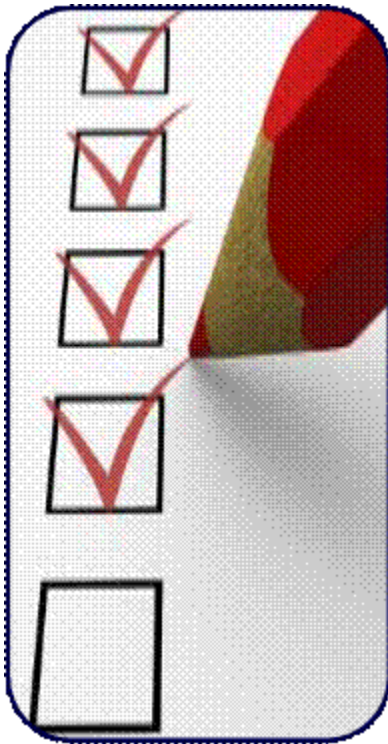




## Addressing Dual Alcohol and Tobacco Use in the STOP Program

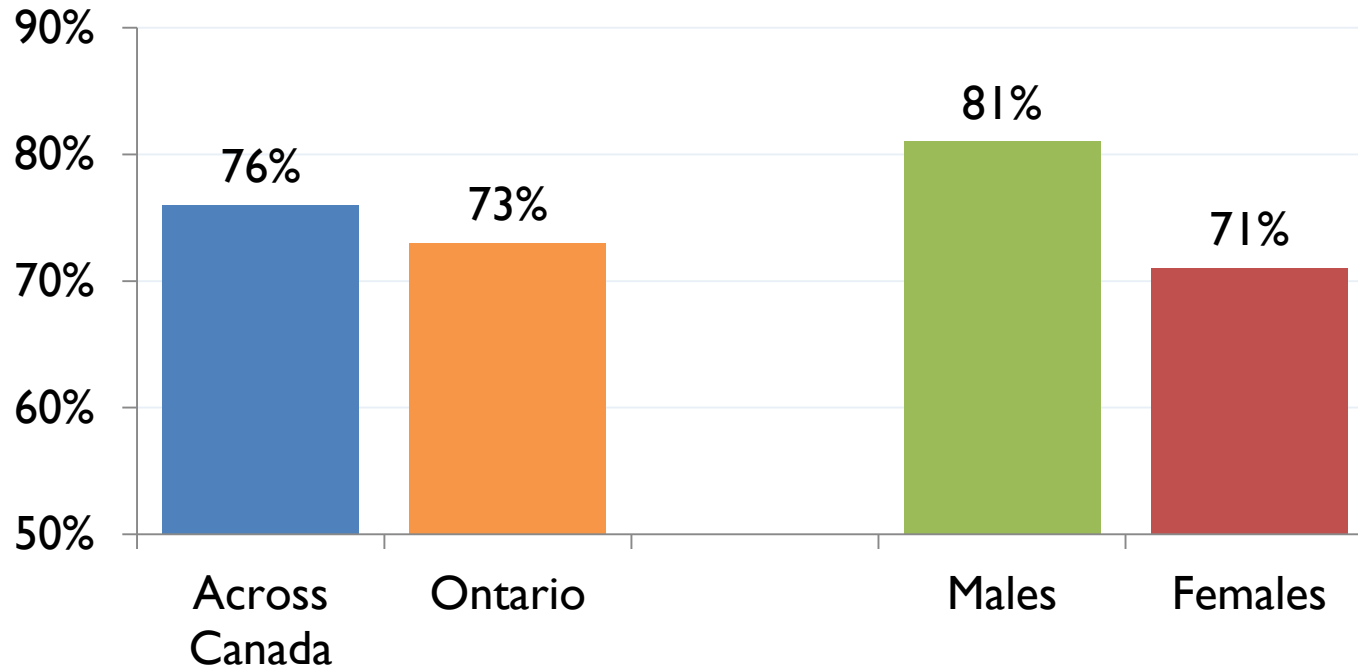
# Learning Objectives



1. Understand the cancer risk associated with alcohol use, and multiplicative cancer risk of dual alcohol and tobacco use
2. Describe low-risk alcohol drinking guidelines in Canada
3. Identify the barriers of alcohol use on smoking cessation
4. Understand the potential to improve cessation outcomes by addressing alcohol consumption
5. Know the basics of SBIRT – an evidence-based practice used to identify, reduce alcohol consumption

# Alcohol Ever-Use Widespread Across Canada

## Reported Drinking Alcohol in Past Year 2013



Source: Government of Canada/Health Canada (CTADS report), 2015

# Binge Drinking in Canada

**Definition:** Having many drinks on one occasion: five or more drinks for a male, or four or more drinks for a female

19%

Overall binge drinking rate  
in Canada, 2013

Binge Drinking Rates by Gender  
Canada, 2013



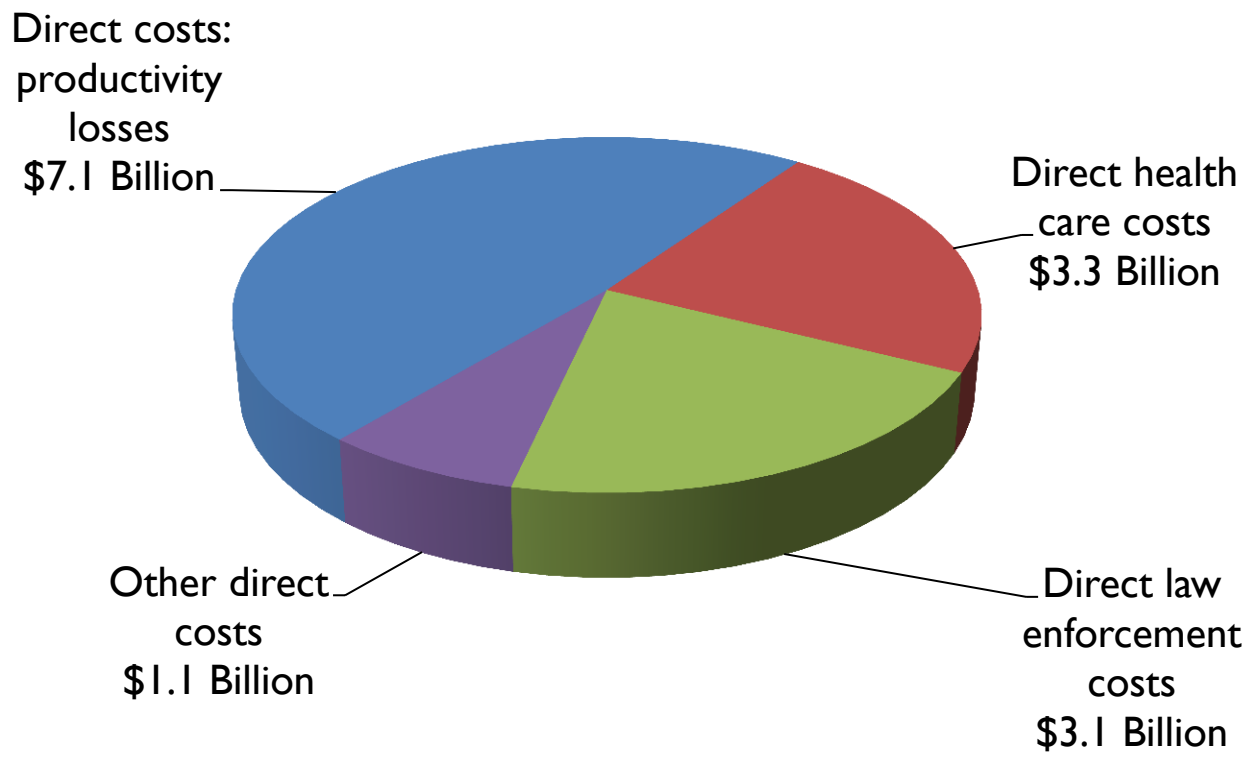
25%



13%

# Large Economic Impact of Alcohol Use in Canada

## Economic Costs of Alcohol-Related Harm (2002) Total Cost: \$14.6 Billion Per Year



Source: Canadian Centre on Substance Abuse, 2014

# Large Health Impact of Alcohol Consumption



**2nd** Most harmful substance in Canada

- Major preventable cause of morbidity and mortality
- Has causal impact on chronic and acute diseases outcomes, including:
  - Cancer
  - Alcohol use disorders
  - Depressive disorders
  - Preterm birth complications and fetal alcohol syndrome
  - Intentional and unintentional injuries

