Funding Victoria's public hospitals: The casemix policy of 2000-2001

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Abstract

On 1 July 1993 Victoria became the first Australian state to use casemix information to set budgets for its public hospitals commencing with casemix funding for inpatient services. Victoria's casemix funding approach now embraces inpatient, outpatient and rehabilitation services.

The geographic and demographic context

Victoria is the second most populous state in Australia, second only to New South Wales. Melbourne, the capital of Victoria, is the second largest city in Australia and boasts a cultural diversity unparalleled in any other Australian capital with almost 45 per cent of residents being born overseas or having a parent born overseas. Twenty per cent of Victorians come from countries where English is not the primary language.

Victoria is the smallest mainland state (227,420 km^2) constituting 2.96 per cent of the national landmass (Australian Bureau of Statistics 2000a). The estimated population at June 1999 was 4.71 million people, approximately one quarter of the Australian population, making Victoria the most densely populated of the states. The Victorian population grew at a rate of 1.2 per cent in the year to June 1999, compared with 0.6 per cent per year over the previous three years. The total population of Victoria is predicted to grow to between 5.01 and 5.46 million by 2021 and between 4.69 and 5.88 million people by 2051 (Australian Bureau of Statistics 2001). As at June 1998, 3.37 million (72 per cent) Victorians were living in Melbourne with 1.34 million living outside the metropolitan area. By 2051, there could be as few as 1.05 million Victorians living outside the metropolitan area.

The median age of the Victorian population was 35.1 years at 30 June 1999 compared with 34.9 years for the Australian population. Improved longevity and the aging of the large number of children born in the decade following the end of World War II ensure that the median age of the Victorian population will continue to increase. Although the total population of Victoria is not expected to increase by more than 10 per cent before 2050, the number of people age 54 years and older is expected to increase by 66 per cent and 98 per cent by 2020 and 2050 respectively. This is eclipsed, however, by the projected nine and 21 fold increases in people age 85 years or older over the same periods.

There are no Statistical Local Areas of Victoria classified as remote using the Commonwealth Government's Accessibility/Remoteness Index of Australia (ARIA).

Age related hospital utilisation

Hospital utilisation is highest in the first few years of life, including birth and in the decade prior to death. The rate of Victorian Public Hospital separations and bed day utilisation by age is included in Table 1. Of interest is the high rate of birth related utilisation in children <1 year of age. There is also an increased separation rate

for women age 25-34 years that may also be related to childbearing. Both separation and patient bed day utilisation rates increase with age from 5 years onward with the exception of women age 25-34 years.

Table 1: Rate of Victorian public hospital separations and bed day utilisation per thousand persons, grouped by age and gender, 1998/99.

Age Group	Separation rate/1,000 Females/year	Separation rate/1,000 Males/year	Patient bed day rate/1,000 Females/year	Patient bed day rate/ 1,000 Males/year
<1 year	407	556	3,089	3,606
1-4 years	105	152	381	475
5-14 years	53	71	196	244
15-24 years	156	82	635	544
25-34 years	267	107	1,032	577
35-44 years	181	128	733	653
45-54 years	115	172	496	923
55-64 years	278	322	1,279	1,753
65-74 years	395	570	2,639	3,417
>75 years	507	690	6,756	7,106
All ages	204	194	1,215	1,196

Source: Australian Bureau of Statistics (2000b), Australian Institute of Health and Welfare (1999) table 3.4, p.30.

Administrative structures governing Victorian hospitals

The statutory framework for the provision of Victorian health services is enshrined in the Health Services Act 1988. The legislative basis for Melbourne public hospitals is different to that applying in rural and regional Victoria. Public hospitals in Melbourne are governed by 12 Metropolitan Health Services that commenced on 1 July 2000 replacing the previous "networks". Metropolitan Health Services are incorporated under section 40A of the Health Services Act with boards of management consisting of six to nine members appointed by the Governor in Council on the recommendation of the Minister for Health.

Most Metropolitan Health Services have no governing or managerial control over Community Health Centres. The latter are separately constituted entities under the *Health Services Act*. Consequently, there is little vertical integration of public community and acute health service provision, (the exceptions are Peninsula and Southern Health). This is in contrast to the majority of publicly funded health services in rural Victoria that are generally vertically integrated. Public Hospitals in rural and regional Victoria are incorporated under Section 31 of the *Health Services Act* with boards consisting of six to twelve people appointed by the Governor in Council.

A small number of "not for profit" hospitals are administered by religious orders. These hospitals are classed as "denominational hospitals" under the Health Services Act and are incorporated in a variety of ways (e.g. *The Corporations (Victoria) Act)* with boards appointed according to their incorporation arrangements.

Until recently, Victoria also had two privately built, owned and operated "for profit" hospitals that provided public hospital services for both public and private patients. These hospitals (La Trobe Regional Hospital and Mildura Hospital) were classed as private hospitals for the purposes of the Health Services Act but designated as "privately operated hospitals" so that certain controls applying to public hospitals also apply to these hospitals. The La Trobe Regional Hospital recently reverted to public hospital status when the state government "bought out" the private contract.

The private hospital sector

Private hospitals are regulated by the Victorian Department of Human Services under Part 4 of the *Health Services Act 1988*. Registration criteria include the suitability of the proprietor, directors, buildings, bed numbers, prescribed health services that can be conducted, the number of beds associated with each of the prescribed health services and the keeping of medical records.

There is no cap on the number of beds in private hospitals. Registration can be revoked if private hospitals breach the *Health Services Act 1988* or the conditions set out in the *Health Services (Private Hospitals and Day Procedure Centres) Regulations 1991*. Penalties apply for private hospitals that operate outside their current registration. As with public hospitals, private hospital quality assurance committees can be protected with statutory immunity under section 139 of the *Health Services Act 1988*.

The structure of the Department of Human Services

The Department of Human Services (DHS) is the Victorian Government body responsible for health service provision. DHS also has responsibility for community services and housing. The Department reports to four ministers: the Minister for Health (Hon. John Thwaites MP who is also Deputy Premier and Minister for Planning); the Minister for Housing and Minister for Aged Care (Hon Bronwyn Pike MP); the Minister for Community Services (Hon. Christine Campbell MP); and the Minister for Aboriginal Affairs (Hon. Keith Hamilton MP).

In 1999/2000 DHS was organised into six program divisions:

- Acute Health;
- Aged, Community & Mental Health;
- Community Care;
- DisAbility Services
- Public Health
- Office of Housing

The divisions report directly to the Departmental Secretary. Two functional divisions also report directly to the Secretary (Resources, Policy Development and Planning).

DHS has a regional structure which complements the role of the central divisional structure. There are four metropolitan regions (Eastern, Northern, Southern, Western)) and five rural regions (Barwon South Western, Gippsland, Grampians, Loddon Mallee, Hume). Acute health services in metropolitan Melbourne relate directly to the Acute Health Division. Rural and regional services relate via their regional office. Regional Directors of DHS report to the Secretary via the Divisional Directors.

State program budget structure

The 2000/01 budget for DHS is $7,253.4 million including $66.3 million of intra-governmental payments (payments to Transport Authorities, Youth Sport and Recreation and Payroll Tax) of which $3,621.9 million (50.4 per cent) is allocated to acute services (Department of Treasury and Finance 2000).

Table 2: Department of Human Services Budget 2000/01 by output group

Human Services Output Group	Budget 2000/01 ($ Million)	Percentage
Acute Health Services	3,621.9	49.9
Ambulance Services	220.6	3.0
Aged Care and Primary Health	855.6	11.8
Mental Health Services	493.5	6.8
Public Health Services	214.1	3.0
DisAbility Services	668.5	9.2
Community Care	491.1	6.8
Concessions to pensioners and beneficiaries	280.7	3.9
Housing assistance	407.4	5.6
Human Services total	7,253.4	100.0

Source: Department of Treasury and Finance (2000). (Budget estimates - p.61)

Public hospitals in Victoria are funded primarily from the State and Commonwealth Government. Health insurance funds, third party payers (eg Transport Accident Commission), and payments from individuals make up only 10.1 per cent of total public hospital funding. (Table 3).

