7. HEALTH BEHAVIOURS

Health behaviours in adulthood influence health and wellbeing. Behaviours relating to diet, physical activity, smoking (both active and passive), alcohol and drugs, immunisation against vaccine preventable diseases, cancer screening, injury prevention, and exposure to environmental risk directly influence preventable disease and premature mortality throughout adulthood. The health behaviours measured in 2004 in the New South Wales Population Health Survey included alcohol intake, cancer screening (colorectal), cancer screening (breast and cervical), immunisation, injury prevention (smoke alarm or detector in the home), nutrition, physical activity, sexual health, smoking and exposure to tobacco smoke in the home and car, and sun protection.

Alcohol

Introduction

Alcohol affects health in a number of ways including: acute physical effects, such as intoxication and alcohol overdose; chronic physical effects, such as cirrhosis of the liver, heart disease, brain damage, and memory loss; and the effects of alcohol consumption on the health of others, such as road trauma caused by drink-driving and alcohol-related violence.[1] Alcohol abuse is also associated with crime, social problems, and lost productivity.

Alcohol consumption is second only to tobacco consumption as a preventable cause of drug-related morbidity and mortality in Australia. In New South Wales in 2002, alcohol use caused an estimated 1,544 deaths (1,107 males and 437 females). This represents 4.7 per cent and 2.0 per cent of all male and female deaths respectively. In 2002–03, alcohol caused an estimated 37,991 hospitalisations (24,368 among males and 13,624 among females). This represents 2.5 per cent and 1.2 per cent of all male and female hospitalisations respectively.[2] The proportion of people in Australia who engage in high risk drinking—as measured in the National Health Survey—has not changed since 1990.[3]

Despite the major harms associated with excessive alcohol consumption, a number of health benefits are believed to accrue from low-to-moderate alcohol consumption. These include: reduced strain of chronic stress and negative life events; decreased risk of stone formation in the kidney and gall bladder; increased bone mineral density; and decreased mortality from cardiovascular disease in the middle-aged and elderly populations.[4]

To monitor levels of alcohol use in the community, in 2004 the New South Wales Population Health Survey included questions on the consumption of alcohol. Respondents were asked the following questions: 'How often do you usually drink alcohol?'; 'On a day when you drink alcohol, how many standard drinks do you usually have?'; 'In the past 4 weeks how often have you had more than 4 [if male] or 2 [if female] drinks in a day?'; 'In the past 4 weeks, how often have you had 11 or more [if male] or 7 or more [if female] drinks in a day?'; 'In the past 4 weeks how often have you had 7–10 [if male] or 5–6 [if female] drinks in a day?'.

Results

Any alcohol risk-drinking behaviour

'Any alcohol risk-drinking behaviour' was defined, as per Guideline 1 of the NHMRC Australian Alcohol Guidelines,[5] as one or more of the following: consuming alcohol every day; consuming on average more than 4 if male or 2 if female 'standard drinks' per day; or consuming more than 6 if male or 4 if female 'standard drinks' on any occasion in the past 4 weeks.

In 2004, more than one-third of the overall adult population (35.4 per cent) undertook 'any risk drinking behaviour'. The proportion of males (40.5 per cent) engaging in any risk drinking behaviours was significantly higher than the proportion of females (30.3 per cent).

Among males, a significantly higher proportion of those aged 16–24 years (53.0 per cent) and a significantly lower proportion of those aged 65–74 years (30.3 per cent) undertook any risk-drinking behaviour, compared with the overall adult male population. Among females, a significantly greater proportion of those aged 16–24 years (45.4 per cent) and a significantly lower proportion of those aged 55 years and over (ranging from 23.7 per cent among those aged 55–64 years to 18.3 per cent aged 75 years and over) were likely to undertake any risk-drinking behaviour, compared with the overall adult female population.

There was significant geographic variation in 'any risk drinking behaviour', with a significantly higher proportion of rural residents (39.2 per cent) reporting any risk drinking behaviour than urban residents (34.4 per cent). A significantly lower proportion of males in the Sydney South West (30.9 per cent) and Sydney West (32.6 per cent) Health Areas, and a significantly greater proportion of females in the Northern Sydney and Central Coast (38.0 per cent) and Greater Southern (37.4 per cent) Health Areas were likely to undertake any risk drinking behaviour, compared to the overall adult male and female populations.

A significantly lower proportion of males (31.7 per cent) and females (24.4 per cent) in the most socioeconomically disadvantaged quintile were likely to undertake risk-drinking behaviours than the overall adult male and female populations.

Encouragingly, there has been a significant decrease in the proportion of people reporting 'any risk drinking behaviour' between 1997 (42.3 per cent) and 2004 (35.4 per cent). This decrease was greater in males (50.6 per cent to 40.7 per cent) than females (34.3 per cent to 30.2 per cent).

High short-term alcohol risk: 'Binge drinking'

Short-term alcohol risk was categorised into 'no risk' (did not drink alcohol), 'low risk' (having consumed up to 6 standard drinks on any one day if male, or up to 4 drinks

if female); 'risky' (having consumed 7–10 standard drinks on any one day if male, and 5–6 if female), and 'high risk' (having consumed 11 or more standard drinks in any one day if male, and 7 or more if female), as per the WHO International Guide for Monitoring Alcohol Consumption and Related Harm.[6]

Overall, in 2004, 27.0 per cent of people were classified as 'no risk' as they did not drink alcohol, 53.0 per cent were categorised as at 'low risk', 10.1 per cent were classified as 'risky', and 9.6 per cent were classified as 'high risk' of harm in the short-term.The proportion of males reporting short-term high-risk drinking (12.6 per cent) was significantly higher than the proportion of females (7.1 per cent).

Among males, a significantly higher proportion of those aged 16–24 years (28.5 per cent), and a significantly lower proportion of those aged 65 years and over (1.7 per cent among those 65–74 years and 1.2 per cent among those 75 years and over) undertook short-term high-risk drinking, compared with the overall adult population of males. Among females, a significantly higher proportion aged 16–24 years (18.3 per cent) and a significantly lower proportion aged 45 years and over (ranging from 4.1 per cent among those aged 45–54 years to 0.3 per cent aged 75 years and over) were likely to undertake short-term high-risk drinking, compared with the overall population of females.

There was no significant difference in the levels of short-term high-risk drinking between urban residents and rural residents.

In 2004, there was no significant difference in the levels of short-term high-risk drinking among any of the 5 quintiles of socioeconomic disadvantage.

There was no significant change in the proportion of people engaging in short-term high-risk drinking between 2002 and 2004.

Figure 11 shows any risk alcohol drinking by age. Figure 12 shows any risk alcohol drinking by socioeconomic disadvantage. Figure 13 shows alcohol drinking by risk. Figure 14 shows the proportion of people reporting high risk alcohol drinking by age.

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FIGURE 11

ANY RISK ALCOHOL DRINKING BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

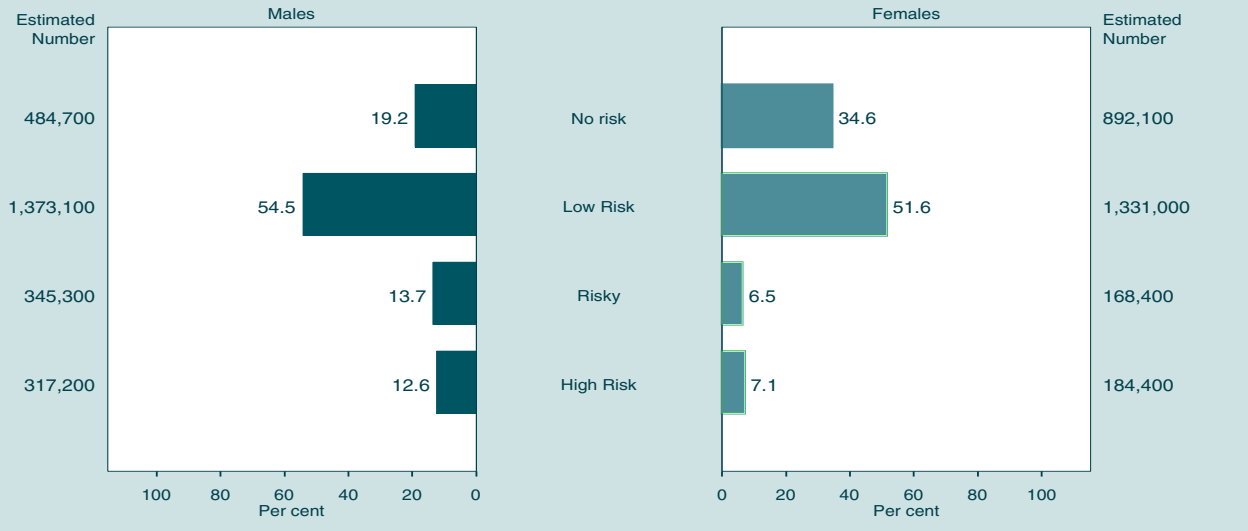
FIGURE 12

ANY RISK ALCOHOL DRINKING BY SOCIOECONOMIC DISADVANTAGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 13

ALCOHOL DRINKING BY RISK, PERSONS WHO CONSUME ALCOHOL AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 14

HIGH RISK ALCOHOL DRINKING BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Cancer screening (breast and cervical)

Introduction

Australia currently supports 2 population cancer screening programs: BreastScreen Australia, a population-based breast cancer screening program for females aged over 40 years, targeting females in the 50–69 years age group; and the National Cervical Screening Program for cervical cancer, a population screening program targeting all females aged 18–70 years who have ever been sexually active.

The aim of screening for cancer is to reduce mortality and disability from the disease. Mortality, and not 5-year survival, is the outcome indicator for screening because survival may be extended purely as a consequence of the cancers being diagnosed earlier before symptoms are apparent.

In 2003, breast cancer was the most common cancer in women, comprising 29 per cent of all female cancers. Between 1994 and 2003, the age-standardised incidence of breast cancer increased by 7 per cent per cent in females; however, the mortality rate fell by 22 per cent in this period.[1] Part of the increasing incidence of breast cancer is explained by the earlier detection of cancers through mammographic screening. This explanation is supported by evidence that the average size of breast cancer tumours has decreased.[2]

The BreastScreen NSW program (part of BreastScreen Australia) began in 1991, and offers women aged 50–69 years a screening mammogram every 2 years. BreastScreen NSW has set a target rate for 2-yearly screening of 70 per cent of females aged 50–69 years. A screening mammogram differs from a diagnostic mammogram in that screening is conducted on females who have no history of breast cancer, and no breast problems or symptoms at the time the mammogram is taken.

The incidence of cervical cancer has been decreasing steadily in the last 3 decades. Between 1972 and 2001, cervical cancer declined from the fourth to the thirteenth most common cancer in females, and between 1994 and 2003 age-standardised incidence rates of cervical cancer fell by 46 per cent.[1]

The Pap test is effective at detecting precancerous lesions in the cervix, and regular 2-yearly testing with appropriate follow up treatment can prevent cervical cancer from developing in most cases.[3] This is why cervical screening can reduce both cancer incidence and mortality. The target population for the Pap test is all women aged between 18 and 70 years who have ever been sexually active.

In 2004, the New South Wales Population Health Survey asked females aged 50–69 years the following questions: 'Have you ever had a mammogram?', 'When did you last have a mammogram?', 'Can you tell me all the reasons why you had your last mammogram?', 'Do you have mammograms regularly?', 'What is the usual time period between your mammograms?'. Females aged 20–69 years were also asked the following questions: 'Have you ever had a Pap test?', 'When did you last have a Pap test?', 'Do you have a Pap test regularly?', 'What is the usual time period between your Pap tests?'.

Results

Breast cancer screening

To establish the proportion of females who have screening mammograms, females who had a breast problem or breast cancer in the past were excluded from the data.

In 2004, 74.4 per cent of females aged 50–69 years reported having a screening mammogram within the past 2 years. There was no variation in the proportion having a screening mammogram within the past 2 years by age.

There was no significant variation in the proportion of females who reported having a screening mammogram in the last 2 years by geographic location or socioeconomic status.

There was no significant difference in the proportion of females aged 50–69 years who had a screening mammogram in the last 2 years between 1997 and 2004.

Cervical cancer screening

To establish the proportion of females who have Pap tests, women who have had a hysterectomy were excluded from the data.

In 2004, 72.8 per cent of females aged 20–69 years reported having a Pap test in the past 2 years. A significantly lower proportion of females aged 20–29 years (61.6 per cent) and a significantly greater proportion aged 30–39 years (81.8 per cent) had a Pap test within the last 2 years, compared with the overall adult female population aged 20–69 years.

There was no significant variation in the proportions of females who reported having a Pap test within the last 2 years by geographic location or socioeconomic status.

There was a significant decrease in the proportion of females who reported having a Pap test in the last 2 years between 1998 (77.3 per cent) and 2004 (72.8 per cent).

Figures 15–16 provides information on the proportion of women who reported having had screening mammograms and Pap tests within the last 2 years by age.

References

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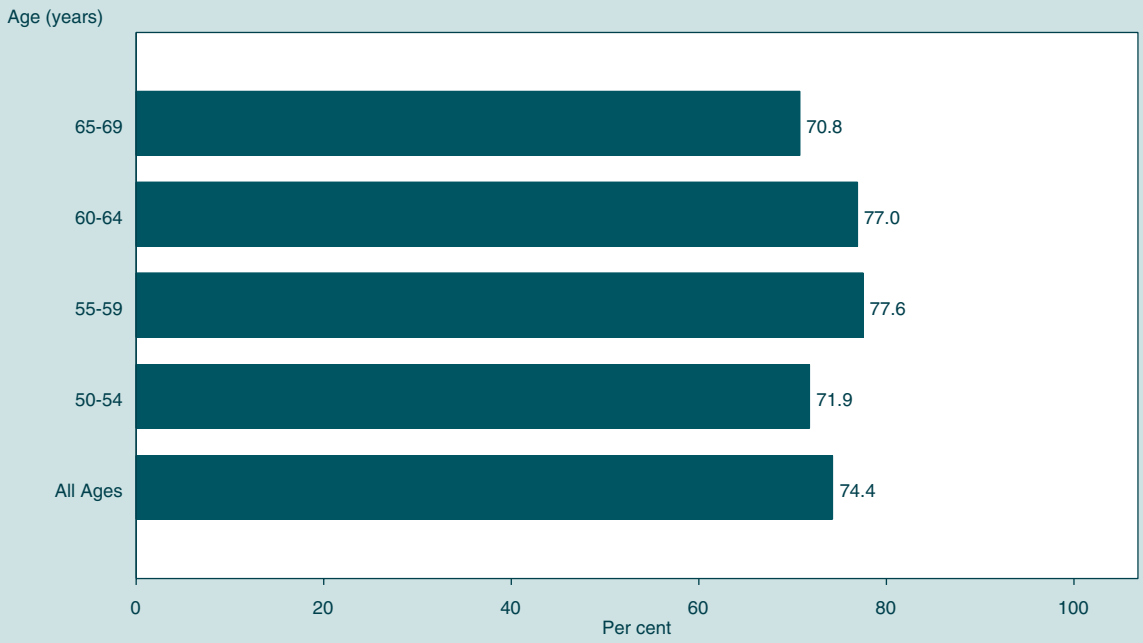
3. Cervical Cancer Screening Evaluation Steering Committee. *The interim evaluation of the organised approach to preventing cancer of the cervix 1991–1995*. Canberra: Commonwealth Department of Human Services and Health, 1995.

