentation	Proportion of hospital separations for which an adverse drug event was recorded, split by whether adverse event occurred during that hospital stay or prior to admission.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals, aged care
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	Admitted Patient Care National Minimum Data Set
Frequency of data availability	Annual
Baseline year	
Responsibility for providing data	States/Territories, private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	

## **26b—Staphylococcus aureus (including MRSA) bacteraemia in acute care hospitals**

<b>Indicator details</b>	
Description	Number of patients with Staphylococcus aureus (including MRSA) bacteraemia in acute care hospitals.
Rationale	Many deaths are caused by staphylococcus aureus bacteraemia and they are preventable.
Numerator	Number of patients with Staphylococcus aureus (including MRSA) bacteraemia in acute care hospitals
Denominator	None
Presentation	
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available. Would be recorded in the Admitted Patient Care National Minimum Data Set
Frequency of data availability	
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	

## 26c—Pressure ulcers in care settings

<b>Indicator details</b>	
Description	Pressure ulcers arising in care (acute care and residential aged care/other care).
Rationale	The occurrence of decubitus ulcer in a hospitalised patient can have a serious negative impact on the individual's health. Decubitus ulcers cause pain and discomfort for the patient and can prolong the duration of hospitalisation. Decubitus ulcer is preventable with good quality nursing care (Millar & Matkke 2004).
Numerator	Number of separations where pressure ulcers were recorded, split by whether condition arose in that hospital or elsewhere
Denominator	Total number of acute hospital separations
Presentation	Percent of acute hospital separations where pressure ulcers recorded.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	Yes
Endorsement	Agency for Healthcare Research and Quality (AHRQ) / US HealthGrades / US National Healthcare Quality Report / Australian Council for Safety and Quality in Healthcare (ACSQHC): Charting the S&Q of Healthcare Report / OECD - Quality Indicators Project.
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	Yes – OECD, US (AHRQ)
<b>Data collection details</b>	
Data source	Data not currently available. Would be recorded in the National Admitted Patient Care National Minimum Data Set, and the data held by the Australian Government Department of Health and Ageing on the Australian residential aged care system
Frequency of data availability	Annual
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	

**26d—Fall resulting in patient harm in care settings**

<b>Indicator details</b>	
Description	Fall resulting in patient harm (acute care and residential aged care).
Rationale	Falls are a major cause of morbidity and mortality for Australians, especially older women. Programs to reduce falls in hospitals and residential aged care have been successful, so a performance indicator in this area will drive change.
Numerator	Number of falls resulting in serious patient harm as defined by an external cause code for fall recorded as a Principal or additional diagnosis
Denominator	
Presentation	Number of falls in hospital and residential aged care resulting in serious patient harm.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals, Aged care
Endorsement	
Is this a current indicator?	
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	Admitted Patient Care National Minimum Data Set
Frequency of data availability	Annual
Baseline year	
Responsibility for providing data	Commonwealth, States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	The condition onset flag is used to determine whether the fall occurred in the hospital. If the fall occurred in residential aged care, the patient should be recorded as being on leave from that facility.

## 26e—Intentional self-harm in hospitals

<b>Indicator details</b>	
Description	Intentional self-harm in hospitals.
Rationale	Intentional self-harm (including resultant suicides) is a serious adverse event in hospital, and is a marker of the quality of care for people with tendencies towards self-harm.
Numerator	The number of admitted patients who undertake significant self-mutilation in an admission, during the time period under study  Or  The number of admitted patients with an attempted or actual suicide, in an admission, during the time period under study
Denominator	The total number of admitted patients during the time period under study
Presentation	Admitted patients undertake intentional self-harm as a proportion of admitted patient separations.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	Australian Council for Safety and Quality in Healthcare (ACSQHC): Charting the S&Q of Healthcare Report. OECD Healthcare Quality Indicators Project / The Australian Council on Healthcare Standards (ACHS): Australian Clinical Indicators.
Endorsement	
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	Admitted Patient Care National Minimum Data Set
Frequency of data availability	Annual
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium (across all adverse events).
Other issues and caveats	

**27—Independent peer review of surgical deaths**

<b>Indicator details</b>	
Description	Independent peer review of all in-hospital deaths of surgical patients.
Rationale	To identify those deaths where there may be an area of concern related to processes, procedures, or staff skills that may have affected the outcome.
Numerator	Number of independent peer reviews of in-hospital deaths of patients who had surgery during their admission
Denominator	Number of in-hospital deaths of patients who had surgery during their admission
Presentation	Proportion of surgical patient deaths with an independent peer review.
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 8.1
International comparisons available?	Scotland—all surgeons; UK—cardiac surgeons
<b>Data collection details</b>	
Data source	Data not currently available in all States. Available in WA (Royal Australasian College of Surgeons 2008) and being developed in other States
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Low
Other issues and caveats	Independent peer review of surgical deaths could be extended to other classes of patients as appropriate.

## **28—Admitted adult patients who are assessed for risk of venous thromboembolism**

<b>Indicator details</b>	
Description	Proportion of admitted adult patients who are assessed for risk of venous thromboembolism.
Rationale	Best practice guidelines suggest that all admitted adult patients should be assessed for risk of venous thromboembolism, and then appropriate action taken according to the level of risk ascertained. VTE causes about 5,300 deaths annually (Access Economics 2008).
Numerator	Number of adult patients that have documented VTE risk assessment
Denominator	Number of admitted adult patients in reference period
Presentation	Proportion
Equity and other breakdowns	Socioeconomic status, Remoteness, Indigenous, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available (although collected in NSW TAG and CEC)
Frequency of data availability	
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Medium
Other issues and caveats	There was much discussion as to whether this indicator should only include the process indicator of whether an assessment was made taken (Quality Use of Medicines in Australian Hospitals TAG indicator 1.1), or whether it should also include that appropriate prophylaxis was taken (Quality Use of Medicines in Australian Hospitals TAG indicator 1.2). It was considered that monitoring whether the risk assessment was undertaken was sufficient, as it was unlikely that no action would be taken if a patient was assessed as being at high risk. In addition, recording what prophylactic action was taken and ascertaining whether it was appropriate was a difficult exercise, so it would be costly to collect this information. Therefore it was concluded that recording whether risk assessment was undertaken was the most cost-effective way to achieve change in practice in this area.

## INTEGRATION AND CONTINUITY OF CARE

### 29—Discharge summaries transmitted electronically

<b>Indicator details</b>	
Description	Proportion of hospital patients with discharge summaries transmitted electronically within 1 day of discharge.
Rationale	Discharge summaries are considered to improve the health outcomes for patients by providing them with important health information and improving the transition between acute care and care provided in the community.
Numerator	Hospital patients with discharge summaries transmitted electronically within 1 day of discharge
Denominator	All hospital patients
Presentation	Per 1,000 separations (for selected conditions).
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 4.4 and 11.2
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available but the National Hospital Morbidity Database could potentially be modified to include a data item on electronic discharge summaries
Frequency of data availability	
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes, for example to agree on the selected separations for which electronic summaries would be required (e.g. it would be important to exclude separations for repeat treatments such as chemotherapy or renal dialysis), the definition of 'electronic discharge summary' and how best to obtain this information.
Estimated additional costs for data development/collection	Medium
Other issues and caveats	

