

# Chapter 10

## HEALTH

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# Chapter 10

## HEALTH

The desire to attain good health is universal. Throughout history man has always endeavoured to protect his health, at first by devising techniques and selecting special individuals to ward off 'evil spirits'. Observation and experience gradually identified ways for keeping well. Laws were developed to govern health and, as large communities developed, methods of sanitation were devised. But it was not until the 1800s with the discovery that germs caused disease, that significant advances in man's understanding of, and ability to successfully treat, illness were made.

Yet, for all the knowledge and resources now directed towards attaining good health, death, disease, injury and illness are still part of everyday life, present everywhere and touching all of us.

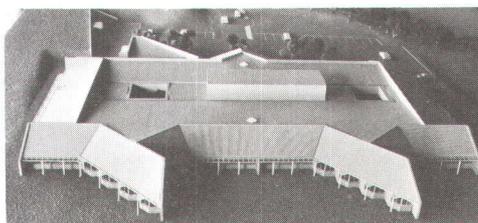
### 10.1 MORTALITY

In 1986 the deaths of 3 454 resident Tasmanians were recorded. This was 239 fewer than the 1985 figure of 3 693, and represents a crude death rate of 7.73 per 1 000 mean population, the lowest rate since 1983 when it was 7.67. It has been lower on only one other occasion (1979 with a rate of 7.61 deaths per 1 000 mean population) since records began in 1860. Of the deaths, 1 825 were males and 1 629 were females, a ratio of 112 males for every 100 female deaths.

#### 10.1 DEATHS IN TASMANIA, 1984

| Age group (years) | Males | Females | Persons |
|-------------------|-------|---------|---------|
| Under 1           | 45    | 34      | 79      |
| 1-4               | 12    | 4       | 16      |
| 5-14              | 19    | 2       | 21      |
| 15-24             | 51    | 17      | 68      |
| 25-44             | 87    | 57      | 144     |
| 45-54             | 120   | 57      | 177     |
| 55-64             | 296   | 155     | 451     |
| 65-74             | 501   | 373     | 874     |
| 75 and over       | 694   | 930     | 1 624   |
| Total             | 1 825 | 1 629   | 3 454   |

Up until age 75 male deaths outnumbered female deaths. The reversal in the 75 and over age group occurs because of the higher number of



A scale model of a new 50-bed private hospital being built in Burnie.

Photo: Examiner

females of that age in the population. In all groups the age-specific death rate of males is higher than that of females and for most age groups the male rate is almost twice the female rate. Only for the 1-4 age group does the death rate for females approximate the male rate. The death rate among infants, children aged less than one year, is considerably higher for males than for females.

#### 10.2 AGE-SPECIFIC DEATH RATES, TASMANIA, 1986

| Age group (years) | Males  | Females |
|-------------------|--------|---------|
| Under 1           | 14.86  | 10.64   |
| 1-4               | 0.82   | 0.64    |
| 5-14              | 0.52   | 0.06    |
| 15-24             | 1.36   | 0.46    |
| 25-44             | 1.31   | 0.87    |
| 45-54             | 5.54   | 2.71    |
| 55-64             | 14.53  | 7.57    |
| 65-74             | 36.28  | 22.68   |
| 75 and over       | 101.51 | 81.29   |
| All ages          | 8.23   | 7.25    |

### 10.1.1 Causes of Death

Four causes of death accounted for just over two thirds of all deaths registered in 1986. These were Ischaemic heart disease (27.0 per cent), cancers (23.5 per cent), strokes (10.1 per cent), and accidents, poisonings and violence (6.9 per cent).

#### 10.3 PRINCIPAL CAUSES OF DEATH, TASMANIA, 1986

| Cause                            | Proportion of all deaths | Number |         |
|----------------------------------|--------------------------|--------|---------|
|                                  |                          | Males  | Females |
| Ischaemic heart disease          | 27.0                     | 523    | 411     |
| Malignant neoplasm               | 23.5                     | 444    | 368     |
| Cerebrovascular diseases         | 10.1                     | 125    | 225     |
| Accidents, suicides and violence | 6.9                      | 174    | 65      |

Most deaths among people aged from 1 to 44 years result from motor vehicle traffic accidents, and suicide and self-inflicted injuries. These causes account for nearly half (44 per cent) of all male deaths, and nearly one third (31 per cent) of all female deaths in that age group.

Around the ages 35 to 40 years a change in the pattern of deaths takes place. In the 25 to 44 year age group diseases of the circulatory system account for the deaths of 18 per cent of males. This figure jumps to 44 per cent for males aged between 45 and 64 years.

Cancer also becomes significant. Two broad groups, malignant neoplasms of the digestive organs and peritoneum (which includes 'stomach' and 'bowel' cancer), and lung cancer account for most cancer deaths. 11 per cent of male deaths between 1 and 44 years are due to various forms of cancer. This figure triples to 33 per cent for males between 45 and 64.

While the predominant causes of death among women are similar, the pattern differs in that cancers are initially more prevalent than diseases associated with the circulatory system. Cancer in women below 25 years was virtually non-existent in 1986, but accounted for 40 per cent of deaths of those aged between 25 and 44 years. Half of these were cases of breast cancer.

Diseases of the circulatory system are responsible for just over a third (34 per cent) of the deaths of women in the 25 to 44 year age group. The proportion rises to 50 per cent in the 65 to 74 year age group, then to 64 per cent for those 75 years and over. Diseases of the respiratory system account for fewer female than male deaths.