Table 3: Sources of funding for Victorian public and private hospitals 1998/99

	Expenditure ($ M)			
Funding source	Public hospitals		Private hospitals	
Government sector				
Commonwealth Government	1,174	(38.0%)	78	(7.5%)
Department of Veterans Affairs	140	(4.5%)	31	(3.0%)
State government	1,460	(47.3%)	-	-
Government sector total	2,774	(89.9%)	110	(10.6%)
Non-government sector				
Health Insurance funds	66	(2.1%)	668	(64.5%)
Individual out-of-pocket expenses	58	(1.9%)	124	(12.0%)
Other parties, Transport Accident Commission (TAC) and primarily Victorian WorkCover Authority (VWA)	189	(6.1%)	134	(12.9%)
Non-government sector total	313	(10.1%)	926	(89.4%)
Total hospital funding	**3,087**	**(100.0%)**	**1,036**	**(100.0%)**

Source: Australian Institute of Health and Welfare (2000a), (Table A4 p. 23).

The Commonwealth Government contribution is primarily through the Australian Health Care Agreement between the Commonwealth Government and the State of Victoria (AHCA) which provided $1.17 billion in 1998/99 (Australian Institute of Health and Welfare 2000a).

Hospital provision and performance

In 1998/99 there where 140 acute non-psychiatric public hospitals and 136 private hospitals including 41 day procedure centres in Victoria (Australian Institute of Health and Welfare 1999). Forty-eight of the 140 acute public hospitals were located in metropolitan centres and five of these were denominational hospitals. Together these hospitals provided services for more than 70 per cent of the Victorian population. In addition, a privately built and operated rural hospital provided public hospital services in Mildura. There are two Victorian hospitals in locations that are considered to be remote according to the Victorian definition of being more than 60km from a category "B" or large category "C" hospital (Table 4).

Table 4: Number of Victorian acute public hospitals and beds per 1,000 population by location, 1998/99.

	Hospitals	Beds per 1,000 people
Metropolitan	48	2.3
Rural	92	3.2
Remote	2	2.3
Total all regions*	**142**	**2.5**

* Includes psychiatric hospitals.

Source: Australian Institute of Health and Welfare (1999). (Table 3.4, p.30):

Beds

In 1998/99 there were 17,999 beds available in Victorian acute non-psychiatric hospitals 607 (3.4 per cent) beds less than for 1997-98. Two thirds (11,638) of these beds were in public hospitals, one third (6,357) were in private hospitals with less than one per cent (256) in private day procedure centres. The average size of acute hospitals in Victoria in 1999/2000 was 80 beds, with public hospitals being somewhat larger on average (85 beds) than private hospitals (72 beds, average not including day procedure centres).

Over 5M bed days were provided in 1998/99 (Table 5). Public hospital beds provided 69 per cent of total bed days at an unadjusted occupancy rate of 87 per cent while the occupancy rate for private hospitals was 70 per cent. There were more available beds per person in rural areas than in metropolitan centres (3.2 versus 2.3 beds/1 000 persons) (Australian Institute of Health and Welfare 2000)

Table 5: Patient days by accommodation status and hospital sector, Victoria, 1998/99

Accommodation status	Bed days
Public hospitals	
Eligible public patient	3,204,967
Eligible private patient	238,658
Eligible DVA patient	201,368
Eligible other patient	57,537
Ineligible patient	8,190
Total	**3,710,720**
Private hospitals	
Eligible public patient	4,974
Eligible private patient	1,369,929
Eligible DVA patient	157,543
Eligible other patient	100,837
Ineligible patient	1,266
Total	**1,634,549**
All hospitals	
Eligible public patient	3,209,941
Eligible private patient	1,608,587
Eligible Department of Veterans' Affairs patient	358,911
Eligible other patient	158,374
Ineligible patient	9,456
Total	**5,345,269**

Source: Australian Institute of Health and Welfare (2000b).

Separations

Sixty six per cent of Victorian separations took place in public hospitals (Table 6). Forty-eight per cent of acute public hospital separations were same day separations compared with 46 per cent in 1997/98. Thirty two per cent of separations were undertaken in rural or remote hospitals (Department of Human Services 2000a).

Table 6: Separations, same day separations, and separations per 1,000 population, by hospital type, for Victoria 1998/99

	Total separations Number	Per cent	Same day separations Number	Per cent	Same day separations as per cent of total	Total separations per 1,000 population
Public hospitals*	970,150	66.2	468,028	63.0	48.2	199.4
Private hospitals+	495,667	33.8	275,266	37.0	55.5	99.4
Private day procedure facilities	47,063	3.2	47,063	6.3	100.0	9.4
Total	**1,465,817**	**100.0**	**743,294**	**100.0**	**50.7**	**298.8**

* Includes psychiaatricadmissions

\+ Includes day procedure facilities

Source: Australian Institute of Health and Welfare (2000b, p.43:

The average length of stay (ALOS) in public acute care hospitals is 3.8 days per separation, 6.5 days per separation if same-day separations are excluded. The ALOS for patients attending all Victorian hospitals, grouped by hospital type, is shown in Table 7.

Table 7: Average length of stay including and excluding same day separations, by hospital type, Victoria, 1998/99

	Average length of stay (days)	
	All separations	Excluding same-day separations
Public hospitals	3.8	6.5
Private hospitals*	3.3	6.2
Private day procedure facilities	1.0	-
Total	**3.6**	**6.4**

* Includes day procedure facilities.

Source: Department of Human Services (1996)

The relative average length of stay for all Diagnosis Related Groups (DRGs) grouped by major diagnostic category is summarised in Table 8. The standardised length of stay ratio (SLR) is the index of the average length of stay for patients in a MDC in either public or private hospitals against the overall average e.g. a private SLR of 1.01 for diseases and disorders of the nervous system indicates that patients in that MDC in private hospitals stay one per cent longer than the state average. Of interest is the average length of stay for the Pregnancy, childbirth and puerperium MDC which is significantly shorter in public hospitals than in private hospitals ($P < 0.0001$). This was not the case for any of the other major diagnostic categories ($p > 0.01$).

Table 8: Average length of stay and sector specific standardised length of stay rate (SLR) by Major Diagnostic Category, by hospital sector, Victoria, 1998/99

Major Diagnostic Category		State ALOS	Public SLR	Private SLR
01	Diseases and disorders of the nervous system	5.75	1.00	1.01
02	Diseases and disorders of the eye	1.21	1.08	0.93
03	Diseases and disorders of the ear, nose, mouth and throat	1.48	1.07	0.91
04	Diseases and disorders of the respiratory system	5.23	0.95	1.19
05	Diseases and disorders of the circulatory system	4.40	0.96	1.10
06	Diseases and disorders of the digestive system	2.32	1.14	0.85
07	Diseases and disorders of the hepatobiliary system and pancreas	4.33	0.98	1.05
08	Diseases and disorders of the musculoskeletal system and connective tissue	4.10	1.02	0.98*
09	Diseases and disorders of the skin, subcutaneous tissue and breast	2.94	1.08	0.90
10	Endocrine, nutritional and metabolic diseases and disorders	4.35	0.98	1.06
11	Diseases and disorders of the kidney and urinary tract	1.48	0.95	1.25
12	Diseases and disorders of the male reproductive system	2.43	0.94	1.08
13	Diseases and disorders of the female reproductive system	2.01	0.95	1.08
14	Pregnancy, childbirth and puerperium	3.24	0.89*	1.39
15	Newborns and other neonates	7.56	1.05	0.77
16	Disorders of the blood and blood-forming organs, immunological disorders	2.23	0.99	1.04
17	Neoplastic disorders (haematological and solid neoplasms)	1.55	1.05	0.92
18	Infectious and parasitic diseases	5.69	0.95	1.24
19	Mental diseases and disorders	7.35	1.29	0.64
20	Alcohol/drug use and alcohol/drug induced organic mental disorders	4.45	0.90	1.12
21	Injuries, poisoning and toxic effects of drugs	3.07	0.93	1.39
22	Burns	6.21	1.00	0.99
23	Factors influencing health status and other contacts with health services	2.72	1.17	0.76
ED	Error DRGs	5.00	1.83	0.76
PR	Pre-MDC (tracheostomies, transplants, ECMO)	27.15	1.00	1.00
	Mean	**3.22**	**1.03**	**0.94**

Source: Australian Institute of Health and Welfare (2000b).

