

PATIENT SATISFACTION SURVEY

Patient evaluation of hospital services (all hospitals)

Patients' ratings of satisfaction with hospital services give an indication of the perceived quality of service provision. Research has shown that satisfaction is related to better health outcomes.

This year, as part of the annual Consumer Evaluation of Health Services, a sample of people who attended hospital for two days or less (including same day patients) were sent a survey in the mail. The survey was conducted continuously from August 2003 to June 2004.

The overall response rate for short stay patients who were in hospital for two days or less was 47%. The state outcome score for all short stay patients in 2003-04 was 76 out of 100 (75 for adults and 84 for adult's rating of their child's stay). The outcome scores indicate that WA hospital patients generally perceived their hospital stay as beneficial and hospitals are succeeding in their objective to restore the health of their patients.

Table 11: 2003-04 mean scale scores for patient groups with outcome score and overall indicator of satisfaction

Scales	Short stay adult	Short stay child
Information & communication between hospital staff and you	82.4	83.8
Continuity of care	80.5	80.6
Availability of people caring for you	92.2	90.1
Right to be involved in decisions about your care & treatment	49.3	54.5
Access to hospital	77.5	75.0
Meeting personal as well as clinical needs	92.3	92.2
The residential aspects of the hospital (including food)	66.9	63.2
Overall indicator of satisfaction	78.1	78.5
Patient rated outcome of hospital stay	75.1	83.6

The table above presents the seven major scales with the overall indicator of satisfaction and patient rated outcome of hospital stay by adult and child short stay patients for 2003-04. The scales are presented in order of importance as ranked by the people who completed the survey. Information and communication was seen as the most important aspect of hospital stay, and residential aspects of the hospital were seen as the least important.

Overall, the results indicate a high level of satisfaction with the availability of hospital staff, the meeting of personal needs and information and communication with hospital staff. These were also the areas which were seen as the most important to people staying in hospital for two days or less.

However, the right to be involved in decisions about care and treatment, ranked fourth in importance to patients, had the lowest rating of satisfaction and clearly indicates the need for

improvement. Two other scales (access to hospital and residential aspects of the hospital) had scores below 80 suggesting these areas could also be improved.

The ratings among short stay child respondents were significantly lower than short stay adult patients for access to hospital, residential aspects and availability of staff, and significantly higher than adult patients for client involvement in decisions and the patient rated outcome of hospital stay.

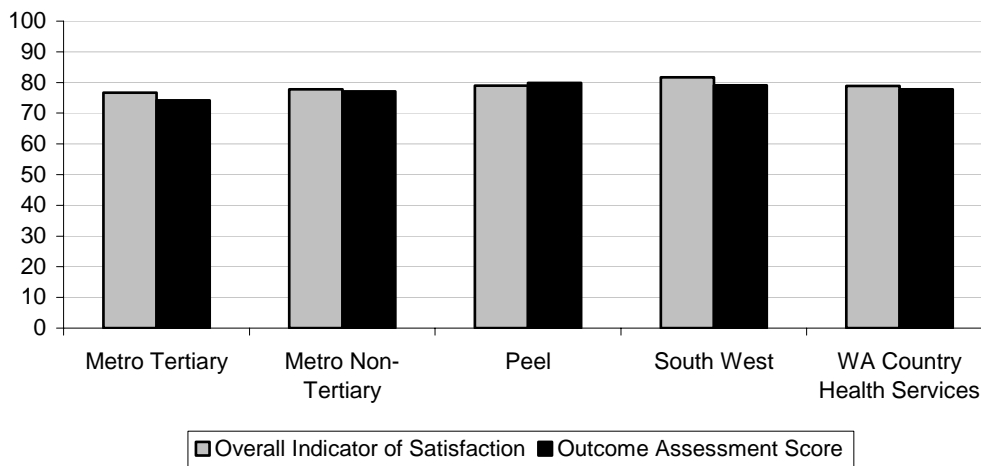
The patient rated outcome score measures patients' perceptions of the benefit of their hospital stay. The overall indicator of satisfaction measures the patients' reported satisfaction with the services received while in hospital. The figure below presents the outcome score and the overall indicator of satisfaction for adult and child short stay patients by hospital locality.

Results

The results indicate that the overall indicator of patient satisfaction was significantly lower for Metropolitan teaching hospitals compared with hospitals in WA Country Health Services and the South West. Non-teaching hospitals in the Metropolitan area and WA Country Health

Services hospitals also scored lower on overall patient satisfaction than those in the South West. The patient rating of outcomes was significantly lower for Metropolitan teaching hospitals but similar across all other hospital localities.

Figure 1: Comparison of short stay satisfaction and outcome scores by locality



Data Source

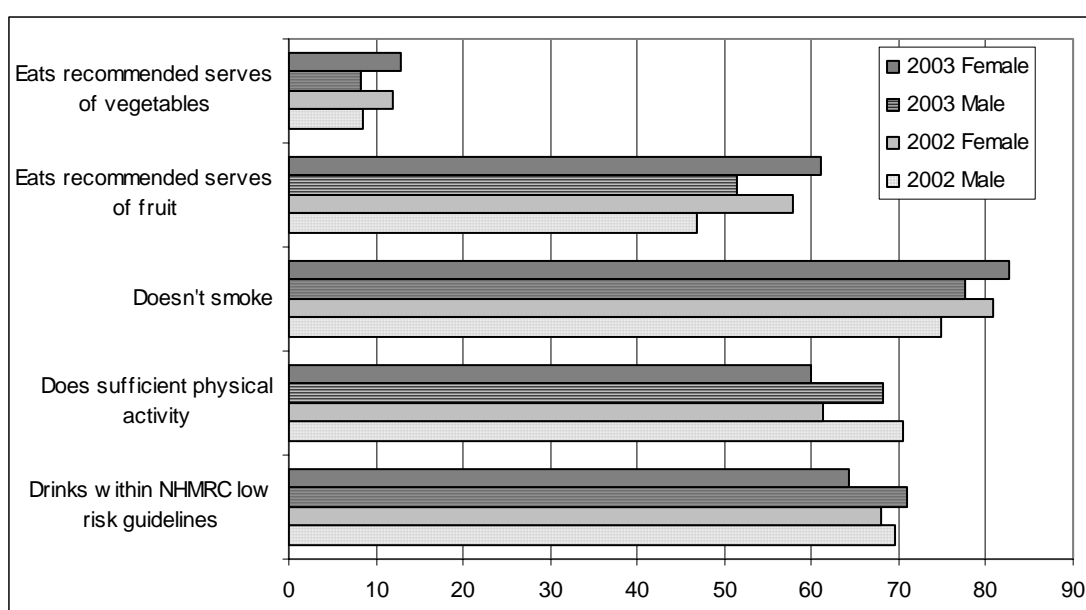
WA Consumer Evaluation of Health Services survey.

RISK FACTORS FOR DISEASE

The WA Health and Wellbeing Surveillance System started in 2002 and tracks the health status of Western Australians over time. As part of the Surveillance System, people are asked questions about their lifestyle as how people behave affects their health. Lifestyle choices that promote good health include not smoking, drinking according to the National Health and Medical Research Council (NHMRC) safe drinking

guidelines (up to two standard drinks daily for women and up to four standard drinks daily for men), doing at least 150 minutes of moderate physical activity weekly, and eating five serves of vegetables and two serves of fruit daily. The figure below compares the proportion of men and women who chose lifestyle habits that promoted good health in 2002 and 2003.

