

# Appendix IV: Geography & demography of Victoria

## Location

Victoria is illustrated in the map. It lies between latitude 35°S and 39°S and longitude 141°E and 150°E. It is bounded to the north by New South Wales (NSW) and to the west by South Australia.

## Area

Victoria has a land area of 227,600 km<sup>2</sup>. It is slightly smaller than Great Britain and is the smallest of the mainland states of Australia with just under 3% of the total area.

## Relief and physical geography

Most of the state is below 200 m in altitude but a hilly backbone extends east-west across the state. This belt of high country separates the riverine plains of the Murray and the sand plains of the Mallee and Wimmera to the north from the plains and uplands of the coastal area to the south. The highest point is Mt. Bogong with a height of 1,986 m. The eastern uplands are heavily forested and receive more rainfall than the west. The western uplands are lower in relief and are a mixture of woodlands and cleared cropland.

## Geology

Victoria has a complex geology and a rich variety of minerals. It has enormous reserves of oil, natural gas and brown coal. The gold rushes of the 1850s played a role in the development of the state and gold is still being mined, as are copper, zinc and silver.

## Climate

Because of the uplands running east–west and the prevailing south-east to south-west winds, the south of the state receives more rain than the north. The moderating effect of the sea (no point in Victoria is more than 380 kms from the ocean) means that snow is rarely seen below 600 m and there are no permanent snowfields. Summer temperatures, especially when air is advected from the Australian land mass to the north, may exceed 35°C.



## Population numbers

The estimated population in 2004 comprised 4,962,970 persons, making Victoria the second most populous state after New South Wales. One in four Australians lives in Victoria.

The Aboriginal population was 25,078 (0.5% of Victorian total and 6% of national indigenous population) at the 2001 census.

## Population distribution

Almost three-quarters of the population live in the Melbourne Metropolitan Area and most of the remainder live in small provincial cities with 0.1% living in remote areas. The average Victorian population density is 22 persons per km<sup>2</sup> (Australia 2.5 persons per km<sup>2</sup>) ranging from less than 2 in the Wimmera to 462 in Melbourne Statistical Division.

## Age and sex

The age-sex distribution is shown in the population pyramid. Although the shape of its pyramid has been modified by its immigrant history, Victoria has the type of population distribution expected in a country of late demographic transition. With a declining birth rate, a steady ageing of the population can be expected and the pyramid will become increasingly rectangular as more people survive to older ages and the younger strata are not replaced.

## Ethnicity

At the 2001 census, 23% of the population was described as overseas born. Of these 1,025,106 persons, 22% were from Southern Europe (Italy 9%, former Yugoslavia 6%, Greece 6%), 21% from Great Britain, 20% from the Middle East, 12% from Asia (Vietnam 5%, China 5%, India 3%, Sri Lanka 2%), 7% from the rest of Europe and USSR, and smaller numbers from North and South America, Africa and Oceania.

## Employment

The employed population numbered 2,303,100 persons (2001 census), with an unemployment rate of 6.2% of the labour force. Of those employed, 8.6% were managers and administrators, 20.1% were professionals, 11.5% were associate professionals, 12.9% were tradespersons, 30.2% were clerical, sales and service workers, 8.9% were production and transport workers and 7.8% were labourers and related workers.

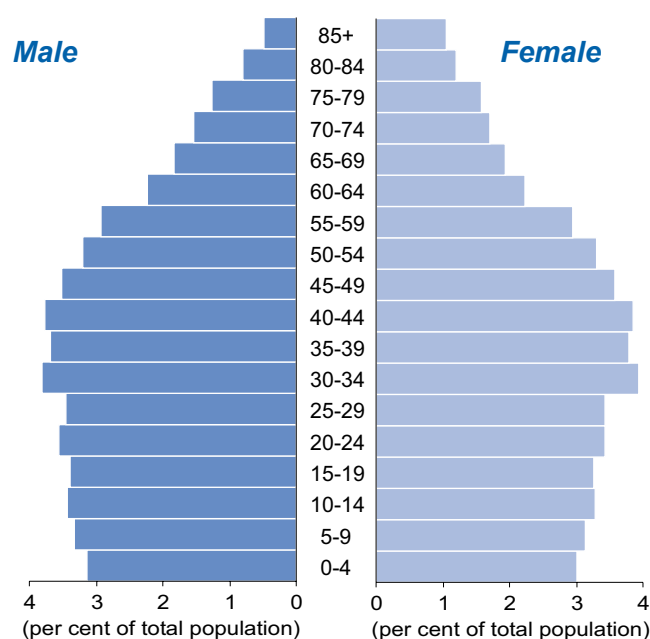
## Vital statistics

The birth rate has been steadily declining since the early 1970s. In 2003 the Victorian crude birth rate was 12.4 per 1,000 population.