The ALOS for specific Diagnosis Related Groups (DRGs) was compared for 1998/99 separations where there were at least ten separations in both private and public hospitals. The ALOS is significantly shorter for public hospitals separations for obstetric ($p < 0.0001$) and non-obstetric medical ($p = 0.049$) separations than for private hospital separations (2-sided t-test). The length of stay for patients undergoing non-obstetric surgical

procedures is significantly shorter for separations sustained in private hospitals (p=0.028). However, there appear to be coding anomalies in the surgical separations that influence the comparison of ALOS. Specifically, allogenic bone marrow transplants are only permitted to be performed at three major public hospitals (ALOS = 35.5 days). However, eleven BMT separations were recorded for private hospitals (ALOS = nine days). These separations may include transfers and radiotherapy or other related procedures. When allogenic bone marrow transplants are excluded from the analysis there remains a significant difference between non-obstetric surgical separations in the two sectors (p = 0.047).

Acute breakdown - medical, surgical, obstetrics

Non-obstetric medical procedures accounted for 66 per cent of all separations and 68 per cent of bed days (Table 8). Seven per cent of all separations were obstetric of which almost half (43 per cent) involved vaginal delivery.

Table 9: Separations and bed days by separation type, private and public hospitals, Victoria 1998/99

Procedure type	Private hospitals			Public hospitals		
	Separations Number	Per cent	Bed days	Separations Number	Per cent	Bed days
Medical (non-obstetric)	284,186	58.5%	950,939	702,537	70.0%	2,717,459
Surgical (non-obstetric)	177,801	36.6%	540,707	215,914	21.5%	815,753
Obstetric	23,393	4.8%	106,842	85,043	8.5%	250,373
Unclassified	357	0.1%	539	7	0.0%	253
Total	**485,737**	**100.0%**	**1,599,027**	**1,003,501**	**100.0%**	**3,783,838**

Source: Department of Human Services, Victorian Admitted Episodes Dataset (VAED).(One off extraction) .

Utilisation

Private patients accounted for 7.1 per cent of the separations and 6.9 per cent of the bed days provided by Victorian public hospitals in 1998-9 excluding separations and bed days funded by DVA, TAC and VWA (Table 10). This contrasts sharply with the 2.1 per cent of public hospital funding provided by health insurance payments and the 1.9 per cent from individuals (Table 3). The discrepancy between the proportion of separations/ bed days utilised and the proportion of funding reflects the implicit subsidy to fees charged for private patients accommodated in public hospitals (Duckett and Hunter 1999; Canil 2001).

Table 10: Separations and bed days by accommodation status and hospital sector, Victoria, 1998/99

Accommodation status	Separations	Bed days
Public hospitals		
Eligible public patient	855,470	3,204,967
Eligible private patient	65,231	238,658
Eligible DVA patient	33,578	201,368
Eligible other patient a	13,113	57,537
Ineligible patient b	2,758	8,190
Total	**970,150**	**3,710,720**
Accommodation status	**Separations**	**Bed days**
Private hospitals		
Eligible public patient	3,192	4,974
Eligible private patient	439,663	1,369,929
Eligible DVA patient	31,248	157,543
Eligible other patient	21,202	100,837
Ineligible patient	362	1,266
Total	**495,667**	**1,634,549**

a Workcover and Traffic Accident Commission funded patients;
b Overseas and non-Medicare funded patients.

Source: Australian Institute of Health and Welfare (2000b). (Table 5.1, p. 58.)

Private patient load in public hospitals

Although 7 per cent of public hospital separations accommodated privately funded patients, this does not indicate the number of separations involving patients with private hospital insurance coverage who utilise public hospital services. Public patients accounted for 3,192 private hospital separations and 4,974 bed days in 1998/99. The majority of these separations were either in bush nursing hospitals prior to transfer to rural hospitals or critical care beds purchased by the DHS to deal with a temporary demand that could not be managed by public hospital critical care units.

Sub-acute and non-acute care

Rehabilitation services are provided through 17 specialised facilities of 20 beds or more as well as a number of smaller facilities. The current Victorian benchmarks for services are 3.0 rehabilitation beds, 1.5 places in metropolitan Community Rehabilitation Clinics (CRCs), and 3.5 places in rural CRCs for each 1,000 people age >70 years. CRCs provide day treatment for people undergoing rehabilitation. Victoria has 37 CRCs, 25 outside metropolitan Melbourne providing an estimated 122,229 treatment day equivalents during the 2000/01 year. There are also 22 sub-acute specialist clinics in Victoria including fifteen continence clinics, five falls clinics and two pain management clinics. Table 11 shows the number of sub-acute and non-acute bed days available for 1999/2000.

The Aged, Community Care and Mental Health Division (ACMH) purchases palliative care services. While 53,300 bed days were available in palliative care facilities in 1998/99, only 48,193 palliative bed days were utilised. The number of palliative care bed days available for 1999/2000 has increased considerably (Table 11).

Table 11: Bed days for sub-acute and non-acute patients, Victoria 1999/2000

	Accommodation type	Bed days
Sub-acute and specialist services	Geriatric evaluation and management	181,722
	Palliative care	66,953
	Rehabilitation level 1	9,039
	Rehabilitation level 2	206,957
	Nursing home type care	6,799
	Total	471,470
Supported residential care	Nursing home care	1,160,162

Source: Department of Human Services (1999)

Hospital-in-the-home (HITH) is a method of providing nursing care and medical treatment without the need for patients to remain within a hospital. HITH is available to all public patients including separations funded by DVA, TAC, and VWA. Residential status is not a barrier to HITH if a home carer is available. Patients are technically admitted to the hospital, often without ever occupying a bed, and care is provided by the HITH program. Treatments are conducted using pre-set treatment protocols and provide a high standard of treatment and care without the social dislocation associated with hospital inpatient admission and at a lower cost for the providing health service. Forty four Victorian hospitals are participating in the program that is growing both in terms of separations and the range of treatments that are being adopted as suitable for provision through HITH. In 1999/2000 there were 96,976 bed days provided under the HITH scheme (Department of Human Services 2000b).

Many small rural public hospitals accommodate nursing home type patients that would otherwise be transferred to a nursing home in a larger centre (Australian Institute of Health and Welfare 2000b). Patients revert to nursing home payment status after 35 days in an acute care facility unless a certificate of ongoing acute care is forwarded to the Department of Human Services or DVA. In 1998-99, Victoria used 88,000 acute public hospital bed days for nursing home type patients. These data include nursing home type patients accommodated in metropolitan hospitals awaiting placement in a home.

System performance

In 1998/99, 69 per cent of public and 77 per cent of private hospitals were accredited with the Australian Council on Healthcare Standards accounting for 88 per cent and 87 per cent of beds in public and private hospitals respectively (Australian Institute of Health and Welfare 2000b). All Victorian public hospitals are required to be accredited by the Australian Council on Healthcare Standards, the International Organisation for Standardisation's Quality Management System 9000 (ISO 9002), the Quality Improvement Council's Quality Improvement and Community Services Accreditation (QICSA) or another equivalent program. Accreditation is linked to a bonus of at least $15,000 with larger facilities receiving $30,000.