FIGURE 15

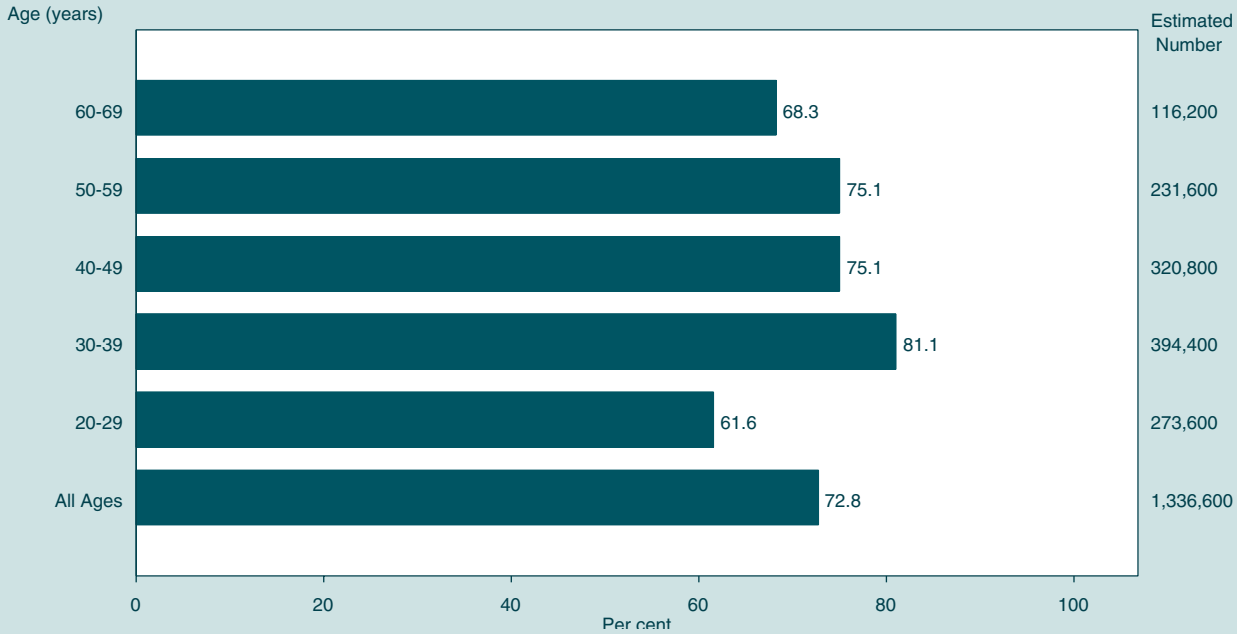
SCREENING MAMMOGRAM WITHIN THE LAST 2 YEARS BY AGE, FEMALES AGED 50 TO 69 YEARS, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 16

PAP TEST WITHIN THE LAST 2 YEARS BY AGE, FEMALES AGED 20 TO 69 YEARS, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Cancer screening (colorectal)

Introduction

Colorectal or bowel cancer is cancer involving the large bowel. It is the most commonly diagnosed non-cutaneous cancer in Australia, with one in 19 men and one in 27 women developing colorectal cancer by the age of 75 years.[1] In New South Wales, colorectal cancer affects 4,000 people every year and for the period 1993 to 1997 incidence rates were among the highest in the world.[2] In 2002, colorectal cancer ranked second for incidence and mortality in both males and females and was the most common cancer for both sexes combined.[2]

The risk of colorectal cancer increases markedly with age.[1,3] It is rare in people under the age of 50 and the median age of diagnosis is around 70 years. The risk is increased in people with a family history of the disease.[3]

The earlier the stage at diagnosis, the higher is the chance of survival.[1,2] The best chance of cure is when the disease is localised to the bowel wall or at least does not involve the lymph nodes, which usually means before symptoms develop.[4] Therefore, screening programs offer the opportunity to detect colorectal cancer early and they have been shown to reduce mortality from colorectal cancer by between 16 and 23 per cent.[3] There are 4 different types of screening tests that can be used to detect early cancer of the bowel: faecal occult blood testing (FOBT) tests faeces samples for small amounts of blood; sigmoidoscopy (rigid or flexible) examines the lower part of the bowel; sigmoidoscopy combined with double-contrast barium enema examines the whole of the large bowel; and colonoscopy examines the whole of the large bowel.

The NHMRC guidelines for screening differ according to 3 levels of relative risk, based on family history. Most (98 per cent) of the population are classified as being at average risk. These people are asymptomatic and have either no family history of colorectal cancer or only one first or second degree relative with colorectal cancer diagnosed at 55 or older. For these people, the guidelines recommend FOBT at least every 2 years from age of 50 and to consider sigmoidoscopy (preferably flexible) every 5 years.[1,3]

People with 2 first or second degree relatives with colorectal cancer are classified as being at a moderately increased risk, which includes between one and 2 per cent of the population. The recommended NHMRC screening guidelines for this group are for colonoscopy every 5 years, starting at age 50 years or at an age 10 years younger than that of the youngest family member at the time they were diagnosed with colorectal cancer, whichever comes first. Sigmoidoscopy plus double-contrast barium enema is an acceptable alternative to colonoscopy, if colonoscopy is unavailable, and FOBT should be considered in the intervening years.[3,5]

The third category includes those from families at potentially high risk due to strong genetic predisposition and covers less than one per cent of the population. This group is advised to have a colonoscopy annually or 2-yearly commencing at around 25 years of age.[3,5]

In 2004, the New South Wales Population Health Survey asked all persons 50 years and over the following questions: 'Bowel cancer is a common cancer that, if found, can be treated at an early stage. Bowel cancer may be detected by means of an x-ray of the bowel, or by a test that involves a doctor passing a long tube through your back passage to examine the inside of your bowel, or by examining a sample of faeces. Have you ever had any of these types of investigation?', 'Which of these investigations have you had?', 'When did you have your last x-ray?', 'When did you have your last test with a tube-like instrument?', 'When did you have your last faeces sample examined?', 'Can you tell me all the reasons why you had [this–these] investigations for bowel cancer?', 'Can you tell me how old this relative was when they were diagnosed with bowel cancer?', and 'Were the relatives diagnosed with bowel cancer on the same side of your family?'.

Results

Screening for colorectal cancer

Overall, 26.0 per cent of people in New South Wales aged 50 years and over had undergone a test (FOBT or colonoscopy or sigmoidoscopy) for colorectal cancer in the last 5 years for screening and not as part of follow-up treatment. A significantly greater proportion of males aged 65–69 years had undergone a screening test for colorectal cancer (34.7 per cent), compared to the overall adult population.

There was no significant variation in the proportion of people screened for colorectal cancer in the last 5 years by socioeconomic status.

There was no significant variation in the proportion of people screened for colorectal cancer in the last 5 years by urban or rural location. A significantly greater proportion of people in the North Coast Health Area (36.8 per cent) and a significantly lower proportion of people in the Greater Southern Health Area (18.1 per cent) reported a screening test in the last 5 years, compared to the overall adult population.

Reasons for undergoing screening tests

Among people aged 50 years or over who had undergone an FOBT over the last 5 years for screening and not as part of follow up treatment, 35.6 per cent were screened as part of a regular checkup with their doctor, 30.8 per cent as a result of publicity about bowel cancer and screening, and 29.9 per cent because their doctor recommended it.

Among people who had undergone a sigmoidoscopy or colonoscopy over the last 5 years for screening and not as part of follow up treatment, the most common reasons for being screened were recommendation by their doctor (43.3 per cent), as part of a regular checkup (27.9 per cent), and having one close relative with bowel cancer (19.7 per cent).

Figure 17 provides information on the proportion of people tested for colorectal cancer for screening purposes in the last 5 years by age. Figure 18 provides information on the reasons for having a faecal occult blood text to screen for colorectal cancer in the last 5 years by age. Figure 19 provides information on the reasons for having a sigmoidoscopy or colonoscopy to screen for colorectal cancer in the last 5 years by age.

References

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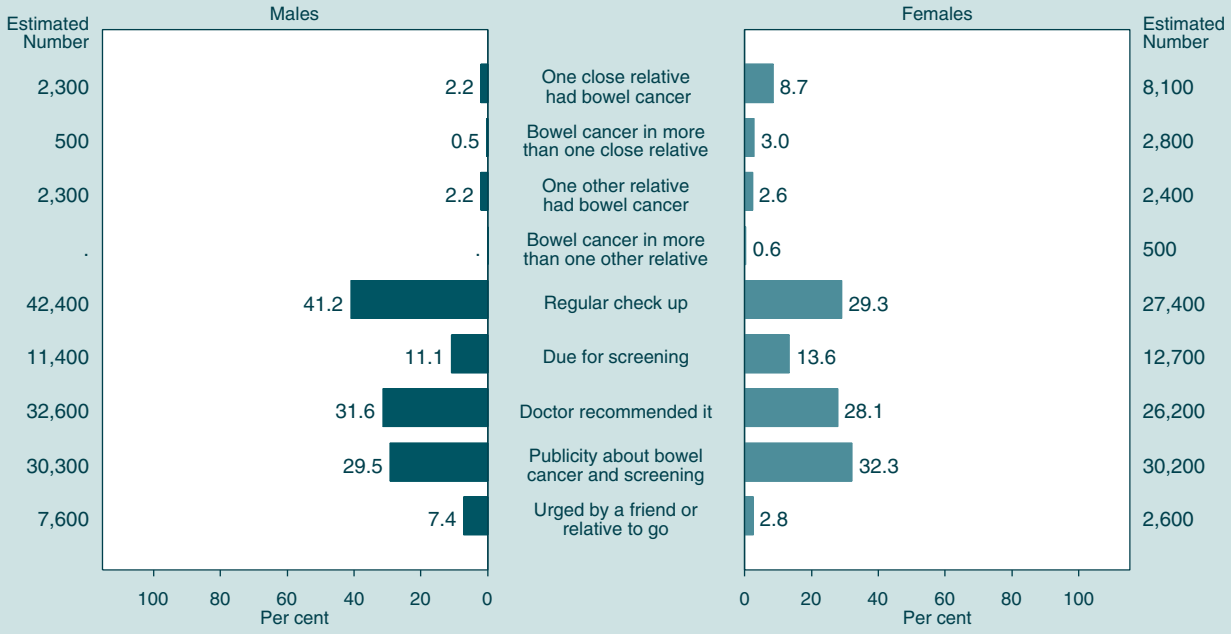
FIGURE 17

SCREENING TEST FOR COLORECTAL CANCER IN THE LAST 5 YEARS BY AGE AND SEX, PERSONS AGED 50 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 18

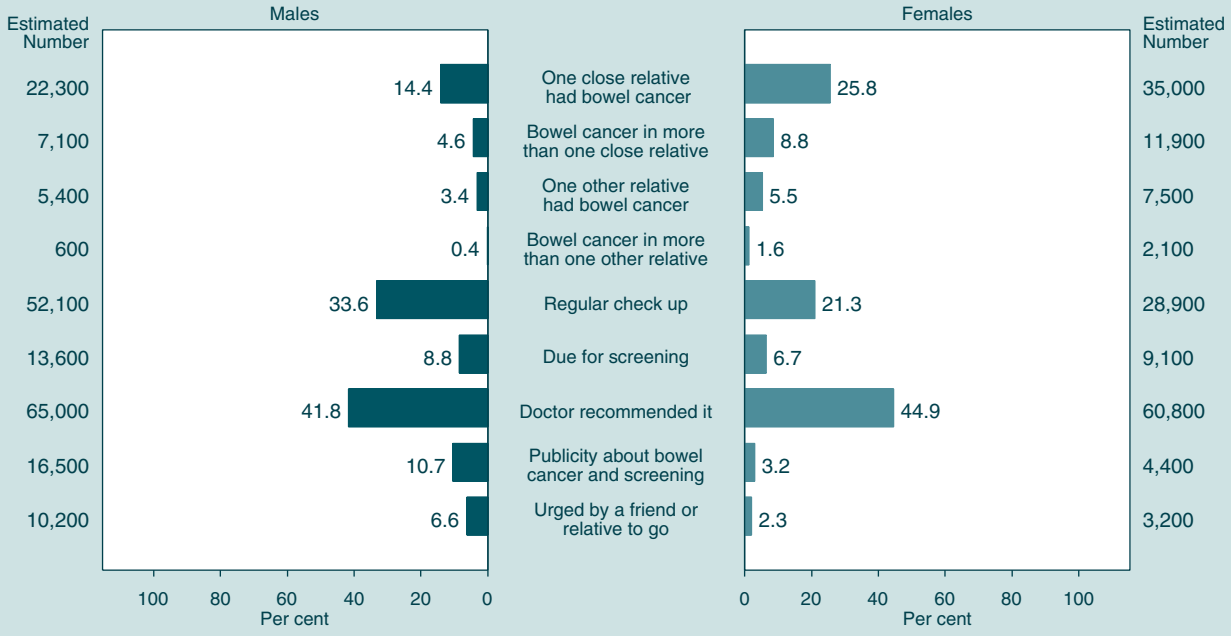
REASONS FOR HAVING FAECAL OCCULT BLOOD TEST TO SCREEN FOR COLORECTAL CANCER IN LAST 5 YEARS , PERSONS AGED 50 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 19

REASONS FOR HAVING SIGMOIDOSCOPY OR COLONOSCOPY TO SCREEN FOR COLORECTAL CANCER IN LAST 5 YEARS, PERSONS AGED 50 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Immunisation

Introduction

In New South Wales, despite substantial progress in reducing the incidence of vaccine preventable diseases, increases in immunisation levels are needed to further reduce and eliminate these causes of illness and death.[1]

Influenza (or flu) is caused by the influenza virus and is characterised by abrupt onset of fever, myalgia, headache, sore throat, and acute cough, and can cause extreme malaise lasting several days. Although usually not life-threatening, influenza can be complicated by secondary bacterial pneumonia in individuals whose medical condition makes them vulnerable. Under the National Influenza and Pneumococcal Vaccination (NIPV) Program,[1] influenza vaccine is provided free to all people aged 65 years and over and is recommended annually. For Aboriginal and Torres Strait Islander people, the vaccine is provided free to those aged 50 years and over, and to those aged 15–49 years who may be at increased risk because of chronic illness.

Streptococcus pneumoniae (pneumococcus), a bacterial inhabitant of the upper-respiratory tract, is a major cause of pneumonia, meningitis, and middle-ear infection, particularly in young children, the elderly, and Aboriginal and Torres Strait Islander people. The NHMRC recommends immunisation against pneumococcal disease every 5 years for: all people aged 65 years and over; Aboriginal and Torres Strait Islander people aged 50 years and over; and people with compromised immune systems, chronic illness, or who have had their spleen removed.[1]

In 2004, in the New South Wales Population Health Survey, the following questions were asked of respondents aged 50 years and over: 'Has a health professional ever advised you to be vaccinated against the flu?', 'Were you vaccinated or immunised against flu in the past 12 months?', 'Has a health professional ever advised you to be vaccinated against pneumonia?', 'When were you last vaccinated or immunised against pneumonia?'.

Results

Influenza vaccination

Overall, in 2004, 49.1 per cent of the population aged 50 years and over reported having had an influenza vaccination in the last 12 months. A significantly greater proportion of females (51.7 per cent) than males (46.2 per cent) reported having had an influenza vaccination. The proportion of people aged 50 years and over vaccinated against influenza did not differ between urban areas (48.6 per cent) and rural areas (50.5 per cent), and did not vary by level of socioeconomic disadvantage. Influenza vaccination coverage increased significantly overall between 1997 (34.6 per cent) and 2004 (49.1 per cent), although the coverage has remained stable between 2003 (49.8 per cent) and 2004.

In people aged 65 years and over, the proportion vaccinated against influenza in the last 12 months was 75.8 per cent. There was no significant difference in the proportion of females (75.3 per cent) and males (76.4 per cent) who were vaccinated in the last 12 months. The proportion of people who reported they were vaccinated against influenza was significantly lower among those aged 65–69 years (67.6 per cent), than in the overall population aged 65 years and over.

