

Appendix 1 Scope of report

Definition of health expenditure

The term 'health expenditure' in this report refers to expenditure on health and health-related goods and services. Health goods and services expenditure includes expenditure on health goods (pharmaceuticals, aids and appliances), health services (clinical interventions), and health-related services (public health, research and administration), often termed recurrent expenditure.

This definition of health expenditure closely follows the definitions and concepts used in the *Health Expenditure Australia* series based on the OECD's System of Health Accounts (OECD 2000) framework. It excludes the following:

- expenditure that may have a 'health' outcome but that is incurred outside the health sector (such as expenditure on building safer transport systems, removing lead from petrol, and educating health professionals);
- expenditure on personal activities not directly related to maintaining or improving personal health; and
- expenditure that does not have health as the main area of expected national benefit.

Total health expenditure reported is slightly underestimated in that it excludes health expenditure by the Australian Defence Force, some school health expenditure and some expenditure incurred by Corrective Services Institutions in the various states and territories. Difficulties in separating expenditures incurred by local governments on particular health functions from those of state and territory governments means that these funding sources are often combined.

Scope of expenditure reporting

This report expands the scope of reporting from the previous two reports on expenditure on health services for Aboriginal and Torres Strait Islander people. For example:

- State and territory government expenditures include more detailed reporting on a wider range of categories than past reports.
- The non-government expenditure included relates to all health expenditures irrespective of whether the related services were funded by government or non-government funding providers.
- Acknowledging that broader definitions of health exist, a chapter on health-related welfare expenditure has been included, covering welfare services for the aged (GPC 2622) and welfare services for people with a disability (GPC 2623).

Government Purpose Classification

In collecting information for this report from states and territories, the ABS's GPC was used as the framework for grouping government expenditure. This majority of this report focuses

on health services defined by GPC category 25 (Table A1.1). The definitions for GPC category 25 were applied regardless of whether the expenditure was incurred by health, welfare or other organisation.

The one deviation from the GPC was in the reporting of public health expenditures. Instead, the categories of the National Public Health Expenditure Project have been followed (refer to AIHW 2004c for more information).

Table A1.1: Government Purpose Classification (GPC) used in this report

GPC code	Name of GPC category	Reporting area
25	Health	Health expenditure
251	Acute-care institutions	Health expenditure
252	Mental health institutions	Health expenditure
253	Nursing home for the aged	Health expenditure
254	Community health services	Health expenditure
255	Public health services	Health expenditure
256	Pharmaceuticals, medical aids and appliances	Health expenditure
257	Health research	Health expenditure
259	Health administration (not elsewhere classified)	Health expenditure
2622	Welfare services for the aged	Health-related welfare expenditure
2623	Welfare services for people with a disability	Health-related welfare expenditure

Source: ABS Government Purpose Classifications.

Expenditure estimates

The expenditure estimates for the total population were based on recurrent health expenditure data from the AIHW Health Expenditure database.

The presentation of health expenditure data is similar to reporting in *Health Expenditure Australia 2002–03* (AIHW 2004b) and other reports in that series. The major areas of reporting are described in Table A1.2 below.

Table A1.2: Major areas of health expenditure used in this report

Term	Definition
Public hospitals	Hospitals operated by, or on behalf of, state and territory governments that provide a range of general hospital services. Such hospitals are recognised under Australian Health Care Agreements.
Private hospitals	Privately owned and operated institutions that provide a range of general hospital services. In health expenditure publications the term includes private free standing day hospital facilities.
Emergency departments	<p>The dedicated area in a public hospital that is organised and administered to provide emergency care to those in the community who perceive the need for or are in need of acute or urgent care.</p> <p>The emergency department must be part of a hospital and be licensed or otherwise recognised as an emergency department by the appropriate state or territory authority. An emergency department provides triage, assessment, care and/or treatment for patients suffering from medical condition(s) and/or injury.</p>
Other non-admitted patient services	Dedicated areas within a public hospital that is organised to deliver clinical services to non-admitted patients not requiring urgent or acute-care.
Public (psychiatric) hospitals	Hospitals operated by, or on behalf of, state and territory governments that provide treatment and care specifically to patients with psychiatric disorders.
Services for older people (High-level residential care)	<p>Care provided to residents in residential care facilities who have been classified as having a need for and are receiving a very high level of care (i.e. patients classified in RCS categories 1–4).</p> <p>Establishments that provide long-term care involving regular basic nursing care to chronically ill, frail, disabled or convalescent persons or senile in-patients. They must be approved by the Department of Health and Ageing (DoHA) and licensed by a state or territory government.</p>
Patient transport	<p>Public or registered non-profit organisations which provide patient transport (or ambulance) services associated with out-patient or residential episodes to and from health care facilities.</p> <p>Excludes patient transport expenses that are included in the operating costs of public hospitals.</p>

(continued)

Table A1.2 (continued): Major areas of health expenditure used in this report

Term	Definition
Medical services	<p>Services of a type listed in the Medical Benefits Schedule that are provided by registered medical practitioners. Most medical services in Australia are provided on a fee-for-service basis and attract benefits from the Australian Government under Medicare. Expenditure on medical services includes services provided to private patients in hospitals as well as some expenditure that is not based on fee-for-service (i.e. alternative funding arrangements). It also includes expenditures funded by injury compensation insurers.</p> <p>Excluded are expenditures on medical services provided to public patients in public hospitals and medical services provided at out-patient clinics in public hospitals.</p>
Other professional services	<p>Services provided by registered health practitioners (other than doctors and dentists). These include chiropractors, optometrists, physiotherapists, speech therapists, audiologists, dieticians, podiatrists, homeopaths, naturopaths, practitioners of Chinese medicine and other forms of traditional medicine, etc.</p>
Benefit-paid pharmaceuticals	<p>Pharmaceuticals in the Pharmaceutical Benefits Scheme (PBS) and the Repatriation Pharmaceutical Benefits Scheme (RPBS) for which the Australian Government paid a benefit.</p>
Other pharmaceuticals	<p>Pharmaceuticals for which no PBS or RPBS benefit was paid.</p> <p>Includes:</p> <ul style="list-style-type: none"> • pharmaceuticals listed in the PBS or RPBS, the total costs of which are equal to, or less than, the statutory patient contribution for the class of patient concerned; • medicines dispensed through private prescriptions for items not listed in the PBS or RPBS; and • over-the-counter medicines such as aspirin, cough and cold medicines, vitamins and minerals, some herbal and other complementary medicines and a range of medical non-durables, such as bandages, band aids and condoms.
Aids and appliances	<p>Durable medical goods dispensed to out-patients, that are designed for use more than once, such as optical products, hearing aids, wheelchairs and orthopaedic appliances and prosthetics that are not implanted surgically. Excludes prostheses fitted as part of in-patient care in a hospital.</p>
Community health	<p>Non-residential health services offered by public or registered non-profit establishments to patients/clients, in an integrated and coordinated manner in a community setting, or the coordination of health services elsewhere in the community.</p> <p>Includes:</p> <ul style="list-style-type: none"> • dental services provided by the state and territories • community mental health • alcohol and other drug treatment • other community health services—such as domiciliary nursing services, well baby clinics and family planning services.