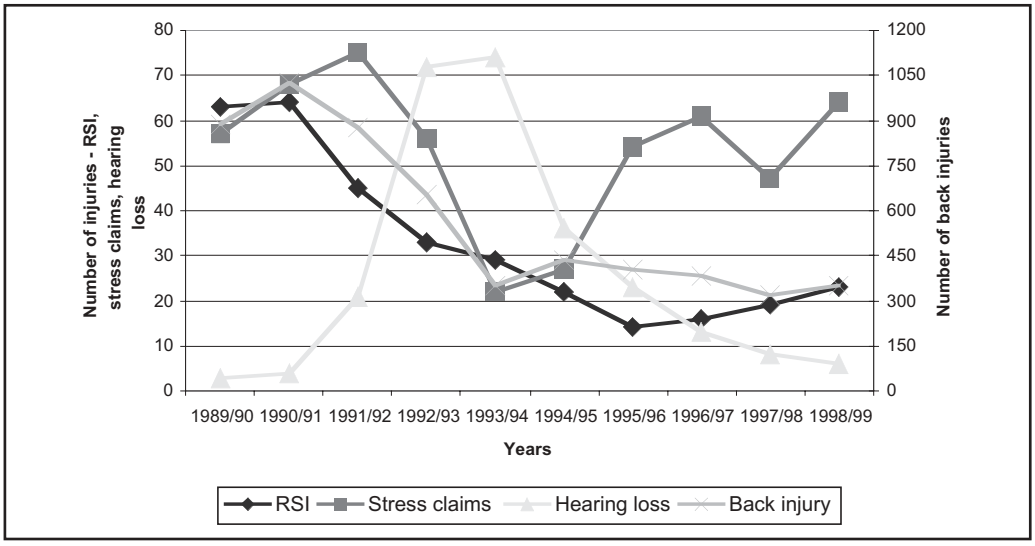
The Department of Human Services has a voluntary public hospital incident report data collection service, however, less than 50 per cent of public hospitals contribute data. Hence, there is no reliable data pertaining to injuries and incidents within Victorian public hospitals that could be used as a proxy measure of safety.

WorkCover injuries are grouped by occupation for hospitals and nursing homes in the National Occupational Health and Safety Database established by the National Occupational Health and Safety Commission. The VWA collects injury statistics by hospital type. A time series of sentinel injury claims for Victorian public hospitals is shown in Figure 1. Back injuries, by far the largest source of claims, have decreased markedly since 1991, as have repetitive strain injuries (RSI). Interventions to prevent back injuries commenced in the early

1990s and culminated in a "no-lift" policy implemented by the Australian Nursing Federation in concert with the Department of Human Services in 1998. However, changes to WorkCover legislation over this period may also have reduced the rate of workplace injury reporting. Injuries related to hearing loss had a peak in 1993 that is not easily explained. Stress related injuries were approximately 50 per cent lower in the years 1993/94 and 1994/95 than either the years before or the years after.

Waiting list data is currently collected for Victorian public hospitals through the Elective Surgery Information System (ESIS). As at 30 June 2000, there were no category one (urgent) procedures with extended waits >30 days, however, 18.6 per cent of all category two (semi-urgent) procedures had extended waits >90 days. As at 30 June 2000, the elective surgery waiting list consisted of 677 category one, 14,986 category two, and 26,458 category three (non-urgent) patients waiting for procedures.

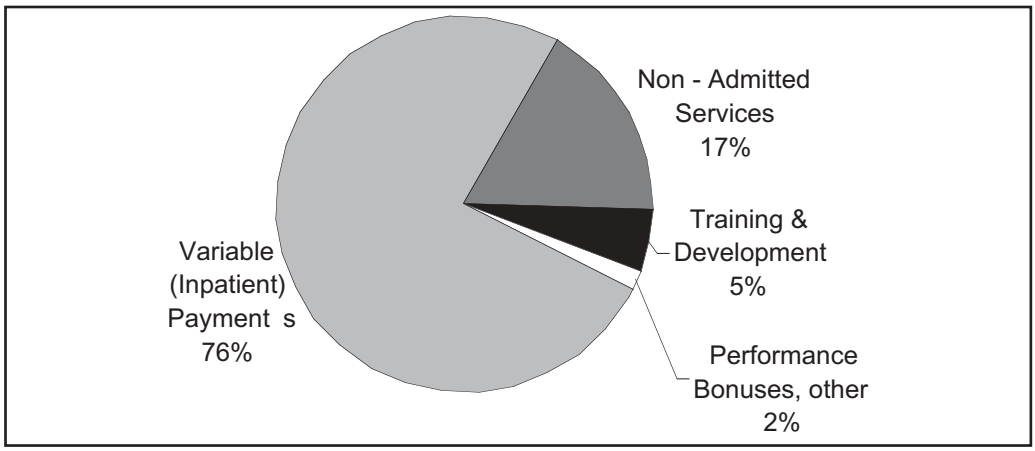
Figure 1: Total number of sentinel WorkCover claims made through employment at Victorian public (non-psychiatric) hospitals, 1989/99



Public hospital funding arrangements

Since 1 July 1993, Victorian public hospitals have been funded based on their casemix. Although casemix funding was initially limited to inpatient services, it has subsequently been extended to include non- inpatient and sub-acute patient services. The funding formula is updated annually and published in Victoria-Public Hospitals Policy and Funding Guidelines . Total expenditure on acute public hospitals in 2000/01 amounted to $3.6b, with 76 per cent of this for inpatient services (see Figure 2).

Figure 2: Public hospital funding 2000-01



Inpatients

Funding for inpatient separations is on the basis of casemix. Figure 3 is a broad schema of the Victorian casemix funding process.

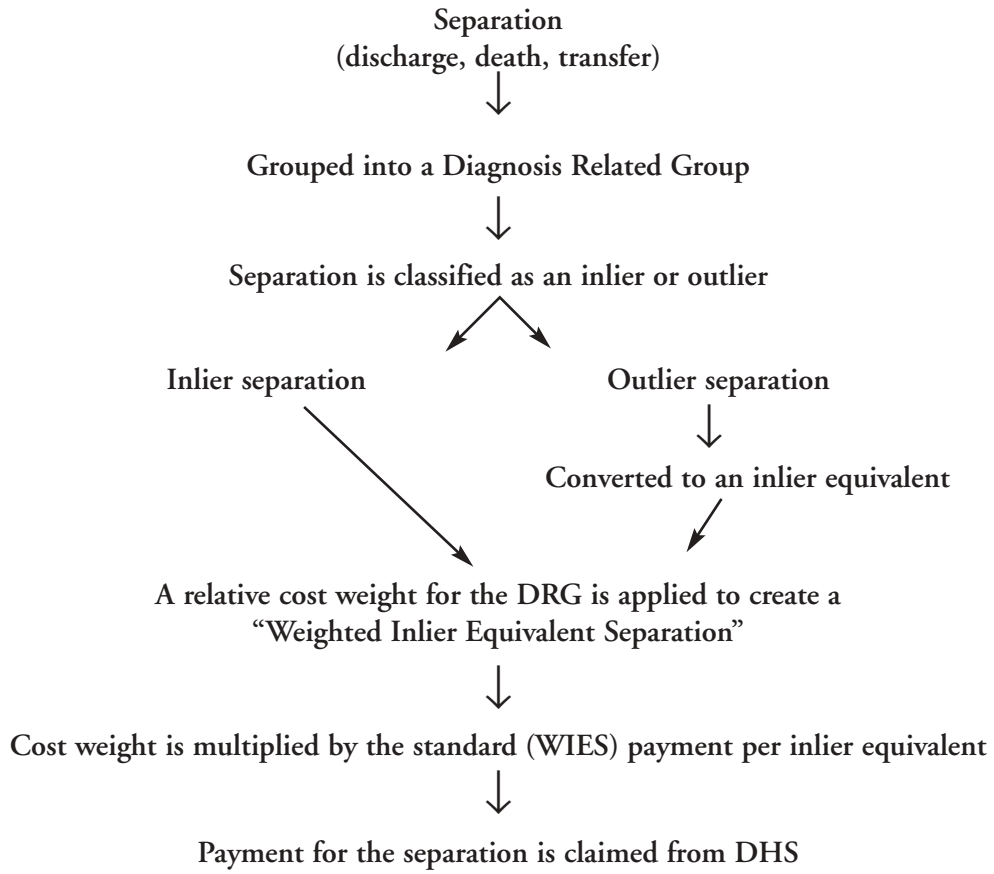


Figure 3: Method of determining payment for Victorian public hospital inpatients.

Hospital separations are coded using the International Classification of Diseases, Tenth revision (ICD-10). Inpatient separations are allocated into Diagnosis Related Groups (DRGs) for the purpose of funding using a modified form of AR-DRG Version 4.1, the VIC-DRG4. The main modifications to AR-DRG Version 4.1 are:

- discrimination between peritoneal (VIC-DRG4: L61Y) and Haemodialysis (VIC-DRG4: L61Z);
- regrouping of the principal diagnoses in non-same day cases involving radiotherapy for malignancy to attract the increased costs associated with radiotherapy;
- the separation of Allogenic (VIC-DRG4 A04A) and other, mainly autologous, bone marrow transplants (VIC-DRG4 A04B).

