# Research brief

# Daily smoking trends in Victoria among demographic groups (2015 to 2018)

**Prepared for Quit Victoria by Emily Bain and Linda Hayes, May 2019**

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Quit Victoria believe that Victoria could be one of the first jurisdictions in the world to reach a daily smoking prevalence of 5% by 2025[1] with continued investment and action in tobacco control.

This brief presents the latest data from the Victorian Smoking and Health Survey. Positively, between 2015 and 2018, statistical declines in daily smoking were observed across almost all key demographic sub-groups studied; older adults were the only sub-group for whom a statistical decline was not recorded. In 2018, the prevalence of daily smoking among Victorian adults (10.7%) was observed to be at a record low.

## Declines in daily smoking, 2015 to 2018

- In 2018, 10.7% of Victorian adults (an estimated 543,000 people) smoked daily. This represents a statistical decline in daily smoking since 2015, when 13.5% of adults smoked on a daily basis (Table 1).
- Daily smoking declined among both **males** (down from 15.9% to 12.2%) and **females** (from 11.3% to 9.4%) between 2015 and 2018.
- Daily smoking declined across the 2015 to 2018 period both among **younger adults** (from 15.5% to 10.6%), and **mid-aged adults** (15.2% to 12.0%). Prevalence of daily smoking remained relatively low and did not change significantly among adults **aged 50 plus,** with approximately one-in-ten older adults smoking each day.
- When comparing results by education status, declines in daily smoking were observed for both adults with **lower education levels** (19.2% in 2015 to 15.6% in 2018) and among adults who had completed **Year 12 or higher** education (from 12.1% in 2015 down to 8.5% in 2018). Victorian adults with lower levels of formal education, consistently recorded higher smoking prevalence across the years studied, compared to those who had completed Year 12 or above.
- Among Victorian adults residing in the **most disadvantaged (low SES)** areas, daily smoking reduced from 16.8% in 2015 to 13.0%. Across the study period, daily smoking prevalence remained consistently lower and also declined, from 11.8% to 9.6%, among adults living in **mid to high SES** areas.
- Between 2015 and 2018, daily smoking among **health care card holders** declined from 16.3% to 12.2% and from 12.1% to 10.0% among adults who did **not hold a health care** card.
- Daily smoking declined from 14.3% to 11.1% among **regional Victorians** and from 13.1% to 10.6% among adults living in **Melbourne**.

# Results

## Table 1: Daily smoking in Victoria by demographic groups, 2015 to 2018 (base: adults aged 18 years and over)

| | 2015 % (95% CI) | 2016 % (95% CI) | 2017 % (95% CI) | 2018 % (95% CI) | Change (2015 to 2018) |
|---|---|---|---|---|---|
| **Victoria** (N=3998-4001) | 13.5 (±1.1) | 11.8 (±1.0) | 11.6 (±1.0) | 10.7 (±1.0) | ⇩ |
| **Sex** | | | | | |
| Males (n=1930-1941) | 15.9 (±1.6) | 13.5 (±1.5) | 13.8 (±1.5) | 12.2 (±1.5) | ⇩ |
| Females (n=2050-2060) | 11.3 (±1.4) | 10.3 (±1.3) | 9.7 (±1.3) | 9.4 (±1.3) | ⇩ |
| **Age group** | | | | | |
| 18 to 29 years (n=874-916) | 15.5 (±2.4) | 13.0 (±2.2) | 11.7 (±2.1) | 10.6 (±2.0) | ⇩ |
| 30 to 49 years (n=1358-1437) | 15.2 (±1.9) | 13.6 (±1.8) | 14.5 (±1.9) | 12.0 (±1.7) | ⇩ |
| 50+ years (n=1691-1724) | 11.2 (±1.5) | 9.8 (±1.4) | 9.3 (±1.4) | 9.8 (±1.4) | - |
| **Education** | | | | | |
| Did not complete Year 12 (n=794-1221) | 19.2 (±2.7) | 18.4 (±2.7) | 18.8 (±2.7) | 15.6 (±2.0) | ⇩ |
| Year 12 and above (n=2748-3181) | 12.1 (±1.1) | 10.2 (±1.1) | 9.9 (±1.0) | 8.5 (±1.0) | ⇩ |
| **SEIFA** (ref) | | | | | |
| Low SES (n=1324-1404) | 16.8 (±2.0) | 16.2 (±1.9) | 15.3 (±1.9) | 13.0 (±1.8) | ⇩ |
| Mid-high SES (n=2597-2674) | 11.8 (±1.2) | 9.4 (±1.1) | 9.8 (±1.1) | 9.6 (±1.1) | ⇩ |
| **Health care card** | | | | | |
| Health care card holder (n=1278-1367) | 16.3 (±2.0) | 14.6 (±1.9) | 13.2 (±1.9) | 12.2 (±1.7) | ⇩ |
| Not a health care card holder (n=2633-2720) | 12.1 (±1.2) | 10.4 (±1.2) | 10.9 (±1.2) | 10.0 (±1.1) | ⇩ |
| **Part of Victoria** | | | | | |
| Regional Victoria (n=998-1096) | 14.3 (±2.1) | 14.5 (±2.1) | 13.7 (±2.1) | 11.1 (±2.0) | ⇩ |
| Melbourne (n=2890-3001) | 13.1 (±1.2) | 10.9 (±1.1) | 10.9 (±1.1) | 10.6 (±1.1) | ⇩ |

