

**Centre for Behavioural Research in Cancer**  
Cancer Control Research Institute  
The Cancer Council Victoria



**CBRC**  
**RESEARCH PAPER SERIES**  
No. 5  
March 2004

# **Smoking prevalence and consumption in Victoria: key findings from the 2000–2002 Population Surveys**

Tessa Letcher  
Irene Bobevski  
Carly Black  
John Lipscomb  
Sarah Durkin

**Prepared for:**  
The Victorian Smoking and Health Program (Quit)

**Website:**  
[www.cancervic.org.au/cbrc](http://www.cancervic.org.au/cbrc)

## ABSTRACT

Smoking prevalence and cigarette consumption were calculated from a population survey conducted by telephone among Victorian adults in November 2002 and compared with data from similar surveys conducted in 2000 and 2001. In 2002, 19.2% of respondents indicated they smoked regularly, compared with 20.4% in 2001 and 19.6% in 2000. There was no significant change in smoking prevalence between the years 2000, 2001 and 2002.

In 2002, smoking prevalence was significantly higher among males than among females. Those aged under 50 years had significantly higher smoking rates than older people. Smoking prevalence was significantly lower among those with tertiary education compared with those who had reached Year 12 or completed a trade qualification and those who had completed Year 11 or less. Those employed in white-collar occupations had lower smoking rates than those in blue-collar occupations.

In 2002, daily smokers reported smoking a mean number of 17.3 cigarettes per day, while daily and weekly smokers combined reported smoking 16.5 cigarettes per day. Cigarette consumption did not change significantly over the period 2000-2002. Heavy smokers comprised around one-fifth of daily smokers, medium smokers around one-third, and light smokers made up 42%-47% of daily smokers. There was no change in these proportions between 2000, 2001 and 2002.

The data indicate little change in smoking prevalence for Victorian adults between 2000 and 2002, following a downward trend in smoking observed in the early 1990s in Victoria.

### **Suggested citation:**

Letcher T, Bobevski I, Black C, Lipscomb J, Durkin S. *Smoking prevalence and consumption in Victoria: Key findings from the 2000-2002 population surveys*. CBRC Research Paper Series No. 5. Melbourne, Australia: Centre for Behavioural Research in Cancer, The Cancer Council Victoria, March 2004.

## INTRODUCTION

The current report presents the most recent Victorian population survey data on smoking prevalence and consumption from a population survey conducted among Victorian adults in November 2002. Data on prevalence and consumption from similar surveys conducted in 2000 and 2001 are also reported.

The report was prepared by the Centre for Behavioural Research in Cancer (CBRC) for the Victorian Smoking and Health Program (Quit).

## METHOD

The data presented in this report are from telephone surveys of randomly sampled Victorians conducted in November 2000 ( $n=2000$ ), November 2001 ( $n=2000$ ) and November 2002 ( $n=2000$ ). These annual population surveys are commissioned by CBRC from a large market research company which interviews a representative sample of 2000 Victorians by telephone each year. The questions, designed by CBRC, are asked in an eight- to ten-minute interview conducted during weekends and weeknights in November.

The standard tobacco use question<sup>1</sup> has been used to determine smoking status. In this report, smoking status is presented in two ways. The first way categorises respondents as *Regular smokers* (smoke daily or at least weekly), *Irregular smokers* (smoke less than weekly), *Former smokers* (do not smoke currently but have smoked at least 100 cigarettes in their lifetime, regardless of whether they have ever smoked daily), and *Never smokers* (do not smoke at all and have not smoked 100 or more cigarettes in their lifetime).

The second way of categorising smoking status is taken directly from the survey question, and categorises respondents as *Daily smokers* (smoke daily), *Weekly smokers* (smoke at least weekly), *Less than weekly smokers* (smoke less than weekly), and *Not at all smokers (current)* (do not smoke at all currently, may have smoked in the past).

## Sample

In each year (2000, 2001 and 2002), 2000 Victorian adults aged 18 years and over completed a telephone survey.

## Statistical analysis

A comparison of the sample socio-demographic characteristics with the Australian Bureau of Statistics estimates of the Victorian population<sup>2,3,4,5</sup> revealed that women and older people were over-represented in the telephone survey samples. To adjust for this, the data were weighted by age and sex according to population census data. When data are presented for the single year 2002, the data were weighted by gender and age to the population census data for that year. When data from more than one year are presented together, data from all years were weighted to the latest year (2002).

Analyses of variance and logistic regression analyses were used to examine the changes in smoking prevalence and consumption from 2000 to 2002, and the relationships between demographic variables and prevalence in 2002. Details of statistical tests of significance are not included in the report text. Where relationships between variables are reported, the probability level of significance was less than 0.01, indicating a less than 1 in 100 probability that the effect was caused by chance. For smoking prevalence and consumption levels, 95% confidence intervals are reported.