Life expectancy at birth was, in 1999–2003, 77.0 years for males and 82.4 for females. Since 1982 this has increased by sex and four years in males and females respectively.

There were 32,522 deaths registered in 2004 of which cancers accounted for 29%, ischaemic heart disease for 18%, cerebrovascular disease 9%, motor vehicle accidents 1% and diabetes 3%. The crude death rate was 6.5 per 1,000. The masculinity of deaths was 102 males per 100 females.

Population pyramid, Victoria 2004



Estimated Resident Population, Victoria 2004

Age	Males	Females	Persons
0-4	156,071	149,625	305,696
5-9	164,596	155,508	320,104
10-14	170,634	162,626	333,260
15-19	168,297	161,632	329,929
20-24	176,556	170,633	347,189
25-29	171,790	170,552	342,342
30-34	189,287	195,732	385,019
35-39	182,873	187,763	370,636
40-44	187,444	191,233	378,677
45-49	174,164	177,760	351,924
50-54	158,572	163,673	322,245
55-59	145,292	146,503	291,795
60-64	110,483	110,498	220,981
65-69	90,711	95,697	186,408
70-74	76,119	84,161	160,280
75-79	62,845	78,395	141,240
80-84	39,299	59,764	99,063
85+	23,888	52,294	76,182
<b>Total</b>	<b>2,448,921</b>	<b>2,514,049</b>	<b>4,962,970</b>

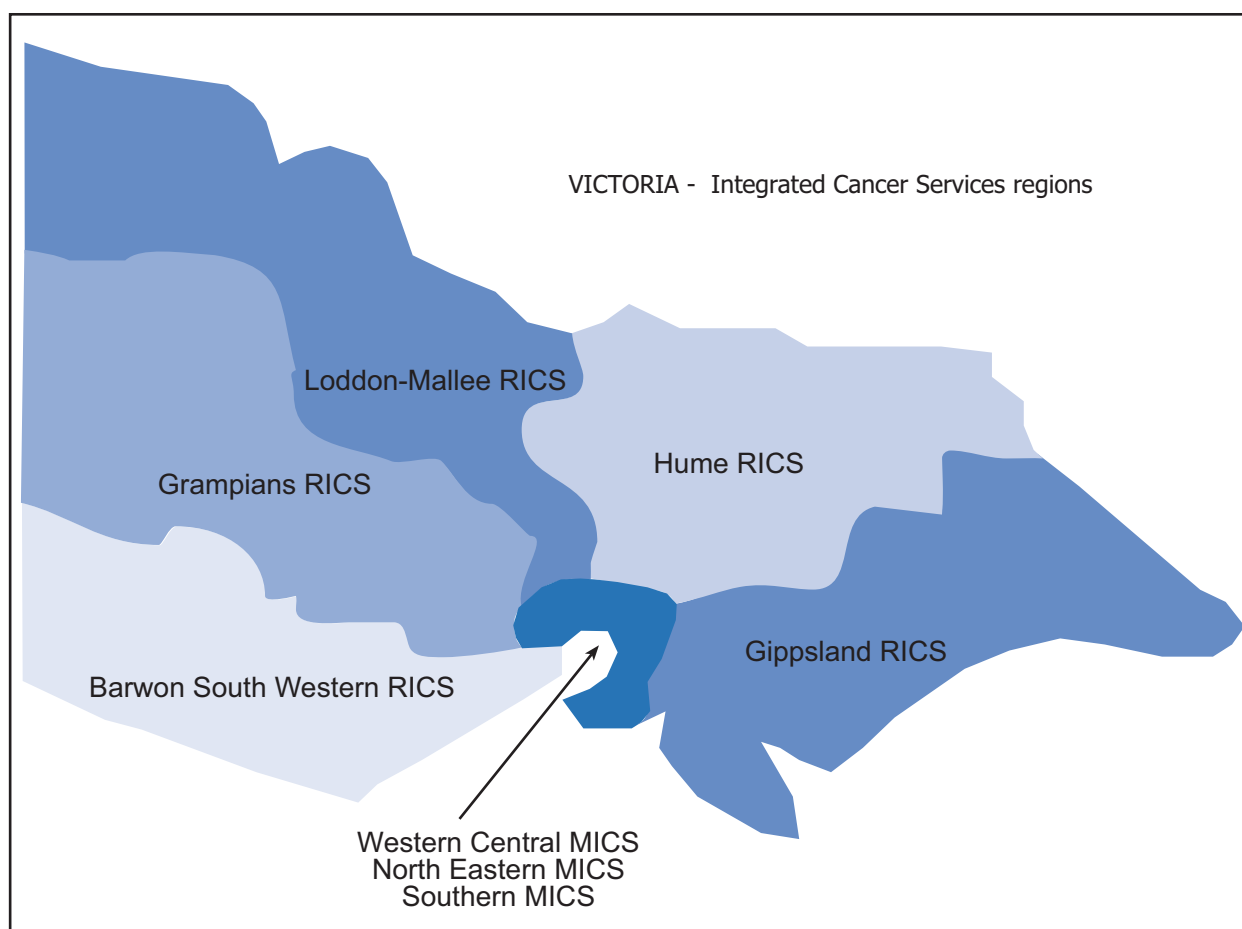
Source: Australian Bureau of Statistics. Estimated resident population by sex and age: states and territories of Australia. (Cat. No. 3201.0)

