

Report on Cancer 2020:

A Call for Renewed
Action on Cancer
Prevention and
Detection in Ontario

The Provincial Cancer
Prevention and Screening Council



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du cancer



cancer care
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Acknowledgements

The Provincial Cancer Prevention and Screening Council thanks the following people for their contributions to the development of this report: Helen Angus, Bill Campbell, Sandrene Chin Cheong, Rina Chua-Alamag, Diane Finkle, Hélène Gagné, Robbi Howlett, Eric Holowaty, Janine Hopkins, Brian Hyndman, Carmen Jones, Deb Keen, Nancy Kreiger, Christine Lyons, Loraine Marrett, Christine Naugler, Diane Nishri, Danielle Paterson, Patti Payne, Rowena Pinto, Caroline Silverman, Peggy Sloan, Michael Spinks and Beth Theis.

Symbols and abbreviations used in this report

Definitions of terms outlined in *italics* are provided in the Glossary of Terms and Methods found at the end of this report. Defined words or terms are identified the first time they are used following the Executive Summary.

APN	Aboriginal patient navigator
AQI	Air Quality Index
BDCM	Bromodichloromethane
BMI	Body Mass Index
CAMH	Centre for Addiction and Mental Health
CAREX	CARCinogen EXposure Software
CCHS	Canadian Community Health Survey
F	Female
FOBT	Fecal Occult Blood Test
HPV	Human papillomavirus
HPV-DNA	Human papillomavirus-deoxyribonucleic acid
IARC	International Agency for Research on Cancer
M	Male
OBSP	Ontario Breast Screening Program
OCSP	Ontario Cervical Screening Program
OTRU	Ontario Tobacco Research Unit
PHU	Public Health Unit
PM _{2.5}	Particulate matter that has an aerodynamic diameter of less than 2.5 microns
RRFSS	Rapid Risk Factor Surveillance System
THM	Trihalomethane

About the Provincial Cancer Prevention and Screening Council

In May 2003, the Ontario Ministry of Health and Long-Term Care provided one-time funding to support the initial operation of the Provincial Cancer Prevention and Screening Council. Council has been meeting since October 2003, and was until recently co-chaired and staffed by Cancer Care Ontario and the Canadian Cancer Society, Ontario Division. John McLaughlin, Vice President of Preventive Oncology at Cancer Care Ontario, recently became Chair of the Council. Cancer Care Ontario continues to staff the Council Secretariat.

Council's key responsibilities are:

- Providing expert advice and support for the development of a cancer prevention strategy/system for Ontario to address the targets laid out in *Targeting Cancer: An Action Plan for Cancer Prevention and Detection (Cancer 2020 Action Plan)*, building on existing cancer prevention and screening activities in Ontario and engaging other relevant provincial and national chronic disease and cancer control initiatives.
- Providing expert advice to position the *Cancer 2020 Action Plan* for endorsement and approval by the government.

Council works by leading in select areas where its added value will have an impact, supporting key players working on all the different areas and monitoring progress to determine needs, priorities and opportunities for action.

Members come from a variety of backgrounds and disciplines - organizational and agency representatives, health professionals, content experts and cancer survivors - contributing expertise in a variety of areas,

such as alcohol consumption, cancer screening, citizen advocacy, environmental carcinogens, nutrition and healthy body weight, occupational health and safety, patient advocacy, physical activity, population health, program evaluation, public health programs and advocacy, regional implementation and services, research, sun safety and ultraviolet radiation exposure, tobacco control policy and viral infections.

Additional information about Council is provided in the Appendix.

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A Message from the Provincial Cancer Prevention and Screening Council Co-Chairs

Since the *Cancer 2020 Action Plan* was released in 2003, many advances in cancer prevention and screening have been made in Ontario. A solid foundation is being built which will stimulate individual action and broad population-based initiatives, such as implementing healthy active living policies and expanding opportunities for physical activity. However, more action is urgently needed. Cancer prevention and screening efforts must be increased. In addition, surveillance capacity and infrastructure must be improved to better track progress towards the targets set out in the *Cancer 2020 Action Plan* and to enable more effective evaluation, planning, policy and action for cancer prevention and early detection across the province.

