

3 Public hospitals— Expenditure and revenue

Introduction

Commonwealth and State government expenditure for 1996–97 on public hospitals, including the Department of Veterans’ Affairs hospital in New South Wales and public psychiatric hospitals, accounts for over one-third of all government sector expenditure on health in this period (AIHW 1998b). This chapter provides information on public hospital expenditure, revenue, average salaries and the cost per casemix-adjusted separation in public acute hospitals in Australian States and Territories.

Quality of financial data

A recent publication of 1995–96 hospital performance indicators (SCRCSSP 1998) has highlighted the need for greater consistency in reporting financial data that are to be used to compare jurisdictions. However, some limitations in the financial data provided by States and Territories could not be fully resolved for the 1996–97 report. During 1998, the National Health Data Committee is undertaking to resolve inconsistent financial reporting in consultation with senior finance and information officers in the States and Territories. Recommendations are to be developed for improved classification standards and methods for consistent identification and reporting at the hospital or health service delivery level. This will include data for areas of expenditure that have currently been identified as being inconsistently reported, such as—

- expended revenue from trust funds,
- expenditure at the area (or district/regional) health service administration level,
- group services expenditure (e.g. central laundry and pathology services), and
- salary oncosts including superannuation and workers’ compensation.

In the current report there are differences between jurisdictions with regard to the scope of financial data provided. New South Wales has this year excluded population health and primary and community based services expenditure, and expended trust funds which had previously been included in the State’s financial reports to the National Public Hospital Establishments Database. The effect is an apparent decrease in New South Wales recurrent expenditure between 1995–96 and 1996–97. However, the decrease should be viewed as a result of the reporting procedures and not an actual decrease in spending within the New South Wales’ hospital system.

In addition to the identified changes in reported New South Wales recurrent expenditure for 1996–97, procedures in other jurisdictions also limit comparisons between States and Territories, and across reporting periods. Victoria has been unable to report financial data at the hospital ‘campus’ level for 1996–97, and instead has reported expenditure at a higher

'network' level (that is, by grouping hospitals together which had previously reported separately). The most prominent effect on the current report is that, for the cost per casemix-adjusted separation calculation (see Table 3.1), both the recurrent expenditure and the activity data are likely to represent a different scope from data for this particular calculation in previous reports (AIHW 1998c, NHMBWG 1996, 1998, SCRCSSP 1997, 1998).

It should also be noted that, because some States have not fully implemented accrual accounting procedures and systems, expenditures and revenue shown in the tables are, in fact, mixtures of expenditures/payments and revenue/receipts, respectively. Because it forms such a significant part of the expenditures of those States that report on an accrual basis, depreciation expense has been totally excluded from the expenditures of all States and Territories, to ensure comparability across jurisdictions. This is because not all States and Territories have fully implemented accrual recording and reporting expenditure. It is expected that as accrual accounting becomes universally adopted by health authorities, comparable data on depreciation will be reported.

Given the inconsistencies described above, comparisons amongst jurisdictions should be made with care and financial data presented in the current report should be interpreted with caution. Furthermore, because of changes in the scope of the 1996–97 data, cross-year comparisons between the cost per casemix-adjusted separation provided in this report and the same calculation released in previous reports (NHMBWG 1996, 1998; SCRCSSP 1997, 1998) may not be justified. See Appendix 3 for a more detailed discussion of the cost methodology.

Cost per casemix-adjusted separation

The hospital system is increasingly focusing on acute care and advances in drug treatments and medical technology that require monitoring (NHMBWG 1998). Thus, there has been an increasing need to measure the efficiency of public hospitals, and to compare this information among jurisdictions. One method for doing this, developed by the National Health Ministers' Benchmarking Working Group, is the cost per casemix-adjusted separation (NHMBWG 1996). It is an indicator of cost performance amongst hospitals and measures the average cost of providing care for an admitted patient (whether an overnight-stay patient or a same day patient), adjusted for the relative complexity of the patient's clinical condition and of the hospital services provided. The cost per casemix-adjusted separation does not, however, take account of the quality of care delivered within a hospital nor the health outcomes achieved.

