



Ontario

Cancer Care Ontario

Action Cancer Ontario



# Cancer Risk Factors in Ontario

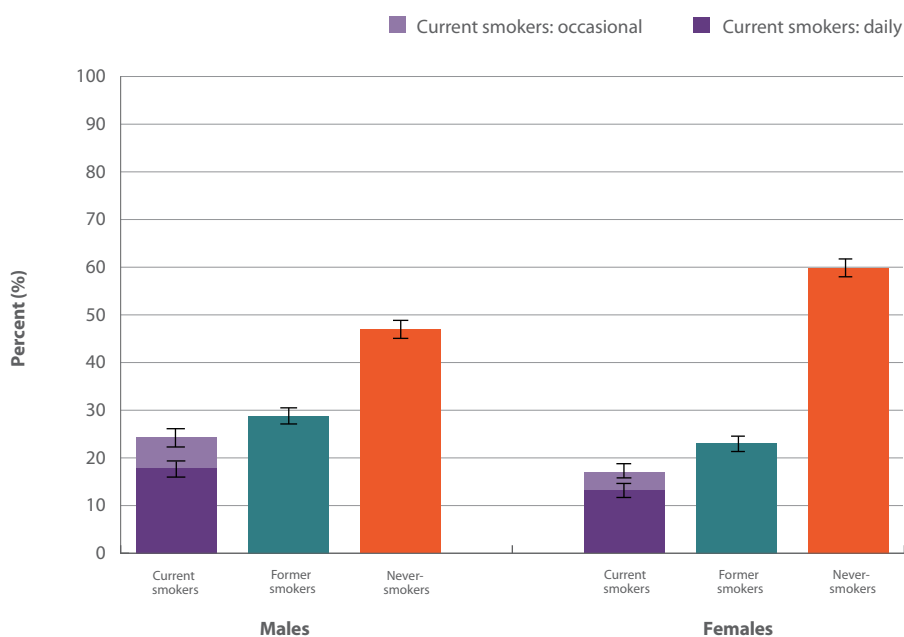
Adults



## 2. ADULTS

### 2.1 OVERVIEW: CURRENT, FORMER AND NEVER-SMOKERS

**FIGURE 3.**  
Smoking status of Ontario adults (aged 20+), by sex, 2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.

I represent 95% confidence intervals.

**Current smokers:** adults who reported that they presently smoke cigarettes “daily” or “occasionally.” See Appendix B for more details.

**Former smokers:** adults who reported that they presently do not smoke cigarettes but they had smoked at least 100 cigarettes in their lifetime.

**Never-smokers:** adults who reported that they presently do not smoke cigarettes and that they had smoked less than 100 cigarettes in their lifetime.

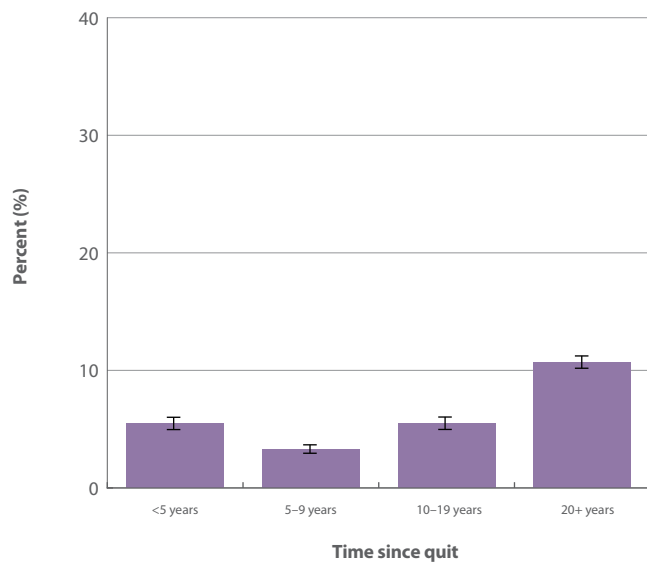
**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- In 2011, approximately 2 million Ontario adults aged 20 years and older (20.6% after adjusting for age) smoked cigarettes daily or occasionally, while an additional 2.6 million (25.7%) were former daily or occasional smokers (based on self-reports) (see supplementary table S1).
- A larger proportion of adult males than females in Ontario were current (daily or occasional) smokers and former smokers, while the proportion who had never smoked was significantly higher in females than males (Figure 3):
  - Among males, 24.2% were current smokers, 28.8% were former smokers and 46.9% were never-smokers.
  - Among females, the prevalence of current, former and never-smoking was 17.1%, 23.1% and 59.8%, respectively.

- Daily smoking was much more common than occasional smoking for men and women; 17.9% of males and 13.2% of females were daily smokers, while 6.3% of males and 3.9% of females were occasional smokers.
- Occasional smokers are individuals who reported that they “smoke cigarettes occasionally” at the present time. Ontario’s occasional smokers are a heterogeneous group of persistent occasional smokers and of former daily smokers at risk of returning to daily smoking.<sup>15</sup>

**FIGURE 4.**

Prevalence of former smokers among Ontario adults (aged 20+), by time since quitting, 2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
I represent 95% confidence intervals.

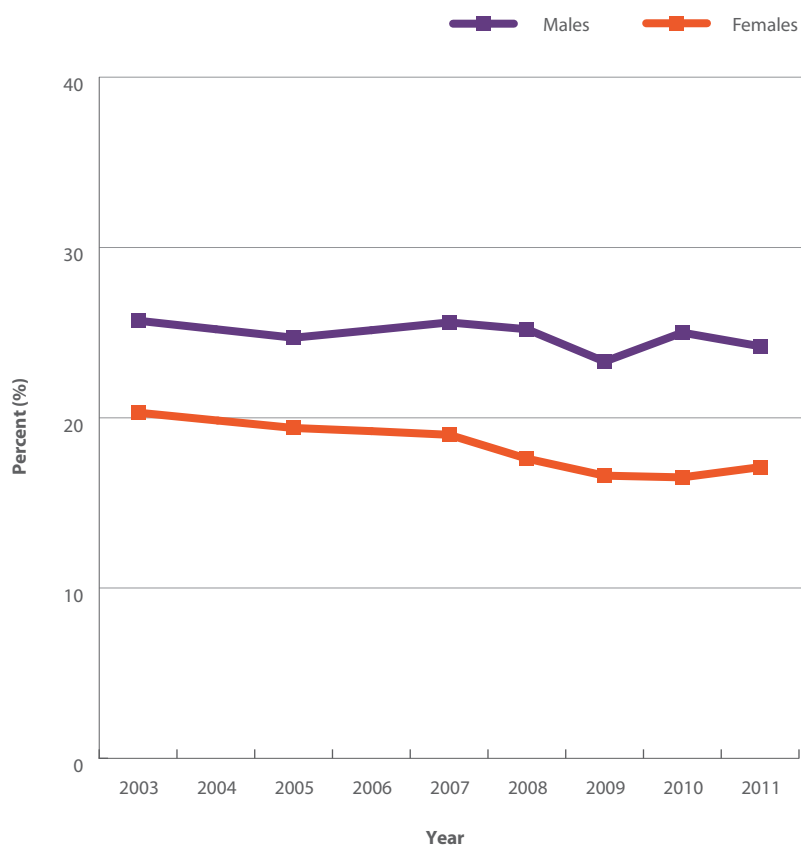
**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- Tobacco-associated cancer risk generally decreases as the time since quitting increases. For some cancers, such as lung, risk declines rapidly but remains elevated compared to never-smokers for many years, while for others, such as oral cancer, the risk is nearly the same as for never-smokers around 10 years after cessation.<sup>3,4</sup>
- Among adults aged 20 years and over, 5.5% were former smokers who had stopped smoking within the last five years, 3.3% had quit five to nine years ago, 5.5% were former smokers who quit 10 to 19 years ago, and 10.7% were former smokers who had not smoked for at least 20 years (Figure 4). Significantly more males had quit smoking 10 to 19 years ago and for 20 years or more than females (see supplementary table S2).
- The higher proportion of former smokers who quit less than five years ago, compared with five to nine years ago, may reflect the fact that this group includes people who have recently quit smoking and are at a high risk of relapsing.

