Determining Quality Chronic Disease Prevention Indicators for Ontario: The Chronic Disease Prevention Indicators Framework

Ontario Chronic Disease Prevention Alliance

November 2016
### Table of Contents

Table of Contents .......................................................................................................................................... 2  
Tables........................................................................................................................................................ 4 
Figures ...................................................................................................................................................... 4  
Acknowledgements ....................................................................................................................................... 5 
Advisory Group Members ........................................................................................................................... 5 
Key Informants .......................................................................................................................................... 5 
About the OCDPA ......................................................................................................................................... 6  
Introduction.................................................................................................................................................... 6 
The Issue................................................................................................................................................... 6 
Background ............................................................................................................................................... 8 
Rationale for Risk-Factor Focus ............................................................................................................... 9 
Using a Population Health Approach ..................................................................................................... 9 
Methods Overview ...................................................................................................................................... 10 
Indicator Selection ................................................................................................................................... 10 
Indicator Prioritization .............................................................................................................................. 11 
Summary of Phases I - III ............................................................................................................................ 11 
  Phase I – Indicator Short-list Selection ................................................................................................... 11 
  Phase II – Indicator Validation ................................................................................................................ 12 
  Phase III – Indicator Data Population ..................................................................................................... 12 
Selected Indicators ...................................................................................................................................... 12 
  Infographics............................................................................................................................................. 12 
  Full List of 52 Populated Indicators ......................................................................................................... 19 
Policy Recommendations ............................................................................................................................ 24 
  Physical Inactivity ................................................................................................................................ 24 
  Unhealthy Eating ................................................................................................................................. 24 
  Tobacco Use ......................................................................................................................................... 25 
  High-Risk Alcohol Consumption ........................................................................................................... 25 
  Mental Illness ....................................................................................................................................... 25 
Conclusions and Next Steps ....................................................................................................................... 26 
Appendix A – Detailed Description of Phases I – III ................................................................................... 27 
  Phase I – Indicator short-list selection .................................................................................................... 27 
  Limitations ............................................................................................................................................ 27 
  Phase II – Indicator validation ............................................................................................................... 28 
  Limitations ............................................................................................................................................ 28
Phase III – Indicator data population ...................................................................................................... 29
Limitations ............................................................................................................................................... 29
Tables

Table 1 Causal links between selected modifiable risk factors and chronic disease ......................................... 8
Table 2 Indicator framework phases of development ......................................................................................... 10
Table 3 Indicator quality selection criteria .................................................................................................... 11
Table 4 Populated indicators for unhealthy eating ........................................................................................ 19
Table 5 Populated indicators for physical inactivity ....................................................................................... 19
Table 6 Populated indicators for alcohol consumption ................................................................................ 21
Table 7 Populated indicators for tobacco use ............................................................................................... 22
Table 8 Populated indicators for mental illness ........................................................................................... 23

Figures

Figure 1 Interrelationship between risk factors and chronic diseases .......................................................... 7
Figure 2 Chronic disease in Ontario infographic ......................................................................................... 13
Figure 3 Unhealthy eating in Ontario infographic ....................................................................................... 14
Figure 4 Physical inactivity in Ontario infographic .................................................................................. 15
Figure 6 Alcohol consumption in Ontario infographic ............................................................................. 16
Figure 6 Tobacco use in Ontario infographic ........................................................................................... 17
Figure 7 Mental illness in Ontario infographic ........................................................................................... 18
Figure 8 Flow chart of indicator selection process and outcomes (Phase I) ............................................... 27
Figure 9 Overview of Phase II Validated Quality Indicator Framework .................................................... 28
Acknowledgements

Elizabeth Manafò, MHSc, RD, Research Associate for Advisory Group, prepared this report in collaboration with the Quality Indicators Advisory Group of the OCDPA. Megan Charlish, MPH, RD provided valuable research assistance.

Advisory Group Members

John Atkinson, Canadian Cancer Society, Ontario Division
Michelle Brownrigg, Ophea
Amanda Dupupet, Health Nexus (OCDPA Secretariat)
Diane English, Parks and Recreation Ontario
Norman Giesbrecht, Centre for Addiction and Mental Health (Chair of the Advisory Group)
Chris Markham, Ophea
Sara Mison, Ophea
Scott Mitchell, Canadian Mental Health Association, Ontario
Cristin Napier, Heart and Stroke Foundation
Zarsanga Popal, Canadian Mental Health Association, Ontario
Lynn Roblin, Dietitians of Canada and Ontario Public Health Association
Penny Scott, Health Nexus (OCDPA Secretariat)
Rebecca Truscott, Cancer Care Ontario
Ellen Wodchis, Association of Local Public Health Agencies (alPHA)
Linda Yoo, Centre for Addiction and Mental Health
Sherry Zarins, The Lung Association – Ontario

Key Informants

The key informants listed below provided their insight and expertise during Phase II of the report which included validating the proposed indicators.

Joanne Beyers, Sudbury District Health Unit
Naushaba Degani, Health Quality Ontario
David Hammond, University of Waterloo
Anca Ialomiteanu, Centre for Addiction and Mental Health
Michele MacDonald Werstuck, Hamilton Family Health Team
Robert Schwartz, Centre for Addiction and Mental Health
Peter Selby, Centre for Addiction and Mental Health
Heather Thomas, Middlesex Public Health
Ashley Wettlaufer, Centre for Addiction and Mental Health

The OCDPA gratefully acknowledges the financial support of the Public Health Agency of Canada and the in-kind support provided by Health Nexus, both of which made this project possible.
About the OCDPA

The Ontario Chronic Disease Prevention Alliance (OCDPA) is a collaborative of more than 20 leading health-related organizations working together to comprehensively address chronic disease prevention and healthy living. Since its formation in 2003, the OCDPA has provided overviews on the determinants and risk factors for chronic disease development, addressed the economic burden of chronic disease in Canada, and identified the priorities for action in chronic disease prevention.

The OCDPA believes in a healthy province, defined as “one where its population is physically active; living in vibrant communities; has access to, and makes healthy food choices; has low to no tobacco use; is aware of and adheres to the low risk drinking guidelines; and has access to an integrated system of coordinated and effective promotion, prevention, early intervention, and treatment programs for mental health issues. It’s a province where everyone has equitable access to healthy options and enjoys the benefits of healthy living.”

