
3 PUBLIC ACUTE CARE HOSPITALS

Summary

An agreed framework of indicators has been developed to measure both the effectiveness and efficiency of public acute care hospitals in Australia.¹ The effectiveness measures cover the quality of care, the appropriateness of care, and the accessibility of services. The efficiency measures developed focus on the unit cost by type of treatment (see Figure 3.5).

As is the case in several areas of government service provision, considerable effort has been invested in developing comparable information on efficiency measures relating inputs to outputs.

Presently, however, there is little comparable effectiveness information. The lack of information is partly due to the difficulty of attributing the health gain by patients to treatments provided. This is because treatment is only one of a variety of independent factors that will affect the well being of a patient. The influence of these independent factors will be more pronounced the longer and more complex the treatment.

Nonetheless, there is widespread recognition of the need for much better system-wide indicators on the effectiveness of health services. Considerable work is taking place in all jurisdictions to develop these. One example is the development of national and State and Territory health goals and targets. However, even once defined and developed, it is likely to take some time to establish the necessary data systems.

¹ The Steering Committee acknowledges the role of the National Health Ministers' Benchmarking Working Group (NHMBWG) in developing the performance indicators for public acute care hospitals.

Waiting times for elective surgery

Waiting times for elective surgery has been selected as one indicator of accessibility to public hospitals. The results of the first attempt to report on elective surgery waiting times for public hospitals by Mays (1995)², indicate that waiting times varied considerably across Australia³ (see Tables 3.15 and 3.16). A significant factor in this variability would have been the differences in coding and counting practice between the jurisdictions at the time the data for this report were collected.

The results of the one month data collection by Mays indicated that in 1994, 9 per cent of elective surgery patients had waited more than 12 months Australia-wide. Across all specialities the highest proportion of these long wait patients at census were in the ACT (26 per cent) and the lowest in New South Wales (5 per cent).

Only limited system-wide data on the quality of care in public acute hospitals are available

There is a lack of nationally comparable information on the quality of care in public acute care hospitals in Australia. To date, few States have instituted system-wide reporting of hospital quality of care performance data. However, the situation is changing with most, if not all, jurisdictions planning to introduce system-wide reporting of standard quality of care indicators.

It has been possible to include in this report some of available data collected by States and Territories on quality of care (see Section 3.7 'State and Territory specific information'). These data are not comparable between jurisdictions because of definitional differences.

Surgical intervention rates

These measure the differing frequency of certain procedures in jurisdictions.

No State or Territory had rates significantly different from the comparison rates for all the selected procedures (see Table 3.13). However, there are some substantial differences for individual procedures. These data highlight the need to do further work on the underlying reasons for differences in procedure rates between States and Territories to enable appropriate interpretation of such data

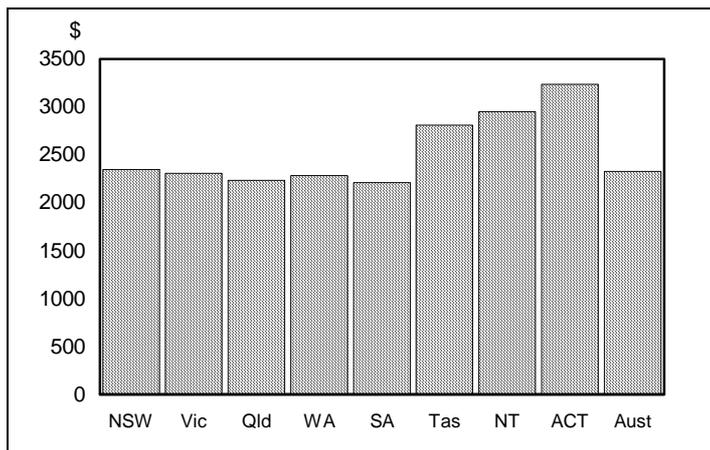
² Elective surgery is defined as surgery which, although deemed necessary by the treating clinician, can be delayed for at least 24 hours in the clinician's opinion. Data for *The National report on elective surgery waiting lists for public hospitals 1994* (Mays, 1995) were also disaggregated into two categories of urgency.

³ Some limitations of the data are noted in Mays (1995). These include difficulties experienced by States and Territories in collecting the data according to agreed definitions and the short duration of the survey period which may not represent a typical period.

in subsequent reports. The available data do not allow definite conclusions about the relative level of care between the States and Territories to be drawn.

The cost of treating cases in hospitals varies across Australia

Recurrent unit cost, adjusted for the mix of cases treated for public acute care hospitals, 1993-94



Note: The unit costs are estimates based on an incomplete data source therefore caution should be exercised in interpreting the results (see Section 3.4).

Although the unit cost data need to be interpreted with caution, the larger States appear to have lower unit costs per inpatient case treated (adjusted for the mix of cases). The difference between the highest cost jurisdiction and the lowest cost jurisdiction for recurrent expenditure, including labour costs, was over \$1000 per case treated — a variation of over 46 per cent (see Table 3.18).

Future directions

There are currently a number of Commonwealth and State initiatives underway to develop consistent definitions and to collect comparable data on a wide range of efficiency and effectiveness indicators in the hospitals area. There also remains the need to ensure that better data are collected for the existing indicators. In particular, the key challenges over the next year are:

- to develop indicators and expedite the collection of comparable data on the quality of care;
- to collect more complete and comparable waiting time data;
- to improve and extend the current coverage of unit costs to include outpatient activity;
- where possible, to develop and implement a nationally comparable patient satisfaction methodology; and
- to develop agreed indicators for hospital service outcomes.

3.1 Profile of the sector

This chapter includes a brief examination of public acute care hospitals and their role in the broader health system. Section 3.2 explores some of the recent developments affecting public acute care hospitals which may affect the performance indicators. The framework of agreed performance indicators is presented in Section 3.3 (each indicator is defined and briefly explained in Section 3.8). Section 3.4 provides a summary of results for public acute care hospitals (derived from the data presented in Sections 3.6 and 3.7). Section 3.5 outlines some current initiatives to expand the scope of nationally comparable performance information on the hospital sector.

Public acute care hospitals were chosen for this year's Review for a number of reasons. First, they are an important component of health care in Australia and represent a large expenditure area. They make up three quarters of all hospitals in Australia (Figure 3.1). In 1992–93, over \$9 billion was spent on these hospitals (see Table 3.1). Second, there has been some work undertaken on benchmarking and performance measurement in this area. Third, bodies such as the Australian Institute of Health and Welfare (AIHW) and the Australian Health Ministers' Advisory Council have been encouraging the collection of data on hospital activity in Australia.

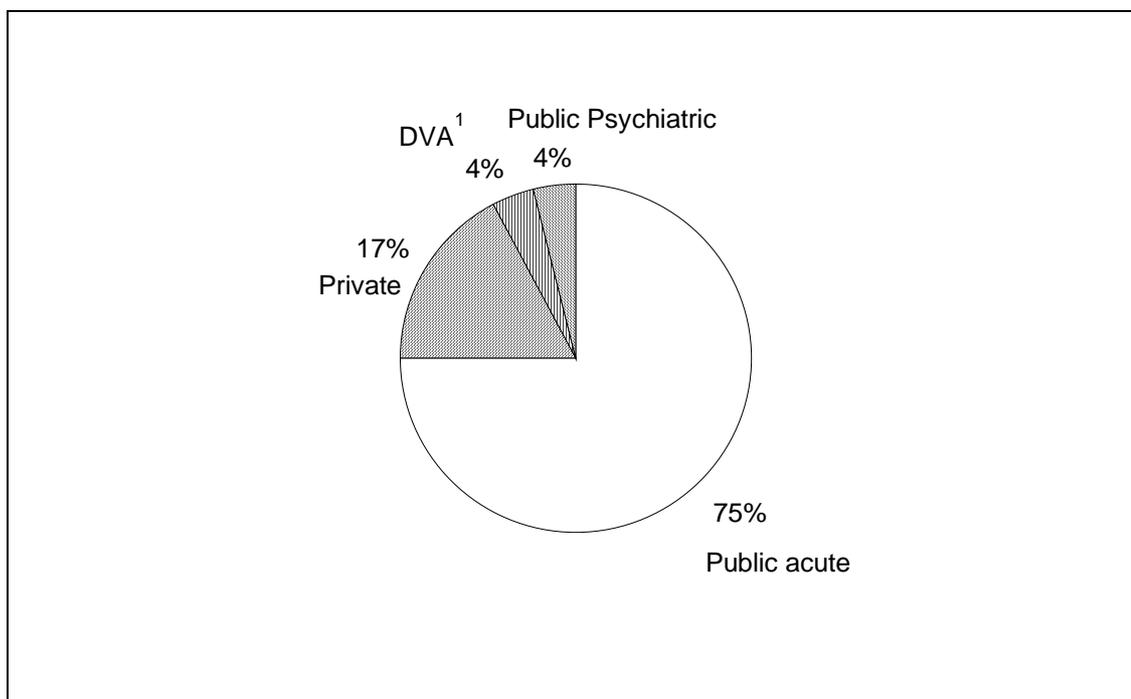
This year's Review only considers the services provided directly to patients who are admitted for treatment (inpatients). Patients who are treated by the hospital but not admitted (non-inpatients) are not examined. Research work and teaching operations conducted by hospitals are also not examined in this report.

The AIHW and the Australian Bureau of Statistics (ABS) define an acute hospital as:

A hospital that provides at least minimum medical surgical or obstetrical services for inpatient treatment and/or care, and provides round-the-clock comprehensive qualified nursing services as well as other necessary professional services. It must be licensed by the State health authority. Most patients have acute conditions or temporary ailments and the average stay per admission is relatively short. (ABS, AIHW, 1995 p. 23)

These hospitals also treat some non-acute patients (such as some mental health and rehabilitation patients as well as long-stay nursing home type patients). See Box 3.1 for an explanation of some commonly used hospital terms.

Figure 3.1: Composition of hospital sector expenditure in Australia, 1992–93 (per cent)



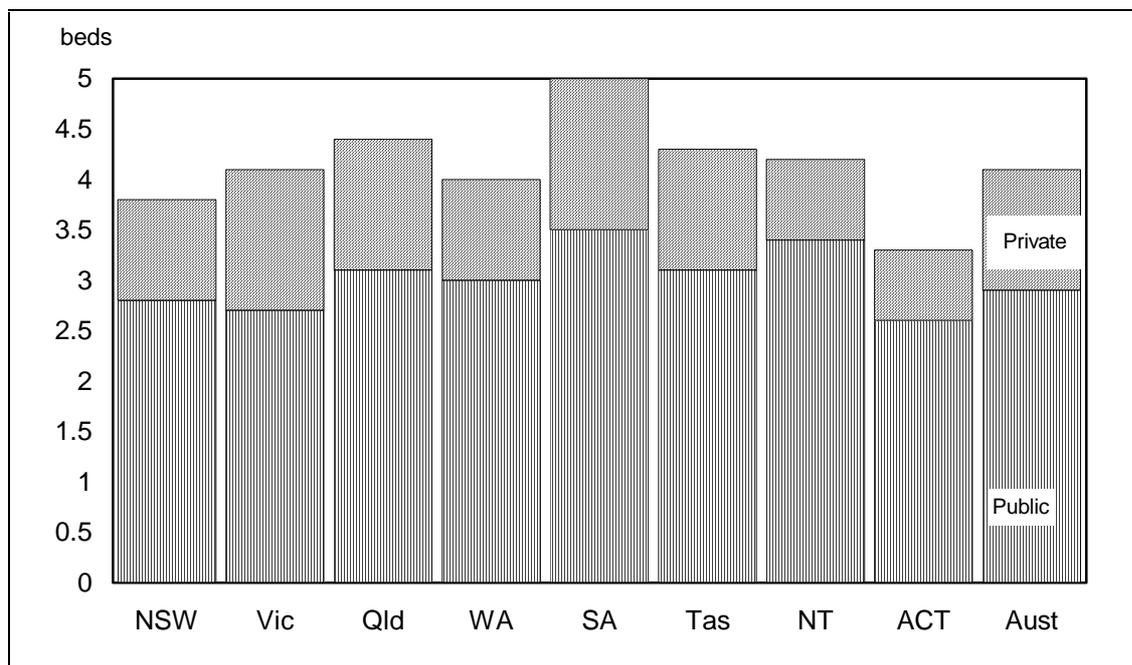
Source: AIHW, October 1995, *Health Expenditure Bulletin*, no. 11. Table 16.

Note: 1 Department of Veterans Affairs (DVA). Since 1992–93 most Department of Veterans' Affairs hospitals have either been transferred to the relevant State jurisdiction or sold to private operators.

Figure 3.2 shows the number of acute beds per 1000 population. Australia-wide, public acute care hospitals supplied 2.9 beds per 1000 population while all acute care hospitals supplied 4.2 beds per 1000 population.

In 1993–94, public acute care hospitals employed just under 168 000 staff (see Table 3.9) and recorded 3.3 million separations (see Figure 3.3). This represented 72.6 per cent of public and private acute care separations (see Table 3.5).

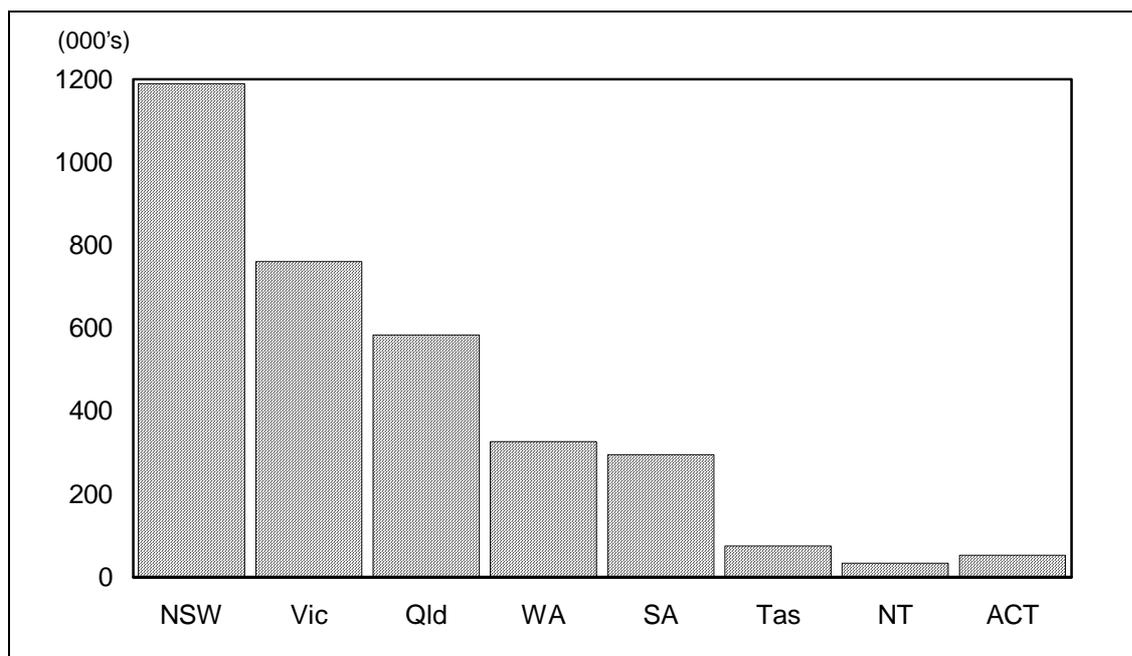
Figure 3.2: Acute care beds per 1000 population, by jurisdiction, 1993–94 (beds)



Source: AIHW National Minimum Data Set collection, unpublished; ABS Estimated resident population, Cat. no. 3101.0; Private Hospitals Australia, 1993–94, ABS Cat. no. 4390.0.

Note: Private includes beds for free-standing day hospitals in Australia column only.

Figure 3.3: Separations by public acute care hospitals, by jurisdiction, 1993-94 (000's)



Source: AIHW, National Minimum Data Set, unpublished.

Box 3.1: Some common hospital terms

The following terms are frequently used when describing the activities of public acute care hospitals. A more detailed and technical explanation is provided in the National Health Data Dictionary (NHDC, 1995).

Acute care episode: An acute care episode covers the majority of illnesses in hospitals. It includes providing treatment, performing surgery, relieving symptoms of illness and/or reducing the severity of the injury.

Casemix adjustment: Adjusting the cases treated to take account of the number and type of cases.

Diagnosis Related Group (DRG): A means of classifying hospital patients to provide a common basis for comparing factors such as cost effectiveness and quality of care across hospitals. Each DRG represents a class of patients with similar clinical conditions requiring similar hospital services.

Inpatient: A person who is formally admitted by a hospital.

Length of stay: Calculated by subtracting the separation date from the date the patient is admitted, minus leave days. A same-day patient is allocated a length of stay of one day.

Mis-adventure rates: A set of clinical indicators agreed on by the Hospitals Working Group and the NHMBWG to measure the quality of care in hospitals.

Out-patient: Also referred to as a non-inpatient or non-admitted patient. Describes a patient who receives treatment from a hospital but does not require admission to hospital.

Public hospitals: Those hospitals providing free treatment and accommodation to Australians who elect to be treated as public patients. In addition, public hospitals provide free out-patient services and may provide accommodation and nursing care services to private patients.