# Appendix V: The delivery of cancer services in Victoria

Following a review of cancer services in 2002<sup>1</sup>, Victoria was divided into eight “Integrated Cancer Services” regions. These Integrated Cancer Services (ICS) regions include three metropolitan regions - Southern, Western & Central and North Eastern Metropolitan Integrated Cancer Services (MICS) regions and five rural regions - Barwon South Western, Grampians, Loddon-Mallee, Hume and Gippsland Regional Integrated Cancer Services (RICS) regions – brief details of the demography and provision of cancer services in each ICS region are given below.

The ICS are broadly consortia of public health services. Many private hospitals also provide cancer services and some ICS are actively working with private providers. The data presented in this report relate to cancers treated in both public and private facilities and are divided into regions according to the patient’s residential address rather than by the hospitals at which they were treated. In addition to the eight ICS regions there is a statewide paediatric ICS comprising the Royal Children’s Hospital, Monash Medical Centre and Peter MacCallum Cancer Centre. For the purposes of this report paediatric cancers are included under their relevant ICS region based on place of usual residence.

1. *A Cancer Services Framework for Victoria and future directions for the Peter MacCallum Cancer Institute.* Barton M, Frommer M, Olver I, Cox C, Crowe P et al for The Collaboration for Cancer Outcomes Research and Evaluation. July 2003.



## Southern MICS

**Population** This region contained 1,334,007 residents in 2004 – it is the most populous of the ICS regions and includes 27% of all Victorians. Of these, 25% were aged under 20 years and 14% were aged 65 years and over.

**Cancers** In 2004, a total of 6,429 residents were newly diagnosed with an invasive cancer and 2,631 residents died from cancer. Of the residents newly diagnosed with cancer, 33% were admitted to at least one hospital outside the region during their first 12 months of treatment.

---

**Hospitals** Bayside Health, Southern Health, and Peninsula Health.

**Radiotherapy services** Public – The Alfred (Prahran), Peter MacCallum Cancer Centre at Monash Medical Centre (Moorabbin). Private – Radiation Oncology Victoria at Frankston

**Palliative Care** Community – Peninsula Hospice Service, South East Palliative Care, Calvary Health Care Bethlehem.

Hospitals with specialist palliative care beds – Calvary Health Care Bethlehem, Monash Medical Centre Clayton, Casey Hospital, Peninsula Health.