# Health Risks Proportionate with Alcohol Consumption Levels

## Risk of Premature Death from Alcohol-Related Illnesses

Type of Illness or Disease	Proportion of All Deaths, 2002-2005	Percentage Increase/Decrease in Risk				
		1 Drink	2 Drinks	3-4 Drinks	5-6 Drinks	+6 Drinks
Oral cavity & pharynx cancer	1 in 200	+42	+96	+197	+368	+697
Oral esophagus cancer	1 in 150	+20	+43	+87	+164	+367
Colon cancer	1 in 40	+3	+5	+9	+15	+26
Rectum cancer	1 in 200	+5	+10	+18	+30	+53
Liver cancer	1 in 200	+10	+21	+38	+60	+99
Larynx cancer	1 in 500	+21	+47	+95	+181	+399
Ischemic heart disease	1 in 13	-19	-19	-14	0	+31
Epilepsy	1 in 1,000	+19	+41	+81	+152	+353
Dysrhythmias	1 in 250	+8	+17	+32	+54	+102
Pancreatitis	1 in 750	+3	+12	+41	+133	+851
Low birth weight	1 in 1,000	0	+29	+84	+207	+685

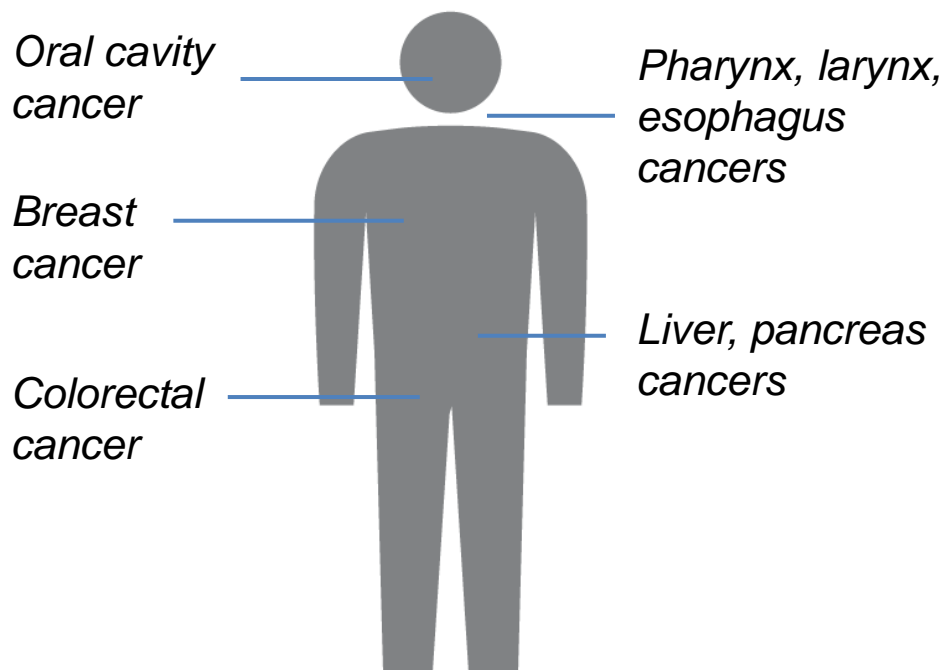
Source: Canadian Centre on Substance Abuse, 2013

# Alcohol Proven to be Carcinogenic

1,000-3,000

Cancer cases diagnosed  
in Ontario attributable  
to alcohol consumption,  
2010

## Alcohol Consumption Linked to Increased Risk of:

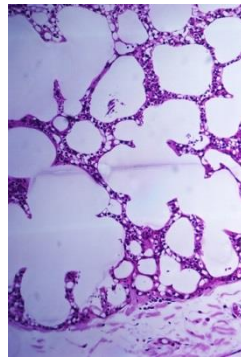




# How Alcohol Increases Cancer Risk



Contains DNA-damaging reactive metabolites (e.g., acetaldehyde)



Acts as solvent for carcinogens to penetrate cells easily



Associated with poor diet; makes tissues more susceptible to carcinogenesis



Metabolizes to produce harmful free radical oxygen

# Unknowns of Alcohol and Cancer Risk



# of years after initiating drinking  
when impact on risk becomes greatest



How cancer risk differs by drinking  
patterns vs. amount consumed



Whether potential for alcohol-related  
cell damage is higher at certain ages



# Cancer Risk Present at All Levels, Proportionate to Consumption



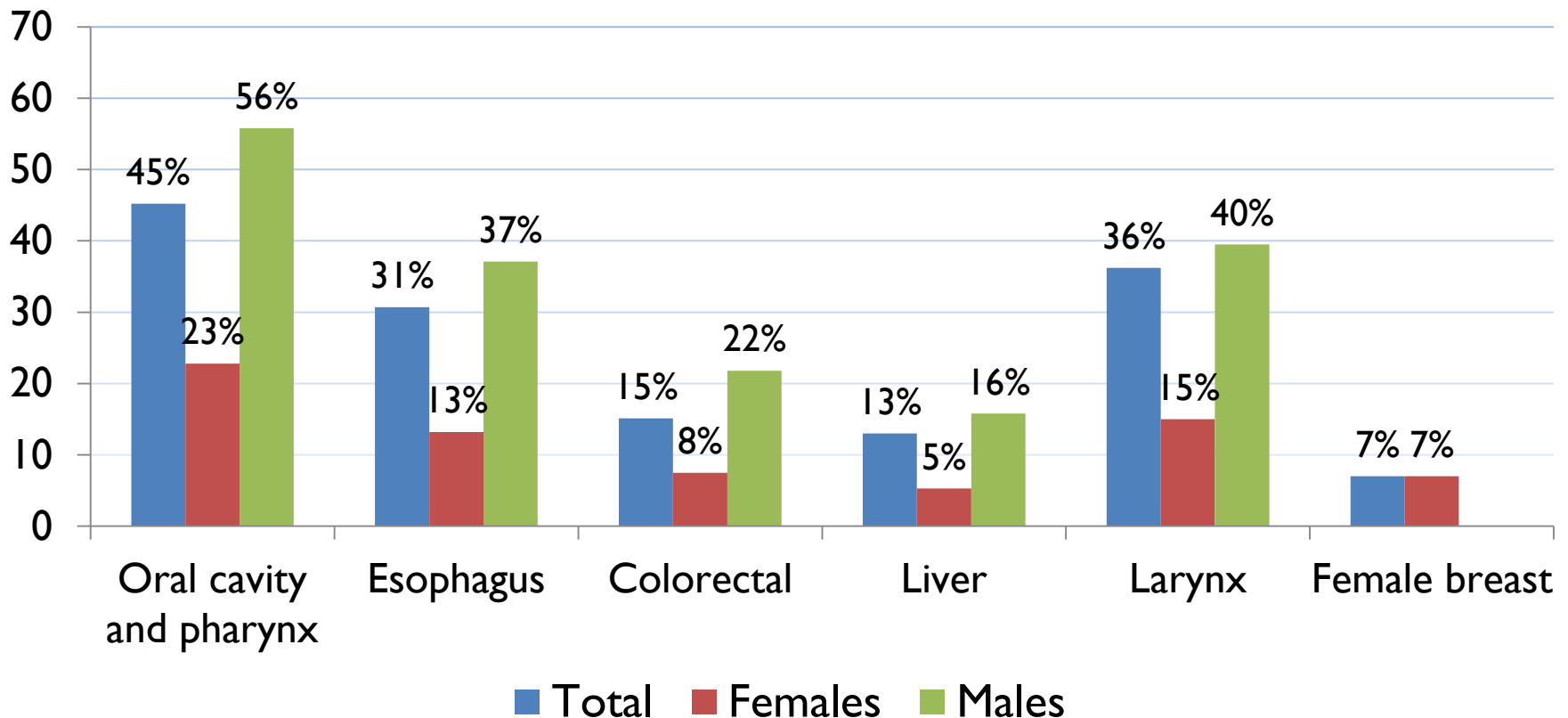
There is no clear “safe limit”  
of alcohol intake to prevent an  
increased risk of cancer