#### 10.4 MAIN CAUSES OF DEATH AT SELECTED AGES, TASMANIA, 1986

| Cause  | Male | Female |
|--|------|--------|
| <i>Under 1 year age group</i>                              |      |        |
| Conditions originating in the perinatal period             | 19   | 9      |
| Congenital Anomalies                                       | 12   | 13     |
| Sudden infant death syndrome                               | 13   | 11     |
| Other causes   | 1    | 1      |
| All causes   | 45   | 34     |
| <i>1 to 14 year age group</i>                              |      |        |
| Motor vehicle traffic accidents                            | 9    | 4      |
| Other accidents, poisonings and violence                   | 6    | 1      |
| Other causes   | 16   | 1      |
| All causes   | 31   | 6      |
| <i>15 to 24 year age group</i>                             |      |        |
| Motor vehicle traffic accidents                            | 17   | 7      |
| Suicide and self-inflicted injuries                        | 15   | 2      |
| Other accidents and violence                               | 10   | 4      |
| Other causes   | 9    | 4      |
| All causes   | 51   | 17     |
| <i>25 to 44 year age group</i>                             |      |        |
| Accidents, poisonings and violence                         | 5    | 1      |
| Diseases of the circulatory system including heart disease | 16   | 6      |
| Neoplasm   | 13   | 23     |
| Other causes   | 16   | 6      |
| All causes   | 50   | 36     |
| <i>45 to 64 year age group</i>                             |      |        |
| Diseases of the circulatory system including heart disease | 181  | 73     |
| Neoplasms  | 137  | 96     |
| Accidents, poisonings and violence                         | 37   | 9      |
| Diseases of the respiratory system                         | 16   | 10     |
| Other causes   | 45   | 24     |
| All causes   | 416  | 212    |
| <i>65 to 74 year age group</i>                             |      |        |
| Diseases of the circulatory system including heart disease | 249  | 185    |
| Neoplasms  | 152  | 111    |
| Diseases of the respiratory system                         | 49   | 25     |
| Accidents, poisonings and violence                         | 14   | 8      |
| Other causes   | 37   | 44     |
| All causes   | 501  | 373    |
| <i>75 years and over age group</i>                         |      |        |
| Diseases of the circulatory system including heart disease | 369  | 594    |
| Neoplasms  | 143  | 144    |
| Diseases of the respiratory system                         | 75   | 49     |
| Diseases of the digestive system                           | 17   | 43     |
| Other causes   | 90   | 100    |
| All causes   | 694  | 930    |

## Suicides

by Alan Deacon

From 1980 to 1987, 502 Tasmanians committed suicide, 399 males and 103 females.

During the preceding twenty years, 1960–1979 the Australian suicide rates were 17 per 100 000 of male population and 7 per 100 000 for females. The Tasmanian rates although slightly higher approximated these figures.

During the 1980s the suicide rate among Tasmanian males increased dramatically to an average of 23 per 100 000 for the period 1980–1987 reaching high points of 26 per 100 000 in 1982, 1986 and 1987. This compared with a smaller increase (16 to 19 per 100 000) among all Australian males over the same period and a constant rate among females.

A disturbing feature of the climb in the suicide rate is the increase in the number of young males taking their own lives.

Between 1965 and 1985 the suicide rate for youths in the 15–19 year age group has more than doubled while the female rate has remained comparatively steady. This is not a statistic peculiar to Tasmania or Australia but is generally considered to be world wide. The United States has shown a consistent increase since 1960.

In Tasmania the percentage of suicides in the 0–24 age group during the years 1985, 1986 and 1987 was 25, 28 and 24 respectively.

These figures are possibly understated. Death by suicide is usually determined by a coronial inquiry. In the past there has been a tendency for coroners to sometimes ascribe the terms 'death by misadventure', 'accidental death', 'childish act' or 'undetermined' to the very young thus excluding them from suicide figures.

Some observers have suggested that although under-reporting of suicides may have once been the case it is now less likely to occur and that the increase in suicide figures in the young may be partly related to a shift in coronial verdicts from 'accidental' to deliberate.

In any event, the dramatic increase in suicides of young males as measured by the statistics, is much too significant to be attributed to a shift in coding procedures.

Also excluded from suicide figures are those cases which undoubtedly occur but cannot be verified. In particular, motor vehicle deaths raise many queries as to the motivation of some of the drivers.

The methods of committing suicide have varied little over time, with males using the more violent means of firearms in over 50 per cent of cases, hanging in 15 per cent and the balance distributed mainly between drug overdose, car exhaust, and drowning. For females however there appears to have been a movement away from suicide by drug overdose towards a more even distribution between the various methods.

From 1961 to 1981 the percentage of Australian women who committed suicide by taking an overdose of drugs was 58.7 of all suicides. In Tasmania the percentage of females dying from drug overdoses during the period 1978–86 was 41. This proportion fell to 36 per cent for the period 1984–87 with 16 per cent suiciding by hanging, 18 per cent by firearms and 14 per cent by drowning.

The methods used have considerable bearing on the ratio of male to female suicides — more than 3:1 in the last ten years — since attempts at suicide through firearms are far more likely to be successful than drug overdosing.

10.5 SUICIDE RATES, TASMANIA (per 100 000)

| Year | Male      |       |       |          | Female    |       |       |          |
|------|-----------|-------|-------|----------|-----------|-------|-------|----------|
|      | Age Group |       |       |          | Age Group |       |       |          |
|      | 15–29     | 30–39 | 40–49 | All Ages | 15–29     | 30–39 | 40–49 | All Ages |
| 1980 | 21        | 17    | 37    | 17       | 2         | –     | 19    | 5        |
| 1981 | 29        | 23    | 46    | 26       | 4         | –     | 9     | 5        |
| 1982 | 40        | 13    | 31    | 21       | 4         | 7     | 5     | 6        |
| 1983 | 27        | 50    | 9     | 25       | 4         | 6     | 23    | 7        |
| 1984 | 18        | 37    | 13    | 17       | 9         | 9     | –     | 6        |
| 1985 | 43        | 33    | 21    | 25       | 5         | 18    | 4     | 7        |
| 1986 | 39        | 17    | 36    | 26       | 4         | 15    | 16    | 5        |
| 1987 | 34        | 29    | 45    | 26       | 2         | 3     | 16    | 6        |

In the three years 1979 to 1981, 666 females were admitted to public hospitals in Tasmania for attempted suicide of whom 635 were for overdose of drugs. The male figures for the same period were 359 admissions, 301 of which were drug overdose. In most instances recovery is complete after an average length of stay in hospital of four to five days. Assuming that similar proportions of unsuccessful attempts occur amongst those admitted to private hospitals or are treated satisfactorily in casualty stations or privately, then the prevalence of suicidal intent shifts dramatically from the 3:1 male to female ratio to an almost 2:1 female to male proportion. This approximates the public hospital admissions for mental disorders over the same period if the figures (or the male dominated alcohol dependence syndrome (789 males to 147 females) are excluded. These are 3 337 females to 2 354 males.