## Western & Central MICS

**Population** This region contained 1,023,519 residents in 2004 (21% of the Victorian population). Of these 26% were aged under 20 years and 11% were aged 65 years and over.

**Cancers** In 2004, a total of 3,935 residents were newly diagnosed with an invasive cancer and 1,618 residents died from cancer. Of the residents newly diagnosed with cancer, 23% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Melbourne Health, Royal Women's Hospital, Western Health, Peter MacCallum Cancer Centre, Mercy Werribee Hospital and St Vincent's Health.

**Radiotherapy services** Public – Peter MacCallum Cancer Centre at Peter MacCallum Cancer Centre (East Melbourne). Private – Epworth Hospital (Richmond), Radiation Oncology Victoria at Freemasons Private Hospital (East Melbourne), Western Private Hospital (Footscray).

**Palliative Care** Community – Mercy Western Palliative Care, Melbourne City Mission Palliative Care.

Hospitals with specialist palliative care beds – Mercy Werribee Hospital, St Vincent's Health Service and Western Health.

## North Eastern MICS

**Population** This region contained 1,243,124 residents in 2004 (25% of the Victorian population). Of these 26% were aged under 20 years and 13% were aged 65 years and over.

**Cancers** In 2004, a total of 5,951 residents were newly diagnosed with an invasive cancer and 2,207 residents died from cancer. Of the residents newly diagnosed with cancer, 47% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Austin Health, Northern Health, Eastern Health and Mercy Hospital for Women.

**Radiotherapy services** Public – Austin Health (Heidelberg) and Peter MacCallum Cancer Centre at Epworth Eastern (Box Hill). Private – Radiation Oncology Victoria at Ringwood Private Hospital.

**Palliative Care** Community – Eastern Palliative Care, Banksia Palliative Care.

Hospitals with specialist palliative care beds – Austin Health, Northern Health, Eastern Health (beds due to open 2008).

## Barwon South Western RICS

**Population** This region contained 350,801 residents in 2004 (7% of the Victorian population). Of these 27% were aged under 20 years and 16% were aged 65 years and over.

**Cancers** In 2004, a total of 1,874 residents were newly diagnosed with an invasive cancer and 801 residents died from cancer. Of the residents newly diagnosed with cancer, 24% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Barwon Health, Casterton Memorial Hospital, Colac Area Health, Hesse Rural Health Service,

---

Heywood Rural Health, Lorne Community Hospital, Moyne Health Service, Otway Health & Community Services, Portland District health, South West Healthcare, Terang & Mortlake Health Service, Timboon & District Health Service, Western District Health Service.

**Radiotherapy services** Public – Geelong Hospital

**Palliative Care** Community – Barwon Health, Bellarine Peninsula Community Health Service, Colac Area Health, Portland and District Hospital, Southwest Healthcare, Western District Health Service.

Hospitals with specialist palliative care beds – Barwon Health (McKellar Centre), Colac Area Health, South West Health Care, Portland and Western District Health Service.

## Grampians RICS

**Population** This region contained 213,316 residents in 2004 (4% of the Victorian population and, in terms of population, the smallest of the ICS regions). Of these 28% were aged under 20 years and 15% were 65 years and over.

**Cancers** In 2004, a total of 1,069 residents were newly diagnosed with an invasive cancer and 432 residents died from cancer. Of the residents newly diagnosed with cancer, 22% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Ballarat Health Services, Beaufort & Skipton Health Services, Djerrivah Health Services, Dunmunkle Health Services, East Grampians Health Services, East Wimmera Health Services, Edenhope & District Hospital, Hepburn Health Service, Rural Northwest Health, Stawell Regional Health, West Wimmera Health Service, Wimmera Health Care Group.

**Radiotherapy services** Public – Austin Health at St John of God Private Hospital (Ballarat).

**Palliative Care** Community – Central Grampians Palliative Care, Wimmera Hospice Service, Djerrivarrh Health Service, Ballarat Hospice Care.

Hospitals with specialist palliative care beds – Ballarat Health Service, Djerrivarrh Health Service, Central Grampians Health Service, Wimmera Health Care Group.

## Loddon Mallee RICS

**Population** This region contained 302,043 residents in 2004 (6% of the Victorian population). Of these 28% were aged under 20 years and 15% were aged 65 years and over.