When first introduced, inpatient casemix funding in Victoria was based on a fixed and variable model (Duckett 1995). However, as of 2000/01, casemix payments are presented as a single payment rate with allowances for rural areas and differential claw-backs for different levels of under performance.

The payment unit is the Weighted Inlier Equivalent Separation (WIES). The WIES value for a separation is derived by converting each separation into an "inlier equivalent" and multiplying that by a cost weight. Most separations are classed as inliers (i.e. their length of stay falls between lower and upper trim points). Separations that are outliers (i.e. their length of stay falls outside the lower and upper trim points) are converted into inlier equivalents (see outlier section).

The cost weights and length of stay trim points are updated annually which, in turn, alters the WIES value for a given length of stay in a particular DRG. The WIES version used for payments in 2000/01 is WIES8.

Outliers

Even though the development process for DRGs is designed to minimise within DRG variation in resource use, including length of stay, some variation in length of stay is expected with any particular DRG due to unexpected complications or other factors not necessarily related to the procedure. Casemix funding systems are designed to place incentives on hospitals to manage the care of "normal" patients. The funding system typically provides adjustments for "abnormal" cases. In the Victorian funding system "abnormal" cases are defined by variations in length of stay with additional payment for cases with exceptionally long lengths of stay and reduced payment for cases with a very short stay. Generally, Victoria adopts a "L3H3" policy for determining abnormal lengths of stay: inlier cases are those with a length of stay within "trim points" set as one third (low trim point) and three times (high trim point) the average length of stay for the DRG. Cases with lengths of stay below or above the trim points are termed low or high stay outliers respectively.

The additional payment per diem for high outliers in any particular DRG is based on the WIES8 cost weight, excluding the costs associated with operating theatres and prostheses. An outlier is converted to an 'inlier equivalent' by adding a per diem payment for high outlier days (i.e. days of stay above the high boundary point) to the inlier payment. The per diem payment is generally set as a discounted payment on the average per diem payment for an outlier. For most patients (patients with mechanical ventilation and certain other high cost patients are exceptions), the additional payment to convert to an inlier equivalent is equal to the number of days above the high boundary point divided by the inlier average length of stay all multiplied by the discount factor. The discount is 0.8 for medical cases and 0.7 for surgical cases. These corrections compensate for the less intensive treatment anticipated in the latter stages of an admission, particularly for surgical separations. Specialist separations where the intensity of treatment is constant do not attract this adjustment. A final adjustment for high outlier weight payments may be made to distinguish rural and urban hospitals. The adjustment currently limits the range of additional per diem payments to between $213 and $810 per day.

The payment for low stay outliers varies by DRG. For some DRGs designated 'same day DRGs', same day low outliers are paid according to a "same day weight" (based on estimated costs for same day cases, not a formula related to the inlier weight), and other low outlier cases are paid according to the low outlier *per diem* weight described above. For other DRGs, if the low boundary point is one day, a same day low stay outlier is paid half of the multi-day inlier weight. If the low boundary point is more than one day, the low stay per diem payment

is half of the multi-day inlier weight divided by the low boundary point.

Weight setting

Cost weights are set on an annual basis using a range of up to twenty hospitals that are able to provide patient level cost data from clinical costing systems (see Jackson 2001). Data for a financial year (year 0) are compiled and analysed over the subsequent six-nine month period (year 1) and used for relative weights for funding policy applying in the following year (year 2) This process results in an inherent lag of around two years between the cost patterns of treated patients being used for payment purposes. This may lead to anomalies where there is rapid technological change. The contract to conduct the cost weight study is tendered annually. Cost relativities arising from the data analysis may be adjusted by casemix panels from relevant clinical services areas.

Capping

Hospital inpatient funding is capped by setting WIES targets. Each hospital is allocated a quantum of WIES known as Target A (Table 13). The hospital receives full funding for inpatient activity up to the level of Target A and funding at the marginal rate up to WIES Target B (Table 13). Target B has been introduced in recognition of the difficulty experienced by hospitals in precisely predicting the number and type of separations that will be provided in any given period. Target B is set at five per cent of the total WIES allocation for metropolitan hospitals and three per cent for rural hospitals.

DVA patients are not included in the WIES8 targets for hospitals and health services. Hence, payments for these patients are effectively uncapped. DVA funded separations attract a premium of approximately $50 more than the payment for Target A WIES8 separations. The premium price paid by DVA for public hospital services and the uncapped nature of the number of services provided has made DVA patients an attractive option for health service revenue raising.

Table 13: Total metropolitan and rural WIES8 targets for Victorian public hospitals, 2000/01 (Department of Human Services 2000).

	Target A*	Target B*	DVA	Total
Metropolitan Providers	509,890	26,639	17,009	553,538
Rural Providers	210,731	7,239	13,917	231,887
Total	**720,621**	**33,878**	**30,926**	**785,425**

* Excludes DVA targets

Source: Department of Human Services (2000a) (Section B p. 5 modified from Table 5 p. 25)

Target A payments vary for different hospitals with smaller hospitals attracting a higher base rate implicitly recognising economies of scale, albeit at a very low level. The payment rate for smaller rural hospitals only exceeds the payment to equivalent larger rural hospitals by about 1.5 per cent. WIES8 payments for private patients in public hospitals are between $408 and $411 below that for public patients (Table 14). The adjustment accounts for private patient payments made by individuals and Medicare for medical, pathology and radiology services that would otherwise be funded by the state through WIES8 payments.

Table 14: Inpatient WIES8 payment rates by hospital type and target grouping, Victoria, 2000/01.

WIES target	All Hospitals $	Major providers $	Rural group B (large) $	Rural group B (small) and C $	Rural group D and E $
Target A - Public		2,240	2,254	2,287	2,317
Target A - Private		1,832	1,846	1,878	1,906
Target B - Public	1,750				
Target B - Private	1,431				
DVA per WIES8		2,294	2,311	2,337	2,367
Rural Adjustment*		Nil	14	47	77

* Rural adjustment for public hospital services

Source: Department of Human Services (2000a).

Recall adjustment for under performance

Hospitals are expected to achieve their Target A activity level and are funded for that level. Because hospital funding structures involve a significant level of fixed cost, the financial consequences of failure to achieve Target A levels have been mitigated. Where hospitals and health services fail to meet WIES Target A, monies are recalled at a reduced rate up to five per cent below the target after which monies are recalled at the standard Target A rate (Table 15) (Department of Human Services 2000a).

Table 15: Recall adjustment rates, Victorian hospitals 2000/01

	Recall adjustment	
WIES activity	Metropolitan health services	Rural hospitals
0 - 2% below target	50% of Target B Rate	50% of Target B Rate
2 - 3% below target	80% of Target B Rate	80% of Target B Rate
3 - 5% below target	100% of Target B Rate	80% of Target A Rate
>5% below target	100% of Target A Rate	100% of Target A Rate

Source: Department of Human Services (2000a). (Section A p. 27).

The number of day procedures has increased significantly due to improvements in efficiency and technology whereby previously admitted patients can now be treated as day cases. However, there has also been a marked increase in the number of day cases over and above this efficiency increase. The number of day case separations has consequently been capped at 6.5 per cent of Target A separations, as an aggregate for Metropolitan Health Services or as a direct proportion for rural hospitals. DRGs that contribute to the 6.5 per cent cap exclude separations associated with chemotherapy, radiotherapy and other oncological treatments, male sterilisation, transfers and deaths (Department of Human Services 2000a)

Comparison of payment level of two representative DRGs (vaginal delivery and appendicectomy)

Vaginal delivery without complications and appendicectomy without complications are two procedures with similar ALOS and L3H3 boundaries (Table 16). Although cost weights are primarily determined by length of stay, there is a difference of more than $500 between the WIES8 payment for these two procedures. The

increased cost of operating theatres over delivery suites, the increased cost of caring for a post appendicectomy patient in comparison with a new mother or increased pharmacy costs associated with appendicectomy are possible explanations for the substantial difference in payment.