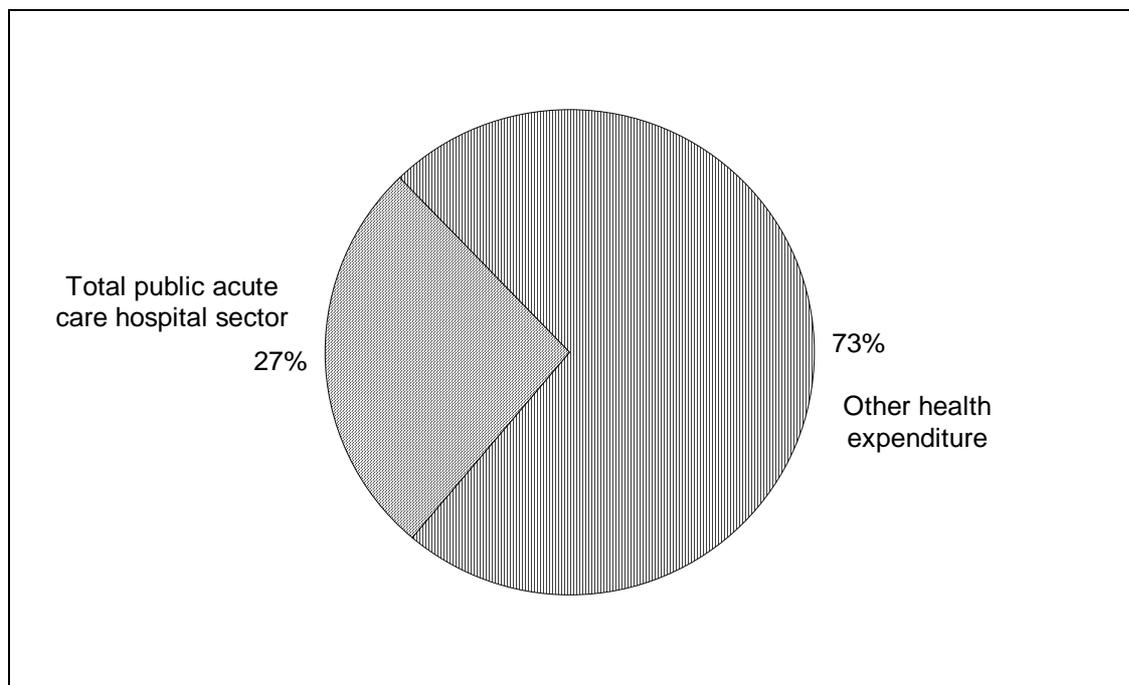
Separation: A separation refers to the discharge, transfer or death of a patient from hospital. It is broadly analogous to an admission.

Sources: NHDC, 1995 and ABS & AIHW, 1995

Public acute hospitals and the broader health system

Public acute care hospitals are a major area of health expenditure consuming approximately 27 per cent of the total health expenditure in 1992–93 (see Figure 3.4).

Figure 3.4: Public acute care hospital share of health expenditure, 1992–93 (per cent)



Source: AIHW, October 1995, *Health Expenditure Bulletin*, no. 11. Table 16.

Public hospitals are, however, only one component of health care in Australia. There are extensive and growing linkages between public acute care hospitals and other elements of the health care system. These other elements can often affect the indicators selected here for public acute care hospitals.

A wide range of services across the continuum of health care (such as general practitioners, specialists, public health initiatives, private hospitals, community health centres, and aged care programs) operate to assist patients with their health needs. Public hospitals aim to work with all these components in order to improve the well being of all people in Australia.

The health care system is only one element in a variety of factors which determine or influence the overall health status of individuals. Other factors such as education, employment, health technology, lifestyle, diet, climate, and the state of the economy also play a role.

Institutional arrangements

In Australia, the Commonwealth and the States and Territories are jointly responsible for funding public acute care hospitals. States and Territories are responsible for the delivery of hospital services.

Commonwealth funds for hospitals are provided as Hospital Funding Grants to the States and Territories. These grants are specific purpose payments to States and Territories for the provision of hospital services. They include a base grant allocated in accordance with the age/sex weighted population distribution and an ‘incentives package’⁴.

In addition, the States and Territories also fund public acute care hospitals from Commonwealth general purpose grants as well as their own revenue sources.

In 1992-93, \$9.3 billion was spent on public acute care hospitals. The total recurrent expenditure for the Commonwealth, and States and Territories for 1992–93 is presented in Table 3.1.

Table 3.1: Expenditure on public acute care hospitals, Australia, 1992 – 93 (\$ millions)

<i>Source of funds</i>	<i>Expenditure</i>
Commonwealth	4,076
State and Territory	4,393
Private	864
Total	9,333

Source: AIHW, October 1995, *Health Expenditure Bulletin*, no. 11. Table 16.

The Commonwealth and the States and Territories are also involved in the development of national health policy which impacts on the activities of all elements of the health care system.

3.2 Recent developments

The services provided by hospitals have been undergoing changes over recent years. These changes — due to improved technology, government policy and the changing needs of patients — may affect the performance of hospitals and the way performance is monitored and measured.

Two particular developments can be identified as important drivers of change for public acute hospitals. They are:

- the changing demand for the services provided; and
- the changing nature of hospital funding.

⁴ In July 1993 — the start of the new Medicare five year agreement — the incentives package was geared toward improving public patient access and promoting microeconomic reform in the hospital system.

The changing demand for the services provided

Public acute care hospitals are experiencing an increase in demand for their services. Table 3.2 shows that the number of patients admitted to public acute care hospitals has increased from 2.36 million in 1984–85 to 3.40 million in 1993–94. This increase has reflected both population growth and increased per capita usage of hospitals (Howe, 1992; p. 1).

Although admissions have increased, the number of occupied bed days have been slowly decreasing. This can be attributed to the decreasing average length of stay (ALOS) of patients in public acute hospitals which decreased from 6.9 days in 1984–85 to 4.7 days in 1993–94. There are also similar trends in the private sector.

Table 3.2: Throughput data for public acute care hospitals

<i>Year</i>	<i>84–85</i>	<i>85–86</i>	<i>86–87</i>	<i>87–88</i>	<i>88–89</i>	<i>89–90</i>	<i>90–91</i>	<i>91–92¹</i>	<i>92–93¹</i>	<i>93–94¹</i>
Admissions ('000s)	2,363	2,430	2,478	2,544	2,632	2,730	2,832	3,025	3,132	3,397
Occupied bed days per 1000 population	1,040	1,020	992	992	968	951	906	926	919	906
Beds per 1000 population	4.36	4.27	4.14	4.03	3.91	3.80	3.72	3.28	3.07	2.96
Average length of stay (days)	6.90	6.67	6.46	6.39	6.13	5.89	5.49	5.30	5.20	4.70

Sources: 1984–85 to 1990–91: AIHW, 1994, Tables; 4, 6, 8; pp. 7, 10, 12.

1991–92 to 1993–94: unpublished AIHW data.

Note: 1 These are unpublished data and are not part of the 1984–85 to 1990–91 data set. Although both were collected under the same program, there may be some differences in the data.

The improvements in health related technology have also affected the demand for health services and the average length of stay. Developments in health treatments have either reduced the ALOS or have allowed an expansion of day surgery which avoids the need for patients to stay in hospital overnight. Advancements in diagnostic technology and minimally invasive surgical techniques have the potential to significantly reduce the need for invasive exploratory surgery requiring overnight admission to hospital.

In future, the likely demand for health services appears set to increase as the average age of the Australian population steadily increases. The ageing of our population affects the hospital system as diseases of the aged tend to be more chronic. Acute services will be required to deal with increasing crisis episodes (such as hip fractures) and the degenerative diseases of longer life (such as cancer and heart disease). At the same time, there will be certain conditions that

could be more effectively treated in peoples' homes, long term care facilities, and in outpatient services.

The changing nature of hospital funding

The way hospitals in Australia are funded is also changing. States are increasingly moving away from input-based funding towards funding based on outputs.

Casemix type funding in Victoria (from 1993–94), South Australia (from 1994–95) and Queensland (from 1995) are practical applications of output based funding. Casemix type funding funds hospitals according to the number and type of patients they treat. Under these arrangements hospitals receive a fixed annual grant together with a variable case payment. Such policies are designed to increase efficiency, increase throughput, and reduce waiting times, by putting the focus on treating patients.

Changes in hospital funding arrangements can affect the way a hospital provides its services. For example, funding based on 'treated cases' may encourage hospitals to focus on increasing the volume of cases. In such instances, it is important that the overall quality of care be carefully monitored.

3.3 Framework of performance indicators

In order to monitor the performance of hospitals in the Review, eighteen indicators were developed that covered key aspects of public acute care.

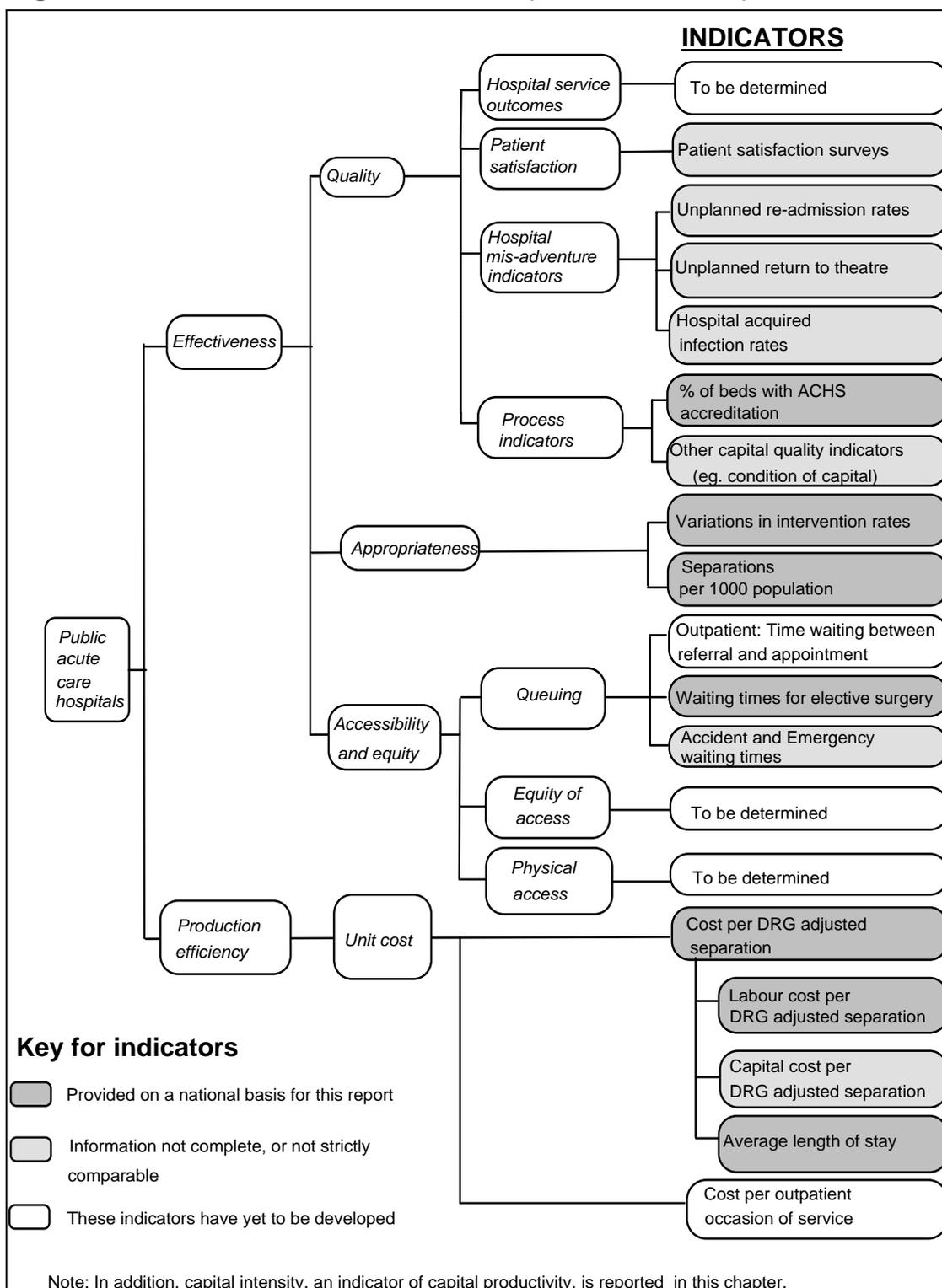
The indicators agreed by the Steering Committee and the Hospitals Working Group are illustrated in the framework of performance indicators for public acute care hospitals (see Figure 3.5). The indicators cover both the effectiveness of service delivery and the efficiency with which it is delivered. The framework further disaggregates effectiveness into quality, appropriateness of care, and accessibility and equity. The indicators are defined in Section 3.8.

The indicators presented in the framework will change over time as better measures are developed to measure the performance of hospitals in Australia. The framework itself can also be expected to evolve as the focus and objective of the Review changes.

For this Review, the States and Territories were only able to provide nationally comparable data for seven of the eighteen indicators. These are shaded in Figure 3.5. The areas most affected by the lack of data were the quality of care indicators (hospital mis-adventure rates and patient satisfaction), and some accessibility indicators such as accident and emergency (A&E) and outpatient waiting times.

Where it was not possible for the States and Territories to provide data based on standard definitions, the Steering Committee requested State and Territory specific data from each jurisdiction. The request sought additional information on quality of care and accessibility. The results of the request are included for illustrative purposes and are not nationally comparable (see Section 3.7, 'State and Territory specific information').

Figure 3.5: Framework of indicators for public acute hospitals



3.4 Summary of results

Although comparable data are limited, particularly in relation to quality of care, it is possible to draw some broad conclusions from the information collected. The results in this section have been derived from the data presented in Sections 3.6 and 3.7.

In making these comparisons, it is recognised that comparisons are only valid where data quality (in terms of consistency) is high. In areas where data have been extracted from various sources and are not strictly comparable — such as asset valuations — caution is required in interpreting the results.

It is also worth noting that the relative performance of a jurisdiction may be affected by certain factors beyond the control of public acute care hospitals. For example, the share of the private hospital sector or the demographic characteristics of a jurisdiction may affect certain indicators.

Most of the data presented in this report are for 1993–94. Exceptions to this are waiting times for elective surgery (which were collected by each State and Territory for a one month period between June and September 1994) and variations in intervention rates (1992–93).

Over time, the data that are collected will allow jurisdictions to assess themselves, not only against each other, but against previous years' performance.

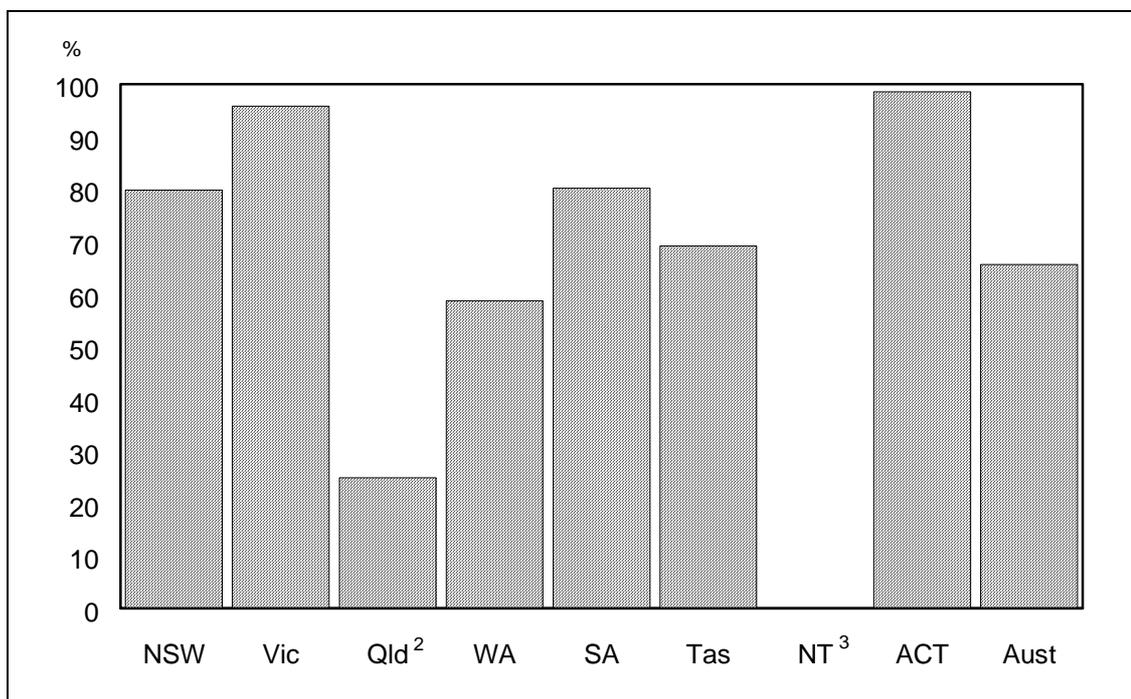
Quality

Two indicators have been selected as proxies for quality — the percentage of public acute beds accredited by the Australian Council on Healthcare Standards (ACHS) and condition of capital.

Data were available for the percentage of *all public* beds accredited by the ACHS (see Figure 3.6). This is broader than the scope of the agreed indicator which relates only to acute beds.

The percentage of public acute *facilities* (rather than public beds) with ACHS accreditation was also available. Certificates of 1 year, 3 years, or 5 years are awarded to hospitals based on an assessment of the quality of care in the hospital. These percentages range from the ACT which had all of its public acute care facilities accredited to the NT and Qld who have 0 per cent and 4 per cent respectively accredited (see Table 3.11).

Figure 3.6: Percentage of public beds¹ accredited by the ACHS in Australia, by jurisdiction, 1993–94 (per cent)



Sources: ACHS Statistics as at June 1994, and Statistics provided by the relevant State authorities.

Note: 1 Broader than public acute but excludes nursing homes and day hospital facilities.

2 The low level of accreditation in Queensland reflects the lack of active policy support for accreditation. Queensland adopted a policy of seeking accreditation in 1993–94 and is rapidly increasing the number of accredited beds. Queensland's accreditation level reflects this policy difference rather than any quality difference (see Queensland's own comments in Section 3.6 for more details).

