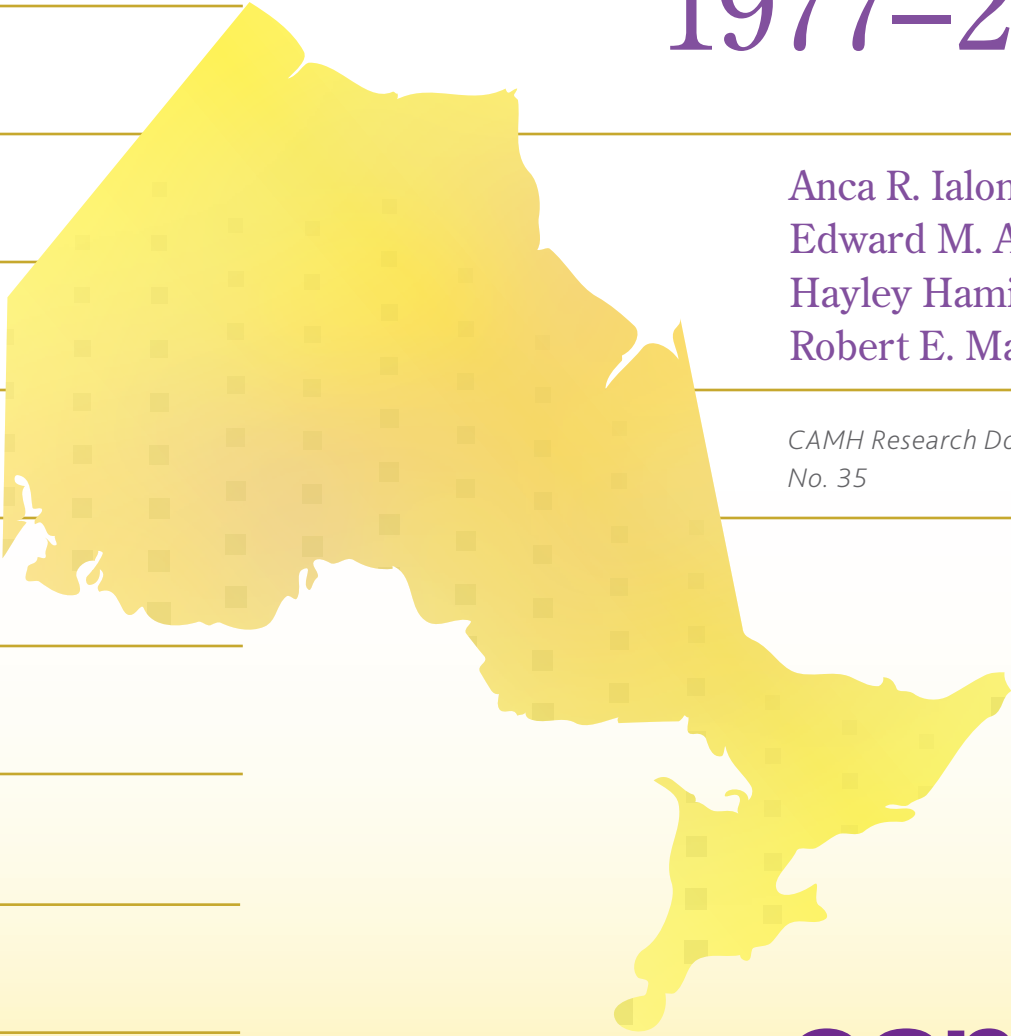*2011*

CAMH Monitor *e*Report

Addiction and Mental Health Indicators Among Ontario Adults

1977–2011

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A Pan American Health Organization /
World Health Organization
Collaborating Centre
Affiliated with the University of Toronto

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THE 2011 CAMH MONITOR *e*REPORT
Executive Summary

The Centre for Addiction and Mental Health's *CAMH Monitor* is the longest ongoing representative survey of adult substance use in Canada. The study, which now spans **35 years**, is based on 26 random surveys conducted between 1977 and 2011. The 2011 cycle of the *CAMH Monitor* is based on telephone interviews with **3,039** adults aged 18 and older across Ontario (response rate - **51%** of eligible respondents). This report presents the 2011 estimates of substance use and related harms, as well as mental health indicators among Ontario adults. It also describes changes in substance use and related harms since 1977.

Addiction and Mental Health Indicators, CAMH Monitor 2011

	Measure	Percent Estimate %			Total Population Estimate [1]
		Total	**Men**	**Women**	
Alcohol	Percentage drinking alcohol - past 12 months	**81.2**	83.7	78.9	**7,676,200**
	Percentage drinking daily - total sample - among drinkers	**7.0** **8.6**	9.7 11.6	4.5 * 5.7 *	**658,500**
	Average number of drinks consumed weekly - among drinkers (mean)	**4.7**	6.7	2.8 *	
	Percentage exceeding low-risk drinking guidelines - total sample - among drinkers	**18.4** **22.3**	23.0 27.5	13.9 * 17.1 *	**1,746,800**
	Percentage consuming 5 or more drinks on a single occasion weekly (weekly binge drinking) - total sample - among drinkers	**7.4** **9.1**	12.4 14.9	2.7 * 3.4 *	**691,700**
	Percentage reporting hazardous or harmful drinking (AUDIT 8+) - total sample - among drinkers	**14.4** **17.8**	21.5 25.8	7.9 * 10.0 *	**1,152,700**
	Percentage reporting symptoms of alcohol dependence (based on the AUDIT) - total sample	**8.1**	10.2	6.2 *	**761,000**
Tobacco	Percentage currently smoking cigarettes - % smoking daily	**15.4** **11.5**	17.9 12.3	13.0 * 10.8	**1,445,800** **1,082,600**
	Average number of cigarettes smoked daily - among smokers (mean)	**11.3**	11.3	11.2	
	Percentage of daily smokers reporting high smoking dependence - among daily smokers	**12.1**	14.9	9.2	**129,500**
Cannabis	Percentage using cannabis in lifetime	**40.5**	45.4	35.9 *	**3,791,900**
	Percentage using cannabis - past 12 months	**13.4**	16.3	10.8 *	**1,254,400**
	Percentage reporting moderate or high risk of cannabis problems (ASSIST-CIS 4+) - total sample - among users	**5.6** **41.7**	7.7 49.6	3.7 * 32.1 *	**514,000**

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	Measure	Percent Estimate %			Total Population Estimate [1]
		Total	Men	Women	
Cocaine	Percentage using cocaine in lifetime	7.0	9.9	4.4 *	647,000
	Percentage using cocaine - past 12 months	1.1	2.0	< 1.0	102,700
Prescription opioid pain relievers	Percentage reporting any use of prescription opioid pain relievers - past 12 months	23.9	24.1	23.8	2,204,400
	Percentage using prescription opioid pain relievers for non-medical purposes past 12 months	4.0	5.5	2.6 *	365,200
Driving [2]	Percentage of drivers who drove after drinking two or more drinks in the previous hour - past 12 months	5.8	10.6	1.4 *	489,300
	Percentage of drivers who drove after using cannabis - past 12 months	2.4	2.9	1.9	197,600
Mental Health	Percentage reporting elevated psychological distress during the past few weeks	14.7	13.3	15.9	1,361,000
	Percentage using prescribed antianxiety medication - past 12 months	7.1	5.4	8.6	654,400
	Percentage using prescribed antidepression medication - past 12 months	7.1	5.0	9.0 *	654,600
	Percentage reporting poor mental health in general	6.0	5.3	6.6	583,100
	Percentage reporting frequent mental distress days (14+) during the past 30 days	7.1	5.8	8.2	648,100

Note: [1] population estimates for total sample, based on an adult population of 9,460,369, are rounded to the nearest hundred; [2] estimates are based on licensed drivers; * indicates a discernible sex difference (p<.05) when controlling for other demographic factors.

Substance Use and Related Factors

Substance use was strongly associated with the following demographic factors:

- **Gender** was discernibly[1] associated with 13 substance use measures.

  Men displayed higher prevalence than women on all substance use measures where differences were observed. Specifically, men were discernibly more likely than women to:

  - drink alcohol daily
  - consume more drinks weekly
  - exceed the low-risk drinking guidelines

- report weekly binge drinking (5 or more drinks on a single occasion)
- drink hazardously or harmfully
- report symptoms of alcohol dependence
- currently smoke cigarettes
- use cannabis during lifetime
- use cannabis during the past year
- report cannabis use problems
- use cocaine during lifetime
- use prescription opioids for non-medical purposes
- report drinking and driving

- **Age** of respondent was discernibly associated with 15 substance use measures. In most cases, use declined with age or was highest among 18 to 29 year olds. One exception was daily drinking, which increased with age. When adjusting for other demographic characteristics, **18 to 29 year olds** were

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[1] We use the term "discernible" (e.g., statistically discernible difference) to indicate relationships or differences that are statistically significant at the p<.05 level when adjusting for the sampling design.

discernibly more likely than older respondents to:

- exceed the low-risk drinking guidelines
- report weekly binge drinking
- drink hazardously or harmfully
- report symptoms of alcohol dependence
- use cannabis during the past year
- report cannabis use problems
- report cannabis use and driving

- **Marital status** was discernibly associated with 7 substance use measures. In all cases, use was higher among never married or previously married respondents. After adjusting for other factors, previously married respondents were more likely to:

  - report weekly binge drinking
  - drink hazardously or harmfully
  - report current and daily smoking

- **Education level** was discernibly associated with 5 indicators. The most common pattern noted was that substance use declined with increasing education. Specifically, when adjusting for other demographic characteristics, respondents not completing high school were discernibly more likely to:

  - report weekly binge drinking
  - report symptoms of alcohol dependence
  - report current smoking
  - report daily smoking
  - use cocaine during lifetime

- There was no dominant pattern in **regional differences**. Statistically

discernible differences in **public health region** were evident with only one indicator: drinking hazardously or harmfully was above the provincial estimate in the South West region.

- Although the overall association between several substance use indicators and region did not reach our criteria of statistical discernibility, there are some regional contrasts that are worthy of mention. Compared to the provincial estimate, past year drinking was lowest in Toronto, residents in the Central South had the lowest rate of exceeding the low-risk drinking guidelines, and weekly binge drinking and driving after drinking was highest in the South West. In addition, current cigarette smoking and daily smoking were above the provincial estimate in the North and in the Central South.

- **Income** was discernibly associated with 8 indicators. In most cases, substance use tended to increase with income or was highest among those with higher incomes. One exception was lifetime cocaine use, which declined with income. Specifically, when adjusting for other demographic characteristics, respondents with higher incomes were discernibly more likely to:

  - drink alcohol daily
  - drink hazardously or harmfully
  - report symptoms of alcohol dependence
  - report current smoking
  - use cannabis during the past year
  - report drinking and driving

Mental Health Status and Related Factors

Elevated Psychological Distress

Provincially, one in seven (14.7%) adults reported symptoms indicative of **elevated psychological distress** in 2011.

Elevated psychological distress was associated with age and marital status, when adjusting for other demographic characteristics.

- Elevated distress was highest among those **aged 18 to 29** and lowest among those aged 65 years and older.

- When adjusting for other factors, previously married respondents were the most likely to report elevated distress in the past few weeks.

Poor Mental Health

Overall, an estimated 6.0% of Ontario adults rated their mental health as poor (defined as the percentage reporting "fair" or "poor" mental health in general) in 2011. Marital status and education were discernibly related to self-reported poor mental health.

- Ratings of poor mental health among those never married were almost two times higher than among those who were married.

- Ratings of poor mental health tended to decrease discernibly with higher education. Ratings were highest among those without high school completion and lowest among university graduates.

Frequent Mental Distress Days

About 7.1% of Ontario adults reported frequent mental distress days during the past 30 days (defined as the percentage reporting 14 or more mentally unhealthy days). Public health region, marital status and education were discernibly related to reporting frequent mental distress days, after adjusting for other demographic characteristics.

- Compared to the provincial estimate, respondents living in the **Central East** reported discernibly lower rates of reporting frequent mental distress days; in contrast, respondents living in the **Central South** reported discernibly higher rates.

- The rates of reporting frequent mental distress days were more than two times

higher among those previously married than among married respondents.

- Compared to those not completing high school, rates of reporting frequent mental distress days were discernibly lower among respondents with a university degree.

Prescribed Medication to Treat Anxiety and Depression

Antianxiety medication (anxiolytics)

An estimated 7.1% of adults reported using a prescribed medication for anxiety in 2011. Age, marital status, education and income were discernibly related to past year use of antianxiety medication.

- Although past year use of antianxiety medication shows discernible age variation, varying from 5.8% to 8.7%, there is no dominant age-related pattern. Use is lowest among those aged 18 to 29 and highest among those aged 40 to 49.

- When adjusting for other factors, the odds of using antianxiety medication among those previously married are 2.3 times higher than those of married respondents.

- Use of antianxiety medication decreased discernibly with increasing education. Use was highest among those who did not complete high school, and lowest among those with a university degree.

- Household income shows a discernible inverse association with past year use of antianxiety medication. The rate is higher among those with the lowest income and lower among those with higher incomes.

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Antidepressants

An estimated 7.1% of Ontario adults reported using a prescribed medication for depression – antidepressants – during the 12 months before the survey. Use of antidepressants was discernibly related to gender, age, marital status, education and region.

- Women, those aged 40 to 49 years, those previously married and those who did not graduate high school were most likely to report use.

- Use of antidepressants shows discernible regional differences, ranging from 4.4% among residents of the Central East to 12.8% for residents of the Central South.

Trends in Substance Use

Alcohol

- Past year **alcohol use increased** discernibly between 2010 and 2011, from 78.0% to 81.2%. There were also three subgroup increases during this period: among **women**, from 74.6% to 78.9%, among residents of the **Central West**, from 76.0% to 83.4%, and among **married** respondents, from 78.7% to 81.8%

- Between 1996 and 2011, there was a discernible variation in past year alcohol use, with a low of 77.1% in 1998 and a high of 81.5% in 2007. Discernible increases during this period were found especially among **women**, and those aged **65 years and older**. There was also non-linear variation in past year drinking among respondents living in the North, married and previously married respondents and among those who completed high school.

- **Daily drinking among drinkers** remained stable between 2010 and 2011 (8.7% and 8.6%, respectively) and rates were stable for most demographic subgroups.

- Between 1996 and 2011, there was a discernible **increase** in daily drinking among drinkers, from 5.3% in 2002 to 8.6% in 2011. Discernible increases were found among drinking **men** (from 7.1% in 2005 to 11.6% in 2011), drinking **women** (from a low of 2.6% in 2001 to 5.7% in 2011), and a non-linear upward trend among **18 to 29** year olds (from 1.3% in 2000 to 7.2% in 2009).

- There were also discernible increases in daily drinking among residents of the East, married respondents, those not graduating high school and university graduates.

- In the longer term, between 1977 and 2011, daily drinking among drinkers declined considerably until 2006. From a high of 13.4% in 1977, it decreased to a low of 4.1% in 1992 and has varied between 5.3% and 7.4% until 2006. But this trend has reversed in the past five years, **increasing discernibly from 5.9% in 2006 to 8.6% in 2011**. This non-linear trend was especially prominent among drinking **men**, whose daily drinking dropped from 19.5% in 1977 to 7.1% in 2005 and then increasing again to 11.6% in 2011.

- The **average number of standard drinks** consumed per week among past year drinkers **did not change discernibly** between 2010 and 2011 (4.6 vs. 4.7), and rates were stable for all demographic subgroups. Between 1996 and 2011, there was a **discernible increase in the average number of drinks consumed weekly**, from 3.3 in 1996 to 4.7 in 2011. There was also a discernible increase in the number of drinks consumed among drinking men, among drinking women and drinkers who did not graduate high school.

- The percentage of Ontarians **exceeding the low-risk drinking guidelines** in 2011 (18.4%) was unchanged from 2009 (17.8%) and rates were stable for most demographic subgroups. There were however three discernible subgroup declines during this period: among respondents aged **65 and older**, among residents of the **Central South** and among respondents without high school completion.

- Exceeding low-risk drinking guidelines did not vary discernibly between 2003 and 2011. There was however discernible non-linear variation among residents of the **South West**, the **East** and among respondents with some **postsecondary education** or a **university degree.**

- **Weekly binge drinking** for the total sample remained unchanged between 2010 and 2011 (7.5% vs. 7.4%, respectively), and rates of weekly binge drinking were **stable since 2009** for most subgroups. There was only one discernible subgroup increase among previously married respondents, from 4.4% in 2010 to 8.9% in 2011.

- Although estimates of weekly binge drinking remained stable between 1996 and 2007, varying between 10.5% and 12.7% among the total sample, and between 13.1% and 16.5% among past year drinkers, there was a discernible **decline** in binge drinking between 2007 and 2011. Estimates **declined** from 11.2% in 2007 to 7.4% in 2011 for the total sample and from 13.8% to 9.1% among drinkers. Discernible subgroup declines were also evident during this period for gender, age, region, marital status and education.

- In the longer term, three distinct periods can be seen between 1977 and 2011. **Binge drinking** remained stable among the total sample between 1977 and 1995, then increased discernibly in 1996 (from 7.0% to 11.7%) and remained at this elevated level until 2008 when it started declining, down to near 7%.

- Overall, the percentage reporting **hazardous or harmful drinking (AUDIT 8+)** remained stable between 2010 and 2011 among the total sample (14.8% vs.14.4%), and for all demographic subgroups. Between 1998 and 2011, there was a discernible **non-linear change** in hazardous/harmful drinking among **Ontario adults**. It was lowest in 2005 (10.4%) and highest in 2007 (15.6%), but has subsequently declined and stabilized. Discernible subgroup variation was evident for gender, age, and region. Hazardous/harmful drinking among **women** increased from 4.8% in 1998 to 7.9% in 2011. There were also discernible non-linear increases among **18 to 29** year olds (from 22.4% in 2002 to 31.8% in 2010), and among **30 to 39** year olds (from 7.1% in 2005 to 14.7% in 2011). Discernible subgroup changes were also found for residents of the **South West** and of the **East**.

- The proportion of Ontario adults reporting at least **one of the alcohol dependence indicators** remained stable between 2010 and 2011 (7.9% vs. 8.1%) and rates were stable for most subgroups. There were only two discernible subgroup changes during this period: an increase among those aged **40 to 49** and a decrease among residents living in the **North.**

- Between 1998 and 2011, there was a discernible **non-linear** variation in reporting at least one of the dependence indicators. It **declined** from 9.4% in 1998 to 5.9% in 2003 and then **increased** again to 8.1% in 2011. Discernible non-linear subgroup variation was found during this period only for those **aged 50 to 64** and residents of the **Central South** and of the **North**.

Tobacco - Cigarettes

- Although prevalence of **current cigarette smoking** in 2011 (15.4%) did not change discernibly from 2010 (17.6%), it is discernibly lower than the 18.6% found in 2009. There were also two discernible subgroup declines during this period: among residents of **Toronto (**from 17.4% in 2010 to 11.7% in 2011) and of the **Central East** (from 21.4% in 2009 to 14.0% in 2011).

- Current smoking trended downward from 28.5% in 1991 to 23.5% in 1993, and then rebounded to 28.5% in 1995. **Since 1996**, current cigarette smoking has **discernibly declined**, from 26.8% in 1996 to 15.4% in 2011. There were also widespread discernible declines since 1996 for all gender, age, region, marital status and education subgroups. Further, daily smoking showed a twofold decline provincially, from 23.0% in 1996 to 11.5% in 2011.

Cannabis

- **Past year cannabis use** remained stable between 2010 and 2011 (14.2% and 13.4%, respectively). In addition, rates were stable for all subgroups.

- Since 1996, the prevalence of past year cannabis use **increased steadily** from 8.7% in 1996 to 13.4% in 2011.

- There were discernible increases among all subgroups between 1996 and 2011: **men**, **women**, and all **age**, **region**, **marital status** and **education** subgroups.

- Since 1977, past year use of cannabis has **increased appreciably**. The current rate of 13.4% is discernibly higher than the 8.1% found in 1977. There were also discernible increases over the longer term among **men** (from 9.1% in 1992 to 19.9% in 2010); **women** (from 4.5% in 1977 to 10.8% in 2011) and **all age groups**, especially 18 to 29 year olds (from 22.6% in 1977 to 33.5% in 2011) and those 50 years and older (from 1.2% in 1977 to 5.2% in 2011).

- An important long term change has been the **continuing aging of cannabis users**. In 1977, 82% of past year cannabis users were aged 18 to 29 compared to only 49% in 2011. In contrast, the proportion aged 30 to 49 **increased two-fold** from 15% to 36%, and the proportion aged 50 and older **increased five-fold** from 3% to 16% during the same period.

- Prevalence of past year **cannabis problems** was stable between 2010 (7.1%) and 2011 (5.6%). In addition, rates were stable for sex and age.

- Estimates of past year **cannabis problems** between 2004 and 2011 were generally stable among the total sample, varying between 5.2% and 7.1%.

Cocaine

- **Lifetime** use of cocaine **decreased discernibly** between 2010 and 2011 (9.6% vs. 7.0%), but was similar to the estimate found in 2008 (7.4%). Although **past year cocaine** use was numerically **lower** in 2011 (1.1%) than 2010 (1.8%), this difference failed to reach a statistical difference.

- Lifetime cocaine use **increased discernibly** between 1984 and 2010, from 3.3% to 9.6%, but then returned to an earlier rate of 7.0% in 2011. Past year cocaine use remained low (under 2.2%) during the same period.

Prescription Opioid Pain Relievers

- Although past year use of **any prescription opioid** pain relievers remained **stable** between 2010 and 2011 (26.6% vs. 23.9%, respectively), the proportion of Ontario adults who reported **nonmedical use** of prescription opioid pain relievers **dropped** significantly from 7.7% in 2010 to 4.0% in 2011.

Driving and Substance Use

- Prevalence of driving after drinking among licensed drivers remained stable between 2010 and 2011 (5.0% vs. 5.8%) and rates were stable for most demographic subgroups. There was only one discernible subgroup change during this period: an increase among residents of the **Central West**, from 3.7% in 2010 to 10.5% in 2011.

- Since 1996, driving after drinking has displayed a discernible **linear decline** from 13.1% to below 6% in the past two years. These declines occurred during a period when the province introduced several measures designed to reduce impaired driving rates, including increased sanctions for 'warn-range' drivers and measures to increase the use of ignition interlock devices by convicted offenders.

- There were discernible declines in driving after drinking since 1996 for all demographic subgroups. The most striking decline occurred among male drivers, from 21.2% in 1996 to 10.6% in 2011 and among young adult drivers aged 18 to 29, from 20.1% in 1996 to 5.6% in 2011. A discernible declining linear trend between 1996 and 2011 was found for all regions, but especially for drivers living in Toronto (from 14.1% to 5.1%) and drivers living in the Central South (from 17.4% to 4.2%).

- The percentage of licensed drivers reporting **driving within one hour of consuming cannabis** at least one time during the past 12 months was stable between 2010 and in 2011 (1.5% vs. 2.4%) and rates were stable for most demographic subgroups. There was one discernible increase in cannabis use and driving among young adults aged 18 to 29, from 3.2% in 2010 to 8.6% in 2011.

- Between 2002 and 2011, driving after cannabis use remained virtually **unchanged** (from 2.9% to 2.4%). The only discernible non-linear trend was found among those **aged 18 to 29**. Driving after consuming cannabis **increased** from 7.2% in 2002 to 11.9% in 2006, then declined to 2.8% in 2009 and then increased three-fold to 8.6% in 2011. No other subgroup changes were evident.

Elevated Psychological Distress

- **Elevated psychological distress** remained stable between 2010 and 2011 among the total sample (14.7% vs. 14.6%, respectively), as well as among all demographic subgroups. Between 2000 and 2011, elevated distress did not vary discernibly among the total sample or among subgroups.

Prescribed Antianxiety Medication

- Use of **antianxiety medication** (anxiolytics) in 2011 (7.1%) remained virtually unchanged from 2010 (8.9%), and rates of past year use of anxiolytics were stable for gender, most age groups and all regions. There were, however, several discernible **declines** among the following subgroups during this period: among respondents **aged 50 to 64**, among **married** respondents and among respondents who completed **high school** and among those holding a **university** degree.

- Since 1997, use of antianxiety medication among the total sample has displayed a discernible **linear increase** from 4.5% in 1999 to 7.1% in 2011, especially among women (from 5.6% to 8.6%) and among 18 to 29 year olds (from 1.7% to 5.8%).

Prescribed Antidepressant Medication

- Past year use of **antidepressants** in 2011 (7.1%) was unchanged from 2010 (7.2%) and rates of use were stable between these two years for most subgroups. The only discernible change was found for respondents aged 50 to 64, whose past year use of anti-depressants **declined** from 11.7% in 2010 to 8.1% in 2011.

- Since 1997, use of antidepressants among the total population has discernibly **increased**, from 3.6% in 1999 to 7.2% in 2010 and has remained steady at this level in 2011. Discernible subgroup increases were also evident for gender, region, marital status and education. Increases were strongest among the youngest respondents. Between 1997 and 2011, use of anti-depressants increased three-fold among **18 to 29 year olds** from 2.0% to 7.2%.

Poor Mental Health

- **Poor mental health** remained virtually unchanged between 2010 and 2011 (6.1% vs. 6.0%, respectively). There were only two discernible subgroup changes during this period: **an increase** among residents of the **North**, and among respondents with **some postsecondary** education.

- Between 2003 and 2011, there were no dominant changes and no discernible changes for most subgroups.

Frequent Mental Distress Days

- The percent reporting **frequent mental distress days** in the past 30 days in 2011 (7.1%) was not discernibly different from 2010 (7.9%). There were only two discernible subgroup changes during this period: a **decrease** among respondents **aged 50 to 64**, and among residents of the **Central East**.

- Between 2003 and 2011, there was a discernible **increase** in reporting frequent mental distress days in the past 30 days, from 5.4% in 2003 to 7.9% in 2010 and remained above 7% in 2011.

Some Encouraging Findings

The following findings in this report should be seen as encouraging.

- **Cigarettes:** The majority of Ontario adults (84.6%) do not smoke cigarettes. Current cigarette smoking has discernibly declined since 1996, as has daily smoking (from 23.0% in 1977 to 11.5% in 2011).

- **Alcohol:** Although the majority of Ontario adults (81.2%) are past year drinkers, most do not drink excessively. Indeed, the survey noted that 90% of drinkers do not binge drink weekly, 88% of drinkers do not exceed the recommended drinking guidelines (LRDG) and 82% do not exceed the AUDIT threshold for hazardous or harmful drinking.

- There were discernible **declines** in **binge drinking** between 2006 (12.3%) and 2011 (7.4%). This decline was generally robust, occurring among several subgroups, but was especially evident among **men** (from 20.7% in 2001 to 12.4% in 2011).

- **Cannabis:** Although the percentage that used cannabis in the past year has increased, use is generally infrequent. For example, among lifetime users, only 18% reported using cannabis once a month or more frequently.

- **Driving after drinking**: Driving after drinking among drivers **declined by more than half** between 1996 and 2011 (from 13.1% to 5.8%). Moreover, this decline was occurring among several subgroups, including **men** (whose estimate fell from 21.2% to 10.6%).

- **Prescription Opioid Pain Relievers**: The proportion of the Ontario adult population who report nonmedical use of prescription opioid pain relievers **dropped significantly** from 7.7% in 2010 to 4.0% in 2011. This decline occurred during a period when provincial programs and policies to reduce nonmedical use of these substances were introduced.

Some Public Health Concerns

The following findings should be viewed as potential public health concerns.

- **Cigarettes:** Despite the fact that the rate of current cigarette smoking among Ontario adults declined substantially since 1996, there is still a significant percentage (15.4%) that does smoke (about 1,445,799 adults). Cigarette smoking is the leading preventable cause of disease in Canada. The current rate of 15.4% is **three times higher** than the Cancer Care Ontario target of 5%. Moreover, the declining trend in smoking has dampened in recent years and it seems unlikely that this target will be met.

- **Alcohol:** Although the percentage of the population who drink alcohol has not changed dramatically in the past decade, two indicators are worthy of attention. First, **weekly binge drinking** among drinkers still remains at an elevated level (7.4%) and it is **highest** among young adults **aged 18-29** (18.9%). Second, a sizeable percentage of drinkers consume alcohol at **levels exceeding recommended guidelines**. Nearly one-in-five drinkers (18%) report exceeding recommended low-risk drinking guidelines. There was also a

discernible increase in the **average number of drinks consumed weekly**, from 3.3 in 1996 to 4.7 in 2011. Increases were also found in **daily drinking** among past year drinkers, from 5.3% in 2002 to 8.6% in 2011. This increase was especially prominent among **women** (from 2.6% in 2001 to 5.7% in 2011).

- **Cannabis:** The prevalence of past year cannabis use has been steadily increasing from 8.7% in 1996 to 13.4% in 2011, for both men and women and among all age groups. An almost two-fold **increase in cannabis use** occurred among 18 to 29 year olds, from 18.3% in 1996 up to 33.5% in 2011. This increase in cannabis use among young adults corresponds to earlier increases seen in the late 1990s for cannabis use among Ontario students. Perhaps the most noticeable change, however, was the **aging of cannabis users**. Between 1996 and 2011, the percentage of past year cannabis users aged 50 years and older increased from 2% to 16%. In addition, 6% of Ontarians are classified as having a moderate or high risk of harm from cannabis use.

- **Prescription Opioid Pain Relievers**: Despite a decline in use, 4% of the Ontario adult population (365,000) report nonmedical use of prescription opioid pain relievers in 2011. These are powerful and addictive drugs that have been linked to increased use of illicit opiates.

- **Driving and Substance Use**: While rates of driving after drinking have been declining, rates of **driving after using cannabis** remain unchanged, and among young adults exceed rates of driving after drinking (8.6% vs. 5.6%, respectively).

- **Mental Health:** One in seven Ontario adults (14.7%) experiences elevated **psychological distress**, which can reduce the ability to effectively function socially and emotionally. As well, one-in-seventeen (6%) rated their mental

health as poor. The percentage of Ontario adults reporting past year use of prescribed depression medication doubled since 1999, from 3.6% to 7.1% in 2011.

Sommaire
INDICATEUR DE CAMH (RAPPORT électronique) 2011

L'*Indicateur de CAMH*, préparé par le Centre de toxicomanie et de santé mentale, est la plus ancienne étude représentative permanente sur l'utilisation de substances intoxicantes chez les adultes réalisée au Canada. Cette étude, effectuée depuis 35 ans, porte sur 26 sondages aléatoires menés entre 1977 et 2011. Le cycle de 2011 de l'*Indicateur de CAMH* repose sur des entrevues téléphoniques menées auprès de **3 039** adultes âgés de 18 ans et plus (taux de

réponse : **51 %** des répondants admissibles) en Ontario. Le rapport présente les estimations des problèmes liés à l'utilisation de substances intoxicantes et des problèmes connexes en 2011, ainsi que les indicateurs de la santé mentale chez les adultes ontariens. Il décrit également l'évolution de l'utilisation de substances intoxicantes et des problèmes connexes depuis 1977.

Indicateurs de toxicomanie et de santé mentale, Indicateur de CAMH 2011

	Mesure	Estimation %			Population estimative[1]
		Total	Hommes	Femmes	
Alcool	Pourcentage de personnes ayant bu de l'alcool - au cours des 12 mois écoulés	**81,2**	83,7	78,9	**7,676,200**

	Pourcentage de personnes ayant bu tous les jours
	      - échantillon total
	      - parmi les buveurs
		7
		8,6
			9,7
			11,6
				4,5 *
				5,7 *
					658,500

	Nombre moyen de verres par semaine - chez les buveurs (moyenne)	**4,7**	6,7	2,8 *	

	Pourcentage de personnes ayant bu plus d'alcool que la quantité jugée acceptable dans les directives de consommation d'alcool à faible risque
	      - échantillon total
	      - chez les buveurs
		18,4
		22,3
			23,0
			27,5
				13,9 *
				17,1 *
					1,746,800

	Pourcentage de personnes ayant bu cinq verres ou plus en une occasion, par semaine (excès d'alcool hebdomadaires)
	      - échantillon total
	      - chez les buveurs
		7,4
		9,1
			12,4
			14,9
				2,7 *
				3,4 *
					691,700

	Pourcentage de personnes ayant signalé une consommation d'alcool dangereuse ou nocive (AUDIT 8+)
	      - échantillon total
	      - chez les buveurs
		14,4
		17,8
			21,5
			25,8
				7,9 *
				10 *
					1,152,700

	Pourcentage de personnes ayant signalé des symptômes de dépendance à l'alcool (en se basant sur l'AUDIT) - échantillon total	**8,1**	10,2	6,2 *	**761,000**
Tabac	Pourcentage de personnes qui fument la cigarette - pourcentage de ceux qui fument tous les jours	**15,4** **11,5**	17,9 12,3	13,0 * 10,8	**1,445,800** **1,082,600**
	Nombre moyen de cigarettes fumées tous les jours - chez les fumeurs (moyenne)	**11,3**	11,3	11,2	
	Pourcentage des fumeurs quotidiens ayant signalé une forte dépendance au tabac - chez les fumeurs quotidiens	**12,1**	14,9	9,2	**129,500**
Cannabis	Pourcentage de personnes ayant consommé du cannabis au cours de leur vie	**40,5**	45,4	35,9 *	**3,791,900**

	Mesure	Estimation %				Population estimative[1]
		Total	Hommes	Femmes		
	Pourcentage de personnes ayant consommé du cannabis - au cours des 12 mois écoulés	13,4	16,3	10,8	*	1,254,400
	Pourcentage de personnes ayant signalé un risque modéré ou élevé de problèmes liés à la consommation de cannabis (ASSIST-CIS 4+) - échantillon total - chez les usagers	5,6 41,7	7,7 49,6	3,7 32,1	* *	514,000
Cocaïne	Pourcentage de personnes ayant consommé de la cocaïne au cours de leur vie	7	9,9	4,4	*	647,000
	Pourcentage de personnes ayant consommé de la cocaïne - au cours des 12 mois écoulés	1,1	2	< 1		102,700
Analgésiques opioïdes sur ordonnance	Pourcentage de personnes qui ont déclaré avoir pris des analgésiques opioïdes sur ordonnance - au cours des 12 mois écoulés	23,9	24,1	23,8		2,204,400
	Pourcentage de personnes qui ont pris des analgésiques opioïdes sur ordonnance à des fins non médicales - au cours des 12 mois écoulés	4	5,5	2,6	*	365,200
Conduite[2]	Pourcentage des conducteurs ayant pris le volant après avoir bu au - cours des 12 mois écoulés	5,8	10,6	1,4	*	489,300
	Pourcentage des conducteurs ayant pris le volant après avoir consommé du cannabis - au cours des 12 mois écoulés	2,4	2,9	1,9		197,600
Santé mentale	Pourcentage de personnes ayant signalé un niveau élevé de détresse psychologique au cours des dernières semaines	14,7	13,3	15,9		1,361,000
	Pourcentage de personnes ayant pris des anxiolytiques sur ordonnance - au cours des 12 mois écoulés	7,1	5,4	8,6		654,400
	Pourcentage de personnes ayant pris des antidépresseurs sur ordonnance - au cours des 12 mois écoulés	7,1	5	9	*	654,600
	Pourcentage de personnes ayant signalé une mauvaise santé mentale en général	6,0	5,3	6,6		583,100
	Pourcentage de personnes ayant signalé un nombre élevé de jours de détresse mentale (14 et plus) au cours des 30 jours écoulés	7,1	5,8	8,2		648,100

Nota : [1] Population estimative pour l'échantillon total, d'après une population adulte de 9 460 369, arrondie à une centaine près ;
[2] Les estimations reposent sur le nombre de titulaires d'un permis de conduire ; * indique qu'il y a une différence perceptible entre les hommes et les femmes (p < 0,05) en tenant compte d'autres facteurs démographiques.

Utilisation d'une substance intoxicante et facteurs connexes

L'utilisation d'une substance était intimement liée aux facteurs démographiques suivants :

- **Le sexe** des répondants avait une influence perceptible[2] sur 13 mesures de l'utilisation d'une substance.

La prévalence était plus élevée chez **les hommes** que chez les femmes pour toutes les mesures de l'utilisation d'une substance. Les hommes étaient nettement plus susceptibles :

- de boire de l'alcool tous les jours
- de prendre davantage de verres par semaine
- de boire plus d'alcool que la quantité jugée acceptable dans les

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[2] Nous utilisons le mot « perceptible » (c.-à-d. une différence statistiquement perceptible) pour indiquer un lien ou une différence qui est statistiquement perceptible au niveau p < 0,05 en tenant compte d'autres caractéristiques démographiques.

directives de consommation d'alcool à faible risque
- boire cinq verres ou plus en une occasion, par semaine (excès d'alcool)
- de boire de l'alcool de façon dangereuse ou nocive
- de signaler des symptômes de dépendance à l'alcool
- de fumer des cigarettes au moment de l'étude
- d'avoir consommé du cannabis au cours de leur vie
- d'avoir consommé du cannabis au cours de l'année écoulée
- de signaler des problèmes liés à la consommation de cannabis
- d'avoir consommé de la cocaïne au cours de leur vie.
- d'avoir pris des analgésiques opioïdes sur ordonnance à des fins non-médicales
- de déclarer avoir pris le volant en état d'ivresse.

- **L'âge** des répondants avait une influence perceptible sur 15 mesures de l'utilisation d'une substance. Dans la plupart des cas, l'utilisation diminuait avec l'âge ou était la plus élevée chez les personnes de 18 à 29 ans. La consommation d'alcool tous les jours fait exception, car elle augmentait avec l'âge. En tenant compte d'autres caractéristiques démographiques, les personnes de **18 à 29 ans** étaient nettement plus susceptibles :

  - de boire plus d'alcool que la quantité jugée acceptable dans les directives de consommation d'alcool à faible risque
  - de déclarer faire des excès d'alcool hebdomadaires
  - de boire de l'alcool de façon dangereuse ou nocive
  - de signaler des symptômes de dépendance à l'alcool
  - d'avoir consommé du cannabis au cours de l'année écoulée

- de déclarer avoir des problèmes liés à la consommation de cannabis
- de déclarer avoir pris le volant après avoir consommé du cannabis.

- **L'état civil** avait une influence perceptible sur sept mesures de l'utilisation d'une substance. Dans tous les cas, l'utilisation était plus élevée parmi les répondants qui n'ont pas été mariés ou qui ne le sont plus. Après avoir tenu compte d'autres facteurs, on a constaté que les répondants qui ont été mariés étaient les plus susceptibles :
  - de déclarer faire des excès d'alcool hebdomadaires
  - de boire de l'alcool de façon dangereuse ou nocive
  - de déclarer qu'ils fumaient ou qu'ils fumaient tous les jours.

- **Le niveau de scolarité** avait une influence perceptible sur cinq indicateurs. Selon la tendance dominante, l'utilisation d'une substance diminuait lorsque le niveau de scolarité augmentait. En tenant compte d'autres caractéristiques démographiques, les répondants n'ayant pas terminé leurs études secondaires étaient nettement plus susceptibles de :

  - déclarer faire des excès d'alcool hebdomadaires
  - signaler des symptômes de dépendance à l'alcool
  - déclarer qu'ils fumaient au moment de l'étude
  - déclarer qu'ils fumaient tous les jours
  - d'avoir consommé de la cocaïne au cours de leur vie.

- On n'a relevé aucune tendance dominante sur le plan des **différences régionales**. On a remarqué des différences statistiques notables pour l'un des indicateurs : la consommation d'alcool de façon dangereuse ou nocive était supérieure à l'estimation provinciale dans la région du Sud-Ouest.

- Malgré le fait que l'on n'ait pas noté en général un lien perceptible entre plusieurs indicateurs d'utilisation de substances et telle ou telle région, on peut cependant noter quelques contrastes régionaux. Si l'on compare les indicateurs suivants avec l'estimation provinciale, la consommation d'alcool au cours de l'année écoulée était la plus faible à Toronto; on a relevé le taux le plus bas de consommation d'alcool dépassant les directives de consommation à faible risque chez les habitants du Centre-Sud; les excès d'alcool hebdomadaires et la conduite en état d'ivresse étaient les plus élevés dans le Sud-Ouest; l'usage actuel de la cigarette et l'usage quotidien du tabac étaient supérieurs à la moyenne provinciale dans le Nord et dans le Centre-Sud.

- **Le revenu** avait une influence perceptible sur huit indicateurs. Dans la plupart des cas, la consommation de substances intoxicantes avait tendance à augmenter avec le revenu ou était la plus élevée chez les personnes dont le revenu était le plus élevé, à l'exception de la consommation de cocaïne au cours de la vie, qui était de moins en moins élevée à mesure que la courbe des revenus montait. Plus précisément, en tenant compte d'autres caractéristiques démographiques, on note chez les répondants dont les revenus étaient les plus élevés une tendance perceptible à :

  - consommer de l'alcool tous les jours
  - signaler une consommation d'alcool dangereuse ou nocive
  - signaler des symptômes de dépendance à l'alcool
  - déclarer qu'ils fumaient au moment de l'étude
  - consommer du cannabis au cours des 12 mois écoulés
  - déclarer avoir pris le volant après avoir bu.

État de santé mentale et facteurs connexes

Niveau élevé de détresse psychologique

À l'échelle de la province, un adulte sur sept (14,7 %) a signalé des symptômes d'un **niveau élevé de détresse psychologique** en 2011.

En tenant compte d'autres caractéristiques démographiques, le niveau élevé de détresse psychologique était associé à l'âge et à l'état civil.

- Le niveau de détresse psychologique était à son plus haut chez les répondants **âgés de 18 à 29 ans** et il était à son plus bas chez les répondants de 65 ans et plus.

- En tenant compte d'autres facteurs, on a constaté que les répondants qui ont déjà été mariés étaient les plus susceptibles de signaler un niveau élevé de détresse psychologique au cours des dernières semaines.

Mauvaise santé mentale

Dans l'ensemble, on estime à 6 % le pourcentage d'adultes ontariens qui ont signalé une mauvaise santé mentale en 2011 (pourcentage de répondants ayant signalé une santé mentale « passable » ou « mauvaise » en général). L'état civil et le niveau de scolarité avaient une influence perceptible sur la mauvaise santé mentale déclarée.

- Le taux de répondants ayant signalé une mauvaise santé mentale était presque deux fois plus élevé que ce taux parmi les répondants qui étaient mariés

- Le taux de répondants ayant signalé une mauvaise santé mentale tendait à

diminuer de façon perceptible à mesure que le niveau de scolarité augmentait. Il était le plus élevé chez les personnes n'ayant pas terminé leurs études secondaires et le plus faible chez les diplômés universitaires.

Nombre élevé de jours de détresse mentale

Environ 7,1 % des adultes ontariens ont déclaré avoir éprouvé une détresse mentale pendant plusieurs jours (soit 14 jours ou plus) au cours des 30 jours écoulés. La région de santé publique, l'état civil et le niveau de scolarité étaient liés de façon perceptible à cet indicateur, après avoir tenu compte d'autres caractéristiques démographiques.

- En utilisant l'estimation provinciale à titre de comparaison, on a noté de façon perceptible des taux plus faibles de répondants résidant de la région **Centre-Est** ayant déclaré avoir éprouvé fréquemment une détresse mentale pendant un ou plusieurs jours, tandis qu'on a noté de façon perceptible des taux plus élevés pour cet indicateur chez les répondants résidant dans la région **Centre-Sud**.

- Le taux de répondants ayant déclaré avoir éprouvé une détresse mentale pendant plusieurs jours était presque deux fois plus élevé chez les répondants qui avaient été mariés que parmi les répondants qui étaient mariés.

- Quand on compare avec les répondants n'ayant pas terminé leurs études secondaires, on a noté de façon perceptible que le taux de répondants ayant déclaré avoir fréquemment éprouvé une détresse mentale pendant un ou plusieurs jours était plus bas chez les diplômés universitaires.

Anxiolytiques et antidépresseurs sur ordonnance

Médicaments contre l'anxiété (anxiolytiques)

On estime à 7,1 % le taux d'adultes ayant déclaré avoir pris des anxiolytiques sur ordonnance en 2011. L'âge, l'état civil, le niveau de scolarité et les revenus avaient une influence perceptible sur l'utilisation de ces médicaments au cours des 12 mois écoulés.

- Bien que l'utilisation dans l'année courante d'anxiolytiques varie de façon perceptible avec l'âge (de 5,8 % à 8,7 %), on n'a pas noté de tendance générale liée à l'âge. Le taux d'utilisation est le plus bas chez les répondants âgés de 18 à 29 ans et il est le plus haut chez les répondants âgés de 40 à 49 ans.

- Après avoir tenu compte d'autres facteurs, on a constaté que les répondants qui avaient été mariés étaient 2,3 fois plus susceptibles de déclarer avoir pris ces médicaments que les répondants mariés.

- L'utilisation d'anxiolytiques diminue de façon perceptible plus le niveau de scolarité des répondants est élevé. L'utilisation était la plus élevée chez les répondants n'ayant pas terminé leurs études secondaires, et elle était la plus basse chez les diplômés universitaires.

- L'utilisation d'anxiolytiques au cours de l'année écoulée a un lien perceptible avec le revenu du foyer : plus celui-ci était élevé, moins l'utilisation d'anxiolytiques était grande. Le taux d'utilisation était plus élevé chez les répondants dont les revenus étaient les plus bas et il était moins élevé chez les répondants dont les revenus étaient plus élevés.

Antidépresseurs

On estime à 7,1 % le taux d'adultes ontariens qui ont pris des antidépresseurs sur ordonnance au cours des 12 mois précédant le sondage. Le sexe, l'âge, l'état civil, le niveau de scolarité et la région avaient une influence perceptible sur l'utilisation de ces médicaments.

- Les femmes de 40 à 49 ans, celles qui avaient été mariées et celles qui n'avaient pas terminé leurs études secondaires étaient les plus susceptibles de déclarer avoir pris ces médicaments.

- On a noté des différences géographiques perceptibles quant à l'utilisation d'antidépresseurs, le taux variant de 4,4 % chez les résidents du Centre-Est à 12,8 % chez les résidents du Centre-Sud.

Tendances en matière d'utilisation de substances intoxicantes

Alcool

- Le pourcentage de répondants qui ont déclaré avoir **consommé de l'alcool** au cours de l'année écoulée a **augmenté** de façon perceptible de 2010 à 2011 (de 78 % à 81,2 %). On a noté une augmentation de consommation au sein de trois sous-groupes : chez les **femmes** (de 74,6 % à 78,9 %), chez les habitants du **Centre-Ouest** (de 76 % à 83,4 %) et chez les répondants **mariés** (de 78,7 % à 81,8 %).

- Entre 1996 et 2011, il y a eu une variation perceptible de la consommation d'alcool au cours de l'année écoulée, qui a affiché son niveau le plus bas en 1998 (77,1 %) et a atteint un sommet de 81,5 % en 2007. Il y a eu des augmentations perceptibles au cours de cette période, tout particulièrement chez les **femmes** et les **personnes âgées de 65 ans et plus**. On a noté une variation non linéaire pour ce qui est de la consommation d'alcool au cours l'année écoulée chez les répondants résidant dans le Nord, chez les répondants qui sont mariés et qui ont été mariés ainsi que chez les répondants n'ayant pas terminé leurs études secondaires.

- **La consommation d'alcool tous les jours chez les buveurs** est demeurée stable de 2010 à 2011 (8,7 % et 8,6 %, respectivement). Les taux étaient stables pour la plupart des sous-groupes démographiques.

- Entre 1996 et 2011, il y a eu une **hausse** perceptible de la consommation d'alcool tous les jours chez les personnes qui avaient bu de l'alcool au cours de l'année écoulée. Ce taux est passé de 5,3 % en 2002 à 8,6 % en 2011. Il y a eu des hausses perceptibles chez les **hommes** qui boivent (de 7,1 % en 2005 à 11,6 % en 2011), les **femmes** qui boivent (de 2,6 % en 2001 à 5,7 % en 2011) et on a noté une tendance non linéaire à la hausse chez les **buveurs âgés de 18 à 29 ans** (de 1,3 % en 2000 à 7,2 % en 2009).

- Il y a également eu des hausses perceptibles de la consommation d'alcool tous les jours chez les habitants de l'Est, chez les répondants mariés, et chez ceux qui n'ont pas terminé leurs études secondaires et chez les diplômés universitaires.

- Sur le long terme, soit entre 1977 et 2011, la consommation d'alcool tous les jours chez les personnes qui avaient bu au cours de l'année écoulée a diminué considérablement jusqu'en 2006. Ce taux a atteint un sommet de 13,4 % en 1977 puis a baissé des deux tiers pour atteindre un creux de 4,1 % en 1992 pour varier de 5,3 % à 7,4 % jusqu'à 2007. Le taux de consommation d'alcool tous les jours a **augmenté de façon perceptible** au cours des cinq dernières années, **passant de 5,9 % en 2006 à 8,6 % en 2011**. Cette variation non linéaire est particulièrement prononcée chez les **hommes** qui boivent, dont le taux de consommation d'alcool tous les jours est passé de 19,5 % en 1977 à 7,1 % en 2005 pour revenir à 11,6 % en 2011.

- Le **nombre moyen de verres standard** par semaine chez les personnes ayant consommé de l'alcool au cours de l'année écoulée **n'a pas changé de façon perceptible** de 2010 à 2011 (4,6 % par rapport à 4,7 %) et les taux étaient stables pour tous les sous-groupes démographiques. Entre 1996 et 2011, il y a eu une **hausse perceptible du nombre moyen de verres consommés par semaine**, qui est passé de 3,3 en 1996 à 4,7 en 2011. Il y a également eu une hausse perceptible du nombre de verres consommés chez les hommes qui boivent, les femmes qui boivent et les buveurs n'ayant pas terminé leurs études secondaires.

- Le pourcentage d'Ontariens qui ont **bu plus d'alcool que la quantité jugée acceptable dans les directives de consommation d'alcool à faible risque** en 2011 (18,4 %) n'a pratiquement pas changé par rapport à celui enregistré en 2009 (17,8 %) et les taux étaient stables pour la plupart des sous-groupes démographiques. Ce pourcentage a baissé de façon perceptible pendant cette période au sein de trois sous-groupes spécifiques : chez les répondants âgés de

65 ans ou plus, chez les résidents du Centre-Sud et chez les répondants n'ayant pas terminé leurs études secondaires.

- Le pourcentage d'Ontariens qui ont bu plus d'alcool que la quantité jugée acceptable dans les directives de consommation d'alcool à faible risque n'a pas varié de façon perceptible entre 2003 et 2011. On a noté cependant une variation non linéaire chez les résidents du **Sud-Ouest**, de l'**Est** et chez les répondants ayant commencé des **études postsecondaires** ou ayant obtenu un **diplôme universitaire**.

- De 2010 à 2011, le taux **d'excès d'alcool hebdomadaires** au sein de l'échantillon total n'a presque pas changé (7,5 % par rapport à 7,4 %), et ce taux est resté **stable depuis 2009** au sein de la plupart des sous-groupes. Il y a eu des baisses perceptibles au sein d'un seul des sous-groupes : les répondants ayant déjà été mariés (de 4,4 % en 2010 à 8,9 % en 2011).

- Bien que les estimations des excès d'alcool hebdomadaires soient demeurées stables entre 1996 et 2007, variant de 10,5 % à 12,7 % au sein de l'échantillon total et de 13,1 % à 16,5 % au sein des personnes ayant consommé de l'alcool au cours des 12 mois écoulés, il y a eu une **baisse** perceptible des excès occasionnels d'alcool entre 2007 et 2011. Les estimations ont **diminué**, passant de 11,2 % en 2007 à 7,4 % en 2011 au sein de l'échantillon total et de 13,8 % à 9,1 % chez les buveurs. Il y a également eu des baisses perceptibles pendant cette période parmi les sous-groupes suivants : sexe, âge, région, état civil et niveau de scolarité.

- Sur le long terme, on a relevé trois périodes distinctes entre 1977 et 2011. Les **excès occasionnels d'alcool** sont demeurés stables entre 1977 et 1995, puis ont augmenté de façon perceptible

en 1996 au sein de l'échantillon total (de 7 % à 11,7 %) et sont demeurés à ce niveau élevé jusqu'en 2008, date à laquelle ils ont commencé à diminuer, pour atteindre près de 7 %.

- Dans l'ensemble, le pourcentage de répondants ayant signalé une **consommation d'alcool dangereuse ou nocive (AUDIT 8+)** est demeuré stable entre 2010 et 2011 au sein de l'échantillon total (14,8 % par rapport à 14,4 %). De plus, les taux ont été stables pour tous les sous-groupes démographiques. Entre 1998 et 2011, il y a eu un **changement non linéaire** perceptible sur le plan de la consommation d'alcool dangereuse ou nocive chez les **adultes ontariens**. Le pourcentage enregistré à ce chapitre était à son plus bas en 2005 (10,4 %) et a atteint un sommet en 2007 (15,6 %) avant de diminuer pour se stabiliser. Il y a eu une variation perceptible parmi les sous-groupes suivants : sexe, âge et région. La consommation d'alcool dangereuse ou nocive chez les **femmes** a augmenté (4,8 % en 1998 pour atteindre 7,9 % en 2011). On a également noté une augmentation non linéaire chez les répondants âgés de **18 à 29** ans (de 22,4 % en 2002 à 31,8 % en 2010) et chez les répondants âgés de **30 à 39** ans (de 7,1 % en 2005 à 14,7 % en 2011). On a aussi noté des changements perceptibles au sein de deux sous-groupes : les résidents du **Sud-Ouest** et de **l'Est**.

- La proportion d'adultes ontariens ayant signalé au moins **un indicateur de dépendance** est restée stable entre 2010 et 2011 (7,9 % par rapport à 8,1 %) et le taux était stable pour la plupart des sous-groupes. On n'a noté des changements perceptibles qu'au sein de deux sous-groupes pendant cette période : chez les répondants **âgés de 40 à 49 ans**, chez les résidents du **Centre-Sud** et chez les résidents du **Nord**.

- On a noté une variation **non linéaire** perceptible dans la déclaration d'au moins un des indicateurs de dépendance entre 1998 et 2011. Ce taux **a diminué** (de 9,4 % en 1998 à 5,9 % en 2003) puis **a augmenté** à nouveau pour atteindre 8,1 % en 2011. On a remarqué une variation non linéaire au sein de sous-groupes pendant cette période chez les personnes **âgées de 50 à 64 ans** et chez les résidents du **Centre-Sud** et du **Nord**.

Cigarettes - Tabac

- Bien que la prévalence de la **consommation de tabac** en 2011 (15,4 %) n'ait pas changé de manière perceptible depuis 2010 (17,6 %), elle est plus faible de façon perceptible qu'en 2009, où elle s'élevait à 18,6 %. Il y a eu aussi des diminutions perceptibles au sein de deux sous-groupes pendant cette période : chez les résidents de **Toronto** (de 17,4 % en 2010 à 11,7 % en 2011) et chez les résidents du **Centre-Est** (de 21,4 % en 2009 à 14,0 % en 2011).

- L'usage actuel du tabac est passé de 28,5 % en 1991 à 23,5 % en 1993 puis est revenu à 28,5 % en 1995. Il y a eu une **baisse perceptible** de l'usage de la cigarette, qui est passé de 26,8 % en **1996** à 15,4 % en 2011. Il y a également eu des baisses perceptibles généralisées depuis 1996 dans les sous-groupes suivants : sexe, âge, région, état civil et niveau de scolarité. De plus, l'usage quotidien du tabac a diminué de moitié dans la province, passant de 23 % en 1996 à 11,5 % en 2011.

Cannabis

- Les taux de **consommation de cannabis au cours de l'année écoulée** sont demeurés stables entre 2010 et 2011 (14,2 % et 13,4 %, respectivement). De plus, les taux de consommation ont été stables pour tous les sous-groupes.

- La prévalence de la consommation de cannabis au cours de l'année écoulée a **augmenté graduellement**, passant de 8,7 % en 1996 à 13,4 % en 2011.

- Il y a eu des hausses perceptibles dans tous les sous-groupes entre 1996 et 2011 ; chez les **hommes**, les **femmes** et au sein de tous les sous-groupes (**âge, région, état civil et niveau de scolarité**).

- Depuis 1977, la consommation de cannabis au cours de l'année écoulée a **augmenté de façon notable**. Le taux actuel de 13,4 % est plus élevé de façon perceptible que le taux de 8,1 % relevé en 1977. Il y a eu d'autres augmentations perceptibles sur le long terme chez les **hommes** (de 9,1 % en 1992 à 19,9 % en 2010); chez les **femmes** (de 4,5 % en 1977 à 10,8 % en 2011) et au sein de **tous les groupes d'âge**, notamment chez les répondants âgés de 18 à 29 ans (de 22,6 % en 1977 à 33,5 % en 2011) et chez les répondants âgés de 50 ans et plus (de 1,2 % en 1977 à 5,2 % en 2011).

- On a relevé un changement important à long terme, soit une **consommation de cannabis par des personnes de plus en plus âgées**. En 1977, 82 % des personnes ayant consommé du cannabis au cours de l'année écoulée avaient entre 18 et 29 ans comparativement à 49 % seulement en 2011. En revanche, le pourcentage d'usagers de 30 à 49 ans **a doublé**, passant de 15 % à 36 %. Quant à lui, le pourcentage d'usagers âgés de 50 ans et plus **a quintuplé**, passant de 3 % à 16 % pendant la même période.

- La prévalence de **problèmes liés à l'utilisation de cannabis** au cours de l'année écoulée est restée stable entre 2010 (7,1 %) et 2011 (5,6 %). De plus, le taux de consommation est resté stable chez les hommes comme chez les femmes et au sein des sous-groupes d'âge.

- Les estimations de problèmes liés au cannabis au cours de l'année écoulée entre 2004 et 2011 sont généralement restées stables au sein de l'échantillon total, passant de 5,2 % à 7,1 %.

Cocaïne

- Le taux de consommation de cocaïne **au cours de la vie** mesuré a **diminué de façon perceptible** entre 2010 et 2011 (9,6 % par rapport à 7,0 %), mais était similaire à l'estimation de 2008 (7,4 %). Bien que la **consommation de cocaïne au cours de l'année écoulée** ait été numériquement **plus faible** en 2011 (1,1 %) qu'en 2010 (1,8 %), cette différence n'est pas statistiquement perceptible.

- Le taux de consommation de cocaïne au cours de la vie **a augmenté de façon perceptible** entre 1984 et 2010, passant de 3,3 % à 9,6 % pour ensuite revenir au taux précédent de 7 % en 2011. Le taux de consommation de cocaïne au cours de l'année écoulée est demeuré faible (moins de 2,2 %) au cours de la même période.

Analgésiques opioïdes sur ordonnance

- Bien que la prevalence de l'utilisation des analgésiques opioïdes sur ordonnance est resté stable entre 2010 et 2011 (26,6% vs 23,9%, respectivement), la proportion des adultes de l'Ontario qui ont rapporté l'usage non médical des analgésiques opioïdes sur ordonnance a considérablement diminué, passant de 7,7% en 2010 à 4,0 % en 2011.

Conduite et utilisation de substances intoxicantes

- La prévalence de la conduite en état d'ivresse est restée stable entre 2010 et 2011 (5,0 % par rapport à 5,8 %). De plus, les taux ont été stables pour la plupart des sous-groupes démographiques. Il n'y a eu un changement perceptible qu'au sein de l'un des sous-groupes démographiques : les résidents du **Centre-Ouest** (de 3,7 % en 2010 à 10,5 % en 2011).

- Depuis 1996, il y a eu une **baisse linéaire** perceptible au chapitre de la conduite en état d'ivresse, le taux passant de 13,1 % à moins de 6% au cours des deux dernières années. Ces baisses sont survenues à une époque où la province a introduit plusieurs mesures visant à réduire les taux de conduite avec facultés affaiblies, y compris des sanctions accrues pour les pilotes et des mesures visant à accroître l'utilisation des antidémarreurs par les délinquants reconnus coupables.

- Il y a également eu des baisses perceptibles depuis 1996 dans les sous-groupes démographiques. La baisse la plus marquante s'est produite chez les conducteurs de sexe masculin, passant de 21,2 % en 1996 à 10,6 % en 2011, et chez les jeunes adultes conducteurs âgés de 18 à 29 ans, passant de 20,1 % en 1996 à 5,6 % en 2011. On a noté une tendance perceptible à la baisse dans toutes les régions entre 1996 et 2011, mais tout particulièrement au sein des conducteurs résidant à Toronto (de

14,1 % à 5,1 %) et chez les conducteurs résidant au Centre-Sud (de 17,4 % à 4,2 %).

- Le pourcentage d'adultes ontariens titulaires d'un permis de conduire valide qui ont déclaré **avoir pris le volant une heure ou moins après avoir consommé du cannabis** au moins une fois au cours des 12 derniers mois est demeuré stable entre 2010 et 2011 (1,5 % par rapport à 2,4 %). De plus, les taux sont restés stables entre ces deux années pour la plupart des sous-groupes démographiques. On a noté une augmentation perceptible du taux de jeunes adultes âgés de 18 à 29 ans qui ont pris le volant après avoir consommé du cannabis, qui est passé de 3,2 % en 2010 à 8,6 % en 2011.

- Entre 2002 et 2011, le pourcentage d'adultes ontariens qui ont déclaré avoir pris le volant une heure ou moins après avoir consommé du cannabis n'a presque **pas changé** (de 2,9 % à 2,4 %). La seule tendance non linéaire perceptible était chez les répondants **âgés de 18 à 29 ans**. Le taux de conduite après avoir consommé du cannabis a **augmenté** (de 7,2 % en 2002 à 11,9 % en 2006), puis a diminué jusqu'à 2,8 % en 2009 pour ensuite tripler en 2011 (8,6 %). On n'a pas relevé d'autres tendances marquées au sein d'autres sous-groupes.

Évolution des indicateurs de santé mentale

Niveau élevé de détresse psychologique

- Les indicateurs de niveau élevé de détresse psychologique sont demeurés stables entre 2010 et 2011 au sein de

l'échantillon total (14,7 % par rapport à 14,6 %) et des sous-groupes démographiques. Entre 2000 et 2009, il n'y a pas eu de variation perceptible de ce niveau et rien n'indique qu'il y a eu

un changement différentiel dominant au sein des sous-groupes.

Anxiolytiques sur ordonnance

- L'utilisation d'**anxiolytiques** n'a pratiquement **pas changé** en 2011 (7,1 %) comparativement à 2010 (8,9 %) et le taux d'utilisation d'anxiolytiques au cours de l'année précédente est resté stable chez les hommes et les femmes, au sein de la plupart des groupes d'âge et dans toutes les régions. On a noté cependant des **diminutions** perceptibles au sein des sous-groupes suivants pendant cette période : les répondants **âgés de 50 à 64** ans, les répondants **mariés**, chez ceux qui ont **terminé leurs études secondaires**, et les **diplômés universitaires**.

- Depuis 1997, une **tendance linéaire à la hausse** est perceptible en ce qui concerne l'utilisation d'anxiolytiques au sein de l'échantillon total. En effet, le taux d'utilisation est passé de 4,5 % en 1999 à 7,1 % en 2011. Cela est particulièrement manifeste chez les femmes (de 5,6 % à 8,6 %) et les personnes de 18 à 29 ans (de 1,7 % à 5,8 %).

Antidépresseurs sur ordonnance

- Il n'y a pas eu de changement en ce qui concerne l'**utilisation d'antidépresseurs au cours de l'année écoulée** en 2011 (7,1 %) par rapport à 2010 (7,2 %). De plus, les taux d'utilisation ont été stables entre ces deux années pour la plupart des sous-groupes. On n'a noté qu'un changement perceptible chez les répondants âgés de 50 à 64 ans, pour qui ce taux a **diminué** (de 11,7 % en 2010 à 8,1 % en 2011).

- Depuis 1997, il y a une **tendance à la hausse perceptible** en ce qui concerne l'utilisation d'antidépresseurs au sein de la population totale. Le taux d'utilisation est passé de 3,6 % en 1999 à 7,2 % en

2010 et est demeuré stable en 2011. Il y a eu des hausses perceptibles dans les sous-groupes suivants : sexe, région, état civil et niveau de scolarité. Les augmentations étaient plus fortes chez les répondants les plus jeunes. De 1997 à 2011, l'utilisation d'antidépresseurs a triplé chez les répondants **âgés de 18 à 29 ans** (de 2 % à 7,2 %).

Mauvaise santé mentale

- Les indicateurs de **mauvaise santé mentale** sont demeurés stables entre 2010 et 2011 (6,1 % par rapport à 6 %, respectivement). On n'a noté de changement perceptible que dans deux sous-groupes pendant cette période : une **augmentation** chez les résidents du **Nord** et chez les répondants ayant **commencé des études postsecondaires**.

- Entre 2003 et 2011, il n'y a eu aucun changement dominant ni changement perceptible dans la plupart des sous-groupes en ce qui concerne ces indicateurs.

Nombre élevé de jours de détresse mentale

- Le pourcentage de personnes ayant signalé un **nombre élevé de jours de détresse mentale** au cours des 30 jours écoulés en 2011 (7,1 %) n'était pas différent de façon perceptible par rapport à 2010 (7,9 %). On a noté des changements perceptibles au sein de deux sous-groupes pendant cette période : une **diminution** chez les répondants **âgés de 50 à 64 ans** et chez les résidents du **Centre-Est**.

- Entre 2003 et 2011, on a noté une **augmentation** perceptible dans le pourcentage de répondants ayant signalé un nombre élevé de jours de détresse mentale au cours des 30 jours écoulés (de 5,4 % en 2003 à 7,9 % en 2010) et ce pourcentage est resté au-dessus de 7 % en 2011.

Constatations encourageantes

Les constatations suivantes devraient être considérées comme encourageantes.

- **Cigarette :** La plupart des adultes ontariens (84,6 %) ne fument pas la cigarette. La prévalence de l'usage actuel de la cigarette a diminué de façon perceptible depuis 1996, tout comme l'a fait l'usage quotidien du tabac (de 23 % en 1977 à 11,5 % en 2011).

- **Alcool :** Bien que la majorité des adultes ontariens (81,2 %) aient bu de l'alcool au cours de l'année écoulée, la plupart d'entre eux boivent sans faire d'excès.

- En effet, l'étude a montré que 90 % des buveurs ne font pas d'excès d'alcool hebdomadaires et que 88 % des buveurs ne dépassent pas la quantité jugée acceptable dans les directives de consommation d'alcool. Elle a aussi montré que 82 % des buveurs ne dépassent pas le seuil de consommation d'alcool dangereuse ou nocive AUDIT.

- De plus, il y a eu des **baisses** perceptibles des **excès occasionnels d'alcool** entre 2006 (12,3 %) et 2009 (7,4 %). Cette baisse était conséquente dans l'ensemble, se produisant dans plusieurs sous-groupes, mais elle était particulièrement marquée chez les **hommes** (de 20,7 % en 2001 à 12,4 % en 2011).

- **Cannabis :** Bien que le pourcentage de personnes ayant consommé du cannabis au cours de l'année écoulée ait augmenté, l'usage est généralement peu fréquent. Par exemple, parmi les personnes en ayant consommé au cours de leur vie, seulement 18 % d'entre elles ont déclaré en prendre une fois par mois ou plus souvent.

- **Conduite en état d'ivresse :** La conduite en état d'ivresse parmi les titulaires d'un permis de conduire a **diminué de plus de la moitié** entre 1996 et 2011, passant de 13,1 % à 5,8 %. De plus, cette diminution a eu lieu dans plusieurs sous-groupes, dont les **hommes** (l'estimation pour ce sous-groupe est passée de 21,2 % à 10,6 %).

- **Analgésiques opioïdes sur ordonnance:** La proportion de la population adulte de l'Ontario qui déclarent utilisation non médicale des analgésiques opioïdes sur ordonnance a considérablement diminué, passant de 7,7% en 2010 à 4,0% en 2011. Cette baisse s'est produite au cours d'une période où les programmes et les politiques provinciales visant à réduire l'usage non médical de ces substances ont été introduites.

Préoccupations en matière de santé publique

Les constatations suivantes devraient être considérées comme des préoccupations potentielles en matière de santé publique.

- **Cigarette :** Bien que le taux d'usage actuel de la cigarette ait diminué considérablement chez les adultes ontariens depuis 1995, le pourcentage d'adultes qui fument demeure élevé

(15,4 %, soit environ 1 445 799 adultes). L'usage de la cigarette est la principale cause évitable de maladie au Canada. Le taux actuel de 15,4 % est de **trois fois plus élevé** que le taux de 5 % visé par Action Cancer Ontario. De plus, la baisse progressive du taux d'usage du tabac s'est amoindrie ces dernières

années, et il semble peu probable que le taux visé sera atteint.

- **Alcool :** Bien que le pourcentage de la population qui consomme de l'alcool n'ait pas beaucoup changé au cours des 10 dernières années, deux indicateurs attirent notre attention. Premièrement, les **excès d'alcool hebdomadaires** demeurent à un niveau élevé (7,4 %) et ils sont à leur taux **le plus haut** chez les **jeunes adultes âgés de 18 à 29 ans** (18,9 %). Deuxièmement, la consommation d'alcool d'un pourcentage important de personnes est **supérieure au niveau recommandé dans les directives**. Près d'un buveur sur cinq (18 %) a déclaré que sa consommation d'alcool était supérieure à la quantité recommandée dans les directives sur la consommation d'alcool à faible risque. De plus, il y a eu une hausse perceptible du **nombre moyen de verres consommés par semaine**, qui est passé de 3,3 en 1996 à 4,7 en 2011, ainsi qu'une hausse du taux de **consommation d'alcool tous les jours** chez les personnes ayant bu de l'alcool au cours de l'année écoulée, qui est passé de 5,3 % en 2002 à 8,6 % en 2011. Ces hausses étaient particulièrement importantes chez les **femmes** (de 2,6 % en 2001 à 5,7 % en 2011).

- **Cannabis :** La prévalence de la consommation de cannabis au cours de l'année écoulée est en hausse, passant de 8,7 % en 1996 à 13,4 % en 2011, tant chez les hommes que chez les femmes et pour tous les groupes d'âge. La consommation de cannabis a **presque doublé** chez les personnes de 18 à 29 ans, passant de 18,3 % en 1996 à 33,5 % en 2011. La hausse de la consommation de cannabis chez les jeunes adultes est à l'image des hausses enregistrées à ce chapitre à la fin des années 1990 chez les élèves ontariens. Toutefois, le changement le plus évident pourrait être le vieillissement des usagers de cannabis. Entre 1996 et 2011,

le pourcentage de personnes âgées de 50 ans ou plus ayant consommé du cannabis au cours de l'année écoulée est passé de 2 % à 16 %. De plus, 6 % des Ontariens sont à risque modéré ou élevé de problèmes liés à la consommation de cannabis.

- **Analgésiques opioïdes sur ordonnance:** En dépit d'une baisse de la consommation, 4% de la population adulte de l'Ontario (365 000) signalent l'usage non médical des analgésiques opioïdes sur ordonnance en 2011. Ce sont des médicaments puissants et addictives qui ont été liés à l'utilisation accrue des opiacés illicites.

- **Conduite de véhicules et utilisation de la substance:** Bien que les taux de conduite en état d'ivresse sont en baisse, les taux de conduire après avoir consommé du cannabis demeurent inchangées, et chez les jeunes adultes dépassent les taux de conduite en état d'ivresse (8,6% vs 5,6%, respectivement).

- **Santé mentale :** Environ un adulte ontarien sur sept (14,7 %) éprouve un **niveau élevé de détresse psychologique**, qui peut nuire à son fonctionnement social et affectif. De plus, une personne sur 17 (6 %) a signalé une mauvaise santé mentale. Le pourcentage d'adultes ontariens qui ont déclaré prendre des antidépresseurs sur ordonnance a doublé depuis 1999, passant de 3,6 % à 7,1 % en 2011.

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ACKNOWLEDGEMENTS

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1. INTRODUCTION

Knowledge derived from surveillance research about the shifting pattern and character of substance use, its harms, and mental health impairments in the population, is essential to informed prevention programming, health and social policy, and any treatment response.

Our knowledge regarding substance use has also shown that the ability of a given drug to cause harms to its users, their families and friends, and their communities depends on at least three primary factors: (1) the **prevalence** of use in the population – what percentage use the substance; (2) its **dependence liability** – the ability of the drug to produce dependence; and (3) its **hazard liability** – the ability of the drug to produce lethal and other adverse consequences (Brands, Sproule, & Marshman, 1998).

Thus, we should not simply equate prevalence of use with the extent of consequent harm. The important point is that drug use prevalence in the population is but one factor in determining the harm potential of a given substance.

Population surveillance of mental health indicators is likewise a critical imperative for informed health policy and any treatment response. Screening instruments assessing mental health can assist in identifying not only the prevalence of impaired mental and emotional functioning, but also the related determinants and risk factors (Tsuang & Tohen, 2002). These two domains – addiction and mental health impairment – have strong connections, and the ability to investigate their co-occurrence, risk profiles and changes over time, further enhances their public health utility.

The **purpose of this report** is threefold. *First*, we describe the prevalence of substance use –

alcohol, tobacco, cannabis and other drugs – and markers of impaired mental health – elevated distress, use of antianxiety and antidepressant medication and mental health-related quality of life indicators – among Ontario adults in 2011.[3] *Second*, we examine the question, "Who is at risk?" by assessing the correlates and risk factors related to these outcomes; and *third*, based on 26 repeated cross-sectional surveys conducted during a 35-year period between 1977 and 2011, we examine trends in substance use and mental health indicators.[4] To this end, we describe first the development and implementation of the *CAMH Monitor*, the longest ongoing surveillance program of adult drug use in Canada.

Why is it **important to monitor** addiction and mental health indicators? Because such phenomena are influenced by ongoing demographic shifts and market forces, as well as societal changes in values, attitudes and consequent stigmatization of such conditions, their character is rarely static. Such forces may combine to create tipping points resulting in favourable conditions for drug taking and the emergence of drug-related outbreaks and full-fledged epidemics. Thus, the need for surveillance is paramount not only to enhance knowledge of addiction and mental health, but also to build strategies to reduce their harms

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[3] The province of Ontario has the largest population of the ten Canadian provinces, representing over one in three Canadians (38%).

[4] Mental health measures were introduced into the *CAMH Monitor* in 1999, thus limiting the available trend to a reduced period.

(Sloboda, 2005; Stockwell, Gruenewald, Toumbourou, & Loxley, 2005).

Specifically, monitoring addiction and mental health indicators provides several **important benefits:**

- First, monitoring **builds knowledge** and increases understanding of the processes that bring population changes in addiction and mental health indicators, of the methods to best measure them, and of associated public sentiment and stigmatization.
- Second, monitoring **informs policy**. To be effective, policies intended to reduce the harm caused by drugs and impaired mental health must be informed by the most current data.
- Third, monitoring serves as **a tool for the evaluation** of health programs, interventions, objectives and targets set by governmental and advisory bodies.[5] Monitoring studies inform both needs assessment as well as outcome and impact evaluation.

There are several means, including population surveys and institutional or archival aggregate data, to estimate and monitor addiction and mental health indicators (Sloboda, McKetin, & Kozel, 2005). Examples of aggregate data include per capita alcohol consumption, the number of alcohol and drug-related arrests, convictions and seizures, and the number of illnesses or injuries as represented by hospitalizations, treatment cases, nonfatal overdoses and fatalities.

Although aggregate data are useful in describing population level or change, or social patterning of addiction and mental health indicators, because they are typically based on the summation of counts of cases or events, rather than individuals, they can be somewhat remote from individual behaviour. For example, **per capita alcohol consumption**, based on

sales data, is a measure summed across both drinkers and non-drinkers alike. Although such indicators are useful on a total population basis, especially for the purpose of cross-national, national and provincial trends, rates of drinking among subgroups such as gender and age cannot be derived.

Arrest and conviction data can reflect factors other than the rate of use, such as the degree of enforcement and drug availability. In addition, such data often apply to atypical cases, namely individuals who are detected and apprehended for their use of drugs. Thus, there may or may not be a direct and necessary relationship between drug arrests, seizures and the size of the drug-using population. Changes in such data must be carefully interpreted. For example, an increase in drug arrests or seizures may reflect processes other than increasing drug use: it may reflect more funds or a higher priority given to enforcement; it may reflect the same number of users using greater quantities or more users consuming fixed quantities; or it may reflect increases in use among restricted and typically small populations whose behaviour easily comes to the attention of authorities. Thus, although official aggregate indicators are important to help define the particular contours of the drug problem, they should not be confused with direct indicators of the prevalence, amount and harms of use experienced by individuals in the population.

The Strengths and Limitations of Surveys

The most direct means of estimating and monitoring addiction and mental health indicators in the population are based on sample surveys. Although the sample survey method has its limitations, it remains the most feasible technique to monitor health behaviours and outcomes in the general population. The **strength** of the survey method is the requirement of the random selection of individuals from a known population. Thus, assuming no systematic bias in the selection process, drug users and those with mental health difficulties drawn for the sample should

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[5] e.g. Healthy People 2020:
http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=38

be representative of drug users and those with mental health difficulties in the population.

The surveillance program's transition to random-digit-dialed (RDD) telephone sampling comes packaged with several **advantages**, the most relevant of which are the following[6]:

- a dedicated addiction/mental health survey has greater depth of content than general health surveys with limited addiction/mental health content
- a population with a high telephone coverage rate
- elimination of travel costs over a wide geographical area
- reduced cost per interview
- better access to populations such as older adults who may be reticent about answering their door to strangers (i.e., unknown interviewers). Also, access may be restricted from personal visit interviewers in many multi-unit dwellings, such as apartments and condominiums
- advantages of computerized interviewing systems
- elimination of separate data entry processing resulting in ready access to final dataset.

Like other indicators of addiction and mental health, the survey method also has its **limitations**. First, estimates can be biased – i.e., different from the true population value – if the survey is used to project outside the target population or if the survey frame population is an inadequate representation of the target population. For example, the *CM2011* is based on a sampling frame of telephone numbers (cell phone numbers are also included). Whether

estimates would be measurably biased by projecting to *all* households depends on (1) the size of non-telephone households and (2) whether the non-telephone household population differs appreciably from the telephone household population. Fortunately, Canada traditionally has one of the highest telephone coverage rates in the world, second only to Sweden (Trewin & Lee, 1988). Moreover, Statistics Canada estimated that 11% of Ontario households in 2010 had no landline telephone, of which 10% had a cell-phone only and **only 1% were phoneless** (Statistics Canada, 2011). Given this high penetration rate, we would not expect appreciable coverage bias (Biemer & Lyberg, 2003).

As well, general population surveys commonly employ a target population consisting of noninstitutionalized residents and are not intended as a census of the full adult population. Thus, those in jails, prisons, hospitals, military establishments, and transient populations such as the homeless are commonly **excluded by design**. These **out-of-scope** groups often contain an especially elevated proportion of drug users, heavy drinkers and those experiencing mental health difficulties (Adlaf, Smart, & Canale, 1991; Rossi, 1989; Sloboda, 2005). However, the bias caused by such noncoverage depends not only upon the *difference* in drug use between respondents and nonrespondents, but also on the *size of the group* not surveyed. Thus, even if indicators of addiction and mental health are substantially higher in the excluded group (e.g., homeless, phoneless) than those in the sampled group, if the size of the excluded group is small relative to the total population the bias is not expected to be considerable (Groves & Couper, 1998; Heeringa, West, & Berglund, 2010; Kandel, 1991). This point also infers that even a moderately large total nonresponse rate may not translate to nonresponse bias if the difference between respondents and non-respondents is negligible.

The topic of a survey has the potential to influence response quality in two ways: (1) topic relevance can affect the propensity to participate, and (2) topic sensitivity can

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[6] In 1991, a mode system effect study was launched to investigate a mode conversion from personal-visit to RDD surveys. During 1991, the existing area-based personal-visit survey continued as usual, but a parallel RDD survey was also fielded concurrently. The objective of this study was to assess whether the two modes, and their respective packages of methods and procedures, provided similar estimates. The results showed that holding values of sex and age fixed, mode differences were minimal for alcohol and other drug use measures. Consequently, in 1992, the surveillance program migrated to a RDD survey.

influence the quality of responses (e.g., social desirability bias). One limitation of interview surveys, especially those measuring sensitive behaviours, is its **reliance on self-reports**. Reviews of such methods for alcohol and drug use surveys suggest that although surveys tend to underestimate true usage, they are still regarded as the best available means to estimate and monitor such behaviours for public health purposes (Harrison, Haaga, & Richards, 1993; Sloboda, 2005; Turner, Lessler, & Gfroefer, 1992). Moreover, although these biases may operate to understate drug-use estimates at a single point in time, they should have lesser impact on estimating trends as long as the magnitude of underreporting remains constant across time (Cochran, 1977).

It is also important to note that repeated cross-sectional surveys – repeated surveys interviewing different respondents each time – can assess only specific types of change. Because the same individuals are not surveyed at different times, repeated cross-sectional surveys cannot evaluate development patterns or individual change (e.g., how patterns of drinking change with increasing age), nor can they fully resolve issues of causal order (e.g., whether unemployment causes drinking problems/impaired mental health or whether drinking problems/impaired mental health causes unemployment).

Nonetheless, repeated cross-sectional surveys are especially adept at *identifying* and *measuring* population change (e.g., changes in the percentage of the population affected by impairments or disabilities caused by alcohol and other drug use and mental difficulties). In comparison to longitudinal follow-up designs, the advantages of repeated cross-sectional studies is that each survey takes into account population change and that estimates combine effects of changing values and changing populations, and therefore provide an efficient estimates of net population change.

2. METHOD

2.1 Sampling Designs

The series of data described in this report are based on **26 repeated cross-sectional surveys** conducted during a 35-year period between the years **1977** and **2011** and targeting a population of noninstitutionalized Ontarians aged 18 and older.[7] To capture this target population, we employed a survey population frame of Ontario telephone numbers and their adult household members.

This surveillance program was initiated and supported by the Addiction Research Foundation (ARF) and fielded from 1977 through 1998, and continued by the Centre for Addiction and Mental Health (CAMH) since 1999 (see **Table 2.1.1**).[8] These data – which amalgamate previous monitoring research, including the *Ontario Adult Drug Use* series (1977–1994) (Adlaf, Ivis, & Smart, 1994) and the *Ontario Alcohol and Other Drug Opinion Survey* series (1992–1995) (Ialomiteanu & Bondy, 1997) – represent the **longest** and **most comprehensive** surveillance program of adult drug use in Canada.[9]

2.1.1 Sampling Designs, 1977–1995

As seen in **Table 2.1.1**, the five modified-probability (a stratified, three-stage area sample)[10] periodic surveys conducted between **1977** and **1989** employed face-to-face, personal-visit interviews administered by Ian Sone and Associates (1977) and Gallup Canada (1982–1989).

In contrast, the 21 surveys conducted annually between **1991** and **2011** employed **computer assisted telephone interviewing** (CATI) (see textbox, pg 13). Using random-digit-dialling selection (RDD), these surveys employed a **stratified two-stage** (telephone number; household respondent) **probability selection** of telephone numbers and were administered at the CATI facility at York University's Institute for Social Research (ISR).[11]

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[7] The target population for all surveys includes noninstitutionalized adults aged 18 and older residing in Ontario; however, the frame population varied from geo-based (1977 through 1989) to telephone number elements (1991 onward).

[8] In 1998, the Government of Ontario amalgamated the ARF with three other substance abuse and mental health organizations into the newly formed *CAMH*, a full affiliate of the University of Toronto and a Pan American Health Organization/ World Health Organization Collaborating Centre.

[9] Each cycle of the *CAMH Monitor* procedures and interviews was approved by the *CAMH* Research Ethics Board and the CATI instrument and data collection procedures related to ISRs contractual involvement were also approved by the York University REB.

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[10] Although such designs typically result in a sample with "representative" characteristics, these five surveys do not technically qualify for a *full probability* designation because (1) respondents within households were not randomly selected (in all households, the youngest male aged 18 and older was interviewed until the quota was filled), and (2) quota sampling was employed in rural areas.

[11] ISR, which operates a fully-supervised, centralized CATI laboratory with 75 workstations, was responsible for generating the sampling frame and drawing the sample; pretesting and deploying the CATI; developing the sampling weights; and preparing the data and dataset. The *CAMH Monitor* research team was responsible for the overall direction of the survey; the post-collection development, selection and coordination of interview content; post-collection data preparation (e.g., creation of derived variables and post-stratified weighting adjustments); building the multi-cycle merged dataset; and all surveillance data analysis and interpretation.

2.1.2 The *CAMH Monitor* Series, 1996–2011

In 1996, general population survey research at the Addiction Research Foundation was amalgamated into the *Ontario Drug Monitor* (ODM). To maintain comparability to earlier surveys, the ODM was designed to replicate many of the features of previous surveys. The major change was a **transition to a continuously fielded CATI** similar to the US NHANES survey (Centers for Disease Control and Prevention, 2011). In 1999, this development continued, and the expanded survey introduced modules of health and mental health indicators to better capture the wider institutional work of CAMH. To more formally recognize this wider scope, the survey was rebranded the *CAMH Monitor* (*CM*).[12]

There are three major differences between the current *CAMH Monitor* and earlier surveys:

1. The *CM* is based on the **annual cumulation of four quarterly rolling samples** (versus a typical two weeks to a month periodic fieldwork in earlier cycles). Such "rolling" or continuous interviewing surveys have several advantages over periodic fieldwork including the following:

- Greater capacity to detect seasonal and secular trends;
- Greater capacity to provide timely data;[13]
- Ability to accumulate rare populations across time (Kalton, 2009; Kish, 1999);
- Multiple repeated samples lead to better statistical estimation (Kish, 1965);
- Reduction of administration costs by better equalizing interviewer workload across time;
- Potential for near immediate fielding new material and evaluating changes in

programs, policies and legislation, and for assessing potential drug-related outbreaks.

2. The *CM* is **regionally stratified with equal allocation** of respondents within each of the six regional areas (versus proportional allocation employed in earlier cycles). Thus, the sample is equally allocated among six regions according to telephone area codes: Toronto; Central West; Central East; West; East; and North (see **Table 2.4.1** for more details). As a result, the precision of estimates from areas such as Northern Ontario is improved compared with earlier surveys (Note, however, that this improvement comes at a cost to larger regions, such as Toronto, whose equally allocated sample size is reduced versus proportional allocation). As well, the potential for pooling or cumulating interview data across time (i.e., samples) for regional or rare subgroup analyses is greatly enhanced (see, for example, Chapter 8).

3. The *CM* **sample size was increased** from earlier cycles – now exceeding 3,000 per year. Between 1996 and 2011, the annual sample size varied from 2,005 to 3,039 respondents.[14]

The *CAMH Monitor* Sample Design

The *CAMH Monitor* **target population** – the intended population about which we wish to make inferences to – is *noninstitutionalized adults aged 18 and older residing in Ontario during calendar year 2011* (*N=9,460,369*). To represent this target population, we employ a **sample (or frame) population** – the population that has an actual chance of being selected – based on telephone numbers and the respective adult household members residing in Ontario during 2011 and who were capable of completing the interview in English. Thus, excluded from selection are adults that are phoneless, those who are institutionalized, and those who are non-English speakers.

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[12] The *CAMH Monitor* is supported by the Ontario Ministry of Health and Long term Care (MOHLTC) and supplemented by investigator- and organization-initiated and extramural research activities.

[13] Because changes to the CATI can be made within days, if not hours, emerging issues can be quickly fielded.

[14] Beginning in 2010, the target sample size was increased to 3,000 respondents. Thus, compared to most similar national surveys, the CM's Ontario sample often exceeds the Ontario component from national surveys.

The *CAMH Monitor* sample design employs a
stratified (by six regional area codes[15]) **two-stage** (telephone number; respondent) **list-assisted**[16] **RDD** rolling quarterly[17] probability
sampling procedure, interviewing Ontario
residents aged 18 and older, capable of
completing a telephone interview in English.
Each calendar year the four quarterly (or 12
monthly, for cycles before 2011) non-overlapping samples were cumulated to provide
a single annual dataset (Alexander, 2002; Kish,
1999).

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[15] See **Table 2.4.1** for area code-region designations. In
instances where area codes overlapped multiple regional
strata, postal codes and other sources were used to
generate non-overlapping regional strata.

[16] Between 1991 and 1999, the stage 1 sampling frame
consisted of landline telephone numbers only. In 2000, the
frame was expanded to a list-assisted RDD, including the
possible selection of cell/wireless/mobile phones, unlisted
and newly listed or connected numbers. Although the
movement away from exclusive landline selection loosens
the notion of "household," we contend that this revision
improves our sample.

[17] In 2011, the field period was lengthened from 12
monthly to 4 quarterly samples to allow for a longer
period to re-contact unanswered calls.

The *CM2011* was administered by the Institute
for Social Research, York University, as were
all RDD telephone surveys since 1991.

The *CAMH Monitor* Sample Design

Stage of Selection	Primary Sampling Unit (PSU) / Secondary Sampling Unit (SSU)	Strata
1.	**Telephone number**; selected with equal probability and without replacement for each quarterly sample using list-assisted RDD rolling sampling	Six area code based regions; equally allocated
2.	**Respondent** aged 18+, selected using last birthday method	None

Building the List-Assisted Frame

Since CM2000, the sampling frame has been
built using 10-digit telephone numbers in
Ontario consisting of (1) an *area code*, (2) a
central office code, exchange or prefix (the first
three digits of the telephone number) and (3) a
suffix or bank (the last four digits of the
telephone number).

A list of telephone numbers in Ontario can be
generated from CD-ROM versions of telephone
books and other commercially available lists.
Telephone numbers from these sources, as well
as telephone numbers on either side of selected
listed numbers are included in the sampling
frame. For example, if the selected number 416-651-8513 is published in a directory then all
numbers from 416-651-8510 through 416-651-8519 are added to the sampling frame *even if
they are cell phone numbers, unlisted or newly
connected or listed numbers* (unless they are
known *not-in-service* numbers). A computer
then generates a random (i.e., EPSEM) sample
of telephone numbers from this list from which
each quarterly/monthly sample is drawn.
Because **unlisted numbers, cell phone
numbers and newly connected or published
numbers** are interspersed among published
numbers, this strategy provides a superior

sample than one based on listed landline numbers alone.[18]

Sample Selection

Stage 1 - Telephone number selection (PSU – primary sampling unit): Within each of the six area code regional strata, *each quarter* a random sample of 10-digit telephone numbers (i.e., area code – exchange – suffix) was selected with equal probability (EPSEM) and without replacement (WOR) from the list-assisted frame.

Stage 2 – Respondent selection (SSU – secondary sampling unit):
Within the household of selected telephone numbers, one respondent age 18 or older who could complete the interview in English[19] was subsampled according to the *last-birthday method* of selecting within-household members (Binson, Canchola, & Catania, 2000; Rizzo, Brick, & Park, 2004).[20] A minimum of 12 callbacks were placed to unanswered numbers and **refusal conversion attempts** were made with all respondents who refused to participate on the first contact in a final attempt to convert

their initial refusal to participation.[21] (Refusal conversion attempts recovered 19% of initial refusals.)

To increase the precision of estimates within different areas of the province, and thus improve any regional analyses, the sample was equally allocated among six strata derived from adjacent telephone area codes, thus resulting in a **disproportional-to-population allocation** (see Appendix A, **Table A1**).[22]

To help maximize the response rate, beginning in January 2009, all selected telephone subscribers were mailed (addresses retrieved from reverse directories) an **advance or prenotification letter** describing the history, purpose and importance of the survey and that they would be phoned in the near future and asked to participate in the survey.

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[18] Including cell phones numbers should improve the sample quality given the increased coverage and the recent research suggesting that exclusive landline surveys underestimate several health behaviours including binge drinking and smoking (Blumberg, Luke, & Cynamon, 2006). More recently, Voigt et al (2011) in their description of select national US surveys similarly found elevated prevalences of current smoking and alcohol use among cell-only users than landline users.

[19] With the introduction of the RDD series in 1991, both English and French CATIs were available to all respondents. However, we found that most Francophone respondents preferred to complete the English interview. Given this preference, in 1998 the CATI became exclusively English.

[20] Such methods are frequently employed because there is a desire to employ unobtrusive strategies needed to draw a probability sample (e.g., a full listing of all household residents) without depressing response rates. The potential limitation of such methods is that if the month/day of a birthday is correlated with the survey variables there is potential for sample bias (Groves et al., 2009).

[21] These refusal conversion attempts are conducted by the most experienced interviewers. Respondents who refuse by requesting to be put on the 'do-not-call list' (even though researchers are exempt from this list) or are distressed about the request are not recontacted.

[22] Earlier proportional stratified designs were problematic because the region often displaying elevated indicators (i.e., Northern Ontario) also had one of the smallest sample sizes due to their population share (Although not the smallest region, the Northern samples for the 12 cycles between 1991 and 2011 ranged from 309 to 602; mean=426, median=401). Consequently, although the North displayed elevated indicators, especially for alcohol, such differences did not reach our level of statistical discernibility and we were statistically unable to report such findings despite their potential public health importance.