Ontario spends approximately \$2-billion per year on cancer services.¹ The indirect costs of cancer in Ontario, including loss of productivity, are estimated at \$5-billion.² In Ontario, the number of cancer cases continues to rise steadily.³ Although most of the increase is due to an aging population, approximately 50% of cancers that will be diagnosed by the year 2020 can either be prevented or detected early, before they become a serious health problem.⁴

As Ontario baby boomers get older, more and more resources will be needed to expand the availability of cancer treatment. In the face of these growing pressures, significant efforts need to be taken to make the best use of resources to diagnose and treat, and more importantly, prevent cancer. By taking stronger and more immediate action on a plan for cancer prevention and early detection, Ontario could save lives as well as reduce the burden of cancer and other chronic diseases, and the expected increase in the future costs of cancer services.

As we transition to different roles on Council, we welcome John McLaughlin as the incoming Chair. John is the Vice President of Preventive Oncology for Cancer Care Ontario. His mandate and vision in moving forward is to strengthen the impact and output of cancer prevention and screening initiatives in Ontario.

On behalf of the Provincial Cancer Prevention and Screening Council, we are pleased to present the first *Report on Cancer 2020*. This report represents more than an update on the *Cancer 2020 Action Plan*. It is also a call for renewed action and sustained investment in cancer prevention and detection in Ontario.

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Prevention and
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Executive Summary

In May 2003, *Targeting Cancer: An Action Plan for Cancer Prevention and Detection (Cancer 2020 Action Plan)*, a long-term cancer prevention and early detection strategy, was jointly released by Cancer Care Ontario and the Canadian Cancer Society, Ontario Division. The *Cancer 2020 Action Plan* is a call to action based on clear targets for lowering the incidence of and mortality from cancer.

Cancer 2020 Action Plan priorities are based on the knowledge and recommendations of Ontario's leading researchers and practitioners in cancer control. Priorities for action focus on risk factors that are well established and where the association with cancer is strong. It is essential that a series of prevention and screening targets and goals are set out that are consistent with an ambitious agenda and provide a benchmark against which progress can be measured.

The present report provides baseline estimates and indicators in several key areas against which future movements towards the *Cancer 2020* targets will be measured: tobacco use reduction; nutrition, physical activity, obesity and alcohol; early detection; ultraviolet radiation exposure; and occupational and environmental carcinogens.

The primary source of data for these indicators is the second *Canadian Community Health Survey*, which was conducted in 2003, the same year that the *Cancer 2020 Action Plan* was released. As such, it provides baseline data for monitoring progress in many areas. However, not all aspects of the *Cancer 2020 Action Plan* were included, and some cannot be fully monitored at this time due to a lack of readily available data sources.

This report also highlights a selection of key provincial activities accomplished since the release of the *Cancer 2020 Action Plan*. There have been a number of

initiatives in Ontario with direct or indirect impacts on cancer prevention and early detection. Examples include: the passage of groundbreaking provincial tobacco control legislation; the release of the 2004 *Chief Medical Officer of Health Report: Healthy Weights/Healthy Lives*; the preparation of a strategic directions document on sun safety by the National Sun Safety Committee; a three-year pilot project on occupational cancer research and surveillance conducted by Cancer Care Ontario and the Workplace Safety and Insurance Board of Ontario; a series of meetings of provincial environmental stakeholders convened by Cancer Care Ontario to identify opportunities for joint collaboration on the prevention of exposure to, and control of, environmental carcinogens; and the development of the Aboriginal Cancer Strategy. On their own, these activities reflect the efforts of a wide range of organizations and individuals; together they signify preliminary movement towards the targets identified in the *Cancer 2020 Action Plan*. However, ongoing government funding and commitment are essential to enable the Provincial Cancer Prevention and Screening Council and other provincial partners to move forward in their efforts.

Ontario still faces formidable challenges to achieving the *Cancer 2020* targets. For example, not enough Ontarians are taking advantage of screening programs. This is largely because of inadequate resources for organized screening programs. While participation in the Ontario Breast Screening Program has been steadily increasing, most women aged 50 to 69 do not benefit from organized screening, Ontario does not yet have an organized colorectal screening program. In addition, there is a lack of ongoing surveillance mechanisms and inadequate funding for screening programs.



The Provincial Cancer Prevention and Screening Council is inspired by what has been accomplished to date and is pleased to support government initiatives and ministries as they provide leadership and direction in health promotion and public health. The Council is committed to working in collaboration with key stakeholder groups and providing input that will advance both the provincial and national chronic disease prevention strategies. Above all, the Council is dedicated to achieving real improvements in cancer prevention and early detection by the year 2020.