Introduction

The Issue

Chronic diseases are the leading cause of death in Ontario – 79% of all deaths in the province are attributable to cancer, cardiovascular diseases, chronic respiratory disease or diabetes. Nearly half of morbidity in Canada and in other developed countries is attributed to underlying shared modifiable risk factors, which significantly impact a population’s quality of life. More than three quarters of Ontarians are living with a chronic condition, and most have multiple conditions. Together, unhealthy behaviours and socioeconomic barriers contribute nearly 40% of Ontario’s health care costs, or $134 billion over 10 years.

Targeting chronic disease risk factors – tobacco use, alcohol consumption, physical inactivity, unhealthy eating and mental illness – has the greatest potential for reducing the burden of chronic disease. These five risk factors account for the majority of the economic burden of disease in Canada. These risk factors do not occur independently – many Ontarians may have two or more. Figure 1 describes the interrelationship between several risk factors and chronic disease. Although mental illness is not explicitly identified as a risk factor, this figure suggests that modification of one risk factor will likely impact the development of several other risk factors, given their interaction, which can be extrapolated to include mental illness.
Figure 1 Interrelationship between risk factors and chronic diseases

Note: Alcohol also has a protective effect for CVDs among women and men 65 years and older, depending on the pattern of drinking; the link to diabetes also depends on volume and patterns of drinking.

Preventing and Managing Chronic Disease: Ontario’s Framework acknowledges the importance of an integrated, coordinated system in the prevention and management of chronic diseases to reduce the overall disease burden. As such, looking at multiple risk factors and their links to multiple chronic diseases is critical to informing health-related decision-making. Table 1 describes the causal links between selected modifiable risk factors and chronic disease as identified in the Public Health Ontario – Cancer Care Ontario Report, Taking Action to Prevent Chronic Disease (2012). While previously neglected, mental illness is increasingly understood as a cross-cutting issue. It is both a risk factor for chronic physical diseases and sometimes a chronic condition itself. Mental illness, however, is not a "modifiable" behaviour in the same sense that physical inactivity and other risk factors are modifiable at the individual level. Nonetheless, action can be taken to address social determinants that will improve both mental and physical health.

Table 1 Causal links between selected modifiable risk factors and chronic disease

<table>
<thead>
<tr>
<th>Select specific diseases</th>
<th>Tobacco use</th>
<th>Alcohol</th>
<th>Physical inactivity</th>
<th>Unhealthy eating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current smoker</td>
<td>Second-hand smoke</td>
<td>Smokeless</td>
<td>Alcohol consumption</td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Lung</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Colon and rectum</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Leukemia</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Bladder</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Body of uterus</td>
<td>↓</td>
<td></td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Kidney</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Oral cavity, pharynx</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Asthma</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>COPD</td>
<td>↑</td>
<td></td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Chronic respiratory disease</td>
<td>↑</td>
<td></td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
</tbody>
</table>

Table 1 was assembled using expert evaluations performed by the World Health Organization, International Agency for Research on Cancer, United States Surgeon General and World Cancer Research Fund. This table includes only a selection of risk factors and the most common diseases associated with these risk factors. Directional arrows were included if the strength of evidence for the causal association between the risk factor and disease was rated as "probable" or stronger by the expert panel. Unhealthy eating indicators were evaluated by the World Health Organization for cardiovascular disease as a whole; a distinction was not made between IHD and stroke.

Background

A framework approach has been used in many contexts — for example, to assess access to and quality of child care across Canada, rating Canadian universities, quality of policies and interventions to control drinking and driving in the provinces and territories, and assessment of provincial alcohol policies on ten dimensions, to mention a few.

In 2014, the Public Health Agency of Canada (PHAC) developed the Chronic Disease Indicator Framework with the goal of systematizing and enhancing chronic disease surveillance in Canada. PHAC’s Chronic Disease Infobase provides the epidemiology of major non-communicable diseases in...
Canada, including the most current cancers and cardiovascular and respiratory diseases by province/territory and by regional health unit. However, this information can only be proactively accessed by data users and is not actively disseminated in a user-friendly format.

There is no comprehensive framework for Ontario that consolidates and compares chronic disease factors and preventative measures collected across the province. However, there are several initiatives that are complementary to the OCDPA Indicators Framework. The CAMH Monitor Survey collects provincial data on trends in substance use and mental health problems among adults, including self-reported measures of physical health, but does not delve deeper into chronic physical conditions. More recently, Cancer Care Ontario (CCO) published their 2016 Prevention System Quality Index which focuses on cancer-specific indicators for prevention and is revised annually. CCO’s indicator framework has an exclusive focus on system-level indicators and cancer-related risk factors.

The OCDPA recognized the importance of identifying a list of indicators and associated measures pertaining to the five risk factors with an emphasis on selecting indicators that are indicative of quality, accessibility and relevance to the Ontario context.

OCDPA also identified the significant benefit to a focused, evidence-informed indicator framework that allows those from across sectors and governments to clearly and easily identify how well Ontario is doing in preventing chronic disease. This would be accomplished by looking at risk factors and identifying different areas requiring attention or work at a research, policy and/or practice level. Collection of initial data for the identified indicators acts as baseline information and as a subsequent tool to monitor short, medium and long-term changes and identify challenges to be addressed.

The ultimate purpose of the indicator framework is to track and compare risk factors and trends for Ontario on a periodic basis. It also provides a planning tool for organizations and individuals across the chronic disease prevention sector, as well as helps provide government with an independent, objective, credible and relevant data analysis.

Rationale for Risk-Factor Focus

Given the evidence outlined earlier in this report, it is well understood that there is a great need to move beyond reporting on single diseases towards a more comprehensive approach. This report will extensively explore five risk factors that contribute to the development of a variety of chronic diseases:

- unhealthy diet
- physical inactivity
- high-risk alcohol consumption
- tobacco use
- mental illness

Using a Population Health Approach

Population health aims to improve the health of the entire population while reducing health inequities among subgroups. This approach facilitates a process that considers a broad range of factors and conditions that have a strong influence on health. The exploration of both systemic and behavioural indicators in the OCDPA’s Indicators Framework highlights the inequities in the burden of chronic disease. Persistent health inequities are indicative of higher chronic disease outcomes, including increased morbidity, co-morbidities and mortality.