Figure 2: Proportion of people who chose lifestyle habits that promoted good health by sex: 2002 compared with 2003



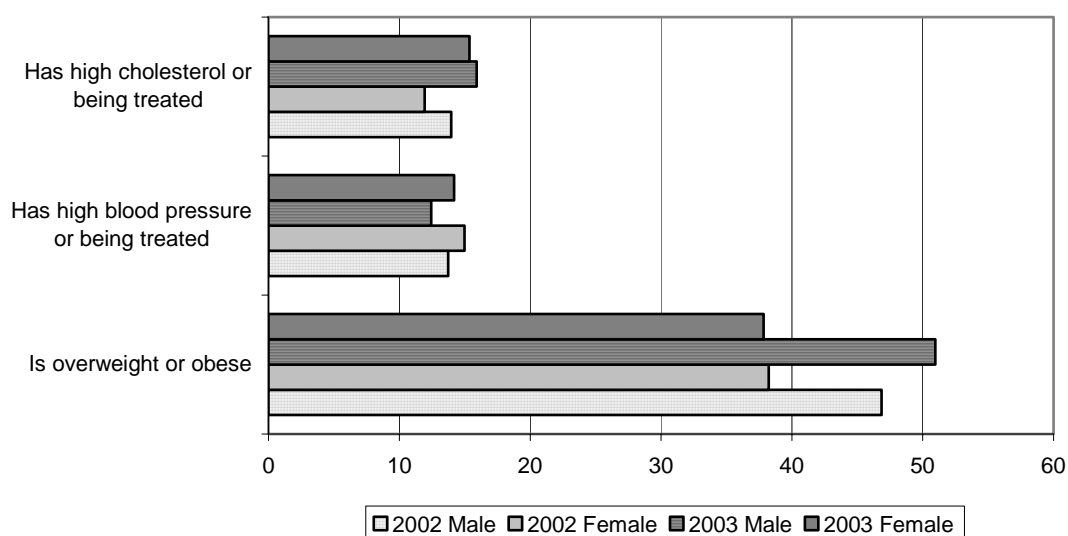
While the majority of WA people made healthy lifestyle choices, the exception was eating sufficient daily serves of vegetables. Changes between 2002 and 2003 were:

- A significantly lower proportion of women drank within NHMRC guidelines in 2003 compared with 2002.
- More men and women ate the recommended daily serves of fruit in 2003 than 2002.
- More men than women drank within the NHMRC guidelines in 2003.
- More men than women did sufficient physical activity in both 2002 and 2003.
- In both years there were more female non-smokers compared with men.
- In both years more women than men ate the recommended serves of fruit and vegetables.

The main lifestyle risk factors are smoking, excessive alcohol consumption, poor nutrition and insufficient physical activity. These behavioural risk factors also contribute to physiological risk factors such as high blood pressure, high cholesterol and obesity. As the figure below shows, almost half of the Western Australian population reported being overweight or obese and more than ten percent of adults aged sixteen and over reported having high blood pressure or high cholesterol levels.

In both years more men than women reported being overweight or obese. In 2003, more men reported being overweight compared with 2002. There were no significant differences between men and women for high blood pressure or high cholesterol levels.

Figure 3: Proportion of people who have physiological risk factors by sex: 2002 compared with 2003



The table below presents the proportion of people who chose healthy lifestyles and the proportion of people with physiological risk factors by geographic area and year.

Table 12: Risk factors by locality – 2002 compared with 2003

Lifestyle choices	Metropolitan and Peel Area Health Services		South West Area Health Service		WA Country Health Service	
	2002	2003	2002	2003	2002	2003
Drinks within NHMRC low risk guidelines*	69.5	69.0	65.4	63.5	66.7	64.7
Sufficient physical activity+	65.0	64.7	70.3	62.4	64.3	62.1
Doesn't smoke*	79.0	80.5	78.0	79.7	74.6	75.5
Eats recommended serves of vegetables	52.8	55.3	58.6	58.6	51.9	54.7
Eats recommended serves of fruit	10.2	10.1	11.5	12.7	10.8	12.2
Physiological risk factors						
Has high cholesterol levels or being treated *	40.7	42.0	47.8	47.3	45.9	46.4
Has high blood pressure or being treated *	14.5	13.7	16.3	15.9	13.4	13.5
Is overweight or obese	10.4	11.7	10.1	12.9	9.0	11.6

Note

* asked of people aged 16 and over

+ asked of people aged 16 to 64 years using the Active Australia questions

There were differences between 2002 and 2003 in geographic areas of Western Australia. These were:

- In 2003, a significantly higher proportion of Metropolitan/Peel residents drank within NHMRC guidelines compared with the South West Area and WA Country Health Services.
- In 2002, a significantly higher proportion of South West residents did sufficient physical activity compared with Metropolitan/Peel and WA Country Health Service residents.
- In 2003, a significantly lower proportion of South West residents did sufficient physical activity compared to the previous year.
- In 2003, significantly more Metropolitan/Peel than WA Country Health Service residents did sufficient physical activity.
- In 2002, there were more Metropolitan/Peel non-smokers than in the WA Country Health Service.
- In 2003, more Metropolitan/Peel and South West residents were non-smokers than in the WA Country Health Service area.

- In 2002, a higher proportion of residents in the South West area than Metropolitan/Peel and WA Country Health Services ate the recommended serves of fruit.
- In 2003, fewer Metropolitan/Peel residents ate the recommended serves of vegetables daily compared with South West and WA Country Health Service residents.

In both 2002 and 2003, a lower proportion of residents in the Metropolitan/Peel area Health Services reported being overweight or obese compared with their South West and Country counterparts. There were no significant differences between areas in either year in proportions reporting high blood pressure or high cholesterol levels.

Data Source

WA Health and Wellbeing Surveillance System, Health Information Centre, DOH.

SELF REPORTED HEALTH STATUS OF WESTERN AUSTRALIANS

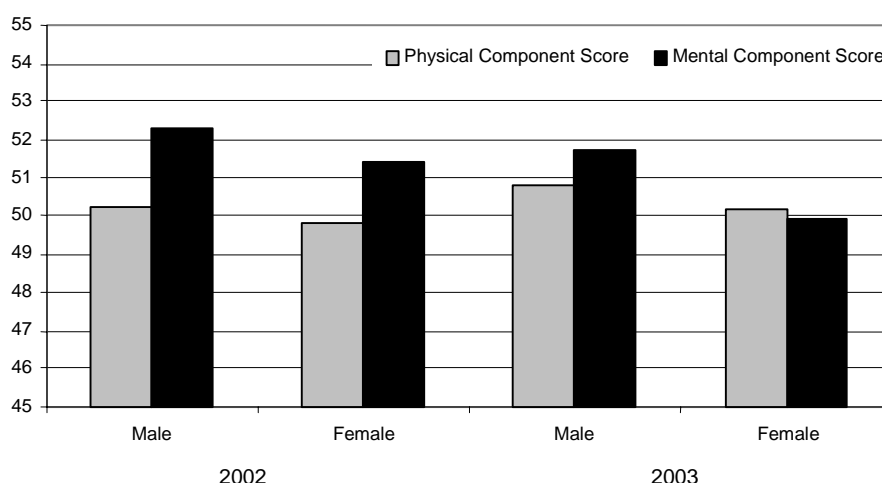
Overall health status

The health status of Western Australians can be assessed using a special version of the Medical Outcomes Short Form instrument that was designed for use with large populations. This version is known as the SF8.