## INTEGRATION AND CONTINUITY OF CARE

### 30—Discharge plans for patients with complex care needs

<b>Indicator details</b>	
Description	Proportion of hospital patients with complex needs for which a discharge plan is provided within 5 days of discharge.
Rationale	Discharge plans are considered to improve the health outcomes for patients by providing them and other care-givers information and improving the transition between acute care and care provided in the community.
Numerator	Hospital patients with complex needs for which a discharge plan is provided within 5 days of discharge
Denominator	All hospital patients with complex needs
Presentation	Per 1,000 separations
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, Public hospital peer group
Health sector(s) covered	Hospitals
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 4.4 and 11.2
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available but the National Hospital Morbidity Database could potentially be modified to include a data item on discharge plans for complex care patients
Frequency of data availability	
Baseline year	
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	Yes, for example to agree on the definition of complex care patients (the ACT currently define this group as patients over the age of 75 years) and what constitutes a 'discharge plan'.
Estimated additional costs for data development/collection	Medium
Other issues and caveats	

## INTEGRATION AND CONTINUITY OF CARE

### 31—General practices with register and recall systems for patients with chronic disease

<b>Indicator details</b>	
Description	The proportion of general practices with a register and recall system for patients with chronic disease.
Rationale	Timely provision of preventive and other health care to patients with chronic disease is likely to improve long-term health outcomes.
Numerator	General practices with a register and recall system for patients with chronic disease
Denominator	All general practices
Presentation	Proportion
Equity and other breakdowns	n.a.
Level of government/health sector breakdown	States/Territories, GP Network
Health sector(s) covered	Primary care and community health
Is this a current indicator?	Yes
Endorsement	Australian General Practice Network National Performance Indicators 2008–12
Is this indicator suitable for benchmarking?	Yes Not included in NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data are not currently published, but could be made available at the GP Network level
Frequency of data availability	
Baseline year	
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Not all GPs participate in the GP Networks, so some estimate would need to be made of the impact on the performance indicator of this missing data.

## INTEGRATION AND CONTINUITY OF CARE

### 32—Post-discharge community care for mental health patients

<b>Indicator details</b>	
Description	Percentage of separations from specialised psychiatric units in public hospitals for which a community ambulatory service contact was recorded in the seven days immediately following that separation.
Rationale	Continuity of care and support following discharge from a mental health inpatient service is critical in terms of maintaining clinical and functional stability, minimising the need for hospital readmission and decreasing the likelihood of suicide or self-harm.
Numerator	Number of separations from specialised psychiatric units in public hospitals for which a public sector community mental health contact was recorded in the seven days immediately following that separation
Denominator	Total number of separations from specialised psychiatric units
Presentation	Percentage
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, health area/region
Health sector(s) covered	Mental health, Community care
Is this a current indicator?	National Mental Health Key Performance Indicators Project
Endorsement	National Mental Health Working Group of the Australian Health Ministers Advisory Council endorsed 2005
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 4.5
International comparisons available?	No
<b>Data collection details</b>	
Data source	National Minimum Data Set—Community Mental Health Care National Minimum Data Set—Admitted Patient Mental Health Care
Frequency of data availability	Data not currently routinely available at national level. It is available at the State/Territory level
Baseline year	1996–97 for admitted data and 2000–01 for community data
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	Yes
Estimated additional costs for data development/collection	Low
Other issues and caveats	<p>Further information about this indicator is in the National Mental Health Strategy's Key Performance Indicators for Australian Public Mental Health Services Technical Specification Summary January 2008.</p> <p>The current indicator is quite narrowly defined and was developed to be feasible within existing data collection arrangements. Development would be required if the scope of collection was to include the private sector, and if program type information (adult, children and adolescent, older persons, forensic) was to be collected.</p>

### 33—Patient experience

<b>Indicator details</b>	
Description	The dimensions of care that patients value include: <ul style="list-style-type: none"> <li>• Access to care</li> <li>• Coordination and integration of care</li> <li>• Transitions and continuity of care</li> <li>• Respect for patient’s values, preferences and expressed needs</li> <li>• Information and education</li> <li>• Physical comfort</li> <li>• Emotional support</li> <li>• Family and friends</li> <li>• Continuity of care and transition after discharge (Picker Institute 2008))</li> </ul>
Rationale	The way health services are delivered is a key component of their quality. A patient experience survey first identifies priority areas for improvements across the system and then when weaknesses are addressed one can expect to see improvement in the third or fourth year of survey.
Numerator	Survey respondents rating services as good/very good/excellent or answering yes to a particular question
Denominator	Respondents to patient survey
Presentation	Percentage of survey respondents rating services as good/very good/excellent or answering yes to a particular question.
Equity and other breakdowns	Indigenous status, Remoteness, SEIFA, Sex, Age group
Level of government/health sector breakdown	States/Territories, health area/region
Health sector(s) covered	Hospital (admitted patient, outpatient, non-admitted emergency), primary care and community health, dental
Is this a current indicator?	NSW has an extensive patient experience survey in which 80 or so questions are asked of patients from different areas of the health system. Other States also have patient experience surveys, but there is no consistency in the questions asked.
Endorsement	No
Is this indicator suitable for benchmarking?	No. Related to NHHRC Pls 5.4, 7.1, 11.1
International comparisons available?	Possibly, depending on survey questions used
<b>Data collection details</b>	
Data source	Data not currently available nationally
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes. A national survey is needed, so state and regional comparisons can be made. The national survey could draw on the best of the State surveys.
Estimated additional costs for data development/collection	Very high. A national patient experience survey—covering hospital and non-hospital patients is estimated as costing between \$5-10 million. This would build on and/or harmonise the experiences of States already conducting such surveys.
Other issues and caveats	

### **34—Cost per case mix-adjusted separation for acute care hospitals**

<b>Indicator details</b>	
Description	Average cost per case mix-adjusted separation for acute care public and private hospitals.
Rationale	To monitor the efficiency of acute care activity. This indicator should be interpreted in conjunction with information about the safety and quality of acute care provision.
Numerator	Total admitted patient costs reported for acute care public and private hospitals. Costs are calculated by multiplying total reported costs by the admitted patient fraction (IFRAC) reported for each hospital
Denominator	Total case mix-adjusted separations reported for acute care public and private hospitals. Separations include all care types, including those other than acute. Newborns with no qualified days are excluded, along with records that do not relate to admitted patients (boarders and posthumous organ procurement)
Presentation	Cost per case mix-adjusted separation.
Equity and other breakdowns	n.a.
Level of government/health sector breakdown	States/Territories, Public hospital peer group, Public/private
Health sector(s) covered	Hospitals
Is this a current indicator?	Yes (NHPC, for public hospitals only)
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Not included in NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	Admitted Patient Care National Minimum Data Set, Hospital Expenditure Database
Frequency of data availability	Annual
Baseline year	2002–03 (data available from 1993–94 but longer time series associated with greater data comparability issues)
Responsibility for providing data	States/Territories and private hospitals
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	Calculating case mix-adjusted (i.e. cost-weighted) separations for private hospitals would require more regular provision of current private sector cost weights.  For detailed definitions see NHPC 2004 <i>National Report on Health Sector Performance Indicators 2003</i> .