3 To date, the NT has not sought accreditation for its public hospitals. This policy is under review (see also the NT's own comments at Section 3.6).

However, accreditation by hospitals is a voluntary process. Consequently, this cannot give a true indication of the quality of care of hospitals at the jurisdiction level as a low level of accreditation may be attributed to a low participation rate rather than poor quality. For example, as with Figure 3.6, the low level of accreditation in Queensland and the NT reflects the lack of active policy support for accreditation. Queensland adopted a policy of seeking accreditation in 1993–94 and is rapidly increasing the number of accredited beds. The policy is under review in the NT. (See Queensland's and NT's own comments in section 3.6). Also WA's relatively low proportion of accredited hospitals is due in significant part to cost and logistical problems faced by the State's rural and remote hospitals in taking part in the accreditation process.

Another agreed indicator of quality is the condition of capital indicator (see Table 3.12). That is, the ratio of depreciated replacement value (current replacement cost of the asset less the accumulated depreciation) to the total

replacement value (current replacement cost of the asset). This indicator gives an approximation of condition.

Assets were separated into two categories: equipment and buildings. The results obtained, however, should be treated as indicative⁵.

NSW recorded the highest value for the ratio of depreciated replacement value to the total replacement value for both buildings and equipment (0.82 and 0.64, respectively) indicating a 'newer' (or less depreciated) stock.

In addition to the available comparable data, jurisdictions were able to provide some information on quality of care at a system-wide level (see Table 3.3 and Section 3.7, 'State and Territory specific information').

Table 3.3: Summary of the quality of care information provided by jurisdictions.

<i>Indicator</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>
Patient satisfaction	√	√	√	√				√
Unplanned re-admission to hospital		√			√	√	√	√
Unplanned return to operating room						√	√	√
Hospital acquired infection rates						√	√	√

The information provided by jurisdictions on quality of care at a hospital or system-wide level is not comparable for a number of reasons. First, some of the indicators have been calculated using different definitions. For example, Victoria monitors unplanned and total re-admission rates rather than emergency re-admission rates and, unlike the ACHS, does not distinguish whether or not the re-admissions are related back to the original episode of care.

Second, differences may exist even when ACHS definitions are used. This can occur because some flexibility exists with ACHS indicator definitions and data collection. That is, a health care facility is able to review its care with definitions which differ from the Medical Colleges and the ACHS definitions, provided it states its reasons and includes the definitions with its results so that the data can be interpreted appropriately.

⁵ Asset data were obtained for all jurisdictions except for Queensland and the NT as these jurisdictions are yet to measure assets at current replacement values. However, even for those jurisdictions for which data were provided, the information was incomplete and non-comparable. In particular asset valuation methodologies vary across jurisdictions.

While non-comparable between the States and Territories, the notable results from the jurisdiction-specific data submitted were:

- NSW general hospitals scored 84 out of a possible 100 in a patient satisfaction survey undertaken between November 1993 and January 1994.
- Unplanned re-admission rates in Victoria peaked at 11.3 per cent (October 1993) of all separations. The average from August 1993 to June 1995 was 9.9 per cent of all separations⁶. In addition, results from a patient satisfaction survey conducted in 1995 showed that 97 per cent of patients were satisfied with the care they received.
- 87 per cent of patients in a survey of accident and emergency departments in Queensland responded as being 'satisfied' with the care they received. Just over 50 per cent of the satisfied patients were 'very satisfied'.
- Western Australian patients ranked their hospital stay as 4.51 on a satisfaction scale of 1 to 5 in May 1995.⁷
- Unplanned re-admissions to South Australia's metropolitan hospitals fell from 7.0 per cent in 1992–93 to 6.3 per cent of total separations in 1993–94.
- The quality of care in Tasmania's hospitals, measured by various clinical indicators, met or out-performed the standards used by the ACHS⁸ in 1994–95.
- The Royal Darwin Hospital in the Northern Territory showed variability over the collection period. Unplanned re-admission rates, unplanned return to theatre, and contaminated wound infections all exhibited rates in excess of the threshold indicators (set by the ACHS) at some stage during 1994–95. However, this may be partly explained by differences in, and changes to, definitions.
- The quality of care in the ACT in 1994–95 out-performed ACHS threshold indicators. Both the Calvary and the Woden Valley hospitals fell well within the thresholds set for unplanned re-admission, unplanned return to operating theatre, and hospital acquired infection rates. In addition, 96 per cent of patients in the Woden Valley hospital in May 1995 responded as being 'satisfied' with the care they received. Just under 63 per cent of satisfied patients were 'very satisfied' with the care received.

⁶ Caution must be exercised in interpreting trend data, particularly for quality performance indicators like unplanned re-admissions. The causal factors underlying variations over time may be due to problems associated with refining the data collection process, rather than changes in the quality of the service delivery.

⁷ Where 1 is unsatisfied with the service and 5 is fully satisfied with the service.

⁸ As part of the ACHS Accreditation program clinical indicators have been developed, along with recommended standards or thresholds (which should not be exceeded), for measuring the quality of patient care.

Appropriateness of care

Measuring the appropriateness of care is problematic. It involves an examination of where health care could be best provided and how it should be provided. More importantly, it presupposes that there exists a set method for providing care to patients.

At this stage, measuring the appropriateness of care is limited to measuring the differences in care at the jurisdiction level. It should, however, be noted that differences in care do not necessarily imply that a particular jurisdiction is providing an inappropriate level of care.

Variations in intervention rates (see Table 3.13) and separations per 1000 population (see Table 3.14) are two indicators capable of indicating whether differences exist across jurisdictions. Such differences may then lead to examinations of appropriateness of the level of care.

Variations in intervention rates for small geographical areas reflect the collective decisions of medical practitioners who refer patients for surgical treatment in hospital. However, as the available data were not uniformly coded for area of usual residence, the rates were calculated at the jurisdiction level. This will tend to smooth out the 'small area' variation.

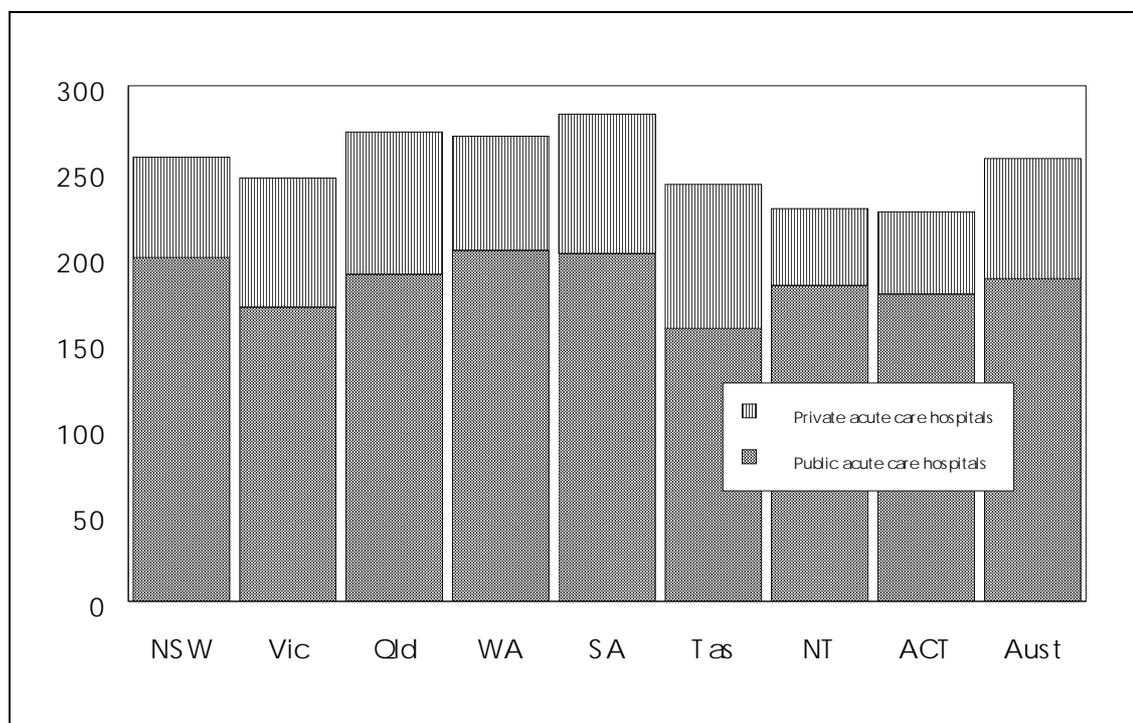
None of the States or Territories varied significantly in their intervention rates for all the selected procedures. There were, however, some substantial differences for individual procedures. The greatest positive percentage variation was for hip replacements in the ACT (73 per cent above the standardised rate for the other States and Territories)⁹ and the greatest negative percentage variation was for lens insertion in Western Australia (44 per cent below the standardised rate for the other States and Territories).

Total separations per 1000 population measure hospital activity in the jurisdictions. Again, this indicator can highlight differences in the provision of hospital services between jurisdictions¹⁰. Put simply, it indicates the frequency of treatment across the population. Total separations per 1000 population for all patients ranged from 226.5 in the ACT to 283.4 in South Australia (see Figure 3.7).

⁹ Rates have been calculated by location of service provider, not by location of patient's residence. This will affect those jurisdictions that experience a high degree of cross-border flow of patients.

¹⁰ Both public and private separations need to be considered for this indicator as the private/public share of hospitals differs across jurisdictions.

Figure 3.7: Total separations per 1000 population by private and public acute hospital, by jurisdiction, 1993–94



Sources: AIHW National Minimum Data Set survey program, unpublished; Department of Human Services and Health, unpublished.

It should be noted that the separations per 1000 population have not been standardised to adjust for differences in the mix between States and Territories in the age and sex of their populations.

Access

The waiting times for elective surgery reported in this chapter were collected for one month between June and September 1994. The Mays Report (1995) was the result of the first attempt to collect these data in a nationally consistent manner.

There are a number of limitations with the data. At the time of the survey there were significant differences in coding and counting practices between the jurisdictions and differences in the approaches to waiting list audit and management. Also, because the survey period was short, the data collected may not be typical of a longer period.

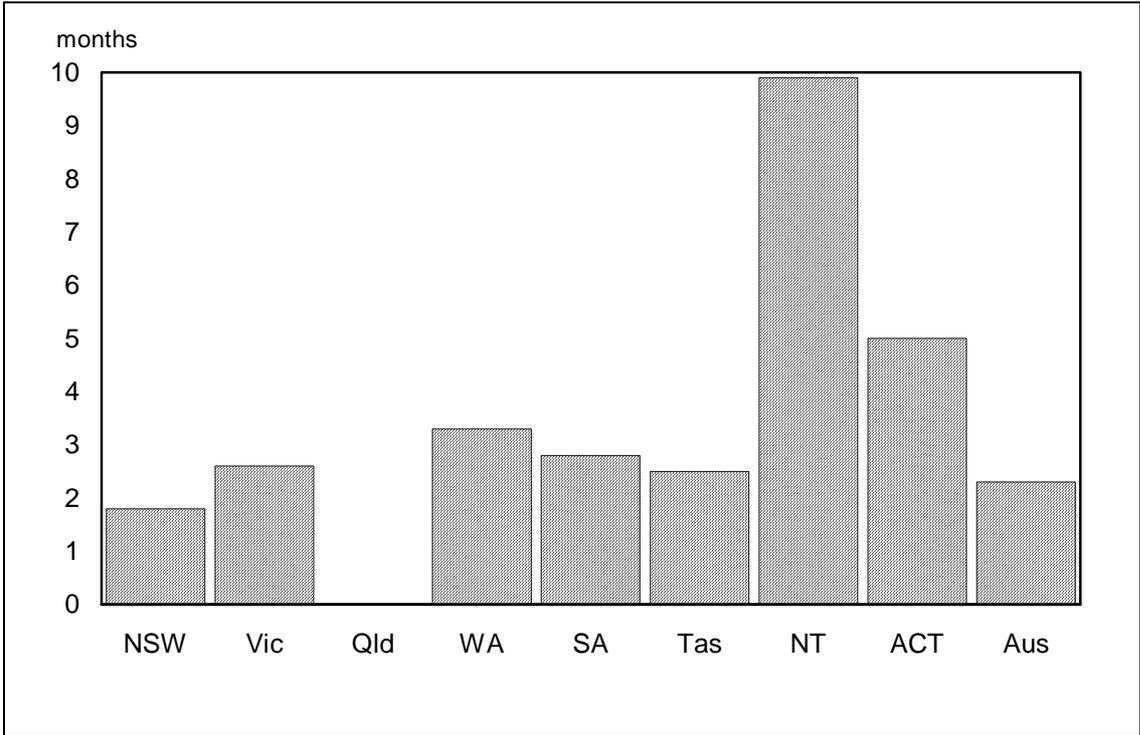
The three sets of performance measures selected to measure waiting times for elective surgery for the Mays Report were:

- clearance time (see Table 3.15);
- the proportion of patients waiting inappropriately at the time of the census (see Table 3.16); and
- the proportion of patients admitted after waiting an inappropriate time (see Table 3.16).

Clearance time can be conceived as the length of time that it would take to clear the elective surgery waiting lists assuming that the rate of clearance remains constant and no more patients were added to the list. Clearance time is a prospective measure of the capacity of the system to remove patients from waiting lists. It should not be considered as the average waiting time.

During the (one month) survey period in 1994, New South Wales recorded a clearance time of 1.8 months while the Northern Territory recorded a clearance time of 9.9 months. The national average was 2.3 months (Figure 3.8).

Figure 3.8: Elective surgery clearance time for public hospitals, by jurisdiction, 1994 (months)



Source: Mays (1995). Based on data collected for one month between June and September 1994.
Note: Queensland was unable to provide data.

The results of the other performance measures selected to measure waiting times for elective surgery are summarised in Box 3.2.

Box 3.2: Additional results of waiting times for elective surgery for public acute care hospitals

- 9 per cent of the patients at the time of census had been waiting for longer than 12 months;
- 2 per cent of patients admitted from the elective surgery waiting list had been waiting over 12 months;
- 40 per cent of category 1 patients at the time of census had been waiting over 30 days;
- 13 per cent of category 1 patients admitted from the elective surgery waiting list had been waiting over 30 days.

Note: Category 1 is defined in Mays (1995) as referring to patients whose admission is desirable within 30 days in the opinion of the treating clinician.

Source: Mays, 1995, *National report on elective surgery waiting lists for public hospitals 1994*.

New South Wales and one hospital in Tasmania also provided Accident and Emergency waiting times. From March 1995 to July 1995 the New South Wales Accident and Emergency departments improved their performance in the highest category (resuscitation) by increasing the percentage of patients attended within the recommended time from around 60 per cent to 74 per cent.

Tasmania consistently achieved the ACHS recommended standards for the two most urgent categories and the non-urgent category of care.

Efficiency

States and Territories collect and are able to provide a significant coverage of data on unit costs for public hospitals. The unit cost of a hospital separation in regard to both recurrent and capital expenditure — adjusted for the mix of cases treated — is reported for public acute care hospitals.

Recurrent costs per separation were calculated using a number of sources of varying quality¹¹. Consequently, the costs presented in this report are estimates. For example, not all jurisdictions were able to provide an adjustment factor (the

¹¹ The results are based on an incomplete data base which contained some anomalies.

inpatient fraction¹²) to allow the expenditure associated with inpatients to be separated from total hospital expenditure. For these jurisdictions a standard adjustment factor was applied. Therefore, a great deal of care should be exercised in interpreting the results.

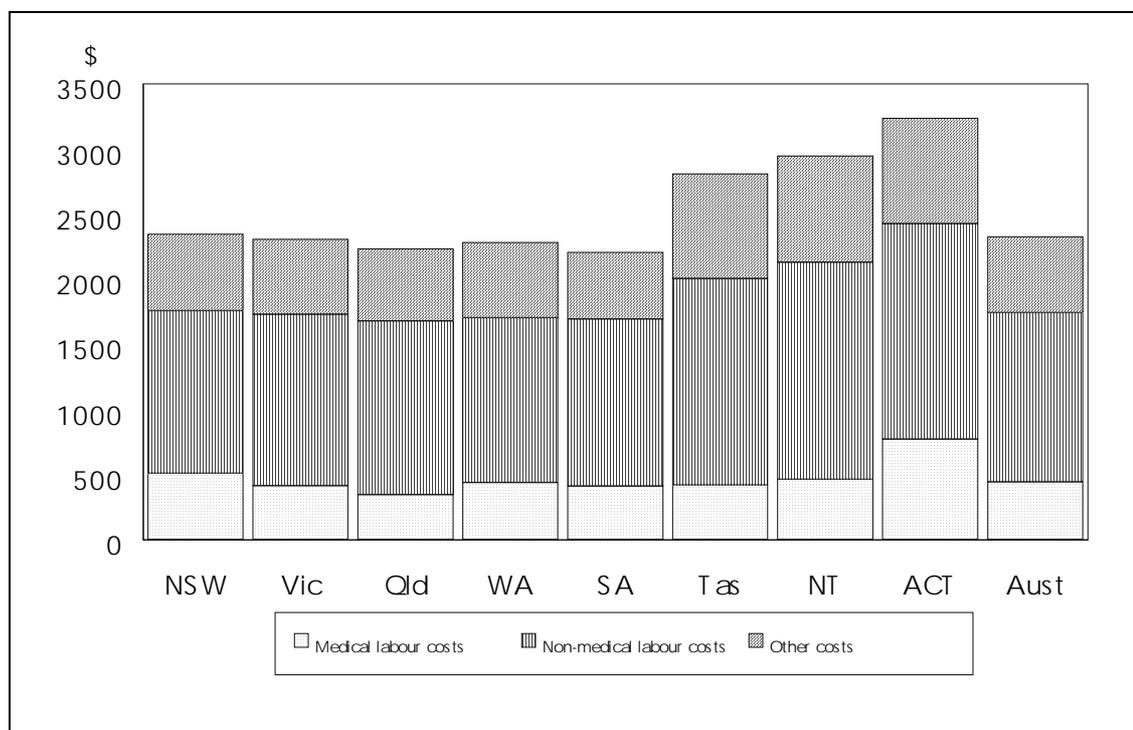
The recurrent cost per casemix adjusted separation deals with the costs associated with acute inpatients. It was not possible to separate out the costs of acute patients from all other admitted patients. However, non-acute admitted patients (such as mental health, rehabilitation and nursing home type patients) account for less than 5 per cent of all admitted patients.