*While the OCDPA currently addresses “Tobacco” and “Alcohol” as the two core risk factors that pertain to substance use and/or consumption, upcoming legislation that will see marijuana use legalized in Canada (expected Spring 2017) has prompted the OCDPA to include marijuana in the Policy Recommendations section under “Tobacco”. In future reports and recommendations, the OCDPA will look at ways to integrate marijuana use into the addressed five risk factors, possibly combining it with tobacco based on Ontario-specific legislation.*
considering the social and economic factors that influence people’s health) that attempts to capture these inequities is imperative in identifying and selecting indicators to best address the difference in health status between different population groups. The two-tiered domain reduces the emphasis placed on lifestyle choices while providing consideration to broader socio-environmental issues.\textsuperscript{20}

**Methods Overview**

An Advisory Group (AG) of OCDPA members was established in December 2014, drawing on the OCPDA expertise in each of the identified risk factors. From 2014 to 2016, the AG guided four phases of development, as described in Table 2.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity</th>
<th>Brief Description</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I*</td>
<td>Indicator short-list selection</td>
<td>Review, identification and selection of existing indicators used to measure impact on chronic disease prevention across the five risk factor focus areas</td>
<td>December 2014– March 2015</td>
</tr>
<tr>
<td>Phase II*</td>
<td>Indicator validation</td>
<td>Validation of short-listed indicators by Ontario-specific experts, working in their respective fields across the five risk factor focus areas</td>
<td>September–November 2015</td>
</tr>
<tr>
<td>Phase III</td>
<td>Indicator data population</td>
<td>Populate validated indicators with most recent data</td>
<td>November 2015– January 2016</td>
</tr>
<tr>
<td>Phase IV</td>
<td>Knowledge mobilization and exchange</td>
<td>Develop and implement a knowledge mobilization and exchange plan to disseminate indicator framework and supporting documents</td>
<td>February 2016–March 2017</td>
</tr>
</tbody>
</table>

**Indicator Selection**

The AG identified preliminary selection criteria to guide the indicator selection process:

*Inclusion criteria:*
- Indicator source includes at least one measure of the identified risk factors;
- Data must be specific to Ontario; and
- Focus on ages 19 and over, with some youth-focused data, especially where the data is informative of behavior in a risk factor area over the life span.

Exclusion criteria:
- Data is collected in Ontario, but not at a level that allows for comparison by region and/or Public Health Unit.

Much progress has been made in understanding chronic diseases beyond being the outcome of unhealthy lifestyle decisions, to encompass the ways in which the social environment shapes behavioural “choices.”\textsuperscript{21}

As such, indicators were divided into two key areas for each risk factor:\textsuperscript{22}

i) **Systemic domain:** which focuses on the social and environmental determinants

ii) **Behavioural domain:** which focuses on the risk and protective factors related to the individual

The indicator group describes the broader area in which the indicator measure is organized.
For example:

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>INDICATOR GROUP</th>
<th>INDICATOR MEASURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic</td>
<td>Household food security</td>
<td>% of households in Ontario experiencing some degree of food insecurity, defined as lack of access to safe, sufficient and nutritious food due to financial constraints</td>
</tr>
<tr>
<td>Behavioural</td>
<td>Vegetable and fruit consumption</td>
<td>% of population consuming vegetables or fruit 5 or more times per day</td>
</tr>
</tbody>
</table>

**Indicator Prioritization**

A three-pronged approach was established to prioritize selected indicators.

1. Quality criteria were determined based on a review of existing indicator criteria (e.g., PHAC, Mental Health Commission of Canada, and the National Health Service in the United Kingdom) and discussion among the AG regarding which quality criteria best met this framework’s objectives. The long-list of indicators was reviewed against the established quality grading criteria (see Table 3).

2. Gaps in current indicators based on data-set limitations were noted to support expanding current data collection as well as identify potential future areas of research. These indicators are highlighted appropriately in the report card.

3. Once a draft short-list of indicators was determined, the AG met to review each risk factor and build consensus around indicator groups and measures across each risk factor, prior to agreeing on the final list.

**Table 3 Indicator quality selection criteria**

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningfulness and relevancy</td>
<td>The indicator measures a sufficiently important question or service and is clearly relevant to the chronic disease prevention or is a plausible proxy for the “gold standard” measure. The information is easy to understand, relevant to government plans and priorities and useful for public health action.</td>
</tr>
<tr>
<td>Validity</td>
<td>Data source and indicator is scientifically sound.</td>
</tr>
<tr>
<td>Feasibility</td>
<td>Sufficiently good quality data are already available.</td>
</tr>
<tr>
<td>Replicability</td>
<td>Data can be regularly collected and compared over time.</td>
</tr>
<tr>
<td>Actionability</td>
<td>Indicator provides information that can lead to action for change, including informing and influencing policy or funding, altering behaviour, or increased general understanding of impact on chronic disease.</td>
</tr>
</tbody>
</table>

**Summary of Phases I - III**

Below represents a brief summary of the outcomes of phases I – III. For a more detailed description of each phase, including figures and limitations, please see Appendix A.

**Phase I – Indicator Short-list selection**

Phase I focused on the review, identification and selection of existing indicators used to measure impact on chronic disease prevention across the five risk factor focus areas. A total of 25 indicator groups were identified across all five risk factors – these include both systemic and behavioural indicators. A total of 68 unique indicator measures describe the data to be collected in each of the indicator groupings.
Phase II – Indicator Validation

Phase II focused on the validation of the short-listed indicators by Ontario-specific experts, working in their respective fields across the five risk factor focus areas. Twenty-five key informants were contacted across the five risk factor areas and eight informants suggested indicators be added, removed, or modified.

Based on the contributions of the key informants the number of indicators increased to 72 total indicators.

Phase III – Indicator Data Population

Phase III saw the population of indicators with Ontario-specific data. Of the 72 indicators from phase II, Ontario-specific data was retrieved for 52 indicators (in a few instances Canadian-based data was used, see Table 4 for exact sourcing).

See Infographics for a series of shareable infographics representing the indicators for each of the five risk factor focus areas.

For more details on the indicators and the data sources, see Full List of 52 Populated Indicators.

