

## HEALTH

---

### COMMONWEALTH GOVERNMENT HEALTH SERVICES

#### **Commonwealth Department of Health**

The Commonwealth Department of Health implements government policies and administers Commonwealth legislation in health and health-related matters. It plans, develops, and co-ordinates approved national health programmes and it is responsible for advice on health matters to Australia's external territories.

The Commonwealth Minister for Health is responsible for the administration of the Department and three statutory authorities – the Capital Territory Health Commission, the Commonwealth Serum Laboratories Commission, and the Health Insurance Commission. In addition, the Commonwealth controls the Commonwealth Institute of Health.

The Department is organised on a geographic basis with its Central Office located in Canberra and a Regional Office in each State and the Northern Territory. The Victorian Regional Office of the Department is responsible for administering a wide range of the Department's programmes, which include the following:

- (1) human quarantine programmes which aim to prevent the entry and spread of diseases;
- (2) provision of medical examinations and assessments for Commonwealth Government employment and for other purposes such as invalid pensions and the handicapped children's allowance;
- (3) administration of the provisions of the National Health Act relating to the Pharmaceutical Benefits Scheme, including processing of chemists' claims and pharmaceutical inspection and liaison;
- (4) supervision of the operation of the Commonwealth Pathology Laboratory at Bendigo which provides a diagnostic pathology service to hospitals and medical practitioners;
- (5) supervision of the operation of the National Acoustic Laboratories' hearing centres in the provision and servicing of hearing aids;
- (6) administration of the provisions of the Isolated Patients' Travel and Accommodation Assistance Scheme;
- (7) undertaking the registration, inspection, and control of private hospitals and;
- (8) administration of health insurance arrangements within Victoria, including control, supervision and financial monitoring of registered health benefits organisations.

In Victoria, the Department is also responsible for the operations of the Australian Radiation Laboratory, the Medical Devices and Dental Products Laboratory, and the National Biological Standards Laboratory.

#### *Community Health Programme*

The Community Health Programme was introduced in 1973-74 to encourage the provision of comprehensive and integrated community-based health care and support services. Its objectives emphasise prevention, education, rehabilitation, and domiciliary services as an alternative to institutional care. Although by no means all community health services are supported under this one programme, it is seen as a major source of support for new initiatives in community health services. There is a clear preference for proposals in which the community itself has been involved in the planning of programmes, together with the relevant State health authorities.

This programme promotes community health by allocating funds to State and Territory health authorities for salaried/sessional medical and associated health services; and by providing funds directly to organisations conducting projects for community-based health related services which are national in character.

The grants to the State and Territory health authorities were introduced as part of Medicare on 1 February 1984. In 1985-86 these grants are estimated to be \$18.7m. In addition to the Medicare grants,

the Commonwealth also provides funds to the States and the Northern Territory for community health services through a component of the Identified Health Grants. As these grants are part of the General Revenue Grants, their use and distribution within each State and the Northern Territory is determined by the recipient State/Territory.

In 1985-86, \$11.8m will be provided for health related programmes and services of national significance and to maintain the national secretariats which co-ordinate voluntary services in the health field.

**COMMUNITY HEALTH PROGRAMME,  
EXPENDITURE, AUSTRALIA  
(\$m)**

Item	1983-84	1984-85	1985-86(a)
Medicare grants for community health	7.3	18.0	18.7
National projects	9.2	11.0	11.8
<b>Total</b>	<b>16.5</b>	<b>29.0</b>	<b>30.5</b>

(a) Estimated.

*Health Care Services-Planning Research and Development Grants*

The purpose of these grants is to improve through research, demonstration, and evaluation, the administration, planning, and delivery of health care and to study the quality, efficiency, and effectiveness of health and aged care services. An amount of \$1.6m was made available in 1984-85 in grants for all States.

*Health Insurance Commission*

From 1 November 1978, the role of the Health Insurance Commission was reduced to that of a private registered organisation (while still a statutory authority) and its former functions were taken over by the Commonwealth Department of Health. From 1 February 1984, the Health Insurance Commission has been charged with responsibility for the operation of Medicare which is funded through the Department of Health.

**VICTORIAN GOVERNMENT HEALTH SERVICES**

**Health Department Victoria**

*Objectives*

The primary role of the Department is to protect and improve the health and well-being of Victoria's population. To achieve this, the primary objectives of the Department are:

- (1) to promote the identification of the factors affecting the community's health and the development of general strategies and programmes to improve the health of the community where possible;
- (2) to protect the community against major environmental, microbiological, chemical, radiological, and physical agents of disease and to promote behavioural and environmental changes conducive to health;
- (3) to ensure that health services of an appropriate standard and mix are provided on an equitable and accessible basis to meet the needs of the population, within the context of government policies and the optimal use of available resources;
- (4) to promote staff consultation and participation in the health sector; and
- (5) to promote community participation in the direction and management of health services.

The Department's primary functions are concerned with the management of the activities of the health sector. In 1985-86, these include: acute hospital services; disease prevention and health promotion; community based health services; long-term institutional care; and psychiatric services.

In 1985-86, community based services and services to intellectually disabled persons were transferred to the Department of Community Services.

In some ways, the Department co-ordinates health services through a variety of separately incorporated agencies. Public hospitals, nursing homes, and most community health centres are separate legal entities, administered by their own committees of management. Local government, private, voluntary, and charitable organisations are also active in the provision of health services. Other health services, notably those provided for persons with psychiatric disorders or disabilities and services for intellectually disabled persons, are State-managed.

The Commission is primarily responsible for ensuring that the objectives of individual agencies are consistent with State goals, plus the development and implementation of strategies, and the evaluation and monitoring of the performance of individual agencies in light of State policies and objectives.

Health services over the past decade have altered with the introduction of sophisticated technology in certain areas but are still based essentially on human skills, judgement, and care. Approximately 11,500 public servants and 80,000 non-public servants are employed in publicly provided health services, and their salary costs constitute approximately three-quarters of all recurrent expenditure. The recruitment and maintenance of a skilled and satisfied labour force is one of the major objectives of the Department. To this end in 1984-85, staff have been consulted on key policy and programme initiatives and it is a key objective for 1985-86 that industrial democratic principles be adhered to within the health sector.

#### *Functions*

To pursue its objectives, to implement the policies of the Victorian Government, and to discharge the obligations under the Acts for which the Minister for Health and the Department are responsible, the Department undertakes a diverse range of functions that can be briefly summarised as follows:

- (1) assessing the health needs of the Victorian population and planning the best use of existing health services, including the development where practicable of new and/or alternative forms of care;
- (2) developing Victoria's health policies;
- (3) ensuring community participation and representation in the health sector;
- (4) promoting the development of adequate information and monitoring systems to assess the health of the community;
- (5) promoting general health, medical, and clinical research into the identification of factors affecting the health of the community and the evaluation of possible solutions;
- (6) planning and developing a comprehensive range of services and programmes on an equitable and accessible basis according to need;
- (7) ensuring the provision of adequate and appropriate services and resources;
- (8) promoting and assisting in the supply and training of staff to be employed in the provision of health services;
- (9) monitoring the standard of all health services in Victoria;
- (10) monitoring the general performance, efficiency, and effectiveness of publicly-funded health services;
- (11) regulating the supply and type of hospital and other health services;
- (12) regulating to prevent major environmental, microbiological, chemical, and radiological agents of disease;
- (13) providing services to minimise the incidence of communicable diseases; and
- (14) ensuring equal employment opportunities for all employees, facilitating satisfactory working conditions, and promoting sound employee relations.

Further information concerning the Health Department can be found in Annual Reports and *Health Service Statistics*, both published annually by the Health Department, Victoria.

### HEALTH INSURANCE IN AUSTRALIA

#### **Medicare benefits**

##### *General features*

A brief historical background to changes in health insurance in Australia since 1946 can be found on pages 625-6 of the *Victorian Year Book* 1985.

Further changes to the health insurance arrangements occurred on 1 February 1984 with the commencement of Medicare, a health insurance scheme based on the principles of universality, equity, simplicity, and ease of access.

The scheme is funded by a one per cent levy on taxable incomes with exemptions from the levy for low income earners and a ceiling for high income earners. The tax rebate formerly paid for basic health insurance contributions ceased from 30 June 1983.

Medicare provides a benefit of eighty-five per cent of the scheduled fee with a maximum gap of \$10 per service to all permanent residents of Australia, which includes visitors staying for more than six months. The same Medicare benefits are payable to Australians while overseas. Patients who have paid \$150 in meeting costs between Medicare benefits and the scheduled fee in a financial year are entitled thereafter in that year to Medicare benefits of 100 per cent of the scheduled fee. Medicare entitlements also include access without direct charge to public hospital accommodation and to

inpatient and outpatient treatment by doctors appointed by the hospital.

Doctors, approved dentists, and participating optometrists are permitted to bulk bill any eligible person. When bulk billing, the practitioner undertakes to accept the relevant Medicare benefit as full payment for the service.

The Commonwealth Department of Health allocates each medical practitioner a unique number called the provider number. Doctors must use their provider number on accounts and receipts to ensure payment of Medicare benefits. Private medical practitioners normally charge for treatment provided on a fee-for-service basis. Each medical service which attracts a medical benefit has a scheduled fee which is set by an independent tribunal. The fees are set for medical benefit payment purposes only and doctors are not compelled to charge them.