Table 2.1.1: ARF/ CAMH - Ontario Adult Population Survey Program, 1977-2011

Year	Mode of Interview	Survey Organization	Sample Design	Sample (N) Date	RR $deff$	Standard Error Calculation Model	Source
1977 (1)	Face-to-face	Gallup	**Area-based modified-probability design**: The sample design incorporated stratification by six community size groups, based on the most recent census data: cities of 500,000 population and over; those between 100,000 and 500,000; 30,000 to 100,000; 10,000 to 30,000; 1,000 to 10,000, and rural farm and rural non-farm areas. The population was arrayed in geographic order, by census enumeration areas. Enumeration areas, on the average, contain about 500 to 1,000 people. **Stage 1**: Up to 105 enumeration areas were selected randomly from this array. Within urban centres, a random block sampling procedure was used to select starting points for interviewers. **Stage 2**: The interviewer was provided with a map of the enumeration area, showing the location of the starting point and was required to follow a specified route in the selection of households. **Stage 3**: Within the household, the youngest male, 18 years and over at home at the time of the interview, was surveyed. If there is no male available, or when the male quota was filled, the youngest available female, 18 years and over, was interviewed. The selection of rural and rural non-farm interviewing locations followed the sample design established for the urban centres in terms of geographic dispersion and random selection of enumeration areas. Because of the low population density and wide dispersion of households, the random block sampling procedure was replaced by quota sampling based on sex and age. Sampling weights for the 1977 through 1989 surveys employed post-stratification adjustments according to the gender and age distribution according to the most recent census year.	N=1,059 Periodic: June 16-18	NA		(Smart & Goodstadt, 1977)
1982 (2)	Face-to-face	Gallup		N=1,040 Periodic: Feb. 22-28	NA		(Smart & Adlaf, 1982)
1984 (3)	Face-to-face	Gallup		N=1,050 Periodic: Feb. 27- March 3	NA		(Smart & Adlaf, 1984)
1987 (4)	Face-to-face	Gallup		N=1,084 Periodic: Jan. 8-23	NA		(Smart & Adlaf, 1987)
1989 (5)	Face-to-face	Gallup		N=1,101 Periodic: Feb. 11 - March 4	NA		(Adlaf & Smart, 1989)
1991 (6)	Telephone	ISR	**Full-probability landline RDD**: The survey used random-digit-dialing (RDD) techniques through computer assisted telephone interviewing (CATI) methods. The design employed *single-strata, two-stage probability RDD survey* fielded during a 2-3 month period. **Stage 1**: From a sampling frame of all active area codes and exchanges in Ontario provided by the ATT Long Lines Tape, a random sample of 10-digit telephone numbers was selected with equal probability. **Stage 2:** Within selected telephone households, one respondent was selected according to the household member with the most recent birthday. A minimum of 12 callbacks were made to each nonresponding household, and all households who refused to participate were re-contacted in order to secure participation. Sampling weights were a function of the number of household members.	N=1,047 Periodic: Feb 20- March 18	RR=67% $deff$=1.14	1 SE strata; 1047 SECU; 1046 design df	(Adlaf et al., 1991)
1992 (7)	Telephone	ISR		N=1,058 Periodic: June 14- Aug 20	RR=63% $deff$ =1.19	1 SE strata; 1058 SECU; 1057 design df	(Ferris, Templeton, & Wong, 1994)
1993 (8)	Telephone	ISR		N=1,034 Periodic: April 19- May 24	RR=65% $deff$ =1.10	1 SE strata; 1034 SECU; 1033 design df	(Bondy, 1994)

Year	Mode of Interview	Survey Organization	Sample Design	Sample (N) Date	RR *deff*	Standard Error Calculation Model	Source
1994 (9)	Telephone	ISR		N=2,022 Periodic: March 1-May 5	RR=63% *deff* =1.16	1 SE strata; 2022 SECU; 2021 design df	(Adlaf et al., 1994; Paglia, 1995)
1995 (10)	Telephone	ISR		N=994 Periodic: March 28-May 9	RR=62% *deff* =1.16	1 SE strata; 994 SECU; 993 design df	(Anglin, 1995)
1996 (11)	Telephone	ISR	***Ontario Drug Monitor* (ODM)** **Full-probability monthly landline RDD**: The survey used RDD techniques through CATI methods. The design employed a rolling monthly *two-stage probability RDD survey* stratified by six geographical/area-code regions with sample sizes allocated equally (disproportionally). **Stage 1**: From a sampling frame of all active area codes and exchanges in Ontario provided by the ATT Long Lines Tape, within each regional stratum a random sample of telephone numbers was selected with equal probability. **Stage 2**: Within selected telephone households, one respondent was selected according to the most recent birthday of household members. A minimum of 12 call-backs were made to each non-responding household, and all households who refused to participate were re-contacted in order to secure participation. Twelve monthly samples were cumulated to provide annual estimates. Sampling weights were a function of the number of household members, regional probabilities and month.	N=2,721 **12m rolling:** April 8 - Jan 8	RR=64%	6 SE strata; 2721 SECU; 2715 design df	(Adlaf, Ivis, Bondy et al., 1997; Adlaf, Ivis, Ialomiteanu, Walsh, & Bondy, 1997)
1997 (12)	Telephone	ISR		N=2,776 12m rolling: Jan 14 - Dec 21	RR=67%	6 SE strata; 2776 SECU; 2770 design df	(Adlaf, Ivis, & Ialomiteanu, 1998; Adlaf, Ivis, Ialomiteanu et al., 1998)
1998 (13)	Telephone	ISR		N=2,509 12m rolling: Jan 21- Dec 20	RR=69%	6 SE strata; 2509 SECU; 2503 design df	(Adlaf, Paglia, & Ialomiteanu, 1999; Adlaf, Paglia, Ivis, & Ialomiteanu, 1999)
1999 (14)	Telephone	ISR	***CAMH Monitor* (CM)** **Full-probability monthly RDD**: The survey used RDD techniques through CATI methods. The design employed a rolling monthly *two-stage probability list-assisted RDD survey stratified by six geographical/area-code regions* with sample sizes allocated equally (disproportionally).	N=2,436 12m rolling: Jan 20- Dec 21	RR=69%	6 SE strata; 2436 SECU; 2430 design df	(Adlaf & Ialomiteanu, 2001; Adlaf, Ialomiteanu, & Paglia, 2000)
2000 (15)	Telephone	ISR	A list of 10-digit telephone numbers in Ontario can be constructed from CD-ROM versions of telephone books and the other commercially available lists of telephone numbers. Entries from these sources, as well as telephone numbers between or on either side of listed numbers are included in the sampling frame. Since unlisted numbers, cell phone	N=2,406 12m rolling: Jan 20- Dec 21	RR=61%	6 SE strata; 2406 SECU; 2400 design df	(Adlaf & Ialomiteanu, 2001; Adlaf, Ialomiteanu, & Paglia, 2001)

Year	Mode of Interview	Survey Organiza tion	Sample Design	Sample (N) Date	RR _deff_	Standard Error Calculation Model	Source
2001 (16)	Telephone	ISR	numbers and newly published numbers are interspersed among published numbers, this strategy provides a superior sample than one based on listed numbers alone. **Stage 1**: Within each of the six regional strata, each month a random sample of telephone numbers was selected with equal probability. **Stage 2**: Within selected telephone households, one respondent age 18 or older who could complete the interview in English was selected according to the "last birthday" method of household members. A minimum of 12 call-backs were placed to unanswered numbers and most households who refused to participate on the first contact were re-contacted in order to secure participation Twelve monthly samples were cumulated to provide annual estimates. Sampling weights were a function of the number of household members, regional probabilities and month. In 2000, the stage one selection was revised to a list-assisted RDD selection, with a sampling frame including landline, cell, unlisted and unpublished telephone numbers.. In 2006, the target sample was reduced to 2,000 completions.	N= 2,627 12m rolling: Jan 25- Dec 20	RR=61%	6 SE strata; 2627 SECU; 2621 design df	(Adlaf & Ialomiteanu, 2002a, 2002b)
2002 (17)	Telephone	ISR		N= 2,421 12m rolling: Jan 10- Dec 22	RR=58%	6 SE strata; 2421 SECU; 2415 design df	(Ialomiteanu & Adlaf, 2003)
2003 (18)	Telephone	ISR		N= 2,411 12m rolling: Jan 10- Dec 30	RR=58%	6 SE strata; 2411 SECU; 2405 design df	(Ialomiteanu & Adlaf, 2004)
2004 (19)	Telephone	ISR		N= 2,611 12m rolling: Jan 03- Dec 30	RR=59%	6 SE strata; 2611 SECU; 2605 design df	(Ialomiteanu & Adlaf, 2005)
2005 (20)	Telephone	ISR		N= 2,445 12m rolling: Jan 10- Dec 22	RR=61%	6 SE strata; 2445 SECU; 2439 design df	(Adlaf, Ialomiteanu, & Rehm, 2008; Ialomiteanu & Adlaf, 2006)
2006 (21)	Telephone	ISR		N= 2,016 12m rolling: Jan 03- Dec 30	RR=61%	6 SE strata; 2016 SECU; 2010 design df	(Ialomiteanu & Adlaf, 2007)
2007 (22)	Telephone	ISR		N= 2,005 12m rolling: Jan 02- Dec 30	RR=53%	6 SE strata; 2005 SECU; 1999 design df	(Ialomiteanu & Adlaf, 2008; Ialomiteanu, Adlaf, Mann, & Rehm, 2009)

Year	Mode of Interview	Survey Organiza tion	Sample Design	Sample (N) Date	RR *deff*	Standard Error Calculation Model	Source
2008 (23)	Telephone	ISR		N= 2,024 12m rolling: Jan 05- Dec 28	RR=55%	6 SE strata; 2024 SECU; 2018 design df	(Ialomiteanu & Adlaf, 2009)
2009 (24)	Telephone	ISR		N=2,037 12m rolling: Jan 2- Dec 30	RR=57%	6 SE strata; 2037 SECU 2031 design df	(Ialomiteanu & Adlaf, 2010; Ialomiteanu, Adlaf, Mann, & Rehm, 2011)
2010 (25)	Telephone	ISR	In 2010, the target sample was increased to 3,000 completions.	N=3,030 12m rolling: Jan 2- Dec 28	RR=51%	6 SE strata; 3030 SECU 3024 design df	(Ialomiteanu & Adlaf, 2011)
2011 (26)	Telephone	ISR		N=3,039 **4Q rolling:** Jan 4- Dec 20	RR=51%	6 SE strata; 3039 SECU 3033 design df	(Ialomiteanu & Adlaf, 2012)

Notes: **ARF**, Addiction Research Foundation; ISR= Institute for Social Research, York University, **RR** = unweighted unit response rate; *deff* = average design effect; **SE** = standard error; **SECU**=Standard Error Calculation Unit (respondents).

2.2 Computer Assisted Telephone Interviewing (CATI)

Two split-ballot interview panels are employed in the *CAMH Monitor*, both of which include **core items** – questions asked among all respondents and which represent the majority of the interview – and **panel items** – questions asked among a single panel only. The CATI system randomizes respondents to one of two panels, Panel A or B, both of which were fielded concurrently throughout the 2011 calendar year.[23]

To reduce the response load and burden while maximizing questionnaire content and flexibility, the *CAMH Monitor* employs a **matrix interview design**, whereby within each panel, random subsets of respondents are asked various modules of questions, while other respondents are concurrently asked modules of alternative questions.

The major **advantage** of this matrix approach is that the interview content can be maximized without increasing the response load or burden of a single interview. In addition, the CATI system's ability to randomize respondents between different question versions and formats readily allows for methodological studies on question wording, order, etc.[24] A **disadvantage**, however, is that sample sizes for split sample analysis are reduced (unless imputation methods are used to restore the sample size). Some discussion of matrix sampling can be found in the literature (Heeringa et al., 2010; Thomas, Raghunathan, Schenker, Katzoff, & Johnson, 2006).

CATI Systems

CATI systems are one of the most widely used of the computer assisted interviewing technologies. Interviewer-administered CATI systems function to manage aspects of the interview process, including such functions as editing, coding and data collection. Operating from a centralized facility, CATI systems employ computerized instruments to manage the interaction between the interviewer and respondent. The process can be described as follows.

Interview questions, pre-coded and open-ended responses, and related interviewer instructions are keyed and saved electronically. The CATI system stores this information and then the presented order of questions and any question branching instructions (i.e., item skipping) is programmed. This programming automates the interview process and ensures that only relevant questions are asked of each respondent.

Once the system is ready, telephone numbers (previously stored) are randomly selected and dialed by the system. In most software, the calling schedule is also automated to maximize respondent contact. After the interviewer establishes contact and eligibility of the respondent, the interviewer begins the interview. One-by-one, each question appears on the interviewer's computer screen. The interviewer then reads the question over the telephone headset to the respondent and waits for a response. The respondent's answer is entered directly into the system by the interviewer, thus automatically capturing interview data and eliminating the need for a separate stage of data entry, and, in turn, provides quick access to a final data set.

Questions automatically route to the next relevant question depending on the respondent's prior answers (e.g., past year drinking) or based on their demographic characteristics (e.g., sex, age) or any prior questions.

See (Biemer & Lyberg, 2003; Caitlin & Ingram, 1988; Couper & Nicholls II, 1998) for reviews of CATI systems.

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[23] Beginning in CM2010, the two CATI panels (A and B) were allocated to produce samples of 1,000 and 2,000 completions, respectively. Panel A is allocated to core and tobacco content (a buy-in sample sponsored by the Ontario Tobacco Research Unit), while the larger Panel B is allocated to general surveillance. Prior to 2010, both panels were allocated near equal samples of 1,000 and were fielded consecutively.

[24] As well, potential questions can be assessed and tested on a subsample prior to live field interviewing.

To assess **usability** – how well the instrument works in practice – full interviews and all new items in the *CM2011* were field pretested with a minimum of 25 respondents. Pre-field assessments also included interviewer debriefing and expert questionnaire review provided by ISR and CAMH staff.

In 2011, the CATI included a combined total of 217 questions dispersed between the two panels, with a maximum of 129 and 150 items in Panels A and B, respectively. Interviews, which averaged **23 minutes** (range 6–71 min.; median 22 min.; 90% of interviews completed within 30 min.), were conducted by 60 ISR interviewers, many with considerable CATI experience, including prior *CAMH Monitor* interviewing. Interviews were distributed across a six-day week (Fridays excluded) and time of day.[25]

2.3 Data Quality: Participation, Sample Characteristics and Representativeness

Participation. Of the 8,277 telephone numbers randomly dialed during the four quarters of interviewing in 2011, 5,677 were known to be, or estimated to be, eligible,[26] of which **3,039 respondents participated between January 4 and December 20, 2011** (1,040 and 1,999 in Panels A and B, respectively)**.** Participating respondents represent a unit **response rate of 51%** (quarterly response rates varied from 50% to 52%; regional rates were 44% for Toronto, 46% for the Central East, 51% for the Central West, 53% for the East, 56% for the West, and

59% for the North).[27] The weighted response rate – considered a better indicator of potential response bias in the presence of unequal probabilities of selection – is similar to the unweighted rate.[28]

Although caution is always needed when comparing response rates across surveys (due to differing calculation methods) the following comparisons involve similar designs and methods. The *CAMH Monitor* unit response rates are marginally higher than recent Canadian alcohol and drug use RDD surveys, including the 2004 *Canadian Addiction Survey* (response rate = 47%) (Adlaf, Begin, & Sawka, 2005) and the more recent 2011 *Canadian Alcohol and Drug Use Monitor Survey* (Health Canada, 2010), with a response rate of 45%.

The *CAMH Monitor* response rate fairs well by international standards. For example, the *Behavioral Risk Factor Surveillance System* (BRFSS), the largest health risk RDD survey coordinated by the Centers for Disease Control, obtained a median state response rate of 53% in 2009.[29] The decline in response rates in the past decade is common among many respected large-scale surveys. For example, the University of Michigan's *Survey of Consumer Attitudes*, had a 12 percentage point decline in response rates from 60% in 1996 to 48% in 2003 (Curtin, Presser, & Singer, 2005).

The *CAMH Monitor* has also experienced a downtrend in response rates similar to other studies. Unit response rates for the 20 surveys conducted between 1991 and 2010 vary from

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[25] Interviews were conducted from 10 AM to 5 PM and 6 PM to 9:45 PM, Monday through Thursday and from 10 AM to 6 PM on Saturday and 2 PM to 9:45 PM on Sunday. Two-thirds (65%) of interviews were completed during the evening, 25% during the afternoon and 10% during the morning.

[26] Whether eligible respondents reside in noncontacted households is unknown, but is estimated based on the eligible proportion of respondents derived among contacted households. This issue is not unimportant to telephone surveys because ignoring unknown eligibles overstates the response rate (because the denominator is deflated). All response rate calculations are based on unweighted data.

[27] We employ AAPORs response rate calculation #3, which includes an estimate of unknown eligibles (see Standard Definitions at http://www.AAPOR.org). AAPOR RR3= $I / ((I+P) + (R+NC+O) + e(UH + UO))$, where I=completions; P=partial completions; R=refusals/breakoffs; NC=non-contacts; O=other; e=estimated proportion of cases of unknown eligibility that are eligible; UH=unknown if household; UO=unknown other.

[28] The weighted response rate is based on the sum of the product of the regional weighted distribution and the unweighted response rate: *Toronto* $(.2217 \times .44)$ + *Central East* $(.267 \times .46)$ + *Central West* $(.1954 \times .51)$ + *West* $(.1252 \times .56)$ + *East* $(.1328 \times .53)$ + *North* $(.0679 \times .59)$ = 49.6%.

[29] ftp//ftp.cdc.gov/pub/Data/Brfss/2009_Summary_Data_Quality_Report.pdf. Accessed March 5, 2011.

51% to 69% with a mean of 62% and median of 61%. Moreover, there is evidence that this variation is moving downward. An analysis regressing response rates (in proportions) on year showed a small, but discernible linear annual decline in response rates of 2.5 percentage points with each survey year (b_{year} = –.025, p<.001). Yet, despite the downtrend in response rates, recent evidence suggests that this decline has not translated into a corresponding decline in sample representativeness (Chang & Krosnick, 2009; Curtin et al., 2005; Keeter, Miller, Kohut, Groves, & Presser, 2000).

We cannot ignore the possible link between nonresponse and nonresponse bias. Although the response rate is a key marker of data quality, the caveat is that we rarely know to what extent the total response rate represents nonresponse bias. Rather, the magnitude of the response rate is best viewed as indicating the *potential*, not presence of nonresponse bias (Biemer & Lyberg, 2003; R.M. Groves et al., 2004; Groves & Peytcheva, 2008).

Another interpretative challenge with response rates is the difficulty establishing an accepted threshold – some argue it is dangerous to do so (Lohr, 1999)– because of the wide variation in their calculation, and varying definitions of components of the numerator and denominator. Moreover, defining an acceptable cutoff is futile without knowledge of the difference between respondents and nonrespondents (which is rarely known).

Representativeness. The *CM2011* sample represents noninstitutionalized residents aged 18 and older residing in Ontario during calendar year 2011 (a population of approximately 9,460,369 adults).

To evaluate the representativeness of our sample, we compared characteristics of *CM2011* respondents aged 18 and older with comparable 2006 Ontario Census data (Statistics Canada, 2008).[30]

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[30] CM2011 respondent characteristics were derived using final post-adjusted weights. Discernible differences were determined if the Census figure fell outside the *CM2011* confidence interval. At the time of this writing, the 2011 Census data were not fully accessible.

Table 2.3.1
Overview of *CAMH Monitor* 2011 Sample

CAMH Monitor 2011 Sample
▪ Target population – non-institutionalized Ontario adults aged 18 and older
▪ 8,277 randomly selected telephone numbers (including landline, cell/mobile, unlisted and newly-published), of which 5,677 were estimated to be eligible
▪ **3,039** respondents aged 18 and older participated, representing a **51%** response rate
▪ Computer assisted telephone interviews (CATI) were conducted in English throughout the 2011 calendar year (January 4 – December 20), and averaged **23** minutes in length (90% of interviews completed within 30 minutes)
▪ Sample represents **9,460,369** Ontarians aged 18 and older; each respondent represents 3,113 Ontario adults.
▪ **48%** men (*n*=1212); **52%** women (*n*=1827) ▪ Mean age of 46.3 years (range 18–97 years) ▪ Sample equally allocated within six area code regions
▪ Compared with Ontario residents from the 2006 Census, the *CM2011* respondents were *similar* for gender, age and region; the CM2011 *underrepresented* those never married, widowed, divorced or separated, and those not having completed high school; and *overrepresented* married, and university graduated respondents.

Note: at the time of this writing, the 2011 Census data were not fully accessible.

Of the five comparisons three – gender, age, region – showed no discernible differences between the *CM2011* and Census distributions, indicating that the sample with its post-adjusted weights calibrate well to the population for these characteristics. Specifically, there were no discernible differences for key socio-demographic factors such as gender or age. Comparisons for marital status, education and region were available only for *those aged 20 and older*. For these three available comparisons, there were differences for marital status and education (region, represented by Toronto vs. non-Toronto residence, showed no difference).

Compared with Ontario figures from the 2006 Census, the *CM2011* sample **under-represented** those never married (20.0% vs. 25.4%), those widowed, divorced or separated (11.0% vs. 17.9%), and those who did not complete high school (29.0% vs. 44.6%). Correspondingly, the *CM2011* sample **over-represented** married (69.0% vs. 56.6%) and respondents with a university degree (36.1% vs. 22.4%).[31] Information regarding selected sample characteristics is presented in **Appendix A**.

One of the measurable indicators of response quality is item "missingness" – the propensity to answer every relevant question. In this report, CM data are neither imputed nor adjusted for item missingness.

Further details describing the *CM2011* survey, including procedures, CATI items, and data quality reporting are available in a companion metadata technical document (Ialomiteanu & Adlaf, 2012) available in portable document format (pdf) at http://ww.camh.ca/en/research/news_and_publications/Pages/camh_monitor.aspx

2.4   Measures Used in this Report

Measuring the spectrum of alcohol and other drug use requires the collection of several related indicators. Some of the data required to estimate consumption are *prevalence*– what percentage of the population consumes a given drug, *frequency* – how often the drug is consumed, *quantity* – how much is consumed, and *concentration* – how potent is the substance. In this report, we limit our attention to a few of these factors. For alcohol consumption, we describe the prevalence, frequency and quantity; for other drug use, we describe the prevalence and, data permitting, frequency. To assess the harms of alcohol, tobacco, other drug use and impaired mental well-being, we also employ validated screeners assessing hazardous or harmful patterns of alcohol (AUDIT – Alcohol Use Disorders Identification Test), tobacco (HIS – Heaviness of Smoking Index)) and cannabis use (ASSIST–

CIS- Cannabis Involvement Score) and elevated psychological distress (GHQ – General Health Questionnaire) (see **Table 2.4.2**). Additional standardized measures include two mental health related items from the Health-Related Quality of Life scale (HRQoL–4).

Although questions and modules have been added, deleted or recurring over the lifecycle of this study, to ensure valid trend comparisons, drug use and mental health questions have remained similar across each of the available 26 surveys. In addition to internal comparability across time, a considerable number of surveillance items employed in the CM are drawn from standard survey practice (e.g., alcohol and other drug use question formats and wordings) as are the use of validated screeners currently being employed in other national settings. This comparability not only enhances the potential for cross-national and cross-provincial research, but is deemed a key dimension of data quality (Biemer & Lyberg, 2003).[32]

The demographic characteristics, drug use and mental health measures described in this report are outlined briefly in **Tables 2.4.1** and **2.4.2.**

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[31] This overrepresentation of respondents with degrees of higher learning is a long-standing feature of telephone samples (Trewin & Lee, 1988).

[32] The remaining six quality dimensions identified by Eurostat include the following: relevance, accuracy, timeliness, assessibility and clarity of information, coherence and completeness.

Table 2.4.1
Socio-Demographic/ Risk Factor Measures

Measure	Number of Categories and Category Type	
Gender	*2*	Men; Women
Age (in years)	5	18-29; 30-39; 40-49; 50-64; 65+
	4	18-29; 30-39; 40-49; 50+
Marital Status	4	Never married; married; living with partner; previously married (i.e. widowed, divorced or separated).
	3	Never married; married (including living as married); previously married (i.e. widowed, divorced or separated).
Region	6	**Design Strata** – based on adjacent regional area codes: Toronto (416, 647 area codes); Central West (705, 905, 289); Central East (519, 905, 289) ; West (519, 226); East (613); North (705, 807) (Also see Appendix A, Table A-1)
	7	**Public Health Region** – based on Ontario Ministry of Health 7 planning regions: Toronto; Central South; Central West; South West; Central East; East; North (Also see Appendix A, Table A-2)
	14	**Local Health Integration Networks (LHIN)** – based on 14 geographic areas of Ontario: Erie St. Clair; South West; Waterloo Wellington; Hamilton Niagara Haldimand Brant; Central West; Mississauga Halton; Toronto Central; Central; Central East; South East; Champlain; North Simcoe Muskoka; North East; and North West (see appended map in Chapter 8)
Highest Education	4	Not completed high school; completed high school; some college or university (inc. completed college); completed university degree (BA or higher)
Gross Annual Household Income ('000)	5	Less than $30K; $30-$49K; $50-$79K; $80K+; not stated

Table 2.4.2: Definition of Addiction and Mental Health Measures

Measure	Definition
ALCOHOL USE	
Drinking Status	Percentage assigned to one of three categories: *lifetime abstainers* (those never drinking alcohol in their lifetime); *former drinkers* (those drinking alcohol in lifetime, but not in past 12 months); and *current drinkers* (those reporting drinking alcohol in past 12 months) (26 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991–2011)
Past year Drinking	Percentage reporting drinking alcohol at least once during the 12 months before the survey (26 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991–2011).
Daily Drinking	Percentage reporting drinking at least one alcoholic drink everyday during the 12 months before the survey (26 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991–2011)
Five or More Drinks (Binge Drinking)	Percentage reporting drinking five or more alcoholic drinks on a single occasion on a weekly basis during the 12 months before the survey (24 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991, 1994–2011)
Number of Drinks Consumed in Past 12 Months	Estimated number of alcoholic drinks consumed in past 12 months is the product of the frequency of drinking during the past 12 months and the number of drinks typically consumed per occasion (20 cycles; Available 1992–2011)
Exceeding Low-Risk Drinking Guidelines	Percentage exceeding the Low-Risk Drinking Guidelines. Based on exceeding weekly and daily sex specific limits (men: no more than 14 standard drinks per week; women: no more than 9 standard drinks per week). Also, alcohol intake on any one day should not exceed 2 standard drinks. (8 cycles; Available 2003–2009; 2011)
Hazardous or Harmful Drinking (AUDIT)	Percentage scoring 8+ on the AUDIT screener. Based on 10 items assessing alcohol intake and past 12 month alcohol-related harms and hazards. See Table 3.6.1 for items. (14 cycles; Available 1998–2011)
CIGARETTE USE	
Smoking Status	Percentage assigned to one of five categories: *never smokers* (never smoked 100+ cigarettes in lifetime); *former non-daily* (never smoked daily and did not smoke in the past 30 days); *former daily* (smoked daily but did not smoke in the past 30 days); *non-daily* (never smoked daily but smoked occasionally in the past 30 days); *daily smoker* (smoked daily and smoked in the past 30 days) (16 cycles; Available 1996–2011)
Current Smoking	Percentage reporting: 1) smoking daily or occasionally, 2) having smoked over 100 cigarettes in their lifetime, and 3) having smoked within the past 30 days (20 cycles; Available 1991–2011)
Daily Smoking	Percentage reporting: (1) smoking at least one cigarette daily, 2) having smoked over 100 cigarettes in their lifetime, and 3) having smoked within the past 30 days (16 cycles; Available 1996–2011)
High Nicotine Dependence (*Heaviness of Smoking Index (HSI)*)	Percentage of daily smokers who score 5-6 (high dependence) on the 2-item HSI. Based on (1) time to first cigarette in morning and (2) number cigarettes smoked per day. (16 cycles; Available 1996–2011)
CANNABIS USE	
Lifetime Cannabis Use	Percentage reporting the use of marijuana or hashish at least once in their lifetime (24 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991–2011, excl. 1993, 1995)
Past year Cannabis Use	Percentage reporting the use of marijuana or hashish at least once during the 12 months before the survey (24 cycles; Available 1977, 1982, 1984, 1987, 1989, 1991–2011, excl. 1993, 1995)

Measure	Definition
Hazardous or Harmful Cannabis Use (ASSIST–CIS)	Percentage scoring 4+ on the Cannabis Involvement Score on the ASSIST screener. Based on 6 items assessing cannabis consumption and past 3 month cannabis-related problems. See Table 5.1.5 for items (8 cycles; Available 2004–2011; Panel B subsample)
OTHER DRUG USE	
Lifetime Cocaine Use	Percentage reporting the use of cocaine at least once in their lifetime (Available 1984, 1987, 1989, 1991, every even year since 1994 until 2010; 2011; Panel B subsample)
Past year Cocaine Use	Percentage reporting the use of cocaine at least once during the 12 months before the survey (Available 1984, 1987, 1989, 1991, every even year since 1994 until 2010; 2011; Panel b subsample)
Medical and Non-medical Use of Prescription Opioid Pain Relievers	Percentage reporting medical and non-medical use of prescription opioid pain relievers at least once during the 12 months before the survey (2 cycles; Available 2010–2011; Panel B subsample)
DRUGS AND DRIVING	
Driving after Drinking	Percentage of respondents with a valid driver's licence reporting driving within one hour of consuming two or more drinks of alcohol during the past 12 months (16 cycles; Available 1996–2011)
Driving after Cannabis Use	Percentage of respondents with a valid driver's licence reporting driving within two hours of consuming cannabis during the past 12 months (10 cycles; Available 2002–2011)
Riding with a driver who had been drinking	Percentage reporting being a passenger in a motor vehicle with a driver who had two or more drinks of alcohol during the previous hour, at least once during the past 12 months (5 cycles; Available 2006–2010)
Riding with a driver who had been using cannabis	Percentage reporting being a passenger in a motor vehicle with a driver who had used cannabis during the previous hour, at least once during the past 12 months (5 cycles; Available 2006–2010)
MENTAL HEALTH	
Elevated Psychological Distress (GHQ12)	Percentage reporting 3 of more of the 12 GHQ symptoms. The 12 items assess symptoms of anxiety, depression, and social functioning over the past few weeks. See Table 7.1.1 for items (12 cycles; Available 2000– 2011; Panel B subsample)
Use of Prescribed Antianxiety Medication	Percentage reporting the use of prescribed antianxiety medication at least once during the 12 months before the survey (11 cycles; Available 1997, 1999–2011, excl. 2000, 2005, 2007; Panel B subsample)
Use of Prescribed Antidepressant Medication	Percentage reporting the use of prescribed antidepressant medication at least once during the 12 months before the survey (11 cycles; Available 1997, 1999–2011, excl. 2000, 2005, 2007; Panel B subsample).
Health-Related Quality of Life (HRQoL)	Percentage reporting two mental-health related HRQoL items: *fair/poor mental health* (defined as self-ratings of *fair* or *poor* mental health); and *frequent mental distress days* (defined as reporting at least 14 or more days of unhealthy mental health during the past 30 days) (9 cycles; Available 2003–2011; Panel B subsample)

2.5 Data Weighting & Suppression

Data Weighting. For many good reasons, most notably the control of precision, most sample surveys do not select respondents at a probability matching their representation in the population. Consequently, such data require sample or case weights attached to each respondent to ensure that their share of the sample equals their share of the population (see **Appendix B).** The weights are based on the inverse of the product of (1) the probability of selecting a telephone number within a stratum; (2) the probability of selecting one respondent within the telephone household; and (3) post-stratified calibration to census data based on eight age-by-sex classes. In the *CM2011*, on average, each respondent represents or "stands in" for 3,113 Ontario adults.[33]

There are two key aspects to the statistical quality of survey estimates: *precision* – measured by the 95% lower and upper limits that define the confidence interval; and *stability* – measured by the ratio of the standard error to its estimate. **Design-based confidence intervals** indicate the probable error of a given survey estimate being correct while accommodating the sample design; thus, a ±1.9%, 95% CI with the maximum limits (48.1%, 51.9%) (based on a *CM* sample of 3,000 with a percentage estimate of 50%)[34] indicates that *with repeated sampling* using the same sampling plan, 95% of the sample CIs would contain the true, but unknown, population value. In essence, CIs provide a probability statement of how often we expect this interval to correctly capture the population value.

Confidence intervals, however, do not reflect total errors or accuracy, but reflect errors due to our surveying only a single sample of the total population. Errors as measured by **confidence intervals do not include non-sampling errors** such as question non-response, problems of respondent memory and recall, interviewer effects, underreporting of stigmatized behaviours (such as drug use and impaired mental health). Thus, the reader should always consider that the precision of an estimate, as indicated by the confidence interval, is not synonymous with total accuracy, but rather, is a component of it. Indeed, accuracy (also known as mean square error) is a function of both precision and bias; heuristically, *accuracy = precision + bias^2*.

The ratio of the standard error to its estimate, the **coefficient of variation**, (CV) (or relative standard error), is a measure of relative variability and is especially useful when comparing the precision of different measures based on different sample sizes and is also used to identify estimates with considerable statistical inaccuracy suggesting the need for possible data suppression (Kalton, 2009).[35]

Data Suppression. To assist readers and users in assessing the accuracy of *CM2011* estimates (Kalton, 2009), we **suppressed any estimate as statistically inaccurate** and potentially unusable if the coefficient of variation **exceeded 33.3** (a standard practice employed by national statistical agencies) or, regardless of the sample size, if the estimated percentage was **less than 1%**. Estimates replaced with an '†' indicate suppressed values; those adjacent to a dagger (†) should be interpreted with caution due to moderate sampling variability (i.e., 16.6>CV< 33.3).

Based on this CV suppression rule, estimates for the *CM2011* total sample are **reportable as low as 1.5% without suppression.** (Note that reportable percentage estimates for

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[33] Both relative (i.e., sample size scaled) and expansion (i.e., population scaled) weights employed in the *CM2011* are rescaled versions of one other. The **relative weights** are scaled to sum to the interviewed sample size (*n*=3039) and average 1.0 while ranging from .146 to 6.056. The **expansion weights**, are scaled to sum to the Ontario adult population (*N*=9,460,369), and with a mean of 3112.9, ranges from 455.1 to 18852.0.

[34] For percentages, 50% represents the maximum variance. Thus, CIs calculated on this value will provide the maximum confidence limits or width.

[35] An additional application of the CV is in assessing whether the use of sampling weights signals inefficiency in estimation (Korn & Graubard, 1999).

subpopulations, e.g., men, women, with smaller samples will have higher maximum suppression cut-off values.)

Complex Sample Estimation

Why do different sampling procedures affect the precision of sample estimates?

A key reason is that some sampling procedures (e.g., stratification and weighting) violate the assumption of independence, a necessary assumption for standard statistical estimation. The assumption of independence holds that the selection of one respondent must be independent of the selection of all other respondents. This assumption is typically violated in complex samples. The *CAMH Monitor*, for example, employs stratification by area code. Analytically, this improves the sample because now, we can ensure that (1) there are sufficient cases in the North for estimation, and (2) when we compare regions, each has a sufficient and near equal number of respondents.

This desirable design feature, however, causes the criterion of independence to be violated because although proportional allocation typically leads to increased precision, the CM employs disproportional stratification, resulting in unequal probabilities of selection and the need for analysis or case weights, both of which combine to deflate the precision of estimates (relative to a SRS) and effectively reducing the effective sample size.

We are left with an ironic trade-off: while the stratification improves the quality and fitness for use of estimates, the consequence of stratification introduces the need for statistical analyses to accommodate the violations introduced by the same stratification.

2.6 Complex Survey Analysis

Complex survey data do not conform to many estimating assumptions, including maximum likelihood, generalized linear and, most importantly, simple random sampling. Complex sampling methods employ procedures that influence the independence and selection probabilities of respondents. These procedures, such as stratification (resulting in unequal sampling fractions), clustering (not employed in the CM), weighting, and multistage selection, combine to **underestimate the variance (or error)** when simple random sampling (SRS) formulas – the default used in standard statistical systems – are used inappropriately. The consequence of applying SRS-based assumptions when estimating variance from complex sampling designs is that we are likely to understate the error, and thereby compute a narrower confidence interval than truly exists. In turn, we will also be more likely to find an inflated number of statistically discernible differences than actually exist (i.e., inflated false positive inferences).

The **design effect** (*deff)*, an indicator of **design efficiency**, measures the net combined influence of clustering, stratification, weighting and multistage selection. The *deff* has been defined as

"*the ratio of the variance of an estimator accounting for the sample design to the variance that would have been obtained if a SRS with same sample size had been employed*" (Kish, 1999), and alternatively,

" *a measure of the precision gained or lost by use of the complex design instead of an SRS*" (Lohr, 1999).

A *deff* of 1.0 indicates equal precision between a SRS and an equivalent alternative sample, while a *deff* of 1.56, for example, indicates that the variance of a given variable of a complex sample is 56% inflated relative to an equivalent SRS. A parallel statement is that the complex survey sample size for this example results in a loss of sample information, by reducing the actual sample by 56% to an effective sample

size (ESS) of 1,948 (i.e., 3039/1.56). Most variables in complex samples, however, tend to have *deff*s larger than 1.0, and variances and standard errors larger than an equivalent SRS.[36]

Although the average *deff* across variables differs from one sample design to another, ***deff*s are measures of variable variance**, and each variable will have a different *deff* within the same sample.

Given the potentially serious loss of sample information and precision, *why would complex surveys be considered at all?* The answer is simple: complex samples provide the highest precision for the lowest cost. Indeed, features of complex sampling – multistage selection, clustering, stratification and its related weights optimize the variance/cost ratio of the final design (Heeringa et al., 2010). Although the CM data does not employ clustering as a design element, it does involve stratification and its related unequal sampling fractions and consequent sampling weights, and multistage selection, all of which require accommodation to resolve the possible violations of most statistical models' assumptions.

In this context, one advantage of telephone surveys compared with other designs (e.g., clustered area designs), is that telephone surveys tend to produce lower *deff*s, often due to reduced or eliminated clustering, the selection of only one respondent per household, i.e., a final stage, non-clustered selection, and most RDD designs do not exceed two stages (Groves et al., 2009; Groves & Kahn, 1979).[37]

Our analyses have several features:

- All 2011 estimates (and estimates since 1996) are based on robust[38] methods implemented in Stata®'s *svy* suite of commands, which employ **pseudo-maximum likelihood estimation (PMLE)[39]** in estimating point estimates (e.g., percentages, totals, means) and **Taylor series linearization (TSL)**, a sandwich-type variance estimator, in estimating variances (e.g., standard errors, CIs) (StataCorp, 2010). In short, these methods use various strategies to accommodate the violations in data assumptions generated from the complex sample data. Design-based percentage point-estimates and their CIs were based on the *svy: tabulate* command (i.e., bivariate cross tabulations) and subgroup risk analyses were based on the *svy: logit* command. [40]
- Population estimates are provided for select estimates using Stata's *svy: total* command and expansion-scaled weights.
- For variance estimation, the *CAMH Monitor* design can be approximated by the

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[36] Although less common, a *deff* can also be less than 1.0 (more efficient than an SRS), resulting in lower variance and statistical tests with greater power relative to an SRS.

[37] Indeed, for 47 major demographic categories of this CM2011 report, *deff*s range from 0.6 through 2.7 (mean=1.48, median=1.5, IRQ=1,2, 1.7 (Ialomiteanu & Adlaf, 2012).

[38] Robust variance estimators – estimators robust to SRS violations – are also known as sandwich-type variance estimators, which include the Huber–White estimator.

[39] "Pseudo"–likelihood indicates that the standard errors do not derive directly from the log-likelihood of the model (Hilbe, 2009). PMLE is required to accommodate the violation of MLE assumptions generated by complex survey data.

[40] The Stata *sampling error calculation model* used for this analysis was as follows: *svyset IDNUM [pweight = FWGHT], strata (REGION)*, where IDNUM represents respondents (the PSU or cluster codes); FWGHT represents the final relative (or "sample-scaled") weight factor, whereas XWGHT represents the expansion "population-scaled" weights used to calculate population estimates); and REGION represents the six area code based regions (stratum codes). We also impose a standard simplifying assumption by restricting design specification to stage 1 sampling units given that stage 2 variances "roll-up" into stage 1 PSUs (Heeringa et al., 2010). Overall, the CM2011 has 6 sampling error strata and 3,039 sampling error computation units (respondents), resulting in 3,033 design-based degrees of freedom.

primary stage selection of 3,039 telephone numbers (PSUs) from each of the 6 area code strata.

- Complex sampling estimation employs a design-based fixed-rule calculation for the **degrees of freedom**: *df = (# PSUs) – (# strata)*. In the *CM2011* this value for the total sample is *df* = (3,039) – (6) = 3,033.

- Estimates of sampling error (CIs) for surveys conducted between 1977 and 1995 are adjusted based on the effective sample size derived from the average design effect (see **Table 2.1.1**).

- One complicating feature of complex survey analysis is the **estimation among subpopulations** (e.g., drinking problems among drinkers or drinking men; distress among women; DWI among drivers). If such analyses are implemented by simply dropping observations outside the subpopulation with the use of conditional selection filters (e.g., *select if drinker*) the software ignores the design codes of the survey, resulting in understated variances.[41] In this report, all subgroup analyses employ **unconditional subclass analysis** by specifying a *SUBPOP* command instructing Stata to account properly for the sampling structure.[42]

- In cases where the combined influence of a categorical risk factor (i.e., the overall or multiparameter test) is not statistically discernable according to the Wald test, but one or more category ORs are statistically discernable, we interpret such ORs.[43]

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[41] This underestimation occurs because a conditional IF command removes all cases not satisfying the logical statement, *including their PSU and stratum codes*. Consequently, the correct denominator for the number of PSUs and strata, which are components of the calculation of the degrees of freedom, are understated.

[42] Such a procedure rather than removing respondents, assigns a weight of zero to all cases outside the subclass and retains the original weight for subclass cases thereby retaining the relevant design codes (Heeringa et al., 2010; Korn & Graubard, 1999).

[43] We interpret such instances for several reasons. First, the needs of users are diverse, and it is quite appropriate for a user from the North to want to know any results relevant to that region, regardless of the overall

- All analyses are based on those who provided responses to *all* model variables (i.e., listwise deletion) (See **Appendix C** for details on item- and model-missing data).

2.7 Outline of the Report

The 2011 Cross-Sectional Analyses

In reporting the *CM2011* findings, we present design-based percentage estimates and associated confidence intervals. As well, we examine associations between substance use and mental health with six demographic characteristics or risk factors described in **Table 2.4.1**. – *gender, age, marital status, region, education,* and *income*.

Our analysis is descriptive, though we rely on statistical methods holding values of risk factors fixed among these six factors. Although such multivariable analysis complicates the reporting of results, we contend that this approach will reduce misinterpretation of data that are common to simple descriptive reporting, and will provide a more useful and accurate interpretation of these data. For example, it is often reported that alcohol and other drug use varies by marital status, being especially elevated among never married respondents. However, those who have never been married are typically the youngest, a group also displaying elevated rates. Thus, without concurrently separating the influence of age and marital status, we cannot know whether marital status differences in drug use are due to the unique aspects of marital status and its roles and obligations, or whether they are rather due to age differences. Holding values of age (and other predictors) constant when assessing the influence of marital status reduces the possible misinterpretation of such relationships.

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association. Second, our analyses are descriptive and based on a set of risk factors; the analyses are not a model-building activity. It is also important to note that there are reasons for the overall factor test and the OR category test might vary.

Our 2011 cross-sectional analyses employ **design-based multivariable logit models** (*svy:logit* command). For each binary indicator or response, we employ six epidemiologically-relevant risk factors represented by 25 categories and 19 regressors (i.e., 25 categories – 6 referents). The categories *women* (GENDER), *18–29* (AGE), *Toronto* (REGION), *married* (MARITAL STATUS), *not having completed high school* (EDUCATION), and *less than $30,000* (HOUSEHOLD INCOME) are set to the reference (i.e., contrasted categories). With the exception of AGE (which employed previous group contrasts) and REGION (which employed provincial mean contrasts), all predictor variables employed indicator coding.

In addition to OR testing, the contribution of each category, overall or multiparameter tests for each factor are also assessed.[44] Sample size, percentage estimate and 95% confidence intervals and adjusted odds ratios are presented for each represented category (i.e., regressor). All risk factor analyses of binary indicators (e.g., drug use versus non-use; elevated distress versus not) employ design-based logit regression (Heeringa et al., 2010; Hilbe, 2009).

The Cummulated Trend Data. We also describe recent and longer-term changes in drug use and mental health outcomes. For trend analyses, we stacked (i.e., combined) all 16 surveys between the years 1996 and 2011, culminating in a **16-year data set** with **39,514** respondents dispersed among 96 strata (6 area code strata × 16 survey years).[45] Earlier surveys (1977–1995) were not combined due to differing sample designs.[46]

Our trend analysis is two-fold:

1. To assess change since the last survey, for each indicator, we contrast the most recent estimate (2011) to the prior one (2009 or 2010) and we identify whether the difference between these two most recent surveys is statistically discernible (i.e., whether it is likely that the difference is not due to chance). Based on Stata's *svy:tabulate* command, we employ a design-based Rao-Scott-adjusted[47] Pearson chi-square test at the $p<.05$ level.

2. For trend analyses of the 16 years between 1996 and 2011, we employ the following strategy:

- First, we assess the overall trend between 1996 and 2011 using the Wald statistic derived from univariable logit regression modelling the contribution of YEAR to each indicator. This provides an indication of whether there is any discernible total population change in the outcome and provides contrasts to all years prior to 2011. (Specific comparisons between 2011 and each survey prior to 1996 are based on whether confidence intervals overlap between two estimates).

- Second, using design-based regression, we assess whether changes between 1996 and 2011 represent discernible linear or non-linear trends.

- And third, to assess whether trends between 1996 and 2011 differ by subgroup, we firstly model six pairwise (i.e., 2-way) risk factor × year interactions and only if discernible, we further assess differential subgroup change.[48] This two-stage strategy

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[44] The contribution of each OR is assessed by the *z* test, whereas, the contribution of each factor is assessed by the Wald test.

[45] Because our trend analysis is assessing time differences using surveys measured at different times among the same population, the original relative sample weights do not require revision (Korn & Graubard, 1999).

[46] See (Alexander, 2002; Kish, 1999; Korn & Graubard, 1999) for advice on merging multiple complex survey datasets.

[47] The Rao-Scott second-order adjustment involves rescaling the standard Pearson χ^2 and G^2 statistics by dividing them by an estimate of a generalized design effect (Heeringa et al., 2010). [Note that decimal degrees of freedom for the *F* test are due to this second-order correction.]

[48] For each outcome, six pairwise year × risk factor interactions were assessed separately with a logit model containing the variables YEAR, the relevant RISK FACTOR

should reduce the problem of multiple testing (i.e., some results reaching $p<.05$ due solely to the large number of statistical tests performed).

2.8 Presentation of Data

Readers should note the following:

- Tables and figures typically provide a logit transformed, design-adjusted 95% confidence interval, which indicates the probability of capturing the true population value within the specified interval, while accommodating features of the sample design.

- With the exception of population estimates, sample sizes displayed in all tables refer to the number of adults interviewed (i.e., the unweighted sample size).

- We use the term *discernible* (e.g., statistically discernible increase) to indicate changes or trends, relationships or group differences that are **statistically "significant" at the $p<.05$ level or lower** while accommodating the sampling structure. We contend that this language not only increases audience clarity, but removes the common usage of "significant"– typically meaning important – from statistical description.[49] The finding of **a statistically discernible** difference is a **probability statement** indicating the likelihood of finding such a result. It does not necessarily signal an **importance statement** related to public health. Such judgements require extra-statistical judgement.

(i.e., sex, age, region, marital status, education and income) and YEAR × RISK FACTOR. Using unconditional subclass methods to select each category involved in a discernible YEAR × RISK FACTOR interaction, we employ logit models regressing each binary indicator on a dummy-coded YEAR (with 2011 set to the referent).

[49] See (Fox, 1984; Wonnacott & Wonnacott, 1972) regarding the usage of *statistically discernible*.

Table Description

Below is a brief description of the tabular material.

Percentage *Drinking Alcohol* During the Past 12 Months, Adjusted Group Differences, Ontarians Aged 18+

		%	95%CI		Adjusted Odds Ratios
Total Sample		**77.2**	(75,1, 79.1)		
1) Gender					***
Women	(Comparison Group)	**73.0**	(70.1, 75.7)		---
Men		**81.7**	(78.8, 84.3)		1.49
2) Age		❶	❷		❸ NS
18-29	(Comparison Group)	**85.7**	(81.5, 89.1)		---
30-39		**80.3**	(75.8, 84.1)		0.76
40-49		**79.2**	(74.8, 83.0)		0.70
50-64		**76.5**	(71.7, 80.7)		0.68
65+		**61.9**	(56.2, 67.3)		0.50*

❶**Percentage estimate**: Displays the estimated percentage among the total and by risk factor (e.g., gender, age group, etc.) We display estimates for six factor variables containing a total of 25 subgroups.

❷ **Confidence limits and interval**: Displays the confidence limits which define the confidence interval, the probable accuracy of the estimate – the *true* population value would be expected within this range in 95 of 100 sample CIs. **Design-based confidence intervals** account for characteristics of the sample design (i.e., stratification, weighting and multistage selection). In the table above, we see that 77.2% reported past 12 month drinking. Thus, ignoring non-sampling errors, we can be reasonably confident that while accommodating for the complex sampling plan, with repeated sampling *the true percentage of Ontario adults drinking in the population would be included within the interval 75.1% and 79.1% in 95 of 100 samples*. In addition, our percentages **CIs** employ a **logit transformation** which, especially for estimates nearing 0 or 100, ensures that confidence limits will neither exceed

100 nor be lower than 0. Consequently, CIs may become asymmetric (i.e., unequal) when the outcome nears either extremity.

❸ **Adjusted (Net) Odds Ratio**: Displays adjusted odds ratios holding values of the remaining five risk factors in the table fixed or constant. For example, *holding fixed values of the model predictors and accommodating the sampling design, the adjusted odds of past year drinking among men is 1.49 times higher (or 49% greater) than the odds for women*. Odds ratios less than 1 represent a net decrease in the odds, whereas ORs greater than 1 represent a net increase. If the prevalence of the response is less than 10% the OR may also be expressed in **risk language** (Hilbe, 2009): "*The adjusted odds of past year drinking is 49% more likely among men than women*". For consistency, however, we have retained the OR interpretation throughout this report.

3. ALCOHOL

3.1. Alcohol Prevalence

The prevalence of past year drinking – the percentage consuming alcohol at least once during the 12 months before the survey – is an indicator of the relative size of the drinking population, and establishes the extent of potential exposure to alcohol-related problems.

2011……….…..Table 3.1.1;
Fig. 3.1.1–3.1.2

The estimated percentage of Ontario adults who have used alcohol in the 12 months before the survey is **81.2%** (95% CI: 79.4% to 82.9%). In addition, 12.1% did not drink alcohol during the past 12 months and 6.7% were abstainers in their lifetime. The corresponding population estimate is 7,676,232 past year drinkers (95% CI: 7,424,691 to 7,927,772).

When holding fixed values of our set of risk factors, only **region** and **income** were discernibly related to past year use of alcohol.

- Past year drinking increased discernibly with income. Relative to those with a household income of less than $30,000 (60.8%), the odds of drinking were near **2 times higher** for those with incomes of $30,000 to $49,999 (72.5%; OR=1.75) and for those who did not report their income (76.5%; OR=2.05), near **3 times higher** for those with incomes of $50,000 to $79,999 (81.8%; OR=2.71), and **5.7 times higher** for those with incomes of $80,000 or more (90.7%; OR=5.68).

- Although the overall association between past year drinking and

region did not reach our criteria of statistical discernibility, one regional contrast showing that past year drinking is 35% lower in Toronto than the provincial estimate (75.4% vs. 81.2%; OR=0.65).

There were no discernible differences in past year drinking by gender, age, marital status and education.

Frequency of Drinking ……
Fig. 3.1.3–3.1.6

Among past year drinkers, the most common frequency of drinking was two to three times a week (20.9%). One-in-five drinkers (20.4%) drank less than once a month and about one in 11 (8.6%) drank on a daily basis.

Trends
1977–2011 ……..…..Table 3.1.2; Fig. 3.1.7.

2010–2011
Between 2010 and 2011, past year drinking **increased discernibly**, from 78.0% to 81.2%. There were also three subgroup increases during this period: among **women**, from 74.6% to 78.9%, among residents of the **Central West**, from 76.0% to 83.4%, and among **married** respondents, from 78.7% to 81.8%.

1996–2011
Overall, between 1996 and 2011, there was discernible non-linear variation,

with drinking varying between 77.1% and 81.5%.

Year did not interact discernibly with any of the six demographic factors analysed, suggesting **similar trends** in each subgroup.

Trend analyses done separately for each subgroup showed a discernible uptrend for **women** (from 72.4% in 2005 to 78.9% in 2011), and those aged **65 years and older** (from 58.8% in 1997 to 71.8% in 2011). There were also non-linear increases in past year drinking among respondents living in the North, married and previously married respondents, and those who completed high school.

1977–2011

Long term trend analysis between 1977 and 2011 revealed both a discernible linear and non-linear trend in past year drinking.

Table 3.1.1: Past year Drinking: Percentage *Drinking Alcohol* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**81.2**	(79.4, 82.9)	—
Gender				NS
Men	1212	**83.7**	(80.9, 86.1)	1.16
Women *(Comparison Group)*	1827	**78.9**	(76.6, 81.1)	—
Age				
(Comparison Group is previous age group)				NS
18-29	267	**85.8**	(80.1, 90.0)	—
30-39	396	**83.1**	(78.3, 87.0)	0.76
40-49	551	**85.5**	(81.6, 88.6)	1.09
50-64	923	**80.8**	(77.6, 83.7)	0.85
65+	814	**71.8**	(68.1, 75.2)	0.88
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**75.4**	(70.5, 79.7)	**0.65****
Central South	253	**81.6**	(76.1, 86.1)	1.12
Central West	391	**83.4**	(78.7, 87.3)	1.03
South West	500	**83.4**	(79.7, 86.5)	1.19
Central East	416	**83.0**	(78.4, 86.9)	1.07
East	517	**82.4**	(78.3, 85.8)	0.95
North	459	**81.6**	(77.5, 85.1)	1.12
Marital Status				NS
Married/Partner *(Comparison Group)*	1896	**81.8**	(79.6, 83.8)	—
Previously Married	656	**73.8**	(69.6, 77.5)	1.16
Never Married	451	**84.3**	(79.6, 88.1)	1.31
Education				NS
Less than high school *(Comparison Group)*	369	**68.9**	(62.6, 74.5)	—
Completed high school	670	**77.3**	(73.2, 81.0)	1.32
Some college or university	1018	**84.3**	(81.3, 87.0)	**1.65***
University degree	945	**84.2**	(81.1, 86.9)	1.46
Household Income				***
< \$30,000 *(Comparison Group)*	351	**60.8**	(53.6, 67.5)	—
\$30,000-\$49,999	411	**72.5**	(66.6, 77.7)	**1.75***
\$50,000-\$79,999	558	**81.8**	(77.1, 85.7)	**2.71****
\$80,000+	980	**90.7**	(88.4, 92.6)	**5.68****
Not stated	739	**76.5**	(72.4, 80.1)	**2.05****

Notes: (1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of drinking are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of drinking are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education, and income (complete case sample size N=2916).

Q: *During the past 12 months, have you had a drink of any alcoholic beverage?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.1.2: Past year Drinking: Percentage *Drinking Alcohol* During the Past 12 Months, by Demographic Characteristics, Ontarians Aged 18+, 1977–1995

(N=)	1977 (1059)	1982 (1040)	1984 (1051)	1987 (1084)	1989 (1101)	1991 (1047)	1992 (1058)	1993 (941)	1994 (2022)	1995 (994)
Total Sample	79.9	77.6	84.5	83.1	82.6	80.3	86.6	83.3	82.1	84.4
(95%CI)[a]	(73.6, 86.2)	(75.1, 80.1)	(82.3, 86.7)	(80.9, 85.3)	(80.4, 84.8)	(77.9, 82.7)	(84.5, 88.7)	(80.9, 85.7)	(80.4, 83.8)	(82.1, 86.7)
Gender										
Men	85.9	81.6	86.8	87.6	85.8	81.8	89.7	91.6	84.7	86.8
	(82.9, 88.9)	(78.3, 84.9)	(83.9, 89.7)	(84.8, 90.4)	(82.9, 88.7)	(78.4, 85.2)	(87.0, 92.4)	(89.1, 94.1)	(82.6, 86.8)	(83.8, 89.8)
Women	73.4	73.6	82.3	78.8	79.6	78.7	83.9	75.4	79.8	82.0
	(69.6, 77.2)	(69.8, 77.4)	(79.0, 85.6)	(75.4, 82.2)	(76.2, 83.0)	(75.3, 82.1)	(80.9, 87.0)	(71.8, 79.0)	(77.2, 82.4)	(78.7, 85.3)
Age										
18 - 29 years	85.8	82.5	89.8	92.1	88.1	87.2	90.9	89.2	86.0	86.7
	(81.8, 89.8)	(78.0, 87.0)	(86.2, 93.3)	(88.7, 95.5)	(84.0, 92.2)	(83.2, 91.2)	(87.5, 94.3)	(85.3, 93.1)	(82.9, 89.1)	(82.4, 91.0)
30 - 39 years	86.0	82.5	91.1	87.7	90.8	84.2	86.7	81.7	85.1	85.2
	(81.4, 90.6)	(77.8, 87.2)	(87.5, 94.7)	(83.9, 91.5)	(87.5, 94.1)	(79.8, 88.6)	(82.7, 90.7)	(77.2, 86.2)	(82.1, 88.1)	(80.7, 89.7)
40 - 49 years	88.6	80.6	88.6	87.7	87.3	81.2	90.4	85.7	84.1	86.0
	(84.0, 93.2)	(74.0, 87.1)	(84.1, 93.1)	(82.8, 92.6)	(82.4, 92.2)	(7.60, 86.4)	(86.4, 94.4)	(80.9, 90.5)	(80.7, 87.5)	(81.3, 90.7)
50 - 64 years	76.2	76.2	80.0	80.9	74.2	73.8	83.1	81.0	78.2	86.4
	(70.2, 82.2)	(70.4, 82.0)	(74.5, 85.5)	(75.6, 86.2)	(68.3, 80.1)	(66.7, 80.9)	(77.1, 89.1)	(74.9, 87.1)	(73.7, 82.7)	(81.2, 91.6)
65+ years	53.5	58.5	64.8	58.2	66.8	63.8	73.6	72.0	67.0	71.6
	(45.6, 61.4)	(49.8, 67.2)	(56.3, 73.3)	(50.7, 65.7)	(59.5, 74.1)	(55.6, 7.20)	(66.0, 81.2)	(64.3, 79.7)	(61.0, 73.0)	(63.6, 79.6)
Marital Status										
Married/Partner	—	—	—	—	—	79.3	87.4	82.0	81.5	85.1
Previously Married	—	—	—	—	—	73.6	81.1	76.5	76.8	80.5
Never Married	—	—	—	—	—	85.8	87.5	89.5	85.8	84.8
Education										
Less than high school	—	—	—	—	—	64.3	84.0	78.2	72.1	79.1
Completed high school	—	—	—	—	—	81.4	84.4	81.7	83.1	83.0
Some college or university	—	—	—	—	—	87.2	90.2	81.8	85.9	84.2
University degree	—	—	—	—	—	87.4	88.2	92.4	85.3	91.4

Notes: [a] 95% confidence interval; — data not available; regional data not available.
Q: *During the past 12 months, have you had a drink of any alcoholic beverage?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.1.3: Past year Drinking: Percentage *Drinking Alcohol* During the Past 12 Months, by Demographic Characteristics, Ontarians Aged 18+, 1996–2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)		
Total Sample	**79.3**	**79.9**	**77.1**	**79.1**	**77.1**	**79.5**	**79.5**	**80.4**	**81.2**	**78.9**	**77.7**	**81.5**	**80.3**	**79.1**	**78.0**	**81.2**	T	2Y
(95%CI)[a]	(77.5, 81.1)	(78.1, 81.6)	(75.0, 79.0)	(77.2, 80.9)	(75.1, 79.1)	(77.6, 81.3)	(77.6, 81.3)	(78.5, 82.1)	(79.3, 83.0)	(77.0, 80.7)	(75.5,79.8)	(79.4,83.4)	(78.0, 82.3)	(76.8, 81.2)	(76.0, 79.8)	(79.4,82.9)		
Gender																	NSI	
Men	**82.7**	**83.2**	**82.1**	**85.1**	**81.7**	**83.6**	**82.3**	**83.4**	**85.2**	**83.3**	**84.2**	**85.3**	**84.2**	**80.9**	**81.6**	**83.7**	–	–
	(80.6, 84.8)	(81.1, 85.3)	(79.2,84.6)	(82.4, 87.4)	(78.8, 84.3)	(80.8, 86.0)	(79.5, 84.8)	(80.8, 85.8)	(82.5, 87.5)	(80.3, 85.9)	(81.5, 86.6)	(82.4,87.9)	(80.8, 87.0)	(77.5, 83.9)	(78.8, 84.0)	(80.9, 86.1)		
Women	**76.4**	**76.9**	**72.5**	**73.6**	**73.0**	**75.7**	**76.9**	**77.5**	**77.5**	**72.4**	**73.9**	**77.8**	**76.7**	**77.4**	**74.6**	**78.9**	T	2Y
	(74.3, 78.5)	(74.8, 79.0)	(69.6, 75.3)	(70.7, 76.3)	(70.1, 75.7)	(73.0, 78.3)	(74.1, 79.4)	(74.8, 80.0)	(74.8, 80.0)	(69.2,75.4)	(71.1,76.6)	(74.8,80.6)	(73.5,79.5)	(74.3, 80.3)	(71.8, 77.1)	(76.6, 81.1)		
Age																	NSI	
18 - 29 years	**83.5**	**83.6**	**82.5**	**86.5**	**85.7**	**84.9**	**84.6**	**87.4**	**86.9**	**82.5**	**84.5**	**89.5**	**86.5**	**83.6**	**82.4**	**85.8**	–	–
	(80.3, 86.7)	(80.5, 86.7)	(77.9, 86.3)	(82.4, 89.8)	(81.5, 89.1)	(80.4, 88.6)	(79.9, 88.3)	(83.4,90.5)	(82.3, 90.4)	(77.4, 86.7)	(78.6,89.1)	(83.8,93.3)	(79.6, 91.4)	(76.6, 88.8)	(76.6, 87.0)	(80.1,90.0)		
30 - 39 years	**83.6**	**84.4**	**81.5**	**81.4**	**80.3**	**86.5**	**81.6**	**83.0**	**85.5**	**82.6**	**78.2**	**81.9**	**84.0**	**79.0**	**78.2**	**83.1**	–	–
	(80.8, 86.4)	(81.6, 87.2)	(77.5, 84.9)	(77.0, 85.0)	(75.8, 84.1)	(82.8, 89.5)	(77.3, 85.3)	(78.5, 86.7)	(81.1, 89.0)	(78.2, 86.3)	(72.8,82.8)	(76.4,86.3)	(78.0, 88.6)	(72.8, 84.1)	(72.9, 82.7)	(78.3,87.0)		
40 - 49 years	**81.6**	**85.2**	**78.0**	**81.5**	**79.2**	**79.1**	**84.0**	**81.6**	**82.9**	**83.1**	**82.4**	**82.8**	**82.5**	**83.5**	**82.3**	**85.5**	–	–
	(78.4, 84.78	(82.3, 88.1)	(73.4, 81.9)	(77.1, 85.2)	(74.8, 83.0)	(74.7, 82.9)	(79.9, 87.4)	(77.7, 85.0)	(78.8, 86.4)	(79.3, 86.3)	(77.7,86.3)	(78.0,86.7)	(77.6, 86.5)	(78.8, 87.3)	(78.4, 85.7)	(81.6,88.6)		
50 - 64 years	**76.0**	**77.4**	**77.2**	**78.0**	**76.5**	**78.0**	**80.1**	**78.8**	**81.5**	**77.8**	**77.2**	**82.3**	**82.1**	**81.1**	**78.3**	**80.8**	–	–
	(72.2, 79.8)	(73.8, 81.0)	(72.2, 81.6)	(73.2, 82.1)	(71.7, 80.7)	(73.7, 81.9)	(75.9, 83.7)	(74.3, 82.6)	(77.8, 84.7)	(73.7, 81.5)	(72.8, 80.9)	(78.2,85.7)	(78.1, 85.5)	(77.0, 84.7)	(75.1, 81.3)	(77.6,83.7)		
65+ years	**66.2**	**58.8**	**65.5**	**66.6**	**61.9**	**67.0**	**65.9**	**69.9**	**70.6**	**67.6**	**65.9**	**73.5**	**69.5**	**68.6**	**70.0**	**71.8**	T	–
	(61.6, 70.8)	(54.0, 63.6)	(59.8, 70.9)	(61.2, 71.6)	(56.2, 67.3)	(61.6, 72.0)	(60.2, 71.1)	(64.7, 74.8)	(65.6, 75.2)	(62.3, 72.5)	(60.4, 71.0)	(68.5,77.9)	(64.4, 74.2)	(63.6, 73.3)	(66.0, 73.8)	(68.1,75.2)		
Region																	NSI	
Toronto	**74.1**	**74.2**	**74.1**	**72.0**	**69.7**	**78.8**	**75.1**	**78.4**	**76.0**	**73.9**	**76.4**	**73.6**	**76.0**	**77.6**	**72.3**	**75.4**	–	–
	(69.1, 78.5)	(69.2, 78.6)	(68.9, 78.7)	(66.7, 76.6)	(64.4, 74.5)	(74.1, 82.9)	(70.1, 79.5)	(73.7, 82.4)	(70.9, 80.5)	(68.9, 78.4)	(70.8,81.2)	(67.8,78.7)	(70.4,80.9)	(71.7, 82.7)	(67.3, 76.7)	(70.5,79.7)		
Central South	**80.2**	**78.1**	**77.5**	**81.6**	**78.3**	**78.2**	**77.4**	**85.7**	**83.2**	**80.7**	**76.1**	**82.7**	**83.1**	**83.5**	**81.2**	**81.6**	–	–
	(74.2, 85.1)	(71.9, 83.2)	(70.8, 83.1)	(75.6, 86.5)	(71.8, 83.6)	(71.3, 83.9)	(70.5, 83.0)	(79.8, 90.1)	(77.2, 87.8)	(74.3, 85.8)	(67.7,82.8)	(75.6,88.1)	(74.1,89.4)	(76.2, 88.9)	(75.6, 85.8)	(76.1,86.1)		
Central West	**81.9**	**81.9**	**77.1**	**83.5**	**77.7**	**77.5**	**81.9**	**77.9**	**83.8**	**77.9**	**78.9**	**80.3**	**74.1**	**72.5**	**76.0**	**83.4**	–	2Y
	(77.1, 85.9)	(75.5, 86.9)	(71.3, 82.0)	(78.6, 87.4)	(72.0, 82.5)	(72.0, 82.2)	(76.8, 86.1)	(72.4, 82.6)	(78.7, 87.8)	(72.6, 82.5)	(72.9,83.9)	(74.1,85.3)	(67.2,80.0)	(65.8, 78.3)	(70.6, 80.6)	(78.7,87.3)		
South West	**78.0**	**81.2**	**76.7**	**79.0**	**81.6**	**77.9**	**83.6**	**80.1**	**83.3**	**79.0**	**82.3**	**84.3**	**82.7**	**78.2**	**80.6**	**83.4**	–	–
	(73.9, 81.7)	(77.1, 84.6)	(71.8, 81.0)	(74.2, 83.1)	(77.1, 85.3)	(73.4, 81.8)	(79.2, 87.1)	(75.5, 84.1)	(79.2, 86.7)	(74.5, 82.9)	(77.8,86.0)	(79.7,88.0)	(78.1,86.5)	(73.1, 82.6)	(76.2, 84.4)	(79.7,86.5)		
Central East	**82.7**	**84.2**	**80.6**	**80.6**	**76.9**	**83.3**	**78.6**	**85.5**	**83.1**	**81.9**	**78.3**	**85.3**	**82.6**	**81.9**	**79.8**	**83.0**	–	–
	(77.5, 86.8)	(80.1, 87.5)	(74.9, 85.3)	(75.0, 85.2)	(71.0, 81.9)	(77.8, 87.7)	(72.4, 83.7)	(80.5, 89.4)	(77.6, 87.4)	(76.7, 86.2)	(72.2, 83.4)	(80.3,89.2)	(77.1,86.9)	(76.1, 86.5)	(74.8, 84.0)	(78.4,86.9)		
East	**81.1**	**81.2**	**79.5**	**81.7**	**80.8**	**81.4**	**83.3**	**78.2**	**82.6**	**81.6**	**76.0**	**85.6**	**86.3**	**85.6**	**80.3**	**82.4**	–	–
	(77.0, 84.5)	(77.2, 84.7)	(74.9, 83.5)	(76.9, 85.6)	(76.2, 84.7)	(77.1, 85.1)	(79.0, 86.9)	(73.6, 82.2)	(78.4, 86.2)	(77.1, 85.4)	(70.5,80.8)	(81.5,89.0)	(81.9,89.7)	(81.4, 89.1)	(75.8, 83.7)	(78.3,85.8)		
North	**82.0**	**81.1**	**74.8**	**81.2**	**83.2**	**80.0**	**77.7**	**79.6**	**81.1**	**82.2**	**74.6**	**84.8**	**82.7**	**77.2**	**83.6**	**81.6**	T	–
	(78.1, 85.4)	(77.0, 84.5)	(69.9, 79.2)	(76.7, 84.9)	(79.1, 86.7)	(76.2, 83.4)	(73.1, 81.7)	(74.9, 83.5)	(77.6, 84.2)	(78.0, 85.8)	(69.0,79.5)	(80.3,88.5)	(78.0,86.6)	(71.7, 81.8)	(79.7, 86.8)	(77.5,85.1)		

Cont'd

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)		
Marital Status																	**NSI**	
Married/Partner	79.8	79.9	77.7	78.9	76.5	80.0	81.3	79.9	82.0	79.8	77.5	81.4	81.8	79.5	78.7	81.8	T	2Y
Previously Married	72.5	74.3	65.3	69.5	68.9	73.7	70.8	72.6	74.0	72.5	66.0	77.7	71.3	74.4	71.3	73.8	T	–
Never Married	82.5	82.8	81.4	85.7	83.4	82.4	80.8	86.0	84.3	80.6	85.1	85.0	81.1	81.7	79.7	84.3	–	–
Education																	**NSI**	
Less than HS	69.4	68.7	68.4	66.7	61.1	65.7	68.6	68.2	68.3	63.4	67.0	68.4	67.9	71.5	67.9	68.9	–	–
Completed HS	79.8	77.0	73.0	78.7	76.6	80.8	77.6	80.1	82.0	79.2	74.8	81.9	81.6	72.8	72.8	77.3	T	–
Some College or Univ	82.4	86.1	81.7	83.0	84.6	83.6	83.3	82.4	85.2	82.9	80.5	84.7	81.3	83.0	82.5	84.3	–	–
University Degree	84.0	83.4	83.4	83.9	79.2	81.4	83.6	85.8	83.2	80.7	81.9	83.2	82.6	82.0	80.4	84.2	–	–

Notes:　(1) All analyses are sample design adjusted; [a] 95% confidence interval.

(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.

(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q:　During the past 12 months have you had a drink of any alcoholic beverage?

Source:　The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.1.1
Drinking Status, Ontarians Aged 18+, 2011

Note: horizontal 'whiskers' represent 95% confidence intervals
Source: 2011 CAMH Monitor
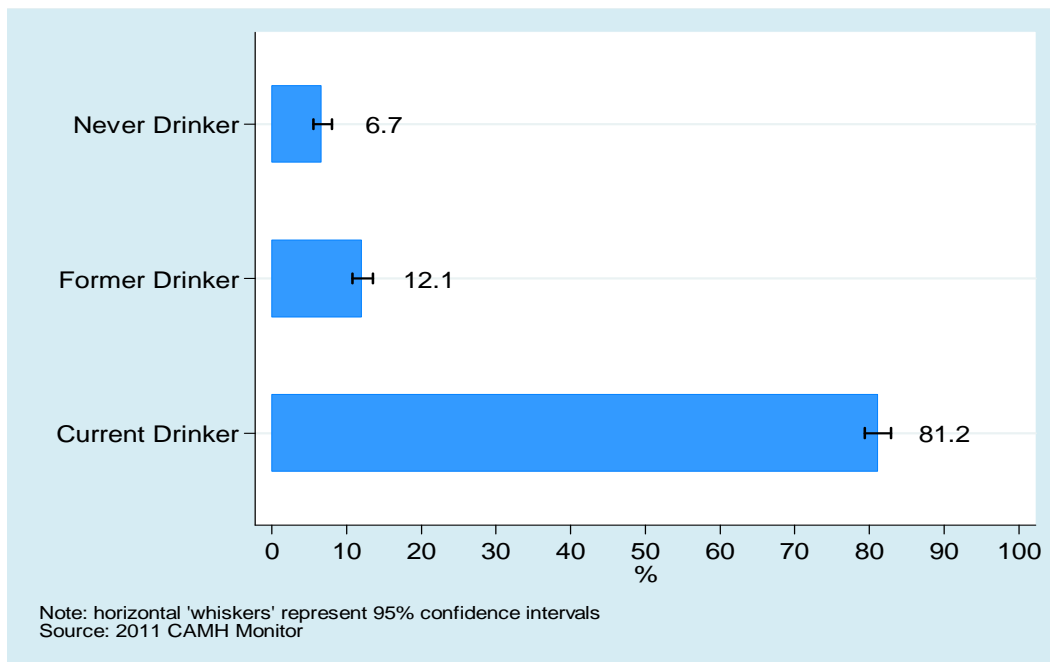
Figure 3.1.2
Past Year Alcohol Use by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
Source: 2011 CAMH Monitor
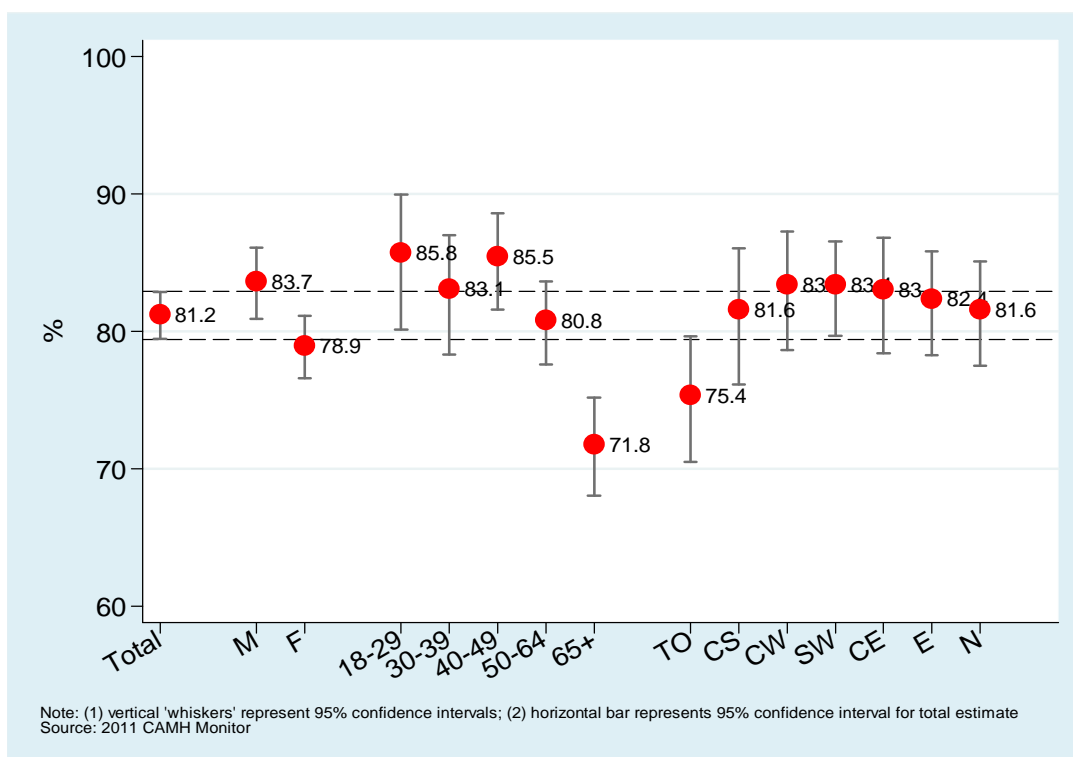
Figure 3.1.3
Past Year Frequency of Drinking Among Ontarians Aged 18+, 2011

Note: horizontal 'whiskers' represent 95% confidence intervals
Source: 2011 CAMH Monitor
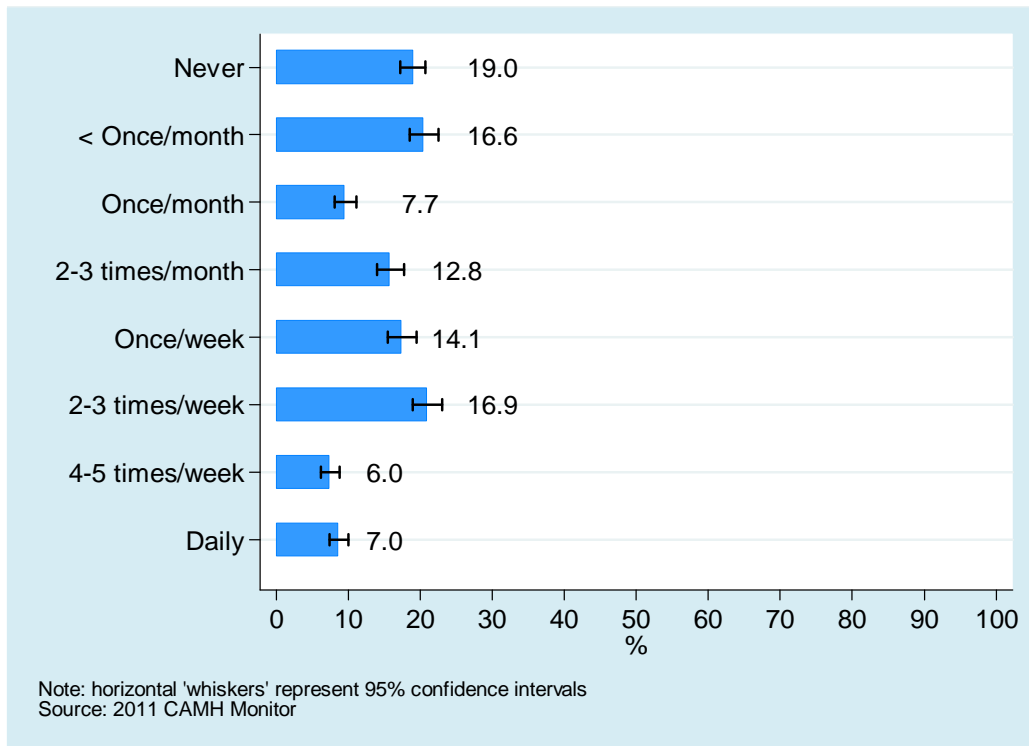
Figure 3.1.4
Frequency of Drinking Among Past Year Drinkers, Ontarians Aged 18+, 2011

Note: horizontal 'whiskers' represent 95% confidence intervals
Source: 2011 CAMH Monitor
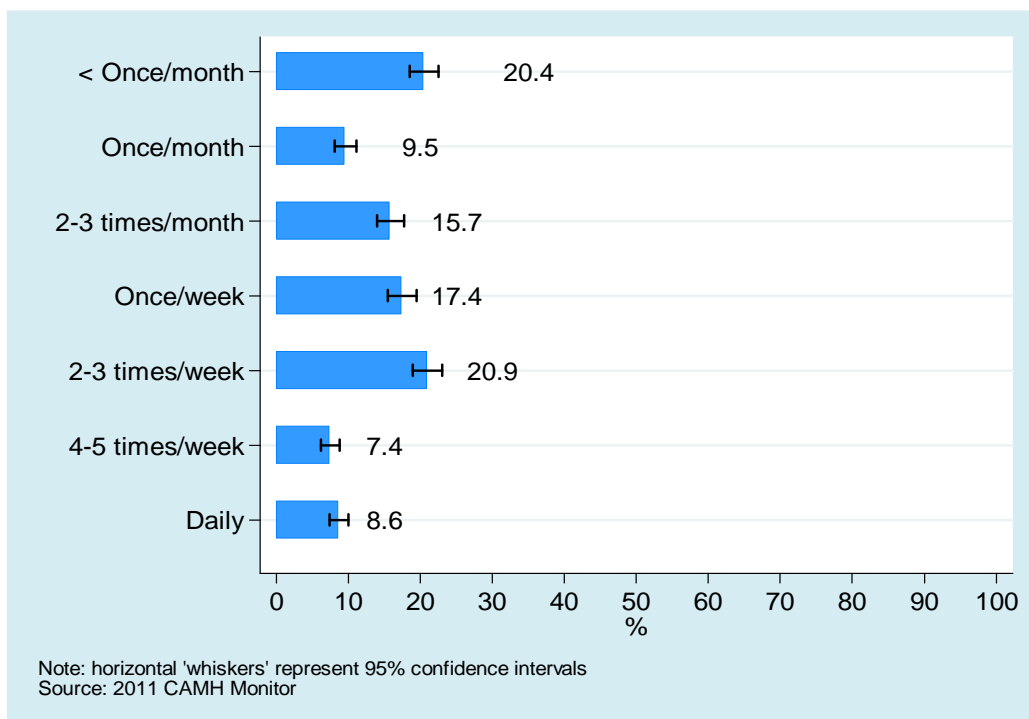
Figure 3.1.5
Frequency of Drinking Among Ontarians Aged 18+, 1977–2011

Source: CAMH Monitor
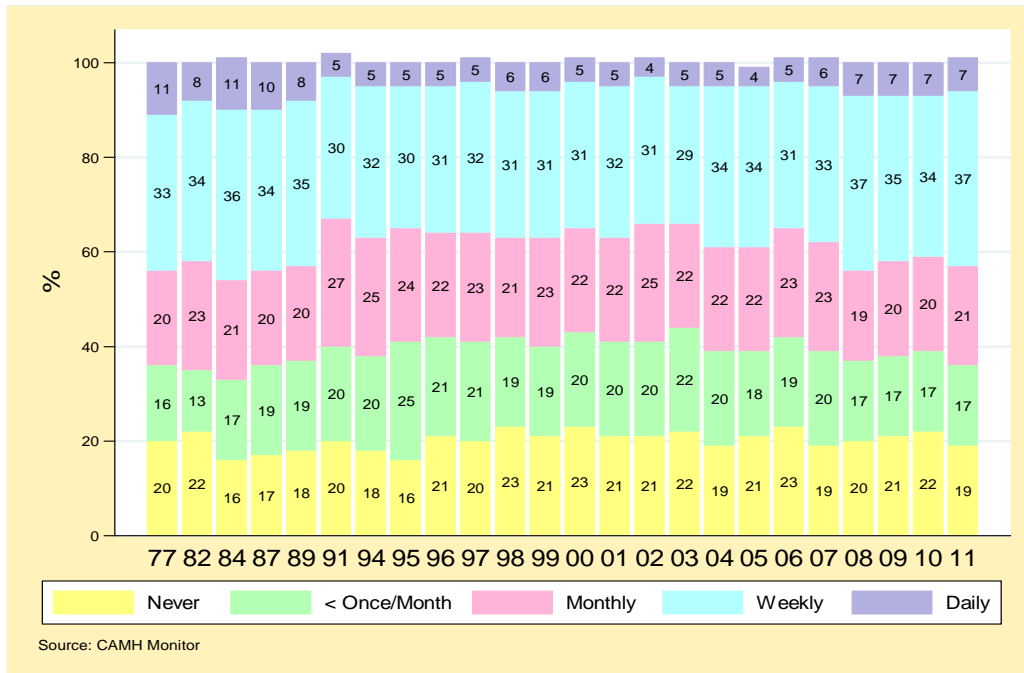
Figure 3.1.6
Frequency of Drinking Among Past Year Drinkers Aged 18+, 1977–2011

Source: CAMH Monitor
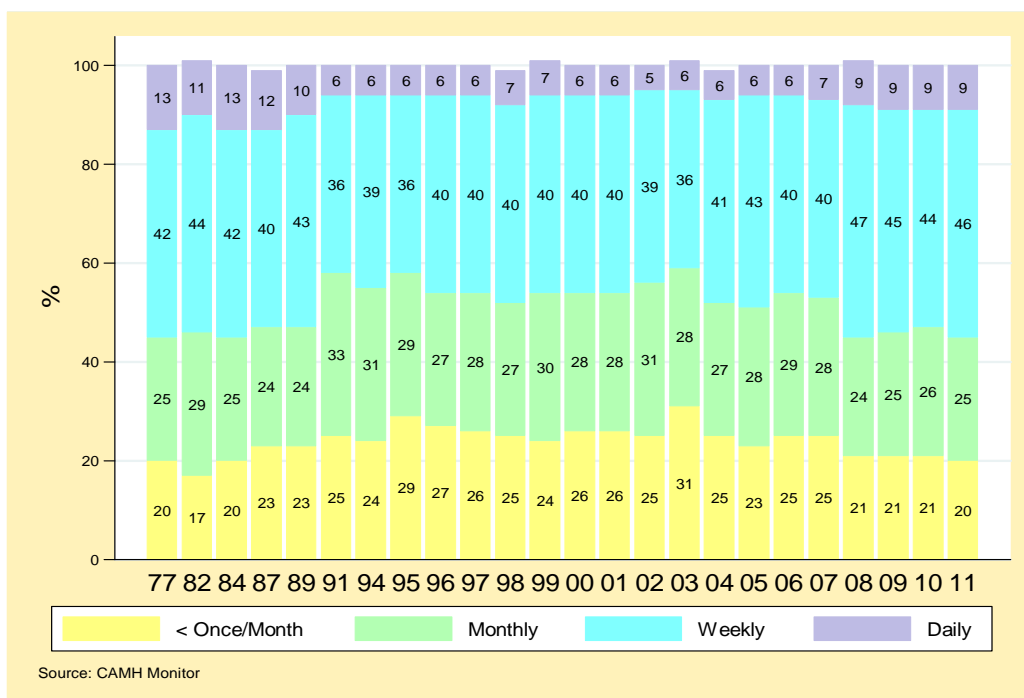
Figure 3.1.7
Past Year Alcohol Use, Ontarians Aged 18+, 1977–2011

Alcohol: Total

Alcohol: Sex

Alcohol: Age Group

Alcohol: Education Level

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
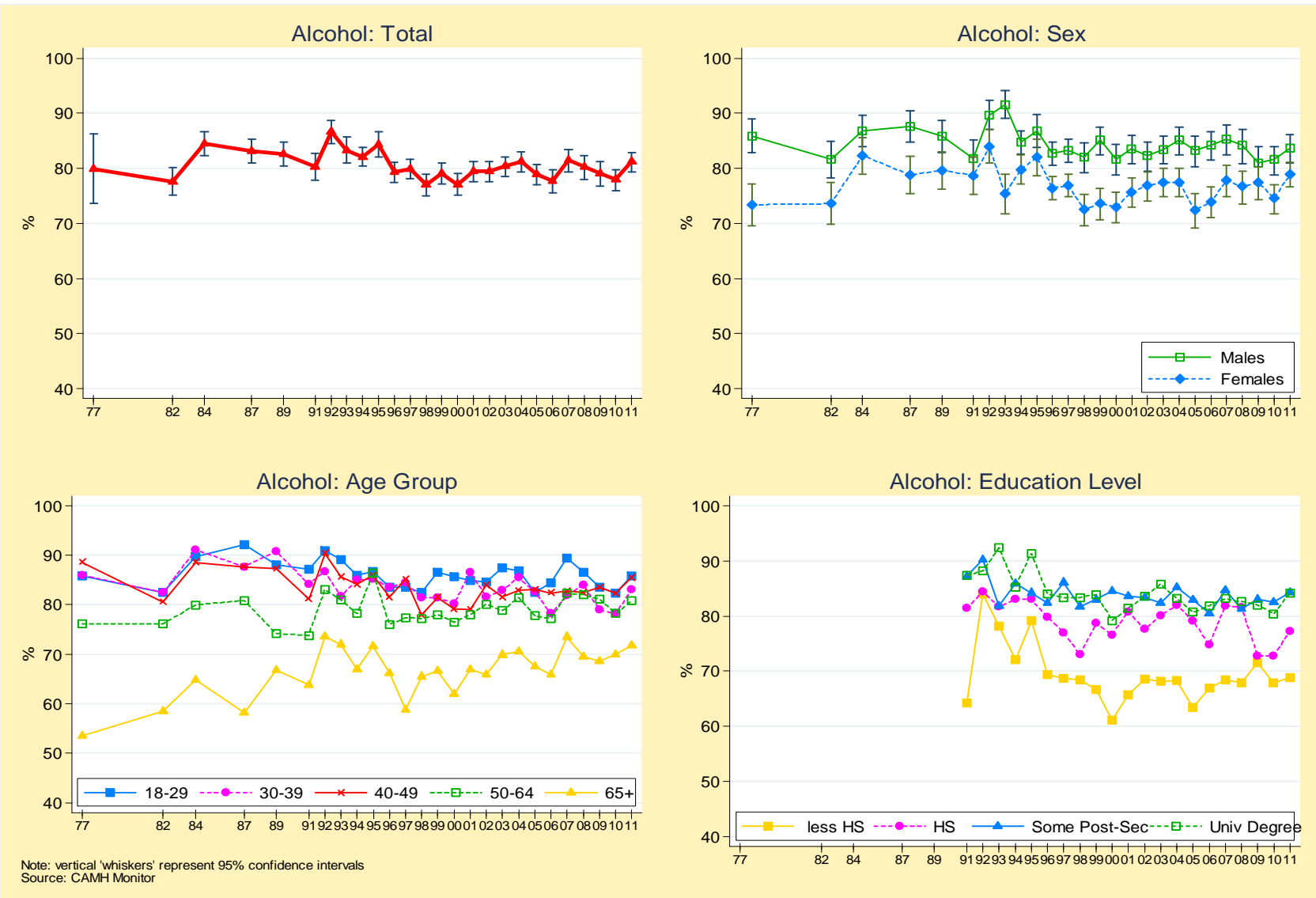
3.2   Daily Drinking

The percentage drinking alcohol on a daily basis is an indicator of a regular pattern of drinking. This indicator, however, is not synonymous with a problematic drinking pattern.

2011…….Table 3.2.1, 3.2.2; Fig. 3.2.1

An estimated **7.0%** (95% CI: 6.0% to 8.1%) of Ontario adults drank alcohol daily in the 12 months before the survey. Among past year drinkers, the prevalence was **8.6%** (95% CI: 7.4% to 10.0%). The corresponding population estimate is 658,450 daily drinkers (95% CI: 558,594 to 758,306).

Only **gender** and **age** were discernibly related to daily drinking among **Ontario adults**.

▪ The adjusted odds of daily drinking were 2.3 times higher for men than women (9.7% vs. 4.5%, respectively).

▪ Daily drinking increases discernibly with age, from 2.7% of those aged 18 to 29 to 14.9% of those aged 65 and older. One of the four sequential age group comparisons is statistically discernible: the adjusted odds of daily drinking were about 2 times higher among those aged 65 and older than those aged 50 to 64 (OR=1.97; 14.9% vs. 9.0%, respectively).

Region, marital status, education and income were not discernibly related to daily drinking when controlling for other demographics.

Past year drinkers displayed similar patterns related to daily drinking. The adjusted odds of daily drinking were 2.2 times higher for drinking men than drinking women (11.6% vs. 5.7%) and those aged 65 and older reported the highest rates of daily drinking (20.8%).

Education was also discernibly related to daily drinking among drinkers.

• Among drinkers, the distinguishing feature is a contrast between those not having graduated high school (17.0%) and all others (6.0%–10.4%). Only one of the three contrasts are statistically discernible. Relative to drinkers who did not complete high school, the adjusted odds of daily drinking were discernibly 48% lower among drinkers who completed high school (OR=0.52).

Trends
1977–2011………Table 3.2.3; Fig. 3.2.2

2010–2011
Daily drinking among past year drinkers in 2011 (8.6%) was **unchanged** from 2010 (8.7%) and 2009 (9.3%). In addition, daily drinking was stable since 2009 for all subgroups.

1996–2011
Between 1996 and 2011, there was a discernible **increase** in daily drinking among drinkers, from 5.3% in 2002 to 8.6% in 2011.

Year did not interact discernibly with any of the demographic factors analysed, suggesting that subgroup trends were not measurably dissimilar.

Trend analyses done separately for each subgroup showed a discernible uptrend for **men** and **women** and for **18 to 29** year olds. There was a discernible increase in daily drinking among

drinking **men** (from 7.1% in 2005 to 11.6% in 2011), drinking **women** (from a low of 2.6% in 2001 to 5.7% in 2011), and a non-linear uptrend among **18 to 29** year olds (from 1.3% in 2000 to 7.2% in 2009).

There were also discernible increases for residents of the East, for married respondents, for those not graduating high school and for university graduates.

1977–2011

In the longer term, between 1977 and 2011, daily drinking among drinkers decreased considerably until 2006. From a high of 13.4% in 1977, it decreased 3-fold to a low of 4.1% in 1992 and has varied between 5.3% and 7.4% until 2007. But this trend has reversed in the past five years, **increasing discernibly from 5.9% in 2006 to 8.6% in 2011**. This non-linear change was especially prominent among drinking **men**, whose daily drinking dropped from 19.5% in 1977 to 7.1% in 2005 and then increased to 11.6% in 2011.