The SF8 provides an assessment of a community's physical and mental health status.^a The Physical Component Score (PCS) is a measure of how health may affect physical functioning while the Mental Component Score (MCS) measures the effect of health on social and emotional functioning. The PCS and MCS can be used to describe the general mental and physical health status of a population and they also relate well to measures of social determinants. As such, they are useful population health surveys.

The scores on these measures are standardised with a mean of 50 and a standard deviation of ten. Most scores will be close to 50. Scores higher or lower than 50 indicate being higher or lower than average for the population. The WA Health and Wellbeing Surveillance System collects this important information continuously throughout the year. The figures below provide a picture of WA's physical and mental health status for the years 2002 and 2003.

Figure 4: Self-reported health status of Western Australians by sex – March 2002 to June 2003

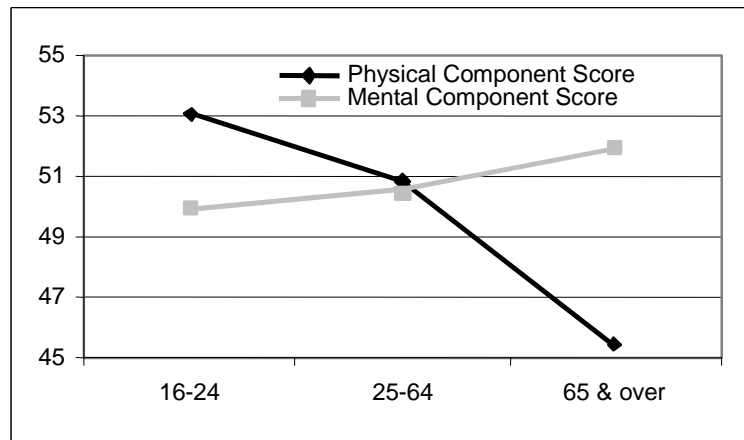


There was no statistically significant difference between men and women's physical health status in 2002 but in 2003 men reported significantly fewer effects of health on their ability to function compared with women. In both years men reported significantly fewer effects of health on their mental health status compared with women. These differences were evident across all age groups with men showing better physical and mental health functioning than women.

There were no significant differences in physical or mental health status for either males or females between 2002 and 2003.

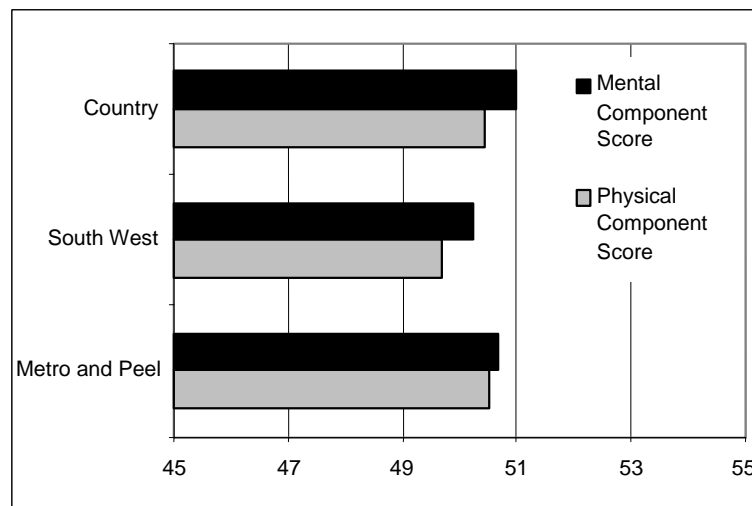
As expected, younger people reported better physical health status compared with older people. There was also an association between mental health status and age, with older people reporting better mental health status. This finding has been consistent over the years and is also found nationally and internationally.

Figure 5: Trends in Self reported health status of Western Australians by age - 2003



There were no significant differences between 2002 and 2003 over any of the age groups in either physical or mental health status.

Figure 6: Trends in self reported health status of Western Australians by locality - 2003



Residents of the WA Country Health Service reported better mental health status compared with those from the Metropolitan and Peel area Health Services. There were no other significant differences in 2003 between the geographic areas.

Method

The data came from the WA Health Surveillance System. All surveys were conducted as telephone interviews and therefore results are comparable.

Notes

1. The SF-8 is a short eight-item version of the SF-36, a thirty-six item questionnaire. Weights for each item were derived from the original SF-36 and these weights are

used in scoring the SF-8. The scoring for the SF-8 results in two summary component scores, the Physical Component Score (PCS) and the Mental Component Score (MCS). The scoring for the SF-8 is described in Ware J.E., Kosinski M.A. Dewey J.E. Gandek M.S. How to Score and Interpret Single-Item Health Status Measures: A Manual for Users of the SF-8 Health Survey. Quality Metric Inc., Lincoln RI June 2001 Third Printing.

2. Significant differences were tested using confidence intervals.

Data Source

WA Health and Wellbeing Surveillance System, Health Information Centre, DOH.

LONG TERM HEALTH CONDITIONS

While mortality and hospital morbidity statistics provide some measure of the health of Western Australians, the health status of the majority of people is not captured by these systems. Less severe illness is often managed by general practitioners, allied health or alternative health practitioners or by the person themselves. Long term health conditions, sometimes called chronic health conditions, are often ones that can be modified by changes in lifestyle.

For this reason they have been targeted as important and many of the National Health Priority Areas are ones where a large component of the health condition is preventable.

Population surveys such as the WA Health and Wellbeing Surveillance System can provide an indication of the prevalence of long term health conditions. This provides another measure of the overall health of WA.

Table 13: Prevalence of self reported long term health conditions of Western Australians by sex - 2002 and 2003

Health Condition	2002		2003	
	% Male	% Female	% Male	% Female
Heart	5.7	4.5	↑ 5.6	3.4
Stroke*	↑ 1.9	1.1	1.9	2.0
Diabetes	2.8	↑ 4.1	3.8	3.9
Cancer	4.7	5.3	4.5	5.1
Current asthma	9.9	10.2	9.4	↑12.5
Current respiratory problem other than asthma	2.7	1.9	4.0	3.8
Arthritis	18.0	↑ 24.3	16.6	↑21.8
Osteoporosis**	6.9	↑ 20.3	1.6	↑ 6.7
Current mental health condition	6.5	↑ 10.4	5.5	↑ 8.8
Injury	↑ 31.7	20.1	↑ 26.9	18.4