(Continued)

Table A1.2 (continued): Major areas of health expenditure used in this report

Term	Definition
Public health	<p>Services provided and/or funded by governments that are aimed at protecting and promoting the health of the whole population or specified population sub-groups and/or preventing illness, injury and disability, in the whole population or specified population sub-groups.</p> <p>The nine reporting categories are those defined by the National Public Health Expenditure Project:</p> <ol style="list-style-type: none"> 1. communicable disease control 2. selected health promotion 3. organised immunisation 4. environmental health 5. food standards and hygiene 6. breast cancer screening 7. cervical screening 8. prevention of hazardous and harmful drug use 9. public health research
Dental services	<p>A range of services provided by registered dental practitioners.</p> <p>Includes maxiofacial surgery items listed in the Medical Benefits Schedule.</p> <p>Excludes state and territory government expenditure on dental services (see Community health)</p>
Health administration	<p>Activities related to the formulation and administration of government and non government policy in health and in the setting and enforcement of standards for medical and paramedical personnel and for hospitals, clinics, etc. Includes the regulation and licensing of providers of health services.</p>
Health research	<p>Research undertaken at tertiary institutions, in private non-profit organisations and in government facilities that has a health socio-economic objective.</p> <p>Excludes commercially oriented research carried out or commissioned by private business, the costs of which are assumed to have been included in the prices charged for the goods and services (e.g. pharmaceuticals that have been developed and/or supported by research activities).</p>

Source: AIHW 2004b.

Primary and secondary/tertiary care

Total health expenditures have been allocated, where possible, to the broad categories of primary and secondary/tertiary care. Differences between primary, secondary and tertiary health services are difficult to precisely define, particularly when the allocation of data to expenditure categories is not always clear, or treated in a similar manner (Deeble et al 1998). However, a similar analysis to that performed in the two previous reports has been completed applying the following general definitions.

Those health practitioners who have first contact with people are considered to provide primary health care. Included in expenditures on primary health care are expenditures on

services provided by general practitioners (GPs) – including any associated diagnostic services and prescribed medications – plus community health services and public health activities. Expenditures on secondary/tertiary health care are those related to goods and services provided by providers to whom primary health care providers refer people – i.e. they are a secondary or tertiary point of contact for health services. These are generally limited to expenditures on admitted patient care in acute-care hospitals and specialist medical services – including any associated diagnostic services.

Therefore, for Aboriginal and Torres Strait Islander people, expenditure on primary health services comprised:

- allocated expenditures on public health activities and community health services (including all expenditure on health services by ACCHSs);
- expenditure on general practitioner (GP) services for which benefits were paid under Medicare to Indigenous people (and the diagnostic services ordered by them);
- pharmaceuticals prescribed by GPs for which PBS benefits were paid;
- non-benefit pharmaceuticals dispensed to individuals;
- a proportion of aids and appliances (split along the same lines as expenditure on pharmaceuticals);
- 50% of the estimated costs associated with non-admitted patient services in acute-care hospitals and transport for Aboriginal and Torres Strait Islander patients.

The remainder was classified as secondary/tertiary.

For non-Indigenous people, the same basic divisions were applied.

Expenditures on 'Administration' and 'Other health services nec' (including research) were not allocated to either group.

Data limitations

There are some important issues that need to be understood about the data contained in this report. The quality of the information and estimates is limited by underlying data and the methods used for calculation. A number of key issues are outlined below. Readers are urged to bear them in mind and to exercise appropriate caution in the interpretation of the estimates.

Quality of data on Indigenous service use

For many publicly funded health services there are few details available about service users and, in particular, their Indigenous status. For privately funded services, this information is frequently unavailable. For those services that do collect this information, recording Indigenous status accurately for all people does not always occur. The result is that it is not possible to make accurate estimations of health expenditure for Aboriginal and Torres Strait Islander people and their corresponding service use.

Furthermore, much of the data that is available relates only to needs that have been met. There are limited data available on unmet needs for health services by Aboriginal and Torres Strait Islander people. Consequently this report does not directly assist in identifying gaps in service delivery.

Variations within regions

There are variations in the health status of Aboriginal and Torres Strait Islander people across regions, however variability in data quality limits the reliability of examinations of health status by region. Indigenous identification is likely to be more accurate in areas where Indigenous Australians make up a larger proportion of the population, and poorer where they are a small minority (ATSIHWIU 1999, Young 2001).

This hypothesis was further supported by evidence from a number of studies examining the accuracy of hospital data in the lead-up to this report.

One WA study of the data collected by 26 public hospitals over the period from June 2000 to January 2001 found variations in the accuracy of hospital records covering Indigenous status (Young 2001). The study found that hospital data from the area with the highest proportion of Indigenous Australians within its catchment area had the highest level of accuracy in the recording of Indigenous status. This corroborated earlier evidence collected in a national study covering 11 hospitals (ATSIHWIU 1999).

In New South Wales, a record linkage study undertaken prior to the second Indigenous health expenditure report resulted in the application of Area Health Service specific under-identification factors. For this report, the results of that analysis were again used, however variations in the adjustment were applied at a very broad level to two regional classifications – a 38% under-identification adjustment was applied to data from hospitals in metropolitan areas and a 21% adjustment to all other hospitals.

It could be concluded that some of the patterns suggested in this analysis are influenced by these likely variations in identification. It is also important to consider that the application of under-identification adjustments, particularly when applied at a state than regional level, may mask the patterns this analysis is attempting to reveal.

Quality of expenditure estimates

There may be some limitations associated with the scope and definition of health expenditures included in this report. Other (non-health) agency contributions to health expenditure, such as 'health' expenditures incurred within education departments and prisons, are not included.

Furthermore, while every effort has been made to ensure consistent reporting and categorisation of expenditure on health goods and services, in some cases there may be inconsistencies across data providers. These may result from limitations of financial reporting systems, and/or different reporting mechanisms. Reporting of health administration (nec) is one such example, in some cases all the associated administration costs have been included in the estimates of expenditure on a particular health service category (for example acute-care services), whereas in other cases, they have not and have been separately reported.

Per person expenditure estimates

Reporting expenditure estimates on a per person or per capita basis is a practice followed in many financial reports aimed at enabling comparative assessments. Estimates of average expenditures per person have been included in this report. These estimates and comparisons need to be interpreted with care. They are an indication of the average health expenditure per head of the reference population(s) – in this case, the whole of the Indigenous and non-Indigenous populations drawn from ABS census estimates for 2001 – and do not reflect

the average expenditure incurred by each person accessing the goods and services being discussed.

Depending on the nature of the services being examined, it is also important to bear in mind that the age structure of the Aboriginal and Torres Strait Islander population is younger than that of the non-Indigenous population. Accordingly, for programs that target particular population sub-groups – such as services for older people, childhood immunisation, breast and cervical screening – the reported estimates of average expenditures per person do not reflect average expenditures on the members of those target populations.

Economies of scale and geographic isolation

Economies of scale and the relative isolation of target populations both greatly influence the costs of producing and delivering health goods and services. Consequently, these are factors that can have large impacts on both the levels of health expenditure and the quantity of goods and services that can be provided to particular population groups. For example, the Northern Territory, with its relatively small population, faces substantial diseconomies in comparison with, say, Victoria in providing health goods and services to its population. This comparative disadvantage is further compounded by differences in the relative isolation of two jurisdictions' populations. And this disparity is even more pronounced in respect of the Indigenous populations of the two jurisdictions.

Furthermore, variations in Indigenous health status by geographic regions are likely, although these are not easily substantiated by the available data. Several reports, including one examining death rates within regions, attest to the poorer health of Australians who live in more remote areas (AIHW 2003c, AIHW & AACR 2003).

Appendix 2 Population estimates

Aboriginal and Torres Strait Islander population estimates

Population estimates used in this report are from the 2001 Census of Population and Housing conducted by the Australian Bureau of Statistics (ABS). To produce Indigenous population counts, the ABS makes allowance for net undercount and for instances in which Indigenous status is unknown (AIHW & ABS 2003). These estimates are sometimes referred to as 'Experimental estimates of the resident Indigenous population'.

Population estimates for non-regional analyses

Population estimates for Aboriginal and Torres Strait Islander people were as at June 2001. There is argument to suggest that the mean resident population over the year 1 July 2001 to 30 June 2002 should be calculated to produce a 2001–02 population estimate. However, as the population projections (covering 2002) were not available until part-way through the production process and the population estimates vary only slightly using a calculated annual mean, the beginning of period population was used.