## EFFICIENCY/VALUE FOR MONEY

### 35—Total cost per medical specialist (MBS) service

<b>Indicator details</b>	
Description	Cost per medical specialist (MBS) service
Rationale	Medical specialist services are costly and the rate at which fees charged are increasing is an issue of concern
Numerator	Total fee charged for out-of-hospital medical services covered under MBS deflated by GDP deflator (split by Pathology, imaging and other specialist)
Denominator	Total number of medical specialist services (split by pathology, imaging and other specialist)
Presentation	Real costs per medical specialist services over time for pathology, imaging, other specialist and total specialist.
Equity and other breakdowns	n.a.
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Medical specialist
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Not included in NHHRC PIs
International comparisons available?	No
<b>Data collection details</b>	
Data source	MBS
Frequency of data availability	MBS data updated monthly
Baseline year	MBS data available from 1984
Responsibility for providing data	Commonwealth
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	Nil
Other issues and caveats	

## SUSTAINABILITY

### 36—Health & aged care workforce inflows and outflows as a percentage of the health workforce, by profession

<b>Indicator details</b>	
Description	Net growth in health workforce (doctors, nurses, midwives, dental practitioners, pharmacists).
Rationale	To assess if the number of new entrants into the workforce is sufficient to replace the existing workforce and those who are close to retirement.
Numerator	Number of graduates (doctors, nurses, midwives, dental practitioners, pharmacists) and the number of health workforce (doctors, nurses, midwives, dental practitioners, pharmacists) exiting the workforce (for retirement or other reasons) plus net health workforce pharmacy, medicine and nursing migration
Denominator	Total health workforce (doctors, nurses, midwives, dental practitioners, pharmacists)
Presentation	Percentage change.
Equity and other breakdowns	
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 12.1
International comparisons available?	No
<b>Data collection details</b>	
Data source	Data not currently available
Frequency of data availability	
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes. Questionnaires to collect workforce information as part of the national registration scheme need to be designed carefully to collect relevant information about issues such as the migration of health professionals and temporary absences from the health workforce.
Estimated additional costs for data development/collection	Nil. It is assumed that these costs would be met as part of the work to develop a national workforce registration scheme.
Other issues and caveats	This indicator cannot currently be reported. Until data are available from the new national health workforce registration scheme, it is recommended that 36a and 36b (current NHPC indicators) continue to be reported.

## SUSTAINABILITY

### 36a— Graduates in pharmacy, medicine and nursing as a percentage of the total pharmacy, medical and nursing workforce

Indicator details	
Description	Graduates in pharmacy, medicine and nursing as a percentage of the total pharmacy, medical and nursing workforce.
Rationale	The two key factors influencing the sustainability of the health workforce are whether the number of new entrants is sufficient to replace the existing workforce (36a) and the proportion of the workforce who are close to retirement (36b). In the longer term, following implementation of the national health workforce registration scheme, more detailed information should also be available on health workforce inflows, including outflows due to migration (this is the aspirational indicator suggested as 36).
Numerator	Graduates in pharmacy, medicine and nursing
Denominator	Total pharmacy, medical and nursing workforce
Presentation	Percentage.
Equity and other breakdowns	Indigenous status of health professional
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Various
Is this a current indicator?	Yes (NHPF 3.25, <i>Australia's Health 2008</i> )
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 12.1
International comparisons available?	Yes
Data collection details	
Data source	AIHW Medical, nursing and pharmacy labour force surveys, 1995 and 1999, DEEWR data on university course completion numbers
Frequency of data availability	Data available from annual re-registration surveys for medical and nursing workforce, generally 1–3 years post reference period. Ad hoc data collection for pharmacy workforce. Annual data from DEEWR
Baseline year	1995
Responsibility for providing data	States/Territories
Action required/issues	
Is any data development required?	No (however, the indicator will be able to be replaced by indicator 36 once more detailed information became available from the national registration scheme for health workforce).
Estimated additional costs for data development/collection	Nil
Other issues and caveats	

## SUSTAINABILITY

### 36b— Percentage of health practitioners aged 55 years and over

<b>Indicator details</b>	
Description	Percentage of health practitioners aged 55 years and over.
Rationale	The two key factors influencing the sustainability of the health workforce are whether the number of new entrants is sufficient to replace the existing workforce (36a) and the proportion of the workforce who are close to retirement (36b). In the longer term, following implementation of the national health workforce registration scheme, more detailed information should also be available on health workforce inflows, including outflows due to migration. (This is the aspirational indicator suggested as 36).
Numerator	Number of pharmacists, primary care practitioners, medical specialists and nurses aged 55 years and over
Denominator	Total pharmacy, primary care practitioners, medical specialist and nursing workforce
Presentation	Percentage.
Equity and other breakdowns	Indigenous status/remoteness of health professional, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	Various
Is this a current indicator?	Yes. (NHPF 3.25 <i>Australia's Health 2008</i> )
Endorsement	AHMAC
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 12.1
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	AIHW medical, nursing and pharmacy labour force surveys, 1995 and 1999. For international data relevant to this indicator, please refer to OECD Health Data and associated publications.
Frequency of data availability	Data available from annual re-registration surveys, generally 1–3 years post reference period
Baseline year	1995
Responsibility for providing data	States/Territories
<b>Action required/issues</b>	
Is any data development required?	No (however, the indicator will be able to be replaced by indicator 36 once more detailed information became available from the national registration scheme for health workforce).
Estimated additional costs for data development/collection	Nil
Other issues and caveats	It may not be feasible to present this information accurately by Indigenous status or remoteness using available data sources.

## SUSTAINABILITY

### 37—Commonwealth/States/Territories expenditure on health & aged care as a % of GDP

<b>Indicator details</b>	
Description	Commonwealth, State and Territory government expenditure on health & aged care as a percent of GDP.
Rationale	The health and aged care system is highly dependent on government financing. Understanding government financing of the system in relation to the ability of the economy to provide resources (i.e. GDP) is important information for assessing the sustainability of the system. It is not always clear whether a particular level is too high or too low, but monitoring government expenditure, and its rate of change, in relation to overall health outcomes and need for health care is an important part of assessing sustainability.
Numerator	Government funding of health and aged care
Denominator	Gross Domestic Product (or Gross State Product (GSP))
Presentation	Government funding of health and aged care expenditure as a percentage of GDP (or GSP) over time, by State and Territory and in comparison to other countries.
Equity and other breakdowns	Not appropriate
Level of government/health sector breakdown	State and Territory
Health sector(s) covered	All sectors
Is this a current indicator?	No
Endorsement	
Is this indicator suitable for benchmarking?	No Not included in NHHRC PIs
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	AIHW health expenditure database
Frequency of data availability	Annual
Baseline year	1960–61
Responsibility for providing data	AIHW
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	No
Other issues and caveats	

## SUSTAINABILITY

### 38—Number of accredited and filled clinical training positions

<b>Indicator details</b>	
Description	Number of accredited and filled clinical training positions by profession ((GPs, medical specialist, nursing, dental, pharmacy).
Rationale	There are ongoing differences between numbers of training placements recommended by medical workforce reviews and actual training placements and trainees.
Numerator	Number of accredited and filled clinical training positions by profession (GPs, medical specialist, nursing, dental, pharmacy)
Denominator	Total number of pharmacy, primary care practitioners, medical specialist and nursing in the workforce
Presentation	
Equity and other breakdowns	Indigenous status/remoteness of health professional, Sex, Age group
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	No
Endorsement	No
Is this indicator suitable for benchmarking?	Yes NHHRC PI 12.3
International comparisons available?	No
<b>Data collection details</b>	
Data source	Medical Deans Australia and New Zealand (Medical Deans), The Confederation of Postgraduate Medical Education Councils (CPMEC), General Practice Education and Training (GPET), Medical Training Review Panel (MTRP)
Frequency of data availability	Data not currently available nationally
Baseline year	
Responsibility for providing data	
<b>Action required/issues</b>	
Is any data development required?	Yes There are several acknowledged data gaps that are the subject of efforts to improve the quality of data collection and presentation over time.  In addition to the data on accredited training placements sourced through the medical colleges, data has been provided by a number of states and territories on the number of vocational training positions offered and filled by facility or location (usually a hospital) and specialty and subspecialty for 2007. This is the first time these data have been available to the MTRP and have been reproduced in the Data CD. These data are not complete (e.g. Victoria and New South Wales have not provided data and the Northern Territory has only provided partial data) and not comparable across jurisdictions or with data collected by medical colleges.
Estimated additional costs for data development/collection	Low
Other issues and caveats	It may not be feasible to present this information accurately by Indigenous status or remoteness using available data sources.