Heavy alcohol drinkers  
(4+ drinks per day) are at a  
substantially increased risk  
of cancer

Increase in Cancer Risk with 3.5 Drinks/Day		
Cancers of: Breast Colon Rectum		1.5x
Cancers of: Oral cavity Pharynx Larynx Esophagus		2-3x

# Proportion of Ontario Cancer Cases Attributable to Alcohol Consumption



Source: Cancer Care Ontario, 2014

# Further Risk of Aerodigestive Cancers with Dual Consumption

## Oral and Pharyngeal Cancer Cases Attributed to Dual Consumption



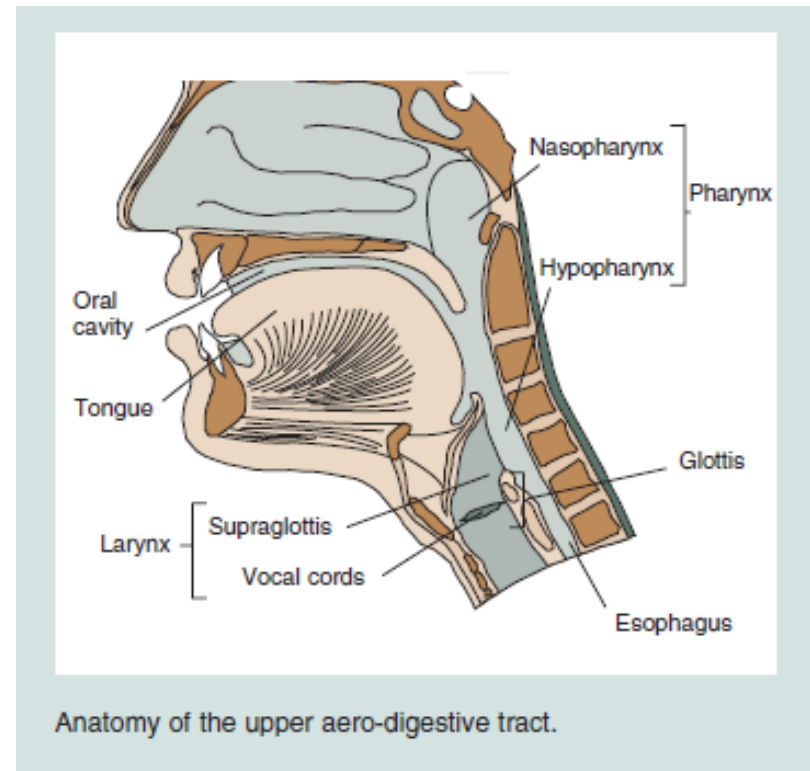
80%



65%

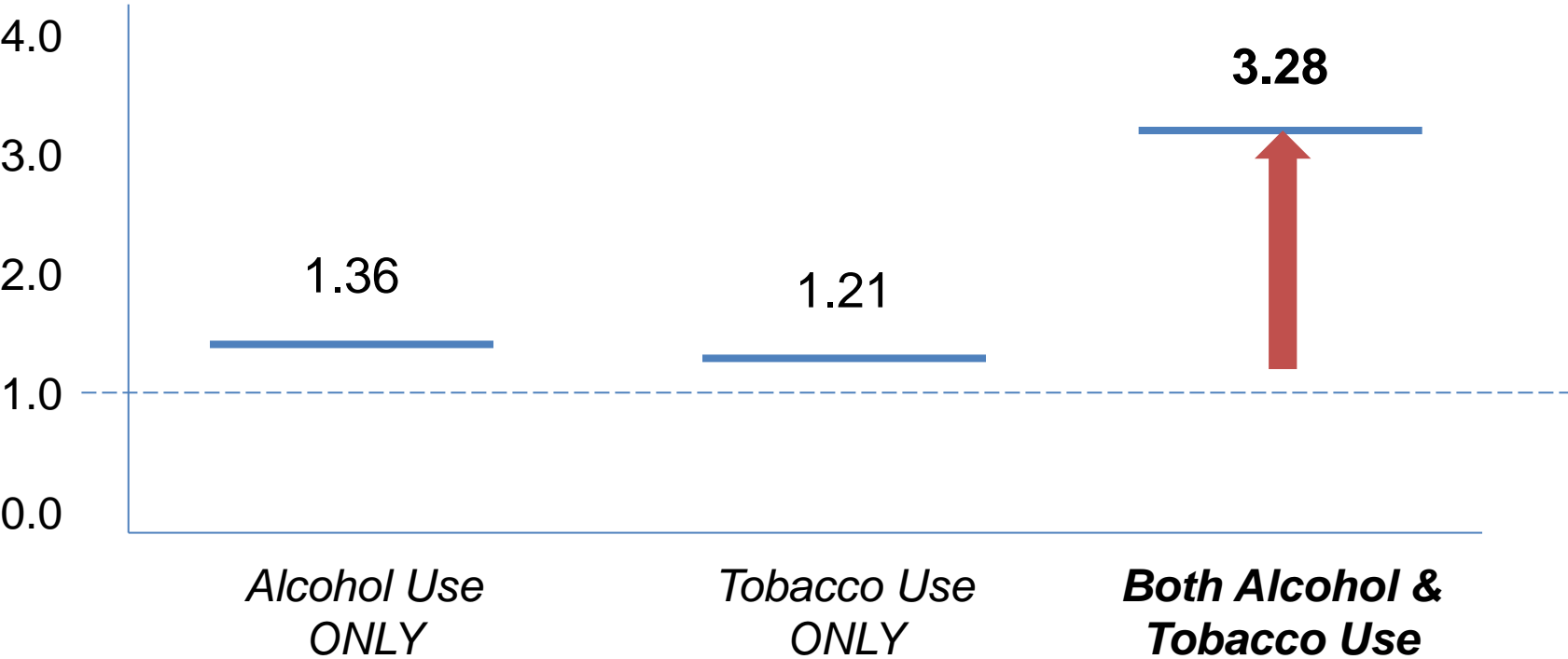
**35x**

Increased risk of oropharyngeal cancer with heavy dual consumption



# Multiplicative Effect on Cancer Risk of Dual Alcohol and Tobacco Use

Adjusted Odds Ratios of ESCC\* Risk by Alcohol, Tobacco Use



\*Esophageal squamous cell carcinoma

Source: Prabhu et al 2014

# POLL QUESTION

**What percentage of Canadians are aware that cancer risk can be lowered by reducing alcohol consumption?**

- Less than 25%