It is important to note that the total Australian population is made up of the sum of the state and territory populations. As such, it excludes 2,584 people who reside in Christmas Island and the Cocos Islands.

Table A2.1: Population estimates for Aboriginal and Torres Strait Islander people and the total Australian population, 2001

State/territory	Total population		Indigenous population		
	Number	% of total population	Number	% of Indigenous population	% of state population
NSW	6,575,217	33.9	134,888	29.4	2.1
Vic	4,804,726	24.8	27,846	6.1	0.6
Qld	3,628,946	18.7	125,910	27.5	3.5
WA	1,901,159	9.8	65,931	14.4	3.5
SA	1,511,728	7.8	25,544	5.6	1.7
Tas	471,795	2.4	17,384	3.8	3.7
ACT	319,317	1.6	3,909	0.9	1.2
NT	197,768	1.0	56,875	12.4	28.8
Total	19,410,656	100.0	458,287	100.0	2.4
Total^(a)	19,413,240		458,520		

(a) Includes Other Territories

Source: ABS 2003c.

Regional population estimates and classification scheme

A 2001 revised version of the Accessibility-Remoteness Index of Australia (ARIA), commonly referred to as ARIA+, has been used in this report as a framework for the regional analysis of health outcomes. The index is based on the Australian Standard Geographical Classification (ASGC) and replaces the original ARIA used in the 1998–99 study. Information on the development of ARIA+ is presented below, along with an outline of the differences between the ARIA+ and ARIA classifications.

Accessibility and remoteness—ASGC Remoteness area (ARIA+)

The ARIA+ classification system provides a framework for assessing regional differences in health expenditure. The original ARIA model was developed in 1997 by the National Key Centre for Social Application of Geographic Information Systems (GISCA). In 2001, the ABS added the Remoteness Area Structure (ASGC Remoteness Areas) to the ASGC; creating ARIA+.

Both ARIA and ARIA+ provide classification frameworks, which measure the level of access a region has to a range of services. Since remoteness is commonly associated with the lack of accessibility to services, this classification focuses on disadvantage in terms of access to services due to region of residence in Australia. Furthermore, as ARIA/ARIA+ are geographical approaches, they exclude socioeconomic, urban/rural and population size factors. They reflect the actual distance needed to travel by road from population localities to service centres of various sizes (see AIHW 2004d).

ARIA scores have previously been categorised as—highly accessible, accessible, moderately accessible, remote and very remote. Under ARIA+ a new classification structure has been developed (Box A2.1).

Box A2.1: Structure of the ASGC Remoteness Areas and ARIA+ index values

<i>Class</i>	<i>Abbreviation</i>	<i>Index value range</i>
<i>Major cities of Australia</i>	<i>MC</i>	$0 \leq MC \leq 0.2$
<i>Inner Regional Australia</i>	<i>IR</i>	$0.2 < IR \leq 2.4$
<i>Outer Regional Australia</i>	<i>OR</i>	$2.4 < OR \leq 5.92$
<i>Remote Australia</i>	<i>R</i>	$5.92 < R \leq 10.53$
<i>Very Remote Australia</i>	<i>VR</i>	$10.53 < VR \leq 15$

Source: ABS 2001b.

Population estimates for regional analysis

Regional analyses in this report have used ABS Population Characteristics data for Aboriginal and Torres Strait Islander Australians to provide population distributions by ASGC Remoteness Areas (using ARIA+ index values) (ABS 2003c).

Table A2.2: Population distribution in Australia by ASGC Remoteness Areas, Aboriginal and Torres Strait Islander people and total Australian population, 2001–02

ASGC remoteness area	Total population		Indigenous population	
	No.	%	No.	%
Major Cities	12,870,986	66.3	138,494	30.2
Inner Regional	4,025,895	20.7	92,988	20.3
Outer Region	2,013,563	10.4	105,875	23.1
Remote	324,321	1.7	40,161	8.8
Very Remote	178,475	0.9	81,002	17.7
Total	19,413,240	100.0	458,520	100.0

Note: The populations in this table include Other Territories.

Source: ABS 2003c.

Revisions to population estimates

In developing the 1998–99 estimates of expenditure on Aboriginal and Torres Strait Islander people, an estimated total Indigenous population of 406,311 was used (Table A2.3). This was based on an average of the official Australian Bureau of Statistics estimate of the Indigenous population for 1998 and 1999 at the time of publication.

The population estimates for 1998–99 and 2001–02, *prima facie*, suggest an average 4.1% per year increase between the two studies in the identified Indigenous population, which is well in excess of the overall rate of population growth for Australia of 1.0% per year.

Table A2.3: Estimated mean resident population, Indigenous Australians and non-Indigenous people, 1995–96, 1998–99 and 2001–02, Australia

Study period	Estimated mean resident population			
	Indigenous		Non-Indigenous	
	Population ('000)	Annual change (%)	Population ('000)	Annual change (%)
1995–96	367.81	..	18,184.00	..
1998–99	406.31	3.4	18,429.57	0.4
2001–02	458.52	4.1	18,954.72	0.9

Sources: 1995–96 estimates—Deeble, Mathers, et al 1998:63; 1998–99 estimates—AIHW 2001; 2001–02 estimates—ABS 2003c.

For the earlier (1995–96) study, the Indigenous population was estimated at 367,808. This was later revised to 381,402 (AIHW 2001:169).

Following the 2001 census, the population estimates, both for the total Australian population and for the Indigenous Australian sub-set of the aggregate, have been substantially revised. These revisions were undertaken subsequent to the publication of *Expenditures on health services for Aboriginal and Torres Strait Islander People 1998–99*.

The revised estimates of Indigenous populations for 1995–96 and 1998–99 are 409,690 and 436,650, respectively. This, in turn, indicates an average rate of increase in the Indigenous population between 1995–96 and 1998–99 of 2.1% and between 1998–99 and 2001–02 of 1.6% per year.

Appendix 3 Estimation of Australian Government expenditure on Aboriginal and Torres Strait Islander people

For many areas of expenditure by Australian Government there were limited administrative data on the utilisation of the associated services by Aboriginal and Torres Strait Islander people. Accordingly, in many areas, estimates were made on the basis of survey data, or an approximation of Indigenous use was made, based on likely Indigenous access to the service. Details of the methodology for each of the major areas of health expenditure are outlined below.

Expenditure by the Health and Ageing portfolio

Public (non-psychiatric) hospitals

Because the states and territories are responsible for the provision of public hospital services, they are regarded as incurring almost all of the expenditure involved in providing those services. There are, however, some expenditures on public (non-psychiatric) hospitals that are considered to have been incurred by the Australian Government. These are related to specific Australian Government programs aimed at supporting particular activities, which are concentrated in public hospitals. The related expenditures were not included in expenditures reported by state and territory governments. In 2001-02, a total of \$184.6 million was spent on those programs (Table A3.1). Of this, an estimated \$9.1 million was for services to Aboriginal and Torres Strait Islander people.

Table A3.1: Expenditures incurred by the Australian Government on public (non psychiatric) hospitals, 2001–02 (\$ million)

Program	Indigenous	Non-Indigenous	Total
Access to Public Hospitals	0.1	1.4	1.4
Australian Organ Donor Register	0.1	1.9	2.0
Bone Marrow Transplant Program	0.1	2.2	2.3
Radiation Oncology Services	1.3	25.2	26.5
National Cord Blood Collection Network	0.1	2.1	2.3
National demonstration hospitals	0.1	1.9	2.0
Organ and tissue donation sector	0.1	1.0	1.0
Blood and organ donation research and support	0.1	1.0	1.1
Blood fractionation products and blood related products	7.2	138.9	146.0
Total expenditure	9.1	175.6	184.6

Source: AIHW Health Expenditure Database.