Table 16: Average length of stay, low and high outlier boundaries, and WIES8 payments per separation for public and private Vaginal delivery and appendicectomy patients accommodated in Victorian hospitals, 2000/01

			Boundary points (days)		WIES8 payment per separation	
VICDRG	AN-DRG Version 4.1	ALOS	L3	H3	Public patient	Private patient
060D	Vaginal delivery without complicating diagnosis	3.1	1	10	$1,654	$1,353
G07B	Appendectomy without complicated principal diagnosis	3.0	0	9	$2,400	$1,963

Source: Department of Human Services (2000a) (Section A chapter 14); Australian Institute of Health and Welfare (2000b).

Inpatient funding adjustments

A rural/isolated payment for each WIES8 is made in addition to the rural adjustment included within the higher WIES8 payment made to non-metropolitan hospitals. This additional payment aims to compensate for the additional costs incurred for inter-hospital ambulance transfers to metropolitan hospitals. The payment of $15 for rural hospitals and $36 for isolated hospitals is added to all non-metropolitan WIES8 payments.

Patients who require critical care services may attract an additional mechanical ventilation payment at a per diem rate. The payment is not included for cases where mechanical ventilation is a routine component of care (i.e. included in the DRG definition) and is only paid for separations involving more than 36 hours of ventilation in a recognised intensive care unit. The current payment is set at 0.7729 WIES8 (around $1,731) per diem.

An adjustment of 10 per cent is added to the WIES8 payment for separations involving Aboriginal and Torres Strait Islander patients reflecting increased costs associated with the inpatient treatment of Aboriginal peoples (Department of Health and Family Services 1997; Nichol et al. 1999)

New technology enables the treatment of many conditions for which treatment was not previously available. Although the costs of new technology are incorporated into cost weights, compensation is required for clinical services which adopt new technology and practices during the period (usually two years) prior to their incorporation into cost weights. The New Technology/Clinical Practice Program provides $13.5 million for interim funding prior to the incorporation of new techniques into cost weights. This is distributed annually as grants of at least $20,000 for individual projects.

DRG coding audits

Audits of the Victorian Admitted Episode Dataset (VAED) are conducted on an annual basis. Approximately one sixth of Victorian hospitals are audited annually involving the review of around 100 separations per hospital. Audits have, to date, demonstrated that separations have generally been accurately allocated to the appropriate DRG. Hospitals have been targeted for additional auditing when a 15 per cent variation in AN-DRG allocation or an increase in WIES of >2 per cent are detected. The subsequent auditing cost may be borne by the hospital. Where an audit detects anomalies that increase the allocation of WIES the Department of Human Services may adjust variable throughput payments to rectify the anomaly. Where consistent anomalies are detected on subsequent audits the Department may choose to suspend a hospitals variable throughput payments (e.g. target B) until all of the anomalies are resolved (Department of Human Services 2000a)

Non-admitted patient funding

Outpatients

Funding of specialist outpatient services for non-admitted patients in metropolitan hospitals, Ballarat Heath Services and the Bendigo Health Care Group is through the Victorian Ambulatory Classification System (VACS). Outpatient services in other hospitals are funded on a negotiated or historical basis.

The VACS has fixed and variable components. The fixed component is a base grant to assist with provision of the service as well as teaching and training which is acknowledged as an intrinsic function of outpatient services. Base grants for service provision were previously based on 13 per cent of the historical outpatient funding allocation. In 2000/01 base grants range from $0.8M to $5.4M. The VACS Teaching Grant is set at 8 per cent of the outpatients budget for "Group A" hospitals and 4 per cent for "Group B" hospitals providing $0.25M to $3.4M for individual health services.

The number of specialist consultations (encounters) in outpatient and emergency departments determines the variable component of VACS funding (Department of Human Services 1998) The VACS system is based on weights for 45 clinical specialty groupings (or clinics) rather than assigning weights based on individual diagnoses or procedures. Weights are adjusted following the annual cost weight studies using a three year rolling mean to calculate the cost weight for any given year. VACS weights range from 0.522 for an orthopaedic application encounter to 2.095 for a neurological disability encounter with general surgical and general medical encounter cost weights being 0.986 and 1.104 respectively. Costs for all pathology, radiology and pharmacy services that are provided by the hospital in a 30 day window before or after the encounter are bundled into the VACS encounter payment. A payment of $114 is made for each VACS weighted encounter within the 45 VACS groups. An unweighted payment of $42 is provided for each occasion of allied health professional service

VACS expenditure is limited through a cap on the number and type of clinics that can be conducted by a health service or hospital. A clinical panel has been established to monitor VACS. In addition to reviewing weights, the panel assigns clinics to VACS categories avoiding hospital-specific idiosyncratic naming policies (Jackson and Sevil 1997). Clinic schedules for each provider are established annually by the VACS Clinical Panel who must be informed of any changes in clinic schedules. Hence, new clinics established in response to need do not attract funding unless the clinical panel approves them.

The number of outpatient encounters for each health service is capped by the number of VACS weighted encounters that will be funded (Table 17). The health service, rather than the Department of Human Services, has control over the number of encounters allocated to each discipline.

Table 17: Target number of VACS weighted encounters and allied health occasions of service for the Metropolitan Health Services, Ballarat Health Services and the Bendigo Health group 2000/01

VACS weighted encounters	1,072,488
Allied health occasions of service	67,124
DVA VACS weighted encounters	23,947
DVA Allied health occasions of service	12,973

Source: Department of Human Services (2000a). (Section A: Chapter 18).

Emergency

Funding for hospital emergency services follows recommendations of a 1997 review that reported to the DHS that significant cost drivers for hospital emergency services included availability costs (such as wages for the provision of a 24 hour service, capital and equipment costs) as well as variable costs associated with each patient treated (Duckett and Jackson 2001). Emergency department utilisation is dependent on an unpredictable demand that is beyond the control of the health service yet is required to be available 24 hours per day. The

funding system for hospital emergency services thus includes a significant fixed grant determined by categorising the departments and linking each category to a funding level (Table 18).

Table 18: Non-Admitted Emergency Services Categorisation and Notional Funding Levels, Victorian Public hospitals, 2000/01

Category	Funding ($000)	Hospitals
E1	8,897.9	Alfred, Austin and Repatriation Medical Centre, Monash Medical Centre, Royal Melbourne
E2	5,539.0	Box Hill, Dandenong, Frankston , Geelong, Northern, St Vincent's, Western (Footscray)
E3	3,870.7	Ballarat, Bendigo, Maroondah
E4	2,224.3	Angliss, Goulburn Valley, Latrobe Regional
E5	1,668.4	Mildura, Wangaratta, Warrnambool
E6	1,112.3	Central Wellington, Hamilton, Sandringham, Swan Hill, West Gippsland, Williamstown, Wodonga
E7	556.1	Wimmera, Echuca, Bairnsdale
E9	Specialist	Royal Children's ($4,448.9), Sunshine ($3,114.2), Royal Victorian Eye & Ear ($2,224.3), Royal Women's ($1,112.3), Mercy - East Melbourne ($778.7)

Source: Department of Human Services, (2000a). (Section A: Chapter 18).

In addition to the fixed payment, hospitals attract funding for hospital emergency services through the ordinary DRG payment for hospital inpatient care.

Funding for sub-acute and non-acute care

Sub-acute and non-acute care facilities provide, geriatric evaluation and nursing home type services, as well as inpatient and outpatient rehabilitation services. Inpatient rehabilitation services are funded under separate programs for larger (20 hours or more) and smaller units. A single rehabilitation centre may have units funded in both streams.

Designated inpatient rehabilitation services with 20 beds or more are funded using a cost-weight system under "VicRehab". Separations as level 1 involve rehabilitation immediately following the initial acute management of spinal cord injury, head injury, and amputation. All other separations are funded at level 2 using Casemix Rehabilitation and Funding Tree (CRAFT) weights with a weighted unit being notionally funded at $8,885 for 2000/01. Inlier weights range from 0.4055 to 1.7822 and are generally proportional to the ALOS (Table 19).