## 2.2 CURRENT SMOKING

FIGURE 5.

Trends in current smoking prevalence among Ontario adults (aged 20+), 2003–2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.

First year of data is 2003 because of a change in the method of administering the survey after the 2000/2001 CCHS cycle, which affected some smoking estimates.

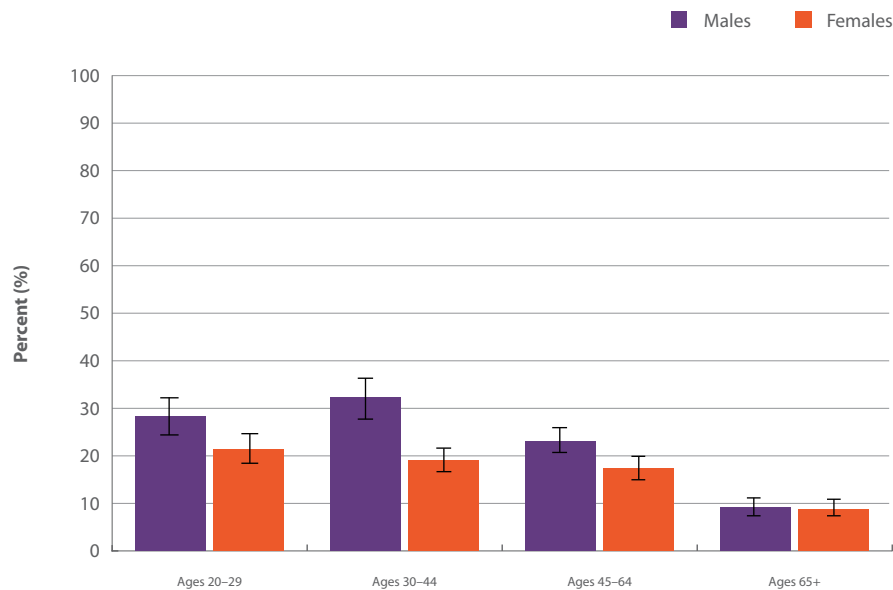
**Source:** Canadian Community Health Survey, 2003, 2005, 2007–2011 (Statistics Canada)

- The overall prevalence of current smoking (daily or occasional) among Ontario adults aged 20 years and older decreased significantly between 2003 and 2011 (see supplementary table S3), continuing a decline seen for several decades.<sup>16</sup> This decline is largely due to decreases in the prevalence of daily rather than occasional smoking.<sup>17</sup>
- The prevalence of current smoking remained consistently higher in males than in females between 2003 and 2011; this is similar to earlier periods. The proportion of female adults who were daily or occasional smokers decreased significantly, from 20.3% in 2003 to 17.1% in 2011, although the rate appears to have stabilized since 2009. Smoking rates for males remained stable for the 2003–2011 period (Figure 5).

- Despite long-term declines in smoking rates, a sizeable number of Ontario adults smoke and this number can be expected to rise in future years, even if the smoking rate remains stable, because of ongoing population growth. The recent stabilization of smoking rates, particularly in males, following a long-term decline suggests a need for additional strategies to promote cessation and prevent uptake to re-start this downward trend.

**FIGURE 6.**

Current smoking prevalence in Ontario adults (aged 20+), by sex and age group, 2011



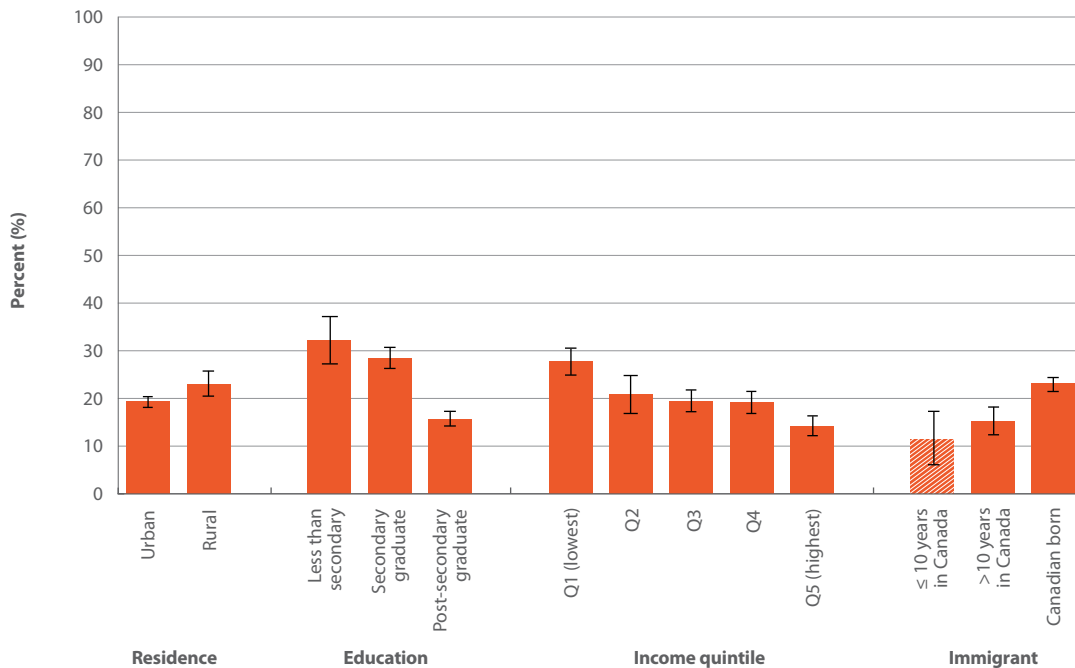
**Notes:** I represent 95% confidence intervals.

**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- In 2011, the age-specific prevalence of current daily or occasional smoking among both males and females was highest in the 20–29 (males 28.2%, females 21.4%) and 30–44 (males 32.3%, females 19.0%) age groups. Prevalence was significantly lower at ages 65 and older (males 9.2%, females 8.8%) (Figure 6; supplementary table S4). It should be noted that despite lower percentages, the older age groups 30 years and up represent more Ontarians and thus higher actual numbers of smokers than the 20–29-year-old group.
- Lower prevalence in the older age groups likely reflects a combination of higher rates of successful quitting among ever-smokers in these age groups and greater tobacco-related mortality as smokers age.
- Similar to the pattern for all ages combined, males younger than age 65 had a significantly higher prevalence of current smoking than females. Males and females aged 65 and older had similar rates of current smoking (Figure 6).