Selected Indicators

Infographics

The below six infographics represent key findings from the OCDPA Indicators Report.
Figure 2 Chronic disease in Ontario infographic

CHRONIC DISEASE PREVENTION IN ONTARIO

90% of Canadians aged 65 and over live with at least one chronic disease or condition, including depression and dementia.

79% of all deaths in the province are attributable to cancer, cardiovascular diseases, chronic respiratory disease and diabetes.

40% of Ontario’s health care costs are related to unhealthy behaviours and socioeconomic barriers, costing $134 billion over 10 years.

Chronic diseases are the leading cause of death in Ontario. They are impacted by:

- Unhealthy Eating
- Physical Inactivity
- Tobacco Use
- High-Risk Alcohol Consumption
- Mental Illness

Let's measure our impact in preventing chronic disease in Ontario. The OCDPA Chronic Disease Prevention Indicator Framework can help. Use this tool to collectively inform research, practice and policies that impact the health and well-being of the population.

For more information and full references: www.ocdpa.ca

October 2016
Figure 3 Unhealthy eating in Ontario infographic

UNHEALTHY EATING IN ONTARIO

Vegetable and Fruit Consumption

**LET'S INCREASE THIS NUMBER**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38%</td>
<td>Consume vegetables and fruit five or more times per day</td>
</tr>
</tbody>
</table>

Food Security

**LET'S DECREASE THESE NUMBERS**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>Are food insecure in their household</td>
</tr>
<tr>
<td>Within that 13%...</td>
<td></td>
</tr>
<tr>
<td>4%</td>
<td>Are marginally food insecure in their household</td>
</tr>
<tr>
<td>6%</td>
<td>Are moderately food insecure in their household</td>
</tr>
<tr>
<td>3%</td>
<td>Are severely food insecure in their household</td>
</tr>
</tbody>
</table>

Overall Dietary Intake

**LET'S INCREASE THIS NUMBER**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>Perceive their eating habits to be very good or excellent</td>
</tr>
</tbody>
</table>

While several indicators were identified and validated for unhealthy eating, Ontario-specific or Canada-wide data were not available.

For more information and full references, see: [www.ocdpa.ca](http://www.ocdpa.ca)

Data is for adult population 18+ years. October 2016
Figure 4 Physical inactivity in Ontario infographic

**Physical Inactivity in Ontario**

### Workplace and School Wellness

**Let’s Increase These Numbers**
- 59% 5-17 year olds have a place to walk, jog, bicycle or rollerblade at or near their place of work or study
- 40% 15-75 year olds have access to playing fields or open spaces for ball games or other sports at or near their place of work or study
- 46% 15-75 year olds have access to a gym or physical fitness facilities at or near their place of work or study
- 36% 15-75 year olds have access to organized fitness classes at or near their place of work or study
- 28% 15-75 year olds have access to organized recreational sports teams at or near their place of work or study

### Sedentary Behaviour

**Let’s Decrease These Numbers**
- 63% 12+ year olds spend more than 14 hours per week watching television or using computers during leisure time
- 8.5 hours per week spent on a computer, including playing games or using the internet
- 12.3 hours per week spent watching TV in the past three months
- 6.2 hours per week spent reading, not counting at work or school in the past three months

### Physical Activity

**Let’s Increase These Numbers**
- 53% 12+ year olds are ‘moderately’ or ‘very’ physically active
- ~50% 20+ year olds are physically ‘active’ or ‘moderately active’ during their leisure time
- 53% are ‘moderately active’ or ‘active’
- 23% walk to and from work or school
- 5% bike to and from work or school

For more information and full references, see: www.ocdpa.ca
Details for adult population 16+ years unless otherwise noted.

October 2016
Figure 5 Alcohol consumption in Ontario infographic

HIGH RISK ALCOHOL CONSUMPTION IN ONTARIO

Alcohol Consumption

LETS DECREASE THIS NUMBER
7.3 litres of absolute alcohol per year per person aged 15+

LETS DECREASE THESE NUMBERS
Self-Reported
14% males and females who exceeded the Low-Risk Alcohol Drinking Guidelines, monthly
8% males and females who exceeded Low-Risk Alcohol Drinking Guidelines, weekly
18% report hazardous or harmful drinking (among drinkers)
6% report symptoms of alcohol dependence

Alcohol Price

LETS INCREASE THESE NUMBERS
Minimum Price of Off-premise Alcohol
(Off-premise refers to liquor, beer or wine stores)
Range from $1.07 (cooler) to $1.36 (split) per standard drink

LETS INCREASE THESE NUMBERS
Minimum Price of On-premise Alcohol
(On-premise refers to restaurants, bars and clubs)
Range from $2.00 (cooler, beer, wine) to $3.00 (spirit) per standard drink

LETS DECREASE THESE NUMBERS
Density of On- and Off-premise Outlets
(Acohol density has been linked with alcohol-related harm)
15.12 density of on-premise outlets per 10,000
1.63 density of off-premise outlets per 10,000

Behavioural Counselling

3% of drinkers have a relative, friend, doctor or health worker who expressed concern about their drinking in the last 12 months

Awareness of Risk

LETS INCREASE THIS NUMBER
21% have heard about Canada’s "Low-Risk Alcohol Drinking Guidelines"

For more information and full references, see: www.ocdpa.ca
Data is for adult population 18+ years unless otherwise noted.
October 2016
Figure 6 Tobacco use in Ontario infographic
**MENTAL ILLNESS IN ONTARIO**

**LET'S INCREASE THESE NUMBERS**
- 68% perceive their mental health as 'very good' or 'excellent'
- 13% have seen or talked to a health professional about emotional or mental health, when needed

**LET'S DECREASE THESE NUMBERS**
- 7% report poor mental health in general
- 7% perceive their mental health as 'fair' or 'poor'

**Mental and Psychological Health**

**Stress**

**LET'S DECREASE THESE NUMBERS**
- 28% report most days at work to be 'quite a bit' or 'extremely' stressful (working population)
- 22% self-perceive being 'quite a bit' or 'extremely' stressed
- 13% report psychological distress during the past few weeks
- 7% report frequent mental distress days (14+) during the past 30 days
- 17% experience 'very high' stress associated with family caregiving

**Access to Health Care**

**LET'S DECREASE THESE NUMBERS**
- 24% of people with mental health conditions report unmet need for general health care
- 26% of people with mental disorders report unmet need for mental health care

**Discrimination**

**LET'S DECREASE THIS NUMBER**
- 38% of people with a mental health condition experience discrimination

For more information and full references, see: [www.ocdpa.ca](http://www.ocdpa.ca)

Data is for adult population 18+ years unless otherwise noted.