## SUSTAINABILITY

### 39—Capital expenditure as a proportion of total health and aged care expenditure

<b>Indicator details</b>	
Description	Capital expenditure for all health and aged care facilities as a proportion of total expenditure in health and aged care.
Rationale	There is concern that the health and aged care capital stock has been run down so that health practitioners are not therefore able to offer effective and efficient care. Capital expenditure is one indicator of how much the capital stock is being replaced.
Numerator	Capital expenditure for health and aged care facilities
Denominator	Total expenditure for health and aged care
Presentation	Capital expenditure for all health and aged care facilities as a proportion of total expenditure in health and aged care.
Equity and other breakdowns	Not applicable
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	
Endorsement	
Is this indicator suitable for benchmarking?	Not included in NHHRC PIs
International comparisons available?	Yes. OECD health and social expenditure databases contain this information, but there are significant inconsistencies across countries
<b>Data collection details</b>	
Data source	AIHW health and welfare expenditure databases
Frequency of data availability	Annual
Baseline year	1960–61
Responsibility for providing data	AIHW
<b>Action required/issues</b>	
Is any data development required?	Yes. Greater standardisation of definitions required - particularly the asset capitalisation cut-off value.
Estimated additional costs for data development/collection	
Other issues and caveats	The ideal indicator in this area is a measure of the total real value of the capital stock and its change over time, and the average age of capital equipment. It is possible to develop such a measure over time, but because of inconsistencies in accounting practices between the States and across the private and public sectors, it is difficult to develop a measure which is comparable.

## SUSTAINABILITY

### 40—Proportion of GDP (or health expenditure) spent on health research and development

<b>Indicator details</b>	
Description	Proportion of GDP (or health expenditure) spent on health research and development.
Rationale	Health research is not only important for the new understandings it brings, but is an essential component of keeping the Australian health and aged care workforce up-to-date with the latest understandings of what works and what doesn't work.
Numerator	Health research and experimental development expenditure
Denominator	GDP (or total recurrent health expenditure)
Presentation	Health research expenditure as a percent of GDP over time.
Equity and other breakdowns	Not applicable
Level of government/health sector breakdown	States/Territories
Health sector(s) covered	All
Is this a current indicator?	Yes. Reported in <i>Health expenditure Australia</i>
Endorsement	
Is this indicator suitable for benchmarking?	Yes Related to NHHRC PI 12.5
International comparisons available?	Yes
<b>Data collection details</b>	
Data source	ABS Survey of Research and Experimental Development
Frequency of data availability	Every 2 years. For in-between years, AIHW makes estimates based on interpolation.
Baseline year	
Responsibility for providing data	ABS
<b>Action required/issues</b>	
Is any data development required?	No
Estimated additional costs for data development/collection	
Other issues and caveats	

# Appendix A—Project methodology

The development of the performance indicator set involved the following steps:

- Identification of a set of ‘principles’ for the health and aged care system for use as an organising framework for the performance indicators, drawing on priorities expressed by Health Ministers and others for health sector reform and ongoing management of the sector
- Review of health sector performance indicators currently in use in Australia and overseas and development of a draft set of performance indicators for consultation with stakeholders
- Refinement of the set based on extensive consultation with government and non-government stakeholders
- Provision of the finalised performance indicator set as this report to Health Ministers.

Advice on the work has been provided by AHMAC’s National e-Health and Information Principal Committee.

Details of these steps follow.

## Development of draft working principles

Based on reference to COAG and Health Ministers’ communiqués (including the Terms of Reference for the COAG Health and Ageing and Indigenous Reform Working Groups, and for the National Health and Hospitals Reform Commission), and to draft principles and reform goals and early consultation, the AIHW developed a set of principles as an organising framework for the performance indicators (see Chapter 1).

The principles were included in consultations with stakeholders and comments taken on board in terms of how the principles were used in this report.

The use of this independent set of working principles meant that it was possible to map the proposed performance indicators to other frameworks (e.g. the Health and Hospitals Reform Commission framework for developing benchmarks and the COAG Health and Ageing Working Group outcomes framework).

## Reviewing existing performance indicators

An initial scan of relevant Australian and international indicator sets was undertaken to identify a subset of performance indicators suitable for assessment. About 150 performance indicators were initially assessed, across the health and aged care system (Table A1).

Initial detailed assessment was conducted on those performance indicators regarded as suitable for assessment. This process involved two key components—calculating a weighted score and describing each indicator’s attributes.

**Table A1: Indicator sets initially assessed**

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<b>Indicator set/theme</b>
National Health Performance Framework indicators
Public Health Outcome Funding Agreement (PHOFA) indicators
Key Performance Indicators for Public Sector Mental Health Services
Indicators from <i>Charting the Safety and Quality of Health Care in Australia</i>
State/Territory performance indicators
Existing AHCA indicators
Previous AHCA indicators
Aboriginal and Torres Strait Islander Health Performance Indicators
GP Divisions performance indicators
COAG indicators for mental health and human capital
National health priority area indicators
Indicators of Australia's Welfare (AIHW)
Report on Government Services health sector indicators
ABS <i>Measuring Australia's Performance</i>
OECD Health Data and health care quality indicators
Canadian health indicators (e.g. Health Indicators 2008)
US health indicators (e.g. US National Healthcare Quality Report, Joint Commission on Accreditation of Health Care Organisations, Agency for Health Care Research and Quality, Commonwealth Fund)
UK health indicators (e.g. The annual health check 2006/2007—A national overview of the performance of NHS trusts in England)
NZ indicators (e.g. Health and Independence report 2007)

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## Calculating a weighted score

A weighted score out of 100 was calculated for each indicator based on the following questions (each rated 0–3):

1. Is it worth measuring?
2. Important to the public?
3. Important to policy discussion?
4. Can it be understood by the public?
5. Can it be understood by policy makers?
6. Is there a clear direction for change?
7. Will it galvanise action?
8. Do trends in the indicator over time reflect actions?
9. Can changes in the indicator be attributed to specific interventions?
10. How quickly do actions affect the indicator?
11. Are the data timely (i.e. available quickly)?
12. Is it measurable?
13. Is it valid?
14. Are changes in the indicator usually of statistical significance?
15. Is there an applicable national data definition?

16. Do collections currently comply with national data definitions?
17. Are data currently available? (If not, can it be made available at reasonable cost?)
18. Can it be disaggregated to the health unit level?

Separate ‘importance’ and ‘feasibility’ scores were also derived, based on the results of particular combinations of these questions.