**FIGURE 7.**

Current smoking prevalence in Ontario adults (aged 30+), by selected socio-demographic factors, 2011

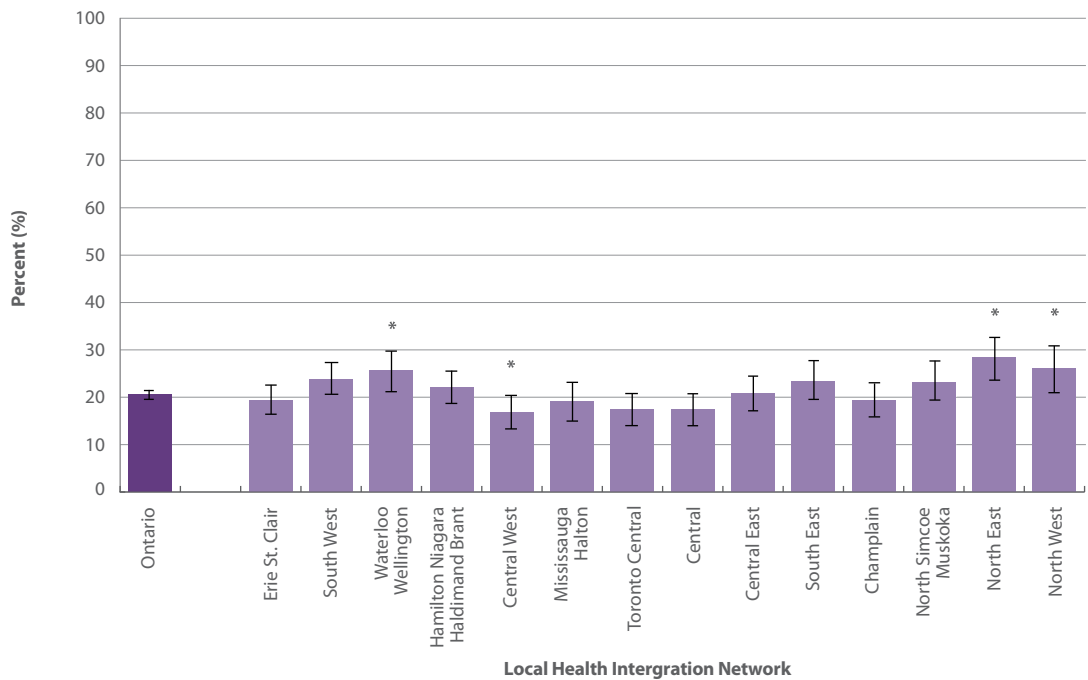


**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
I represent 95% confidence intervals.  
Interpret estimates denoted with diagonal lines with caution due to high sampling variability.  
**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- The prevalence of current smoking differs significantly across levels of several socio-demographic factors. Socio-demographic characteristics were analyzed for adults aged 30 and over to restrict the sample to those who have likely completed their education and reached their adult socio-demographic status.
- In 2011, current smoking prevalence was significantly higher among adults (aged 30+) living in rural (23.0%) compared to urban areas (19.3%), among those with less than a secondary school education (32.1%) compared to post-secondary school graduates (15.7%), and among the lowest income group (27.8%) compared with the highest (14.2%) (Figure 7).
- Consistent with a healthy immigrant effect, Canadian-born adults had significantly higher smoking rates (23.1%) than immigrants.
- Similar differences in current smoking prevalence by education, income and immigrant status were seen for males and females (see supplementary table S5).

- Adult smokers (ages 18+), compared to non-smokers, are less likely to be food secure, have a family doctor, own their dwelling and be a post-secondary graduate, and are more likely to be white, Canadian-born, male, have unhealthy eating habits and exceed low-risk drinking guidelines.<sup>7</sup>

**FIGURE 8.**  
Current smoking prevalence in Ontario adults (aged 20+), by Local Health Integration Network, 2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
 † represent 95% confidence intervals.  
 \*Estimate is significantly higher/lower than the Ontario estimate.  
**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

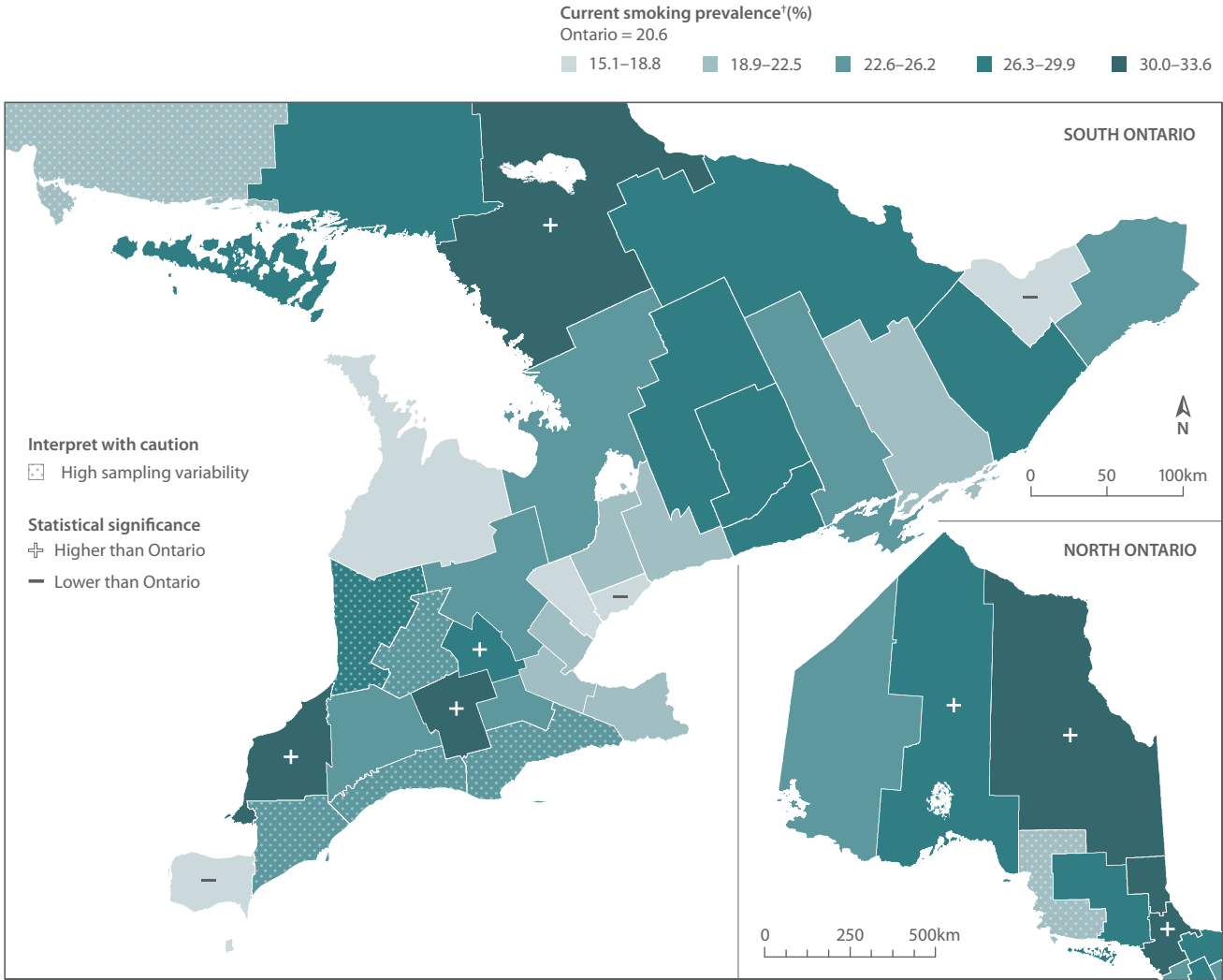
- Ontario has significant regional variation in current smoking rates, with the lowest rates generally observed in the central part of the province and the highest rates generally in the north.
- Compared to the 2011 provincial estimate of 20.6%, the Waterloo Wellington, North East and North West Local Health Integration Networks (LHINs) had significantly higher age-adjusted rate of current smoking, while the Central West LHIN had a significantly lower smoking rate (Figure 8; see Appendix D for map showing LHIN boundaries).
- Current smoking prevalence among Ontario's 14 LHINs ranged from a low of 16.7% in the Central West LHIN to a high of 28.4% in the North East LHIN.