Table 19: Rehabilitation cost weights applicable to VicRehab Units, 2000-01

CRAFT Categories	ALOS	Same day weight	Short stay weight	Inlier weight
Short stay (overnight)	2.02	n.a.	0.0957	n.a.
Stroke/Neuro LB	40.37	0.0356	0.0957	1.7822
Stroke/Neuro HB	22.66	0.0289	0.0957	0.7027
Ortho Fracture LB	33.07	0.0327	0.0957	1.0734
Ortho Fracture HB	23.13	0.0298	0.0957	0.6803
Ortho Replace Hip/Knee LB	22.57	0.0271	0.0957	0.6574
Ortho Replace Hip/Knee MB	17.35	0.0312	0.0957	0.4454
Ortho Replace Hip/Knee HB	14.67	0.0315	0.0957	0.4055
Other Ortho LB	32.93	0.0312	0.0957	1.1145
Other Ortho HB	23.94	0.0260	0.0957	0.7065
Cardio/Pulmonary	21.49	0.0386	0.0957	1.0482
Other LB	27.64	0.0394	0.0957	1.2370
Other HB	20.55	0.0424	0.0957	0.7274

Source: Department of Human Services (2000a).

Inpatient rehabilitation facilities with less than 20 beds, geriatric evaluation and respite services are funded at a two tiered per diem rate with a cap for non-DVA separations (Table 20). The level one rate is only applicable to separations where rehabilitation immediately follows the initial acute management of spinal cord injury, head injury or amputation. All other separations are funded at the level two bed day rate.

Table 20: Sub-Acute bed-day payment rates for non-VicRehab agencies, 2000-01

Stream of care	Per diem rate 2000/01
Rehabilitation Level 1	$406
Rehabilitation Level 2	$338
Geriatric evaluation and management	$338
Geriatric respite/nursing home type	$133

Source: Department of Human Services, June (2000a) (Section A, p. 57, Table 7).

Community Rehabilitation Centres (non-inpatient services) have been allocated $26.2 million funding for 2000/01. Agencies are funded for treatment day equivalents in three categories that depend on the intensity and complexity of treatment provided. Treatment day costs range between $135 and $363. Sub-acute specialist clinics providing falls and pain management treatment are block funded while the continence clinics receive $500 per patient irrespective of the number or type of treatments.

Post-acute care

The Post-Acute Care (PAC) Program provides a service after discharge to assist in transition from acute to community care for non-psychiatric public hospital patients. Patients are assessed using a "risk screening tool" that attempts to identify people who may require additional help on discharge to facilitate their successful

discharge. The PAC program provides community care services that may be required by the patient upon returning home post-acute care. Some of the services that are provided include home nursing, personal care, childcare, allied health services and home help. The PAC Program aims to provide additional services that may be required on the short term rather than substitute for existing services that may be required long-term. The program has a budget of $13.5 million that is jointly funded by the Aged, Community and Mental Health and the Acute Health Divisions.

Hospital-in-the-home

Patients receiving the equivalent of hospital inpatient services in a home or residential care setting (such as a nursing home) can be classed as admitted patients under the Hospital in the Home (HITH) program. These patients receive WIES payments as other inpatients and count toward WIES targets.

There are also special HITH supplementary payments to encourage this development and support the management infrastructure for HITH ($2.75M in 2000/01). This funding is divided in proportion to the number of non-same day inpatient days (excluding chemotherapy) provided by a health service or hospital in 1999/2000. Incentives totaling $1.25M are available for hospitals that provide a higher proportion of HITH treatment days, as a proportion of inpatient days, than the state averages (i.e. the proportion of HITH days that are substituted for inpatient days). A further $1 million is available for HITH providers to work collaboratively across service providers to improve the quality and accessibility of HITH.

Mental health services

The total Victorian mental health budget is estimated at $340M for 1999/2000 (Table 21) and involves an estimated 47,223 registered clients for whom there were 1,615,685 registered contacts.

Table 21: Victorian Mental Health budget by service component, 1999/2000

Service component	Budget ($M)
Acute and sub-Acute	283.7
Community Care and Support	32.0
Supported Residential Care	11.2
Prevention and Promotion	3.2
Training, Research and Development	5.4
Corporate support	4.0
Mental Health budget	339.4

Source: Department of Human Services (1999).

Victoria has adopted a policy whereby mental health has been incorporated into mainstream public health services and, where possible, de-institutionalised. There were 882 acute mental health beds available in 1999,of these, 73 were available in only two dedicated public psychiatric hospitals in Victoria (see Table 22) (Australian Institute of Health and Welfare 1999)

Table 22: Total available Victorian mental health beds, 1999

	Available beds
Acute inpatient treatment capacity	882
Sub-acute treatment capacity	430
Psychogeriatric supported residential care	567

Source: Department of Human Services (1999).

The Department of Aged Care and Mental Health purchases acute and sub-acute mental health services on a per diem basis with the published rates set out in Table 23. These rates may be varied by negotiation between the Department of Human Services (either the regional office or the central Mental Health Branch) and the hospital.

Table 23: Payment *per diem* for Victorian mental health inpatients, October 1999

Target group	Accommodation type	Bed day payment $
Child and adolescent services	Acute	378
Adult services	Acute	311
	Secure/extended care	298
	Community care	203
Aged persons services	Acute	277
	Secure/extended care	240

Source: Department of Human Services (1999).

Essentially, psychiatric inpatient facilities are funded on a 'beds available' basis, (e.g. a 25-bed unit will be funded 25 x 365 days x desired occupancy rate x per diem), with little regard for the mix of patients, and differences in treatment styles (e.g. differences in length of stay).

Specified grants

Specified Grants are provided for services that have a highly specialised function, are not easily funded on an inpatient or outpatient casemix basis and are provided at one or two locations (e.g. transplant, cochlear implant and genetic services). Specified grants provided up to $4.2M for individual Metropolitan Health Services in 1999/2000.

Purchasing arrangements with the private sector

There is now one privately operated hospital which contracts with the Department of Human Services to provide a range of public hospital inpatient services (Mildura Hospital). In addition, critical care services are purchased from a number of private hospitals when critical care beds in public hospitals are not available.

Non-admitted public hospital services provided by the private sector are usually limited to "not for profit" facilities funded under the Bush Nursing Hospital Program. Facilities provided include emergency stabilisation/urgent care to patients that attracts quarterly funding for activity based on the mean number of services provided over the previous three years. Each episode of emergency stabilisation attracts fifty dollars for up to the first six hours and fifteen dollars for each additional six hours thereafter. Emergency obstetric and inpatient services for eligible public patients attract payments under case-mix funding. Payments amounted to around $250,000 in 1999/2000.

Teaching and research

Postgraduate teaching

The training and development of health professionals is inextricably linked to the clinical care of patients. Post-graduate doctors, for example, require supervised clinical practice and concurrently provide a source of labour for health services and hospitals. In recognition of these ongoing education requirements, a Training and Development Grant is paid to assist with the funding of training positions within hospitals (Table 24).

Table 24: Reimbursements provided under the Training and Development Grant Scheme 2000/01

Training position	Funding per position
Hospital Medical Officer	34,766
Accredited Registrar	36,214
Graduate nurse program	12,626
Post-graduate midwifery nurse programs	9,995
Post-graduate nursing programs	11,573

Source: Department of Human Services, (2000a).

Graduate Nurse Programs are provided to facilitate the transition of graduate nurses into patient care environments. Programs are one year full-time in duration and include tutorial work with nurse educators and episodes of continuing education. Potential graduate nurse program participants must be recruited through the "Nursing Computer Match Service" in order to attract funding. The conditions under which these programs must be conducted are outlined in Graduate Nurse Program Guidelines (Department of Human Services 1997). Participants are not permitted to contribute to the funding of the program. The number of available positions is capped by the Department of Human Services.

Student midwives studying at tertiary institutions are required to undertake clinical experience during the course of their post-graduate education. This attracts supplementary funding of $3,000 per student for hospitals and health services that provide at least 50 days clinical experience during the academic year.

Post-graduate Nursing programs for many specialties are conducted within hospital settings. Courses include nursing studies in midwifery, intensive care, coronary care, emergency care, neonatal intensive care, paediatrics, peri-operative care, plastic surgery, neuroscience, ear/nose and throat, oncology, palliative care, infection control, rehabilitation and aged care amongst others. Most courses are conducted in collaboration with a university and hospitals where the postgraduate students work a minimum of 24 hours per week and a dedicated nurse educator is provided for the course. The programs are further supported by a $250 grant to compensate nurses employed at rural hospitals who are required to travel a 'significant distance' to other facilities for clinical experience.