The casemix-adjusted recurrent cost per separation varied significantly across jurisdictions with South Australia registering the lowest cost at about \$2200 and ACT the highest at over \$3200. The national average was almost \$2400 (see Figure 3.9 and Table 3.18).

The three components of the cost per casemix adjusted separation were medical labour costs, non-medical labour costs and other (recurrent costs). The data suggest that labour was the largest component accounting for 75 per cent of the national average recurrent adjusted unit cost. Nursing accounted for 37 per cent of the total labour component.

¹² The inpatient fraction (IFRAC) is an expression of the ratio of inpatient costs to total hospital costs and is generally estimated using existing management information. Where no IFRAC was available the inpatient costs as a proportion of total costs were derived using the Health and Allied Services Advisory Council (HASAC) conversion rate which equates the cost of 5.753 non-inpatient services with the cost of one inpatient bed day. It should be noted that there are reasons to question the applicability of the HASAC ratio and the results are sensitive to the ratio used.

Figure 3.9: Cost per casemix adjusted separation for public acute care hospitals, by jurisdiction, 1993–94 (dollars)



Sources: AIHW National Minimum Data Set collection, unpublished; Commonwealth Department of Human Services and Health casemix data base, unpublished; Commonwealth Department of Human Services and Health, Medicare Agreements data, unpublished.

As well as the recurrent costs shown above, a user charge of capital (a measure of capital usage) was also calculated for both buildings and equipment (see Table 3.19). However, the asset data were unreliable and incomplete¹³.

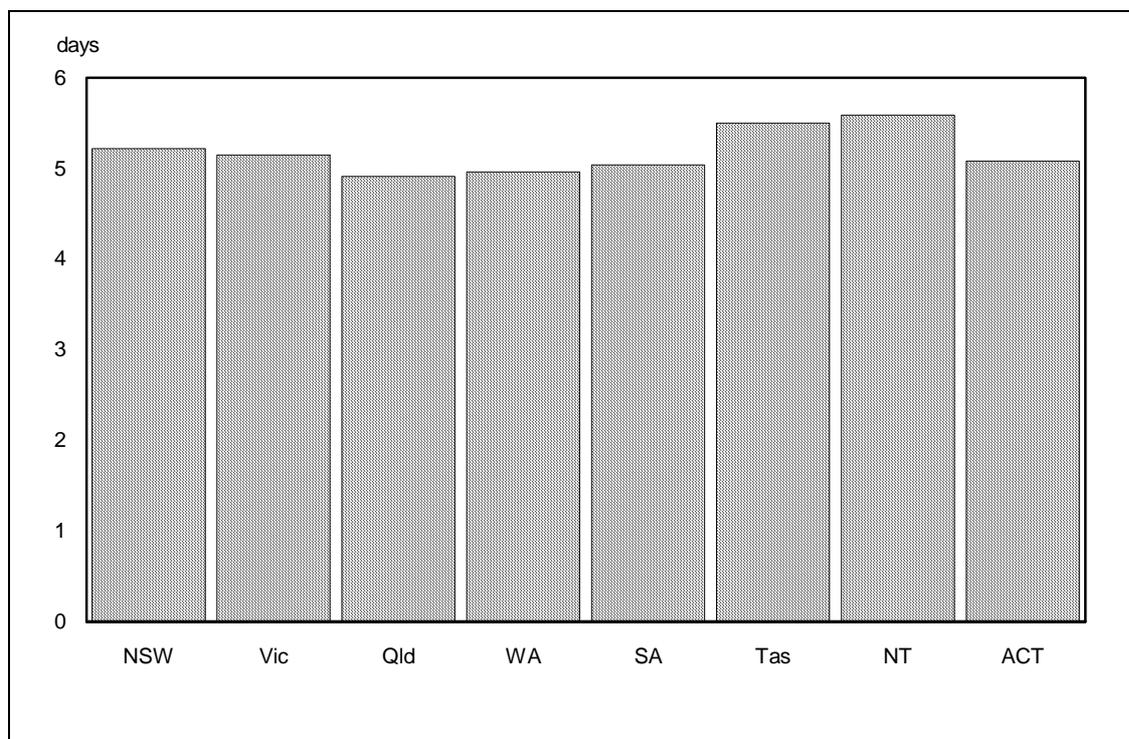
For buildings, the user charge of capital per casemix-adjusted separation ranged from over \$260 in South Australia to just over \$470 in the ACT. However, the accumulated depreciation on South Australia's hospitals and related buildings is considerable (69 per cent) suggesting older stock.

It also appears that the average length of stay (ALOS) is a significant factor determining hospital inpatient episode costs¹⁴. For instance, the Northern Territory and Tasmania, which appeared to record relatively high recurrent costs per treated case, exhibited a longer ALOS in 1992–93.

¹³ Because of incomplete asset registers and different asset valuation techniques. Also not obtained for Queensland and the Northern Territory (see footnote 5).

¹⁴ The ALOS data are not casemix-adjusted and are therefore a biased explanation of different costs for the same case profile between States and Territories. For example, a lower ALOS may indicate a lower casemix profile.

Figure 3.10: Average length of stay, for public hospital patients, by jurisdiction, 1992–93 (days)



Source: Commonwealth Department of Human Services and Health, 1994(a).

3.5 Future directions

The indicators presented in this chapter will, over time, change as new and better ways of measuring performance are developed.

The challenges are:

- to improve the existing indicators;
- develop additional indicators; and
- to extend the coverage of the review.

Improving existing indicators

The effectiveness indicators in particular need to be properly defined before data can be collected. Developments that are expected to lead to improvements are outlined below.

Quality of care

The Department of Human Services and Health has commissioned consultancies to further develop the following indicators:

Mis-adventure indicators: Consultants have recently been engaged to study the validity and reliability of these indicators as defined by the Quality of Care Working Party of the National Hospital Quality Management Program. Their work should be available towards the end of 1996.

Consumer satisfaction: Consultants have been engaged to isolate core areas of concern to consumers and to recommend key questions that should be asked, and methods for obtaining reliable feedback on these core areas. It is hoped that this consultancy will provide information to assist the establishment of a standard set of consumer satisfaction indicators which could be introduced by each State and Territory. The final report should be available towards the end of 1995.

Accessibility to services

Waiting times for accident and emergency: Draft definitions for accident and emergency waiting times are being used in a number of hospitals. Recently, these definitions became part of the ACHS accreditation program. These definitions would need to be included in the National Health Data Dictionary (NHDD) before nationally consistent data are available for reporting. This project is expected to finalise proposals for inclusion into Version 5.0 of the NHDD (effective July 1996).

Waiting times for outpatients: This indicator will benefit from the work on developing definitions for ambulatory care services. Information systems will also need to be established that enable the collection of appropriate data. However, the lead time for these activities is considerable. It is not expected that consistent data will be available before the second half of 1998.

Unit cost

Cost per outpatient occasion of service: This indicator relies on the development of a classification system for ambulatory care services and agreement on a standard minimum data set which will be used by all States and Territories. A project funded by the Commonwealth Department of Human Services and Health aims to develop a strategic level model for institutional-based ambulatory care services. Such a model may provide the framework for the introduction of a standard set of data definitions by States and Territories which could facilitate the development of more flexible contracting and costing mechanisms. Pilot data definitions will become available for Version 6.0 of the NHDD. Data collected according

to these definitions would be available in late 1997 and could be reported as preliminary or pilot data.

In addition, the unit cost indicators reported in this Review can be improved. Work will be undertaken to further refine and build on the unit cost measures already developed. Part of improving the quality of the unit cost measure will be the work done to better value assets.

Developing additional indicators

A further challenge is to develop performance indicators (and collect data) in areas where they have not currently been developed (see Figure 3.5). The effectiveness indicators will be further improved by developing:

- hospital service outcome indicators;
- equity of access indicators; and
- physical access measures.

Work is currently underway on some of these projects. In the area of hospital service outcomes, for example, one of the key programs is the National Goals, Targets and Strategies for Better Health Outcomes into the Next Century. The targets set by this initiative may become 'benchmarks' for system performance into the next century. Specific goals relating to the hospital component of care have been set by some jurisdictions and may form the basis of hospital performance indicators.

Extending the coverage of the Review

In the longer term, the Review should be mindful of the changes that will affect the way health services will be provided to Australians. These changes may affect the development of performance indicators for the hospital sector as well as the health sector in general.

The Council of Australian Governments (COAG), for example, has recognised the changing focus of care in Australia and is sponsoring a re-examination of the best ways to provide health services to individuals and of the role of hospitals within the health care system.

The purpose of these reforms will be to provide health services which meet peoples' needs better and which contain in-built incentives for the most effective use of funds. The key elements of the reform are to concentrate on:

- the organisation of services to better meet the needs of the people;
- planning arrangements to allow governments to plan, fund and manage service based on outcomes;
- funding arrangements to, *inter alia*, reflect better variety of care and support the needs of people; and
- the development of nationally consistent data to re-focus services towards meeting peoples' needs.

3.6 Data results

This section presents all national data collected for this initial report. This includes both the descriptive data and data collected for the performance indicators.

In addition, each jurisdiction provided to the Steering Committee a single page commentary to assist in the interpretation of the data presented.

The following information is presented in this section:

- jurisdictions' own comments;
- descriptive data;
- effectiveness indicators on:
 - quality;
 - appropriateness;
 - accessibility and equity;
- unit cost and productivity indicators.

Throughout the Tables a number of abbreviations have been used. These abbreviations are as follows:

- na (not available) is used when the data is not available, either because it is not collected or there were insufficient resources. For example, private hospital data may not be collected in some jurisdictions.
- - (not applicable) is used where it is not possible to collect the figure. For example, a '-' is shown in the ACT teaching hospital column as there are no teaching hospitals for the ACT.

The State and Territory specific information collected from each jurisdiction are then presented in Section 3.7.¹⁵

¹⁵ The abbreviations developed for section 3.6 have not been followed in section 3.7. The abbreviations presented are as submitted by each jurisdiction.

New South Wales — jurisdiction's own comments

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The initiative to develop comparable indicators with the aim of improving health service provision across the Australian States and Territories is commendable. The establishment of performance indicators will increase the use of information in various services to identify aspects of service performance which warrant investigation and offer pointers for appropriate actions for improving performance. These will supplement management information available at the state level.

At this stage of this endeavour, however, caution should be exercised in drawing conclusions, as the performance measures and the comparability of data across the States leave much room for improvement. A case in point is the difference in accounting principles adopted among the States and Territories. NSW, for instance, is the first State to adopt accrual accounting in financial management. The NSW 1993–94 expenditure and asset condition and maintenance data reflect this new accounting method. NSW is also the only State which adopts a need-based budget allocation scheme across the State which incorporates community as well as hospital-based services.

The challenge for the current initiative is the continued development and refinement of performance indicators to provide a consistent picture of service provision. In the aspect of efficiency, for instance, the unit cost uses public-private mix data in the calculation. NSW has a relatively higher proportion of private patients in public hospitals. This does not mean that NSW is less efficient because of the higher private patient proportion. This endeavour should also address the issue of allocative efficiency, that is maximising benefits with available resources, and not only look at the production of outputs at lowest cost. The issue of trade off between efficiency and equity objectives need also to be addressed. NSW Health supports future activities in the development of indicators or composite indicators along this line.

The Government has just released its *Economic Statement for Health*. The Government will strengthen the public health system to ensure better health for people, enable equity of access to comprehensive health services, and improve the quality of service. These will be achieved through ensuring an appropriate balance of resources across the spectrum of health services and that resources are used efficiently and effectively.

A new program structure, introduced in NSW in 1995–96 allows the development of more detailed performance indicators and targets. The new structure will also facilitate more valid comparison with other State and Territory health systems. The NSW Department of Health's activities in this area will closely tie up with the Australian Health Ministers' Council's (AHMC) current and future initiatives in this respect.

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Victoria — jurisdiction's own comments

“ Victoria has been the leader in the development and implementation of output based funding systems, and studies have been commissioned to extend casemix funding to include outpatients and other services. This will enable further standardisation of data collection and a more accurate picture of performance.

The *Victorian Patient Satisfaction Survey* has now been piloted in thirty public hospitals. The results will be used to develop a comprehensive framework for measuring patient satisfaction in public hospitals.

A recently released discussion paper *Towards a New Framework for Quality in Victoria's Hospitals*, recommends ways of reinforcing Victoria's focus on patient access and service delivery standards.

A *Hospital Services Report* has also been published to provide information on hospital inpatient activity; access to emergency, critical care and elective surgery services; and effectiveness. Data on individual hospitals gives consumers, providers and government the opportunity to compare performance.

The implementation of Health Care Networks in the Melbourne Metropolitan area provides scope for improved patient care and organisational efficiencies across all levels of service provision, including primary care. The restructure repositions hospitals to respond more appropriately to individual needs of patients.

In relation to the assessment of the comparative performance of Victoria's hospitals, it is important to note that:

- Comparisons are generally based on 1993–94 data. This was the first year casemix funding was operational. Significant refinements have been made to the formula to ensure that priority is given to emergency and elective admissions, and to reward hospitals which provide high quality, patient focussed services with proven health outcome benefits.
 - Victoria's unplanned readmission rate measures the percentage of patients readmitted by the hospital for further treatment of the same or an unrelated condition. It is misleading to compare this rate with the emergency readmission rates collected by other jurisdictions.
 - The reported clearance times are calculated averages and do not reflect real waiting times as experienced by patients. The overwhelming majority of elective patients gain admission without being on a waiting list. Of those on the waiting list a large proportion are admitted within a short period of time.
- ”

Queensland — jurisdiction's own comments

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Queensland Health operates in a distinctive environment of a population substantially dispersed over large distances, with many population centres across the State. Queensland hospitals must respond to needs of local populations within a context of significant rurality.

Queensland Health has developed an active focus on *Quality Client Service* which is supported by a Best Practice Corporate Policy. Quality assurance is being improved through the use of patient-oriented systems for managing quality of care. Within hospitals there has been progress with instruments such as patient satisfaction surveys, unplanned readmissions and adverse outcomes.

In accord with this focus, Queensland Health actively supports public hospitals seeking ACHS accreditation status. There should be significant increases in the numbers of hospitals awarded accreditation in the immediate future.

The Queensland Government acknowledged the need to rebuild and replace the hospital capital stock with a \$1.7 billion capital works program over ten years. Queensland Health undertook a complete survey and assessment of the quality and value of its capital stock, though the results are not in a format enabling reporting in this publication.

Queensland is establishing systems to report accurate and comprehensive data on waiting times for elective surgery. The issues of information infrastructure and a strategy for management of elective surgery waiting lists are being finalised, and Queensland anticipates contributing to the National Report on Elective Surgery Waiting Lists for Public Hospitals in 1995.

Specialities where separation rates are less than national benchmark rates have been identified in planning studies, and where appropriate, action to enhance the relevant speciality services is being undertaken.

Queensland has been shown by some studies to have lower average costs per patient in public hospitals than other States. Previous comparisons were not able to adjust for different casemix profiles between States. Casemix-adjusted data show a reduced difference between Queensland and other States.

Reasons for differences may include different levels of efficiency, different clinical practices, and different unit input costs amongst other factors. Queensland Health has moved to casemix funding of its public hospitals (as of 1 January 1995) and continues to extend benchmark pricing for various treatment areas.

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Western Australia — jurisdiction's own comments

“ The Western Australian public hospital system aims to provide accessible, high quality, comprehensive hospital services at costs which are comparable with other States.

The public hospital system in Western Australia covers a geographic area equal to one third of the Australian continent. The system includes 88 public hospitals providing a total of approximately 5000 beds. Approximately 40 per cent of public hospital beds are located outside the metropolitan area.

A higher level of access is provided to public patients in Western Australia compared to most other States. In 1993/94, 60 per cent of all hospital admissions were public patients, compared to 50 per cent nationally. The State's public hospital system also provides an extensive network of emergency and public outpatient services with an estimated 25 per cent of total hospital resources allocated to the provision of these services.

Western Australia incurs significant extra costs in providing public hospital services to remote regions. Contributing factors are the cost of patient transport from country and remote regions of the State to Perth for needed hospital services, unavoidable small scale diseconomies and higher unit labour and other operational costs.

Despite this, in 1993–94, the average cost per public hospital inpatient separation in Western Australia was below that of most other States and well below the national average.

The average length of stay for inpatients in Western Australia continues to be the lowest of all States and Territories.

Although some caution needs to be exercised in making interstate comparisons, it would appear that WA public hospital services are delivered at a level of efficiency which compares favourably with other States.

Surveys of public hospital patients continue to report a high level of patient satisfaction with the services provided. ”

South Australia — jurisdiction's own comments

“ Among the many pressures for change in the organisation and operation of public health services are constraints on resources available to fund health care. Such constraints are made the more pressing by increasing demands for services. The South Australian Health Commission is seeking to develop and implement more efficient delivery mechanisms with an emphasis on equity; quality of care and outcomes; and of accountability to the community. These issues are of particular importance in South Australia, which has the highest rate of inpatient separations of any State or Territory.