There appears to be a growing conviction that psychiatric illness is predominant amongst the reasons for attempted suicides. In most instances this would need to be 'triggered' by any one of a host of factors including depression caused by hostile family environment, physical health,

economic problems and social relationships. This latter 'trigger' has been related to many of the drug overdose attempts which, it is postulated, may not be so much suicidal as a means of attracting attention, proving a point, punishing someone else or emotional blackmail.

Other reasons for taking one's own life include the realisation of a terminal illness and not wishing to either suffer oneself or be a burden to others; to make the ultimate apology for failure; to demonstrate to an audience in an endeavour to influence opinion as in public self immolation, hunger strikes and the like; so called 'love pacts'; 'copycat' suicides which seem in many instances more of a preoccupation with the actual act and its notoriety than the result of the act.

Considerable discussion, claim, and counter-claim, has revolved around the possibility that restricting the means would lower the suicide rate. However, regardless of any controls or restrictions placed on the means for self destruction it would seem that at least some three to four hundred Tasmanians will attempt to take their own lives each year.

### 10.6 SUICIDES, TASMANIA 1978-1987

| Year   | Overdose |    | Car exhaust |   | Hanging or suffocating |    | Drowning |    | Firearms |    | Other |   | Total |     | Persons |
|--------|----------|----|-------------|---|------------------------|----|----------|----|----------|----|-------|---|-------|-----|---------|
|        | M        | F  | M           | F | M                      | F  | M        | F  | M        | F  | M     | F | M     | F   |         |
| 1978   | 7        | 8  | 4           | - | 1                      | -  | -        | 5  | 21       | -  | 3     | - | 36    | 13  | 49      |
| 1979   | 7        | 8  | 1           | - | 8                      | -  | 1        | 4  | 18       | 4  | 3     | - | 38    | 16  | 54      |
| 1980   | 3        | 1  | 4           | - | 2                      | 4  | 2        | 1  | 25       | 3  | 1     | 1 | 37    | 10  | 47      |
| 1981   | 4        | 4  | 12          | 2 | 7                      | 1  | 3        | 1  | 23       | 2  | 4     | - | 53    | 10  | 63      |
| 1982   | 3        | 7  | 2           | 2 | 11                     | 3  | 2        | 2  | 21       | 1  | 4     | - | 43    | 15  | 58      |
| 1983   | 2        | 6  | 10          | 1 | 11                     | 5  | 3        | 2  | 25       | 1  | 3     | - | 54    | 15  | 69      |
| 1984   | 6        | 4  | 5           | - | 5                      | 3  | 2        | 1  | 18       | 4  | 2     | 1 | 38    | 13  | 51      |
| 1985   | 4        | 9  | 8           | 1 | 7                      | 1  | 2        | 3  | 31       | 1  | 3     | - | 55    | 15  | 70      |
| 1986   | 4        | 2  | 9           | 1 | 7                      | 3  | 2        | 2  | 32       | 1  | 6     | 3 | 60    | 12  | 72      |
| * 1987 | 4        | 3  | 11          | 1 | 7                      | 1  | 5        | 1  | 23       | 3  | 3     | - | 52    | 9   | 62      |
| Total  | 44       | 52 | 66          | 8 | 66                     | 21 | 22       | 22 | 237      | 20 | 30    | 5 | 465   | 128 | 593     |

\* 1987 figures are preliminary only.

## 10.2 CARING FOR THE SICK

The treatment of illness is the major function of the health care system. In Australia the most visible, and the most expensive, part of the system is the hospital. But although some form of institution for the care of the sick has probably always existed, hospitals in their current form are a relatively modern concept.

Originally, hospitals were established for sick or weary travellers and for the poor, the blind and the crippled. Usually operated by religious orders, hospitals served as institutions to care for persons too poor or too sick to be treated at home. Even up to the 1700s they were still operated as charity institutions, with the well-to-do being treated in their own homes.

It wasn't until the 1800s, when hospitals underwent considerable improvement in cleanliness, that the trend of caring for patients in hospitals instead of in their own homes began.

Perhaps ironically the escalating costs of treating patients in modern hospitals has forced a new move back to home based nursing care. Increasingly, efforts are being made to significantly reduce the length of time patients are kept in hospitals. More and more admissions are being delayed and patients are being discharged early to be cared for by teams of Home Nurses and people providing 'home help' or 'handyman' services.

### 10.2.1 Hospitals

According to a survey conducted in 1983 an estimated 12 per cent of Tasmanians had had one or more episodes in a hospital during the previous twelve months. For most, the stay in hospital was of a relatively short duration; for 70 per cent, one week or less. Less than four per cent of the population was hospitalised for more than a month, and only 20 per cent underwent more than one period in hospital during the 12 month period.

In most age groups, more females than males had been hospitalised; only among infants and children up to 14 years of age were females outnumbered by males.

Tasmania has 28 hospitals of which six are operated privately. In Hobart, the Medical Benefits Fund owns and operates St John's Hospital and Australian Hospital Care Pty Ltd owns St Helen's Hospital. Both provide medical and surgical facilities. The Roman Catholic Church owns Calvary Hospital in Hobart and St Vincent's in Launceston. St Luke's Health Insurance own and operate St Luke's Hospital in

Launceston. The sixth is a psychiatric hospital, the Hobart Clinic.

At the end of June 1986, a total of 2520 approved beds were being provided in Tasmania; 5.64 beds for every 1000 people.

### 10.7 APPROVED HOSPITAL BEDS, TASMANIA, April 1986

|                             |             |
|-----------------------------|-------------|
| Beds in —                   |             |
| Public hospitals            | 2004        |
| Private hospitals —         |             |
| Category 1                  | 336         |
| Category 2                  | 180         |
| Total private hospital beds | 516         |
| <b>Total hospital beds</b>  | <b>2520</b> |

The State provides four general hospitals, 14 district hospitals, 11 hospital annexes and district nursing centres with bed accommodation, six centres without accommodation, one mental hospital, two maternity hospitals, and three nursing homes for the aged. A total of 2004 public hospital beds are available.