There was no significant difference between the proportion of residents aged 65 years and over reporting influenza vaccination in rural areas and urban areas. The proportion reporting vaccination against influenza in the last 12 months did not vary significantly by level of socioeconomic disadvantage.

Rates of vaccination against influenza in people aged 65 years and over have increased significantly, from 57.1 per cent in 1997 to 75.8 per cent in 2004.

Pneumococcal vaccinations

Almost one in 4 (24.1 per cent) people aged 50 years and over reported having had a pneumococcal vaccination in the past 5 years. Of those aged 50 years and over, 11.0 per cent reported being vaccinated within the last 12 months, 13.1 per cent were vaccinated 12 months to 5 years ago, and 2.3 per cent were vaccinated more than 5 years ago. A significantly greater proportion of females had been vaccinated against pneumococcal disease in the last 5 years (27.4 per cent) than males (20.2 per cent). The proportion of people vaccinated against pneumococcal disease increased with age. In 2004, there was no significant variation by level of socioeconomic disadvantage in the proportion of people vaccinated against pneumococcal disease in the last 5 years. There was also no significant difference in the proportion of people vaccinated against pneumococcal disease in rural areas and urban areas.

There was a significant increase from 2002 (19.2 per cent) to 2003 (23.9 per cent) in the proportion of people aged 50 years and over who were vaccinated against pneumococcal disease in the last 5 years. However, there was no significant increase between 2003 and 2004.

Among people aged 65 years and over, the proportion vaccinated for pneumococcal pneumonia in the last 5 years was 47.2 per cent. There was no significant difference between the proportion of males (43.4 per cent) and females (50.4 per cent) vaccinated in the last 5 years. When compared to the overall population aged 65 years or over, a significantly lower proportion of people aged 65–69 years (32.1 per cent), and a significantly greater proportion of people aged 75 years and over (56.7 per cent), reported vaccination against pneumococcal disease in the last 5 years.

The proportion of people aged 65 years and over vaccinated against pneumococcal pneumonia in the last 5 years did not vary significantly between urban areas and rural areas. A significantly lower proportion of males in the Sydney South West Health Area (31.3 per cent) had been vaccinated in

the last 5 years, compared to the overall population aged 65 years and over.

A significantly lower proportion of males aged 65 years and over in the quintile of most socioeconomic disadvantage (27.3 per cent) had received pneumococcal vaccination, compared to the overall adult population.

Between 2002 and 2004 there was a significant increase in the proportion of people aged 65 years and over reporting pneumococcal vaccination in the last 5 years, from 38.6 per cent to 47.2 per cent. However, most of this increase occurred between 2003 and 2004 (38.6 per cent to 47.1 per cent).

Figures 20 and 21 provide information on the proportion of people aged 65 years and over who have been vaccinated against influenza in the last 12 months by age and socioeconomic disadvantage. Figure 22 provides information on the proportion of people aged 65years and over vaccinated against pneumococcal disease in the last 5 years by age.

References

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FIGURE 20

VACCINATED AGAINST INFLUENZA IN THE LAST 12 MONTHS BY AGE AND SEX, PERSONS AGED 65 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

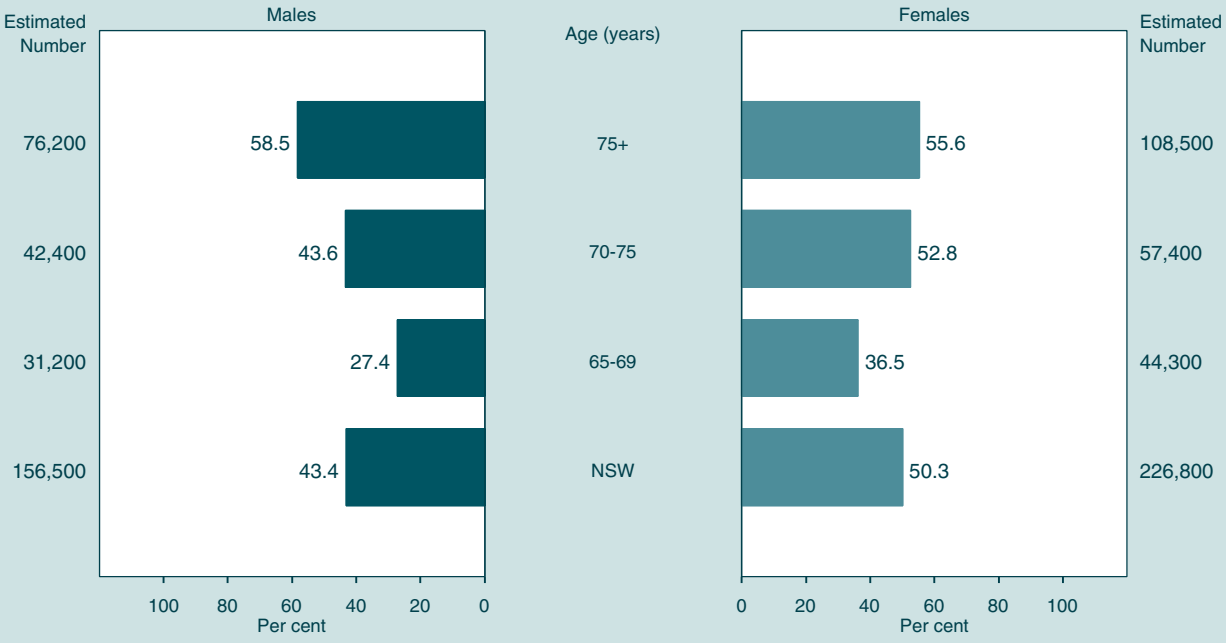
FIGURE 21

VACCINATED AGAINST INFLUENZA IN THE LAST 12 MONTHS BY SOCIOECONOMIC DISADVANTAGE AND SEX, PERSONS AGED 65 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 22

VACCINATED AGAINST PNEUMOCOCCAL DISEASE IN THE LAST 5 YEARS BY AGE AND SEX, PERSONS AGED 65 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Injury prevention

Introduction

In New South Wales, around 300 people are injured and around 30 people die each year as a result of house fires. Most deaths happen at night while people are sleeping and are due to smoke inhalation rather than to burns. Smoke alarms detect low levels of smoke and sound an alarm before the smoke becomes too dense for people to escape. Studies have shown that the installation of smoke alarms dramatically reduces fatalities, reduces damage to property and costs to the health system, and benefits individuals.[1,2]

Since 1994, all new homes built in New South Wales have installed electrically-wired smoke alarms. In 1996, the NSW Department of Housing commenced a program to install alarms in all its housing. Consequently, installation of smoke alarms has increased substantially from 24 per cent in 1994 to 64.0 per cent in 1998.[1,3]

Although the reported ownership of smoke alarms has increased, the functional status of those alarms has not been examined. In the United States, a comparison of responses from telephone surveys and household surveys demonstrated that although 71 per cent of households reported having a smoke alarm, on inspection only 49 per cent of these alarms were functional.[4] In 2005, the Australasian Fire Authorities Council released a report on accidental fire fatalities in residential structures. For New South Wales, the report shows that where smoke alarm data was available or reported, 61 per cent of homes where a fire death resulted did not have a smoke alarm. Of the homes that did have a smoke alarm, 56 per cent were not working at the time of the fire.[5]

The NSW Fire Brigade operates the SABRE (Smoke Alarm Battery Replacement for the Elderly) Program. The Program involves the NSW Fire Brigade forming partnerships with other community organisations to assist senior citizens in the maintenance of fire safety devices in their home.

In 2004 in the New South Wales Population Health Survey, respondents were asked 'Do you have any of the following fire safety measures in your home? Fire alarm (hard wired), Fire alarm (battery operated only), Fire sprinkler system, Safety switch–circuit breaker, Fire extinguisher, Fire evacuation plan, External water supply, External sprinkler'. 'Are you aware of the NSW Fire Brigades' program to change or install battery-operated fire alarms in homes?' and 'Have you had one installed through this program?'

Results

In 2004, residents of New South Wales reported a range of fire safety measures in the home. Over three-quarters reported an external water supply (82.5 per cent), 80.0 per cent reported smoke alarms, 71.8 per cent reported safety switches or circuit breakers, 33.2 per cent reported fire extinguishers, 32.4 per cent reported external sprinklers, 29.9 per cent reported fire evacuation plans, 4.6 per cent reported a fire blanket, and 2.8 per cent reported a fire sprinkler system.

Overall, in 2004, 71.6 per cent of New South Wales residents reported that they had a smoke alarm or detector installed in their home. There was no significant variation by age in the proportion of people who reported having a smoke alarm installed.

There was no significant difference in the proportion of people in rural areas and urban areas who reported having a smoke alarm installed in their home. A significantly greater proportion of residents in the Hunter and New England Health Area (79.0 per cent) and a significantly lower proportion of residents in the Sydney South West Health Area (65.9 per cent) reported having a smoke alarm installed in their home.

The proportion of people with smoke alarms installed in their home did not vary by socioeconomic status.

The proportion of respondents reporting having smoke alarms installed in their home increased significantly from 1997 (58.2 per cent) to 2004 (71.6 per cent).

Figure 23 provides information on fire safety measures in the home. Figure 24 provides information on the proportion of homes with a smoke alarm or detector by age.

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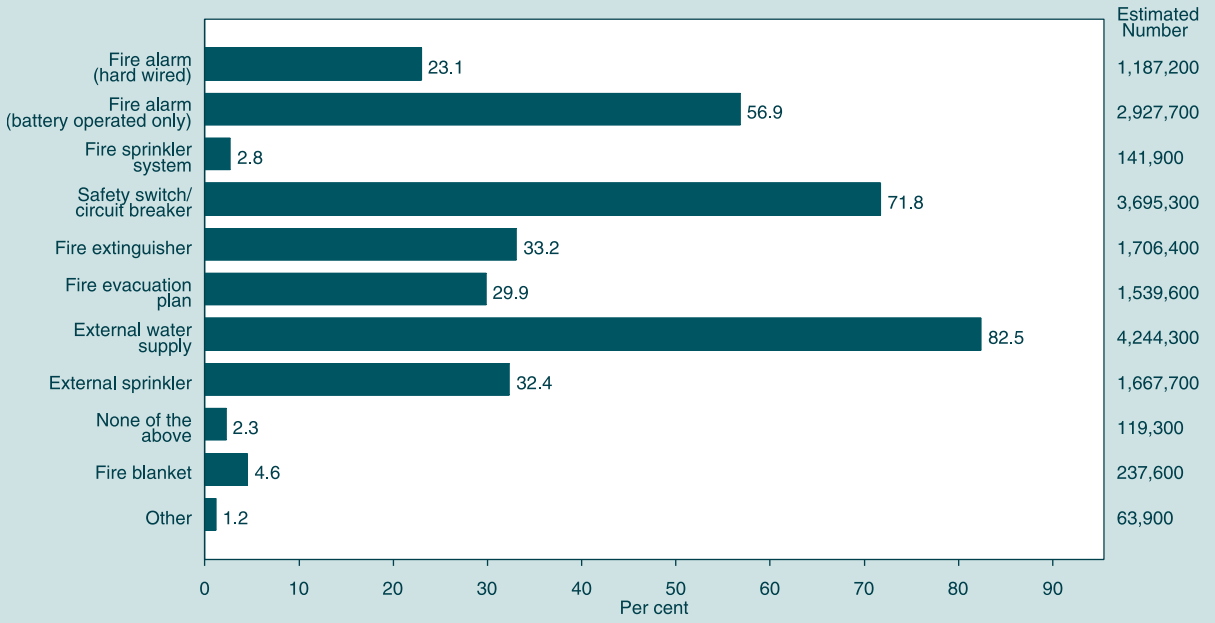
FIGURE 23

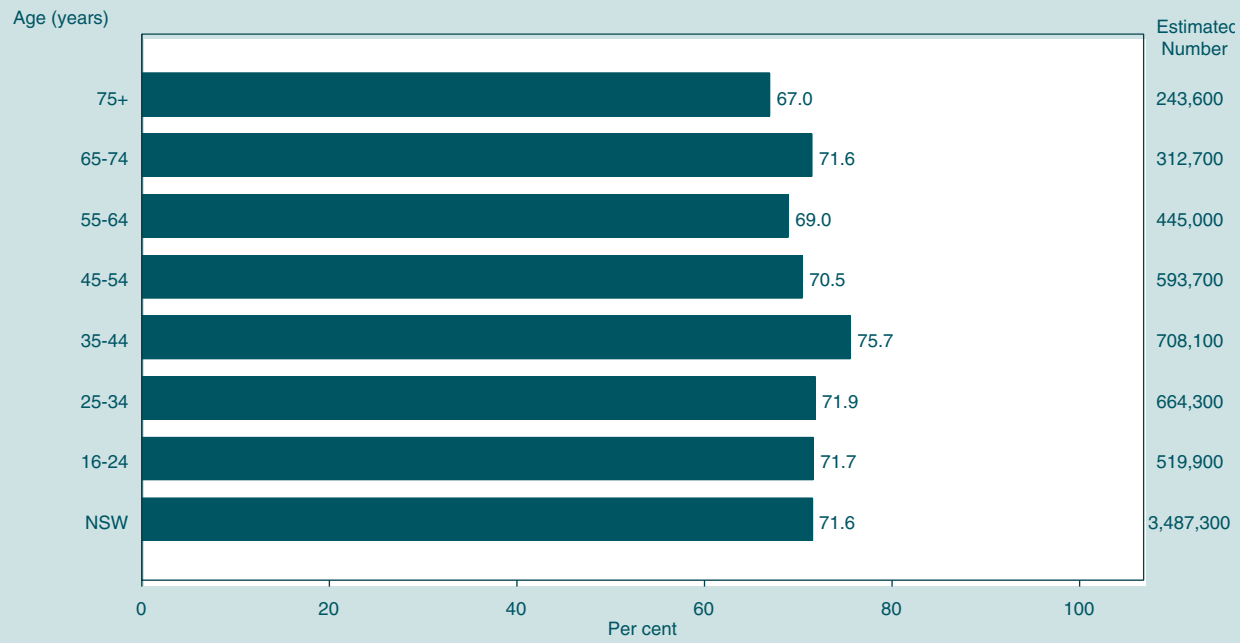
FIRE SAFETY MEASURES IN THE HOME, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 24

HOMES WITH A SMOKE ALARM OR DETECTOR BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Nutrition

Introduction

Nutrition is an important determinant of health and disease at all stages of life. Many dietary factors are linked to health and disease, either as protective influences or as risk factors. Some common chronic diseases, to which diet contributes substantially to health risk or health protection, include: coronary heart disease, stroke, cancer, non-insulin-dependent diabetes mellitus, osteoporosis, dental caries, gall bladder disease, and diverticular disease.[1,2,3,4]

Cardiovascular disease is the major cause of death in New South Wales.[5] Raised serum cholesterol, an important risk factor, is linked with excessive saturated fat consumption. Eating patterns in relation to dairy foods, processed meats, and fried potato products, are of interest because these foods are significant sources of saturated fat.[2,4]

An adequate intake of fruit, vegetables, bread, and cereals (preferably whole grain) decreases the risk of major chronic diseases.[1,3] However, most groups in the New South Wales population eat less than the recommended amounts of these foods.[1]

Despite the good quality of the food supply, there are some groups who lack food security: that is, do not have sufficient access at all times to sufficient food for an active and healthy life. Food insecurity is a likely contributor to ill health associated with socioeconomic disadvantage.