The Indigenous share of this expenditure was determined on the basis of analysis of state and territory admitted patient expenditure for Aboriginal and Torres Strait Islander people.

Private hospitals

Approximately \$7.7 million of direct expenditure by the Australian Government was for private hospital services in 2001–02. This expenditure was in the way of grants to not-for-profit hospitals to ease the costs of transition to new Fringe Benefits Tax arrangements. The estimated Indigenous share of this expenditure (0.5%) was calculated from survey data indicating the Indigenous proportion of all people with private health insurance (ABS 2002b).

Services for older Australians

High-level residential aged care

Most of the estimated expenditure on older people identified in this report relates to expenditure on people in residential care facilities – formerly nursing homes and hostels for the aged. These types of facilities were combined into the single classification ‘Residential aged care facility’ following a review of aged persons’ residential care in the late 1990s. At that time, a number of different types of benefits and payments by the Australian Government were combined into a single residential care subsidy based, not on the type of institution, but on the care needs of and the levels of care provided to the residents of the recipient institution. The residents themselves are also required to make a contribution to the cost of their care in the form of a co-payment that is, in part, based on their ability to pay.

A Resident Classification Scale (RCS) level is assigned to each resident on admission to a residential aged care facility. That RCS level is reviewed regularly during the course of the resident’s stay and, as a result of that review process, may be maintained or revised up or down, depending on the assessed care needs of the person, and the level of care that the facility will provide. The RCS for each resident is based on a combination of the person’s health and personal care factors at the time of assessment or review.

There are eight levels in the RCS. They range from one – the highest care need – to eight. Residents who are assessed in the four highest RCS levels (that is levels one to four, inclusive) are regarded as needing and receiving predominantly health services. These are often referred to as receiving ‘high-level’ residential care, and both the Australian Government subsidy and the resident’s contribution are included as expenditure on health services. Residents assessed in RCS levels five to eight are regarded as receiving predominantly personal care and other non-health services. The subsidy and resident’s co-payment for these people are considered to be expenditure on health-related welfare services in this report.

The Australian Government’s Department of Health and Ageing (DoHA) maintains a computer-based database known as the Aged and Community Care Management Information System (ACCMIS) to allow it to monitor its aged care programs, including the residential care subsidy scheme. In the case of the residential care subsidy scheme, ACCMIS contains detailed information in respect of each person in respect of whom an approved service provider attracts subsidies. The individual data in ACCMIS include:

- Indigenous status;
- pension status;
- usual residence status (prior to admission); and
- living arrangements (prior to admission).

DHA provided unidentifiable extracts of data from ACCMIS for use in estimating the Government’s recurrent expenditure on the residential care subsidy. Those data were also used to estimate the residents’ contribution, which has been included in this report as non-government expenditure on aged persons’ care.

While Indigenous status is an element of the data received from ACCMIS, identification of Indigenous status by an approved service provider is not compulsory, nor is it an essential element of the subsidy assessment process. Therefore, there may be some degree of under-identification of Indigenous residents reported through ACCMIS.

An estimated daily subsidy cost to Government was applied to the number of occupied bed-days for each resident during the financial year. This cost depended on the type and level of care, and comprised a basic subsidy plus primary and other supplements less reductions and income tested fees.

About 9.9% of the total estimated funding through the residential care subsidy related to residents whose Indigenous status was not reported. This amount was allocated to expenditure on Indigenous and non-Indigenous residents according to the distribution of expenditure in relation to their peers. For example, the proportion of resident care days in each RCS level that were identified as relating to Indigenous residents was applied to those resident care days in the same RCS where the Indigenous status of the resident was not known. The sum of the identified Indigenous care days and the estimated Indigenous proportion of the days where the Indigenous status of the resident was not known was estimated to be the total number of subsidy days related to Indigenous residents at that RCS level.

The Australian Government, through the Health and Ageing portfolio, spent an estimated \$3.4 billion on high-level residential aged care in 2001–02. Of this, \$30.5 million (0.9%) was for Aboriginal and Torres Strait Islander people.

Services for veterans are also included in ACCMIS data. As such the same method was followed to estimate expenditure on Indigenous veterans.

Other services for older Australians

A further \$9.0 million was spent on other high-level care services for Indigenous people provided through multi-purpose services in rural and remote areas and by flexible care services. Data were not available on the Indigenous status of residents in multi-purpose services. Indigenous expenditure was estimated using the proportions of Indigenous clients in high-level residential aged care services by remoteness areas were applied. All of the expenditure on Indigenous-specific multi-purpose services was allocated to Indigenous Australians.

A small amount of Australian Government expenditure was for the provision of services through the Extended Aged Care at Home (EACH) program. EACH services are primarily available in major cities. Indigenous use of these services was estimated to be low, in accordance with their low access to high-level residential aged care in major cities.

Medical services and Pharmaceuticals

Estimation of Medicare and PBS expenditure

In the course of preparation for this report, substantial investigations into the methodology for estimating the Indigenous share of Medicare and PBS occurred. The following material outlines much of these investigations, and ultimately the method followed in preparing the estimates of expenditure.

Australian Government expenditures on Aboriginal and Torres Strait Islander people through the Medical Benefits Scheme (MBS) and Pharmaceutical Benefits Scheme (PBS) are not easily quantified. Until very recently the administrative data collected through these programs has not included information on the Indigenous status of patients. Since November 2002, Aboriginal and Torres Strait Islander people have been able to voluntarily identify through the Medicare system. At the time of preparing this report, however, there were limited numbers of Indigenous Australians identified within Medicare data.

Accordingly, in this report, the estimates of expenditure on Aboriginal and Torres Strait Islander people through these programs are largely based on survey data. Future report may be able to use the voluntarily identified Medicare data.

In this report, as in the previous report (for 1998–99), the national, continuing survey of general practitioner activity entitled 'Bettering the Evaluation and Care of Health', or BEACH, is the principal source of data used in estimating the Aboriginal and Torres Strait Islander share of MBS and PBS benefits. Two years of survey data, collected between April 2001 and March 2003, have been used in this analysis.

The BEACH survey, which is managed by the General Practice Statistics and Classification Unit, is a collaborative study between the Australian Institute of Health and Welfare and the Family Medicine Research Centre at the University of Sydney. The annual report of the survey, which has been conducted annually since 1998, contains a comprehensive description of the methods used to survey General Practitioners (GPs) (AIHW: Britt et al. 2002; AIHW: Britt et al. 2003).

Because the BEACH survey had not commenced, the estimates of MBS and PBS in the 1995–96 report were based on the results of special surveys of general practice and pharmacies undertaken in 1997. Full details of the method are provided in the first report on health expenditures for Aboriginal and Torres Strait Islander people (Deeble et al. 1998). Some information from the special surveys for the 1995–96 report has been used in this report and

the previous report. Those special surveys are still the only available source of information about certain aspects of practice such the proportions of referrals to private and publicly employed specialists, and information on dispensing patterns for Indigenous Australians.

BEACH survey – background

Since 1998–99, the BEACH survey has in each year randomly selected about 1000 GPs who billed Medicare for at least 375 GP service items in the preceding quarter. Each GP then records details of their activity for 100 consecutive patient encounters. After weighting for the characteristics of the participating doctors (age, gender, location, activity levels, etc.) there were 96,973 encounters in 2001–02 and 100,987 encounters in 2002–03.

Apart from such patient characteristics as age, gender, residence and health care card status, the survey collects data on the nature of each encounter (whether direct or indirect via telephone etc.), services provided, medications prescribed or recommended, pathology and imaging services ordered and referrals made, as well as sources of payment and entitlements to benefit under various schemes.

The weighted results of the survey are, in effect, a 0.1% sample of all GP activity in a year and their key statistical features correspond very closely with the aggregate Medicare data. Expenditure estimates are largely derived by expanding from the information collected through the BEACH survey.