A major initiative has been the introduction of casemix funding into South Australian public acute hospitals from 1 July 1994. At the same time a number of initiatives were commenced to assist in assessing the quality of care and outcomes of hospital inpatient treatment. An important issue was to determine whether there was any evidence to support the view that quality of care would suffer in an environment where costs were contained or controlled. As an initial step, three clinical indicators (rates of emergency patient re-admissions; rates of hospital acquired infection; and rates of unplanned return to operating theatre) were incorporated into the routinely collected management data collection system from 1 July 1995. Subsequently, work was commenced to develop profiles of a number of these indicators from the hospital inpatient information system for three years of data. Limited results from the first two years of data for re-admissions are included in this report. Information to be released during November 1995 for re-admission rates over 1994/95 (by DRG) will enable comparisons to be made with rates calculated on data collected prior to the introduction of casemix funding. Detailed data from the other indicators will be available at the end of 1995–96.

Another initiative aims to develop a standard approach to measuring consumer (patient) satisfaction in public hospitals. Information from this pilot study, which is being undertaken in conjunction with the Association for Quality in Health Care SA, is being collected from a mix of public and private hospitals in metropolitan and country areas.

Considerable work is also being undertaken in the area of the measurement of the outcomes of hospital patient treatment. One such example is the trialing of the Rand Medical Outcome Study Short Form 36 (SF36). The SF36 is a generalised health status tool which is becoming widely used in Australia. A study, commenced late in 1994, aims to assess utility of SF36 information for diagnostic purposes, for improving the care delivery processes and to evaluate the use of the SF36 as an indicator of patient outcomes. It is of potential interest to clinicians in that it can provide comparisons of health outcomes for their specific clinical groups against population norms.

”

Tasmania — jurisdiction's own comments

“ Tasmania supports the continued development of performance indicators as a means to improve health services provided to the community. The use of performance indicators to make comparisons between hospitals and jurisdictions is continuing to evolve. Substantial work is required to improve the quality of information currently collected and reported. It is therefore important that qualifications concerning the validity and reliability of the data be noted and that care be exercised in drawing conclusions from the information presented.

Each of Tasmania's three Community and Health Service Regions produce an annual business plan including performance indicators for each program area which are reported on quarterly. In the hospital area performance indicators and their collection are continually being refined to take account of local and national reporting requirements.

Tasmania's relatively small and dispersed (60 per cent of residents live outside the capital city) population introduces economies of scale disadvantage compared to larger jurisdictions. This contributes to the Tasmanian average cost per casemix adjusted separation being greater than the national average.

Tasmania is continuing to develop waiting list management reporting with implementation of national definitions and urgency ratings. The forthcoming 1996 national waiting list report will publish higher quality data due to information system enhancements and the six month data capture period.

The percentage of beds with ACHS accreditation as a proxy measure of quality is subject to variation as accreditation status changes. For example, a recently commissioned regional hospital is seeking accreditation in 1996 and this will increase the number of accredited beds in Tasmania by 16 per cent.

Tasmania has recently entered into contracts with private hospitals for the provision of services to public patients. The agreements include provision for monitoring of performance and quality against agreed criteria.

The information in this report will stimulate some debate and self examination. It is hoped that the report and the forthcoming report on hospital performance indicators by the National Health Ministers' Benchmarking Working Group will be a catalyst for further development of valid performance indicators for use at all levels of the hospital industry.

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Northern Territory — jurisdiction's own comments

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In the Northern Territory, Health Services are provided to a population of 171,440 scattered over an area of 1.3 million square kilometres, almost half of whom live outside an urban area.

A large proportion of the Northern Territory's population has a higher morbidity rate than the general Australian population (Plant, Condon, Durling, 1995). Persons in this group are more likely than the general population to be admitted to hospital and, when they are admitted, they generally present with complicating conditions super-imposed on the principle condition for which they were admitted. The result is longer time spent in hospital and greater chance of infections and complications as a result of the pre-existing morbidity.

The high morbidity of some sections of the community and the consequent increased demand for health services is, unfortunately not matched by the availability of medical practitioners. The Northern Territory has only 1.7 medical practitioners per 1000 of the population, compared to the National average of 2.2. This imbalance is more pronounced in the case of specialist medical services, the Northern Territory has only one third of the National average of in-hospital specialist medical attendances and less than half of the National average of out-of-hospital specialist medical services. This lack of availability of specialist medical officers results in patients being on waiting lists longer than desirable.

Due to the above factors, and others noted in the body of the Report, care is needed in interpreting the data for the Northern Territory, and particular care is needed in making comparisons with other jurisdictions. For example, the data on unplanned returns to operating theatres has been collected using manual methods and is based on different definitional criteria over the time of the collection period. The patient returns referred to are in fact all returns to operating theatres both planned and unplanned. Similarly unplanned readmissions to hospital within 28 days of discharge, include readmissions of patients in both the same and unrelated Diagnosis Related Groups as the original admission. Infection rates generally reflect the fact that 66 per cent of surgery in Northern Territory hospitals is emergency and urgent surgery and predominantly relates to individuals from the higher morbidity groups of the Northern Territory population.

In relation to accreditation of Northern Territory hospitals it should be noted that, at the time this data was collected, it was not the Northern Territory's policy to seek accreditation for its public hospitals. This policy is under review.

”

Australian Capital Territory — jurisdiction's own comments

“ In respect of the ACT, the most telling aspect of this chapter is the indicators concerning the relative efficiency of the ACT public hospital system. The indicators support the findings of a number of other reviews in recent years which have found that the ACT public hospital system is more costly than the national average. Several factors contribute to this situation.

The ACT is unique in a number of aspects. Its size relative to other jurisdictions means that in providing a comprehensive range of acute services at comparative low volume, some economies of scale are foregone. It is notable that for the three smallest jurisdictions, the unit cost of treating patients is higher than the other States.

The ACT is also a largely urban jurisdiction in that all of its hospital services are provided in metropolitan areas. It is well recognised that the provision of acute services in metropolitan hospitals is more expensive than that provided in rural hospitals.

Prior to ACT self-government in 1989, the public hospital system was managed by the Commonwealth Government. The result was that hospital funding was not carried out in the broader context of Territory budgeting, and there were no clear lines of accountability for outputs.

The ACT public hospital system is unusual too in that a large proportion of its clients reside in another jurisdiction. More than 20 per cent of inpatients and 14 per cent of outpatients reside in the South East region of NSW. In this context, it is reasonable to expect that as a referral centre for the region, the Territory's hospitals treat cases which are, for the most part, of greater complexity and consequently more expensive to treat.

The effects of these factors are apparent in the efficiency indicators contained in this report. Reform of the ACT health system, such that the costs of its outputs more closely reflects the national average, is a high priority of the ACT Government.

It is important to note that the development of indicators is at an early stage and as such, they need to be interpreted and applied with caution.

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All jurisdictions, 1993–94, descriptors**Table 3.4:** Acute hospital beds per 1,000 population¹

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Public									
teaching ²	1.1	1.0	1.0	1.3	1.4	1.9	-	-	1.1
non-teaching	1.7	1.7	2.1	1.7	2.1	1.2	3.4	2.6	1.8
Total	2.8	2.7	3.1	3.0	3.5	3.1	3.4	2.6	2.9
Private	1.0	1.4	1.4	1.1	1.5	1.3	0.8	0.7	1.3
Total acute beds	3.8	4.1	4.4	4.6	4.9	4.4	4.2	3.3	4.2

Source: AIHW National Minimum Data Set Collection, unpublished; Commonwealth Department of Human Services and Health *Annual Report 1993–94*; ABS Estimated Resident Population, Cat. No. 3101.1.

Notes: 1 Based on ABS estimated resident population, 30 June 1993.

2 Assumes teaching hospitals service the whole State.

Table 3.5: Total separations ('000s)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Public acute care hospitals	1,190	761	584	327	295	75	34	53	3,319
Private acute hospitals ¹	361 ²	345	261	113	129 ³	41	- ³	- ²	1,251
Total separations	1,551	1,106	845	440	424	116	-	-	4,570

Source: AIHW National Minimum Data Set Collection, unpublished; ABS, 1995, *Private Hospitals Australia*, 1993–94, ABS Cat. No. 4390.0, Table 5.

Notes: 1 Private acute hospitals also includes psychiatric hospitals.

2 The NSW figure includes ACT separations.

3 The SA figure includes NT separations.

All jurisdictions, 1993–94, descriptors**Table 3.6:** Recurrent acute care expenditure (\$ million)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Public acute hospitals	3,821	2,231	1,481	896	820	253	116	191	9,809
Private acute hospitals ¹	588	658	351	172	219	61	-	-	2,049
Total acute hospitals	4,409	2,289	1,832	1,069	1,039	314	-	-	11,859

Source: AIHW, National Minimum Data Set Collection, unpublished; Commonwealth Department of Human Services and Health, *Annual Report 1993–94*; ABS Estimated Resident Population, Cat. No. 3101.1; Private Hospitals Australia, 1991–92, ABS Cat. No. 4390.0.

Notes: 1 As reported in Private Hospitals Australia, 1991–92, ABS Cat. No. 4390.0.

Table 3.7: Number of acute care hospitals

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i> ¹	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Public	184	134	178	88	81	17	5	3	687
teaching	14	13	8	5	6	2	-	-	47
non-teaching	170	121	170	83	75	15	5	3	640
Private ^{2,3}	91	113	51	24	38	9	1	2	329
Free-standing day hospital facilities ⁴	63	24	9	7	3	1	-	4	111
Total	338	271	238	119	122	27	6	9	1130

Source: AIHW National Minimum Data Set Collection, unpublished.; Private Hospitals Australia, 1991–92, ABS Cat. No. 4390.0.

Notes: 1 The Medicare Agreement Schedule A totals 130 acute hospitals and 48 outpatient clinics totalling 178. The outpatient clinics do not have inpatients.

2 All private hospitals data relates to 1992–93 except for SA which is 1993–94.

3 Includes private psychiatric hospitals.

4 Private hospitals providing care on a same-day basis only.

All jurisdictions, 1993–94, descriptors

Table 3.8: Indicative¹ estimates for value of assets for public acute care hospitals (\$ millions)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Total replacement value									
buildings	4,738	3,654	na	2,001	1950	na	na	348	-
equipment	1,028	568	na	149	262	na	na	41	-
Depreciated replacement value									
buildings	3,896	1,700	na	1,057	605	277	na	254	-
equipment	663	251	na	76	na	39	na	23	-

Source: State and Territory health authorities, mostly unpublished.

Notes: 1 These data are not based on nationally consistent definitions or methodologies and can be considered indicative only. Details on the nature and quality of these data are as follows:

NSW NSW Health financial and accounting policy does not require the separation of plant and equipment, so plant has been reported with equipment in this report. Physical assets costing less than \$5000 are expended in the year of acquisition. Donated physical assets are capitalised and brought into account at fair market value if the value is \$5000 or more. The data include facilities under the Area and District Health Services, the NSW ambulance service, the Corrections Health Service and the Central Office of the Department. This is estimated to amount to 1.5–2 per cent of the value of the buildings, and around 10 per cent of the value of plant and equipment. The data include the value of depreciation of buildings leased to other entities for the operation of hospital services.

Victoria Data are based on a survey of all Victorian tertiary, referral, metropolitan, rural base hospitals and a sample of smaller country hospitals that together provide 96 per cent of casemix funded separations. The values are estimated replacement cost in 1994. Depreciation has been calculated by a straight line on the total replacement value. The scope covers acute care hospitals only — nursing homes are excluded — and includes hospitals providing public beds, including religious and charitable hospitals. The data include hospital owned buildings including commercial and leased space; excluded is university owned buildings, independent research institutes and private sector operated car parks. Data on equipment were collected on items with a value down to \$1000 with estimates made for each item below that value.

Qld Yet to measure assets in current replacement values. Queensland is currently implementing a major revaluation of all State assets.

WA Information provided for replacement value for equipment is in fact historical cost.

SA South Australia provided estimates of the total replacement value of all buildings and equipment based on values provided by the SA Audit Commission and their estimate that 75 per cent of the total assets value is represented by building assets including plant. The estimates assume that the vast majority of assets are related to hospitals. Estimates of the depreciated replacement value of buildings were based on the results of a recent valuation exercise showing that the depreciated value was 31 per cent of the total value. A useful life of 50 years was used for buildings to determine depreciation. Due to the difficulties in estimating the useful life and residual value of equipment, no estimates of depreciated value or depreciation were provided.

Tasmania Depreciated replacement values were based on the Valuer General's most recent valuation, or, for recent buildings, on actual building costs. No estimates of total replacement value were available for the whole State.

NT Yet to measure assets in current replacement values.

ACT The information provided in relation to equipment is based on historical cost rather than current replacement values. Data were not available for one small community hospital.

All jurisdictions, 1993–94, descriptors

Table 3.9: Staffing levels for public acute care hospitals¹

	<i>NSW</i> ²	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Total teaching									
salaried medical officers	3,087	1,835	893	1,171	1,052	286	-	-	8,450
nursing staff	10,621	6,682	4,901	3,714	4,106	1,936	-	-	32,704
other	15,081	8,723	5,883	5,477	4,896	2,154	-	-	42,992
Total	28,789	17,239	11,677	10,361	10,054	4,376	-	-	84,146
Total non-teaching									
salaried medical officers	1,314	1,076	1,058	160	190	6	140	235	4,050
nursing staff	15,812	9,939	7,476	3,470	2,677	200	882	988	40,699
other	15,006	9,447	6,991	3,373	2,355	126	945	1,544	39,007
Total	32,132	20,462	15,524	7,003	5,222	331	1,966	2,767	83,756
Total									
salaried medical officers	4,400	2,910	1,951	1,330	1,242	291	140	235	12,500
nursing staff	26,434	16,621	12,377	7,184	6,783	2,136	882	988	73,404
other	30,087	18,169	12,873	8,850	7,251	2,280	945	1,544	81,999
Total	60,921	37,700	27,201	17,364	15,277	4,707	1,966	2,767	167,902

Source: AIHW, unpublished.

Note: 1 Hospitals included are type 1, 2, 3 and 4 hospitals in each jurisdiction.

2 NSW figures are preliminary and unchecked.

All jurisdictions, 1993–94, effectiveness — quality

Table 3.10: Percentage of beds with ACHS accreditation, at June 1994¹

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i> ²	<i>WA</i> ³	<i>SA</i>	<i>Tas</i>	<i>NT</i> ⁴	<i>ACT</i>	<i>Aust</i>
Total beds									
public	19,350	12,335	10,101	5,364	5108	1,444	579	776	59,127
private	5,855	6,344	4,848	1,779	2,264	664	150	194	22,098
Total	25,205	18,679	14,949	7,143	7,372	2,108	729	970	81,225
Accredited beds									
public	15,445	11,823	2,521	3,149	4,095	999	na	765	38,797
private	5,332	4,544	3,269	832	2,029	511	131	194	16,842
Total	20,777	16,367	5,790	3,981	6,124	1,510	-	959	55,639
Percentage accredited									
public	79.82	95.85	24.96	58.71	80.17	69.18	na	98.58	65.62
private	91.07	71.63	67.43	46.77	89.62	76.96	87.33	100.00	76.22
Total	82.43	87.62	38.73	55.73	83.07	71.63	-	98.87	68.50

Source: Australian Council on Healthcare Standards (ACHS) statistics as at June 1994, and statistics provided by the relevant state authorities

- Note: 1 Includes all public hospitals except nursing homes and day hospital facilities.
- 2 The total number of public beds figure was supplied by the Queensland Department of Health. However, the Australia wide totals have not been altered from the original ACHS data. The low level of accreditation in Queensland reflects the lack of active policy support for accreditation. Queensland adopted a policy of seeking accreditation in 1993-94 and is rapidly increasing the number of accredited beds. Queensland's accreditation level reflects this policy difference rather than any quality difference (see Queensland's own comments in section 3. 6 for more details).
- 3 WA's relatively low proportion of accredited hospitals is due in significant part to cost and logistical problems faced by the State's rural and remote hospitals in taking part in the accreditation process.
- 4 To date, the NT has not sought accreditation for its public hospitals. This policy is under review (see also the NT's own comments at Section 3.6).

All jurisdictions, 1993–94, effectiveness — quality

Table 3.11: Percentage of facilities with ACHS accreditation, 30 June 1994

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i> ¹	<i>WA</i> ²	<i>SA</i>	<i>Tas</i>	<i>NT</i> ³	<i>ACT</i>	<i>Aust</i>
Public									
1 year	4	2	1	3	3	12	-	-	3
3 years	46	36	3	23	37	12	-	100	28
5 years	3	4	-	-	-	-	-	-	2
Total	53	43	4	26	40	24	-	100	32
Private									
1 year	7	2	6	5	5	-	-	-	4
3 years	69	40	49	52	64	88	100	-	54
5 years	10	4	4	-	5	-	-	-	5
Total	86	45	59	57	74	88	100	-	64
Total									
1 year	5	2	2	4	3	8	-	-	3
3 years	54	38	13	28	46	36	-	60	36
5 years	5	4	1	-	2	-	-	-	3
Total	64	44	16	32	51	44	-	60	42

Source: Australian Council on Healthcare Standards, unpublished.

- Notes: 1 The low level of accreditation in Queensland reflects the lack of active policy support for accreditation. Queensland adopted a policy of seeking accreditation in 1993-94 and is rapidly increasing the number of accredited beds. Queensland's accreditation level reflects this policy difference rather than any quality difference (see Queensland's own comments in section 3.6 for more details).
- 2 WA's relatively low proportion of accredited hospitals is due in significant part to cost and logistical problems faced by the State's rural and remote hospitals in taking part in the accreditation process.
- 3 To date, the NT has not sought accreditation for its public hospitals. This policy is under review (see also the NT's own comments at Section 3.6).