### 10.8 PUBLIC HOSPITAL BEDS, TASMANIA, 1986

|                                  |             |
|----------------------------------|-------------|
| General Hospitals —              |             |
| Royal Hobart                     | 497         |
| Launceston General               | 98          |
| Mersey General                   | 187         |
| North-Western General            | 216         |
| Maternity Hospitals —            |             |
| Queen Alexandra                  | 68          |
| Queen Victoria                   | 117         |
| District Hospitals —             |             |
| Huon                             | 39          |
| Beaconsfield                     | 26          |
| Campbell Town                    | 18          |
| King Island                      | 24          |
| New Norfolk                      | 42          |
| North-Eastern Soldiers' Memorial | 49          |
| Ouse                             | 10          |
| Rosebery                         | 15          |
| Smithton                         | 16          |
| St Helens                        | 9           |
| St Marys                         | 19          |
| Toosey                           | 33          |
| Ulverstone                       | 48          |
| West Coast                       | 43          |
| District Nursing Centres         | 71          |
| Miscellaneous                    | 43          |
| <b>Total</b>                     | <b>1988</b> |

The four general hospitals, the Royal Hobart, Launceston General, Mersey General (at Latrobe and Devonport) and the North-Western General (with divisions at Burnie and Wynyard) provide all facilities. Specialist treatment is available in obstetrics, gynaecology, orthopaedics, uro-genital surgery, plastic and reconstructural surgery,

neuro-surgery and neurology, radiology, pathology, radiotherapy, psychiatry and ophthalmology. Skin diseases and venereal diseases are also treated and clinics operate in thoracic medicine and surgery. An emergency obstetric service, with specialists based in Hobart and Launceston, provides a free service to the smaller public hospitals, district nursing hospitals and district medical officers outside Hobart and Launceston.

During 1985-86 a total of 62 916 in-patients were treated in the State's hospitals.

### 10.9 IN-PATIENTS TREATED, TASMANIAN PUBLIC HOSPITALS, 1985-86

| <i>Hospital</i>          | <i>General</i> | <i>Maternity</i> |
|--------------------------|----------------|------------------|
| General hospitals        | 43 429         | 5 317            |
| District hospitals       | 7 281          | 707              |
| Maternity hospitals      | 2 236          | 2 068            |
| District nursing centres | 1 118          | -                |
| Other (a)                | 760            | -                |
| Total                    | 54 824         | 8 092            |

(a) Mothercraft Home and Peacock Convalescent Home

#### The W.P. Holman Clinics

One of the emerging medical specialities in the 1920s was the use of radiation to treat cancerous growths, and Tasmania was well to the fore in meeting this challenge. This was largely due to the pioneering work of Dr William Prout Holman at the Launceston General Hospital and later at the Victorian Cancer Institute where he continued to take an active interest in services in Tasmania.

Radiotherapy involves the use of rays very similar to those used in taking x-ray pictures. However, the treatment rays used are much more powerful and penetrating and need the equivalent of millions of volts of electricity, instead of only thousands of volts, as is the case in diagnostic rays. In addition, therapy rays are kept flowing for many seconds or minutes instead of just a fraction of a second needed to produce an x-ray film. The radiation used for the treatment of cancer can be produced by electrical means or by using the rays emanating from a radioactive substance. The main radiation-generating machine, a linear accelerator, produces a penetrating radiation which can reach tumours anywhere in the body. Other machines are available which generate less penetrating radiation when this is required and the strengthened penetration of the rays can be varied, depending on the nature of the cancer and its position in the body.

A further treatment possibility is the direct use of a radioactive material, either implanted under the skin or placed in a body cavity. Generally, because of the nature of the treatment, the patients are hospitalised under the supervision of the Radiotherapist-In-Charge, although there are cases, because of the low energy strength of the radioactive source, where the patient is allowed to return home. Radiotherapy can be used alone or in combination with surgery and/or chemotherapy.

The Tasmanian Government and the Department of Health Services are indebted to the Victorian Cancer Institute Board for operating clinics on Tasmania's behalf since 1952 when it was agreed that the State was too small to operate its own cancer service. At that stage both Hobart and Launceston clinics operated superficial and deep x-ray therapy units but the State did not possess a higher energy unit. As a result, it was necessary to transfer to Melbourne patients who required higher energy treatment. To a certain extent the inconvenience of this situation was remedied as new equipment was purchased and specialist staff became available. In 1961 a full-time radiotherapist was appointed, thus making it possible for specialist treatment to take place in both Hobart and Launceston.

In 1964 cancer clinics were opened on the north-west coast at Burnie, Ulverstone and Devonport. It was not, however, until 1969 that a six megavolt linear accelerator was installed in the new cancer clinic in Hobart. The acquisition of this equipment eliminated the necessity for patients to travel to Melbourne for treatment. Tasmania was now well served with a cobalt-60 unit in Launceston and a linear accelerator in Hobart. In 1975 the cobalt machine in Launceston was replaced by a linear accelerator.

A new stage in the delivery of services was reached when, in July 1986, after a period of negotiation, responsibility was transferred to Tasmanian administration. The clinics, one in Hobart and one in Launceston, were renamed the W.P. Holman Clinics in appropriate recognition of his work in this field. Currently these clinics comprise the Division of Radiation Oncology within the Department of Health Services.

### 10.2.2 Community Health

A major initiative in health services in Tasmania during 1987-88 was the creation of a new Division of Community Health. The creation of this Division was seen as a means to address the challenges of "Health for All by 2000".

In the Tasmanian context these challenges are:

- to provide a mechanism to improve health status in Tasmania;
- to provide alternatives to expensive institutional care;
- to harness community resources; and
- to reduce inequities in health services.

The current growth of community health services in Tasmania began in 1975. There are now more than 600 full-time equivalent staff serving about 8000 clients at any one time. Funds totalling nearly \$14 million have been attracted from the Community Health Program, the Home and Community Care Program, Medicare and a variety of smaller sources. Services currently include Home Nursing, Home Help, Handyman, Palliative Care, Geriatric Assessment, Social Work, Physiotherapy, Occupational Therapy and Meals on Wheels as well as Health Education and Promotion.

The diversity of funding sources has been matched by diversity of management structures. Services have been administered via at least 50 different projects, including all the State's public hospitals.

The more unified Divisional structure will make it possible to achieve economies of scale and a maximisation of existing resources. It will also make it much easier to co-operate with voluntary agencies such as service clubs, community organisations and national bodies.

1987-88 has been occupied with the administrative changes required to bring about the transfer of staff and resources to the Division. 1988-89 will be the year where the major challenges will be set out publicly and tackled enthusiastically.

In terms of health status, the Better Health Commission has already identified the major areas for concern in Australia as cardiovascular disease, nutrition and accidents. Tasmania currently has the worst record of all Australian States for heart disease and nutritional problems. Community programs will be introduced to encourage local groups to set up exercise and nutritional programs to address these very major problems.

