6 Technical notes

6.1 Methods used to produce estimates

State and territory expenditure tables

The state and territory tables are intended to give some indication of differences in the overall levels of expenditure on health in the states and territories; they do not necessarily reflect levels of activity by state and territory governments. For example, the states and territories pursue a variety of funding arrangements involving inputs from both government and non-government sources. As a result, one state or territory may have a mix of services and facilities that is quite different from that in another state. The estimates will enable a state or territory to monitor the impact of policies on overall expenditure on health goods and services provided within its borders.

Where funding data are provided only on a national basis, the Institute calculates allocations for those expenditures by state and territory and by source of funds.

Expenditure by the Australian Government

The bulk of the expenditures by the Australian Government can readily be allocated on a state and territory basis. These include:

- Specific-purpose payments to the states and territories for public hospitals;
- other specific-purpose payments to the states and territories;
- residential aged care subsidies;
- Medicare benefits payments; and
- payments under the PBS.

However, some Australian Government expenditure data are not available on a state and territory basis. In those cases, other indicators have been used to derive estimates on a state and territory basis for the data. For example, grants to medical service providers aimed at enhancing or modifying medical practice are allocated according to the proportion of vocationally registered general practitioners in each state or territory. Expenditures on community and public health that are not part of specific-purpose payments (SPPs) to the states and territories are allocated according to the allocation of similar payments that are part of SPPs.

Expenditure by state and local government authorities

The ABS produces annual estimates of public finance, which form part of the Australian National Accounts. Until 1996–97, public finance data were reported on a

cash basis. From 1997–98 reporting has been on an accrual basis for most jurisdictions. Where states or territories have not reported on an accrual basis, their cash accounts have been modified to conform to accrual definitions.

There have always been difficulties associated with the way the ABS has classified government expenditures according to their purpose (function). Since moving to accrual-based accounting, the emphasis of the ABS and the state and territory treasuries has been on ensuring that transaction type classifications of expenditure are correct (that is, ensuring that expenses and revenues are correctly classified in the state and territory accounts). To date, less attention has been given to the verification of expenditure according to function. As a consequence, only the ABS estimates of total expenditure by state and local governments are used as a guide to the overall estimate of state and local government recurrent expenditure on health. Some minor adjustments are made to take account of research expenditure that is counted by the ABS as having primarily an education purpose but which has a health outcome focus.

However, although the ABS total state government funded health expenditure numbers appear reliable, the allocations between different areas of health expenditure are far from accurate.

Of most concern are the ABS's distributions of expenditure between public hospital services, nursing homes (high-level residential aged care), community and public health services, administration and research. As a result, the Institute relies on estimates and reports of expenditure provided by state and territory health authorities for public hospitals, high-level residential aged care and dental services. These have proved consistent over time. In most years the ABS public finance database estimates have been used for state, territory and local government expenditure on administration, ambulance services and pharmaceuticals, and the ABS *Research and Experimental Development Survey* series has provided information about research. Estimates of state and territory expenditure on community and public health services are then derived by subtraction. Thus, this is a residual category and has been somewhat volatile.

In 1998–99, as part of the process for collection of data for a study of expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples, each of the states and territories provided detailed expenditure and revenue information for programs for which they had primary responsibility. That information has been extensively checked and verified with the provider agencies. Because of the rigorous processes gone through in verifying the accuracy of the data, the Institute has, wherever possible, incorporated them in the state/territory estimates of health expenditure. This has raised some doubts about the reliability of previously published estimates for some areas of health expenditure in 1996–97 and 1997–98. As a consequence, there have been adjustments to the previously published data for those years (see Section 6.4). The states and territories again supplied data in this format for 2000–01.

It should also be noted that the estimates of expenditure on public hospitals in this publication reflect the level of expenditure on goods and services provided hospitals,

including community and public health services that are operated by public hospitals. The estimate of community and public health services includes only expenditure on community and public health services that is not included as part of the gross operating expenditures of public hospitals. This complicates state-by-state comparisons as far as expenditure on those services is concerned, because the proportion of community and public health services delivered by hospitals varies from state to state.