Non-response and under-identification of Indigenous Australians

In order to prepare estimates of MBS and PBS benefits to Aboriginal and Torres Strait Islander people, two issues concerning the enumeration of Indigenous patients in BEACH data required investigation – the issues of non-response to the Indigenous status questions and under-identification of Indigenous Australians. Our investigations of these issues suggested that there are a number of different methodological pathways which could be followed to handle these issues in the expenditure estimation procedures. Each method relies on a combination of statistical evidence and assumptions which cannot be fully tested. Thus it is not possible to conclude definitively which of the alternative methods is best. Fortunately, the alternative methods result in very similar estimates of expenditure. And statistical evidence is accumulating which will support the choice of a definitive estimation method.

Non-response to Indigenous status questions

Each GP participating in the BEACH survey is instructed to ask the patient whether he or she identifies as an Aboriginal person and/or as a Torres Strait Islander. But it is not always clear that the question was asked exactly as prescribed and in many encounters, no response to the question was recorded on the survey form. For example, in 2001–02, the Indigenous status question was not completed at all in about 12.5% of encounters. In the reports produced summarising information from the BEACH survey, these encounters are treated as ‘non-Indigenous’, but the 1998–99 report on Indigenous health expenditure (AIHW 2001) followed a different approach – missing data were redistributed according to the 94% of encounters where the question was answered.

The issue of non-response was considered again when preparing estimates for this report. It was thought that there were no firm grounds for assuming that non-responses can validly be re-distributed proportionally to the Yes/No responses, even though this was the approach taken in the 1998–99 report. Similarly, there were no firm grounds for assuming that failure to enter a response indicated that a patient was or was not an Indigenous Australian. For

that reason, when preparing the estimates for this report, several alternative treatments of non-response were assessed, rather than invoking any single assumption about the characteristics of non-respondents.

Two methods of treating non-response are summarised later in this section. In the first method, all missing data are included with non-Indigenous encounters. It should be noted that this method embodies an implicit adjustment for under-identification of Indigenous patients. The second method takes a similar approach to the 1998–99 report – namely distributing the non-responses. This method has been coupled with a more conservative adjustment for under-identification than is implied by the first method.

Under-identification of Aboriginal and Torres Strait Islander patients

In addition to the issue of non-response, new evidence of under-enumeration of Aboriginal and Torres Strait Islander people in the BEACH survey (AIHW GPSCU 2004a) became available during the preparation of this report and it warranted further investigation.

In the 5th and 6th years of the BEACH data collection (April 2002 to March 2004), two sub-studies were run that aimed to validate the routine BEACH questions on language background and Indigenous status. The methodology for such BEACH substudies, referred to as SAND (Supplementary Analysis of Nominated Data), is outlined on the website of the AIHW's General Practice and Statistical Classification Unit (AIHW GPSCU 2004b).

The SAND substudies in question surveyed 18,091 patients attending 1,474 GPs between December 2002 and March 2004. A section on the bottom of each encounter form included questions about the patient's cultural background, based on the 2001 Census questions. Patients were asked about their country of birth, parents' countries of birth, whether the patient was of Aboriginal or Torres Strait Islander origin and what language was spoken at home.

The combined results of the SAND substudies suggested quite substantial under-enumeration of Aboriginal and Torres Strait Islander patients. However, the substudies had some limitations. First, the sample size in these SAND substudies was limited. Second, there was some evidence to suggest that external factors may have influenced the recorded rate of Indigenous encounters during 2003–04 (the period of the substudies). These factors included a campaign highlighting the importance of Indigenous identification and the introduction of the pneumococcal vaccination with associated incentive payments to GPs. These factors may have artificially boosted the percentage of Indigenous patients in the substudies' collection period above the percentage which it would be appropriate to use when adjusting 2001–02 expenditure estimates for under-identification.

The SAND substudies use a sample of the GPs who participated in the annual BEACH collection. An analysis of the proportion of Indigenous encounters recorded through the routine BEACH collection and through each block of the SAND sample was undertaken. The proportion of respondents identifying as Indigenous varied appreciably between blocks in both the routine BEACH and SAND samples. But, for any given block of GPs, there appeared to be a somewhat stable relationship between the proportion of patients identifying as Indigenous in the SAND vis-à-vis the routine BEACH collection. After removal of outlier blocks, the ratio of the proportion of Indigenous encounters in SAND to those in the routine BEACH collection was 1.4:1. These analyses imply that the Indigenous encounters in BEACH (on which expenditure estimates were based) should be adjusted upwards by 40% to compensate for under-identification.

The annual proportions of encounters with Aboriginal and Torres Strait Islander people that occurred since the commencement of the BEACH survey were also assessed. At the time six

full years of BEACH data were available. These indicated that the proportion of encounters with Aboriginal and Torres Strait Islander people fell within the range of 0.7% to 1.6% (Table A3.1). The collection methods in 1999–00 and 2000–01 differed, rendering the implied Indigenous proportions in these years somewhat unreliable. In 2003–04, as noted above, there were some external factors that may have influenced the recorded rate of Indigenous encounters. Furthermore, for many encounters in that year, the collection of information on Indigenous status occurred through the SAND substudy rather than through the routine method.

Examining only those BEACH data collected through the routine collection method, suggests that the unadjusted percentage of total encounters that were for Indigenous people fell within the range 1.0–1.2%.

Table A3.2: Proportion of BEACH encounters with Aboriginal and/or Torres Strait Islander patients, 1998–2002

Data collection year	Total encounters	Indigenous number	Per cent of encounters Indigenous (%)	95% LCL	95% UCL
1998–99	96,901	1,163	1.20	0.94	1.46
1999–00 ^(a)	104,856	751	0.72	0.52	0.91
2000–01 ^(a)	99,307	775	0.78	0.46	1.10
2001–02	96,973	982	1.01	0.76	1.27
2002–03	100,987	1,375	1.02	0.79	1.26
2003–04	98,877	1,600	1.62	1.19	2.04

(a) Data collection forms in these years allowed only for a single 'positive' response for Aboriginal and Torres Strait Islander data. Other years allowed for 'yes' or 'no' responses. This change in the reporting form is thought to have resulted in a lower response rate.

Source: AIHW—GPSCU BEACH data.

In the event, it was necessary to choose an adjustment for under-identification, based on a triangulation of this partial evidence. Applying an under-identification factor of 24% to the two years of BEACH data used to estimate Medicare and PBS benefits appeared reasonable. The implications of applying this factor are summarised in 'Method 1' below.

An alternate method ('Method 2') is also summarised below. Under this method, the non-responses were redistributed according to the encounters where questions on Indigenous status were answered. Such distribution of non-response was the method followed for the 1998–99 report. It effectively embodies a partial adjustment for under-identification and it alters the base survey data to which under-identification adjustments would be made. Accordingly, the adjustment for under-identification need not be as high as the 24% adopted under Method 1. A loading of 10% could be applied, as summarised in 'Method 2' below.

Method 1

Under this method, the non-responses were included with non-Indigenous encounters. However, a 24% adjustment for under-identification of Indigenous Australians was made to the base survey data. It implies that Indigenous Australians account for 1.26% of general practice encounters.

Table A3.3: Method 1, estimated Medicare-paid GP services, 2001–02

	BEACH data (weighted) ^(a)	Adjustments ^(b)	Est. MBS paid encounters	Expansion to MBS data	Est. services (million)	Est. bens (\$ million)
Indigenous	2,014	2,492	2,319	534.38	1.239	34.0
Non-Indigenous	174,086	195,468	184,666	534.38	98.681	2,708.2
Non-responses	21,860					
Total	197,960	197,960	186,985		99.921	2,742.2
MBS GP services	99.92 million					

(a) BEACH data are drawn from the 2001–02 and 2002–03 collection years.