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- The variation in current smoking prevalence across LHINs appears to be largely influenced by variation in LHIN-specific female rates of current smoking (see supplementary table S6).
  - In 2011, the prevalence of current smoking among Ontario's 36 public health units (PHUs) ranged from a low of 15.1% in the Windsor-Essex PHU to a high of 33.6% in the Porcupine PHU (Figure 9 and supplementary table S7).
  - Compared to the provincial estimate of 20.6%, the Porcupine, Oxford, Lambton, North Bay Parry Sound, Waterloo and Thunder Bay PHUs had significantly higher prevalence of current smoking, while the Windsor-Essex, Ottawa and Toronto PHUs had significantly lower smoking prevalence.
  - Greater regional variation in current smoking prevalence was apparent at the PHU level than at the LHIN level, with marked variation between some PHUs within the same LHIN. Within the Erie St. Clair LHIN at the southwest tip of Ontario, for example, current smoking rates ranged from as low as 15.1% in the Windsor-Essex PHU to as high as 31.0% in the Lambton PHU; these differences are averaged out at the LHIN level resulting in a smoking estimate that is similar to all Ontario. Likewise, smoking prevalence in northern Ontario was not uniformly higher than the provincial average, as the LHIN rates imply (see Appendix D for map showing LHIN and PHU boundaries).



**FIGURE 9.**

Current smoking prevalence in Ontario adults (aged 20+) by public health unit, 2011



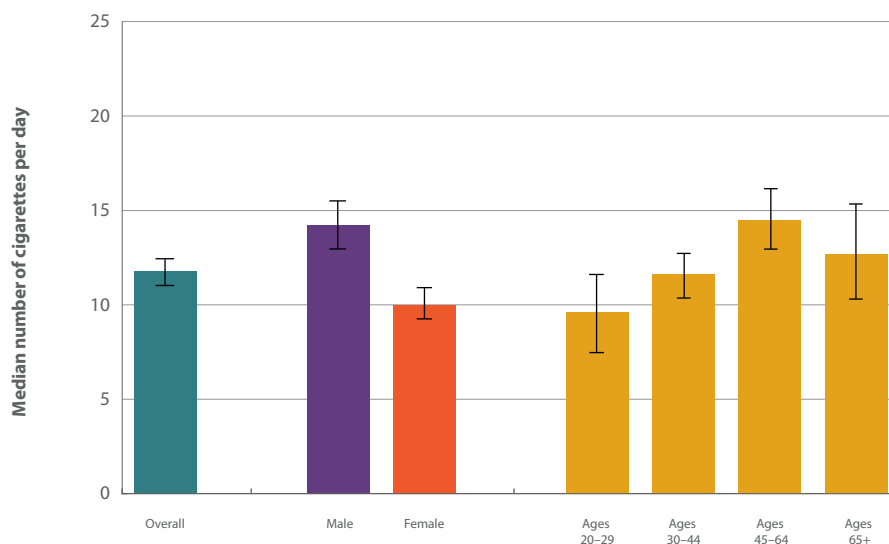
**Notes:** \* Estimates are age-standardized to the 2006 Canadian population.

**Sources:** Canadian Community Health Survey, 2011 (Statistics Canada); 2006 Census Boundaries (Statistics Canada)

## 2.3 CIGARETTE CONSUMPTION

**FIGURE 10.**

Median cigarette consumption among adult (aged 20+) daily smokers in Ontario, by sex and by age group, 2011



**Notes:** I represent 95% confidence intervals.

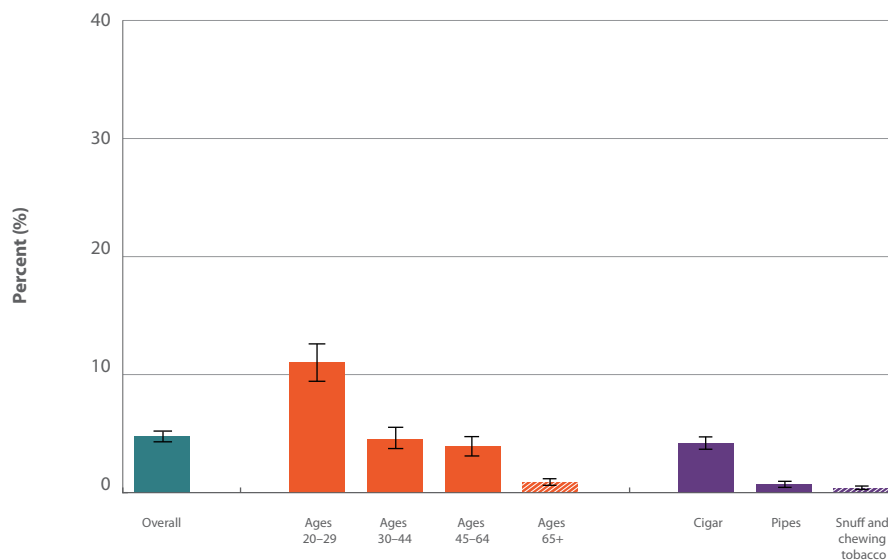
**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- In 2011, the median number of cigarettes consumed by daily smokers was 11.8 (mean 14.5) cigarettes per day (CPD) (Figure 10; supplementary table S8).
- Males had a significantly higher median cigarette consumption (14.2 CPD) compared to females (10.0 CPD).
- Daily cigarette consumption varied significantly across age groups. In 2011, median consumption was lowest among adults aged 20–29 (9.6 CPD), higher in the 30–44 age group (11.6 CPD), higher still in the 45–64 age group (14.5 CPD), and slightly lower among adults aged 65 years and older (12.7 CPD).
- Although half of daily smokers in Ontario smoked well below 20 cigarettes (one pack) per day, 32.4% reported smoking 20 or more cigarettes per day and can be considered “heavy smokers.” The proportion of daily smokers smoking heavily appears to have declined since at least 2003, but nonetheless remains high (data not shown).

## 2.4 USE OF OTHER TOBACCO PRODUCTS

**FIGURE 11.**

Prevalence of other tobacco product use in Ontario adults (aged 20+), by age group and by type of product, 2011



**Notes:** Estimates for overall and by type are age-standardized to the 2006 Canadian population.

I represent 95% confidence intervals.

Interpret estimates denoted with diagonal lines with caution due to high sampling variability.

**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- In 2011, 4.8% of Ontario adults used tobacco products other than cigarettes, such as cigars, pipes and chewing tobacco, in the past month (Figure 11; supplementary table S9).
- The use of other tobacco products of all types was 10.4 times higher in males (8.9%) than in females (0.9%) (see supplementary table S9).
- Other tobacco use was most common among adults aged 20–29 (11.1%) and generally decreased with increasing age; the prevalence of other tobacco products in the 65+ age group was less than one percent.
- Cigars were the most commonly used alternate form of tobacco, with 4.2% of Ontario adults reporting smoking at least one in the past month. A much smaller proportion of adults reported using pipes (0.7%) and snuff or chewing tobacco (0.4%).
- Current cigarette smokers were more likely to use other tobacco products than adults who do not smoke cigarettes (data not shown).