Community Health Services already maintain at least 1000 individuals at home who would

otherwise need access to institutional beds. There is no doubt that the pressure for institutional beds will continue to increase with the ageing of Tasmanian society. The Division has already made a huge impact with geriatric assessment and will continue its efforts towards preventing inappropriate or premature admission.

There is now little doubt of the need to improve the health of the community. The majority of service clubs, community organisations and health related bodies are agreed that much needs to be done. There is, however, a tendency to do these things in isolation and in disparate ways. A major brief for the Division is to bring together the various projects and developments in the Tasmanian community under a co-ordinated and directed strategy.

Inequity of access to health care is a continuing problem. It is affected by financial, social, geographic and philosophical factors. The Division does not intend to revolutionise society but will be attempting to address some of the major inequities in health status between various groups in the population and to improve the access to information about health across the State.

In geographical terms, Tasmania's uniqueness lies in its defined boundaries within which lives a relatively representative Australian community. Tasmania has always been considered an ideal crucible in which to carry out programs designed to improve health, and past experience such as the Hydatids Campaign and the School Dental achievements bear witness to that reality. The Division of Community Health intends to build upon the experience gained by these previous programs to maximise their health effects.

#### Communicable Diseases Unit

To co-ordinate the monitoring of all cases of notifiable infectious diseases occurring in Tasmania, the Department of Health Services has established a communicable diseases unit. While the major emphasis to date has related to the acquired immune deficiency syndrome (AIDS), which was declared an infectious disease in 1983, the unit is also involved in monitoring sexually transmitted diseases by way of regular clinics held at the Royal Hobart Hospital.

The communicable disease unit has the prime responsibility for providing counselling and education functions to individuals, high risk and community interest groups, as well as professional and employee bodies. In addition an AIDS hot line was introduced in 1985. This facility has proved to be a valuable information source and a point of first contact for those callers needing the services of the communicable disease unit.

## 10.3 HEALTH MAINTENANCE

Increasingly it is being argued that preventing illness is not only the best, but the cheapest form of health care provision. This move is evident in an increasing emphasis on health education for adults in particular. But it is also part of the rationale for such measures as fluoridating public water supplies and introducing a range of screening and monitoring services for children especially. Examples are the Child Health Clinics, mobile dental units, school nurses, dental therapists and medical officers.

### 10.3.1 Child Health

The Child Health Service commenced in 1917 under the auspices of two voluntary organisations, the Hobart and the Launceston Child Welfare Associations. Since then, the Tasmanian Government, through the Department of Health Services, has increasingly assumed responsibility and now provides the staff and the majority of the buildings. However, the voluntary organisation which has become the Child Health Association of Tasmania, still owns a number of the Child Health Centres and the Association's committees continue to support and to meet the running costs of the majority of the Child Health Centres.

In 1987 there were 117 Child Health Centres and 1 travelling unit. Triple certificated child health nurses attached to these Centres advise mothers on all aspects of caring for babies and young children. Mothers are advised on infant feeding, child development and other health and social problems. The registered nurses screen children's growth and development to detect, as early as possible, a deviation from the normal pattern of development and refer these to the family doctor or the appropriate agency for investigation and/or early treatment. Child health nurses visit new born babies at home and continue the supervision and support either at home or, more commonly, in the Child Health Centre where individual records are maintained. Nurses also arrange for examinations to be carried out by family doctors under the Pre-School Medical Scheme. Departmental medical officers carry out examinations in Child Health Centres.

The Mothercraft Home in South Hobart provides care for babies and toddlers needing assessment and management of specific problems and offers support and counselling advice to the mothers. Assessment centres in Hobart, Launceston and Burnie provide a multi-disciplinary team, in liaison with the Education Department, to assess and attend to the needs of children up to school-leaving age.

### 10.3.2 Dental Health

Free dental treatment is available each year for every child up to the school leaving age from the School Dental Health Service. In 1966 Tasmania became the first Australian State to develop a School of Dental Therapy.

The school was established to enable dental therapists to provide a field service, and mobile clinics were used to bring services to schools. On 30 June 1986 the field service had 65 full-time equivalent dental therapists and 13 District Dental Officers who provided referral care to 24.7 per cent of all patients examined by the field service.

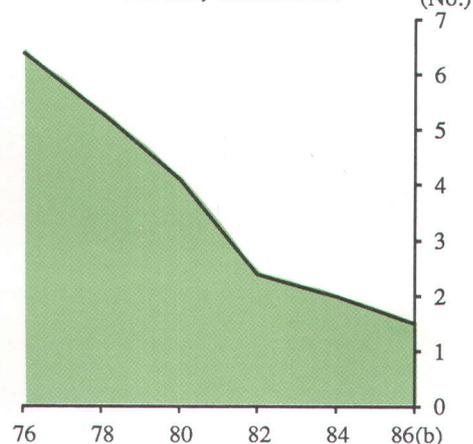
#### 10.10 SCHOOL DENTAL SERVICE

| School    | School population | No. Treated | Utilisation (%) |
|-----------|-------------------|-------------|-----------------|
| Primary   | 53 188            | 45 131      | 84.8            |
| Secondary | 36 606            | 18 900      | 51.6            |

Tasmania, compared with other States, has a low level of natural fluoride and other trace elements in soil and rock because of the influence of glaciation during the Ice Age. The introduction of water fluoridation has helped compensate for this lack and contributed to the decrease in the incidence of dental caries.

Specialised techniques such as the use of sealants for at-risk pits and fissures in permanent molars, and the selective use of silver fluoride have helped reduce tooth loss. Education, espe-

DMF(a) TEETH IN CHILDREN AGED 12 YEARS, TASMANIA (No.)



(a) Decayed, Missing, Filled teeth

Source: Department of Health Services

cially in the early years, on the prevention of dental disease and the importance of oral hygiene is one of the simplest and most effective prevention measures. This emphasis is fundamental to the work of the School Dental Health Service and should ensure the future dental health for young Tasmanians.

The international standard for oral health set as a goal for the year 2000 by the World Health Organisation, is that 12-year-old children should have an average of only three permanent teeth affected by decay. A measure of the notable success achieved by the Tasmanian School Dental Health Service is that this goal was reached in 1982. Tasmania once had the nation's highest rate of incidence of dental caries and, indeed, a number of studies have shown that the incidence of dental caries worldwide increases in higher latitudes. Since 1975 the total permanent caries found in schoolchildren has steadily declined.