The training and development grants also provide monies for acute public hospitals in recognition of the increased level of supervision required for allied health professionals in their first post-graduate year.

In addition to funding for designated training positions, the Training and Development Grant provides part funding for all first year allied health graduate positions ($14,428 to $24,701 per year). The grants also provide $42,328 for each clinical academic position.

Undergraduate teaching

Training and development grant payments are made to Victorian acute public hospitals to assist with the funding of undergraduate teaching within the institution for nursing and medical undergraduates. This is based as a proportion of the amount of other Training and Development Grants. For Allied Health, one million dollars was allocated in 2000-01 in proportion to the number of days undergraduates spent in hospitals during

the previous year. The program specifically covers students undertaking degrees in: audiology, dietetics, health information management, orthoptics, occupational therapy, pharmacy, physiotherapy, podiatry, prosthetics, radiation science, social work and speech therapy. Universities providing these programs submit data on the distribution of student placements.

The Industry Based Work Program provides a subsidy under the training and development grants scheme for institutions employing undergraduate medical biophysics trainees and medical laboratory scientists. The grants are for $13,853 and $11,719 respectively.

Research and development

The research and development component of the Training and Development Grant is provided to hospitals in two tiers. Large hospitals receive $1,451,800 and smaller hospitals $484,000. These monies are provided in recognition of the added costs associated with undertaking research and development, particularly in hospitals at which academic units are based. These monies notionally contribute to the funding of Medical Research and Institutional Ethics Committees, specific research clinics and inpatient bed facilities, provision of areas in which research can be undertaken including laboratories (with the associated furnishing and cleaning costs) and the maintenance of equipment that is shared between clinical and research services. These monies also contribute to the additional costs of medical record storage, media relations support, supply infrastructure, library services and administrative support including IT and communication (E.G. internal mail, telephone, fax and network facilities) and Human Resource services including payroll, recruitment assistance and grant administration.

In addition, the Medical Research Infrastructure Funding Program provides $11million to support the infrastructure required to administer 21 medical research institutes associated with Victorian hospitals (e.g. The Walter and Eliza Hall Institute, The Baker Institute) (Department of Human Services 2000a).

Capital

Capital charges incorporate interest payments and other costs associated with borrowings made by the state to fund capital equipment and buildings. A $205.4M capital charge was passed on to the Department of Human Services by Treasury in 2000/01. Capital charges were generally not passed on to individual health services.

Privately built owned and operated hospitals at Latrobe and Mildura provide public hospital services to patients under contract to the state government. These hospitals receive an Allocated Facilities Charge of ~$4.5M per annum at Latrobe Regional Hospital. The Allocated Fund Charge for Mildura Hospital has not been established.

Price updating (including salary adjustments)

The policy and funding guidelines 2000/01 specifically address the financial support that will be given to hospitals during and after industrial action in terms of the throughput funding. The policy is less specific on whether price updating will be funded by the department or by the hospitals themselves in the event of an increase in award salaries. Historically, increases in awards lead to specific additional payments to agencies based on the expected costs of the award change given the staffing mix of the agency. Costs of award increases are incorporated into WIES payments in subsequent years.

Performance bonuses

Hospitals are rewarded for efficiency by earning bonuses through the Hospital Access Program (HAP). In 2000/01 $30M has been made available for elective surgery ($13M), critical care ($3.5M) and emergency ($13M) incentives under the HAP (Department of Human Services 2000c). Service providers are allocated a bonus that is then reduced each time a target goal is not met.

Waiting list times for elective admissions impact upon bonus funding for both Victorian hospitals and health services through the HAP. Of the $13M bonuses allocated to the program, half is divided between hospitals participating in the Elective Surgery Information System (ESIS) in proportion to their average WIES and the number of patients on their waiting list (Department of Human Services 2000a) and half is distributed at a reduced rate to the remaining hospitals in proportion to their elective 1999/2000 WIES7. Payments are not tied to targets for hospitals not participating in ESIS.

Twenty-four hospitals and healthcare groups participate in ESIS and are eligible for elective surgery bonus funding. Metropolitan Health Services are eligible for $11M with individual services being eligible for up to $1.8M. Rural hospitals are eligible for the remaining $2M. Indicators, targets and bonus reductions for elective surgery for 2000/01 are included in Table 25. The main reduction liability is in category one elective patients where a wait of 30 days or more for five patients results in complete abrogation of the elective surgery bonus. Multiple elective surgery postponements are also an indicator, however a target and schedule for bonus reduction has not been set for 2000/01.

Table 25: Schedule of indicators, targets and bonus reductions for elective surgery for Victoria, 2000/01, under the Hospital Access Program.

Indicator Target	Bonus Reductions	
Proportion of category 1 elective surgery patients treated within 30 days	100%	20% per patient
Proportion of category 2 elective surgery patients treated within 90 days	75%	2% per % point under
Average waiting time of category 2 elective surgery patients	85 days	2% per % point over (capped at 20%)
Average waiting time of category 3 elective surgery patients	300 days	1% per % point over
Growth in elective surgery waiting list	No growth from Jan 1 2000	1% per % point over

Source: Department of Human Services (2000a).

The Hospital Access Program makes $3.5M available to the 13 metropolitan hospitals providing high level critical care services in proportion to the projected total WIES7 for 1999/2000. Bonuses are reduced by six per cent for every patient above the target proportion that is transferred because critical care is unavailable. Although the number of available critical care beds is being monitored as an indicator, it is not linked to a bonus reduction.

The Hospital Access Program makes $13M available in bonuses to 19 emergency departments. Bonus reductions apply when emergency departments service provision targets are not met (Table 26). The focus of bonus reductions is on immediate attention to Category 1 emergency patients. There are also significant disincentives for delay in attending to Category 2 patients or going on to ambulance bypass. Although there are targets for Category 4 and 5 patients of 60 per cent being seen "on-time" they are not linked to bonus reductions.

Table 26: Schedule of indicators, targets and bonus reductions for Victorian emergency departments, 2000/01, under the Hospital Access Program

Indicator	Target	Bonus Reductions
Proportion of triage category 1 emergency patients seen immediately	100%	20% per patient
Proportion of triage category 2 emergency patients seen within 10 minutes	80%	5% per % point under
Proportion of triage category 3 emergency patients treated on time	75%	1% per % point under
Proportion of triage category 4 emergency patients treated on time	60%	No reduction
Proportion of triage category 5 emergency patients treated on time	60%	No reduction
Number of occasions of ambulance bypass	5 per quarter	2% per bypass
Proportion of patients admitted to ward in less than 12 hours	95%	7% per % point under*

* Bonus reduction increases to 10 per cent for each percentage point under 90 per cent

Source: Department of Human Services (2000a). Appendix 3.

Hospitals will be eligible for an accreditation bonus upon receipt of their accreditation operating report or update for 2000/01. Category A and B hospitals will receive $30,000 while all other acute public hospitals will receive $15,000 (Department of Human Services 2000a)

Conclusion

Victoria was the first Australian state to introduce casemix funding. That new funding approach has now been in place for eight financial years. Originally, casemix funding only applied to inpatients and incorporated fixed and variable payments and an Additional Throughput Pool to pay for additional activity. Casemix funding as it now applies has evolved substantially since first introduced in 1993. The fixed and variable basis of funding has been replaced by an integrated payment and more certainty has been introduced for volume increases through phasing-in arrangements of additional activity over the target volume. Casemix funding now applies across a range of areas including sub-acute and non-inpatient activity.

There has also been a significant increase in the number of small sub-programs each with specific funding on a submission, for example, quality enhancement grants, hospital-in-the-home grants, and so on. The more submission-driven funding is incorporated in the funding base of hospitals, the more the underlying principles of casemix funding are undermined.

The Victorian casemix funding arrangements are probably now the most elaborated of any in Australia and have shown that they are politically resilient, in the sense that casemix funding survived the change of government from the Kennett Liberal Government to the Bracks Labor Government. This resilience is in part because the casemix arrangements are technically sound and are well-accepted within the Victorian health system.

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