The Australian Medical Association (AMA) publishes its own list of medical services and fees which in the opinion of the Association are fair, reasonable, and appropriate for the services listed. While there is some variation between individual items, generally speaking the AMA fees are in excess of the scheduled fees (e.g., GP standard surgery consultation recommended by the AMA is \$18.20, compared with \$14.80 for the scheduled fee).

#### *Specialist recognition*

Since 1970, a feature of the Australian medical benefits arrangements has been the payment of a higher rate of benefit for medical services performed by recognised specialists and consultant physicians. Thus, for medical benefit payment purposes, Specialist Recognition Advisory Committees were established in each State to consider applications for recognition from medical practitioners. At 30 June 1985, there were 2,296 recognised specialists and 1,073 recognised consultant physicians in Victoria.

#### **Pharmaceutical Services Committee of Inquiry**

Under the National Health Act, a Committee of Inquiry has been appointed to inquire into and conduct hearings concerning the supply of pharmaceutical benefits and the provision of pensioner pharmaceutical benefits.

The Pharmaceutical Services Committee of Inquiry consists of four pharmaceutical chemists appointed by the Minister after consultation with official pharmacy organisations.

#### **Health Programme Grants Scheme**

Health programme grants were introduced as part of the Medibank arrangements with effect from 1 July 1975, primarily to provide an alternative source of financing for the payment of medical benefits for non-hospital services by medical practitioners employed on a salaried or sessional basis. It was believed that meeting the cost of these services by means of a grant would result in savings to the Commonwealth Government, as under the then existing arrangements the Government would have had to meet under Medibank the rest of the medical benefits for services rendered. The grants were also used to assist organisations in the provision of appropriate health-type services.

Organisations receiving such grants include family planning associations, low vision clinics, Aboriginal medical services, and the Yallourn Medical and Hospital Society.

Since 1 February 1984, organisations in receipt of grants are not permitted to raise a fee for services provided to patients and their operating costs are funded by the Commonwealth Government through the Department of Health on a deficit financed basis.

Commonwealth Government concern about the serious cost escalation being experienced by Australia's health care delivery system has led to the introduction of health programme grants for development projects and associated evaluative research which consider new and different forms of health care, quality assurance processes, and cost containment in health services.

#### **Hospital benefits**

Since September 1981, block grants from the Commonwealth Government have formed the basis for funding of public hospitals; with the introduction of Medicare on 1 February 1984 the Commonwealth has entered into agreements with the States to ensure that all permanent residents of Australia have access, without direct charge, to accommodation and treatment at public hospitals by salaried hospital doctors. This includes both inpatient and outpatient treatment.

If a patient elects to be a private patient (i.e., requests a doctor of his/her choice) in a public hospital, then the responsibility for payment of both the hospital and medical expenses lies with the patient, as for a patient in a private hospital.

Health benefit organisations are permitted to offer private insurance to private patients requiring

cover for shared ward charges in public hospitals (the basic private table) and higher hospital insurance to cover or assist with costs of private hospital accommodation (supplementary tables).

On 1 September 1985 the Commonwealth Government introduced changes to the health scheme providing additional benefits and increased incentives to encourage private insurance. From that date insured patients are automatically classified as private patients on admittance to recognised hospitals, unless they specifically request admission as Medicare patients. Gap insurance was introduced to cover the difference between Medicare benefits and the schedule fee in respect of professional services rendered to inpatients of a hospital or patients of a day hospital facility. Benefits were also introduced for 'same day' patients and day hospital facilities.

For private hospitals, there are three levels of basic private table benefits, based on a three-tier categorisation of hospitals. The basic private table benefits are supplemented by Commonwealth bed day subsidies paid directly to private hospitals on the basis of their category. The Commonwealth bed day subsidy is \$40, \$30, or \$20 per day, depending on the hospital categorisation as 1, 2, or 3. Decisions as to the categorisation of individual hospitals are made on the basis of the size of the hospital and the level of services and facilities provided. Also, through its Reinsurance Account arrangements with the health benefit organisations, the Commonwealth provides special assistance for those basic private table contributors with chronic or other illnesses requiring prolonged hospitalisation. The Commonwealth Government contribution to the Reinsurance arrangements was set at \$20m on 1 February 1984; however this figure was reduced to \$5m in 1985-86.

Basically, both private and public hospitals are for acute patients. Patients accommodated in hospitals may be reclassified as 'nursing home type' patients after a continuous period as an inpatient exceeding thirty-five days, unless a medical practitioner certifies that such a patient is in need of acute care.

All nursing home type patients are charged an uninsurable amount towards the cost of hospital accommodation, currently \$14.10 per day in Victoria.

#### **Isolated Patients Travel and Accommodation Assistance Scheme**

The Isolated Patients Travel and Accommodation Assistance Scheme provides financial help for persons in remote areas of Australia who require specialist medical treatment or services. The Commonwealth Government will help to meet the cost of travel and accommodation for patients who have to travel more than 200 kilometres to the nearest suitable specialist for treatment.

Patients are required to pay the first \$30 of the cost of travel. The Commonwealth Government will pay the balance and up to \$30 a night towards the cost of necessary accommodation. The scheme also provides identical help for a person accompanying the patient when the medical condition of the patient warrants it. If the patient is a child under seventeen years of age, the financial assistance will be given to a parent or other escort, irrespective of the child's condition. There is no means test for the scheme, which commenced on 1 October 1978.

#### **Pharmaceutical benefits**

The National Pharmaceutical Benefits Scheme was introduced in 1950, along with a restricted free list of life-saving and disease-preventing drugs. In 1951, an additional comprehensive range of medicines was provided free to pensioners. The Scheme, considerably expanded in 1960, introduced a patient contribution fee of 50 cents for prescriptions written for the general public. This contribution was increased to \$1.00 in 1971, \$1.50 in 1975, \$2.00 in 1976, \$2.50 in July 1978, \$2.75 in September 1979, \$3.20 in December 1981, \$4.00 from 1 January 1983, and \$5.00 from 1 July 1985. Eligible pensioners and their dependants who hold a valid Pensioner Health Benefits Card and sickness benefits recipients and their dependants holding a valid Health Benefits Card receive pharmaceutical benefit prescriptions free of charge. A patient contribution of \$2 per benefit item was introduced from 1 January 1983 for persons holding Health Care Cards and Social Services and Veterans Affairs' pensioners who are not eligible for a Pensioner Health Benefits or Health Benefits Card, and dependants of these groups.

The drugs and medicinal preparations available as pharmaceutical benefits are determined by the Commonwealth Minister for Health on the advice of the Commonwealth Pharmaceutical Benefits Advisory Committee. Pharmaceutical benefits are supplied by approved pharmaceutical chemists on medical practitioners' prescriptions. In regions with no approved chemist, a medical practitioner may be approved as supplier. An amendment to the National Health Act in May 1981 established the Pharmaceutical Benefits Remuneration Tribunal as the body responsible for determining payments to approved pharmaceutical chemists for the supply of pharmaceutical benefits. Previously approved chemists' fees were set by the Joint Committee on Pharmaceutical Benefits Pricing Arrangements.

### **Optometrical services**

Underpinning the provision of optometrical consultation benefits is a Participating Optometrists Scheme, whereby optometrists, or if applicable, their employees, must undertake to charge consultation fees no higher than those set out in the Schedule to the Commonwealth Health Insurance Act and that consultations will be provided generally at no direct cost to eligible pensioners and their dependants by means of assignment of Commonwealth medical benefits.

Most optometrists in Victoria are participating in the Scheme. At 31 July 1985, 212 undertakings were in effect in respect of 367 practice locations.

Before the introduction of the Participating Optometrists Scheme, optometrists who made their services available to isolated areas recouped the additional costs incurred by raising a surcharge. The current arrangements preclude such additional charges. To ensure that an adequate optometrical service is available in isolated areas, the Commonwealth Government covers the approved costs incurred by making per capita grants directly related to the number of patients seen in these isolated areas. This assistance is in addition to the optometrical consultation benefits.

At 30 June 1985, ten Victorian optometrists were receiving such assistance with the per capita grants ranging from \$2.85 to \$4.90.

### **Medical laboratories**

#### *National Acoustic Laboratories*

The National Acoustic Laboratories hearing centres provide audiological (hearing) tests, ensure specialist medical examinations and, where necessary, fit and maintain hearing aids. They also assist in the general aural rehabilitation of clients.

Clients eligible to use the services of the hearing centres include all Australians up to twenty-one years of age, eligible pensioners and their dependants, members of the Armed Services, ex-servicemen and women with hearing impairments, Commonwealth compensation claimants, and civil aviation flight personnel undergoing audiological assessments as part of their regular medical examinations.

In Victoria, clients are currently serviced by six branch laboratories located in the Melbourne metropolitan area and regional laboratories at Geelong, Ballarat, and Bendigo. Other centres at Horsham, Mildura, Morwell, Shepparton, Swan Hill, Wangaratta, and Warrnambool are serviced on a regular basis by visiting audiological staff from Melbourne.