Table 3.12: Condition of capital for public acute care hospitals (ratio of DRV/TRV)¹

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Buildings	0.82	0.47	na	0.53	0.31	na	na	0.73	-
Equipment	0.64	0.44	na	0.51	na	na	na	0.57	-

Source: State and Territory health authorities, mostly unpublished.

- Note: 1 See Table 3.8 for the note on the derivation of the DRV and TRV values.

All jurisdictions, 1992–93, effectiveness — appropriateness

Table 3.13: Separation rates for sentinel procedures (Variation in intervention rates), public and private hospitals combined

	NSW	Vic ¹	Qld ²	WA	SA	Tas	NT ³	ACT	Aust ⁴
Appendicectomy									
Separations ⁵	9,780	na	4,324	2,860	2,442	665	na	354	16,101
Standardised separations rate ⁶	1.7	na	1.4	1.7	1.7	1.4	na	1.1	1.7
Standardised rate for the States ⁷	1.6	na	na	1.7	1.7	1.7	na	1.7	-
Difference (%) ⁸	3.1	na	na	2.7	5.5	-13.6	na	-32.7	-
Significance of difference ⁹	~	na	na	~	~	*	na	*	-
Coronary artery bypass graft									
Separations ⁵	8,229	na	2,067	1,581	2,235	552	na	-	12,597
Standardised separations rate ⁶	1.3	na	0.7	1.0	1.4	1.1	na	-	1.3
Standardised rate for the States ⁷	1.1	na	na	1.3	1.2	1.3	na	-	-
Difference (%) ⁸	16.6	na	na	-20.1	15.6	-8.6	na	-	-
Significance of difference ⁹	*	na	na	*	*	~	na	-	-
Caesarean									
Separations ⁵	14,930	na	9,513	4,722	4,387	1,143	na	1,071	26,253
Standardised separations rate ⁶	2.6	na	3.1	2.8	3.1	2.6	na	3.3	2.7
Standardised rate for the States ⁷	3.0	na	na	2.7	2.7	2.7	na	2.7	-
Difference (%) ⁸	-13.3	na	na	5.5	18.4	-5.1	na	23.0	-
Significance of difference ⁹	*	na	na	*	*	~	na	*	-
Cholecystectomy									
Separations ⁵	13,604	na	6,349	3,253	3,723	962	na	550	22,092
Standardised separations rate ⁶	2.2	na	2.1	2.0	2.4	2.0	na	2.1	2.2
Standardised rate for the States ⁷	2.2	na	na	2.2	2.1	2.2	na	2.2	-
Difference (%) ⁸	1.2	na	na	-9.4	12.5	-7.8	na	-4.1	-
Significance of difference ⁹	~	na	na	*	*	~	na	~	-

See end of Table for source and notes.

All jurisdictions, 1992–93, effectiveness — appropriateness**Table 3.13:** Separation rates for sentinel procedures (Variation in intervention rates), public and private hospitals combined (continued)

	<i>NSW</i>	<i>Vic</i> ¹	<i>Qld</i> ²	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i> ³	<i>ACT</i>	<i>Aust</i> ⁴
Endoscopy									
Separations ⁵	130,408	na	55,534	25,006	25,285	10,419	na	4,808	195,926
Standardised separations rate ⁶	21.0	na	18.0	15.5	16.2	21.5	na	19.6	19.4
Standardised rate for the States ⁷	16.8	na	na	20.1	20.0	19.3	na	19.4	-
Difference (%) ⁸	25.4	na	na	-22.7	-19.0	11.7	na	1.2	-
Significance of difference ⁹	*	na	na	*	*	*	na	~	-
Hip replacement									
Separations ⁵	5,255	na	1,864	1,591	1,600	537	na	279	9,262
Standardised separations rate ⁶	0.8	na	0.6	1.0	0.9	1.0	na	1.5	0.9
Standardised rate for the States ⁷	1.0	na	na	0.8	0.9	0.9	na	0.9	-
Difference (%) ⁸	-20.3	na	na	18.8	8.0	22.7	na	72.8	-
Significance of difference ⁹	*	na	na	*	*	*	na	*	-
Hysterectomy									
Separations ⁵	11,149	na	5,684	4,020	3,509	873	na	592	20,143
Standardised separations rate ⁶	1.8	na	1.8	2.4	2.3	1.8	na	2.0	2.0
Standardised rate for the States ⁷	2.2	na	na	1.9	1.9	2.0	na	2.0	-
Difference (%) ⁸	-19.6	na	na	24.8	18.9	-8.1	na	-0.7	-
Significance of difference ⁹	*	na	na	*	*	~	na	~	-
Lens insertion									
Separations ⁵	23,949	na	7,313	3,185	6,416	2,164	na	675	36,389
Standardised separations rate ⁶	3.7	na	2.4	2.1	3.7	4.1	na	3.8	3.5
Standardised rate for the States ⁷	3.1	na	na	3.7	3.4	3.4	na	3.4	-
Difference (%) ⁸	17.1	na	na	-43.7	9.0	21.0	na	9.6	-
Significance of difference ⁹	*	na	na	*	*	*	na	~	-

See end of Table for source and notes.

All jurisdictions, 1992–93, effectiveness — appropriateness

Table 3.13: Separation rates for sentinel procedures (Variation in intervention rates), public and private hospitals combined (continued)

	<i>NSW</i>	<i>Vic</i> ¹	<i>Qld</i> ²	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i> ³	<i>ACT</i>	<i>Aust</i> ⁴
Tonsillectomy									
Separations ⁵	10,476	na	5,462	3,655	4,039	685	na	577	19,432
Standardised separations rate ⁶	1.8	na	1.7	2.1	2.9	1.5	na	1.8	2.0
Standardised rate for the States ⁷	2.3	na	na	2.0	1.9	2.0	na	2.0	-
Difference (%) ⁸	-22.0	na	na	8.2	58.7	-28.2	na	-7.9	-
Significance of difference ⁹	*	na	na	*	*	*	na	~	-

Source: AIHW National Minimum Data Set survey program, unpublished; Qld Health Department, unpublished.

- Notes: 1 Morbidity data for Victorian private hospitals for 1992–93 were not sufficiently complete to permit reliable estimation of rates for these procedures.
- 2 Queensland private hospital data were not available to the AIHW, but were calculated by Queensland Health Department using the same methodology. Queensland data have not been used in the calculation of comparison rates.
- 3 Data were available for public hospitals. However, aggregates could not be determined as data were not available for the NT private hospital.
- 4 Total of NSW, WA, SA, Tas, and ACT only.
- 5 Number of separations from public and private acute hospitals, for principal and second procedure.
- 6 Age-sex-standardised rate per 1,000 population. Caution should be exercised in interpreting interstate differences as these may be the result of differences in coding practices between the States and differences in use of similar or alternative treatments. For example, angioplasty compared to coronary by-pass surgery.
- 7 Age-sex-standardised rate for other States and Territories combined. That is, the results in the Table show the age-standardised rates compared with the rate for all other jurisdictions combined.
- 8 Difference between State rate and comparison rate, expressed as a ratio of the rate to the comparison rate.
- 9 Measure of statistical significance. For example, the ‘*’ symbol indicates that the difference is significant at the 1% significance level. The ‘~’ suggests that the rates not statistically different.

All jurisdictions, 1993–94, effectiveness — appropriateness

Table 3.14: Separations per 1,000 population

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Same-day separations									
Public acute hospitals									
public patients	46.2	50.5	56.7	50.1	57.6	40.6	29.0	66.3	50.5
private patients	12.8	10.9	7.4	9.0	13.3	4.2	5.4	11.1	10.7
other ¹	6.0	1.2	0.4	1.0	0.8	3.7	0.6	0.5	2.7
all patients	65.0	62.6	64.4	60.1	71.7	48.5	35.1	78.0	63.9
Private acute hospitals	22.5	30.7	29.3	17.3	26.5	27.6	13.0	20.1	25.6
All same-day	87.4	93.3	93.7	77.4	98.2	76.1	48.0	98.1	89.4
Overnight separations									
Public acute hospitals									
public patients	98.5	83.6	107.3	100.8	106.0	88.5	138.3	74.4	96.8
private patients	26.4	22.2	17.3	16.3	22.1	11.9	7.4	24.1	21.8
other ¹	10.0	2.6	1.2	3.8	2.6	9.8	2.9	2.0	5.1
all patients	134.9	108.4	125.8	120.8	130.7	110.1	148.6	100.6	123.8
Private acute hospitals	36.0	44.6	53.6	49.2	54.6	56.3	31.7	27.9	44.4
All overnight	170.9	152.9	179.4	170.7	185.3	166.4	180.3	128.4	168.2
Total separations									
Public acute hospitals	199.8	171.0	190.2	204.1	202.3	158.6	183.7	178.6	187.6
Private acute hospitals	58.5	75.3	82.9	66.5	81.1	83.9	44.7	47.9	70.0
Total	258.3	246.2	273.1	270.6	283.4	242.5	228.3	226.5	257.6

Source: AIHW National Minimum Data Set survey program, unpublished; ABS Cat. No. 4390.0.

Notes: 1 The 'other' category includes nursing home type patients, DVA patients, compensable and ineligible patients.

Data were not available to adjust for cross-border flows or for the age-sex structure of the populations.

All jurisdictions, 1993–94, effectiveness — accessibility and equity**Table 3.15:** Clearance time for elective surgery by clinical speciality, for public acute care hospitals¹, 1994 (months)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
- cardio-thoracic surgery	1.1	1.0	na	1.1	1.1	2.0	na	0.4	1.1
- ear, nose and throat	2.9	3.2	na	5.0	4.8	4.6	na	4.9	3.6
- general surgery	1.3	1.9	na	2.6	2.6	2.1	na	4.9	1.7
- gynaecology	1.2	1.9	na	1.0	1.9	2.8	na	3.0	1.6
- neurosurgery	0.8	1.4	na	0.8	0.9	1.4	na	8.7	1.1
- ophthalmology	3.3	2.7	na	5.5	2.1	3.4	na	4.8	3.2
- orthopaedic surgery	2.7	3.3	na	5.0	3.9	6.0	na	5.4	3.3
- plastic surgery	1.6	5.1	na	4.0	3.5	5.8	na	5.2	3.4
- urology	2.0	2.9	na	4.5	2.2	3.3	na	11.0	2.7
- vascular surgery	1.5	2.6	na	1.3	2.0	1.5	na	7.4	1.9
- other	-	1.6	na	1.8	2.5	0.4	na	-	1.0
All patients	1.8	2.6	-	3.3	2.8	2.5	9.9	5.0	2.3

Source: Mays, (1995), *National report on elective surgery waiting lists for public hospitals 1994*.

Notes: 1 The data do not cover all public hospitals in each State and Territory.

At the time that these data were collected there were significant differences in the approaches to waiting list audit and management. Also, because the survey period was short, the data collected may not be typical of a longer period.

Clearance time is a prospective measure of the capacity of the system to remove patients from waiting lists. It should not be considered as the average waiting time.

All jurisdictions, 1993–94, effectiveness — accessibility and equity**Table 3.16:** Waiting times for elective surgery, public acute care hospitals¹, 1994² (per cent)

<i>Indicator</i>	<i>NSW</i>	<i>Vic³</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Proportion of patients waiting over 12 months⁴ at census, by clinical speciality, 1994									
- cardio-thoracic surgery	-	2	na	3	2	-	na	na	-
- ear, nose and throat	8	8	na	25	16	32	na	na	11
- general surgery	3	8	na	20	7	19	na	na	7
- gynaecology	-	4	na	4	5	14	na	na	5
- neurosurgery	2	3	na	12	3	18	na	na	6
- ophthalmology	6	3	na	22	2	15	na	na	6
- orthopaedic surgery	7	9	na	17	10	13	na	na	8
- plastic surgery	13	16	na	29	20	32	na	na	20
- urology	3	7	na	24	17	30	na	na	11
- vascular surgery	12	7	na	6	28	22	na	na	17
- other	-	8	na	22	20	2	na	na	2
All patients	5	8	-	21	12	20	23	26	9
Proportion of patients admitted after waiting over 12 months⁴, by clinical speciality, 1994									
- cardio-thoracic surgery	-	-	na	-	-	-	na	na	-
- ear, nose and throat	2	2	na	13	6	23	na	na	4
- general surgery	-	2	na	4	2	4	na	na	1
- gynaecology	-	1	na	-	2	6	na	na	1
- neurosurgery	-	-	na	1	1	6	na	na	1
- ophthalmology	1	1	na	13	1	1	na	na	1
- orthopaedic surgery	2	6	na	7	4	9	na	na	2
- plastic surgery	1	5	na	4	5	12	na	na	6
- urology	-	3	na	-	3	15	na	na	2
- vascular surgery	1	6	na	-	2	-	na	na	1
- other	-	-	na	4	-	1	na	na	-
All patients	1	3	-	5	3	6	8	26	2

See end of Table for source and notes.

All jurisdictions, 1993–94, effectiveness — accessibility and equity

Table 3.16: Waiting times for elective surgery, public acute care hospitals¹, 1994², (per cent) — continued

<i>Indicator</i>	<i>NSW</i>	<i>Vic</i> ³	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Proportion of category 1 patients waiting over 30 days at census									
All patients	36	1	-	67	-	45	52	27	40
Proportion of category 1 patients admitted after waiting over 30 days									
All patients	13	0.3	-	17	na	11	25	-	13

Source: Mays, (1995), *National report on elective surgery waiting lists for public hospitals 1994*.

Notes: 1 The data do not cover all public hospitals in each State and Territory.

2 At the time that these data were collected there were significant differences in the approaches to waiting list audit and management. Also, because the survey period was short, the data collected may not be typical of a longer period.

3 Victorian data are not comparable because of a different method of calculating waiting time.

4 The 12 month period used in the Mays Report represents a compromise on the differing views on the definition of a maximum waiting time for elective surgery patients. The concept was that any patient listed for elective surgery at a public hospital should expect to receive that surgery within a reasonable time limit.

Categorisation of patients by clinical urgency was implemented to varying degrees and with variable consistency.

All jurisdictions, 1993–94, unit cost and productivity

Table 3.17: Recurrent costs per separation for public acute care hospitals — unadjusted (dollars)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Labour recurrent costs per separation									
Non medical labour costs per separation									
nursing	642	678	609	586	688	804	808	803	650
diagnostic/allied health	180	197	134	168	166	201	212	273	176
administrative	151	177	112	159	167	117	162	250	153
other staff	277	217	251	254	216	315	337	151	252
superannuation ¹	89	126	95	21	106	102	0	56	92
Total	1,340	1,395	1,201	1,189	1,344	1,539	1,519	1,532	1,322
Medical labour costs									
Public patients									
- salaried/sessional staff	192	255	204	235	203	228	298	271	216
- VMO payments	195	81	65	111	148	95	99	280	131
Private patients (estimated) ²	159	103	43	67	80	82	25	165	105
Total	546	439	311	412	430	406	422	715	452
Total labour costs	1,886	1,834	1,512	1,601	1,774	1,945	1,941	2,247	1,774
Other recurrent cost per separation									
domestic services	53	77	71	103	76	119	73	86	71
repairs/maintenance	79	50	53	83	81	79	59	19	68
medical supplies	123	119	151	122	139	223	123	209	132
drug supplies	88	92	99	97	90	164	66	102	93
food supplies	30	32	26	28	29	28	27	43	30
administration	99	118	78	83	103	151	149	151	101
other	160	122	20	26	21	15	246	137	100
Total other	632	610	498	542	539	779	744	747	593
Total recurrent unadjusted hospital costs per separation									
	2,518	2,444	2,010	2,142	2,312	2,724	2,685	2,995	2,368

Sources: AIHW National Minimum Data Set collection, unpublished; Commonwealth Department of Human Services and Health casemix data base, unpublished; Commonwealth Department of Human Services and Health Medicare Agreements data, unpublished.

- Notes: 1 Superannuation costs cannot always be disaggregated down to the hospital employee. For example, in the NT, the NT Treasury pays superannuation for the public service as a whole.
- 2 Estimated private patient medical costs calculated as sum of salary/sessional and VMO payments divided by public patient proportion. This is an estimate of the medical costs for all non-public patients, including private, compensable, and ineligible. These estimates are based on an incomplete data base, therefore caution should be exercised in interpreting the results. These costs have not been adjusted for casemix.

All jurisdictions, 1993–94, unit cost and productivity

Table 3.18: Recurrent costs per separation for public acute care hospitals — casemix adjusted (dollars)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
total separations ('000s)	1,190	761	584	327	295	75	34	53	3,319
average caseweight ¹	1.07	1.06	0.90	0.94	1.05	0.97	0.91	0.93	1.02
units of care ('000s) ²	1,276	806	526	307	309	73	31	49	3,378
total recur expd (\$m)	3,821	2,231	1,481	896	820	253	116	191	9,809
inpatient fraction (%) ³	71.7	79.3	77.0	74.8	79.8	77.4	76.9	77.4	75.5
public pat. prop. (%) ⁴	70.8	76.6	86.2	83.9	81.5	79.7	94.1	77.0	76.8
Labour costs per casemix adjusted separation									
Non medical labour costs per casemix adjusted separation (\$)									
nursing	599	640	677	625	657	829	888	868	639
diagnostic/allied health	168	186	149	179	159	208	232	295	173
administrative	141	167	124	170	160	121	178	270	150
other staff	258	205	279	271	206	325	370	163	247
superannuation ⁵	83	119	106	22	102	105	0	60	90
Total	1,250	1,317	1,334	1,266	1,283	1,587	1,668	1,656	1,299
Medical labour costs per casemix adjusted separation (\$)									
Public patients									
- salaried/sessional staff	179	241	226	250	194	235	327	293	212
- VMO payments	182	76	72	118	141	98	109	302	129
Private patients (estimated) ⁶	148	97	48	71	76	85	27	178	103
Total	509	414	346	439	411	419	463	773	444
Total labour costs	1,759	1,731	1,680	1,705	1,694	2,006	2,131	2,429	1,743
Other recurrent cost per casemix adjusted separation (\$)									
domestic services	50	73	78	110	72	123	80	93	69
repairs/maintenance	74	47	59	88	78	82	65	20	67
medical supplies	114	112	168	130	133	230	135	226	129
drug supplies	82	86	110	103	86	169	72	111	92
food supplies	28	31	29	30	27	29	30	47	29
administration	92	112	87	88	98	156	164	163	99
other	149	116	22	28	20	15	270	148	98
Total other	589	576	553	577	514	804	817	808	583
Total recurrent hospital costs per casemix adjusted separation (\$)									
	2,348	2,307	2,234	2,283	2,208	2,809	2,948	3,237	2,327

Sources: AIHW National Minimum Data Set collection, unpublished; Commonwealth Department of Human Services and Health casemix data base, unpublished; Commonwealth Department of Human Services and Health Medicare Agreements data, unpublished.