- 26-50%
- 51-75%
- Over 76%

# Low-Risk Drinking Guidelines Developed to Target Cancer Risk

## Canada's Low-Risk Alcohol Drinking Guidelines (CCSA)

*No more than:*



Day: 2 drinks on most days  
Week: 10 drinks



Day: 3 drinks on most days  
Week: 15 drinks a week



## Canadian Cancer Society (CCS) Low-Risk Drinking Guidelines

*Less than:*



Day: 1 drink per day



Day: 2 drinks per day

Source: Cancer Care Ontario, 2014



# How Much is One Drink?



Beer  
341 ml (12 oz.)  
5% alcohol  
content

Cider/Cooler  
341 ml (12 oz.)  
5% alcohol  
content

Wine  
142 ml (5 oz.)  
12% alcohol  
content

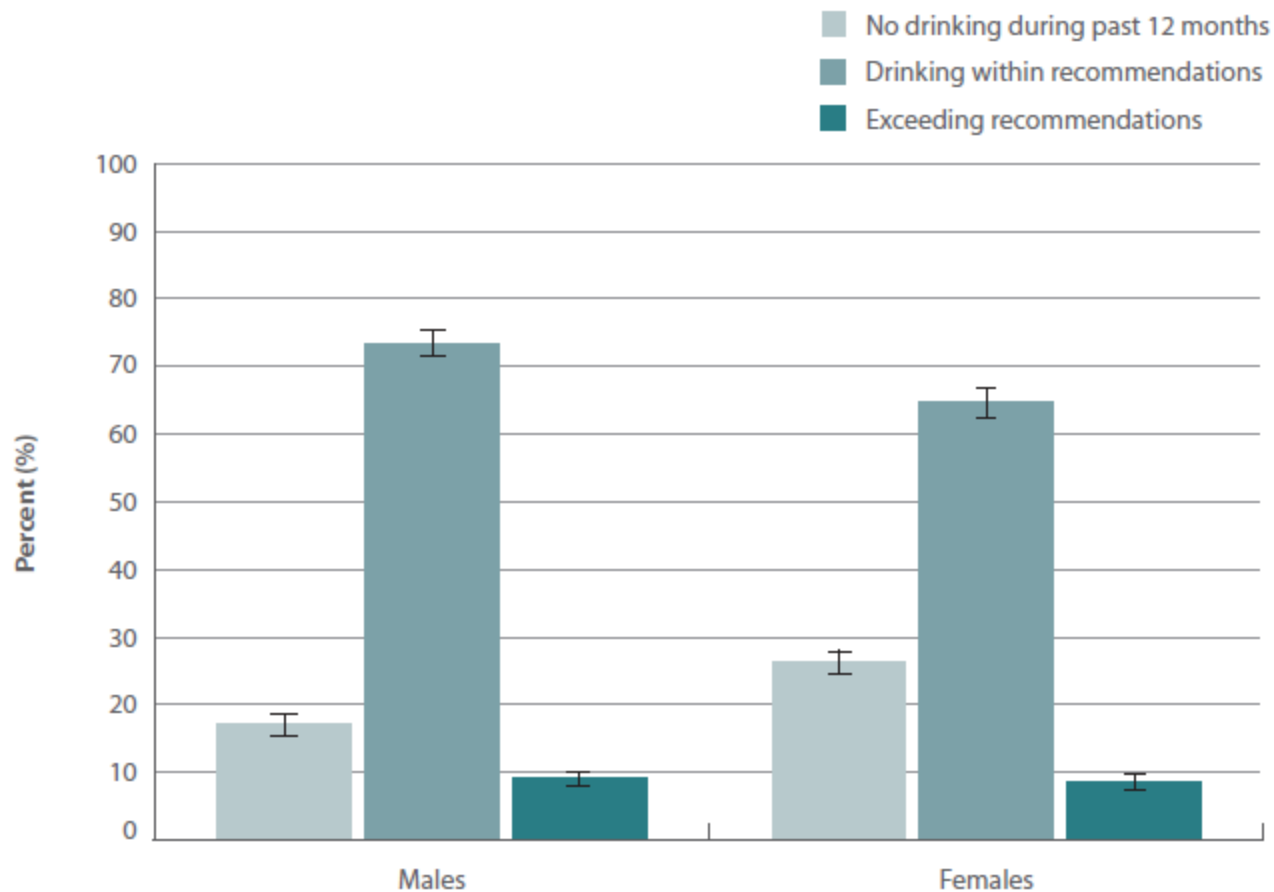
Distilled Alcohol  
43 ml (1.5 oz.)  
40% alcohol  
content

**13.6 grams**

Alcohol content of one  
standard drink in Canada

# Nearly 1M Ontario Adults Drinking Above Guidelines

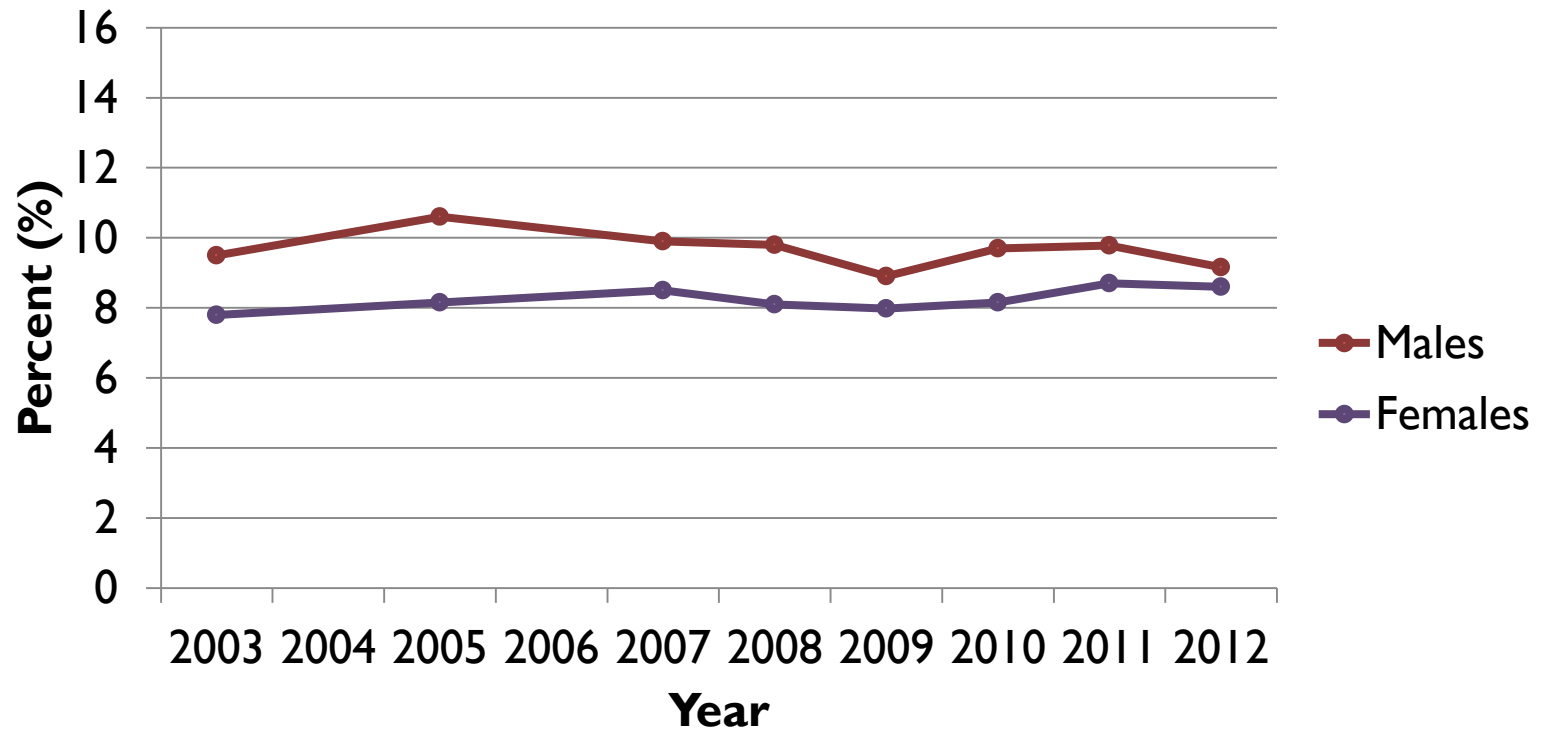
Alcohol Consumption in Relation to Cancer Prevention Recommendations During Past 12 Months, Ontario Adults (Aged 19+), 2012