(b) Non-responses are included with non-Indigenous and a 24% adjustment for under-identification of Indigenous Australians is applied.

Sources: AIHW—GPSCU BEACH data; AIHW & Britt et al. 2003; AIHW & GPSCU 2004a; DoHA 2004a; Deeble et al. 1998; DoHA unpublished data.

Extrapolation of the data to all Medicare paid GP encounters suggests that 1,239,000 Aboriginal and Torres Strait Islander consultations were conducted in 2001–02. At an average benefit paid of \$27.44 per service, this suggests that the total Medicare benefits for GP services to Indigenous Australians were \$34.0 million.

Method 2

Under this method, the BEACH survey forms for which no information on Indigenous status was recorded – ‘non-responses’ – were redistributed according to the encounters where questions on Indigenous status were answered. Following this pro-rata distribution of the non-responses and a more conservative adjustment of 10% for under-identification of Indigenous Australians, the estimated proportion of Indigenous general practice clients is 1.26% (the same as the proportion implied by Method 1).

Table A3.4: Method 2, estimated Medicare-paid GP services, 2001–02

	BEACH data (weighted) ^(a)	Adjustments ^(b)	Est. MBS paid encounters	Expansion to MBS data	Est. services (million)	Est. bens (\$ million)
Indigenous	2,014	2,490	2,318	534.38	1.238	34.0
Non-Indigenous	174,086	195,470	184,668	534.38	98.682	2,708.2
Non-responses	21,860					
Total	197,960	197,960	186,985		99.921	2,742.2
MBS GP services	99.92 million					

(a) BEACH data are drawn from the 2001–02 and 2002–03 collection years.

(b) Non-responses are redistributed between Indigenous and non-Indigenous according to the identified encounters and a 10% adjustment for under-identification of Indigenous Australians is applied.

Sources: AIHW—GPSCU BEACH data; AIHW & Britt et al. 2003; AIHW & GPSCU 2004a; DoHA 2004a; Deeble et al. 1998; DoHA unpublished data.

Extrapolation of the data results in an estimated 1,238,000 Medicare-paid GP services for Aboriginal and Torres Strait Islander people. At an average benefit paid of \$27.44 per service, the resultant estimate of Medicare benefits for GP services to Indigenous Australians was \$34.0 million.

Conclusions regarding method

The application of either method produces similar estimates of Indigenous MBS benefits for GP services. The other service data (medications prescribed, pathology tests, imaging investigations ordered and referrals to specialists) follow from this base estimate of GP services. Therefore, the estimates of benefits for these other MBS and PBS services are also of a similar magnitude under either method.

The estimates of MBS and PBS benefits in this report have been produced following 'Method 1', outlined above. A more detailed description of the methodology follows this section.

Notwithstanding the fact that the alternative approaches have resulted in similar estimates of MBS and PBS expenditures, additional evidence is needed before a definitive estimation method can be chosen for future issues of this triennial report. Fortunately, such evidence is accumulating. Additional SAND data, new data concerning BEACH encounters taking place in an ACCHS, and the Medicare Voluntary Indigenous Identifier (VII) data will all contribute to a greater understanding of these issues in the next report.

Results—estimated services and benefits

Estimates of Aboriginal and Torres Strait Islander MBS and PBS benefits were made on the basis of the numbers of GP encounters, services provided and prescriptions written for Aboriginal and Torres Strait Islander people.

MBS benefits

Calculating MBS benefits from the BEACH data is based largely on expansion of the survey data to the MBS data. As noted earlier, one year of BEACH data represent approximately a 0.1% sample of all GP activity. Two years of data were used in the analyses for this report.

The method involves the following steps:

- Services ineligible for Medicare benefits were excluded. Those ineligible services include compensable services and those paid through other means, such as state or hospital paid encounters.
- The GP generated services—pathology tests and imaging examinations requested by GPs—were directly estimated from the BEACH data, with the necessary adjustments for under-identification of Indigenous patients.
- In order to estimate specialist services, the BEACH data on referrals were examined. BEACH (as primarily a GP survey) recorded 'referrals', not the individual services on which Medicare payments are based. Some additional analysis was also required to determine those referrals that were to a private specialist and those to a specialist practising in a public hospital or public clinic—this is because it was assumed that specialist services provided in the public system would not generate a Medicare payment. These proportions were determined on the basis of information collected through the special surveys undertaken for the 1995–96 report. Overall the Medicare data suggested that, for each referral, an average of 2.9 consultations was generated.
- Specialist generated services—pathology, imaging and procedures also needed to be determined. There are no direct data on Aboriginal and Torres Strait Islander use of these services. It was assumed that they were similar to that for all other privately-referred patients and the cost of such services were allocated in proportion to the Indigenous share of specialist referrals (0.5%).

The method also involved adjustments for under-identification (as discussed in the previous section of this chapter).

Table A3.5: Estimated medical services and benefits through MBS for Aboriginal and Torres Strait Islander people, 2001–02

	Services (million)	Average benefit (\$) ^(a)	Total estimated benefits (\$ million)
Services by non-specialist practitioners			
GP	1.239	27.44	34.0
Pathology	0.491	27.05	13.3
Imaging	0.100	87.75	8.8
Services by specialist practitioners			
Consultations	0.094	52.55	4.9
Procedures	0.075	88.69	6.6
Pathology	0.061	30.32	1.8
Imaging	0.017	138.17	2.3
Total MBS (less dental + optometry)			71.8

(a) The average benefit for services has been calculated from MBS data for 2001–02.

Sources: AIHW—GPSCU BEACH data; AIHW & Britt et al. 2003; AIHW & GPSCU 2004a; DoHA 2004a; Deeble et al. 1998; DoHA unpublished data.

During 2001–02, Medicare benefits for optometry and dental services amounted to \$179.7 million. Benefits for optometry services constituted the bulk of this expenditure – \$171.9 (95.7%). There was no national data concerning Indigenous use of these services.

As in the 1998–99 report, the proportion of optometry benefits attributed to Aboriginal and Torres Strait Islander peoples was assumed to be the same as that for PBS benefits – 0.83%. Use of these services were assumed to be low for Aboriginal and Torres Strait Islander people, given the potential costs of any associated optometrical devices.

PBS benefits

The estimation of PBS benefits to Aboriginal and Torres Strait Islander people was also largely made on the basis of BEACH data.

The BEACH survey collects information on prescriptions written but not on those dispensed. Not all prescriptions are dispensed, and of those that are dispensed a significant proportion are repeats of prescriptions written some time before. There are no Australian data on dispensing rates per se but it is possible to make some estimates. Also required, is information on the scripts that generate a benefit under the PBS. The available information on these issues is discussed below.

The special survey undertaken for the 1995–96 report collected information on dispensing rates for Indigenous Australians. The number of prescription items recorded as dispensed (GP and specialist) was 77 per 100 GP consultations, or 71.4% of those reported by the survey GPs as being ordered on original scripts. That proportion was applied to the BEACH prescribing data in the 1998–99 report to estimate the number of items dispensed in that year. It has been applied again in this report.

Two small-area surveys during 2003 and 2004 in the Darwin and Northern Adelaide health zones collected data on dispensing which, though geographically limited, were structurally very similar to the special surveys undertaken for the 1995–96 report. While clearly

insufficient to establish a national rate, the data provide confirmation of the dispensing rate being used in this and the previous report.

A sample survey of pharmacies conducted annually by the Pharmacy Guild includes information on total dispensing volumes. The data for 2001 indicate that of the scripts dispensed by pharmacies, 6.8% were not listed on the PBS or RPBS (DHA 2004a). Such scripts are available only on private prescription, which means that the patient pays the full cost for the item. The special survey for the 1995–96 report indicated, however, that the PBS covered 97% of items dispensed by private pharmacies to Aboriginal and Torres Strait Islander people. This latter proportion has been applied in calculations for this report.