October 2016
Full List of 52 Populated Indicators

The following indicators represent the 52 selected indicators for all five focus risk factors. The data\(^2\) column represents Ontario-specific data for the most recent year available, unless otherwise stated. In some instances, Canadian data was used when no Ontario data was available and the Canadian data was deemed to be comparable to the provincial population. The abbreviation for the source is provided for reference. Full source information is available by emailing ocdpa@on.lung.ca

### Table 4 Populated indicators for unhealthy eating

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Food access and security</td>
<td>Systemic</td>
<td>Nearly 13% are food insecure; 4% are marginally food insecure; 6% are moderately food insecure and 3% are severely food insecure</td>
<td>Households experiencing some degree of food insecurity, defined as access to safe, sufficient and nutritious food due to financial constraints</td>
<td>PROOF 2013</td>
</tr>
<tr>
<td>2. Fruit and vegetable consumption</td>
<td>Behavioural</td>
<td>38%</td>
<td>Population consuming vegetables or fruit 5 or more times per day</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>3. Overall diet/balanced dietary intake</td>
<td>Behavioural</td>
<td>46%(^3)</td>
<td>Population who perceive their diet to be very good or excellent</td>
<td>CCHS 2013</td>
</tr>
</tbody>
</table>

### Table 5 Populated indicators for physical inactivity

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Workplace wellness</td>
<td>Systemic</td>
<td>59%</td>
<td>5-17 year olds have a place to walk, jog, bicycle or rollerblade at or near their place of work or school</td>
<td>CCHS 2008</td>
</tr>
<tr>
<td>1. Workplace wellness</td>
<td>Systemic</td>
<td>40%</td>
<td>15-75 year olds have access to playing fields or open spaces for ball games or other sports at or near their place of work or school</td>
<td>CCHS 2008</td>
</tr>
<tr>
<td>1. Workplace wellness</td>
<td>Systemic</td>
<td>45.5%</td>
<td>15-75 year olds have access to a gym or physical fitness facilities at or near their place of work or school</td>
<td>CCHS 2008</td>
</tr>
<tr>
<td>1. Workplace wellness</td>
<td>Systemic</td>
<td>36%</td>
<td>15-75 years olds have access to organized fitness classes at or near their place of work or school</td>
<td>CCHS 2008</td>
</tr>
</tbody>
</table>

\(^2\) Based on most recently available data retrieved in March 2016

\(^3\) Canadian level data
<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Workplace wellness</td>
<td>Systemic</td>
<td>28%</td>
<td>15-75 years old have access to organized recreational sports teams at or near their place of work or school</td>
<td>CCHS 2008</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>68%</td>
<td>5-17 years old are physically &quot;active&quot; or &quot;moderately active&quot; during their leisure time</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>52.70%</td>
<td>12 year old + are &quot;moderately&quot; or &quot;very&quot; physically active</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>55.8% (age 20-34) 50% (age 35-44) 49.5% (age 45-64) 47% (age 65+)</td>
<td>Population who are physically &quot;active&quot; or &quot;moderately active&quot; during their leisure time, populated aged 20+</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>53%</td>
<td>Population who are &quot;moderately active&quot; or &quot;active&quot;</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>23%</td>
<td>Population who walk to and from work or school</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>2. Physical activity</td>
<td>Behavioural</td>
<td>5%</td>
<td>Population who bike to and from work or school</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>3. Sedentary behaviour</td>
<td>Behavioural</td>
<td>63%</td>
<td>12 year olds + spend more than 14 hours per week watching television or using computers during leisure time</td>
<td>CCHS 2012</td>
</tr>
<tr>
<td>3. Sedentary behaviour</td>
<td>Behavioural</td>
<td>8.5 hours/week</td>
<td>Time spent on a computer, including playing games or using the Internet, in the past three months</td>
<td>CCHS 2012</td>
</tr>
<tr>
<td>3. Sedentary behaviour</td>
<td>Behavioural</td>
<td>12.3 hours/week</td>
<td>Time usually spent watching TV in past three months</td>
<td>CCHS 2012</td>
</tr>
<tr>
<td>3. Sedentary behaviour</td>
<td>Behavioural</td>
<td>6.2 hours/week</td>
<td>Time spent reading, not counting at work or school, in the past three months</td>
<td>CCHS 2012</td>
</tr>
</tbody>
</table>
## Table 6 Populated indicators for alcohol consumption