**Cancers** In 2004, a total of 1,706 residents were newly diagnosed with an invasive cancer and 692 residents died from cancer. Of the residents newly diagnosed with cancer, 45% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Bendigo Health Care Group, Boort District Hospital, Cohuna District Hospital, Echuca Regional Health, Inglewood & District Health Service, Kerang District Health, Kyabram District Health Service, Kyneton District Health Service, Maldon Hospital, Mallee Track Health & Community Service, Manangatang & District Hospital, Maryborough District Hospital, Mclvor Health & Community Services, Mt Alexander Hospital, Mildura Base Hospital, Robinvale District Health Service, Rochester & Elmore District Health, Swan Hill District Hospital.

**Radiotherapy services** Public – Peter MacCallum Cancer Centre at Bendigo Health.

**Palliative Care** Community – Bendigo Community Palliative Care, Castlemaine Palliative Care Service, Central Goldfields (Maryborough) Community Palliative Care, Echuca Regional Health Community Palliative Care, Macedon Ranges Community Palliative Care Service (Kyneton), Sunraysia Community Health Services (Mildura) Palliative Care Service, Swan Hill Community Palliative Care.

Hospitals with specialist palliative care beds – Bendigo Health, Mildura Base Hospital.

---

## Hume RICS

**Population** This region contained 259,586 residents in 2004 (5% of the Victorian population). Of these 28% were aged under 20 years and 14% were aged 65 years and over.

**Cancers** In 2004, a total of 1,418 residents were newly diagnosed with an invasive cancer and 593 residents died from cancer. Of the residents newly diagnosed with cancer, 43% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Alexandra District Hospital, Alpine Health, Beechworth Health Service, Benalla & District Memorial Hospital, Cobram District Hospital, Goulburn Valley Health, Kilmore & District Hospital, Mansfield District Hospital, Yarrawonga District Health Service, Nathalia District Hospital, Northeast Health Wangaratta, Numurkah District Health Service, Seymour District Memorial Hospital, Tallangatta Health Service, Upper Murray Health & Community Service, Wodonga Regional Health Service, Yea & District Memorial Hospital.

**Radiotherapy services** Private – Radiation Oncology Victoria at Murray Valley Private Hospital (Wodonga).

**Palliative Care** Community – Benalla and District Memorial Hospital, Goulburn Valley Hospice, Lower Hume/Seymour Memorial Hospital, North Eastern Health Wangaratta, Numurkah District Health Service, Wodonga Regional Health Service.

Hospitals with specialist palliative care beds – Goulburn Valley Health, Seymour District Memorial Hospital, Wangaratta District Base Hospital, Wodonga Regional Health Service.

## Gippsland RICS

**Population** This region contained 246,383 residents in 2004 (5% of the Victorian population). Of these 27% were aged under 20 years and 16% were aged 65 years and over.

**Cancers** In 2004, a total of 1,422 residents were newly diagnosed with an invasive cancer and 568 residents died from cancer. Of the residents newly diagnosed with cancer, 56% were admitted to at least one hospital outside the region during their first 12 months of treatment.

**Hospitals** Bass Coast Regional Health, Bairnsdale District Health Service, Central Gippsland Health Service, Gippsland Southern Health Service, Kooweerup Regional Health Service, Latrobe Regional Hospital, Omeo District Hospital, Orbost Regional Health, South Gippsland Hospital, West Gippsland Healthcare Group, Yarram & District Health Service.

**Radiotherapy services** Public – The Alfred at Gippsland Cancer Treatment Centre, Latrobe Regional Hospital, Traralgon.

**Palliative Care** Community – Bairnsdale Regional Health Service, Gippsland Lakes Community Health, Bass Coast Regional Health Service, Bass Coast Community Health Service, Central Gippsland Health Service, Yarram & District Health Service, Latrobe Community Health Service, West Gippsland Healthcare Group, Gippsland Southern Health Services.

Hospitals with specialist palliative care beds – Bairnsdale Regional Health Service, Central Gippsland Health Service, Gippsland Southern Health Service, Latrobe Regional Hospital, West Gippsland Health Care Group, Wonthaggi & District Hospital.