Table 3.1 shows the total cost per casemix-adjusted separation for all States and Territories for 1996–97. At the national level, the cost per casemix-adjusted separation was \$2,496. A large portion of these costs is attributed to nursing and medical staff salaries; nationally these costs are \$690 and \$450, respectively, per casemix-adjusted separation. When interpreting these data, however, it should be noted that the costs are sensitive to the magnitude of both the inpatient fraction,ⁱ which is an estimate, and the average cost weight, which is calculated for acute episodes of care only.

There is inconsistency across States and Territories in the application of current classifications for hospital activity, the allocation of costs within hospital programs and units, and the estimation of admitted and non-admitted patient proportions. The National Health Ministers Benchmarking Working Group is working toward an improved methodology for estimating the inpatient fraction (or admitted patient cost proportion). Initiatives to date have included a study of the current practices for estimating the admitted

and non-admitted patient fractions in all acute care hospitals with over 50 beds across all jurisdictions (NHMBWG 1998). Results of the study showed that the current allocation methodology could have a significant impact on the derived cost of admitted patient services. For example, under different methods of allocation for hospital pharmacy expenditures, the cost of an AN-DRG could vary by 10%. Furthermore, the treatment of hospital-wide costs, such as teaching and research, is inconsistent within, as well as among, different jurisdictions.

In addition to the methodological problems associated with the estimation of the inpatient fraction, the complexity of cases treated as admitted patients can differ regionally. Some jurisdictions admit patients who might be treated as non-admitted patients in other jurisdictions. Age structures are less of a concern in comparing States and Territories, and the AN-DRG adjustment is deemed to compensate for the differences in costs due to the higher proportion of older patients in some jurisdictions (Gillett & O'Connor-Cox 1996; Duckett & Jackson 1998).

The cost per casemix-adjusted separation cannot be used as the sole measure of the efficiency of the different jurisdictions in providing hospital services, however, as many of the costs incurred are costs beyond the control of a jurisdiction. For example, the Northern Territory has high staffing and transport costs, and treats a greater proportion of patients of indigenous status than other jurisdictions. Because of factors such as these, cost disabilitiesⁱⁱ associated with providing the same level and standard of hospital services available elsewhere in Australia are recognised by the Commonwealth Grants Commission (CGC 1997). Other jurisdictions may suffer cost disabilities for other reasons. Factors such as these should be taken into account when making comparisons.

Methodology

The methodology for calculating the cost per casemix-adjusted separation has been agreed by the National Health Ministers Benchmarking Working Group (see Appendix 3). All of the elements of the total cost are derived from both establishment- and patient-level data that are reported to the Institute, with the exception of medical costs for services provided to private patients in public hospitals. In summary, the derivation of this cost measure is based on—

- the recurrent expenditure reported for public acute care hospitals in each jurisdiction;
- the number of separations in each jurisdiction for these hospitals;
- the average cost weight of separations for these hospitals in each jurisdiction. This is a weighting calculated for each hospital to control for the complexity of cases treated, based on the Australian National Diagnosis Related Groups of the separations (see Chapter 10 for more detail);
- the inpatient fraction (or admitted patient cost proportion). This figure provides information on the proportion of hospital expenditure that is attributed to admitted patients (rather than non-admitted patients or other non-patient activity such as research). Where hospitals have not been able to provide this information, the inpatient fraction is estimated using a ratio developed by the Health and Allied Services Advisory Council (NHMBWG 1996). This formula assumes that the cost of providing care to an admitted patient for one day is 5.8 times that of providing one occasion of service to a non-admitted patient;

- the public patient proportion. This is the number of public patient days (in public hospitals) as a proportion of total public hospital patient days (which also includes private patient days in public hospitals); and
- the private patient medical costs. The cost per day of providing private medical services is assumed to be equal to the cost per day of treating public patients using salaries and sessional payments to medical officers. Private patient medical costs are not recorded directly by hospitals as these costs are paid for by patients and subsidised through Medicare. The amounts attributed to private patients' medical costs are likely to be less than the actual costs of the charges by private medical practitioners to private patients.