In 2004, the New South Wales Population Health Survey included a short dietary questionnaire on usual consumption of fruit, vegetables, breads and cereals, milk, selected foods high in saturated fats (chips and processed meats), and food security.[6] This questionnaire was validated using the 1995 National Nutrition Survey and the Tasmanian Dietary Key Indicators Study for relative ranking of intake between respondents but not for measuring a respondent's number of serves; however, it is still useful for ongoing monitoring.[7,8] Respondents were asked the following questions: 'How many serves of vegetables do you usually eat each day?', 'How many serves of fruit do you usually eat each day?', 'How often do you usually eat bread?', 'How often do you eat breakfast cereal?', 'How often do you eat pasta, rice, noodles, or other cooked cereals (not including cooked breakfast cereals)?', 'What type of milk do you usually have?', 'How often do you eat processed meat products such as sausages, frankfurts, devon, salami, meat pies, bacon, or ham?', 'How often do you eat chips, french fries, wedges, fried potatoes, or crisps?', 'In the last 12 months, were there any times that you ran out of food and couldn't afford to buy more?'. The national Go for 2 Fruit and 5 Vegetables Campaign was used as the source of recommended numbers of serves of fruits and vegetables for this report on adult health.[9]

Results

Consumption of fruit

Overall, in 2004, 7.4 per cent of the population reported that they ate no fruit, 14.1 per cent had less than one serve per day, 31.5 per cent had one serve per day, 27.0 per cent had 2 serves per day, 12.8 per cent had 3 serves a day, and 7.2 per cent had more than 3 serves a day. Therefore, 47.0 per cent of the population ate the recommended daily intake of fruit (2 serves or more). A significantly greater proportion of females (53.4 per cent) than males (40.6 per cent) consumed the recommended amount of fruit each day.

Consumption of the recommended daily intake of fruit increased with age. Among males, a significantly greater proportion of those aged 75 years and over (53.8 per cent) ate the recommended daily intake of fruit, compared with the overall adult male population. Among females, a significantly lower proportion of those aged 16–34 years (43.8 per cent to 44.9 per cent) and a significantly greater proportion of those aged 65 years and over (60.4 per cent to 64.8 per cent) ate the recommended daily intake of fruit, compared with the overall adult female population.

A significantly greater proportion of urban residents (48.0 per cent) than rural residents (43.7 per cent) ate the recommended daily intake of fruit. A significantly lower proportion of people in the Greater Western Health Area (39.7 per cent) at the recommended daily intake of fruit.

Overall, the proportion of people consuming the recommended daily intake of fruit did not vary significantly by level of socioeconomic disadvantage.

Daily consumption of fruit did not differ significantly from 1997 to 2004.

Consumption of vegetables

Overall, in 2004, 1.0 per cent of the population reported that they ate no vegetables, 6.1 per cent ate less than one serve per day, 27.0 per cent ate one serve per day, 30.5 per cent ate 2 serves per day, 16.9 per cent ate 3 serves per day, 10.5 per cent ate 4 serves per day, 3.9 per cent ate 5 serves per day, and 4.2 per cent ate more than 5 serves per day. Therefore, 8.1 per cent of the population ate the recommended daily intake of vegetables (5 serves or more). A significantly greater proportion of females (10.3 per cent) than males (6.0 per cent) consumed the recommended amount of vegetables each day.

Consumption of the recommended daily intake of vegetables increased with age. Among females, a significantly lower proportion of those aged 25–34 years (6.4 per cent) consumed the recommended daily intake of vegetables, compared with the overall adult female population. There was no significant variation in vegetable consumption by age among males.

There was some geographical variation, with a significantly greater proportion of rural residents (10.0 per cent) than urban residents (7.7 per cent) consuming the recommended daily intake of vegetables. A significantly lower proportion of residents from Sydney Western Health Area (5.3 per cent), consumed the recommended daily intake of vegetables, compared to the overall adult population.

There was no significant variation in consumption of the recommended daily intake of vegetables by socioeconomic disadvantage.

The proportion of people consuming the recommended daily intake of vegetables did not vary significantly by level of socioeconomic disadvantage. Among males, the proportion consuming the recommended serves of vegetables has decreased significantly, from 8.0 per cent in 1997 to 6.0 per cent in 2004.

Type of milk

The Australian Guide to Healthy Eating recommends a diet low in fat to reduce the overall energy intake.[10] Those who use reduced fat or skim milk have diets significantly lower in total and saturated fat.[3]

Overall, in 2004, 48.8 per cent of the population reported that they usually had regular milk (full cream), 31.1 per cent had reduced fat milk, 15.2 per cent had skim milk, and one per cent had other milk. Therefore, 46.3 per cent of the population who drink milk reported using reduced fat or skim milk. A significantly greater proportion of females (53.2 per cent) than males (38.8 per cent) reported using reduced fat or skim milk.

Use of reduced fat or skim milk increased with age but dropped off among those aged 75 years and over. Among males, a significantly lower proportion of those aged 16–24 years (23.1 per cent) and a significantly greater proportion of those aged 55–74 years (47.7 per cent to 50.6 per cent) used reduced fat or skim milk, compared with the overall adult male population. Among females, a significantly lower proportion of those aged 16–24 years (44.6 per cent) and a significantly greater proportion of those aged 45–74 years (60.0 per cent to 61.6 per cent) used reduced fat or skim milk, compared with the overall adult female population.

There was significant geographical variation, with a significantly greater proportion of urban (47.7 per cent) than rural residents (40.0 per cent) using reduced fat or skim milk. A significantly greater proportion of people in the Northern Sydney and Central Coast Health Areas (54.3 per cent), and a significantly lower proportion of people in the North Coast Health Area (40.7 per cent) used reduced fat or skim milk, compared to the overall adult population.

The proportion of people reportedly using reduced fat or skim milk was significantly lower in the third most disadvantaged quintile (40.9 per cent), and significantly greater in the quintile of least socioeconomic disadvantage (55.5 per cent), compared with the overall adult population. A significantly greater proportion of males in the least disadvantaged quintile (48.7 per cent) used reduced fat or skim milk, compared with the overall adult male population.

Reported use of reduced fat or skim milk did not differ significantly from 1997 to 2004.

Breads and cereals

In 2004, the New South Wales Population Health Survey asked questions on the frequency of eating breakfast cereals, bread, pasta, rice, and noodles. The data from these questions have been combined to provide an overall daily frequency of eating breakfast cereals, bread, pasta, rice, and noodles.

Overall, in 2004, 0.6 per cent of the population did not eat breads and cereals, 4.4 per cent had breads and cereals less than once a day, 26.5 per cent had breads and cereals once a day, 39.1 per cent twice a day, 20.6 per cent 3 times a day, 6.2 per cent 4 times a day, 1.6 per cent 5 times a day, and 1.1 per cent had breads and cereals more than 5 times a day.

Chips

In 2004, New South Wales Population Health Survey asked questions on the frequency of eating chips (including french fries, potato wedges, fried potatoes, or crisps). Those who consume chips more frequently are likely to have diets that are significantly higher in energy, total fat, and saturated fat.[8] The Australian Guide to Health Eating refers to chips as 'extra foods': that is, foods that should only be consumed 'sometimes'.[10]

Overall, in 2004, 24.7 per cent of the population did not eat chips (20.4 per cent of males and 28.9 per cent of females), 23.4 per cent had chips less than once a week, 27.9 per cent had chips once a week, 13.0 per cent had chips twice a week, 5.6 per cent had chips 3 times a week, 2.0 per cent had chips 4 times a week, 0.6 per cent had chips 5 times a week, and 2.8 per cent had chips more than 5 times a week.

Meat products

In 2004, New South Wales Population Health Survey asked questions on the frequency of eating processed meat products such as sausages, frankfurts, devon, salami, meat pies, bacon, or ham. A higher frequency of reported consumption of processed meats such as these is significantly associated with diets higher in energy, total fat, and saturated fat.[8]

Overall, in 2004, 21.0 per cent of the population did not eat processed meat products (14.8 per cent of males and 27.0 per cent of females), 15.9 per cent had processed meat products less than once a week, 25.0 per cent had them once a week, 16.9 per cent had them twice a week, 9.1 per cent had them 3 times a week, 4.2 per cent had them 4 times a week, 1.9 per cent had them 5 times a week, and 6.0 per cent had processed meat products more than 5 times a week.

Food security

In 2004, New South Wales Population Health Survey asked a question on food insecurity, with those experiencing food insecurity defined as those who had run out of food and couldn't afford to buy more.

Overall, in 2004, 5.8 per cent of the population reported that they had experienced some food insecurity in the past 12 months. There was no significant difference in the proportion of males and females experiencing food insecurity.

The proportion of people who had experienced food insecurity was significantly lower among those aged 65

years and over (0.8 per cent to 1.0 per cent) and significantly greater among those aged 25–34 years (8.8 per cent), compared with the overall adult population.

There was no significant geographical variation in the proportion of people who had experienced food insecurity between rural residents and urban residents.

In 2004, the proportion of people experiencing food insecurity did not vary significantly by level of socioeconomic disadvantage.

There was no significant change in the proportion of people experiencing food insecurity between 2002 and 2004.

Figure 25 shows the number of serves of fruit consumed per day. Figure 26 shows the proportion of people who consumed the recommended daily fruit intake by age. Figure 27 shows the number of serves of vegetables consumed per day. Figure 28 shows the proportion of people who consumed the recommended daily vegetable intake by age. Figure 29 shows the type of milk usually consumed. Figure 30 shows the proportion of people who usually consume low fat, reduced fat, or skim milk by age. Figures 31–33 show the frequency of eating fried potato products per week; bread, pasta and other cereal products per day; and processed meat products per week. Figures 34 and 35 show the proportion of food insecurity in the last 12 months by age and socioeconomic disadvantage.

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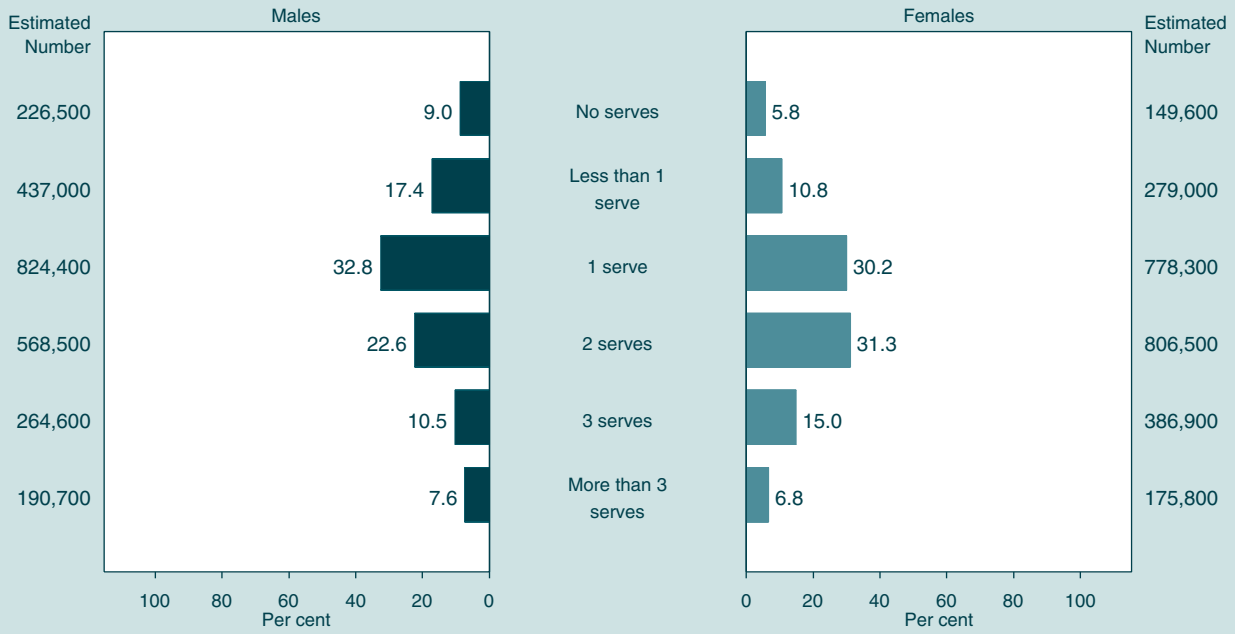
9. National Go for 2 Fruit and 5 Vegetables Campaign website at www.gofor2and5.com.au.
10. National Health and Medical Research Council. *Australian Guide to Healthy Eating*. Canberra: NHMRC, 2003.

FIGURE 25

NUMBER OF SERVES OF FRUIT PER DAY, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 26

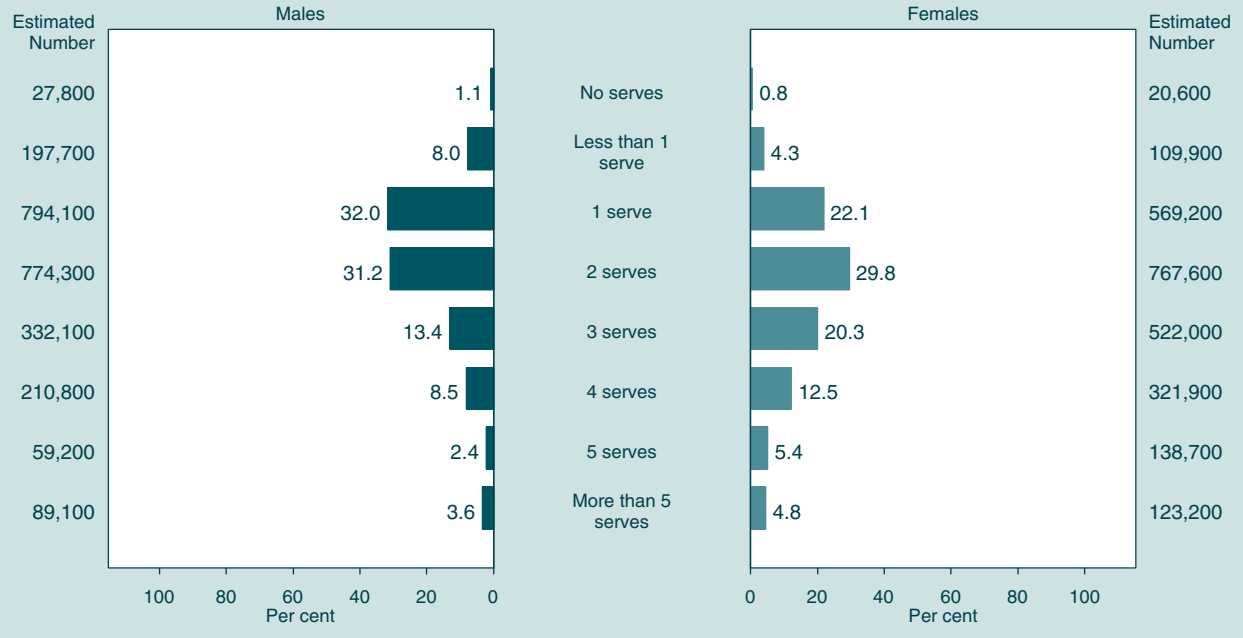
RECOMMENDED FRUIT CONSUMPTION BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Note: Recommended fruit consumption is 2 serves per day.