## Describing indicator attributes

Each indicator was also been assessed to identify its attributes in relation to the following:

- Principle(s) to which the indicator most closely relates
  - Better health, Access, Focus on prevention, High quality care, Integration & continuity of care, Efficiency, Patient-centred, Sustainable
- Health sector level(s) to which the indicator most closely relates (e.g. Hospitals, Primary care and community health, Aged care, Public health, Maternity, Mental health, Dental health)
- National Health Performance Framework dimension/domain(s) to which the indicator most closely relates:
  - Tier 1—Health Status (Health conditions, Human function, Life expectancy and wellbeing, Death)
  - Tier 2—Determinants of Health (Environmental factors, Socioeconomic factors, Community capacity, Health behaviours, Person-related factors)
  - Tier 3—Health System Performance (Effective, Appropriate, Efficient, Responsive, Accessible, Safe, Continuous, Capable, Sustainable)
- Whether the indicator can currently be reported in terms of the following characteristics:
  - Indigenous status
  - Socioeconomic status (SEIFA)
  - Rural/remote status
  - Age groups
  - Sex
  - International comparison
  - A time dimension (how frequently collected)

} If any of these dimensions are available, indicator can be used to examine equity

## Consultation

Between March and June 2008, the AIHW consulted with over 50 government and non-government bodies and committees spanning State/Territory and Commonwealth governments, consumers and professional organisations (see Table A2). For example, consultations were held with the Department of Health and Ageing, all states and territories, the National Health and Medical Research Council and the Department of Veterans’ Affairs.

Consultation discussions were conducted by senior AIHW staff and were generally face-to-face meetings of 1–3 hours. Discussions were guided by a consultation package, which was circulated to all individuals and organisations prior to each meeting. This package included background material, information about the project parameters and methodology, draft working principles and a comprehensive draft indicator set (grouped according to the draft working principles). Consultation participants were asked to focus on the draft working

principles and draft indicator set and provide advice about the meaningfulness, feasibility and comprehensiveness of the draft set.

During the consultation period, the AIHW also received advice from and/or provided input to related national health performance indicator work being conducted by the National Health and Hospitals Reform Commission, the Australian Commission on Safety & Quality in Health Care and the COAG Health and Ageing Working Group.

The AHMAC National e-Health and Information Principal Committee also provided advice and coordinated the provision of advice about the likely costs of proposed data development.

Through the consultations, AIHW received a range of useful and detailed comments on individual indicators and groups of indicators. They were used to finalise the performance indicator set and the other information in this report.

**Table A2: Organisations and committees consulted**

<b>Non-government/academic experts</b>
Allied Health Professions Australia
Australian Association of Gerontology
Australian Dental Association
Australian Healthcare & Hospitals Association
Australian Medical Association
Australian Nursing Federation
Australian Private Hospitals Association
Australian Public Health Association
Australian Research Centre for Population Oral Health
Australian Rural Health Alliance
Australian General Practice Network
Consumers' Health Forum of Australia
Dr Jean Slutsky, Director Center for Outcomes and Evidence, Agency for Healthcare Research and Quality (AHRQ) of the U.S. Department of Health and Human Service
National Aboriginal Community Controlled Health Organisation
National Primary and Community Health Network
Palliative Care Australia
Professor Peter Collignon (Infectious diseases physician and microbiologist)
Public Health Association of Australia
Public Health Information Development Unit
Quality Improvement Council
Research Centre for Injury Studies
Royal Australasian College of Surgeons
Royal Australian College of General Practitioners
Royal College of Nursing Australia
Royal College of Pathologists of Australia
<b>Government—Australian Government</b>
Australian Bureau of Statistics
National Health and Medical Research Council
Department of Veterans' Affairs
Department of Health and Ageing (including the Office of Aboriginal and Torres Strait Islander Health)

**Table A2: Organisations and committees consulted**

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**Government—State and Territory Health Departments<sup>(a)</sup>**

NSW Health

Victorian Department of Human Services, Treasury and Finance, Premier and Cabinet

Queensland Health

Western Australian Department of Health

SA Health, Treasury and Finance, Premier and Cabinet

Tasmanian Department of Health and Human Services

ACT Health

Northern Territory Department of Health and Community Services

**Committees**

National e-Health and Information Principal Committee (NEHIPC)

National Advisory Group for Aboriginal and Torres Strait Islander Health Information and Data

AIHW's National Indicators Advisory Group on Safety and Quality in Health Care

AIHW's Health Expenditure Advisory Committee

National Health Performance Committee

Mental Health Information Strategy Sub-Committee

Population Health Information Development Group

**Other**

National Health Workforce Taskforce

Australian Commission on Safety and Quality in Health Care

National Health and Hospitals Reform Commission

**Written material only**

Mental Health Council of Australia

General Practice Victoria

National Prescribing Service

Australian National Council on Drugs

(a) Some states and territories also had representatives from their Premier and Cabinet Departments and Treasury and Finance Departments.

## **Compilation of the proposed performance indicator set**

The compilation of the proposed indicator set presented in this report included critical examination of the proposed performance indicators as a set to ensure that they provide a balanced view of the relevant aspects of the Australian health care system. In preparing the proposed indicator set, the AIHW has taken into consideration a wide range of requirements including the need to:

- develop a focussed and therefore limited number of performance indicators which reflect the range of inter-related activity across the health and aged care system;
- build on existing performance indicator sets and data collections, where available;
- balance the prevention and health promotion role of the health system against the illness-focussed sectors; and
- ensure a reasonable coverage of all the sectors, including performance indicators measuring transitions between them, where possible.

# Appendix B—Other performance indicators with stakeholder support

Over 80 performance indicators were included in the consultation documentation and were therefore considered and debated by a wide range of stakeholders. A selection of these indicators were supported by some stakeholders during consultation but were not included in the final proposed indicator set, for various reasons relating to its overall balance.

Table B1 provides a list of these indicators, grouped according to the Institute’s organising principles used during consultation.

Many of the performance indicators from this list are included in key cascading indicator sets (e.g. pre-admission community care for mental health patients is included in the Key Performance Indicators for Mental Health) and/or routinely publicly reported (e.g. maternal mortality is routinely reported by the AIHW National Perinatal Statistics Unit, the Australian Bureau of Statistics and internationally).

**Table B1: Performance indicators with some stakeholder support not included in final proposed set**

<b>Better health</b>	
1	Mortality, by major disease group
2	Healthy life years lost due to disability (PYLD) due to disease and injury, by major disease group
<b>Focus on prevention</b>	
3	Availability of fluoridated water
4	Incidence of serious falls among older people in the community
5	Proportion of eligible persons who have received an Enhanced Primary Care (EPC) annual voluntary health assessment, and proportion of eligible persons who have received an EPC two-yearly health check
6	Proportion of babies breastfed (3, 6 months)
<b>Access</b>	
7	Proportion of non-referred (GP) attendances that are bulk-billed (direct billed) under the Medicare program: by socio-economic status and remoteness
8	Individual (out-of-pocket) costs in comparison to ability to pay, by service type (by population survey). (Out-of-pocket costs only included for selected services, and not in comparison to ability to pay)
9	Proportion of ICUs with an organ donation coordinator (OR Organ donation rate per death in ICU)
10	Access to post-natal depression services – proportion of women screened post-natally
11	Waiting times for services <ul style="list-style-type: none"> <li>Ambulance emergency response times (median)</li> <li>Persons waiting more than 21 days to commence radiotherapy for cancer</li> <li>Waiting times for first visit to specialists in private practice (by population survey)</li> <li>Waiting times for public hospital outpatient services, including allied health services</li> <li>Waiting times for Alcohol and Other Drug Treatment services</li> <li>Waiting times for residential aged care</li> <li>Waiting times for community mental health services (including emergency support)</li> <li>Waiting times from referral to aged care assessment</li> </ul>