Table 3.2.1: Percentage *Drinking Alcohol Daily* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**7.0**	(6.0, 8.1)	—
Gender				***
Men	1212	**9.7**	(8.0, 11.7)	**2.29*****
Women *(Comparison Group)*	1827	**4.5**	(3.5, 5.7)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**†2.7**	(1.1, 6.3)	—
30-39	396	**†3.7**	(2.1, 6.3)	0.86
40-49	551	**†6.1**	(4.0, 9.2)	1.91
50-64	923	**9.0**	(7.0, 11.4)	1.50
65+	814	**14.9**	(12.1, 18.1)	**1.97****
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**†7.2**	(5.2, 9.8)	1.06
Central South	253	**†6.6**	(3.7, 11.5)	0.97
Central West	391	**†7.3**	(4.9, 10.9)	1.26
South West	500	**†6.0**	(4.2, 8.6)	0.81
Central East	416	**†5.8**	(3.8, 8.7)	0.81
East	517	**9.5**	(6.9, 13.0)	1.35
North	459	**†6.4**	(4.2, 9.5)	0.87
Marital Status				NS
Married/Partner *(Comparison Group)*	1896	**8.2**	(7.0, 9.7)	—
Previously Married	656	**8.4**	(5.5, 12.7)	0.90
Never Married	451	**†2.8**	(1.4, 5.3)	0.57
Education				NS
Less than high school *(Comparison Group)*	369	**11.7**	(7.6, 17.7)	—
Completed high school	670	**†5.5**	(3.8, 7.8)	0.61
Some college or university	1018	**†5.0**	(3.7, 6.8)	0.66
University degree	945	**8.8**	(7.0, 10.9)	1.05
Household Income				NS
< $30,000 *(Comparison Group)*	351	**†4.0**	(2.3, 6.9)	—
$30,000-$49,999	411	**†6.7**	(4.3, 10.3)	1.51
$50,000-$79,999	558	**7.4**	(5.3, 10.2)	2.04
$80,000+	980	**7.2**	(5.6, 9.2)	1.87
Not stated	739	**7.5**	(5.4, 10.3)	2.08

Notes: (1) All analyses are sample design adjusted; *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † estimates unstable or suppressed.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that daily alcohol use is more likely to occur in the group being compared to the comparison group; ORs less than 1.0 indicate that daily alcohol use is less likely to occur in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=2904).
Q: *Response of "daily" or "almost daily" to the question: How often did you drink alcoholic beverages during the past 12 months?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.2.2: Percentage *Drinking Alcohol Daily* During the Past 12 Months and Adjusted Group Differences, Ontarian *Past year Drinkers* Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	2401	**8.6**	(7.4, 10.0)	—
Gender				***
Men	1001	**11.6**	(9.5, 14.0)	**2.24***
Women *(Comparison Group)*	1400	**5.7**	(4.5, 7.2)	—
Age				
(Comparison Group is previous age group)				***
18-29	233	**†3.1**	(1.3, 7.3)	—
30-39	332	**†4.4**	(2.6, 7.6)	0.96
40-49	471	**†7.1**	(4.7, 10.7)	1.79
50-64	742	**11.1**	(8.7, 14.1)	1.65
65+	568	**20.8**	(17.1, 25.1)	**2.06***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	380	**†9.5**	(6.9, 12.9)	1.13
Central South	194	**†8.1**	(4.6, 14.0)	0.93
Central West	320	**†8.8**	(5.9, 13.1)	1.25
South West	395	**†7.2**	(5.0, 10.3)	0.78
Central East	338	**†7.0**	(4.6, 10.4)	0.79
East	416	**11.5**	(8.4, 15.7)	1.43
North	358	**†7.8**	(5.2, 11.6)	0.87
Marital Status				NS
Married/Partner *(Comparison Group)*	1551	**10.1**	(8.6, 11.9)	—
Previously Married	469	**11.4**	(7.5, 17.0)	0.93
Never Married	362	**†3.3**	(1.7, 6.3)	0.58
Education				*
Less than high school *(Comparison Group)*	234	**17.0**	(11.1, 25.1)	—
Completed high school	501	**†7.1**	(5.0, 10.1)	**0.52***
Some college or university	856	**†6.0**	(4.4, 8.1)	0.53
University degree	791	**10.4**	(8.3, 13.0)	0.87
Household Income				NS
< $30,000 *(Comparison Group)*	213	**†6.6**	(3.8, 11.3)	—
$30,000-$49,999	304	**†9.2**	(5.9, 14.1)	1.18
$50,000-$79,999	468	**10.9**	(6.6, 12.5)	1.54
$80,000+	891	**7.7**	(6.2, 10.1)	1.28
Not stated	525	**9.5**	(7.1, 13.4)	1.73

Notes: (1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no discernible difference; † estimates unstable or suppressed.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that daily alcohol use is more likely to occur in the group being compared to the comparison group; ORs less than 1.0 indicate that daily alcohol use is less likely to occur in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N= 2314).
Q: *Response of "daily" or "almost daily" to the question: How often did you drink alcoholic beverages during the past 12 months?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.2.3: Percentage *Drinking Daily* During the Past 12 Months, by Demographic Characteristics, Ontarian *Past year Drinkers* Aged 18+, 1977–1995

	1977	1982	1984	1987	1989	1991	1992	1993	1994	1995
(N=)	(818)	(795)	(885)	(893)	(906)	(841)	(916)	(783)	(1660)	(839)
Total Drinkers	**13.4**	**10.7**	**12.9**	**11.8**	**10.0**	**6.2**	**4.1**	**6.9**	**6.1**	**5.9**
(95%CI)[a]	(11.1,15.7)	(8.5,12.9)	(10.7, 15.1)	(9.7,13.9)	(8.0,12.0)	(4.6, 7.8)	(2.8, 5.4)	(5.7, 8.1)	(4.9, 7.3)	(4.3, 7.5)
Gender										
Men	**19.5**	**15.6**	**17.3**	**16.6**	**13.3**	**8.3**	**5.2**	**10.0**	**8.5**	**8.6**
Women	**5.7**	**5.2**	**8.6**	**6.7**	**6.7**	**4.1**	**3.0**	**3.6**	**3.8**	**2.9**
Age										
18 - 29 years	**7.8**	**† 4.1**	**† 5.0**	**6.0**	**† 3.7**	**† 3.0**	**† 1.8**	**† 2.7**	**† 2.0**	**† 1.3**
30 - 39 years	**10.9**	**7.8**	**10.0**	**11.6**	**5.5**	**† 4.5**	**†1.8**	**6.1**	**†4.2**	**†3.6**
40 - 49 years	**18.2**	**19.1**	**15.6**	**12.9**	**11.8**	**8.8**	**†5.8**	**6.1**	**9.0**	**†5.8**
50 - 64 years	**22.1**	**15.7**	**22.2**	**15.7**	**17.6**	**7.9**	**7.8**	**9.7**	**8.0**	**8.2**
65+ years	**13.2**	**19.9**	**21.8**	**19.6**	**23.0**	**11.8**	**8.5**	**20.0**	**15.0**	**23.6**
Marital Status										
Married/Partner	—	—	—	—	—	**4.7**	**4.5**	**7.8**	**6.0**	**6.6**
Previously Married	—	—	—	—	—	**8.1**	**6.7**	**7.8**	**5.5**	**9.7**
Never Married	—	—	—	—	—	**†4.5**	**†1.8**	**†4.5**	**†2.2**	**†2.3**
Education										
Less than high school	—	—	—	—	—	**6.4**	**7.2**	**9.1**	**6.3**	**6.3**
Completed high school	—	—	—	—	—	**†4.6**	**†2.7**	**5.9**	**5.1**	**6.7**
Some college or university	—	—	—	—	—	**†4.1**	**†2.7**	**†4.2**	**†2.3**	**6.0**
University degree	—	—	—	—	—	**5.2**	**5.2**	**9.9**	**7.6**	**†4.4**

Notes: [a] 95% confidence interval; — data not available; † Estimate suppressed or unstable;

Q: *Response of "daily" or "almost daily" to the question: How often, if ever, did you drink alcoholic beverages during the past 12 months?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.2.4: Percentage *Drinking Daily* During the Past 12 Months, by Demographic Characteristics, Ontarian *Past year Drinkers* Aged 18+, 1996–2011

	1996 (2141)	1997 (2219)	1998 (1777)	1999 (1938)	2000 (1887)	2001 (2088)	2002 (1933)	2003 (1933)	2004 (2101)	2005 (1906)	2006 (1527)	2007 (1618)	2008 (1599)	2009 (1602)	2010 (2352)	2011 (2401)	Change
Total Drinkers	**6.0**	**5.9**	**7.4**	**7.0**	**6.3**	**5.8**	**5.3**	**6.0**	**6.4**	**5.6**	**5.9**	**7.3**	**8.6**	**9.3**	**8.7**	**8.6**	T –
(95%CI)[a]	(5.0,7.2)	(4.8,7.1)	(6.0,9.1)	(5.9,8.5)	(5.2,7.7)	(4.7,7.1)	(4.3,6.5)	(4.9,7.3)	(5.3,7.8)	(4.6,6.8)	(4.8,7.3)	(6.0,8.8)	(7.3,10.2)	(7.7,11.1)	(7.5,10.0)	(7.4,10.0)	
Gender																	NSI
Men	**8.2**	**8.4**	**9.8**	**10.0**	**8.6**	**8.8**	**7.4**	**7.3**	**8.9**	**7.1**	**7.3**	**9.2**	**10.9**	**12.5**	**11.2**	**11.6**	T –
	(6.4,10.3)	(6.7,10.5)	(7.6,12.6)	(2.7,5.4)	(6.8,10.8)	(7.0,11.1)	(5.7,9.6)	(5.6,9.5)	(7.1,11.3)	(5.6,9.1)	(5.6,9.6)	(7.1,11.7)	(8.8,13.5)	(9.9,15.6)	(9.3,13.5)	(9.4,14.0)	
Women	**3.9**	**3.4**	**5.0**	**3.9**	**4.1**	**2.6**	**3.1**	**4.6**	**3.9**	**3.9**	**4.4**	**5.3**	**6.3**	**6.1**	**6.1**	**5.7**	T –
	(2.9,5.3)	(2.3,4.9)	(3.5,7.0)	(8.1,12.4)	(2.8,5.9)	(1.7,3.9)	(2.2,4.4)	(3.4,6.2)	(2.8,5.3)	(2.7,5.5)	(3.1,6.1)	(3.9,7.1)	(4.8,8.3)	(4.4,8.3)	(4.8,7.7)	(4.5,7.2)	
Age																	NSI
18 - 29 years	**†1.4**	**†1.8**	**†3.5**	**†2.1**	**†1.3**	**†1.9**	**†**	**†2.3**	**†2.6**	**†**	**†**	**†**	**†4.0**	**†7.2**	**†3.3**	**†3.1**	T –
	(0.6,3.3)	(0.8,4.0)	(1.7,7.1)	(1.1,4.3)	(0.6,2.9)	(0.8,4.1)	-	(1.0,5.4)	(1.2,5.7)	-	-	-	(1.8,8.4)	(3.4,14.5)	(1.6,6.7)	(1.3,7.3)	
30 - 39 years	**†3.6**	**†3.3**	**†3.9**	**†3.4**	**†3.8**	**†3.9**	**†2.0**	**†3.9**	**†3.4**	**†2.4**	**†4.1**	**†3.9**	**†3.5**	**†3.9**	**†3.9**	**†4.4**	– –
	(2.0,6.1)	(2.0,5.5)	(2.1,7.0)	(2.0,5.7)	(2.3,6.2)	(2.3,6.5)	(1.0,4.2)	(2.0,7.5)	(1.8,6.4)	(1.1,5.0)	(1.9,8.4)	(1.9,7.7)	(1.8,6.8)	(1.9,7.8)	(2.1,7.0)	(2.6,7.6)	
40 - 49 years	**6.5**	**6.3**	**†5.0**	**†5.1**	**†5.0**	**†4.0**	**†3.0**	**†4.1**	**†3.9**	**†5.8**	**†3.8**	**†5.9**	**†7.3**	**†5.1**	**†6.3**	**†7.1**	– –
	(4.5,9.4)	(4.0,9.7)	(3.0,8.2)	(3.0,8.3)	(3.2,7.6)	(2.5,6.3)	(1.7,5.2)	(2.5, 6.5)	(2.2,6.9)	(3.7,8.9)	(2.2,6.5)	(3.5,9.8)	(4.6, 11.2)	(3.1, 8.1)	(4.2, 9.4)	(4.7, 10.7)	
50 - 64 years	**9.8**	**9.6**	**12.0**	**13.7**	**10.9**	**7.2**	**9.6**	**10.6**	**10.6**	**8.0**	**9.7**	**8.4**	**11.1**	**12.1**	**11.2**	**11.1**	– –
	(7.0,13.6)	(6.8,13.5)	(8.1,17.5)	(10.1,18.4)	(7.3,16.0)	(4.9,10.5)	(7.0,13.1)	(7.7,14.4)	(7.8,14.4)	(5.5,11.4)	(7.0,13.2)	(6.1,11.6)	(8.3,14.6)	(8.8,16.2)	(8.9,14.0)	(8.7,14.1)	
65+ years	**16.9**	**17.1**	**19.2**	**16.4**	**16.9**	**16.2**	**16.2**	**13.2**	**15.8**	**14.3**	**14.0**	**20.2**	**21.1**	**22.2**	**22.0**	**22.8**	– –
	(12.0,23.2)	(12.3,23.4)	(13.7,26.2)	(11.9,22.1)	(12.3,22.8)	(11.3,22.6)	(11.5,22.4)	(9.4,18.2)	(11.8,20.9)	(10.4,19.3)	(9.9,19.4)	(15.2,26.2)	(16.4,26.6)	(17.5, 27.8)	(17.9, 26.8)	(17.1, 25.1)	
Region																	NSI
Toronto	**8.5**	**8.4**	**10.6**	**8.5**	**†5.4**	**†5.8**	**†6.6**	**†6.5**	**†7.2**	**†4.9**	**†6.6**	**†8.6**	**†8.4**	**†8.1**	**†7.5**	**†9.5**	– –
	(5.7,12.4)	(5.6, 12.4)	(7.1,15.6)	(5.7,12.7)	(2.9, 9.6)	(3.5,9.5)	(4.2,10.4)	(3.9,10.6)	(4.6,10.9)	(2.9,8.2)	(3.9,10.9)	(5.5,13.3)	(5.6,12.3)	(5.1, 12.5)	(5.1, 11.0)	(6.9,12.9)	
Central South	**7.0**	**7.4**	**8.7**	**7.1**	**8.7**	**†2.6**	**†4.8**	**†3.8**	**†3.7**	**†5.8**	**†7.4**	**11.4**	**†6.8**	**11.3**	**†9.7**	**†8.1**	– –
	(4.0,12.2)	(4.5,12.1)	(4.3,16.7)	(3.7, 13.2)	(5.1,14.4)	(1.0,7.0)	(2.3,9.6)	(1.9,7.8)	(1.7,7.8)	(3.0,10.9)	(3.9,13.4)	(7.0,18.1)	(3.4,12.9)	(6.9, 17.9)	(6.0, 15.3)	(4.6,14.0)	
Central West	**†4.6**	**†3.8**	**7.8**	**7.0**	**7.0**	**†4.3**	**†4.0**	**†5.6**	**†6.1**	**†6.0**	**†4.6**	**†5.6**	**10.4**	**†8.8**	**†9.7**	**†8.8**	– –
	(2.8,7.4)	(1.8,7.7)	(4.7,12.7)	(4.4,10.9)	(4.3,11.1)	(2.3,7.8)	(2.2,7.2)	(3.2,9.7)	(3.6,10.1)	(3.5,10.2)	(2.6,8.0)	(3.3,9.5)	(6.7, 15.8)	(5.4, 13.9)	(6.8, 13.6)	(5.9,13.1)	
South West	**†4.2**	**†4.3**	**7.2**	**†6.2**	**†3.4**	**7.1**	**†5.5**	**†5.4**	**†6.8**	**†7.4**	**†5.5**	**†7.7**	**†7.1**	**†5.3**	**†8.8**	**†7.2**	– –
	(2.4,7.0)	(2.4,7.5)	(4.3,11.8)	(3.9,9.6)	(1.9,6.2)	(4.6,10.9)	(3.5,8.6)	(3.4,8.5)	(4.4,10.3)	(5.0,10.8)	(3.4,8.7)	(5.0,11.5)	(4.6,10.7)	(3.1, 8.9)	(6.4, 12.0)	(5.0,10.3)	
Central East	**†5.1**	**†6.4**	**†2.8**	**7.3**	**7.0**	**8.0**	**†5.1**	**†5.2**	**†6.5**	**†4.3**	**†5.8**	**†5.9**	**7.2**	**14.0**	**†9.2**	**†7.0**	– –
	(2.9,8.8)	(4.2,9.7)	(1.2,6.5)	(4.4,11.7)	(4.2,11.4)	(4.9,12.6)	(2.8,9.1)	(3.0,8.9)	(3.7,11.3)	(2.3,7.8)	(3.2,10.3)	(3.3,10.1)	(4.3,11.7)	(9.1, 20.9)	(6.2, 13.4)	(4.6,10.4)	
East	**†5.9**	**†4.8**	**†6.7**	**†5.7**	**†6.2**	**†5.2**	**†4.6**	**†7.0**	**†7.6**	**†5.0**	**†5.9**	**†7.1**	**11.0**	**†8.1**	**†7.4**	**†11.5**	T –
	(3.9,8.9)	(2.9,7.7)	(4.2,10.5)	(3.5,9.1)	(3.9,9.7)	(3.2,8.3)	(2.7,7.8)	(4.5,10.7)	(5.1,11.2)	(3.1,8.0)	(3.7,9.4)	(4.6,10.7)	(7.6,15.5)	(5.6, 11.7)	(5.3, 10.4)	(8.4,15.7)	
North	**†5.4**	**†3.6**	**†6.0**	**†6.6**	**8.4**	**6.9**	**†6.1**	**8.5**	**†6.0**	**†6.6**	**†6.1**	**†3.1**	**10.4**	**†8.4**	**†8.9**	**†7.8**	– –
	(3.4,8.4)	(2.1,6.1)	(3.4,10.3)	(4.2,10.2)	(5.7,12.2)	(4.7,10.0)	(3.8,9.7)	(5.7,12.5)	(4.2,8.6)	(4.3,10.1)	(3.7,9.8)	(1.6,5.9)	(6.9,15.3)	(5.5, 12.6)	(6.3, 12.6)	(5.2,11.6)	

Cont'd

	1996 (2141)	1997 (2219)	1998 (1777)	1999 (1938)	2000 (1887)	2001 (2088)	2002 (1933)	2003 (1933)	2004 (2101)	2005 (1906)	2006 (1527)	2007 (1618)	2008 (1599)	2009 (1602)	2010 (2352)	2011 (2401)	Change	
Marital Status																	NSI	
Married/Partner	6.6	6.6	8.1	8.1	7.4	6.6	6.1	7.2	6.9	6.8	5.9	8.2	9.3	10.3	9.7	10.1	T	–
Previously Married	9.2	9.3	9.7	8.8	10.8	6.4	7.4	6.6	8.0	8.4	10.1	10.2	10.9	11.8	13.4	11.4	–	–
Never Married	†3.1	†2.7	†4.4	† 3.2	† 1.8	† 3.0	†1.7	†2.4	†4.5	†	†3.6	†2.1	†4.5	†4.7	†3.2	†3.3	–	–
Education																	NSI	
Less than high school	†7.5	9.8	†5.6	12.2	9.8	12.0	†7.2	11.0	9.6	†8.5	†8.7	†11.5	15.9	18.8	†13.8	17.0	T	–
Completed high school	†5.3	†6.0	8.7	†7.7	†6.6	†5.7	†4.3	†5.2	†6.3	†7.1	†5.9	†7.6	†8.3	9.1	†7.8	†7.1	–	–
Some college or university	5.1	†4.5	6.2	†4.5	†4.5	† 3.8	5.6	†4.3	†5.7	†4.6	†5.0	†5.2	8.1	7.1	7.2	†6.0	–	–
University degree	6.7	†4.9	8.0	6.8	6.7	5.6	†4.5	6.6	6.1	†4.6	†5.9	7.7	7.3	8.9	9.8	10.4	T	–

Notes: (1) All analyses are sample design adjusted; [a] 95% confidence interval; † Estimate suppressed or unstable;

(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates;

(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q: *Response of "daily" or "almost daily" to the question: How often, if ever, did you drink alcoholic beverages during the PAST TWELVE months?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.2.1
Past Year Daily Drinking by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
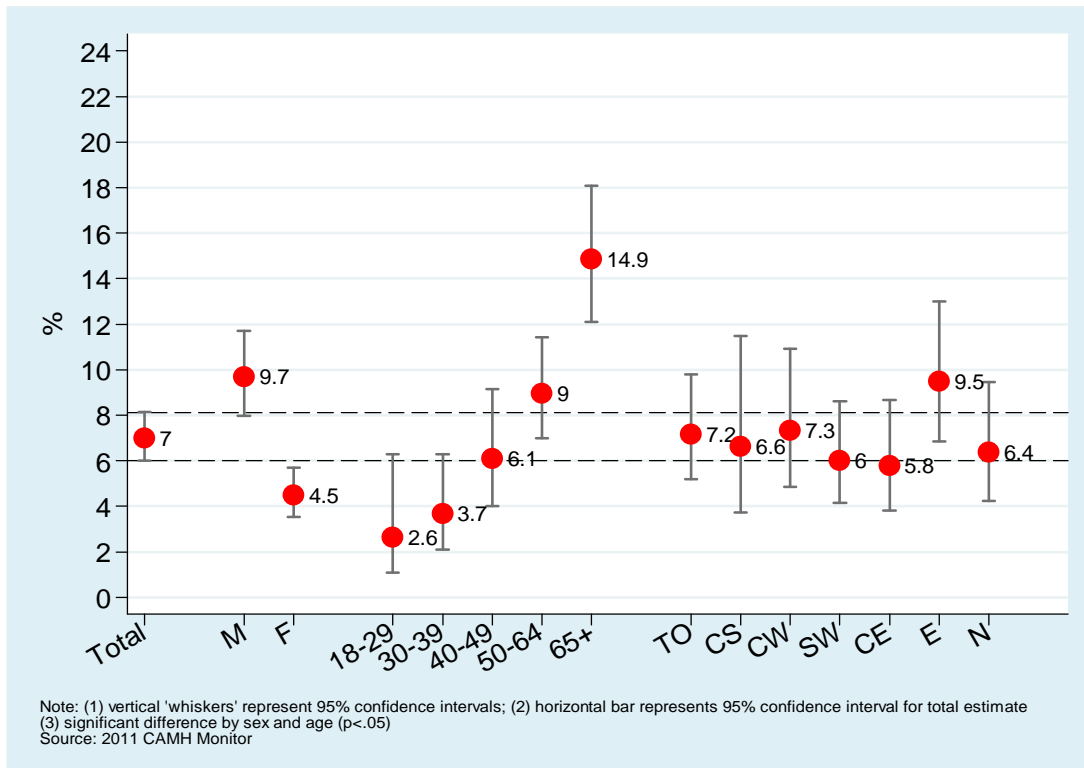
Figure 3.2.2
Daily Drinking, Ontarian Past Year Drinkers Aged 18+, 1977–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
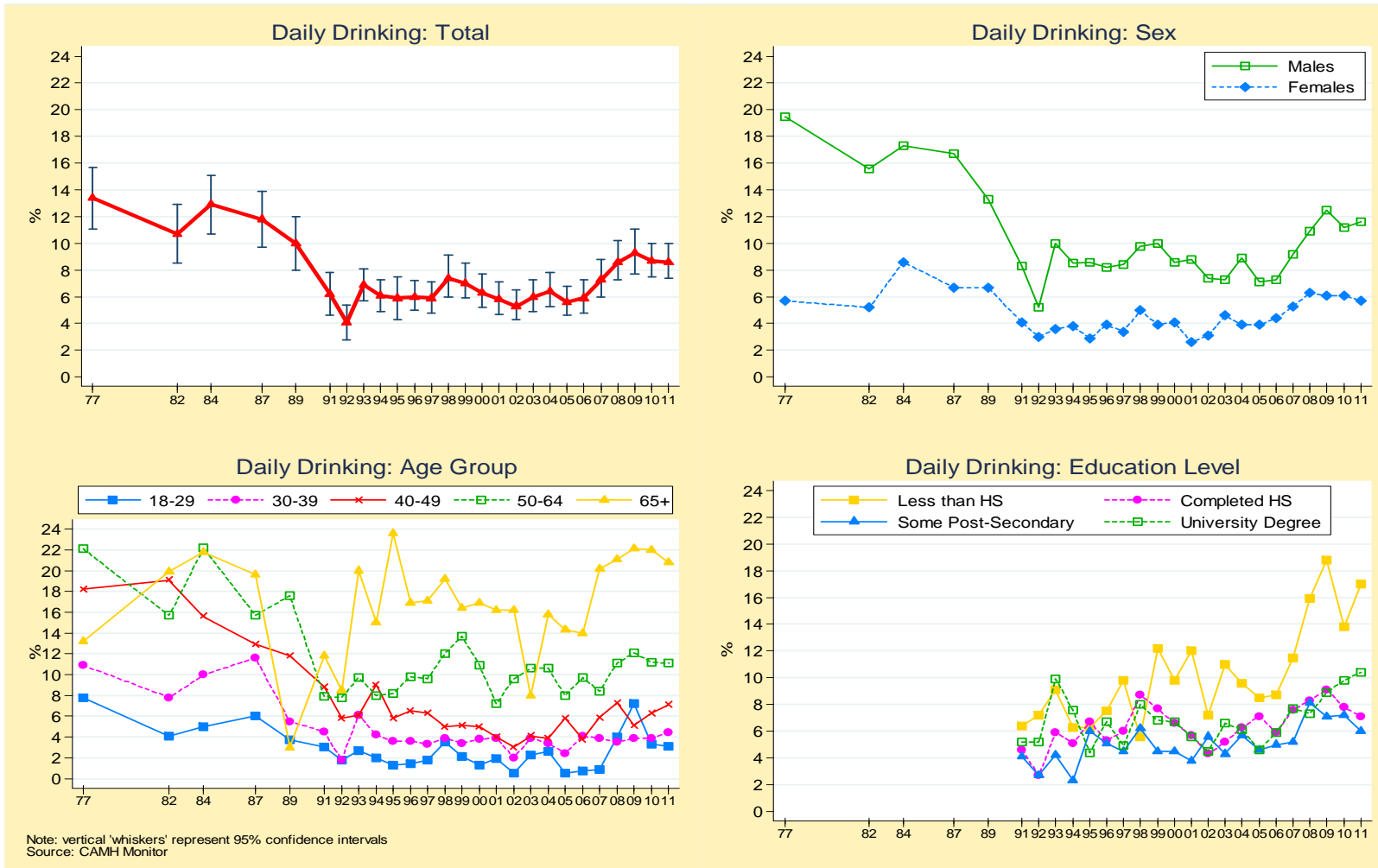
3.3   Estimated Number of Drinks Consumed Weekly Among Past Year Drinkers

The estimated number of drinks consumed is based on the respondent's recall of both the frequency of drinking and the amount consumed on a typical drinking occasion. In contrast to the prevalence of past year drinking, which describes the size of the drinking population, and the prevalence of daily drinking, which describes the percentage drinking regularly, the estimated number of drinks consumed is an indicator of the <u>quantity</u> of alcohol typically consumed.

2011………………..Table 3.3.1

On average, Ontarian **past year drinkers** reported consuming **4.7** (95% CI: 4.3 to 5.1) **drinks weekly**.

Of the six demographic factors examined, there were discernible univariate effects only for **gender**.

- Male drinkers consumed an average of 6.7 drinks weekly, compared to only 2.8 drinks for female drinkers.

There were no discernible differences for age, region, marital status, education and income.

Trends
1996–2011…….……..Table 3.3.1;
Fig.3.3.1

2010–2011
The average number of drinks consumed weekly did not change discernibly between 2010 and 2011 (4.6 vs. 4.7). In addition, the number of drinks consumed was **stable for all** sex, age, region, marital status, education and income subgroups.

1996–2011
Between 1996 and 2011, there was a **discernible increase** in the average number of drinks consumed weekly, from 3.3 in 1996 to 4.7 in 2011.

There were also **discernible increases** in the number of drinks consumed among drinking **men** (from 4.8 in 1996 to 6.7 in 2011), among drinking **women** (from 1.9 in 1996 to 2.8 in 2011) and drinkers who **did not graduate** high school (from 3.4 in 1996 to 9.8 in 2009).

During this period, there is a notable upturn from 2007 to 2008 (3.7 to 5.0), which is especially evident for men (5.0 to 7.0) and 18 to 29 year olds (4.5 to 6.7).

Table 3.3.1: Estimated *Average Number of Drinks Consumed Per Week* During the Past 12 Months, Ontarian *Past Year Drinkers* Aged 18+, 1996–2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(2141)	(2219)	(1582)	(1938)	(1887)	(2088)	(1933)	(1933)	(2101)	(1906)	(1527)	(1618)	(1599)	(1602)	(2352)	(2401)	
Total Sample	3.32	3.38	3.90	3.58	3.53	3.44	3.51	3.50	3.69	3.81	3.88	3.67	5.04	4.62	4.56	4.69	T –
(95% CI)	(2.97,3.68)	(3.09,3.66)	(3.50,4.30)	(3.25,3.91)	(3.19,3.88)	(3.14,3.75)	(3.05, 3.97)	(3.18, 3.83)	(3.36, 4.02)	(3.47, 4.15)	(3.45, 4.31)	(3.33,4.02)	(4.52, 5.55)	(4.02, 5.22)	(4.18, 4.93)	(4.25, 5.14)	
Gender																	***
Men	4.84	4.82	5.62	5.12	5.01	5.00	4.85	4.84	4.97	4.97	5.36	4.96	7.03	6.48	6.13	6.67	T –
	(4.16, 5.52)	(4.31,5.32)	(4.91,6.34)	(4.55,5.69)	(4.40,5.61)	(4.44,5.53)	(4.05, 5.65)	(4.27, 5.41)	(4.41, 5.52)	(4.44, 5.49)	(4.60,6.13)	(4.37,5.54)	(6.14, 7.92)	(5.36, 7.61)	(5.48, 6.78)	(5.83, 7.50)	
Women	1.87	1.97	2.19	1.94	2.06	1.85	2.16	2.14	2.38	2.54	2.28	2.36	3.01	2.79	2.96	2.76	T –
	(1.67, 2.08)	(1.74,2.19)	(1.89,2.49)	(1.68,2.21)	(1.77,2.34)	(1.64,2.06)	(1.75, 2.57)	(1.86, 2.41)	(2.06, 2.70)	(2.14, 2.95)	(1.98,2.57)	(2.04,2.68)	(2.55, 3.46)	(2.44, 3.14)	(2.64, 3.28)	(2.51, 3.01)	
Age																	NS
18 - 29	4.16	3.74	5.14	3.84	3.29	3.85	3.92	4.00	4.67	4.41	4.76	4.50	6.73	5.56	5.39	5.83	– –
	(3.04, 5.28)	(3.10,4.37)	(4.04,6.24)	(3.01,4.68)	(2.72,3.86)	(3.11,4.60)	(2.79, 5.06)	(3.20, 4.81)	(3.69, 5.66)	(3.63,5.21)	(3.44,6.08)	(3.54,5.46)	(5.01, 8.46)	(3.17, 7.95)	(4.15, 6.62)	(4.33, 7.34)	
30 - 39	2.64	2.98	3.33	3.55	2.88	3.49	2.83	3.15	2.99	3.09	3.72	2.49	3.98	4.21	3.86	4.02*	– –
	(2.20, 3.07)	(2.50,3.46)	(2.49,4.17)	(2.80,4.31)	(2.37,3.38)	(2.80,4.17)	(2.34, 3.32)	(2.49, 3.82)	(2.45, 3.54)	(2.52,3.67)	(2.69,4.75)	(1.91,3.06)	(3.12, 4.85)	(3.16, 5.26)	(3.06, 4.65)	(3.14, 4.91)	
40 - 49	3.11	2.99	3.18	3.11	3.67	2.96	3.38	2.81	3.23	4.25	3.31	3.15	4.96	4.37	4.01	4.78	– –
	(2.52, 3.70)	(2.45,3.53)	(2.61,3.74)	(2.61,3.61)	(2.82,4.54)	(2.39,3.52)	(1.91, 4.85)	(2.34, 3.28)	(2.50, 3.96)	(3.26, 5.24)	(2.64,3.96)	(2.65,3.65)	(3.90, 6.02)	(3.51, 5.23)	(3.47, 4.55)	(3.87, 5.70)	
50 - 64	3.44	3.42	3.95	3.87	4.53	3.43	3.96	3.92	3.90	3.45	3.60	4.15	4.64	4.49	4.79	4.53	– –
	(2.86, 4.03)	(2.82,4.02)	(3.18,4.73)	(3.18,4.56)	(3.42,5.64)	(2.88,3.99)	(3.20, 4.73)	(3.10, 4.75)	(3.32, 4.48)	(2.93,3.97)	(3.02,4.18)	(3.32,4.98)	(3.83, 5.45)	(3.65, 5.32)	(4.12, 5.46)	(3.95, 5.12)	
65+	3.39	4.17	4.14	3.58	3.50	3.73	3.76	3.96	4.01	4.06	4.06	4.00	4.89	4.81	4.77	4.57	– –
	(2.73, 4.04)	(3.08,5.25)	(3.11,5.18)	(2.83,4.32)	(2.73,4.27)	(2.78,4.67)	(2.90, 4.63)	(3.00, 4.92)	(3.27, 4.75)	(3.33, 4.79)	(3.14,4.98)	(3.15,4.85)	(3.94, 5.85)	(3.86, 5.76)	(4.01, 5.53)	(3.54, 5.60)	
Region																	NS
Toronto	3.59	3.15	4.20	3.67	3.07	3.22	3.21	3.50	3.54	3.18	3.61	3.65	4.27	3.70	4.15	4.04	– –
	(2.89, 4.29)	(2.55, 3.76)	(3.26, 5.14)	(2.91, 4.42)	(2.43, 3.70)	(2.67, 3.76)	(2.38, 4.04)	2.70, 4.30)	(2.82, 4.28)	(2.59, 3.77)	2.68,4.54)	(2.92,4.37)	(2.99, 5.55)	(2.94,4.47)	(3.37,4.93)	(3.04, 5.03)	
Central South	3.16	4.03	3.80	3.29	4.14	3.00	3.52	2.97	3.46	3.90	5.16	3.78	4.44	6.12	5.24	3.82	– –
	(2.52, 3.80)	(3.09, 4.97)	(2.64, 4.97)	(2.54, 4.04)	(2.56, 5.73)	(2.00, 4.00)	(2.24, 4.80)	(2.23, 3.71)	(2.13, 4.79)	(2.83, 4.98)	(3.51,6.81)	(2.76,4.80)	(3.08, 5.80)	(4.16, 8.07)	(3.95, 6.53)	(2.87, 4.77)	
Central West	2.66	3.09	3.37	3.33	3.41	3.00	2.97	3.73	3.46	4.27	3.62	3.63	5.75	4.37	4.75	5.42	– –
	(2.21, 3.12)	(2.38, 3.81)	(2.47, 4.27)	(2.45, 4.21)	(2.71, 4.12)	(2.39, 3.62)	(2.41, 3.52)	(2.70, 4.75)	(2.63, 4.29)	(3.35, 5.19)	(2.28,4.97)	(2.53,4.72)	(4.16, 7.35)	(3.32, 5.42)	(3.72, 5.78)	(3.88, 6.96)	
South West	3.67	2.99	3.97	3.79	3.49	4.03	3.81	3.05	4.22	4.14	4.31	4.56	4.27	3.33	4.51	4.94	– –
	(1.84, 5.50)	(2.26, 3.72)	(3.04, 4.90)	(2.96, 4.63)	(2.67, 4.31)	(3.21, 4.84)	(2.50, 5.13)	(2.49, 3.61)	(3.38, 5.05)	(3.38, 4.89)	(3.39,5.23)	(3.57,5.54)	(3.46, 5.08)	(2.71, 3.95)	(3.65, 3.38)	(4.00, 5.88)	
Central East	3.20	3.40	3.04	3.70	3.55	3.50	4.43	3.31	3.94	3.87	3.19	2.76	5.35	6.01	4.48	4.54	– –
	(2.61, 3.80)	(2.75, 4.05)	(2.19, 3.88)	(2.82, 4.58)	(2.79, 4.30)	(2.57, 4.42)	(2.21, 6.65)	(2.59, 4.03)	(3.04, 4.84)	(2.83, 4.91)	(2.28,4.10)	(2.15,3.36)	(3.99, 6.72)	(3.46, 8.55)	(3.45, 5.51)	(3.64, 5.44)	
East	3.39	4.07	4.33	3.46	3.53	3.51	3.92	3.97	3.44	3.22	3.99	4.27	5.71	4.18	4.24	5.11	– –
	(2.48,4.29)	(3.20, 4.94)	(3.40, 5.26)	(2.66, 4.26)	(2.57, 4.48)	(2.76, 4.25)	(2.70, 3.88)	(3.08, 4.86)	(2.82, 4.06)	(2.69, 3.75)	(3.19,4.79)	(3.33,5.20)	(4.58, 6.83)	(3.24, 5.11)	(3.58, 4.90)	(4.15, 6.08)	
North	3.65	2.92	4.03	3.92	4.23	4.42	3.64	4.19	3.83	4.67	3.67	2.78	5.69	5.67	5.26	4.93	– –
	(2.53, 4.77)	(2.29, 3.56)	(3.09, 4.96)	(2.65, 5.19)	(2.97, 5.48)	(2.99, 5.85)	(2.84, 4.45)	(3.16, 5.22)	(3.09, 4.57)	(2.92, 6.40)	(2.69,4.65)	(2.14,3.43)	(4.53, 6.85)	(4.38, 6.96)	(4.01, 6.50)	(4.02, 5.84)	

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2141)	(2219)	(1582)	(1938)	(1887)	(2088)	(1933)	(1933)	(2101)	(1906)	(1527)	(1618)	(1599)	(1602)	(2352)	(2401)		
Marital Status																	NS	
Married/Partn.	2.70	3.04	3.02	3.26	3.30	3.21	3.09	3.30	3.28	3.58	3.29	3.30	4.41	4.52	4.22	4.40	–	–
Prev. Married	3.94	4.05	3.36	3.45	3.39	3.09	2.85	3.94	3.48	4.36	4.57	3.69	5.30	5.39	5.02	5.48	–	–
Never married	4.63	3.75	5.41	4.57	4.91	4.23	5.09	3.92	4.99	4.21	5.20	4.85	6.67	4.60	5.33	5.29	–	–
Education																	NS	
Less than HS	3.41	4.13	4.39	4.86	3.67	4.62	6.20	4.14	4.70	6.06	4.82	4.92	8.31	9.80	5.00	5.86	T	–
Complete HS	3.31	3.57	4.26	3.82	3.81	3.97	3.01	3.96	3.80	4.33	4.41	4.44	6.07	4.25	4.64	4.76	–	–
Some College or Univ	3.65	3.19	3.82	3.27	3.40	2.96	3.22	3.44	3.81	3.67	3.72	3.15	4.54	4.04	4.86	4.76	–	–
Univ Degree	2.93	2.84	3.32	3.08	3.36	3.08	2.98	3.02	3.15	2.88	3.40	3.24	3.84	4.05	4.05	4.39	–	–

Notes: (1) All analyses are sample design adjusted; *p<.05; **p<.01; ***p<.001; based on F-tests; CI = 95% confidence interval; NS – no statistically discernible difference.

(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.

Def: *Product of the frequency of drinking and the amount consumed on a typical drinking occasion*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.3.1
Average Number of Drinks Consumed Weekly, Ontarian Past Year Drinkers Aged 18+, 1992–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
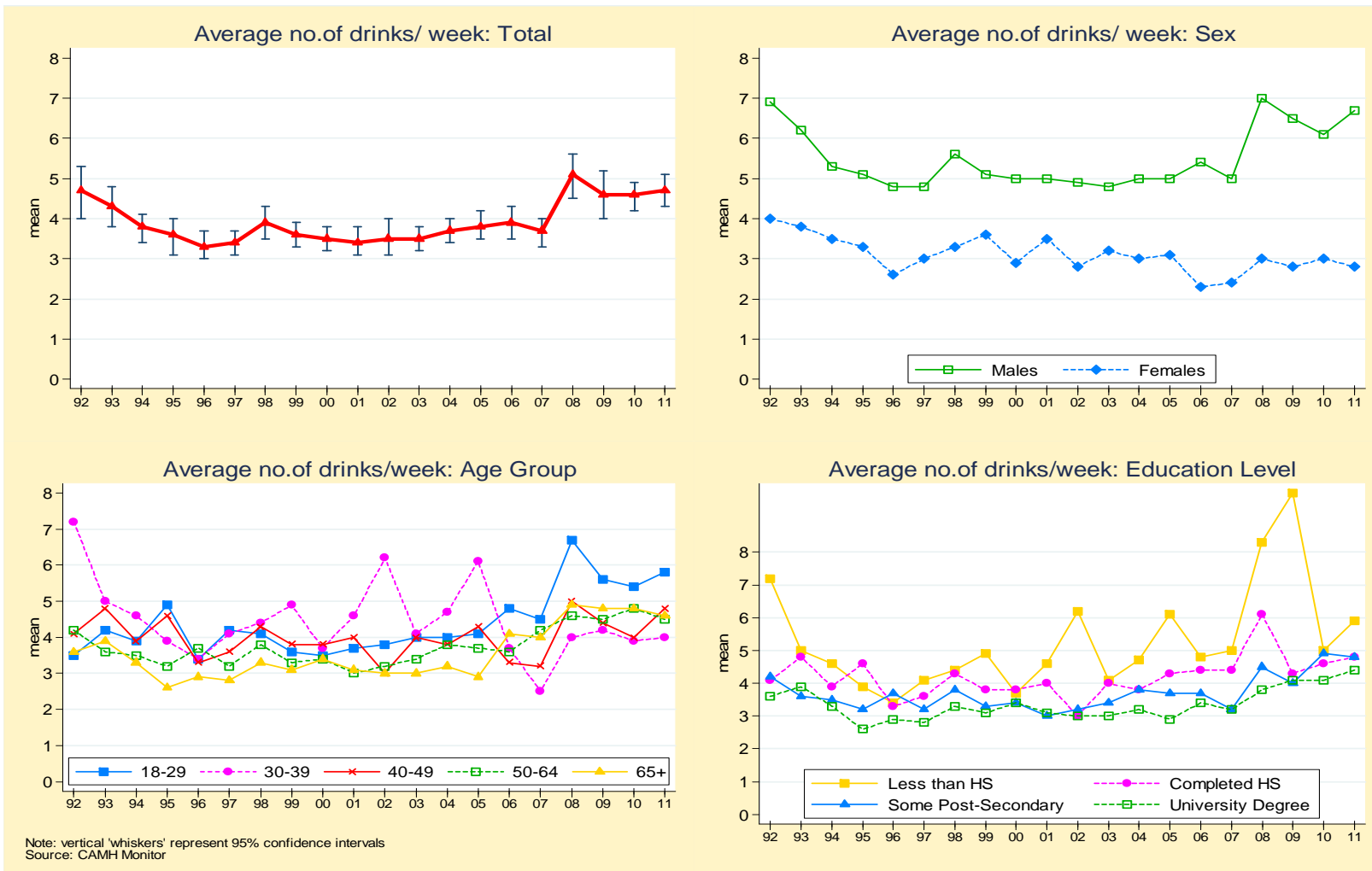
3.4   Exceeding Low-Risk Drinking Guidelines

Canadian guidelines referring to "low-risk drinking" were initially disseminated in 1994 following an international conference on health benefits and risks (Ashley et al., 1994). In 1997, updated guidelines were released by the former Addiction Research Foundation (currently CAMH) and the Canadian Centre on Substance Abuse (Bondy et al., 1999).

Released on November 25, 2011, the recently revised Canada's Low-Risk Alcohol Drinking Guidelines (LRDG) were developed by the National Alcohol Strategy Advisory Committee (NASAC) to help Canadians make healthier choices about their alcohol consumption.

*The revised LRDG recommend no more than **two drinks a day OR 10 standard drinks a week for women**, and no more than **three drinks a day OR 15 standard drinks a week for men**. They also recommend that Canadians plan non-drinking days each week, to help avoid developing a habit. The LRDG suggest limits to reduce harm on single occasions, and highlight situations where alcohol should be avoided altogether, such as when taking medication, driving, or when living with mental or physical health problems. Also, caution should be taken to avoid intoxication and injury. The guidelines are intended to represent low risk of the most important forms of harm and to address usual drinking over many years. The compliance with low-risk drinking guidelines is derived from the respondents' self-reported consumption of standard drinks consumed during the past seven days, measured daily.*

Respondents were considered as exceeding the guidelines if they reported a total weekly consumption of 16 drinks or more for men and 11 or more drinks for women, OR if they exceeded three drinks(for men) or two drinks (for women) in any given day over the past week. In 2011, the LRDG items were asked only of a random subsample of respondents (Panel A, n=1,040).

2011….. Tables 3.4.1, 3.4.2, Fig. 3.4.1

An estimated **18.4%** (95% CI: 15.2% to 22.1%) of Ontarians exceeded the low-risk drinking guidelines during the past 12 months. Among past year drinkers, the prevalence was **22.3%** (95% CI: 18.5% to 26.6%). The corresponding population estimate is 1,746,767 Ontario adults exceeded the guidelines (95% CI: 1,396,033 to 2,097,501).

When controlling for other demographic factors, only **gender** and **age** were discernibly related to exceeding the drinking guidelines during the past year.

- The adjusted odds of exceeding guidelines among men were 1.8 times higher than among women (23.0% vs. 13.9%).

- Exceeding guidelines showed a **discernible decline with age**, dropping from 29% of 18 to 29 year olds to 4.0% of those 65 years and older. Only one of the four sequential age group comparisons was statistically discernible: the adjusted odds of exceeding the drinking guidelines were 72% lower among those aged 65 and older than those aged 50 to 64 (OR=0.28).

Region, marital status, education and income were not discernibly related to

exceeding the low-risk drinking
guidelines, when controlling for other
factors.

Trends
2003–2011 ……… Tables 3.4.3; 3.4.4;
Fig 3.4.2

2009–2011
The percent of Ontarians exceeding the
low-risk drinking guidelines in **2011**
(18.4%) was statistically unchanged
from 2009 (17.8%). In addition, rates of
exceeding the drinking guidelines were
stable for most subgroups. There were
however three discernible subgroup
declines during this period: among
respondents aged 65 and older (from
9.7% in 2009 to 4.0% in 2011), among
residents of the Central South (from
21.5% in 2009 to 5.2% in 2011) and
among respondents without high school
completion (from 21.5% in 2009 to
8.8% in 2011).

2003–2011
Between 2003 and 2011, exceeding
guidelines did not vary discernibly.

Year did not interact discernibly with
any of the demographic categories
analysed, suggesting that subgroup
trends were not dissimilar.

Although there was no evidence of
measurable differential subgroup trends,
there was discernible non-linear
trending among residents of the **South
West** (from 17.8% in 2003 to 27.2% in
2006 and to 13.6% in 2009), the **East**
(from 17.1% in 2003 to 25.1% in 2006
and to 15.0% in 2011) and among
respondents with some **postsecondary
education or university degree** (from
19.1% in 2003 to 27.1% in 2005 and
back down to 18.8% in 2008).

Table 3.4.1: Percentage *Exceeding Low-Risk Drinking Guidelines* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	1040	**18.4**	(15.2, 22.1)	—
Gender				*
Men	419	**23.0**	(17.9, 29.1)	**1.78***
Women *(Comparison Group)*	621	**13.9**	(10.5, 18.3)	—
Age				
(Comparison Group is previous age group)				**
18-29	97	**†29.0**	(19.3, 41.1)	—
30-39	137	**†22.2**	(14.9, 31.7)	0.75
40-49	185	**21.7**	(15.5, 29.5)	0.94
50-64	318	**†15.2**	(10.3, 21.9)	0.68
65+	280	**†4.0**	(2.0, 7.7)	**0.28***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	178	**†15.9**	(9.9, 24.7)	0.96
Central South	75	**†**	—	**0.27***
Central West	130	**†21.7**	(13.7, 32.6)	1.27
South West	177	**†21.9**	(14.7, 31.4)	1.47
Central East	152	**†21.4**	(13.6, 32.0)	1.46
East	159	**†15.0**	(9.6, 22.7)	0.89
North	169	**†21.5**	(15.2, 29.7)	1.59
Marital Status				NS
Married/Partner *(Comparison Group)*	644	**17.2**	(13.7, 21.4)	—
Previously Married	223	**†10.6**	(5.9, 18.4)	1.22
Never Married	159	**†25.8**	(17.7, 35.9)	1.13
Education				NS
Less than high school *(Comparison Group)*	116	**†8.8**	(3.9, 18.8)	—
Completed high school	232	**†19.6**	(13.1, 28.3)	1.55
Some college or university	337	**20.7**	(15.1, 27.7)	1.52
University degree	336	**18.3**	(13.2, 24.8)	1.25
Household Income				NS
< $30,000 *(Comparison Group)*	116	**†**	—	—
$30,000-$49,999	143	**†10.4**	(5.4, 19.0)	1.10
$50,000-$79,999	170	**†17.3**	(11.0, 26.2)	1.56
$80,000+	351	**24.2**	(18.9, 30.4)	2.45
Not stated	260	**†16.7**	(10.3, 26.0)	1.91

Notes: [1] LRDG items were asked of a random subsample in 2011 (N= 1,040); all analyses are sample design adjusted.

(1) *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.

(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.

(3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group.

(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=950).

Def'n: *Based on total weekly consumption of 16 drinks or more for males or 11 or more drinks for females, or, over the past week, a daily consumption exceeding two drinks for women or three drinks for men.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.4.2: Percentage *Exceeding Low-Risk Drinking Guidelines* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2003-2011

	2003	2004	2005	2006	2007	2008	2009	2011	Change	
(N=)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(1040)		
Total Sample	**17.6**	**19.5**	**21.5**	**20.6**	**19.1**	**17.6**	**17.8**	**18.4**	–	–
(95%CI)[a]	(15.9, 19.5)	(17.7, 21.4)	(19.6, 23.6)	(18.5, 22.9)	(17.1, 21.3)	(15.6, 19.8)	15.8, 20.0)	(15.2, 22.1)		
Gender										
Men	**21.2**	**22.7**	**26.5**	**26.8**	**21.7**	**21.4**	**21.1**	**23.0**	–	–
	(18.5, 24.2)	(19.9, 25.9)	(23.4, 29.8)	(23.3, 30.5)	(18.6, 25.2)	(18.2, 24.9)	(18.0, 24.6)	(17.9, 29.1)		
Women	**14.2**	**16.4**	**17.0**	**14.8**	**16.7**	**14.1**	**14.7**	**13.9**	–	–
	(12.2, 16.5)	(14.2, 18.9)	(14.8, 19.5)	(12.4,17.4)	(14.3,19.4)	(11.8,16.7)	(12.3,17.6)	(10.5,18.3)		
Age										
18-29	**27.1**	**34.9**	**33.5**	**33.7**	**34.3**	**28.3**	**29.1**	**†29.0**	–	–
	(22.4, 32.4)	(29.5, 40.8)	(28.1, 39.5)	(27.4, 40.7)	(27.7, 41.4)	(21.9, 35.8)	(22.3,37.0)	(19.3, 41.1)		
30-39	**20.9**	**18.9**	**24.0**	**23.1**	**17.5**	**19.0**	**16.2**	**†22.2**	–	–
	(16.9, 25.5)	(15.3,23.0)	(19.8, 28.8)	(18.5, 28.5)	(13.5, 22.3)	(14.3, 24.7)	(12.2, 21.2)	(14.9,31.7)		
40-49	**16.9**	**18.0**	**24.0**	**18.9**	**19.9**	**20.0**	**20.7**	**†21.7**	–	–
	(13.8, 20.5)	(14.7, 21.9)	(20.2, 28.3)	(14.9,23.6)	(15.9, 24.6)	(15.9, 24.8)	(16.8,25.3)	(15.5,29.5)		
50-64	**12.2**	**16.8**	**15.9**	**17.1**	**16.3**	**14.2**	**14.5**	**†15.2**	–	–
	(9.4, 15.6)	(13.6, 20.6)	(12.9, 19.6)	(13.7, 21.1)	(13.1, 20.2)	(11.3, 17.7)	(11.3, 18.4)	(14.7,22.2)		
65+	**9.1**	**7.9**	**7.7**	**8.6**	**8.4**	**7.6**	**9.7**	**†4.0**	–	2Y
	(6.3, 12.8)	(5.3, 11.5)	(5.2, 11.2)	(5.8, 12.6)	(5.8, 12.1)	(5.3,10.7)	(7.1, 13.1)	(2.0, 7.7)		
Public Health Region										
Toronto	**18.1**	**15.7**	**18.5**	**15.5**	**14.3**	**12.6**	**17.1**	**†15.9**	–	–
	(14.1, 22.97)	(12.1, 20.1)	(14.4, 23.4)	(11.6, 20.6)	(10.6, 19.1)	(9.1, 17.2)	(12.6, 22.7)	(9.9, 24.7)		
Central South	**16.1**	**19.7**	**20.5**	**†22.8**	**†19.5**	**†16.2**	**†21.5**	**†5.2**	–	2Y
	(11.5, 22.0)	(14.2, 26.7)	(14.8, 27.6)	(15.8, 31.7)	(13.7, 26.9)	(10.5, 24.1)	(15.2, 29.5)	(1.6,15.3)		
Central West	**18.8**	**21.9**	**24.6**	**19.4**	**†16.6**	**16.7**	**17.2**	**†21.7**	–	–
	(14.5, 24.2)	(17.1, 27.7)	(19.8, 30.2)	(14.3, 25.7)	(11.7, 22.9)	(12.0, 22.8)	(12.8, 22.6)	(13.7,32.6)		
South West	**17.8**	**23.9**	**25.1**	**27.2**	**22.2**	**17.1**	**13.6**	**†21.9**	T	–
	(14.1,22.2)	(19.4, 28.9)	(20.8, 29.9)	(22.0, 33.1)	(17.4, 27.8)	(13.1, 22.2)	(10.0,18.2)	(14.7, 31.4)		
Central East	**16.7**	**18.4**	**20.2**	**19.9**	**19.0**	**19.7**	**20.9**	**†21.4**	–	–
	(12.4, 22.0)	(13.8, 24.1)	(15.3, 26.1)	(14.4, 26.8)	(13.9, 25.5)	(14.6, 26.1)	(15.3, 27.7)	(13.6,32.0)		
East	**17.1**	**20.5**	**20.4**	**25.1**	**24.2**	**23.2**	**15.3**	**†15.0**	T	–
	(13.4, 21.6)	(16.6, 25.0)	(16.3, 25.2)	(20.0, 31.0)	(19.2,30.1)	(18.0, 29.3)	(11.5, 20.1)	(9.6,22.7)		
North	**17.7**	**18.9**	**21.9**	**16.6**	**24.0**	**22.1**	**22.1**	**†21.5**	–	–
	(13.9, 22.2)	(15.7, 22.6)	(17.8, 26.7)	(12.5, 21.5)	(19.0, 29.9)	(17.1, 28.0)	(17.0, 28.4)	(15.2,29.7)		
Marital Status										
Married/Partner	**15.5**	**15.9**	**20.2**	**18.0**	**16.1**	**15.6**	**15.9**	**17.2**	–	–
Previously Married	**15.5**	**16.2**	**14.7**	**13.3**	**19.4**	**14.5**	**16.5**	**†10.6**	–	–
Never Married	**24.8**	**32.4**	**29.7**	**33.3**	**29.0**	**26.0**	**25.2**	**†25.8**	–	–
Education										
Less than high school	**14.3**	**13.7**	**15.8**	**18.6**	**†17.9**	**20.5**	**†21.5**	**†8.8**	–	2Y
Completed high school	**20.6**	**20.5**	**21.5**	**20.5**	**21.2**	**18.8**	**15.7**	**†19.6**	–	–
Some college or university	**19.1**	**21.4**	**27.1**	**21.6**	**21.8**	**18.8**	**20.4**	**20.7**	T	–
University degree	**15.5**	**19.7**	**17.1**	**20.8**	**14.6**	**14.6**	**15.5**	**18.3**	–	–

Notes: (1) All analyses are sample design adjusted; [a] 95% confidence interval; † Estimate suppressed or unstable;
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2003-2011; **2Y** discernible change (p<.05) between last two estimates;
(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Def'n: *Based on total weekly consumption of 16 drinks or more for males or 11 or more drinks for females, or, over the past week, a daily consumption exceeding two drinks for women or three drinks for men.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.4.1
Percentage Exceeding Low-Risk Drinking Guidelines in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
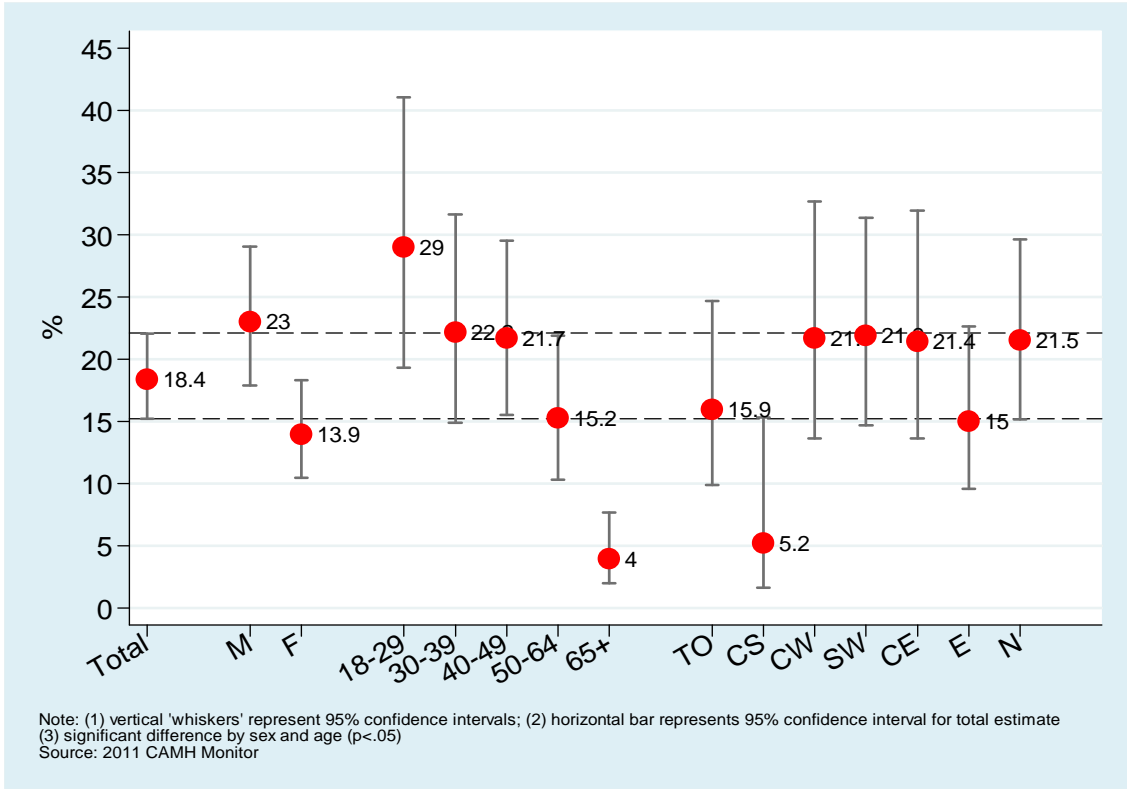
Figure 3.4.2
Percentage Exceeding Low-Risk Drinking Guidelines in the Past Year, Ontarians Aged 18+, 2003–2011

Note: Vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
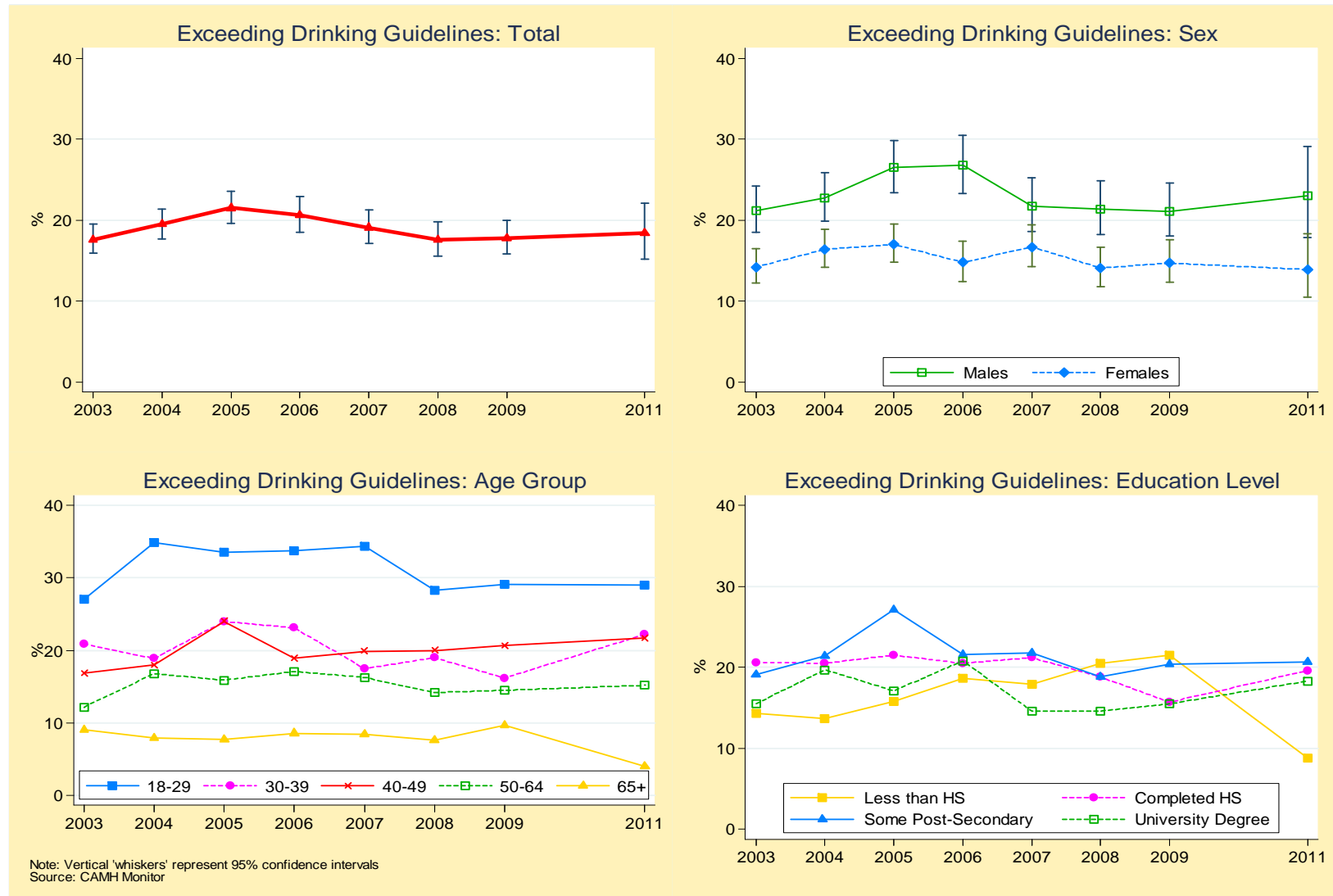
3.5 Past Year Weekly Binge Drinking: Five or More Drinks on a Single Occasion Weekly

The percentage reporting the consumption of five or more drinks on a single occasion on a weekly basis ("binge drinking") during the 12 months before the survey is an indicator of **regular heavy intake** *of alcohol. Although we retain the "binge" drinking label for reader recognition, we must note that the use of this term is a matter of debate among researchers. Readers should also note that this concept is equivalent to the terms "heavy episodic drinking", and more recently, "risky single occasion drinking" (RSOD).*

2011………………..Tables 3.5.1, 3.5.2;
Fig. 3.5.1

Overall, the estimated percentage of Ontarians who binge drink weekly – drink five or more drinks on a single occasion on a weekly basis in the 12 months before the survey – was **7.4%** (95% CI: 6.1% to 8.8%). Among past year drinkers, the prevalence was **9.1%** (95% CI: 7.6% to 10.8%). The corresponding population estimate is 691,646 Ontario adults who binge drink weekly (95% CI: 563,952 to 819,339).

Gender, age, marital status and **education** were discernibly related to weekly binge drinking, when controlling for other demographics:

- The adjusted odds of weekly binge drinking among men were 5 times higher than women (12.4% vs. 2.7%; OR=5.11).

- Weekly binge drinking declines with age. Those aged 18 to 29 reported the highest percentage of weekly binge drinking (16.2%), whereas those aged 65 and older reported the lowest rate (2.6%). Two of the four sequential age group comparisons are statistically discernible: the adjusted odds of weekly binge drinking were discernibly lower among 30 to 39 year olds (by 67%) than 18 to 29 year olds (6.2% vs. 16.2%; OR=0.33) and discernibly lower among 50 to 64 year olds (by 50%) than 40 to 49 year olds (4.8% vs. 7.8%; OR=0.50).

- The adjusted odds of weekly binge drinking among those previously married were 2.6 times higher than among married respondents (8.9% vs. 5.7%).

- Weekly binge drinking was highest among those who graduated high school (10.6%) and lowest among those with a university degree (5.2%).

Region and income were not discernibly related to weekly binge drinking.

Past year drinkers displayed similar characteristics related to weekly binge drinking: men, those aged 18 to 29, those previously married and those who did not graduate high school reported the highest percent of weekly binge drinking among their respective demographic subgroups.

Trends
1977–2011………Tables 3.5.3, 3.5.4;
Fig. 3.5.2

2010–2011
Weekly binge drinking for the total sample remained virtually unchanged in 2011 (7.4%) from 2010 (7.5%) and 2009 (7.1%), and rates of weekly binge drinking were stable since 2009 for most subgroups. There was only one discernible subgroup increase among previously married respondents, from 4.4% in 2010 to 8.9% in 2011.

Past year drinkers displayed similar characteristics. The estimate of weekly binge drinking was not discernibly different in 2011 (9.1%) from 2010 (9.6%) and 2009 (9.0%), and the rate increased discernibly only among those previously married, from 6.2% in 2010 to 12.2% in 2011.

1996–2011

Although estimates of weekly binge drinking remained stable between 1996 and 2007, varying between 10.5% and 12.7% among the total sample, and between 13.1% and 16.5% among past year drinkers, there was a discernible **decline** in binge drinking between 2007 and 2011. Estimates declined from 11.2% in 2007 to 7.4% in 2011 for the total sample and from 13.8% to 9.1% among drinkers.

Year did not interact discernibly with any of the demographic categories analysed, suggesting that subgroup declines were similar among our risk factors. Indeed, discernible subgroup declines were evident during this period for gender, age, region, marital status and education.

1977–2011

Since 1977, estimates of weekly binge drinking have ranged from 7% (8.2% among drinkers) in 1995 to 12.7% (16.5% among drinkers) in 2000. **Three distinct periods** are evident between 1977 and 2011. Binge drinking remained stable between 1977 and 1995, and then increased discernibly in 1996 among the total sample (from 7.0% to 11.7%) and among past year drinkers (from 8.2% to 14.8%) and remained at this elevated level until 2007. The increases were especially notable among **men** (trending upward from 10.7% in 1995 to 20.7% in 2001), and **18 to 29**

year olds (trending from 10.6% in 1995 to 26.1% in 2007). Weekly binge drinking began its descent again in 2008 and discernible subgroup declines were evident for gender, age, region, marital status and education subgroups.

Table 3.5.1: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks on a Single Occasion Weekly During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**7.4**	(6.1, 8.8)	—
Gender				***
Men	1212	**12.4**	(10.1, 15.2)	**5.11***
Women *(Comparison Group)*	1827	**2.7**	(1.9, 3.8)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**16.2**	(11.6, 22.0)	—
30-39	396	**†6.2**	(3.9, 9.7)	**0.33***
40-49	551	**7.8**	(5.6, 10.9)	1.20
50-64	923	**4.8**	(3.6, 6.5)	**0.50***
65+	814	**†2.6**	(1.6, 4.4)	0.50
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**†5.5**	(3.2, 9.3)	0.76
Central South	253	**†6.6**	(3.4, 12.6)	0.97
Central West	391	**†9.8**	(6.3, 14.9)	1.13
South West	500	**10.9**	(7.7, 15.2)	**1.54***
Central East	416	**†4.6**	(2.9, 7.2)	0.65
East	517	**8.1**	(5.6, 11.5)	1.20
North	459	**†7.5**	(4.8, 11.5)	1.00
Marital Status				**
Married/Partner *(Comparison Group)*	1896	**5.7**	(4.6, 7.1)	—
Previously Married	656	**8.9**	(5.6, 14.0)	**2.63***
Never Married	451	**11.9**	(8.4, 16.8)	0.81
Education				*
Less than high school *(Comparison Group)*	369	**10.1**	(5.9, 16.9)	—
Completed high school	670	**10.6**	(7.6, 14.5)	1.07
Some college or university	1018	**7.2**	(5.4, 9.5)	0.63
University degree	945	**5.2**	(3.5, 7.8)	0.44
Household Income				NS
< $30,000 *(Comparison Group)*	351	**†6.7**	(3.9, 11.2)	—
$30,000-$49,999	411	**†3.9**	(2.1, 6.9)	0.59
$50,000-$79,999	558	**†5.9**	(3.7, 9.3)	0.85
$80,000+	980	**8.6**	(6.6, 11.2)	1.40
Not stated	739	**8.3**	(5.6, 12.1)	1.28

Notes: (1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that drinking is higher in the group being compared to the comparison group; ORs less than 1.0 indicate that drinking is lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N = 2898).

Q: *About how often during the past 12 months would you say you had five or more drinks at the same sitting or occasion?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.5.2: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks on a Single Occasion Weekly During the Past 12 Months and Adjusted Group Differences, Ontarian *Past year Drinkers* Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	2401	**9.1**	(7.6, 10.8)	—
Gender				***
Men	1001	**14.9**	(12.2, 18.1)	**5.07***
Women *(Comparison Group)*	1400	**3.4**	(2.4, 4.8)	—
Age				
(Comparison Group is previous age group)				***
18-29	233	**18.9**	(13.7, 25.5)	—
30-39	332	**†7.5**	(4.8, 11.7)	**0.36**
40-49	471	**9.2**	(6.5, 12.7)	1.12
50-64	742	**6.0**	(4.4, 8.0)	**0.54**
65+	568	**†3.7**	(2.2, 6.1)	0.53
Public Health Region				NS
Toronto *(vs. Provincial Average)*	380	**†7.3**	(4.3, 12.2)	0.85
Central South	194	**†8.2**	(4.2, 15.3)	0.89
Central West	320	**11.8**	(7.7, 17.8)	1.17
South West	395	**13.1**	(9.3, 18.1)	1.43
Central East	338	**†5.5**	(3.5, 8.6)	0.63
East	416	**9.8**	(6.8, 13.9)	1.28
North	358	**†9.2**	(5.9, 14.0)	0.99
Marital Status				**
Married/Partner *(Comparison Group)*	1551	**7.0**	(5.6, 8.7)	—
Previously Married	469	**12.2**	(7.7, 18.8)	**2.51**
Never Married	362	**14.2**	(10.0, 19.8)	0.82
Education				*
Less than high school *(Comparison Group)*	234	**14.8**	(8.7, 24.0)	—
Completed high school	501	**13.8**	(9.9, 18.7)	1.00
Some college or university	856	**8.5**	(6.4, 11.2)	0.57
University degree	791	**6.2**	(4.2, 9.2)	**0.40**
Household Income				NS
< $30,000 *(Comparison Group)*	213	**11.0**	(6.5, 18.1)	—
$30,000-$49,999	304	**†5.3**	(2.9, 9.5)	0.52
$50,000-$79,999	468	**†7.3**	(4.6, 11.4)	0.65
$80,000+	891	**9.5**	(7.3, 12.3)	0.97
Not stated	525	**10.9**	(7.4, 15.8)	1.03

Notes:
(1) All analyses are sample design adjusted;*p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that drinking is higher in the group being compared to the comparison group; ORs less than 1.0 indicate that drinking is lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N = 2308).

Q: *About how often during the past 12 months would you say you had five or more drinks at the same sitting or occasion?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.5.3: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks on a Single Occasion Weekly During the Past 12 Months, by Demographic Characteristics, Ontarians Aged 18+, 1977-1995

	1977	1982	1984	1987	1989	1991	1994	1995
(N=)	(1059)	(1040)	(1051)	(1084)	(1101)	(1047)	(2022)	(994)
Total	**8.9**	**8.3**	**9.3**	**8.7**	**9.5**	**7.4**	**8.4**	**7.0**
(95%CI)ᵃ	(7.2, 10.6)	(6.6, 10.0)	(4.5, 11.1)	(7.0, 10.4)	(7.8, 11.2)	(5.8, 9.0)	(7.2, 9.6)	(5.4, 8.6)
Gender								
Men	**14.2**	**13.3**	**15.5**	**13.9**	**16.0**	**10.4**	**13.0**	**10.7**
	(11.2, 17.2)	(10.4, 16.2)	(12.4, 18.6)	(11.0, 16.8)	(12.9, 19.1)	(7.7, 13.1)	(11.0, 15.0)	(7.9, 13.5)
Women	**3.1**	**3.3**	**3.6**	**3.8**	**3.4**	**4.5**	**4.3**	**3.2**
	(1.6, 4.6)	(1.8, 4.8)	(2.0, 5.2)	(2.2, 5.4)	(1.9, 4.9)	(2.8, 6.2)	(3.0, 5.6)	(1.7, 4.7)
Age								
18 - 29	**13.6**	**13.7**	**12.2**	**14.2**	**15.8**	**10.0**	**12.7**	**10.6**
	(9.7, 17.5)	(9.6, 17.8)	(8.3, 16.1)	(9.8, 18.6)	(11.2, 20.4)	(6.4, 13.6)	(9.7, 15.7)	(6.7, 14.5)
30 - 39	**4.3**	**9.0**	**11.6**	**8.7**	**6.9**	**8.3**	**9.2**	**9.2**
	(1.6, 7.0)	(5.5, 12.6)	(7.6, 15.6)	(5.4, 12.0)	(4.0, 9.8)	(5.0, 11.6)	(6.8, 11.6)	(5.5, 12.9)
40 - 49	**13.0**	**6.5**	**9.9**	**8.5**	**8.8**	**6.4**	**6.5**	**†5.0**
	(8.1, 17.9)	(2.4, 10.6)	5.6, 14.2)	(4.3, 12.7)	(4.7, 12.9)	(3.1, 9.7)	(4.2, 8.8)	(2.1, 7.9)
50 - 64	**6.6**	**5.8**	**6.0**	**5.6**	**7.9**	**7.3**	**4.9**	**†4.2**
	(3.1, 10.1)	(2.7, 8.9)	(2.7, 9.3)	(2.5, 8.7)	(4.3, 11.5)	(3.1, 11.5)	(2.5, 7.3)	(1.2, 7.2)
65+	**4.0**	**†0.6**	**4.5**	**†2.1**	**†4.1**	**†1.4**	**†4.5**	**†3.0**
	(0.9, 7.1)	(0.8, 2.0)	(0.8, 8.2)	(0.07, 4.3)	(1.0, 7.2)	(0.6, 3.4)	(1.9, 7.1)	(0.02, 6.0)
Marital Status								
Married/ Partner	—	—	—	—	—	**4.5**	**6.7**	**5.3**
Previously Married	—	—	—	—	—	**12.3**	**7.3**	**†5.5**
Never Married	—	—	—	—	—	**11.9**	**12.7**	**11.3**
Education								
Less Than HS	—	—	—	—	—	**8.8**	**8.9**	**9.9**
Completed HS	—	—	—	—	—	**10.6**	**10.6**	**10.4**
Some College or University	—	—	—	—	—	**6.2**	**8.9**	**6.1**
University Degree	—	—	—	—	—	**†3.0**	**†4.0**	**†1.8**

Notes: ᵃ95% confidence interval.   — data not available; † Estimate suppressed or unstable.
Q.   *How often during the past 12 months would you say you had five or more drinks at the same sitting or occasion?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.5.4: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks in a Single Occasion Weekly During the Past 12 Months, by Demographic Characteristics, Ontarians Aged 18+, 1996–2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2721)	(2776)	(2232)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)		
Total	**11.7**	**11.1**	**11.8**	**11.8**	**12.7**	**12.3**	**10.5**	**11.0**	**11.4**	**10.8**	**12.3**	**11.2**	**8.8**	**7.1**	**7.5**	**7.4**	T	–
(95%CI)[a]	(10.3, 13.3)	(9.8, 12.6)	(10.3, 13.4)	(10.4, 13.4)	(11.2, 14.3)	(10.9, 13.9)	(9.1, 11.9)	(9.6, 12.6)	(9.9,13.1)	(9.4,12.4)	(10.6,14.3)	(9.6,13.1)	(7.3,10.6)	(5.8,8.6)	(6.3, 8.8)	(6.1,8.8)		
Gender																		NSI
Men	**18.7**	**17.8**	**20.0**	**19.8**	**18.8**	**20.7**	**16.3**	**16.7**	**17.6**	**17.5**	**18.8**	**17.5**	**14.6**	**11.4**	**11.5**	**12.4**	T	–
	(16.3, 21.5)	(15.5, 20.4)	(17.1, 23.2)	(17.3, 22.7)	(16.3, 21.7)	(18.1, 23.6)	(14.0, 18.8)	(14.2, 19.5)	(15.1, 20.5)	(15.0,20.3)	(15.0,20.3)	(14.6,20.8)	(11.9,17.9)	(9.1,14.1)	(9.6,13.9)	(10.1,15.2)		
Women	**5.5**	**5.1**	**4.4**	**4.4**	**7.1**	**4.4**	**4.9**	**5.7**	**5.6**	**4.6**	**6.2**	**5.3**	**3.4**	**3.1**	**3.7**	**2.7**	T	–
	(4.3, 7.1)	(4.0, 6.6)	(3.4, 5.8)	(3.3, 5.9)	(5.7, 8.8)	(3.3, 5.9)	(3.7, 6.5)	(4.4, 7.4)	(4.3, 7.4)	(3.4, 6.1)	(4.7, 8.3)	(3.9, 7.3)	(2.2, 5.1)	(1.9,4.9)	(2.6,5.2)	(1.9,3.8)		
Age																		NSI
18 - 29	**21.0**	**19.7**	**18.9**	**20.2**	**21.3**	**18.4**	**16.5**	**19.4**	**21.8**	**16.2**	**24.0**	**26.1**	**20.5**	**11.5**	**15.4**	**16.2**	–	–
	(17.1, 25.4)	(16.3, 23.7)	(14.5, 23.8)	(16.2, 25.1)	(17.3, 25.9)	(14.7, 22.9)	(13.0, 20.7)	(15.3, 24.2)	(17.0, 27.3)	(12.3,21.1)	(18.4,30.7)	(20.1,33.2)	(15.0,27.4)	(7.2, 17.8)	(11.3, 20.7)	(11.6, 22.0)		
30 - 39	**11.7**	**10.7**	**11.1**	**11.0**	**13.1**	**13.8**	**9.7**	**11.6**	**11.8**	**9.9**	**12.8**	**7.9**	**9.4**	**8.0**	**†6.4**	**†6.2**	T	–
	(9.2, 14.9)	(8.3, 13.6)	(8.5, 14.5)	(8.6, 14.1)	(10.3, 16.6)	(10.8, 17.4)	(7.1, 13.0)	(8.5, 15.8)	(8.7, 15.8)	(7.1,13.7))	(9.3,17.2)	(5.2,11.8)	(6.1,14.4)	(5.4, 11.8)	(4.1, 9.6)	(3.9, 9.7)		
40 - 49	**9.6**	**7.7**	**10.1**	**11.8**	**11.9**	**9.1**	**11.1**	**8.4**	**10.6**	**13.0**	**11.1**	**8.6**	**7.0**	**8.8**	**†6.2**	**7.8**	T	–
	(7.2, 12.5)	(5.6, 10.5)	(7.5, 13.6)	(8.8, 15.6)	(9.1, 15.4)	(6.6, 12.4)	(8.3, 14.7)	(6.2, 11.2)	(7.9, 14.2)	(10.0,16.7))	(8.0,15.2)	(6.1,11.9)	(4.7,10.1)	(6.2,12.4)	(4.3, 8.8)	(5.6, 10.9)		
50 - 64	**8.2**	**7.2**	**11.1**	**8.6**	**9.4**	**12.3**	**7.8**	**8.7**	**7.6**	**7.4**	**7.5**	**8.8**	**†5.5**	**†5.0**	**6.3**	**4.8**	T	–
	(5.9, 11.2)	(5.1, 10.1)	(8.0, 15.1)	(6.2, 11.8)	(6.8, 12.9)	(9.4, 16.0)	(5.6, 10.8)	(6.3, 11.8)	(5.6, 10.3)	(5.4,10.1)	(5.3,10.4)	(6.5,11.8)	(3.6, 8.4)	(3.2,7.8)	(4.8, 8.2)	(3.6,6.5)		
65+	**†2.6**	**†5.8**	**†5.8**	**† 6.3**	**† 4.6**	**† 5.5**	**6.7**	**† 6.0**	**† 5.6**	**† 6.4**	**†5.6**	**† 5.8**	**†2.5**	**†2.6**	**†3.4**	**†2.6**	T	–
	(1.4, 4.8)	(3.5, 9.5)	(3.4, 9.6)	(3.9, 9.8)	(2.5, 8.1)	(3.4, 8.9)	(4.3, 10.2)	(3.9, 9.1)	(3.7, 8.2)	(4.1,9.8)	(3.4, 9.0)	(3.8,8.9)	(1.4, 4.7)	(1.5, 4.5)	(2.1, 5.4)	(1.6, 4.4)		
Region																		NSI
Toronto	**13.0**	**11.0**	**11.4**	**10.7**	**11.9**	**14.8**	**8.9**	**11.0**	**8.7**	**11.1**	**10.7**	**†7.8**	**†6.8**	**†4.7**	**†7.0**	**†5.5**	T	–
	(9.5, 17.4)	(8.2, 14.6)	(8.1, 15.9)	(7.8, 14.6)	(8.8, 16.1)	(11.3, 19.2)	(6.3, 12.3)	(7.9, 15.2)	(5.9, 12.6)	(7.8,15.4)	(7.5,15.2)	(5.0,12.0)	(4.2,11.0)	(2.8, 7.8)	(4.6,10.5)	(3.2, 9.3)		
Central South	**13.0**	**11.5**	**10.9**	**12.2**	**13.9**	**10.4**	**10.4**	**7.5**	**11.5**	**†7.7**	**21.3**	**13.8**	**10.4**	**12.1**	**†8.2**	**†6.6**	–	–
	(8.8, 18.0)	(7.9, 16.5)	(6.7, 17.3)	(8.0, 18, 2)	(9.4, 20.0)	(6.8, 15.5)	(6.5, 16.3)	(4.6, 12.1)	(7.2, 17.9)	(4.6,12.9)	(14.4,30.4)	(8.9,20.8)	(5.7,18.2)	(7.4,19.3)	(4.8,13.7)	(3.4, 12.6)		
Central West	**8.3**	**10.1**	**9.8**	**11.4**	**13.7**	**9.6**	**11.6**	**12.4**	**13.2**	**13.0**	**12.5**	**10.9**	**†7.7**	**7.8**	**†6.7**	**9.8**	–	–
	(5.7, 11.9)	(6.5, 15.2)	(6.7, 14.3)	(8.2, 15.8)	(10.1, 18.4)	(6.9, 13.2)	(8.2, 16.2)	(8.7, 17.4)	(9.1, 18.7)	(9.3,17.8)	(8.3,18.5)	(6.7,17.1)	(4.4,13.3)	(4.8,12.4)	(4.3,10.1)	(6.3, 14.9)		
South West	**13.0**	**9.1**	**14.0**	**12.5**	**11.8**	**14.5**	**12.3**	**11.0**	**14.6**	**14.1**	**17.0**	**13.1**	**†6.7**	**†5.2**	**†7.7**	**10.9**	T	–
	(9.7, 17.1)	(6.5, 12.6)	(10.4, 18.5)	(9.4, 16.6)	(8.7, 15.9)	(11.1, 18.7)	(9.3, 16.1)	(8.0, 14.9)	(11.1, 19.1)	(10.8,18.2)	(12.7,22.4)	(9.2,18.2)	(4.2,10.7)	(3.1, 8.7)	(5.3,11.0)	(7.7, 15.2)		
Central East	**12.4**	**12.9**	**9.5**	**14.5**	**12.2**	**12.8**	**9.4**	**11.6**	**13.1**	**†8.5**	**†6.8**	**†7.9**	**11.4**	**†8.4**	**†8.0**	**†4.6**	T	–
	(8.9, 17.0)	(9.8, 16.8)	(6.1, 14.4)	(10.4, 19.9)	(8.6, 17.1)	(9.0, 17.8)	(11.6, 9.2)	(8.0, 16.5)	(9.1, 18.3)	(5.6,12.7)	(4.0,11.1)	(4.7,13.0)	(7.4,17.0)	(4.8,14.4)	(5.1, 12.2)	(2.9, 7.2)		
East	**10.1**	**11.8**	**14.4**	**11.7**	**12.0**	**10.5**	**11.6**	**11.2**	**9.7**	**9.1**	**10.5**	**17.3**	**†8.8**	**†5.4**	**†7.0**	**8.1**	T	–
	(7.5, 13.6)	(8.8, 15.5)	(10.8, 19.0)	(8.7, 15.6)	(8.9, 15.9)	(7.6, 14.3)	(8.6, 15.5)	(8.2, 15.0)	(7.0, 13.2)	(6.3,13.0)	(7.2,15.2)	(12.8,23.0)	(5.6,13.5)	(3.4, 8.6)	(4.6, 10.5)	(5.6, 11.5)		
North	**12.9**	**12.7**	**13.2**	**9.1**	**14.4**	**11.2**	**9.2**	**11.2**	**10.9**	**10.8**	**†8.3**	**†9.7**	**12.4**	**†9.3**	**†9.8**	**†7.5**	–	–
	(9.8, 16.9)	(9.7, 16.5)	(9.7, 17.7)	(6.5, 12.5)	(10.9, 18.7)	(8.7, 14.3)	(6.5, 12.7)	(8.2, 15.1)	(8.4, 14.0)	(7.9,14.6)	(5.5,12.4)	(6.4,14.4)	(8.6,17.5)	(6.2,13.8)	(6.8, 13.9)	(4.8, 11.5)		

Cont'd

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(2721)	(2776)	(2232)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Marital Status																	NSI
Married/ Partner	8.0	8.6	7.3	8.9	10.4	10.5	7.7	8.6	8.6	9.6	9.0	7.7	6.1	6.6	6.0	5.7	T –
Previously Married	9.4	9.6	10.3	9.0	10.4	9.6	8.7	9.9	8.7	8.0	8.3	12.1	6.9	†6.3	†4.4	8.9	– 2Y
Never Married	22.7	17.8	18.8	22.5	19.4	18.8	19.3	18.5	21.4	16.0	25.0	22.5	18.3	9.2	13.8	11.9	T –
Education																	NSI
Less than high school	10.9	11.0	15.2	14.9	10.1	12.7	14.4	11.7	14.2	9.4	9.6	11.9	12.1	12.7	†8.0	10.1	– –
Completed high school	14.6	13.0	13.8	12.2	15.0	18.0	12.0	13.3	12.4	14.8	17.8	17.3	13.4	†7.7	9.0	10.6	T –
Some college or university	13.1	12.3	10.0	12.0	15.0	11.8	11.5	11.7	13.0	11.1	10.9	12.6	8.3	†7.1	9.4	7.2	T –
University degree	8.1	7.4	9.1	9.0	8.9	7.0	†5.7	7.9	8.2	7.6	10.7	†4.3	†4.9	†5.0	†4.3	5.2	T –

Notes: (1) All analyses are sample design adjusted; 95% confidence interval; † Estimate suppressed or unstable.

(2) Trend Analysis: – change not statistically discernible at p<.05 between 1996-2011; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.