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alcohol price</td>
<td>Systemic</td>
<td>$1.23 - Non-draft beer, 5% alc, refillable container $1.11 - Table wine, 12% alc, non-US import $1.36 - Spirits, 40% alc, class A $1.07 - Coolers, 7% acl</td>
<td>Minimum price of off-premise alcohol for a standard drink</td>
<td>CCO 2012</td>
</tr>
<tr>
<td>1. Alcohol price</td>
<td>Systemic</td>
<td>$2.00 - Beer $2.00 - Wine $3.00 - Spirits $2.00 - Cooler</td>
<td>Minimum price of on-premise alcohol for a standard drink</td>
<td>CCO 2012</td>
</tr>
<tr>
<td>1. Alcohol price</td>
<td>Systemic</td>
<td>$106.4 - Beer $101.8 - Wine $111.2 - Spirits</td>
<td>Average price relative to Consumer Price Index (CPI)</td>
<td>CCO 2011</td>
</tr>
<tr>
<td>2. Physical availability</td>
<td>Systemic</td>
<td>On-premise outlets: 15.12 per 10,000 Off-premise outlets: 1.63 per 10,000</td>
<td>Density of on- and off-premise outlets. On-premise refers to bars, restaurants, clubs; off-premise refers to liquor, beer or wine stores.</td>
<td>CCO 2010/2011 CCO 2013/2014</td>
</tr>
<tr>
<td>3. Normalization of drinking</td>
<td>Behavioural</td>
<td>1 drink - 31.6% 2 drinks - 38.2% 3 drinks - 13.2%</td>
<td>Perception of maximum number of drinks per day that could be considered low-risk for a man of legal drinking age</td>
<td>CAMH Monitor 2007</td>
</tr>
<tr>
<td>3. Normalization of drinking</td>
<td>Behavioural</td>
<td>0 drinks - 36.8% 1 drink - 26.0% 2 drinks - 23.1% 3 drinks - 6.7%</td>
<td>Perception of maximum number of drinks per day that could be considered low-risk for a woman of legal drinking age</td>
<td>CAMH Monitor 2007</td>
</tr>
<tr>
<td>4. Behavioural counselling</td>
<td>Behavioural</td>
<td>2.4% (total sample) 3.1% (among drinkers)</td>
<td>Have a relative, friend, doctor or health worker have ever been concerned about your drinking in the last 12 months</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>5. Alcohol consumption</td>
<td>Behavioural</td>
<td>About 7.3 litres of absolute alcohol per</td>
<td>Per capita (L) of absolute alcohol consumption per person aged 15 and older</td>
<td>CANSIM 2014/2015</td>
</tr>
<tr>
<td>INDICATOR GROUP</td>
<td>BEHAVIOURAL OR SYSTEMIC</td>
<td>DATA</td>
<td>INDICATOR MEASURE</td>
<td>SOURCE</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------</td>
<td>------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>6. Self-reported alcohol consumption (among drinkers)</td>
<td>Behavioural</td>
<td>1,737,737 in Ontario 1,219,660 Males 518,077 Females</td>
<td>Heavy drinking, by sex and province (number of persons)⁴</td>
<td>CANSIM 2012</td>
</tr>
<tr>
<td>6. Self-reported alcohol consumption (among drinkers)</td>
<td>Behavioural</td>
<td>Never 21.8% (total sample) Monthly or less 29.1% 2-4 times/month 33.2% 2-3 times/week 20.2% 4+ times/week 17.5%</td>
<td>Drank alcoholic beverages in the past 12 months</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>6. Self-reported alcohol consumption (among drinkers)</td>
<td>Behavioural</td>
<td>54.3% &lt;monthly 23.1% Monthly 14% Weekly 7.7%</td>
<td>Drank 5 (male) and 4 (female) or more drinks on one occasion</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>6. Self-reported alcohol consumption (among drinkers)</td>
<td>Behavioural</td>
<td>23.5%</td>
<td>Exceeded Low-Risk Alcohol Drinking Guidelines</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>6. Self-reported alcohol consumption (among drinkers)</td>
<td>Behavioural</td>
<td>17.7%</td>
<td>Reported hazardous or harmful drinking</td>
<td>CAMH Monitor 2013</td>
</tr>
</tbody>
</table>

Table 7 Populated indicators for tobacco use

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Price</td>
<td>Systemic</td>
<td>$88.64/carton (200 cigarettes/carton)</td>
<td>Price of cigarettes</td>
<td>SHAF 2015</td>
</tr>
<tr>
<td>2. Taxation</td>
<td>Systemic</td>
<td>$0.13975 per cigarette $2.80 per pack 20 cigarettes</td>
<td>Taxation of cigarettes</td>
<td>Gov of Ontario 2014</td>
</tr>
<tr>
<td>3. Access to cessation aids</td>
<td>Systemic</td>
<td>18%</td>
<td>Tried a nicotine patch to quit smoking in the past 12</td>
<td>TIMS 2012</td>
</tr>
</tbody>
</table>

⁴ A definition change was implemented in 2013 to conform with the World Health Organization (WHO) and Health Canada guidelines for heavy drinking. Heavy drinking refers to males who reported having 5 or more drinks, or women who reported having 4 or more drinks, on one occasion, at least once a month in the past year. While this indicator remains comparable for males to the 5 or more drinks indicator published in previous years, it is no longer comparable for females.
### Table 8 Populated indicators for mental illness

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Behavioural counselling</td>
<td>Systemic</td>
<td>57%</td>
<td>Doctor advised to quit smoking in past 12 months</td>
<td>TIMS 2012</td>
</tr>
<tr>
<td>5. Smoking prevalence</td>
<td>Behavioural</td>
<td>6%</td>
<td>12-19 years are occasional smokers</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>5. Smoking prevalence</td>
<td>Behavioural</td>
<td>14%</td>
<td>19 years + are daily smokers</td>
<td>TIMS 2014</td>
</tr>
<tr>
<td>5. Smoking prevalence</td>
<td>Behavioural</td>
<td>3%</td>
<td>19 years + are occasional smokers</td>
<td>TIMS 2014</td>
</tr>
<tr>
<td>6. Quit attempts</td>
<td>Behavioural</td>
<td>46%</td>
<td>Population who stopped smoking for at least 24 hours because they were trying to quit smoking</td>
<td>CCHS 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stress</td>
<td>Systemic</td>
<td>28%</td>
<td>Working population 15-17 years who report most days at work to be “quite a bit stressful” or “extremely stressful”</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>1. Stress</td>
<td>Systemic</td>
<td>17%°</td>
<td>Experience very high stress associated with family caregiving</td>
<td>MHCC 2015</td>
</tr>
<tr>
<td>1. Stress</td>
<td>Behavioural</td>
<td>22%</td>
<td>Population self-perceived life stress as “quite a lot” or “extremely”</td>
<td>CCHS 2014</td>
</tr>
<tr>
<td>1. Stress</td>
<td>Behavioural</td>
<td>13%</td>
<td>Population report psychological distress during the past few weeks</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>1. Stress</td>
<td>Behavioural</td>
<td>7%</td>
<td>Population report frequent mental distress days (14+) during the past 30 days</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>2. Discrimination</td>
<td>Systemic</td>
<td>37.9%°</td>
<td>People with mental health conditions who experience discrimination</td>
<td>MHCC 2015</td>
</tr>
<tr>
<td>3. Access to health care</td>
<td>Systemic</td>
<td>24.2%°</td>
<td>Unmet need for general health care among people with common mental health conditions</td>
<td>MHCC 2015</td>
</tr>
<tr>
<td>3. Access to health care</td>
<td>Systemic</td>
<td>26.3%°</td>
<td>Unmet need for mental health care among people with mental disorders</td>
<td>MHCC 2015</td>
</tr>
<tr>
<td>4. Mental/</td>
<td>Behavioural</td>
<td>7%</td>
<td>Population report poor</td>
<td>CAMH Monitor</td>
</tr>
</tbody>
</table>