### 10.3.3 School Health Service

The main role of the School Health Service is that of screening, counselling and health education. It is noteworthy that, in Tasmania, the School Health staff work in close liaison with nurses in the Child Health clinics and the documents and screening results of the child's visits to the clinics are passed on, thereby giving the Tasmanian service continuity of records.

The School Health Service is available to all school children both in government and non-government schools. Very few refuse to utilise the service and over 99 per cent of school children participated in 1986.

Each child receives an examination by a school medical officer at five years of age or during the first year of attendance. The school nurse is responsible for the students in a group of schools and plays a pivotal role in the provision of health care in schools. Routinely, all children have vision screening, hearing tests and checks of

height, weight, thyroid, posture and skin. Where necessary checks are made for infestation and hygiene. A full health assessment is given by the nurse to those 11-year-old students not needing reviews and the final school medical examination takes place in grade 9 when there is increased emphasis on health education. Problems that may be found in the assessment of the health and development of the child are referred for treatment. Co-operation between the school health staff, teachers and parents is essential in the best interests of the children. Growth and change are characteristics of childhood and the monitoring system of the school health services can identify problems and disabilities as they occur. Therefore, counselling and advisory services are provided on a whole range of health related matters as the first stage in preventative health care.

### 10.3.4 Health Education

The National Campaign Against Drug Abuse is a cost-shared project with the Commonwealth in community-based health education. Cigarette smoking is the largest single preventable cause of illness and death in Tasmania, while addiction to such drugs as heroin is still small compared with other States. Special efforts have therefore been directed to anti-smoking strategies.

Smoking is a personal life-style choice but surveys have shown that young people, particularly girls, are continuing to take up smoking in early adolescence. "Life in the Big Smoke" is an anti-smoking campaign targeted at this group and run jointly by the Department of Health Services and the Education Department. Humour is used to drive home the message — 'Only dags need fags' and 'Only a galah would suck tar!' Television cartoons shown at peak viewing time for the early teen years and late primary age groups, have been designed to reinforce the slogans. Distribution of 6000 posters and 40000 stickers to schools, youth groups and individuals have helped to make these anti-smoking messages into household words in the same way as the commercials of the advertising industry. The campaign has had a very positive influence on its target group according to informal assessment. Judging from the large correspondence received from young people and their parents it also has had the side-effect of putting pressure on parents, through their children, to give up smoking. 'QUIT' programs are run by Community Health staff to support and encourage those smokers, young or old, who wish to be non-smokers.

The 'Learn 'n Live' program is a community awareness and workshop project incorporating a mobile resource unit to bring health education to specific groups and country areas. The program

### 10.11 SCHOOL MEDICAL EXAMINATIONS, TASMANIA, 1985

| Total number examined              | 19 286        |
|------------------------------------|---------------|
| Number with notification of defect | 3 120         |
| <i>Defects notified</i>            | <i>Number</i> |
| Eye conditions                     | 667           |
| Orthopaedic conditions             | 476           |
| Ear conditions                     | 469           |
| Nutritional disorders              | 390           |
| Skin and hair                      | 332           |
| Behaviour                          | 162           |
| Speech                             | 101           |
| Other                              | 523           |

Source: Department of Health Services.

serves many purposes but the main one is to open communication channels so that people can gain an understanding of how their personal choices in life-style can effect their health in the long term, whether it be the use of cigarettes, alcohol, prohibited drugs or other risk-related behaviour such as excessive salt or fat consumption. The Healthfit unit caravan has proved a popular source of information. Its size, colour and logo have made it highly visible at country shows and during its travels in country areas. The groups contacted have been diverse and have included gatherings at neighbourhood houses, in training centres and at special interest seminars and at institutions such as boys' homes.

Research and informal feedback from the communities visited by Health Education teams have indicated that alcohol abuse is the drug abuse area causing major widespread and serious problems. An alcohol program for the year 1987-88, aimed at teenage alcohol abuse and based upon "Stay in Control", is being prepared. This will be supplemented by an intensive campaign in Tasmania.

#### **Costs of Smoking**

According to a study released in 1987 by the Health Department of Western Australia smoking costs \$2.5 billion each year. The cost to Tasmania was estimated at \$82 million.

The cost estimates, based on estimates for 1984, take into account the direct expense of treating smokers, the loss of income and productivity resulting from smoking caused premature deaths and disability.

## 10.4 HEALTH RESEARCH

### **The Menzies Centre for Population Health Research**

Plans for a major new medical research centre in Tasmania were approved at an international workshop in February 1987. Participants at the workshop organised by the Menzies Foundation included Sir Richard Doll, Emeritus Professor of Medicine at Oxford, and Siegfried Böthig, Chief of the Cardiovascular Disease Section of the World Health Organisation, as well as many noted Australian medical scientists and administrators. The Centre, to be called the Menzies Centre for Population Health Research, is to be funded by contributions from the Menzies Foundation, the Tasmanian Government and the University of Tasmania. It has also received contributions from the AMP and the St John's Association. It was officially opened in January 1988 and based at the University of Tasmania.

The investigators will look at diseases which are important in Tasmania and also of interest elsewhere in the western world. The research will be seen as relevant by participating Tasmanians, and at the same time it will attract interest and funds from national and international sources.

The Centre will focus on two areas, finding the causes of disease, and finding ways of applying this knowledge to prevent disease in the community. This latter category of research, which might be termed "applied intervention", will be the major emphasis of the Centre and will give it a unique role within the Australian medical research context.