#### *Pathology services*

Commonwealth Pathology Laboratories, located at ten regional centres throughout Australia, provide a clinical pathology service to hospitals and medical practitioners in their areas. There is one Commonwealth Pathology Laboratory in Victoria located in Bendigo. Since the commencement of Medicare on 1 February 1984, Commonwealth Pathology Laboratories no longer charge for their services.

#### *Australian Radiation Laboratory*

The Australian Radiation Laboratory is located at Yallambie, Victoria, and is primarily concerned with all aspects of radiation which have implications for public or occupational health. Its activities cover many different forms of radiation ranging from emissions from microwave ovens to radioactivity associated with uranium mining.

Much of the Laboratory's energy is devoted to research in applied physics and chemistry in areas relevant to the Laboratory's public health purpose.

The Laboratory is active in the development of radiation protection standards through the Radiation Health Committee of the National Health and Medical Research Council for which it provides logistic and research support. In addition, it participates in the development of standards through the Standards Association of Australia and the development of nuclear codes of practice to regulate the mining and milling of uranium.

#### *National Biological Standards Laboratory*

The primary responsibility of the National Biological Standards Laboratory is to ensure that therapeutic goods available in Australia for human and veterinary use are safe and effective.

The Laboratory evaluates the quality of therapeutic goods before marketing, carries out research and develops standards and ascertains whether therapeutic goods conform to such standards. In conjunction with the States, Laboratory staff inspect manufacturing operations and facilities for

compliance with good manufacturing practices. The Laboratory also has the responsibility for investigating complaints about, and recalls of, therapeutic goods.

#### *Medical Devices and Dental Products Laboratory*

The National Biological Standards Laboratory administers the Medical Devices and Dental Products Laboratory, located in Abbotsford, Victoria. The Medical Devices and Dental Products Laboratory conducts research on dental and allied equipment, materials and techniques, tests available materials and continues to contribute to new or revised Australian standards. The Laboratory also provides an education service and disseminates information to the dental profession and ancillary staff.

### MEDICAL TRAINING AND MANPOWER

#### **Training of doctors**

##### *Undergraduate training*

Medical undergraduate training in Victoria is carried out at the University of Melbourne and Monash University. The Melbourne Medical School began in 1862 and now admits 182 students into the first year of the course, and 192 students into the second year. This enables an entry into second year of students who have another relevant degree or part thereof. The Monash Medical School admits 145 students into the first year of the course, and into the second year allows for a lateral entry of suitably qualified students to replace wastage. In both universities the pre-clinical course lasts three years, followed by three years of clinical instruction. After six years there is a final examination which, if passed, confers on the student the degrees of MB, BS. The major hospitals where the University of Melbourne sends its undergraduates are the Royal Melbourne Hospital, St Vincent's Hospital, Austin Hospital, Repatriation General Hospital, Royal Children's Hospital, Royal Women's Hospital, Fairfield Hospital, Mt Royal, and hospitals under the control of the Mental Health Division of the Department of Health, Victoria. Monash University students are trained at the Alfred Hospital, Prince Henry's Hospital, Queen Victoria Medical Centre, Geelong Hospital, Royal Southern Memorial Hospital, Western General Hospital, Moorabbin Hospital, Fairfield Hospital, hospitals under the control of the Mental Health Division of the Health Department Victoria, and a number of associated hospitals.

The Medical Board of Victoria grants provisional registration to new graduates who, after one year's experience as interns, are registered as legally qualified medical practitioners. The aim of the university medical schools is to produce a generalist who, with further training, may become a general practitioner, physician, surgeon, obstetrician, paediatrician, psychiatrist, or other specialist.

##### *Postgraduate training*

Vocational training of recent medical graduates is usually directed towards obtaining membership of the appropriate professional College, e.g. the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, and the Royal Australian College of General Practitioners.

Each of these Colleges is a body which conducts its own examinations for membership, stipulates the criteria required for the training necessary before examination can be undertaken and, in most instances, the post-examination training needed before membership and fellowship status can be achieved. In all, this normally takes between six and seven years after the intern year.

The Graduate Boards of Studies at each hospital supervise vocational training in each speciality, given by the specialist staff free of charge to the trainee. This is apart from the patient care that the trainee is giving to the patients of the hospital which pays the trainee for this service.

In addition, these Colleges and the Victorian Medical Postgraduate Foundation arrange continuing education and conduct refresher courses for both specialists and generalists. These courses are conducted both in the Melbourne metropolitan area and in the country. Particular emphasis is placed on the continuing education of country medical practitioners. The universities have postgraduate degrees which they offer to medical graduates. These may be obtained by course work and/or thesis. Clinical academics also take part in training programmes arranged by Boards of Graduate Studies.

##### *Specialist status*

When a specialist qualification is granted by a college and the appropriate experience is gained, the recipient may be registered as a specialist with the Commonwealth Department of Health. Registration as a specialist was introduced at the Commonwealth level as part of the differential fee rebate scheme. This does not provide at present for specialist recognition of general practice. However, it is the aim of the Royal College of General Practitioners to achieve such recognition.

### Nursing

Nursing is a discipline that provides a wide range and scope of health services in a variety of settings. The services include health education, promotion and maintenance of health and the prevention of illness or injury, rehabilitation and implementation of prescribed medical regimes.

Nursing activities may include conducting preventative health examinations, teaching and counselling of children in school, teenagers in clinics, adults at work, senior citizens in private and public nursing homes, new mothers in clinics and at home; performing complex tasks to help maintain life of patients in critical care units in hospitals; and providing supportive physical and/or emotional care to individuals undergoing surgical, medical, or psychiatric care.

The majority of registered nurses in Victoria continue to work in hospitals. Other areas of employment are psychiatric clinics, public health facilities, nursing homes and homes for the aged, doctors' professional rooms, community health clinics, industry, and educational institutions.

Nursing education and practice are supervised by the Victorian Nursing Council, the statutory nursing body constituted under the *Nurses Act* 1958. The Council membership consists mainly of nurses from various nursing interests; there are also members from legal, medical, hospital, and general education fields. The Council is particularly concerned with standards of nursing courses, teaching personnel, examinations, and schools of nursing. Every person practising nursing for a fee or reward is required to be registered under the Nurses Act, and to hold a current annual practising certificate issued by the Victorian Nursing Council. Registers of nurses in each branch of nursing, and a roll of current practising certificate holders, are maintained by the Council.

Hospital-based general nursing courses are being phased out as additional college-based courses are commenced. It is envisaged that the transfer of basic general nursing education from hospitals to the higher education system will be completed within the next five years.

Tertiary level nursing education courses are being offered for registered nurses by the Schools of Nursing at Lincoln Institute of Health Sciences and Phillip Institute of Technology. The courses offered include the Bachelor of Applied Science, Advanced Nursing (with major studies in clinical nursing, community nursing, nursing administration, nursing education, and midwifery), and the Diploma in Applied Science in Community Health Nursing.

Inservice nursing courses in various specialist areas such as critical care, operating theatre, geriatric, oncological, eye, ear, nose and throat, gynaecological, and communicable diseases nursing are available in various hospitals.

A number of hospitals and health agencies offer orientation and refresher courses to assist nurses who have been out of the labour force to return to nursing practice.

#### NURSES, VICTORIA, 1984-85

Courses	Approved training institutions at 30 June 1985 (a)	Students at 30 June 1985	Completed course during 1984-85	Registrations approved, including interstate and overseas applicants	Qualifications of holders of practising certificates issued for year ended 31 December 1984
Basic courses –					
General nurse	28	4,670	1,441	2,512	42,707
Psychiatric nurse (regional)	3	494	169	340	3,016
Mental retardation nurse	6	194	45	66	654
Mothercraft nurse	7	494	149	169	2,244
State enrolled nurse	42	918	844	1,973	22,555
Post-basic courses –					
Midwives	12	468	435	670	15,749
Infant welfare	2	82	65	90	2,076
Total nurses holding a current annual practising certificate	..	..	..	..	68,328

(a) Some institutions conduct more than one type of nursing education programme.





NUMBER OF PUBLIC HOSPITALS AT 30 JUNE, VICTORIA – *continued*

Type of institution	1978	1979	1980	1981	1982	1983
Remainder of State –						
Base hospitals	10	10	10	10	10	10
General hospitals	96	95	95	95	95	91
Hospitals for the aged	7	7	7	7	7	(d)5
Total	113	112	112	112	112	106
Total hospitals	162	161	161	161	161	164

(a) Special hospitals are those having accommodation for specific cases only or for women and/or children exclusively.

(b) Includes seventeen special and teaching hospitals plus seven other specialised hospitals.

(c) Includes twelve metropolitan major and general hospitals and seventeen small community hospitals.

(d) Lyndoch and Gippsland geriatric centres are excluded from Hospitals for the aged because they are classified as nursing homes.

Source: Health Commission of Victoria, Health Service Statistics, 1982-83.

### Private hospitals and nursing homes

Most private hospitals are privately owned and administered along profitable business lines, although some hospitals may best be described as non-profit organisations with their ownership resting mainly in religious denominations.