Expenditure by the non-government sector

Expenditure by the non-government sector is split into three categories—health insurance funds, individuals, and other non-government sources—in the various state matrices.

Expenditure by health insurance funds on health goods and services within a state or territory is assumed to be equal to the level of expenditure by health insurance funds that operate from that state or territory. In the case of New South Wales and the Australian Capital Territory, it is assumed that their combined total expenditure is equal to the level of expenditure by health insurance funds registered in New South Wales. This is then split between New South Wales and the Australian Capital Territory according to the number of available hospital beds. In 1997–98 and 1998–99 expenditure by health insurance funds has been reduced by the extent of the Australian Government subsidy through the PHIIS and the 30% rebate.

Estimates of expenditure by individuals are derived from the ABS estimates of household final consumption expenditure (HFCE). Estimates of funding by health insurance funds are derived elsewhere and these are deducted from HFCE to arrive at an estimate of expenditure financed by individuals.

6.2 Definitions, sources and notes

General

The total expenditure and revenue data used to generate the tables are, to the greatest possible extent, produced on an accrual basis; that is, the total expenditure reported for each area relates to expenses incurred in respect of the year in which the expenditure they are reported.

However, the data used in constructing expenditure estimates for the different sources of funds (for example, benefits paid by private health insurance funds) are the reported cash outlays of those sources of funds in each year. Those cash outlays do not necessarily relate to expenditures incurred in the year in which they are reported. This means that, if a funding source reported cash outlays on a particular area of expenditure in one year, and the outlays really related to expenses incurred in the previous year, the contribution of that source of funding would be overstated in one year and understated in the previous year. As a further consequence, the

contribution of the major source of funding related to that area of expenditure would be understated in one year and overstated in the previous year.

The Institute gathers information for estimates of health expenditure from a wide range of sources. The ABS, the Australian Department of Health and Ageing, and state and territory health authorities provided most of the basic data used in this publication. Other major data sources are the Department of Veterans' Affairs, the Private Health Insurance Administration Council, Comcare and the major workers compensation and compulsory third-party motor vehicle insurers in each state and territory.

The term 'public (non-psychiatric) hospital' is used to refer to those hospitals operated by, or on behalf of, state and territory governments that provide a range of general hospital services. Essentially, they are the hospitals that were included as recognised public hospitals for the purposes of the Australian Health Care Agreements.

The 'medical services' category in Tables A1 to A6 and B1 to B24 covers medical services provided on a fee-for-service basis, including medical services provided to private patients in hospitals. It also takes in some private medical services expenditure that is not based on a fee for service. However, it excludes expenditure on medical salaries or visiting medical officers at public hospitals.

The 'Australian Government' column in Tables A1 to A4 includes expenditure by the Department of Veterans' Affairs on behalf of eligible veterans and their dependants.

'Benefit-paid pharmaceuticals' are pharmaceuticals in the PBS and the Repatriation Pharmaceutical Benefits Scheme for which the Australian Government paid a benefit. Pharmaceuticals listed in the PBS for which a prescription is required but where all the costs are met by the patient are included in 'all other pharmaceuticals'. Also included in 'all other pharmaceuticals' are over-the-counter medicines such as aspirins, cough and cold medicines, vitamins and minerals, and some herbal and other remedies.

Box 1: Periods equating to OECD year 2001

Country	Financial year
Australia	*1 July 2001 to 30 June 2002*
Canada	*1 April 2001 to 31 March 2002*
France	*1 January 2001 to 31 December 2001*
Germany	*1 January 2001 to 31 December 2001*
Japan	*1 April 2001 to 31 March 2002*
Netherlands	*1 January 2001 to 31 December 2001*
New Zealand	*1 July 2001 to 30 June 2002*
Sweden	*1 January 2001 to 31 December 2001*
United Kingdom	*1 April 2001 to 31 March 2002*
United States	*1 October 2000 to 30 September 2001*

For the 10 countries included in the international comparison of health expenditure (see Table 32 to 35), the OECD financial year 2001 refers to the periods listed in Box 1.