Arrows indicate changes of statistical significance

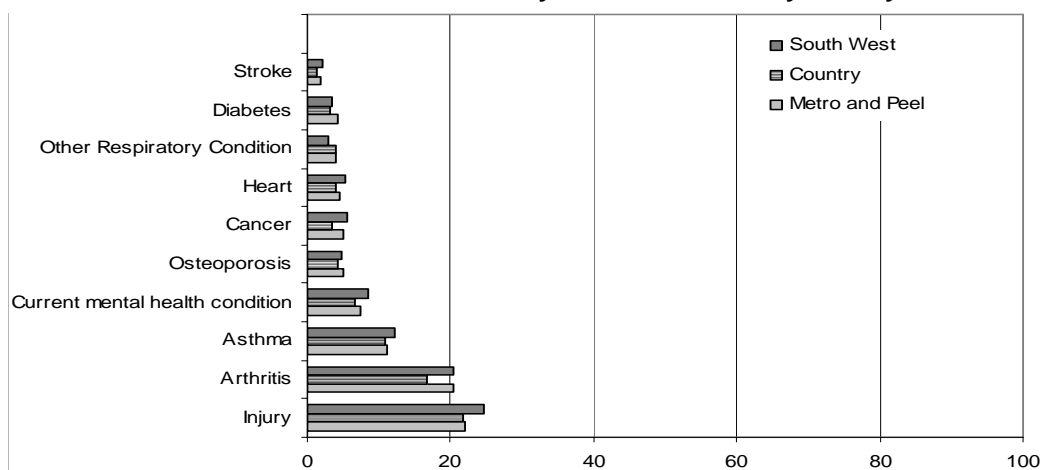
* Stroke only asked of people aged 16 years and over

** Osteoporosis only asked of people aged 65 and over in 2002; and asked of people aged 16 and over in 2003

The table shows that in 2002 more men reported having had a stroke compared with women, and more women than men reported having diabetes. These differences were not seen in 2003. In both years more men reported an injury requiring treatment compared with women. In both 2002 and 2003 more women reported having arthritis, osteoporosis or a mental health condition compared with men.

Only in 2003 did more women report having asthma compared with men, and more men than women reported having heart disease. There were no significant differences between the sexes for prevalence of a respiratory condition other than asthma and cancer in either year.

Figure 7: Prevalence of National Health Priority Area conditions by locality in 2003



Examination of the conditions by locality shows that in 2003 the only significant difference was reporting an injury during the last twelve months. A significantly lower proportion of WA Country Health Service residents reported having an injury compared with the Metropolitan and Peel regions and with the South West.

Notes

1. A long term condition is defined as a medical condition (illness, injury or disability) which has lasted for at least six months, or for which the respondent expects to last six months or more.

2. The data have been age and sex adjusted to the Estimated Resident Population for WA for the year of data collection.
3. Significant differences for long term conditions were determined using confidence intervals.
4. The Metropolitan and Peel Area Health Services were combined in the analysis.

Data Source

WA Health and Wellbeing Surveillance System, Health Information Centre, DOH.

INFORMATION ABOUT SCREENING FOR CERVICAL CANCER IN WESTERN AUSTRALIA

Percentage of target population who had a Pap smear in the past two years.

Each year in Western Australia approximately 90 new cases of cervical cancer are diagnosed and 30 women die from the disease. The Western Australian Cervical Cancer Prevention Program (WACCPP) promotes cervical cancer awareness to increase the proportion of women who regularly undergo screening, in accordance with the National Policy for Screening for the Prevention of Cervical Cancer.

The examination of smears collected from the cervix is invaluable in the early diagnosis of cancer. It can detect changes which are likely to progress to cancer long before any symptoms are produced.

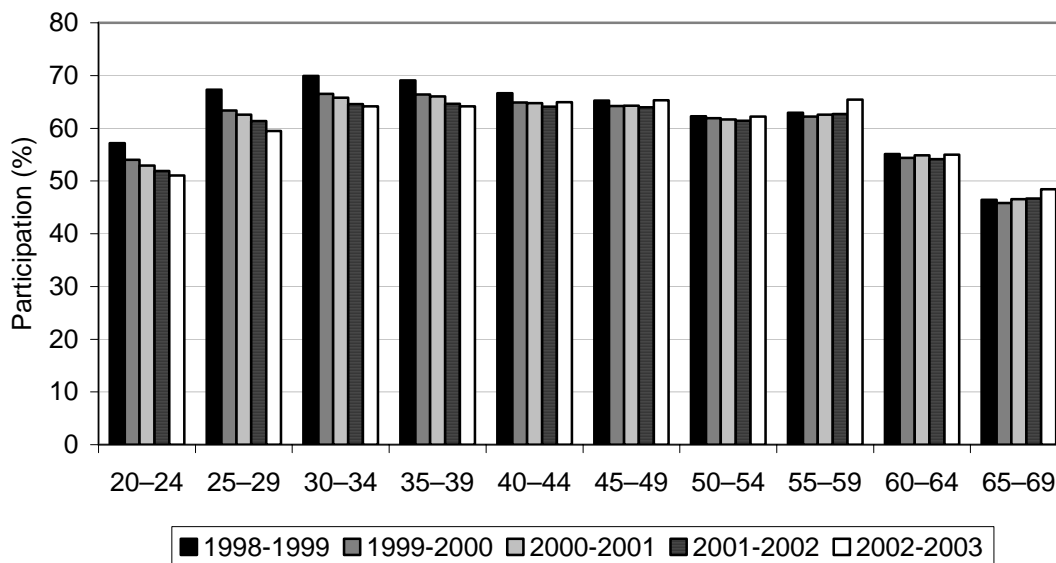
By having regular two-yearly Pap smears of well women aged 20 to 69 years, most cancers of the cervix can be prevented. Cervical screening tests are performed by medical professionals including GPs, specialist obstetricians or gynaecologists and credentialed nurse Pap smear providers.

Results

The total screening coverage among women aged between 20 to 69 years during the 2002-03 period was 61.0%, similar to the 60.8% recorded in 2001-02.

The 65 to 69 year age group have over time had the lowest participation rates, but these have increased in 2002-03. The 55 to 59 year age group had the highest participation in 2003.

Figure 8: Percentage of target population who had a Pap smear in a two-year period



Data Sources

Cervical Cytology Registry of Western Australia, Cancer Prevention and Detection Directorate, Department of Health.

Note

The population figures have been adjusted for hysterectomy (1995 and 2001 National Health Surveys). The number of women in the target population for the 2002-03 period has been based solely on the 2002 ABS ERP data (rather than an average of 2002 & 2003 ERP data), as the 2003 ABS ERP yet to be released.

INFORMATION ABOUT SCREENING FOR BREAST CANCER IN WESTERN AUSTRALIA

Percentage of target population screened for breast cancer

Breast cancer affects 1 in 11 West Australian women in their lifetime¹. Breast cancer cannot be prevented and its cause is unknown. It is the most common cause of female cancer death in Australian women.

Based on the latest evidence², the best strategy for reducing breast cancer morbidity and mortality is through early detection with a population screening program providing high quality screening and assessment services; and through effective treatment, particularly in early stage disease.

A series of international randomised trials have observed substantial reductions for breast cancer mortality of up to 30% for women aged 50 to 69 years offered breast cancer screening. Based on these trials, it is estimated that a two-yearly participation rate of 70% or more is required to obtain the most cost effective breast cancer mortality reduction³.

This indicator measures the uptake of screening in the target population of women aged 50 to 69 years.