## RESULTS

### Smoking status 2000–2002

As reported in Table 1a, in 2002 19.2% of respondents indicated they smoked regularly, compared with 20.4% in 2001 and 19.6% in 2000. Logistic regression analyses showed that there was no significant change in the proportion of regular smokers between the years 2000, 2001 and 2002. The proportion of irregular (less than weekly) smokers was around 1.4% each year. Former smokers comprised just over one-quarter of the sample in 2002 (26.7%), compared with 31.1% in 2000 and 32.0% in 2001. Just over half of respondents in 2002 reported they had never smoked, compared with 48.0% in 2000 and 46.1% in 2001. As indicated in the table, an examination of the confidence intervals shows there is wide overlap between prevalence estimates for each category of smoking status across the survey years (for example, among regular smokers: 2000 95% CI 17.9-21.3; 2001 95% CI 18.6-22.2; 2002 95% CI 17.5-20.9).

Table 1a:  
Smoking prevalence among Victorian adults, 2000–2002

Smoking status	2000 (N=2000) % (± 95% CI)	2001 (N=1999) % (± 95% CI)	2002 (N=2000) % (± 95% CI)
Regular smokers	19.6 (± 1.7)	20.4 (± 1.8)	19.2 (± 1.7)
Irregular smokers	1.4 (± 0.5)	1.5 (± 0.5)	1.4 (± 0.5)
Former smokers	31.1 (± 0.5)	32.0 (± 2.0)	26.7 (± 1.9)
Never smokers	48.0 (± 0.5)	46.1 (± 2.2)	52.9 (± 2.2)

Data are weighted by age and sex to Victorian ABS 2002 figures.  
Due to rounding, not all columns sum to 100.

As described in the Method section, Table 1b presents smoking status in slightly different categories – daily, weekly and less than weekly smokers, and not at all smokers (including former and never smokers). In 2002, there were 17.7% daily smokers, compared with 18.0% in 2000 and 18.4% in 2001. There were 1.5% weekly smokers in 2002, compared with 1.6% in 2000 and 2.1% in 2001. Around the same proportion reported smoking less than weekly, 1.4% in 2002. Over three-quarters of respondents reported that they did not smoke at all at the time of the survey, 79.5% in 2002, 78.0% in 2001 and 79.1% in 2000.

Logistic regression analyses indicated no significant change in smoking prevalence between 2002 and the earlier two years in any of the categories. An examination of the confidence intervals reported in the table indicates broad overlap between prevalence estimates for each category of smoking status across the survey years (for example, among daily smokers: 2000 95% CI 16.3-19.7; 2001 95% CI 16.7-20.1; 2002 95% CI 16.0-19.4).

Table 1b:  
Smoking status by frequency of smoking among Victorian adults, 2000–2002

Smoking status*	2000 (N=2000) % (± 95% CI)	2001 (N=1994) % (± 95% CI)	2002 (N=1999) % (± 95% CI)
Daily smokers	18.0 (± 1.7)	18.4 (± 1.7)	17.7 (± 1.7)
Weekly smokers	1.6 (± 0.6)	2.1 (± 0.6)	1.5 (± 0.5)
Less than weekly smokers	1.4 (± 0.5)	1.5 (± 0.5)	1.4 (± 0.5)
Not at all smokers (current)	79.1 (± 1.8)	78.0 (± 1.8)	79.5 (± 1.8)

\*'Can't say' not presented as ≤1%.

Data are weighted by age and sex to Victorian ABS 2002 figures.

Due to rounding, not all columns sum to 100.

## Smoking prevalence and demographic variables, 2002

Smoking prevalence and demographic information for the 2002 population survey is presented in Table 2. Logistic regressions were carried out to investigate the differences in smoking prevalence by demographic group. Smoking prevalence was found to be significantly higher among males (22.5%) than among females (16.0%). The eldest age group, 50+ years, was found to have a significantly lower prevalence (12.0%) than the two younger age groups (18-29 year-olds 24.4%; 30-49 year-olds 23.1%), with no significant differences between these two groups.

Table 2:  
Smoking status by gender, age, education level, occupational status and region, 2002

Demographic characteristic	Regular Smokers	Irregular Smokers	Former Smokers	Never Smokers
Gender				
Men (n=974)	22.5	1.4	29.6	46.5
Women (n=1026)	16.0	1.3	23.9	58.9
Age				
18-29 (n=443)	24.4	2.3	13.3	60.0
30-49 (n=784)	23.1	1.3	25.4	50.2
50+ (n=767)	12.0	0.8	35.8	51.4
Education				
Yr 11 or less (n=527)	26.8	1.3	29.0	42.9
Yr 12/Trade (n=779)	19.1	1.3	25.8	53.8
Tertiary (n=677)	13.4	1.5	25.7	59.4
Occupational status				
Lower Blue (n=83)	24.1	0.0	22.9	53.0
Upper Blue (n=115)	28.7	2.6	19.1	49.6
Lower White (n=225)	17.8	0.9	25.3	56.0
Upper White (n=173)	13.4	2.3	22.7	61.6
Region				
Melbourne (n=1413)	18.6	1.3	25.5	54.5
Rural Vic (n=587)	20.4	1.4	29.3	48.9

Smoking prevalence was significantly different between all three levels of education; those with tertiary education reported a prevalence of 13.4%, compared with those who had reached Year 12 or completed a trade qualification (19.1%) and those who had completed Year 11 or less (26.8%). In examining occupational status, those in the white-collar group had lower prevalence than those in blue-collar occupations. Smoking prevalence was lowest among the upper white-collar group (13.4%), significantly lower than among the upper blue-collar group (28.7%).