**Table B1: Performance indicators with some stakeholder support not included in final proposed set**

<b>High quality—Appropriate</b>	
12	Proportion of health and aged care services accredited—specialist practices, dental practices, community health facilities. (Accreditation of a number of other health and aged care facilities included, but not the three above).
13	Presence of monitoring arrangements for incidents and sentinel events
14	Management of AMI/CHF according to relevant guidelines
15	Timing of thrombolytics and reperfusion for AMI patients
16	Appropriate prescription of antibiotics by GPs for upper respiratory tract infections
17	Number of emergency department visits and hospital days in the last 30 days of life per person (palliative care indicator)
18	Unplanned return/readmission to ICU
19	Unplanned return to OT in same admission
20	Use of seclusion for mental health conditions
<b>High quality—Safe</b>	
21	Proportion of hospital separations in which selected adverse events were treated (split by place of occurrence). The following specific adverse events were not included in the final proposed set: <ul style="list-style-type: none"> <li>Superficial incisional surgical site infection in coronary artery vein by-pass grafting</li> <li>Deep incisional surgical site infection in coronary artery vein by-pass grafting</li> <li>Superficial incisional surgical site infection in caesarean section</li> <li>Deep incisional surgical site infection in caesarean section</li> <li>Surgical or non-surgical procedures involving wrong patient or body part</li> </ul>
22	Obstetric trauma—vaginal delivery and caesarean delivery
23	Birth trauma—injury to neonate
24	Maternal mortality
25	Death in low mortality DRGs
26	Attempted or actual suicide of an admitted patient up to 28 days after discharge (although suicide or self-harm of admitted patients in hospitals was included)
27	Infection control in general practice, specialised private medical practice, allied health and dental practice
<b>Integration and continuity of care</b>	
28	Pre-admission community care for mental health patients
29	Review of medication use (home medication review)
<b>Efficiency/value for money</b>	
30	Proportion of pharmaceuticals dispensed that are generics, for drugs for which generics are available
31	Percentage of Pharmaceutical Benefits Scheme benefits paid for pharmaceuticals listed following evidence-based assessment of comparative effectiveness and cost
32	Percentage of Medicare Benefits Scheme benefits paid for medical services listed following evidence-based assessment of comparative effectiveness and cost
<b>Sustainable</b>	
33	Indigenous people in the health workforce as a proportion of total workforce (although could be reported as part of Sustainability indicator 36)
34	Proportion of GDP spent on health vs. comparator countries. (Instead government expenditure as percent of GDP spent on health included).

# Appendix C—Alignment of indicators with health and aged care priorities

## National Health Performance Framework

Of the proposed health and aged care performance indicators, 17 are already existing indicators in the Health Ministers' National Health Performance Framework (NHPF), last reported as a set in *Australia's Health 2008*. Put another way, of the 44 existing NHPF indicators, 28 are also included in this set. (Note: Some of the existing NHPF indicators are included in composite indicators in the new set, which is why 17 is less than 28). The proposed indicators span all of the NHPF tiers—health status and outcomes, determinants of health and health system performance—but does not include the non-health determinant domains such as socio-economic and environmental factors.

## AIHW principles

Throughout this report, the proposed performance indicators are grouped according to the AIHW organising principle to which they most closely relate. However, many of the performance indicators are also relevant to other principles. For example, potentially preventable hospitalisations and waiting times for selected services are primarily related to the principle of access but can also be considered in terms of appropriateness of care. Table C1 provides details about the primary and secondary principle(s) to which each proposed performance indicator relates.

<b>Table C1: AIHW indicators—primary and secondary principles</b>		Better health	Prevention	Access	Appropriate	Safe	Continuity	Patient-centred	Efficiency	Sustainable
* Primary principle ▲ Secondary principle										
<b>Better health</b>										
1	Life expectancy (incl. gap b/w Indigenous & non-Indigenous)	*								
2	Infant/young child mortality rate (incl. gap b/w Indigenous & non-Indigenous)	*								
3	Incidence and prevalence of important preventable diseases and injury	*								
4	Potentially avoidable deaths	*								
<b>Focus on prevention</b>										
5	Risk factor prevalence		*							
6	Prop. of children with all developmental health checks (6, 12, 18 months, 4yrs)		*	▲						
7	Cancer screening rates (breast, cervical, bowel)		*	▲						
8	Prop. of babies who are low birthweight, incl. Indigenous status		*							
9	Immunisation rates for vaccines in the national schedule		*	▲						
10	Public health program expenditure as a proportion of total health expenditure		*							▲
<b>Access</b>										
11	Health service use differentials			*	▲					
12	Selected potentially preventable hospitalisations			*	▲					
13	Waiting times for services (elective surgery, EDs, GPs, public dental services)			*	▲			▲		
14	Treated prevalence rates for mental illness			*	▲			▲		
15	Residential and community aged care services per 1,000 pop aged 70+ yrs			*	▲			▲		
16	No. hospital patient days by those ACAT assessed, waiting for residential aged care			*	▲		▲	▲		
17	Out-of-pocket costs as a prop. service cost			*						▲
18	People deferring recommended treatment due to financial barriers			*						
<b>High quality—Appropriate</b>										
19	Prop. of diabetics with GP annual cycle of care, prop. with HbA1c below 7%				*					
20	Proportion of pregnancies with an antenatal visit in the first trimester		▲	*						
21	Survival of people diagnosed with cancer (5 year relative rates)			*						
22	In-hospital mortality for selected procedures			*		▲				
23	Proportion of asthmatics with a written asthma plan			*		-				
24	Unplanned readmissions w/in 28 days of surgical/mental health admission			*		▲				
25	Prop. of health/aged care services accredited			*						
<b>High quality—Safe</b>										
26	Selected adverse events in acute and other care settings					*				
27	Independent peer review of surgical deaths			▲	*					
28	Prop. of admitted adult patients assessed for risk of venous thromboembolism			▲	*					
<b>Integration and continuity of care</b>										
29	Prop. discharge summaries transmitted electronically w/in 1 day of discharge						*	▲		
30	Discharge plans for complex care needs within 5 days of discharge						*	▲		
31	Prop. of GPs with register/recall system for patients with chronic disease		▲				*	▲		
32	Post-discharge community care for mental health patients						*	▲		
<b>Patient-centred</b>										
33	Patient experience (based domains of concern to patients)				▲			*		
<b>Efficiency/value for money</b>										
34	Cost per case mix-adjusted separation for acute care hospitals							*	▲	
35	Total cost per medical specialist (MBS) service							*	▲	
<b>Sustainable</b>										
36	Health/aged care workforce in/outflows as % of health workforce								*	
37	C'wealth/State/Territory expenditure on health & aged care as % of GDP								*	
38	No. of accredited/filled clinical training positions								*	
39	Capital expenditure as a prop. of total health/ aged care expenditure								*	
40	Prop. of GDP (or health expenditure) spent on health R&D								*	

## Alignment with Health Ministers' priorities

In their communiqué of 29 February 2008, Health Ministers announced a range of priorities for inclusion in the next health care agreement and reform areas for immediate focus.

The performance indicators align with the Health Ministers' priorities, as detailed in Table C2. In summary:

- Five performance indicators measure outcomes relevant to **keeping people well and avoiding hospitalisations**
- Eight performance indicators could be used to monitor, directly or indirectly, the extent to which different **aspects of the system are being brought together**, coordinated and integrated
- Fifteen performance indicators relate primarily, or secondarily, to delivery of **effective and efficient** care
- Seven performance indicators could be used to assess the **experience of people** using health services
- Nine performance indicators are relevant to providing better care for **ageing, chronic disease and long-term conditions**
- Eight performance indicators focus on the accessibility or effectiveness of **prevention** activities
- Four performance indicators relate specifically to services for **pregnant women, babies and young children**
- Most of the performance indicators could be presented in comparisons for **Indigenous** and other Australians, and three focus specifically on outcomes for Indigenous people
- Two performance indicators are designed to monitor the building of the **health workforce**, and
- Two indicators are relevant to **developing the next generation of leaders**.