Table 14: Participation rate in the target age group of women aged 50 to 69 years

Western Australia: 24 month screening period ending 30 June					Australia: 24 month screening period ending 31st December 2003
2000	2001	2002	2003	2004	
53%	56%	56%	55%	57%	57%

The age standardised national participation rate for women in the target age group for 2001-02 was 57.1%, a slight increase from 56.9% in 2000-01. The WA participation rate was equal to the most recently available national rate.

The WA participation rate for the 24 months to June 2004 was 57%, an increase of two percent against the 24 month rate to the previous year. This has increased since the 24 month screening period to 2000, when the rate was 53%. Although the number of screens has risen each year, the participation rate dropped in 2003 due to an increase in the female target age population.

BreastScreen WA is part of BreastScreen Australia, a jointly funded Program between Commonwealth, States and Territories, and provides a breast cancer screening and assessment program for Western Australian women.

A performance objective of BreastScreen Australia is to maximise the participation of women aged 50 to 69 years, with the aim of screening 70% of this group every two years.

- 1 Threlfall TJ, Thompson JR (2003) Cancer incidence and mortality in Western Australia 2001. Department of Health, Western Australia, Perth. Statistical Series No. 68.
- 2 Commonwealth Department of Health and Family Services and AIHW (1998). National Health Priority Areas Report on Cancer Control 1997. AIHW Cat. No. PHE 4.
- 3 Commonwealth Department of Health and Aging. BreastScreen Australia National Quality Management Committee, National Accreditation Standards (2001).

Note

The estimated target population was derived from the Australian Bureau of Statistics Estimated Resident Population by Age, Sex and Statistical Local Area.

Data Sources

Mammography Screening Registry, BreastScreen WA, Department of Health, WA.
 Australian Institute of Health and Welfare (AIHW) 2003, *BreastScreen Australia Monitoring Report for 2000-2001*. AIHW Cat. No. CAN 20. Canberra: Australian Institute of Health and Welfare (Cancer Series no. 25).
 Australian Institute of Health and Welfare Canberra, *BreastScreen Australia Monitoring Report for 2002 (draft)*.

INFORMATION ABOUT SCREENING FOR BREAST CANCER IN WESTERN AUSTRALIA (CONT)

BreastScreen small invasive cancer detection rate for women screened

Early detection of breast cancer means discovery of cancers while they are small and have not spread, or metastasised, beyond the breast. The smaller the size of the cancer at diagnosis the better the chance of effective treatment. The mortality reduction that can be achieved from population screening is determined by the rate of small pre-metastatic cancers detected. Women whose breast cancer is localised to the breast at diagnosis have a five year survival rate of 90%.¹

Small invasive cancers are defined by BreastScreen Australia as those less than or equal to 15mm in diameter. The National Accreditation Standard for small invasive cancer detection is set at 25 or more cancers of 15mm or less per 10,000 women aged 50 to 69 years who attend for screening².

The standard was chosen on the basis of crude data for screens in 1997 from all States and Territories and is comparable to rates achieved in a number of international breast screening programs.

BreastScreen WA detected 294 invasive breast cancers for the calendar year 2003 in women aged 50 to 69 years. Of these, 165 (56%) were invasive breast cancers less than or equal to 15mm in diameter. There were 58,819 women aged 50 to 69 years screened in that 12-month period. The rate of small invasive cancers detected is thus 28 per 10,000 women screened. This rate exceeds the 25 or greater per 10,000 women screened recommended by the BreastScreen Australia National Accreditation Standards.

Table 15: Detection rate of small invasive cancer per 10,000 women screened by BreastScreen WA

Detection rate of small invasive cancer per 10,000 women screened by BreastScreen WA	2001	2002	2003
		29	30

Note

Results for the period January to December 2003 is reported here as collection of data after that period is not yet complete.

Data Sources

Mammography Screening Registry, BreastScreen WA, Department of Health, WA.
 Australian Institute of Health and Welfare (AIHW) 2003, *BreastScreen Australia Monitoring Report for 2000-2001*. AIHW cat. no. CAN 20. Canberra: Australian Institute of Health and Welfare (Cancer Series no. 25).

¹ Supramaniam R, Smith D, et al. Breast Cancer Survival in NSW in 1973 to 1995. Sydney: NSW Cancer Council, 1998.

² Commonwealth Department of Health and Aging. BreastScreen Australia National Quality Management Committee, National Accreditation Standards (2001).

LIFE EXPECTANCY AT BIRTH OF WESTERN AUSTRALIANS

Life expectancy is the average number of years of life a person can be expected to live, if current age-specific mortality rates do not change throughout the person's lifetime. However, as mortality rates change, so does life expectancy. In the earlier part of the twentieth century, reductions in infant and child mortality - particularly through the diminished impact of infectious diseases in childhood and early adulthood - were largely accountable for increased life expectancy. Since the latter half of the twentieth century, significant gains occurred through reductions in mortality rates for diseases of the circulatory system and cancer.

Although life expectancy does not provide an indication of disease severity or quality of life, it does provide an insight into the effects changes in social, economic and environmental circumstances and health care provision have had over time.

Results

There have been significant increases in male and female life expectancy at birth for both Australians and Western Australians over the period 1984-2001. Between 1984 and 2001, Western Australian male life expectancy at birth increased by 4.7 years from 73.2 to 77.9 and for females the increase was 3.3 years from 79.6 to 82.9. During the same period, Australian male life expectancy at birth increased by 4.9 years from 72.5 to 77.4 and for females the increase was 3.59 years from 79.0 to 82.6. These increases reflect the ageing population, as well as an increase in the survival of males and females over the period.

In 2001, West Australians had a slightly better life expectancy at birth compared to their national counterparts. Females could expect to live 82.9 years compared to 82.6 years nationally, and males could expect to live 77.9 years (77.4 years nationally).

Life expectancy of Western Australian Aboriginal people compared with Northern Territory and South Australia for 1993-2001

In general, Aboriginal people have poorer health and higher mortality rates than non-Aboriginal people. Consequently, life expectancy among Aboriginal people is significantly lower than that for the rest of the population. As the quality of indigenous identification varies across Australia, comparison of WA Aboriginal statistics has been limited to those States and Territories that have been acknowledged by the ABS to have good quality data.