A more detailed discussion of the methodology used to calculate the figures presented in Table 3.1, and the limitations in these data, is provided in Appendix 3.

Scope of separations

The cost analysis excludes a number of hospitals in each jurisdiction, such as psychiatric hospitals, drug and alcohol services, mothers' and babies' facilities, dental hospitals and same day facilities that do not typically treat acute cases. The scope of public hospital establishments included in the calculation of the cost per casemix-adjusted separation figures for 1996–97 is different from the scope of the data reported in Table 3.2 and the scope has also changed since the 1995–96 report (SCRCSSP 1998, NHMBWG 1998).

In Victoria, with the exception of psychiatric patients in custodial institutions, psychiatric patients are included in the total separations used to calculate the cost figures in Table 3.1. This change in the total separations report follows the mainstreaming of specialised psychiatric care into the public acute hospital system. At present, these separations cannot be separately identified in reports to the National Hospital Morbidity Database. For other States, however, admitted patient separations from public psychiatric hospitals have been excluded from this calculation, representing a concomitant, and substantial, number of separations. The scope of separations for Victoria also differs from the 1995–96 report (SCRCSSP 1998, NHMBWG 1998), in which unqualified neonates were included in the calculation of costs.

The methodology agreed in previous years by the National Health Ministers Benchmarking Working Group has excluded unqualified neonates from the denominator in the cost per casemix-adjusted separation calculations (see Appendix 3 for a detailed discussion of this issue). However, identification of these neonate separations has not been accurate in the past, since the reports were provided only to the National Public Hospital Establishments Database as an aggregate for each hospital, and the consistency of the reports was variable amongst different jurisdictions. For the 1995–96 report of the separation cost (SCRCSSP 1998, NHMBWG 1998), some jurisdictions included unqualified neonates and others did not. The ability to exclude unqualified neonate separations has been improved in the current report because these separations can now be accurately identified from the National Hospital Morbidity Database.

In the absence of appropriate cost weights for unqualified neonates, the current report follows the casemix-adjusted separation methodology that has been used in previous years, that is, excluding these separations. Calculating the cost in this way results in a total cost that is \$108 more, nationally, than the cost would be if the method had included the unqualified neonate separations (that is, the national cost per casemix-adjusted separation would have been decreased by 4.3% nationally).

Recurrent expenditure

For the purpose of this report, expenditure is a mixture of–

- expenditure (not including depreciation) for hospitals in the States and Territories that reported on an accrual basis relating to 1996–97, and
- payments made during 1996–97 for those States that reported on a ‘cash’ basis.

Nationally, recurrent expenditure on public acute and psychiatric hospitals was \$12.2 billion in 1996–97. Information on gross recurrent expenditure, categorised into salary and non-salary expenditure, is presented in Table 3.2. Real recurrent expenditure in 1995–96 was \$12.1 billion (referenced to 1996–97 constant prices). Thus there was a real increase in recurrent expenditure in the 1996–97 year of 0.7%. The magnitude of this increase has been affected substantially by a change in the reporting practices of New South Wales. As discussed above, New South Wales population health and primary and community based services expenditure and expended trust funds have not been included in this report. The excluded expenditure amounts to \$580 million in 1996–97, and had these expenditures been considered within scope for this report, the national increase in real recurrent expenditure would have been 5.5%.

The largest share of expenditure is for labour costs. Even when payments to visiting medical officers and payments for outsourced services which include large labour components are excluded, these account for 64.5% of the \$12.2 billion spent within the public hospital system. Salary payments include salaries and wages, payments to staff on paid leave, workers’ compensation and salaries paid to contract staff where the contract is for the supply of labour and where full time equivalent staffing data are available.

Medical/surgical supplies (which includes consumable supplies only and not equipment purchases), administrative expenses and drug supplies were the major non-salary expenses for public hospitals nationally.

Average salaries and wages expenditure

Average salaries paid to public hospital staff by State and Territory are presented in Table 3.3. A number of jurisdictions were unable to report staffing numbers and salaries for the different nurse categories and, therefore, average nursing salaries have been produced as a single figure for this report. As noted previously, some States have difficulty in differentiating ‘other personal care staff’ and ‘domestic and other staff’. Thus, some of the variation in average salaries reported within these categories may be a result of different reporting practices.