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 27

NUMBER OF SERVES OF VEGETABLES PER DAY, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 28

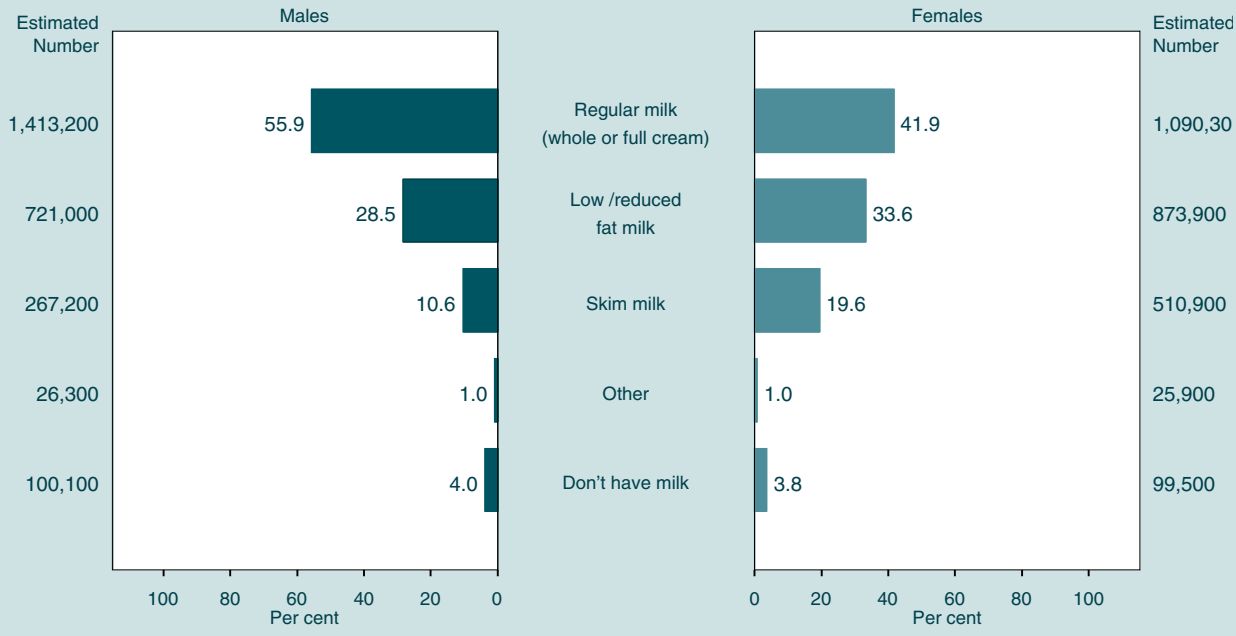
RECOMMENDED VEGETABLE CONSUMPTION BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Note: Recommended vegetable consumption is 5 serves per day.

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 29

TYPE OF MILK USUALLY CONSUMED, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 30

USUAL USE OF LOWER FAT MILKS BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

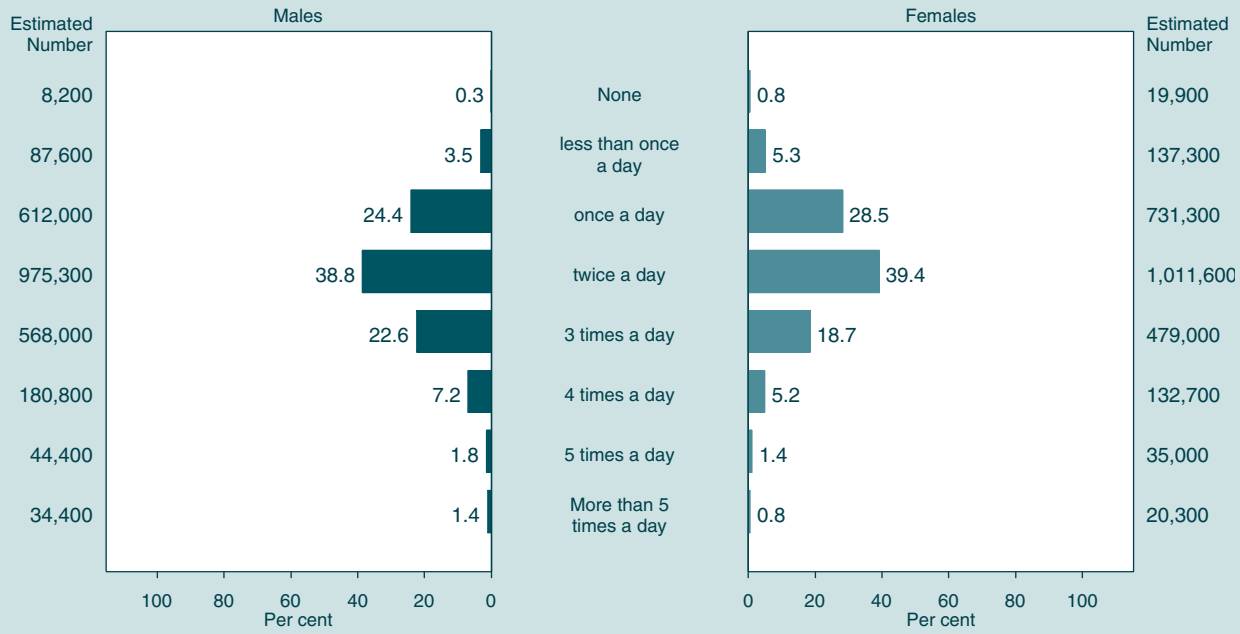
FIGURE 31

FREQUENCY OF EATING CHIPS, FRENCH FRIES, WEDGES, FRIED POTATOES OR CRISPS PER WEEK, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 32

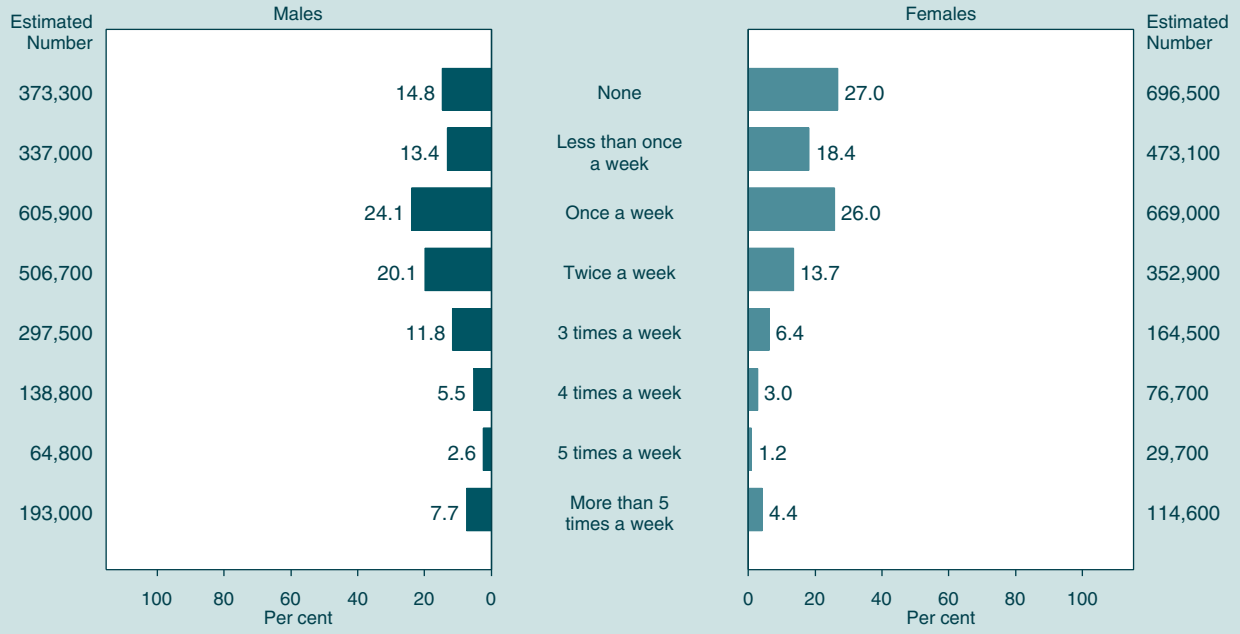
FREQUENCY OF EATING BREAKFAST CEREAL, BREADS, PASTA, RICE AND NOODLES PER DAY, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 33

FREQUENCY OF EATING PROCESSED MEAT PRODUCTS PER WEEK, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 34

FOOD INSECURITY IN THE LAST 12 MONTHS BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 35

FOOD INSECURITY IN THE LAST 12 MONTHS BY SOCIOECONOMIC DISADVANTAGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Physical activity

Introduction

Physical activity is an important factor in maintaining good health. People who participate in moderate to vigorous levels of physical activity have lower mortality rates and lower incidence of a number of diseases and conditions than those who are physically inactive. Physical activity is of benefit in 6 out of the 7 National Health Priorities,[1] and is a preventative factor for cardiovascular disease, cancer, mental illness, diabetes mellitus, obesity, and injury. In Australia, physical inactivity ranks second only to tobacco smoking in terms of burden of disease from health risk factors, and accounts for 6.7 per cent of the burden of disease and injury.[2]

The National Physical Activity Guidelines for Adults state that the minimum amount of physical activity that is recommended to maintain good health is at least 30 minutes of moderate activity on most and preferably all days of the week.[3] Encouragingly, this can be undertaken in shorter bursts of exercise, such as 3 lots of 10 minutes. Exercise of moderate intensity includes brisk walking, dancing, swimming, or cycling. The Guidelines also encourage people to think of movement as an opportunity not as an inconvenience and to be active every day in as many ways as possible.

To achieve the above recommendations, people are now encouraged to consider other ways in which they can be active, such as through transport, at work, or at home. Active transport is using sustainable transport such as walking, cycling, or public transport to get to or from a destination. Active transport is an achievable way for most people to incorporate the recommended 30 minutes of physical activity into their daily lives. In addition, journeys to and from work provide regular opportunitites to engage in moderate intensity physical activity through walking or cycling to work, or walking to public transport. As such, monitoring transport habits of the population over time provides further information about physical activity through active transport.

In 2004, the New South Wales Population Health Survey included the following Active Australia Survey questions:[4] 'In the last week, how many times have you walked continuously for at least 10 minutes for recreation or exercise or to get to or from places?', 'What do you estimate was the total time you spent walking in this way in the last week?', 'In the last week, how many times did you do any vigorous physical activity that made you breathe harder or puff and pant?', 'What do you estimate was the total time you spent doing this vigorous physical activity in the last week?', 'In the last week, how many times did you do any other more moderate physical activity that you haven't already mentioned?', 'What do you estimate was the total time that you spent doing these activities in the last week?'. In 2004, the New South Wales Population Health Survey also included a question about active transport: 'How do you usually get to work?'.

Results

Adequate physical activity

'Adequate' physical activity was calculated from the Active Australia Survey questions above,[4] and is defined as undertaking physical activity for a total of 150 minutes per week over 5 separate occasions. The total minutes were calculated by adding minutes in the last week spent walking (continuously for at least 10 minutes), minutes doing moderate physical activity, plus minutes doing vigorous physical activity multiplied by 2.

Overall, in 2004, 52.3 per cent of respondents aged 16 years and over reported adequate levels of physical activity. A significantly greater proportion of males (57.0 per cent) than females (47.7 per cent) were likely to undertake adequate physical activity.

Among males, a significantly greater proportion aged 16–24 years (66.0 per cent) and a significantly lower proportion aged 75 years and over (41.5 per cent) undertook adequate physical activity, compared with the overall adult male population. Among females, a significantly greater proportion aged 16–24 years (64.8 per cent) and a significantly lower proportion aged 65 years and over (27.6 per cent to 41.2 per cent) undertook adequate physical activity, compared with the overall adult female population.

There was no significant difference between urban and rural areas in the proportion of people undertaking adequate levels of physical activity. A significantly lower proportion of people in Sydney West Health Area undertook adequate physical activity (46.6 per cent), compared to the overall adult population.

In 2004, the proportion of people undertaking adequate levels of physical activity did not vary significantly by level of socioeconomic disadvantage.

Overall, there has been a significant increase in the proportion of people undertaking adequate physical activity, from 1998 (47.9 per cent) to 2004 (52.3 per cent).

Active transport

Overall, in 2004, the majority of respondents did not use active transport to travel to work, as 76.9 per cent commuted by car, motorbike, truck, or taxi. Around one in 4 (26.3 per cent) used a form of active transport, including 10.6 per cent catching a train, 6.9 per cent catching a bus, 7.3 per cent walking to work, 1.1 per cent riding a bicycle, and 0.6 per cent catching a ferry.

Figure 36 shows the proportion of people who had undertaken adequate physical activity in the last week by age. Figure 37 shows the usual method of transportation to work.

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FIGURE 36

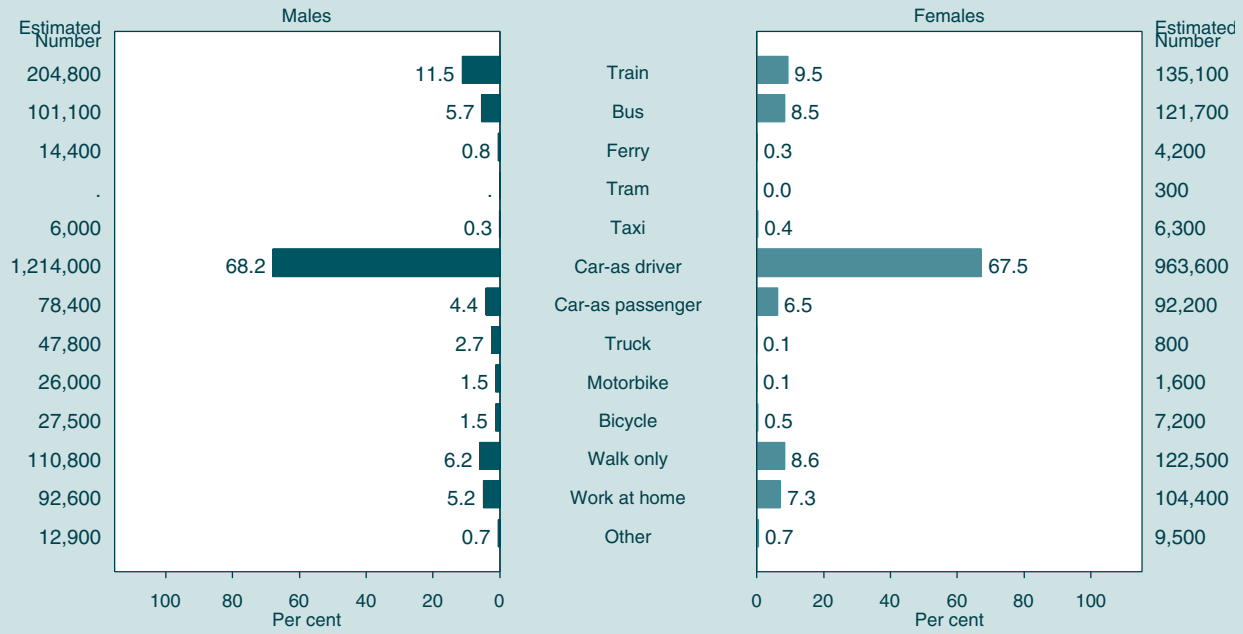
ADEQUATE PHYSICAL ACTIVITY BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Note: Adequate physical activity is a total of 150 minutes per week over 5 separate occasions.

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 37

USUAL TRANSPORT TO WORK, EMPLOYED PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Unsafe sex

Introduction

Sexually Transmitted Infections (STIs) include any infections passed from one person to another by sexual contact. There are many different types of STIs including chlamydia, gonorrhoea, syphilis, genital warts, and HIV–AIDS. 'Unsafe' sex places an individual at an increased risk of contracting an STI. The World Health Organization ranks 'unsafe' sex second among the top 10 risk factors in terms of its burden of disease in developed countries.[1]

STIs affect millions of people each year worldwide and cause a significant level of morbidity and mortality among both adults and children. This includes HIV—the number one STI-related cause of morbidity and mortality in the world—as well as ectopic pregnancy, tubo-ovarian abscess, chronic pelvic pain, infertility, congenital syphilis and cervical cancer in women, and testicular infection and possible infertility in men. STIs can lead to death from a variety of causes and have also been linked to the increased transmission of other infections.