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- In addition to the tobacco products considered here, more information on other products, such as cigarillos and flavoured tobacco products, is important for a complete understanding of the burden of tobacco use in the Ontario population. Data on such products are not available in the Canadian Community Health Survey (CCHS); however, the Canadian Tobacco Use Monitoring Survey (CTUMS) suggests that in 2011 nearly 2% of Ontarians aged 19+ had used a little cigar or cigarillo in the past month.<sup>18</sup>

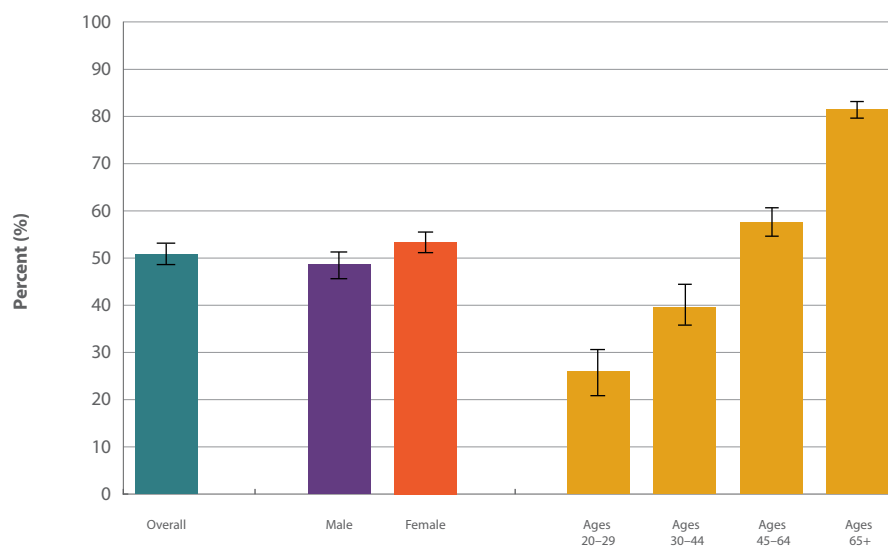
## 2.5 SMOKING CESSATION

Tobacco control efforts aim to increase the proportion of smokers who have successfully quit smoking and to support successful quitters to remain abstinent over the long term. Smoking cessation is a complex process influenced by a number of factors, such as past quit attempts, motivation, level of dependence and bans on smoking inside the home. While factors such as sex, age and measures of socioeconomic status may also play a role, these have been reported inconsistently in the literature.<sup>19</sup>

- Among Ontario adults who have ever been smokers, over half (53.1%) have now quit (data not shown).
- In 2011, 25% of current smokers intended to quit in the next 30 days and over half intended to quit in the next six months.<sup>7</sup>
- The percentage of recent smokers (i.e., current smokers and recent quitters) who had quit smoking in the past year and were smoke-free at the time of interview in 2011 was 7.1% (6.5% for males and 8.0% for females). Resuming regular smoking is common among recent quitters; data from the Ontario Tobacco Survey suggests that 79% of these recent quitters will relapse in the subsequent year.<sup>7</sup>
- Roughly half (50.8%) of ever-smoking adults surveyed in Ontario in 2011 had successfully quit smoking for at least one year (Figure 12). This long-term quitting indicator provides a more robust estimate of trends in smoking cessation than an estimate including more recent quitters, given the high rate of relapse experienced in the first year of quitting (Shawn O'Connor, Ontario Tobacco Research Unit, personal communication).

**FIGURE 12.**

Prevalence of long-term quitters among Ontario ever-smokers (aged 20+), by sex and by age group, 2011



**Notes:** Estimates for overall and by sex are age-standardized to the 2006 Canadian population  
I represent 95% confidence intervals.

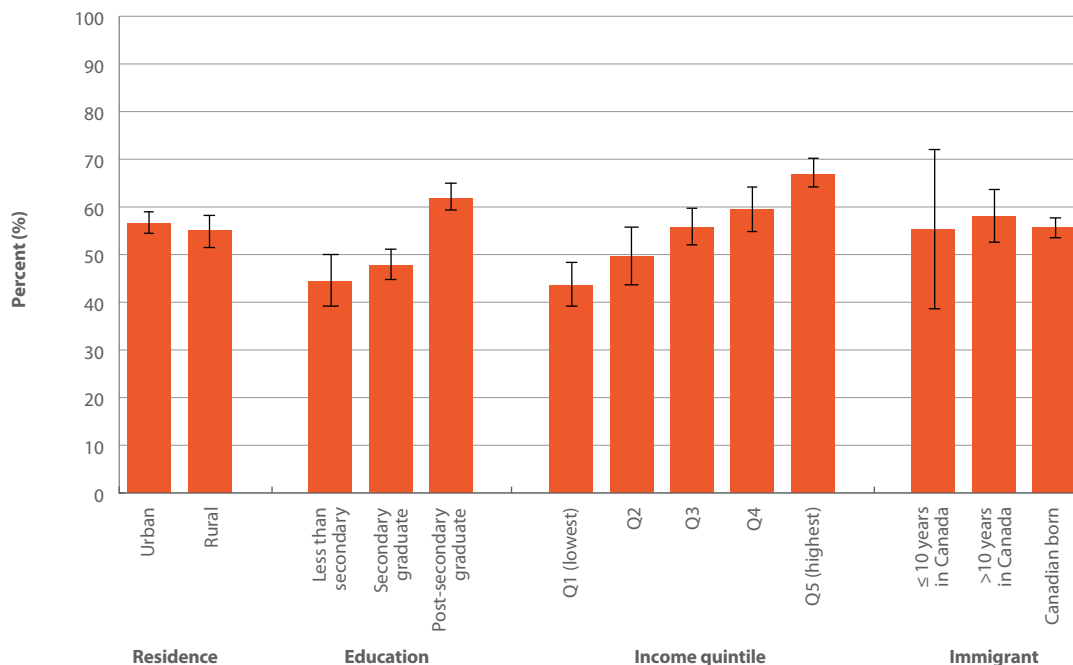
**Long-term quitters:** adult former smokers who reported that they quit smoking at least 1 year ago.

**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- A larger proportion of ever-smoking females (53.4%) than males (48.6%) had successfully quit smoking at least one year ago (Figure 12; supplementary table S10).
- The proportion of ever-smokers who successfully quit smoking at least one year ago was significantly higher with increases in age, from 25.9% among adults aged 20–29 to 81.5% among adults aged 65 years and older.
- A higher rate of successful long-term quitting with increasing age is consistent with the lower rates of current smoking in these groups. Older smokers have had more time to try to quit and most smokers attempt to quit smoking several times before succeeding.<sup>20</sup>

**FIGURE 13.**

Prevalence of long-term quitters among Ontario ever-smokers (aged 30+), by socio-demographic factors, 2011