PBS statistics show that in 2001–02, benefits were paid for 155.0 million items. Of these items 139.6 million (90.1%) were ordered by GPs and the remaining 15.3 million by specialists.

The calculations to estimate PBS services for GP ordered items for Aboriginal and Torres Strait Islander people included the following steps:

- BEACH data provide us with an estimate of the number of items prescribed. These are adjusted to remove from our count of prescribed items any that would be ineligible for benefits—such as encounters paid through workers compensation or hospitals;
- An adjustment is then made to exclude scripts not covered by the PBS (as discussed above);
- The data are then expanded to a national estimate, using the expansion factor determined for the MBS analysis;
- Finally, an adjustment for dispensing patterns of Aboriginal and Torres Strait Islander people (as discussed above) allows an estimate of the total number of PBS items for Indigenous Australians.

Information from the special survey for the 1995–96 report suggested that scripts dispensed for Indigenous Australians fell into the following categories: 80% were for concessional patients, 12% general patients and 8% had reached safety net provisions. Using these data, a weighted average benefit for PBS items for Indigenous people was calculated from PBS statistics. At \$24.42, this average cost is marginally lower than the national average cost (\$24.95). Simple extrapolation of these data allows for an estimate of total PBS benefits for GP ordered pharmaceuticals (Table A3.6).

Table A3.6: Estimated services and benefits through PBS for Aboriginal and Torres Strait Islander people, 2001–02

	Items (million)	Average benefit (\$)	Total estimated benefits (\$ million)
GP ordered	0.795	24.42	19.4
Specialist ordered	0.073	43.12	3.1
Doctor's bag	0.005	22.33	0.1
<i>Drugs dispensed under Section 100</i>			
Remote area AHS	0.698	n.a.	10.9
Other Section 100 drugs	n.a.	n.a.	0.7
Total PBS			34.3

Sources: AIHW—GPSCU BEACH data; AIHW & Britt et al. 2003; AIHW & GPSCU 2004a; DoHA 2004a; Deeble et al. 1998; DoHA unpublished data.

No information was available on specialist ordered items for Aboriginal and Torres Strait Islander people. So, it was again assumed that they would be similar to the rate of privately-referred Indigenous patients and the cost of these items were allocated accordingly.

The \$9.8 million in benefits for doctor's bag items were attributed on the basis of the estimated proportions of Indigenous clients of GPs and private specialists—1.2% of GP doctor's bag benefits and 0.4% of specialist doctor's bag were attributed to Aboriginal and Torres Strait Islander patients.

After the 1998–99 report, special provisions have been introduced under Section 100 of the national Pharmaceutical Act for Indigenous Australians in remote areas where access to private pharmacies was poor (refer Box A3.1). Clients of approved remote area Aboriginal Health Services (AHS) were able to receive PBS medicines directly from the AHS at the time of medical consultation, without the need for a normal prescription form, and without charge. DoHA data show that about 775,000 items were dispensed in 2001–02 for benefits of \$12.1 million. The Service Activity Reports of Aboriginal Community Controlled Health Services indicate that around 10% of the services in remote and very remote areas were accessed by non-Indigenous people. Accordingly, a small proportion of the benefits for these items was attributed to non-Indigenous people.

In total, PBS benefits of \$34.3 million were estimated to have been for items for Aboriginal and Torres Strait Islander people.

Box A3.1: Special arrangements through MBS and PBS for improving access by Indigenous Australians

Section 19(2) arrangements

Special arrangements were put in place in 1996 under section 19(2) of the Health Insurance Act 1973 allowing most Aboriginal Community Controlled Health Services (ACCHS) and some remote Aboriginal Health Services in Queensland and the Northern Territory to claim Medicare benefits for primary health care services (HIC 2004).

Figures for 2001–02 indicate that 398,358 services were provided under Section 19(2) to ACCHS, at a cost of \$12.0 million. A further 247,731 referred services from ACCHS, contributing \$7.2 million in benefits, were also paid through the Section 19(2) exemption (DoHA unpublished data). In addition, state funded remote clinics received Medicare payments of \$2.4 million, covering 78,000 services (DoHA 2004a).

Section 100 arrangements

Special arrangements were introduced in 1999 for the supply of PBS medicines to clients of remote area Aboriginal Health Services (AHSs), under the provisions of section 100 of the National Health Act 1953. The objective was to overcome geographic, cultural and financial barriers to Indigenous Australians accessing medicines under the Pharmaceutical Benefits Scheme (PBS),

[Section 100 of the Act allows the Minister to make special arrangements for supplying PBS benefits to people in isolated areas, or where the normal pharmacy-centred supply chain does not work conveniently or efficiently.]

Under the arrangements, clients of approved remote area AHSs are able to receive PBS medicines directly from the AHS at the time of medical consultation, without the need for a normal prescription form, and without charge. Participating AHSs order the required PBS pharmaceuticals from community pharmacies, which transmit claims to the Health Insurance Commission for reimbursement.

These arrangements were restricted to remote areas because of the extra difficulties that Aboriginal and Torres Strait Islander people in those areas have in accessing basic health services due to either or both:

- *their distance from established centres of population; and*
- *service demands that exceed the resources, structures and personnel required to meet their needs.*

Remote health services operated by the States and Territories are also able to participate, conditional on commitments by State/Territory governments to maintain current outlays on health care services for Aboriginal and Torres Strait Islander peoples.

Clients of over 150 remote area AHSs benefited from improved PBS access through these arrangements. There were 775,212 prescriptions ordered through this program during 2001–02, and expenditure for the financial year 2001–02 was \$13.2 million, including GST.

Comparability with previous estimates

Some major methodological changes were made in preparing estimates for this report compared with those for the 1998–99 report. These alterations to the method limit the ability to directly compare estimates produced for the previous report with those produced in this report.

The major changes to the methodology used in this report were in:

- the treatment of non-response to the BEACH survey questions about Indigenous status;
- an adjustment for under-identification of Aboriginal and Torres Strait Islander people in the BEACH survey; and
- the application of the BEACH sample weights.

The BEACH sample weights draw on differences between the GP sample obtained for the BEACH survey and Medicare data. They assist in drawing comparisons between the BEACH sample and the overall population. In the preliminary analyses of data for 2001–02, the application of sample weights had the effect of reducing the sample of Indigenous encounters by 21% and the proportion of Indigenous encounters from 1.3% to 1.0%. This suggests that there may have been some over-sampling of GPs in practices treating larger numbers of Aboriginal and Torres Strait Islander people. Advice obtained from the BEACH data custodians supported the application of sample weights to BEACH data for the purposes of this analysis.

The effect of not applying BEACH sample weights in the 1998–99 report would be to artificially boost the number of Indigenous encounters, which acted as a de facto upwards adjustment for under-identification. The redistribution of non-responses also inflated the estimated number of services for Indigenous Australians in 1998–99. The revised estimate of benefits for GP services in 1998–99, produced following the application of sample weights and a 24% under-identification factor, results in a similar estimate to that reported in the 1998–99 report—\$29.5 million as opposed to \$28.7 million (Table A3.7).

Table A3.7: Estimated MBS benefits for GP services, reported and revised results, 1998–99 and 2001–02

	Services (million)	Average benefit (\$)	Total (\$ million)	% all benefits
Reported 1998–99 GP services ^(a)	1.236	23.20	28.7	1.22
Revised estimate 1998–99 GP services	1.270	23.20	29.5	1.25
2001–02 GP services	1.239	27.44	34.0	1.24

(a) AIHW 2001.

Sources: AIHW analysis of AIHW—GPSCU BEACH data; AIHW & Britt et al. 2003; AIHW & GPSCU 2004a; DoHA 2004a; Deeble et al. 1998; DoHA unpublished data.