While private hospitals accommodate short-term and acutely ill patients, private nursing homes accommodate patients requiring constant nursing care for an indefinite period. Patients may be the frail aged, bed-fast, near bed-fast, or totally dependent children.

Private hospitals and nursing homes must meet building regulations as laid down by the *Victorian Health Act 1958*, as well as regulations relating to private hospitals, uniform building regulations, and fire regulations.

At 30 June 1983, there were 372 private hospitals and nursing homes in Victoria totalling 14,103 beds.

### District nursing services

District nursing services are conducted by four district nursing societies, some community health centres, four hospitals in the Melbourne metropolitan area, and 88 country hospitals. The district nurses are responsible for the general nursing care of patients in their own homes, thus reducing the number who would otherwise be admitted to hospital for care.

In Victoria during 1981-82, the 97 approved district nursing services employed 506 full-time and 258 part-time nurses who treated 57,661 patients and made 1,528,874 visits.

### Repatriation hospitals and clinics

The Commonwealth Department of Veterans' Affairs has, *inter alia*, responsibility for the medical care and treatment of eligible clients. Within Victoria, out-patient care is provided by an extensive network of 2,661 Local Medical Officers, and 1,173 Local Dental Officers, with provision for specialist medical services, allied health, and domiciliary support services to also be made available.

In-patient treatment is available through the Department's own institutions or alternatively in public or private hospitals, or nursing homes, as appropriate.

#### *Repatriation General Hospital, Heidelberg*

This hospital is a large acute general teaching hospital and a clinical school of the University of Melbourne, recognised for post-graduate training in a number of medical specialties, and provides training for nursing and allied health staff.

In 1984-85 there were 14,706 admissions and 193,570 outpatient attendances to various clinics. The average length of stay was 8.7 days. At 30 June 1985, there were 1,541 full-time and 133 part-time staff at the hospital.

#### *Other institutions*

Macleod Repatriation Hospital, Mont Park, provides for longer stay rehabilitation and assessment patients and has some beds for respite care. The Repatriation Hospital, Bundoora, caters for psychiatric patients requiring custodial care, and is administered by State Authorities on behalf of the Department. Anzac Hostel provides a small number of beds for totally and permanently incapacitated veterans, and the Repatriation Artificial Limb and Appliance Centre provides artificial limbs and orthoses.

### Bush nursing services

#### *Bush nursing centres*

Bush nursing centres are, in the main, located in the more remote areas of the State. Registered nurses, living in and working from centres, provide primary health care either at the centre or by domiciliary visits. Medical support is usually available in a distant town. The centres are administered by a locally elected honorary committee. Victorian Government grants and the Commonwealth Home Nursing Subsidy are the main sources of finance, supplemented by patients' fees and charitable sources. During the year ended 30 June 1984, fifteen full-time and eighteen part-time nurses at eighteen centres provided treatment for 27,835 patients with 3,267 centre visits and 19,088 home visits.

#### *Bush nursing hospitals*

The first bush nursing hospital was established at Cowes, Phillip Island in 1923 and the number of hospitals reached a peak of 67 in 1942. At 30 June 1984, there were 38 hospitals providing 643 acute beds, 177 nursing home beds, and aged persons hostel accommodation for 32 residents.

Primary non-specialised care is provided at the hospitals with complicated cases being transferred when necessary, to base or city hospitals.

The hospitals are administered by locally elected autonomous committees and are registered with the Health Department Victoria as private hospitals. As such, they receive no financial support from the Victorian Government.

Equivalent full-time staff employed at bush nursing hospitals at 30 June 1984 were nursing, 532; domestic, 257; and administrative, 101.

#### *Bush Nursing Association*

The Victorian Bush Nursing Association Incorporated, founded in 1910, provides, in accordance with its constitutional objectives, nursing, hospital, and related services to persons in country areas of Victoria. The Association is administered by an elected board of management, the members of which act in an honorary capacity.

The board employs a manager and appropriate staff to maintain a central office located in Melbourne. The office has computer facilities and provides centralised payroll, accounting, and administrative advisory services for those agencies requiring support.

### Cancer Institute

The Cancer Institute, with its treatment section, the Peter MacCallum Hospital, is Australia's only comprehensive, specialist centre for treatment, research, and education in cancer and allied diseases. Established under the *Victorian Cancer Institute Act 1949*, the Institute today provides a full range of patient services, including inpatient and outpatient care, backed by supportive services such as social services, physiotherapy, occupational therapy, and the visiting nursing service. In addition, it operates clinics in twelve Melbourne public hospitals and institutes and six country hospitals, and is responsible for radiotherapy services in Tasmania.

Research is a primary responsibility of the Institute and the wide ranging research programmes comprise both clinical trials and laboratory research. There are four research units—biological research, haematology research, experimental chemotherapy and immunogenetics research.

The Institute's education responsibilities cover medical, paramedical, and technical areas and the Peter MacCallum Hospital is a teaching hospital for the University of Melbourne and Monash University. The Institute also runs a post-basic course in oncological nursing.

In August 1984 a Department of Cancer Medicine was established at the Cancer Institute-Peter MacCallum Hospital by the University of Melbourne and is involved in patient care, teaching, and research.

#### CANCER INSTITUTE, VICTORIA

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Patients –						
New patients registered (hospital patients)	4,501	4,197	4,137	3,850	4,088	3,868
Inpatients (ward and hostel) –						
Number of beds available at 30 June	147	147	163	163	163	163
Admissions (a)	6,294	7,809	8,667	9,120	8,667	8,424
Daily average (a)	115.3	113.4	115.8	116.4	114.2	109.1

CANCER INSTITUTE, VICTORIA – *continued*

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Outpatients –						
Attendances at consultative clinics (hospital patients) (b)	46,154	42,443	48,951	47,179	48,446	43,001
Radiotherapy Department (b) (c) –						
Attendances for treatment (hospital and private)	61,503	59,954	62,000	68,663	69,084	64,744
Fields treated (hospital and private)	124,316	118,876	126,311	139,029	153,732	148,753
Visiting Nursing Service –						
Patients visited	1,235	1,093	1,049	832	971	1,052
Total visits	51,368	51,289	47,302	43,132	45,233	43,558
Other services (at Peter MacCallum Hospital) (c) (d) –						
Attendances (hospital and private)	129,166	127,458	152,582	173,513	164,901	159,581
Paid staff (e)	1,129	1,147	1,147	1,093	1,091	1,100

(a) Includes day patients.

(b) Includes patients at Peter MacCallum Hospital and Peter MacCallum clinics at the Austin and Alfred Hospitals and in the county.

(c) Includes inpatients and outpatients.

(d) Includes diagnostic radiations, pathology, physiotherapy, pharmacy, medical, social work, theatre, and photography.

(e) Effective full-time.

### Other institutional health services

Information relating to psychiatric and alcohol and drug services may be found on pages 640-1 of the *Victorian Year Book* 1985.

### NON-INSTITUTIONAL HEALTH SERVICES

Details relating to services for the aged, the physically and mentally handicapped, and ambulance services in Victoria are shown on pages 642-5 of the *Victorian Year Book* 1985.

### MORBIDITY AND MORTALITY STATISTICS

#### Hospital Morbidity Collection

Hospital morbidity identifies the incidence of disease, medical condition, or external injury obtained from the records of inpatients treated at public hospitals in Victoria.

In July 1978, the Health Commission of Victoria assumed responsibility for the development of Victorian hospital morbidity statistics. The tables on pages 407-8 have been prepared by the ABS from data provided by the Commission.

The scope of the Hospital Morbidity collection is restricted to information concerning inpatients who were separated from public hospitals by discharge, transfer, or death during the year.

Public hospitals are those hospitals listed in Tables A and B of the Fifth Schedule of the *Hospitals and Charities Act* 1958.

Repatriation hospitals are not included in this Act but have supplied data independently to the Health Commission of Victoria. Separations from private hospitals, psychiatric hospitals, rehabilitation hospitals, hospitals for the aged, and nursing homes are not included.

The coverage of the collection in 1984 was approximately 100 per cent of public hospital beds, and statistics have been compiled using the following definitions:

- (1) an inpatient is any person in respect of whom the hospital admission procedures have been completed, or whom the hospital assesses as an inpatient for financial purposes;
- (2) babies born in hospital who experience no morbidity are excluded as inpatients;
- (3) a separation occurs when an inpatient is discharged from hospital, transferred to another hospital or other health care accommodation, or dies in hospital following formal admission;
- (4) inpatients who had more than one episode in hospital during the year are counted more than once in the statistics (i.e. each time they are discharged);
- (5) the principal diagnosis is the main condition, disease, or injury treated or investigated during the patient's stay in hospital;
- (6) length of stay is the difference in days between the date of admission and the date of discharge;
- (7) average length of stay is calculated by totalling the lengths of stay, in days, of the relevant

separations and dividing by the number of separations in the category. Where an inpatient is admitted and separated on the same day, the length of stay is taken as zero in the calculation of average length of stay; and

(8) age is calculated at the date of admission, and is shown in completed years.

Statistics have been collected on 518,172 inpatients in Victorian public hospitals during 1984. Females accounted for 57 per cent of inpatients.