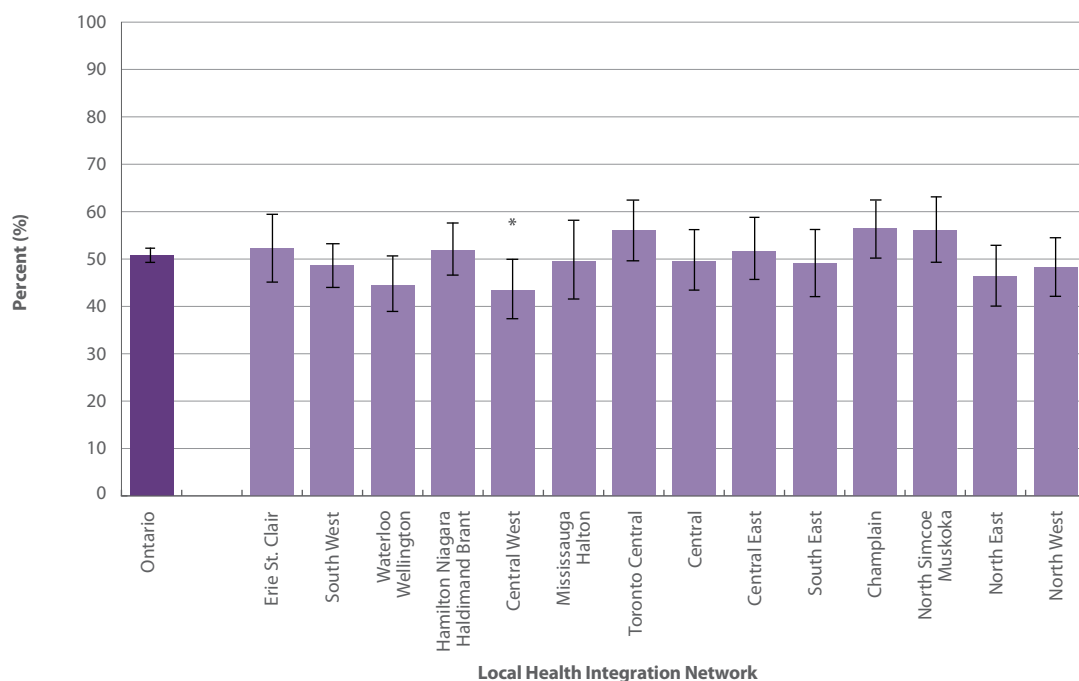
**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
I represent 95% confidence intervals.

**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

- The prevalence of ever-smoking Ontario adults who have successfully quit smoking for at least one year varies significantly across levels of several socio-demographic factors.
- In 2011, ever-smokers with the highest level of education (61.7%) and those in the highest income quintile (66.8%) were significantly more likely to have successfully quit smoking for at least one year, compared with the least educated (44.4%) and those in the lowest income quintile (43.5%) (Figure 13; supplementary table S11).
- Long-term quitting did not differ between urban and rural areas or between Canadian-born adults and immigrants to Canada, regardless of time since immigration.
- These results, together with the current smoking results by socio-demographic factors, highlight significant income- and education-related disparities in tobacco use in Ontario; adults with the lowest level of education and in the lowest income group are more likely to smoke and less likely to quit smoking over the long term.

- Socio-demographic disparities in smoking cessation have been reported previously in Canada<sup>21</sup> and may be partially related to differences in health-seeking behaviours, as well as awareness of and access (including availability and uptake) to smoking cessation assistance methods (e.g., stop-smoking medications) and other sources of cessation support in the province.<sup>21</sup>

**FIGURE 14.**  
Prevalence of long-term quitters among Ontario ever-smokers (aged 20+), by Local Health Integration Network, 2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
I represent 95% confidence intervals.  
\*Estimate is significantly lower than Ontario's estimate.

**Source:** Canadian Community Health Survey, 2011 (Statistics Canada)

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- In 2011, the proportion of ever-smokers who had successfully quit smoking for at least one year in Ontario's 14 LHINs ranged from 43.4% in the Central West LHIN to 56.5% in the Champlain LHIN. The Central West LHIN was, however, the only LHIN that differed significantly from the Ontario estimate of 50.8% (Figure 14; supplementary table S12). This LHIN has the lowest rate of current smoking, and the remaining smokers may be those who find it hardest to quit.
  - The Smoke-Free Ontario Strategy includes a variety of initiatives to help smokers quit, although the reach of these may be too narrow and too recent to explain the variation in cessation rates presented here. The Government of Ontario provides funding for the provincial, population-level quit-line operated by the Canadian Cancer Society and also funds smoking cessation prescription medications for eligible Ontarians through the Ontario Drug Benefit (ODB) program. Through its renewed commitment to the Smoke-Free Ontario Strategy, the Government of Ontario is also working on expanding the availability of smoking cessation support in clinical and community settings. A recommendation to further extend efforts to create an integrated and coordinated tobacco cessation system in Ontario was part of the 2012 *Taking Action to Prevent Chronic Disease: Recommendations for a Healthier Ontario* report.<sup>2</sup>
  - Electronic cigarettes (e-cigarettes) will be important for the Ontario government to consider. E-cigarettes heat nicotine solution into vapours inhaled by the user<sup>23</sup> and are gaining public interest as a potential harm reduction and smoking cessation aid.<sup>23,24</sup> Little research has been conducted to date on their effectiveness as cessation aids.

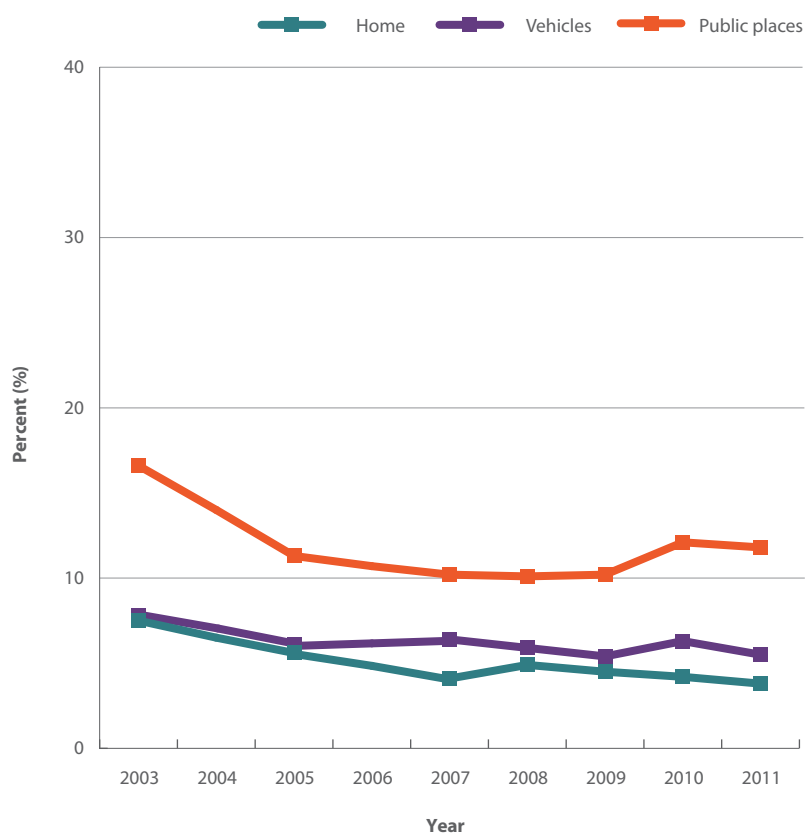


## 2.6 EXPOSURE TO SECOND-HAND SMOKE

Exposure to second-hand smoke may occur in several locales, including the home, vehicles, workplaces and public places, such as bars, restaurants and outdoor public spaces. A smoke-free home policy not only benefits the non-smokers inside a household, but has also been found to help smokers reduce their cigarette consumption and quit smoking completely.<sup>19,25</sup>

**FIGURE 15.**

Trends in second-hand smoke exposure among non-smoking adults (aged 20+) in Ontario, 2003–2011