(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q. *How often during the past 12 months would you say you had five or more drinks at the same sitting or occasion?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.5.5: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks in a Single Occasion Weekly During the Past 12 Months, by Demographic Characteristics, Ontarian *Past year Drinkers*, Aged 18+, 1977–1995

	1977	1982	1984	1987	1989	1991	1994	1995
(N=)	(818)	(792)	(891)	(889)	(908)	(841)	(1660)	(839)
Total Drinkers	**10.9**	**10.6**	**11.1**	**10.5**	**11.5**	**9.2**	**10.2**	**8.2**
(95%CI)[a]	(13.0, 8.8)	(12.7, 8.5)	(13.2, 9.0)	(12.5, 8.5)	(13.6, 9.4)	(11.3, 7.1)	(11.6, 8.8)	(10.1, 6.3)
Gender								
Men	**16.3**	**16.1**	**18.0**	**15.9**	**18.6**	**12.7**	**15.4**	**12.4**
Women	**4.1**	**4.5**	**4.4**	**4.9**	**4.3**	**5.7**	**5.4**	**3.9**
Age								
18 - 29	**16.0**	**16.8**	**13.6**	**15.4**	**18.0**	**11.5**	**14.8**	**12.2**
30 - 39	**5.0**	**10.5**	**12.8**	**10.0**	**7.6**	**9.8**	**10.8**	**10.8**
40 - 49	**14.4**	**8.1**	**11.2**	**9.7**	**10.2**	**7.9**	**7.8**	**5.8**
50 - 64	**7.9**	**7.1**	**7.6**	**7.0**	**10.6**	**9.9**	**6.3**	**†4.8**
65+	**6.6**	**†1.1**	**7.0**	**†3.7**	**6.2**	**†2.2**	**6.8**	**†4.1**
Marital Status								
Married/Partner	—	—	—	—	—	5.7	8.3	6.2
Previously Married	—	—	—	—	—	16.7	9.5	6.8
Never Married	—	—	—	—	—	13.9	14.8	13.4
Education								
Less Than HS	—	—	—	—	—	13.7	12.4	12.5
Completed HS	—	—	—	—	—	13.1	12.8	12.5
Some College/Univ	—	—	—	—	—	7.1	10.4	7.2
University Degree	—	—	—	—	—	†3.4	†4.7	†2.0

Notes: [a]95% confidence interval; — data not available; † Estimate suppressed or unstable.
Q.   *How often during the past 12 month would you say you had five or more drinks at the same sitting or occasion?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.5.6: *Weekly Binge Drinking* – Percentage Drinking Five or More Drinks in a Single Occasion Weekly During the Past 12 Months, by Demographic Characteristics, Ontarian *Past year Drinkers*, Aged 18+, 1996–2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2141)	(2219)	(1777)	(1938)	(1887)	(2088)	(1933)	(1933)	(2101)	(1906)	(1527)	(1618)	(1599)	(1602)	(2352)	(2401)		
Total Drinkers	**14.8**	**13.9**	**14.9**	**15.0**	**16.5**	**15.5**	**13.1**	**13.7**	**14.1**	**13.8**	**15.9**	**13.8**	**11.0**	**9.0**	**9.6**	**9.1**	T	–
(95%CI)[a]	(13.1, 16.7)	(12.4, 15.7)	(13.0, 16.9)	(13.2, 17.0)	(14.6, 18.5)	(13.7, 17.5)	(11.5, 15.0)	(12.0, 15.7)	(12.3, 16.1)	(12.0,15.7)	(13.7,18.4)	(11.8,16.1)	(9.1,13.2)	(7.3,10.9)	(8.2, 11.3)	(7.6,10.8)		
Gender																	NSI	
Men	**22.7**	**21.4**	**23.7**	**23.4**	**23.1**	**24.8**	**19.8**	**20.1**	**20.7**	**20.8**	**22.6**	**20.6**	**17.4**	**14.1**	**14.2**	**14.9**	T	–
	(19.7, 25.9)	(18.7, 24.4)	(20.4, 27.2)	(20.4, 26.6)	(20.1, 26.5)	(21.8, 28.1)	(17.0, 22.8)	(17.2, 23.3)	(17.8, 24.0)	(17.9, 24.1)	(17.9, 24.1)	(17.2,24.4)	(14.2,21.2)	(11.3, 17.4)	(11.8, 17.0)	(12.2, 18.1)		
Women	**7.3**	**6.7**	**5.8**	**6.0**	**9.8**	**5.8**	**6.4**	**7.4**	**7.3**	**6.2**	**8.6**	**6.8**	**4.4**	**4.0**	**5.0**	**3.4**	T	–
	(5.7, 9.3)	(5.2, 8.6)	(4.4, 7.7)	(4.5, 8.0)	(7.8, 12.1)	(4.4, 7.8)	(4.8, 8.5)	(5.7, 9.5)	(5.5, 9.5)	(4.7,8.3)	(6.5,11.4)	(5.0,9.3)	(2.9,6.6)	(2.5,6.3)	(3.5, 7.0)	(2.4,4.8)		
Age																	NSI	
18 - 29	**25.1**	**23.6**	**22.5**	**23.5**	**24.3**	**21.7**	**19.5**	**22.2**	**25.0**	**19.7**	**28.4**	**29.2**	**23.7**	**13.7**	**18.8**	**18.9**	–	–
	(20.6, 30.3)	(19.6, 28.2)	(17.9, 28.1)	(18.8, 28.9)	(20.2, 30.1)	(17.4, 26.8)	(15.4, 24.3)	(17.6, 27.5)	(19.7, 31.2)	(14.9,25.4)	(21.9,35.9)	(22.5,36.8)	(17.4,31.4)	(8.7, 21.1)	(13.8, 24.9)	(13.7,25.5)		
30 - 39	**14.0**	**12.6**	**13.3**	**13.6**	**16.4**	**16.0**	**11.8**	**14.1**	**13.8**	**12.0**	**16.4**	**9.6**	**11.2**	**10.1**	**†8.1**	**†7.5**	T	–
	(11.0, 17.7)	(9.9, 16.0)	(10.2, 17.2)	(10.6, 17.2)	(12.9, 20.6)	(12.5, 20.1)	(8.7, 15.8)	(10.3, 19.0)	(10.2, 18.4)	(8.6,16.5)	(12.2,21.9)	(6.3,14.4)	(7.3,17.0)	(6.8,14.9)	(5.3, 12.2)	(4.8,11.7)		
40 - 49	**11.8**	**9.1**	**12.7**	**14.5**	**15.1**	**11.5**	**13.2**	**10.3**	**12.8**	**15.7**	**13.5**	**10.4**	**8.5**	**10.6**	**†7.6**	**9.2**	T	–
	(8.9, 15.4)	(6.6, 12.3)	(9.4, 17.0)	(10.9, 19.1)	(11.6, 19.4)	(8.4, 15.6)	(9.9, 17.4)	(7.6, 13.7)	(9.6, 17.0)	(12.1,20.0)	(9.7, 18.4)	(7.4,14.4)	(5.8,12.3)	(7.4,14.8)	(5.3, 10.7)	(6.5,12.7)		
50 - 64	**10.8**	**9.3**	**14.0**	**11.0**	**12.4**	**15.8**	**9.7**	**11.1**	**9.4**	**9.6**	**9.7**	**10.7**	**6.7**	**†6.2**	**8.0**	**6.0**	T	–
	(7.8, 14.7)	(6.6, 13.0)	(10.1, 19.0)	(7.9, 15.1)	(9.0, 16.8)	(12.1, 20.4)	(7.0, 13.4)	(8.1, 14.9)	(6.9, 12.7)	(7.0,12.9)	(6.9,13.4)	(7.9,14.3)	(4.4,10.2)	(3.9,9.7)	(6.1, 10.5)	(4.4,8.0)		
65+	**4.0**	**9.9**	**8.4**	**9.5**	**7.5**	**8.3**	**10.1**	**8.5**	**7.9**	**9.5**	**8.6**	**8.0**	**†3.7**	**†3.8**	**†4.9**	**†3.7**	T	–
	(2.2, 7.2)	(6.0, 15.9)	(5.0, 13.8)	(6.0, 14.6)	(4.2, 13.1)	(5.1, 13.2)	(6.6, 15.2)	(5.5, 12.9)	(5.3, 11.6)	(6.2, 14.4)	(5.3,13.6)	(5.1,12.1)	(2.0,6.8)	(2.2,6.6)	(3.1, 7.7)	(2.2,6.1)		
Region																	NSI	
Toronto	**17.5**	**13.5**	**15.0**	**15.0**	**17.2**	**18.9**	**11.8**	**14.1**	**11.5**	**15.0**	**14.1**	**10.1**	**9.0**	**†6.1**	**†9.7**	**†7.3**	T	–
	(13.0, 23.2)	(10.1, 17.9)	(10.7, 20.6)	(10.9, 20.3)	(12.7, 22.9)	(14.4, 24.3)	(8.4, 16.3)	(10.1, 19.3)	(7.9, 16.4)	(10.7,20.7)	(10.7,20.7)	(6.9,16.2)	(5.5,14.3)	(3.6,10.0)	(6.4, 14.4)	(4.3,12.2)		
Central South	**15.9**	**14.7**	**13.6**	**15.0**	**17.9**	**13.3**	**13.5**	**8.8**	**13.9**	**9.6**	**28.0**	**16.8**	**12.5**	**14.5**	**†10.1**	**†8.2**	T	–
	(11.1, 22.3)	(10.1, 20.9)	(8.4, 21.3)	(9.9, 22.2)	(12.2, 25.4)	(8.8, 19.6)	(8.5, 20.8)	(5.4, 14.1)	(8.7, 21.4)	(5.7,15.8)	(19.2,38.9)	(10.9,25.0)	(6.9,21.5)	(8.9,23.0)	(5.9, 16.8)	(4.2,15.3)		
Central West	**10.1**	**12.3**	**12.6**	**13.7**	**17.7**	**12.4**	**14.2**	**16.0**	**15.7**	**16.7**	**15.9**	**13.5**	**10.5**	**10.8**	**†8.8**	**11.8**	–	–
	(7.0, 14.5)	(8.0, 18.5)	(8.6, 18.1)	(9.8, 18.9)	(13.1, 23.5)	(9.0, 17.0)	(10.0, 19.6)	(11.3, 22.1)	(10.9, 22.1)	(12.0,22.6)	(10.6,23.2)	(8.4,21.0)	(6.0,17.7)	(6.7,17.0)	(5.8, 13.3)	(7.7,17.8)		
South West	**16.7**	**12.3**	**17.6**	**16.0**	**14.6**	**18.6**	**14.8**	**13.8**	**17.7**	**17.9**	**20.7**	**15.5**	**8.2**	**†6.7**	**†9.6**	**13.1**	T	–
	(12.6, 21.8)	(8.8, 16.9)	(13.1, 23.1)	(12.0, 20.9)	(10.8, 19.5)	(14.3, 23.9)	(11.2, 19.2)	(10.0, 18.6)	(13.5, 22.9)	(13.8,22.9)	(15.6,27.0)	(11.0,21.5)	(5.1,12.8)	(4.0,11.1)	(6.7, 13.6)	(9.3,18.1)		
Central East	**15.0**	**15.3**	**11.5**	**18.1**	**16.0**	**15.4**	**11.9**	**13.6**	**15.7**	**10.3**	**8.6**	**9.3**	**13.8**	**10.3**	**†10.0**	**†5.5**	T	–
	(10.8, 20.4)	(11.7, 19.9)	(7.4, 17.3)	(13.0, 24.5)	(11.3, 22.1)	(10.9, 21.2)	(7.9, 17.5)	(9.4, 19.3)	(11.1, 21.9)	(6.8,15.4)	(5.1,14.1)	(5.5,15.1)	(9.0,20.4)	(5.9,17.4)	(6.5, 15.2)	(3.5,8.6)		
East	**12.5**	**14.5**	**17.6**	**14.4**	**14.9**	**12.9**	**13.9**	**14.3**	**11.7**	**11.2**	**13.9**	**20.2**	**10.3**	**†6.3**	**†8.8**	**9.8**	T	–
	(9.3, 16.7)	(10.9, 19.0)	(13.3, 22.9)	(10.7, 19.1)	(11.1, 19.6)	(9.4, 17.5)	(10.3, 18.5)	(10.6, 19.0)	(8.5, 16.0)	(7.7,15.9)	(9.5,19.8)	(15.0,26.6)	(6.6,15.7)	(3.9,10.0)	(5.8, 13.1)	(6.8,13.9)		
North	**15.8**	**15.7**	**17.2**	**11.4**	**17.3**	**14.1**	**11.8**	**14.1**	**13.4**	**13.3**	**11.3**	**11.4**	**15.0**	**12.1**	**†11.8**	**†9.2**	–	–
	(12.0, 20.6)	(12.0, 20.3)	(12.7, 22.8)	(8.2, 15.6)	(13.2, 22.4)	(10.9, 17.9)	(8.4, 16.2)	(10.4, 18.9)	(10.4, 17.2)	(9.8,17.9)	(7.5,16.5)	(7.6,16.9)	(10.4,21.0)	(8.1,17.8)	(8.2, 16.5)	(5.9,14.0)		

Cont'd

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2141)	(2219)	(1777)	(1938)	(1887)	(2088)	(1933)	(1933)	(2101)	(1906)	(1527)	(1618)	(1599)	(1602)	(2352)	(2401)		
Marital Status																	NSI	
Married/Partner	10.0	10.8	12.3	11.3	13.7	13.1	9.4	10.8	10.6	12.0	11.7	9.5	7.5	8.3	7.7	7.0	T	–
Previously Married	13.1	13.0	10.9	13.2	15.2	13.2	12.2	13.6	11.8	11.2	12.6	15.6	9.8	†8.5	†6.2	12.2	–	2Y
Never Married	27.5	21.5	23.4	26.5	23.3	22.9	23.9	21.6	25.4	19.9	29.4	26.5	22.6	11.3	17.4	14.2	T	–
Education																	NSI	
Less than high school	15.8	16.1	21.4	22.8	16.7	19.6	20.9	17.3	21.0	15.1	14.4	17.5	17.9	17.8	†9.7	14.8	–	–
Completed high school	18.3	16.9	17.9	15.7	19.6	22.3	15.4	16.7	15.1	18.7	23.8	21.1	16.4	10.6	†10.1	13.8	T	–
Some college or university	15.9	14.3	11.9	14.5	17.7	14.2	13.7	14.2	15.3	13.4	13.5	14.9	10.2	†8.6	†8.8	8.5	T	–
University degree	9.6	8.9	11.0	10.8	11.2	8.7	6.8	9.2	9.8	9.5	13.1	†5.2	†6.0	†6.0	†9.6	6.2	T	–

Notes: (1) All analyses are sample design adjusted; ª95% confidence interval; † Estimate suppressed or unstable.
(2) Trend Analysis: **–** change not statistically discernible at p<.05 between 1996-2011; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q.   *How often during the past 12 months would you say you had five or more drinks at the same sitting or occasion?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.5.1

Percentage Drinking Five or More Drinks on a Single Occasion Weekly in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
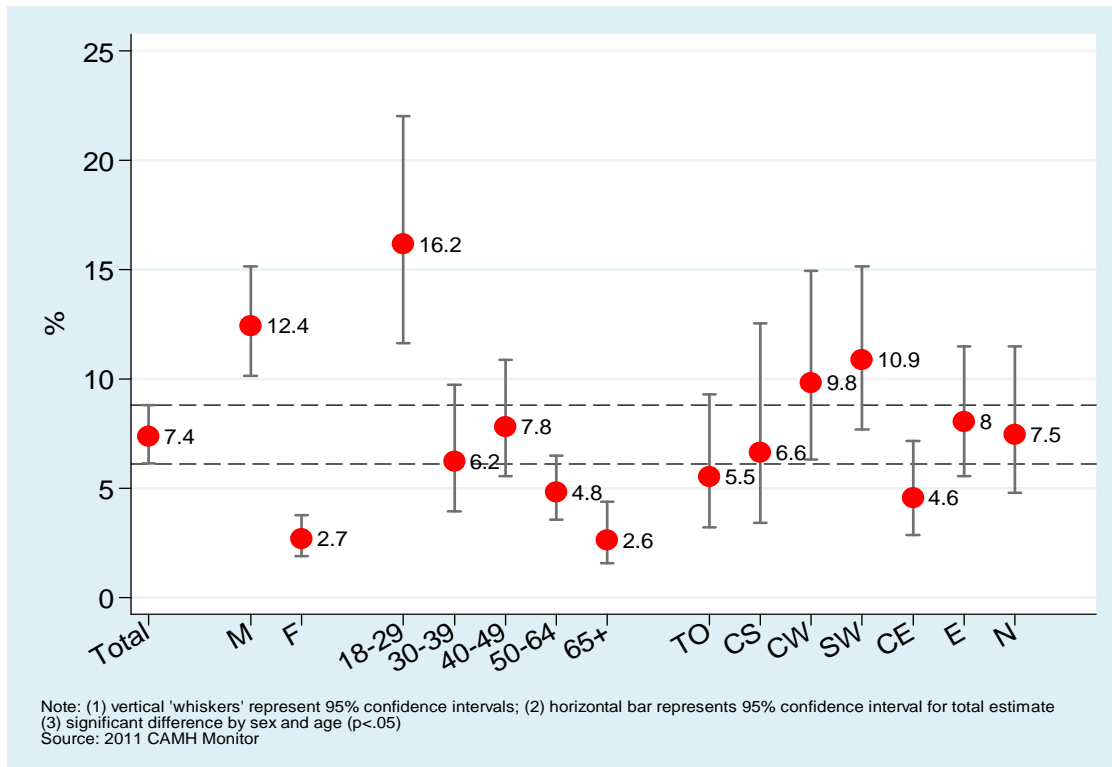
Figure 3.5.2
Percentage Drinking Five or More Drinks on a Single Occasion Weekly in the Past Year, Ontarians Aged 18+, 1977–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
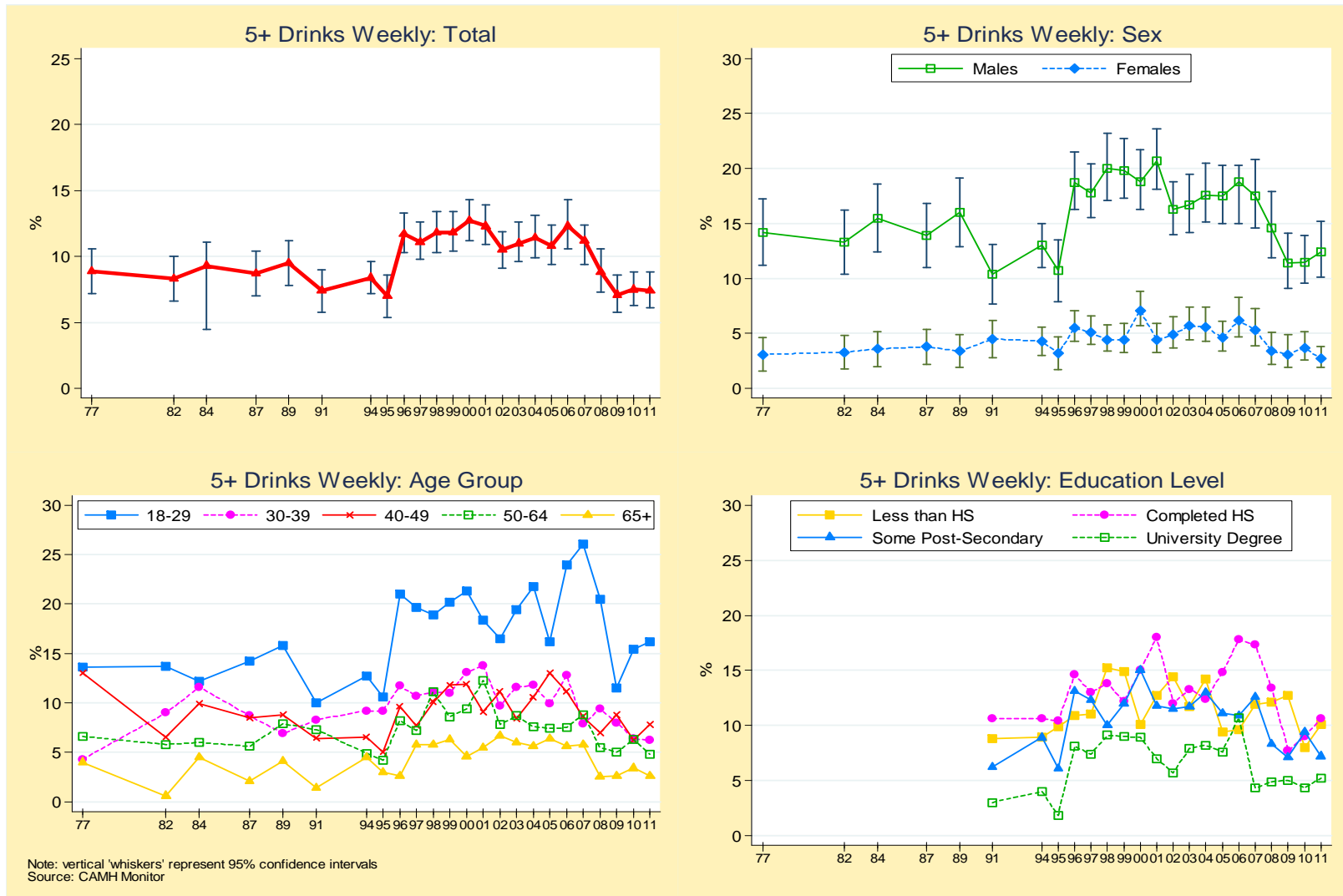
3.6   Hazardous or Harmful Drinking (AUDIT)

The consequences of problematic drinking vary in their nature and quality. Alcohol problems are multidimensional; they can be indicated by excessive consumption, problematic consequences, and dependence.

The *Alcohol Use Disorders Identification Te*st (AUDIT), whose development was sponsored by the World Health Organization, was designed to detect problem drinkers at the less severe end of the spectrum of alcohol problems. The AUDIT identifies **hazardous** alcohol use – an established pattern of drinking that *increases the likelihood of future* physical and mental health problems (e.g., liver disease) – as well as **harmful** consequences of that use – a pattern of drinking that is *already causing damage* to health (e.g., alcohol-related injuries; depression) and indications of dependence (Babor et al., 2001; Saunders et al., 1993). The AUDIT consists of a 10-item screener (including lack of control over one's own drinking, failure to meet expectations, drinking in the morning, feelings of guilt, black-outs, injuries resulting from drinking, and having someone express concern about drinking) and a protocol for scoring responses to these items (see **Table 3.6.1**).

Conventionally, a score of **8 or more** of 40 on the AUDIT scale is used to classify drinkers thus allowing estimation of the percentage that **drink at hazardous or harmful levels** or are at risk of becoming dependent. A score of 8 or more should not be viewed as "alcoholism", but, rather, as a pattern of drinking that is causing current problems or likely to cause future problems.

2011……….………....Tables 3.6.1–3.6.3;
Fig. 3.6.1

An estimated, **14.4%** (95% CI: 12.7% to 16.2%) of Ontario **adults drank** hazardously or harmfully drinking during the past 12 months before the survey. Among **past year drinkers**, the prevalence was **17.8%** (95% CI: 15.8% to 20.1%). The corresponding population estimate is 1,325,955 hazardous/harmful drinkers (95% CI: 1,152,661 to 1,499,248).

Gender, age, region, marital status, and **income** were discernibly related to hazardous/harmful drinking, when controlling for other characteristics.

- The adjusted odds of hazardous/harmful drinking among men were 3.2 times higher than women (21.5% vs. 7.9%).

- Hazardous/harmful drinking declined discernibly with age, dropping from 29.6% among 18 to 29 year olds to 4.3% among those aged 65 and older. Three of the four sequential age group comparisons are statistically discernible. The adjusted odds of hazardous/harmful drinking were discernibly 49% lower among 30 to 39 year olds than 18 to 29 year olds (OR=0.51), discernibly 55% lower among those 50 to 64 year olds than 40 to 49 year olds (OR=0.45) and discernibly 50% lower among those aged 65 and older compared to 50 to 64 year olds (OR=0.50).

- Relative to the provincial estimate (of 14.4%), respondents living in the **South West** reported discernibly higher rates and adjusted odds of hazardous/harmful drinking (20.6%; OR=1.65).

- The adjusted odds of hazardous/harmful drinking among those previously married were 2.2 times higher than among married respondents (12.5% vs. 11.0%).

- Household income also shows a discernible association to hazardous/harmful drinking. The distinguishing feature is an elevated rate among those with incomes of $80,000 or higher (18.7%), who show discernibly higher adjusted odds (OR=1.75) than those with incomes of less than $30 thousand (11.7%).

Education was not discernibly related to hazardous/harmful drinking.

Similarly, **among past year drinkers**, gender, age, and marital status were all discernibly related to hazardous/harmful drinking. Men, those aged 18 to 29, and those previously married, displayed the highest reports of hazardous/harmful drinking.

Trends
1998–2011 …………..……Table 3.6.4 -3.6.5; Fig 3.6.2
2010–2011
Hazardous/harmful drinking among Ontarians was not discernibly different in 2011 (14.4%) from 2010 (14.8%) and 2009 (13.0%). Moreover, rates of hazardous/harmful drinking were stable between 2010 and 2011 for all subgroups.

Past year drinkers displayed similar characteristics. Hazardous/harmful drinking among Ontario drinkers was not discernibly different in 2011 (17.8%) than in 2010 (19.1%) or in 2009 (16.7%), and hazardous/harmful drinking among drinkers was stable for all gender, age, marital status,

and education subgroups between 2010 and 2011.

1998–2011
Between 1998 and 2011, there was a discernible non-linear change in hazardous/harmful drinking among Ontario adults. It was lowest in 2005 (10.4%) and highest in 2007 (15.6%), but has subsequently declined and stabilized.

Year did not interact discernibly with any of the demographic factors analysed, suggesting that subgroup trends moved similarly. Discernible non-linear subgroup changes were evident during this period for **gender, age**, and **region**.

Hazardous/harmful drinking among women increased from 4.8% in 1998 to 7.9% in 2011. There were also discernible non-linear increases among 18 to 29 year olds (from 22.4% in 2002 to 31.8% in 2010), and among 30 to 39 year olds (from 7.1% in 2005 to 14.7% in 2011). Discernible subgroup changes were also found for respondents living in the South West and in the East.

Past year drinkers displayed similar discernible non-linear trends. Hazardous/harmful drinking among drinkers increased discernibly from 13.3% in 2005 to 17.8% in 2011. Year did not interact discernibly with any of the demographic categories analysed between 1998 and 2011, but discernible subgroup changes were found for those aged 18 to 29, those aged 30 to 39, those living in the South West, in the East, and in the North.

Table 3.6.1: Percentage Reporting *Hazardous and Harmful Drinking (AUDIT) Symptoms*, Ontarians and Ontarian Past Year Drinkers, Aged 18+, 2011

AUDIT ITEMS		Total Sample (N=3,039)	Drinkers (N=2,401)
Alcohol Intake		%	%
1. How often did you drink alcoholic beverages during the past 12 months?	0. Never	19.0	—
	1. Monthly or less	24.3	30.0
	2. 2-4 times/month	26.9	33.2
	3. 2-3 times/week	16.9	20.9
	4. 4+ times/week	13.0	16.0
	Mean (SE)	1.81 (.03)	2.23 (.03)
2. On those days when you drink, how many drinks do you usually have?	0. One or less (including none)	50.0	37.9
	1. Two to Three	35.6	44.0
	2. Four	5.3	6.5
	3. Five to Seven	6.5	8.0
	4. Eight or more	3.0	3.7
	Mean (SE)	.78 (.03)	.96 (.03)
3. About how often during the past 12 months would you say that you had five or more drinks at the same sitting or occasion?	0. Never	58.1	48.2
	1. Less than monthly	21.7	26.8
	2. Monthly	12.9	15.9
	3. Weekly	6.8	8.4
	4. Daily or almost daily	†	†
	Mean (SE)	.70 (.02)	0.87 (.03)
Dependence Indicators			
4. How often during the last year have you found that you were not able to stop drinking once you had started?	0. Never	95.2	94.1
	1. Less than monthly	2.3	2.8
	2. Monthly	1.5	1.9
	3. Weekly	†	†
	4. Daily or almost daily	†	†
	Mean (SE)	.09 (.01)	.11 (.03)
5. How often during the last year have you failed to do what was normally expected from you because of drinking?	0. Never	94.8	93.6
	1. Less than monthly	3.6	4.5
	2. Monthly	1.2	1.5
	3. Weekly	†	†
	4. Daily or almost daily	†	†
	Mean (SE)	.07 (.01)	.09 (.01)

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6. How often during the last year have you needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session?	0. Never	98.6	98.3
	1. Less than monthly	1.0	1.2
	2. Monthly	†	†
	3. Weekly	†	†
	4. Daily or almost daily	†	†
	Mean (SE)	.02 (.01)	.03 (.01)
Adverse Consequences			
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	0. Never	91.0	88.9
	1. Less than monthly	6.8	8.3
	2. Monthly	1.7	2.1
	3. Weekly	†	†
	4. Daily or almost daily	†	†
	Mean (SE)	.12 (.01)	.15 (.01)
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	0. Never	90.0	87.5
	1. Less than monthly	8.0	9.9
	2. Monthly	1.7	2.1
	3. Weekly	†	†
	4. Daily or almost daily	†	†
	Mean (SE)	.13 (.01)	.16 (.02)
9. Have you or someone else ever been injured as a result of your drinking?	0. No	93.2	91.7
	2. Yes, but not last year	4.6	5.7
	4. Yes, during last year	2.2	2.7
	Mean (SE)	.18 (.02)	.22 (.02)
10. Has a relative or friend or a doctor or other health worker ever been concerned about your drinking or suggested that you cut down?	0. No	94.9	93.7
	2. Yes, but not last year	3.3	4.0
	4. Yes, during last year	1.9	2.3
	Mean (SE)	.14 (.02)	.17 (.02)

Notes: All analyses are sample design adjusted; † Estimate less than 1%;
Def: The AUDIT screener measures hazardous and harmful drinking, as indicated by a score of 8 or more out of 40.
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.6.2: Percentage Reporting *Hazardous/Harmful Drinking* (*AUDIT 8+*) During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**14.4**	(12.7, 16.2)	—
Gender				***
Men	1212	**21.5**	(18.6, 24.7)	**3.15***
Women *(Comparison Group)*	1827	**7.9**	(6.3, 9.8)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**29.6**	(23.7, 36.3)	—
30-39	396	**14.7**	(11.1, 19.2)	**0.51***
40-49	551	**16.2**	(12.8, 20.2)	1.08
50-64	923	**8.8**	(6.7, 11.5)	**0.45**
65+	814	**†4.3**	(2.9, 6.3)	**0.50***
Public Health Region				*
Toronto *(vs. Provincial Average)*	503	**10.8**	(7.7, 15.0)	0.70
Central South	253	**12.2**	(7.5, 19.4)	0.78
Central West	391	**16.7**	(12.0, 22.4)	0.97
South West	500	**20.6**	(16.2, 25.7)	**1.65**
Central East	416	**12.2**	(8.7, 16.9)	0.91
East	517	**14.6**	(11.2, 18.9)	1.01
North	459	**16.6**	(12.6, 21.7)	1.25
Marital Status				**
Married/Partner *(Comparison Group)*	1896	**11.0**	(9.4, 12.9)	—
Previously Married	656	**12.5**	(8.7, 17.5)	**2.20**
Never Married	451	**25.8**	(20.7, 31.7)	1.59
Education				NS
Less than high school *(Comparison Group)*	369	**14.2**	(9.2, 21.3)	—
Completed high school	670	**14.8**	(11.4, 19.1)	0.81
Some college or university	1018	**16.4**	(12.2, 19.3)	0.81
University degree	945	**12.3**	(9.8, 15.4)	0.55
Household Income				**
< $30,000 *(Comparison Group)*	351	**11.7**	(7.1, 18.7)	—
$30,000-$49,999	411	**9.3**	(6.2, 13.7)	0.72
$50,000-$79,999	558	**12.4**	(9.2, 16.5)	0.96
$80,000+	980	**18.7**	(15.8, 22.1)	**1.75***
Not stated	739	**12.1**	(8.8, 16.5)	0.91

Notes: (1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval;
             NS – no statistically discernible difference; † Estimate suppressed or unstable.
          (2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
          (3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group;
             ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group.
          (4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case
             sample size N=2852).

Defn: *The AUDIT screener measures hazardous and harmful drinking, as indicated by a score of 8 or more out of 40.*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.6.3: Percentage Reporting *Hazardous or Harmful Drinking* (*AUDIT 8+)* During the Past 12 Months and Adjusted Group Differences, Ontarian *Past Year Drinkers* Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	2401	**17.8**	(15.8, 20.1)	—
Gender				***
Men	1001	**25.8**	(22.4, 29.6)	**3.23***
Women *(Comparison Group)*	1400	**10.0**	(8.0, 12.5)	—
Age				***
(Comparison Group is previous age group)				
18-29	233	**34.7**	(27.9, 42.1)	—
30-39	332	**17.7**	(13.4, 22.9)	**0.51***
40-49	471	**19.0**	(15.2, 23.6)	1.05
50-64	742	**11.0**	(8.4, 14.2)	**0.48***
65+	568	**6.1**	(4.1, 8.9)	**0.52***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	380	**14.5**	(10.4, 19.9)	0.81
Central South	194	**15.1**	(9.3, 23.6)	0.71
Central West	320	**20.0**	(14.6, 26.8)	0.98
South West	395	**24.8**	(19.7, 30.7)	**1.55***
Central East	338	**14.8**	(10.6, 20.3)	0.88
East	416	**17.8**	(13.7, 22.9)	1.05
North	358	**20.6**	(15.6, 26.7)	1.25
Marital Status				**
Married/Partner *(Comparison Group)*	1551	**13.6**	(11.6, 15.8)	—
Previously Married	469	**17.1**	(12.1, 23.54)	**2.05***
Never Married	362	**30.7**	(24.8, 37.3)	1.54
Education				NS
Less than high school *(Comparison Group)*	234	**21.2**	(13.9, 30.8)	—
Completed high school	501	**19.5**	(15.0, 24.9)	0.73
Some college or university	856	**19.6**	(16.1, 23.6)	0.70
University degree	791	**14.6**	(11.7, 18.2)	**0.48***
Household Income				NS
< $30,000 *(Comparison Group)*	213	**19.6**	(12.2, 30.0)	—
$30,000-$49,999	304	**12.9**	(8.7, 18.9)	0.61
$50,000-$79,999	468	**15.2**	(11.4, 20.1)	0.70
$80,000+	891	**20.7**	(17.4, 24.3)	1.12
Not stated	525	**16.1**	(11.8, 21.6)	0.69

Notes: (1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=2262).
Def: *The AUDIT screener measures hazardous and harmful drinking, as indicated by a score of 8 or more out of 40.*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.6.4: Percentage *Reporting Hazardous or Harmful Drinking (AUDIT 8+)* During the Past 12 Months, by Demographic Characteristics, Ontarians, Aged 18+, 1998–2011

	(N=)	1998 (2509)	1999 (2436)	2000 (2406)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (3030)	2011 (3039)	Change
Total Sample		13.3	13.2	13.3	12.9	13.0	13.2	13.9	10.4	13.8	15.6	14.7	13.0	14.8	14.4	T –
(95%CI)[a]		(11.7, 15.0)	(11.7, 14.9)	(11.8, 15.0)	(11.4, 14.4)	(11.5, 14.6)	(11.6, 14.9)	(12.3, 15.7)	(9.0, 12.0)	(11.9, 15.8)	(13.6, 17.7)	(12.7,16.9)	(11.2, 15.1)	(13.2, 16.5)	(12.7,16.2)	
Gender																NSI
Men		22.9	21.7	20.0	19.7	19.9	19.4	20.6	15.5	21.6	23.2	22.2	19.0	21.3	21.5	– –
		(20.1, 26.0)	(18.9, 24.8)	(17.4, 23.0)	(17.2, 22.4)	(17.3, 22.7)	(16.7, 22.4)	(17.8, 23.7)	(13.0, 18.3)	(18.4, 25.2)	(19.9, 26.8)	(18.8, 25.9)	(16.0, 22.4)	(18.6, 24.2)	(18.6, 24.7)	
Women		4.8	5.6	7.4	6.6	6.6	7.5	7.8	5.6	6.5	8.4	7.8	7.5	8.7	7.9	T –
		(3.7, 6.2)	(4.3, 7.2)	(6.0, 9.0)	(5.3, 8.4)	(5.1, 8.5)	(5.9, 9.4)	(6.1, 9.8)	(4.3, 7.3)	(4.9, 8.5)	(6.6, 10.8)	(5.8,10.5)	(5.6,9.9)	(7.1, 10.7)	(6.3,9.8)	
Age																NSI
18-29		26.9	25.7	25.5	24.9	22.4	27.2	31.2	25.5	28.2	39.1	31.4	27.5	31.8	29.6	T –
		(22.4, 31.9)	(21.2, 30.9)	(21.2, 30.4)	(20.7, 29.7)	(18.2, 27.2)	(22.4, 32.5)	(25.9, 37.1)	(20.6, 31.2)	(22.2, 35.0)	(32.2, 46.4)	(24.4,39.4)	(20.9,35.3)	(26.2, 38.1)	(23.7,36.3)	
30-39		11.4	13.1	11.9	14.8	15.5	16.0	15.6	7.1	14.5	11.7	16.0	14.7	14.9	14.7	T –
		(8.8, 14.6)	(10.2, 16.6)	(9.4, 15.1)	(11.7, 18.6)	(12.2, 19.6)	(12.3, 20.5)	(12.1, 20.0)	(5.0, 9.9)	(10.8, 19.3)	(8.3,16.2)	(11.5,21.7)	(10.8,19.6)	(11.3,19.2)	(11.1,19.2)	
40-49		11.6	11.0	10.9	9.5	11.2	10.1	10.4	9.3	11.7	10.1	13.5	11.8	12.5	16.2	– –
		(8.8, 15.1)	(8.2, 14.6)	(8.2, 14.2)	(7.2, 12.5)	(8.4, 14.6)	(7.6, 13.2)	(7.8, 13.7)	(6.8, 12.6)	(8.5, 15.8)	(7.3, 14.0)	(9.9,18.0)	(8.9,15.7)	(9.8, 15.9)	(12.8, 20.2)	
50-64		9.3	9.0	9.8	10.9	8.7	7.4	7.5	6.1	8.3	13.5	10.3	8.0	10.5	8.8	– –
		(6.6, 12.9)	(6.2, 12.7)	(7.1, 13.4)	(8.2, 14.4)	(6.2, 12.0)	(5.2, 10.5)	(5.3, 10.4)	(4.2, 8.8)	(6.0, 11.5)	(10.5, 17.2)	(7.7,13.6)	(5.6,11.4)	(8.6, 12.9)	(6.7, 11.5)	
65+		†4.7	†4.7	†5.2	†2.4	†5.7	†3.2	†5.4	†3.1	†4.6	†4.5	†3.4	†5.0	†4.5	†4.3	– –
		(2.7, 8.1)	(2.9, 7.6)	(3.0, 9.1)	(1.2, 4.7)	(3.3, 9.5)	(1.8, 5.9)	(3.3, 8.6)	(1.7, 5.7)	(2.7, 7.8)	(2.7, 7.5)	(2.1, 5.7)	(3.2, 7.7)	(3.1, 6.6)	(2.9, 6.37)	
Region																NSI
Toronto		13.3	12.7	12.6	13.0	11.7	12.9	13.4	7.3	11.2	13.4	12.2	12.4	12.9	10.8	– –
		(9.9, 17.7)	(9.3, 17.2)	(9.3, 16.7)	(9.8, 17.0)	(8.5, 15.7)	(9.5, 17.5)	(9.9, 17.9)	(4.8, 10.8)	(7.6, 16.1)	(9.6, 18.4)	(8.1,18.1)	(8.6,17.7)	(9.6,17.0)	(7.7,15.0)	
Central South		15.0	13.0	13.5	11.7	11.1	12.6	11.7	9.1	19.2	15.2	13.5	16.0	15.4	12.2	– –
		(10.2, 21.7)	(8.5, 19.2)	(9.1, 19.4)	(7.7, 17.3)	(7.0, 17.3)	(8.4, 18.6)	(7.2, 18.5)	(5.4, 15.0)	(12.7, 28.2)	(10.1, 22.4)	(8.2,21.4)	(10.5,22.5)	(10.6, 21.9)	(7.5,19.4	
Central West		10.7	11.0	14.7	12.1	15.5	15.2	14.5	12.0	13.2	15.2	13.8	13.4	12.8	16.7	– –
		(7.4, 15.1)	(7.7, 15.6)	(10.9, 19.4)	(8.8, 16.4)	(11.5, 20.7)	(11.2, 20.3)	(10.3, 20.0)	(8.3, 17.0)	(8.9, 19.1)	(10.2, 22.1)	(9.3,20.0)	(9.2,19.1)	(9.2,17.6)	(12.0,22.4)	
South West		15.4	14.5	12.2	15.9	12.0	12.9	15.8	13.2	19.2	17.8	11.9	9.1	16.6	20.6	T –
		(11.6, 20.0)	(11.1, 18.7)	(9.0, 16.4)	(12.3, 20.3)	(9.0, 15.8)	(9.7, 16.9)	(12.2, 20.3)	(9.8, 17.5)	(14.7, 24.5)	(13.4, 23.3)	(8.1,17.1)	(6.1, 13.2)	(12.8,21.1)	(16.2, 25.7)	
Central East		10.5	15.8	13.0	11.1	13.9	14.0	16.1	9.7	9.2	13.2	16.7	15.3	13.5	12.2	– –
		(7.1, 15.1)	(11.5, 21.3)	(9.2, 18.0)	(7.8, 15.7)	(10.0, 19.2)	(9.9, 19.4)	(11.7, 21.7)	(6.3, 14.7)	(5.7, 14.4)	(8.9, 19.0)	(11.9,23.1)	(10.4,22.0)	(9.8,18.4)	(8.7,16.9)	
East		13.9	12.5	12.1	13.2	13.6	11.8	11.1	10.4	14.9	22.0	18.7	12.1	16.8	14.6	T –
		(10.4, 18.2)	(9.2, 16.8)	(8.9, 16.2)	(10.0,17.3)	(10.2, 17.9)	(8.5, 16.1)	(8.2, 15.0)	(7.3, 14.6)	(10.6, 20.4)	(16.9, 28.0)	(13.8,24.7)	(8.7,16.6)	(13.0,21.5)	(11.2,18.9)	
North		16.4	13.6	17.1	13.1	12.2	12.0	14.2	12.7	11.3	11.3	18.2	13.3	21.1	16.6	– –
		(12.6, 21.0)	(10.3, 17.8)	(13.3, 21.6)	(10.3, 16.5)	(9.0, 16.2)	(8.8, 16.1)	(11.3, 17.8)	(9.4, 17.0)	(7.9, 15.8)	(7.8,16.1)	(13.8,23.8)	(9.6,18.2)	(16.8,26.2)	(12.6,21.7)	

Cont'd

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Marital Status															NSI
Married/Partner	9.9	9.7	10.4	9.8	10.4	10.0	9.7	7.2	9.8	10.6	10.8	10.8	11.8	11.0	– –
Previously Married	8.7	9.7	11.5	8.7	10.9	11.8	8.4	7.3	†9.8	13.2	10.1	8.0	9.2	12.5	– –
Never Married	25.3	26.3	21.8	24.0	21.3	23.5	29.9	21.8	28.3	33.7	29.7	23.7	26.7	25.8	– –
Education															NSI
Less than high school	15.8	13.7	10.3	9.4	14.8	12.3	17.6	10.0	†12.7	†13.1	17.8	16.4	†15.7	14.2	– –
Completed high school	12.9	15.0	15.5	17.9	14.7	15.3	16.4	†14.7	16.9	22.0	18.2	11.9	16.1	14.8	– –
Some college or university	14.9	13.0	15.0	13.1	13.6	14.4	15.0	11.7	13.4	17.1	14.7	15.4	17.0	16.4	– –
University degree	10.0	11.4	10.8	9.6	9.4	10.7	9.9	†5.2	12.2	†9.4	11.1	10.3	11.4	12.3	– –

Notes: (1) All analyses are sample design adjusted; ª95% confidence interval; † Estimate suppressed or unstable.
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1998-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction.
Def: *The AUDIT screener measures hazardous and harmful drinking, as indicated by a score of 8 or more out of 40.*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 3.6.5: Percentage *Reporting Hazardous or Harmful Drinking (AUDIT 8+)* During the Past 12 Months, by Demographic Characteristics, Ontarian *Past Year Drinkers*, Aged 18+, 1998–2011

	1998 (1777)	1999 (1938)	2000 (1887)	2001 (2088)	2002 (1933)	2003 (1933)	2004 (2101)	2005 (1906)	2006 (1527)	2007 (1618)	2008 (1599)	2009 (1602)	2010 (2352)	2011 (2401)	Change	
Total Drinkers	**17.4**	**16.9**	**16.7**	**16.7**	**16.5**	**16.5**	**17.3**	**13.3**	**17.9**	**19.3**	**18.4**	**16.7**	**19.1**	**17.8**	T	–
(95%CI)[a]	(15.4, 19.6)	(15.0, 19.1)	(14.9,18.8)	(14.9,18.6)	(14.6, 18.6)	(14.6, 18.6)	(15.3, 19.5)	(11.6, 15.4)	(15.5, 20.5)	(16.9,21.8)	(16.0, 21.1)	(16.9,21.8)	(17.1, 21.2)	(15.8,20.1)		
Gender															NSI	
Men	**28.0**	**25.9**	**23.9**	**24.7**	**24.4**	**23.5**	**24.4**	**18.6**	**26.2**	**27.4**	**26.5**	**23.7**	**26.2**	**25.8**	–	–
	(24.5, 31.8)	(22.6, 29.4)	(20.8, 27 .3)	(21.7, 27.9)	(21.4, 27.8)	(20.4, 27.0)	(21.2, 28.0)	(15.7, 21.9)	(22.4,30.4)	(23.6,31.5)	(22.6,30.8)	(23.6,31.5)	(23.0,29.7)	(22.4,29.6)		
Women	**6.8**	**7.7**	**9.5**	**8.3**	**8.6**	**9.7**	**10.1**	**7.8**	**9.0**	**10.9**	**10.3**	**9.7**	**11.8**	**10.0**	–	–
	(5.2, 8.8)	(5.9, 9.9)	(7.7,11.7)	(6.6,10.5)	(6.7, 11.1)	(7.6, 12.2)	(8.0, 12.8)	(6.0, 10.1)	(6.0, 10.1)	(8.6,13.9)	(7.7,13.6)	(8.6,13.9)	(9.7, 14.3)	(8.0,12.5)		
Age															NSI	
18–29	**32.1**	**29.9**	**29.6**	**30.3**	**26.6**	**31.4**	**36.2**	**31.2**	**33.5**	**43.9**	**36.4**	**33.0**	**38.8**	**34.7**	T	–
	(26.7, 38.0)	(24.7, 35.7)	(24.8,35.0)	(25.3,35.7)	(21.8, 32.2)	(26.0, 37.3)	(30.1, 42.7)	(25.3, 37.7)	(26.6,41.1)	(36.5,51.6)	(28.5,45.1)	(25.3,41.7)	(32.2, 45.8)	(27.9,42.1)		
30–39	**13.8**	**16.2**	**14.4**	**15.9**	**19.2**	**19.4**	**18.4**	**8.6**	**18.7**	**14.3**	**19.1**	**18.6**	**19.1**	**17.7**	T	–
	(10.5, 17.9)	(12.7, 20.4)	(11.3,18.2)	(12.6,20.0)	(15.2, 23.9)	(15.0, 24.7)	(14.3, 23.5)	(6.1, 12.1)	(13.9,24.6)	(10.2,19.7)	(13.8,25.7)	(13.8,24.6)	(14.6, 24.4)	(13.4,22.9)		
40– 49	**14.6**	**13.7**	**12.7**	**13.1**	**13.4**	**12.5**	**12.6**	**11.3**	**14.2**	**12.3**	**16.5**	**14.3**	**15.3**	**19.0**	–	–
	(11.0, 19.1)	(10.3, 18.1)	(9.7,16.6)	(10.1,16.8)	(10.1, 17.5)	(9.4, 16.2)	(9.5, 16.6)	(8.3, 15.3)	(10.4,19.2)	(8.9,16.9)	(12.3,21.9)	(10.7,18.8)	(12.0,19.3)	(15.2,23.6)		
50– 64	**12.7**	**11.6**	**12.5**	**13.5**	**10.9**	**9.5**	**9.3**	**7.9**	**10.9**	**16.6**	**12.6**	**9.9**	**13.5**	**11.0**	–	–
	(9.0, 17.6)	(8.1, 16.3)	(9.0,17.0)	(10.2,17.7)	(7.8, 15.0)	(6.6, 13.4)	(6.6, 12.8)	(5.5, 11.3)	(7.8,14.9)	(12.9,21.0)	(9.4, 16.6)	(6.9,14.0)	(11.0,16.5)	(8.4,14.2)		
65+	**8.0**	**7.5**	**8.1**	**†5.2**	**8.9**	**†4.7**	**7.8**	**†4.8**	**7.2**	**†6.2**	**†5.0**	**7.4**	**†6.5**	**6.1**	–	–
	(4.6, 13.6)	(4.6, 11.9)	(4.6,13.8)	(3.1,8.6)	(5.3, 14.7)	(2.5, 8.4)	(4.8, 12.4)	(2.6, 8.7)	(4.2,12.1)	(3.7, 10.3)	(3.0,8.2)	(4.7, 11.3)	(4.4, 9.5)	(4.1, 8.9)		
Region															NSI	
Toronto	**18.5**	**18.2**	**17.0**	**18.6**	**15.9**	**16.7**	**17.8**	**10.1**	**14.9**	**18.4**	**16.2**	**16.2**	**18.0**	**14.5**	–	–
	(13.7, 24.4)	(13.4, 24.3)	(12.6,22.5)	(14.3,23.8)	(11.7, 21.3)	(12.3, 22.3)	(13.3, 23.6)	(6.7, 14.8)	(10.2,21.2)	(13.3,25.0)	(10.9,23.6)	(11.2, 22.7)	(13.6, 23.5)	(10.4,19.9)		
Central South	**18.8**	**16.1**	**16.0**	**14.0**	**14.6**	**14.9**	**14.3**	**11.5**	**25.5**	**18.7**	**16.4**	**19.2**	**†19.0**	**15.1**	–	–
	(12.5, 27.1)	(10.6, 23.6)	(10.9,22.9)	(9.3,20.7)	(9.3, 22.3)	(9.9, 21.8)	(8.8, 22.3)	(6.8, 18.8)	(17.0, 36.4)	(12.4,27.1)	(10.0, 25.5)	(12.7,27.9)	(13.1, 26.7)	(9.3,23.6)		
Central West	**13.1**	**13.3**	**17.1**	**14.6**	**19.1**	**19.7**	**17.5**	**15.7**	**16.8**	**19.3**	**18.8**	**18.7**	**17.0**	**20.0**	–	–
	(9.0, 18.7)	(9.3, 18.7)	(12.6,22.8)	(10.7,19.6)	(14.2, 25.2)	(14.6, 26.0)	(12.5, 23.9)	(10.9, 21.9)	(11.4,24.1)	(13.1,27.5)	(12.8,26.7)	(13.0,26.1)	(12.2, 23.0)	(14.6,26.8)		
South West	**20.5**	**18.7**	**15.5**	**20.3**	**14.5**	**16.1**	**19.2**	**16.9**	**23.5**	**21.2**	**14.4**	**11.7**	**20.7**	**24.8**	T	–
	(15.5, 26.5)	(14.4, 23.9)	(11.6,20.4)	(15.8,25.6)	(10.9, 18.9)	(12.2, 21.0)	(14.9, 24.5)	(12.6, 22.2)	(18.1,29.8)	(16.0,27.5)	(9.9,20.6)	(7.9,16.9)	(16.2, 26.2)	(19.7,30.7)		
Central East	**13.7**	**19.7**	**16.6**	**14.5**	**17.9**	**16.5**	**19.5**	**11.9**	**11.7**	**15.5**	**20.4**	**18.8**	**17.0**	**14.8**	–	–
	(9.2, 19.8)	(14.4, 26.3)	(11.7,22.8)	(10.5,19.7)	(12.9, 24.3)	(11.7, 22.7)	(14.3, 26.1)	(7.8, 17.9)	(7.3, 18.4)	(10.5,22.2)	(14.5,27.9)	(12.8,26.7)	(12.4, 22.9)	(10.6,20.3)		
East	**17.9**	**15.5**	**15.3**	**15.8**	**16.4**	**15.2**	**13.6**	**12.9**	**19.8**	**25.8**	**21.8**	**14.2**	**21.1**	**17.8**	T	–
	(13.5, 23.3)	(11.4, 20.6)	(11.4,20.2)	(12.0,20.5)	(12.4, 21.4)	(11.1, 20.5)	(10.0, 18.3)	(9.1, 17.9)	(14.2,26.7)	(20.0,32.6)	(16.2,28.6)	(10.2,19.3)	(16.4, 26.8)	(13.6,22.9)		
North	**22.4**	**17.0**	**21.0**	**17.8**	**15.8**	**15.2**	**17.7**	**15.7**	**15.4**	**13.4**	**22.2**	**17.3**	**25.4**	**20.6**	T	–
	(17.2, 28.7)	(12.9, 22.0)	(16.5,26.3)	(14.3,18.6)	(11.7, 20.9)	(11.2, 20.2)	(15.3, 19.5)	(11.6, 20.9)	(11.0, 20.5)	(9.2,19.0)	(16.8,28.7)	(12.5,23.5)	(20.3, 31.2)	(15.6,26.7)		

Cont'd

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(1777)	(1938)	(1887)	(2088)	(1933)	(1933)	(2101)	(1906)	(1527)	(1618)	(1599)	(1602)	(2352)	(2401)		
Marital Status															NSI	
Married/Partner	12.7	12.5	12.5	12.2	12.9	12.6	11.9	9.1	12.8	13.1	13.3	13.6	15.1	13.6	–	–
Previously Married	12.7	14.4	17.5	11.9	15.6	16.5	11.6	10.5	15.3	17.2	14.4	10.9	13.1	17.1	–	–
Never Married	31.8	31.0	26.6	31.0	26.7	27.5	35.8	27.4	33.4	40.0	36.8	29.1	33.7	30.7	–	–
Education															NSI	
Less than high school	24.4	21.6	17.6	16.0	22.3	18.2	27.0	16.8	19.8	19.8	26.6	23.4	23.6	21.2	–	–
Completed high school	18.4	19.4	20.3	23.0	19.1	19.3	20.1	18.8	22.9	27.1	22.5	16.5	22.4	19.5	–	–
Some college or university	17.3	15.8	17.4	16.3	16.5	17.6	17.8	14.2	16.7	20.4	18.3	18.7	20.7	19.6	–	–
University degree	12.2	13.7	11.8	10.9	11.3	12.5	12.0	6.5	15.0	11.4	13.5	12.6	14.2	14.6	–	–

Notes: (1) All analyses are sample design adjusted; ª95% confidence interval;

              (2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1998-2011; **2Y** discernible change (p<.05) between last two estimates.

              (3) **NSI**, non-discernible YEAR × FACTOR interaction.

Def: *The AUDIT screener measures hazardous and harmful drinking, as indicated by a score of 8 or more out of 40.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 3.6.1

Percentage Drinking Hazardously or Harmfully (AUDIT 8+) in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex, age, and region(p<.05)
Source: 2011 CAMH Monitor
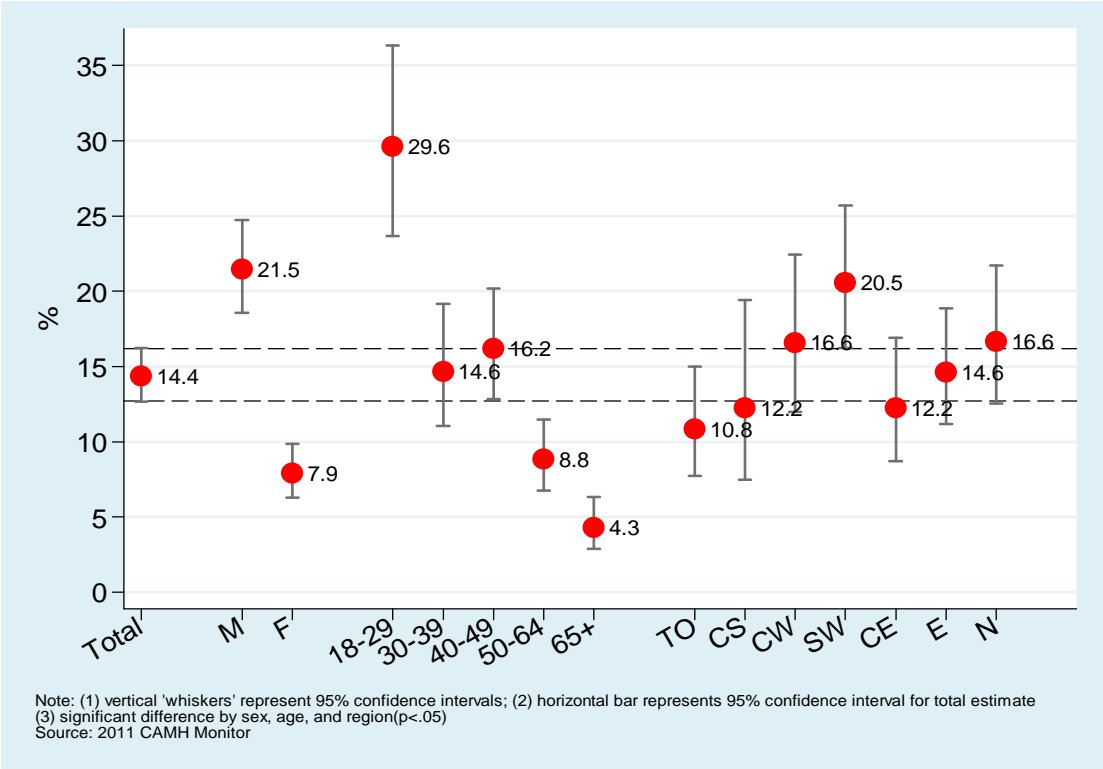
Figure 3.6.2
Percentage Drinking Hazardously or Harmfully (AUDIT 8+) in the Past Year, Ontarians Aged 18+, 1998–2011

Note: Vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
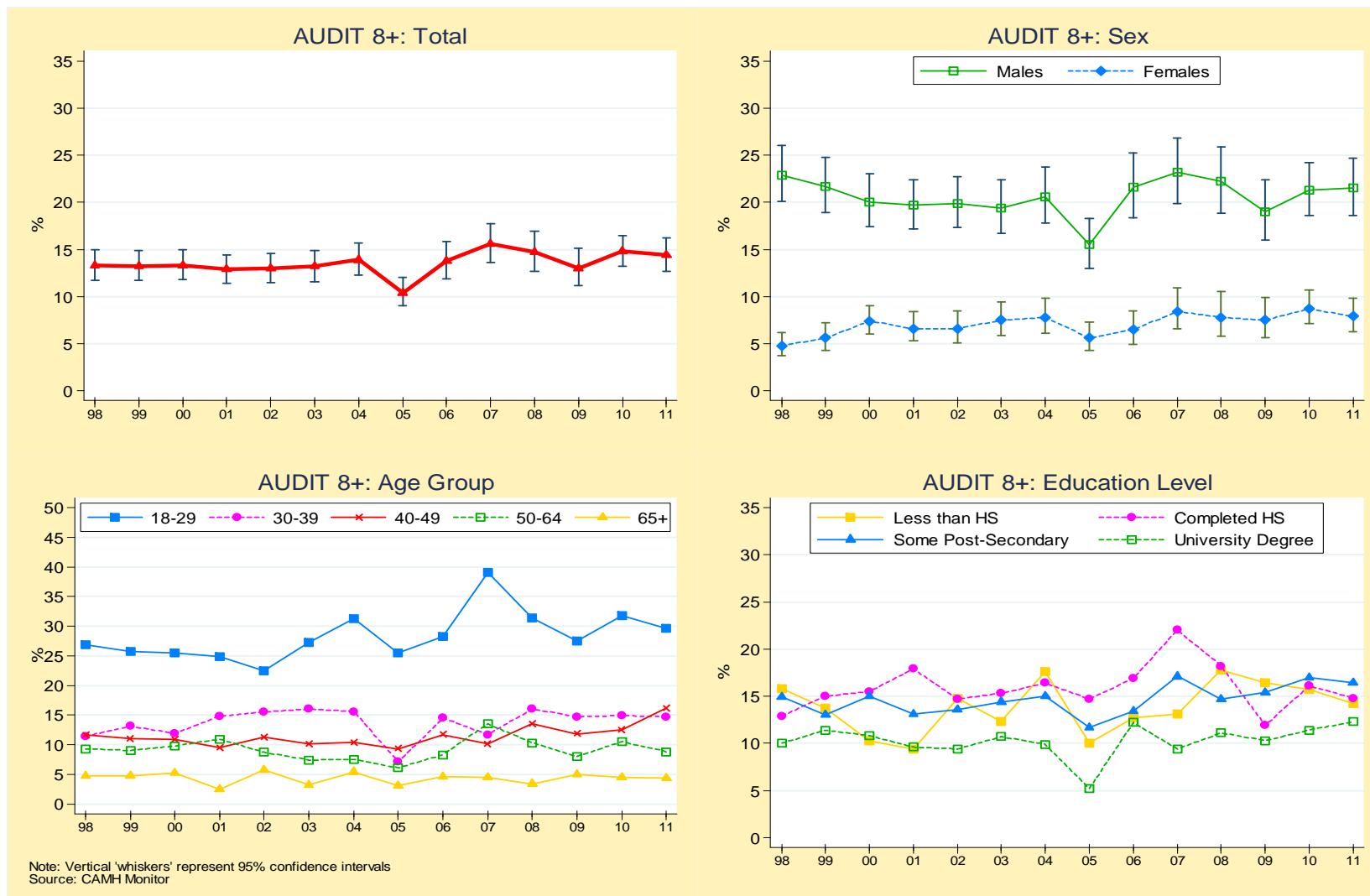
3.6.1 Symptoms of Alcohol Dependence (AUDIT)

While the previous section examined the prevalence of hazardous/harmful drinking, this section describes AUDIT symptoms of **alcohol dependence** experienced in the past year among Ontario adults.

Of the 10 AUDIT items, three (Q4–Q6 in Table 3.6.1) are indicators of dependent drinking. In this section, we present the proportion of Ontario adults reporting **one or more of the three dependence indicators** included in the AUDIT: (1) *were not able to stop drinking once you had started*; (2) *failed to do what was normally expected from you because of drinking*; and (3) *needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session*.

2011………..Table 3.6.6, Fig 3.6.3

An estimated **8.1%** (95%CI: 6.8% to 9.6%) of Ontario adults experienced at least **one** dependence symptom during the past year. The corresponding population estimate is 761,042 Ontario adults (95% CI: 622,931 to 899,153).

Gender, age, marital status, education and **income** were discernibly related to reporting at least one dependence symptom, when controlling for our set of risk factors.

- The odds of experiencing a dependence symptom were 1.5 times greater among men than women (10.2% vs. 6.2%, respectively).

- The prevalence of experiencing at least one dependence symptom declined discernibly with age. Symptoms were highest among 18 to 29 year olds (19.0%) and lowest among those aged 65 and older (2.5%). Two of the four sequential age group comparisons are statistically discernible: the adjusted odds of reporting at least one dependence symptom were discernibly 56% lower among 30 to 39 year olds than 18 to 29 year olds (7.3% vs. 19.0%; OR=0.44) and discernibly 66% lower among 50 to 64 year olds than 40 to 49 year olds (3.6% vs. 9.6%; OR=0.34).

- Those never married reported the highest prevalence (16.7%), twice that of the other marital categories. Relative to married respondents, the adjusted odds of experiencing at least one dependence symptom among those previously married and among those never married were 2.8 times and 2.0 times higher (8.1% and 16.7% vs. 5.4%, respectively).

- The odds of experiencing at least one dependence symptom was highest among those who did not graduate high school (11.2%) and discernibly lower among those who graduated high school, had some college or university education, and those with a university degree (6.9%, 8.4% and 8.0%, respectively), who show discernibly lower adjusted odds (OR=0.35, OR=0.36 and OR=0.35, respectively) than those who did not graduate high school.

- Household income also shows a discernible association to experiencing at least one dependence symptom. The distinguishing feature is higher reports among those with incomes of $80,000 or higher (10.3%), who show three times higher adjusted odds (OR=3.28) than those with incomes of less than $30 thousand (5.0%).

Trends
1998–2011…………..Table 3.6.7, Fig 3.6.4

2010–2011
The proportion of Ontario adults reporting at least one of the dependence indicators in **2011** (8.1%) did not change discernibly from **2010** (7.9%) and **2009** (6.4%). In addition, rates were stable between 2010 and 2011 for most subgroups. There were only two discernible subgroup changes during this period: among those aged **40 to 49** (from 4.8% in 2010 to 9.6% in 2011) and among residents living in the **North** (from 12.6% in 2010 to 6.4% in 2011).

1998–2011

Between 1998 and 2011, there was a discernible **non-linear change** in reporting at least one of the dependence indicators among **Ontario adults**. The percentage experiencing at least one dependence symptom declined discernibly from 9.4% in 1998 to 5.9% in 2003 and then increased to 8.1% in 2011.

Year did not interact discernibly with any of the demographic categories analysed, suggesting that subgroup trends were not measurably dissimilar between factor categories. Discernible non-linear subgroup variation was found during this period only for those **aged 50 to 64** and residents of the **Central South** and living in the **North**.

Table 3.6.6: Percentage *Reporting One or More Alcohol Dependence Symptoms (based on AUDIT)* During the Past 12 Months, Unadjusted and Adjusted Group Differences, Ontarians, Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**8.1**	(6.8, 9.6)	—
Gender				*
Men	1212	**10.2**	(8.0, 12.8)	**1.48***
Women *(Comparison Group)*	1827	**6.2**	(4.7, 8.0)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**19.0**	(14.1, 25.0)	—
30-39	396	**7.3**	(4.6, 11.2)	**0.44***
40-49	551	**9.6**	(7.0, 13.0)	1.31
50-64	923	**†3.6**	(2.4, 5.2)	**0.34****
65+	814	**†2.3**	(1.3, 4.0)	0.57
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**†8.3**	(5.6, 12.2)	1.12
Central South	253	**†6.7**	(3.4, 12.7)	0.88
Central West	391	**†9.5**	(6.2, 14.4)	1.01
South West	500	**†7.7**	(5.0, 11.7)	1.03
Central East	416	**†8.3**	(5.3, 12.7)	1.29
East	517	**†7.7**	(5.3, 11.1)	0.97
North	459	**†6.4**	(4.1, 9.7)	0.79
Marital Status				***
Married/Partner *(Comparison Group)*	1896	**5.4**	(4.3, 6.8)	—
Previously Married	656	**†8.1**	(4.8, 13.2)	**2.81****
Never Married	451	**16.7**	(12.5, 22.0)	**1.99***
Education				*
Less than high school *(Comparison Group)*	369	**†11.2**	(6.4, 18.8)	—
Completed high school	670	**†6.9**	(4.5, 10.5)	**0.35***
Some college or university	1018	**8.4**	(6.3, 11.2)	**0.36****
University degree	945	**8.0**	(5.9, 10.6)	**0.35***
Household Income				*
< $30,000 *(Comparison Group)*	351	**†5.0**	(2.4, 10.0)	—
$30,000-$49,000	411	**†6.5**	(3.6, 11.5)	1.87
$50,000-$79,000	558	**†7.6**	(5.1, 11.2)	2.13
$80,000+	980	**10.3**	(8.0, 13.1)	**3.28****
Not stated	739	**†6.8**	(4.3, 10.5)	1.58

Notes: (1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval;
  NS – no significant difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=2895).

Def: *Percent reporting at least one or more (of 3) AUDIT dependence indicators; based on the AUDIT score for alcohol dependence as indicated by a score of 1 or more out of 12 (see Table 3.6.1: summation of items 4, 5 and 6)*
Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table 3.6.7: Percentage *Reporting One or More Alcohol Dependence Symptoms* During the Past 12 Months, by Demographic Characteristics, Ontarians, Aged 18+, 1998–2011

	(N=)	1998 (2509)	1999 (2436)	2000 (2406)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (3030)	2011 (3039)	Change	
Total Drinkers		**9.4**	**8.5**	**7.7**	**8.1**	**6.7**	**5.9**	**6.3**	**6.8**	**6.8**	**7.1**	**7.5**	**6.4**	**7.9**	**8.1**	**T**	**–**
		(8.1,10.9)	(7.3, 9.8)	(6.5,9.0)	(6.9,9.4)	(5.6,7.9)	(4.9,7.1)	(5.2,7.6)	(5.7,8.2)	(5.4,8.4)	(5.8,8.7)	(6.0,9.3)	(5.2,7.9)	(6.7, 9.3)	(6.8, 9.6)		
Gender																**NSI**	
Men		**13.7**	**12.2**	**10.3**	**11.9**	**10.0**	**7.2**	**8.6**	**9.6**	**9.8**	**8.6**	**10.6**	**8.3**	**9.6**	**10.2**	**–**	**–**
		(11.5,16.3)	(10.2,14.7)	(8.4,12.5)	(9.9,14.3)	(8.2,12.2)	(5.7,9.2)	(6.8,10.9)	(7.6,11.9)	(7.5,12.7)	(6.5,11.3)	(8.2,13.6)	(6.4,10.7)	(7.7,11.9)	(8.0,12.8)		
Women		**5.6**	**5.1**	**5.3**	**4.5**	**† 3.6**	**4.7**	**4.1**	**4.3**	**† 4.0**	**5.7**	**† 4.7**	**† 4.6**	**6.4**	**6.2**	**–**	**–**
		(4.3,7.2)	(3.9,6.6)	(4.1,6.8)	(3.3,6.1)	(2.5,5.1)	(3.5,6.2)	(2.9,5.6)	(3.2,5.8)	(2.8,5.7)	(4.2,7.6)	(3.1,7.0)	(3.1,6.8)	(5.0,8.1)	(4.7,8.0)		
Age																**NSI**	
18-29		**18.6**	**14.0**	**17.1**	**17.1**	**12.3**	**14.0**	**11.8**	**16.1**	**15.1**	**17.3**	**17.8**	**13.3**	**19.9**	**19.0**	**–**	**–**
		(14.7,23.1)	(10.7,18.1)	(13.6,21.3)	(13.4,21.5)	(9.2,16.3)	(10.7,18.2)	(8.5,16.2)	(12.3,20.9)	(10.6,21.0)	(12.3,23.9)	(12.2,25.1)	(8.8,19.7)	(15.2,25.5)	(14.1,25.0)		
30-39		**10.4**	**11.1**	**6.0**	**8.1**	**8.7**	**†6.2**	**8.4**	**†5.7**	**7.7**	**†5.3**	**7.4**	**8.7**	**8.2**	**7.3**	**–**	**–**
		(7.9,13.6)	(8.5,14.3)	(4.2,8.4)	(5.9,11.2)	(6.4,11.8)	(4.2,9.1)	(5.8,12.1)	(3.8,8.5)	(4.9,11.7)	(3.2,8.6)	(4.4,12.0)	(5.8,13.0)	(5.7,11.6)	(4.6,11.2)		
40-49		**†7.5**	**†7.8**	**†5.5**	**†7.7**	**†4.7**	**†3.9**	**†5.9**	**†6.3**	**†6.9**	**†6.2**	**†6.5**	**†6.4**	**†4.8**	**9.6**	**–**	**2Y**
		(5.4,10.4)	(5.5,10.9)	(3.7,8.2)	(5.4,10.9)	(3.0,7.2)	(2.5,6.0)	(3.9,8.7)	(4.2,9.3)	(4.5,10.4)	(4.1,9.2)	(4.3,9.9)	(4.3,9.5)	(3.3,6.8)	(7.0,13.0)		
50-64		**†6.6**	**†5.7**	**†5.3**	**†4.5**	**†3.2**	**†3.2**	**†2.8**	**†2.9**	**†2.4**	**†5.2**	**†4.1**	**†3.6**	**5.3**	**†3.5**	**T**	**–**
		(4.2,10.0)	(3.5,9.1)	(3.4,8.2)	(2.7,7.4)	(1.8,5.7)	(1.9,5.2)	(1.7,4.8)	(1.6,5.0)	(1.4,4.4)	(3.5,7.8)	(2.6,6.5)	(2.3,5.6)	(3.9,7.1)	(2.4,5.2)		
65+		**†**	**†**	**†2.3**	**†**	**†3.5**	**†**	**†**	**†2.3**	**†**	**†**	**†2.7**	**†**	**†2.3**	**†2.3**	**–**	**–**
		—	—	(1.1,4.8)	—	(1.7,7.3)	—	—	(1.3,4.3)	—	—	(1.4,5.0)	—	(1.3,3.9)	(1.3,4.0)		
Region																**NSI**	
Toronto		**10.6**	**†8.3**	**†7.8**	**10.8**	**†6.8**	**†5.4**	**†5.9**	**†5.8**	**†6.2**	**†5.9**	**†8.4**	**†6.5**	**†9.8**	**†8.3**	**–**	**–**
		(7.7, 14.4)	(5.7,11.9)	(5.5,11.0)	(7.8,14.7)	(4.6,10.1)	(3.5,8.3)	(3.7,9.3)	(3.6,9.1)	(3.7,10.3)	(3.6,9.4)	(5.0,13.7)	(4.0,10.7)	(6.9,13.7)	(5.6,12.2)		
Central South		**†10.7**	**†7.6**	**†10.3**	**†**	**†**	**†**	**†**	**†5.3**	**†9.2**	**†7.4**	**†8.2**	**†9.4**	**†7.1**	**†6.7**	**T**	**–**
		(6.7,16.7)	(4.5,12.4)	(6.5,15.9)	—	—	—	—	(2.7,10.0)	(4.8,16.9)	(4.0,13.2)	(4.2,15.3)	(5.4,16.0)	(4.2,11.7)	(3.4,12.7)		
Central West		**†8.2**	**†8.8**	**†8.5**	**†8.3**	**†8.7**	**†6.7**	**†6.8**	**†7.7**	**†6.2**	**†7.0**	**†8.8**	**†5.2**	**†5.3**	**†9.5**	**–**	**–**
		(5.5,12.2)	(6.0,12.8)	(5.7,12.5)	(5.7,12.0)	(5.7,13.1)	(4.2,10.7)	(3.9,11.7)	(5.0,11.8)	(3.4,11.1)	(3.6,13.4)	(5.3,14.1)	(2.8,9.6)	(3.1,8.8)	(6.2,14.4)		
South West		**†8.7**	**†9.4**	**†5.7**	**†7.3**	**†6.2**	**†5.5**	**†7.4**	**†7.3**	**†7.9**	**†8.7**	**†5.0**	**†6.0**	**†8.1**	**†7.7**	**–**	**–**
		(6.0,12.6)	(6.6,13.2)	(3.7,8.7)	(5.1,10.5)	(4.1,9.2)	(3.5,8.7)	(5.0,10.7)	(4.8,10.8)	(5.1,12.1)	(5.7,12.9)	(3.0,8.4)	(3.5,9.9)	(5.6,11.8)	(5.0,11.7)		
Central East		**†10.5**	**†9.8**	**†5.4**	**†9.1**	**†6.6**	**†7.1**	**†7.9**	**†7.6**	**†6.4**	**†5.9**	**†8.4**	**†6.8**	**†5.4**	**†8.3**	**–**	**–**
		(6.9,15.6)	(6.6,14.4)	(3.0,9.7)	(5.8,14.0)	(4.1,10.4)	(4.4,11.4)	(4.9,12.4)	(4.7,12.2)	(3.4,11.7)	(3.2,10.4)	(4.9,13.9)	(3.8,12.1)	(3.1,9.2)	(5.3,12.7)		
East		**†7.3**	**†6.9**	**†6.7**	**†6.1**	**†6.3**	**†7.3**	**†6.1**	**†6.4**	**†5.6**	**†9.2**	**†4.9**	**†6.2**	**†9.8**	**†7.7**	**–**	**–**
		(5.1,10.4)	(4.7,10.2)	(4.4,10.0)	(4.1,9.0)	(4.0,9.7)	(4.9,10.8)	(4.0,9.4)	(4.1,9.9)	(3.2,9.6)	(5.9,14.0)	(2.6,9.1)	(3.9,9.7)	(6.8,14.0)	(5.3,11.1)		
North		**†9.5**	**†7.9**	**†10.7**	**†6.1**	**†6.2**	**†6.1**	**†6.6**	**†8.2**	**†6.9**	**†6.3**	**†8.3**	**†5.0**	**†12.6**	**†6.4**	**T**	**2Y**
		(6.8,13.1)	(5.6,11.2)	(7.8,14.5)	(4.3,8.6)	(4.0,9.4)	(3.9,9.5)	(4.7,9.2)	(5.5,12.0)	(4.3,10.8)	(3.8,10.2)	(5.4,12.5)	(2.9,8.6)	(9.0,17.3)	(4.1,9.7)		

Cont'd

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	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Marital Status															NSI
Married/ Partner	6.9	7.2	5.2	5.7	5.0	4.1	4.9	4.8	4.3	5.3	4.9	5.2	5.1	5.4	– –
Previously Married	†5.5	†4.8	†6.8	†4.0	†4.6	†5.0	†5.3	†4.4	†4.6	†5.0	†8.2	†6.2	†5.1	†8.1	– –
Never Married	18.7	14.7	14.8	16.9	12.5	11.7	11.2	14.2	15.7	†14.6	†15.2	†10.7	18.2	16.7	– –
Education															NSI
Less Than High School	†9.5	†7.1	†7.5	†4.5	†7.8	†5.3	†5.8	†8.4	†5.9	†6.8	†8.7	†7.8	†8.2	†11.2	– –
Completed High School	9.9	9.4	9.2	11.6	†6.3	†7.4	†6.3	†7.9	†7.2	†9.0	†10.2	†7.4	†5.8	†6.9	– –
Some College or University	11.6	9.2	7.9	8.4	7.2	6.3	6.9	8.1	†7.6	8.7	†7.0	†6.9	9.6	8.4	– –
University Degree	†6.0	†7.6	†5.7	†5.8	†5.8	†4.8	†5.9	†3.5	†6.0	†3.6	†5.7	†4.9	7.6	8.0	– –

Notes: All analyses are sample design adjusted; [a] 95% confidence interval; NS – no significant difference; † Estimate suppressed or unstable.

Trend Analysis: – change not significant at p<.05; **T** significant change (p<.05) between 1996-2011; **2Y** significant change (p<.05) between last two estimates.

Def'n: *Percent reporting at least one or more (of 3) AUDIT dependence indicators; based on the AUDIT score for alcohol dependence (summation of: aud4t, aud5t, aud6t) as indicated by a score of 1 or more out of 12.*

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Figure 3.6.3

Percentage Reporting One or More Alcohol Dependence Symptoms (based on AUDIT) in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate (3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
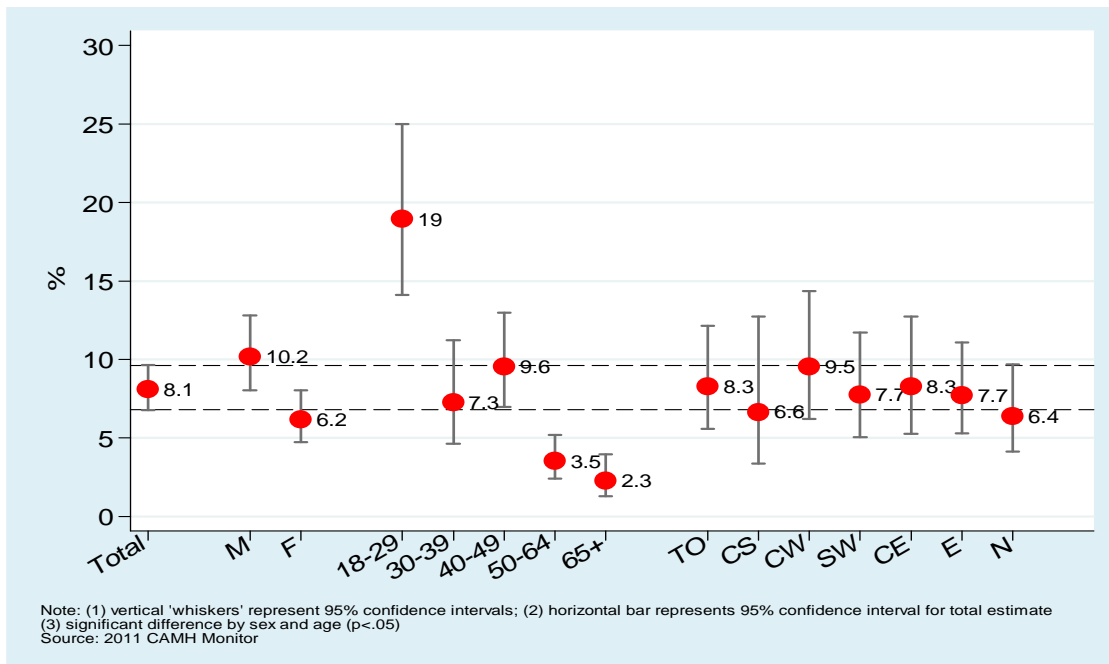
Figure 3.6.4

Percent Reporting One or More Alcohol Dependence Symptoms (based on AUDIT) in the Past Year, Ontarians Aged 18+, 1998–2011

Note: Vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
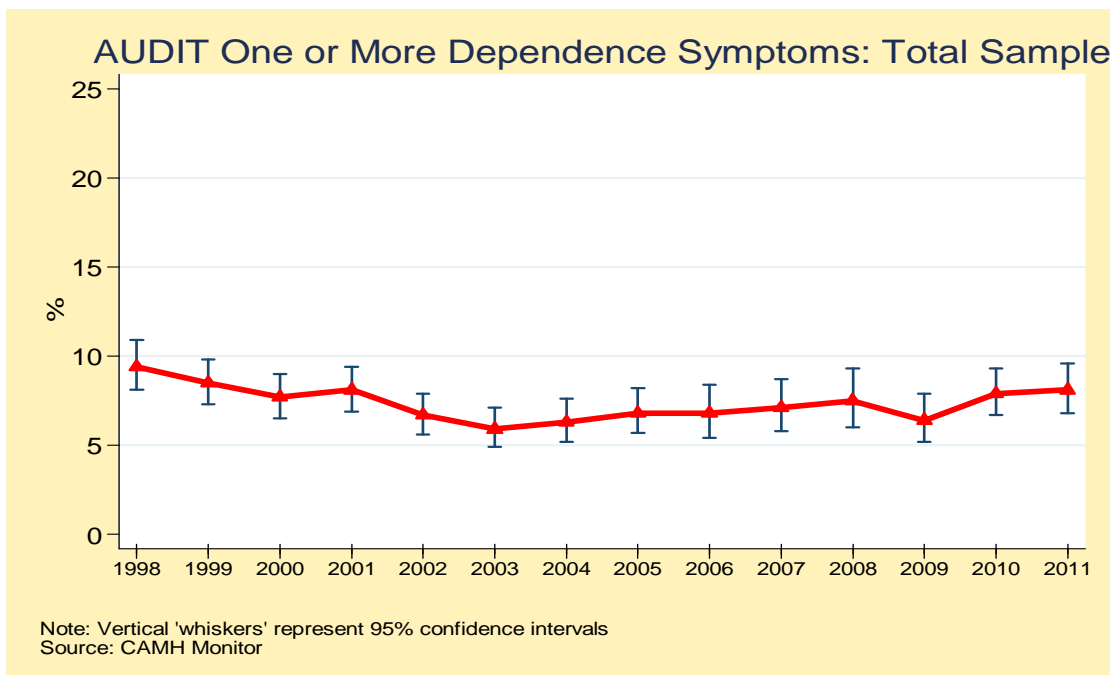
4. TOBACCO

4.1 Cigarette Smoking

2011 ……..… Table 4.1; Fig. 4.1–4.3

Overall, the estimated percentage of *current* smokers – respondents who (1) smoked 100 or more cigarettes in their lifetime, *and* (2) smoked occasionally or daily during the past year, *and* (3) smoked during the past 30 days – was **15.4%** (95% CI: 13.8% to 17.0%).[50] The corresponding population estimate is 1,445,799 current smokers (95% CI: 1,292,863 to 1,598,735).

More than half of Ontarians (56.3%) were classified as *non-smokers* (never smoked more than 100 cigarettes). One-third of the population are estimated to be former smokers comprising *former daily* (28.6%) or *former nondaily* (4.8%) smokers. Finally, *daily smokers* represent an estimated 11.5%, while a small group of *nondaily smokers* represent 3.9% of Ontario adults.

Gender, age, region, marital status, education and **income** were discernibly related to current smoking, when adjusting for other demographic factors.

- The adjusted odds of current smoking were some 1.5 times greater (by 50%) among men than women (17.9% vs. 13.0%, respectively).

- Although smoking is discernibly related to age, differences from 18 to 29 years through to 49 years are nominal. The distinguishing age groups are those aged 50 to 64 and 65 and older, whose estimates of 14.7% and 9.0% are discernibly lower (by 38% and by 58%, respectively) over that of 40 to 49 year olds and 50 to 64

year olds (OR=0.62 and OR=0.42, respectively).

- Regionally, current smoking varied discernibly from 6.8% to 18.5% and although the regional effect was marginally discernible (*p*=0.069), two regions differed from the provincial estimate. Relative to the provincial estimate of 15.4%, residents of the **Central South** and **North** had greater odds of current smoking by 45% (21.8%; OR=1.45) and 33% (23.2%; OR=1.33), respectively.

- The adjusted odds of current smoking of those previously married were almost 2 times **higher** (73% higher) than married individuals (20.7% vs. 14.8%; OR=1.73).

- Smoking decreased discernibly with increasing education. Current smoking was **highest** among those not completing high school (27.0%), and **lowest** among those holding a university degree (7.7%), a decline also evident in the odds ratios. Relative to those not completing high school, the adjusted odds of smoking were discernibly 36% lower among respondents who completed high school (OR=0.64), 48% lower among those with some postsecondary education (OR=0.52) and 79% lower among those with a university degree (OR=0.21).

- Household income shows discernible association to past year smoking. The distinguishing feature is a higher rate among those with the lowest income and a lower rate among those who did not declare their income. Past year smoking decreased discernibly from 22.6% among those with incomes of less than $30,000 to 13.1% among those with incomes of $80,000 and higher (OR=0.65) and 11.6% among

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[50] Standard to Health Canada guidelines

those who did not declare their income (OR=0.48).

▪ On average, current smokers consumed **11.3 cigarettes per day**. This number did not vary discernibly by sex (11.3 among men vs. 11.2 among women), nor by age (ranging from 13.9 among those aged 65 and older to 8.9 among 30 to 39 year olds).

4.2 Daily Smoking

2011 ………… Table 4.2; Fig. 4.1, 4.3

An estimated, **11.5%** (95% CI: 10.2% to 12.9%) of Ontario adults smoked cigarettes daily. The corresponding population estimate is 1,082,621 daily smokers (95% CI: 951,761 to 1,213,481).

Daily smoking displayed similar characteristics as current smoking: those aged 65 and older, those previously married, those with some college or university degree, and those who did not declare their incomes reported discernibly lower rates of daily smoking within their respective demographic risk factors.

Two regional comparisons are discernible. Relative to the provincial estimate of 11.5%, the odds of daily smoking were 51% greater among residents of the **Central South** (17.9%), and 38% lower among residents of **Toronto** (6.8%).

There were no discernible differences in daily smoking for sex when adjusting for other risk factors.

Trends
1991–2011…… Table 4.3-4.4; Fig. 4.5

2010–2011
Although prevalence of **current cigarette smoking** in 2011 (15.4%) did not change discernibly from 2010 (17.6%), it is discernibly lower than the 18.6% found in 2009. There were also two discernible

subgroup declines during this period: among residents of **Toronto (**from 17.4% in 2010 to 11.7% in 2011) and of the **Central East** (from 21.4% in 2009 to 14.0% in 2011).

1991–2011
Since 1991, the prevalence of **current smoking** moved downward from 28.5% in 1991 to 23.5% in 1993, and then rebounded to 28.5% in 1995.

Since 1996, current smoking has steadily declined (from 26.7% in 1996 to 15.4% in 2011), most noticeably since 2007.

Year did not interact discernibly with any of the demographic factors analysed, suggesting **similar trends** in each subgroup. Indeed, there were discernible declines during this period for both men and women, and virtually all age groups, regions, marital status and education groups.

Daily smoking displayed similar patterns to current smoking. Prevalence of daily smoking in 2011 (11.5%) **declined discernibly** from both 2010 (14.2%) and 2009 (14.5%). There were also four discernible subgroup declines between 2010 and 2011: daily smoking decreased among **men** (from 16.6% to 12.3%) **50 to 64** year olds (from 15.7% to 11.6%), residents of **Toronto** (from 14.3% to 6.8%) and those **never married** (from 16.5% to 10.7%).

Since 1996, **daily smoking** declined discernibly from 23.0% to 11.5% in 2011. Discernible similar subgroup declines were also evident for gender, age, marital status and education.

Year interacted discernibly only with **region**, indicating that trends in daily smoking differed among regions in Ontario. Although daily smoking declined discernibly in all regions, declines are strongest in Toronto (from19.3% in 1996 to 6.8% in 2011). In contrast, in the

Central South, daily smoking shows a weaker decline with a rather noticeable, but not discernable upturn between 2010 and 2011.

4.3 Nicotine Dependence (HSI) ………………………… Fig. 4.4

2011
Since 1996, the *CAMH Monitor* has assessed nicotine dependence **among daily smokers**[51] using the *Heaviness of Smoking Index* (HSI).

The 2-item HSI, derived from the Fagerstrom scale (Fagerström, 1978), is based on scores assigned to the *time to the first cigarette each morning* and *number of cigarettes smoked per day* (Heatherton et al., 1989). Scores of 0-2, 3-4 and 5-6 indicates classifications of low, moderate and high dependence on nicotine.

An estimated **12.1%** (95% CI: 8.2% to 17.7%) *of daily smokers* (*n*=381) met the HSI cut-off for **high nicotine dependence**. The corresponding population estimate is 129,445 Ontario daily smokers (95% CI: 77,210 to 181,679). An additional 36.3% and 51.5% of daily smokers were classified as experiencing moderate or low nicotine dependence, respectively.

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[51] The HSI is more meaningful among daily smokers than current smokers because a sizeable proportion of the latter are occasional smokers or smokers attempting to quit.

Table 4.1: Percentage Reporting *Current Cigarette Smoking* and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**15.4**	(13.8, 17.0)	—
Gender				**
Men	1212	**17.9**	(15.4, 20.7)	**1.50**
Women *(Comparison Group)*	1827	**13.0**	(11.3, 14.9)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**16.9**	(12.6, 22.3)	—
30-39	396	**15.9**	(12.3, 20.4)	0.78
40-49	551	**19.2**	(15.8, 23.2)	1.11
50-64	923	**14.7**	(12.2, 17.5)	**0.62**
65+	814	**9.0**	(6.8, 11.8)	**0.42***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**11.7**	(8.6, 15.7)	0.78
Central South	253	**21.8**	(16.5, 28.3)	**1.45***
Central West	391	**13.9**	(10.3, 18.5)	0.81
South West	500	**17.1**	(13.4, 21.5)	0.98
Central East	416	**14.0**	(10.6, 18.2)	0.87
East	517	**15.4**	(12.1, 19.4)	0.97
North	459	**23.2**	(19.0, 28.2)	**1.33**
Marital Status				**
Married/Partner *(Comparison Group)*	1896	**14.8**	(15.0, 20.0)	—
Previously Married	656	**20.7**	(18.8, 29.3)	**1.73**
Never Married	451	**14.3**	(15.3, 26.6)	0.62
Education				***
Less than high school *(Comparison Group)*	369	**27.0**	(21.0, 34.0)	—
Completed high school	670	**19.5**	(16.1, 23.5)	**0.64***
Some college or university	1018	**17.4**	(14.7, 20.5)	**0.52**
University degree	945	**7.7**	(5.9, 9.9)	**0.21**
Household Income				**
< $30,000 *(Comparison Group)*	351	**22.6**	(17.3, 28.9)	—
$30,000-$49,999	411	**17.3**	(13.0, 22.7)	0.79
$50,000-$79,999	558	**20.7**	(16.7, 25.4)	1.01
$80,000+	980	**13.1**	(10.9, 15.6)	**0.65***
Not stated	739	**11.6**	(8.9, 14.9)	**0.48**

Notes: (1) All analyses are sample design adjusted ; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of smoking are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of smoking are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N=2907).

Defn: *Current smokers are those who (1) reported smoking 100 or more cigarettes in their lifetime, (2) smoked cigarettes daily or occasionally during the past year; and (3) smoked during the past 30 days.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 4.2: Percentage Reporting *Daily Cigarette Smoking* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**11.5**	(10.2, 12.9)	—
Gender				NS
Men	1212	**12.3**	(10.2, 14.7)	1.23
Women *(Comparison Group)*	1827	**10.8**	(9.2, 12.5)	—
Age				
(Comparison Group is previous age group)				***
18-29	267	**11.0**	(7.6, 15.7)	—
30-39	396	**11.8**	(8.8, 15.7)	1.21
40-49	551	**14.2**	(11.3, 17.7)	1.07
50-64	923	**11.6**	(9.4, 14.2)	**0.66***
65+	814	**7.9**	(5.8, 10.7)	**0.44***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**6.8**	(4.6, 10.0)	**0.62***
Central South	253	**17.9**	(13.1, 23.9)	**1.51***
Central West	391	**11.2**	(7.9, 15.5)	0.97
South West	500	**12.2**	(9.3, 15.8)	0.91
Central East	416	**10.8**	(7.9, 14.7)	0.92
East	517	**12.1**	(9.2, 15.7)	1.01
North	459	**18.5**	(14.6, 23.1)	1.31
Marital Status				***
Married/Partner *(Comparison Group)*	1896	**10.5**	(9.0, 12.1)	—
Previously Married	656	**19.2**	(15.1, 24.1)	**2.22***
Never Married	451	**10.7**	(7.8, 14.7)	0.92
Education				***
Less than high school *(Comparison Group)*	369	**23.1**	(17.4, 30.0)	—
Completed high school	670	**15.5**	(12.6, 19.0)	0.63
Some college or university	1018	**13.3**	(10.9, 16.0)	**0.49***
University degree	945	**4.4**	(3.2, 6.1)	**0.16***
Household Income				*
< $30,000 *(Comparison Group)*	351	**17.5**	(13.0, 23.2)	—
$30,000-$49,999	411	**14.8**	(10.7, 20.2)	0.91
$50,000-$79,999	558	**14.7**	(11.5, 18.7)	1.01
$80,000+	980	**9.1**	(7.3, 11.3)	0.73
Not stated	739	**9.4**	(7.0, 12.3)	**0.54***

Notes: (1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of smoking are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of smoking are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N=2907).

Defn: Daily smokers are those who (1) reported using 100 or more cigarettes in their lifetime, (2) smoked during the past 30 days; and (3) smoked cigarettes daily at the time of the survey;.