PUBLIC HOSPITAL SEPARATIONS BY AGE GROUP AND  
SEX OF INPATIENTS, VICTORIA, 1984

Age group (years)	Males	Females	Persons
Under 1 year	10,678	7,434	18,112
1-4	14,174	9,129	23,303
5-14	21,347	15,090	36,437
15-24	22,926	49,179	72,105
25-34	19,497	72,617	92,114
35-44	17,771	32,421	50,192
45-54	20,430	23,298	43,728
55-64	34,852	27,585	62,437
65-74	34,801	30,035	64,836
75 and over	23,609	31,004	54,613
Not stated	145	150	295
Total	220,230	297,942	518,172

Length of stay in hospitals of all the inpatients totalled 3.7 million days (10,103 patient years) of which 15 per cent of inpatients stayed for under 1 day, 54 per cent for 1 day and under one week, 27 per cent for 1 week and under 1 month, 3 per cent for 1 month and under 2 months, and 1 per cent for 2 months or more. Average stay per inpatient was 7.1 days.

PUBLIC HOSPITAL SEPARATIONS BY AGE GROUP AND  
LENGTH OF STAY, VICTORIA, 1984

Age group (years)	Length of stay							Total
	Under 1 day	1 day and under 1 week	1 week and under 1 month	1 month and under 2 months	2 months and under 3 months	3 months and under 6 months	6 months and over	
Under 1	2,016	11,196	4,016	622	161	82	19	18,112
1-4	4,663	16,822	1,685	112	13	5	3	23,303
5-14	6,661	26,463	2,973	246	61	22	11	36,437
15-24	11,008	45,806	14,439	623	126	79	24	72,105
25-34	12,365	53,361	25,502	656	139	75	16	92,114
35-44	9,948	28,135	11,385	543	84	74	23	50,192
45-54	9,006	22,345	11,325	752	171	92	37	43,728
55-64	12,061	28,268	19,612	1,838	343	240	75	62,437
65-74	8,638	27,155	24,701	3,031	677	476	158	64,836
75 and over	3,365	20,045	23,949	4,610	1,283	936	425	54,613
Not stated	38	145	88	14	7	—	3	295
Total	79,769	279,741	139,675	13,047	3,065	2,081	794	518,172

While in hospital approximately 256,000 inpatients underwent at least one medical procedure. Surgical operations accounted for 72 per cent of this total with approximately 120,000 females and 65,000 males undergoing at least one surgical operation.

The most common principal diagnoses reported in 1984 relating to males were injuries (13 per cent), circulatory diseases (12 per cent), digestive diseases (12 per cent), respiratory diseases (10 per cent), and neoplasms (cancers) (9 per cent). For females, principal diagnoses reported were delivery and other obstetrics (23 per cent), genito-urinary diseases (11 per cent), digestive diseases (8 per cent), injuries (6 per cent), and circulatory diseases (7 per cent).

**PUBLIC HOSPITAL SEPARATIONS: PRINCIPAL DIAGNOSES BY NUMBER OF SEPARATIONS,  
SEX, LENGTH OF STAY, AND AVERAGE STAY, VICTORIA, 1984**

International Classification of Diseases (ICD) class (a)	Principal diagnosis	Number of separations			Length of stay			Average stay (days)		
		Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
I	Infectious and parasitic diseases	4,069	4,130	8,199	20,107	17,554	37,661	4.9	4.3	4.6
II	Neoplasms	18,609	19,223	37,832	156,868	155,442	312,310	8.4	8.1	8.3
III	Endocrine, nutritional and metabolic diseases, and immunity disorders	3,035	4,111	7,146	27,056	37,819	64,875	8.9	9.2	9.1
IV	Diseases of the blood and blood-forming organs	2,127	2,298	4,425	9,072	11,682	20,754	4.3	5.1	4.7
V	Mental disorders	3,803	5,622	9,425	52,351	79,518	131,869	13.8	14.1	14.0
VI	Diseases of the nervous system and sense organs	11,629	11,452	23,081	83,496	77,072	160,568	7.2	6.7	7.0
VII	Diseases of the circulatory system	25,365	19,683	45,048	266,002	265,561	531,563	10.5	13.5	11.8
VIII	Diseases of the respiratory system	20,735	15,439	36,174	135,914	101,039	236,953	6.6	6.5	6.6
IX	Diseases of the digestive system	24,862	21,734	46,596	128,714	126,765	255,479	5.2	5.8	5.5
X	Diseases of the genito-urinary system	12,828	31,952	44,780	60,429	122,122	182,551	4.7	3.8	4.1
XI	Complications of pregnancy, childbirth, and the puerperium	—	63,469	63,469	—	377,297	377,297	—	5.9	5.9
XII	Diseases of the skin and subcutaneous tissue	4,599	4,245	8,844	29,238	33,445	62,683	6.4	7.9	7.1
XIII	Diseases of the musculoskeletal system and connective tissue	9,153	9,981	19,134	70,530	96,117	166,647	7.7	9.6	8.7
XIV	Congenital anomalies	3,747	2,283	6,030	20,301	16,001	36,302	5.4	7.0	6.0
XV	Certain conditions originating in the perinatal period	3,188	2,417	5,605	29,784	27,107	56,891	9.3	11.2	10.2
XVI	Signs, symptoms, and ill-defined conditions	12,698	14,732	27,430	59,413	75,851	135,264	4.7	5.1	4.9
XVII	Injury and poisoning	27,619	18,167	45,786	182,780	181,631	364,411	6.6	10.0	8.0
VO1-V82	Supplementary classification of factors influencing health status and contact with health services	19,707	30,427	50,134	80,762	122,937	203,699	4.1	4.0	4.1
	Total reported principal diagnoses	207,773	281,365	489,138	1,412,817	1,924,960	3,337,777	6.8	6.8	6.8
	Total unreported principal diagnoses	12,457	16,577	29,034	155,845	194,072	349,917	12.5	11.7	12.1
	Grand total	220,230	297,942	518,172	1,568,662	2,119,032	3,687,694	7.1	7.1	7.1

(a) The classes selected in this table are in accordance with the Morbidity List of the Ninth International Classification of Diseases (ICD9).

## Causes of death

## Classification

Causes of death in Australia from 1979 onwards have been classified according to the Ninth (1975) Revision of the World Health Organisation's (WHO) International Classification of Diseases (ICD9). Particulars relate to the underlying cause of death, which WHO has defined as the disease or injury which initiated the train of morbid events leading directly to death. Accidental and violent deaths are classified according to external cause, that is, to the circumstances of the accident or violence which produced the fatal injury, rather than the nature of the injury.

In 1983, 15,823 male and 13,542 female deaths were registered in Victoria.

## CAUSES OF DEATH (ABBREVIATED LIST), NUMBERS AND RATES, VICTORIA, 1983

Cause of death (a)	ICD9 category code numbers	Number of deaths	Proportion of total	Rate per 1,000,000 of mean population
S1 -10 <i>Infectious and parasitic diseases</i>	001-139	136	0.46	34
S1 Intestinal infectious diseases	001-009	18	0.06	4
S2 Tuberculosis	010-018	19	0.06	5
S3 Whooping cough	033	1	—	—
S6 Septicaemia	038	33	0.11	8
S10 All other infectious and parasitic diseases	(b)	65	0.22	16
S11-20 <i>Malignant neoplasms</i>	140-208	7,123	24.26	1,764
S11 Malignant neoplasm of stomach	151	433	1.47	107
S12 Malignant neoplasm of colon	153	823	2.80	204
S13 Malignant neoplasm of rectum, rectosigmoid junction, and anus	154	334	1.14	83
S14 Malignant neoplasm of trachea, bronchus, and lung	162	1,406	4.79	348
S15 Malignant neoplasm of skin	172,173	221	0.75	55
S16 Malignant neoplasm of female breast	174	594	2.02	147
S17 Malignant neoplasm of cervix uteri	180	94	0.32	23
S18 Malignant neoplasm of prostate	185	379	1.29	94
S19 Leukaemia	204-208	233	0.79	58
S20 All other malignant neoplasms	(c)	2,606	8.87	646
S21 Benign neoplasms and neoplasms of unspecified nature	210-239	68	0.23	17
S22 Diabetes mellitus	250	573	1.95	142
S24 Other protein-calorie malnutrition	262,263	11	0.04	3
S25 Anaemias	280-285	62	0.21	15
S26 Meningitis	320-322	18	0.06	4
S27 Acute rheumatic fever	390-392	1	—	—
S28 Chronic rheumatic heart disease	393-398	114	0.39	28
S29 Hypertensive disease	401-405	354	1.21	88
S30-31 <i>Ischaemic heart disease</i>	410-414	8,078	27.51	2,001
S30 Acute myocardial infarction	410	5,535	18.85	1,371
S31 Other ischaemic heart disease	411-414	2,543	8.66	630
S32 Other forms of heart disease	{ 415,416 } { 420-429 }	1,467	5.00	363
S33 Cerebrovascular disease	430-438	3,202	10.90	793
S34 Atherosclerosis	440	487	1.66	121
S35 All other diseases of circulatory system	{ 417, } { 441-459 }	474	1.61	117
S36 Pneumonia	480-486	534	1.82	132
S37 Influenza	487	13	0.04	3
S38 Bronchitis, emphysema, and asthma	490-493	666	2.27	165
S39 All other diseases of the respiratory system	{ 460-478 } { 494-519 }	1,051	3.58	260
S40 Ulcer of stomach and duodenum	531-533	190	0.65	47
S41 Appendicitis	540-543	8	0.03	2
S42 Chronic liver disease and cirrhosis	571	294	1.00	73
S43 Nephritis, nephrotic syndrome, and nephrosis	580-589	201	0.68	50
S44 Hyperplasia of prostate	600	24	0.08	6
S45-47 <i>Complications of pregnancy, childbirth, and puerperium</i>	630-676	1	—	—
S46 Direct obstetric deaths	{ 640-646, } { 651-676 }	1	—	—