Source: Cancer Care Ontario, 2014

# Gap Between Females and Males Closing

Percentage of Ontario Adults (Aged 19+) Exceeding Cancer Prevention Recommendations for Alcohol Prevention

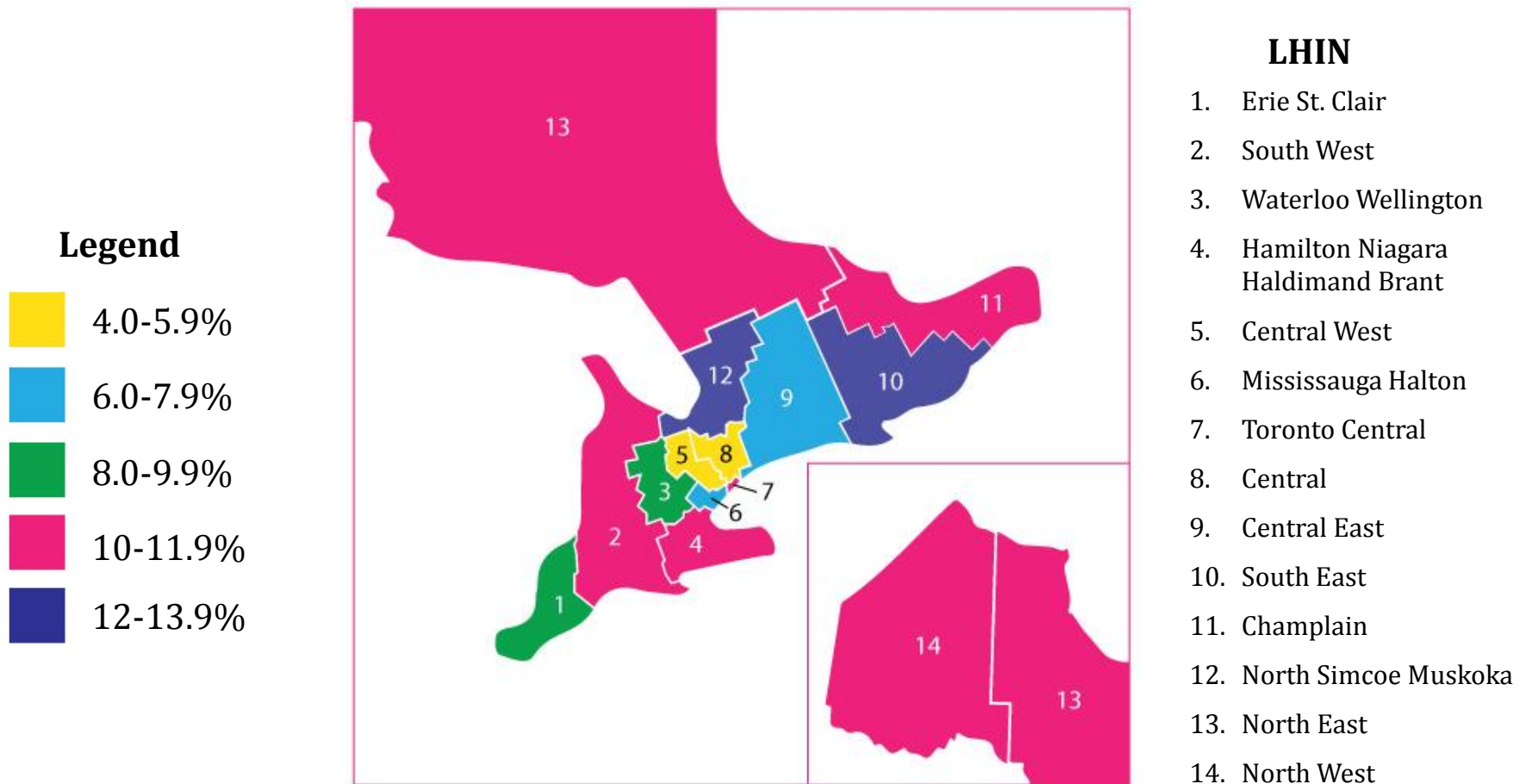


Note: Estimates are age-standardized to the 2006 Canadian population

Source: Cancer Care Ontario, 2014

# Regional Variation in Drinking Rates Across Ontario

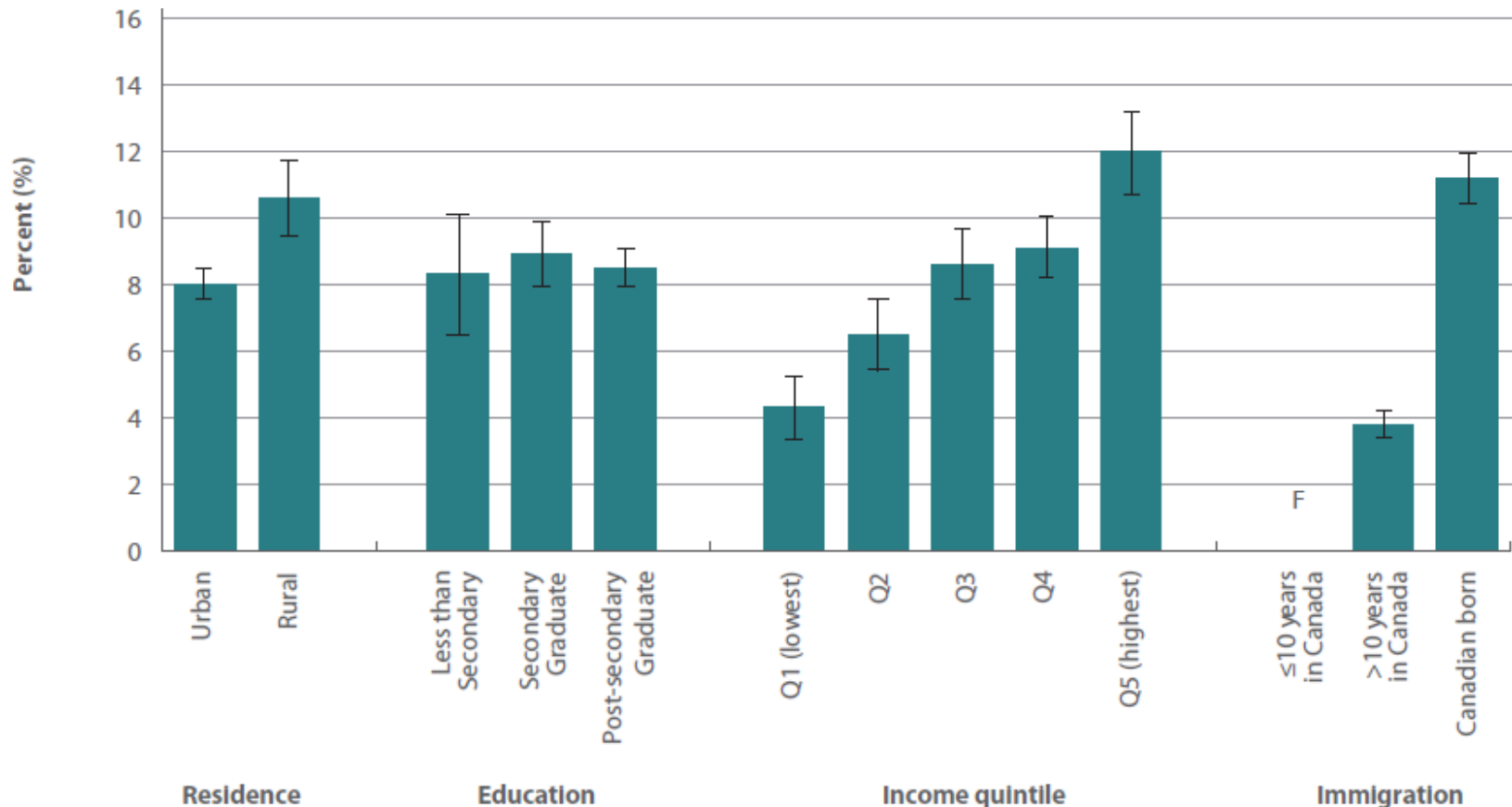
Percentage of Ontario Adults (Aged 19+) Exceeding Cancer Prevention Recommendations for Alcohol Consumption, by LHIN, 2010–2012