STIs are common among adult Australians; self-reported data estimates that 20.2 per cent of men and 16.9 per cent of women have been diagnosed with an STI at some point in time.[2] Chlamydia has been estimated to be the cause of STIs in 1.7 per cent of males and 3.1 per cent of females.[2,3] It rarely causes symptoms, particularly in females, and as a result often goes undetected. Chlamydia is now the most commonly reported notifiable disease in New South Wales, with 7,562 cases reported in 2003. There were also 1,182 cases of gonorrhoea, 414 cases of HIV, and 117 cases of AIDS, and 838 cases of syphilis, notified in 2003.[4]

These STIs are highly preventable by the use of condoms. Condoms provide protection against a variety of STIs including HIV, chlamydia, and gonorrhoea, although the degree of protection varies between different STIs.[4] NSW Health runs programs to increase the number of people using condoms.

A person can avoid STIs in a variety of ways: by not having sex; by having sex with only one partner (who is not having unprotected sex with anyone else and does not have an STI); and by using condoms if having sex with more than one partner or if not sure their partner is free of infection.[5]

In 2004, the New South Wales Population Health Survey aimed to obtain an estimate of the overall percentage of the population between 16–70 years who were practising unsafe sex and were therefore at risk of contracting an STI. Respondents aged 16–70 years were asked: 'Have you had sexual intercourse in the last 12 months?'. Respondents who reported having had sexual intercourse were asked 'Have you had sexual intercourse with more than one person in the last 12 months?' and those who responded 'yes' were then asked 'Did you use condoms every time you had sexual intercourse?' In addition, all respondents who had had sexual intercourse in the last 12 months were asked 'Have you been diagnosed with a sexually transmitted infection

in the last 12 months?' and those who responded that they had were asked 'What sexually transmitted infection were you diagnosed with?'.

As it was not feasible as part of a phone population health survey to ask respondents detailed questions about their sexual behaviour, or about their partner's sexual behaviour, the definition of risk used for this indicator was modified to make it suitable for a phone survey. Unsafe sex was defined as 'having sex with more than one partner in the last 12 months and not using a condom', or 'having sex in the last 12 months with one or more partners and contracting an STI'.

Results

In 2004, 20.4 per cent of persons reported having no sexual intercourse in the last 12 months, 72.1 per cent had only one sexual partner in the last 12 months, 4.2 per cent used a condom when having more than one sexual partner in the past 12 months, 3.2 per cent had more than one sexual partner in the last 12 months and did not use a condom, and 0.2 per cent had acquired a sexually transmitted infection in the last 12 months.

Therefore, a low proportion of persons aged 16–70 years (3.4 per cent) in New South Wales in 2004 practised unsafe sex and were therefore at risk of contracting an STI. A significantly lower proportion of females (2.4 per cent) than males (4.3 per cent) practised unsafe sex. A significantly higher proportion of males (9.6 per cent) and females (5.7 per cent) aged 16–24 years practised unsafe sex, compared to the overall adult male and female populations. A significantly lower proportion of males aged 65–70 years (1.6 per cent) and females aged 55–64 years (0.3 per cent) practised unsafe sex, compared to the overall adult male and female populations.

There was no geographic variation in the proportion of people practising unsafe sex between rural areas and urban areas, or between the 8 health areas, compared to the overall adult population. There was no significant difference seen by socioeconomic disadvantage.

Figure 38 shows sexual behaviour in the last 12 months. Figure 39 shows the proportion of people who engaged in unsafe sex in the last 12 months by age.

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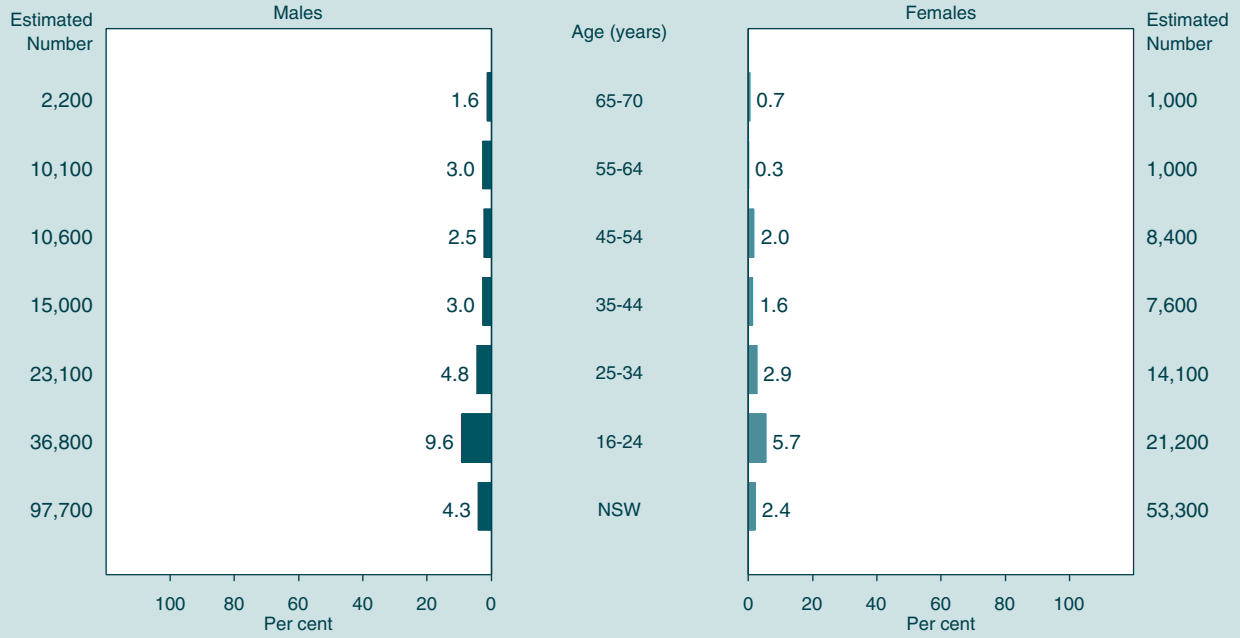
FIGURE 38

SEXUAL BEHAVIOUR IN LAST 12 MONTHS, PERSONS AGED 16 YEARS TO 70 YEARS, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 39

UNSAFE SEX BY AGE AND SEX, PERSONS AGED 16 TO 70 YEARS, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Smoking

Introduction

Smoking is the leading preventable cause of mortality and morbidity in New South Wales. It is the main cause of, or is a significant cause of, many diseases including cancer and cardiovascular disease. Of all preventable risk factors, tobacco use (including passive smoking) is responsible for the greatest burden of premature death and disability.[1]

The adverse effects of exposure to environmental tobacco smoke are well documented. In adults, exposure to environmental tobacco smoke has been linked to asthma, lung cancer, cardiovascular diseases, eye irritations, and headaches.[2] Children are particularly vulnerable to the effects of environmental tobacco smoke. Environmental tobacco smoke has been shown to be associated with several childhood respiratory illnesses, including asthma, bronchitis, and pneumonia, as well as the development of chronic ear infections, retardation of height and weight, and Sudden Infant Death Syndrome (SIDS).[2]

In 2004, the New South Wales Population Health Survey included questions on smoking status, intention to quit smoking, environmental tobacco smoke exposure in the home and car, and attitudes toward smoking. Respondents were asked the following tobacco-related questions: 'Which of the following best describes your smoking status? I smoke daily, I smoke occasionally, I don't smoke now but I used to, I've tried it a few times but never smoked regularly, I've never smoked', 'Which of the following best describes how you feel about your smoking? I am not planning on quitting within the next 6 months, I am planning on quitting within the next 6 months, I am planning on quitting within the next month, I have not smoked in the past 24 hours but was smoking 6 months ago, I have not been smoking in the past 6 months', ' Which of the following best describes your home situation? My home is smoke-free, People occasionally smoke in the house, People frequently smoke in the house', and 'Are people allowed to smoke in your car?'.

Results

Current smoking status

Overall, in 2004, 16.4 per cent of the respondents reported that they smoked daily, 4.6 per cent smoked occasionally, 24.3 per cent do not smoke now but used to, 11.7 per cent have tried smoking a few times but never have smoked regularly, and 43.0 per cent have never smoked.

Current smoking prevalence included respondents who reported that they smoke daily or occasionally. In 2004, 20.9 per cent of respondents reported that they are current smokers. There was no significant difference in the proportion of males and females who reported that they currently smoked.

For both males and females, rates of current smoking were highest in young adults. A significantly greater proportion of those aged 16–34 years (26.1 per cent to 29.5 per cent) and a significantly lower proportion of those aged 55 years and over (5.1 per cent to 16.0 per cent) were current smokers, compared to the overall adult population.

There was no significant difference between the proportion of rural and urban residents reporting current smoking.

The proportion of people reporting current smoking increased with increasing socioeconomic disadvantage. Compared to the overall adult population, the proportion of people currently smoking was significantly lower in respondents in the least disadvantaged quintile (16.9 per cent) and significantly higher in respondents in the most disadvantaged quintile (25.6 per cent).

There was a significant decline in the prevalence of current smoking, between 1997 (24.0 per cent) and 2004 (20.9 per cent).

More than half of all smokers intend to quite in the near future. Of the respondents who reported current smoking, 43.3 per cent were not planning to quit in the next 6 months, 35.3 per cent were planning to quit in the next 6 months, and 18.2 per cent were planning to quit in the next month. A further 2.8 per cent had just quit smoking (had not smoked in the last 24 hours), and 0.4 per cent had not smoked in the last 6 months.

Smoking in the home

In 2004, among New South Wales residents aged 16 years and over, 84.5 per cent reported that their home was smoke-free, 7.5 per cent reported people 'occasionally' smoked inside the home, and 8.0 per cent reported that people 'frequently' smoked inside the home.

The proportion of people living in a smoke-free home was significantly greater among people aged 75 years and over (92.1 per cent), compared with the overall adult population.

There was some geographic variation in the proportion of smoke-free homes, with a significantly greater proportion of residents in Northern Sydney and Central Coast Health Area (88.5 per cent) reporting smoke-free homes, compared with the overall adult population.

The proportion of smoke free homes increased as socio-economic disadvantage decreased. Compared to the overall population, the least disadvantaged quintile (89.4 per cent) had a significantly greater proportion of smoke-free homes, and the most disadvantaged quintile (76.3 per cent) had a significantly lower proportion of smoke-free homes.

There has been a significant increase in the proportion of homes reported to be smoke-free, from 69.7 per cent in 1997 to 84.2 per cent in 2004.

Smoking in cars

In 2004, among New South Wales residents aged 16 years and over, 84.4 per cent reported that their car was smoke-free. A significantly greater proportion of people aged 65 years (88.2 per cent to 90.8 per cent) and a significantly lower proportion of people aged 16–24 years (77.1 per cent) reported that their car was smoke-free.

There was no significant difference in the proportion of people in urban areas who reported a smoke-free car, when compared to rural areas. The proportion of people with a

smoke-free car was signficantly lower (79.9 per cent) in Sydney South West Health Area.

A significantly lower proportion of people in the most socioeconomically disadvantaged quintile (80.0 per cent) reported a smoke-free car.

Between 2003 and 2004 the proportion of people reporting a smoke-free car has increased significantly, from 81.2 per cent in 2003 to 84.4 per cent in 2004.

Figure 40 shows smoking status. Figure 41 and 42 show the proportion of people who currently smoke daily or occasionally by age and socioeconomic disadvantage. Figure 43 shows the intention to quit smoking. Figures 44 and 45 show the proportion of smoke-free households by age and socioeconomic disadvantage. Figure 46 shows the proportion of smoke-free cars by age.

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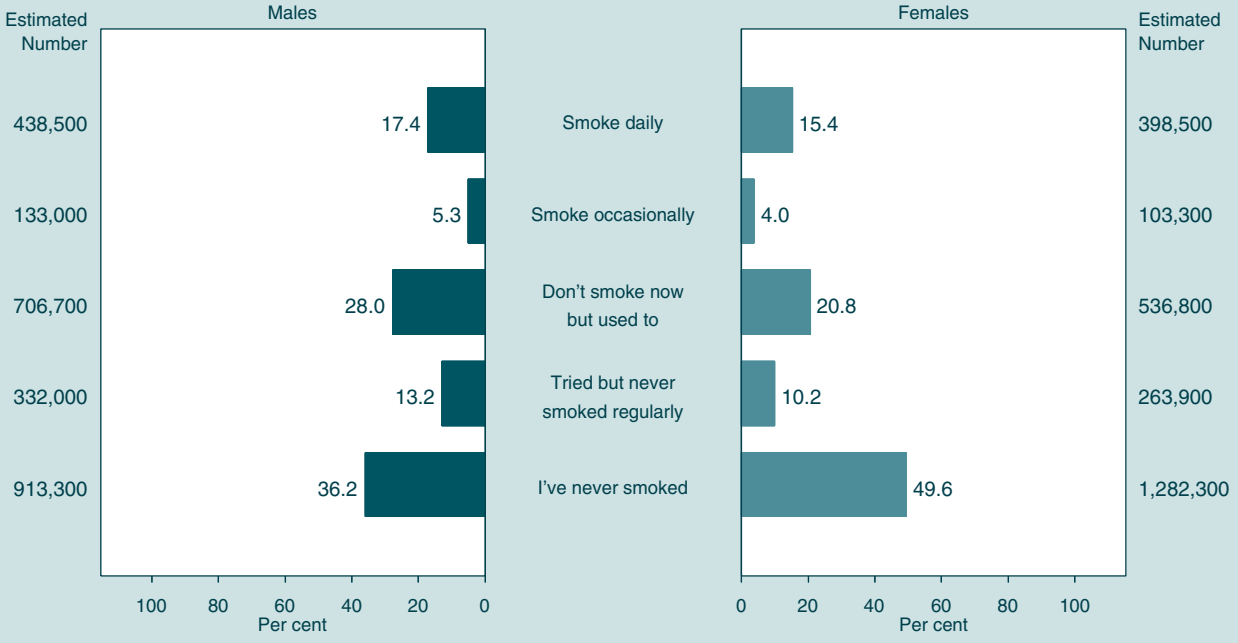
FIGURE 40

SMOKING STATUS, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 41

CURRENT DAILY OR OCCASIONAL SMOKING BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