CAUSES OF DEATH (ABBREVIATED LIST), NUMBERS AND RATES, VICTORIA, 1983 - *continued*

Cause of death (a)	ICD9 category code numbers	Number of deaths	Proportion of total	Rate per 1,000,000 of mean population	
S48	Congenital anomalies	740-759	238	0.81	59
S49-51	<i>Certain conditions, originating in the perinatal period</i>	760-779	204	0.69	51
S49	Birth trauma	767	10	0.03	2
S50	Hypoxia, birth asphyxia and other respiratory conditions	768-770	122	0.42	30
S51	Other conditions originating in the perinatal period	{ 760-766 } { 771-779 }	72	0.25	18
S52	Signs, symptoms, and ill-defined conditions	780-799	164	0.56	41
S53	All other diseases	Residual	1,569	5.34	389
S54-56	<i>Accidents and adverse effects</i>	E800-E949	1,421	4.84	352
S54	Motor vehicle traffic accidents	E810-E819	749	2.55	186
S55	Accidental falls	E880-E888	264	0.90	65
S56	All other accidents and adverse effects	(d)	408	1.39	101
S57	Suicide	E950-E959	513	1.75	127
S58	Homicide	E960-E969	80	0.27	20
S59	All other external causes	E970-E999	26	0.09	6
Total all causes			29,365	100.0	7,274

(a) No deaths were recorded in the following categories in 1983: S7. Smallpox (050): S8. Measles (055): S9. Malaria (084): S23. Nutritional marasmus (261): S45. Abortion (630-639).

(b) 020-032, 034, 035, 039-049, 051-054, 056-083, 085-139.

(c) 140-150, 152, 155-161, 163-171, 175, 179, 181-184, 186-203.

(d) 800-807, 820-879, 890-949.

## MAIN CAUSES OF DEATH IN AGE GROUPS, VICTORIA, 1983

Age group and cause of death	Deaths from specified cause				
	In age group		At all ages		
	Number	Per cent	Number	Per cent (a)	
<b>Under 1 year</b>					
S48	Congenital anomalies	183	33.7	238	76.9
S50	Hypoxia, birth asphyxia and other respiratory conditions	122	22.5	122	100.0
S52	Signs, symptoms and ill-defined conditions	108	19.9	164	65.9
S49, S51	Birth trauma, and other conditions originating in the perinatal period	82	15.1	82	100.0
<b>1-4 years</b>					
S55-56	Accidental falls and all other accidents	40	34.5	672	6.0
S54	Motor vehicle traffic accidents	16	13.8	749	2.1
S11-20	Malignant neoplasms	15	12.9	7,123	0.2
S48	Congenital anomalies	11	9.5	238	4.6
<b>5-14 years</b>					
S54	Motor vehicle traffic accidents	39	26.7	749	5.2
S55-56	Accidental falls and all other accidents	29	19.9	672	4.3
S11-20	Malignant neoplasms	28	19.2	7,123	0.4
S48	Congenital anomalies	8	5.5	238	3.4
<b>15-24 years</b>					
S54	Motor vehicle traffic accidents	280	46.6	749	37.4
S57	Suicide and self-inflicted injury	91	15.1	513	17.7
S55-56	Accidental falls and all other accidents	81	13.5	672	12.1
S11-20	Malignant neoplasms	41	6.8	7,123	0.6
<b>25-34 years</b>					
S54	Motor vehicle traffic accidents	131	23.8	749	17.5
S57	Suicide and self-inflicted injury	112	20.4	513	21.8
S11-20	Malignant neoplasms	83	15.1	7,123	1.2
S55-56	Accidental falls and all other accidents	73	13.3	672	10.9



MAIN CAUSES OF DEATH IN AGE GROUPS, VICTORIA, 1983 - *continued*

Age group and cause of death	Deaths from specified cause			
	In age group		At all ages	
	Number	Per cent	Number	Per cent (a)
<b>35-44 years</b>				
S11-20 Malignant neoplasms	219	29.8	7,123	3.1
S30-31 Ischaemic heart disease	120	16.3	8,078	1.5
S57 Suicide and self-inflicted injury	84	11.4	513	16.4
S54 Motor vehicle traffic accidents	61	8.3	749	8.1
<b>45-54 years</b>				
S11-20 Malignant neoplasms	642	37.2	7,123	9.0
S30-31 Ischaemic heart disease	431	25.0	8,078	5.3
S33 Cerebrovascular disease	170	9.8	3,202	5.3
S42 Chronic liver disease and cirrhosis	69	4.0	294	23.5
<b>55-64 years</b>				
S11-20 Malignant neoplasms	1,589	37.0	7,123	22.3
S30-31 Ischaemic heart disease	1,271	30.0	8,078	15.7
S33 Cerebrovascular disease	291	6.8	3,202	9.1
S36-39 Diseases of the respiratory system	236	5.5	2,264	10.4
<b>65-74 years</b>				
S30-31 Ischaemic heart disease	2,315	31.7	8,078	28.7
S11-20 Malignant neoplasms	2,226	30.5	7,123	31.3
S33 Cerebrovascular disease	674	9.2	3,202	21.0
S36-39 Diseases of the respiratory system	627	8.6	2,264	27.7
<b>75 years and over</b>				
S30-31 Ischaemic heart disease	3,919	29.4	8,078	48.5
S11-20 Malignant neoplasms	2,278	17.1	7,123	32.0
S33 Cerebrovascular disease	2,078	15.6	3,202	64.9
S36-39 Diseases of the respiratory system	1,266	9.5	2,264	55.9

(a) Deaths in this age group from the stated cause expressed as a percentage of all death at all ages from that cause.

*Diseases of the heart*

During 1983 there were 9,884 deaths ascribed to diseases of the heart including 115 due to rheumatic heart disease, 224 to hypertensive heart disease, 5,535 to acute myocardial infarction, 2,543 to other ischaemic heart disease, 52 to pulmonary heart disease, and 1,415 to other forms of heart disease. Deaths in 1983 from this cause are shown in the following table:

## DEATHS FROM HEART DISEASE, VICTORIA, 1983

Cause of death(a)	Males	Females	Persons
Rheumatic heart disease (391,393-398)	38	77	115
Hypertensive heart disease (402,404)	106	118	224
Acute myocardial infarction(410)	3,211	2,324	5,535
Other ischaemic heart disease (411-414)	1,491	1,052	2,543
Pulmonary heart disease (415-416)	24	28	52
Other forms of heart disease (420-429)	585	830	1,415
<b>Total</b>	<b>5,455</b>	<b>4,429</b>	<b>9,884</b>

(a) Figures in parentheses are ICD9 category code numbers.

*Malignant neoplasms*

Since the introduction of the Ninth Revision of the International Classification of Diseases (ICD9) in 1979, deaths classified as malignant neoplasms do not include deaths from polycythaemia vera and myelofibrosis. Deaths from malignant neoplasms in 1983 numbered 7,123. Deaths in 1983 from these diseases are shown in the following table.

Deaths from malignant neoplasms are prominent at most age periods, but as the table 'Main causes of deaths in age groups' on pages 410-11 shows, they characteristically increase with age, reaching a maximum number in the two oldest age groups. Ninety-five per cent of the deaths from malignant neoplasms in 1983 were at ages 45 years and over.

## DEATHS FROM MALIGNANT NEOPLASMS, VICTORIA, 1983

Site of disease (a)	Males	Females	Persons
Lip, oral cavity, and pharynx(140-149)	101	33	134
Oesophagus (150)	112	68	180
Stomach (151)	249	184	433
Intestine, except rectum (152,153)	401	442	843
Rectum, rectosigmoid junction, and anus (154)	193	141	334
Trachea, bronchus, and lung (162)	1,085	321	1,406
Breast (174,175)	5	594	599
Cervix uteri (180)	—	94	94
Body of uterus and unspecified parts of uterus (179,182)	—	78	78
Ovary and other uterine adnexa (183)	—	161	161
Prostate (185)	379	—	379
Bladder (188)	112	47	159
Other and unspecified genito-urinary organs (181,184,186,187,189)	108	71	179
Brain and other unspecified parts of nervous system (191,192)	135	74	209
Leukaemia (204-208)	132	101	233
Other neoplasms of lymphatic and haematopoietic system (200-203)	181	171	352
All other unspecified sites	736	614	1,350
Total	3,929	3,194	7,123

(a) Figures in parentheses are ICD9 category code numbers.