Definition of health expenditure

The term 'health expenditure' refers to expenditure on health goods and services, health-related services and health-related investment. 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. Health-related investment is called capital formation or capital expenditure.

The Institute's definition of health expenditure closely follows the definitions and concepts provided by 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.

6.3 Deflators

Deflation of current price estimates of health expenditure to constant prices shows changes in the volumes of particular health goods, services and capital formation. These measures are expressed in dollar values, using the values of the reference year (in this publication 2000–01). The process is undertaken using a number of input price deflators, either chain price indexes or implicit price deflators (IPDs). The main indexes used in deriving constant price estimates in this publication are listed in Table 36. All indexes are sourced from the ABS, except for the IPDs for Medicare medical services, PBS pharmaceuticals and the total health price index, which are Institute-derived measures.

In this publication, both chain price indexes and IPDs have been used to deflate current price estimates of components of health expenditure and derive constant price estimates of expenditure on individual areas of health expenditure.

The chain price indexes published in the ABS national accounts are annually re-weighted Laspeyres chain price indexes and are calculated at such a detailed level that the ABS considers them analogous to chain volume measures and measures of pure price change. In this publication, the chain price index for:

- gross fixed capital expenditure is used to deflate capital expenditure and capital consumption;

- government final consumption expenditure on hospital and nursing home care is used to deflate most institutional services and facilities that are provided by or purchased through the public sector.

An IPD is an index obtained by dividing a current price value by its corresponding chain volume estimate expressed in terms of the reference year prices. Thus, IPDs are derived measures and are not normally the direct measures of price change by which current price estimates are converted to volume measures. The IPD for GDP is the broadest measure of price change available in the national accounts. It provides an indication of the overall changes in the prices of goods and services produced in Australia, whether for use in the domestic economy or for export.

The consumer price index (CPI) and its health services sub-group have not generally been used to measure movements in overall prices of health goods and services. This is because the CPI measures only movements in prices faced by households when purchasing services. In the case of the health services sub-group of the CPI, this includes private health insurance cover. The CPI does not, for example, include government subsidies, benefit payments and non-marketed services provided by governments.

Table 36: Total health price index and industry-wide indexes (reference year 2000–01 = 100), 1991–92 to 2001–02

Year ended 30 June	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total health price index	80.8	81.4	83.3	85.1	87.6	89.9	92.3	94.4	96.5	100.0	103.2
Final consumption expenditure (FCE) by governments											
Hospital/nursing home care	84.1	84.9	85.7	87.2	88.9	90.5	92.1	94.6	96.8	100.0	103.2
Total, non-defence FCE	85.6	87.5	88.1	88.6	90.2	92.0	93.5	96.1	96.8	100.0	102.4
Final consumption expenditure (FCE) by households											
Doctors and other health professionals	64.1	64.1	67.1	73.6	78.8	82.9	88.5	90.7	93.7	100.0	109.1
Medicare medical services	85.6	85.2	87.0	88.5	89.9	90.4	91.4	94.4	96.8	100.0	103.6
Dental services	68.2	70.5	73.5	76.9	80.4	83.7	87.0	89.9	94.7	100.0	104.9
Medicines/aids and appliances	84.9	85.1	86.3	89.5	91.7	95.0	96.5	96.3	97.1	100.0	100.8
PBS Pharmaceuticals	n.a.	n.a.	97.9	98.2	98.7	98.9	99.1	99.7	99.9	100.0	100.1
Total health FCE	71.2	72.0	73.6	76.7	80.8	86.2	90.7	92.1	95.0	100.0	105.6
Gross fixed capital expenditure											
Australian Government	130.0	126.9	124.8	121.0	118.5	112.2	108.5	105.4	100.3	100.0	97.4
State and local	94.4	94.7	95.5	96.5	98.0	97.3	97.9	98.5	97.8	100.0	99.9
Private capital	95.0	96.1	97.5	97.7	97.6	95.3	94.8	95.4	95.9	100.0	100.9
Gross domestic product	85.9	86.8	87.7	88.7	90.8	92.2	93.4	93.6	95.6	100.0	102.5

6.4 Revisions of definitions and estimates

Definitions

'High-level residential aged care' refers to services of a type that would have been provided to patients in institutions that were formerly classified as nursing homes.