All jurisdictions, 1993–94, unit cost and productivity

- Notes: 1 Estimates provided by Commonwealth Department of Human Services and Health using AN-DRG version 3.0.
- 2 Units of care is the product of separations and average case weight.
- 3 The inpatient fraction (IFRAC) is an expression of the ratio of inpatient costs to total hospital costs and is generally estimated using existing management information. Where no IFRAC was available the inpatient costs as a proportion of total costs were derived using the Health and Allied Services Advisory Council (HASAC) conversion rate which equates the cost of 5.753 non-inpatient services with the cost of one inpatient bed day. The HASAC ratio was used for NSW, Tasmania, NT and two hospitals in the ACT. It should be noted that there are reasons to question the applicability of the HASAC ratio and the results are sensitive to the ratio used.
- 4 The public patient proportion is public patient bed days as a proportion of total bed days.
- 5 Superannuation costs cannot always be disaggregated down to the hospital employee. For example, in the NT, the NT Treasury pays superannuation for the public service as a whole.
- 6 Estimated private patient medical costs calculated as sum of salary/sessional and VMO payments divided by public patient proportion. This is an estimate of the medical costs for all non-public patients, including private, compensable, and ineligible.
- These estimates are based on an incomplete data base, therefore caution should be exercised in interpreting the results.

All jurisdictions, 1993–94, unit cost and productivity

Table 3.19: Indicative estimates of the cost of capital per casemix adjusted separation for public acute care hospitals

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i> ¹	<i>WA</i> ²	<i>SA</i>	<i>Tas</i>	<i>NT</i> ¹	<i>ACT</i>	<i>Aust</i>
Buildings									
DRV (\$m)	3,896	1,700	na	1,057	605	277	na	254	-
opportunity cost (\$m) ³	273	119	-	74	42	19	-	18	-
depreciation (\$m)	121	102	-	34	39	6	-	6	-
casemix-adjusted separations ('000s)	1,276	806	-	307	309	73	-	49	-
User charge per separation	309	274	-	351	263	345	-	473	-
Equipment									
DRV (\$m)	663	251	na	76	na	39	na	23	-
opportunity cost (\$m) ³	46	18	-	5	-	3	-	2	-
depreciation (\$m)	97	42	-	11	-	7	-	3	-
casemix-adjusted separations ('000s)	1,276	806	-	307	309	73	-	49	-
User charge per separation	112	74	-	52	-	137	-	99	-

Sources: State and Territory health authorities, mostly unpublished.

Notes: 1 Queensland and the Northern Territory have yet to measure assets in current replacement values.

2 Values listed for equipment are total and depreciated historical costs, not replacement values. Replacement values have not been calculated for equipment.

3 Calculated as depreciated replacement value by 7.0 per cent.

These data are not based on nationally consistent definitions or methodologies, and can be considered indicative only. (See Descriptive data; Table 3.8 for asset value calculation note.)

Table 3.20: Indicative estimates of capital intensity¹(dollars)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i> ²	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i> ²	<i>ACT</i>	<i>Aust</i>
Buildings	3,714	4,534	na	6,514	6,314	na	na	7,058	-
Equipment	806	705	na	484	849	na	na	832	-

Source: State and Territory health authorities, mostly unpublished.

Notes: 1 Capital intensity is TRV / separations

2 Queensland and the Northern Territory have yet to measure assets in current replacement values.

These data are not based on nationally consistent definitions or methodologies, and can be considered indicative only. (See Descriptive data; Table 3.8 for asset value calculation note.)

All jurisdictions, 1993–94, unit cost and productivity

Table 3.21: Average length of stay for the top 10 AN-DRGs¹
(version 3.0) in volume (days) for public and private separations — *including* same day cases

DRG	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Aust
572 Admit for renal dialysis									
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	-	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0
674 Vaginal delivery without complicating diagnosis									
public	3.6	3.9	3.6	3.7	4.0	4.0	3.7	3.6	3.7
private	5.4	na	5.3	na	5.5	4.9	na	na	5.3
total	3.8	-	3.9	-	4.4	4.3	-	-	3.9
780 Chemotherapy									
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	1.0	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0
727 Neonate, admission weight > 2499g, without significant OR procedure, without problem									
public	3.7	2.4	3.5	3.8	1.9	2.7	3.5	4.0	3.6
private	5.3	na	3.5	na	2.7	2.7	na	na	5.1
total	3.9	-	3.5	-	2.0	2.7	-	-	3.8
332 Other gastroscopy, non-major digestive disease, without complications									
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	1.0	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0
335 Other colonoscopy without complications									
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	1.0	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0
683 Abortion with D&C, aspiration curettage or hysterotomy									
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	1.0	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0
099 Lens procedure without vitrectomy, without complications									
public	1.4	1.3	1.2	1.5	1.3	2.8	1.2	1.3	1.4
private	1.3	na	1.3	na	1.3	1.4	na	na	1.3
total	1.3	-	1.3	-	1.3	1.5	-	-	1.3

See end of Table for source and notes.

All jurisdictions, 1993–94, unit cost and productivity

Table 3.21: Average length of stay for the top 10 AN-DRGs¹ (version 3.0) in volume (days) for public and private separations — *including* same day cases (continued).

<i>DRG</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
187	Bronchitis and asthma, age < 50, without complications								
public	2.0	1.9	2.1	2.1	2.1	2.0	2.3	2.5	2.0
private	2.1	na	2.3	na	2.7	2.4	na	na	2.3
total	2.0	-	2.1	-	2.2	2.1	-	-	2.0
484	Other skin, subcutaneous tissue or breast procedure								
public	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
private	1.0	na	1.0	na	1.0	1.0	na	na	1.0
total	1.0	-	1.0	-	1.0	1.0	-	-	1.0

Source: Commonwealth Department of Human Services and Health casemix data base, unpublished.

Notes: 1 AN-DRGs are Australian National Diagnosis Related Groups.

These estimates are based on an incomplete data base, therefore caution should be exercised in interpreting the results.

Data trimmed using the inter-quartile range method.

Same day cases are allocated a length of stay of 1.0 days.

All jurisdictions, 1993–94, unit cost and productivity

Table 3.22: Average length of stay for the top 10 AN-DRGs¹ (version 3.0) in volume (days) for public and private separations — *excluding* same day cases

<i>DRG</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
674	Vaginal delivery without complicating diagnosis								
public	3.6	3.9	3.6	3.7	4.0	4.1	3.7	3.7	3.7
private	5.4	na	5.3	na	5.5	5.0	na	na	5.4
total	3.9	-	4.0	-	4.4	4.4	-	-	3.9
727	Neonate, admission weight > 2499g, without significant OR procedure, without problem								
public	3.7	2.8	3.7	3.8	2.3	3.2	3.6	4.0	3.7
private	5.3	na	4.2	na	2.8	2.8	na	na	5.2
total	4.0	-	3.7	-	2.4	3.1	-	-	3.9
187	Bronchitis and asthma, age < 50, without complications								
public	2.1	2.0	2.2	2.2	2.3	2.1	2.4	2.5	2.1
private	2.2	na	2.4	na	2.8	2.9	na	na	2.5
total	2.1	-	2.2	-	2.3	2.2	-	-	2.1
252	Heart failure and shock								
public	7.2	6.6	6.4	6.9	6.7	7.2	6.4	7.9	6.9
private	9.0	na	7.3	na	8.7	8.1	na	na	8.1
total	7.3	-	6.7	-	7.0	7.3	-	-	7.0
122	Tonsillectomy and/or adenoidectomy								
public	1.9	1.4	1.4	1.6	1.7	2.2	1.3	1.2	1.6
private	1.4	na	1.2	na	1.6	1.4	na	na	1.4
total	1.7	-	1.3	-	1.6	1.8	-	-	1.5
099	Lens procedure without vitrectomy, without complications								
public	1.6	1.5	1.5	1.8	1.8	2.9	1.3	1.5	1.6
private	1.4	na	1.5	na	1.5	1.6	na	na	1.5
total	1.5	-	1.5	-	1.6	1.8	-	-	1.6
177	Chronic obstructive airways disease								
public	7.2	6.5	6.7	7.2	7.1	7.6	5.9	7.7	7.0
private	9.0	na	8.1	na	8.8	8.5	na	na	8.4
total	7.3	-	7.0	-	7.3	7.7	-	-	7.1

See end of Table for source and notes.

All jurisdictions, 1993–94, Unit cost and productivity

Table 3.22: Average length of stay for the top 10 AN-DRGs^a (version 3.0) in volume (days) for public and private separations — *excluding* same day cases (continued)

<i>DRG</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
455 Medical back problems age < 75, without complications									
public	4.7	4.2	4.0	4.6	4.2	4.5	4.4	3.9	4.4
private	4.9	na	3.6	na	3.2	3.8	na	na	4.0
total	4.8	-	3.9	-	3.7	4.0	-	-	4.3
367 Cholecystectomy, without common duct exploration									
public	3.9	3.5	3.1	4.1	3.8	3.5	4.3	4.3	3.6
private	3.2	na	3.1	na	3.6	3.3	na	na	3.2
total	3.6	-	3.1	-	3.7	3.4	-	-	3.5
347 Abdominal pain or mesenteric adenitis, without complications									
public	2.0	1.9	1.9	2.0	2.1	2.0	2.3	2.0	2.0
private	2.2	na	2.1	na	2.3	1.9	na	na	2.1
total	2.0	-	2.0	2.0	2.1	2.0	-	-	2.0

Source: Commonwealth Department of Human Services and Health casemix data base, unpublished.

Notes: 1 AN-DRGs are Australian National Diagnosis Related Groups.

These estimates are based on an incomplete data base, therefore caution should be exercised in interpreting the results.

Data trimmed using the inter-quartile range method.

3.7 State and Territory specific information

The Steering Committee found a lack of comparable data on the effectiveness of public acute care hospitals in Australia. The lack of comparable data on the effectiveness of public acute care hospitals in Australia should be tackled for future reports (see Section 3.5).

For this report, data were collected in the areas for which comparable data were not available to complement the national data already presented. As information is specific to each jurisdiction, comparisons of the data presented in this section are not valid.

The ACHS surveys some public and private acute health care facilities in order to determine the quality of care in hospitals. Some jurisdictions provided to the Steering Committee the results of these surveys for public acute hospitals.

The areas where information was sought were:

Quality of care

- rate of emergency patient hospital re-admissions within 28 days of separation;
- rate of (a) post-operative wound infections and (b) hospital acquired bacteraemia;
- rate of unplanned return to operating room;
- consumer satisfaction; and
- any other quality of care indicators.

Access

- accident and emergency waiting times; and
- outpatient waiting times.

New South Wales

NSW Health conducted a pilot external patient satisfaction survey across a mix of hospitals within the State between November 1993 and January 1994. The survey aimed to give an in-depth evaluation of customer service as perceived by the customer. The survey uses a satisfaction index of 0 to 100 across the whole spectrum of service delivery where 0 is not satisfied at all and 100 is very satisfied. Table 3.23 summarises the key results from the survey.

Table 3.23: Key results from the external patient satisfaction survey by NSW Health

<i>Area of service</i>	<i>General hospitals¹</i>	<i>All service areas²</i>
Overall patient satisfaction		
Patient satisfaction index (0-100)	84	85
- % customer/clients satisfied	94	94
- % customer/clients very satisfied	61	62
- % "Definitely recommend" to others	72	73
- % Saying "worse than expected"	5	5
Care, treatment and communication		
Quality of care and treatment	89	90
Compassionate, reassuring attitude	82	82
Knowing you as an individual person	72	72
Information and instructions	77	79
Introductions	69	72
Staff		
Doctors — overall	84	84
Doctors — information and communication	79	79
Nurses — overall	90	90
Nurses — information and communication	82	82
Main person (who helped you)	na	90
Case manager — how well he/she helped	na	83
Home nurse — concern, caring attitude and personalised attention	na	96
Comfort/meals		
Condition/look of room (inpatient only)	75	76
Cleanliness of ward toilets/showers	79	79
Restful atmosphere	68	68
Comfort of bedding	69	70
Meals	75	75

See end of Table for sources and notes.

Table 3.23: Key results from the external patient satisfaction survey by NSW Health (continued)

<i>Area of service</i>	<i>General hospitals¹</i>	<i>All service areas²</i>
Waiting aspects		
Emergency department — % saying treatment wait unacceptable	17	17
Emergency department — % left in cubicle with no communication for 20+ minutes	15	15
Outpatients/chs wait — % saying waiting time is unacceptable	18	16
Single day admissions — % waiting over 10 minutes to be attended	11	11

Source: TQA Research Pty Ltd, *NSW Health External Customer Satisfaction Survey, 1993–94, Summary Report*.

Notes: 1 General hospitals include urban teaching, urban non-teaching, rural base and rural district hospitals.

2 All services include customers from general hospitals, mental health institutions and community health services.

Accident and Emergency (A&E) waiting times are collected by NSW Health by triage category. Data from March to July 1995 are summarised below in Table 3.24.

Table 3.24: Accident and emergency waiting times by triage category

<i>Triage category</i>	<i>March 1995</i>	<i>April 1995</i>	<i>May 1995</i>	<i>June 1995</i>	<i>July 1995</i>
	per cent seen within the recommended time ¹				
Category 1	60.36	65.26	70.64	68.32	74.22
Category 2	46.27	46.35	47.35	46.55	48.83
Category 3	56.91	55.65	56.34	52.89	53.72
Category 4	70.75	68.52	70.17	65.54	65.19
Category 5	91.67	90.58	90.86	88.49	88.63

Source: NSW Department of Health.

Note: 1 National ACHS standards were used as the recommended times.

NSW was unable to provide the other quality of care indicators requested or outpatient waiting times. However, projects to start collecting information on the other quality of care indicators will commence in July 1996.

Victoria

Victoria provided unplanned readmission rates collected since the implementation of casemix funding in Victoria on 1 July 1993. Table 3.25 shows the unplanned readmission rates for 1993–94 and 1994–95.

Table 3.25: Unplanned readmission rates for all of Victoria’s recognised public acute care hospitals

<i>Period</i>	<i>Number of unplanned re-admissions</i>	<i>Percentage of total separations¹</i>
1993 August	6,119	10.5
September	6,275	11.1
October	6,548	11.3
November	6,197	10.7
December	6,509	11.2
1994 January	4,858	9.9
February	5,176	9.3
March	6,162	9.7
April	5,453	9.5
May	6,126	9.7
June	6,138	9.7
July	6,189	9.8
August	6,862	10.2
September	6,320	10.0
October	6,105	9.4
November	6,452	10.0
December	6,183	10.0
1995 January	5,158	9.7
February	5,220	9.0
March	6,176	9.4
April	5,332	9.4
May	6,324	9.4
June	6,313	9.7

Source: Victorian Inpatient Minimum Database as at 21 August 1995 update.

Notes: 1 Based on separations excluding those with intention to readmit ‘not applicable’.

Caution must be exercised in interpreting trend data, particularly for quality performance indicators like unplanned re-admissions. The causal factors underlying variations over time may be due to problems associated with refining the data collection process, rather than changes in the quality of the service delivery.

ACHS thresholds not relevant to these data because different definitions are used.

The Victorian method of collecting unplanned readmission rates differs to the standard developed by the ACHS. For example, Victoria monitors unplanned and total re-admission rates rather than emergency re-admission rates and, unlike the ACHS, does distinguish whether or not the re-admissions are related back to the original episode of care.

Rates of unplanned return to the operating theatre and hospital acquired infection rates are not collected at the system-wide level.

Stage 2 of the patient satisfaction survey developmental program has now been completed. Approximately 5000 patients were surveyed from 30 public hospitals. The key results from the patient satisfaction survey are presented in Tables 3.26 and 3.27.

Table 3.26: Patient satisfaction in Victorian Public Hospitals, 1995
(percentage)

<i>Satisfaction level</i>	<i>Percentage of patients</i>
Very satisfied	73
Fairly satisfied	24
Total satisfied	97
Not too satisfied	2
Not satisfied at all	1
Total not satisfied	3

Source: Department of Health & Community Services, Victoria.

Table 3.27: Patient satisfaction in Victorian Public Hospitals, Key measures, 1995

<i>Key measures of satisfaction</i>	<i>Performance indexes (0-100 scale)</i>
Quality of food	59
Restful atmosphere	66
Courtesy of non-medical staff	76
Cleanliness of room	79
Availability of nurses	80
Compassionate, reassuring attitude of all staff	81
Courtesy of doctors	82
Overall care and treatment	84
Courtesy of nurses	86

Source: Department of Health & Community Services, Victoria.