---

5 Canadian level data
6 Canadian level data
7 Canadian level data
8 Canadian level data
<table>
<thead>
<tr>
<th>INDICATOR GROUP</th>
<th>BEHAVIOURAL OR SYSTEMIC</th>
<th>DATA</th>
<th>INDICATOR MEASURE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>psychological health</td>
<td></td>
<td></td>
<td>mental health in general</td>
<td>2013</td>
</tr>
<tr>
<td>4. Mental/ psychological health</td>
<td>Behavioural</td>
<td>66%</td>
<td>Perceive their mental health as very good or excellent</td>
<td>CCHS 2012</td>
</tr>
<tr>
<td>4. Mental/ psychological health</td>
<td>Behavioural</td>
<td>7%</td>
<td>Perceive their mental health as fair or poor</td>
<td>CAMH Monitor 2013</td>
</tr>
<tr>
<td>4. Mental/ psychological health</td>
<td>Behavioural</td>
<td>13%</td>
<td>Population who have seen or talked to a health professional about emotional or mental health</td>
<td>CCHS 2014</td>
</tr>
</tbody>
</table>

**Policy Recommendations**

The OCDPA recognizes that in order to make Ontario the healthiest province, a collaborative approach — which includes multiple sectors and stakeholders at the local, regional and provincial levels — must be taken to remove barriers and increase access to healthy choices. The OCDPA’s Chronic Disease Prevention Indicators Framework can support Ontario to become not only the healthiest province, but also one of the jurisdictions with the highest life expectancy worldwide.

To that end, with input from key stakeholders, the OCDPA has identified policy implications across the five risk factor focus areas. Ongoing knowledge mobilization around the indicators framework and concerted action to reduce these risk factors can result in demonstrable long-term impacts.

**Physical Inactivity**

- Leverage the school as a centre for health by providing funding for health and physical education.
- Mandate yearly physical activity credit requirement for graduation.
- Uniformly implement and monitor PPM 138: Daily Physical Activity policy.
- Support community planning and partnerships that encourage mixed land use and healthy urban planning that enhances safe and sustainable active transportation. In particular, invest in infrastructure that facilitates walking, cycling and public transit use and inclusive environments for recreation and physical activity.
- Support the implementation of an action plan for the Framework for Recreation in Canada to mobilize and align efforts to reduce sedentary behaviours.
- Establish policies that provide fee assistance or subsidy programs for low-income participants, as well as free, universal programs (e.g., drop-in swim, supervised playground program) for all residents.

**Unhealthy Eating**

- Leverage the school as a centre for health by providing funding for health and physical education.
- Reinroduce home economics/family studies course to increase food literacy in elementary and secondary school.
- Increase food access and food literacy in the general population to improve diets and healthy eating behaviours.
- Support community planning and partnerships that encourage mixed land use and healthy urban planning that enhances safe and sustainable access to healthy food.
- Create a public education campaign to support the implementation of the Making Healthier Choices Act around caloric menu labelling. Facilitate ongoing monitoring, research and evaluation of the effects of caloric labelling on various subsets of the population, nutrition knowledge and menu item reformulation as well as the effects (or unintended consequences) on food intake.
• Support the implementation of recommendations from the Ontario Food and Nutrition Strategy, such as restrictions on commercial marketing of all food and beverages to children, as well as those provided by the Healthy Kids Panel, with staffing and resourcing that will ensure cross-ministry and cross-sector collaboration and a strong voice within government to move these strategies and outcomes forward.
• Facilitate research and program development at the intersection of nutrition and mental health to support healthy eating for people living with mental illness.

Tobacco Use
• Leverage the school as a centre for health by providing funding for health and physical education.
• Increase tobacco taxes on cigarettes and roll-your-own tobacco.
• Create a Comprehensive Smoking Cessation System that would link and integrate existing cessation programs and activities for smokers.
• Increase public awareness and support for anti-contraband measures through a province-wide public education campaign that will educate youth and their parents about contraband tobacco products.
• Expand the Smoke-Free Ontario Act’s regulations to apply to medical and recreational marijuana and to hookah/shisha.
• Prohibit the use of e-cigarettes – including the use of vaporizers to consume medical marijuana and testing in stores that sell e-cigarettes – in all enclosed public places and enclosed workplaces.
• Restrict accessibility to e-cigarettes by limiting the number and type of outlets where e-cigarettes can be sold, as well as hours of operation, location, etc. (in particular to reduce exposure to young people).
• Establish rules for the display and promotion of e-cigarettes at places where they are sold.

High-Risk Alcohol Consumption
• Leverage the school as a centre for health by providing funding for health and physical education.
• Maintain and reinforce socially responsible pricing of alcohol by ensuring minimum pricing per standard drink across all alcoholic beverages indexed to inflation, maintaining average prices at or above the consumer price index, and adopting disincentive pricing policies for higher alcohol content beverages to create disincentives for the production and consumption of higher strength alcoholic beverages, and to reduce the overall per capita level consumption of ethyl alcohol.
• Ensure effective controls on alcohol availability by ensuring that there is no increase in hours of sale, that the overall population density of on- and off-premise outlets per capita does not increase, and not undertaking further privatization of “off-premise” alcohol retail sales in Ontario.
• Strengthen targeted controls on alcohol marketing and promotion by adopting targeted control policies on alcohol advertising and marketing, especially marketing efforts adopting a “lifestyle promotion” approach to alcohol consumption, marketing targeting youth or high-risk drinkers, or marketing efforts encouraging high-risk drinking.
• Increase access to brief counselling interventions for moderate to high-risk drinkers, including underage drinkers, via clinics, primary health care services, hospitals, university health care services, workplaces and the Internet.