Source: Cancer Care Ontario, 2014

# Sociodemographic Disparities in Exceeding Recommendations

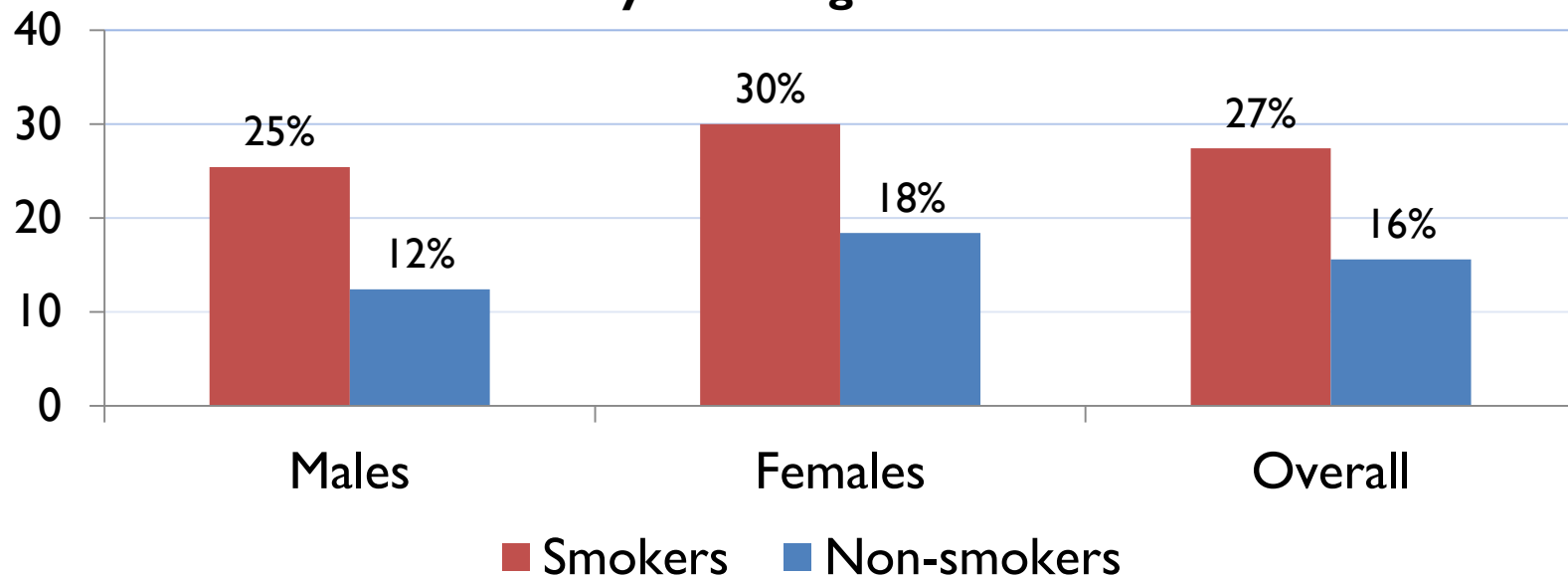
Percentage of Ontario Adults (Aged 30+) Exceeding Cancer Prevention Recommendations for Alcohol Consumption, by Selected Sociodemographic Factors, 2010–2012



Source: Cancer Care Ontario, 2014

# Ontario Smokers More Likely to Drink Above Guidelines

Proportion of ON Adults Exceeding Drinking Guidelines, by Smoking Status

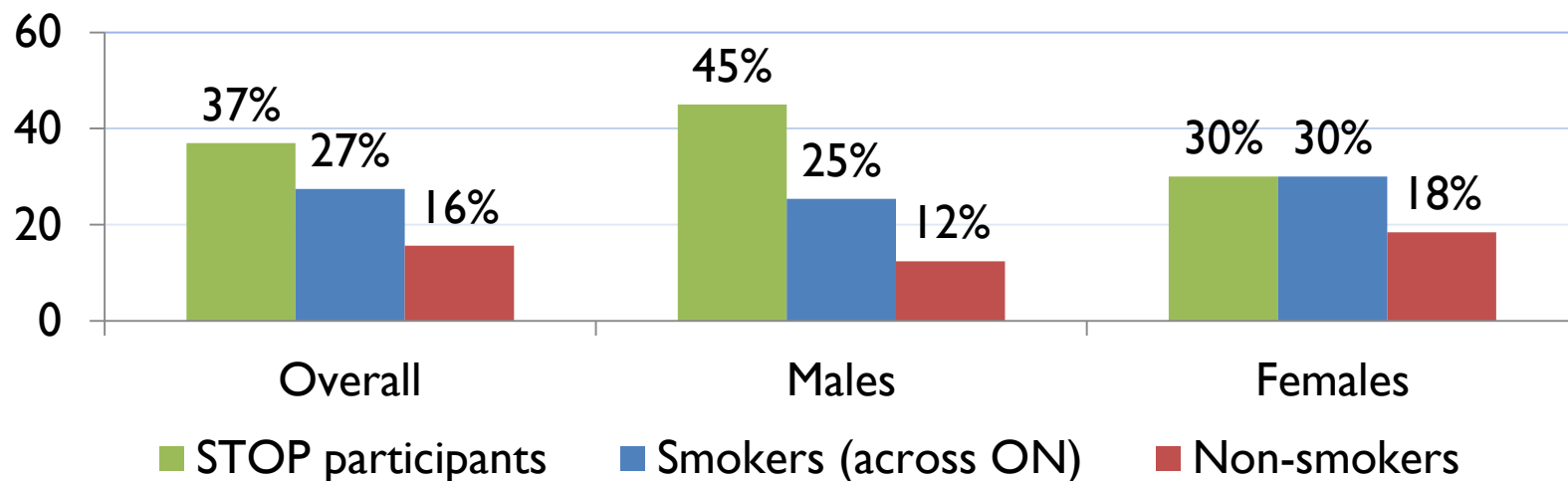


>554,000

Ontario smokers that drink above guidelines

# Even Higher Drinking Rates Among STOP Participants

Proportion of ON Adults Exceeding Drinking Guidelines, by Smoking Status



>8,300

STOP participants that drink above CCS guidelines

# Alcohol Use and Smoking Cessation Rates

Individuals that continue to use alcohol during smoking cessation treatment have lower smoking abstinence rates when compared to non-drinkers