*Cerebrovascular disease*

In 1983, 1,270 male and 1,932 female deaths were ascribed to cerebrovascular disease. Deaths from this disease are shown in the following table:

## DEATHS FROM CEREBROVASCULAR DISEASE, VICTORIA, 1983

Cause of death (a)	Males	Females	Persons
Subarachnoid haemorrhage (430)	61	87	148
Cerebral haemorrhage (431,432)	208	271	479
Cerebral occlusion (433-434)	229	351	580
Acute but ill-defined cerebrovascular disease(436)	655	1,012	1,667
Other and ill-defined cerebrovascular disease, including late effects (437,438)	117	211	328
Total	1,270	1,932	3,202

(a) Figures in parentheses are ICD9 category code numbers.

*Diseases of the respiratory system*

In 1983, deaths from diseases of the respiratory system numbered 2,264. Of these deaths, 16 were due to acute respiratory infections, 534 to pneumonia, 13 to influenza, 666 to bronchitis, emphysema, and asthma, 849 to chronic airways obstruction not elsewhere classified, and 186 to other diseases.

*Diseases of the digestive system*

In 1983, there were 577 male and 459 female deaths from diseases of the digestive system. Deaths from causes in this group in 1983 were: 190 from ulcers of the stomach and duodenum; 8 from appendicitis; 30 from hernia of the abdominal cavity; 102 from non-infective enteritis and colitis; 294 from chronic liver disease and cirrhosis; and 412 from other diseases.

*Diabetes mellitus*

During 1983, diabetes was responsible for 273 male and 300 female deaths.

*Diseases of the genito-urinary system*

In 1983, there were 338 deaths attributed to diseases of the genito-urinary system. Nephritis, nephrotic syndrome, and nephrosis were responsible for 201 deaths, infections of the kidney for 39, calculi of the urinary system for 7, hyperplasia of the prostate for 24, and other diseases of the genito-urinary system for 67.

*Tuberculosis*

The number of deaths ascribed to tuberculosis during 1983 was 19. Deaths from tuberculosis of the respiratory system numbered 15.

*Deaths from external causes*

External causes of death such as accidents, poisonings, and violence, including homicide and suicide, accounted for 7 per cent of deaths registered in 1983. However, these causes were responsible for 67 per cent of the deaths of persons aged 1 to 34 years.

The table 'Main causes of death in age groups' on pages 410-11 shows that external causes (cause groups S54-57) predominate in the various age groups after the first year of life to middle age, but become progressively less prominent in the older age groups. In 1983, 68 per cent of all deaths from external causes were male.

*Transport accidents*

In 1983, registration of deaths from all transport accidents numbered 824 compared with 833 in 1982, 775 in 1981, and 926 in 1980. During 1983, deaths connected with transport represented 58 per cent of the total deaths from accidents. Of the 824 deaths, 762 involved motor vehicles.

*Injury undetermined whether accidentally or purposely inflicted*

In many cases it is not possible to determine whether death from an external cause was accidentally or purposely inflicted, i.e. whether the death was due to accident, suicide, or homicide. The Ninth Revision has a separate category to include cases where the mode of infliction was undetermined. Deaths allocated to these categories in 1983 totalled 25.

*Suicide and self-inflicted injury*

In 1983, deaths from suicide or wilfully self-inflicted injury numbered 374 males and 139 females. Of the 374 male deaths in 1983, 127 were connected with firearms and explosives, and 59 from hanging, strangulation and suffocation. Poisoning by solid or liquid substances accounted for 79 of the 139 female deaths.

*Homicide*

The number of deaths registered in 1983 ascribed to homicide was 80 (40 males and 40 females).

**DEATHS FROM HOMICIDE, (a), VICTORIA**

Year	Males	Females	Persons
1978	27	22	49
1979	37	22	59
1980	51	31	82
1981	21	20	41
1982	58	21	79
1983	40	40	80

(a) Deaths from injuries inflicted by another person with intent to injure or kill by any means.

**MEDICAL RESEARCH****Commonwealth Government***National Health and Medical Research Council*

The National Health and Medical Research Council, established in 1937, is charged, under its Order in Council:

- (1) to enquire into, advise, and make recommendations to the Commonwealth, the States and Territories, and the Australian community on matters of proposed and existing public health practice, legislation and administration, ethical issues in relation to health, and on any other matters relating to health, medical and dental care, and medical and health research;
- (2) to advise and make recommendations to the Commonwealth on expenditure of money on medical and health research and in connection with medical and health research projects generally; and
- (3) to enquire into and advise the Commonwealth, States, Territories, and the Australian community on health promotion and the merits of methods of disease prevention, diagnosis, and treatment.

*Seventieth Anniversary of the Commonwealth Serum Laboratories*

The Commonwealth Serum Laboratories (CSL) is 70 years old in 1986. Since its establishment by the Commonwealth Government in 1916, CSL has given gainful and satisfying employment to thousands of Australians, and has shown that a government-owned manufacturing organisation can be efficient and profitable, and above all can play an unparalleled role in contributing to public and personal health.

There has in fact been more than a century of health care at CSL's present Parkville site as in the early 1880s smallpox vaccine was being produced there.

In 1904 the Commonwealth Quarantine Conference resolved that 'The Director-General (of Quarantine) shall be provided with a biological laboratory under his own control', but no action was taken to implement this resolution until the exigencies of the First World War. Eventually it was the shortage of Diphtheria Antitoxin, caused by the problem of shipping to Australia, that provided the spur to action.

On 21 September 1915 a deputation representing the Melbourne Metropolitan Hospitals Board of Supplies waited on the Minister for Trade and Customs urging the need for a local facility to manufacture therapeutic sera.

It was April 1916, before the Organisation could be said to exist, when the appointment of the first staff member – the founding Director, Dr W.J. Penfold – was made. CSL began the production of biologicals in 1917 in accommodation kindly provided by the Walter and Eliza Hall Institute, in that Institute's building in the grounds of the Melbourne Hospital, Lonsdale Street, Melbourne. Thus began a collaboration that has continued until the present day between two Institutes that were destined to take prominent places in Australian and world medicine.

In 1918, with the completion of the first laboratory complex at Parkville, CSL transferred its operations from the Institute.

The infant organisation faced its first major crisis in 1919 when it was called on to meet the challenge of the influenza pandemic. Contemporary reports vividly demonstrate the concern of government and the general populace, as the disease spread and the number of fatalities rose. In a short time, CSL produced and distributed over three million doses of mixed bacterial influenza vaccine, quickly justifying its foundation, which had been based in part on the need for an organisation '... to meet emergencies'.

The benefit to Australia of a local manufacturing facility was again demonstrated in 1923 when CSL began manufacture of the newly-discovered treatment for diabetes – insulin. The discovery of insulin by Banting and Best in Toronto was announced in 1922, and by the end of that year, CSL had produced its first experimental batch. By August 1923, all local restrictions on its issue to practitioners had been removed. CSL was one of only four laboratories in the world licensed to produce insulin on a commercial scale.

By 1925 human sera for prophylactic and therapeutic use was being prepared from the blood of persons recovered from poliomyelitis, measles, and scarlet fever. This was pioneering work, for the same method was adopted later for the production of the vast quantities of pooled human serum for continuous transfusion required during the war years.

Work commenced in 1927 on the development of diphtheria 'anatoxin', an early toxoid. This product was successful and quickly replaced diphtheria toxin-antitoxin mixture as the immunising agent of choice.

Tiger Snake Antivenom was released in 1930 following several years research in conjunction with the Walter and Eliza Hall Institute. This marked the beginning of a long programme at CSL resulting in the development of antivenoms against all major Australian venomous snakes and spiders.

A research section, separate from and entirely independent of production activities, was set up in 1935 to develop new knowledge and skills.

The threat of war in 1938 led to a great deal of preparatory work to ensure the availability of supplies to service personnel and civilians. Tetanus Prophylactic (Formalinized Toxoid) for active immunisation against Tetanus was developed and produced in large quantities. Tetanus was virtually unknown in Australian troops during the Second World War, and it is believed that no case of tetanus occurred in a fully immunised soldier.

During the years 1940 to 1945 CSL supplied urgently needed biological products to the armed services operating in the Pacific region, Egypt, Palestine, India, Burma, Malaya, and the Netherlands East Indies. Millions of doses of preventative agents against tetanus, smallpox, typhoid fever, plague and cholera were supplied, while at the same time a continuous supply of vital products such as insulin

was maintained for civilian use. Other major wartime contributions to the defence effort were in the areas of blood grouping and the provision of pooled human serum.

Following the decision of the Australian War Cabinet in 1943 that penicillin be produced, Captain P.L. Bazeley, a CSL officer then serving with the 2/8th Australian Armoured Regiment in New Guinea, was appointed to head the project.

Then began a remarkable series of improvisations, because men and materials were in short supply, which resulted in an efficient, highly specialised plant being installed at CSL. By February 1944, the team was supplying the needs of the Australian forces and some of the United States forces in the Pacific combat area. Shortly afterwards, Australia became the first country in the world to make regular supplies available to the civilian population.