In October 1995, the Department of Health and Community Services also released a Hospital Services Report. That report contains information on access to emergency services, access to critical care services, access to elective services

and unplanned re-admissions to hospitals. Figure 3.28 shows the change in composition of Victoria's elective surgery waiting lists over the last three years.

Table 3.28: Composition of Victoria's elective surgery waiting lists according to need

<i>Category of case</i>	<i>At July 1993</i>	<i>At 1 July 1994</i>	<i>At July 1995</i>
Urgent	1,356	188	174
Semi-urgent	11,650	8,373	9,308
Non-urgent	15,612	15,710	18,705
Total	28,618	24,271	28,187

Source: Health and Community Services, Victoria, 1995, *Hospital Services Report*, pg 14.

Notes: *Urgent cases* (waiting list category 1): Very urgent admission desirable for a condition that has the potential to deteriorate quickly to the point that it may become an emergency. Admission within 30 days is desirable.

Semi-urgent cases (waiting list category 2): Admission within 90 days acceptable for a condition causing some pain, dysfunction or disability but is not likely to deteriorate quickly or become an emergency.

Non-urgent cases (waiting list category 3): Admission at some time in the future acceptable for a condition causing minimal or no pain, dysfunction or disability, which is very unlikely to deteriorate quickly and which does not have the potential to become an emergency.

Queensland

The additional information received from Queensland for public acute care hospitals relates to a client satisfaction survey for hospital A&E departments.

The patient satisfaction survey of the accident and emergency department was conducted by an external body. The survey results were collected on a hospital level by the Department of Health. Table 3.29 shows the summary results for 20 of the largest acute hospitals accounting for more than 55 per cent of A&E occasions of service.

Table 3.29: Patient satisfaction survey for Accident and Emergency Departments

<i>Level of satisfaction</i>	<i>Percentage of patients</i>
Very satisfied	51
Fairly satisfied	36
Total satisfied	87
Not too satisfied	8
Not satisfied at all	5
Not satisfied	13

Source: Queensland Department of Health.

Western Australia

Patient satisfaction surveys within Western Australian public acute care hospitals have been conducted for several years. However, due to changes in the format this year trend data are not available.

The most recent survey was conducted in May 1995 and consists of 10 questions which patients answer using a satisfaction index of 1 to 5 where 1 is worst and 5 is best. Table 3.30 summarises the results of the satisfaction survey.

Table 3.30: Summary results of the state-wide patient satisfaction survey

<i>Hospital type</i>	<i>Average overall satisfaction index (scale of 1 to 5)</i>
Tertiary	4.42
Secondary	4.58
All hospitals	4.51

Source: Western Australian Department of Health.

In addition to the patient satisfaction survey, some of the hospitals collect, on a sample basis, other quality of care information including some of the other agreed quality indicators. However, these were not provided to the Steering Committee because of inconsistent data definitions and differing collection methodologies among the State's hospitals.

Waiting times for outpatients and accident and emergency patients were not reported in 1993–94 on a system-wide basis.

South Australia

The South Australian Health Commission provided rates of emergency patient hospital re-admissions for major metropolitan hospitals.

Emergency patient re-admissions are recorded by the number of patients that are readmitted through the Emergency Department within 28 days of their original admission. Table 3.31 covers hospitals in Metropolitan Adelaide based on ACHS definitions for 1992–93 and 1993–94.

Table 3.31: Metropolitan public acute care hospital emergency patient re-admissions.

<i>Hospital</i>	<i>1992–93</i>		<i>1993–94</i>	
	<i>Emergency re-admissions¹</i>	<i>Percentage of total separations</i>	<i>Emergency re-admissions¹</i>	<i>Percentage of total separations</i>
Women's and Children's (campus)	1024	6.0	961	5.4
Women and Children's (Women's campus)	564	8.2	496	7.2
Hampstead	145	13.7	108	10.8
Flinders Medical Centre	2351	7.3	2213	6.4
The Queen Elizabeth	2067	6.8	1916	5.8
Royal Adelaide	2653	6.7	2289	5.7
Southern Dist.	34	3.9	38	4.8
Noarlunga	87	2.5	131	3.2
Modbury	902	6.0	698	5.0
Lyell McEwin	790	5.9	845	5.4
Gawler	180	6.8	197	6.6
RGH	929	9.8	722	8.9
Total	11726	7.0	10614	6.3

Source: The South Australian Health Commission.

Note: 1 Emergency patient re-admissions refer to the number of patients who re-present, within 28 days after a hospital admission, through the Emergency Department.

Tasmania

The Tasmanian Department of Community and Health Services supplied information from their quarterly 1994–95 regional reports. These report on hospital clinical indicators, accident and emergency waiting times by triage code, and several other quality of care and access indicators. The indicators are collected according to ACHS definitions.

Table 3.32 illustrates the hospital misadventure information collected. Although nosocomial infection rates have been collected for the full 1994–95 financial year only the 1995 data are presented in this Table. It is expected that data will be available from all regions for all indicators in 1995–96.

Table 3.32: Quarterly mis-adventure indicators, by region, 1995
(per cent)

<i>Indicator by regions</i>	<i>Jan to March</i>	<i>April to June</i>
	<i>1995</i>	<i>1995</i>
Nosocomial infection		
<i>National and ACHS standard is less than 0.3% of patient population</i>		
Southern region	0.11	0.18
North region	0.17	0.13
North-west region	< 0.3	0.18
Unplanned return to theatre		
<i>National and ACHS standard is less than 2% of patients operated on</i>		
Southern region	2.5	1.18
North region	na	na
North-west region	na	na
Post-operative pulmonary embolism		
<i>National and ACHS standard is less than 1% of patients operated on</i>		
Southern region	0.0 ¹	0.0
North region	na	0.38
North-west region	na	na
Unplanned re-admissions		
<i>National and ACHS standard is less than 5% of admissions</i>		
Southern region	3.8	3.6
North region	na	0.2
North-west region	na	na

Source: Tasmanian Department of Community and Health Services.

Notes: 1 Data only recorded for two of the three months.

Patient satisfaction surveys are conducted at the hospital level. Post discharge client satisfaction is one of the program's agreed performance indicators and a methodology for state-wide reporting of the information will be developed.

Waiting time by triage was only collected by the Southern region in 1994–95 and was collected according to the ACHS definitions. Table 3.33 summarises the overall results against the established ACHS threshold levels. All regions will be required to report on this performance indicator in 1995–96.

A range of factors will influence performance in this area. For example, in the period of April to June 1995 the 'urgent' and 'semi-urgent' codes fell below the threshold as no acute beds were available at the time of admission.

Table 3.33: Department of Emergency Medicine waiting time by triage code for the Southern region, 1994–95

<i>Waiting time by triage code</i>	<i>Nat and ACHS std (%)¹</i>	<i>July to Sept 1994 (%)¹</i>	<i>Oct to Dec 1994 (%)¹</i>	<i>Jan to March 1995 (%)¹</i>	<i>April to June 1995 (%)¹</i>
Southern region					
Red: Resuscitation — immediately	98	>98	>98	96	99
Orange: Emergency — <= 5 mins	95	>95	>95	99	100
Green: Urgent — <= 30 mins	90	~85	~85	79	81
Blue: Semi-urgent — <= 60 mins	90	~85	~85	83	78
White: Non-urgent — <= 120 mins	85	>85	>85	92	92

Source: Tasmanian Department of Community and Health Services.

Note: 1 Refers to the number who met the indicator.

Outpatient waiting times are collected and published in a newsletter circulated to general practitioners to provide information on the likely waiting times for outpatient appointments in the various specialist areas.

Northern Territory

The Northern Territory provided hospital wide medical indicators collected by the Royal Darwin Hospital (RDH). However, of the agreed indicators only hospital mis-adventure rates were supplied.

Although the information is not collected state-wide, the RDH is the largest public acute care hospital in the NT. It is one of two teaching hospitals and one of five public acute care hospitals in the NT. In 1994–95 it accounted for 46 per cent of all NT authorised public acute beds.

The RDH collect all three of the hospital misadventure indicators according to the ACHS definitions. Unplanned return to operating theatre has been recorded on a monthly basis from January 1994 and unplanned re-admissions dates back to May 1994. Table 3.34 has listed the hospital mis-adventure indicators provided by the RDH.

Table 3.34: Hospital mis-adventure indicators for the RDH, July 1994 to July 1995 (per cent)

	<i>Unplanned return to operating theatre¹</i>	<i>Hospital infections: Contaminated surgery</i>	<i>Hospital acquired; Nosocomial Bacteraemia</i>	<i>Hospital infections: Clean surgery</i>	<i>Unplanned re- admissions within 28 days of discharge</i>
National Threshold²	2.00	5.00	0.30	3.00	5.00
1994 July	6.00	4.10	0.10	3.10	5.68
Aug	7.43	9.00	0.12	2.70	7.17
Sept	3.67	9.00	0.12	2.70	6.91
Oct	5.86	3.00	0.20	0.00	6.34
Nov	4.07	1.00	0.45	0.00	5.76
Dec	8.30	2.10	0.60	2.60	6.92
1995 Jan	2.20	4.00	0.30	2.50	6.80
Feb	1.96	10.00	0.01	4.20	7.03
March	0.74	10.00	0.04	8.60	6.08
April	0.35	4.30	0.30	3.00	5.88
May	na	5.00	0.10	3.00	na
June	na	5.00	0.30	3.00	na

Source: NT Department of Health and Community Services.

Notes: 1 The NT Department of Health and Community Services have indicated to the Steering Committee that the data for this indicator is currently collected manually and some concerns regarding the data collection method exist. These have only recently been addressed. There were also some changes in definition during the period. For some of the year the data relate to all returns.

2 National threshold limit established by the ACHS. Each hospital should aim to keep below the stated threshold in each category.

The RDH are currently developing a client satisfaction survey to add to its currently collected and published set of medical indicators.

In addition waiting times for outpatients and accident and emergency were not collected.

Australian Capital Territory

The ACT provided detailed quality of care information. Patient satisfaction information was only available for the Woden Valley Hospital. Hospital mis-adventure information was supplied by both of the ACT's public acute care hospitals — the Calvary and Woden Valley.

The most recent patient satisfaction survey for Woden Valley Hospital was conducted in May 1995. The main results are tabulated in Table 3.35.

Table 3.35: Overall patient satisfaction of hospital services for Woden Valley hospital, 1995

<i>Level of satisfaction</i>	<i>Percentage of customers</i>
Very satisfied	60
Fairly satisfied	36
Total satisfied	96
Not too satisfied	3
Not at all satisfied	1
Total not satisfied	4

Source: ACT Department of Health.

Tables 3.36 and 3.37 show the hospital mis-adventure data collected by the ACT's public acute care hospitals.

Table 3.36 Hospital wide mis-adventure indicators, Calvary Hospital, 1994–95 (per cent)

	<i>Unplanned re-admission rates¹</i>	<i>Unplanned return to operating room within 28 days</i>	<i>Postoperative pulmonary embolus</i>	<i>HAIR²—clean op. wound infection rate³</i>	<i>HAIR²—hospital acquired bacteraemia</i>	<i>HAIR²—contaminated op. wound infections³</i>
National Threshold⁴	5.00	2.00	1.00	3.00	0.30	5.00
1994						
July	2.76	0.65	0.00	1.50	0.00	0.00
Aug	3.71	0.28	0.00	0.00	0.00	0.00
Sept	3.15	0.30	0.00	0.00	0.00	0.00
Oct	2.68	1.20	0.00	0.00	0.10	0.00
Nov	2.47	0.60	0.00	5.80	0.10	6.00
Dec	2.60	0.30	0.00	7.60	0.00	0.00
1995						
Jan	3.92	0.00	0.00	3.30	0.00	0.00
Feb	3.30	0.00	0.00	0.00	0.00	0.00
March	2.80	1.30	0.00	2.10	0.00	1.00
April	2.70	0.80	0.00	0.00	0.20	1.00
May	3.60	0.00	0.00	0.00	na	1.00
June	4.70	0.00	0.00	na	na	na
Average 1994–95	3.06	0.49	0.00	1.85	0.04	0.82

Source: ACT Department of Health.

Notes: 1 Figures adjusted by clinicians to reflect numbers associated with previous admission.

2 HAIR is hospital acquired infection rates.

3 Results open to misinterpretation due to small numbers in sample.

4 Each hospital should aim to keep its rates below the each established National threshold.

Table 3.37 Hospital wide mis-adventure indicators, Woden Valley hospital, 1994–95 (per cent)

	<i>Unplanned re-admission rates¹</i>	<i>Unplanned return to operating room</i>	<i>Post-operative pulmonary embolism</i>	<i>HAIR²—clean op. wound infection rate</i>	<i>HAIR²—hospital acquired bacteraemia</i>	<i>HAIR²—contaminated op. wound infections</i>
National Threshold³	5.00	2.00	1.00	3.00	0.30	5.00
1994 July	4.26	0.38	0.00	1.03	0.26	na
Aug	4.93	0.61	0.00	0.44	0.04	na
Sept	4.31	0.62	0.00	1.93	0.09	0.48
Oct	4.97	0.79	0.78	0.50	0.19	0.50
Nov	4.53	0.53	0.00	2.45	0.18	0.00
Dec	4.50	0.11	0.92	3.30	0.23	0.55
1995 Jan	4.44	0.51	0.00	1.14	0.53	0.00
Feb	4.08	0.58	0.00	2.42	0.53	0.00
March	4.61	1.04	0.00	1.83	0.45	0.91
April	na	na	na	na	na	na
May	na	na	na	na	na	na
June	na	na	na	na	na	na
Average 1994–95	4.15	0.57	0.15	1.67	0.28	0.35

Source: ACT Department of Health.

Notes: 1 Unplanned re-admissions figures not verified by clinicians to determine if associated with previous admission — reflects the number of patients readmitted through the Emergency Department.

2 HAIR is hospital acquired infection rates.

3 Each hospital should aim to keep its rates below the each established National threshold.

3.8 Definitions and explanatory notes

Definition and explanation of the performance indicators

<i>Category / Indicator</i>	<i>Definition</i>	<i>Explanation</i>
Unit cost and productivity		
Cost of capital per casemix adjusted separation	Depreciation + Opportunity cost/ casemix adjusted separation	This indicator takes into account the user cost of capital. It is the sum of depreciation and opportunity cost of all hospital assets excluding land.
Labour cost per casemix adjusted separations	Salary and wages * Inpatient fraction + VMO payments / case weighted separations.	Measures the labour component per casemix adjusted separation
Cost per casemix adjusted separation	(capital charge + recurrent expenditure) * Inpatient fraction / total separations * the average case weight	Deals with the costs associated with acute admitted patients (inpatients)
Cost of treatment per outpatient	(capital charge + recurrent expenditure) * (1 - inpatient fraction) / total outpatient separations	Measures the costs associated with outpatients (or non-inpatients)
Average length of stay (ALOS)	total occupied bed days minus leave days / total episodes	Length of stay can be used as a predictor of cost. Comparing ALOS for similar services across two or more providers is a simple way of evaluating relative efficiency.
Total replacement value (TRV) per casemix adjusted separation	TRV / casemix adjusted separation	A measure of capital intensity

Definition and explanation of the performance indicators (continued)

<i>Category / Indicator</i>	<i>Definition</i>	<i>Explanation</i>
Effectiveness		
Quality		
Percentage of facilities accredited with the ACHS	The ratio of accredited hospitals to all hospitals in the jurisdiction	This indicator is a proxy general measure of the quality of care processes.
Condition of capital	Ratio of depreciated replacement value (DRV) to total replacement value (TRV)	A way of illustrating the age/condition of hospital assets excluding land.
Rate of emergency patient re-admission within 28 days	Number of emergency patient readmissions within 28 days of separation/ total number of admissions excluding deaths	Refers to admission to the same hospital. Restricting the scope to emergency patients will help filter out unplanned re-admissions that may not have been unexpected, such as for some chronic illnesses.
Rate of unplanned return to operating room	Number of separations with one or more unplanned visit to an operating room subsequent to a previous procedure during the same admission / total number of separations where one or more procedures were performed	Attempts to capture all visits to an operating room subsequent to complications arising from any procedure/operation whether or not it was performed in an operating room.
Rate of post-operative wound infection	Number of patients having evidence of wound infection on or after the fifth post-operative day following clean (contaminated) surgery / number of patients undergoing clean (contaminated) surgery with a post-operative length of stay equal to or greater than 5 days	Attempts to measure hospital acquired infection rates.
Rate of hospital acquired bacteraemia	Number of separated patients who acquire bacteraemia during a hospital stay / number of separations with length of stay of ≥ 2 days	As above.
Patient satisfaction	No agreed definitions currently exist for this indicator	A project, funded under the National Hospital Quality Management Program, is progressing the conceptual development in this area.

Definition and explanation of the performance indicators (continued)

<i>Category / Indicator</i>	<i>Definition</i>	<i>Explanation</i>
<i>Appropriateness</i>		
Variations in intervention rates	Number of separations for selected procedures / 1000 persons	This indicator attempts to measure the appropriateness of care, in-so-far as variations in intervention rates for a small geographic area reflect the collective decisions of medical practitioners who refer patients for surgical treatment in hospital.
Separations per 1,000 population	Total number of separations / 1,000 persons	
<i>Access</i>		
Waiting times for elective surgery	Three indicators are reported: - clearance times; - proportion of patients waiting inappropriately at census; - proportion of patients admitted after waiting inappropriately.	A definition of each indicator is provided as a note in the access Tables (section 3.6).
Accident and emergency waiting times	No national definition exists for this indicator	Development projects in this field are currently being undertaken, some of which are sponsored by the Ambulatory Care Branch of the Commonwealth Department of Human Services and Health.
Outpatient waiting times	No national definition exists for this indicator	Development projects in this field are currently being undertaken, some of which are sponsored by the Ambulatory Care Branch of the Commonwealth Department of Human Services and Health.

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