Facilities that were formerly classified as nursing homes are now incorporated into the class of facility known as 'residential care facilities'. Aged persons' hostels are also included in this class of facilities, as are aged persons' complexes.

Residents in such facilities are classified according to the level of care that they need and receive and there are eight such care level categories. For the purpose of maintaining consistency with international reporting, residents who are classified into the four highest categories are included as receiving 'health care' and the associated expenditure is included in this publication as high-level residential aged care.

Estimates

Some estimates of recurrent health expenditure have been revised since the publication of *Health Expenditure Australia 2000–01*. These revisions relate to all years after 1995–96 (Table 37).

Table 37: Comparison of published estimates of total health expenditure, current prices, 1996–97 to 1999–00, previous estimates and current estimates ($million)

Year	Previous estimate	Revised estimate	Change
1996–97	45,195	45,296	101
1997–98	48,360	48,273	–87
1998–99	51,680	51,629	–51
1999–00	55,630	55,809	179

(a) As published in *Health Expenditure Australia 2000–01*, September 2002, p. 8

(b) As published in *Health Expenditure Australia 2001–02*, September 2003, p. 8.

Revision of 1996–97 estimates

Estimated expenditure by the Australian Government on public (non-psychiatric) hospitals was increased by $52 million, from $5,398 million to $5,450 million.

The estimate of expenditure by state and territory governments on public (non-psychiatric) hospitals was revised upwards by $68 million, from $5,490 million to $5,558 million.

Estimated expenditure by individuals on other professional services was reduced by $19 million, from $989 million to $970 million.

Revision of 1997–98 estimates

Estimated expenditure by the Australian Government on public (non-psychiatric) hospitals was increased by $61 million, from $5,837 million to $5,898 million.

The estimate of expenditure by state and territory governments on public (non-psychiatric) hospitals was increased by $75 million, from $6,116 million to $6,191 million).

Revision of the method of allocating subsidies and rebates under the Private Health Insurance Incentives Scheme claimed through the taxation system has resulted in the estimated funding by private health insurance funds being reduced by $157 million, from $4,427 million to $4,270 million. That revision affected estimates over a number of areas of expenditure (Table 38). It also had the effect of increasing estimated expenditure by the Australian Government by $157 million.

Table 38: Revision of estimates of funding of health services by private health insurance funds, current prices, 1997–98 ($ million)

Area of expenditure	Previous estimate	Revised estimate	Change
Public (non-psychiatric) hospitals	311	300	–11
Private hospitals	2,289	2,209	–80
Ambulance	106	102	–4
Medical	217	210	–7
Other professional services	214	206	–8
Non-benefit pharmaceuticals	34	31	–3
Aids and appliances	177	171	–6
Dental services	568	548	–20
Administration	511	493	–18
Total	**4,427**	**4,270**	**–157**

NB: Components may not sum to total due to rounding.

The estimate of expenditure by individuals on other professional services was reduced by $159 million, from $1,053 million to $894 million. This was due to a downward revision by the ABS of its estimate for HFCE on services by doctors and other health professionals.

Revision of 1998–99 estimates

The overall effect of changes to the estimates for 1998–99 was to decrease the estimate of total expenditure by $51 million. This resulted from a number of changes to estimates for different areas of health expenditure. The major areas in which estimates of expenditure were increased were:

- capital outlays by the Australian Government—increased by $95 million, from $71 million to $166 million;
- expenditure on public (non-psychiatric) hospitals by state and territory governments—increased by $82 million, from $6,269 million to $6,351 million; and
- capital consumption by state and local governments—increased by $33 million, from $819 million to $852 million.