Note: ⇩ linear decline at p<0.05, - = no change.

# Method

The Victorian Smoking and Health Survey is a cross-sectional, annual telephone survey of approximately 4000 randomly sampled English speaking Victorian adults. Data from the 2015, 2016, 2017 and 2018 surveys were examined to inform this research brief. Linear regression analyses were used to examine the changes in smoking prevalence from 2015 to 2018. It should be noted that it is common to have fluctuations in data between single years, and observations over multiple years are necessary to gain a reliable indication of the trends in smoking prevalence.

The sample for the Victorian Smoking and Health Survey is generated by Random Digit Dialling (RDD) to both landline and mobile phones. The proportion of the sample recruited via calls to mobile phones has increased gradually in recent years; in 2015 and 2016 60% of the sample was recruited via mobile, in 2017 this increased to 65% and then 70% in 2018.

A multi-stage weighting procedure, including a design weight and a post stratification weight, was used to adjust for any biases inherent with differences between the survey respondents and the wider Victorian population. The design weight took into account the relative chance of inclusion in the landline and/or the mobile phone frame, a chance of selection adjustment based on the number of landlines in each household and the number of in-scope persons per household.[(2)] Information on telephone ownership in the Victorian population ("mobile-only", "landline and mobile" or "landline only") that was used in the calculation of the design weight was obtained from Roy Morgan Single Source.[(3)] The post stratification weight was calculated using a raking method with adjustments for age, sex and education based on estimates of the Victorian population at the 2016 Census.[(4)]

A standard tobacco question [(5)] was used to determine smoking status.

This report includes an analysis of smoking prevalence among socio-economic groups. The Index of Socio-Economic Disadvantage, developed by the ABS, has been used to classify respondents into socio-economic status (SES) groups based on Census data of the area in which they live (6). This index ranks postcodes on a continuum of high disadvantage to low disadvantage, taking into consideration characteristics such as income, education, occupation and housing that may reduce socio-economic conditions of the area. For the purpose of analysis we have grouped respondents into two groups based as follows:

The low SES group (1st and 2nd quintiles) comprises people who live in areas with a SEIFA score in the bottom 40% of ranked Victorian postal areas (this represents a higher level of disadvantage relative to the other areas of Victoria); the mid-high SES group (quintiles 3-5) includes Victorians who live in areas with a SEIFA score between 41% and 100% of ranked postal areas (reflecting a lower level of disadvantage relative to the other Victorians).[(6)] Respondents were assigned SEIFA scores as at the 2016 Census.

Estimates of the numbers of smokers in the Victorian population were based on the 2018 Estimated Resident Population.[(7)] Where smoker numbers are quoted they are subject to the same 95% Confidence Intervals (CI) as prevalence estimates; so with an estimated 2018 daily smoking prevalence of 10.7%, (95% CI, 9.8% to 11.7%) then it is estimated 543,000 Victorians were daily smokers (95% CI, 494,500 to 591,500).

# References


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2. Petroulias T. 2017 Smoking and Health Survey: Technical Report. The Social Research Centre: Melbourne, 2018.

3. Roy Morgan Research. Single Source Fact Sheets: available from http://www.roymorgan.com/products/single-source/single-source-fact-sheets. Accessed 27/01/2015.

4. Australian Bureau of Statistics. Population by age and sex, Australian states and territories 2016 census edition: Final. Catalogue No. 3101.0. Canberra, Australia: ABS, 2017.

5. Australian Institute of Health and Welfare (AIHW). National Health Data Dictionary. Version 8.0. AIHW Catalogue No. HWI 18. Canberra: AIHW, 1999.

6. Australian Bureau of Statistics (ABS). Socio-Economic Indexes for Areas (SEIFA) 2016: Technical Paper. ABS Catalogue number: 2033.0.55.001. Commonwealth of Australia, Canberra, March 2018.

7. Australian Bureau of Statistics. Estimated Resident Population by Single Year of Age, Victoria 2018. Catalogue No. 3101.0. Canberra, Australia: ABS, 2019.