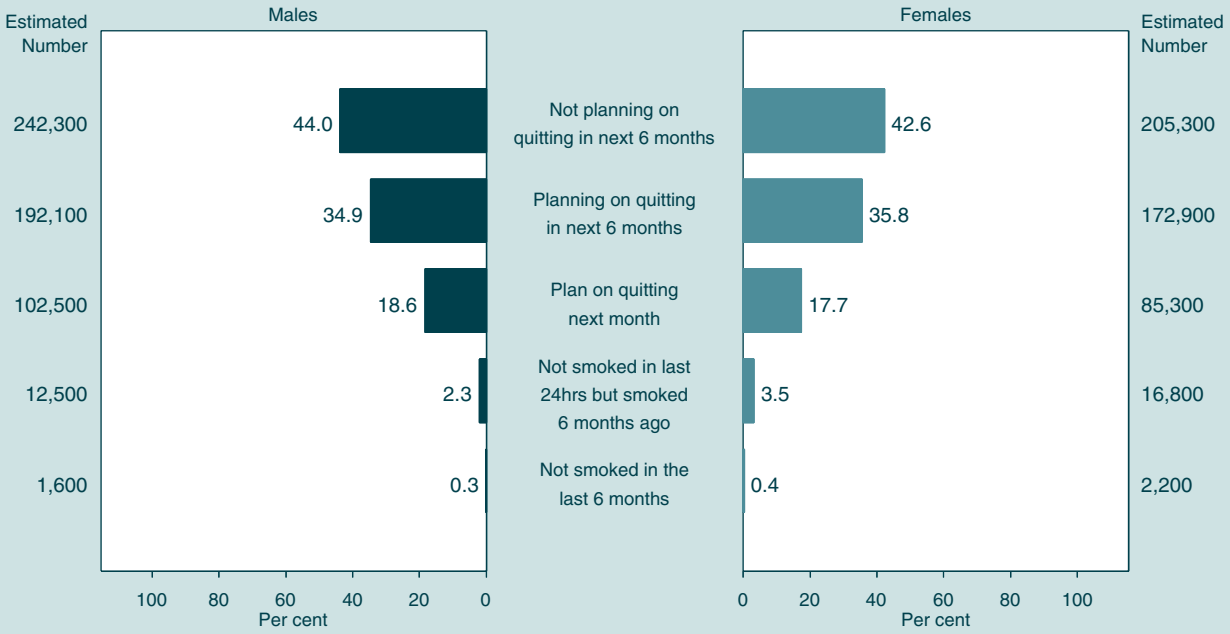
FIGURE 42

CURRENT DAILY OR OCCASIONAL SMOKING BY SOCIOECONOMIC DISADVANTAGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 43

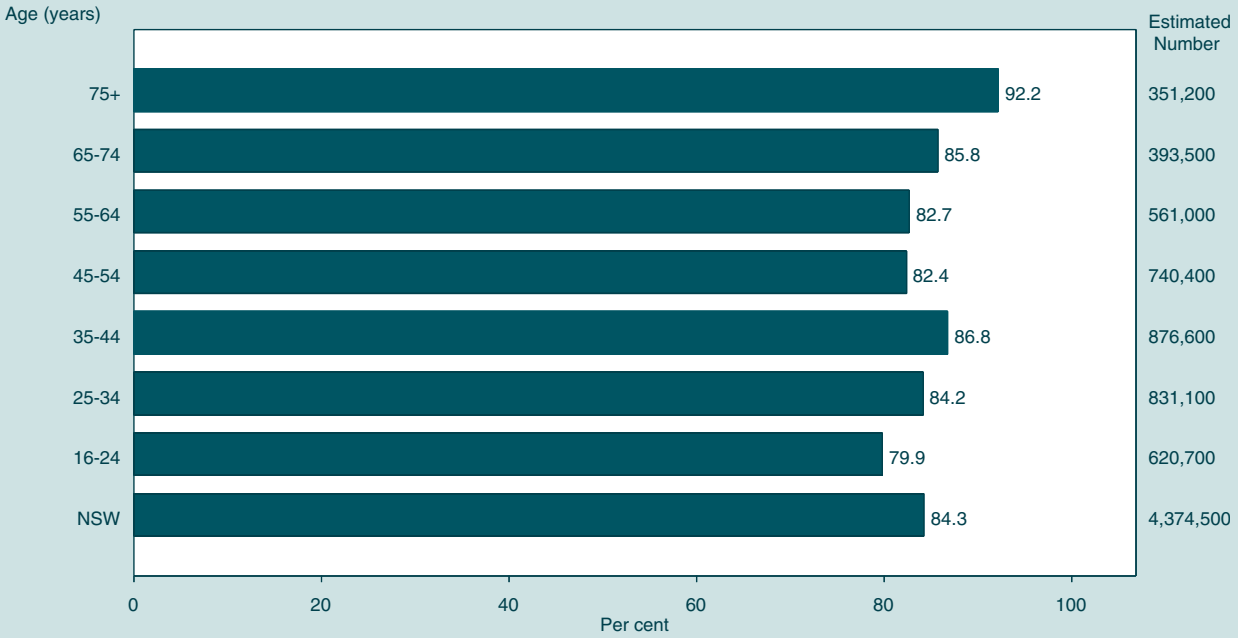
INTENTION TO QUIT SMOKING, PERSONS WHO SMOKE AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 44

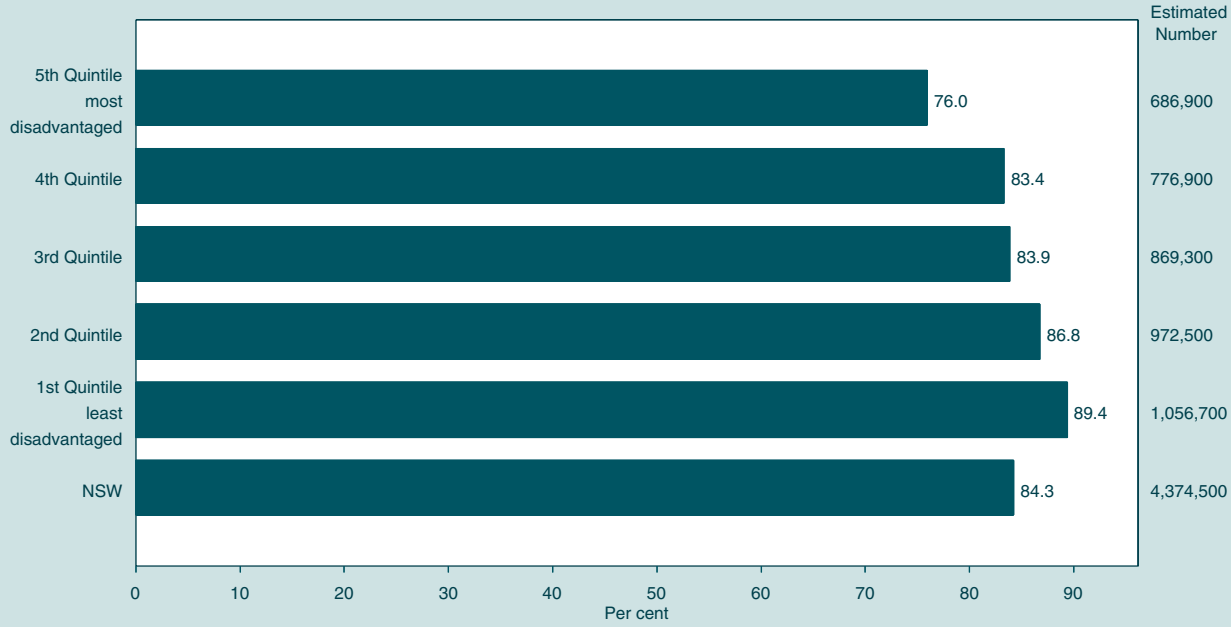
SMOKE-FREE HOUSEHOLDS BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 45

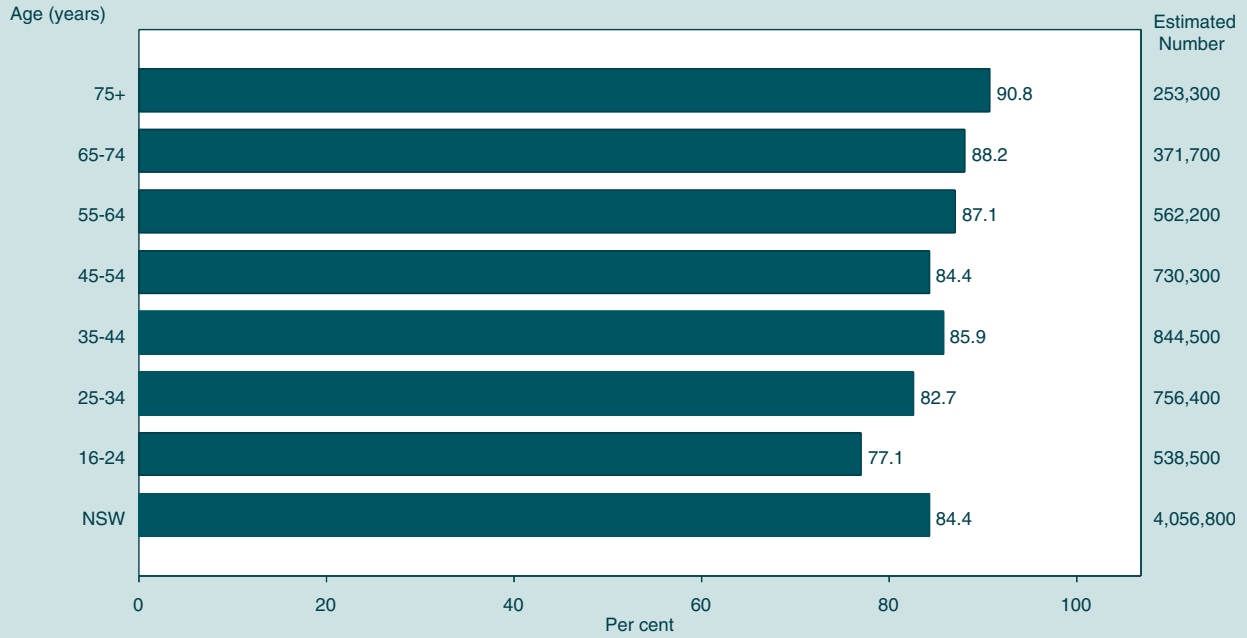
SMOKE-FREE HOUSEHOLDS BY SOCIOECONOMIC DISADVANTAGE, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 46

SMOKE-FREE CARS BY AGE, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Sun protection

Introduction

Sunlight contains ultraviolet radiation (UVR), which can cause skin cancer.[1] Australia's proximity to the equator means levels of UVR in New South Wales are very high.[2] Levels of UVR are highest around midday and are higher in summer than winter, particularly in southern Australia.[1,2]

Some sun exposure is beneficial to health; for example, by helping the body to produce vitamin D, which is essential for healthy bones.[3,4] However, excessive sun exposure can lead to sunburn in the short-term and to melanoma and other skin cancers in the long-term. Most skin cancer in Australia is caused by sun exposure.[1] In addition, there is some evidence that sun exposure causes several forms of eye disease including cataract, non-malignant skin conditions, and premature ageing.[1]

There are 3 types of skin cancer related to sun exposure: malignant melanoma and 2 non-melanocytic skin cancers (NMSC), basal cell carcinoma (BCC), and squamous cell carcinoma (SCC).[1] In Australia, the majority of new cancers that are diagnosed are non-melanoma skin cancers.[5]

Australia has one of the highest rates of melanoma in the world and the incidence of new cases of melanoma continues to rise.[5] In New South Wales in 2002, there were 3,189 new cases of melanoma diagnosed and 429 deaths.[6,7] This compares to 1,427 cases in 1983. Melanoma is now the third most common potentially fatal cancer in New South Wales.[7]

Incidence rates of NMSC also continue to rise in Australia, although there is evidence of a reduction in BCC incidence in younger cohorts.[8] This may indicate that public health campaigns to reduce sun exposure may be having a beneficial effect on skin cancer rates.[8]

In recognition of the high rates of skin cancer in Australia, the National Health Goals, Targets and Strategies for Australia recommended a reduction in exposure to sunlight for all, especially those at high risk of skin cancer.[9]

The principal goal of preventive efforts are to reduce exposure to UVR by environmental, social, and behavioural changes.[2] The recommendations are to reduce sun exposure by avoiding the sun during the summer months before 11.00 a.m. or after 3.00 p.m. by staying indoors, as the sun is at its strongest during these times and the risk of skin damage is at its highest.[2,10] Otherwise, if exposed to the sun during these hours, maximum protection is recommended by way of a wide-brimmed hat or cap with a backflap, clothing that protects from the sun, and the use of sunscreen to remaining exposed skin. The 'Slip, Slop, Slap' campaign ('slip on a shirt, slop on some sunscreen, and slap on a hat') sun protection message has been promoted throughout Australia for over 20 years.[1,2,10,11]

In addition, avoiding direct sunlight by opting for shade such as trees or shelters is one of the most effective ways of reducing sun exposure.[1,10] The SunSmart campaign, adopted first in Victoria in 1988, promotes sunlight avoidance by staying indoors during certain times of the day and wearing protective clothing to prevent exposure to UVR.[12] The Skin Cancer Strategic Plan 2001 outlines policy direction, population and setting, and monitoring priorities for New South Wales.[2] This plan identifies several achievements in the area of skin cancer prevention. These include: a high level of knowledge about skin cancer and sun protection; evidence of improvement in attitudes about sun protection and tanning; evidence of positive changes in sun protection behaviour among adolescents and in the general population; written policies on sun protection in schools, workplaces, and community settings; and an increase in the availability of sun protection products.[2]

In 2004, the New South Wales Population Health Survey aimed to obtain an estimate of the proportion of the population 16 years and over following current sun protection guidelines, and of how easy people find it to access shade in public places. Respondents were asked the following questions: 'Last summer, how often did go out in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m.?', 'Last summer, when out in the sun for more than 15 minutes, how often did you wear a broad-brimmed hat or cap with a back flap?', 'Still thinking about last summer, how often were you deliberately dressed in clothing to protect you from the sun?', 'Still thinking about last summer, how often did you get sunburnt, so your skin was still sore or tender the next day?', 'In your local area, when you are outside, do you find it easy to find shade in sporting areas?', 'In your local area, when you are outside, do you find it easy to find shade at the outdoor public swimming pool?', 'In your local area, when you are outside, do you find it easy to find shade at the public park?'.

A sun protection behaviour index (SPBI) score was calculated, which rated respondents' sun protection behaviour as either 'high' or 'low'. This index was based on similar sun protection indexes reported in the literature.[13] This score was calculated from the responses to the 4 questions about respondents sun protection habits last summer between 11.00 a.m. and 3.00 p.m. The questions used were: 'Last summer, how often did you go out in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m.?', 'Last summer, when out in the sun for more than 15 minutes, how often did you wear a broad brimmed hat or cap with a back flap?', 'Still thinking about last summer, how often did you deliberately dress in clothing to protect you from the sun?'. Respondents who answered that last summer they never went out in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m. were given a maximum score of 16. All other respondents who did go out in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m. were given a score between one and 4 for each question depending on their responses, with respondents who always undertook the particular sun protection behaviour scoring 4 points. Scores for each respondent were then added and those respondents scoring greater than 8 were classified as 'high' sun protection and

those who scored 8 or less were classified as 'low' sun protection on the index.

Results

Sun protection behaviours and sunburn

In 2004, 50.0 per cent of people 'often or always' applied sunscreen, 46.1 per cent 'often or always' dressed in protective clothing, 45.3 per cent 'often or always' wore a hat or a cap, 23.8 per cent did all of these, and 8.1 per cent were never in the sun between 11.00 a.m. and 3.00 p.m. A significantly greater proportion of females (79.0 per cent) were more likely to 'never get sunburnt' than males (69.8 per cent). Among males, the most frequently reported sun protection behaviour was 'often or always' wearing protective clothing (48.9 per cent), followed by wearing a hat or cap (47.1 per cent) and always applying sunscreen (40.9 per cent). Only 4.7 per cent of males were never in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m. Among females the most frequently reported sun protection behaviour was 'often or always' applying sunscreen (59.5 per cent), followed by wearing a hat or cap (43.4 per cent) and wearing protective clothing (43.2 per cent). Only 11.4 per cent of females were never in the sun for more than 15 minutes between 11.00 a.m. and 3.00 p.m.

High sun protection behaviour index score last summer

In New South Wales, 67.0 per cent of persons had a SPBI score between 9 and 16, which was classified as a 'high' score. A significantly greater proportion of females obtained a high score (71.9 per cent) than males (61.8 per cent). Among males, a significantly lower proportion aged 16–24 years (39.6 per cent) and a signficantly greater proportion aged 45–74 years (65.3 per cent to 71.9 per cent) obtained a high sun protection score, compared to the overall adult male population. A significantly lower proportion of females aged 16–24 years (56.4 per cent) and a significantly greater proportion aged 45 years and over (77.5 per cent to 78.3 per cent) obtained a high sun protection score, compared to the overall adult female population.

A significantly greater proportion of males in the second least socioeconomic disadvantaged quintile had a high sun protection score (69.2 per cent). There was no variation by socioeconomic disadvantage among females.