**10.12 ESTIMATED COSTS OF SMOKING, AUSTRALIA, 1984**  
(*\$million*)

| <i>State/Territory</i>       | <i>Direct health care costs</i> | <i>Adult indirect mortality costs</i> | <i>Indirect morbidity costs</i> | <i>Total costs</i> | <i>Perinatal indirect mortality costs</i> | <i>Total costs including perinatal indirect mortality costs</i> |
|------------------------------|---------------------------------|---------------------------------------|---------------------------------|--------------------|---|---|
| New South Wales              | 301                             | 430                                   | 183                             | 914                | 27  | 941   |
| Victoria                     | 238                             | 311                                   | 137                             | 687                | 21  | 708   |
| Queensland                   | 133                             | 186                                   | 80                              | 399                | 12  | 411   |
| Western Australia            | 81                              | 89                                    | 43                              | 213                | 8   | 221   |
| South Australia              | 79                              | 104                                   | 46                              | 229                | 7   | 236   |
| Tasmania                     | 24                              | 40                                    | 16                              | 79                 | 3   | 82  |
| Australian Capital Territory | 11                              | 11                                    | 6                               | 28                 | 1   | 29  |
| Northern Territory           | 9                               | 13                                    | 6                               | 27                 | 1   | 28  |
| Australia                    | 877                             | 1 185                                 | 517                             | 2 579              | 81  | 2 660   |

*Source:* Smoking — Attributable Economic Costs in the Australian States and Territories 1984, Epidemiology Branch, Health Department of Western Australia, Perth, 1987.

While the full range of topics within this framework is yet to be decided, the early work of the Centre will include research into causes of disease and applied interventions.

#### Studies of causes of disease

*Sudden Infant Death Syndrome (SIDS).* The rate of death from this cause is much higher in Tasmania than the mainland.

#### 10.13 SIDS RATE PER 1 000 LIVE BIRTHS, AUSTRALIA 1980-84

| Location          | SIDS mortality rate | Ratio to Tasmanian rate |
|-------------------|---------------------|-------------------------|
| Tasmania          | 3.66                | 1.00                    |
| NSW               | 1.88                | 0.51                    |
| Victoria          | 1.97                | 0.54                    |
| Queensland        | 1.63                | 0.45                    |
| SA                | 2.02                | 0.55                    |
| WA                | 2.01                | 0.55                    |
| Rest of Australia | 1.89                | 0.52                    |

This high rate makes it a priority for research in Tasmania. Therefore, one of the first projects within the Menzies Centre will be a large prospective study on SIDS. The approach will involve the research team measuring factors in the environment and in the baby prior to the occurrence of the condition. This should provide much more valid information than the retrospective approach (interviewing families after the death) which has been used in previous studies around the world on this topic. Up to 2 000 babies each year will be included in the study which will also gain important information on other aspects of infant health in the first year of life.

*Primary cardiac arrest and lifestyle.* The National Heart Foundation has provided \$1 10 000 to conduct a three-year study comparing all cases of primary cardiac arrest (PCA) in adult males in Tasmania to a group of controls selected at random from the community. The data collection will focus on the relationship of sudden death to lifestyle factors such as dietary fatty acid intake, vigorous exercise and passive smoking.

*The establishment of a diabetes register.* The first diabetes register in Australia has been set up in Tasmania and this will be incorporated in the new Centre. The information from the register will be used to generate hypotheses about causes of diabetes as well as to monitor disease incidence and prevalence.

#### Applied interventions.

The applied interventions which have been suggested include work on osteoporosis in elderly females, cervical cancer, coronary heart disease and hypertension.

*Oestrogens and osteoporosis.* Oestrogens are commonly used by doctors in post-menopausal women for the prevention of osteoporosis. It is suggested that research be conducted to test the effectiveness of oestrogens in preventing osteoporosis and to estimate the likelihood of side-effects such as cancer of the uterus.

*Cervical cancer.* It appears that screening for cervical cancer through the examination of cervical smears is effective in reducing the incidence of this cancer. A study aimed at increasing the level of screening in certain areas, with follow-up to determine whether incidence has been reduced, is proposed.

*Coronary heart disease.* The death rate from coronary heart disease (CHD) is currently higher in Tasmania than the average in other Australian States. Tasmania has not experienced the large decline in CHD seen on the mainland since the late 1960s.

#### 10.14 TRENDS IN ISCHAEMIC HEART DISEASE MORTALITY (per 100 000)

|                      | Tasmania | Australia |
|----------------------|----------|-----------|
| Males aged 45-49 —   |          |           |
| 1971-73              | 207      | 209       |
| 1981-83              | 178      | 129       |
| Females aged 45-49 — |          |           |
| 1971-73              | 35       | 48        |
| 1981-83              | 37       | 33        |

This was associated with a higher mean blood cholesterol concentration in Hobart than in other capital cities (based on the National Heart Foundation Risk Prevalence Survey data 1980 and 1983) and a higher smoking prevalence in females. The Menzies Centre is negotiating with the World Health Organisation for inclusion of Tasmania in an international network of centres which have as their primary goal the lowering of CHD incidence through community-wide efforts.

*Coronary heart disease in individuals with high plasma cholesterol.* Both diet and medication can be used to lower blood cholesterol in people who have high levels. However, many of the drugs on the market have had problems — either because they have been unpalatable or they have had side-effects. A newer type of drug which relies on preventing the synthesis of cholesterol in the liver has been developed. This looks promising but needs to be tested more fully in humans with high cholesterol. Some of this work could be conducted in Tasmania.

*Salt and Hypertension.* It is clear that societies which have a low salt intake also have a low

prevalence of high blood pressure. However, the level of reduction of salt in the diet which has to be achieved in western societies to lower blood pressure is not clear, nor is it clear which individuals are most likely to benefit. Dr Trevor Beard of the Community Health Department at the University of Tasmania is seeking funds to conduct a series of studies on this topic.

The choice of specific topics in the future will be influenced by the investigators recruited, and by the interests of, and resources made available by, the Faculty of Medicine and other sections of the University.

## 10.5 MENTAL HEALTH

**Significant advances have been made in the field of clinical psychiatry and in the treatment of mental illness during the past three decades. The development of psychotropic drugs, new therapeutic techniques and improved methods of clinical practice have revolutionised the mental hospital from an institution for the incarceration of lunatics to a modern hospital geared to the care and rehabilitation of the sufferers of psychiatric disorders. In Tasmania a range of services for the mentally ill and the intellectually handicapped are provided by the Mental Health Services Commission, a statutory authority established in 1967.**

### 10.5.1 Adult Psychiatric Services

Adult psychiatric services are provided from the Royal Derwent Hospital, psychiatric units within general hospitals and various community based clinics located throughout the State.