Table C2: AIHW indicators mapped to Health Minister priorities		Avoid hospitalisations	System togetherness	Efficient/effective care	Experience of users	Better care	Prevention focus	Mothers/children	Indigenous	Workforce	Next generation
* Primary priority											
▲ Secondary priority											
<b>Better health</b>											
1	Life expectancy (incl. gap b/w Indigenous & non-Indigenous)	▲							*		
2	Infant/young child mortality rate (incl. gap b/w Indigenous & non-Indigenous)	▲							*		
3	Incidence and prevalence of important preventable diseases and injury	▲					*				
4	Potentially avoidable deaths	▲					*				
<b>Focus on prevention</b>											
5	Risk factor prevalence						*				
6	Prop. of children with all developmental health checks (6, 12, 18 months, 4yrs)						▲	*			
7	Cancer screening rates (breast, cervical, bowel)						*				
8	Prop. of babies who are low birthweight, incl. Indigenous status						*	▲	▲		
9	Immunisation rates for vaccines in the national schedule						*	▲			
10	Public health program expenditure as a proportion of total health expenditure						*				
<b>Access</b>											
11	Health service use differentials		*								
12	Selected potentially preventable hospitalisations	*	▲								
13	Waiting times for services (elective surgery, EDs, GPs, public dental services)			*	▲						
14	Treated prevalence rates for mental illness					*					
15	Residential and community aged care services per 1,000 pop aged 70+ yrs	▲				*					
16	No. hosp. patient days by those ACAT assessed, waiting for residential aged care	*				▲					
17	Out-of-pocket costs as a prop. service cost				*						
18	People deferring recommended treatment due to financial barriers				*						
<b>High quality—Appropriate</b>											
19	Prop. of diabetics with GP annual cycle of care, prop. with HbA1c below 7%			*		▲					
20	Proportion of pregnancies with an antenatal visit in the first trimester	▲						*			
21	Survival of people diagnosed with cancer (5 year relative rates)			*		▲					
22	In-hospital mortality for selected procedures			*							
23	Proportion of asthmatics with a written asthma plan			*		▲					
24	Unplanned readmissions w/in 28 days of surgical/mental health admission			*							
25	Prop. of health/aged care services accredited			*							
<b>High quality—Safe</b>											
26	Selected adverse events in acute and other care settings			*	▲	▲					
27	Independent peer review of surgical deaths			*							
28	Prop. of admitted adult patients assessed for risk of venous thromboembolism			*							
<b>Integration and continuity of care</b>											
29	Prop. discharge summaries transmitted electronically w/in 1 day of discharge		*								
30	Discharge plans for complex care needs within 5 days of discharge		*		▲						
31	Prop. of GPs with register/recall system for patients with chronic disease			*	▲	▲					
32	Post-discharge community care for mental health patients		*			▲					
<b>Patient-centred</b>											
33	Patient experience (based on domains of concern to patients)				*						
<b>Efficiency/value for money</b>											
34	Cost per case mix-adjusted separation for acute care hospitals			*							
35	Total cost per medical specialist (MBS) service			*							
<b>Sustainable</b>											
36	Health/aged care workforce in/outflows as % of health workforce									*	
37	C'wealth/State/Territory expenditure on health & aged care as % of GDP			*							
38	No. of accredited/filled clinical training positions								*	▲	
39	Capital expenditure as a prop. of total health/ aged care expenditure			*							
40	Prop. of GDP (or health expenditure) spent on health R&D										*

## **Alignment with the National Health and Hospitals Reform Commission's Health and Aged Care Challenges**

The National Health and Hospitals Reform Commission identified 12 Health and Aged Care Challenges in response to its task to advise on a framework for the next health care agreements. The Commission recommended performance indicators for each of the challenges; those indicators have been considered by the AIHW as part of its development of the performance indicators in this report.

The performance indicators recommended in this report align with the Commission's challenges, as detailed in Table C4:

- Closing the gap in Indigenous health status is represented by three performance indicators that focus specifically on outcomes for Indigenous people. Most of the other performance indicators could also be presented in comparisons for Indigenous and other Australians.
- Investing in prevention is represented by ten performance indicators that either measure prevention activities or outcomes of prevention efforts.
- There are five performance indicators that relate specifically to services for pregnant women, babies and young children, and so are relevant to ensuring a healthy start.
- Four indicators relate specifically to continuity and integration of care and so are directly relevant to redesigning care for those with chronic and complex conditions. A further seven performance indicators are relevant to access and quality of health and aged care for chronic conditions.
- Recognising the health needs of the whole person is represented by the patient experience performance indicator, and the three performance indicators that specifically cover access/integration of mental health services and dental health services.
- The performance indicator on waiting times for services encompasses two measures relevant to ensuring timely hospital access.
- Caring for and respecting the needs of people at the end of life is represented by a component of the health service use differentials performance indicator.
- Promoting improved safety and quality of health care is covered by the 10 appropriate and safe performance indicators.
- There are eight performance indicators that are particularly relevant to improving distribution and equitable access to services. In addition, comparisons could be made for most of the other performance indicators by Indigenous status, socioeconomic status and area of residence of patients/clients.
- Ensuring access on the basis of need, not ability to pay is represented by two performance indicators.
- Five performance indicators could be used to monitor efforts improving and connecting information to support high quality care.
- Three indicators are relevant to ensuring enough well-trained health professionals and promoting research.

Of the 40 proposed indicators, 20 also appear in the benchmark performance indicator list developed by the NHHRC in April 2008, either exactly the same or in a very similar format (see Table C4).

Table C4: AIHW indicators mapped to Health and Hospitals Reform Commission challenges		Closing the gap	Prevention	Healthy start	Chronic/complex care	Whole person needs	Timely access	End of life care	Safety and quality	Equitable access	Needs basis	Connecting information	Well trained professionals	NHRC indicator no.
<b>* Primary challenge</b> <b>▲ Secondary challenge</b>														
<b>Better health</b>														
1	Life expectancy (incl. gap b/w Indigenous & non-Indigenous)	*								▲				1.1
2	Infant/young child mortality rate (incl. gap b/w Indigenous & non-Indigenous)	*								▲				
3	Incidence and prevalence of important preventable diseases and injury		*											
4	Potentially avoidable deaths		*											
<b>Focus on prevention</b>														
5	Risk factor prevalence		*											2.5, 2.6, 3.3, 3.4
6	Prop. of children with all developmental health checks (6, 12, 18 months, 4yrs)		▲	*										3.1
7	Cancer screening rates (breast, cervical, bowel)		*											2.3
8	Prop. of babies who are low birthweight, incl. Indigenous status	▲	*	▲						▲				2.4
9	Immunisation rates for vaccines in the national schedule		*	▲										2.2
10	Public health program expenditure as a proportion of total health expenditure		*											
<b>Access</b>														
11	Health service use differentials							▲		*				9.1, 9.2, 9.3
12	Selected potentially preventable hospitalisations		*											2.1, 4.7
13	Waiting times for services (elective surgery, EDs, GPs, public dental services)					▲	*							6.1, 6.2, 5.5
14	Treated prevalence rates for mental illness				*	▲				▲				
15	Residential and community aged care services per 1,000 pop aged 70+ yrs				*									
16	No. hosp. patient days by those ACAT assessed, waiting for residential aged care				*									4.2
17	Out-of-pocket costs as a prop. service cost									▲	*			
18	People deferring recommended treatment due to financial barriers									▲	*			10.1
<b>High quality—Appropriate</b>														
19	Prop. of diabetics with GP annual cycle of care, prop. with HbA1c below 7%				*									4.9
20	Proportion of pregnancies with an antenatal visit in the first trimester	▲	*							▲				3.2
21	Survival of people diagnosed with cancer (5 year relative rates)				*									
22	In-hospital mortality for selected procedures								*					
23	Proportion of asthmatics with a written asthma plan				*				▲					4.8
24	Unplanned readmissions w/in 28 days of surgical/mental health admission				*				▲					
25	Prop. of health/aged care services accredited								*					