**Notes:** Estimates are age-standardized to the 2006 Canadian population.

**Source:** Canadian Community Health Survey, 2003, 2005, 2007–2011 (Statistics Canada)

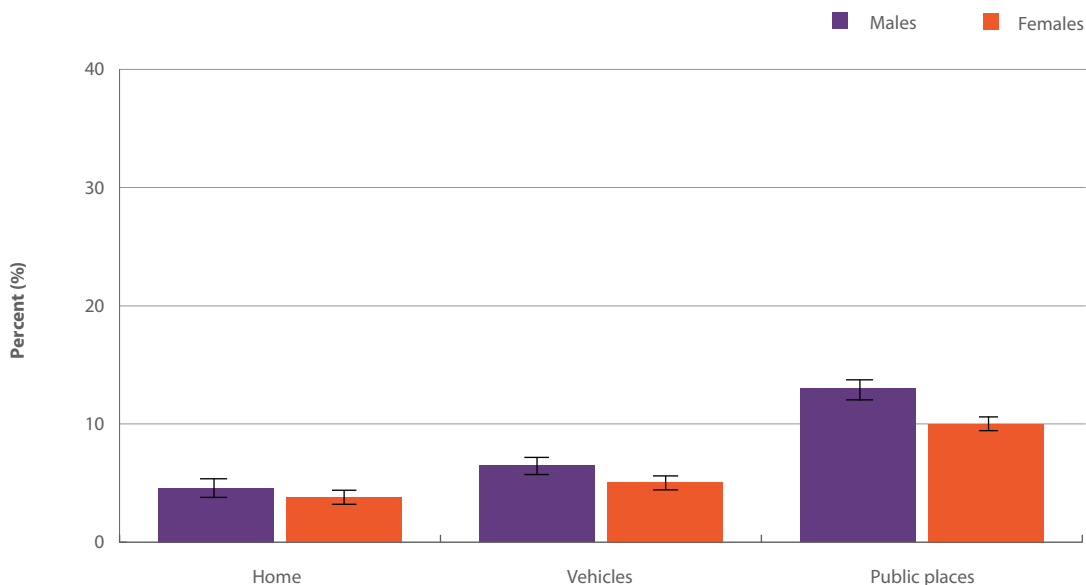
- Between 2003 and 2011, the proportion of Ontario non-smokers reporting that they were regularly exposed to second-hand smoke at home, in public places and in vehicles generally declined (Figure 15).
- In 2011, 11.8% of non-smokers were exposed to second-hand smoke in public places, down

from 16.6% in 2003. The decline was most apparent between 2003 and 2005, and appears to have since levelled off after an apparent but not statistically significant increase between 2009 and 2011. The earlier declines likely reflect smoking bans in bars and restaurants in several large municipalities in the years prior to the implementation of the *Smoke-Free Ontario Act* in 2006.

- Second-hand smoke exposure in vehicles declined significantly from 7.8% in 2003 to 5.5% in 2011, although it appears that rates have stabilized since 2007. Exposure at home also declined significantly, from 7.5% in 2003 to 3.8% in 2011 (see supplementary table S13).
- Declines in second-hand smoke exposure in the home and in vehicles have likely resulted from increased awareness of the health hazards associated with tobacco exposure, increased non-smoking social norms, the increased adoption of voluntary non-smoking policies at home, and the *Smoke-Free Ontario Act* ban on smoking in vehicles when children under age 16 are present.

**FIGURE 16.**

Prevalence of second-hand smoke exposure among non-smoking adults (aged 20+) in Ontario, by sex, 2009–2011 combined



**Notes:** Estimates are age-standardized to the 2006 Canadian population.

Data from CCHS cycles 2009, 2010, and 2011 combined to increase sample size for analyses of second-hand smoke exposure.

I represent 95% confidence intervals.

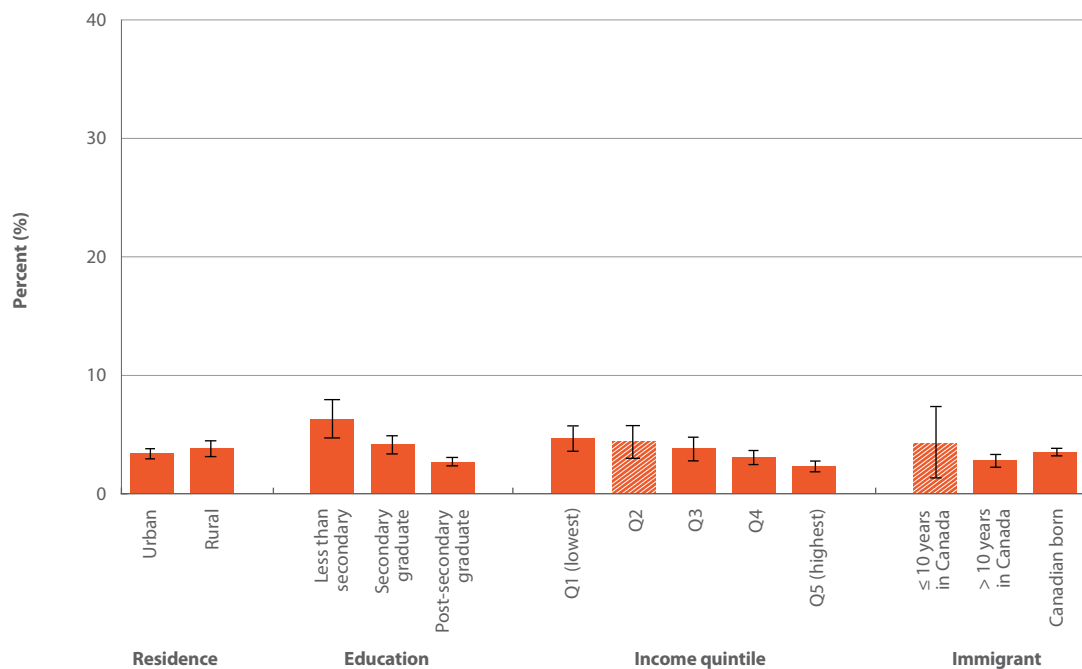
**Source:** Canadian Community Health Survey, 2009–2011 (Statistics Canada)

- During 2009–2011, the proportion of non-smokers regularly exposed to second-hand smoke in public places (11.4%) was significantly higher than the proportion regularly exposed in a vehicle (5.7%) and at home (4.2%) (see supplementary table S14). This was true for males and females (Figure 16).
- Male non-smokers had a significantly higher prevalence of regular exposure to second-hand smoke in a public place (13.0%) and in a vehicle (6.5%) than female non-smokers (10.0% and 5.1%, respectively). The sexes were similar in the proportion exposed to second-hand smoke at home (4.6% males, 3.8% females).
- The youngest group of adults, aged 20–29 years, had the highest prevalence of second-hand smoke exposure at home (7.3%), in a vehicle (11.3%) and in public places (20.1%), and these generally decreased across the older age groups (see supplementary table S15).
- High prevalence of second-hand smoke exposure among young adults aged 20–29 may be due, in part, to a high prevalence of current smoking in this age group and therefore a greater likelihood of exposure among non-smoking 20–29 year-olds from their friends and acquaintances.
- The relatively high prevalence of exposure to second-hand smoke in public places in Ontario is likely due to exposure in settings not covered by the *Smoke-Free Ontario Act* (e.g., uncovered patios, entranceways to most buildings, parks and other outdoor spaces). Data from the CTUMS demonstrates much higher prevalence of second-hand smoke exposure on patios than any other public place.<sup>7</sup> To address this source of exposure, *Taking Action to Prevent Chronic Disease: Recommendations for a Healthier Ontario* recommends expanding the *Smoke-Free Ontario Act* to include unenclosed bar and restaurant patios.<sup>2</sup>
- The relatively low prevalence of regular exposure to second-hand smoke at home among Ontario adult non-smokers likely reflects high adoption of voluntary bans on smoking within the home. In 2011, 86.4% of all Ontario households reported that smoking is not allowed inside their home and even the majority (61.9%) of current smokers reported living in a “smoke-free home” (data not shown). It is, however, likely that the estimates of exposure to second-hand smoke at home reported here underestimate the true prevalence of exposure because individuals living in multi-unit dwellings where no one smokes inside their home may still be exposed to smoke coming from other units within the same building and because the CCHS does not ask about regular exposure that does not occur “every day” or “almost every day.”