Figure 9: Life expectancy at birth for Western Australia and Australia by sex

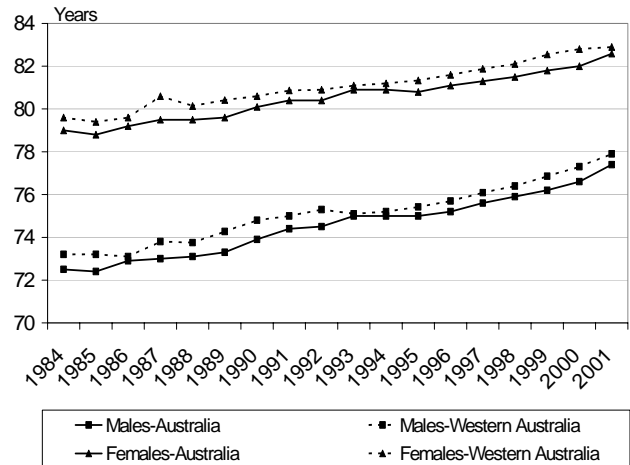


Figure 10: Life expectancy at birth for WA, NT, and SA Aboriginal males

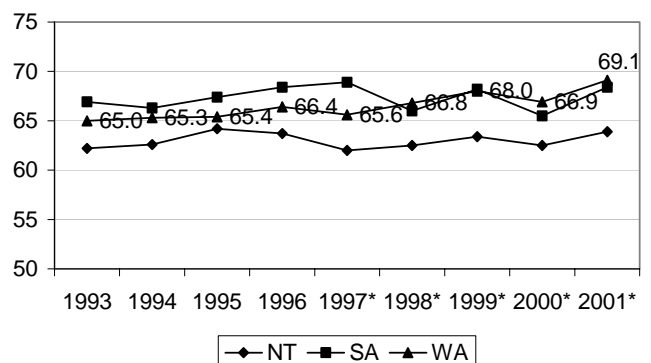
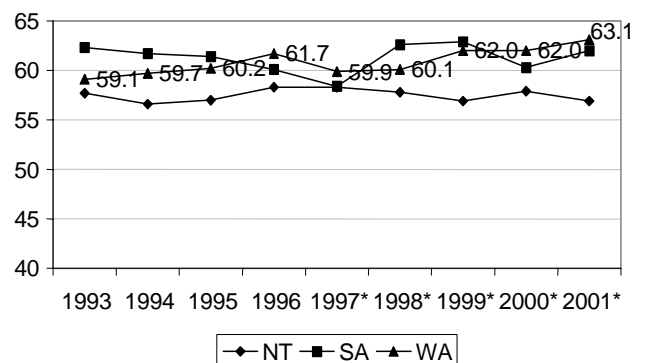


Figure 11: Life expectancy at birth for WA, NT, and SA Aboriginal females



In 2001, Aboriginal WA females had a life expectancy at birth six years higher than equivalent Aboriginal males. In 2001e, the Aboriginal WA life expectancy at birth was 63.1 years among males (NT: 56.9; SA: 62) and 69.1 years among females (NT: 63.9; SA: 68.4). This was 14.8 years less than that for all WA males (77.9) and 13.8 years less than all WA females (82.9), respectively.

During the period 1992-2001, there were significant increases in WA Aboriginal life expectancy from 59.1 years to 63.1 years for males and from 65 years to 69.1 years for females. The changes for SA and NT Aboriginal males and females were not significant.

Method

Aboriginal five-year age (up to 75 years and older) and sex-specific mortality data were used to estimate life expectancy at birth for WA, NT and SA. The number of deaths is based on year of death for 1992-2002. As NT and SA Aboriginal population figures were not available for 1997 to 2002 they were extrapolated from the 1991-1996 ABS estimates by linear regression using the Rates Calculator. The Australian and Western Australian life expectancy figures for 1992 to 2001 are derived by averaging three-year population and death data for each year (1991, 1992, 1993 = 1992; 2000, 2001, 2002 = 2001). This change, introduced by the ABS, is to reduce the impact of year to year statistical variations.

Notes

1. Changes affecting Australian and Western Australian results from 1994 on include: The population and deaths data are based on Australian residents physically present in Australia over the three year period (i.e. Australian residents physically present in Australia are included and those temporarily overseas are excluded).
2. They have been actuarially graduated on the same principles as those used for the quinquennial Australian life tables prepared by the AGA. State life tables are produced along the same principles.
3. Aboriginal life expectancy at birth, while a readily available and recognisable measure of ill health based on age-specific mortality, must be interpreted with caution. Accurate age-specific mortality rates depend not only on the adequate identification of Aboriginal deaths but also on accurate Aboriginal population figures. Between the 1991 and 1996 census there was a large increase in the number of Aboriginal people counted – more than could be explained by natural increase. The accuracy of the population estimates may vary over time and therefore make the monitoring of trends less meaningful. In addition, there is uncertainty of the accuracy of Aboriginal populations for SA and NT because these populations

have been extrapolated from the 1996 estimates due to the unavailability of more recent figures.

4. Five to six per cent of deaths for the most recent year of available data (2002) are not recorded as occurring in that year until data from the following year are available. This results in the lowering of 2002 life expectancy at birth when reported in the subsequent year. For Aboriginal deaths in WA and SA this can be as high as 10 to 20 per cent, and even higher within the NT.
5. WA, NT and SA Aboriginal life expectancy at birth is reported as per the Australian and Western Australian life expectancy (refer Method.) and is based on three years of averaged population and death data for each year.
6. To achieve consistency with results routinely reported during the year for WA Aboriginals, Rates Calculator WA Aboriginal population data has been used to calculate life expectancy at birth as opposed to the ABS Experimental Estimates for WA. This report uses WA figures with an oldest age category of 75 years and older for consistency with the ABS Experimental Estimates. Results differ from those reported in previous annual reports for this reason, but provide a consistent population denominator for WA and reduce the impact of year-to-year statistical variations.
7. The 1984-2001 life expectancy at birth for Australia and Western Australia is as reported by the Australian Bureau of Statistics (ABS) in Catalogue numbers 3311.5, 3311.5.55.001 and 3302.0. Annual life tables were calculated by the Australian Statistician until 1994. From 1995, the life tables have been produced as a joint venture between the ABS and the Australian Government Actuary (AGA).

Data Sources

Mortality database, Health Information Centre, WADOH.
Abraham B, d'Espaignet and Stevenson C (1995). Australian health trends 1995. Canberra: AIHW.
ABS (1994, 1996-03). Demography Western Australia 1994-01. Catalogue No. 3311.5 Canberra: ABS.
ABS (2004). Demography Western Australia 2002. Catalogue No. 3311.5.55.001 Canberra: ABS.
ABS (1997-2003). Death Australia 1996-2002. Catalogue No. 3302.0. Canberra: ABS.
ABS (1998). Experimental Estimates of the Aboriginal and Torres Strait Islander Population, 1991 to 1996. Catalogue No. 3230.0.

BURDEN OF DISEASE

The burden of disease and injury in Western Australia was quantified by estimating the Disability-Adjusted Life Years (DALYs) for the population in 2000. DALYs are a summary health measure, which combine fatal and non-fatal health outcomes into the same metric. Because the measurement incorporates the disability component of a comprehensive range of diseases it extends the scope of health outcomes assessed in comparison to traditional death and hospitalisation data. Also, the method for calculating DALYs has the advantage of relying on population-based epidemiological rather than health service utilisation data, which contain admission and access bias.

In 2000 the estimated crude rate of disease and injury burden in Western Australia was 118 DALYs per 1,000 population and age-standardised to the Australian 1996 population this represents 122 DALYs per 1,000 compared with 137 per 1,000 for Australia in 1996.

In terms of major disease groups, cardiovascular disease, cancers and mental disorders accounted for more than half of the burden among both genders. Among males, injuries contributed 13% of the burden in comparison to 6% among females. Neurological conditions contributed 13% of the burden among females and only 9% among males. Musculoskeletal disorders accounted for 5% of the female burden, but only 3% of the male burden.