**Point prevalence and continuous smoking abstinence rates by alcohol use at baseline**

	Assessment Point				
	Week 12	Week 24	Week 38	Week 64	Continuous abstinence
Drinkers	37.5%	27.6%	25.7%	20.4%	15.5%
Nondrinkers	52.2%	45.7%	41.3%	45.7%	30.4%

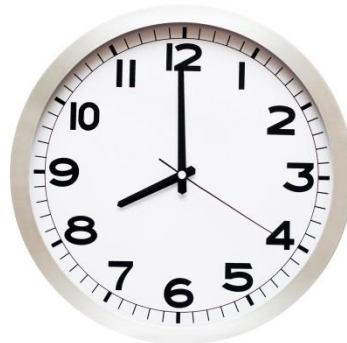


# Alcohol Use a Significant Driver of Smoking Relapse

Effects of Alcohol Beverage Consumption on Smoking Relapse  
(compared to Placebo Beverage)



Ability to resist  
first cigarette



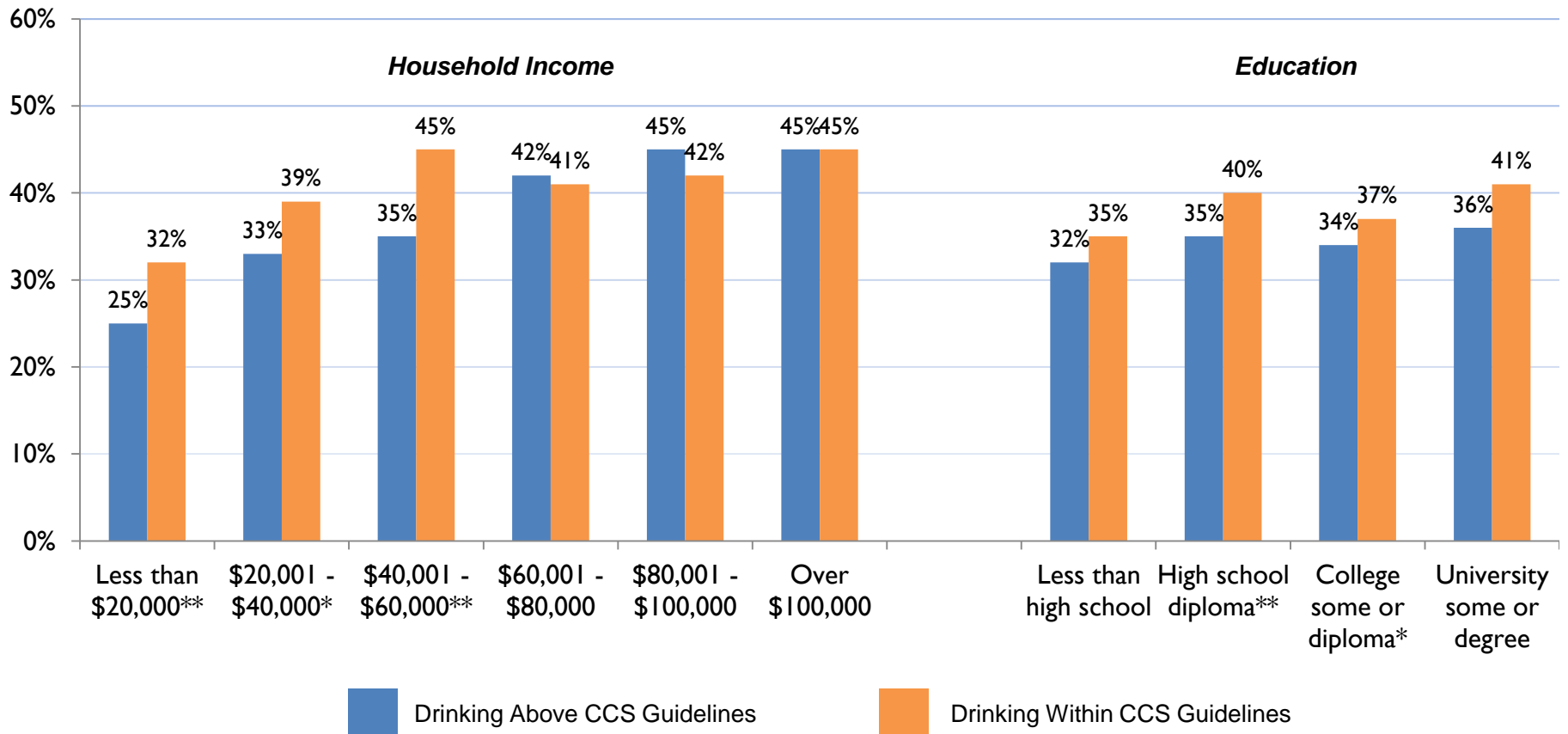
Likelihood of initiating  
smoking sooner



# of cigarettes  
smoked

# Sociodemographic Disparities in STOP Cessation when Drinking Above Guidelines

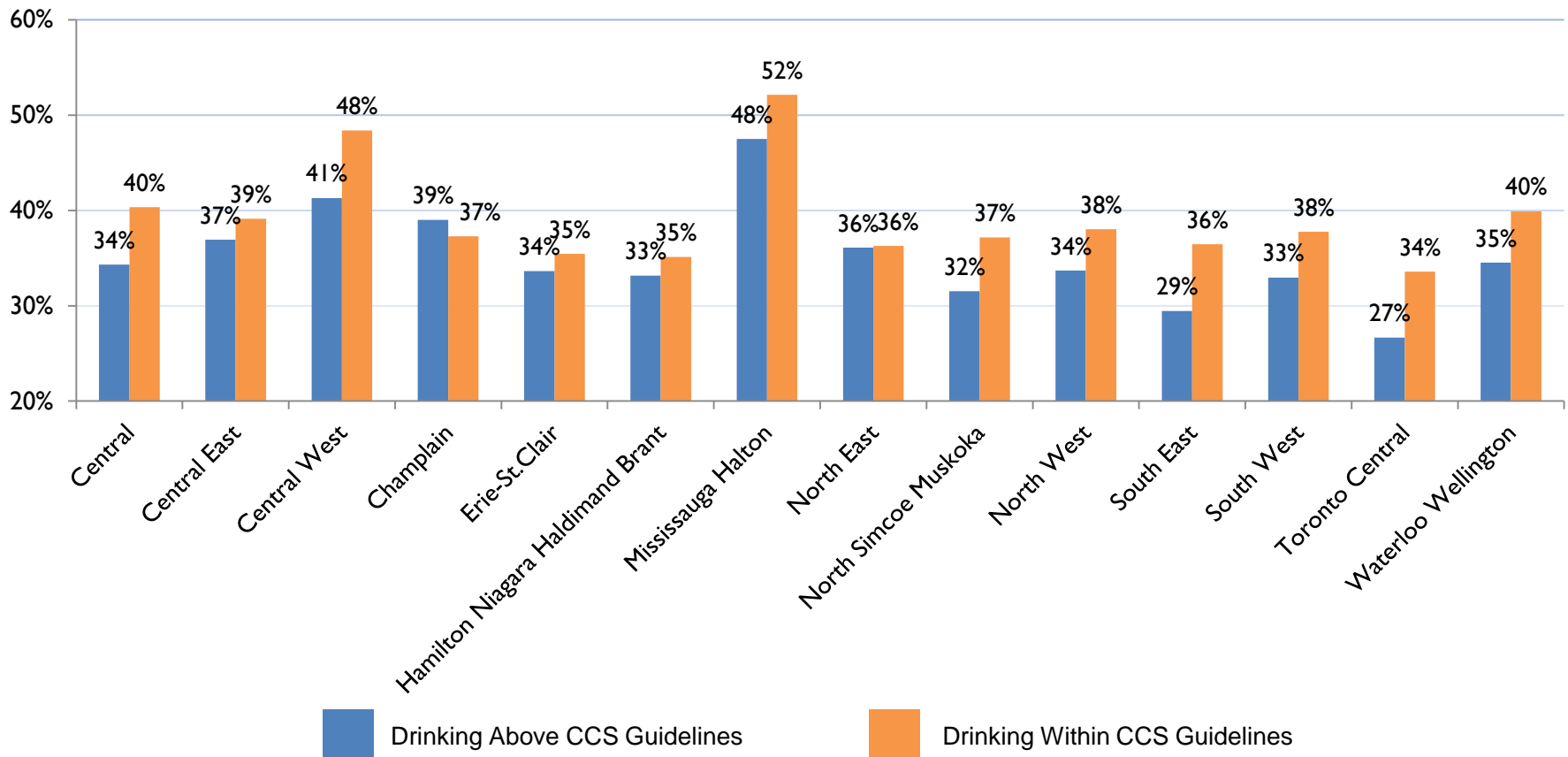
Smoking Quit Rates at 6-month Follow-Up among STOP Participants, Drinking Above vs. Within CCS Guidelines