A significantly greater proportion of people in rural areas had a high sun protection score (70.2 per cent), compared to those in urban areas (66.1 per cent). In addition, a significantly greater proportion of residents in the Greater Southern Health Area had a high sun protection score (72.5 per cent).

Availability of shade

In 2004, 62.5 per cent of people in New South Wales found it easy to find shade when outdoors at sporting areas, 71.8 per cent at public swimming pools and 78.7 per cent at public parks in their local area. There were significant variations by age in how easy it was to find shade at these venues. At local sporting areas, a significantly greater proportion of people aged 55 years and over (68.2 per cent to 76.0 per cent), and a significantly lower proportion of people aged 35–54 years (53.7 per cent to 53.9 per cent) found it easy to find shade. A similar pattern was found at local parks, with a significantly greater proportion of people aged 55 years and over (84.5 per cent to 85.2 per cent) and a significantly lower proportion aged 35–44 years (72.6 per cent) reported shade was easy to find. At swimming pools a significantly greater proportion of younger people aged 16–24 years (79.3 per cent) and a significantly lower proportion of people aged 75 years and over (56.0 per cent) found shade easily.

There was minimal variation by socioeconomic status. A significantly lower proportion of people in the quintile of most disadvantage found shade easy to find in local parks (73.0 per cent). There was no variation by socioeconomic status for ease of finding shade at local sporting venues or local swimming pools.

A significantly greater proportion of people in rural areas found it easier to find shade than people in urban areas in sporting areas (66.8 per cent versus 61.3 per cent), swimming pools (75.6 per cent versus 70.6 per cent), and public parks (88.4 per cent versus 76.0 per cent).

Compared to the overall adult population, a significantly greater proportion of people in the Greater Southern and Greater Western Health Areas found it easy to find shade at sporting areas (68.6 per cent and 68.5 per cent) and parks (90.6 per cent and 90.9 per cent). A significantly greater proportion of people in Hunter New England (82.9 per cent) and North Coast (81.6 per cent) health areas also found it easy to find shade in parks. A significantly lower proportion of people in the North Coast Health Area (61.9 per cent) found shade easy to find at local swimming pools.

Trend data were available for shade in local sporting venues and swimming pools. Between 1997 and 2004, the proportion of people finding it easy to find shade at local sporting venues has increased significantly from 51.2 per cent in 1997 to 62.5 per cent in 2004. Similarly, the proportion of people finding it easy to find shade at local swimming pools has increased significantly from 61.0 per cent in 1997 to 71.8 per cent in 2004. No comparable trend data were available for shade in local parks.

Figure 47 shows sun protection behaviours between 11.00 a.m. and 3.00 p.m. last summer when out in the sun for more than 15 minutes. Figure 48 shows the sun protection behaviour index score last summer by age. Figure 49 and Table 5 show the proportion of people who found it easy to find shade in their local sporting areas by health area. Figure 50 and Table 6 show the proportion of people who found it easy to find shade in outdoor public swimming pools by health area. Figure 51 and Table 7 show the proportion of people who found it easy to find shade in their local public park by health area.

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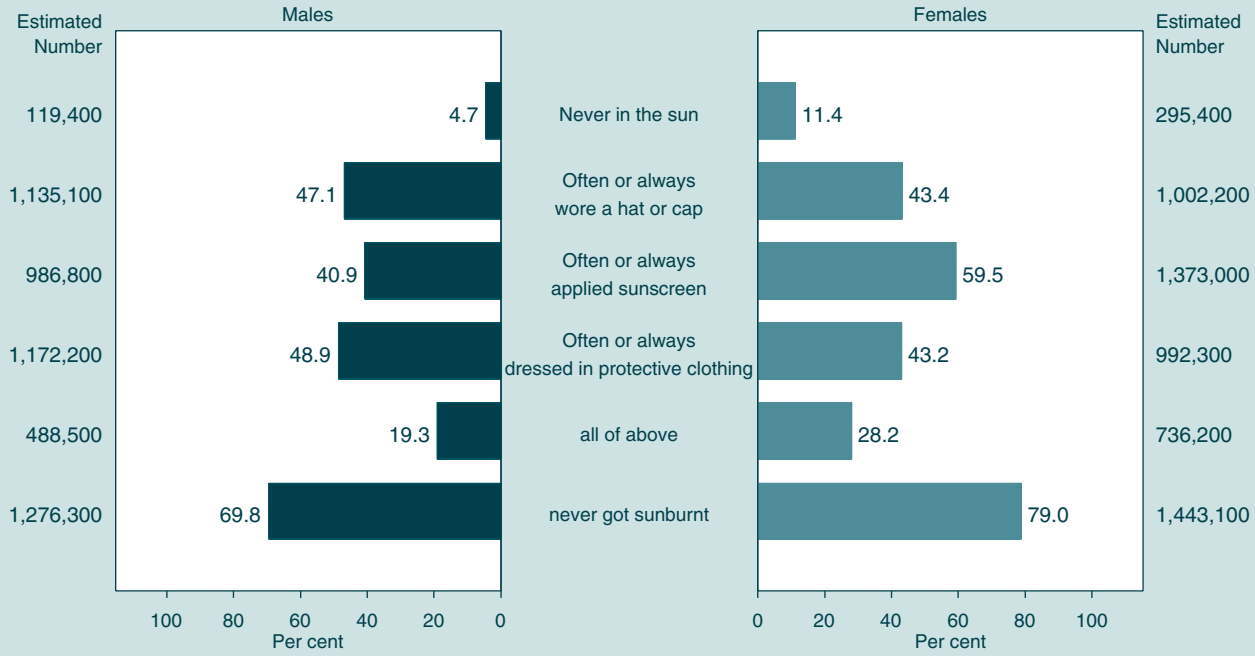
FIGURE 47

SUN PROTECTION BEHAVIOURS BETWEEN 11.00 A.M. AND 3.00 P.M. LAST SUMMER WHEN OUT IN THE SUN FOR MORE THAN 15 MINUTES, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

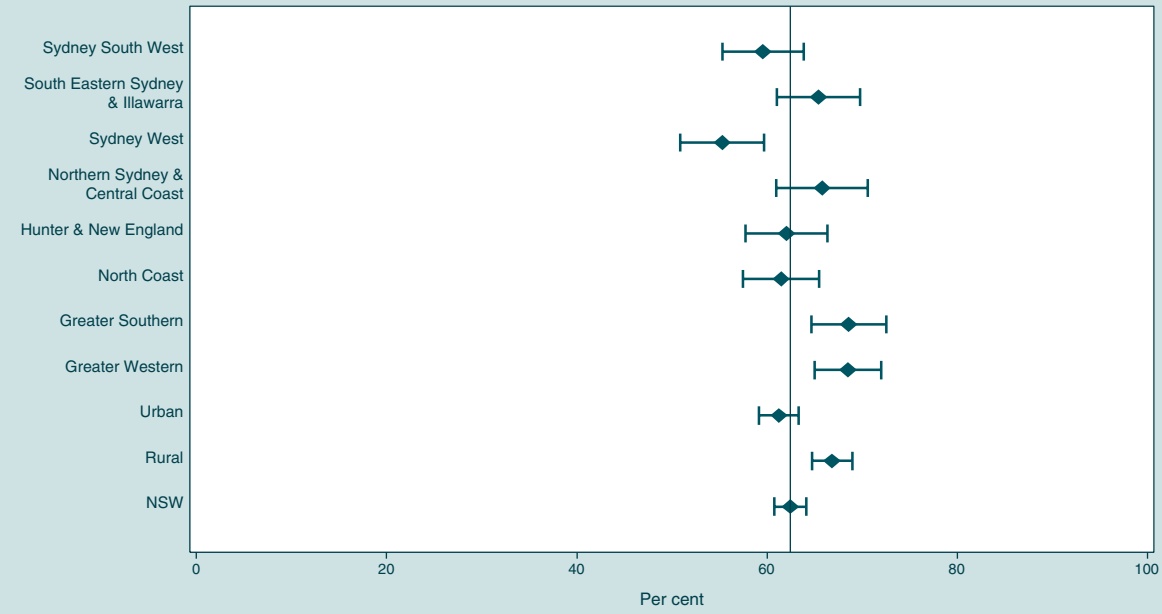
FIGURE 48

HIGH SUN PROTECTION BEHAVIOUR INDEX SCORE LAST SUMMER BY AGE AND SEX, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 49

EASY TO FIND SHADE IN LOCAL SPORTING AREAS BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

TABLE 5

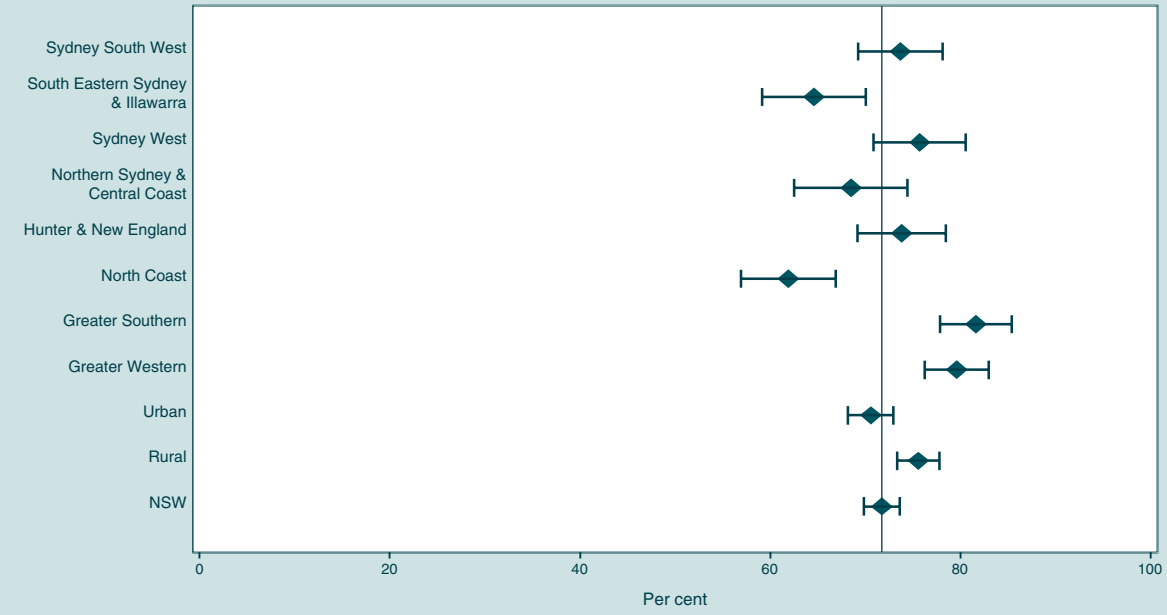
EASY TO FIND SHADE IN LOCAL SPORTING AREAS BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Area	Persons (no.)	Persons LL95% CI	Persons UL95% CI	Persons (est. no.)
Sydney South West	59.6	55.3	63.8	462100
South Eastern Sydney & Illawarra	65.4	61	69.8	467400
Sydney West	55.3	50.9	59.7	338300
Northern Sydney & Central Coast	65.8	61	70.6	439600
Hunter & New England	62	57.7	66.4	305100
North Coast	61.5	57.5	65.5	168500
Greater Southern	68.6	64.6	72.5	193800
Greater Western	68.5	65	72	120500
Urban	61.3	59.2	63.4	1924600
Rural	66.8	64.7	69	570700
NSW	62.5	60.8	64.2	2495300

Source: New South Wales Population Health Survey 2004 (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 50

EASY TO FIND SHADE AT OUTDOOR PUBLIC SWIMMING POOL BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

TABLE 6

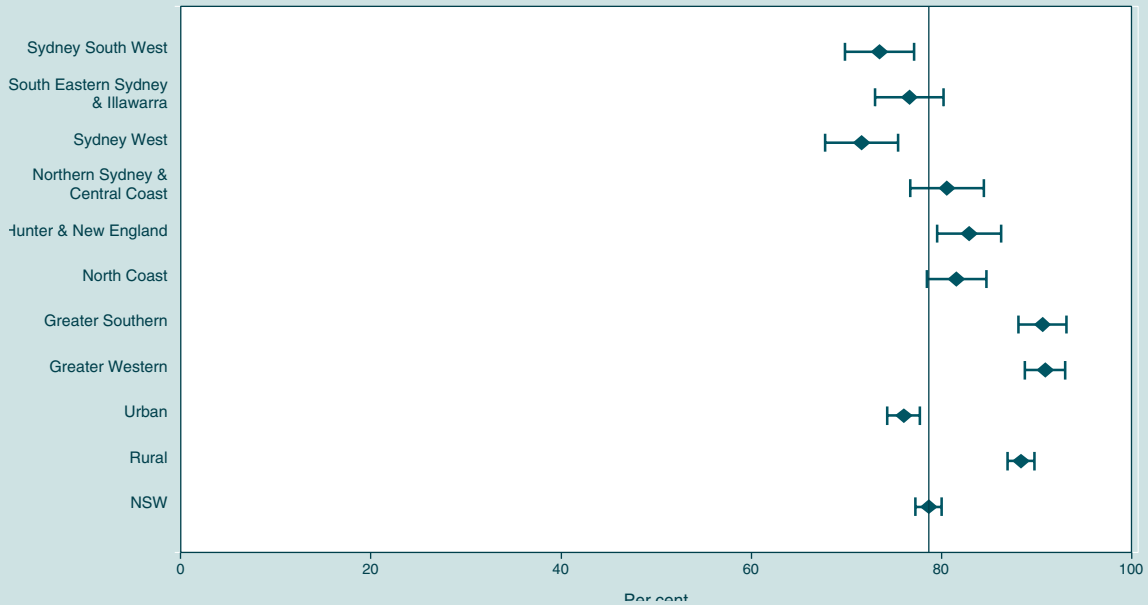
EASY TO FIND SHADE AT OUTDOOR PUBLIC SWIMMING POOL BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Area	Persons (no.)	Persons LL95% CI	Persons UL95% CI	Persons (est. no.)
Sydney South West	73.7	69.3	78.2	396400
South Eastern Sydney & Illawarra	64.6	59.1	70.1	304300
Sydney West	75.8	70.9	80.6	311900
Northern Sydney & Central Coast	68.5	62.5	74.4	282500
Hunter & New England	73.8	69.2	78.5	263300
North Coast	61.9	56.9	66.9	118900
Greater Southern	81.6	77.9	85.4	164600
Greater Western	79.6	76.3	83	117600
Urban	70.6	68.2	73	1477100
Rural	75.6	73.4	77.8	482400
NSW	71.8	69.9	73.6	1959500

Source: New South Wales Population Health Survey 2004 (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 51

EASY TO FIND SHADE AT LOCAL PUBLIC PARK BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004



Source: New South Wales Population Health Survey 2004 (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

TABLE 7

EASY TO FIND SHADE AT LOCAL PUBLIC PARK BY HEALTH AREA, PERSONS AGED 16 YEARS AND OVER, NSW 2004

Area	Persons (no.)	Persons LL95% CI	Persons UL95% CI	Persons (est. no.)
Sydney South West	73.5	69.9	77.1	640600
South Eastern Sydney & Illawarra	76.6	73.0	80.2	627200
Sydney West	71.6	67.8	75.4	480700
Northern Sydney & Central Coast	80.6	76.7	84.5	608500
Hunter & New England	82.9	79.6	86.3	458000
North Coast	81.6	78.5	84.7	249500
Greater Southern	90.6	88.1	93.2	277700
Greater Western	90.9	88.8	93.0	186600
Urban	76.0	74.3	77.8	2686900
Rural	88.4	87.0	89.8	842000
NSW	78.7	77.3	80.1	3528900

Source: New South Wales Population Health Survey 2004 (HOIST). Centre for Epidemiology and Research, NSW Department of Health.