Apart from ischaemic heart disease, which was the leading cause of burden among both genders in Western Australia in 2000, the leading causes of burden differed between the genders. Among males smoking-related diseases (lung cancer and chronic obstructive pulmonary disease) and injuries (suicide and self-inflicted injury, road traffic accidents) were major contributors to burden. Mental disorders (dementias and depressions) as well as breast cancer accounted for a major proportion of the burden among females. Stroke and diabetes ranked highly among both genders.

Most of the leading causes of disease burden in WA during 2000 were also among the leading causes in Australia in 1996. Although ischaemic heart disease and stroke were the two leading causes in both WA and Australia, the proportion of burden attributed to each condition in WA in 2000 was lower than in Australia in 1996. Decreasing death rates for cardiovascular disease may explain this difference. A higher proportion of total

burden was attributed to dementia, particularly among females, in WA in 2000 than in Australia in 1996. The higher ranking of depression, road traffic accidents and suicide and self-inflicted injuries in WA than in Australia may be explained by the younger age structure in WA.

Figure 12: Proportion of disease and injury burden by major disease group in males

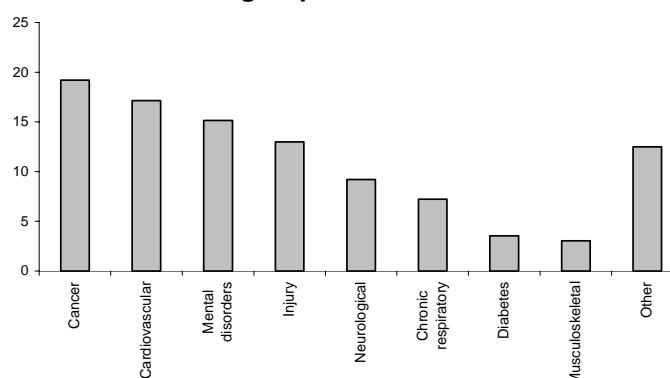
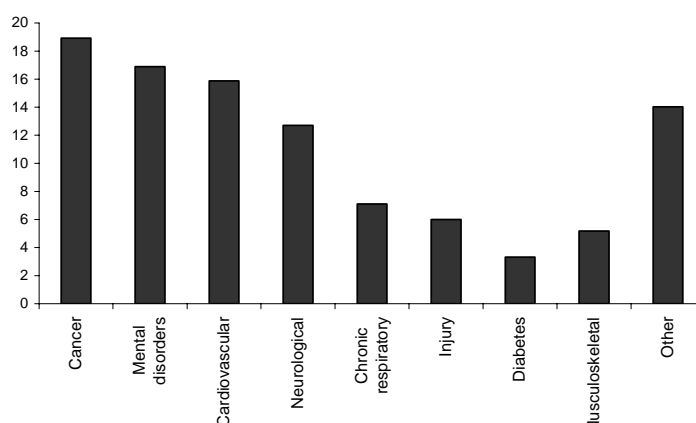


Figure 13: Proportion of disease and injury burden by major disease group in females



Most of the leading causes of disease burden in WA during 2000 were also among the leading causes in Australia in 1996. Although ischaemic heart disease and stroke were the two leading causes in both WA and Australia, the proportion of burden attributed to each condition in WA in 2000 was lower than in Australia in 1996. Decreasing death rates for cardiovascular disease may explain this difference. A higher proportion of total burden was attributed to dementia, particularly among females, in WA in 2000 than in Australia in 1996. The higher ranking of depression, road traffic accidents and suicide and self-inflicted injuries in WA than in Australia may be explained by the younger age structure in WA.

Figure 14: Leading specific causes of disease and injury burden by gender

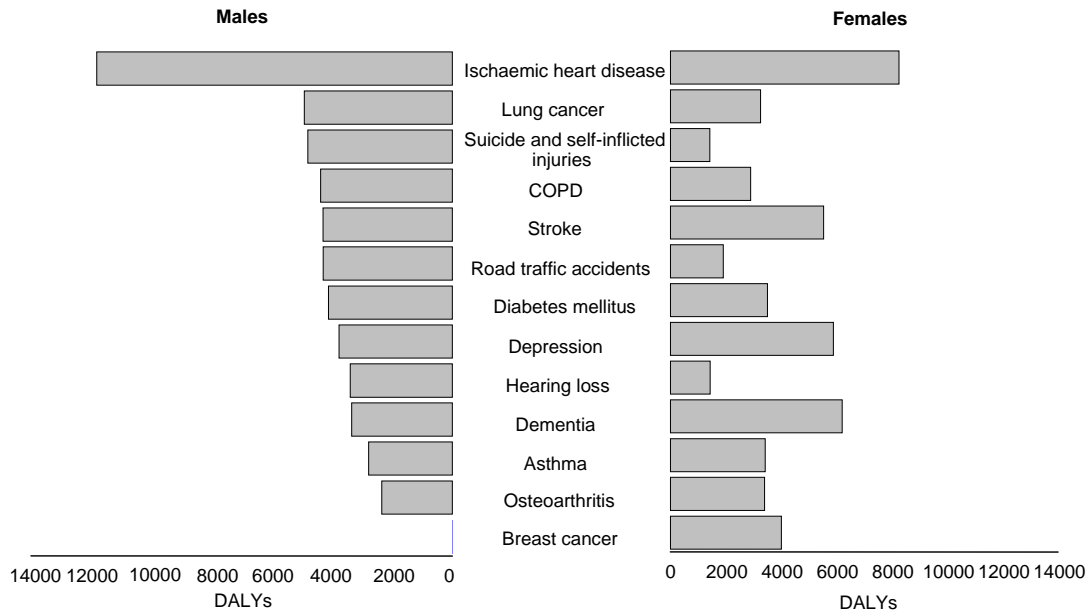
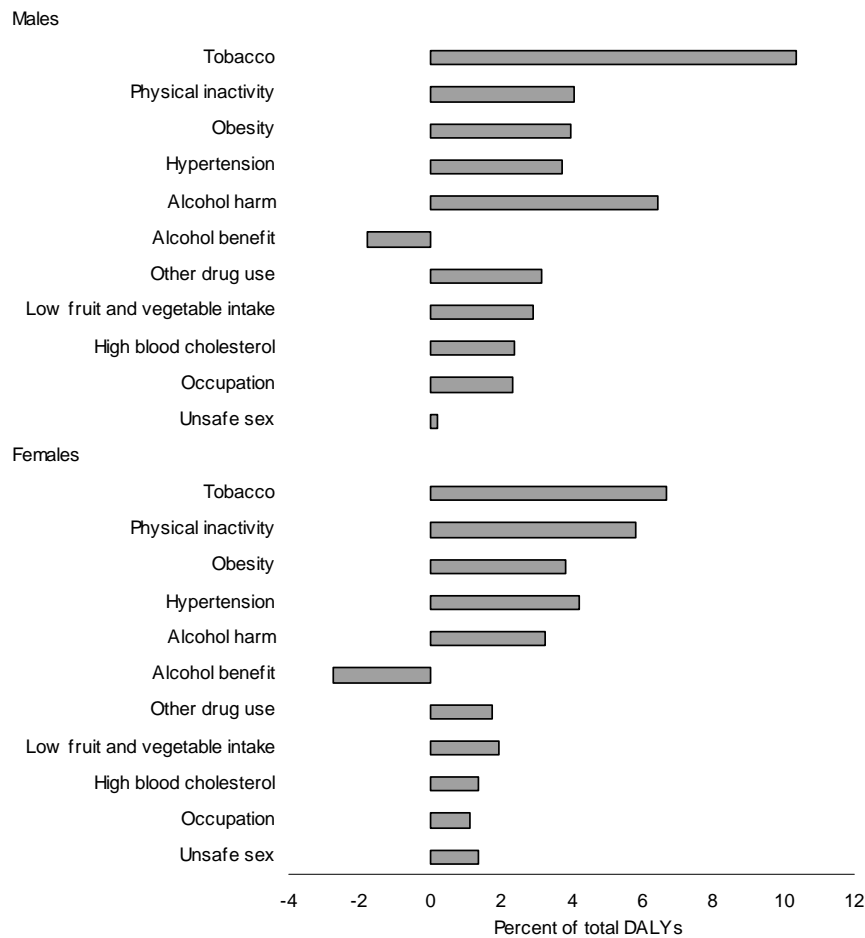