Salaries paid to nurses, as a whole, were relatively consistent nationally. Average salaries paid to salaried medical officers, by contrast, showed a marked variation across jurisdictions. Information on average payments to visiting medical officers for sessions and services in public hospitals is not available.

The data show variation in the distribution of labour costs across jurisdictions. States and Territories that reported the highest rates of staff resources did not necessarily report higher costs per casemix-adjusted separation (Table 3.1). The variations in the data are likely to be affected by different practices in ‘outsourcing’ medical and nursing services, and different arrangements for purchasing domestic and catering functions across jurisdictions. Where services are outsourced, the ratio of salary to non-salary costs will be reduced.

Revenue

Hospital revenue (excluding general revenue payments received from State or Territory Governments) is reported in Table 3.4 by State and Territory. In this table, States and Territories have reported revenue against three categories: patient revenue, recoveries (income from the use of hospital facilities by salaried medical officers or private practitioners exercising their rights of private practice, and other recoveries) and other revenues. In data reported for Queensland, 'patient revenue' includes revenue for items such as pharmacy and ambulance, which could be considered as 'recoveries'.

Australian public hospitals received \$1 billion in revenue in 1996–97. This was equivalent to 8.3% of total expenditure. Revenue as a proportion of total expenditure was, however, variable across States and Territories. Revenue of public hospitals in Tasmania represented 14.9% of expenditure. Revenue of Queensland hospitals, however, was equivalent to only 4.9% of expenditure.

Patient revenue, the largest revenue category, accounted for 59% of all revenue, and was equivalent to 4.9% of total expenditure.

ⁱ This fraction refers to data for 'admitted patients' as defined by the *National Health Data Dictionary Version 6.0*, however in referring to the calculation of the admitted patient cost proportion, the original term 'inpatient fraction' continues to be used. 'Inpatient fraction' is also frequently abbreviated to 'IFRAC'.

ⁱⁱ Cost disability refers to variables such as remoteness, high input costs and socio-economic factors that increase the cost of providing services. Note that the Commonwealth Grants Commission's 'hospital services' category includes ambulance and central administration expenditures as well as acute hospital services expenditure.

Table 3.1: Cost per casemix-adjusted separation, selected public acute hospitals,^(a) States and Territories, 1996–97

Variable	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ⁽ⁱ⁾	Total
Total separations ('000) ^(b)	1,169	889	646	344	324	76	56	48	3,552
Average cost weight ^(c)	1.04	1.04	0.98	0.97	1.02	1.03	0.97	0.80	1.02
Casemix-adjusted separations ('000) ^(d)	1,221	928	637	334	331	78	55	38	3,622
Total recurrent expenditure (\$m)	3,912	2,846	1,871	1,091	917	284	254	152	11,327
Inpatient fraction ^(e)	0.771	0.743	0.787	0.796	0.808	0.716	0.773	0.767	0.771
Public patient bed day proportion ^(f)	0.78	0.83	0.89	0.86	0.82	0.83	0.85	0.95	0.83
Unqualified neonates ('000)	58	38	32	15	13	4	2	1	163
Separations for excluded hospitals ('000) ^{(a)(b)}	65	17	2	4	1	1	0	0	90
Non-medical labour costs per casemix-adjusted separation (\$)									
Nursing	705	670	685	679	650	714	863	898	690
Diagnostic/allied health	187	178	170	199	163	182	277	160	182
Administrative	167	177	150	218	177	150	253	166	173
Other staff	220	213	254	333	156	250	168	285	229
Superannuation ^(g)	113	100	128	116	115	144	277	116	116
<i>Total non-medical labour costs</i>	<i>1,392</i>	<i>1,338</i>	<i>1,387</i>	<i>1,545</i>	<i>1,261</i>	<i>1,440</i>	<i>1,838</i>	<i>1,625</i>	<i>1,390</i>
Other recurrent costs per casemix-adjusted separation (\$)									
Domestic services	49	65	72	111	66	66	108	88	66
Repairs/maintenance	53	53	53	115	100	49	94	28	63
Medical supplies	158	138	179	196	156	219	279	108	162
Drug supplies	113	108	129	116	106	92	143	171	115
Food supplies	49	32	24	30	21	30	48	32	35
Administration	93	111	131	83	142	161	270	290	114
Other	151	73	16	133	36	224	225	330	100
<i>Total other recurrent costs</i>	<i>666</i>	<i>581</i>	<i>605</i>	<i>784</i>	<i>626</i>	<i>842</i>	<i>1,167</i>	<i>1,047</i>	<i>656</i>
Total excluding medical labour costs	2,058	1,919	1,992	2,329	1,887	2,281	3,005	2,672	2,046
Medical labour costs per casemix-adjusted separation (\$)									
Public patients									
Salaried/sessional staff	258	296	265	223	219	251	345	381	265
VMO payments	155	63	57	122	128	65	237	100	107
Private patients (estimated) ^(h)	115	75	41	57	75	63	103	25	78
<i>Total medical labour costs</i>	<i>528</i>	<i>434</i>	<i>363</i>	<i>402</i>	<i>422</i>	<i>379</i>	<i>685</i>	<i>506</i>	<i>450</i>
Total including medical labour costs	2,586	2,353	2,354	2,731	2,309	2,660	3,689	3,179	2,496