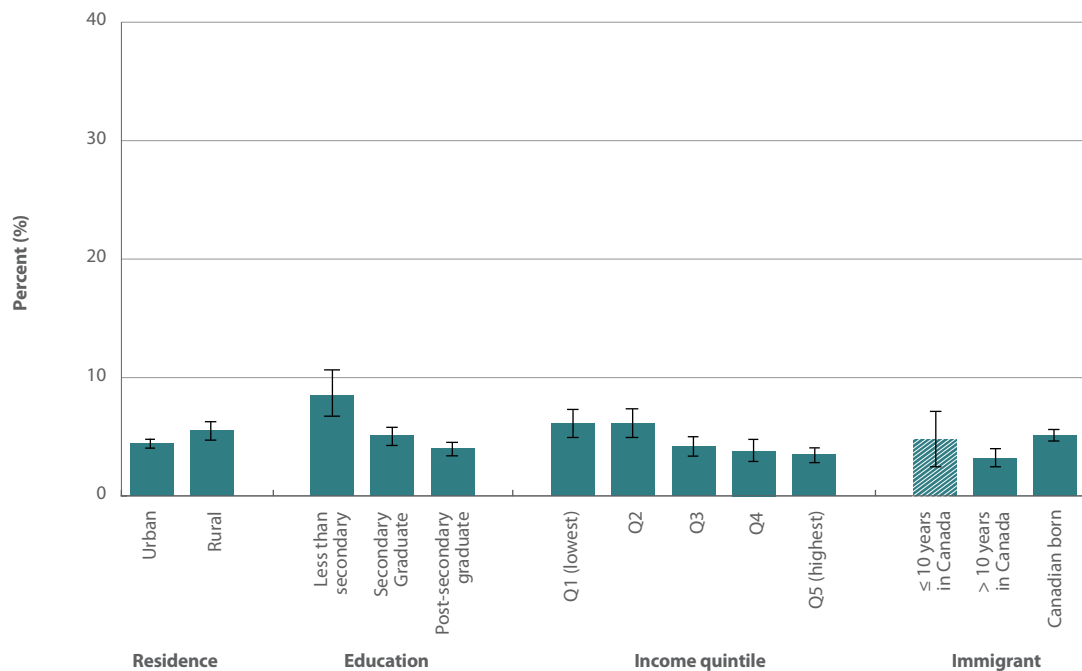
**FIGURE 17.**

Prevalence of second-hand smoke exposure in Ontario adults (aged 30+), by selected socio-demographic factors, 2009–2011 combined

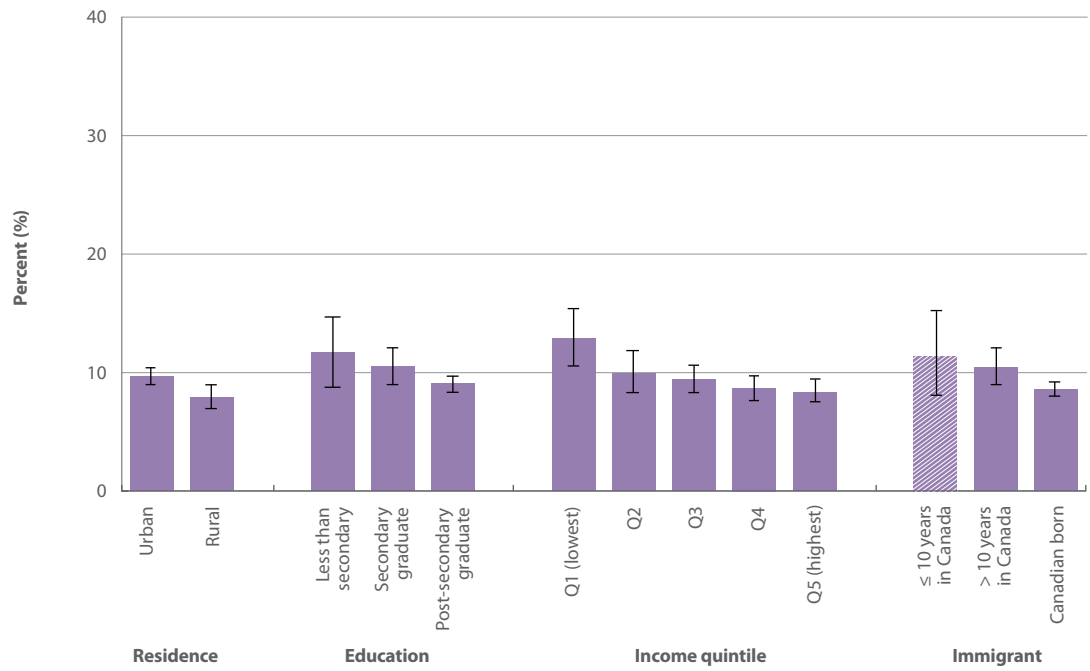
**A) Second-hand smoke exposure at home**



**B) Second-hand smoke exposure in vehicles**



C) Second-hand smoke exposure in public places



**Notes:** Estimates are age-standardized to the 2006 Canadian population.  
 I represent 95% confidence intervals.  
 Interpret estimates denoted with diagonal lines with caution due to high sampling variability.  
**Source:** Canadian Community Health Survey, 2009–2011 (Statistics Canada)

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- During 2009–2011, the prevalence of exposure to second-hand smoke at home was similar in urban (3.4%) and rural/small town (3.8%) areas of residence. Exposure to second-hand smoke in a vehicle, was, however, significantly higher among non-smoking adults living in rural/small town areas (5.5%) than those in urban areas (4.4%), while second-hand smoke exposure in public places was significantly higher in urban areas (9.7% urban vs. 7.9% rural) (Figure 17A, B, C; supplementary table S16).
  - Higher rates of exposure to second-hand smoke in public places in urban areas may reflect a greater likelihood of frequenting more densely populated public places where smoking may be allowed, including outdoor spaces, such as public parks.
  - Exposure to second-hand smoke at home and in a vehicle was significantly higher among non-smoking adults with less than a secondary school education (6.3% at home and 8.5% in a vehicle) than post-secondary school graduates (2.7% at home and 4.0% in a vehicle). The prevalence of second-hand smoke exposure in public places did not, however, differ by the highest level of education.
  - Non-smoking adults in the lowest income quintiles had significantly higher prevalence of second-hand smoke exposure at home (4.7%), in a vehicle (6.1% for Q1) and in public places (12.9%) than those in the highest income quintile (2.3% at home, 3.5% in a vehicle, 8.3% in public places).
  - The decreasing gradients in the prevalence of second-hand smoke exposure at home and in a vehicle across increasing levels of education and increasing income quintiles are consistent with the education- and income-related inequalities in current smoking prevalence seen in Ontario.
  - The prevalence of exposure to second-hand smoke at home did not differ according to immigrant status. However, non-smoking immigrants who had been in Canada for more than 10 years had a significantly lower prevalence of second-hand smoke exposure in a vehicle (3.2%) and a significantly higher prevalence of second-hand smoke exposure in public places (10.4%) than non-smoking Canadian-born adults. Higher exposure in public places among immigrants may reflect the fact that they are likely to live in urban areas.
  - During 2009–2011, there was little variation in second-hand smoke exposure at home or in a vehicle among Ontario's LHINs, while the prevalence of second-hand smoke exposure in public places ranged from 7.7% to 18.0% (see supplementary table S17).