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 4.3: Percentage Reporting *Current Cigarette Smoking*, by Demographic Characteristic, Ontarians Aged 18+, 1991–2011

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(1047)	(1058)	(941)	(2022)	(994)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Total	**28.5**	**26.1**	**23.5**	**25.3**	**28.5**	**26.7**	**26.8**	**25.9**	**25.4**	**25.6**	**24.7**	**22.8**	**22.5**	**21.4**	**20.3**	**20.6**	**21.6**	**19.7**	**18.6**	**17.6**	**15.4**	T –
(95%CI)[a]	(25.8,31.2)	(23.5,28.7)	(20.8,26.2)	(23.4,27.2)	(25.7,31.3)	(25.0,28.4)	(25.2,28.4)	(24.0,27.9)	(23.5,27.4)	(23.7,27.6)	(22.8,26.7)	(20.1,24.8)	(20.7,24.5)	(19.6, 23.4)	(18.5, 22.2)	(18.5,22.8)	(19.5,23.9)	(17.6,21.9)	(16.6,20.8)	(15.9, 19.3)	(13.8, 17.0)	
Gender																						NSI
Men	**28.5**	**29.5**	**28.2**	**26.4**	**30.4**	**27.8**	**29.3**	**28.2**	**28.2**	**31.1**	**28.0**	**25.6**	**25.2**	**24.8**	**21.7**	**23.7**	**23.7**	**23.7**	**21.2**	**20.7**	**17.9**	T –
	(24.5,32.5)	(25.5,33.5)	(24.2,32.2)	(23.8,29.0)	(26.3,34.5)	(25.3,30.3)	(26.8,31.8)	(25.2,31.4)	(25.2,31.3)	(28.0,34.4)	(25.2,31.1)	(22.8,28.6)	(22.4,28.3)	(21.9, 27.9)	(19.0, 24.7)	(20.4,27.3)	(20.4,27.3)	(20.4,27.3)	(18.1,24.7)	(18.1,23.6)	(15.4, 20.7)	
Women	**28.6**	**23.2**	**19.7**	**24.3**	**26.7**	**25.7**	**24.5**	**23.8**	**22.9**	**20.6**	**21.5**	**20.2**	**20.0**	**18.3**	**19.1**	**17.6**	**19.6**	**15.9**	**16.2**	**14.6**	**13.0**	T –
	(24.8,32.4)	(19.7,26.7)	(16.4,23.0)	(21.5,27.1)	(22.9,30.5)	(23.5,27.9)	(22.3,26.7)	(21.4,26.3)	(20.4,25.5)	(18.3,23.1)	(19.1,24.1)	(17.8,22.8)	(17.7,22.6)	(16.1, 20.7)	(16.8, 21.5)	(15.2,20.3)	(17.1,22.4)	(13.5,18.6)	(13.7,19.0)	(12.7,16.7)	(11.3, 14.9)	
Age																						NSI
18 - 29	**29.4**	**31.4**	**26.0**	**34.2**	**33.7**	**29.1**	**34.2**	**31.6**	**31.8**	**32.7**	**32.0**	**28.4**	**31.0**	**24.9**	**27.8**	**27.0**	**31.2**	**24.3**	**24.7**	**18.1**	**16.9**	T –
	(23.9,34.9)	(25.9,36.9)	(20.5,31.5)	(29.9,38.5)	(27.7,39.7)	(25.2,33.0)	(30.3,38.1)	(26.9,36.7)	(27.1,36.8)	(28.0,37.8)	(27.2,37.1)	(23.8,33.5)	(26.3,36.2)	(20.1, 30.4)	(22.7, 33.5)	(21.4,33.5)	(24.9,38.4)	(18.3,31.6)	(18.6,32.1)	(13.7, 23.5)	(12.6, 22.3)	
30 - 39	**31.4**	**30.4**	**29.5**	**28.2**	**31.9**	**31.8**	**31.2**	**32.4**	**31.8**	**28.3**	**30.4**	**29.4**	**23.9**	**25.6**	**23.6**	**22.6**	**21.8**	**19.8**	**21.9**	**20.3**	**15.9**	T –
	(25.8,37.0)	(25.0,35.8)	(24.1,34.9)	(24.4,32.0)	(26.0,37.8)	(28.3,35.3)	(27.6,34.8)	(28.4,36.7)	(27.6,36.3)	(24.3,32.6)	(26.2,35.0)	(25.1,34.1)	(19.6,28.7)	(21.3, 30.3)	(19.6, 28.2)	(18.0,27.9)	(17.2, 27.2)	(14.9,25.7)	(17.0, 27.7)	(16.1, 25.4)	(12.3, 20.4)	
40 - 49	**28.7**	**25.8**	**24.9**	**21.6**	**30.3**	**29.0**	**28.1**	**27.1**	**26.7**	**29.6**	**25.6**	**25.2**	**23.9**	**23.4**	**22.4**	**21.7**	**26.3**	**23.6**	**17.1**	**19.8**	**19.2**	T –
	(22.6,34.8)	(19.8,31.8)	(19.0,30.8)	(17.7,25.5)	(24.1,36.5)	(25.2,32.8)	(24.4,31.8)	(23.2,31.4)	(22.7,31.1)	(25.4,34.2)	(21.8,29.8)	(21.6,29.9)	(20.3,27.8)	(19.5, 27.9)	(18.8, 26.6)	(17.4,26.6)	(21.6,31.5)	(19.2,28.6)	(13.4,21.5)	(16.4,23.6)	(15.8, 23.2)	
50 - 64	**31.3**	**18.2**	**17.6**	**19.1**	**25.6**	**23.2**	**21.2**	**20.2**	**20.2**	**20.6**	**23.1**	**21.1**	**20.7**	**22.6**	**18.6**	**21.2**	**19.4**	**20.7**	**20.2**	**18.8**	**14.7**	T –
	(23.9,38.7)	(12.1,24.3)	(11.7,23.5)	(14.8,23.4)	(19.0,32.2)	(19.4,27.0)	(17.6,24.8)	(16.3,24.8)	(16.4,24.7)	(16.9,24.9)	(19.1,27.6)	(17.5,25.2)	(16.9,25.1)	(19.1,26.5)	(15.3, 22.4)	(17.4,25.6)	(16.0,23.3)	(16.9,25.0)	(16.5,24.4)	(16.1,22.0)	(12.2, 17.5)	
65+	**18.8**	**12.7**	**10.0**	**12.4**	**10.8**	**14.1**	**9.3**	**15.2**	**13.3**	**13.6**	**10.1**	**6.6**	**11.2**	**8.2**	**8.0**	**9.1**	**8.9**	**10.3**	**9.2**	**10.1**	**9.0**	T –
	(12.2,25.4)	(6.9,18.5)	(4.9,15.1)	(8.2,16.6)	(5.3,16.3)	(10.7,17.5)	(6.5,12.1)	(11.5,19.8)	(9.8,17.7)	(10.0,18.1)	(7.3,13.8)	(4.4, 9.7)	(8.1,15.4)	(6.0, 11.3)	(5.7, 11.2)	(6.4,12.9)	(6.4,12.3)	(7.6,13.8)	(6.6,12.5)	(7.8, 13.1)	(6.8, 11.8)	
Region																						NSI
Toronto	—	—	—	—	—	24.1	27.2	23.6	21.0	21.5	24.9	17.2	22.3	20.1	15.4	13.5	20.7	16.8	17.9	17.4	11.7	T 2Y
	—	—	—	—	—	(22.1,30.5)	(22.8,32.1)	(19.3,28.5)	(16.9,25.8)	(17.4,26.3)	(20.5,29.9)	(13.5,21.8)	(18.0,27.3)	(16.1, 24.8)	(11.9, 19.7)	(9.8,18.2)	(15.9, 26.5)	(12.6,22.1)	(13.5,23.3)	(13.9,21.7)	(8.6, 15.7)	
Central-S	—	—	—	—	—	31.5	29.6	26.4	27.9	31.0	19.8	20.3	19.8	21.8	19.6	21.7	21.9	21.8	22.8	18.4	21.8	T –
	—	—	—	—	—	(25.6,38.0)	(24.1,35.7)	(20.6,33.3)	(21.9,34.9)	(24.7,38.1)	(14.4,26.5)	(15.1,26.7)	(14.8,25.9)	(16.4, 28.3)	(14.1, 26.7)	(15.1, 30.0)	(16.1, 29.2)	(15.4, 30.0)	(16.1,31.2)	(13.5, 24.7)	(16.5, 28.3)	
Central-W	—	—	—	—	—	21.8	27.1	23.2	23.4	21.6	23.7	27.7	19.7	20.1	22.3	20.8	15.0	15.7	19.3	18.7	13.9	T –
	—	—	—	—	—	(17.3,27.0)	(21.3,33.9)	(18.6,28.5)	(18.7,28.8)	(17.2,26.6)	(19.2,28.9)	(22.5,33.6)	(15.3,25.0)	(15.5, 25.6)	(17.9, 27.4)	(15.7,27.1)	(10.4,21.2)	(11.3,21.3)	(14.6,25.1)	(14.5,23.7)	(10.3, 18.5)	
South-W	—	—	—	—	—	26.1	29.4	27.3	31.6	28.1	23.3	24.6	24.0	20.7	20.4	24.6	24.0	19.7	14.9	17.5	17.1	T –
	—	—	—	—	—	(19.8,29.0)	(25.2,34.0)	(22.9,32.1)	(26.9,36.7)	(23.5,33.2)	(19.2,28.0)	(20.4,29.3)	(19.8,28.7)	(16.8, 25.2)	(16.5, 24.9)	(20.0,29.8)	(19.3, 29.4)	(15.2,25.1)	(10.9,20.0)	(14.1, 21.6)	(13.4, 21.5)	
Central-E	—	—	—	—	—	29.5	23.7	27.1	24.5	24.2	26.2	23.8	22.8	23.3	26.2	24.1	24.3	21.8	21.4	14.8	14.0	T –
	—	—	—	—	—	(24.3,35.2)	(19.7,28.3)	(21.9,33.0)	(19.4,30.6)	(19.1,30.1)	(21.2,31.9)	(18.9,29.5)	(17.8,28.7)	(18.4, 29.1)	(20.8, 32.2)	(18.3,31.0)	(18.7,31.0)	(16.4,28.4)	(16.1,30.0)	(11.0,19.6)	(10.6, 18.2)	
East	—	—	—	—	—	27.5	21.7	27.7	26.4	28.1	25.3	20.8	21.4	22.1	15.8	22.3	22.5	21.3	13.3	18.8	15.4	T –
	—	—	—	—	—	(23.4,32.0)	(17.9,26.0)	(23.3,32.7)	(22.1,31.2)	(23.6,33.2)	(21.2,30.0)	(16.8,25.3)	(17.4,26.1)	(18.2, 26.6)	(12.3, 20.0)	(17.7,27.8)	(17.7,28.1)	(16.5,27.1)	(9.8,17.8)	(15.1, 23.1)	(12.1, 19.4)	
North	—	—	—	—	—	31.5	32.9	29.5	28.8	32.2	29.9	29.6	31.0	24.5	27.6	20.9	27.3	26.8	24.5	18.7	23.2	T –
	—	—	—	—	—	(27.1,36.3)	(28.3,37.8)	(25.1,34.4)	(24.3,33.8)	(27.5,37.3)	(26.0,34.1)	(25.3,34.5)	(26.3,36.2)	(21.0, 28.4)	(18.5, 22.2)	(16.5, 26.2)	(22.2,33.0)	(21.7,32.7)	(19.6,30.2)	(14.8, 23.3)	(19.0, 28.2)	

Cont'd

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(1047)	(1058)	(941)	(2022)	(994)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Marital Status																						**NSI**
Married/ Partner	26.8	25.0	21.0	22.7	26.4	24.3	21.8	23.6	23.4	22.7	22.0	20.7	20.0	18.7	18.9	18.3	18.1	17.2	17.3	15.6	14.8	T –
Previously Married	39.4	31.8	30.4	30.7	34.9	32.9	35.4	29.4	25.6	26.2	27.8	25.4	23.1	26.5	21.8	24.2	26.6	27.3	23.7	24.3	20.7	T –
Never Married	28.2	27.0	27.2	29.5	31.0	29.9	34.6	30.9	32.0	32.4	30.7	26.8	30.0	26.6	24.0	26.1	30.1	22.4	20.3	20.1	14.3	T –
Education																						**NSI**
Less Than HS	40.5	37.5	35.5	33.8	26.4	38.2	37.0	35.4	30.1	30.5	28.8	27.0	29.3	28.7	28.5	27.6	35.1	30.0	31.0	23.3	27.0	T –
Completed HS	29.8	27.8	25.4	29.8	35.8	30.0	29.5	28.6	29.4	30.2	29.0	30.4	31.4	25.8	24.4	32.0	26.8	27.6	24.3	22.7	19.5	T –
Some College or Univ	26.0	23.9	22.9	23.3	30.0	26.8	28.6	25.7	29.0	27.3	27.2	22.4	22.1	23.2	22.6	20.0	25.4	20.1	19.0	21.0	17.4	T –
University Degree	16.9	14.9	10.1	14.2	19.4	14.6	14.7	15.8	13.1	15.9	15.3	14.4	12.9	13.7	11.2	9.5	7.6	10.4	10.8	8.9	7.7	T –

Notes: (1) [a] 95% confidence interval; — data not available; all analyses are sample design adjusted.

               (2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.

               (3) **NSI**, non-discernible YEAR × FACTOR interaction.

Defn: *Current smokers are those that report (1) consuming 100 or more cigarettes in their lifetime, and (2) smoked cigarettes occasionally or daily during the past year; and (3) smoked during the past 30 days.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 4.4: Percentage Reporting *Daily Cigarette Smoking* in the Past 12 Months, by Demographic Characteristic, Ontarians Aged 18+, 1996–2011

	1996 (2721)	1997 (2776)	1998 (2509)	1999 (2436)	2000 (2406)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (3030)	2011 (3039)	Change
Total Sample	23.0	23.1	22.0	20.7	20.3	19.0	18.0	17.8	16.5	16.1	15.6	17.0	15.6	14.5	14.2	11.5	T 2Y
(95%CI)[a]	(21.3, 24.9)	(21.4, 25.0)	(20.2, 23.9)	(19.0, 22.6)	(18.5, 22.1)	(17.4, 20.8)	(16.4, 19.8)	(16.2, 19.6)	(14.9, 18.3)	(14.5, 17.8)	(13.8,17.6)	(15.1,19.5)	(13.7,17.6)	(12.7,16.5)	(12.8,15.9)	(10.2, 12.9)	
Gender																	NSI
Men	23.6	26.1	24.4	23.5	24.9	21.7	20.3	19.9	18.9	17.0	16.6	18.1	19.6	17.0	16.6	12.3	T 2Y
	(21.1, 26.4)	(23.4, 29.0)	(21.5, 27.5)	(20.8, 26.4)	(22.1, 28.0)	(19.1, 24.6)	(17.8, 23.1)	(17.3, 22.7)	(16.3, 21.8)	(14.6, 19.8)	(13.8,19.6)	(15.2,21.5)	(16.6,23.1)	(14.2,20.2)	(14.2,19.3)	(10.2, 14.7)	
Women	22.5	20.4	19.8	18.2	16.1	16.5	15.8	15.9	14.3	15.2	14.8	15.9	11.7	12.2	12.1	10.8	T –
	(20.2,25.0)	(18.2, 22.8)	(17.6, 22.2)	(16.1, 20.6)	(14.1, 18.4)	(14.5, 18.8)	(13.8, 18.2)	(13.8, 18.2)	(12.3, 16.5)	(13.1, 17.4)	(12.6,17.3)	(13.6, 18.5)	(9.7,14.1)	(10.1,14.7)	(10.3,14.0)	(9.2, 12.5)	
Age																	NSI
18-29	23.0	28.3	26.5	24.2	25.7	22.5	20.3	22.9	16.1	20.2	19.2	23.3	16.0	16.8	13.8	11.0	T –
	(19.2,27.3)	(24.2, 32.8)	(22.0, 31.4)	(20.0, 28.9)	(21.4, 30.6)	(18.4, 27.1)	(16.4, 24.8)	(18.7, 27.6)	(12.2, 20.9)	(15.8, 25.4)	(14.5,24.9)	(17.5, 30.2)	(11.1, 22.5)	(11.8, 23.5)	(9.9, 18.8)	(7.6, 15.7)	
30-39	27.8	26.1	26.7	24.4	20.6	22.7	24.1	18.8	20.4	17.8	15.6	17.0	14.8	16.9	15.2	11.8	T –
	(24.2,31.5)	(22.7, 30.0)	(22.9, 30.8)	(20.8, 28.3)	(17.2, 24.5)	(19.0, 26.9)	(20.1, 28.6)	(15.1, 23.2)	(16.6, 24.9)	(14.3, 22.0)	(11.8,20.5)	(13.0.22.0)	(10.7,20.3)	(10.7,20.3)	(11.4, 19.9)	(8.8, 15.7)	
40-49	26.3	25.6	23.7	24.0	23.6	21.3	20.3	20.6	19.4	18.2	19.0	20.9	20.3	12.7	16.8	14.2	T –
	(22.4,30.6)	(21.7, 29.8)	(20.0, 27.9)	(20.2, 28.3)	(19.7, 27.9)	(17.8, 25.3)	(16.8, 24.3)	(17.3, 24.4)	(15.8, 23.7)	(14.9, 22.0)	(15.0,23.8)	(16.7,25.9)	(16.2,25.1)	(9.5,16.7)	(13.6, 20.4)	(11.3, 17.7)	
50-64	20.6	19.4	18.3	17.9	17.9	19.7	18.0	16.3	18.1	17.1	16.6	15.2	18.5	18.3	15.7	11.6	T 2Y
	(17.0,24.8)	(16.0, 23.3)	(14.6, 22.7)	(14.2, 22.2)	(14.4, 21.9)	(15.9, 24.0)	(14.6, 22.0)	(13.0, 20.2)	(15.0, 21.8)	(14.0, 20.9)	(13.2, 20.6)	(12.2,18.9)	(14.9,22.7)	(14.8,22.4)	(13.1, 18.6)	(9.4, 14.2)	
65+	13.4	8.5	12.8	11.5	11.8	6.9	5.4	9.4	6.6	6.5	6.8	8.3	8.2	7.0	9.3	7.9	T –
	(9.8,18.1)	(5.8, 12.3)	(9.5, 17.2)	(8.4, 15.6)	(8.4, 16.2)	(4.7, 10.1)	(3.5, 8.2)	(6.5, 13.5)	(4.6, 9.3)	(4.5, 9.3)	(4.6, 9.9)	(5.9,11.6)	(5.9,11.4)	(4.8,10.1)	(7.1, 12.2)	(5.8, 10.7)	
Region																	*
Toronto	19.3	22.1	19.5	15.3	16.4	19.1	11.9	17.4	15.7	10.1	9.7	17.2	13.4	15.5	14.3	6.8	T 2Y
	(15.5,23.8)	(18.0, 26.8)	(15.5, 24.3)	(12.0, 19.4)	(12.8, 20.9)	(15.2, 23.6)	(8.8, 15.9)	(13.7, 21.8)	(12.1, 20.2)	(7.4, 13.6)	(6.6, 14.1)	(12.7, 22.8)	(9.7,18.4)	(11.4,20.6)	(11.1, 18.4)	(4.6, 10.0)	
Central South	26.8	24.2	22.8	26.6	26.7	16.6	17.0	16.6	15.7	16.3	18.4	13.4	19.6	20.1	14.5	17.9	T –
	(21.3, 33.1)	(19.2, 30.0)	(17.4, 29.4)	(20.7, 33.5)	(20.7, 33.5)	(11.6, 23.1)	(12.2, 23.2)	(12.0, 22.5)	(11.3, 21.4)	(11.2, 23.1)	(12.3, 26.6)	(9.1,19.3)	(13.5,27.5)	(13.7,28.4)	(10.4, 20.1)	(13.1, 23.9)	
Central West	19.0	24.1	20.3	19.9	17.7	16.5	20.3	14.8	14.2	16.5	16.1	13.5	9.2	13.1	16.3	11.2	T –
	(14.8, 24.0)	(18.5, 30.7)	(15.9, 25.5)	(15.6, 25.0)	(13.7, 22.5)	(12.8, 21.0)	(15.8, 25.7)	(11.0, 19.7)	(10.4, 19.2)	(12.6, 21.3)	(11.6, 22.0)	(9.1,19.5)	(6.0,13.8)	(9.5,18.0)	(12.4, 21.2)	(7.9, 15.5)	
South West	23.8	25.6	21.5	26.8	23.5	18.1	21.4	19.6	16.1	18.0	19.8	20.6	15.8	12.9	14.8	12.2	T –
	(19.9,28.3)	(21.6, 30.0)	(17.5, 26.0)	(22.4, 31.7)	(19.2, 28.4)	(14.4, 22.5)	(17.5, 25.9)	(15.7, 24.1)	(12.6, 20.3)	(14.3, 22.5)	(15.7, 24.6)	(16.2,25.9)	(11.8,20.8)	(9.1,17.9)	(11.7, 18.7)	(9.3, 15.8)	
Central East	26.0	20.8	25.5	17.9	17.4	21.1	20.1	17.8	18.8	22.1	16.3	17.4	18.0	16.0	10.8	10.8	T –
	(21.1, 31.6)	(16.9, 25.2)	(20.4, 31.3)	(13.5, 23.4)	(13.1, 22.8)	(16.6, 26.5)	(15.6, 25.6)	(13.4, 23.4)	(14.3, 24.3)	(17.1, 27.9)	(11.8,22.0)	(12.7,23.4)	(13.0,24.4)	(11.4,22.0)	(7.5, 15.3)	(7.9, 14.7)	
East	24.3	20.0	21.6	21.3	22.7	19.0	17.2	16.0	16.1	12.0	15.6	16.3	16.6	9.3	13.9	12.1	T –
	(20.5, 28.6)	(16.3, 24.2)	(17.7, 26.2)	(17.3, 25.8)	(18.5, 27.6)	(15.4, 23.3)	(13.5, 21.6)	(12.6, 20.2)	(12.8, 20.1)	(9.0, 15.9)	(11.8,20.2)	(12.3,21.3)	(12.4,22.0)	(6.4,13.3)	(10.8, 17.8)	(9.2,15.7)	
North	28.1	30.0	26.3	25.2	23.9	24.9	23.0	26.5	21.0	24.3	18.4	23.8	23.9	17.9	16.4	18.5	T –
	(23.8, 32.1)	(25.6, 34.8)	(22.0, 31.0)	(20.9, 30.0)	(19.7, 28.7)	(21.2, 28.9)	(18.9, 27.7)	(22.1, 31.4)	(17.7, 24.6)	(20.0, 29.3)	(14.2, 23.6)	(19.1,29.4)	(18.9,29.7)	(13.8,22.9)	(12.7, 20.9)	(14.6, 23.1)	

Cont'd

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)		
Marital Status																	NSI	
Married/Partner	21.9	19.0	19.9	19.8	18.1	16.9	16.0	16.2	14.8	15.1	14.2	14.3	14.1	13.8	12.4	10.5	T	–
Previously Married	29.4	30.8	27.2	22.2	22.2	22.4	21.9	20.2	22.1	17.8	18.2	23.4	21.9	18.2	20.9	19.2	T	–
Never Married	22.7	29.2	25.4	23.1	24.8	22.5	20.9	21.6	18.5	18.3	19.3	21.9	16.3	14.9	16.5	10.7	T	2Y
Education																	NSI	
Less Than HS	35.0	35.0	32.6	28.7	26.2	23.8	23.7	26.2	24.4	26.5	24.3	30.9	26.7	28.3	21.7	23.1	T	–
Completed HS	27.0	26.6	24.5	25.7	23.9	23.0	23.7	26.1	21.9	22.0	25.3	21.1	21.4	20.5	20.4	15.5	T	–
Some College/Univ	22.9	24.0	20.9	22.5	21.8	20.5	17.8	17.7	15.8	16.5	14.7	19.8	16.5	14.4	16.7	13.3	T	–
University Degree	9.9	10.2	12.4	7.6	11.3	10.7	9.9	7.2	10.4	6.7	5.8	4.8	7.0	4.8	5.5	4.4	T	–

Notes: (1) ª 95% confidence interval; all analyses are sample design adjusted.

(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change p<.05) between last two estimates.

(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q: *At the present time, do you smoke cigarettes daily, occasionally or not at all?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 4.1
Cigarette Smoking Status, Ontarians Aged 18+, 2011

Note: horizontal 'whiskers' represent 95% confidence intervals
Source: 2011 CAMH Monitor
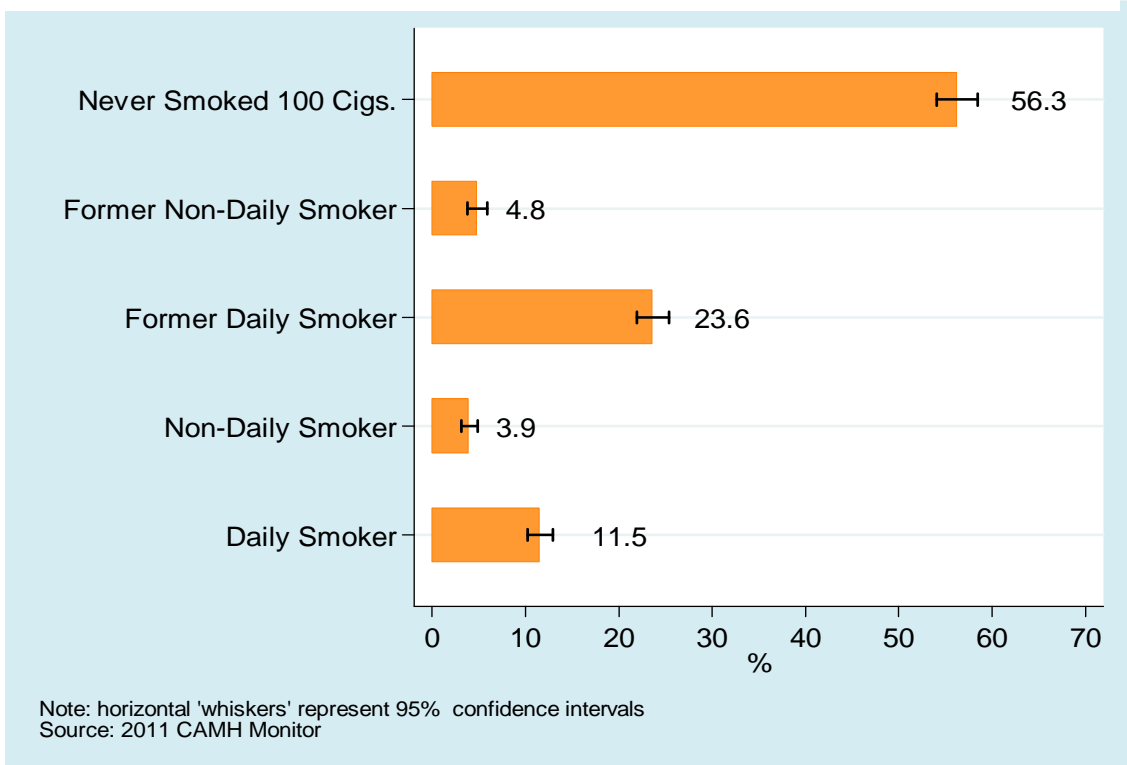
Figure 4.2
Current Cigarette Use by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by age (p<.05)
Source: 2011 CAMH Monitor
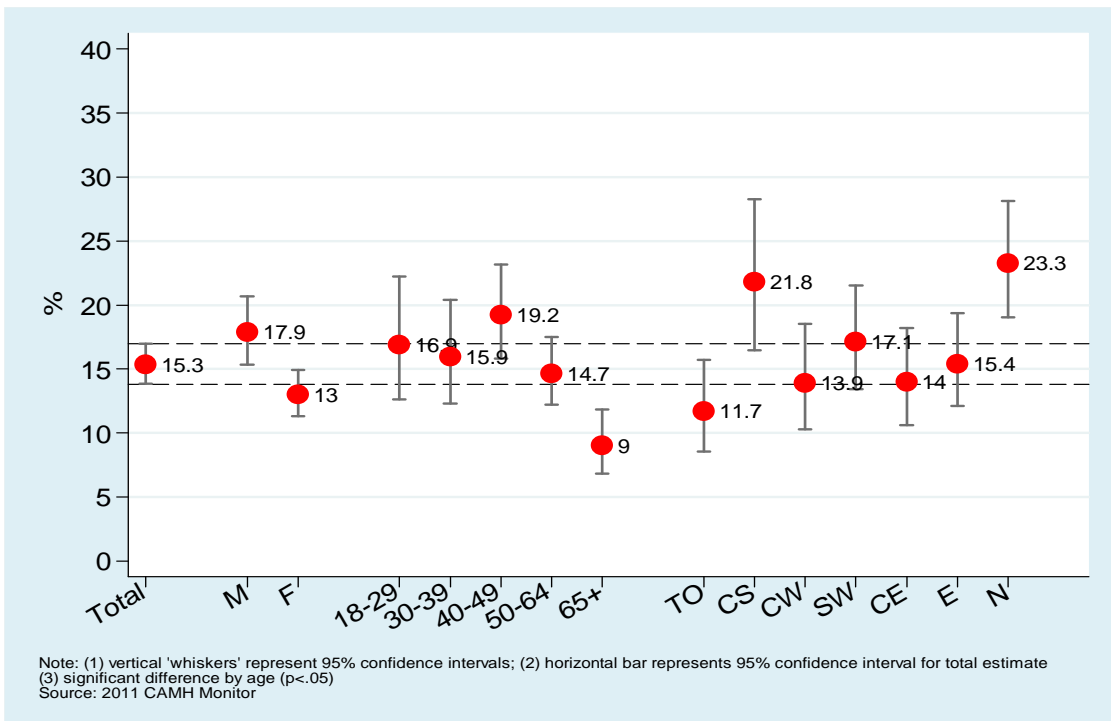
Figure 4.3
Average Number of Cigarettes Smoked Daily, Current Smokers
Aged 18+, 2011 (*n* =483)

Average # of Cigarettes Daily

Source: 2011 CAMH Monitor
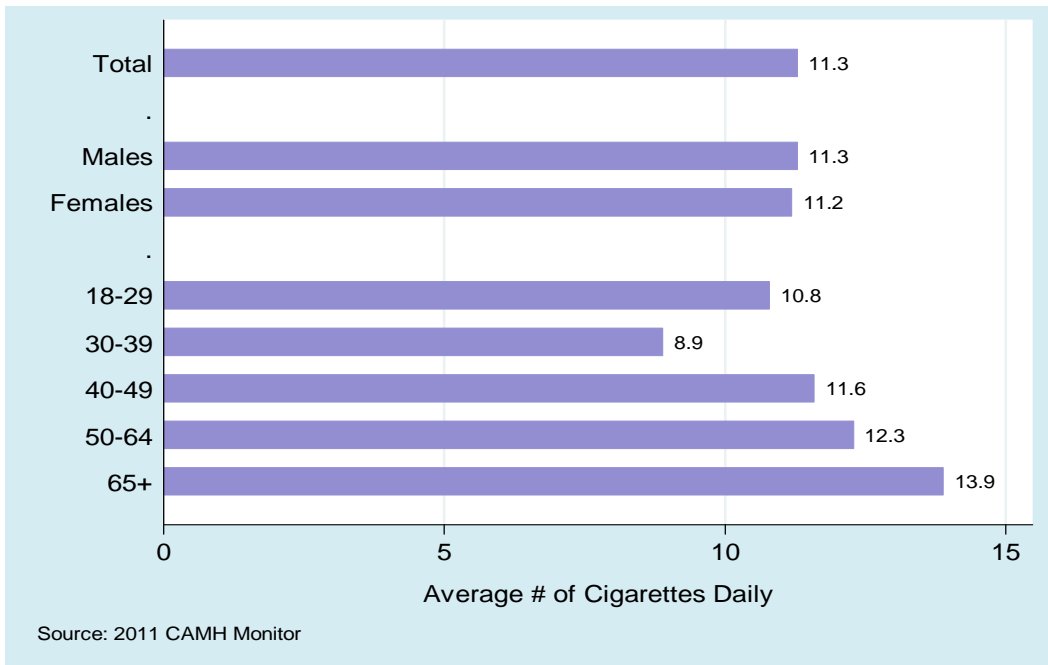
Figure 4.4
Nicotine Dependence (HSI), Daily Smokers Aged 18+, 2011 (*n* =381)

%

Note: horizontal 'whiskers' represent 95% confidence intervals
Source: 2011 CAMH Monitor
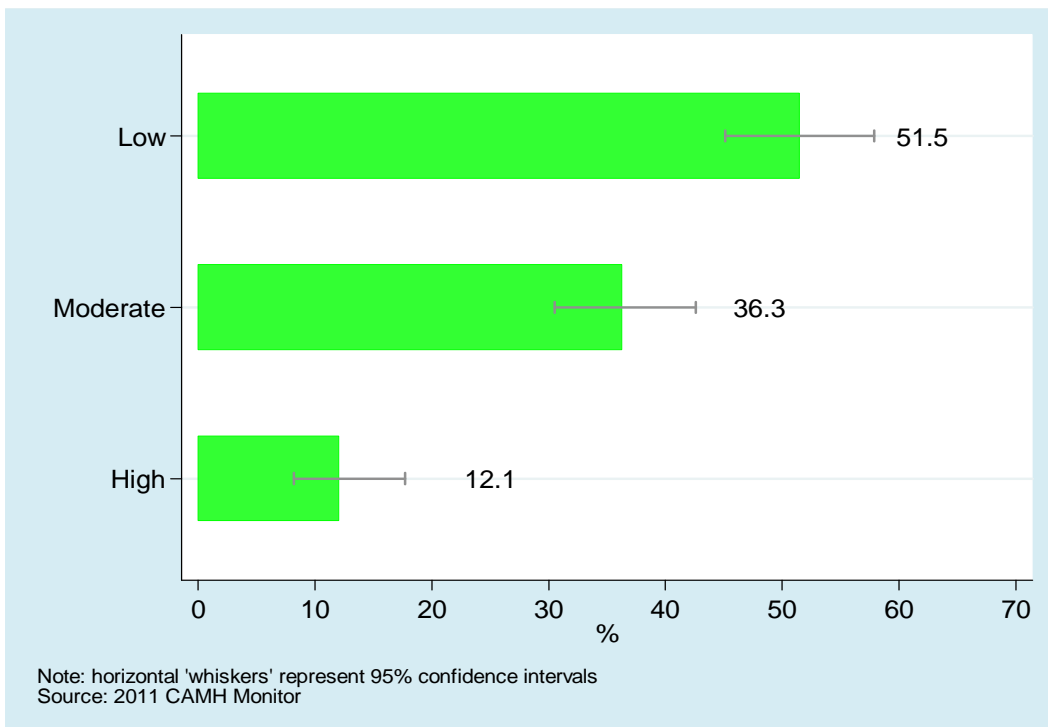
Figure 4.5
Current Cigarette Use Among Ontarians Aged 18+, 1991–2011

Tobacco: Total

Tobacco: Sex

Males   Females

Tobacco: Age Group

18-29   30-39   40-49   50-64   65+

Tobacco: Education Level

Less than HS   Completed HS
Some Post-Secondary   University Degree

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
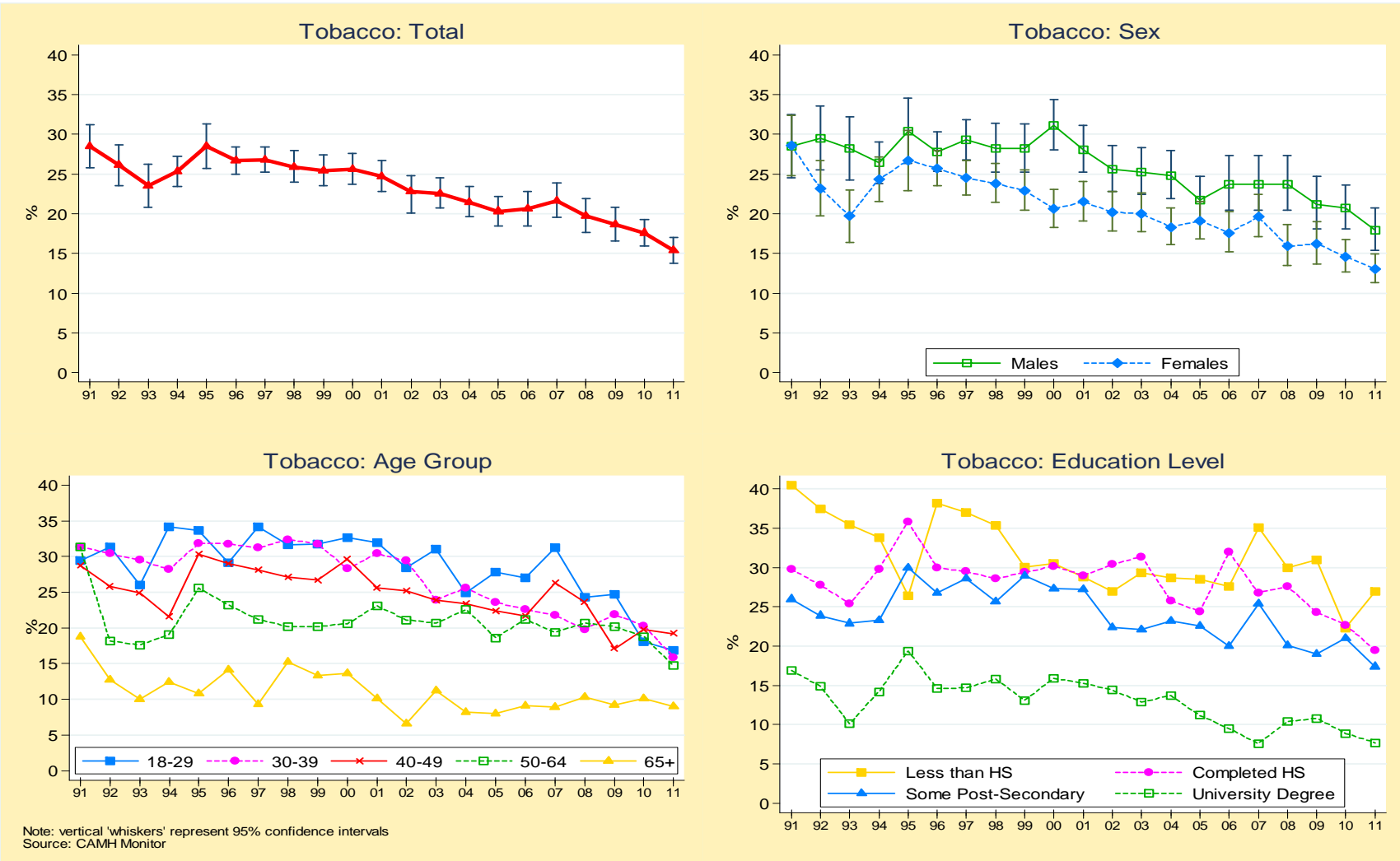
5. CANNABIS and OTHER DRUGS

5.1   Cannabis Use

2011……………….. Tables 5.1.1 - 5.1.3;
Figures 5.1.1 - 5.1.2

O verall, an estimated **40.5%** (95% CI: 38.3 to 42.7) of Ontario adults used cannabis at least once in their lifetime, while **13.4%** (95% CI: 11.8% to 15.2%) used it in the 12 months before the survey. Population estimates for lifetime and past year use are 3,791,878 (95% CI: 3,560,117 to 4,023,639) and 1,254,359 (95% CI: 1,085,312 to 1,423,406) Ontario adults.

Use of cannabis is generally infrequent. Among lifetime users, 66.7% did not use cannabis during the 12 months before the survey, 15.6% used less than once a month, and 17.7% used once a month or more frequently. Among past year cannabis users, 46.9% used less than once a month and 53.1% used more frequently.

Gender, age, marital status and **household income** were discernibly related to past year use of cannabis. While holding values of risk factors constant, adjusted group differences showed the following:

- The adjusted odds of use were 50% higher among men than women (16.3% vs. 10.8%; OR=1.5).

- Past year cannabis use showed a 6-fold decline with age, dropping from 33.5% of 18 to 29 year olds to 5.2% of those 50 years and older. All three sequential age group comparisons are

statistically discernible: The adjusted odds of past year cannabis use were almost half as frequent among 30 to 39 year olds than 18 to 29 year olds (OR = 0.55), and among 40 to 49 years olds than 30 to 39 year olds (OR=0.46). In addition, the odds of use were 40% lower among those 50 and older than those aged 40 to 49 years (OR=0.60).

- Relative to married respondents, the adjusted odds of cannabis use were 2.4 times higher among those previously married (11.2% vs. 8.3%) and 2.2 times higher among those never married (30.2% vs. 8.3%).

- Household income shows a weak, but discernible, association to past-year use. The distinguishing feature is a higher rate among those with the lowest and the highest incomes. The ORs are not discernible relative to the less than $30 thousand category and all five CIs overlap, indicating no differences among the five estimates. The most careful interpretation is that there is no appreciable association between cannabis use and household income.

There were no discernible differences according to region and education after adjusting for other risk factors.

Trends

1977–2011…………….. … Table 5.1.5;
Figures 5.1.2 – 5.1.3

2009–2011

Prevalence of past year cannabis use in 2011 (13.4%) was unchanged from 2010 (14.2%) and 2009 (13.3%). In addition, rates of use were stable since 2009 for all subgroups.

1996–2011

Since 1996, cannabis use among the total sample has **trended upward**, from 8.7% to 13.4% in 2011, although the trend has been especially flat since 2005.

Year interacted discernibly with age, indicating that trends in cannabis use differed among the age groups**.** Year did not interact with sex, region, marital status and education level, suggesting similar trends in each subgroup.

Differential age-group trends suggest that increases are strongest among the youngest respondents and weaken with increasing age. Between 1996 and 2011, cannabis use increased among 18 to 29 year olds from 18.3% to 33.5%, whereas among 30 to 39 year olds only increased from 11.3% to 16.1%, and among 40 to 49 year olds from 6.1% to 9.2%.

Discernible **increases** also occurred among: **men** and **women**, and virtually all **region**, **marital status** and **education** subgroups.

1977–2011

Since 1977, past year use of cannabis has increased appreciably. The current rate of 13.4% is discernibly higher than the 8.1% found in 1977. There were also discernible increases over the longer term among **men** (from 9.1% in 1992 to 19.9% in 2010), **women** (from 4.5% in 1977 to 10.8% in 2011) and **all age groups**, especially 18 to 29 year olds (from 22.6% in 1977 to 33.5% in 2011) and those 50 years and older (from 1.2% in 1977 to 5.2% in 2011).

Perhaps the most salient change is the aging of cannabis users (**Figure 5.1.2**). In 1977, 82% of past year cannabis users were aged 18 to 29 versus only 49% in 2011. In contrast, the proportion aged 30 to 49 increased two-fold from 15% to 36%, and the proportion aged 50 and older increased five-fold from 3% to 16% during the same period.

Table 5.1.1: Estimates of the Percentage Reporting *Cannabis Use* During their *Lifetime*, Ontarians Aged 18+, 2011

Total sample (N=3,039)	Lower Limit %	Estimate %	Upper Limit %
Cannabis	38.3	**40.5**	42.7

Note: All estimates are sample design adjusted.
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.2: Frequency of *Cannabis Use* Among *Lifetime* and *Past Year Users,* Ontarians Aged 18+, 2011

Frequency of Cannabis Use	**Cannabis**	
	% (95% CI) Lifetime Users (N=1,141)	% (95% CI) Past year Users (N=295)
Used in lifetime, but not past 12 months	**66.7** (63.0, 70.2)	—
Used less than once a month during past 12 months	**15.6** (13.1, 18.6)	**46.9** (40.1, 53.9)
Used once a month or more often during past 12 months	**17.7** (14.8, 21.0)	**53.1** (46.1, 60.0)

Note: All estimates are sample design adjusted.
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.3: Percentage *Using Cannabis* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	3039	**13.4**	(11.8, 15.2)	—
Gender				*
Men	1212	**16.3**	(13.7, 19.3)	**1.52***
Women *(Comparison Group)*	1827	**10.8**	(8.8, 13.0)	—
Age				**
(Comparison Group is previous age group)				
18-29	267	**33.5**	(27.4, 40.2)	—
30-39	396	**16.1**	(12.5, 20.5)	**0.55***
40-49	551	**9.27**	(6.8, 12.3)	**0.46****
50+	1737	**5.2**	(4.1, 6.6)	**0.60***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	503	**12.2**	(9.1, 16.3)	0.81
Central South	253	**16.5**	(11.2, 23.7)	1.22
Central West	391	**14.9**	(10.6, 20.6)	0.88
South West	500	**15.4**	(11.4, 20.3)	1.25
Central East	416	**11.0**	(9.7, 20.9)	0.99
East	517	**12.9**	(9.6, 17.2)	0.93
North	459	**13.1**	(9.3, 18.0)	0.99
Marital Status				**
Married/Partner *(Comparison Group)*	1896	**8.3**	(7.0, 9.9)	—
Previously Married	656	**11.2**	(7.6, 16.2)	**2.38****
Never Married	451	**30.2**	(24.9, 36.2)	**2.20****
Education				NS
Less than high school *(Comparison Group)*	369	**11.8**	(7.2, 18.7)	—
Completed high school	670	**14.7**	(11.2, 19.0)	0.98
Some college or university	1018	**15.1**	(12.3, 18.4)	0.82
University degree	945	**11.4**	(8.9, 14.4)	0.64
Household Income				**
< $30,000 *(Comparison Group)*	351	**14.2**	(9.1, 21.5)	—
$30,000-$49,999	411	**11.7**	(7.9, 16.8)	0.89
$50,000-$79,999	558	**11.8**	(8.7, 15.8)	0.89
$80,000+	980	**16.5**	(13.8, 19.7)	1.65
Not stated	739	**10.2**	(7.1, 14.4)	0.57

Notes: (1) All analyses are sample design adjusted; * p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of cannabis use are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of cannabis use are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values of gender, age, region, marital status, education and income (complete case sample size N = 2,892).
Q: ***How many times, if any, have you used cannabis, marijuana or hash during the past 12 months*?**
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.4: Percentage *Using Cannabis* in the Past 12 Months by Demographic Characteristic, Ontarians Aged 18+, 1977–1994

	1977	1982	1984	1987	1989	1991	1992	1994
(N=)	(1059)	(1026)	(1043)	(1075)	(1098)	(1047)	(1058)	(2022)
Total Sample	**8.1**	**8.2**	**11.2**	**9.5**	**10.5**	**8.7**	**6.2**	**9.0**
(95% CI) [a]	(6.5,9.7)	(5.9,0.5)	(9.3,13.1)	(7.7,11.3)	(8.7,12.3)	(7.0,10.4)	(4.7,7.7)	(7.8,10.2)
Gender								
Men	**11.2**	**12.3**	**15.6**	**12.3**	**13.0**	**11.5**	**9.1**	**11.4**
	(8.5,13.9)	(9.5,15.1)	(12.5,18.7)	(9.5,15.1)	(10.2,15.8)	(8.7,14.3)	(6.6,11.6)	(9.5,13.3)
Women	**4.5**	**4.1**	**7.1**	**6.8**	**8.2**	**6.0**	**3.6**	**7.0**
	(2.7,6.3)	(2.4,5.8)	(4.9,9.3)	(4.7,8.9)	(5.9,10.5)	(4.0,8.0)	(2.1,5.1)	(5.4,8.6)
Age								
18 - 29	**22.6**	**22.7**	**28.5**	**20**	**24.6**	**19.9**	**13.3**	**19.6**
	(17.8,27.4)	(17.7,27.7)	(23.1,33.9)	(0.2,3.8)	(19.2,30.0)	(15.1,24.7)	(9.3,17.3)	(16.0,23.2)
30 - 39	**3.9**	**4.2**	**9.5**	**11.6**	**11.8**	**9.1**	**6.6**	**10.2**
	(1.3,6.5)	(1.7,6.7)	(5.8,13.2)	(7.9,15.3)	(8.1,15.5)	(5.6,12.6)	(3.7,9.5)	(7.6,12.8)
40 - 49	**†2.3**	**†**	**†2.2**	**5.4**	**†3.9**	**†3.0**	**†2.4**	**4.3**
	(0.1,4.5)	—	(0.1,4.3)	(2.0,8.8)	(1.1,6.7)	(0.7,5.3)	(0.3,4.5)	(2.4,6.2)
50 +	**†1.2**	**†1.3**	**†1.8**	**†**	**†1.4**	**†**	**†1.3**	**†**
	(0.3,2.7)	(0.2,2.8)	(0.2,3.6)	—	(0.1,3.0)	—	(0.5,3.1)	—
Marital Status								
Married	—	—	—	—	—	**4.0**	**3.5**	**4.1**
Previously Married	—	—	—	—	—	**6.5**	**6.3**	**8.6**
Never Married	—	—	—	—	—	**20.2**	**13.7**	**20.9**
Education								
Less than high school	—	—	—	—	—	**6.3**	**6.3**	**8.5**
Completed high school	—	—	—	—	—	**9.8**	**5.2**	**9.6**
Some college or university	—	—	—	—	—	**10.7**	**6.7**	**10.3**
University degree	—	—	—	—	—	**7.6**	**7.2**	**7.0**

Notes: All estimates and analyses are sample design adjusted; [a] 95% confidence interval; —regional data not available.
Q: How many times, if any, have you used cannabis, marijuana or hash during the past 12 months?
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.5: Percentage *Using Cannabis* in the Past 12 Months by Demographic Characteristic, Ontarians Aged 18+, 1996-2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change
(N=)	(2721)	(2776)	(2509)	(2436)	(2406)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)	
Total Sample	8.7	9.1	8.6	10.4	10.8	11.2	11.5	12.8	12.4	14.4	13.4	12.5	13.1	13.3	14.2	13.4	T –
(95% CI)[a]	(7.6,9.8)	(7.8,10.3)	(7.3,10.0)	(9.1,11.9)	(9.4,12.4)	(9.9,12.8)	(10.1,13.1)	(11.4,14.5)	(10.8, 14.1)	(12.7, 16.2)	(11.5, 15.6)	(10.8,14.5)	(11.2, 15.3)	(11.5,15.4)	(12.6, 16.0)	(11.8,15.2)	
Gender																	NSI
Men	12.6	11.4	12.1	13.2	14.3	15.4	15.3	16.0	16.0	18.8	18.6	15.2	18.2	17.4	19.9	16.3	T –
	(10.7,14.5)	(9.3,13.5)	(9.9,14.7)	(11.1,15.8)	(12.0,16.9)	(13.2,18.0)	(12.9,17.9)	(13.6,18.7)	(13.5, 18.9)	(16.0, 21.9)	(15.4,22.3)	(12.5,18.2)	(15.0,21.9)	(14.4,20.7)	(17.2, 22.9)	(13.7,19.3)	
Women	5.3	7.0	5.4	7.8	7.7	7.3	8.0	9.9	9.0	10.3	8.5	10.1	8.4	9.5	8.8	10.8	T –
	(4.2,6.4)	(5.4,8.5)	(4.2,6.9)	(6.3,9.7)	(6.2,9.6)	(5.7,9.2)	(6.4,10.0)	(8.2,11.9)	(7.3, 11.1)	(8.4, 12.5)	(6.6,10.8)	(8.0, 12.6)	(6.3,11.0)	(7.3,12.2)	(7.2,10.7)	(8.8, 13.0)	
Age																	**
18 - 29	18.3	21.4	25.2	27.1	28.2	26.8	26.6	33.6	34.3	38.2	38.2	33.6	34.6	35.8	33.8	33.5	T –
	(15.0,21.6)	(17.4,25.3)	(20.8,30.1)	(22.6,32.0)	(23.7,33.2)	(22.5,31.7)	(22.1,31.7)	(28.7,38.9)	(28.9, 40.2)	(32.4, 44.2)	(31.6,45.4)	(27.3,40.5)	(27.4,42.7)	(28.6,43.7)	(28.0,40.0)	(27.4,40.2)	
30 - 39	11.3	9.8	8.2	10.3	12.3	15.8	14.7	12.0	14.7	16.9	14.1	12.5	15.2	12.9	18.9	16.1	T –
	(8.9,13.7)	(7.3,12.3)	(6.1,11.1)	(7.9,13.4)	(9.4,15.9)	(12.5,19.8)	(11.5,18.7)	(9.1,15.7)	(11.3, 19.0)	(13.1, 21.6)	(10.4,18.9)	(9.0,17.2)	(11.0,20.6)	(9.2,17.7)	(14.6, 24.0)	(12.5,20.5)	
40 - 49	6.1	4.3	4.6	6.8	6.4	7.2	7.6	9.5	7.3	10.8	8.4	9.9	9.9	11.7	10.1	9.2	T –
	(4.1,8.1)	(2.6,6.1)	(3.1,6.7)	(4.8,9.5)	(4.5,9.1)	(5.3,9.7)	(5.4,10.5)	(7.3,12.3)	(5.2, 10.2)	(8.2, 14.1)	(5.8,12.1)	(7.0,13.8)	(7.0,13.9)	(8.5,15.8)	(7.7,13.0)	(6.8,12.3)	
50 +	†	†1.7	†1.4	4.1	†2.9	†3.3	†3.3	†3.1	†3.0	†2.6	†2.6	†4.6	†4.0	†4.7	5.4	5.2	T –
	—	(0.6,2.8)	(0.3,2.5)	(2.3,5.9)	(1.4,4.4)	(1.8,4.8)	(2.2, 5.0)	(2.0, 4.8)	(2.4, 4.4)	(1.7, 3.9)	(1.7, 3.8)	(3.3,6.4)	(2.7, 5.8)	(3.4, 6.3)	(4.3, 6.8)	(4.1, 6.6)	
Region																	NSI
Toronto	10.2	10.9	13.0	10.1	14.2	14.3	13.0	14.7	13.7	19.0	13.7	15.8	12.4	15.9	15.6	12.2	T –
	(7.5,13.8)	(8.1,14.7)	(9.7,17.3)	(7.3,13.6)	(10.9,18.4)	(10.9,18.7)	(9.7,17.2)	(11.3,19.0)	(10.2, 18.1)	(14.7, 24.1)	(9.7,19.0)	(11.6,21.0)	(8.6,17.5)	(11.6,21.5)	(12.1, 20.0)	(9.1, 16.3)	
Central South	8.8	8.1	5.1	8.9	11.0	10.8	12.6	10.8	9.2	16.0	15.8	12.3	10.3	11.6	13.1	16.5	T –
	(5.8,13.3)	(5.2,12.4)	(2.8,9.2)	(5.4,14.0)	(7.0,16.7)	(7.0,16.4)	(8.4,18.6)	(7.2,16.0)	(5.2, 15.9)	(10.7, 23.3)	(9.7, 24.6)	(7.5,19.5)	(5.7, 18.1)	(7.3,18.0)	(8.7, 19.3)	(11.2,23.7)	
Central West	7.5	7.2	8.6	12.2	10.0	9.5	11.4	10.1	14.0	13.4	12.6	6.5	10.5	11.5	11.5	14.9	T –
	(5.0,11.0)	(4.0,12.6)	(5.7,12.9)	(8.7,16.7)	(7.0,14.2)	(6.8,13.2)	(8.0,16.2)	(7.0,14.5)	(10.0, 19.3)	(9.7, 18.1)	(8.4,18.6)	(3.7,11.1)	(6.6,16.1)	(7.7,16.7)	(8.0, 16.5)	(10.6, 20.6)	
South West	7.6	8.0	4.6	10.6	11.0	9.6	10.0	11.6	11.1	11.6	15.9	14.0	13.0	13.8	12.1	15.4	T –
	(5.2,10.8)	(5.6,11.3)	(2.8,7.4)	(7.7,14.4)	(7.8,15.2)	(7.0,13.2)	(7.2,13.7)	(8.5,15.6)	(8.1, 15.0)	(8.5, 15.6)	(11.7,21.3)	(10.1,19.0)	(8.8,18.8)	(9.4,19.7)	(8.8, 16.3)	(11.4, 20.3)	
Central East	10.3	8.7	10.0	11.4	9.0	11.3	13.0	14.5	13.1	14.8	13.7	9.1	18.3	14.4	16.3	11.0	T –
	(7.0,15.0)	(6.2,12.2)	(6.8,14.4)	(7.7,16.6)	(5.9,13.7)	(8.0,15.7)	(9.2,18.2)	(10.4,19.9)	(9.2, 18.3)	(10.4, 20.5)	(8.8,20.7)	(5.7,14.3)	(12.8,25.5)	(9.7,20.9)	(12.0, 21.6)	(9.7, 20.9)	
East	8.0	11.0	7.4	9.7	9.0	10.9	8.2	14.4	11.9	11.4	10.1	16.8	12.0	11.4	13.9	12.9	T –
	(5.6,11.3)	(8.1,14.7)	(5.0,11.0)	(7.0,13.3)	(6.2,12.7)	(8.0,14.8)	(5.6,11.8)	(11.0,18.6)	(8.8, 15.9)	(8.2, 15.6)	(6.6,15.2)	(12.3,22.6)	(8.1,17.3)	(7.6,16.6)	(10.5, 18.3)	(9.6, 17.2)	
North	6.6	5.5	7.2	9.0	8.5	8.8	11.8	11.5	11.1	10.9	11.5	13.0	12.9	12.5	17.2	13.1	T –
	(4.4,9.7)	(3.7,8.2)	(4.8,10.7)	(6.3,12.9)	(5.9,12.3)	(6.6,11.7)	(8.8,15.7)	(8.5,11.3)	(8.6, 14.3)	(7.8, 15.1)	(8.2,16.1)	(9.3,18.0)	(8.9,18.3)	(8.5,18.1)	(13.1, 22.3)	(9.3,18.0)	

Cont'd

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(N=)	1996 (2721)	1997 (2776)	1998 (2509)	1999 (2436)	2000 (2406)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (3030)	2011 (3039)	Change	
Marital Status																		*
Married/ Partner	4.9	5.1	4.3	6.4	6.2	6.7	7.4	7.6	6.4	7.2	7.4	7.8	7.4	9.3	9.6	8.3	T	–
Previously Married	6.7	6.0	3.9	6.2	†6.0	9.0	9.2	10.5	9.9	10.0	9.4	8.4	9.4	7.8	10.7	11.2	T	–
Never Married	19.5	20.1	22.9	25.3	26.4	25.4	24.3	29.2	31.9	31.6	34.4	31.8	34.4	30.1	30.5	30.2	T	–
Education																		*
Less than high school	6.1	9.8	6.8	7.7	10.4	†7.8	11.0	9.9	7.0	10.3	13.1	†7.7	13.1	13.2	12.6	11.8	T	–
Completed high school	9.5	10.4	10.7	10.6	9.5	13.1	13.2	15.8	12.7	15.0	15.2	17.1	15.2	15.0	16.5	14.7	T	–
Some college or university	11.3	9.0	10.2	13.5	15.7	12.3	13.3	15.4	15.7	17.0	14.2	15.9	14.2	14.8	16.1	15.1	T	–
University degree	7.0	7.4	5.6	8.5	7.0	10.2	8.8	9.2	11.2	12.4	11.7	†7.4	11.7	11.0	11.1	11.4	T	–

Notes:
(1) All estimates and analyses are sample design adjusted; ª 95% confidence interval.
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** statistically discernible change (p<.05) between 1996-2011; **2Y** statistically discernible change (p<.05) between last two estimates;
(3) **NSI**, non-discernible YEAR × FACTOR interaction

Q: ***How many times, if any, have you used cannabis, marijuana or hash during the past 12 months?***
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 5.1.1
Past Year Cannabis Use by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
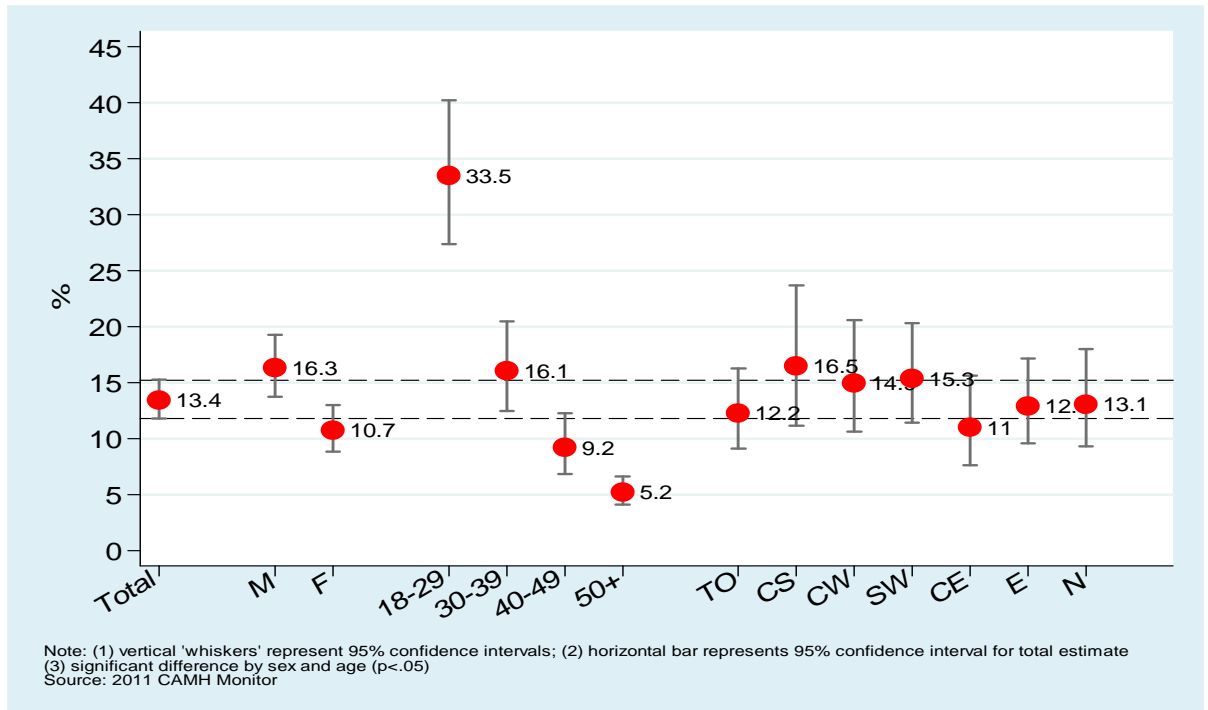
Figure 5.1.2
Age Distribution of Past Year Cannabis Users, Ontarians Aged 18+, 1977–2011

Source: CAMH Monitor
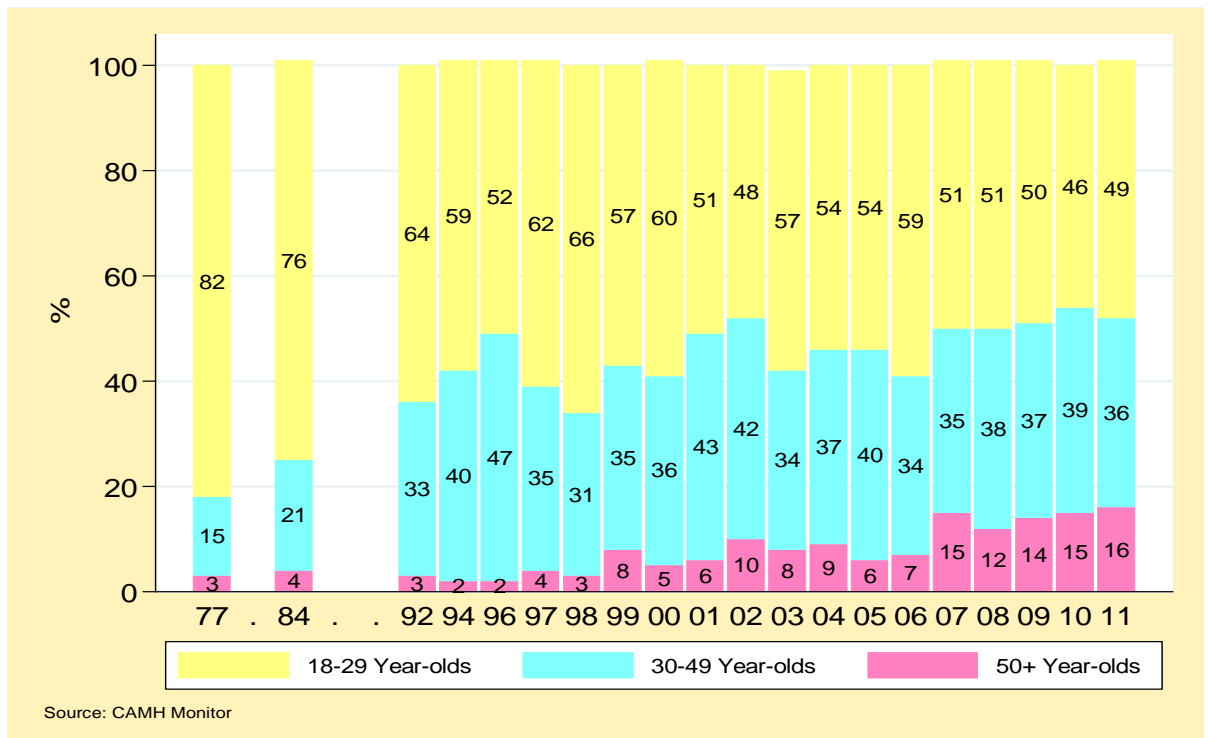
Figure 5.1.3
Past Year Cannabis Use, Ontarians Aged 18+, 1977–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
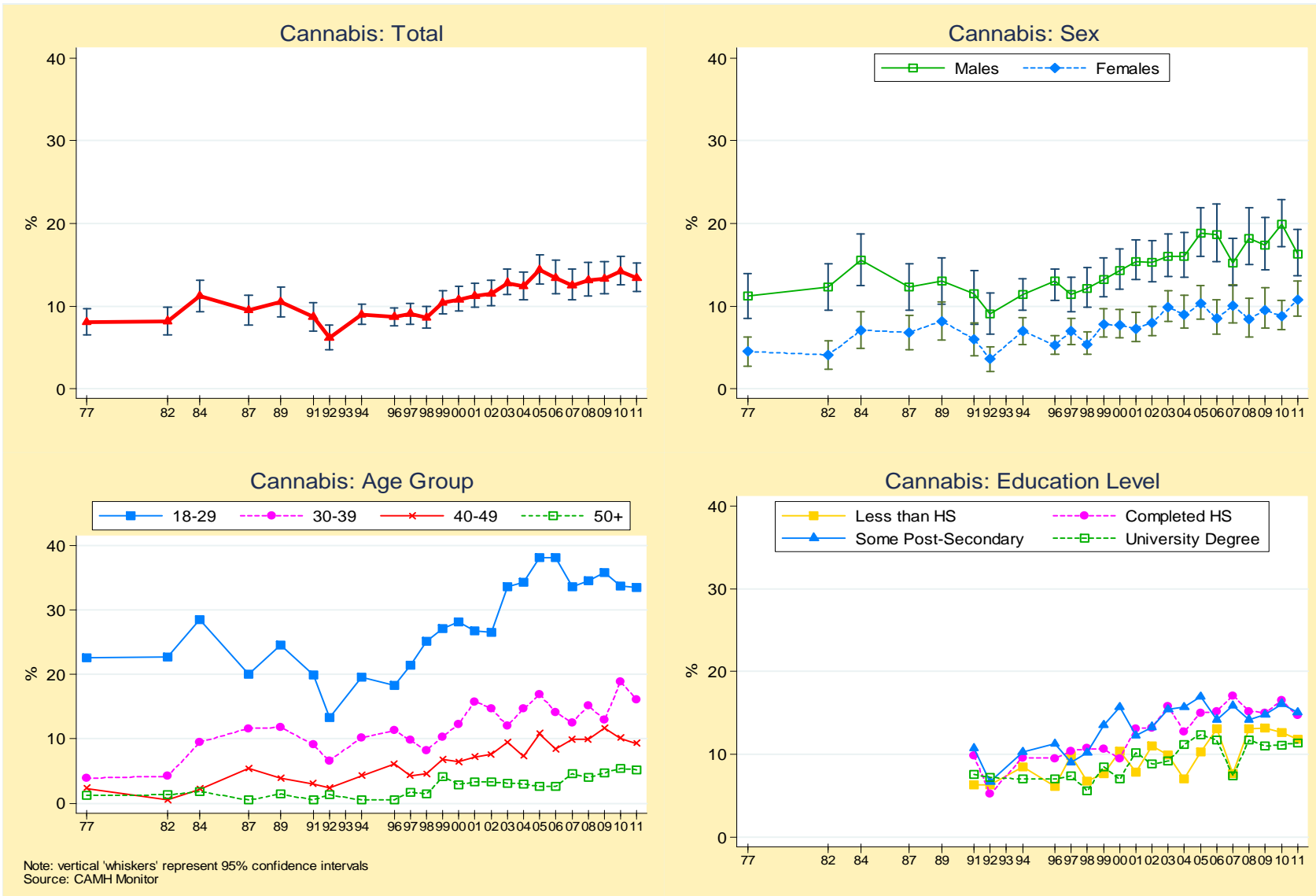
5.1.2 Cannabis Use Problems (ASSIST–CIS)

To provide estimates of moderate- or high-risk cannabis use, we used the *Cannabis Involvement Score* (CIS) from the World Health Organization's Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.0). The WHO developed the ASSIST as a screening instrument designed to assess the risk of experiencing health and other problems (e.g. social, financial, legal, relationship) from their current pattern of use (WHO ASSIST Working Group, 2002).

The ASSIST–CIS was first introduced in the CM in 2004 and is asked only of past 3 month cannabis users. It consists of a 6-item screener (addressing frequency of use, strong desire to use, legal or financial problems from use, lack of control over one's own use, failure to meet expectations, and having someone express concern about using) and a protocol for scoring responses (see **Table 5.1.6**).

The ASSIST–CIS, which ranges in values from 0 to 39, captures aspects of harmful/hazardous use, abuse and dependence and provides three categories to assess the risk of experiencing health and other problems: 1) *low-risk* (scores of 0–3) indicating a pattern of use associated with a low-risk of experiencing problems; 2) *moderate risk* (scores of 4–26) indicating a pattern of use associated with a moderate risk of experiencing problems; and 3) *high risk* (scores of 27 or more) indicating a pattern of use that is associated with a high risk of experiencing problems and is likely to lead to dependency.

We use a score of **4 or more** on the ASSIST–CIS screener as a cut-off to estimate the percentage who presents a moderate or high risk of experiencing cannabis use problems. In 2011, ASSIST-CIS items were asked of a random subsample of respondents (Panel B, N=1,999).

2011 ………………..... Tables 5.1.7 - 5.1.8

Overall, an estimated **5.6%** (95% CI: 4.3% to 7.2%) of Ontario adults and **41.7%** (95% CI: 33.5% to 50.4%) of past year cannabis users met the criteria for **moderate or high risk** of cannabis problems. The population estimate is 514,022 adults (95% CI: 376,231 to 651,813).

Among the total sample, adjusted group differences show the following:

- The odds of experiencing cannabis problems were 2.7 times higher among men than women (7.7% vs. 3.7%).

- The odds of experiencing cannabis problems were 6.1 times higher among those aged 18 to 29 (15.8%), than those aged 30 and older (3.1%).

Among past year users there were no differences by age, but the adjusted odds of problems among men users were 2.4 times higher than women users (49.6% vs. 32.1%).

Trends
2004–2011…………..…Tables 5.1.9 -5.1.10

2010-2011
Prevalence of past year cannabis problems was stable between 2010 (7.1%) and 2011 (5.6%). In addition, rates were stable for sex and age between 2010 and 2011.

2004-2011
Estimates between 2004 and 2011 were generally stable among the total sample, varying between 5.2% and 7.1%.

Year interacted discernibly with **sex**. Estimates for women were stable, but there was a discernible change for men, showing that problem use was lower (6.3%) in 2007 and higher in 2010 (11.8%) versus other years. Year did not interact with age, suggesting that subgroup trends were not dissimilar.

Table 5.1.6: Percentage Reporting *Cannabis Involvement Indicators (ASSIST-CIS)*, Ontarians and Ontarian *Past Year Cannabis Users*, Aged 18+, 2011

ASSIST ITEMS	Response Weight and Response Category	Total Sample[1] (N=1,999)	Cannabis Users[2] (N=196)
ASSIST Q1. How often have you used cannabis, marijuana or hash during the past 3 months? Abuse indicator	0. Never	90.5	30.7
	2. Once or twice	3.1	22.9
	3. Monthly	†2.2	16.0
	4. Weekly	†1.8	13.3
	6. Daily or almost daily	†2.4	17.2
	Mean (SE)	.34 (.04)	2.49 (.19)
ASSIST Q2. During the past 3 months, how often have you had a strong desire or urge to use cannabis, marijuana or hash? Dependence indicator	0. Never	96.9	77.4
	3. Once or twice	†1.3	†9.4
	4. Monthly	†	†1.1
	5. Weekly	†	†4.0
	6. Daily or almost daily	†1.1	†8.3
	Mean (SE)	.14 (.03)	1.02 (.18)
ASSIST Q3. During the past 3 months, how often has your use of cannabis, marijuana or hash led to health, social, legal or financial problems? Abuse and harmful use indicator	0. Never	99.5	96.2
	4. Less than monthly	†	†
	5. Monthly	†	†
	6. Weekly	†	†2.5
	7. Daily or almost daily	†	†
	Mean (SE)	.03 (.01)	.21 (.11)
ASSIST Q4. During the past 3 months, how often have you failed to do what was normally expected of you because of your use of cannabis, marijuana or hash? Abuse indicator	0. Never	99.4	95.4
	5. Less than monthly	†	†3.8
	6. Monthly	†	†
	7. Weekly	†	†
	8. Daily or almost daily	†	†
	Mean (SE)	.03 (.01)	.25 (.09)
ASSIST Q5. Has a friend, relative, a doctor or anyone else ever expressed concern about your use of cannabis, marijuana or hash? Abuse and dependence indicator	0. Never	97.4	81.0
	3. Yes, not past 3 months	†1.3	†9.3
	6. Yes, past 3 months	†1.3	†9.7
	Mean (SE)	.12 (.03)	.86 (.19)
ASSIST Q6. Have you ever tried and failed to control, cut down or stop using cannabis, marijuana or hash? Dependence indicator	0. Never	97.9	84.4
	3. Yes, not past 3 months	†1.2	†8.6
	6. Yes, past 3 months	†1.0	†7.0
	Mean (SE)	.09 (.02)	.68 (.15)

Notes: [1]ASSIST-CIS items were asked only of a random subsample of respondents (N=1,999); [2]Analysis based on unconditional subclass of past year cannabis users (N=196); all analyses are sample design adjusted; † Estimate unstable or suppressed (less than 1%).
Def'n: *The ASSIST–CIS (WHO) screener measures risk of experiencing cannabis use problems.*
Source: *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.7:   Percentage Reporting Moderate or High *Risk of Cannabis Problems (ASSIST–CIS/4+)* During the Past Three Months and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	1999	**5.6**	(4.3, 7.2)	—
Gender				***
Men	793	**7.7**	(5.5, 10.6)	**2.66**
Women *(Comparison Group)*	1206	**3.7**	(2.4, 5.7)	—
Age				***
18-29	180	**15.8**	(10.6, 22.9)	**6.13**
30+ *(Comparison Group)*	1764	**3.1**	(2.3, 4.3)	—

Notes: (1) All analyses are sample design adjusted; *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no discernible difference; † Estimate suppressed or unstable; [1]ASSIST-CIS items were asked only of a random subsample of respondents (N=1,999).
  (2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
  (3) ORs greater than 1.0 indicate that the odds of cannabis problems are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of cannabis problems are lower in the group being compared to the comparison group;
  (4) Adjusted odds ratio holding fixed values for gender, and age (complete case sample size N = 1,940).
Def'n: *The ASSIST–CIS (WHO) screener measures risk of experiencing cannabis problems as indicated by a score of 4 or more.*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.8:   Percentage Reporting Moderate or High *Risk of Cannabis Problems (ASSIST–CIS/4+)* During the Past Three Months and Adjusted Group Differences, Ontarian *Cannabis Users*[1], Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Users[1]	196	**41.7**	(33.5, 50.4)	—
Gender				**
Men	101	**49.6**	(38.2, 61.1)	**2.41**
Women *(Comparison Group)*	95	**32.1**	(21.5, 44.9)	—
Age				NS
18-29	57	**46.2**	(32.5, 60.5)	1.79
30+ *(Comparison Group)*	137	**36.1**	(27.2, 46.1)	—

Notes: [1]Analysis based on unconditional subclass of past year cannabis users; ASSIST-CIS items were asked only of a random subsample of cannabis users (N=196); all estimates and analyses are sample design adjusted.
  (1) *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
  (2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
  (3) ORs greater than 1.0 indicate that the odds of cannabis problems are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of cannabis problems are lower in the group being compared to the comparison group;
  (4) Adjusted odds ratio holding fixed values for gender and age (complete case sample size N=190).
Def'n: *The ASSIST (WHO) screener measures risk of experiencing cannabis problems as indicated by a score of 4.*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.9: Percentage Reporting Moderate or High *Risk of Cannabis Problems (ASSIST–CIS 4+)* During the Past Three Months, by Demographic Characteristics, Ontarians Aged 18+, 2004-2011

	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2611)	(1255)	(2016)	(2005)	(2024)	(2037)	(2024)	(1999)		
Total Sample[1]	5.8	6.3	6.0	5.2	5.6	6.9	7.1	5.6	–	–
(95% CI)[a]	(4.7, 7.1)	(4.8, 8.2)	(4.6, 7.7)	(4.1, 6.5)	(4.3, 7.3)	(5.5, 8.6)	(5.6, 8.9)	(4.3, 7.2)		
Gender										*
Men	8.6	8.2	10.1	6.3	8.3	9.4	11.8	7.7	T	–
	(6.8, 11.0)	(5.7, 11.7)	(7.5,13.4)	(4.7, 8.5)	(6.2,11.0)	(7.1, 12.3)	(9.1, 15.1)	(5.5, 10.6)		
Women	†3.1	†4.6	†2.1	†4.0	†3.2	4.5	†2.4	3.7	–	–
	(2.2, 4.4)	(3.1, 6.9)	(1.2, 3.5)	(2.7,5.9)	(1.8,5.5)	(3.1, 6.6)	(1.5, 3.8)	(2.4, 5.7)		
Age										NSI
18-29	18.4	16.5	19.2	14.9	16.3	22.2	17.6	15.8	–	–
	(14.3, 23.3)	(11.2, 23.6)	(13.9,26.0)	(10.6, 20.5)	(10.9, 23.5)	(16.3, 29.4)	(12.3, 24.5)	(10.6, 22.9)		
30 +	2.8	3.9	2.6	3.0	3.2	3.5	4.4	3.1	–	–
	(2.0, 3.9)	(2.7, 5.7)	(1.7,3.8)	(2.2, 4.1)	(2.3,4.4)	(2.6, 4.7)	(3.3, 5.9)	(2.3, 4.3)		

Notes: [1] ASSIST-CIS items were asked of a random subsample in 2005 (N=1255), 2010 (N=2024) and 2011 (N=1999).
(1) [a] 95% confidence interval; † Estimate suppressed or unstable; all analyses are sample design adjusted.
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2004-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction

Def'n: The WHO ASSIST screener measures the risk of experiencing cannabis problems as indicated by a score of 4 or more.

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.1.10: Percentage Reporting Moderate or High *Risk of Cannabis Problems (ASSIST–CIS 4+)* During the Past Three Months, by Demographic Characteristics, Ontarian *Cannabis Users*[1] Aged 18+, 2004-2011

	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(279)	(145)	(209)	(222)	(209)	(211)	(249)	(196)		
Total Users[1]	47.2	47.1	44.9	41.4	43.4	51.9	43.6	41.7	–	–
(95% CI)[a]	(40.1,54.3)	(37.7, 60.7)	(36.6,53.4)	(33.9,49.2)	(35.0,52.3)	(43.8, 59.8)	(36.2, 51.3)	(33.5, 50.4)		
Gender										NSI
Men	54.4	47.5	54.8	40.0	38.3	54.2	52.3	49.6	–	–
	(45.1,63.4)	(35.0,60.4)	(44.2,64.9)	(28.8, 52.3)	(24.2,54.6)	(44.2, 63.9)	(42.8, 61.7)	(38.2, 61.1)		
Women	35.0	46.6	24.4	42.3	46.0	47.9	24.0	32.1	T	–
	(25.5,45.9)	(32.9,60.7)	(15.0,37.2)	(32.7,52.6)	(35.7,56.7)	(34.7, 61.3)	(15.2, 35.6)	(21.5, 44.9)		
Age										NSI
18-29	54.0	46.1	50.6	44.3	47.4	62.0	47.3	46.2	–	–
	(43.6,64.1)	(32.5,60.2)	(38.8,62.2)	(32.9,56.3)	(34.0,61.3)	(48.8, 73.7)	(35.2, 59.8)	(32.5, 60.5)		
30 +	39.0	48.3	36.7	39.0	39.4	41.6	39.7	36.1	–	–
	(30.0,49.1)	(35.9,61.0)	(26.6,48.2)	(29.7,49.1)	(29.7,49.9)	(32.4, 51.5)	(31.0, 49.2)	(27.2, 46.1)		

Notes: [1] Analysis based on unconditional subclass of past year cannabis users; ASSIST-CIS items were asked of a random subsample of cannabis users in 2005 (N=149), 2010 (N=249) and 2011 (N=196).
(1) [a] 95% confidence interval; † Estimate suppressed or unstable; all analyses are sample design adjusted.
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2004-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction

Def'n: The WHO ASSIST screener measures the risk of experiencing cannabis use problems as indicated by a score of 4 or more.

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 5.1.4
Percentage Reporting Cannabis Problems in the Past 3 Months by Gender and Age, Ontarians Aged 18+, 2011

Note: (1) Vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate (3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
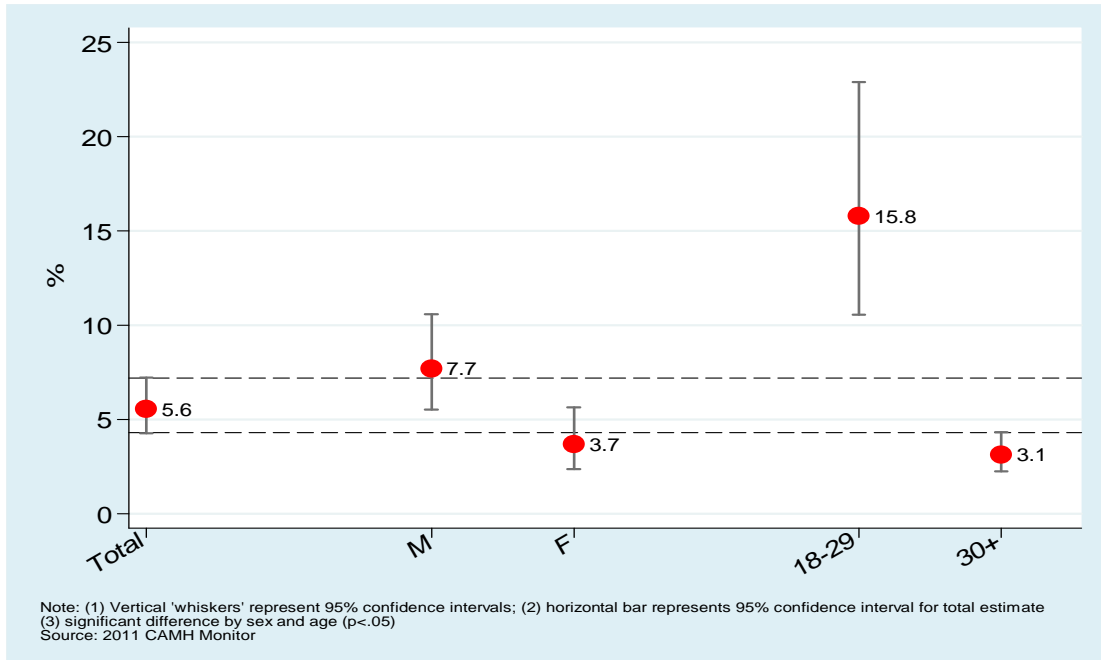
Figure 5.1.5
Percentage Reporting Cannabis Problems in the Past 3 Months, Ontarians Aged 18+, 2004–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor

111
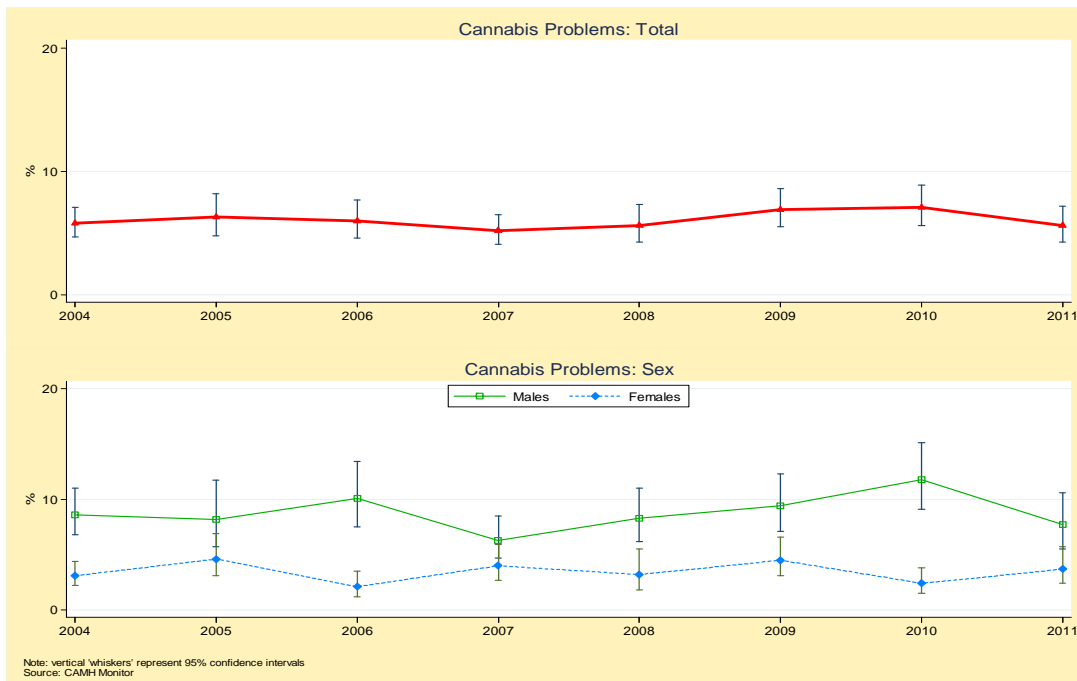
5.2 Cocaine Use

2011 ……….. Tables 5.2.1, 5.2.2

In this section we emphasize lifetime cocaine use given that estimates of past year use and their trends are too low to be reliable.

Overall, an estimated **7.0%** (95% CI: 5.6% to 8.7%) of Ontario adults used cocaine in their lifetime, and **1.1%** used it in the 12 months before the survey. The respective population estimates for lifetime and past year use are 647,008 (95% CI: 501,587 to 792,428) and 102,728 adults (95% CI: 29,328 to 176,129). Among those reporting lifetime use, the majority (84%) did not use it in the past 12 months.

Gender, age, education and income were discernibly related to lifetime use of cocaine. Holding values of risk factors constant, adjusted group differences showed the following:

- The adjusted odds of lifetime cocaine use were 2.4 times higher among men than women (9.9% vs. 4.4%).

- Although lifetime use shows substantial age variation, from 4.6% to 11.1%, there is no dominant age-related pattern. The adjusted odds comparisons show that lifetime use is discernibly higher (by a factor of 2.1) among 40 to 49 year olds than 30 to 39 year olds, while the odds of use are discernibly lower (by 64%) among those aged 50 and older than 40 to 49 year olds (OR = 0.36).

- The adjusted odds of lifetime cocaine use among those with a university degree were discernibly lower (by 64%) than among those with less than high school education (OR=0.36).

- Household income shows a discernible association with lifetime cocaine use. The distinguishing feature is an elevated rate among those with incomes of $30,000 or lower (11%) compared to other respondents, and discernibly so (by 63%) versus those with incomes of $30,000 to $49,000 (5.2%).

There were no other dominant associations, after adjusting for other factors.

Trends
1984–2011…………… Table 5.2.2

2010–2011
Lifetime use of cocaine **decreased discernibly** between the two most recent surveys (7.0% in 2011 vs. 9.6% in 2010), but was similar to the estimate found in 2008 (7.4%). Although past year cocaine use was numerically lower in 2011 (1.1%) than 2010 (1.8%), this difference failed to reach a statistical difference.

1984–2011
Lifetime cocaine use **increased discernibly** between 1984 and 2010, from 3.3% to 9.6%, but then returned to an earlier rate of 7.0% in 2011.

Past year cocaine use remained low and stable (under 2.2%) during the same period. Consequently, we do not present year by demographic factors interactions for past year cocaine use between 1984 and 2011 because of the low prevalence estimates and resulting unreliable measures of change.

Table 5.2.1: Percentage *Using Cocaine* During Lifetime and Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	1999	**7.0**	(5.6, 8.7)	—
Gender				***
Men	793	**9.9**	(7.4, 13.0)	**2.43***
Women *(Comparison Group)*	1206	**4.4**	(3.2, 6.1)	—
Age				**
(Comparison Group is previous age group)				
18-29	180	**10.4**	(6.0, 17.5)	—
30-39	259	**†5.3**	(2.9, 9.5)	0.61
40-49	366	**11.1**	(7.8, 15.6)	2.12
50+	1139	**4.6**	(3.4, 6.2)	**0.36***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	325	**8.7**	(5.5, 13.5)	**1.71***
Central South	178	**†6.8**	(3.4, 12.9)	1.10
Central West	261	**9.6**	(5.6, 15.8)	1.44
South West	323	**†5.9**	(3.7, 9.4)	0.99
Central East	264	**†5.4**	(3.0, 9.5)	0.93
East	358	**†5.7**	(3.2, 9.8)	0.91
North	290	**†4.0**	(2.2, 7.1)	**0.44***
Marital Status				NS
Married/Partner *(Comparison Group)*	1252	**6.0**	(4.6, 7.8)	—
Previously Married	433	**9.4**	(5.2, 16.3)	**2.14***
Never Married	292	**9.4**	(5.7, 15.1)	1.37
Education				*
Less than high school *(Comparison Group)*	253	**9.6**	(4.5, 19.4)	—
Completed high school	438	**5.4**	(3.1, 9.2)	0.52
Some college or university	681	**8.4**	(6.0, 11.6)	0.77
University degree	609	**5.5**	(3.7, 8.1)	**0.39***
Household Income				*
< $30,000 *(Comparison Group)*	235	**11.0**	(5.8, 19.8)	—
$30,000-$49,999	268	**†5.2**	(2.9, 9.2)	**0.36***
$50,000-$79,999	388	**6.3**	(3.7, 10.5)	0.55
$80,000+	629	**8.9**	(6.6, 12.0)	0.84
Not stated	479	**†3.8**	(1.7, 8.3)	0.32

Notes: [1] Cocaine items were asked of a random subsample in 2011 (N= 1999); all estimates and analyses are sample design adjusted;
(1) *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of cocaine use are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of cocaine use are lower in the group being compared to the comparison group;
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N = 1921).
Q: *Have you ever in your lifetime used cocaine*?
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 5.2.2: Percentage *Using Cocaine* During *Lifetime* and During the *Past 12 Months*, by Demographic Characteristics, Ontarians Aged 18+, 1984-2011

(N=)	1984 (1050)	1987 (1081)	1989 (1101)	1991 (1047)	1994 (2022)	1996 (2721)	1998 (2509)	2000 (2406)	2002 (2421)	2003 (2411)	2004 (2611)	2006 (2016)	2008 (2024)	2010 (2024)	2011 (1999)	Change
Total Sample[1]																
Lifetime Use	3.3	6.1	5.6	6.2	5.7	4.9	4.6	6.4	6.6	6.6	6.0	7.1	7.4	9.6	7.0	T 2Y
(95% CI)[a]	(2.2, 4.4)	(4.7, 7.5)	(4.2, 7.0)	(4.7, 7.7)	(4.7, 6.7)	(4.1, 5.7)	(3.8, 5.7)	(5.4, 7.6)	(5.5, 7.8)	(5.5, 7.7)	(4.9, 7.3)	(5.8, 8.7)	(6.1, 9.0)	(8.1, 11.4)	(5.6, 8.7)	
Past year Use	†1.7	†1.8	†2.1	†1.6	†	†	†	†1.4	†1.5	†1.6	†1.3	†1.7	†	†1.8	†1.1	
	(0.9, 2.5)	(1.0, 2.6)	(1.3, 2.9)	(0.8, 2.4)	—	—	—	(0.9, 2.2)	(1.0, 2.3)	(1.1, 2.3)	(0.8, 2.0)	(1.0, 2.8)	—	(1.1, 2.8)	(0.6, 2.3)	
Gender																
Men	†2.9	†2.5	†2.4	†3.1	†	†1.1	†1.5	†2.1	†2.2	†1.9	†2.3	†3.0	†	†2.6	†2.0	
	(1.5, 4.3)	(1.2, 3.8)	(1.1, 3.7)	(1.6, 4.6)	—	(0.5, 1.7)	(0.9, 2.8)	(1.3, 3.5)	(1.3, 3.6)	(1.1, 3.2)	(1.1, 3.2)	(1.7, 5.1)	—	(1.6, 4.4)	(0.9, 4.4)	
Women	†	†1.1	†1.8	†	†	†	†	†	†	†	†1.2	†	†	†	†	
	—	(0.2, 2.0)	(0.7, 2.9)	—	—	—	—	—	—	—	(0.7, 2.1)	—	—	—	—	
Age																
18-29	†4.1	†4.7	6.1	†2.0	†1.6	†1.1	†2.9	5.0	†4.3	†4.3	†4.6	†4.9	†1.5	†3.5	†3.5	
	(1.7, 6.5)	(2.0, 7.4)	(3.1, 9.1)	(0.3, 3.7)	(0.5, 2.7)	(0.2, 2.0)	(1.5, 5.5)	(3.1, 8.1)	(2.4, 7.8)	(2.5, 7.3)	(2.7, 7.6)	(2.5, 9.5)	(0.5, 4.6)	(1.6, 7.6)	(1.2, 9.3)	
30-39	†2.5	†1.8	†1.1	†2.5	†	†1.1	†	†	†1.8	†2.1	†	†	†	†	†	
	(0.6, 4.4)	(0.2, 3.4)	(0.1, 2.3)	(0.6, 4.4)	—	(0.3, 1.9)	—	—	(0.8, 3.7)	(1.1, 4.1)	—	—	—	—	—	
40-49	†	†	†1.1	†1.8	†	†	†	†	†	†	†	†	†	†	†	
	—	—	(0.4, 2.6)	(0.1, 3.6)	—	—	—	—	—	—	—	—	—	—	—	
50+	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Region																
Toronto	—	—	—	—	—	†	†1.5	†1.5	2.2	†2.7	†	†1.6	†	†2.8	†1.6	
	—	—	—	—	—	—	(0.6, 3.6)	(0.7, 3.5)	(1.0, 4.7)	(1.4, 5.3)	—	(0.5, 5.6)	—	(1.3, 6.0)	(0.4, 6.2)	
Central South	—	—	—	—	—	†1.2	†	†	†	†1.3	†1.5	†2.8	†	†	†1.6	
	—	—	—	—	—	(0.3, 3.9)	—	—	—	(0.4, 4.0)	(0.5, 5.2)	(0.7, 10.6)	—	—	(0.3, 8.7)	
Central West	—	—	—	—	—	†	†	†2.6	†1.9	†2.0	†3.1	†	†	†	†2.1	
	—	—	—	—	—	—	—	(1.1, 6.0)	(0.6, 5.8)	(0.9, 4.5)	(1.4, 7.0)	—	—	—	(0.6, 7.4)	
South West	—	—	—	—	—	†	†	†1.2	†	†	†2.3	†2.7	†1.0	†	†	
	—	—	—	—	—	—	—	(0.4, 3.3)	—	—	(1.1, 4.6)	(1.2, 5.6)	(0.4, 2.8)	—	—	
Central East	—	—	—	—	—	†	†	†1.9	†2.3	†	†	†	†1.7	†2.6	†	
	—	—	—	—	—	—	—	(0.6, 5.6)	(0.9, 5.5)	—	—	—	(0.6, 4.7)	(1.0, 6.8)	—	
East	—	—	—	—	—	†1.1	†	†	†	†1.4	†	†	†	†	†	
	—	—	—	—	—	(0.4, 2.8)	—	—	—	(0.5, 3.6)	—	—	—	—	—	
North	—	—	—	—	—	†	†	†	†1.7	†	†	†1.9	†	†	†	
	—	—	—	—	—	—	—	—	(0.6, 4.4)	—	—	(0.8, 4.5)	—	—	—	

Notes: [1] Cocaine items were asked of a random subsample in 2010 (N= 2024) and 2011 (N= 1999).