Figure 15: Proportion of total disease burden attributed to selected modifiable risk factors, by gender



The size of the burden attributed to risk factors suggests that current interventions need to be maintained while new interventions are investigated. Tobacco smoking was responsible for the greatest burden of disease in both males (10.3%) and females (6.7%), of the ten modifiable risk factors. Physical inactivity, hypertension and obesity were ranked next. Each was associated with about four to five percent of the overall burden. Although the overall burden attributed to alcohol was offset by the cardiovascular benefits of alcohol, there was a net burden of 2.3% as a result of harmful and hazardous drinking. Among males, the amount of burden attributed to alcohol harm was ranked second to tobacco smoking with a greater burden attributed to males than females. Males also had greater burden attributed to other drugs use and occupational exposures. Females had greater burden associated with physical

inactivity and unsafe sex, largely due to the prevalence of cervical cancer. At present, the attribution of burden to inadequate consumption of fruit and vegetables is conservative, but it is the only dietary component for which the overall burden can be quantified. Levels of obesity, hypertension and blood cholesterol are associated with dietary behaviour and provide additional indicators of the burden attributable to poor nutrition.

References

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PREVALENCE OF DEPRESSION AMONG ADULTS (18 YEARS AND OVER)

Rational

It is estimated that depression will be the second largest contributor to the world's disease burden by 2020¹. Depression causes considerable disability and distress and is associated with an increased risk of suicide².

The aim of the Department of Health is to promote the health of the community, and where possible prevent the development of mental health illness, including depression.

Interventions to impact positively upon depression have been implemented across the entire continuum of care, from promotion, prevention and early intervention to treatment and maintenance of care.

The prevention and early intervention activities focus primarily on recognition and early management of risk factors that increase people's vulnerability to depression. Preventive interventions can be targeted universally at the general public, selectively at individuals or sub-groups of the population whose risk of developing depressive disorders is significantly higher than average. Specifically indicated interventions can be aimed at high-risk individuals, such as people with existing depressive disorders.

Early recognition of depressive symptoms and first episodes of disorder and the provision of evidence-based treatments are major issues for treatment interventions.

Method

The WA Health and Wellbeing Surveillance system collects data on the health status of Western Australians continuously. The data is collected by a Computer Assisted Telephone Interview (CATI) and includes information on health conditions, health service utilisation, risk factors and emotional wellbeing. The Kessler 10 (K10) scale is a valid and reliable measure of current psychological distress and is one of the methods used to assess the emotional wellbeing of the WA population.

Findings

Between 2002 and 2003 the majority of Western Australians indicated that they had experienced low or moderate levels of distress in the past month. Around one in ten people (9.3%) stated that they had experienced high or very high psychological distress. Of those who did, a significantly higher proportion of females than males were likely to indicate they had experienced this level of distress.

High or very high psychological distress was significantly more prevalent among people aged 18 to 54 years, in particular females aged 35 to 44 years and males aged 45 to 54 years. High or very high distress levels were significantly less prevalent among females and males aged 65 to 74 years.

¹ Murray CJL & Lopez AD (1996). The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries and high risk factors in 1990 and projected to 2020. WHO, World Bank and Harvard School of Public Health.

² Australian Health Ministers Conference. National Health Priority Areas 1998: mental health a report focusing on depression. Commonwealth Department of Health and Aged Care, Australian Institute of Health and Welfare.

Table 16: Prevalence of psychological distress among Western Australians in 2002-03 by age and sex

Age	Female		Male		Persons	
	Low or Moderate distress (%)	High or very high distress (%)	Low or Moderate distress (%)	High or very high distress (%)	Low or Moderate distress (%)	High or very high distress (%)
18-24	87.5	12.5	90.7	9.4	89.0	11.0
25-34	89.9	10.1	94.1	8.6	90.5	9.5
35-44	86.2	↑13.8↑	90.4	9.7	88.1	11.9↑
45-54	87.7	12.3	89.3	10.7↑	88.4	11.6↑
55-64	91.9	8.0	91.0	9.0	91.6	8.4
65-74	93.6	6.4↓	95.8	4.3↓	94.5	5.5↓
75+	92.4	7.6	92.5	7.4	92.5	7.5
Total	89.8	↑10.2	91.7	8.3	90.7	9.3

Date Source

WA Health And Wellbeing Surveillance System.

- ↑ Indicates prevalence of distress significantly higher for females than males.
- ↑ Indicates prevalence of distress significantly higher for this specific age group compared to all females if age group is female, all males if age group is male and all persons if age group is persons.
- ↓ Indicates prevalence of distress significantly lower for this specific age group compared to all females if age group is female, all males if age group is male and all persons if age group is persons.

The table below presents the K10 results for the ten health regions.

Table 17: Prevalence of psychological distress among Western Australians in 2002-03 by Health Region

Health Region	Low or Moderate distress (%)	High or very high distress (%)
North Metro	90.9	9.1
East metro	91.0	9.0
South Metro	89.5	10.5
Kimberley	93.3	6.7
Pilbara-Gascoyne	89.4	10.7
Midwest-Murchison	91.8	8.2
Goldfields-South East	93.1	6.8
Wheatbelt	91.4	8.6
Great Southern	89.7	10.2
South West	92.1	7.9
Total	90.7	9.3

Notes

1. The K10 is designed to estimate the level of psychological distress a person has experienced in the previous four weeks.
2. Psychological distress is categorised as:
 - Low to medium levels of distress: levels considered to be 'normal' in a population and don't require any form of intervention.
 - A high level of distress: considered to indicate the need for some kind of intervention, but this need not be professional.
 - A very high level of distress: is considered to indicate the need for professional intervention.
3. The data collection period was March 2002 through December 2003.
4. Where appropriate, the prevalence rates are standardised to the WA population in the year of data collection.
5. Significant differences were determined by comparing confidence intervals.
6. With survey data there are often statistical power issues associated with Type II errors in data analysis, that is, saying there is no difference between prevalences when a 'true' difference does actually exist. This problem largely arises when doing multiple sub-group comparisons, where the overall sample is split into much smaller sub-groups. This should be taken into consideration when interpreting these results.

Data Source

WA Health and Wellbeing Surveillance System, Epidemiology Branch, Health Information Centre, Department of Health.