In 1947, CSL commenced production of BCG Vaccine for the prevention of tuberculosis. This was the first living bacterial vaccine for human use issued by CSL. Then in 1952 one of the major advances in modern medicine was recorded: the separation of human plasma into its different fractions, each of which contains proteins with properties useful in therapy. Plant for this important project was installed at CSL, and probably the most important product of this fractionation plant, human serum albumin, was first produced in 1952. An event of world importance was the collaboration between CSL, the Australian Red Cross Society Blood Transfusion Service, and Australian voluntary blood donors, by which patients receive plasma fractions, including clotting factors, free of charge.

Triple Antigen vaccine, for the immunisation of infants and young children against diphtheria, whooping cough, and tetanus, was introduced by CSL in 1953 and Salk poliomyelitis vaccine in 1956. The CSL team produced twenty-five million doses of Salk poliomyelitis vaccine over the next ten years.

The Woodend Field Station was established in 1959. The 616 hectare field station raises and nurtures horses – mainly Percherons – cattle, and sheep for the production of a range of life-saving products such as tetanus and diphtheria antitoxins and antivenoms.

CSL was established as a Commonwealth Statutory Authority in 1961 under the control of a Board of Commissioners. The 1960s saw the establishment of sales branches in all State capital cities, the appointment of agents in Singapore, Malaysia, and Hong Kong for CSL products and developmental work which led to the production of a sub-unit influenza virus vaccine, which was released for the 1968 winter.

The 1970s ushered in a period of market expansion and growth. CSL won Export Awards for outstanding achievement in export markets in 1971, 1977, and 1982.

Dr N.J. McCarthy, CSL's present Managing Director, was appointed in 1974, and during subsequent years CSL again demonstrated its vital national interest role, by undertaking urgent investigative work into bluetongue vaccine, following the isolation of bluetongue virus in Australia.

The beginning of the 1980s saw important original work which led to the production for field trial of a purified Q Fever vaccine, bee venom extract, and funnel-web spider antivenom. The production of Interferon for a major clinical trial was commenced. One of the many international aid projects with which CSL has been associated – a major Foot and Mouth Disease Vaccine project at Surabaya, Indonesia – was successfully completed.

CSL was designated as a World Health Organisation (WHO) Collaborating Center for Serology and Production and Quality Control of Vaccines in 1983. This recognition followed CSL's long-standing status as a WHO Influenza Reference Center, WHO National Blood Grouping Reference Laboratory, WHO Brucellosis Center, and National Rabies Diagnostic Center. The release of CLA Vaccine, used by graziers to combat a major disease in sheep, was also a highlight of that year.

In April 1984, the Prime Minister officially opened the \$9m Human Vaccine Building complex and named it after Dr P.L. Bazeley for his contributions to CSL and the Australian nation.

In 1985 CSL/NOVO was formed, a joint venture company of CSL and Novo Industri A/S, Denmark, to market insulin produced in collaboration by the two partners.

A major function, plasma fractionation, provides a contemporary example of the value to Australia of CSL. During 1984-85 CSL, in addition to providing a wide range of blood products, introduced heat-treatment of clotting factors, thus removing the risk of AIDS transmission through these products to haemophilia sufferers.

For 70 years CSL has been responsible for making available to Australians the latest advances in therapeutic medicine which, at times, would otherwise have been unattainable; it has responded to national emergencies in times of war as in times of peace; it has developed products to counter the effects of peculiarly Australian health hazards.

CSL, as the national biological and pharmaceutical manufacturer, makes a significant contribution to the health of Australians by its role in many vital areas. It provides the nation with a significant research and development facility, where product development and basic research of great importance go hand-in-hand.

### **Victorian Government**

#### *Health Commission of Victoria*

Information of research activities within the Health Commission of Victoria is set out on pages 692-3 of the *Victorian Year Book* 1978.

#### *Institute of Mental Health Research and Postgraduate Training*

The Mental Health Research Institute was established in 1956 and renamed the Institute of Mental Health Research and Post-graduate Training in 1970. In 1980, under the Mental Health Division, the Institute reverted to a purely research role under the Assistant Director, Education and Research. The Director of the Mental Health Research Institute supervises research activities in the Institute under the immediate direction of the Chief Psychiatrist, Education and Research, who also takes a Divisional research responsibility and directs divisional education and training programmes with the assistance of a Director of Post-graduate Psychiatry Training and a Director of Child and Adolescent Psychiatry Training. The Director of Post-graduate Psychiatry Training, organises the five year training programme for Divisional medical officers, leading to fellowship of the Royal Australian and New Zealand College of Psychiatrists.

The Mental Health Research Council conducts a forum monthly to examine research proposals and the Executive decides on the acceptability of projects and any modifications needed after each forum. Consideration is given to research projects in the Division and some research projects from outside the Division which relate to Divisional facilities or patients. The Council Executive considers mental retardation projects only in an advisory capacity on request from the Mental Retardation Division.

The Institute is adjacent to the Parkville Psychiatric Unit, which fulfils a clinical training role for medical officers preparing for the Diploma of Psychological Medicine or the Membership of the Royal Australian and New Zealand College of Psychiatrists. Attached to the Institute is the central library and the Charles Brothers Museum.

The Institute's epidemiological research has gained world wide recognition, and its computerised, cumulative patients' register, in operation since 1961, permits collation of all illness episodes in a particular patient, thus assisting in the evaluation of patient care.

#### *Anti-Cancer Council*

The Anti-Cancer Council of Victoria was established by Statute in 1936 as a volunteer-based charity. It works to control cancer through programmes in research and education, and through patient services. Structured as a confederation of anti-cancer interests in Victoria, it has a major role in co-ordinating the response to cancer in Victoria, and in making policy recommendations to government.

Research projects are overseen by the Medical and Scientific Committee, and include clinical and epidemiological research into cancer, its causes, and treatment. Much of this work has received international recognition.

Major strategies for public health are prevention, early detection, and early treatment. Programmes target cancers which are preventable (lung and skin) as well as those which can be detected at an early stage (breast and cervix). Information about cancer and smoking is provided by the Information Service Section of the Council and through the Council's quarterly newsletter, *Cancer News* which has a circulation of 140,000.

Patient services offered are the Breast Cancer Support Service and the Patient Welfare Grant Service. The Social Service Policy Unit works to ensure that all Victorians with cancer have access to essential emotional and practical support services.

The Victorian Cancer Registry, established in 1939, is a register of clinical details on cancer patients in the State. Complete incidence data are available from 1982 onwards. The Registry publishes *Canstat*, a quarterly pamphlet of cancer facts, each issue focusing on a specific site.

**ANTI-CANCER COUNCIL, EXPENDITURE, VICTORIA**  
(**\$**)

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Research (a)	1,088,132	1,195,833	1,301,816	1,431,114	2,129,881	2,223,185
Education	329,612	394,851	488,007	586,329	978,270	(b)1,783,569
Patient aid	166,135	173,693	198,749	218,766	238,516	266,972
Other	634,977	692,191	748,733	899,374	1,082,727	1,176,406
<b>Total expenditure</b>	<b>2,218,856</b>	<b>2,456,568</b>	<b>2,737,305</b>	<b>3,135,583</b>	<b>4,429,394</b>	<b>5,450,132</b>

(a) Includes expenditure on Central Cancer Registry.

(b) Includes expenditure of \$500,000 on a government funded anti-smoking campaign.

*State Health Laboratory*

The State Health Laboratory's activities embrace scientific testing, food standards administration, and consulting services. Over 3,000 samples are examined each year in the laboratory, covering foods, waters, drugs, and an extensive range of miscellaneous substances and articles of public health concern. Work includes checking of fluoridated water supplies, pesticide residue surveys, analysis of waters used in renal dialysis machines for public hospitals, mercury content of fish, penicillin residues in milk, and aflatoxin contamination of peanuts. Senior staff answer about 1,500 inquiries each year, from industry and the public, concerned with the Food and Drug Standards Regulations and various aspects of public health science.

**Universities**

A comprehensive list of projects carried out by departments and teaching hospitals, indicating the range of medical research at Victoria's universities, can be found on pages 819-27 of the *Victorian Year Book 1977*.

**BIBLIOGRAPHY**

**ABS publications**

- Causes of Death, Victoria* (3302.2)
- Causes of Death, Australia* (3303.0)
- Social Indicators, Australia* (4101.0)
- Social Indicators, Victoria* (4101.2)
- Public Hospital Morbidity, Victoria* (4301.2)
- Australian Health Survey* (4311.0)
- Health Insurance Survey, Australia* (4335.0)
- Survey of Handicapped Persons, Australia* (4343.0)
- Persons Employed in Health Occupations and Industries, Australia, Census of Population and Housing* (4345.0)
- Characteristics of Persons Employed in Health Occupations Australia, Census of Population and Housing* (4346.0)
- Characteristics of In-patients of Health Institutions, Australia, Census of Population and Housing* (4347.0)
- Children's Dental Health Survey* (4350.0)
- Children's Immunisation Survey, Australia* (4352.0)
- Rubella Immunisation Survey, Australia* (4353.0)
- Australian Health Survey: Medical and Other Conditions Reported, Australia* (4356.0)
- Australian Health Survey: Consequences of Illnesses, Australia* (4357.0)
- Australian Health Survey: Action Taken, Australia* (4358.0)