There was no significant difference in smoking prevalence for respondents who lived in rural Victoria compared with those in Melbourne.

Cigarette consumption for daily smokers, and for daily and weekly smokers combined, is reported in Table 3 for the years 2000 to 2002. In 2002, daily smokers reported smoking a mean number of 17.3 cigarettes per day, while the combined group of daily and weekly smokers reported smoking 16.5 cigarettes per day.

Analysis of variance revealed that there was no significant change in the mean number of cigarettes smoked per day over the last three years for daily smokers, nor for daily and weekly smokers combined.

*Table 3:*  
**Mean number of cigarettes smoked per day for daily and daily/weekly smokers, 2000-2002**

	<b>2000</b> Mean (SD)	<b>2001</b> Mean (SD)	<b>2002</b> Mean (SD)
Daily smokers	16.4 (12.8)	16.9 (9.8)	17.3 (11.9)
Daily and weekly smokers	15.3 (12.9)	15.5 (10.3)	16.5 (12.1)

Daily smokers were categorised into heavy, medium or light smokers based on their reported daily consumption levels. The proportion of respondents in each category from each survey is presented in Table 4. Heavy smokers (25+ cigarettes a day) comprised around one-fifth of daily smokers (20%-24%), medium smokers (15-24 cigarettes a day) around one-third, and light smokers (fewer than 15 cigarettes a day) 42%-47% of daily smokers.

Logistic regression analysis was carried out to examine the changes in heavy, medium, and light cigarette consumption among daily smokers from 2000 to 2002. No significant differences in the proportions of respondents in any of the three categories were found between 2002 and the previous two years. There is wide overlap between the estimated proportions in each category over time (for example, among heavy smokers: 2000 95% CI 14.9-24.7; 2001 95% CI 18.0-26.6; 2002 95% CI 19.5-28.5).

*Table 4:*  
**Levels of cigarette consumption among daily smokers, 2000 to 2002**

Level of smoking	<b>2000</b> % (± 95% CI)	<b>2001</b> % (± 95% CI)	<b>2002</b> % (± 95% CI)
Heavy smokers (25+)	19.8 (± 4.9)	21.9 (± 4.3)	24.0 (± 4.5)
Medium smokers (15-24)	33.6 (± 4.9)	35.5 (± 4.9)	34.0 (± 5.0)
Light smokers (<15)	46.6 (± 5.2)	42.6 (± 5.1)	42.0 (± 5.2)

## DISCUSSION

The data indicate little change in smoking prevalence for Victorian adults between 2000 and 2002. This follows a downward trend in smoking observed in the early 1990's in Victoria<sup>6</sup>. Cigarette consumption did not change significantly between 2000 and 2002 for those who reported smoking daily, nor for daily and weekly smokers combined. In addition, of those respondents who reported smoking daily, there was no change in the proportions of heavy, medium or light smokers over this time period.

In 2002, gender, age, education level and the occupational status of the main income earner in the household were all found to be related to smoking prevalence, with smoking rates highest among men, those aged under 50 years, people who had reached a lower education level, and those from blue-collar occupations.

## REFERENCES

1. Australian Institute of Health and Welfare (AIHW). *National Health Data Dictionary*. Version 8.0. AIHW Catalogue No. HWI 18. Canberra: AIHW, 1999.
2. Australian Bureau of Statistics (ABS). *Population by Age and Sex, Australian States and Territories*, Catalogue No. 3201.0. Canberra: ABS, 2000.
3. Australian Bureau of Statistics (ABS). *Population by Age and Sex, Australian States and Territories*, Catalogue No. 3201.0. Canberra: ABS, 2001.
4. Australian Bureau of Statistics (ABS). *Estimated Resident Population by Age and Sex for September Quarter 2002, Victoria*. Customised table. Canberra: ABS, 2002.
5. Australian Bureau of Statistics (ABS). *Population by Age and Sex, Australian States and Territories*, Catalogue No. 3201.0. Canberra: ABS, 2002.
6. Trotter L, Inglis G. Key findings of the 2000 and 2001 population surveys. In Letcher T and Trotter L (eds), *Quit Victoria Research and Evaluation Studies No. 11: 2000-2001*. Melbourne: Centre for Behavioural Research in Cancer, 2003.