   (1) [a] 95% confidence interval; †Estimate suppressed or unstable; — regional data not available; all estimates and analyses are sample design adjusted;

   (2) Trend Analysis for lifetime use only: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996 and 2011; **2Y** discernible change (p<.05) between last two estimates.

Q: *(1) Have you ever in your lifetime used cocaine AND (2) How many times, if any, have you used cocaine during the past 12 months?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 5.2.1
Lifetime Cocaine Use by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2011 CAMH Monitor
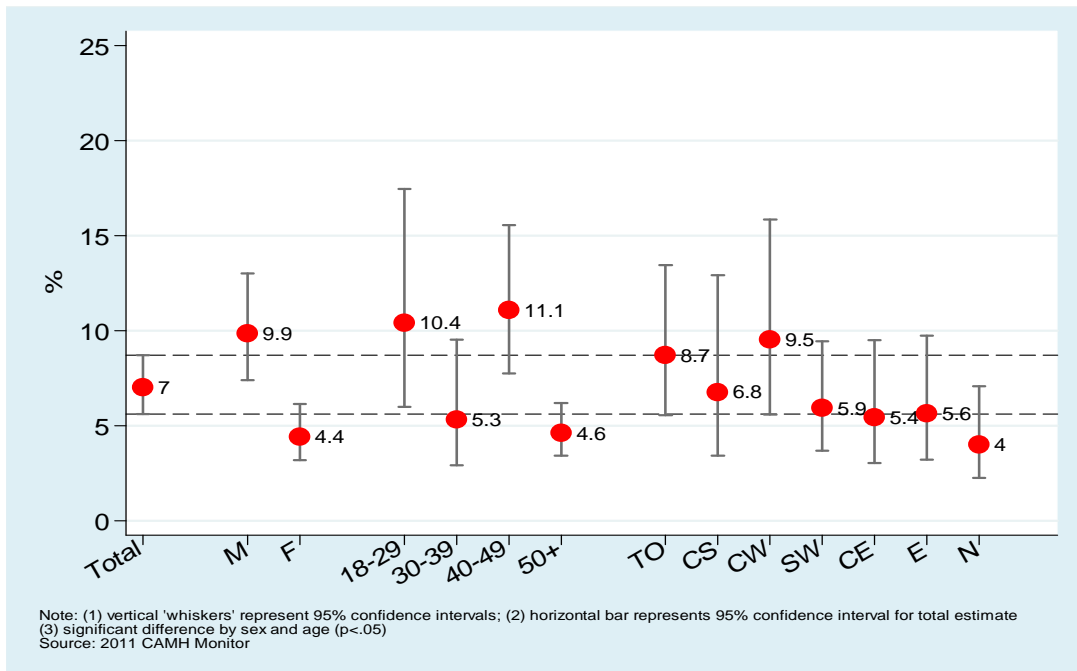
Figure 5.2.2
Lifetime Cocaine Use, Ontarians Aged 18+, 1984-2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
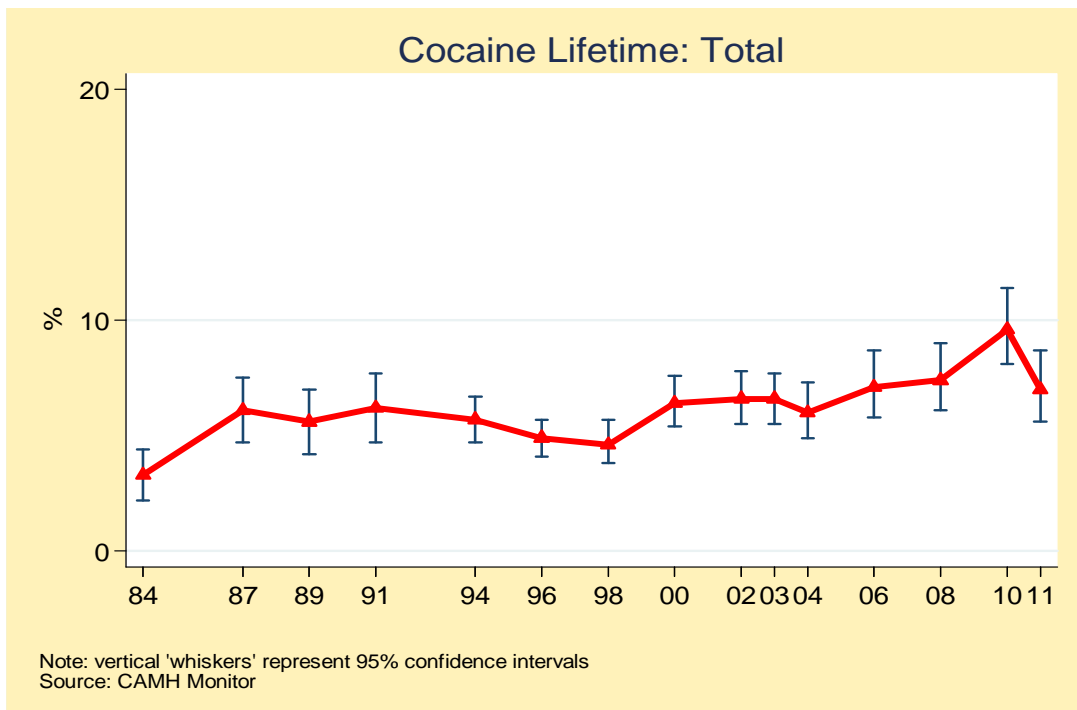
5.3 Use of Prescription Opioid Pain Relievers

In response to recent increases in the use of pain relievers (Fischer, Gittins, & Rehm, 2008; Fischer et al., 2010) we added a module about the use of the general class of prescription opioid pain relievers in 2008. Specifically, we asked respondents about their use of prescription opioid pain relievers, such as Oxycontin™, Percodan™, Percocet™, Tylenol™ #3 or other pain relievers with codeine that are usually obtained by a prescription from a doctor. Opioids suppress pain and may cause a relaxed or euphoric feeling. They also can be dangerous when not used as prescribed or are used without a doctor's recommendation. If taken with depressants (e.g., alcohol) or in large quantities they can impede one's breathing.

In 2010 the item wording was revised to match the items asked in CAMH's school survey (OSDUHS). An analysis showed that the revised items resulted in higher estimates than those used before (in 2008 and 2009[52]), an indication of improved data quality for sensitive questions.

Any past year use (i.e., medical or non-medical) of opioid pain relievers was assessed by the item: "*In the past 12 months how often, if at all, have you used any pain relievers (such as Percocet, Percodan, Demerol, Oxycontin, Tylenol #3 or other products)?*" Responses were coded as *any past year use* (coded 1) versus *no use* (coded 0).

Any past year non-medical use of opioid pain relievers was assessed by the item: "*During the past 12 months, how often did you use pain relievers without a prescription or without a doctor telling you to take them?*" Responses were coded as *any non-medical past year use* (coded 1) versus *no use* (coded 0). Starting 2010, the pain reliever module was asked only of Panel B respondents.

2011 ………………… Table 5.3.1

Overall, an estimated **23.9%** (95% CI: 21.7% to 26.3%) of Ontario adults reported **any past year use** of pain relievers, and **4.0%** (95% CI: 2.9% to 5.3%) reported **any past year non-medical use** of pain relievers. The respective population estimates for any past year use and any past year non-medical use are 2,204,346 (95% CI: 1,983,167 to 2,425,526) and 365,201 Ontario adults (95% CI: 256,149 to 474,252).

There was no discernible association for past year use of any pain relievers for any of the subgroups presented after adjusting for other demographic characteristics.

In contrast, **gender** and **age** were discernibly related to any past year non-medical use of pain relievers after controlling for other predictors.

- The adjusted odds of past year non-medical use of pain relievers were 2.3 times higher among men than women (5.5% vs. 2.6%).

- Past year non-medical use of pain relievers varied from a high of 7.0% among 18 to 29 year olds, to a low of 2.1% among those 50 and older. Only one of the four sequential age group comparisons was statistically

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[52] Details regarding the previous wording of these items can be found in Ialomiteanu & Adlaf (2010). *CAMH Monitor 2009: Technical Guide*. Toronto: Centre for Addiction and Mental Health, accessible at http://www.camh.ca/en/research/news_and_publications/Pages/camh_monitor.aspx

discernible. The adjusted odds of past year non-medical use of pain relievers were discernibly lower (by 68%) among those 50 and older than those aged 40 to 49 (OR = 0.32).

Trends
2010–2011

Although past year use of **any prescription opioid** pain relievers remained **stable** between 2010 and 2011 (26.6% vs. 23.9%, respectively), the proportion of Ontario adults who reported **non-medical use** of prescription opioid pain relievers **dropped** significantly from 7.7% in 2010 to 4.0% in 2011 (data not tabled).

Table 5.3.1: Percentage *Reporting Any Use of Prescription Opioid Pain Relievers* During the Past 12 months, Ontarians, Aged 18+, 2011

		Any use of PO pain relievers			Any non-medical use of PO pain relievers		
	N	%	95% CI	Adjusted Odds Ratio	%	95% CI	Adjusted Odds Ratio
Total Sample [1]	1999	**23.9**	(21.7, 26.3)	—	**†4.0**	(2.9, 5.3)	—
Gender				NS			**
Men	793	**24.1**	(20.6, 28.0)	1.03	**†5.5**	(3.6, 8.1)	**2.30**
Women *(Comparison Group)*	1206	**23.8**	(21.0, 26.8)	—	**†2.6**	(1.8, 3.8)	—
Age *(Comparison Group is previous age group)*				NS			**
18-29	180	**26.0**	(19.4, 33.8)	—	**†7.0**	(3.6, 13.2)	—
30-39	259	**22.3**	(17.0, 28.6)	0.74	**†2.3**	(1.0, 5.6)	0.43
40-49	366	**22.9**	(18.4, 28.2)	0.75	**†5.7**	(3.5, 9.1)	2.39
50+	1139	**24.8**	(22.0, 27.8)	0.74	**†2.1**	(1.5, 3.1)	**0.32**
Public Health Region				NS			NS
Toronto *(vs. Provincial Average)*	325	**22.3**	(17.3, 28.1)	0.95	**†4.3**	(2.4, 7.5)	1.30
Central South	178	**26.0**	(19.3, 34.0)	1.05	**†**	—	—
Central West	261	**27.2**	(21.2, 34.1)	1.16	**†6.1**	(3.0, 11.8)	1.57
South West	323	**22.6**	(18.1, 27.9)	0.88	**†3.4**	(1.8, 6.3)	1.02
Central East	264	**20.5**	(15.4, 26.7)	0.82	**†3.8**	(1.7, 8.4)	1.12
East	358	**24.1**	(19.2, 29.7)	0.99	**†2.7**	(1.3, 5.3)	0.72
North	290	**29.6**	(23.6, 36.3)	1.21	**†5.1**	(3.0, 8.4)	1.46
Marital Status				NS			NS
Married/Partner *(Comparison Group)*	1252	**23.3**	(20.8, 26.1)	—	**†3.2**	(2.3, 4.4)	—
Previously Married	433	**29.2**	(23.7, 35.4)	1.15	**†4.6**	(1.6, 12.0)	1.88
Never Married	292	**23.4**	(17.7, 30.2)	0.71	**†6.3**	(3.4, 11.4)	1.09
Education				NS			NS
Less than HS *(Comparison Group)*	253	**28.9**	(21.5, 37.7)	—	**†**	—	—
Completed high school	438	**26.2**	(21.3, 31.8)	0.99	**†4.2**	(2.2, 7.8)	1.27
Some college or university	681	**24.3**	(20.6, 28.4)	0.89	**†4.8**	(3.1, 7.4)	1.30
University degree	609	**20.8**	(17.2, 24.9)	0.78	**†3.1**	(1.9, 5.2)	0.71
Household Income				NS			NS
< $30,000 *(Comparison Group)*	235	**32.7**	(25.2, 41.1)	—	**†3.0**	(1.3, 6.7)	—
$30,000-$49,999	268	**25.2**	(19.4, 32.2)	0.69	**†3.1**	(1.3, 7.0)	0.65
$50,000-$79,999	388	**21.8**	(17.4, 27.0)	0.60*	**†3.4**	(1.9, 6.2)	0.98
$80,000+	629	**21.9**	(18.3, 26.0)	0.64	**†3.9**	(2.4, 6.4)	1.23
Not stated	479	**25.1**	(20.4, 30.6)	0.79	**†5.2**	(2.8, 9.4)	1.67

Notes: [1] Opioid pain reliever items were asked of a random subsample (N= 1999); all estimates and analyses are sample design adjusted.
(1) *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of opioid use are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of opioid use are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N= 1920 for both any use and any non-medical use).

Def'n: "Any use of pain relievers" defined as reporting any medical or non-medical use in the past 12 months; "Any non-medical use of pain relievers" defined as reporting use "without a prescription or without a doctor telling you to take them" in the past 12 months.

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Figure 5.3.1
Any Use of Prescription Opioid Pain Relievers in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) Vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) no significant difference by sex, by age or by region
Source: 2011 CAMH Monitor
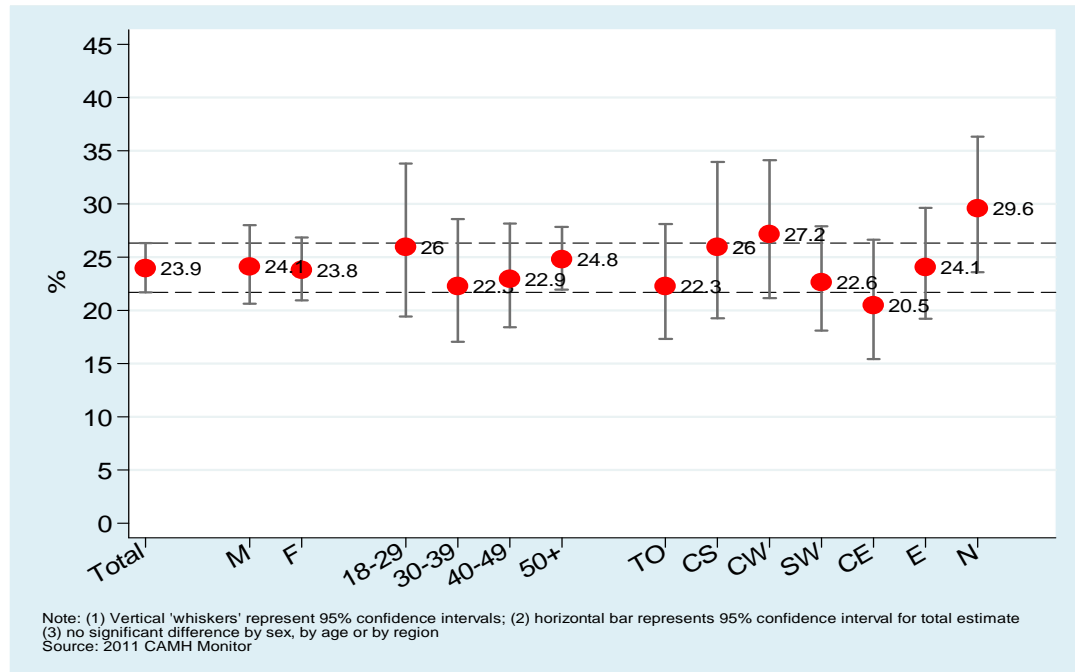
Figure 5.3.2
Any Non-Medical Use of Prescription Opioid Pain Relievers in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) Vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and by age (p<.05)
Source: 2011 CAMH Monitor
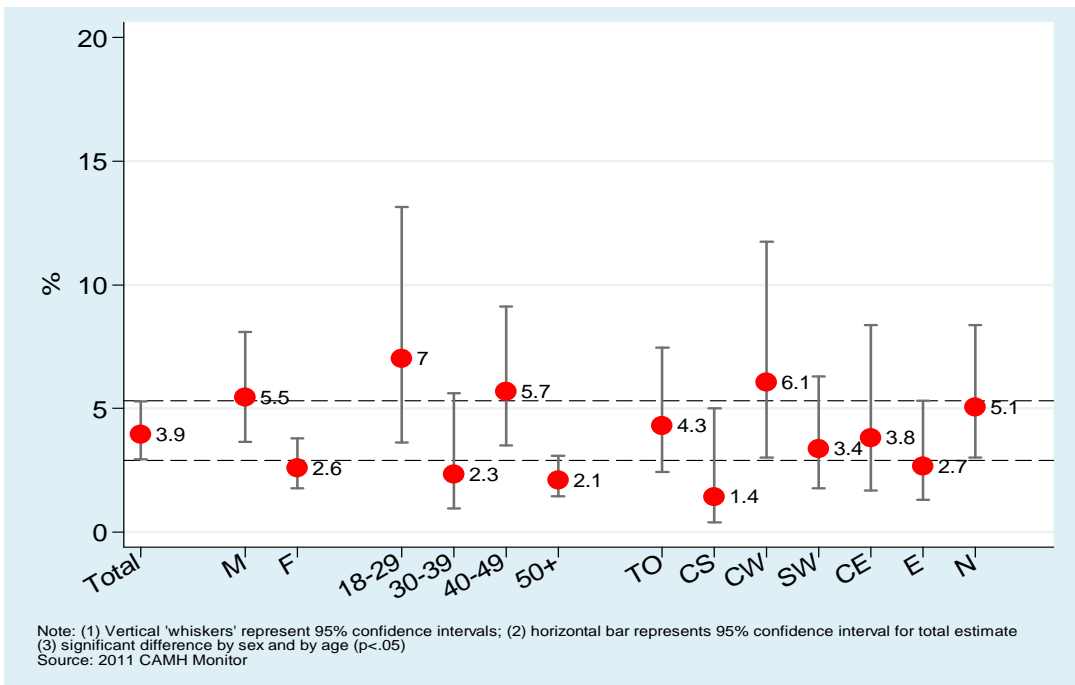
6. DRIVING AND DRUG USE

6.1 Past Year Driving after Drinking

2011……….....….....Table 6.1.1/ Fig 6.1.1

Provincially, an estimated **5.8%** (95% CI: 4.6% to 7.4%) of Ontario adults with a valid driver's licence reported driving after drinking - **driving after consuming two or more drinks in the previous hour** - at least once during the past 12 months. This prevalence corresponds to a population estimate of 489,251 Ontario licensed drivers (95% CI: 371,130 to 607,372).

After adjusting (holding fixed values) for our set of six demographic risk factors, **gender, marital status** and **income** were discernibly related to driving after drinking.

- The adjusted odds of driving after drinking among male drivers were 8.3 times higher than female drivers (10.6% vs. 1.4%).

- Relative to married drivers, the adjusted odds of driving after drinking were 2.4 times higher among previously married drivers (6.4% vs. 5.5%) and 3.3 times higher among never married drivers (6.8% vs. 5.5%).

- The rate of driving after drinking increased with income. The adjusted odds comparisons show that compared to those with incomes of less than $30 thousand, the odds of driving after drinking were 8.6 times higher among drivers with incomes of $50,000 to $79,999, and 11.3 times higher among drivers with incomes of $80,000 or more.

There were no other dominant effects, after adjusting for other demographic factors.

Trends……………Table 6.1.2/ Fig 6.1.2
1996-2011

2010-2011
Prevalence of driving after drinking in 2011 (5.8%) did not change discernibly from 2010 (5.0%) and 2009 (6.9%). In addition, rates were stable for most demographic subgroups. There was only one discernible subgroup change during this period: an increase among residents living in the **Central West**, from 3.7% in 2010 to 10.5% in 2011.

1996-2011
Since 1996, driving after drinking has displayed a discernible **linear decline** from 13.1% to less than 6% in 2010 and 2011.

Year did not interact discernibly with any of the demographic factors analysed, suggesting **similar trends** in each subgroup. There were discernible declines since 1996 for all demographic subgroups.

Discernible declines were evident for both men and women and most age categories. The most **striking decline** was seen among **male drivers**, from 21.2% in 1996 to 10.6% in 2011 and among young adult drivers **aged 18 to 29**, from 20.1% in 1996 to 5.6% in 2011.

A discernible declining linear trend between 1996 and 2011 was found for **all regions**, but especially for drivers living in **Toronto**

(from 14.1% to 5.1%) and drivers living in the **Central South** (from 17.4% to 4.2%).

Moreover, discernible declines between 1996 and 2011 also occurred among all three marital status categories and among all four education subgroups.

Table 6.1.1: Percentage *Driving within One Hour after Consuming 2 or More Drinks* During the Past 12 Months and Adjusted Group Differences, Ontario Licensed Drivers, Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Drivers[1]	1812	**5.8**	(4.6, 7.4)	—
Gender				***
Men	736	**10.6**	(8.2, 13.7)	**8.33***
Women *(Comparison Group)*	1076	†**1.4**	(0.9, 2.3)	—
Age				NS
(Comparison Group is previous age group)				
18-29	153	†**5.6**	(2.6, 11.4)	—
30-39	233	†**5.0**	(2.7, 9.3)	2.34
40-49	345	†**7.8**	(4.8, 12.5)	1.63
50-64	564	†**6.9**	(4.8, 9.8)	0.79
65+	472	†**3.7**	(2.2, 6.1)	0.81
Public Health Region				NS
Toronto *(vs. Provincial Average)*	277	†**5.1**	(3.1, 8.3)	1.16
Central South	156	†**4.2**	(1.5, 10.1)	0.83
Central West	238	†**10.5**	(6.5, 16.5)	**2.06**
South West	303	†**5.9**	(3.4, 10.1)	1.01
Central East	248	†**3.7**	(1.8, 7.7)	0.64
East	323	†**5.1**	(2.8, 9.0)	0.87
North	267	†**5.2**	(2.5, 10.3)	0.90
Marital Status				**
Married/Partner *(Comparison Group)*	1188	**5.5**	(4.2, 7.3)	—
Previously Married	370	†**6.4**	(4.0, 10.1)	**2.35**
Never Married	237	†**6.8**	(3.6, 12.3)	**3.30**
Education				NS
Less than high school *(Comparison Group)*	193	†**3.9**	(1.2, 11.6)	—
Completed high school	385	†**5.0**	(3.0, 8.2)	1.31
Some college or university	636	†**7.5**	(5.2, 10.7)	1.77
University degree	584	†**4.8**	(3.1, 7.4)	0.80
Household Income				*
< $30,000 *(Comparison Group)*	180	†	—	—
$30,000-$49,999	239	†**2.8**	(1.4, 5.3)	3.07
$50,000-$79,999	367	†**6.5**	(4.2, 9.9)	**8.55***
$80,000+	618	**8.5**	(6.1, 11.7)	**11.32***
Not stated	408	†**3.3**	(1.6, 6.5)	4.76

Notes: [1]Driving items were asked only of a random subsample of respondents (Panel B only);
(1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of driving after drinking are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of driving after drinking are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N = 1751).

Q: *During the past 12 months, have you driven a motor vehicle after having two or more drinks in the previous hour?*
 (Asked among drivers currently holding a valid licence)

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table 6.1.2:

Percentage *Driving within One Hour after Consuming 2 or More Drinks* During the Past 12 Months, by Demographic Characteristics, Ontario Licensed Drivers, Aged 18+, 1996-2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2360)	(2432)	(2183)	(2101)	(2066)	(2308)	(2132)	(2124)	(2283)	(2126)	(1730)	(1745)	(1809)	(1833)	(2711)	(1812)		
Total Drivers[1]	**13.1**	**10.6**	**10.1**	**10.5**	**8.6**	**10.9**	**8.1**	**8.5**	**7.7**	**6.2**	**5.9**	**6.1**	**7.1**	**6.9**	**5.0**	**5.8**	T	–
(95% CI) [a]	(11.6,14.7)	(9.3,12.1)	(8.8,11.7)	(9.1,12.1)	(7.3,10.1)	(9.5,12.5)	(6.9,9.5)	(7.2,9.9)	(6.4, 9.2)	(5.1, 7.5)	(4.7, 7.4)	(4.9, 7.5)	(5.8, 8.8)	(5.5, 8.5)	(4.1, 6.1)	(4.6, 7.4)		
Gender																		NSI
Men	**21.2**	**18.6**	**16.0**	**16.5**	**13.6**	**17.9**	**12.5**	**13.7**	**12.6**	**10.1**	**9.4**	**9.6**	**11.4**	**11.6**	**7.3**	**10.6**	T	–
	(18.5,24.1)	(16.1,21.3)	(13.7,18.7)	(14.1,19.2)	(11.3,16.2)	(15.4,20.7)	(10.4,14.9)	(11.4,16.3)	(10.3, 15.2)	(8.2, 12.5)	(7.3,12.0)	(7.5, 12.2)	(9.0, 14.4)	(9.2,14.5)	(5.8, 9.0)	(8.2,13.7)		
Women	**4.9**	**†2.9**	**4.1**	**4.1**	**3.4**	**3.5**	**3.5**	**3.0**	**†2.6**	**†2.1**	**†2.3**	**†2.5**	**†3.0**	**†2.3**	**†2.8**	**†1.4**	T	–
	(3.8,6.4)	(2.1,4.1)	(3.0,5.6)	(3.0,5.5)	(2.4,4.9)	(2.5,4.9)	(2.5,4.8)	(2.0,4.3)	(1.8, 3.8)	(1.4, 3.2)	(1.3,3.9)	(1.6, 3.9)	(1.9,4.7)	(1.4, 3.8)	(1.9, 4.2)	(0.9, 2.3)		
Age																		NSI
18-29	**20.1**	**13.0**	**14.0**	**13.9**	**11.2**	**12.5**	**11.9**	**12.4**	**14.6**	**†7.7**	**10.2**	**10.3**	**12.4**	**12.8**	**†5.7**	**†5.6**	T	–
	(16.7,24.7)	(10.0,16.8)	(10.4,18.4)	(10.4,18.4)	(8.2,15.1)	(9.3, 16.6)	(8.8,15.9)	(9.0,16.9)	(10.5, 19.9)	(5.0, 11.8)	(6.3,15.9)	(6.6, 15.8)	(7.8,19.2)	(8.5,19.0)	(3.4, 9.4)	(2.6,11.4)		
30-39	**15.4**	**11.4**	**10.3**	**12.6**	**10.2**	**13.2**	**8.5**	**11.1**	**†7.1**	**†8.0**	**†3.4**	**†4.6**	**†6.0**	**9.0**	**†7.0**	**†5.0**	T	–
	(12.4,19.0)	(8.8,16.5)	(7.5,13.3)	(10.0,15.8)	(7.5,13.8)	(10.1,17.0)	(6.0,11.9)	(8.1,15.0)	(4.6, 10.7)	(5.4, 11.8)	(1.8, 6.3)	(2.6, 7.9)	(3.5, 10.0)	(5.6,14.3)	(4.6, 10.4)	(2.7, 9.3)		
40-49	**11.8**	**10.1**	**11.3**	**10.3**	**8.3**	**11.9**	**†6.3**	**8.7**	**†6.4**	**†8.0**	**†6.7**	**†5.8**	**†6.9**	**†7.3**	**†5.2**	**†7.8**	T	–
	(9.1,15.1)	(7.3,13.8)	(8.6,14.9)	(7.5,13.9)	(6.0,11.4)	(9.0,15.5)	(4.3,9.2)	(6.3,11.9)	(4.4, 9.2)	(5.8, 11.0)	(4.4,10.1)	(3.7, 9.1)	(4.5,10.6)	(4.9,10.8)	(3.4, 7.8)	(4.8,12.5)		
50-64	**7.0**	**9.4**	**8.1**	**8.0**	**† 5.9**	**9.9**	**9.6**	**†5.8**	**†5.6**	**†2.6**	**†5.8**	**†6.1**	**†5.6**	**†3.9**	**†3.9**	**†6.9**	T	–
	(4.7,10.2)	(6.9,12.6)	(5.8,11.4)	(5.5,11.6)	(3.7,9.3)	(7.1, 13.5)	(7.0,13.2)	(3.8,8.7)	(3.9, 8.2)	(1.5, 4.6)	(3.8,8.9)	(4.1, 9.0)	(3.8,8.4)	(2.5,6.1)	(2.8, 5.6)	(4.8, 9.8)		
65+	**5.8**	**7.8**	**6.4**	**6.8**	**† 6.0**	**† 5.0**	**†3.7**	**†3.4**	**†5.3**	**†4.3**	**†3.2**	**†4.4**	**5.3**	**2.5**	**†3.7**	**†3.7**	–	–
	(3.3,9.9)	(5.2,10.4)	(4.0,10.2)	(4.1,11.0)	(3.3,10.7)	(2.7, 9.4)	(1.9,7.1)	(1.8,6.6)	(3.1, 8.8)	(2.4, 7.6)	(1.5,6.6)	(2.3, 8.3)	(3.2, 8.7)	(1.2,4.8)	(2.4, 5.6)	(2.2, 6.1)		
Public Health Region																		NSI
Toronto	**14.1**	**7.8**	**9.9**	**8.5**	**9.0**	**10.4**	**†5.0**	**9.1**	**†7.3**	**†2.5**	**†4.5**	**†3.5**	**†5.4**	**†5.1**	**†4.6**	**†5.1**	T	–
	(10.3,19.1)	(5.0,14.8)	(6.9,14.1)	(5.7,12.7)	(5.9,13.4)	(7.2,14.8)	(2.9,8.5)	(6.2,13.2)	(4.5, 11.7)	(1.3, 4.8)	(2.3,8.8)	(1.7,6.9)	(3.1, 9.2)	(2.8, 9.1)	(2.9, 7.5)	(3.1, 8.3)		
Central South	**17.4**	**12.1**	**9.1**	**11.1**	**† 6.6**	**11.6**	**11.4**	**†6.0**	**†5.7**	**†7.4**	**†4.4**	**10.1**	**†5.2**	**†7.5**	**†6.4**	**†4.2**	T	–
	(12.4,23.8)	(8.4,17.2)	(5.6,14.5)	(6.9,17.4)	(3.9,10.9)	(7.4,17.6)	(7.1,17.8)	(3.2,11.0)	(2.7, 11.7)	(4.0, 13.3)	(2.1,8.9)	(5.9,17.0)	(2.5,10.4)	(4.0,13.6)	(3.5,11.4)	(1.5,10.1)		
Central West	**12.5**	**9.4**	**10.8**	**8.6**	**8.5**	**8.9**	**†4.6**	**9.3**	**†6.8**	**†8.1**	**†5.6**	**†3.7**	**†7.0**	**†6.8**	**†3.7**	**10.5**	T	2Y
	(9.2,16.7)	(5.8,14.8)	(7.5,15.4)	(5.7,12.7)	(5.7,12.5)	(6.2,12.7)	(2.5,8.2)	(6.2,13.9)	(4.3, 10.8)	(5.2, 12.4)	(3.1,10.6)	(1.8,7.3)	(4.0,12.1)	(4.0,11.5)	(2.1, 6.5)	(6.5,16.5)		
South West	**13.1**	**11.4**	**10.4**	**12.4**	**9.3**	**15.6**	**13.2**	**8.5**	**13.1**	**†9.2**	**†7.2**	**10.8**	**†5.2**	**†5.2**	**†6.6**	**†5.9**	T	–
	(9.9,17.1)	(8.5,15.1)	(7.5,14.2)	(9.3,16.3)	(6.2,13.7)	(12.0,20.0)	(10.0,17.3)	(5.9,12.2)	(9.7, 17.3)	(6.5, 12.9)	(4.4,11.5)	(7.3,15.6)	(3.1,8.5)	(3.1,8.5)	(4.4, 9.9)	(3.4,10.1)		
Central East	**12.0**	**11.5**	**8.8**	**10.7**	**† 7.0**	**10.1**	**9.5**	**9.2**	**†7.8**	**†6.1**	**†6.5**	**†3.2**	**†8.7**	**†6.0**	**†4.5**	**†3.7**	T	–
	(8.5,16.5)	(8.5,15.4)	(5.6,13.4)	(7.2,15.7)	(4.4,11.1)	(6.5,15.6)	(6.2,14.3)	(5.9,14.0)	(4.7, 12.8)	(3.6, 10.1)	(3.4,12.3)	(1.5,7.0)	(5.1, 14.5)	(3.2,11.0)	(2.6, 7.7)	(1.8,7.7)		
East	**9.5**	**12.2**	**10.0**	**11.7**	**7.6**	**10.5**	**7.5**	**†7.0**	**†5.4**	**†4.4**	**†7.9**	**†8.7**	**†9.2**	**10.8**	**†5.4**	**†5.1**	T	–
	(6.8,13.2)	(9.2,16.1)	(7.1,13.8)	(8.5,15.8)	(5.0,11.5)	(7.7,14.3)	(5.0,11.0)	(4.6,10.5)	(3.4, 8.3)	(2.4, 8.0)	(5.1,12.0)	(5.5,13.6)	(5.9,14.2)	(7.0,16.4)	(3.4, 8.3)	(2.8,9.0)		
North	**13.9**	**11.5**	**12.8**	**12.8**	**13.2**	**9.9**	**8.1**	**9.0**	**6.8**	**†6.3**	**†7.3**	**†5.0**	**10.7**	**†9.3**	**†5.3**	**†5.2**	T	–
	(10.4,18.3)	(8.5,15.3)	(9.4,17.0)	(9.3,17.3)	(9.7,10.1)	(7.3,13.4)	(5.4,12.1)	(6.2,12.9)	(4.8, 9.5)	(3.9,10.0)	(4.6,11.5)	(2.7,9.2)	(6.9,16.3)	(5.6,14.9)	(3.3, 8.4)	(2.5,10.3)		

(N=)	1996 (2360)	1997 (2432)	1998 (2183)	1999 (2101)	2000 (2066)	2001 (2308)	2002 (2132)	2003 (2124)	2004 (2283)	2005 (2126)	2006 (1730)	2007 (1745)	2008 (1809)	2009 (1833)	2010 (2711)	2011 (1812)	Change	
													Cont'd					
Marital Status																	NSI	
Married/Partner	10.5	9.0	9.1	9.7	7.4	9.8	7.5	7.6	6.5	5.6	5.5	5.4	6.4	5.8	5.1	5.5	T	–
Previously Married	13.1	14.8	12.4	9.4	10.5	9.0	6.2	†5.4	†4.5	†5.7	†6.1	†4.1	†7.0	†3.8	†4.4	†6.4	T	–
Never Married	20.7	13.4	12.5	14.1	11.3	15.6	11.1	12.9	13.6	†8.5	†7.2	†9.7	†10.3	13.0	5.3	†6.8	T	–
Education																	NSI	
Less than high school	10.6	12.7	11.3	5.9	† 6.2	11.4	9.3	†7.8	†6.1	†6.1	†4.5	†5.8	10.7	†4.3	†5.2	†3.9	T	–
Completed high school	14.0	9.9	9.1	11.5	11.3	12.6	7.5	10.0	6.9	†6.0	†6.1	†8.6	5.3	8.3	†3.5	†5.0	T	–
Some college or university	15.9	12.5	13.0	12.4	9.5	11.0	8.9	7.6	8.1	7.0	6.8	7.6	7.1	8.7	5.7	†7.5	T	–
University degree	10.8	8.1	6.9	9.6	† 5.9	8.7	7.0	8.9	8.4	†5.4	†5.1	†2.8	†7.7	†5.0	5.4	†4.8	T	–

Notes: [1] Driving items in 2011 were asked only of a random subsample of respondents (Panel B only).

(1) [a] 95% confidence interval; † Estimate suppressed or unstable; all estimates and analyses are sample design adjusted.

(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 1996-2011; **2Y** discernible change (p<.05) between last two estimates.

(3) **NSI**, non-discernible YEAR × FACTOR interaction

Q: *During the past 12 months, have you driven a motor vehicle after having two or more drinks in the previous hour?* (Asked among drivers currently holding a valid licence)

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Figure 6.1.1

Percentage Reporting Driving after Drinking in the Past Year by Sex, Age and Region, Ontario Licensed Drivers Aged 18+, 2011

Note: (1) Vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex (p<.05)
Source: 2011 CAMH Monitor

Figure 6.1.2
Past Year Driving after Drinking, Ontario Licensed Drivers Aged 18+, 1996-2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor

6.2 Past Year Driving after Cannabis Use

2011…………..Table 6.2.1/ Fig 6.2.1

Readers should note that given the moderate sample sizes and low estimated prevalence, most of the cannabis-driving estimates are statistically unstable and should be interpreted with caution.

Provincially, an estimated **2.4%** (95% CI: 1.5% to 3.7%) of Ontario adults with a valid driver's licence reported **driving within one hour of consuming cannabis** at least one time during the past 12 months. This prevalence corresponds to a population estimate of 197,645 licensed drivers (95% CI: 108,956 to 286,334).

After controlling for other demographic risk factors, **only age** was discernibly related to driving after cannabis use.

- Driving after cannabis use was reported almost exclusively among **young drivers aged 18 to 29** (8.6%), with other age groups reporting very low estimates (estimates that were 1% or statistically unstable and were suppressed).

Sex, region, marital status, education and income were not discernibly associated with cannabis use and driving.

Trends
2002-2011…………Table 6.2.2/Fig 6.2.2

2010-2011
The percentage of Ontario adult drivers reporting driving within one hour of consuming cannabis at least one time during the past 12 months in 2011 (2.4%) was not discernibly different from 2010 (1.5%) and 2009 (1.8%). In addition, rates were stable since 2009 for most demographic subgroups. There was however one statistically discernible **increase** in driving after consuming cannabis among **young drivers** aged 18 to 29, from 3.2% in 2010 to 8.6% in 2011.

2002-2011
Between 2002 and 2011, driving after cannabis use remained virtually unchanged (from 2.9% to 2.4%). Year did not interact discernibly with any of the demographic categories analysed, suggesting **similar stable trends**[53] in each subgroup. The only discernible non-linear trend was found among young drivers **aged 18 to 29**. Driving after consuming cannabis **increased** from 7.2% in 2002 to 11.9% in 2006, then declined to 2.8% in 2009 and then increased three-fold in 2011 to 8.6%. No other subgroup changes were evident.

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[53] These trend results must be interpreted with caution because moderate sample sizes (with sizeable sampling errors) and low prevalence estimates result in unreliable measures of change.

Table 6.2.1: Percentage *Driving within One Hour after Consuming Cannabis* During the Past 12 Months and Adjusted Group Differences, Ontario Licensed Drivers, Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Drivers[1]	1812	**2.4**	(1.5, 3.7)	—
Gender				NS
Men	736	†**2.9**	(1.6, 5.2)	1.24
Women *(Comparison Group)*	1076	†**1.9**	(1.0, 3.6)	—
Age				*
(Comparison Group is previous age group)				
18-29	153	†**8.6**	(4.7, 15.2)	—
30-39	233	†	—	0.18
40-49	345	†	—	0.84
50+	1036	†**1.1**	(0.6, 2.2)	1.35
Public Health Region				NS
Toronto *(vs. Provincial Average)*	277	†**1.6**	(0.6, 4.0)	0.56
Central South	156	†**3.3**	(1.0, 10.5)	1.86
Central West	238	†**4.1**	(1.6, 10.1)	2.01
South West	303	†**1.6**	(0.6, 4.5)	0.74
Central East	248	†**2.7**	(1.1, 6.6)	1.85
East	323	†	—	0.45
North	267	†	—	0.76
Marital Status				NS
Married/Partner *(Comparison Group)*	1188	†**1.2**	(0.7, 2.2)	—
Previously Married	370	†	—	0.22
Never Married	237	†**7.6**	(4.0, 13.7)	2.44
Education				NS
Less than high school *(Comparison Group)*	193	†	—	—
Completed high school	385	†**2.9**	(1.2, 6.6)	1.16
Some college or university	636	†**3.7**	(2.0, 6.7)	1.20
University degree	584	†	—	0.27
Household Income				NS
< $30,000 *(Comparison Group)*	180	†**3.5**	(0.9, 12.8)	—
$30,000-$49,999	239	†**2.0**	(0.5, 9.5)	0.68
$50,000-$79,999	367	†**2.2**	(1.0, 5.5)	0.58
$80,000+	618	†**3.4**	(1.9, 6.0)	1.03
Not stated	408	†	—	0.10

Notes: [1]Driving items were asked only of a random subsample of respondents (Panel B only).
(1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of driving after cannabis use are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of driving after cannabis use are lower in the group being compared to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=1,753).
Q: *During the past 12 months, have you driven a motor vehicle within an hour of using cannabis, marijuana or hash?*
(Asked among drivers currently holding a valid licence)
Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table 6.2.2: Percentage *Driving within One Hour after Consuming Cannabis* During the Past 12 Months, by Demographic Characteristics, Ontario Licensed Drivers, Aged 18+, 2002-2011

(N=)	2002 (2132)	2003 (2124)	2004 (2283)	2005 (2126)	2006 (1730)	2007 (1745)	2008 (1809)	2009 (1833)	2010 (2711)	2011 (1812)	Change	
Total Drivers[1]	**2.9**	**3.0**	**2.5**	**2.9**	**2.9**	**1.8**	**2.2**	**†1.8**	**†1.5**	**†2.4**	–	–
(95% CI)[a]	(2.1, 4.1)	(2.2, 4.0)	(1.7, 3.6)	(2.1, 4.1)	(1.9, 4.3)	(1.2, 2.7)	(1.4, 3.6)	(1.2, 2.8)	(1.0, 2.2)	(1.5, 3.7)		
Gender											NSI	
Men	**4.8**	**4.6**	**4.1**	**4.5**	**4.8**	**†2.2**	**†2.9**	**†3.3**	**†2.8**	**†2.9**	–	–
	(3.4, 6.7)	(3.2, 6.4)	(2.8, 6.1)	(3.0, 6.6)	(3.1, 7.6)	(1.3, 3.8)	(1.7, 4.8)	(2.1, 5.1)	(1.9, 4.0)	(1.6, 5.2)		
Women	**†1.0**	**1.3**	**†1.0**	**†1.3**	**†1.0**	**†1.3**	**†1.6**	**†**	**†**	**†1.9**	–	–
	(0.5, 2.3)	(0.7, 2.4)	(0.4, 1.8)	(0.7, 2.4)	(0.5, 2.2)	(0.7, 2.6)	(0.6, 4.2)	—	—	(1.0, 3.6)		
Age											NSI	
18 - 29	**†7.3**	**9.0**	**†8.6**	**†8.0**	**†11.9**	**†6.3**	**†7.0**	**†2.8**	**†3.2**	**†8.6**	T	2Y
	(4.6,11.3)	(6.0,13.2)	(5.3, 13.5)	(5.0, 12.5)	(7.4, 18.4)	(3.5, 11.0)	(3.4, 13.8)	(1.3, 6.1)	(1.7, 5.9)	(4.7,15.2)		
30 - 39	**†4.2**	**†2.1**	**†1.0**	**†3.1**	**†1.5**	**†**	**†2.1**	**†3.4**	**†2.3**	**†**	–	–
	(2.3, 7.6)	(1.0,4.2)	(0.3, 2.4)	(1.5, 6.6)	(0.5, 5.8)	—	(0.7, 6.1)	(1.5, 7.2)	(1.1, 4.8)	—		
40 - 49	**†**	**†2.4**	**†1.8**	**†2.4**	**†**	**†**	**†1.8**	**†1.7**	**†**	**†**	–	–
	—	(1.4, 4.2)	(0.8, 4.0)	(1.2, 4.6)	—	—	(0.9, 3.7)	(0.7, 4.4)	—	—		
50+	**†**	**†**	**†**	**†**	**†**	**†**	**†**	**†**	**†**	**†1.1**		
	—	—	—	—	—	—	—	—	—	(0.6, 2.2)		
Public Health Region											NSI	
Toronto	**†4.1**	**†4.1**	**†2.0**	**†3.2**	**†3.3**	**†1.7**	**†2.6**	**†2.4**	**†1.6**	**†1.6**	–	–
	(2.1, 7.9)	(2.1, 7.8)	(0.8, 5.2)	(1.4, 7.2)	(1.3, 8.2)	(0.5, 5.3)	(1.1, 6.1)	(1.0, 5.9)	(0.7, 3.8)	(0.6, 4.0)		
Central South	**†2.2**	**†4.6**	**†3.5**	**†4.1**	**†4.2**	**†1.9**	**†**	**†2.7**	**†**	**†3.3**	–	–
	(0.8, 5.9)	(2.3, 9.1)	(1.0, 10.9)	(1.6, 10.1)	(1.3, 12.6)	(0.6, 6.3)	—	(1.1, 6.7)	—	(1.0, 10.5)		
Central West	**†3.6**	**†**	**†4.7**	**†2.4**	**†3.4**	**†1.8**	**†3.2**	**†2.7**	**†**	**†4.1**	–	–
	(1.6,7.9)	—	(2.4, 9.1)	(1.1, 5.1)	(1.2, 9.0)	(0.6, 5.6)	(1.3, 7.6)	(1.1, 6.3)	—	(1.6, 10.1)		
South West	**†**	**†2.6**	**†2.1**	**†2.8**	**†4.2**	**†**	**†2.8**	**†1.2**	**†**	**†1.6**	–	–
	—	(1.3,5.3)	(1.0, 4.4)	(1.3, 5.8)	(2.1, 8.2)	—	(1.4,5.9)	(0.5, 3.3)	—	(0.6, 4.5)		
Central East	**†3.5**	**†3.1**	**†1.7**	**†5.4**	**†1.7**	**†1.8**	**†2.9**	**†1.5**	**†**	**†2.7**	–	–
	(1.6,7.9)	(1.4,6.6)	(0.6, 4.9)	(2.9, 9.9)	(0.5, 7.7)	(0.7, 4.7)	(0.8, 10.3)	(0.6, 4.5)	—	(1.1,6.6)		
East	**†**	**†2.6**	**†1.6**	**†**	**†**	**†1.8**	**†**	**†**	**†2.9**	**†**	–	–
	—	(1.3,5.5)	(0.7, 3.6)	—	—	(0.7, 5.2)	—	—	(1.5, 5.6)	—		
North	**†3.2**	**†2.2**	**†1.8**	**†**	**†1.7**	**†3.1**	**†1.5**	**†2.0**	**†3.9**	**†**	–	–
	(1.6,7.7)	(1.0,5.2)	(1.0, 3.5)	—	(0.7, 4.5)	(1.4, 6.7)	(0.5, 4.2)	(0.7, 5.7)	(2.1, 7.1)	—		
Marital Status											NSI	
Married/Partner	**†2.2**	**†1.3**	**†1.0**	**†2.0**	**†**	**†**	**†1.7**	**†1.3**	**†1.0**	**†1.2**	–	–
Previously Married	**†**	**†2.1**	**†**	**†1.6**	**†2.1**	**†**	**†**	**†2.7**	**†**	**†**	–	–
Never Married	**†6.5**	**8.7**	**8.6**	**†6.8**	**†10.7**	**†6.2**	**†5.0**	**†3.4**	**†3.5**	**†7.6**	–	–
Education											NSI	
Less than high school	**†5.0**	**†3.5**	**†2.1**	**†5.3**	**†1.5**	**†2.3**	**†3.3**	**†2.5**	**†**	**†**	–	–
Completed high school	**†2.6**	**†4.9**	**†3.8**	**†3.8**	**†4.8**	**†1.8**	**†3.3**	**†4.2**	**†1.8**	**†2.9**	–	–
Some college or university	**†3.2**	**†2.7**	**†2.3**	**†2.8**	**†3.0**	**†2.4**	**†1.0**	**†1.8**	**†1.9**	**†3.7**	–	–
University degree	**†2.0**	**†1.7**	**†1.9**	**†1.7**	**†1.7**	**†**	**†2.5**	**†**	**†**	**†**	–	–

Notes: [1]Driving items were asked only of a random subsample of respondents (Panel B only).
(1) All analyses are sample design adjusted; [a] 95% confidence interval; † Estimate suppressed or unstable;
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2002-2011; **2Y** discernible change (p<.05) between last two estimates; (3) **NSI**, non-discernible YEAR × FACTOR interaction
Q: *During the past 12 months, have you driven a motor vehicle within one hour of using cannabis, marijuana or hash?* (Asked among drivers currently holding a valid licence)
Source: CAMH Monitor, Centre for Addiction and Mental Health

Figure 6.2.1

Percentage Reporting Driving after Cannabis Use in the Past Year by Sex, Age and Region, Ontario Licensed Drivers Aged 18+, 2011
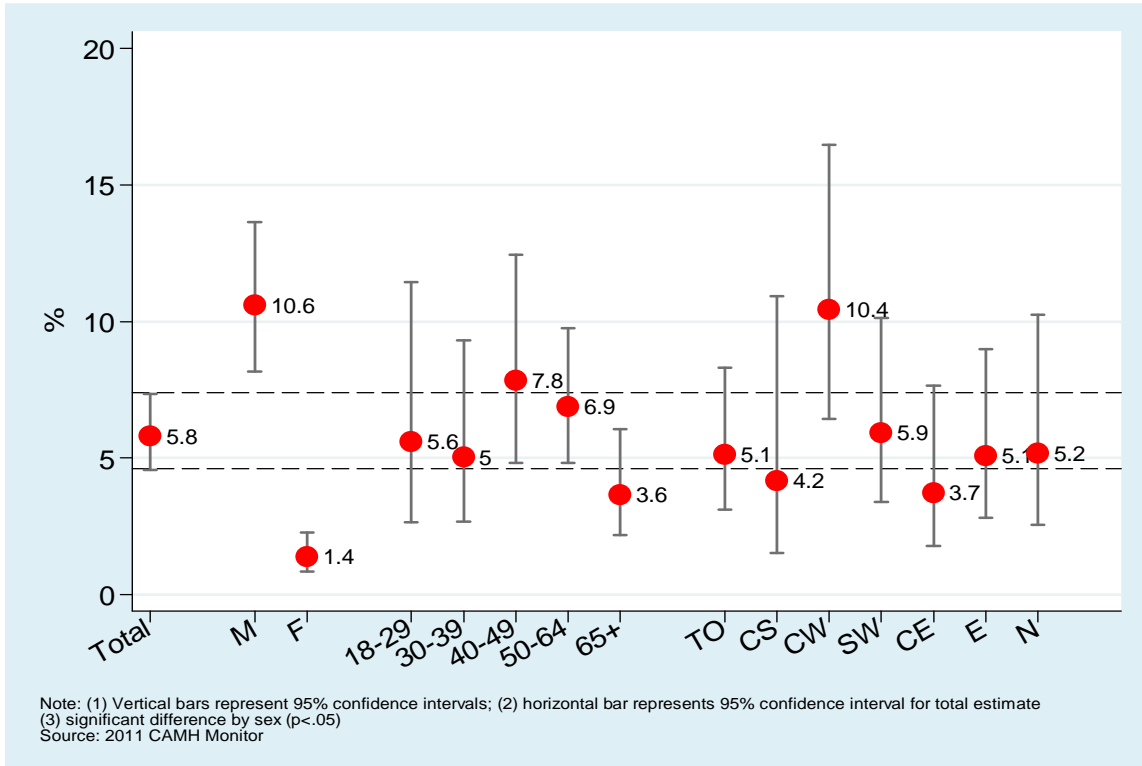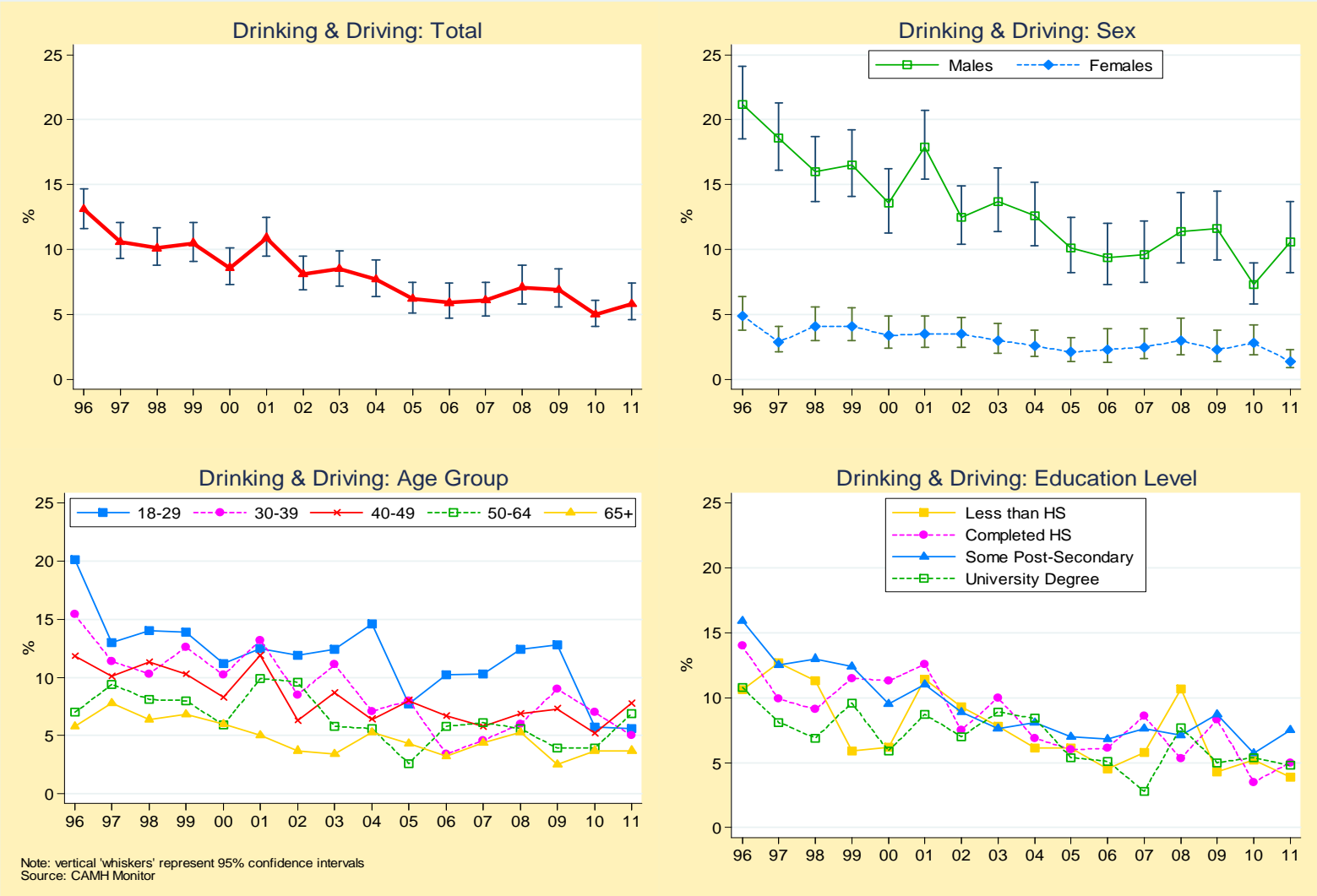

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by age (p<.05)
Source: 2011 CAMH Monitor
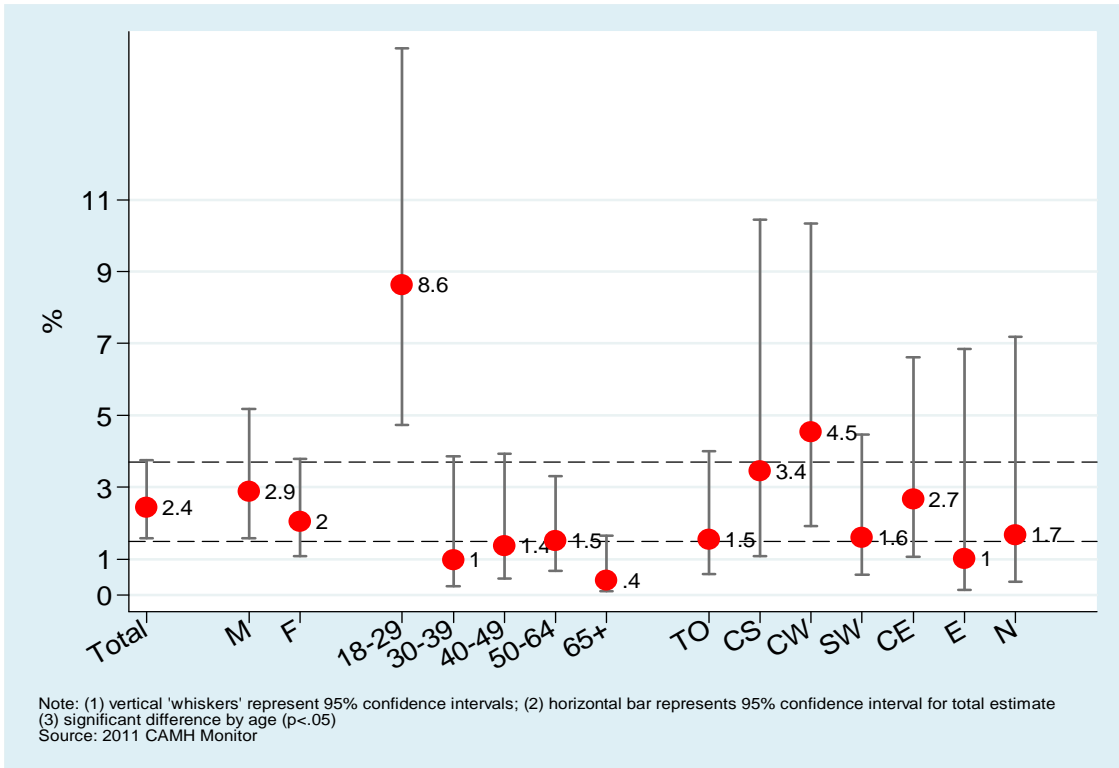
Figure 6.2.2
Past Year Driving after Cannabis Use, Ontario Licensed Drivers Aged 18+, 2002-2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
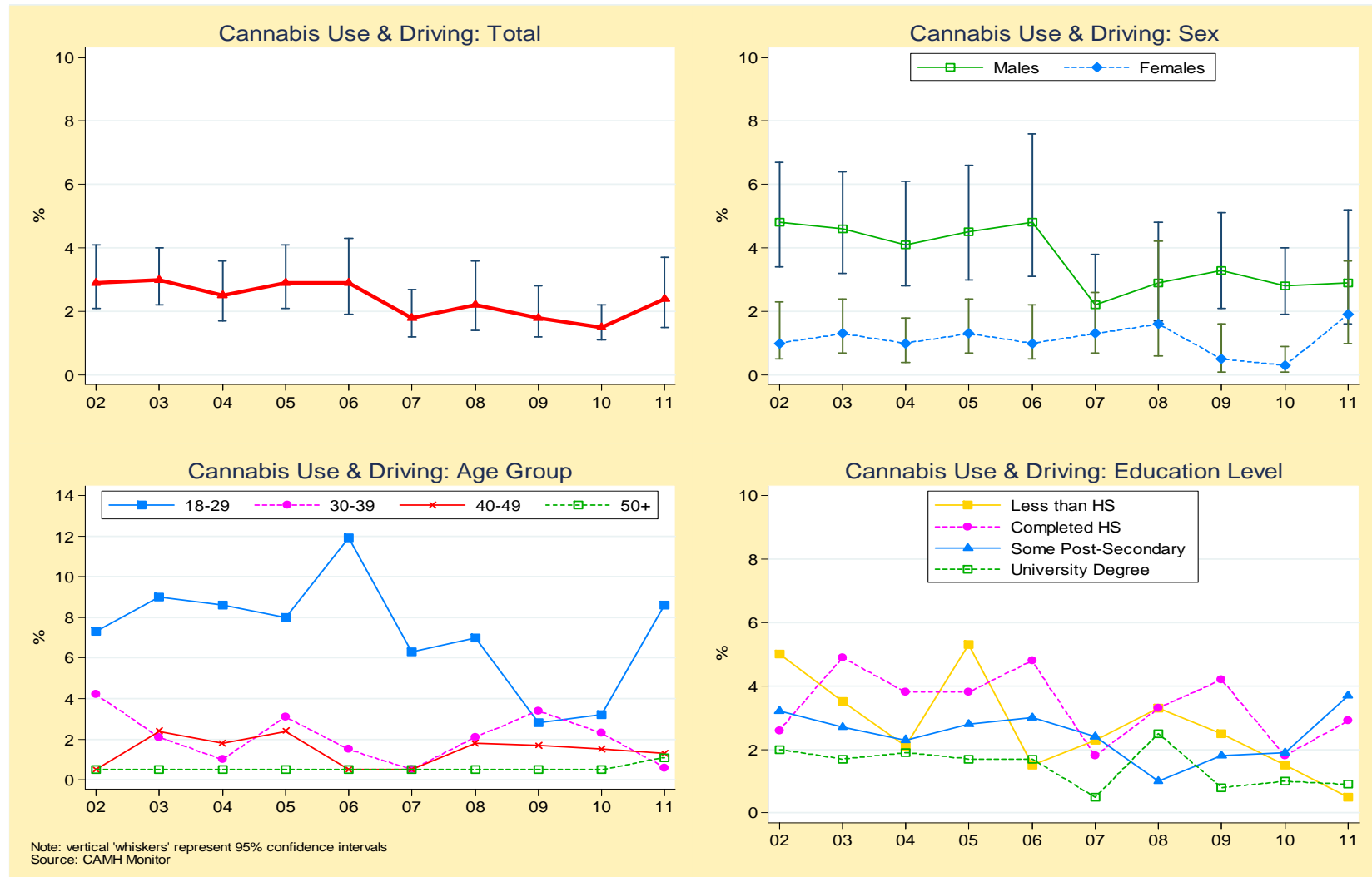
6.3 Passenger with a Driver who Used Alcohol or Cannabis

Drinking-driving or cannabis use and driving risks are not restricted to drivers, but also involve pedestrians and other passengers as well. Beginning in 2006, respondents were asked if they had ridden in a vehicle driven by someone who had been drinking alcohol (within one hour of driving) and if they had ridden with a driver who had been using cannabis prior to driving. Both questions refer to the past 12 month period before the survey. The most recent data collection for these items was in the 2010 cycle of the survey.

6.3.1. Passenger riding with a drinking driver

2010…………..…..Table 6.3.1, 6.3.3

Overall, an estimated **10.6%** (95% CI: 8.6% to 12.2%) of Ontario adults reported riding as a passenger in a vehicle with a driver who had been drinking, at least once during the past 12 months. This prevalence corresponds to a population estimate of 966,539 Ontario adults (95% CI: 790,297 to 1,142,782).

After controlling (holding fixed values) for other demographic risk factors, only **age** and **education** were discernibly related to riding with a drinking driver.

- Riding with a drinking driver declined discernibly with age. Those aged **18 to 29** reported the highest proportion (22.2%), while those aged 65 and older reported the lowest proportion (5.1%).

- Riding with a drinking driver was lowest among those with who did not complete high school (statistically unstable and suppressed – around 1%). Relative to those who did not

complete high school, the adjusted odds of being a passenger with a drinking driver were **discernibly higher** among respondents who completed high school (OR=8.52), among those with some college or university (OR=8.09) or a university degree (OR=8.12).

Gender, region, marital status, and income were not discernibly related to riding with a drinking driver.

Trends
2006-2010…………….....Table 6.3.3

2009-2010
The percentage of Ontario adults reporting riding with a drinking driver during the past 12 months in 2010 (10.6%) was unchanged from 2009 (10.3%). Proportions were stable also for gender, age, regions, and marital status groups. Only one discernible subgroup **decline** between 2009 and 2010 was found: for **those not completing high school**, from 7.6% in 2009 to around 1% in 2010.

2006-2010
Between 2006 and 2009, there was no overall discernible change among Ontario adults reporting riding with a drinking driver.

Year did not interact discernibly with any of the demographic factors analysed, suggesting **similar stable trends** within most demographic subgroups. Separate subgroup trends found only one discernible non-linear trend for the **Central West** region (from 14.0% in 2006 to 9.1% in 2010).

6.3.2. Passenger riding with a driver who had used cannabis

2010……………..…...Table 6.3.2

Provincially, an estimated **8.3%** (95% CI: 6.7% to 10.1%) of Ontario adults reported riding as a passenger with a driver who had used cannabis at least once during the past 12 months. This estimate corresponds to a population estimate of 778,832 adults (95% CI: 613,707 to 943,956).

After controlling for other demographic risk factors, **gender, age, marital status** and **education** were discernibly related to riding with a cannabis-using driver.

- The adjusted odds of riding with a cannabis-using driver were 2.3 times higher among men than women (11.4% vs. 5.1%).

- Riding with a cannabis-using driver declined discernibly with age, with those **aged 18 to 29** reporting the highest proportion (22.4%). Two of the three sequential age group comparisons are statistically discernible: the adjusted odds of past year riding with a cannabis-using driver were **lower** among 30 to 39 year olds than that of 18 to 29 year olds (OR=0.31), and among those aged 50 years and older than that of 40 to 49 year olds (OR = 0.36).

- Relative to married respondents, the adjusted odds of riding as a passenger with a cannabis-using driver were 4 times higher among those previously married (10.1% vs. 4.7%).

- Riding with a cannabis-using driver was numerically highest among those who only **completed high school** (10.9%) and lower among those with a **university degree** (4.5%) and those who did **not complete high school** (3.8%).

Region and household income were not discernibly related to riding with a cannabis-using driver.

Trends
2006-2010………………...Table 6.3.4

2009-2010
In 2010, the percentage of Ontario adults riding as a passenger during the past 12 months with a driver who had used cannabis prior to driving (8.3%) was not discernibly different from 2009 (7.2%). In addition, rates were stable between these two years for most subgroups. There were however **two discernible increases** during this period, for residents **living in the East**, from 4.8% in 2009 to 10.1% in 2010, and for those **previously married**, from 2.8% in 2009 to 10.1% in 2010.

2006-2010
Between 2006 and 2010, the percentage reporting riding as a passenger during the past 12 months with a cannabis-using driver remained virtually unchanged (from 8.4% to 8.3%).

Year did not interact with sex, age, region or education, suggesting similar stable trends in these subgroups.

Year interacted discernibly only with **marital status**, signalling that trends in riding with a cannabis-using driver differed by categories of marital status. Rates among married and never married respondents are stable. In contrast rates among those **previously married** show an increase, from 4.7% in 2006 to 10.1% in 2010.

Table 6.3.1: Percentage Reporting Riding as a *Passenger in a Motor Vehicle with a Driver who had Two or More Drinks of Alcohol in the Previous Hour* during the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2010

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	2024	**10.6**	(8.9, 12.6)	—
Gender				NS
Men	887	**12.7**	(9.9, 16.3)	1.36
Women *(Comparison Group)*	1137	**8.5**	(6.7, 10.7)	—
Age				
(Comparison Group is previous age group)				**
18-29	211	**22.2**	(16.2, 29.6)	—
30-39	245	**†12.1**	(8.0, 17.7)	0.51
40-49	404	**†9.0**	(6.2, 13.0)	0.75
50+	1127	**5.1**	(3.8, 6.6)	0.66
Public Health Region				NS
Toronto *(vs. Provincial Average)*	332	**†11.4**	(7.8, 16.3)	1.08
Central South	163	**†8.1**	(4.0, 15.7)	0.84
Central West	258	**†9.1**	(5.1, 15.6)	0.85
South West	331	**†11.6**	(7.8, 16.9)	1.26
Central East	280	**†11.9**	(7.6, 18.2)	1.13
East	361	**10.6**	(7.1, 15.5)	0.97
North	299	**†9.7**	(6.2, 14.7)	0.95
Marital Status				NS
Married/Partner *(Comparison Group)*	1265	**8.5**	(6.8, 10.5)	—
Previously Married	417	**†5.9**	(3.8, 9.1)	1.02
Never Married	325	**19.2**	(13.9, 26.0)	1.31
Education				*
Less than high school *(Comparison Group)*	241	†	—	—
Completed high school	465	**†11.6**	(7.8, 16.9)	**8.52****
Some college or university	706	**12.3**	(9.3, 16.0)	**8.09****
University degree	599	**10.7**	(7.9, 14.3)	**8.12****
Household Income				NS
< $30,000 *(Comparison Group)*	242	**†10.9**	(5.6, 20.3)	—
$30,000-$49,999	269	**†8.3**	(5.1, 13.2)	0.73
$50,000-$79,999	370	**†12.1**	(8.2, 17.6)	1.05
$80,000+	670	**12.5**	(9.6, 16.1)	1.04
Not stated	473	**†7.5**	(4.7, 11.7)	0.60

Notes: [1]This item was asked only of a random subsample of respondents (Panel B -Total N=2024)
(1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistical discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=1962).

Q: *During the past 12 months, have you been a passenger in a motor vehicle with a driver who had two or more drinks in the previous hour?*

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table 6.3.2: Percentage Reporting Riding as a *Passenger in a Motor Vehicle with a Driver who Consumed Cannabis in the Previous Hour* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2010

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	2024	**8.3**	(6.7, 10.1)	—
Gender				**
Men	887	**11.4**	(8.9, 14.7)	2.28**
Women *(Comparison Group)*	1137	**†5.1**	(3.6, 7.2)	—
Age				
(Comparison Group is previous age group)				***
18-29	211	**22.4**	(16.6, 29.5)	—
30-39	245	**†8.0**	(4.9, 12.7)	**0.31****
40-49	404	**†6.3**	(3.9, 10.0)	0.67
50+	1127	**†2.5**	(1.6, 3.6)	**0.36****
Public Health Region				NS
Toronto *(vs. Provincial Average)*	332	**†11.2**	(7.3, 16.8)	**1.75***
Central South	163	**†6.3**	(2.7, 13.8)	0.76
Central West	258	**†8.8**	(5.2, 14.7)	1.18
South West	331	**†4.6**	(2.4, 8.7)	0.56
Central East	280	**†5.9**	(3.2, 10.5)	0.59
East	361	**†10.1**	(6.6, 15.1)	1.52
North	299	**†9.6**	(6.1, 14.7)	1.18
Marital Status				***
Married/Partner *(Comparison Group)*	1265	**4.7**	(3.5, 6.3)	—
Previously Married	417	**†10.1**	(6.4, 15.6)	**4.01****
Never Married	325	**17.8**	(12.8, 24.3)	1.05
Education				*
Less than high school *(Comparison Group)*	241	**†3.8**	(1.7, 8.0)	—
Completed high school	465	**†10.9**	(7.4, 16.0)	1.90
Some college or university	706	**11.0**	(8.1, 14.7)	1.58
University degree	599	**†4.5**	(2.9, 7.1)	0.71
Household Income				NS
< $30,000 *(Comparison Group)*	242	**†9.4**	(5.4, 15.7)	—
$30,000-$49,999	269	**†5.8**	(3.3, 10.1)	0.52
$50,000-$79,999	370	**†9.3**	(6.1, 13.9)	0.99
$80,000+	670	**9.0**	(6.4, 12.4)	1.08
Not stated	473	**†7.0**	(4.1, 11.7)	0.59

Notes: [1]This item was asked only of a random subsample of respondents (Panel B - Total N=2024).
(1) All analyses are sample design adjusted; *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of the outcome are higher in the group being compared to the comparison group; ORs less than 1.0 indicate that the odds of the outcome are lower in the group being compared to the comparison group
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample size N=1962).

Q: *During the past 12 months, have you been a passenger in a motor vehicle with a driver who used cannabis in the previous hour?*

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table 6.3.3: Percentage Reporting Riding as a *Passenger in a Motor Vehicle with a Driver who had Two or More Drinks of Alcohol in the Previous Hour* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2006-2010

(N=)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (2024)	Change	
Total Sample[1]	**12.6**	**9.5**	**11.2**	**10.3**	**10.6**	–	–
(95% CI) [a]	(10.7,14.8)	(8.0,11.2)	(9.6,13.0)	(8.6,12.2)	(8.9,12.6)		
Gender						NSI	
Men	**14.7**	**10.2**	**12.6**	**10.7**	**12.7**	–	–
	(11.6,18.3)	(7.9,12.9)	(10.1,15.7)	(8.2,13.7)	(9.9,16.3)		
Women	**10.6**	**8.8**	**9.8**	**9.9**	**8.5**	–	–
	(8.5,13.2)	(7.0,11.0)	(7.9,12.1)	(7.8,12.6)	(6.7,10.7)		
Age						NSI	
18-29	**28.7**	**22.0**	**24.1**	**26.2**	**22.2**	–	–
	(22.3,36.2)	(16.9,28.1)	(18.3,31.2)	(19.7,34.0)	(16.2, 29.6)		
30-39	**†11.2**	**†9.4**	**†9.3**	**13.5**	**†12.1**	–	–
	(7.8,15.8)	(6.1,14.3)	(6.0,14.1)	(9.6,18.7)	(8.0, 17.7)		
40-49	**†9.5**	**†7.5**	**10.3**	**†5.9**	**†9.0**	–	–
	(6.7,13.2)	(5.2,10.8)	(7.6,13.9)	(4.0,8.7)	(6.2, 13.0)		
50+	**6.3**	**5.3**	**6.6**	**4.1**	**5.1**	–	–
	(4.7,8.6)	(3.8,7.2)	(5.1,8.4)	(3.0,5.6)	(3.8,6.6)		
Public Health Region						NSI	
Toronto	**†10.3**	**†5.2**	**†10.6**	**†10.4**	**†11.4**	–	–
	(6.9,15.2)	(3.1,8.5)	(6.8,15.6)	(6.8,15.6)	(7.8,16.3)		
Central South	**12.8**	**17.0**	**12.9**	**10.6**	**†8.1**	–	–
	(7.4,21.4)	(11.1,25.1)	(6.0,18.3)	(6.0,18.3)	(4.0,15.7)		
Central West	**14.0**	**†3.1**	**11.8**	**†9.5**	**†9.1**	T	–
	(9.4,20.4)	(1.3,7.4)	(6.0,14.8)	(6.0,14.8)	(5.1,15.6)		
South West	**15.4**	**13.3**	**10.0**	**†9.8**	**†11.6**	–	–
	(10.9,21.3)	(9.6,18.1)	(6.6,14.5)	(6.6,14.5)	(7.8, 16.9)		
Central East	**14.8**	**11.8**	**†9.3**	**10.6**	**†11.9**	–	–
	(9.5,22.3)	(7.9,17.3)	(6.6,16.6)	(6.6,16.6)	(7.6,18.2)		
East	**11.6**	**11.6**	**14.4**	**12.4**	**10.6**	–	–
	(7.8,17.0)	(8.0,16.6)	(8.6,17.4)	(8.6,17.4)	(7.1, 15.5)		
North	**†7.8**	**†9.3**	**10.4**	**†6.9**	**†9.7**	–	–
	(5.1,11.8)	(6.2,13.6)	(4.0,11.9)	(4.0,11.9)	(6.2,14.7)		
Marital Status						NSI	
Married/Partner	**8.8**	**7.0**	**8.8**	**6.8**	**8.5**	–	–
Previously Married	**10.0**	**†4.9**	**†7.5**	**†6.9**	**†5.9**	–	–
Never Married	**25.5**	**21.0**	**21.0**	**23.9**	**19.2**	–	–
Education						NSI	
Less than high school	**†6.1**	**†6.6**	**11.9**	**†7.6**	**†**	–	2Y
Completed high school	**16.4**	**†10.5**	**14.3**	**†10.5**	**†11.6**	–	–
Some college or university	**14.8**	**11.3**	**11.3**	**12.1**	**12.3**	–	–
University degree	**10.1**	**7.8**	**8.3**	**9.1**	**10.7**	–	–

Notes: [1] This item was asked only of a random subsample of respondents in 2010 (N=2024).
(1) All analyses are sample design adjusted; [a] 95% confidence interval; † Estimate suppressed or unstable;
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2006-2010; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q: *During the past 12 months, have you been a passenger in a motor vehicle with a driver who had two or more drinks in the previous hour?*

Source: CAMH Monitor, Centre for Addiction and Mental Health

Table 6.3.4: Percentage Reporting Riding as a *Passenger in a Motor Vehicle with a Driver who Consumed Cannabis in the Previous Hour* During the Past 12 Months and Adjusted Group Differences, Ontarians Aged 18+, 2006-2010

(N=)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (2024)	Change	
Total Sample[1]	8.4	7.0	5.9	7.2	8.3	–	–
(95% CI)[a]	(6.7,10.4)	(5.6,8.6)	(4.6,7.4)	(5.7,9.0)	(6.7,10.1)		
Gender						NSI	
Men	11.1	7.4	8.7	9.3	11.4	–	–
	(8.3,14.7)	(5.4,10.2)	(6.5,11.5)	(7.1,12.2)	(8.9,14.7)		
Women	†5.7	†6.6	†3.2	†5.1	†5.1	–	–
	(4.1,7.9)	(5.0,8.7)	(2.2, 4.8)	(3.4,7.6)	(3.6,7.2)		
Age						NSI	
18-29	27.8	22.5	15.4	24.8	22.4	–	–
	(21.4,35.2)	(16.9,29.2)	(10.6,22.0)	(18.4,32.4)	(16.6,29.5)		
30-39	†6.8	†5.2	†7.4	†8.0	†8.0	–	–
	(4.2,11.0)	(3.2,8.5)	(4.6,11.7)	(5.0,12.4)	(4.9,12.7)		
40-49	†3.6	†4.1	†4.0	†3.3	†6.3	–	–
	(1.9,6.7)	(2.4,7.0)	(2.4,6.5)	(1.9,5.7)	(3.9,10.0)		
50+	†	†2.4	†1.6	†	†2.5	–	–
	—	(1.5,3.9)	(1.0,2.6)	—	(1.6,3.6)		
Public Health Region						NSI	
Toronto	†9.9	†8.5	†5.3	†5.9	†11.2	–	–
	(6.2,15.4)	(5.1,13.6)	(3.0,9.3)	(3.2,10.7)	(7.3,16.8)		
Central South	10.4	†9.1	†5.1	†4.1	†6.3	–	–
	(5.5,18.9)	(5.1,15.7)	(2.2,11.6)	(1.9,8.5)	(2.7,13.8)		
Central West	†7.6	†3.8	†7.6	†8.2	†8.8	–	–
	(4.2,13.6)	(1.9,7.4)	(4.3,13.2)	(4.8,13.6)	(5.2,14.7)		
South West	†7.5	†4.2	†5.1	9.2	†4.6	–	–
	(4.6,12.0)	(2.4,7.2)	(2.9,9.0)	(5.6,14.9)	(2.4, 8.7)		
Central East	†9.9	†6.6	†5.4	9.6	†5.9	–	–
	(5.5,17.2)	(3.8,11.1)	(3.0,9.5)	(5.7,15.8)	(3.2,10.5)		
East	†6.2	10.8	†6.7	†4.8	†10.1	–	2Y
	(3.4,11.2)	(7.2,16.1)	(3.9,11.3)	(2.7,8.3)	(6.6,15.1)		
North	†4.7	†5.0	†5.4	†6.4	†9.6	–	–
	(2.6, 8.4)	(2.8,8.8)	(2.9,9.8)	(3.4,11.8)	(6.1, 14.7)		
Marital Status						*	
Married/Partner	3.2	3.7	3.7	4.0	4.7	–	–
Previously Married	†4.7	†4.3	†3.8	†2.8	†10.1	T	2Y
Never Married	25.9	20.0	13.8	20.3	17.8	–	–
Education						NSI	
Less than high school	†5.7	†4.4	†8.8	†9.4	†3.8	–	–
Completed high school	11.5	8.6	8.4	7.6	†10.9	–	–
Some college or university	8.1	9.6	5.3	8.9	11.0	–	–
University degree	7.3	†4.0	†3.7	†4.3	†4.5	–	–

Notes: [1] This item was asked of a random subsample of respondents in 2010 (N=2024).
(1) All analyses are sample design adjusted; [a] 95% confidence interval; † Estimate suppressed or unstable;
(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2006-2010; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Q: *During the past 12 months, have you been a passenger in a motor vehicle with a driver who used cannabis in the previous hour?*

Source: The CAMH Monitor, Centre for Addiction and Mental Health

Figure 6.3.1
Percentage Reporting Riding as a Passenger in a Motor Vehicle with a Driver who Had Two or More Drinks in the Previous Hour in the Past Year by Sex, Age and Region, Ontarians Aged 18+, 2010

Note: (1) Vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by age(p<.05)
Source: 2010 CAMH Monitor

Figure 6.3.2
Percentage Reporting Riding as a Passenger in a Motor Vehicle with a Driver who Used Cannabis in the Previous Hour in the Past Year by Sex, Age and Region, Ontarians Aged 18+, 2010

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex and age (p<.05)
Source: 2010 CAMH Monitor
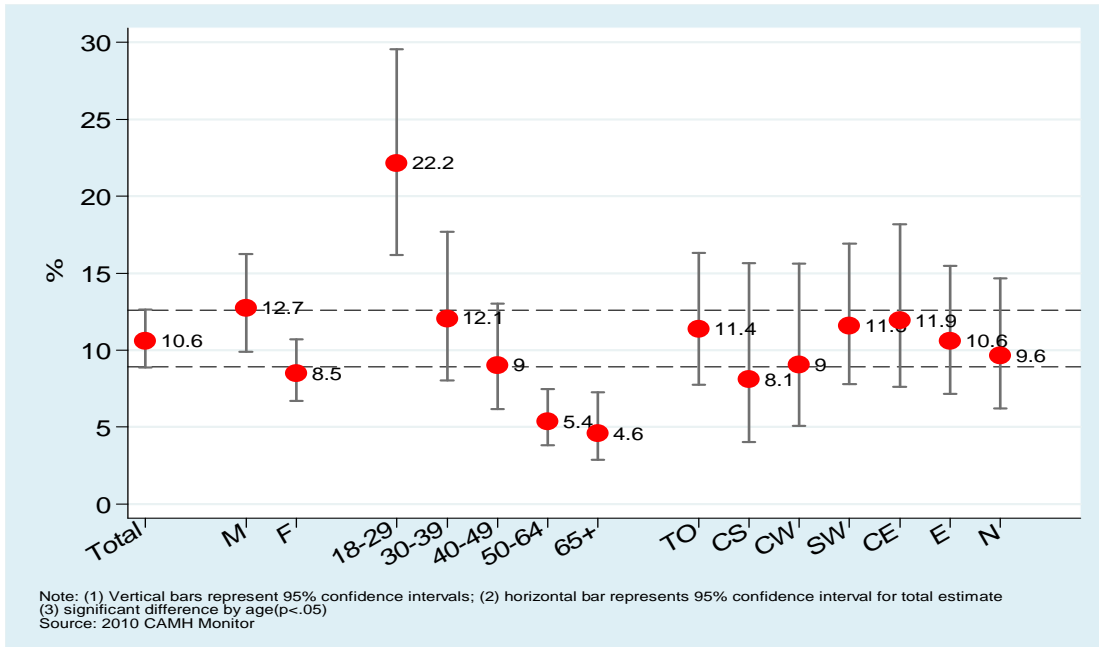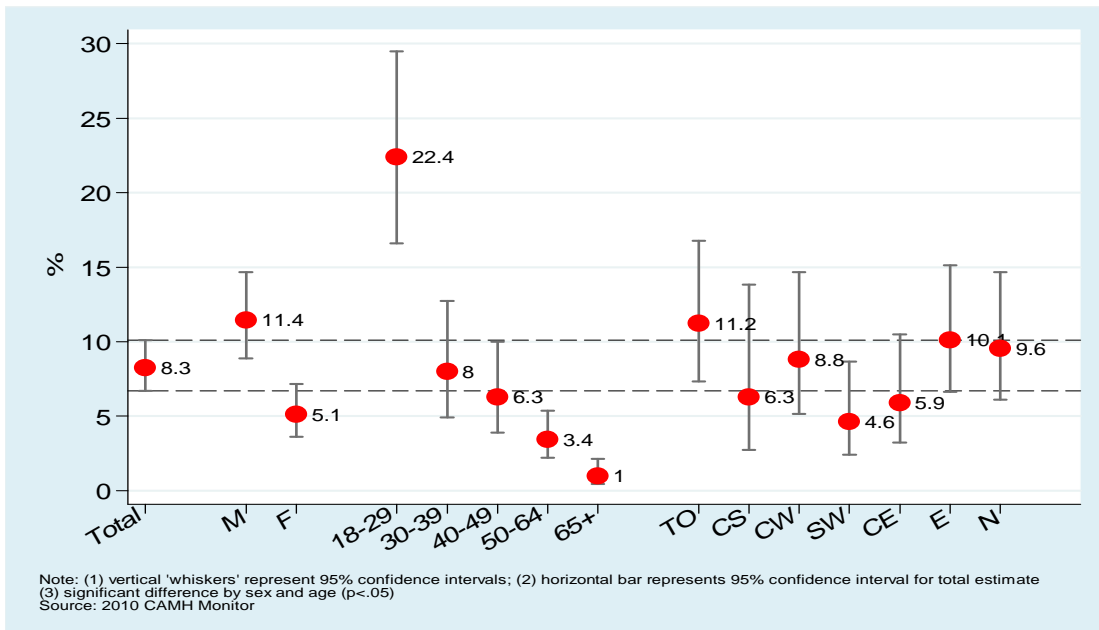
Figure 6.3.3
Past Year Passenger with a Driver Who Had Been Drinking, Ontarians Aged 18+, 2006-2010

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor

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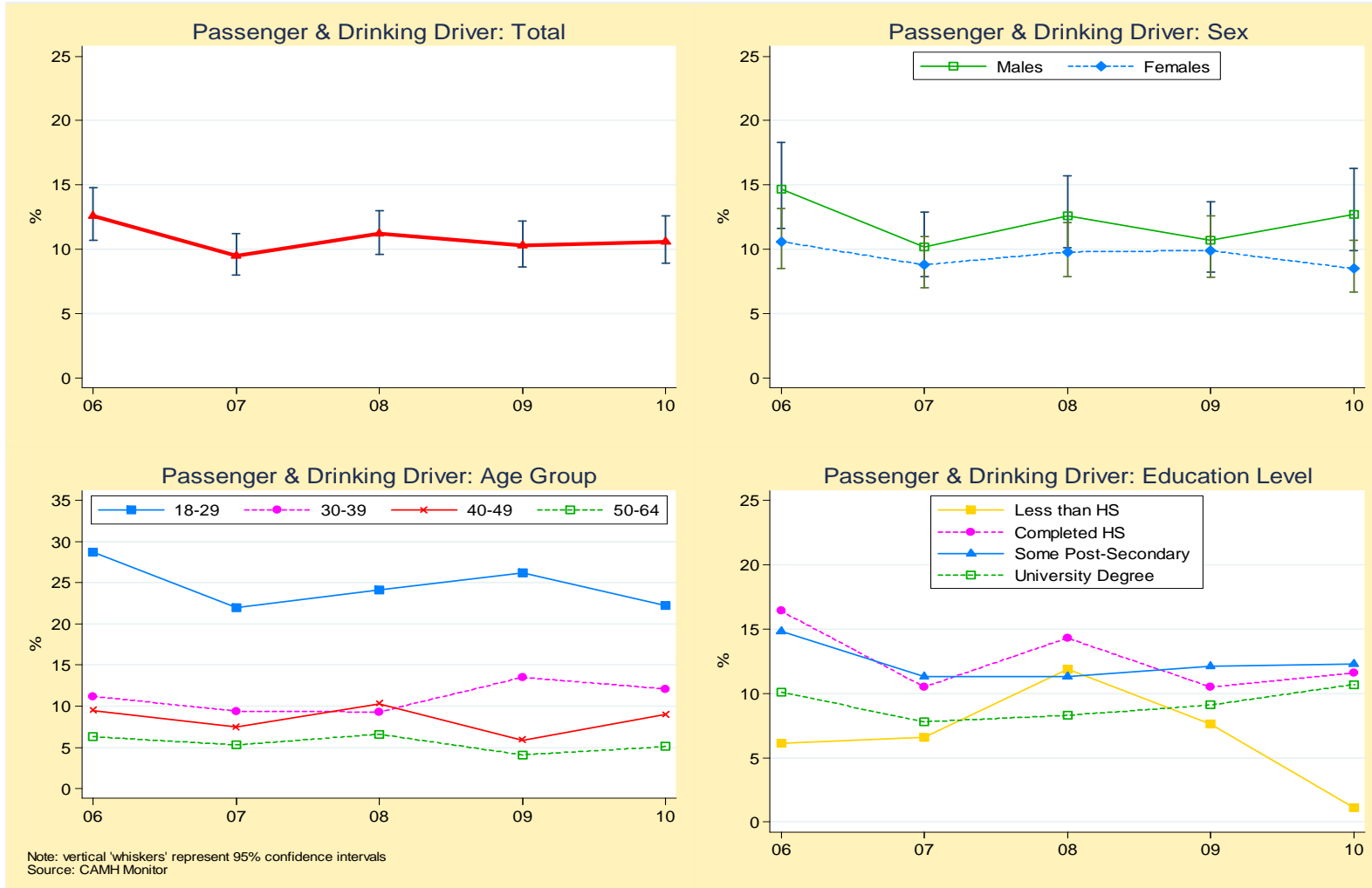
Figure 6.3.4
Past Year Passenger with a Driver Who Had Been Using Cannabis, Ontarians Aged 18+, 2006-2010

Passenger & Cannabis Using Driver: Total

Passenger & Cannabis Using Driver: Sex

Passenger & Cannabis Using Driver: Age Group

Passenger & Cannabis Using Driver: Education Level

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
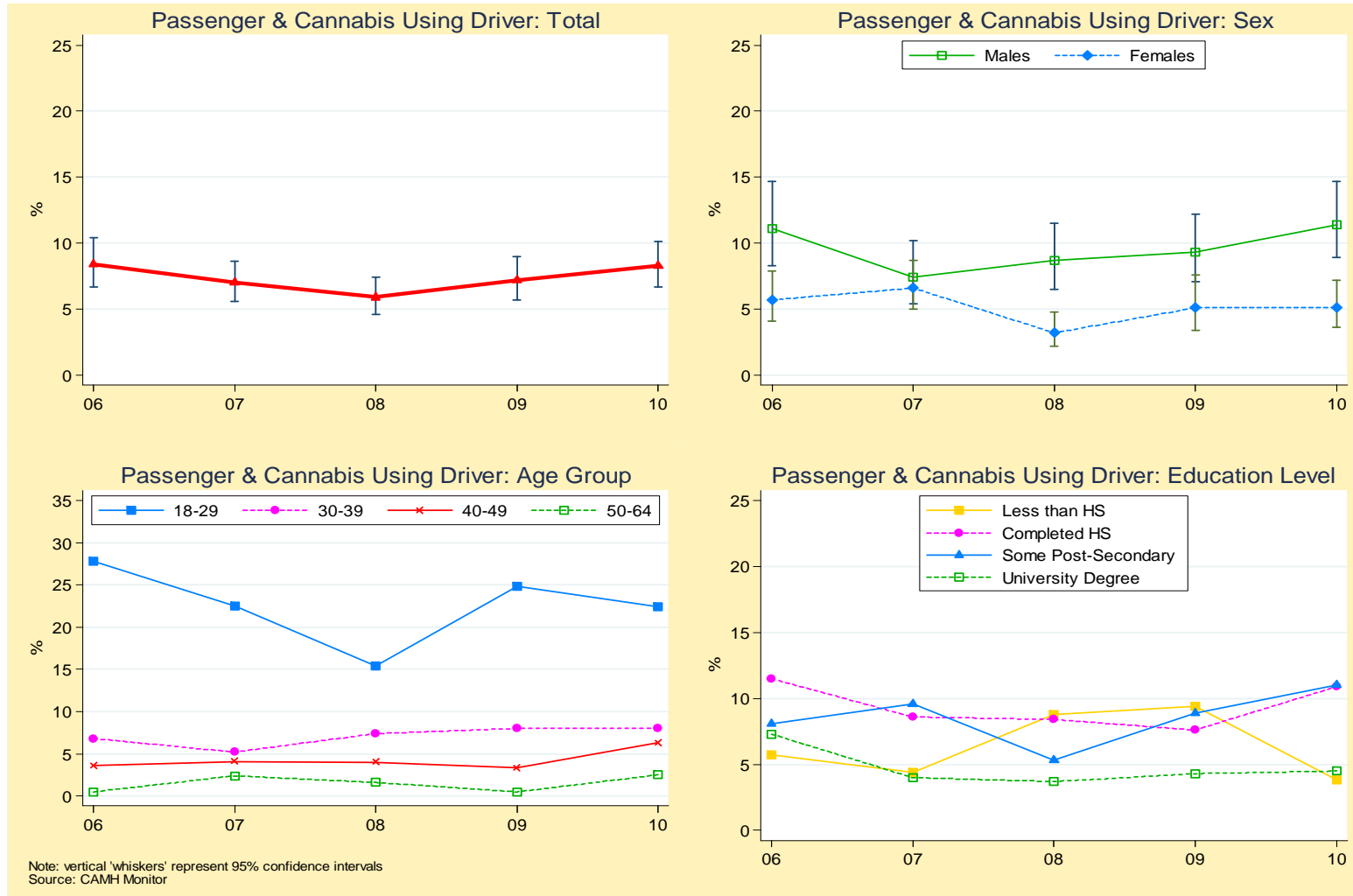
7. MENTAL HEALTH

7.1 Elevated Psychological Distress

To measure global mental wellness, we used the 12-item *General Health Questionnaire (GHQ12)* (Goldberg & Hillier, 1979), a screening instrument that evaluates two domains: depression/anxiety and social functioning. Like all screeners, the GHQ12 does not provide a clinical determination of psychiatric disorder, it does, however, provide an indication of an individual's risk of current or future impairment.