These were to some extent offset by reductions in estimates for:

- expenditure by individuals on other professional services—revised down by $130 million, from $1,228 million to $1,098 million; and
- estimated capital outlays by state, territory and local governments— revised down by $199 million, from $1,597 million to $1,398 million.
- There was also a $175 million transfer of funding from private health insurance funds to the Australian Government. This was the result of a change in the treatment of rebates on private health insurance contributions claimed through the taxation system. It had no effect on the overall estimate of health expenditure.

Table 39: Revision of estimates of funding of health services by private health insurance funds, current prices, 1998–99 ($ million)

Area of expenditure	Previous estimate	Revised estimate	Change
Public (non-psychiatric) hospitals	242	229	–13
Private hospitals	2,116	2,027	–89
Ambulance	105	101	–4
Medical	212	203	–9
Other professional services	197	189	–8
Non-benefit pharmaceuticals	30	29	–1
Aids and appliances	156	149	–7
Dental services	506	484	–22
Administration	496	474	–22
Total	**4,061**	**3,886**	**–175**

NB: Components may not sum to total due to rounding.

Revision of 1999–00 estimates

The estimate of total expenditure on health in 1999–00 has been revised down by $36 million since the publication of *Health Expenditure Australia 2000–01*. The revised estimate is $55,632 million.

This relatively small change in the overall estimate was the result of a number of largely offsetting revisions to particular estimates:

- State and local government funding of ambulance services was reduced by $432 million.
- This reduction was offset by increases of $348 million in the estimates of expenditure by the states, territories and local governments on community and public health and $88 million on public (non-psychiatric) hospitals.
- There was also a reduction of $157 million in the estimate for capital outlays by state and local governments.

The result was an overall reduction of $153 million in the estimate of health funding by state and local governments.

Revision of the data on residential care facilities has resulted in a decrease of $350 million in the estimate of total expenditure on high-level residential care. This is made up of a $116 million reduction in the estimate for funding by the Australian Government (through the Residential Care Subsidy Scheme) and a reduction of $234 million in the estimated contribution by residents receiving high-level care.

Payments by individuals for medical services in Queensland had been understated by $104 million in *Health Expenditure Australia 2000–01,* and this has been adjusted in the latest estimates.

Estimated expenditure by individuals on other professional services has been reduced by $247 million due to revision by the ABS of its estimates for HFCE on services by doctors and other health professionals.

Expenditure by individuals on both pharmaceuticals (non-benefit) and aids and appliances has been affected by the upward revision of the ABS estimate for HFCE on medicines, aids and appliances. The effect has been to increase the estimates of expenditure by individuals for non-benefit pharmaceuticals by $272 million, from $2,229 million to just under $2,502 million, and for aids and appliances by $147 million, from $1,125 million to $1,272 million.

There was also an increase of $272 million in the estimate of expenditure by individuals on ambulance services.

The revised treatment of the private health insurance contribution rebates claimed through the taxation system has resulted in a transfer of $183 million from funding by the private health insurance funds to the Australian Government. This, however, had no effect on the estimate of total national expenditure on health.

Table 40: Revision of estimates of funding of health services by private health insurance funds, current prices, 1999–00 ($ million)

Area of expenditure	Previous estimate	Revised estimate	Change
Public (non-psychiatric) hospitals	210	200	–10
Private hospitals	1,913	1,819	–94
Ambulance	100	95	–5
Medical	206	196	–10
Other professional services	192	182	–10
Non-benefit pharmaceuticals	32	30	–2
Aids and appliances	154	146	–8
Dental services	465	442	–23
Administration	522	499	–23
Total	**3,793**	**3,610**	**–183**

NB: Components may not sum to total due to rounding.