<b>Table C4: AIHW indicators mapped to Health and Hospitals Reform Commission challenges</b> <i>(continued)</i>		Closing the gap	Prevention	Healthy start	Chronic/complex care	Whole person needs	Timely access	End of life care	Safety and quality	Equitable access	Needs basis	Connecting information	Well trained professionals	NHRC indicator no.
<b>* Primary challenge</b> <b>▲ Secondary challenge</b>														
<b>High quality—Safe</b>														
26	Selected adverse events in acute and other care settings								*					
27	Independent peer review of surgical deaths								*					
28	Prop. of admitted adult patients assessed for venous thromboembolism risk								*					
<b>Integration and continuity of care</b>														
29	Prop. discharge summaries transmitted electronically w/in 1 day discharge				*							▲		4.4
30	Discharge plans for complex care needs within 5 days of discharge				*							▲		11.2
31	Prop. of GPs with register/recall system for patients with chronic disease	▲			*							▲		
32	Post-discharge community care for mental health patients				*	▲						▲		4.5
<b>Patient-centred</b>														
33	Patient experience (based on domains of concern to patients)					*		▲				▲		5.4, 7.1, 11.1
<b>Efficiency/value for money</b>														
34	Cost per casemix-adjusted separation for acute care hospitals													
35	Total cost per medical specialist (MBS) service													
<b>Sustainable</b>														
36	Health/aged care workforce in/outflows as % of health workforce												*	12.1
37	C'wealth/State/Territory expenditure on health & aged care as % of GDP												*	12.3
38	No. of accredited/filled clinical training positions												*	12.5
39	Capital expenditure as a prop. of total health/ aged care expenditure												*	12.5
40	Prop. of GDP (or health expenditure) spent on health R&D												*	12.5

# Appendix D—Health Ministers' communiqué



## Australian Health Ministers' Conference JOINT COMMUNIQUÉ

29 February 2008

Today's breakthrough meeting of Australian Health Ministers agreed on the need for reciprocal public performance reporting, as well as priorities for immediate reform.

For the first time, this will mean the Commonwealth and State and Territory governments have agreed on building and reporting a comprehensive set of performance measures across the entire health system.

For example, this will include hospital performance reporting and measures of access to GPs by region. This will build on existing performance requirements.

Today's Australian Health Ministers' Conference also decided on a range of issues that should be included under a new Australian Health Care Agreement.

Those areas will focus on taking pressure off hospitals by keeping people well and avoiding hospital admissions. The key elements of health reform to be dealt with by the AHCA are how to bring together the various aspects of the system to ensure coordination of services to deliver effective and efficient health care.

At the last meeting of AHMC, all Health Ministers agreed that the next AHCA needed to be expanded beyond public hospitals to deliver the major reform that is needed.

Today's meeting identified the areas for immediate focus by the Health Ministers:

- Improving the experience for people using health services.
- Bringing the different aspects of the system together so that hospitals, ambulatory care, primary health care and care in the community have clear funding, role delineations, paths of engagement and transition and are able to continually improve their use both of the workforce and technology,
- Building new models of care based on the patient experience that specifically improve the speed of response to conditions arising from the ageing population, chronic disease and long-term conditions,
- Focusing the system on prevention.
- Expanding services and support for mothers and young children.
- Better services for Aboriginal and Torres Strait Islander people.
- Building the health workforce we need for the future.
- Developing the next generation of leaders to drive health system reform into the future.

Ministers also discussed national registration, and agreed on the need to take urgent action. Ministers agreed to write to the Prime Minister as Chair of COAG seeking finalisation of the national scheme.

Ministers agreed that today's decisions will go a long way towards building a more patient-focused health system, with real results for working families. There was a recognition that these decisions were not possible under the previous Commonwealth Government.

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# Abbreviations

AACR	Australasian Association of Cancer Registries
ABS	Australian Bureau of Statistics
ACAP	Aged Care Assessment Program
ACAT	Aged Care Assessment Team
ACCHOs	Aboriginal Community Controlled Health Organisations
ACIR	Australian Childhood Immunisation Register
ACS	Royal Australasian College of Surgeons
ACSA	Aged and Community Services Australia
ACSQHC	Australian Commission for Safety and Quality in Health Care
AHCA	Australian Health Care Agreements
AHMACH	Australian Health Ministers' Advisory Council
AHMC	Australian Health Ministers' Conference
AHRQ	Agency for Healthcare Research and Quality
AIDS	acquired immune deficiency syndrome
AIHW	Australian Institute of Health and Welfare
AMI	acute myocardial infarction
ASGC	Australian Standard Geographic Classification
AusDiab	Australian Diabetes, Obesity and Lifestyle Study
BMI	body mass index
CACP	Community Aged Care Packages
CATI	computer-aided/assisted telephone interview
CEC	Clinical Excellence Commission
CHF	congestive heart failure
COAG	Council of Australian Governments
CPMEC	Confederation of Postgraduate Medical Education Councils
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DALY	disability-adjusted life year
DEEWR	Department of Education, Employment and Workplace Relations
DoHA	Australian Government Department of Health and Ageing
DRG	diagnosis related group
DVA	Australian Government Department of Veterans' Affairs
EACH	Extended Aged Care at Home
EPC	Enhanced Primary Care
GDP/GSP	Gross Domestic Product /Gross State Product
GEM	geriatric evaluation and management

GPET	General Practice Education and Training
GP	general practitioner
HACC	Home and Community Care
HALE	health-adjusted life expectancy
HbA1c	glycosylated haemoglobin
HIV	human immunodeficiency virus
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification
ICU	intensive care unit
K10	Kessler Psychological Distress Scale
KPIs	Key Performance Indicators
MBS	Medicare Benefits Schedule
MRSA	methicillin resistant <i>Staphylococcus aureus</i>
MTRP	Medical Training Review Panel
n.a.	Not applicable
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NDSHS	National Drug Strategy Household Survey
NHHRC	National Health and Hospitals Reform Commission
NHMRC	National Health and Medical Research Council
NHPC	National Health Performance Committee
NHPF	National Health Performance Framework
NHS	National Health Survey
NMDS	National Minimum Data Set
NPDC	National Perinatal Data Collection
NSW TAG	NSW Therapeutic Advisory Group
OECD	Organisation for Economic Co-operation and Development
PBS	Pharmaceutical Benefits Scheme
PHIDG	Population Health Information Development Group
PHOFA	Public Health Outcomes Funding Agreements
PIP	Practice Incentives Program
PPH	potentially preventable hospitalisations
PYLD	prevalent years lived with disability
RAC	Residential Aged Care
R & D	Research and development
ROGS	Report on Government Services
RPBS	Repatriation Pharmaceutical Benefits Scheme
SEIFA	Socio-Economic Indexes for Areas
SLA	statistical local area

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