(a) States have excluded psychiatric hospitals, drug and alcohol services, mothers' and babies' facilities, dental hospitals and same day facilities from this table.

(b) From the National Hospital Morbidity Database, including same day separations and excluding unqualified neonates.

(c) Average cost weight from the National Hospital Morbidity Database, based on acute and unspecified separations only (excluding unqualified neonates) using the 1996–97 revised AN-DRG version 3.1 cost weights (CofA, unpublished).

(d) Casemix-adjusted separations is the product of Total separations and Average cost weight.

(e) Inpatient fractions have been estimated using the HASAC method for one hospital in New South Wales, 14 in Queensland, 9 in South Australia and all hospitals in the Northern Territory and in the Australian Capital Territory.

(f) Eligible public patient patient bed days as a proportion of total patient bed days, excluding unqualified neonates.

(g) In Western Australia and the Northern Territory the major superannuation scheme is funded by Treasury—hospitals make no contribution in the Northern Territory and fund only a small proportion in Western Australia. The superannuation for these two jurisdictions has been estimated using the average of the other States and Territories.

(h) Estimated private patient medical costs calculated as the sum of salary/sessional and VMO payments multiplied by one minus the public patient proportion. This is an estimate of the medical costs for all non-public patients, including private, compensable and ineligible.

(i) These figures should be interpreted in conjunction with the a consideration of cost disabilities associated with hospital service delivery in the

Table 3.2: Recurrent expenditure (\$'000), public acute and psychiatric hospitals, States and Territories, 1996–97