The Royal Derwent Hospital at New Norfolk in the south is the State's principal centre for treatment of patients suffering severe and chronic psychiatric illness. About 300 beds comprising eight wards, cater for medium to long-term management, acute close management and rehabilitation, with active and individualised programs replacing custodial care wherever possible. Residential accommodation is also supplied for long-term psychotic patients. A psychiatric unit, located at the Royal Hobart Hospital has 23 beds available for acute cases presented to casualty as well as from general referral sources. This unit also has a major teaching function at undergraduate and post-graduate levels. As well, three Community Centres providing general community access in addition to dealing entirely with many patients who need no hospital intervention, provide an alternative to hospital admission. From these Centres, a team approach comprising psychiatry,

psychology, social work and nursing has been developed. Day Centres for elderly brain failure patients are located in South Hobart and Lindisfarne where specialist consultation, respite care and assessment are provided. Long-term care for the more chronically disabled people is also co-ordinated from Hobart.

The north of the State is serviced by the Lindsay Miller Clinic attached to the Launceston General Hospital, and the north-west by the Spencer Psychiatric Clinic and the Devon Clinic located at the North-Western and Mersey General Hospitals respectively. The Lindsay Miller Clinic provides a psychiatric service to the northern region for a population of 121 000. The Clinic has 16 in-patient beds and provides a service for acute and chronic patients on an in-patient, out-patient and day-patient basis. It also provides a liaison service to the hospital, and a community service.

The Spencer Psychiatric Clinic has 17 in-patient beds and out-patient facilities. The unit is also recognised as an Alcohol and Drug Dependency Treatment Centre and provides comprehensive medical treatment for all psychiatric disorders. At the Oldaker Street Clinic in Devonport clients are dealt with on an out-patient basis, with referral to the in-patient facility (Devon Clinic) when necessary. Psychiatric assessment, medical treatment, counselling and psychotherapy using a team approach are available.

### 10.15 ADULT PSYCHIATRIC PATIENTS, TASMANIA, 1986-87

| <i>Hospital/Clinic</i> | <i>Admissions</i> | <i>Out-patients/<br/>Day-patients</i> |
|------------------------|-------------------|---------------------------------------|
| Royal Derwent          | 306               | 44                                    |
| Royal Hobart           | 370               | 231                                   |
| Lindsay Miller Clinic  | 315               | 574                                   |
| Spencer Clinic         | 333               | 508                                   |
| Devon Clinic           | 324               | 99                                    |
| Other                  | -                 | 3 102                                 |
| <b>Total</b>           | <b>1 648</b>      | <b>4 558</b>                          |

### 10.5.2 Child and Adolescent Psychiatric Services

Services for young people are located in Hobart and Launceston. Operating from Clare Street, New Town, the southern service provides a multi-disciplinary approach to the management of a range of problems from temper tantrums in the pre-school child to delinquency in older children. There is a strong emphasis on a family-centred approach, and on consultation with other agencies who may also be involved with the

young person or his family. Staff in the south hold regular clinics in outlying and suburban areas such as Rokeby, Bridgewater, the Huon Valley and Kingborough.

In the north, the Oakrise Centre provides a similar style of service to that in the south although there are fewer staff. Consultations with other departments have included collaboration with the Education Department in a task force on early school leavers or 'drop outs'.

**10.16 CHILD AND ADOLESCENT OUT-PATIENTS, TASMANIA, 1986-87**

| <i>Region</i> | <i>Out-patients</i> |
|---------------|---------------------|
| North         | 953                 |
| South         | 425                 |
| Total         | 1378                |

**10.5.3 Intellectual Disability Services**

In the south, services for adults are centred at the Willow Court Residential Training Centre located at New Norfolk. The Centre manages a residential population of some 310 clients whose disabilities range from moderate to severe. The gradual re-organisation of the Centre's traditional departmental structure toward a programmatic system of service delivery has enabled an increasing emphasis on habilitation and other training for a less dependent lifestyle.

A statewide non-institutional community service organised into northern and southern regions complements the Willow Court Centre.

The northern region, which includes the north-west, is administered from the Rocherlea Training Centre in Launceston. It provides a range of services including day services for adults, community support programs, long-term

**10.17 INTELLECTUAL DISABILITY SERVICES, TASMANIA, 1986-87**

| <i>Facility</i>          | <i>Admissions</i>             | <i>Individuals admitted</i> |
|--------------------------|-------------------------------|-----------------------------|
| Willow Court Centre      | 11                            | 10                          |
| Respite facility (south) | 486                           | 82                          |
| Respite facility (north) | 321                           | 85                          |
| Total                    | 818                           | 177                         |
| <i>Region</i>            | <i>Individual out-clients</i> |                             |
| South                    | 148                           |                             |
| North                    | 191                           |                             |
| Total                    | 339                           |                             |

residential accommodation, respite care, clinical consultancy and community education services.

The southern regional office, which is at present based in the grounds of the John Edis Hospital in Hobart, provides a smaller range of services than those that are available in the north. These include community support programs, respite care, clinical consultancy and community education services.

**10.5.4 Alcohol and Drug Dependency Services**

Treatment of alcohol and drug dependency in Tasmania is provided at two centres, the John Edis Hospital in Hobart and the Launceston and Northern Tasmanian Alcohol and Drug Centre at the Launceston General Hospital.

The John Edis Hospital has facilities for out-patient, day-patient, and in-patient care as well as a 10-bed detoxification unit. The northern centre provides medical assessment and treatment

**10.18 ALCOHOL AND DRUG SERVICES, TASMANIA, 1986-87**

| <i>Facility</i>    | <i>Admissions</i>                  | <i>Individuals admitted</i> |
|--------------------|------------------------------------|-----------------------------|
| John Edis Hospital | 600                                | 425                         |
| <i>Region</i>      | <i>Individual Out/Day patients</i> |                             |
| South              | 790                                |                             |
| North              | 268                                |                             |
| North-west         | 156                                |                             |
| Total              | 1214                               |                             |

***Alcohol and School Students***

Survey research commissioned by the Alcohol and drug Dependency Board of Tasmania and released in 1986 showed:

- Most children have their first drink at home, under parental supervision, before the age of 11 or 12.
- The prevalence and frequency of drinking increases with age.
- Drinking prevalence and frequency has increased markedly over the last 15 years.
- The major psycho-social factors influencing drinking patterns are the relationships between the child and his parents and peers.

combined with individual counselling and group work. Beds are provided at the Lindsay Miller Clinic for medical treatment of a short duration while detoxification is managed at the hospital. In the south the service is planning to commence locally-based clinics at health centres.

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