The *CAMH Monitor* introduced the GHQ12 into the 1999 survey. The item wording in 1999 took the form: "*Over the past month, have you....*" versus the standard GHQ wording, "*Over the past few weeks, have you…*" In 2000, an experiment involving an investigation of the impact of question wording on the GHQ12 was introduced (Adlaf et al., 2001). A random-half sample of respondents received the items beginning with "*Over the past few weeks…*" whereas the remaining half received the items prefixed with "*Over the past month…*" An analysis found that the past month wording resulted in higher estimates than those beginning with the past few weeks.

Therefore, starting in 2001, the standard GHQ12 wording returned: *"Over the past few weeks, have you...."* Response categories are on a 4-point scale ranging from "*better [more so] than usual*" to "*much less than usual*"; or "*not at all*" to "*much more than usual*."

The item wording and the percentage of respondents reporting symptoms of psychological distress are presented in **Table 7.1.1.** In addition to the 12 symptoms, we present the percentage of Ontario adults classed as experiencing **elevated psychological distress**, defined here as reporting **at least 3** of the 12 symptoms (GHQ12/3+).[54]

In 2011 these items were asked of a random subsample of 1,999 Panel B respondents.

2011 ……………Tables 7.1.1–7.1.2; Fig 7.1.1–7.1.3

The most common symptom experienced by respondents was the feeling of being constantly under stress (16.5%), followed by losing sleep because of worrying (14.9%). The least reported symptom was thinking of oneself as a worthless person (2.6%).

An estimated **14.7%** (95% CI: 12.8% to 16.8%) of Ontario adults experienced **elevated psychological distress** (3 or more symptoms) during the past few weeks. The corresponding population estimate is 1,361,009 Ontario adults (95% CI: 1,171,328 to 1,550,691).

Age and **marital status** were discernibly related to elevated distress when holding values of our set of risk factors fixed.

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[54] This 4-point scale was binary coded as (1,1,0,0).

- Elevated distress varied from 20.4% of 18 to 29 year olds to 9.7% of those 65 and older. None of the four sequential age group comparisons was statistically discernible.[55]

- Being married, or living as married, reduces the odds of elevated distress, discernibly so (by a factor or 2.6) than those never married (12.1% vs. 19.7%).

There were no other discernible differences for sex, region, education and income when holding values of our risk factors fixed.

Trends
2000–2011…..………......Table 7.1.3; Figure 7.1.4

2010–2011
Between 2010 and 2011, elevated distress remained virtually unchanged in the population (14.7% vs. 14.6%). In addition, rates of distress were stable for all gender, age, region, marital status, and education subgroups.

2000–2011
Between 2000 and 2011, elevated distress did not vary discernibly and there is no evidence of dominant differential trends between subgroups Indeed, **year did not interact** discernibly with any of the demographic factors analysed, suggesting that subgroup trends were not considerably dissimilar.

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[55] The absence of discernible odds ratios is likely a function of the contrasts employed (i.e., previous age group). For example, ORs referenced to the 18 to 29 year olds would prove discernible, as noted by the non-overlapping CIs.

Table 7.1.1: Percentage Reporting *Psychological Distress Symptoms (GHQ12)* During the Past Few Weeks, Ontarians Aged 18+, 2011

Over the past few weeks, …	Item Score and Response	Total Sample[1] (N=1,999)
1. …have you been able to concentrate on whatever you're doing?	0. Better than usual	5.8
	1. Same as usual	83.4
	2. Less than usual	9.8
	3. Much less than usual	†1.0
	Mean (SE)	1.06 (.01)
2. … have you felt that you are playing a useful part in things?	0. More so than usual	13.3
	1. Same as usual	79.4
	2. Less useful than usual	6.3
	3. Much less useful	†1.1
	Mean (SE)	0.95 (.01)
3. … have you felt capable of making decisions about things?	0. More so than usual	10.3
	1. Same as usual	85.6
	2. Less so than usual	†2.6
	3. Much less capable	†1.5
	Mean (SE)	0.95 (.01)
4. … have you been able to enjoy your day-to-day activities?	0. More so than usual	8.8
	1. Same as usual	79.2
	2. Less so than usual	10.2
	3. Much less than usual	†1.9
	Mean (SE)	1.05 (.02)
5. … have you been able to face up to your problems?	0. More so than usual	12.3
	1. Same as usual	83.2
	2. Less so than usual	3.6
	3. Much less than usual	†1.0
	Mean (SE)	0.93 (.01)
6. … have you been feeling reasonably happy?	0. More so than usual	13.7
	1. Same as usual	75.0
	2. Less so than usual	10.1
	3. Much less than usual	†1.3
	Mean (SE)	1.00 (.02)
7. … have you lost much sleep because of worry?	0. Not at all	45.4
	1. No more than usual	39.8
	2. Rather more than usual	11.0
	3. Much more than usual	3.9
	Mean (SE)	0.73 (.02)

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8. … have you felt constantly under stress?	0. Not at all	43.8
	1. No more than usual	39.7
	2. Rather more than usual	12.4
	3. Much more than usual	4.1
	Mean (SE)	0.77 (02)
9. … have you felt you could not overcome your difficulties?	0. Not at all	67.6
	1. No more than usual	26.0
	2. Rather more than usual	4.5
	3. Much more than usual	†1.9
	Mean (SE)	0.41 (.02)
10. … have you been feeling unhappy and depressed?	0. Not at all	66.8
	1. No more than usual	24.1
	2. Rather more than usual	7.0
	3. Much more than usual	†2.1
	Mean (SE)	0.45 (.02)
11. … have you been losing confidence in yourself?	0. Not at all	76.9
	1. No more than usual	16.7
	2. Rather more than usual	4.8
	3. Much more than usual	†1.7
	Mean (SE)	0.31 (.02)
12. … have you been thinking of yourself as a worthless person?	0. Not at all	88.0
	1. No more than usual	9.4
	2. Rather more than usual	†1.7
	3. Much more than usual	†1.0
	Mean (SE)	0.16 (.01)

Note: [1] GHQ12 items were asked only of a random subsample (Panel B, N= 1999); † Estimate unstable.
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 7.1.2: Percentage Reporting *Elevated Psychological Distress (GHQ12/ 3+)* During the Past Few Weeks and Logistic Regression Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	1999	**14.7**	(12.8, 16.8)	—
Gender				NS
Men	793	**13.3**	(10.6, 16.7)	0.80
Women *(Comparison Group)*	1206	**15.9**	(13.5, 18.6)	—
Age				*
(Comparison Group is previous age group)				
18-29	180	**20.4**	(14.4, 28.1)	—
30-39	259	**15.0**	(11.0, 20.2)	0.77
40-49	366	**16.8**	(12.9, 21.6)	1.11
50-64	605	**12.5**	(9.8, 15.9)	0.71
65+	534	**9.7**	(7.2, 13.1)	0.62
Public Health Region				NS
Toronto *(vs. Provincial Average)*	325	**15.8**	(11.7, 20.9)	1.09
Central South	178	**†16.5**	(11.2, 23.7)	0.72
Central West	261	**16.7**	(11.6, 23.5)	1.14
South West	323	**12.9**	(9.3, 17.7)	0.91
Central East	264	**†11.1**	(7.5, 16.0)	0.78
East	358	**16.5**	(12.1, 22.1)	1.20
North	290	**†12.1**	(8.1, 17.8)	0.82
Marital Status				***
Married/Partner *(Comparison Group)*	1252	**12.1**	(10.1, 14.3)	—
Previously Married	433	**21.8**	(16.6, 28.0)	**2.58****
Never Married	292	**19.7**	(14.4, 26.3)	1.31
Education				NS
Less than high school *(Comparison Group)*	253	**14.2**	(9.0, 21.8)	—
Completed high school	438	**11.7**	(8.5, 16.0)	0.74
Some college or university	681	**15.5**	(12.3, 19.3)	0.90
University degree	609	**15.7**	(12.5, 19.5)	0.95
Household Income				NS
< $30,000 *(Comparison Group)*	235	**13.1**	(9.1, 18.6)	—
$30,000-$49,999	268	**13.0**	(8.7, 19.2)	1.21
$50,000-$79,999	388	**15.2**	(11.4, 19.9)	1.56
$80,000+	629	**15.0**	(12.0, 18.6)	1.52
Not stated	479	**15.1**	(10.9, 20.5)	1.61

Notes: [1]Estimates based on a random subsample.
(1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible; † Estimate suppressed or unstable.
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of distress are higher relative to the comparison group; ORs less than 1.0 indicate that the odds of distress are lower relative to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N= 1925).

Q: *Elevated Psychological Distress is defined as reporting at least 3 of the 12 symptoms on the GHQ12 scale (see Table 7.1.1).*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Table 7.1.3: Percentage Reporting *Elevated Psychological Distress (GHQ12/ 3+)* During the Past Few Weeks by Demographic Characteristics, Ontarians Aged 18+, 2000–2011

(N=)	2000 (1202)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (2024)	2011 (1999)	Change
Total Sample[1]	**12.7**	**12.7**	**12.8**	**13.2**	**12.9**	**12.9**	**13.2**	**12.7**	**13.1**	**14.7**	**14.6**	**14.7**	– –
(95% CI)[a]	(10.7, 15.0)	(11.3, 14.3)	(11.4, 14.4)	(11.7, 14.8)	(11.4,14.5)	(11.4, 14.6)	(11.5, 15.1)	(11.1, 14.6)	(11.3, 15.2)	(12.9, 16.8)	(12.7, 16.7)	(12.8,16.8)	
Gender													NSI
Men	**11.4**	**10.3**	**10.9**	**11.4**	**11.1**	**10.3**	**10.6**	**10.0**	**10.8**	**12.0**	**12.4**	**13.3**	– –
	(8.7, 14.8)	(8.5, 12.5)	(9.0, 13.2)	(9.4, 13.8)	(9.0, 13.5)	(8.4, 12.7)	(8.3, 13.3)	(7.9, 12.6)	(8.4,13.7)	(9.7,14.7)	(9.8,15.6)	(10.6,16.7)	
Women	**13.9**	**15.0**	**14.6**	**14.8**	**14.6**	**15.3**	**15.7**	**15.3**	**15.3**	**17.3**	**16.8**	**15.9**	– –
	(11.2, 17.1)	(12.9, 17.3)	(12.5, 17.0)	(12.8, 17.2)	(12.6, 16.9)	(13.2, 17.7)	(13.4, 18.4)	(13.2, 18.0)	(12.8, 18.3)	(14.6, 20.4)	(14.2, 19.7)	(13.5,18.6)	
Age													NSI
18-29	**17.7**	**13.4**	**16.7**	**16.9**	**17.1**	**13.0**	**†11.1**	**†16.5**	**†14.1**	**†17.6**	**†17.3**	**20.4**	– –
	(12.8, 23.9)	(10.2, 17.6)	(12.9, 21.2)	(13.1, 21.5)	(13.1, 21.9)	(9.4, 17.6)	(7.1, 16.8)	(11.9, 22.5)	(9.0,21.4)	(12.1,25.0)	(12.0,24.2)	(14.4,28.1)	
30-39	**13.0**	**14.6**	**13.2**	**13.1**	**13.9**	**15.7**	**15.7**	**†11.6**	**†12.8**	**†14.6**	**†14.3**	**15.0**	– –
	(9.2, 18.0)	(11.6, 18.4)	(10.2, 17.0)	(10.0, 16.9)	(10.6, 18.0)	(12.0, 20.1)	(11.9, 20.5)	(8.3, 16.0)	(9.1,17.7)	(10.7, 19.7)	(10.0, 20.0)	(11.0, 20.2)	
40-49	**16.4**	**13.3**	**13.2**	**15.1**	**13.0**	**13.5**	**17.2**	**14.3**	**14.5**	**16.0**	**15.3**	**16.8**	– –
	(11.9, 22.3)	(10.5, 16.7)	(10.3, 16.8)	(12.2, 18.7)	(10.0, 16.6)	(10.7, 16.9)	(13.5, 21.8)	(11.0, 18.5)	(10.9,19.2)	(12.4, 20.4)	(11.5, 20.2)	(12.9,21.6)	
50-64	**8.8**	**12.0**	**13.1**	**10.8**	**11.2**	**12.4**	**11.5**	**13.3**	**12.7**	**14.6**	**16.5**	**12.5**	– –
	(5.5, 13.9)	(9.0, 15.8)	(10.2, 16.7)	(8.1, 14.3)	(8.8, 14.2)	(9.7, 15.8)	(8.7, 15.0)	(10.4, 16.9)	(9.9,16.2)	(11.6, 18.2)	(13.3, 20.3)	(9.8,15.9)	
65+	**6.7**	**9.7**	**6.3**	**7.9**	**7.8**	**10.1**	**10.8**	**7.2**	**12.1**	**11.1**	**9.0**	**9.7**	– –
	(3.9, 11.4)	(7.0, 13.3)	(4.2, 9.4)	(5.4, 11.4)	(5.6, 10.9)	(7.1, 14.2)	(7.9, 14.5)	(4.8, 10.6)	(8.9,16.3)	(8.3, 14.8)	(6.5, 12.2)	(7.2,13.1)	
Region													NSI
Toronto	**12.2**	**15.5**	**14.8**	**15.6**	**14.4**	**14.0**	**12.6**	**†11.0**	**16.5**	**15.5**	**20.4**	**15.8**	– –
	(8.0, 18.3)	(11.9, 19.9)	(11.4, 19.0)	(12.1, 20.0)	(11.0, 18.6)	(10.5, 18.3)	(9.2, 17.0)	(7.7, 15.5)	(12.3,21.9)	(11.5,20.6)	(15.5,26.3)	(11.7,20.9)	
Central South	**11.9**	**12.0**	**17.0**	**10.5**	**12.3**	**9.5**	**†13.8**	**†14.1**	**†7.5**	**†10.5**	**†15.5**	**†16.5**	– –
	(7.1, 19.3)	(8.0, 17.6)	(12.1, 23.4)	(6.9, 15.6)	(8.2, 18.1)	(6.0, 14.5)	(8.5, 21.6)	(9.4, 20.6)	(4.1,13.3)	(6.8,16.0)	(9.9,23.5)	(11.2,23.7)	
Central West	**10.5**	**11.2**	**14.8**	**13.9**	**16.7**	**13.2**	**14.3**	**15.2**	**†11.8**	**†11.9**	**†13.1**	**16.7**	– –
	(6.3, 16.9)	(8.1, 15.3)	(11.0, 19.6)	(10.3, 18.4)	(12.4, 22.0)	(9.4, 18.2)	(10.1, 19.9)	(10.7, 21.0)	(8.2,16.8)	(8.4, 16.7)	(9.2, 18.4)	(11.6,23.5)	
South West	**7.2**	**12.1**	**9.5**	**11.7**	**10.2**	**10.9**	**†11.5**	**†10.9**	**†10.2**	**14.7**	**†11.8**	**12.9**	– –
	(4.4, 11.4)	(9.1, 15.9)	(6.9, 12.9)	(8.7, 15.6)	(7.5, 13.8)	(8.1, 14.4)	(8.5, 15.5)	(7.2, 14.1)	(6.9,14.6)	(10.9,19.7)	(8.3, 16.4)	(9.3,17.7)	
Central East	**17.6**	**10.6**	**9.8**	**13.7**	**11.3**	**14.2**	**†13.5**	**†13.0**	**16.7**	**20.9**	**†14.1**	**†11.1**	– –
	(11.8, 25.4)	(7.6, 14.7)	(6.5, 14.5)	(9.7, 19.0)	(7.8, 16.0)	(10.6, 18.9)	(9.2, 19.5)	(9.0, 18.4)	(11.7,23.3)	(15.3,27.8)	(9.6, 20.3)	(7.5,16.0)	
East	**16.6**	**14.8**	**11.0**	**11.8**	**11.5**	**15.1**	**13.6**	**13.6**	**11.3**	**12.3**	**11.8**	**16.5**	– –
	(11.8, 23.0)	(11.6, 18.7)	(8.3, 14.5)	(8.9, 15.6)	(8.6, 15.2)	(11.6, 19.4)	(10.1, 18.1)	(10.2, 18.0)	(8.1,15.6)	(9.0,16.8)	(8.6, 15.8)	(12.1,22.1)	
North	**12.9**	**9.9**	**12.3**	**11.5**	**11.9**	**11.3**	**13.4**	**12.8**	**†11.6**	**14.0**	**†10.9**	**†12.1**	– –
	(8.7, 18.7)	(7.5, 12.9)	(9.2, 16.2)	(8.4, 15.4)	(9.4, 14.9)	(8.3, 15.2)	(9.9, 17.8)	(9.3, 17.3)	(8.1,16.4)	(10.2, 18.9)	(7.4,15.7)	(8.1,17.8)	

Cont'd

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(1202)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(2024)	(1999)		
Marital Status													**NSI**	
Married/Partner	10.0	12.0	10.5	10.2	10.0	10.9	12.4	10.7	11.2	12.8	13.2	12.1	–	–
Previously Married	19.2	15.8	16.2	19.7	18.4	19.4	17.4	17.5	20.6	23.3	18.2	21.8	–	–
Never Married	15.2	13.0	17.0	18.4	18.1	15.4	13.5	15.5	15.2	17.2	17.4	19.7	–	–
Education													**NSI**	
Less than high school	12.7	13.5	15.2	13.8	11.0	15.6	17.6	13.5	15.9	19.6	19.4	14.2	–	–
Completed high school	12.0	11.6	13.4	13.0	14.9	13.6	14.3	16.2	12.5	14.0	15.4	11.7	–	–
Some college or university	15.1	13.7	13.8	13.6	12.0	12.9	11.8	12.5	13.9	14.8	15.2	15.5	–	–
University degree	10.5	12.4	10.0	12.8	12.9	11.3	12.0	9.8	12.1	13.7	12.1	15.7	–	–

Notes: [11]Estimates based on a random subsample in 2000, 2010 and 2011.

(1) [a] 95% confidence interval; all analyses are sample design adjusted.

(2) Trend Analysis: **–** change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2000-2011; **2Y** discernible change (p<.05) between last two estimates.

(3) **NSI**, non-discernible YEAR × FACTOR interaction.

Defn: *Elevated Psychological Distress is defined as reporting at least 3 of the 12 symptoms on the GHQ12 scale.*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 7.1.1
Percentage Reporting Psychological Distress Symptoms (GHQ12) Over the Past Few Weeks, Ontarians Aged 18+, 2011

Source: 2011 CAMH Monitor

Figure 7.1.2
Percentage Reporting Psychological Distress Symptoms (GHQ12) Over the Past Few Weeks by Gender, Ontarians Aged 18+, 2011

Source: 2011 CAMH Monitor

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Figure 7.1.3

Percentage Reporting Elevated Psychological Distress (GHQ12/3+) Over the Past Few Weeks by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
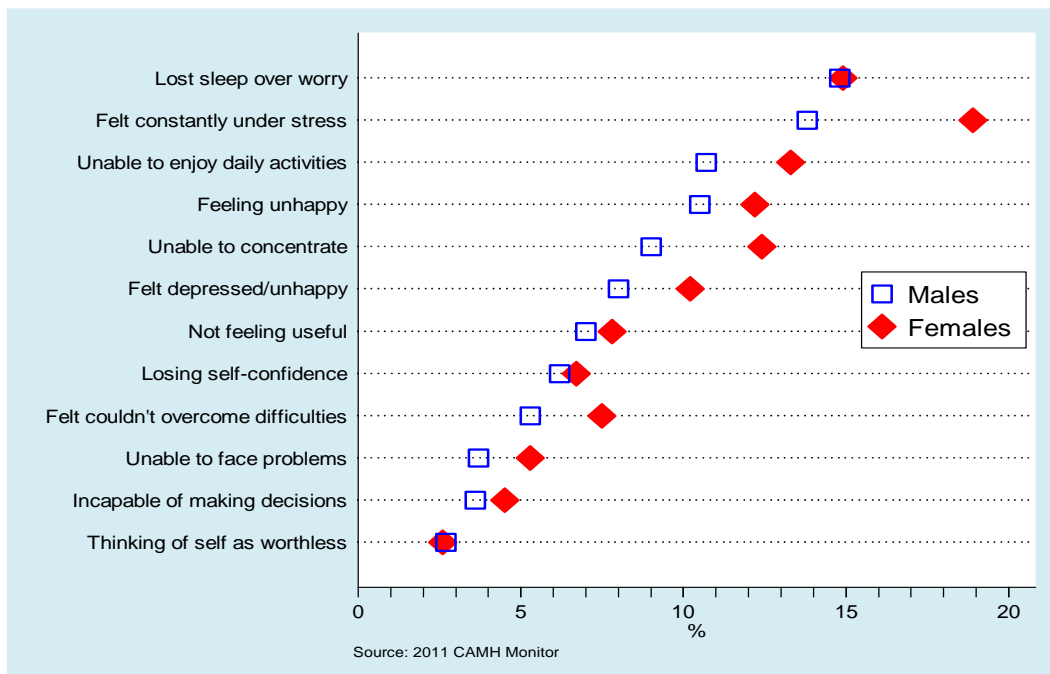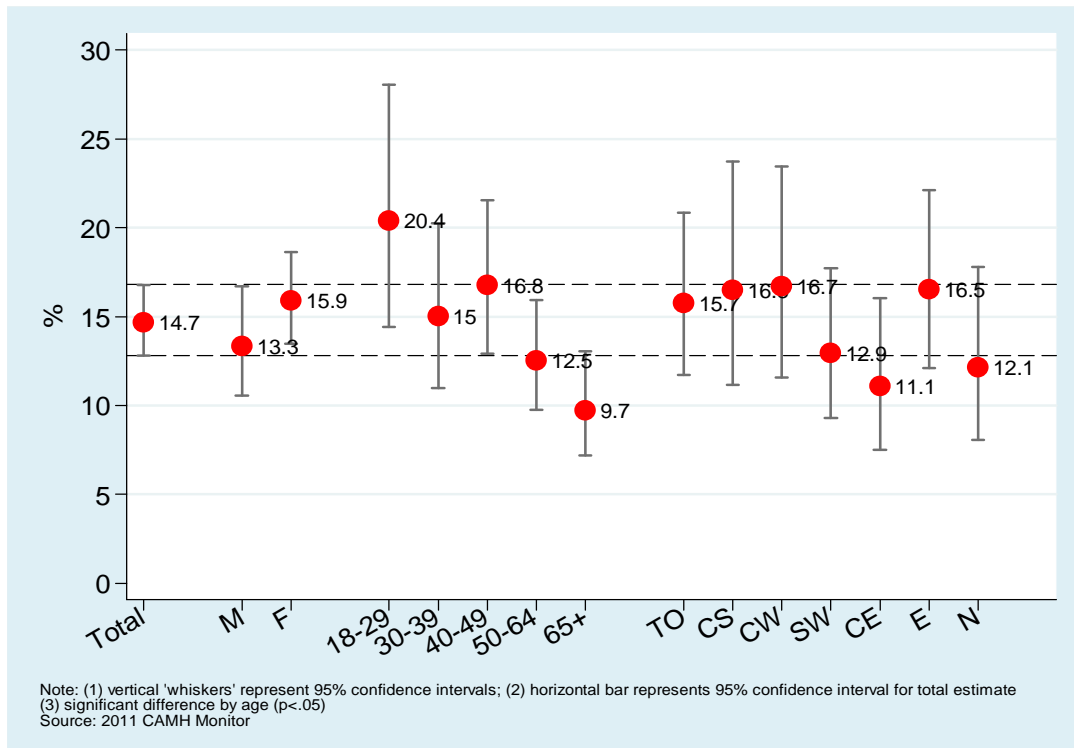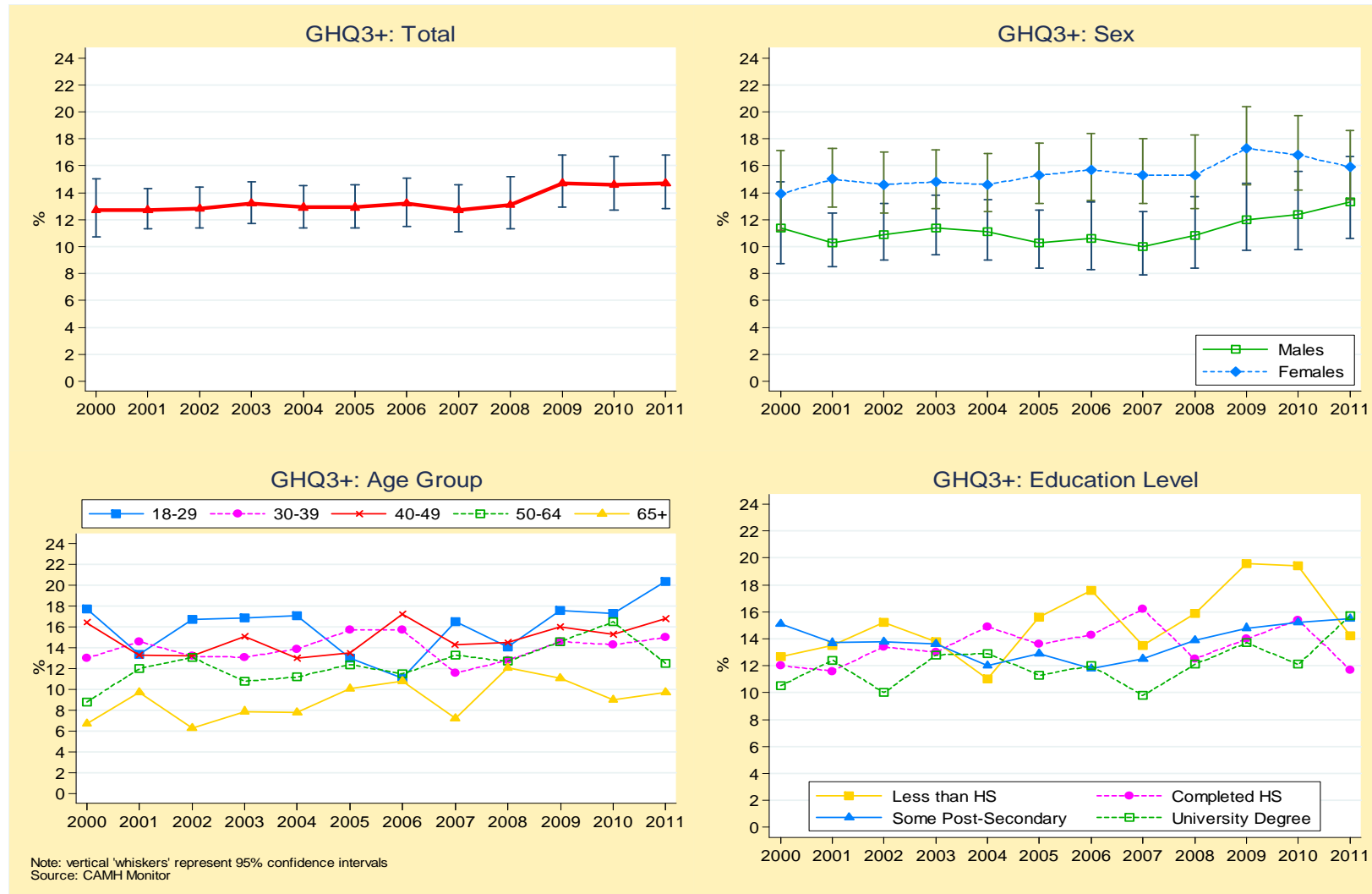(3) significant difference by age (p<.05)
Source: 2011 CAMH Monitor

Figure 7.1.4
Percentage Reporting Elevated Psychological Distress (GHQ12/3+) Over the Past Few Weeks, Ontarians Aged 18+, 2000–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor

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7.2   Prescription Medication for Anxiety and Depression

Anxiety and depression are some of the most prevalent mental health conditions experienced by adults. For monitoring purposes, we assess the percentage reporting having used prescription medication to treat anxiety (anxiolitycs) and depression (antidepressants) during the 12 months before the survey.

The following questions were asked:

1) *In the past 12 months, have you taken any prescription medication to treat anxiety or panic attacks?*
2) *In the past 12 months, have you taken any prescription medication to treat depression?*

Estimates for past year use of antianxiety and antidepression medications are available beginning 1997. In 2011 these items were asked only of a random subsample of respondents (Panel B, N = 1999).

7.2.1   Antianxiety Medication

2011 ……………………Table 7.2.1

Overall, an estimated **7.1%** (95% CI: 5.8% to 8.5%) of Ontario adults used a prescribed medication to treat anxiety – anxiolitycs – during the 12 months before the survey. The corresponding population estimate is 654,362 adult consumers (95% CI: 529,895 to 778,829).

Age, marital status, education and **income** were discernibly related to past year use of antianxiety medication. Holding values of risk factors constant, adjusted group differences showed the following:

- Although past year use of anxiolitycs shows discernible age variation, increasing from 5.8% to 8.7%, there is no dominant age-related pattern. The adjusted odds comparisons show that use is discernibly lower (by 51%) among those aged 65 and older (OR=0.49) than 50 to 64 year olds.

- The adjusted odds of use among those previously married are 2.3 times higher than married individuals (13.9% vs. 5.8%).

- The association between anxiolitycs and education is not straight forward. Although the overall association is statistically discernible, all CIs overlap, and none of the OR contrasts are discernible. Moreover, three of four percentage estimates are flagged for potential inaccuracy.

- Household income shows a marginally discernible association to past year use of anxiolitycs. Although estimates vary from 4.4% to 11.8%, the smaller sample size dampens the ability to find statistically discernible differences. All estimates have evidence of moderate unreliability and all CIs overlap. The only discernible contrast shows that use is discernibly lower (by 59%) among those with incomes of $50,000 to $79,000 (OR=0.41) than those with the lowest incomes.

There were no discernible differences according to sex and region when holding fixed values of our set of risk factors.

Trends
1997–2011……….…… Table 7.2.3

2010–2011
Use of antianxiety medication in 2011 (7.1%) was not discernibly different from 2010 (8.9%) and rates of past year use of anxiolitycs were stable for gender, most age groups and all regions. There were several discernible subgroup **declines** during this period: among respondents **aged 50 to 64** (from 12.8% in 2010 to 7.7% in 2011), among **married** respondents (from 8.3% in 2010 to 5.8% in 2011), among respondents who completed **high school** and among those holding a **university** degree (from 10.6% in 2010 to 5.6% in 2011, and from 7.7% in 2010 to 5.8% in 2011, respectively).

1997–2011
Since 1997, use of anxiolitycs among the total sample has displayed a discernible **linear uptrend**, increasing from 4.5% in 1999 to 7.1% in 2011.

Year interacted discernibly with two factors, indicating that trends in the use of anxiolitycs differed among categories of **age,** and **education level**. Year did not interact with sex, region, or marital status, suggesting similar trends in most subgroups.

Differential age-group trends suggest that although the use of anxiolitycs increased for all age groups, the changes show a different pattern. Between 1997 and 2011, the use of anxiolitycs shows a linear increase among 18 to 29 year olds from 1.7% to 5.8%, whereas among 50 to 64 year olds, use also increased (from 5.2% in 1997 to 12.8% in 2010), but then declined discernibly to 7.7% in 2011.

Differential educational group trends suggest that trends move differently among the education subgroups. The use of anxiolitycs between 1997 and

2011 shows a linear uptrend among those not having completed high school from 5.8% to 10.5%, whereas among respondents completing high school and among those with a university degree the use of anxiolitycs increased until 2010, but then declined discernibly in 2011.

7.2.2. Antidepressant Medication

2011 ……………….……Table 7.2.2

An estimated **7.1%** (95% CI: 5.9% to 8.5%) of Ontario adults used a prescribed medication for depression – antidepressants – during the 12 months before the survey. The corresponding population estimate is 654,602 consuming adults (95% CI: 535,102 to 774,101).

While holding values of risk factors constant, adjusted group differences showed that use of antidepressants was discernibly related to **gender, age, marital status,** and **education.**

- The adjusted odds of use were discernibly lower (by 44%) among men than women (OR=0.56; 5.0% vs. 9.0%, respectively).

- Past year use of antidepressants shows discernible age variation, varying from 4.7% of those aged 65 and older to 8.2%% of 40 to 49 year olds. The adjusted odds contrasts show that the odds of use are a third as frequent of those aged 65 and older than those aged 50 to 64 (OR=0.36).

- Use of antidepressants shows discernible regional variation, varying from 4.4% of residents of the Central East and 12.8% of residents of the Central South. Relative to the provincial estimate (of 7.1%), residents of the **East**

reported discernibly higher rates and adjusted odds of use (11.0%; OR=1.61).

- The adjusted odds of use among those previously married were 2.2 times higher than married individuals (12.7% vs. 6.0%).

- Past year antidepressant use declines discernibly with income, slowly until reaching incomes of $80,000+. The adjusted odds contrasts show that use is discernibly lower (by 55%) among those with incomes of $50,000 to $79,000 (OR=0.45) than those with incomes of $30,000 to $49,999.

There were no discernible differences for education when holding fixed our set of risk factors.

Trends
1997–2011 ………… Tables 7.2.4

2010–2011
Prevalence of past year use of antidepressants in 2011 (7.1%) was virtually unchanged from 2010 (7.2%). In addition, rates of use were stable between these two years for most subgroups. The only discernible change was found for respondents aged 50 to 64, whose past year use of antidepressants **declined** from 11.7% in 2010 to 8.1% in 2011.

1997–2011
Since 1997, use of antidepressants among the total population has discernibly **trended upward**, from 3.6% in 1999 to 7.2% in 2010 and has

remained steady at this level in 2011. Discernible subgroup increases were also evident for gender, region, marital status and education.

Year interacted discernibly with **age**, indicating that trends in past year use of antidepressants differed among age groups. Although the use of antidepressants increased for all age groups, the magnitude of the increased varied. Increases are strongest among the youngest respondents. Between 1997 and 2011, use of antidepressants increased among 18 to 29 year olds from 2.0% to 7.2%, whereas among respondents aged 50 to 64, use increased from 4.1% in 1997 to 11.7% in 2010 but rather than stability, then declined to 8.1% in 2011.

Table 7.2.1 Percentage *Reporting Using Prescription Medication to Treat Anxiety or Panic Attacks* During the Past 12 Months and Logistic Regression Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	1999	**7.1**	(5.8, 8.5)	—
Gender				NS
Men	793	†**5.4**	(3.7, 7.9)	0.67
Women *(Comparison Group)*	1206	**8.6**	(7.0, 10.5)	—
Age				*
(Comparison Group is previous age group)				
18-29	180	†**5.8**	(2.9, 11.2)	—
30-39	259	†**7.1**	(4.5, 10.8)	1.81
40-49	366	†**8.7**	(6.0, 12.5)	1.13
50-64	605	**7.7**	(5.7, 10.5)	0.85
65+	534	†**6.3**	(4.3, 9.2)	**0.49***
Public Health Region				NS
Toronto *(vs. Provincial Average)*	325	†**6.2**	(4.0, 9.6)	0.92
Central South	178	†**9.4**	(5.4, 16.0)	1.11
Central West	261	†**4.3**	(2.1, 8.5)	0.60
South West	323	†**6.4**	(4.2, 9.6)	0.87
Central East	264	†**6.6**	(3.9, 10.9)	0.98
East	358	**10.5**	(7.1, 15.4)	**1.54***
North	290	†**9.6**	(6.2, 14.6)	1.25
Marital Status				**
Married/Partner *(Comparison Group)*	1252	**5.8**	(4.6, 7.4)	—
Previously Married	433	†**13.9**	(9.4, 20.1)	**2.32***
Never Married	292	†**7.5**	(4.7, 11.6)	1.46
Education				*
Less than high school *(Comparison Group)*	253	†**10.5**	(5.9, 18.1)	—
Completed high school	438	†**5.6**	(3.7, 8.3)	0.49
Some college or university	681	**8.9**	(6.6, 11.8)	0.81
University degree	609	†**4.7**	(3.2, 6.7)	0.46
Household Income				*
< $30,000 *(Comparison Group)*	235	†**11.8**	(7.5, 18.0)	—
$30,000-$49,999	268	†**9.4**	(6.2, 14.0)	0.78
$50,000-$79,999	388	†**4.4**	(2.8, 6.8)	**0.41***
$80,000+	629	†**5.2**	(3.7, 7.4)	0.57
Not stated	479	†**9.4**	(6.3, 13.8)	1.06

Notes: [1]Estimates based on a random subsample.

(1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible; † Estimate suppressed or unstable.

(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.

(3) ORs greater than 1.0 indicate that the odds of anxiolitycs use are higher relative to the comparison group; ORs less than 1.0 indicate that the odds of anxiolitycs use are lower relative to the comparison group.

(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N= 1922).

Q: *In the past 12 months, have you taken any prescription medication to reduce anxiety or panic attacks?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Table 7.2.2   Percentage *Reporting Using Prescription Medication to Treat Depression* During the Past 12 Months and Logistic Regression Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	1999	**7.1**	(5.9, 8.5)	—
Gender				*
Men	793	†**5.0**	(3.4, 7.3)	**0.56***
Women *(Comparison Group)*	1206	**9.0**	(5.9, 8.5)	—
Age				*
(Comparison Group is previous age group)				
18-29	180	†**7.2**	(3.9, 12.8)	—
30-39	259	†**7.7**	(5.1, 11.6)	1.42
40-49	366	†**8.2**	(5.8, 11.4)	0.96
50-64	605	**8.1**	(6.1, 10.5)	0.91
65+	534	†**4.7**	(3.0, 7.2)	**0.36****
Public Health Region				*
Toronto *(vs. Provincial Average)*	325	†**5.6**	(3.6, 8.6)	0.83
Central South	178	†**12.8**	(8.1, 19.8)	1.60
Central West	261	†**4.5**	(2.3, 8.8)	0.64
South West	323	†**6.9**	(4.6, 10.3)	0.94
Central East	264	†**4.4**	(2.4, 8.0)	0.61
East	358	**11.0**	(7.7, 15.7)	**1.61***
North	290	†**10.0**	(6.4, 15.4)	1.27
Marital Status				*
Married/Partner *(Comparison Group)*	1252	**6.0**	(4.8, 7.5)	—
Previously Married	433	**12.7**	(8.5, 18.7)	**2.18****
Never Married	292	†**8.2**	(5.3, 12.5)	1.13
Education				NS
Less than high school *(Comparison Group)*	253	†**7.6**	(3.8, 14.8)	—
Completed high school	438	†**7.0**	(4.8, 10.2)	0.89
Some college or university	681	**9.2**	(7.0, 12.1)	1.17
University degree	609	†**4.6**	(3.3, 6.5)	0.68
Household Income				**
< $30,000 *(Comparison Group)*	235	†**11.4**	(7.4, 17.2)	—
$30,000-$49,999	268	†**8.7**	(5.6, 13.3)	0.80
$50,000-$79,999	388	†**4.6**	(2.9, 7.3)	**0.45***
$80,000+	629	**5.0**	(3.6, 6.9)	0.57
Not stated	479	†**10.1**	(7.0, 14.5)	1.26

Notes: [1]Estimates based on a random subsample.
　　　(1) All analyses are sample design adjusted; *p<.05**;** **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible; † Estimate suppressed or unstable.
　　　(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
　　　(3) ORs greater than 1.0 indicate that the odds of antidepressant use are higher relative to the comparison group; ORs less than 1.0 indicate that the odds of antidepressant use are lower relative to the comparison group.
　　　(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N= 1918).

Q:　　*In the past 12 months, have you taken any prescription medication to treat depression?*
Source:　The *CAMH Monitor*, Centre for Addiction and Mental Health.

Table 7.2.3: Percentage *Reporting Using Prescription Medication to Treat Anxiety or Panic Attacks* During the Past 12 Months, Ontarians Aged 18+, 1997–2011

	1997	1999	2001	2002	2003	2004	2006	2008	2009	2010	2011	Change	
(N=)	(2568)	(2436)	(2627)	(2421)	(2411)	(2611)	(2016)	(2024)	(2037)	(2024)	(1999)		
Total Sample[1]	**4.7**	**4.5**	**4.7**	**5.6**	**5.7**	**5.4**	**5.7**	**6.5**	**6.8**	**8.9**	**7.1**	T	–
(95% CI)[a]	(3.8, 5.6)	(3.7,5.4)	(3.9,5.7)	(4.7,6.8)	(4.8,6.8)	(4.5, 6.5)	(4.7,6.8)	(5.4,7.8)	(5.7, 8.2)	(7.5, 10.3)	(5.8, 8.5)		
Gender												NSI	
Men	**3.7**	**2.8**	**3.4**	**3.1**	**4.1**	**3.3**	**3.4**	**5.2**	**5.0**	**6.1**	**†5.4**	T	–
	(2.7,4.7)	(2.0,4.1)	(2.2,4.3)	(2.1,4.6)	(3.1,5.5)	(2.3,4.8)	(2.4,4.7)	(3.7,7.3)	(3.7,6.9)	(4.5, 8.0)	(3.7,7.9)		
Women	**5.6**	**6.0**	**6.3**	**8.0**	**7.2**	**7.3**	**7.9**	**7.7**	**8.5**	**11.5**	**8.6**	T	–
	(4.4, 6.8)	(4.8, 7.5)	(5.0, 7.8)	(6.5, 9.9)	(5.8, 8.8)	(5.9, 9.1)	(6.3, 9.8)	(6.1,9.5)	(6.8,10.6)	(9.5, 13.9)	(7.0,10.5)		
Age												**	
18-29	**†1.7**	**†2.3**	**†2.5**	**†3.4**	**†3.7**	**†5.3**	**†2.9**	**†4.1**	**†5.0**	**†5.4**	**†5.8**	T	–
	(0.6, 2.8)	(1.3, 3.9)	(1.4, 4.5)	(1.9, 5.8)	(2.1, 6.2)	(3.2, 8.8)	(1.5, 5.5)	(1.9,8.7)	(2.6,9.6)	(3.0, 9.7)	(2.9,11.2)		
30-39	**†4.8**	**†4.0**	**†5.1**	**†5.4**	**†6.1**	**†5.1**	**†3.4**	**†5.2**	**†4.2**	**†10.8**	**†7.1**	T	–
	(3.2, 6.4)	(2.6, 6.1)	(3.5, 7.4)	(3.5, 8.4)	(4.0, 9.0)	(3.3, 7.8)	(2.0, 5.8)	(3.1,8.9)	(2.4,7.1)	(7.3, 15.8)	(4.5,10.8)		
40-49	**7.8**	**7.4**	**†6.3**	**7.2**	**8.5**	**†4.7**	**†7.1**	**8.7**	**9.2**	**†6.9**	**†8.7**	T	–
	(5.6, 10.0)	(5.2, 10.4)	(4.5, 8.7)	(5.1, 10.0)	(6.4, 11.1)	(2.9, 7.3)	(4.8, 10.2)	(6.2,12.1)	(6.5,12.9)	(4.7, 10.1)	(6.0,12.5)		
50-64	**†5.2**	**†4.2**	**†5.9**	**†4.3**	**†6.5**	**8.5**	**8.4**	**9.2**	**9.3**	**12.8**	**7.7**	T	2Y
	(3.3, 7.1)	(2.7, 6.4)	(4.0, 8.7)	(2.8, 6.6)	(4.7, 9.0)	(6.4, 11.2)	(6.3, 11.2)	(6.8,12.3)	(6.9,12.4)	(10.1, 16.0)	(5.7,10.5)		
65+	**†4.9**	**†5.2**	**†4.1**	**8.2**	**†3.4**	**†3.3**	**7.2**	**†5.4**	**†6.0**	**†8.2**	**†6.3**	T	–
	(2.8, 7.0)	(3.4, 8.0)	(2.5, 6.8)	(5.6, 12.0)	(1.9, 5.9)	(2.0, 5.2)	(4.7, 11.0)	(3.5,8.1)	(4.1,8.9)	(5.8, 11.5)	(4.3,9.2)		
Region												NSI	
Toronto	**†3.7**	**†2.2**	**†3.1**	**†6.9**	**†4.4**	**†6.4**	**†4.4**	**†6.1**	**†5.0**	**†8.1**	**†6.2**	T	–
	(2.2, 6.0)	(1.2, 4.1)	(1.7, 5.4)	(4.6, 10.3)	(2.8, 6.9)	(4.2, 9.6)	(2.7, 7.1)	(4.0,9.1)	(3.1,7.8)	(5.4, 12.1)	(4.0,9.6)		
Central South	**†6.2**	**†6.0**	**†6.4**	**†6.2**	**†6.5**	**†2.2**	**†4.7**	**†6.3**	**†10.5**	**†12.5**	**†9.4**	T	–
	(3.6, 10.2)	(3.4, 10.3)	(3.7, 10.9)	(3.5, 10.8)	(5.9, 10.5)	(1.0, 5.0)	(2.2, 9.4)	(3.2,12.1)	(6.5, 16.8)	(7.8, 19.4)	(5.4,16.0)		
Central West	**†5.4**	**†5.5**	**†2.7**	**†5.1**	**†3.9**	**†4.3**	**†4.2**	**†3.9**	**†5.4**	**†6.8**	**†4.3**	–	–
	(3.0, 9.6)	(3.4, 8.8)	(1.4, 5.2)	(3.0, 8.6)	(2.2, 6.8)	(2.4, 7.6)	(2.4, 7.3)	(2.2, 6.7)	(3.1,9.1)	(4.2, 10.9)	(2.1,8.5)		
South West	**†3.6**	**†6.9**	**†5.3**	**†5.1**	**7.5**	**†5.3**	**9.1**	**†5.8**	**†7.2**	**†8.8**	**†6.4**	T	–
	(2.2, 6.0)	(4.7, 10.0)	(3.5, 8.1)	(3.3, 7.9)	(5.2, 10.7)	(3.6, 7.9)	(6.3, 12.9)	(3.6,9.1)	(4.8,10.7)	(6.0, 12.8)	(4.2,9.6)		
Central East	**†5.0**	**†3.7**	**†5.8**	**†3.8**	**†4.2**	**†3.0**	**†6.2**	**†7.3**	**†6.9**	**†9.4**	**†6.6**	–	–
	(3.1, 7.9)	(2.1, 6.7)	(3.6, 9.1)	(2.1, 6.7)	(2.3, 7.3)	(1.6, 5.7)	(3.7, 10.3)	(4.4,11.8)	(4.0,11.7)	(6.4, 13.7)	(3.9,10.9)		
East	**†5.2**	**†3.7**	**†6.6**	**†6.8**	**8.7**	**9.9**	**†5.6**	**10.2**	**†7.6**	**†9.7**	**10.5**	T	–
	(3.4, 8.0)	(2.2, 6.1)	(4.6, 9.5)	(4.5, 10.0)	(6.0, 12.3)	(7.2, 13.6)	(3.7, 8.4)	(7.0,14.7)	(4.9,11.6)	(6.7, 13.8)	(7.1,15.4)		
North	**†4.8**	**†5.6**	**†5.5**	**†4.8**	**†6.7**	**†5.9**	**†7.5**	**†6.2**	**†9.2**	**†7.0**	**†9.6**	–	–
	(3.1, 7.4)	(3.7, 8.5)	(3.8, 7.8)	(3.0, 7.6)	(4.5, 9.5)	(4.1, 8.5)	(5.0, 11.0)	(3.7,10.1)	(6.2,13.4)	(4.5, 10.6)	(6.2,14.6)		
Marital Status												NSI	
Married/Partner	**4.4**	**4.5**	**4.4**	**5.0**	**5.4**	**4.0**	**5.5**	**5.6**	**6.0**	**8.3**	**5.8**	T	2Y
Previously Married	**10.4**	**6.9**	**8.3**	**10.2**	**7.5**	**9.3**	**11.2**	**13.4**	**15.2**	**14.1**	**†13.9**	T	–
Never Married	**†2.7**	**†2.6**	**†3.6**	**†4.3**	**†5.6**	**7.1**	**†3.5**	**†5.2**	**†5.5**	**†7.7**	**†7.5**	T	–
Education												*	
Less than high school	**†5.8**	**7.8**	**†3.4**	**†6.1**	**†7.0**	**†5.3**	**†8.1**	**†8.8**	**†8.6**	**†12.6**	**†10.5**	T	–
Completed high school	**†5.5**	**†5.4**	**†5.5**	**†5.8**	**†6.6**	**†7.7**	**†6.3**	**†3.8**	**†7.7**	**†10.6**	**†5.6**	T	2Y
Some college or university	**†4.0**	**†3.6**	**†4.6**	**†7.2**	**5.5**	**†5.3**	**†4.8**	**8.6**	**6.8**	**7.6**	**8.9**	T	–
University degree	**†4.0**	**†2.1**	**†5.0**	**†3.4**	**†4.8**	**†3.9**	**†5.2**	**†5.4**	**†5.8**	**7.7**	**†5.8**	T	2Y

Notes: [1]Estimates based on a random subsample in 2010 and 2011.
(1) † Estimate suppressed or unstable; [a] 95% confidence interval; all analyses are sample design adjusted.
(2) Trend Analysis: – change not statistically discernible at p<.05 between 1997-2011; **T** discernible change (p<.05) between 1997-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction
Q: In the past 12 months have you taken any prescription medication to reduce anxiety or panic attacks?
Source: *CAMH Monitor*, Centre for Addiction and Mental Health

Table 7.2.4: Percentage *Reporting Using Prescription Medication to Treat Depression* During the Past 12 Months, Ontarians Aged 18+, 1997–2011

(N\=)	1997 (2568)	1999 (2436)	2001 (2627)	2002 (2421)	2003 (2411)	2004 (2611)	2006 (2016)	2008 (2024)	2009 (2037)	2010 (2024)	2011 (1999)	Change	
Total Sample	**3.9**	**3.6**	**4.6**	**5.2**	**6.0**	**5.3**	**6.6**	**6.0**	**6.2**	**7.2**	**7.1**	T	–
(95% CI)[a]	(3.1, 4.7)	(2.9, 4.4)	(3.8, 5.5)	(4.4, 6.3)	(5.0, 7.1)	(4.4, 6.5)	(5.5, 7.8)	(5.0, 7.3)	(5.1,7.5)	(6.0, 8.5)	(5.9,8.5)		
Gender													NSI
Men	**†2.8**	**†1.9**	**†2.8**	**†2.7**	**4.1**	**3.5**	**†3.6**	**†4.1**	**5.5**	**4.8**	**5.0**	T	–
	(1.9, 3.7)	(1.2, 2.9)	(2.0, 4.0)	(1.9, 3.9)	(3.0, 5.6)	(2.4, 5.2)	(2.6, 5.0)	(2.8, 6.0)	(3.9,7.5)	(3.5,6.5)	(3.4,7.3)		
Women	**4.9**	**5.2**	**6.2**	**7.6**	**7.7**	**7.1**	**9.3**	**7.8**	**6.9**	**9.5**	**9.0**	T	–
	(3.8, 6.0)	(4.1, 6.5)	(5.0, 7.8)	(6.2, 9.3)	(6.3, 9.4)	(5.7, 8.7)	(7.6, 11.4)	(6.3, 9.7)	(5.5,8.6)	(7.7, 11.7)	(5.9,8.5)		
Age													**
18-29	**†2.0**	**†2.5**	**†1.9**	**†3.3**	**†3.7**	**†3.5**	**†5.2**	**†4.4**	**†3.5**	**†4.2**	**†7.2**	T	–
	(0.8, 3.2)	(1.4, 4.3)	(1.0, 3.5)	(2.0, 5.5)	(2.2, 6.1)	(1.9, 6.5)	(3.1, 8.6)	(2.1,9.1)	(1.6,7.8)	(2.2, 7.9)	(3.9,12.8)		
30-39	**†3.6**	**†4.1**	**†4.9**	**†4.6**	**6.3**	**6.3**	**†4.6**	**†4.2**	**†2.9**	**†5.2**	**†7.7**	T	–
	(2.2, 5.0)	(2.8, 6.1)	(3.3, 7.1)	(2.9, 7.2)	(4.2, 9.3)	(4.3, 9.1)	(2.9, 7.3)	(2.4,7.3)	(1.5,5.6)	(2.8, 9.3)	(5.1,11.6)		
40-49	**6.9**	**†4.6**	**6.9**	**8.2**	**7.2**	**†4.7**	**9.4**	**9.2**	**†7.0**	**†6.1**	**†8.2**	T	–
	(4.8, 9.0)	(3.1, 6.9)	(5.0, 9.4)	(6.0, 11.1)	(5.3, 9.7)	(3.2, 7.0)	(6.7, 12.9)	(6.7,12.6)	(4.7,12.5)	(3.9, 9.4)	(5.8,11.4)		
50-64	**†4.1**	**†3.5**	**†4.5**	**†4.8**	**9.2**	**7.1**	**8.7**	**8.5**	**9.5**	**11.7**	**8.1**	T	2Y
	(2.4, 5.8)	(2.0, 5.8)	(3.0, 6.8)	(3.3, 6.9)	(6.8, 12.5)	(5.1, 9.7)	(6.5, 11.6)	(6.3,11.3)	(7.1,12.5)	(9.2, 14.9)	(6.1,10.5)		
65+	**†4.1**	**†3.1**	**†4.7**	**†5.7**	**†2.9**	**†4.2**	**†4.6**	**†4.6**	**†7.1**	**†7.9**	**†4.7**	T	–
	(2.2, 6.0)	(1.8, 5.1)	(2.8, 7.8)	(3.7, 8.8)	(1.6, 5.2)	(2.6, 6.9)	(2.8, 7.5)	(2.1,5.6)	(4.9,10.2)	(5.6, 11.1)	(3.0,7.2)		
Region													NSI
Toronto	**†4.3**	**†**	**†3.6**	**†6.6**	**†6.3**	**†5.8**	**†4.5**	**†4.6**	**†4.1**	**†7.0**	**†5.6**	T	–
	(2.6, 7.0)	—	(2.1, 6.0)	(4.5, 9.6)	(4.2, 9.1)	(3.7, 9.0)	(2.8, 7.2)	(3.0,7.1)	(2.6,6.6)	(4.4, 10.9)	(3.6,8.6)		
Central South	**†4.9**	**†4.8**	**†6.9**	**†4.9**	**7.6**	**†3.5**	**†2.1**	**†4.6**	**†7.2**	**†10.2**	**†12.8**	T	–
	(2.8, 8.4)	(2.7, 8.3)	(3.9, 11.7)	(2.7, 8.8)	(4.6, 12.1)	(1.8, 6.6)	(1.0, 5.5)	(2.2,9.5)	(4.2,12.0)	(6.0, 16.7)	(8.1,19.8)		
Central West	**†3.5**	**†3.9**	**†**	**†3.4**	**†3.9**	**†4.2**	**†8.1**	**†4.5**	**†5.7**	**†4.4**	**†4.5**	T	–
	(1.7, 7.0)	(2.2, 6.7)	—	(2.0, 6.0)	(2.3, 6.5)	(2.4, 7.2)	(5.3, 12.3)	(2.7,7.4)	(3.4,9.5)	(2.5, 7.7)	(2.3,8.8)		
South West	**†3.9**	**†3.7**	**†4.1**	**†4.2**	**†5.0**	**†4.8**	**†8.4**	**†6.2**	**†7.5**	**†9.2**	**†6.9**	T	–
	(2.4, 6.2)	(2.2, 6.1)	(2.6, 6.5)	(2.6, 6.7)	(3.1, 7.9)	(3.1, 7.4)	(5.8, 12.0)	(3.8,9.9)	(5.1,11.0)	(6.4, 13.2)	(4.6,10.3)		
Central East	**†3.6**	**†2.6**	**†4.4**	**†4.9**	**†4.7**	**†4.7**	**†7.3**	**†8.5**	**†7.1**	**†6.1**	**†4.4**	T	–
	(2.2, 6.0)	(1.4, 4.7)	(2.6, 7.4)	(2.9, 8.3)	(2.7, 7.9)	(2.6, 8.4)	(4.5, 11.6)	(5.4,13.2)	(4.1,12.0)	(4.0,9.3)	(2.4,8.0)		
East	**†3.1**	**†4.6**	**8.0**	**†6.6**	**8.3**	**8.7**	**†7.9**	**†8.3**	**†6.7**	**†8.8**	**11.0**	T	–
	(1.7, 5.6)	(2.9, 7.2)	(5.7, 11.2)	(4.5, 9.4)	(5.7, 11.8)	(6.1, 12.2)	(5.4, 11.5)	(5.7, 11.9)	(4.6,9.7)	(6.0, 12.7)	(7.7,15.7)		
North	**†4.1**	**†6.3**	**†6.0**	**†5.7**	**7.0**	**†5.2**	**†8.5**	**†4.2**	**†6.9**	**†5.5**	**†10.0**	T	–
	(2.5, 6.6)	(4.2, 9.2)	(4.2, 8.5)	(3.7, 8.8)	(4.8, 10.1)	(3.7, 7.4)	(5.7, 12.3)	(2.4, 7.4)	(4.4,10.6)	(3.4, 8.8)	(6.4,15.4)		
Marital Status													NSI
Married/Partner	**3.2**	**3.2**	**4.3**	**4.4**	**5.3**	**4.5**	**6.4**	**4.9**	**5.3**	**6.2**	**6.0**	T	–
Previously Married	**8.7**	**†6.1**	**8.9**	**10.7**	**11.2**	**7.7**	**11.1**	**12.9**	**16.5**	**14.6**	**12.7**	T	–
Never Married	**†3.3**	**†3.0**	**†3.0**	**†4.2**	**†5.3**	**6.2**	**†4.8**	**†5.6**	**†4.0**	**†6.2**	**†8.2**	T	–
Education													NSI
Less than high school	**†4.2**	**†5.5**	**†3.7**	**†4.2**	**†5.4**	**†5.8**	**†7.7**	**†6.9**	**†13.8**	**†12.1**	**†7.6**	T	–
Completed high school	**†4.9**	**†3.0**	**†4.9**	**†5.7**	**6.9**	**7.9**	**†6.3**	**†5.3**	**†5.6**	**†6.6**	**†7.0**	T	–
Some college or university	**†3.1**	**†3.6**	**†5.8**	**†5.4**	**6.2**	**†5.4**	**7.2**	**7.0**	**6.5**	**7.7**	**9.2**	T	–
University degree	**†3.8**	**†2.7**	**†3.5**	**†5.5**	**†5.3**	**†3.2**	**†5.8**	**†5.2**	**†3.8**	**†5.1**	**†4.6**	T	–

Notes: [1]Estimates based on a random subsample in 2010 and 2011.
(1) † Estimate suppressed or unstable; [a] 95% confidence interval; all analyses are sample design adjusted.
(2) Trend Analysis: **–** change not statistically discernible at p<.05 between 1997-2011; **T** discernible change (p<.05) between 1997-2011; **2Y** discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction
Q: *In the past 12 months, have you taken any prescription medication to treat depression?*
Source: *CAMH Monitor*, Centre for Addiction and Mental Health

Figure 7.2.1
Percentage Reporting Using Prescription Medication to Treat Anxiety or Panic Attacks in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011
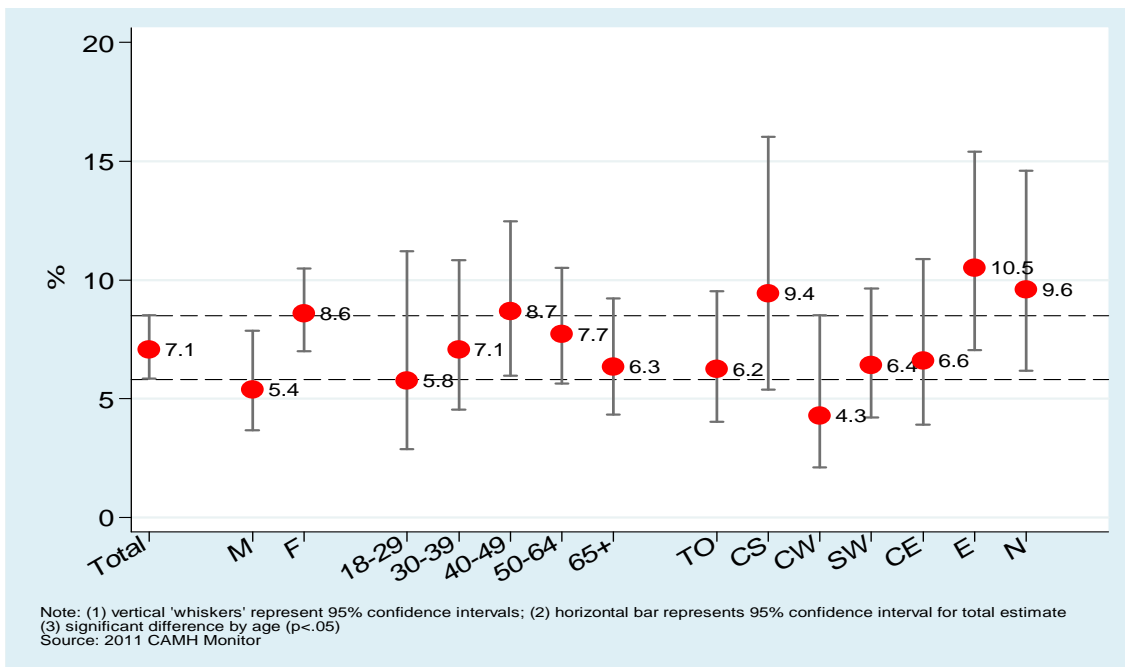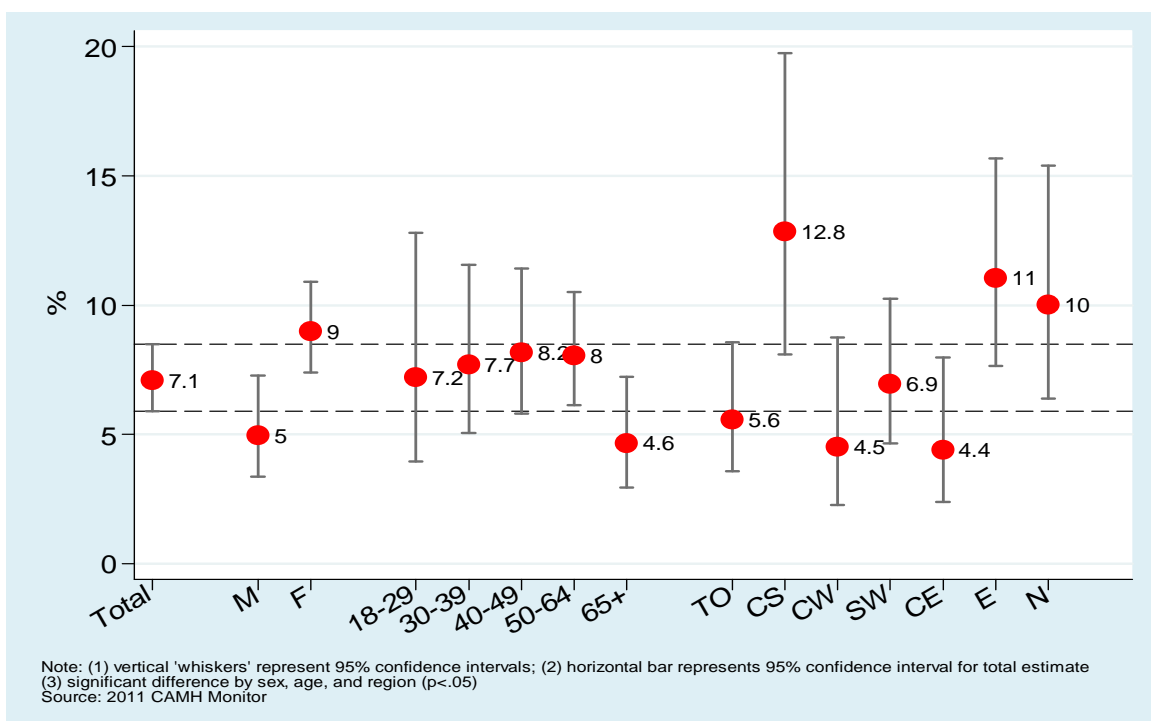

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by age (p<.05)
Source: 2011 CAMH Monitor

Figure 7.2.2
Percentage Reporting Using Prescription Medication to Treat Depression in the Past Year by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by sex, age, and region (p<.05)
Source: 2011 CAMH Monitor

Figure 7.2.3

Percentage Reporting Using Prescription Medication to Treat Anxiety or Panic Attacks in the Past Year, Ontarians Aged 18+, 1997–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
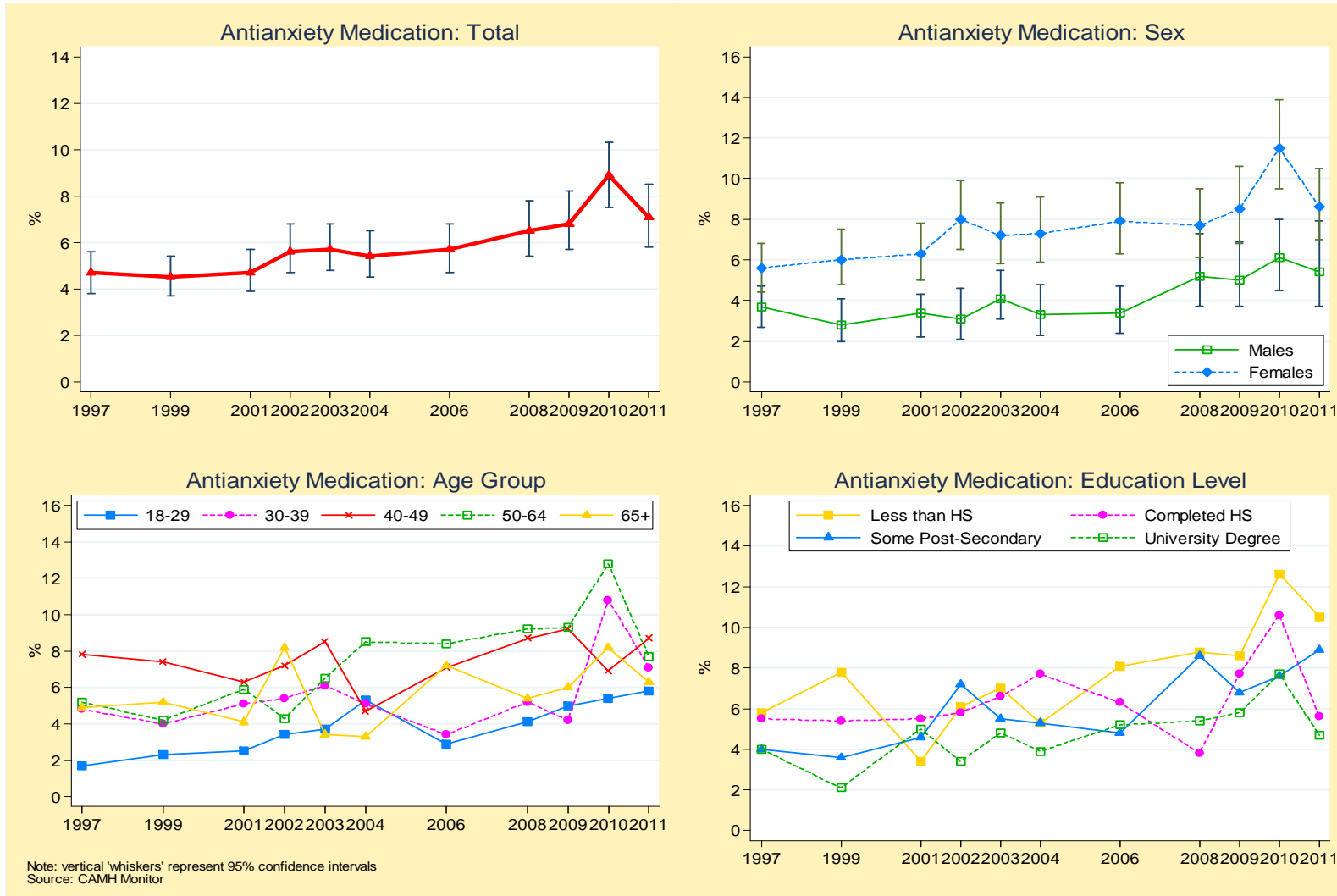
Figure 7.2.4
Percentage Reporting Using Prescription Medication to Treat Depression in the Past Year, Ontarians Aged 18+, 1997–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor

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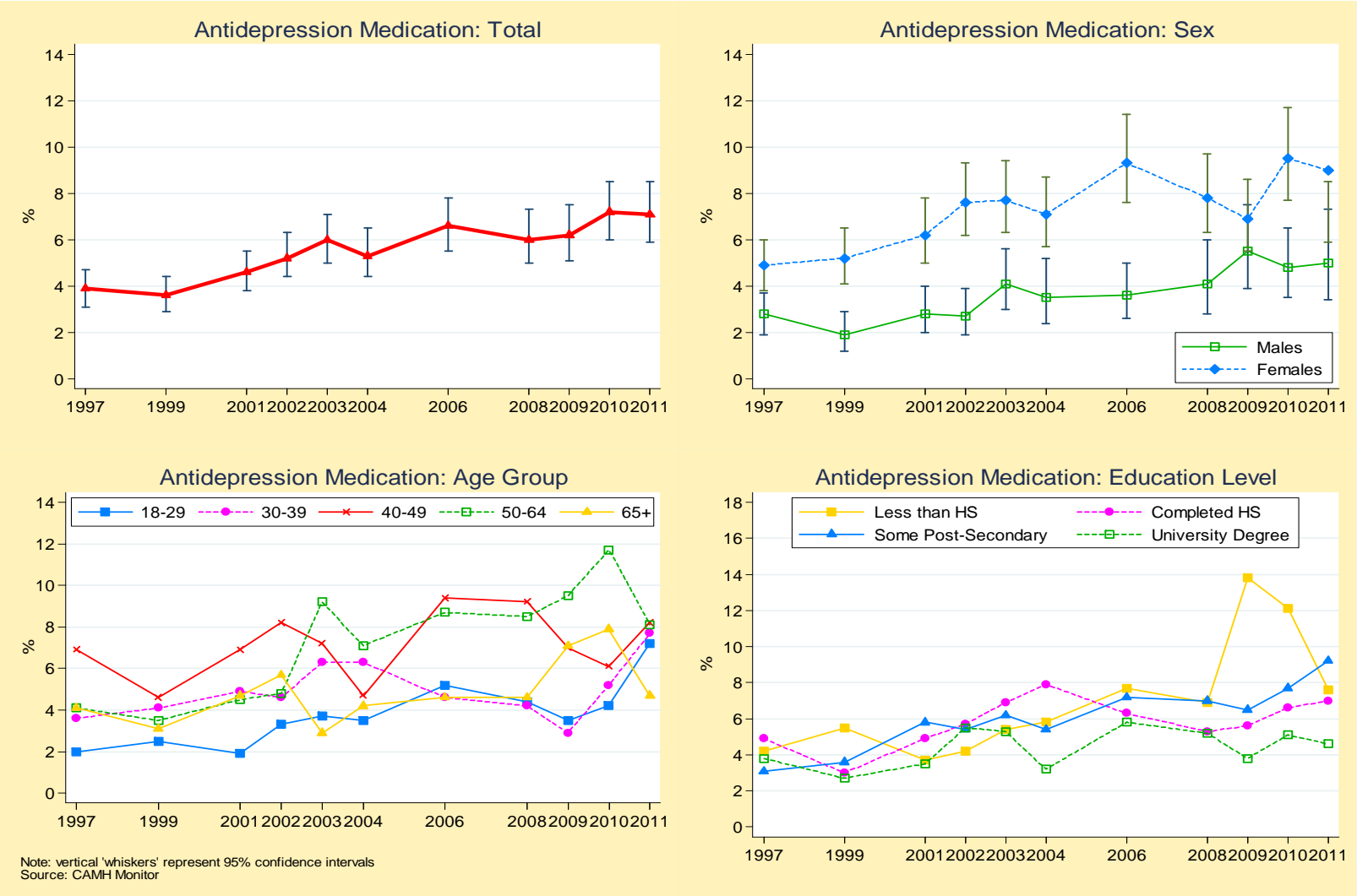
7.3 Mental Health-Related Quality Of Life

Health-Related Quality of Life (HRQoL) items, introduced in 2003, are based on the core module (HRQoL-4) developed by the Centers for Disease Control and Prevention (CDC).

Investigators at CDC have developed a brief instrument to identify key health-related quality of life measures for adult populations (Moriarty, Zack, & Kobau, 2003; Ôunpuu, Krueger, Vermeulen, & Chambers, 2000). The four-item HRQoL measures self-rated health and mental health, recent physical and mental health, and recent activity limitation. HRQoL captures the key concepts of health identified by the World Health Organization as, "a state of complete physical, mental, and social well-being – not merely the absence of disease or infirmity."

The following items were asked in the CM:

1) *In general, would you say your overall mental health is excellent, very good, good, fair or poor?*

2) *Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days in the last 30 days, was your mental health not good?*

In this report, we present the two measures of **mental health-related quality of life**: 1) the percent reporting *fair or poor mental health*, defined as the percentage rating their mental health as fair or poor in general, and 2) the percent reporting *frequent mental distress days*, defined as the percentage reporting **14 or more** mentally unhealthy days during the past 30 days.

In CM2011 these items were asked of a random subsample of respondents (Panel B, *n*=1,999).

7.3.1 Self- Rated Fair/Poor Mental Health

2011 …………………..…Table 7.3.1

An estimated **6.0%** (95% CI: 4.9% to 7.3%) of Ontario adults self-rate their mental health as fair or poor. The corresponding population estimate is 583,062 Ontario adults (95% CI: 468,248 to 697,877).

Marital status and **education** were discernibly related to reporting fair or poor mental health, when holding fixed our set of risk factors.

- The percentage and adjusted odds of fair/poor mental health ratings of those never married were 83% higher than of married respondents (8.0% vs. 5.0%; OR=1.83).

- Relative to those who did not graduate high school, the adjusted odds of fair/poor mental health ratings were discernibly lower (by 57%) among respondents with a university degree (OR=0.43).

There were no other discernible risk factor effects, after adjusting for other factors.

Trends
2003–2011 …………….…… Table 7.3.3

2010–2011
Prevalence of fair or poor self-rated mental health in 2011 (6.0%) remained virtually unchanged from 2010 (6.1%). In addition, ratings of fair/poor mental health were stable for most demographic subgroups. There were only two discernible subgroup changes during this period: an increase among residents of the **North**, from 4.1% in 2010 to 8.3% in 2011, and of respondents with **some postsecondary** education, from 5.6% in 2010 to 8.6% in 2011.

2003–2011
Between 2003 and 2011, there were no discernible changes in ratings of fair/poor mental health. **Year did not interact** discernibly with any of the demographic risk factors analysed, suggesting that subgroup trends were not dissimilar. Despite this overall finding, there was a discernible increase for residents of the **Central South** (from 2.8% in 2008 to 12.2% in 2011).

7.3.2 Frequent Mental Distress Days

2011 …………………..………Table 7.3.2

Overall, an estimated **7.1%** (95% CI: 5.7% to 8.7%) of Ontario adults experienced frequent mental distress days (14+ days) in the past 30 days. The corresponding population estimate is 648,093 Ontario adults (95% CI: 509,909 to 786,278).

Region, marital status and **education** were discernibly related to reporting frequent mental distress days, after adjusting for our set of risk factors.

- Relative to the provincial estimate (of 7.1%), residents of the Central East reported discernibly lower rates and adjusted odds of frequent mental distress days (2.2%; OR=0.35); in contrast, residents of the Central South reported discernibly higher rates and adjusted odds (14.5%; OR=2.21).

- The rates and adjusted odds of experiencing frequent mental distress days were more than 2 times higher among those previously married than among married individuals (12.1% vs. 5.0%; OR=2.20).

- Relative to those not completing high school, the adjusted odds of frequent mental distress days were discernibly lower (by 60%) among those holding a university degree (OR=0.40).

There were no other discernible effects, when adjusting for our set of risk factors.

Trends

2010–2011
Overall, the percent reporting frequent mental distress days in the past 30 days in 2011 (7.1%) was not discernibly different from 2010 (7.9%) and rates of frequent mental distress days were stable for most demographic subgroups. There were only two discernible subgroup changes during this period: a decrease among respondents **aged 50 to 64** (from 9.7% to 5.6%), and among residents of the **Central East**, from 5.8% in 2010 to 2.2% in 2011.

2003–2011
Between 2003 and 2011, there was a **discernible** increase in reporting frequent mental distress days in the past 30 days, from 5.4% in 2003 to 7.9% in 2010 and remained above 7% in 2011.

Year did not interact discernibly with any of the six demographic risk factors analysed, suggesting that subgroup trends were not measurably dissimilar during this period. Although the year-by-region interaction was not statistically discernible, separate subgroup trends showed discernible increases for respondents living in the **Central South** (from 4.9% in 2008 to 14.5% in 2011) and for two of the four education subgroups.

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Table 7.3.1 Percentage Reporting *Fair or Poor Mental Health* and Logistic Regression Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample	1999	**6.0**	(4.9, 7.3)	—
Gender				NS
Men	793	**5.3**	(3.8, 7.4)	0.84
Women *(Comparison Group)*	1206	**6.6**	(5.2, 8.4)	—
Age				
(Comparison Group is previous age group)				NS
18-29	180	†**6.1**	(3.2, 11.3)	—
30-39	259	†**5.6**	(3.5, 8.9)	1.67
40-49	366	†**6.7**	(4.5, 9.9)	1.18
50-64	605	**6.6**	(4.7, 9.0)	0.90
65+	534	†**5.8**	(4.0, 8.5)	0.76
Public Health Region				NS
Toronto *(vs. Provincial Average)*	325	†**5.9**	(3.6, 9.4)	1.13
Central South	178	†**12.2**	(7.3, 19.6)	**1.80***
Central West	261	†**3.8**	(2.1, 7.0)	0.69
South West	323	†**6.8**	(4.5, 10.1)	1.06
Central East	264	†**4.3**	(2.4, 7.4)	0.70
East	358	†**5.0**	(3.1, 7.8)	0.80
North	290	†**8.3**	(5.4, 12.6)	1.21
Marital Status				*
Married/Partner *(Comparison Group)*	1252	**5.0**	(3.9, 6.4)	—
Previously Married	433	†**8.9**	(6.4, 12.3)	1.62
Never Married	292	†**8.0**	(5.0, 12.6)	**1.83***
Education				**
Less than high school *(Comparison Group)*	253	†**7.2**	(4.2, 12.0)	—
Completed high school	438	†**5.9**	(3.8, 9.2)	0.81
Some college or university	681	**8.6**	(6.4, 11.5)	1.25
University degree	609	†**3.0**	(1.9, 4.5)	**0.43***
Household Income				NS
< $30,000 *(Comparison Group)*	235	†**8.6**	(5.4, 13.3)	—
$30,000-$49,999	268	†**7.0**	(3.8, 12.6)	0.77
$50,000-$79,999	388	†**6.0**	(3.7, 9.4)	0.83
$80,000+	629	†**4.3**	(3.0, 6.2)	0.74
Not stated	479	†**7.5**	(5.1, 10.9)	1.12

Notes: [1]Estimates based on a random subsample.
   (1) All analyses are sample design adjusted; *p<.05**; **p<.01; ***p<.001; CI = 95% confidence interval; NS – not statistically discernible; † Estimate suppressed or unstable.
   (2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
   (3) ORs greater than 1.0 indicate that the odds of poor mental health are higher relative to the comparison group; ORs less than 1.0 indicate that the odds of poor mental health are lower relative to the comparison group.
   (4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N = 1923).

Q: *In general, would you say your overall mental health is excellent, very good, good, fair, or poor?*
Def'n: Poor Mental Health – reporting fair or poor mental health in general.
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Table 7.3.2 Percentage Reporting *Frequent Mental Distress Days* (14+) During the Past 30 Days and Logistic Regression Adjusted Group Differences, Ontarians Aged 18+, 2011

	N	%	95% CI	Adjusted Odds Ratio
Total Sample[1]	1999	**7.1**	(5.7, 8.7)	—
Gender				NS
Men	793	**†5.8**	(3.9, 8.7)	0.68
Women *(Comparison Group)*	1206	**8.2**	(6.5, 10.3)	—
Age				
(Comparison Group is previous age group)				NS
18-29	180	**†11.6**	(7.1, 18.5)	—
30-39	259	**†6.9**	(4.3, 10.9)	0.76
40-49	366	**†6.7**	(4.6, 9.9)	0.96
50-64	605	**†5.6**	(3.9, 8.0)	0.71
65+	534	**†4.6**	(2.9, 7.2)	0.59
Public Health Region				*
Toronto *(vs. Provincial Average)*	325	**†7.7**	(5.0, 11.7)	1.21
Central South	178	**†14.5**	(9.1, 22.4)	**2.12***
Central West	261	**†8.1**	(4.4, 14.4)	1.19
South West	323	**†6.8**	(4.3, 10.7)	1.03
Central East	264	**†2.2**	(1.1, 4.2)	**0.35***
East	358	**†6.4**	(4.0, 10.3)	1.01
North	290	**†6.7**	(3.9, 11.2)	0.90
Marital Status				*
Married/Partner *(Comparison Group)*	1252	**5.0**	(3.8, 6.4)	—
Previously Married	433	**†12.1**	(7.7, 18.4)	**2.20***
Never Married	292	**†11.3**	(7.2, 17.2)	1.22
Education				**
Less than high school *(Comparison Group)*	253	**†9.5**	(4.8, 17.7)	—
Completed high school	438	**†5.2**	(3.1, 8.8)	0.48
Some college or university	681	**10.8**	(8.1, 14.3)	0.98
University degree	609	**†3.7**	(2.4, 5.8)	**0.40***
Household Income				NS
< $30,000 *(Comparison Group)*	235	**†8.4**	(5.2, 13.3)	—
$30,000-$49,999	268	**†10.7**	(6.4, 17.3)	1.62
$50,000-$79,999	388	**†7.1**	(4.6, 11.0)	1.20
$80,000+	629	**†4.4**	(2.9, 6.6)	0.80
Not stated	479	**†9.4**	(6.0, 14.4)	1.61

Notes: [1]Estimates based on a random subsample.
(1) All analyses are sample design adjusted; *p<.05; **p<.01; ***p<.001; CI = 95% confidence interval; NS – no statistically discernible difference; † Estimate suppressed or unstable; [1] Asked only of a random subsample
(2) Asterisks in group row indicate a statistically discernible group effect, based on Wald test.
(3) ORs greater than 1.0 indicate that the odds of distress are higher relative to the comparison group; ORs less than 1.0 indicate that the odds of distress are lower relative to the comparison group.
(4) Adjusted odds ratio holding fixed values for gender, age, region, marital status, education and income (complete case sample N = 1888).

Q: *Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?*

Def'n: Frequent Mental Distress Days – reporting 14 or more mental distress days during the past 30 days
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Table 7.3.3: Percentage *Reporting Fair or Poor Mental Health*, by Demographic Characteristic, Ontarians Aged 18+, 2003–2011

	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change	
(N=)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(2024)	(1999)		
Total Sample	4.7	6.1	5.2	5.8	6.2	6.1	5.7	6.1	6.0	–	–
(95% CI)[a]	(3.9, 5.8)	(5.1, 7.4)	(4.3, 6.3)	(4.7, 7.1)	(5.2, 7.5)	(4.8, 7.6)	(4.7, 7.0)	(5.0, 7.5)	(4.9, 7.3)		
Gender										NSI	
Men	5.0	6.4	4.3	5.6	5.1	6.1	6.1	5.4	5.3	–	–
	(3.7, 6.7)	(4.8, 8.5)	(3.1, 6.0)	(4.4, 7.8)	(3.7, 6.9)	(4.4, 8.3)	(4.6, 8.2)	(4.0, 7.4)	(3.8, 7.4)		
Women	4.5	5.8	6.1	5.9	7.3	6.1	5.4	6.9	6.6	–	–
	(3.4, 5.9)	(4.6, 7.4)	(4.8, 7.7)	(4.1, 7.6)	(5.7, 9.3)	(4.4, 8.3)	(4.1, 7.0)	(5.2, 9.0)	(5.2, 8.4)		
Age										NSI	
18-29	6.2	5.1	5.4	4.7	†7.1	†6.4	†2.9	†5.3	†6.1	–	–
	(3.9, 9.6)	(3.0, 8.4)	(3.4, 8.5)	(2.5, 8.8)	(4.5, 11.2)	(3.0, 13.1)	(1.5, 5.7)	(2.7, 10.2)	(3.2, 11.3)		
30-39	†4.8	8.0	6.1	5.9	†3.9	†5.9	†7.8	†4.2	†5.6	–	–
	(3.0, 7.5)	(5.6, 11.3)	(3.9, 9.4)	(3.6, 9.5)	(2.3, 6.4)	(3.4, 10.1)	(4.9, 12.1)	(2.3, 7.5)	(3.5, 8.9)		
40-49	†4.3	5.3	5.6	7.3	8.0	†6.1	†6.5	†8.0	†6.7	–	–
	(2.8, 6.5)	(3.5, 11.3)	(3.8, 8.0)	(4.9, 10.6)	(5.5, 11.5)	(4.0, 9.2)	(4.2, 9.8)	(5.4, 11.7)	(4.5, 9.9)		
50-64	†4.3	6.4	5.2	5.4	†6.5	7.9	†7.2	7.4	6.6	–	–
	(2.9, 6.3)	(4.6, 9.0)	(3.5, 7.6)	(3.6, 8.2)	(4.5, 9.3)	(5.7, 10.9)	(5.2, 9.9)	(5.4, 10.2)	(4.7, 9.0)		
65+	†3.5	†4.2	†3.3	†5.7	†5.7	†4.0	†4.3	†5.2	†5.8	–	–
	(2.1, 5.8)	(2.6, 6.8)	(2.0, 5.5)	(3.7, 8.8)	(3.5, 9.2)	(2.4, 6.5)	(2.7, 6.6)	(3.4, 7.9)	(4.0, 8.5)		
Region										NSI	
Toronto	†4.6	†7.1	†4.9	†5.4	†6.5	†9.2	†6.7	†6.9	†5.9	–	–
	(2.8, 7.3)	(4.7, 10.6)	(3.0, 7.8)	(3.2, 8.9)	(4.2, 10.0)	(6.1, 13.7)	(4.4, 10.2)	(4.2, 11.3)	(3.6, 9.4)		
Central South	†6.8	†5.1	†3.3	†6.0	†6.9	†2.8	†6.3	†8.0	†12.2	T	–
	(3.9, 11.6)	(2.9, 10.0)	(1.7, 6.3)	(3.1, 11.3)	(3.9, 11.8)	(1.3, 5.9)	(3.5, 11.1)	(4.3, 14.4)	(7.3, 19.6)		
Central West	†2.5	†5.3	†6.0	†6.8	†7.5	†2.7	†5.5	†4.2	†3.8	–	–
	(1.3, 4.8)	(3.0, 9.2)	(3.7, 9.7)	(3.9, 11.6)	(4.5, 12.2)	(1.4, 5.3)	(3.2, 9.4)	(2.4, 7.2)	(2.1, 7.0)		
South West	†4.2	†5.2	†6.4	†5.2	†5.9	†5.3	†5.4	†6.0	†6.8	–	–
	(2.6, 6.8)	(3.4, 7.9)	(4.4, 9.4)	(3.3, 8.1)	(3.7, 9.2)	(3.5, 8.2)	(3.5, 8.3)	(3.6, 9.8)	(4.5, 10.1)		
Central East	†4.6	†6.7	†2.8	†4.8	†4.6	†8.1	†5.4	†5.9	†4.3	–	–
	(2.3, 8.9)	(4.2, 10.7)	(1.4, 5.4)	(2.7, 8.5)	(2.7, 7.8)	(4.5, 14.0)	(3.1, 9.2)	(3.6, 9.5)	(2.4, 7.4)		
East	†5.4	†6.7	†6.9	†4.2	†5.2	†5.5	†5.8	†7.5	†5.0	–	–
	(3.4, 8.5)	(4.2, 10.7)	(4.5, 10.4)	(2.5, 7.1)	(3.2, 8.3)	(3.2, 9.1)	(3.7, 9.0)	(4.9, 11.3)	(3.1, 7.8)		
North	†6.9	†6.3	†6.7	†9.3	†7.5	†5.1	†3.8	†4.1	†8.3	–	2Y
	(4.8, 9.7)	(4.2, 9.3)	(4.5, 9.9)	(6.4, 13.5)	(4.9, 11.3)	(3.0, 8.4)	(2.1, 6.7)	(2.5, 6.5)	(5.4, 12.6)		
Marital Status										NSI	
Married/Partner	†3.6	4.6	4.0	5.4	5.2	4.3	5.2	5.1	5.0	–	–
Previously Married	7.8	11.9	8.6	10.3	9.2	11.8	†8.5	†10.9	†8.9	–	–
Never Married	†6.4	†7.2	†6.7	†4.4	†7.1	†8.3	†6.3	†6.7	†8.0	–	–
Education										NSI	
Less Than High School	7.9	8.9	8.5	11.8	12.8	†9.7	11.2	†10.9	†7.2	–	–
Completed High School	6.4	9.2	6.1	†4.1	†7.6	†6.2	†6.6	†7.3	†5.9	–	–
Some College or University	†4.0	5.5	†3.8	5.6	†4.7	6.1	†4.7	5.6	8.6	–	2Y
University Degree	†2.9	†3.4	5.0	†4.8	†4.0	†5.0	†4.6	†4.6	†3.0	–	–

Notes: [1] Estimates based on a random subsample in 2010 and 2011.
   (1) † Estimate suppressed or unstable; [a] 95% confidence interval; all analyses are sample design adjusted.
   (2) Trend Analysis: – change not statistically discernible at p<.05; T discernible change (p<.05) between 2003-2011; **2Y** discernible change (p<.05) between last two estimates.
   (3) **NSI**, non-discernible YEAR × FACTOR interaction.
   (4) Poor Mental Health – reporting fair or poor mental health in general.