\* $p < 0.1$ , \*\* $p < 0.05$

# Regional Variation in STOP Cessation Rates when Drinking Above Guidelines

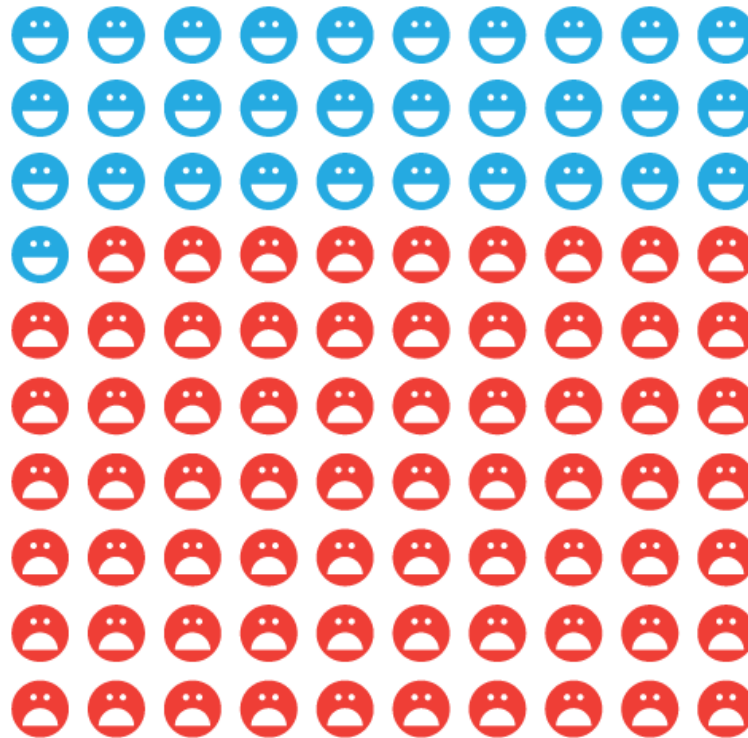
Smoking Quit Rates at 6-month Follow-Up among STOP Participants Exceeding CCS Guidelines, by LHIN



Source: Internal data

# Addressing Drinking Behaviours in STOP Can Improve Quit Outcomes

## Female STOP Participants



# Addressing Drinking Behaviours in STOP Can Improve Quit Outcomes

## Female STOP Participants



# Addressing Drinking Behaviours in STOP Can Improve Quit Outcomes

## Male STOP Participants



# Addressing Drinking Behaviours in STOP Can Improve Quit Outcomes

## Male STOP Participants



# Potential Outcomes of Combined Alcohol and Cessation Programming



Better quit outcomes



Reduced drinking rates



Patients' acceptance;  
interest in treatment



Increase in long-term sobriety



# POLL QUESTION

**Does your clinic currently have a protocol for health care practitioners to address patients' alcohol use?**

Yes

No

# SBIRT is Evidence-Based Approach to Addressing Risky Alcohol Use

- SBIRT is an evidence-based clinical practice used to identify, reduce, and prevent problematic substance use, abuse, dependence on alcohol and illicit drugs
- SBIRT has been adapted for use in a variety of settings, including, primary care settings, office and clinical-based practices, and community settings
- There are three parts to SBIRT:
  1. Screening
  2. Brief Intervention
  3. Referral to Treatment

# Screening, Brief Intervention, & Referral to Treatment (SBIRT)

## Step 1: Screening

Different tools available depending on setting, populations targeted:

- AUDIT
- ASSIST
- CAGE
- CRAFFT
- S-MAST
- RAPS
- T-ACE
- TWEAK



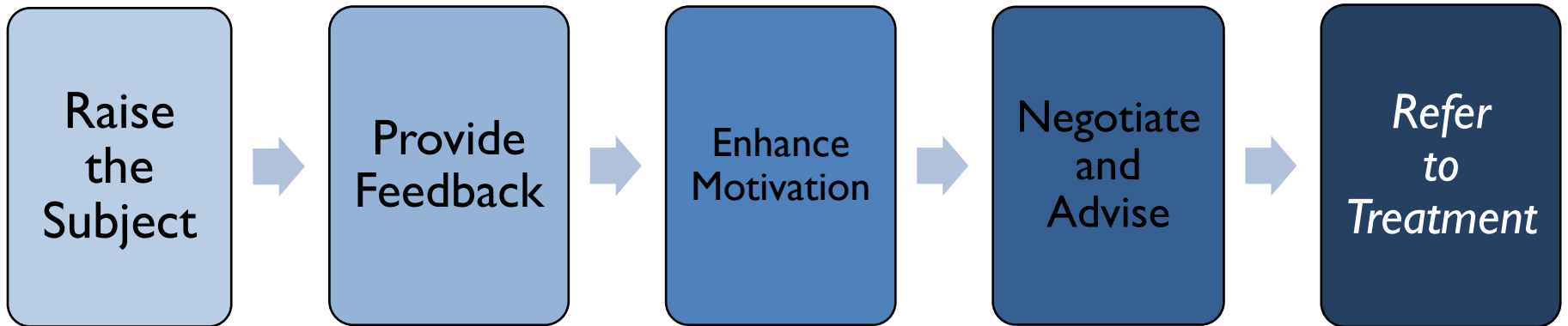
### **Alcohol Use and Disorders Identification Test (AUDIT)**

1. *How often do you have a drink containing alcohol?*
2. *How many drinks containing alcohol do you have on a typical day when you are drinking?*
3. *How often do you have six or more drinks on one occasion?*
4. ...

# Screening, Brief Intervention, & Referral to Treatment (SBIRT)

## *Step 2: Brief Intervention (example)*

### **Brief Intervention Steps Recommended by APHA**



# Screening, Brief Intervention, & Referral to Treatment (SBIRT)

## *Step 3: Referral to Treatment*



### **Refer to Health Care Provider:**

- Addiction therapist
- Psychiatrist
- Counselor
- Social Worker

### **Provide Resources:**

- Workbooks
- Fact sheets
- Agreement forms
- Diary cards, *etc.*

# Introducing COMBAT



Applies SBIRT approach to address consumption of alcohol above recommended guidelines



Offers implementers the option to provide patients with relevant resources

Objective is to increase proportion of eligible participants:

1. Abstinent from smoking
2. Meeting CCS drinking guidelines at 6-month follow up



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# Thank you!

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