Other medical services

Some medical services expenditure occurred through programs, such as alternative funding for general practice services, primary care strategies and trials of coordinated care. These expenditures were distributed according to the Indigenous proportion of the total Australian population.

Community health

Per person expenditure by the Health and Ageing portfolio on community health programs for Aboriginal and Torres Strait Islander people was significantly greater than expenditure for non-Indigenous community health programs. This difference was largely attributable to expenditure on Aboriginal Community Controlled Health Services (ACCHS).

Aboriginal Community Controlled Health Services

The bulk of OATSIH funding was directed towards ACCHSs (sometimes referred to as Aboriginal Medical Services or Aboriginal Health Services), which were health services planned and governed by local Aboriginal communities. The ACCHSs deliver holistic and culturally appropriate health and health-related services to Aboriginal and Torres Strait

Islander people, with funding provided by state and territory governments and the Australian Government.

ACCHSs offered a wide range of services, including:

- general and specialist health services;
- eye health, hearing, substance use, mental health, remote health and sexual health services;
- services fostering emotional and social well-being; and
- transport.

These services often fulfilled a social role – for example, by acting as community centres (Keys Young 1997). Many such functions are important social determinants of health, but some are considered to be primarily serving ‘welfare’, ‘community development’ or other objectives. For the purposes of this report, these non-health functions were excluded from the estimates of health expenditure in this chapter and are reported on in Chapter 8, which covers expenditures on health-related services.

Programs administered by OATSIH, including ACCHS, accounted for \$188.6 million of the expenditure on Aboriginal and Torres Strait Islander people. Of this, \$22.4 million was spent on administration.

As outlined above, ACCHS provide a mixture of services, including some not generally classified as health services. It was estimated that 92.3% of the total expenditure on ACCHS was associated with providing health services. The remaining expenditure has been included in health-related expenditures reported in Chapter 8. These estimates result from an analysis of the professions, services provided by these professions, and salary costs associated with each profession at ACCHS throughout Australia (refer to Appendix 8 for details of the method). Use of ACCHSs by non-Indigenous people represents an estimated 10.9% of total expenditure on ACCHS.

Patient transport

The Health and Ageing portfolio contribution to patient transport is mostly through its provision of a \$20 million grant in aid to the Royal Flying Doctor Service (RFDS). It was estimated that 46.5% of the patients managed by the service were Aboriginal and Torres Strait Islander people.

Dental

During 2001–02, Medicare benefits for dental services amounted to \$7.7 million. As with other Medicare paid services, the proportion of this expenditure attributed to services for Aboriginal and Torres Strait Islander people was assumed to be low. The Indigenous share was estimated at 0.83% of total expenditure.

Other health professionals

During 2001–02, Medicare benefits for optometry services amounted to \$171.9 million. Indigenous access to these services was assumed to be low, given the costs associated with optometry devices. As in the 1998–99 report, the results of the analysis for pharmaceutical benefits were applied, giving an Indigenous share of 0.83%.

Expenditure on audiology services managed by Australian Hearing was also included under Other health professionals. Over \$161 million was spent on these audiology services in 2001–02. Expenditure on Indigenous Australians was estimated to be in proportion to their share of the total Australian population.

Australian Hearing also provided hearing services for eligible Indigenous Australians through the Australian Hearing Services Program for Indigenous Australians. Expenditure from this Indigenous-specific program was also included in the estimates of Indigenous-specific program expenditure.

Public health

For the majority of core public health activities where specific Indigenous expenditure was able to be identified, that data has been used to inform the Indigenous proportion of expenditure. For the remaining activities due to limited data on service utilisation, Indigenous expenditures incurred through some activities were estimated on a population basis. For instance, for the breast cancer screening and cervical screening programs, Australian Government expenditure on Aboriginal and Torres Strait Islander people was estimated using the Indigenous proportion of the female population within the target age group for these programs. This is not entirely unreasonable, given the findings of the ABS 2001 National Health Survey in which women were asked whether they had regular pap smear tests and mammograms. The application of these data is limited, however the response rates for Indigenous and non-Indigenous women were somewhat similar in each case. In the case of estimating organised immunisation expenditure, identified Indigenous specific expenditure on vaccines was added to an estimated expenditure based on GP attendances of Indigenous children aged seven years and younger.

Health research

National Health and Medical Research Council grants for research into Aboriginal and Torres Strait Islander health were estimated at \$5.0 million in 2001–02. Part of these targeted expenditures (\$2.4 million) was included under the public health category as they related to research into public health issues.

Estimating health expenditure by DVA

Informal advice received during the course of the second Indigenous health expenditure report (AIHW 2001) was to the effect that Aboriginal and Torres Strait Islander veterans comprise a very small proportion of Australia's surviving veterans. It was advised that around one percent of the veteran community are thought to be Aboriginal and Torres Strait Islander people.

In order to estimate Australia's total health expenditure for Aboriginal and Torres Strait Islander people some approximation of DVA expenditure on Indigenous Australians was required. For each major area of expenditure we have applied the proportion of expenditure on Indigenous Australians calculated for expenditure by the Health and Ageing Portfolio. This was then deflated to take into account the estimate of Indigenous veterans.

Australian Government funding through private health insurance incentives payments

In July 1997 the Australian Government introduced the first of its incentive payments to people who took out or maintained membership in private health insurance funds. The private health insurance incentives subsidy (PHIIS) was a means-tested subsidy aimed at assisting low-to-middle income earners obtain and keep private health insurance cover.

The PHIIS was replaced, in January 1999, by a 30% rebate of premiums, which is available to all Australians, irrespective of means, who take out and/or maintain private health insurance cover.

Both the PHIIS and the rebate of premiums have been included as funding by the Australian Government.

In July 2001, in addition to the premium rebate, the Australian Government brought into effect legislation that penalised individuals and families who failed to obtain private health insurance cover before they reached 30 years of age. Lifetime health insurance cover, introduced a penalty of 2% of the premium for each year by which a member's age exceeded 30 at the time he or she obtained private health insurance cover. In other words, if a person was 35 years of age at the time of taking out health insurance cover, he or she would pay a premium that was effectively 10% greater than would be paid by a person aged 30 or less who obtained a similar level of cover.

The combined effect of including the 30% premium as Australian Government funding and the increased outlays by private health insurance funds resulting from the greater coverage following lifetime cover caused a substantial increase in funding by the Australian Government in 2001-02 (Table A3.8).

Of the 21.5% real increase in the Australian Government's estimated funding for acute-care hospitals, from \$290.6 million in 1998-99 (at 2001-02 prices) to \$352.9 million in 2001-02 (Appendix Table A9.10), \$2.1 million (3.4%) was due to the allocation of the private health insurance incentives payments.

Table A3.8: Estimated health funding by the Australian Government for Indigenous Australians, through the private health insurance incentives payments, 1998–99 and 2001–02, constant prices^(a), Australia

Health goods and services type	Funding (\$ million)		Average annual real change (%)
	1998–99	2001–02	
Acute-care hospitals	3.068	5.138	18.8
Public hospitals	0.298	0.510	19.6
Private hospitals	2.770	4.629	18.7
Medical services	0.276	0.812	43.3
Dental services	0.639	1.285	26.2
Other professional services	0.253	0.570	31.0
Community health services	—	—	11.0
Pharmaceuticals	0.034	0.086	36.3
Patient transport	0.121	0.257	28.5
Other (nec)	0.757	1.525	26.3
Total expenditure	5.149	9.674	23.4

(a) Constant price estimates for 1995–96 and 1998–99 have been calculated by applying specific implicit price deflators derived from the AIHW's Health expenditure database to the reported estimates of expenditure (at current prices) for the individual areas of expenditure.

Source: AIHW Health expenditure database.