Q: *In general, would you say your overall mental health is excellent, very good, good, fair, or poor?*
Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Table 7.3.4: Percentage *Reporting Frequent Mental Distress Days* (14+) During the Past 30 Days, by Demographic Characteristic, Ontarians Aged 18+, 2003–2011

(N=)	2003 (2411)	2004 (2611)	2005 (2445)	2006 (2016)	2007 (2005)	2008 (2024)	2009 (2037)	2010 (2024)	2011 (1999)	Change	
Total Sample	**5.4**	**6.6**	**5.4**	**5.8**	**6.6**	**6.0**	**6.4**	**7.9**	**7.1**	**T**	**–**
(95% CI)[a]	(4.5, 6.5)	(5.5, 7.9)	(4.5, 6.6)	(4.7, 7.1)	(5.5,7.9)	(4.7, 7.6)	(4.8, 8.3)	(6.6, 9.5)	(5.7, 8.7)		
Gender											**NSI**
Men	**4.2**	**5.7**	**4.4**	**4.9**	**4.7**	**5.6**	**4.7**	**5.8**	**†5.8**	–	–
	(3.0, 5.8)	(4.3, 7.6)	(3.2, 6.2)	(3.4,6.9)	(3.3,6.5)	(3.9, 7.9)	(3.1, 7.2)	(4.2, 8.0)	(3.9, 8.7)		
Women	**6.5**	**7.4**	**6.3**	**6.7**	**8.4**	**6.4**	**8.1**	**10.1**	**8.2**	–	–
	(5.2, 8.2)	(6.0, 9.2)	(5.0, 8.0)	(5.2,8.6)	(6.7,10.5)	(4.5, 8.9)	(5.7,11.4)	(8.1, 12.5)	(6.5,10.3)		
Age											**NSI**
18-29	**7.0**	**8.2**	**†5.7**	**†5.4**	**†7.9**	**10.2**	**†5.0**	**†9.0**	**†11.6**	–	–
	(4.6, 10.4)	(5.5, 12.1)	(3.6, 9.0)	(3.1,9.0)	(5.1,12.1)	(5.8, 17.4)	(2.1, 11.5)	(5.6, 14.2)	(7.1, 18.5)		
30 –39	**†3.4**	**6.3**	**7.6**	**†7.6**	**†8.5**	**†5.9**	**†7.2**	**†7.5**	**†6.9**	–	–
	(2.1, 5.4)	(4.2, 9.3)	(5.1, 11.1)	(4.9,11.6)	(5.6, 12.5)	(3.7, 9.5)	(4.1, 12.3)	(4.7, 11.8)	(4.3, 10.9)		
40-49	**6.8**	**7.8**	**†4.8**	**†7.1**	**†7.2**	**8.1**	**†6.5**	**†7.5**	**†6.7**	–	–
	(4.8, 9.4)	(5.5, 11.0)	(3.2, 7.1)	(4.8,10.4)	(4.8,10.5)	(5.5,11.9)	(3.7, 11.4)	(5.0, 11.1)	(4.6, 9.9)		
50-64	**6.9**	**6.6**	**†5.1**	**†5.4**	**†6.2**	**†4.3**	**†8.3**	**†9.7**	**†5.6**	–	**2Y**
	(4.9, 9.8)	(4.8, 9.1)	(3.4, 7.7)	(3.6, 8.2)	(4.3,9.0)	(2.8, 6.4)	(5.2, 13.0)	(7.2, 13.0)	(3.9, 8.0)		
65+	**†1.9**	**†3.8**	**†3.6**	**†3.2**	**†3.1**	**†1.9**	**†3.5**	**†5.5**	**†4.6**	–	–
	(1.0,3.8)	(2.2, 6.4)	(2.2, 5.8)	(1.7,6.2)	(1.9,5.2)	(1.0, 3.8)	(1.7, 7.1)	(3.6, 8.4)	(2.9, 7.2)		
Region											**NSI**
Toronto	**†4.7**	**†7.3**	**†4.8**	**†3.8**	**†5.1**	**†6.6**	**†6.9**	**†8.4**	**†7.7**	–	–
	(3.0, 7.5)	(5.0, 10.7)	(3.0, 7.5)	(2.0, 7.3)	(3.0, 8.5)	(3.8, 11.3)	(3.8, 12.0)	(5.4, 12.8)	(5.0,11.7)		
Central South	**†7.3**	**†4.5**	**†4.6**	**†7.1**	**†8.0**	**†4.9**	**†6.5**	**†11.5**	**†14.5**	**T**	**–**
	(4.4, 11.7)	(2.5, 7.9)	(2.5, 8.4)	(3.6, 13.6)	(4.6,13.6)	(1.9, 11.8)	(2.7, 14.8)	(6.8, 18.8)	(9.1,22.4)		
Central West	**†4.7**	**†7.9**	**†6.5**	**†7.3**	**†8.2**	**†4.0**	**†9.3**	**†10.0**	**†8.1**	–	–
	(2.9, 7.6)	(5.0, 12.5)	(4.0, 10.6)	(4.6, 11.5)	(5.2,12.8)	(2.0, 7.7)	(5.3, 15.8)	(6.6, 14.8)	(4.4,14.4)		
South West	**†6.0**	**†8.6**	**†5.1**	**†6.0**	**†4.3**	**†5.4**	**†4.5**	**†5.8**	**†6.8**	–	–
	(4.0, 9.1)	(6.2, 12.0)	(3.2, 8.0)	(3.8, 9.5)	(2.7,7.0)	(3.3, 8.5)	(2.2, 8.7)	(3.6, 9.3)	(4.3,10.7)		
Central East	**†6.1**	**†5.0**	**†6.5**	**†5.5**	**†5.5**	**†9.7**	**†3.3**	**†5.8**	**†2.2**	–	**2Y**
	(3.4, 10.6)	(2.9, 8.6)	(4.1, 10.1)	(3.2, 9.4)	(3.3,8.9)	(5.8, 15.7)	(1.3, 8.4)	(3.5, 9.6)	(1.1, 4.2)		
East	**†4.5**	**†6.0**	**†5.1**	**†5.4**	**†8.3**	**†3.3**	**†7.4**	**†8.5**	**†6.4**	–	–
	(2.8, 7.2)	(4.0, 9.0)	(3.1, 8.2)	(3.2, 9.0)	(5.5,12.4)	(1.7, 6.1)	(3.8, 14.1)	(5.7, 12.6)	(4.0,10.3)		
North	**†5.4**	**†5.1**	**†4.6**	**†6.3**	**†8.4**	**†6.4**	**†4.4**	**†4.9**	**†6.7**	–	–
	(3.5, 8.3)	(3.6, 7.2)	(2.9, 7.2)	(3.9, 9.9)	(5.6,12.4)	(3.7, 10.6)	(1.8, 9.9)	(2.7, 8.8)	(3.9,11.2)		
Marital Status											**NSI**
Married/Partner	**4.4**	**5.0**	**4.0**	**5.5**	**5.8**	**4.4**	**6.1**	**6.9**	**5.0**	–	–
Previously Married	**†7.4**	**10.6**	**9.2**	**†8.5**	**†8.8**	**†6.8**	**†7.7**	**†14.1**	**†12.1**	–	–
Never Married	**†7.1**	**8.9**	**†7.3**	**†5.4**	**†7.8**	**10.6**	**†6.5**	**†8.1**	**†11.3**	–	–
Education											**NSI**
Less Than High School	**†5.7**	**7.3**	**†5.5**	**†7.9**	**†9.5**	**†7.2**	**†4.4**	**†11.3**	**†9.5**	**T**	**–**
Completed High School	**7.6**	**9.2**	**7.2**	**†6.3**	**8.9**	**†4.8**	**†7.4**	**8.5**	**†5.2**	–	–
Some College or University	**5.7**	**7.4**	**5.0**	**†4.9**	**6.6**	**†7.3**	**6.1**	**8.6**	**10.8**	**T**	**–**
University Degree	**†3.2**	**†3.5**	**†4.2**	**5.5**	**†3.4**	**†5.2**	**6.6**	**†4.8**	**†3.7**	–	–

Notes: [1]Estimates based on a random subsample in 2010 and 2011.
(1) † Estimate suppressed or unstable; [a] 95% confidence interval; all analyses are sample design adjusted.
(2) Trend Analysis: – change not statistically discernible at p<.05; **T** discernible change (p<.05) between 2003-2011; 2Y discernible change (p<.05) between last two estimates.
(3) **NSI**, non-discernible YEAR × FACTOR interaction.
(4) Frequent Mental Distress Days –reporting 14 or more mental distress days during the past 30 days.

Q: *Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?*

Source: The *CAMH Monitor*, Centre for Addiction and Mental Health.

Figure 7.3.1
Percentage Reporting Fair or Poor Mental Health by Gender, Age and Region, Ontarians Aged 18+, 2011
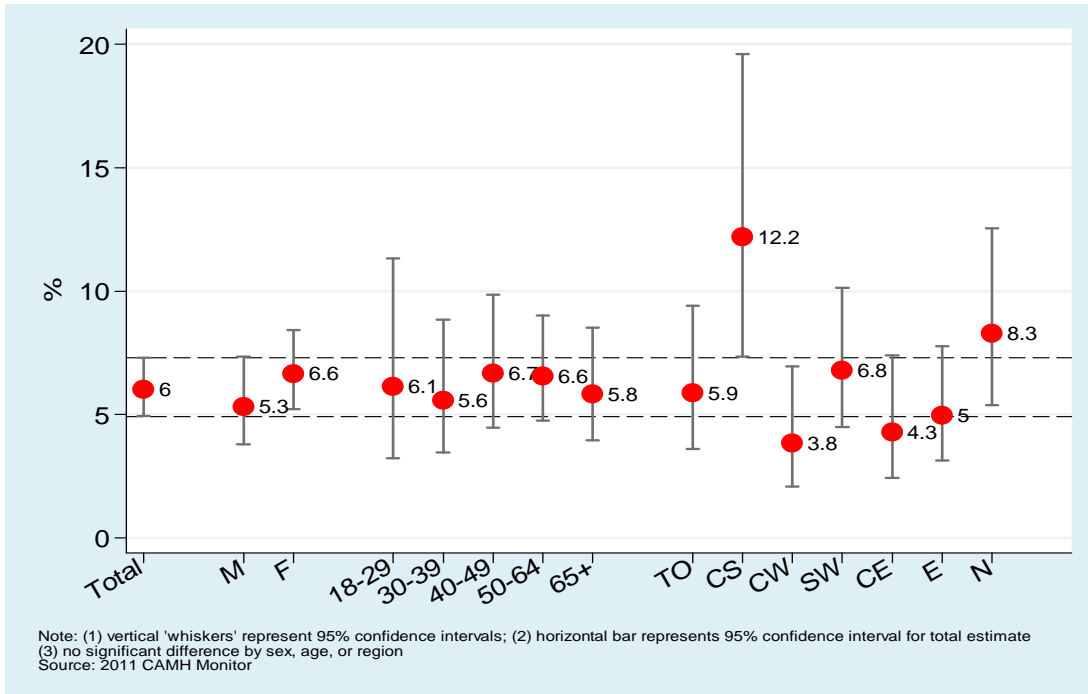

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) no significant difference by sex, age, or region
Source: 2011 CAMH Monitor

Figure 7.3.2
Percentage Reporting Frequent Mental Distress Days (14+) in the Past 30 Days by Gender, Age and Region, Ontarians Aged 18+, 2011

Note: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal bar represents 95% confidence interval for total estimate
(3) significant difference by region (p<.05)
Source: 2011 CAMH Monitor
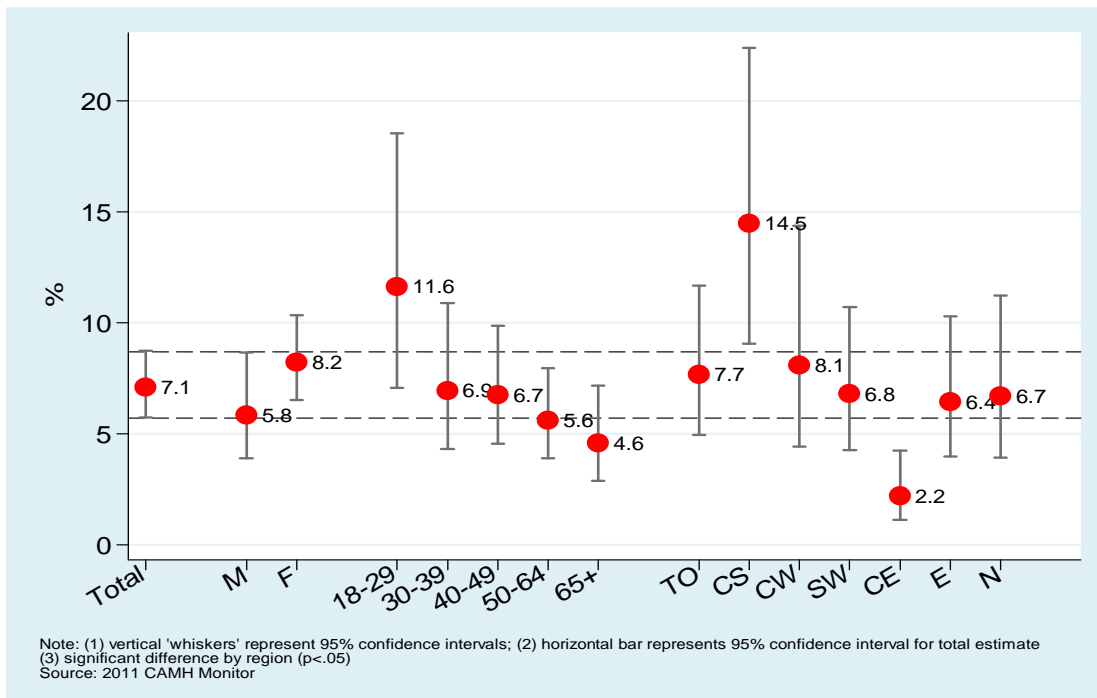
Figure 7.3.3
Percentage Reporting Fair or Poor Mental Health, Ontarians Aged 18+, 2003–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
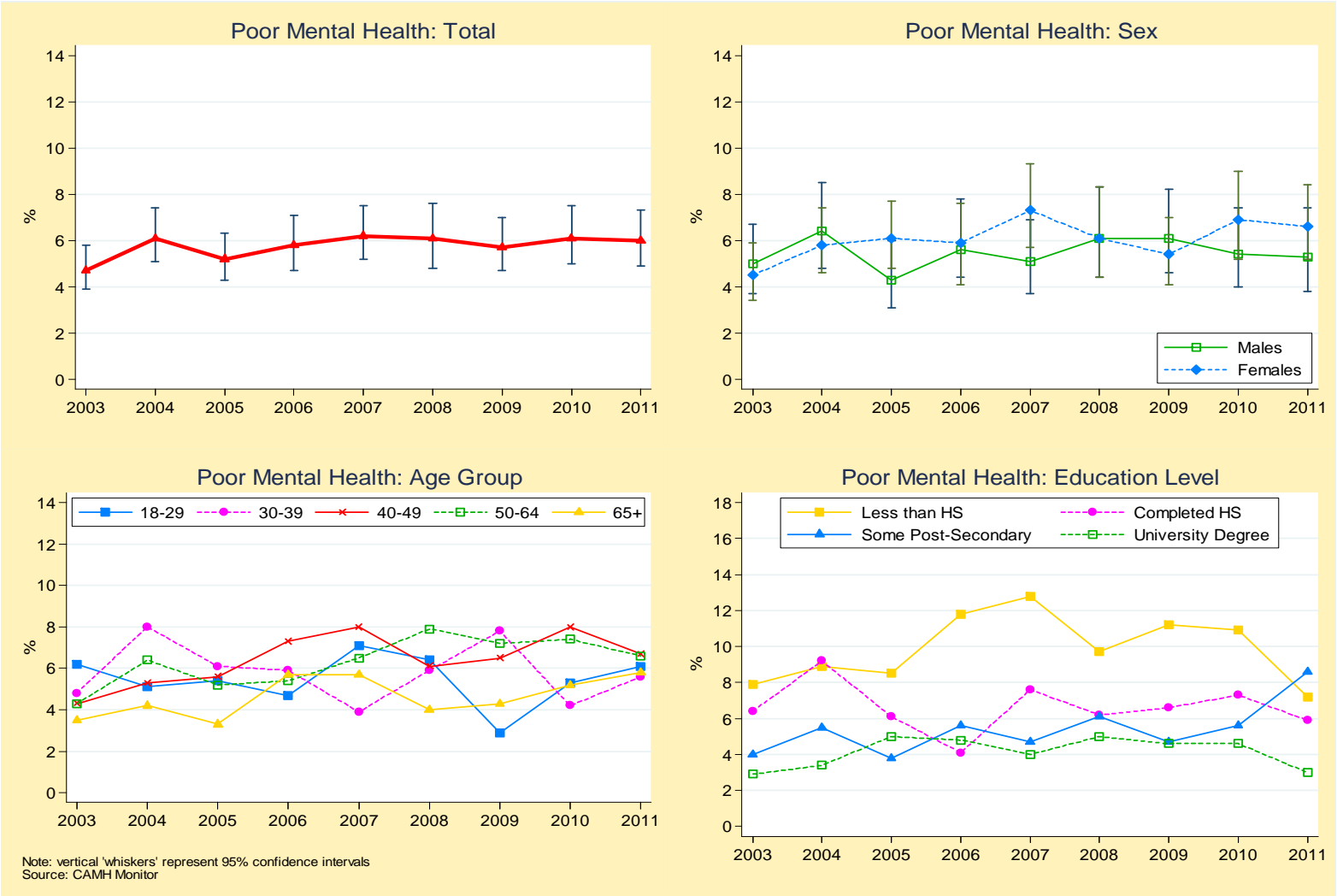
Figure 7.3.4
Percentage Reporting Frequent Mental Distress Days (14+) in the Past 30 Days, Ontarians Aged 18+, 2003–2011

Note: vertical 'whiskers' represent 95% confidence intervals
Source: CAMH Monitor
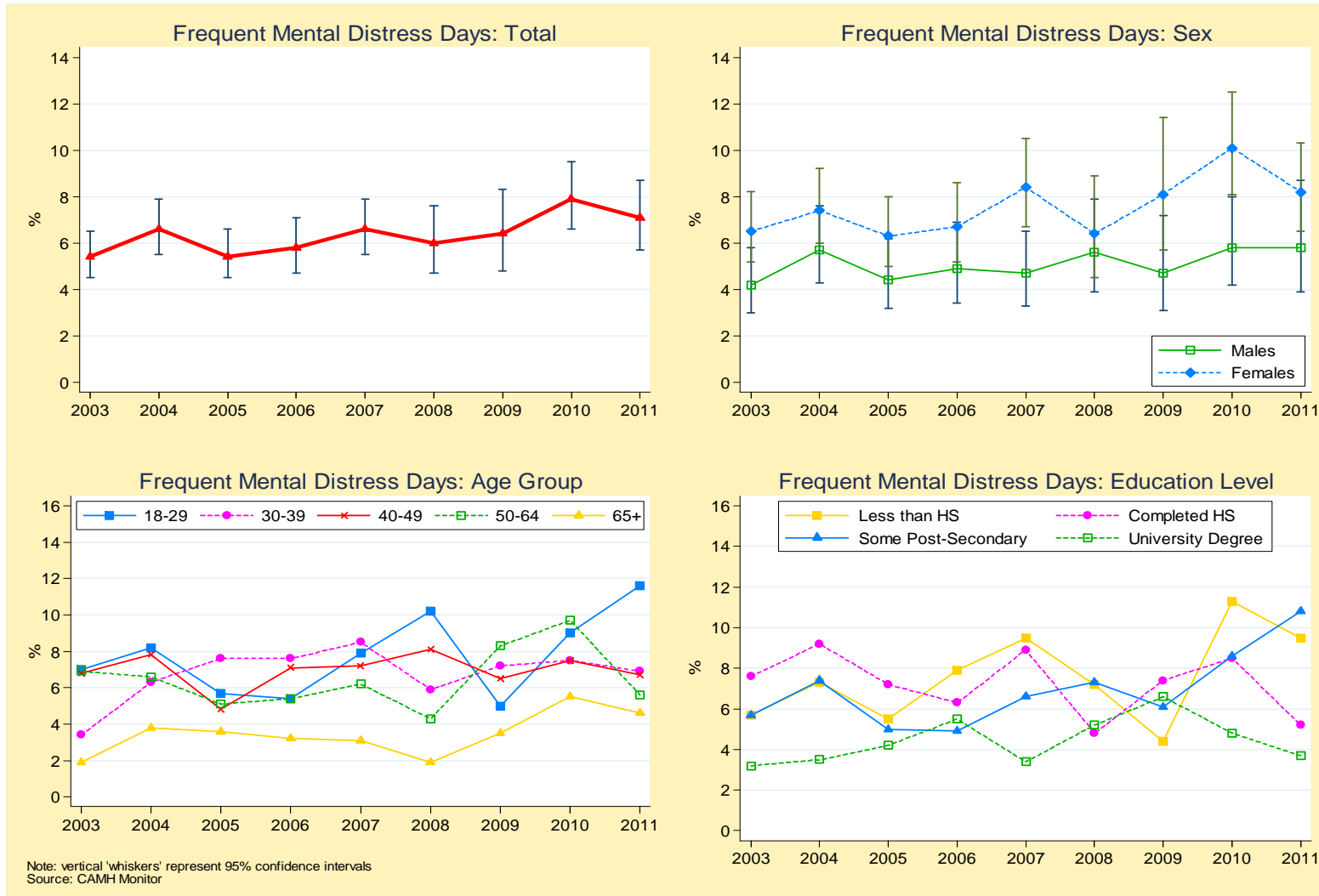
8. REGIONAL LHIN OVERVIEW

Substance Use and Mental Health Indicators among Ontario LHINs

This chapter provides estimates of substance use and mental health indicators according to Ontario's *Local Health Integration Networks* (LHINs).

In 2006, the province of Ontario designated 14 geographic areas as *Local Health Integration Network*s, each to function as health systems that plan, integrate and fund local health services (see http://www.lhins.on.ca).

The 14 LHIN regions are as follows:
> Erie St. Clair;
> South West;
> Waterloo Wellington;
> Hamilton Niagara Haldimand Brant;
> Central West;
> Mississauga Halton;
> Toronto Central;
> Central;
> Central East,
> South East;
> Champlain;
> North Simcoe Muskoka;
> North East and,
> North West
> (see map in this chapter).

The respondents were assigned to LHINs according to the first three digits of their postal code (forward sortation area). Data from the **2008, 2009, 2010 and 2011** surveys were merged in order to obtain sufficient sample sizes per LHIN. The present analyses are based on a total sample size of 9,210 (1,818 in 2008, 1,833 in 2009, 2,797 in 2010, and 2,762 in 2011). About 9% of respondents did not provide a postal code and therefore were excluded from the analyses. All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design.[56]

Combined 2008–2011 Data
…………………………... Tables 8.1- 8.3

Most LHINs (10 of 14) differ from the province on at least one measure. Still, LHIN estimates relative to provincial estimates are not dramatic.

Three LHINs display **below average** estimates for multiple measures. Respondents from the **Central West** report the lowest estimates for three measures: past year drinking; lifetime cannabis use; and driving after drinking. Respondents from the **Central LHIN** report the lowest estimates for binge drinking and hazardous or harmful drinking, and below average estimates for lifetime cannabis use. Respondents from the **Central East** report lower than average estimates for past year drinking and lifetime cannabis use.

Four LHINs display **above average** estimates for multiple measures. **Toronto Central** shows the highest estimates of past year drinking, lifetime and past year

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[56] For each outcome in Table 8.1, a design-based logit regression was estimated in which the LHIN predictor variable (effect coded – i.e., deviation contrasts – to the provincial average) was regressed on the binary response variable. This strategy compares the estimates for respondents in a given LHIN to the provincial average (specifically, the grand mean, the mean of all the LHIN regions).

cannabis use and elevated psychological distress. **Champlain** shows higher than average estimates of past year drinking and driving after drinking. **North East** shows the highest estimates for hazardous or harmful drinking and daily smoking. **North West** shows the highest estimates for exceeding drinking guidelines, binge drinking, and driving after drinking and higher than average estimates for lifetime cannabis use and daily smoking.

Table 8.1 presents estimates for substance use and mental health indicators for each LHIN.

Compared to the **provincial estimate**:

- Past year drinking was discernibly higher in South West, Toronto Central and Champlain, and discernibly lower in the Central West and Central East LHINs (84.5%, 84.6%, 84.4%, 67.8% and 75.2% vs. 80.7%, respectively).

- The percentage exceeding the low-risk drinking guidelines in the past 12 months was discernibly higher in the North West LHIN (27.4% vs. 18.2%).

- The percentage reporting drinking 5 or more drinks on one occasion (binge drinking) at least once a week was discernibly higher in the North West and discernibly lower in the Central LHIN (11.5% and 4.2% vs. 7.6%, respectively).

- The percentage reporting hazardous or harmful drinking was discernibly higher in the North East and discernibly lower in the Central LHIN (18.8% and 9.7% vs. 14.3%, respectively).

- Lifetime cannabis use was discernibly higher in Toronto Central, North Simcoe Muskoka and North West, and discernibly lower in the Central West, Central, and Central East LHINs (54.6%, 50.8%, 47.6%, 31.7%, 36.1%, and 38.1% vs. 41.8 %, respectively).

- Past year driving after drinking was discernibly higher in Waterloo Wellington, Champlain and the North West, and discernibly lower in the Central West LHIN (8.7%, 8.0%, 10.9% and 2.3% vs. 6.2%, respectively).

- Past year daily cigarette smoking was discernibly higher in the North East and North West LHINs (19.1% and 18.3% vs. 13.8%, respectively).

- The percentage reporting elevated psychological distress (GHQ12/3+) during the past few weeks was discernibly higher in Toronto Central and the Central LHIN (19.9% and 19.5% vs. 14.2%).

Tables 8.2 and **8.3** summarize which LHINs are discernibly different from the provincial estimate on various substance use and mental health related indicators.

Table 8.1: Percentage of Ontario Adults (18+) Reporting *Substance Use and Mental Health* Indicators by Ontario LHINs, CAMH Monitor, Combined 4-Year Data, 2008–2011

	Erie St.Clair	South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	Central East	South East	Champlain	North Simcoe Muskoka	North East	North West	ONT
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Total N =	551	992	474	875	276	478	698	688	836	474	1088	370	964	446	9210
Alcohol															
Alcohol use (past 12m)	79.0	↑84.5	83.0	82.7	↓67.8	80.7	↑84.6	78.2	↓75.2	81.1	↑84.4	84.1	83.4	83.1	80.7
	(75.0, 82.5)	(81.9, 86.8)	(78.7, 86.6)	(78.8, 85.6)	(60.9, 73.9)	(76.4, 84.4)	(81.2, 87.5)	(74.3, 81.6)	(71.6, 78.4)	(77.1, 84.6)	(81.8, 86.7)	(79.0, 88.2)	(80.8, 85.7)	(79.2, 86.4)	(79.6, 81.6)
Exceeding low-risk drinking guidelines	16.4	15.6	19.7	17.1	13.1	18.5	19.0	15.6	18.1	21.6	18.5	25.9	21.4	↑27.4	18.2
	(11.9, 22.2)	(12.3, 19.6)	(14.4, 26.4)	(13.3, 21.8)	(7.8, 21.3)	(13.1, 25.4)	(14.4, 24.6)	(11.4, 20.9)	(14.1, 23.0)	(15.3, 29.5)	(14.8, 22.7)	(18.2, 35.4)	(17.4, 26.0)	(20.5, 35.6)	(16.8, 19.7)
Binge drinking weekly	9.6	6.8	8.5	7.8	5.3	8.8	8.1	↓4.2	8.1	11.2	6.3	7.8	9.7	↑11.5	7.6
	(6.9, 13.1)	(5.1, 9.1)	(6.0, 12.0)	(5.8, 10.4)	(2.9, 9.5)	(5.9, 13.1)	(5.8, 11.3)	(2.7, 6.6)	(6.1, 10.6)	(7.8, 15.8)	(4.7, 8.3)	(4.9, 12.3)	(7.6, 12.3)	(8.0, 16.3)	(6.9, 8.4)
Hazardous/Harmful Drinking (AUDIT 8+)	16.2	14.2	12.7	13.4	11.0	15.0	16.2	↓9.7	14.1	18.9	14.7	17.1	↑18.8	17.5	14.3
	(12.7, 20.6)	(11.6, 17.2)	(9.5, 16.7)	(10.8, 16.6)	(6.9, 17.0)	(11.3, 19.7)	(13.0, 19.9)	(7.2, 13.1)	(11.3, 17.4)	(14.5, 24.2)	(12.2, 17.4)	(12.5, 22.9)	(15.9, 22.2)	(13.3, 22.6)	(13.4, 15.3)
Cannabis															
Cannabis use (lifetime)	38.9	43.0	39.0	41.8	↓31.7	38.1	↑54.6	↓36.1	↓38.0	45.6	44.1	↑50.8	45.3	↑47.6	41.8
	(34.2, 43.7)	(39.3, 46.7)	(34.1, 44.2)	(38.1, 45.7)	(25.6, 38.5)	(33.0, 43.3)	(50.2, 58.8)	(31.9, 40.6)	(34.4, 41.0)	(40.4, 51.0)	(40.7, 47.6)	(44.6, 57.0)	(41.7, 48.9)	(42.8, 53.1)	(40.6, 43.1)
Cannabis use (past 12m)	13.7	14.4	11.3	12.4	11.6	14.3	↑18.3	11.8`	13.6	14.2	12.5	16.9	14.3	14.9	13.7
	(10.3, 18.1)	(11.6, 17.8)	(8.2, 15.3)	(9.9, 15.4)	(7.3, 17.8)	(10.6, 19.0)	(15.0, 22.1)	(9.0, 15.4)	(10.9, 16.7)	(10.3, 19.3)	(10.2, 15.3)	(12.3, 22.7)	(11.6, 17.6)	(10.9, 20.2)	(12.7, 14.7)
Driving															
Drink & driving	7.3	4.3	↑8.7	6.0	↓2.3	8.0	5.8	7.2	4.2	5.7	↑8.0	4.9	6.4	↑10.9	6.2
	(5.0, 10.6)	(3.0, 6.2)	(6.5, 12.5)	(4.2, 8.4)	(1.0, 5.5)	(5.3, 12.0)	(3.9, 8.6)	(5.1, 10.1)	(2.8, 6.2)	(3.2, 10.1)	(6.3, 10.4)	(2.5, 9.6)	(4.5, 8.8)	(7.0, 16.6)	(5.5, 6.9)
Cannabis & driving	†	†2.0	†2.8	†1.8	†	†3.6	†2.3	†	†2.3	†	†1.7	†	†2.9	†2.2	2.1
	†	(1.2, 3.6)	(1.3, 5.9)	(1.0, 3.5)	†	(1.8, 7.0)	(1.2, 4.4)	†	(1.2, 4.1)	†	(1.0, 3.1)	†	(1.6, 5.0)	(1.0, 4.9)	(1.7, 2.5)

	Erie St.Clair	South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	Central East	South East	Champlain	North Simcoe Muskoka	North East	North West	ONT
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	
Total N =	551	992	474	875	276	478	698	688	836	474	1088	370	964	446	9210
Tobacco															
Daily Smoking	**16.9**	**12.9**	**14.6**	**14.5**	**11.5**	**12.8**	**11.9**	**12.6**	**14.8**	**16.2**	**11.8**	**12.2**	↑**19.1**	↑**18.3**	**13.8**
	(13.6, 20.9)	(10.6, 15.5)	(11.3, 18.7)	(12.1, 17.3)	(7.9, 16.5)	(9.7, 16.8)	(9.4, 15.0)	(9.9, 15.9)	(12.2, 17.9)	(12.4, 20.9)	(9.8, 14.2)	(8.8, 16.7)	(16.3, 22.2)	(14.7, 22.7)	(12.9, 14.7)
Mental Health															
Elevated Psychological Distress (GHQ12/ 3+)	**16.3**	**11.0**	**13.3**	**12.3**	**12.6**	**15.0**	↑**19.9**	↑**19.5**	**13.2**	**12.0**	**13.1**	**10.1**	**12.6**	**11.5**	**14.2**
	(12.5, 21.0)	(8.8, 13.8)	(9.9, 17.7)	(9.9, 15.3)	(8.6, 18.0)	(11.1, 19.9)	(16.2, 24.2)	(15.6, 24.1)	(10.6, 16.4)	(8.5, 16.6)	(10.7, 16.0)	(6.7, 15.0)	(10.0, 15.7)	(8.2, 16.0)	(13.2, 15.3)

Notes: (1) entries in brackets are 95% confidence intervals; (2) underlined entries are discernibly different from Ontario estimate - higher (↑) or lower (↓); (3) Driving questions were asked only of those with a valid driver's licence (N=7,504); (4) † Estimate suppressed or unstable.

Legend: **Alcohol Use** (percentage consuming alcohol in past 12 m); **Exceeding Low-Risk Drinking Guidelines** (percentage consuming 16 or more drinks per week or 4 or more drinks/day for men; percentage consuming 11 or more drinks per week or 3 or more drinks/day for women); **Binge drinking weekly** (percentage consuming five or more drinks on a single occasion weekly); **Hazardous/Harmful Drinking** (percentage reporting hazardous or harmful drinking based on the AUDIT 8+); **Drinking & Driving** (percentage drinking and driving among licensed drivers); **Cannabis & Driving** (percentage driving after using cannabis among licensed drivers); **Daily Smoking** (percentage smoking cigarettes daily); **Cannabis** (percentage using in lifetime and in past year); **Elevated Psychological Distress** (percentage scoring 3+ on GHQ12).

Table 8.2: Summary of LHIN Substance Use and Mental Health Indicators Discernibly *Lower* than the Province, Ontario Adults (18+), 2008–2011 CAMH Monitor

LHIN	Discernibly Lower than Province
Central West	• Past Year Alcohol Use (67.8% vs. 80.7%) • Cannabis Use Lifetime (31.7% vs. 41.8%) • Drinking and Driving (2.3% vs. 6.2%)
Central	• Binge Drinking Weekly (4.2% vs. 7.6%) • Hazardous/Harmful Drinking (9.7% vs. 14.3%) • Cannabis Use Lifetime (36.1% vs. 41.8%)
Central East	• Past Year Alcohol Use (75.2% vs. 80.7%) • Cannabis Use Lifetime (38.0% vs. 41.8%)

Table 8.3: Summary of LHIN Substance Use and Mental Health Indicators Discernibly *Higher* than the Province, Ontario Adults (18+), 2008–2011 CAMH Monitor

LHIN	Discernibly Higher than Province
South West	• Past Year Alcohol Use (84.5% vs. 80.7%)
Waterloo Wellington	• Drinking and Driving (8.7% vs. 6.2%)
Toronto Central	• Past Year Alcohol Use (84.6% vs. 80.7%) • Cannabis Use Lifetime (54.6% vs. 41.8%) • Cannabis Use Past Year (18.3% vs. 13.7%) • Elevated Psychological Distress (19.9% vs. 14.2%)
Central	• Elevated Psychological Distress (19.5% vs. 14.2%)
Champlain	• Past Year Drinking (84.4% vs. 80.7%) • Drinking and Driving (8.0% vs. 6.2%)
North Simcoe Muskoka	• Cannabis Use Lifetime (50.8% vs. 41.8%)
North East	• Hazardous/Harmful Drinking (18.8% vs. 14.3%) • Daily Smoking (19.1 % vs. 13.8%)
North West	• Exceeding Drinking Guidelines (27.4% vs. 18.2%) • Binge Drinking Weekly (11.5% vs. 7.6%) • Cannabis Use Lifetime (47.6% vs. 41.8%) • Drinking and Driving (10.9% vs. 6.2%) • Daily Smoking (18.3 % vs. 13.8%)

14 LHINs of Ontario
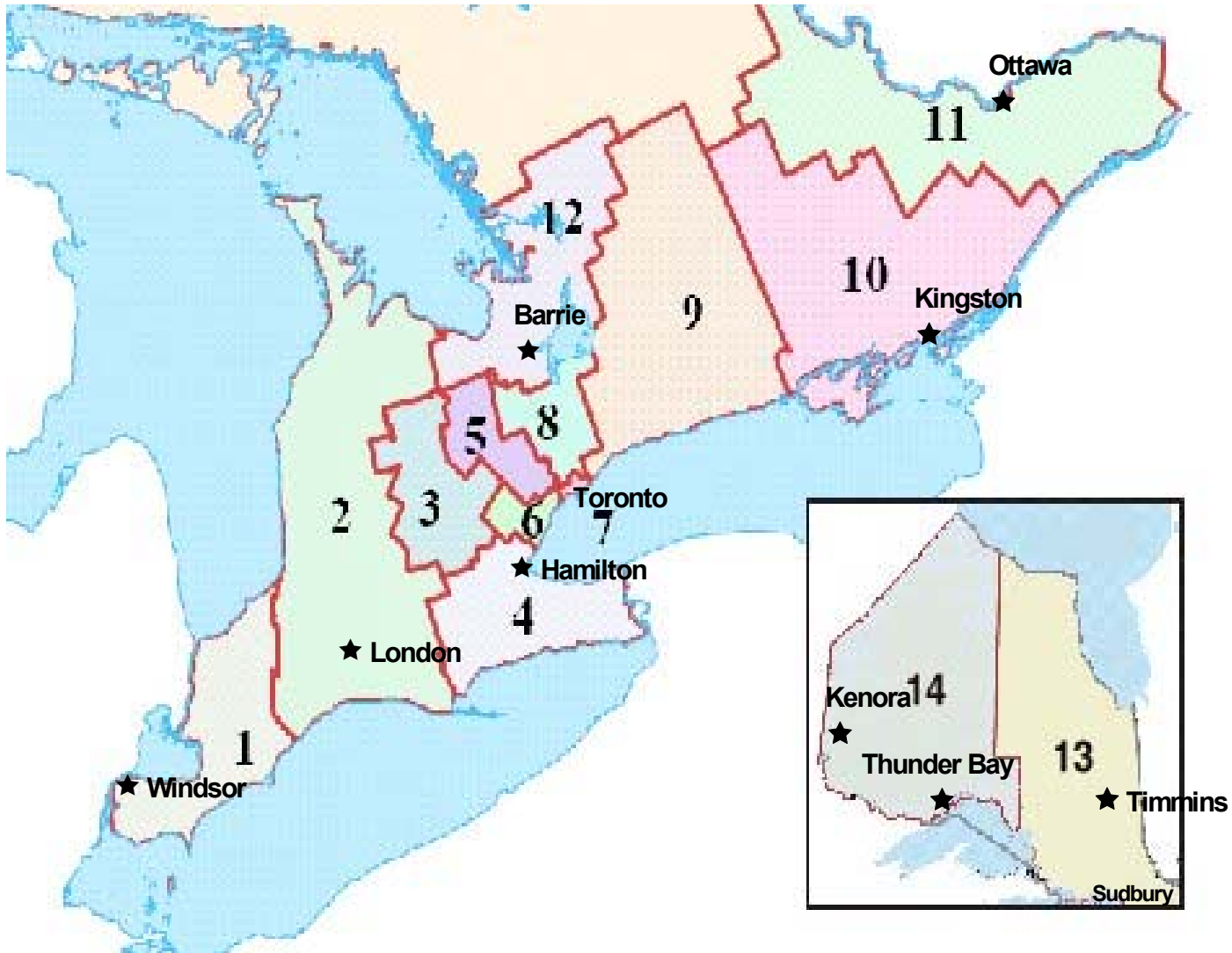
1 Erie St.Clair

2 South West

3 Waterloo Wellington

4 Hamilton Niagara Haldimand Brant

5 Central West

6 Mississauga Halton

7 Toronto Central

8 Central

9 Central East

10 South East

11 Champlain

12 North Simcoe Muskoka

13 North East

14 North West

9. SUMMARY AND DISCUSSION

The Public Health Approach Toward Substance Use and Mental Health

Timely and relevant data on alcohol and other drug use are necessary prerequisites for effective health and social policy and programming, and for the monitoring and evaluation of established health objective targets.

Designating substance use and mental health harms, impairments and disabilities as matters of public health enables health professionals from various disciplines to collaborate on prevention efforts. Preventing harms from occurring, or minimally reducing the risk, is preferable to treating them.

The public health approach involves the following:
- identifying the extent of mental health concerns, alcohol and other drug use, and related impairments and disabilities among the general population;
- identifying its timing and pattern during the life course;
- tracking trends in the prevalence, incidence and harms with time;
- identifying risk and protective factors;
- designing preventive programs and active health promotion programs; and
- disseminating findings to stakeholders and the general public.

Data Limitations

Before discussing our findings, we should remind readers of the limitations of this study. Although sample surveys are the most feasible means to establish and monitor substance use and mental health impairments in the population, those interpreting *CAMH Monitor* (CM) data should consider the following.

Telephone Households. The *CAMH Monitor* is based on a target population of telephone numbers whose subscribers reside in Ontario households. However, Statistics Canada, using their 2010 *Residential Telephone Service Survey* (RTSS), estimated that 12% of Ontario households had no landline telephone, of which 11% had a cell-phone only and **1% were phoneless** (Statistics Canada, 2011).[57] As well, by design, the target sample of the *CAMH Monitor* excludes several high risk groups (see exclusions page 3). Finally, telephone surveys often over-represent those with higher education and thus under-represent those with lower education (Trewin & Lee, 1988).

Interview Barriers. Some interviews could not be completed because respondents could not adequately converse in English, or were too ill or aged.

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[57] This concern regarding coverage and potential bias was reduced in 2000 when the selection was revised to a list-assisted RDD sampling frame, which included the sampling of wireless cell phones and unlisted numbers.

Self-Reports. Our data are based on self-reports, which cannot be readily verified. However, reviews of self-report methods for alcohol and drug use suggest that although surveys tend to underestimate true usage, they are still regarded as the best available means to estimate such individual behaviours in the population (Harrison et al., 1993; Turner et al., 1992). Moreover, although these biases influence alcohol and drug use estimates at a single point in time, they should have less impact on estimating trends as long as under-reporting remains constant. If the latter holds true, estimates of change should remain unbiased and valid (Cochran, 1977).

Repeated Cross-Sectional Survey. The *CAMH Monitor*, a repeated cross-sectional survey, can assess only specific types of change. Because we do not survey the same individuals at different times, we cannot identify *causes* of individual change or the *temporal ordering* of effects (e.g., whether unemployment causes drug use or whether drug use causes unemployment).

Despite these limitations, monitoring studies excel at identifying the extent and change of various health behaviours and measures in the general population. Surveillance studies identify which groups of the population are at the greatest risk for impaired health measures; identify areas requiring more research; and identify trends that may have implications for future service and programming needs.

2011 Subgroup Findings

In **Table 9.1**, we summarize statistically discernible associations among various respondent characteristics and substance use and mental health indicators. Given substantial age, gender and other social and socio-economic differences that occur in illness and health generally (D'Arcy, 1998), it should not be surprising that many of these same factors are associated with alcohol use, other drug use and mental health. As seen, **gender, age, marital status, education and income show important associations** with rates of substance use and mental health indicators.

Gender was discernibly associated with *13 of the 20* measures presented in **Table 9.1**. Men were more likely than women to report alcohol and other drug use, whereas women were more likely to report use of antidepression medication.

Age of respondent was discernibly associated with *15 of the 20* measures. In most cases, use declined with age or was highest among 18 to 29 year olds. One exception was **daily drinking**, which **increased with age**, culminating in those aged 65 and older having the highest estimate. The most common pattern occurs for 7 indicators (exceeding the low-risk drinking guidelines, weekly binge drinking, drink hazardously or harmfully, report symptoms of alcohol dependence, use cannabis during the past year, report cannabis use problems, report cannabis use and driving, elevated psychological distress) and shows the **highest levels** among young adults **aged 18 to 29**. A final contrasting pattern shows that use of **antianxiety** and **antidepressant** medication is highest among those **aged 40 to 49.**

Education level was discernibly associated with *8 of the 20* measures. The most common education-related pattern noted was that substance use declined with increasing education. Cigarette smoking (current and daily) was highest among those who did not graduate from high school. Four indicators (weekly binge drinking, symptoms of alcohol dependence, frequent mental distress days and use of antianxiety medication) decreased with education, and, lifetime cocaine use and self-rated poor mental health were lowest among those who graduated university.

Public Health Region was associated with 3 *of the 20* measures. Despite these differences, there was no strong dominant pattern in regional differences. Drinking hazardously or harmfully was above the provincial estimate in the South West region, reporting frequent mental distress days was highest in the Central-South, and use of antidepression medication was highest in the East. Although the overall association between several substance use indicators and region did not reach our criteria of statistical discernibility, there are some regional contrasts that are worthy of mention. Compared to the provincial estimate, past year drinking was lowest in Toronto, residents in the Central South had the lowest rate of exceeding the low-riskdrinking guidelines, and weekly binge drinking and driving after drinking was highest in the South West. In addition, current cigarette smoking and daily smoking were above the provincial estimate in the North and in the Central South.

Marital status was associated with *12 of 20* measures. In all cases, substance use was higher among never married or previously married (divorced or widowed) respondents.
Those previously married reported the highest estimates of weekly binge

drinking, hazardous/harmful drinking; current and daily smoking and impaired mental health measures. Those never married reported higher estimates of symptoms of alcohol dependence, cannabis use, driving after drinking and poor mental health.

Income was associated with *9 of 20* measures, of which five increased with income (past year drinking; hazardous/harmful drinking; symptoms of alcohol dependence; past year cannabis use; and driving after drinking). The remaining four indicators (smoking, lifetime cocaine use, and use of antianxiety and antidepression medication) decreased with income.

Short Term Trends, 1996-2011

As seen in **Table 9.2**, **changes between 2010 and 2011** are not dramatic. Of the 17 measures presented, two measures show evidence of total sample change. **Past year alcohol use** increased discernibly between 2010 and 2011, from 78.0% to 81.2%, especially among **women**, from 74.6% to 78.9%. **Non-medical use of prescription opioid pain relievers** declined discernibly, from 7.7% in 2010 to 4.0% in 2011. Another indicator, **driving after cannabis use**, is also worthy of attention. Although, the percentage of Ontario adult licensed drivers reporting **driving within one hour of consuming cannabis** was stable between 2010 and in 2011, there was a statistically discernible **increase** among young adults **aged 18 to 29**, from 3.2% in 2010 to 8.6% in 2011.

There are, however, several findings that suggest the emergence of change. First, some important changes are seen in **alcohol use**. These changes involve primarily binge drinking, daily drinking, the average number of drinks consumed

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per week and to a lesser extent, hazardous/harmful drinking.

Between 2006 and 2011, **binge drinking declined** from 12.3% in 2006 to 7.4% in 2011 for the total sample and from 15.9% to 9.1% among drinkers. This decline was evident among both men and women. Among **men** it declined from 18.8% in 2006 to 12.4% in 2011 and among **women**, from 6.2% in 2006 to 2.7% in 2011. Such a **decline in binge drinking** has public health significance because this pattern of drinking has been causally linked to various disease measures (one, most notably being ischaemic heart disease) and both intentional and unintentional injury (Jürgen Rehm et al., 2010).

Short term changes point to the complexity of trends in alcohol consumption. Between 2005 and 2011, an **increase in alcohol use** was especially evident among **women**. Past year drinking among women increased from 72.4% in 2005 to 78.9% in 2011.

A similar increase also occurred for daily drinking and the average number of drinks consumed per week. In the past decade, there was a discernible **increase** in **daily drinking** among drinkers, from 5.3% in 2002 to 8.6% in 2011. Discernible increases were found among both **male** drinkers (from 7.1% in 2005 to 11.6% in 2011), and **female** drinkers (from a low of 2.6% in 2001 to 5.7% in 2011).

Although the **average number of standard drinks** consumed per week among past year drinkers did not change discernibly between 2010 and 2011, there was a **discernible increase** in the average number of drinks consumed weekly between 1996 and 2011 (from 3.3 in 1996 to 4.7 in 2011).

This increase was evident among both men and women. The number of drinks consumed among **male** drinkers increased from 4.8 drinks in 1996 to 6.7 drinks in 2011, and among **female** drinkers, from 1.9 drinks in 1996 to 2.8 drinks in 2011.

Another measure worthy of attention is **hazardous or harmful drinking** (based on the AUDIT screener). Although this type of drinking remained stable between 2010 and 2011 among the total sample (14.8% vs. 14.4%), and for all demographic subgroups, there were discernible **non-linear changes** among subgroups between 1998 and 2011. There was a discernible **increase** in hazardous/harmful drinking among **women,** from 4.8% in 1998 to 7.9% in 2011. There were also discernible non-linear **increases** among **18 to 29** year olds (from 22.4% in 2002 to 31.8% in 2010), and among **30 to 39** year olds (from 7.1% in 2005 to 14.7% in 2011).

The other potential change of note is the **decline in current smoking**. Although prevalence of current cigarette smoking in 2011 (15.4%) did not change discernibly from 2010 (17.6%), it is **discernibly lower** than the 18.6% found in 2009.

Since 1996, current cigarette smoking has **discernibly declined**, from 26.8% in 1996 to 15.4% in 2011. There were also widespread discernible declines since 1996 for all gender, age, region, marital status and education subgroups. Further, **daily smoking** posted a two-fold overall decline, from 23.0% in 1996 to 11.5% in 2011.

A short term change is evident for **cannabis use**. Past year cannabis use has been **steadily increasing** from 8.7% in 1996 to 13.4% in 2011. This increase is evident among both **men** (from 11.4% in 1997 to 16.3 in 2011), and **women** (from 5.3% in 1996 to 10.8% in 2011).

Increases in cannabis use were evident for all region, marital status and education subgroups.

Discernible increases in cannabis use were found for all age groups, but especially among **18 to 29 year olds** (from 18.3% in 1996 to 33.5% in 2011). This increase in cannabis use among young adults corresponds to recent increases evident in cannabis use among Ontario 12th-graders (Adlaf et al., 2000; Paglia-Boak, Adlaf, & Mann, 2011).

Another important change related to cannabis use, however, has been the **aging of cannabis users**. Between 1996 and 2011, the percentage of cannabis users aged 50 years and older increased from 2% to 16%.

Between 1996 and 2011, the prevalence of **driving after drinking** among drivers has displayed a steady **linear decline** from 13.1% to below 6% in the past two years.

Although **driving after cannabis use** remained **stable** between 2002 and 2011 (2.9% vs. 2.4%), a discernible non-linear trend was found among those **aged 18 to 29**. Driving after consuming cannabis among this age group increased from 7.2% in 2002 to 11.9% in 2006, then declined to 2.8% in 2009 and then increased three-fold to 8.6% in 2011.

Since 1997, use of **antianxiety medication** among the total sample has displayed a discernible **linear increase** from 4.5% in 1999 to 7.1% in 2011, especially among **women** (from 5.6% to 8.6%) and among **18 to 29 year olds** (from 1.7% to 5.8%).

Use of antidepressants also **increased** discernibly, from 3.6% in 1999 to 7.2% in 2010 and has remained steady at this level in 2011. Discernible subgroup increases were also evident for all

gender, region, marital status and education groups. Increases were strongest among the **youngest respondents**. Between 1997 and 2011, use of antidepressants increased three-fold among **18 to 29 year olds** from 2.0% to 7.2%.

There was also a discernible **increase** overall in **reporting frequent mental distress days** in the past 30 days. Between 2003 and 2011, it increased from 5.4% in 2003 to 7.9% in 2010 and remained above 7% in 2011.

Long Term, 35-Year Trends, 1977–2011

Two long term changes in substance use are particularly noteworthy.

The first notable long term trend is the **increase in past year cannabis use** and the **aging of cannabis users**. Past year cannabis use increased from 8.1% in 1977 to 13.4% in 2011.

In 1977, cannabis use was the domain of young adults, with only one-in-seven users aged 30 to 49 years. Current estimates, however, show that, on average, **cannabis users in 2011 were older** than their counterparts in 1977 (average age of 33.8 years vs. 25.6 years, respectively). In 1977, 82% of cannabis users were aged 18-29 compared to only 49% in 2011. In contrast, the proportion of past year cannabis users aged 30 to 49 years **more than doubled** from 15% in 1977 to 36% in 2011, and the proportion of past year cannabis users aged 50 and older **increased 5-fold**, from 3% to 16% during the same period.

The second notable long term trend is the **decline in daily drinking** since 1977. Although the percentage drinking alcohol has varied between 77% and 87%, **fewer drinkers are drinking daily** compared to decades ago.

The percentage of past year drinkers who reported drinking daily decreased steadily from 13.4% in 1977 to 5.9% in 1995, and remained around 6% until 2006.   During the past five years, however, this trend has reversed, daily drinking increasing discernibly from 5.9% in 2006 to 8.6% in 2011. This non-linear trend was especially prominent among **male drinkers**, whose daily drinking dropped from 19.5% in 1977 to 7.1% in 2005 and then increased to 11.6% in 2011.

Some Encouraging Findings

The following findings should be considered as encouraging.

Cigarettes: The majority of Ontario adults (84.6%) do not smoke cigarettes. Current cigarette smoking has discernibly declined since 1996, as has daily smoking (from 23.0% in 1977 to 11.5% in 2011, the lowest on record).

Alcohol: Although the majority of Ontario adults (81.2%) are past year drinkers, most do not drink excessively. Indeed, the survey noted that 90% of drinkers do not binge drink weekly, 88% of drinkers do not exceed recommended drinking guidelines and 82% do not exceed the AUDIT threshold for hazardous or harmful drinking. There were also discernible declines in binge drinking (defined as consuming five or more drinks on a single occasion weekly) between 2006 (12.3%) and 2011 (7.4%). This decline was generally robust, occurring among several subgroups, but was especially evident among men (from 20.7% in 2001 to 12.4% in 2011).

Cannabis: Although the percentage that used cannabis in the past year has increased over the long term, use is generally infrequent. For example, among lifetime users, only 18% reported

using cannabis once a month or more frequently.

Driving After Drinking: Between 1996 and 2011, driving after drinking among drivers declined by more than half (from 13.1% to 5.8%). Moreover, this decline occurred among several subgroups, including men (whose estimate fell from 21.2% to 10.6%). These declines occurred in a period when the province introduced several measures designed to reduce impaired driving rates, including increased sanctions for 'warn-range' drivers and measures to increase the use of ignition interlock devices by convicted offenders.

Prescription Opioid Pain Relievers: The proportion of the Ontario adult population who report non-medical use of prescription opioid pain relievers dropped significantly from 7.7% in 2010 to 4.0% in 2011. This decline occurred during a period when provincial programs and policies to reduce non-medical use of these substances were introduced.

Some Public Health Concerns

There are several public health concerns – findings that point to potential public health harms that require close scrutiny and monitoring – raised by these *CAMH Monitor* findings.

Cigarettes: As one of the health targets set by Cancer Care Ontario (CCO) (Cancer 2020 Steering Committee, 2003), *adult smoking should be reduced to 5% by 2020*. Despite the fact that the rate of cigarette smoking among Ontario adults has declined substantially, the current rate of 15.4% is 3 times higher than the CCO target of 5% and it seems unlikely that this target will be met. The health target developed by American health professionals, "Healthy People 2020" (U.S. Department of Health and Human Services, 2000) set a target of

12% of adults who are current smokers in the year 2010, a target which was retained for the year 2020.

Cannabis: Past year use of cannabis increased discernibly from 8.7% in 1996 to 13.4% in 2011, for both **men** and **women** and among **all age groups**. An almost two-fold increase in cannabis use occurred among **18 to 29 year olds**, from 18.3% in 1996 to 33.5% in 2011.

Although the "Healthy People 2020" does not provide a specific target for cannabis use, it does provide a target of 7.1% for any past month illicit drug use, for which past month cannabis use would still serve a good approximation because virtually all illicit drug users also use cannabis. The *CAMH Monitor* estimate for past month cannabis use was **7.4%** (95% CI: 5.8% to 9.3%), an estimate within the confidence interval of the HP2020 target.

Although cannabis use is generally infrequent (47% of past year users report use less than once a month), the percentage of users reporting daily use is 15.2%. Such daily use may increase the likelihood of respiratory illnesses (Calabria et al., 2010). In addition, the potential medical complications related to the **aging of cannabis users** and especially the increase in past year cannabis use among middle-aged and older adults is worthy of further study. Indeed, some research in the U.S. suggests that the aging cohort of cannabis users will place increasing demands on substance use treatment (Gfroerer, Wright, & Kopstein, 1997).

Alcohol: Although the percentage who drink alcohol has not changed dramatically, two indicators are worthy of attention. First, despite recent declines, weekly **binge drinking still remains at an elevated level** (7.4%) and it is **highest** among young adults **aged 18 to 29** (18.9%). To compare our

binge drinking estimate to existing targets such as the HP2020, we need to employ a question that directly measures past month binge drinking.[58] This variant question provides an estimate of **20.3%** (95% CI: 18.3% to 22.3%), an estimate and a confidence interval above the 17% HP2020 target.

Second, a sizeable percentage of drinkers consume alcohol at levels **exceeding recommended guidelines**. Nearly one-in-five drinkers (18%) report exceeding recommended low-risk drinking guidelines. There was also a discernible increase in the **average number of drinks consumed weekly**, from 3.3 in 1996 to 4.7 in 2011, and increases were also found in **daily drinking** among past year drinkers, from 5.3% in 2002 to 8.6% in 2011. This increase was especially prominent among **women** (from 2.6% in 2001 to 5.7% in 2011). Such an increase in use among women is of concern given the harmful effects of high levels of alcohol use.

Driving after cannabis use: Another measure showing upward movement among young adults is **driving after cannabis use.** While rates of driving after drinking have been declining, rates of driving after using cannabis remain unchanged, and the rate increased from 2.8% in 2009 to 8.6% in 2011 among those **aged 18 to 29.** Among young adults this rate exceeds rates of driving after drinking.

Prescription Opioid Pain Relievers: In spite of a decline in use, 4% of the Ontario adult population (365,000) report **non-medical use** of prescription opioid pain relievers in 2011. These are powerful and addictive drugs that have

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[58] The past month question read as follows: "*Now what about the past 30 days, on about how many of these days did you have five or more drinks on the same occasion*?"

been linked to increased use of illicit opiates.

One important substantive issue relates to the prevention importance of the measurement of alcohol harms and problems versus disorders. It is evident that **indicators of alcohol harms should not be restricted to alcohol disorders such as alcohol dependence or abuse**. Indeed, an array of alcohol harms is experienced by those who *do not* meet the more stringent psychiatric criteria of alcohol disorder. For example, the 2002 *Canadian Community Health Survey* found that 2.6% of Canadians (2.1% of Ontarians) aged 15 or older met the psychiatric criteria for alcohol dependence (Statistics Canada, 2002). Yet, the 2011 *CAMH Monitor* found 18% were drinking at risky levels, and 7% reported weekly binge drinking. From a prevention standpoint, these latter behaviours are of great concern if our goal is to *prevent* and *reduce* alcohol-related harms in the population.

It is also clear that **alcohol and tobacco cause greater harms to individuals, communities and society than do illicit drugs**. We can never ignore the tragedy of human suffering caused by illegal drug use; but we must put these numbers into a broader context. If public concern and health policy are to be based on the harm caused to the greatest number of individuals, then clearly, alcohol and tobacco each outweigh the harms caused by illegal drugs.

The *CAMH Monitor* shows that, among some nine million adult Ontarians, about 7.4% (691,700) binge drink weekly, 14.4% (1.2 million) are consuming alcohol at hazardous or harmful levels, 18.4% (1.8 million) are drinking at risky levels and 15.4% (1.5 million) are current smokers. In contrast, only 5.6% (514,000) report moderate or high risk of harms due to cannabis use.

The dominance of alcohol and tobacco use is also evident in **economic cost studies** (Rehm et al., 2006; Rehm et al., 2007; Single et al., 2000). The most recent study partnered by the *Canadian Centre on Substance Abuse* and *CAMH* found that alcohol, tobacco and illicit drug use represent a major source of death and illness in Canada (Rehm et al., 2006). In 2002, these substances together accounted for 21% of total deaths, 25% of total potential years of life lost and 19.4% of total admissions to hospital for any cause. Although the deaths related to illicit drug use increased discernibly between 1992 and 2002, **illicit drugs represented only 0.8% of all deaths and only 2.0% of total years of life lost** through any cause in 2002. Thus, we must recognize that although illegal drugs cause significant harms, in both relative and absolute terms, tobacco and alcohol cause much more.

Finally, our findings also speak to the issue of **mental well-being** among Ontario adults. A sizeable percentage experience symptoms that, although may not qualify for a clinical psychiatric disorder, would nonetheless reduce their ability to function productively in their emotional, social, and occupational worlds. Indeed, we found that about one-in-seven (15%) report **elevated psychological distress**. As well, one-in-seventeen (6%) rated their **mental health as poor** and the percentage of Ontario adults reporting past year use of **prescribed depression medication** doubled since 1999, from 3.6% to 7.1% in 2011. These findings are particularly important given that **depression is one of the leading contributors to total burden of disease**, (Murray & Lopez, 1996; Üstün, 1999) and to economic burden in Canada (Stephens & Joubert, 2001). The *World Health Organization* (WHO, 2008, 2012) reports that depression is the leading cause of

disability in the world and the leading cause of disease burden in high- and middle-income countries. In Canada, recognition of the burden of mental disorders has led to the development of the country's first mental health strategy to improve mental health (Mental Health Commission of Canada, 2012).

Mental illness and addiction together exert an enormous toll on society. Recently, Ratnasingham, Cairney, Rehm, Manson, and Kurdyak (2012) estimated that the overall burden of mental illness and addiction in Ontario is 1.5 times higher than all cancers and seven times higher than all infectious diseases. Timely and relevant data on alcohol and other drug use and mental health are prerequisites for effective health and social policy and prevention programming. Monitoring such health-risk behaviours and measures provides valuable information about determinants, trends, the co-occurrences of these risk behaviours, and as well provincial and cross-national differences. Such data also enable us to evaluate the impact of changes in policies, educational programs and legislation, and whether health targets are achieved.

The *CAMH Monitor* is an exceptional vehicle to monitor matters of addiction and mental health in Ontario. Its flexible design allows for a wealth of analytic investigation, including examples such as the study of rare groups (e.g., single-parents; unemployed; drinking drivers; daily cannabis users); the statistical analysis of trends (including secular or period and cohort trends); and data in naturally existing nested structures (i.e., respondents nested in households; households nested in communities; and communities nested in counties). Such investigations are well within the scope of the *CAMH Monitor* given its ability to cumulate periodic surveys across time

or space (Kish, 1999; Korn & Graubard, 1999). The multi-purpose scope of the *CAMH Monitor* has demonstrated its utility, not only for addressing public aspects of addiction and mental health, but also for promoting local, provincial, national, and international investigations.

Table 9.1 Summary Findings: Statistically Discernible Associations for *Past Year Substance Use and Mental Health Indicators* by Demographic Characteristics, Ontarians Aged 18+, **CAMH Monitor, 2011**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	ALCOHOL							TOBACCO (cigarettes)		OTHER DRUGS				DRUGS & DRIVING		MENTAL HEALTH				
	Past Yr Drink	Daily Drink	Avg No. Drinks Week†	Exceed Drink Guidelines	Weekly Binge Drink	Hazard Drink (AUDIT 8+)	Alcohol Depend (AUDIT)	Current Smoking	Daily Smoking	Cannab 12m	Cannab Problem (ASSIST-CIS)	Cocaine (Life)	Opioid Pain Reliever (Non-med)	Drink & Drive	Cannab & Drive	GHQ3+	Poor mental health	Freq mental distress days	Anx 12M	Dep 12M
Gender	—	Men higher	Men higher	Men higher	Men higher	Men higher	Men higher	Men higher	—	Men higher	Men higher	Men higher	Men higher	Men higher	—	—	—	—	—	Women higher
Age	—	Increase 65+ highest	—	Decrease 65+ lowest	18-29 highest	Decrease 18-29 highest	Decrease 18-29 highest	65+ lowest	65+ lowest	Decrease 18-29 highest	18-29 highest	50+ lowest	50+ lowest	—	18-29 highest	18-29 highest	—	—	40-49 highest	40-49 highest
Marital Status	—	—	—	—	Prev. married higher	Prev. married higher	Prev. & never married higher	Prev. married highest	Prev. married highest	Prev. & never married higher	—	—	—	Prev. & never married higher	—	Prev. married highest	Never married higher	Prev. married highest	Prev. married highest	Prev. married highest
Public Health Region	—	—	—	—	—	S-W highest	—	—	—	—	—	—	—	—	—	—	—	C-S highest; C-E lowest	—	East higher
Education	—	—	—	—	Decrease	—	Decrease	< HS highest	< HS highest	—	—	Univ degree lowest	—	—	—	—	Univ degree lowest	Decrease	Decrease	—
Household Income	$80,000 highest	—	—	—	—	$80,000 highest	$80,000 highest	$80,000 & not stated lower	Not stated lower	Increase	—	<$30,000 highest	—	Increase $80,000 highest	—	—	—	—	Decrease	Decrease

Notes: ─ No discernible difference; † Unadjusted associations; all other associations are adjusted for gender, age, region, marital status, education, and income.
Legend:
Past Yr Drink (percentage drinking in past year); **Daily Drink** (percentage drinking daily); **Avg. Nr. Drinks Weekly** (average number of drinks consumed weekly among drinkers); **Exceeding Drinking Guidelines** (percentage exceeding a weekly consumption of 16 drinks or more for men or 11 or more drinks for women, or exceeding a daily consumption of two drinks for women or three drinks for men); **Weekly Binge Drinking** (percentage consuming five or more drinks on a single occasion weekly); **Hazard Drink** (percentage reporting hazardous or harmful drinking based on the AUDIT 8+); **Alcohol Depend** (percentage reporting one or more (of 3) AUDIT dependence indicators); **Current Smoking** (percentage currently smoking cigarettes); **Daily Smoking** (percentage smoking cigarettes daily); **Cannabis** (percentage reporting using cannabis past year); **Cannabis problems** (percentage scoring 4+ on the WHO-ASSIST-CIS**); Cocaine** (percentage reporting using cocaine in lifetime; data available for 2008 only); **Opioid Pain Relievers** (percentage reporting using prescription opioid pain relievers for non-medical purposes); **Drink & Drive** (percentage drinking and driving among drivers); **Cannabis & Driving** (percentage driving after using cannabis among drivers); **GHQ3+** (Psychological Distress - percent scoring 3+ on GHQ12); **Poor Mental Health** (percentage reporting fair or poor mental health in general); **Frequent Mental Distress Days** (percent reporting 14 or more mental distress days during the past 30 days); **Anx 12M** (percentage using antianxiety medication past year); **Dep 12M** (percentage using antidepressant medication past year).

Table 9.2   Summary of *Changes in Substance Use and Mental Health Indicators*, CAMH Monitor, **1977- 2011**

Indicator	2010 vs. 2011	Trends: 1996-2011	Trends: 1977-2011
		ALCOHOL	
Past year drinking	• **Increased discernibly** overall, from 78.0% to 81.2% • There were three subgroup increases during this period: among **women**, from 74.6% to 78.9%, among residents of the **Central West**, from 76.0% to 83.4%, and among **married** respondents, from 78.7% to 81.8%.	• Overall discernible **non-linear variation**, with a low in 1998 at 77.1% and a high of 81.5% in 2007. • Discernible **increase** for **women** (from 72.4% in 2005 to 78.9% in 2011), and those aged **65 years and older** (from 58.8% in 1997 to 71.8% in 2011). • Non-linear variation in past year drinking among respondents living in the **North,** married and **previously married** respondents and those who graduated **high school**.	• Discernible linear and non-linear trends; peaks in the mid-1980s and again in the early 1990s.
Daily drinking (among past year drinkers)	• **Stable** among total sample (8.7% vs. 8.6%). • Stable for all subgroups.	• Overall discernible **increase** in daily drinking among drinkers, from 5.3% in 2002 to 8.6% in 2011. • Discernible **increase** in daily drinking among drinking **men** (from 7.1% in 2005 to 11.6% in 2011), drinking **women** (from a low of 2.6% in 2001 to 5.7% in 2011), and a non-linear uptrend among **18 to 29** year olds (from 1.3% in 2000 to 7.2% in 2009). There were also discernible increases for residents of the **East**, for **married** respondents, for those **not graduating high school** and for **university** graduates.	• Discernible linear and non-linear trends • Overall **decline** from 13.4% in 1977 to 7.3% in 2005; • Trend has reversed in the past five years **increasing** discernibly from **5.9%** in **2006** to **8.6%** in **2011**. • This non-linear trending was especially prominent among drinking **men**, whose daily drinking dropped from 19.5% in 1977 to 7.1% in 2005 and then increased to 11.6% in 2011.
Average number of drinks per week (among past year drinkers)	• **Stable** among total sample (4.6 vs. 4.7) • No subgroup changes.	• Overall discernible **increase** (from 3.3 in 1996 to 4.7 in 2011). • Discernible **increases** among drinking **men** (from 4.8 in 1996 to 6.7 in 2011), among drinking **women** (from 1.9 in 1996 to 2.8 in 2011) and drinkers who **did not graduate** high school (from 3.4 in 1996 to 9.8 in 2009).	• Not available.
Percent exceeding the low-riskdrinking guidelines (LRDG)	• Available 2009 vs. 2011. • **Stable** among total sample (17.8 vs. 18.4) • Three discernible subgroup **declines** during	• **Stable** among total. • Discernible non-linear variation among residents of the	• Not available.

Indicator	2010 vs. 2011	Trends: 1996-2011	Trends: 1977-2011
	this period: among respondents aged **65 and older** (from 9.7% in 2009 to 4.0% in 2011), among residents of the **Central South** (from 21.5% in 2009 to 5.2% in 2011) and among respondents **without high school** completion (from 21.5% in 2009 to 8.8% in 2011).	**South West** (from 17.8% in 2003 to 27.2% in 2006 and to 13.6% in 2009), the **East** (from 17.1% in 2003 to 25.1% in 2006 and to 15.0% in 2011) and among respondents with some **postsecondary education or university degree** (from 19.1% in 2003 to 27.1% in 2005 and to 18.8% in 2008).	
Weekly binge drinking (5+ drinks/ occasion weekly)	• **Stable** among total sample (7.5% vs. 7.4%). • Rates were **stable since 2009** for most subgroups. There was only one discernible subgroup increase among previously married respondents, from 4.4% in 2010 to 8.9% in 2011.	• Overall **stable** between 1996 and 2007, varying between 10.5% and 12.7% among the total sample, and between 13.1% and 16.5% among past year drinkers • Discernible **decline** between 2007 and 2011, from 11.2% in 2007 to 7.4% in 2011 for the total sample and from 13.8% to 9.1% among drinkers. • Discernible subgroup **declines** for gender, age, region, marital status and education.	• Discernible linear and non-linear trends. • **Three distinct periods** are evident. Binge drinking remained stable between 1977 and 1995, and then increased discernibly in 1996 (from 7.0% to 11.7%) and remained at this elevated level until 2007. The **increases** were especially notable among **men** (from 10.7% in 1995 to 20.7% in 2001), and **18 to 29** year olds (from 10.6% in 1995 to 26.1% in 2007). • Binge drinking started declining again in 2008 and discernible **declines** were evident for gender, age, region, marital status and education.
Hazardous/Harmful drinking (AUDIT 8+)	• **Stable** among total sample (14.8% vs. 14.4%). • Stable for all subgroups.	• Available 1998–2011. • Overall discernible **non-linear change:** lowest in 2005 (10.4%) and highest in 2007 (15.6%), but has subsequently declined and stabilized. • Discernible non-linear trend evident among **women,** increasing from 4.8% in 1998 to 7.9% in 2011. • Discernible non-linear **increases** among **18 to 29** year olds (from 22.4% in 2002 to 31.8% in 2010), and among **30 to 39** year olds (from 7.1% in 2005 to 14.7% in 2011). • Discernible **increases** found also for respondents living in the **South West** and in the **East**.	• Not available.
Symptoms of alcohol dependence (AUDIT)	• **Stable** among total sample (7.9% vs. 8.1%). • Stable for most subgroups. Two discernible subgroup changes during this period: among those aged **40 to 49** (from 4.8% in 2010 to 9.6% in 2011) and among residents living in the **North** (from 12.6% in 2010 to 6.4% in 2011).	• Available 1998–2011. • Overall discernible **non-linear change:** from 9.4% in 1998 to 5.9% in 2003 and then increased to 8.1% in 2011. • Discernible non-linear subgroup trends for those **aged 50 to 64** and residents of the **Central South** and living in the **North**.	• Not available.

Indicator	2010 vs. 2011	Trends: 1996-2011	Trends: 1977-2011
TOBACCO — CIGARETTES			
Current Smoking	• **Stable** among total sample (17.6% vs. 15.4%). • Stable for most subgroups. Two discernible **declines**: among residents of **Toronto (**from 17.4% in 2010 to 11.7% in 2011) and of the **Central East** (from 21.4% in 2009 to 14.0% in 2011).	• Overall discernible steady linear **decline** from 26.7% in 1996 to 15.4% in 2011. • Discernible **decline** for: **men** and **women**, and all **age groups**, **regions**, **marital status** and **education** subgroups.	• Not available.
OTHER DRUGS			
CANNABIS **Past year use**	• **Stable** among total sample (14.2% vs. 13.4%). • No subgroup changes.	• Overall discernible **increase** in cannabis use, from 8.7% in 1996 to 13.4% in 2011. • Discernible **increases** also occurred among: **men** and **women**, and virtually all **age groups**, **regions**, **marital status** and **education** subgroups.	• Overall discernible **increase** from 8.1% in 1977 to 13.4% in 2011. • Discernible **increases** over the long term among **men** (from 9.1% in 1992 to 19.9% in 2010); **women** (from 4.5% in 1977 to 10.8% in 2011) and **all age groups**, especially 18 to 29 year olds (from 22.6% in 1977 to 33.5% in 2011) and those 50 years and older (from 1.2% in 1977 to 5.2% in 2011). • **More older users**: in 1977, 82% of past year cannabis users were aged 18 to 29 compared to only 49% in 2011. In contrast, the proportion aged 30 to 49 increased two-fold from 15.4% to 35.6%, and the proportion aged 50 and older increased five-fold from 2.8% to 15.9% during the same period.
COCAINE **Past year use**	• **Stable** among total sample (1.8% vs. 1.7%). • No subgroup changes.	• Overall remained **low and stable** (under 2.2%).	• Not available.
PRESCRIPTION OPIOIDS **Any past year use**	• **Stable** among total sample (23.1% vs. 23.9%).	• Not available.	• Not available.
Any non-medical past year use	• Overall discernible **decline**, from 7.7% in 2010 to 4.0% in 2011.	• Not available.	• Not available.

Indicator	2010 vs. 2011	Trends: 1996-2011	Trends: 1977-2011
DRUGS AND DRIVING			
Past year Driving after Drinking (among drivers)	• **Stable** among total sample (5.0% vs. 5.8%). • Stable for most subgroups. One discernible subgroup change during this period: an **increase** among residents living in the **Central West**, from 3.7% in 2010 to 10.5% in 2011.	• Overall discernible linear **decline** from 13.1% to 5.0% in 2010, but this decline seems to have levelled off in 2011. • Discernible **decline** between 1996 and 2011 among both **men** drivers (from 21.2% to 10.6%), and **women** drivers (from 4.9% to 1.4%); and most **age groups**, but especially among drivers **aged 18 to 29**, from 20.1% in 1996 to 5.6% in 2011. • Discernible **declines** between 1996 and 2011 for all regions, but especially for drivers living in **Toronto** (from 14.1% to 5.1%) and drivers living in the **Central South** (from 17.4% to 4.2%). • Discernible **declines** occurred among all three **marital status** and among **all four education** subgroups.	• Not available.
Past year Driving after using Cannabis (among drivers)	• **Stable** among total sample (1.5% vs. 2.4%). • Stable for most subgroups. One discernible **increase** in driving after consuming cannabis among young drivers **aged 18 to 29**, from 3.2% in 2010 to 8.6% in 2011.	• Available 2002 to 2011. • Overall **stable** (2.9% vs. 2.4%). • **Stable** for most demographic subgroups. Only one discernible non-linear **increase** occurred among drivers **aged 18 to 29**, from 7.2% in 2002 to 11.9% in 2006, then declined to 2.8% in 2009 and then increased three-fold in 2011 to 8.6%.	• Not available.
MENTAL HEALTH			
Psychological Distress (GHQ3+)	• **Stable** among total sample (14.6% vs. 14.7%). • No subgroup changes.	• Available 2000 to 2011. • Overall **stable**. • **Stable** for all demographic subgroups.	• Not available.
Poor Self-Rated Mental Health	• **Stable** among total sample (6.1% vs. 6.0%). • Stable for most subgroups. Two discernible subgroup increases: among residents of the **North** (from 4.1% to 8.3%), and respondents with **some postsecondary** education (from 5.6% to 8.6%).	• Available 2003 to 2011: Overall **stable**. • Rates stable for most demographic subgroups. • Discernible increase for residents of the **Central South** (from 2.8% in 2008 to 12.2% in 2011).	• Not available.
Frequent Mental Distress Days	• **Stable** among total sample (7.9% vs. 7.1%). • Stable for most subgroups. Two discernible subgroup **decreases**: among respondents **aged 50 to 64** (from 9.7% to 5.6%), and among residents of the **Central East** (from 5.8% to 2.2%).	• Available 2003 to 2011. • Discernible **increase** from 5.4% in 2003 to 7.9% in 2010 and remained above 7% in 2011. • Rates stable for most demographic subgroups. Discernible **increases** for respondents living in the **Central South** (from 4.9% in 2008 to 14.5% in 2011) and for two of the four education subgroups.	• Not available.

Indicator	2010 vs. 2011	Trends: 1996-2011	Trends: 1977-2011
Antianxiety medication	• **Stable** among total sample (8.9% vs. 7.1%). • Stable for most subgroups. • Discernible subgroup **declines** among: respondents **aged 50 to 64** (from 12.8% to 7.7%), **married** respondents (from 8.3% to 5.8%) and among respondents who completed **high school** and those holding a **university** degree (from 10.6% to 5.6%, and from 7.7% to 5.8%, respectively).	• Available 1997-2011. • Discernible linear **increase**, from 4.5% in 1999 to 7.1% in 2011. • Discernible **non-linear changes** for most subgroups, but especially among **18 to 29 year** olds from 1.7% to 5.8%, and among those **not having completed high school** from 5.8% to 10.5%. • Discernible **non-linear increases** were found also for respondents living in **Toronto**, **Central South**, **South West** and the **East**.	• Not available.
Antidepressant medication	• **Stable** among total sample (7.2% vs. 7.1%). • Stable for most subgroups. Discernible **decline** only for respondents aged 50 to 64 (from 11.7% to 8.1%).	• Available 1997-2011. • Discernible linear **upward trend**, increasing from 3.6% in 1999 to 7.2% in 2010 and has remained steady at this level in 2011. • Discernible subgroup **increases** were also evident for all gender, age, region, marital status and education subgroups.	• Not available.

Appendix A

Sample Design

Table A-1: Regional Stratification of the CM 2011 Sample

Region	County	Area Code
Toronto	Toronto	416, 647
Central West	Halton; Hamilton-Wentworth; Waterloo; Wellington; Dufferin; Niagara; Brant; Haldiman-Norfolk	519, 905, 289
Central East	Peel; Simcoe; York; Haliburton; Peterborough; Victoria; Northumberland; Durham	705, 905,289
West	Kent; Huron; Perth; Elgin; Oxford; Middlesex; Grey; Bruce; Lambton; Essex	519, 226
East	Stormont, Dundas and Glengarry; Prescott-Russell; Ottawa-Carleton; Renfrew; Lanark; Leeds-Grenville; Hastings; Prince Edward; Frontenac; Lennox and Addington	613, 343
North	Kenora; Rainy River; Thunder Bay; Muskoka; Parry Sound; Nipissing; Timiskaming; Algoma; Manitoulin; Sudbury RM; Sudbury TD; Cochrane	705, 807

Table A-2: Ontario Health Survey (OHS) Planning Regions (Ontario Ministry of Health)

OHS Planning Region	Counties (23 Local Areas)
South West	Essex Kent, Lambton Elgin, Oxford, Middlesex Bruce, Grey, Perth, Huron
Central South	Niagara Hamilton-Wentworth Brant, Haldimand-Norfolk
Central West	Halton Peel Wellington, Dufferin Waterloo
Toronto	
Central East	Northumberland, Victoria, Haliburton, Peterborough Durham York Simcoe
East	Ottawa-Carleton Renfrew, Prescott & Russell, Stormont, Dundas & Glengarry Lanark/Leeds/Grenville, Hastings, Prince Edward, Frontenac, Lennox & Addington
North	Algoma, Cochrane Manitoulin, Sudbury (R.M.), Sudbury (T.D.) Muskoka, Parry Sound, Nipissing, Timiskaming Thunder Bay, Kenora, Rainy River

Ontario Ministry of Health – Planning Regions

N

CE

E

CW

TO

SW

CS

•Northumberland, Victoria, Haliburton, Peterborough;
•Durham; York; Simcoe

•Ottawa-Carleton
•Renfrew, Prescott & Russell, Stormont, Dundas & Glengary
•Lanark/Leeds/Grenville, Hastings

•Algoma, Cochrane;
•Manitoulin, Sudbury (RM), Sudbury (TD);
•Muskoka, Parry Sound, Nipissing, Timiskaming;
•Thunder Bay, Kenora, Rainy River

•Halton; Peel; Wellington
•Dufferin; Waterloo

•Essex; Kent; Lambton;
•Elgin; Oxford; Middlesex
•Bruce; Grey; Perth; Huron

•Niagara;
•Hamilton-Wentworth
•Brant; Halidimand-Norfolk

Table A-3: Number of Interviews by Demographic Characteristic, 1991- 2011

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Sample	1047	1058	1034	2022	994	2721	2776	2509	2436	2406	2627	2421	2411	2611	2445	2016	2005	2024	2037	3030	3039
Gender																					
Male	495	490	481	930	477	1206	1260	1088	1061	1052	1216	1100	1062	1122	1037	884	840	842	877	1303	1212
Female	552	568	553	1092	517	1515	1516	1421	1375	1354	1411	1321	1349	1489	1408	1132	1165	1182	1160	1727	1827
Age																					
18-29	267	272	241	472	240	533	560	457	427	458	473	426	427	391	354	264	258	200	198	311	267
30-39	264	283	280	541	240	685	654	580	567	538	547	523	438	463	453	338	315	279	289	372	396
40-49	215	207	208	434	212	562	571	567	505	507	597	513	575	552	569	421	402	415	426	600	551
50-64	150	153	162	320	168	483	508	448	470	466	531	518	521	651	570	561	551	595	608	976	923
65+	134	129	132	236	123	406	407	376	420	378	412	384	396	494	436	397	417	462	461	709	814
Marital Status																					
Married	597	579	554	1028	471	1450	1449	1336	1234	1252	1360	1217	1257	1354	1274	1095	1034	1097	1144	1660	1692
Living with Partner	–	65	54	118	61	146	176	151	193	161	190	146	190	190	183	146	143	141	166	224	204
Previously Married	173	171	187	347	192	508	510	467	490	456	500	503	449	531	503	396	463	443	390	641	656
Never Married	269	239	238	523	262	601	601	517	491	508	556	539	498	504	457	360	337	317	307	477	451
Public Health Region																					
Toronto	–	–	–	–	–	430	431	421	410	404	406	407	411	390	396	347	317	352	327	510	503
Central South	–	–	–	–	–	245	265	220	212	220	202	210	211	215	193	154	177	155	164	255	253
Central West	–	–	–	–	–	355	241	327	316	312	332	329	313	299	343	261	244	247	281	403	391
South West	–	–	–	–	–	461	465	414	403	404	408	403	397	412	427	361	339	340	354	506	500
Central East	–	–	–	–	–	307	441	284	285	276	313	272	262	286	284	234	268	282	266	392	416
East	–	–	–	–	–	481	470	424	409	394	420	402	416	407	404	323	351	328	343	503	517
North	–	–	–	–	–	442	463	419	401	396	545	398	401	602	398	336	309	320	302	461	459
Education																					
Less Than High School	244	223	225	403	180	600	554	480	438	362	418	417	375	421	322	280	284	259	266	363	369
Completed High School	302	295	276	552	281	713	710	649	655	701	672	609	572	639	612	487	480	467	437	692	670
Some College or University	255	329	315	614	304	775	839	779	758	715	874	740	814	840	842	660	679	677	698	1041	1018
University Degree	241	207	216	446	225	610	641	564	555	609	632	620	624	675	639	556	525	604	611	913	945

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Sample	1047	1058	1034	2022	994	2721	2776	2509	2436	2406	2627	2421	2411	2611	2445	2016	2005	2024	2037	3030	3039
Income																					
<$30,000	325	239	273	520	261	579	547	453	500	427	496	468	404	458	368	298	282	253	237	356	351
$30,000 - $49,999	212	224	227	435	226	534	510	455	450	403	501	422	446	454	390	312	311	260	265	395	411
$50,000 - $79,999	234	248	229	458	217	625	551	523	521	525	538	544	543	541	504	415	373	387	370	546	558
$80,000+	106	178	179	294	158	439	471	442	475	496	557	568	618	643	737	613	549	614	596	994	980
Missing Responses	170	169	126	275	132	544	697	636	490	555	535	418	400	515	446	378	490	510	569	739	739
Employment Status																					
Full-Time	552	558	543	1010	500	1279	1363	1198	1255	1220	1343	1183	1150	1263	1186	990	937	894	879	1339	1304
Part-Time	111	111	100	203	114	303	311	296	240	249	260	215	219	213	225	179	164	182	172	248	272
Unemployed	64	63	52	132	39	142	102	82	63	60	91	87	83	71	67	55	65	44	94	126	77
Retired	139	137	148	269	139	465	484	491	483	456	500	465	460	589	514	452	472	552	561	829	900
Homemaker	68	77	72	141	61	203	154	133	118	111	139	116	122	122	118	90	69	78	73	98	120
Student	81	71	94	175	94	143	172	146	113	131	138	143	135	128	114	80	95	64	61	100	100
Self Employed	–	–	–	–	–	–	–	–	–	–	–	110	134	113	117	100	88	112	108	131	138
Other	30	37	44	92	43	171	167	146	147	162	140	90	81	83	72	53	98	81	65	142	105

Notes: – Data not available
Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table A-4a: Number of Interviews by Gender, Age, and Region of Respondent, 1977- 2000

	1977	1982	1984	1987	1989	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
(N=)	(1059)	(1040)	(1051)	(1084)	(1101)	(1047)	(1058)	(1034)	(2022)	(994)	(2721)	(2776)	(2509)	(2436)	(2406)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Gender															
Male	52.2	50	48.5	48.5	48.4	49.0	46.7	48.2	46.8	49.7	47.0	47.4	47.5	48.0	47.5
	(529)	(517)	(524)	(539)	(551)	(495)	(490)	(481)	(1092)	(477)	(1206)	(1260)	(1088)	(1061)	(1052)
Female	47.8	50	51.5	51.5	51.6	51.0	53.3	51.8	53.2	50.3	53.0	52.6	52.5	52.0	52.5
	(529)	(523)	(527)	(545)	(550)	(552)	(568)	(553)	(930)	(517)	(1515)	(1516)	(1421)	(1375)	(1354)
Age															
18-29	30.0	31.9	29.6	29.6	28.0	29.5	29.6	26.8	26.7	26.9	24.3	26.1	23.1	21.7	23.3
	(296)	(270)	(274)	(238)	(245)	(267)	(272)	(241)	(472)	(240)	(533)	(560)	(457)	(427)	(458)
30-39	21.7	23.2	20.4	22.5	23.2	24.4	25.1	25.8	26.1	23.3	24.0	23.2	21.7	22.1	21.4
	(222)	(253)	(248)	(283)	(290)	(264)	(283)	(280)	(541)	(240)	(685)	(654)	(580)	(567)	(538)
40-49	17.1	13.2	15.7	13.6	14.5	20.7	20.0	20.3	21.2	22.5	20.7	20.5	21.9	19.4	20.5
	(181)	(143)	(190)	(171)	(181)	(215)	(207)	(208)	(434)	(212)	(562)	(571)	(567)	(505)	(507)
50-64	18.3	20.1	21.5	19.2	19.3	14.5	14.7	16.4	15.6	17.1	17.1	18.4	16.8	18.7	18.3
	(197)	(213)	(205)	(213)	(211)	(150)	(153)	(162)	(320)	(168)	(483)	(508)	(448)	(470)	(466)
65+	12.9	11.7	12.8	15.1	14.9	11.0	10.5	10.7	10.4	10.3	11.9	11.8	16.4	16.1	16.5
	(155)	(125)	(122)	(168)	(163)	(134)	(129)	(132)	(237)	(123)	(406)	(407)	(376)	(420)	(378)
Region															
Toronto	30.6	32.3	31.9	32.8	35.1	24.9	22.5	22.0	21.3	22.5	23.2	20.7	22.9	23.5	23.8
	(314)	(329)	(331)	(351)	(383)	(237)	(239)	(214)	(435)	(230)	(427)	(390)	(421)	(410)	(424)
Non-Toronto	69.4	67.7	68.1	67.2	64.9	75.1	77.5	78.0	78.7	77.5	76.8	79.3	77.1	76.5	76.2
	(745)	(711)	(720)	(733)	(718)	(705)	(772)	(785)	(1519)	(740)	(2294)	(2386)	(2088)	(2026)	(1982)

Notes: % based on weighted data; (N) based on number of interviews (unweighted)
Source: The CAMH Monitor, Centre for Addiction and Mental Health

Table A-4b: Number of Interviews by Gender, Age, and Region of Respondent, 2001 - 2011

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
(N=)	(2627)	(2421)	(2411)	(2611)	(2445)	(2016)	(2005)	(2024)	(2037)	(3030)	(3039)
	%	%	%	%	%	%	%	%	%	%	%
	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Gender											
Male	48.5	48.6	48.5	48.3	48.2	48.6	48.5	48.2	48.5	48.5	48.2
	(1216)	(1100)	(1062)	(1122)	(1037)	(884)	(840)	(842)	(877)	(1303)	(1212)
Female	51.5	51.4	51.5	51.7	51.8	51.4	51.5	51.8	51.5	51.5	51.8
	(1411)	(1321)	(1349)	(1489)	(1408)	(1132)	(1165)	(1182)	(1160)	(1727)	(1827)
Age											
18-29	20.9	21.2	22.4	20.0	20.8	20.9	19.5	19.7	18.9	19.6	19.7
	(473)	(426)	(427)	(391)	(354)	(264)	(258)	(200)	(198)	(311)	(267)
30-39	19.8	22.4	19.0	21.3	20.3	20.8	19.2	19.2	18.8	18.3	19.0
	(547)	(523)	(438)	(463)	(453)	(338)	(315)	(279)	(289)	(372)	(396)
40-49	21.7	20.6	23.3	21.8	22.3	20.7	21.0	21.4	21.9	21.3	20.0
	(597)	(513)	(575)	(552)	(569)	(421)	(402)	(415)	(426)	(600)	(551)
50-64	19.1	19.4	18.9	20.5	20.2	21.3	23.7	23.0	23.9	24.2	24.7
	(531)	(518)	(521)	(651)	(570)	(561)	(551)	(595)	(608)	(976)	(923)
65+	15.9	16.4	16.3	16.3	16.4	16.4	16.6	16.6	16.6	16.6	16.6
	(412)	(384)	(396)	(494)	(436)	(397)	(417)	(462)	(461)	(709)	(814)
Region											
Toronto	24.5	22.4	23.9	25.2	21.6	21.4	22.2	22.0	21.5	22.1	21.2
	(417)	(407)	(411)	(390)	(396)	(347)	(317)	(352)	(327)	(510)	(503)
Non-Toronto	75.5	77.6	76.1	74.8	78.4	78.6	77.8	78.0	78.5	77.9	78.8
	(2210)	(2014)	(2000)	(2221)	(2049)	(1669)	(1688)	(1672)	(1710)	(2520)	(2536)

Notes: % based on weighted data; (N) based on number of interviews (unweighted)
Source: The CAMH Monitor, Centre for Addiction and Mental Health

Appendix B

Weighting

Data Weighting

Because most sample surveys do not select respondents at a probability indicative of their representation in the population, data typically require weighting to ensure a proper representation of interviews.

1977-1989 Samples

Weights for the 1977 through 1989 surveys employed post stratification adjustments according to the gender by age distribution (based on the most relevant census data).

1991-1995 Samples

Weights for the 1991-1995 surveys were weighted to adjust for the number of individuals per household (i.e., 1 / number of adults), and then normed so that the weighted sample size represented the actual number of respondents.

1996-1997 Samples

Because the 1996 to 1997 samples were allocated equally within each of the six regions weights are required to restore population representation. Calculation of the overall weight variable consisted of three elements: household, region, and survey wave (month of sampling). Within each wave and region, relative household weight is directly proportional to the number of household residents aged 18 and older. Within each cycle, relative region weight is directly proportional to the percentage of all Ontario households located in the region. Finally, cycles are weighted so that each monthly wave makes an equal contribution to the weighted N. At each stage, average weight is equal to 1.

The overall 12-month aggregated sampling weight variable is a function of the following quantity:

$$\frac{N \text{ adults in HH}}{Mean\ N\ adults} \ X \ \frac{P\ of\ HH\ in\ region}{Sample\ P\ of\ HH\ in\ region} \ X \ \frac{Total\ N}{12\ (monthly\ N)}$$

1998 -2011 Samples

For the 1998 - 2011 cycles of the CM survey, the final weight factor is a function of the aggregated sampling weight (above) and a post-stratification adjustment.

Telephone and other probability surveys typically apply post-strata population adjustments based on census information. Although this procedure does not remove all biases, it does provide a simultaneous adjustment for non-response and non-coverage of households without telephones (Casady & Lepkowski, 1999). Using the 2006 Census (Ontarians aged 18 and over), the post-stratification adjustment was based on eight post strata representing four age groups (18-24; 25-44; 45-64; 65+) by gender (male; female) configuration. Previous surveys did not employ post-stratification adjustments.

Appendix C

Missing Data

Table C-1: Item and Model Missing Data – Complete Cases (N) – CM 2011

Variable	Table No.	Univariable Item Missing (%)	Multivariable Model Missing (%)	Complete Case N
Predictor Variables				
Gender	—	0.0%	—	—
Age	—	2.9%	—	—
PH Region	—	0.0%	—	—
Marital status	—	1.2%	—	—
Education	—	1.2%	—	—
Income	—	0.0%	—	—
Logistic Regression Response Variables				
Alcohol past year	T3.1.1	—	4.0%	2,916
Daily alcohol	T3.2.1	—	4.4%	2,904
Daily alcohol - drinkers[a]	T3.2.2	—	3.6%	2,314
LRDG[b]	T3.4.1	—	4.8%	950
Binge drinking (Weekly 5+)	T3.5.1	—	4.6%	2,898
Binge drinking (Weekly 5+) - drinkers[a]	T3.5.2	—	3.9%	2,308
AUDIT	T3.6.2	—	5.2%	2,852
AUDIT - drinkers[a]	T3.6.3	—	5.8%	2,262
AUDIT - dependence	T3.6.6	—	4.7%	2,895
Current smoking	T4.1	—	4.3%	2,907
Daily smoking	T4.2	—	4.3%	2,907
Cannabis	T5.1.3	—	4.8%	2,892
Cocaine[b]	T5.2.1	—	3.9%	1,921
Prescription opioids[b]	T5.3.1	—	4.0%	1,920
Driving after drinking - drivers[ab]	T6.1.1	—	3.4%	1,751
Driving after cannabis use - drivers[ab]	T6.2.1	—	3.3%	1,753
Passenger with drinking driver[c]	T6.3.1	—	1.9%	1,962
Passenger with driver who used cannabis[c]	T6.3.2	—	1.9%	1,962
Psychological distress (GHQ12/3+)[b]	T7.1.2	—	3.7%	1,925
Antianxiety medication[b]	T7.2.1	—	3.9%	1,922
Antidepression medication[b]	T7.2.2	—	4.1%	1,918
Poor mental health[b]	T7.3.1	—	3.8%	1,923
Frequent mental distress days[b]	T7.3.2	—	5.6%	1,888
		—		

Notes: Model missing refers to percentage missing due to a complete case analysis (i.e., list-wise deletion); [a] Based on subclass analysis; [b] Based on random subsample analysis; [c] Based on 2010 data.

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