Mental Illness
• Support the implementation of Open Minds, Healthy Minds: Ontario’s Comprehensive Mental Health and Addictions Strategy to improve the mental health and wellbeing of all Ontarians.
• Build capacity among mental health service providers to deal with the chronic physical conditions experienced by people with serious mental illnesses.
• Foster collaboration among public health units, health professionals, community mental health agencies and people with lived experience to develop approaches to supporting healthy behaviours and self-management of chronic conditions that recognize the particular barriers facing people with serious mental illnesses.
• Provide mental health accessibility training to physical activity service providers to reduce
barriers and improve access to programs and services for people living with mental health conditions.
- Improve access to primary health care for people with serious mental illnesses.
- Incorporate routine screening for depression and anxiety in primary care protocols for preventing and managing chronic physical conditions.
- Provide training for health care providers to improve their understanding of serious mental illness and to reduce stigma, as well as training on how to meet the unique needs of people with co-existing physical and mental health conditions.
- Support the implementation of the National Standard of Canada for Psychological Health and Safety in the Workplace.
- Leverage the school as a centre for mental health promotion and early intervention.
- Provide students with programs to prevent bullying, to increase awareness about mental illness and the stigma that surrounds it, and to build resilience.
- Increase support for family caregivers to reduce the burden of care.
- Take action on the broad determinants of health by developing public policies that enhance housing, employment and education opportunities, as well as reduce poverty.

Conclusions and Next Steps

The OCDPA Indicators Report is a multi-year project focusing on five main risk factors for chronic disease and specifically the 52 identified indicators linked to these risk factors. It highlights that there is extensive information on these five risk factors. However, there are also areas where more information is needed to better expand our understanding of preventable chronic disease in Ontario, inform prevention planning, and guide policy development and enhancement. The project provides a focus for coordinated and collective action – as summarized in the infographics – and also offers policy recommendations and implications.

Moving forward, several steps are planned:

- **Provincial and National Knowledge Dissemination**: There will be ongoing dissemination and knowledge transfer activities, including webinars, presentations, and informal conversations with a wide range of stakeholders in prevention of chronic disease in Ontario and at a national level.

- **Project Assessment**: As part of these activities, OCDPA members and members of the Indicators project advisory group will assess the responses to the report and the knowledge transfer activities.

- **Raise Awareness for Missing Data**: There are emerging plans to promote data collection of ‘missing’ indicators.

- **Advocate for Policy-Level Change**: Building on the recommendations listed in this report, all stakeholders are encouraged to pick those that are most relevant to their areas of interest and expertise and advocate for policies that will reduce risk of chronic disease in Ontario.

- **Document Trends**: The infographics noted above imply a roadmap of what specific changes would be most relevant to chronic disease prevention. It is proposed that there be ongoing documentation of these changes.

- **Repeat**: It is envisaged that in 2 or 3 years there be another updated version of this analysis, and thus having the ability to document if and where there has been any movement on indicators. In 2019, will there be evidence of system level or behavioural level changes since 2016 that illustrate reduced risk and healthier orientation vis-à-vis chronic disease?
Appendix A – Detailed Description of Phases I – III

Phase I – Indicator short-list selection

Limitations

- Based on availability, current data collection focuses largely on behavioural/lifestyle indicators. There is a relative lack of system-level indicators. Moving forward, there is a need to identify broader indicators that relate to accessibility, availability, structural, social, cultural or economic dimensions that may contribute to enhancing or reducing risk of chronic disease.

- There is a lack of ongoing and consistent data gathering in the province due to provincial and municipal barriers/facilitators. This is a notable gap, where resource designation should be encouraged to capture more of this information. Suggestions for possible use of the Local Health Integrated Network (LHIN) and/or Public Health Unit tracking of ongoing data may be a useful approach as well as employing the RRFSS (Rapid Risk Factor Surveillance System) that could be collected more consistently across Public Health Units.
The limited opportunity to add emergent issues across risk factors given the existing data sets restricts the ability to capture indicators that best tell the current “story” about the impacts of chronic disease on a population’s health. The OCDPA framework aims to not only capture existing indicators but also identify current gaps and propose new indicators that would enhance the picture of chronic disease prevention in Ontario.

Phase II – Indicator validation

Feedback obtained across five risk factor areas by eight Ontario key informants

<table>
<thead>
<tr>
<th>PHASE I SELECTED INDICATOR MEASURES</th>
<th>PHASE II VALIDATED INDICATOR MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cross-cutting risk factor</td>
<td>1 Cross-cutting risk factor</td>
</tr>
<tr>
<td>7 Unhealthy Eating (2 systemic; 5 behavioural)</td>
<td>9 Unhealthy Eating (1 systemic; 8 behavioural)</td>
</tr>
<tr>
<td>17 Physical Inactivity (5 systemic; 12 behavioural)</td>
<td>18 Physical Inactivity (6 systemic; 12 behavioural)</td>
</tr>
<tr>
<td>18 Alcohol (11 systemic; 7 behavioural)</td>
<td>21 Alcohol (11 systemic; 10 behavioural)</td>
</tr>
<tr>
<td>10 Tobacco (5 systemic; 5 behavioural)</td>
<td>10 Tobacco (5 systemic; 5 behavioural)</td>
</tr>
<tr>
<td>15 Mental Illness (6 systemic; 9 behavioural)</td>
<td>13 Mental Illness (3 systemic; 10 behavioural)</td>
</tr>
</tbody>
</table>

TOTAL: 68 indicators

TOTAL: 72 indicators

Limitations:

- Due to limited time and availability of key informants, the framework did not reach the anticipated response rate across all risk factor areas. The aim was to include at least 2-3 key experts across each risk factor domain area. However, each risk factor area was represented by at least one key informant with the exception of physical inactivity. Key informants from other risk factor areas were encouraged to provide feedback across other areas as appropriate. This included physical inactivity.
- With several of the newly added indicators, there is the potential for a lack of consistent data gathering in the province. The Chronic Disease Prevention Indicators Framework is limited by available indicators and data collected. However, opportunities for indicators are identified to support future iterations of the framework. Additional considerations, such as expanding of age ranges (to include youth up to 19 years of age and adults older than 55 years) and focusing on
the impact of chronic disease for priority populations, were considered by the Advisory Group for future iterations of the framework.

Phase III – Indicator data population

Limitations

- Despite attempts to gain the most recent data to be comparable across indicator measures, several limitations were noted in retrieving consistent data across sources to ensure clarity and ease in comparability of trends.
REFERENCES


26 For the physical inactivity risk factor focus, indicators focusing on children and youth were included in this iteration of the chronic disease framework.