Staffing category	NSW	Vic	Qld ^(a)	WA ^(b)	SA ^(a)	Tas	ACT	NT ^(b)	Total
Salaried medical officers	435,443	374,938	220,388	98,644	93,998	28,746	24,419	19,098	1,295,675
Registered nurses	n.a.	740,559	513,244	n.a.	241,487	n.a.	55,252	24,048	n.a.
Enrolled nurses	n.a.	67,563	83,869	n.a.	51,464	n.a.	6,530	3,168	n.a.
Student nurses	n.a.	253	2,977	n.a.	..	n.a.	..	..	n.a.
Trainee/pupil nurses	n.a.	1,003	758	n.a.	2,288	n.a.	..	..	n.a.
Not reported	..	31,950	..	..	..	..	..	17,759	49,709
Total nurses	1,331,462	841,327	600,848	305,933	295,239	81,707	61,782	44,975	3,563,274
Other personal care staff	57,833	39,661	29,734	28,900	7,206	168	1,452	819	165,773
Diagnostic & health professionals	332,461	231,730	154,295	88,182	70,494	20,801	19,553	8,013	925,530
Administrative & clerical staff	297,331	228,770	128,772	97,726	76,896	17,285	18,074	8,333	873,187
Domestic & other staff	350,857	227,586	195,357	117,373	64,869	28,346	10,548	13,446	1,008,381
Not reported	..	8,180	..	..	..	..	..	..	8,180
Total salary & wages expenditure	2,805,388	1,952,192	1,329,394	736,758	608,702	177,053	135,827	94,684	7,839,999
Payments to visiting medical officers	262,916	78,756	48,093	51,231	53,305	7,072	16,757	5,026	523,156
Superannuation payments	204,438	126,598	113,024	16,044	50,543	16,649	19,616	..	546,913
Drug supplies	188,264	135,848	106,511	49,569	45,199	10,093	10,143	8,555	554,182
Medical & surgical supplies	257,513	175,380	148,751	82,482	64,396	23,932	19,704	5,404	777,562
Food supplies	86,765	39,967	21,974	13,568	10,070	3,314	3,448	1,622	180,728
Domestic services	90,346	82,089	63,869	48,544	29,020	7,265	7,712	4,391	333,235
Repairs & maintenance	97,112	67,678	45,358	49,773	43,222	5,379	6,652	1,423	316,597
Patient transport	36,538	13,270	12,970	3,197	7,067	2,035	1,565	4,485	81,127
Administrative expenses	168,878	142,226	113,545	37,020	62,230	17,616	19,156	14,515	575,186
Interest payments	16,558	250	..	18,498	..	..	29	0	35,334
Other recurrent expenditure	209,071	89,795	899	36,724	9,142	24,943	14,284	12,023	396,880
Total non-salary expenditure	1,618,398	951,856	674,994	406,650	374,195	118,298	119,064	57,444	4,320,898
Total expenditure	4,423,787	2,904,048	2,004,388	1,143,407	982,897	295,351	254,891	152,128	12,160,897

(a) Interest payments are included in administrative expenses.

(b) In Western Australia and Northern Territory the major superannuation scheme is funded by Treasury—hospitals make no contribution in the Northern Territory, and fund only a small proportion in Western Australia.

n.a. not available.

.. not applicable.

Table 3.3: Average salary (\$), full time equivalent staff,^(a) public acute and psychiatric hospitals, States and Territories, 1996–97

Staffing category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Salaried medical officers	84,444	108,539	90,712	104,022	66,491	88,032	93,299	86,963	91,178
Nurses	46,766	48,881	43,001	48,938	40,734	42,935	45,265	46,497	46,043
Other personal care staff	29,965	20,563	29,893	n.a.	26,052	9,568	45,359	12,567	26,097
Diagnostic & health professionals	39,230	38,354	44,834	56,687	38,494	46,552	46,377	54,648	41,392
Administrative & clerical staff	37,685	36,125	32,095	40,622	30,616	33,747	38,796	28,915	35,760
Domestic & other staff	30,895	40,544	31,186	34,367	27,388	27,324	33,270	24,216	32,605
Total staff	44,341	48,104	42,725	48,561	38,894	41,722	47,440	42,230	44,752

(a) Where average full time equivalent staff numbers were not available, staff numbers at 30 June 1997 were used.
n.a. not available.

Table 3.4: Revenue (\$'000), public acute and psychiatric hospitals, States and Territories, 1996–97

Revenue source	NSW	Vic	Qld ^(a)	WA	SA	Tas	ACT	NT ^(b)	Total
Patient revenue	189,318	182,810	77,176	60,304	47,648	20,805	11,337	4,028	593,427
Recoveries	129,482	51,203	12,942	10,989	126	5,559	3,646	3,037	216,985
Other revenue	69,116	57,216	7,422	28,986	4,962	17,519	8,284	5,496	199,001
Not reported	..	89	..	..	..	..	..	..	89
Total revenue	387,917	291,318	97,540	100,279	52,736	43,883	23,268	12,561	1,009,502

(a) Patient revenue includes revenue for items such as pharmacy and ambulance, which may be considered as recoveries.

(b) Patient revenue has been estimated using data supplied by the Commonwealth Grants Commission.
.. not applicable.