Ontario has the potential to reduce the growing demand for cancer services by implementing a comprehensive and inter-sectoral approach to cancer prevention and detection, which focuses on research, surveillance and monitoring, policies and programs, and collective action.

Recommendation A: Research, Surveillance and Monitoring

A comprehensive knowledge base, as demonstrated by the Canadian Strategy for Cancer Control, is needed to improve the observation and management of cancer in Ontario and in Canada and to demonstrate the effectiveness and impact of cancer prevention and early detection strategies and interventions over time. Substantial investments are required for knowledge development (research), surveillance and monitoring in the following areas:

- Cancer research funders (e.g., National Cancer Institute of Canada, Ontario Institute for Cancer Research, Ontario Government) should increase research funding for primary prevention and screening. Funders should build a well-developed, long-term research agenda to guide investment, particularly on population-based cancer research and on risk factors that have traditionally received less attention (i.e., alcohol, environmental and occupational exposures to carcinogens, sun safety and ultraviolet exposure).
- Cancer Care Ontario and other relevant research bodies should increase research, monitoring and evaluation on the link between risk factors and cancer.
- Cancer Care Ontario, the Canadian Cancer Society and other partners should participate in and support provincial and federal efforts in developing coordinated research agendas and surveillance systems on cancer prevention and early detection. In particular:
 - ▶ Commitments from federal and provincial governments are required in order to expand the cancer surveillance system to support the measurement of progress toward all target domains set out in the *Cancer 2020 Action Plan*.

- Commitments from federal and provincial governments are required to develop better surveillance information on the exposures to risks associated with environmental and occupational carcinogens.

Recommendation B: Policies and Programs

There is a critical need to continue to create and strengthen supportive environments, in which policies and programs are part of the governmental infrastructure and where sufficient coordinated resources are provided to regions and communities for implementation. In order to achieve the *Cancer 2020 Action Plan* targets, the following policies and programs should be developed and implemented:

General

- The Ontario Ministry of Health and Long-Term Care, with support of Cancer Care Ontario, should ensure integration of *Cancer 2020 Action Plan* targets into the Mandatory Health Programs and Services Guidelines.
- The provincial government should expand incentive systems for physicians and other health care professionals (particularly in Family Health Teams) to engage in cancer prevention and screening education with their patients/clients.
- The provincial government should continue to increase investment in and strengthen public health infrastructure.
- The federal and provincial governments should continue to fund and support implementation of the Aboriginal Cancer Strategy.



- Cancer Care Ontario should continue to build capacity within regional cancer prevention and screening networks to help regions work towards achieving Cancer 2020 targets.

Prevention

- The provincial government should increase funds for and continue to implement *Ontario's Action Plan for Healthy Eating and Active Living*.
- The provincial government should continue to implement and fund a comprehensive school health program to foster individual and environmental change in schools to promote healthy eating and physical activity.
- Cancer Care Ontario, the Centre for Addiction and Mental Health and other relevant partners should promote policies and interventions that will curtail the current rising level in the overall rate of alcohol consumption and reduce the proportion of Ontarians who drink at high risk.
- Government ministries, Cancer Care Ontario and relevant partners should develop and implement a

comprehensive provincial environmental carcinogens reduction strategy, which would include reductions in fine air particulates.

- Cancer Care Ontario, relevant partners and government ministries should develop and implement a broader provincial occupational carcinogens reduction strategy.
- Cancer Care Ontario and relevant partners should pilot and evaluate innovative chronic disease prevention and health promotion interventions for cancer.

Screening

- The Ontario Ministry of Health and Long-Term Care should fund a provincial population-based colorectal cancer screening program through the province's organized screening program to ensure consistent quality and safety standards across the province.
- The Ontario Ministry of Health and Long-Term Care should provide stable, long-term funding for the Ontario Breast Screening Program and ensure all mammography screens are provided through the Program.
- Cancer Care Ontario should monitor and evaluate the potential impact of human papillomavirus (HPV) and HPV vaccine on cervical screening activities in Ontario.
- The Ontario Ministry of Health and Long-Term Care should provide funds to pilot innovative cancer screening interventions to reach under-screened populations (e.g., cervical screening).

Recommendation C: Collective Action

Collective action on common chronic disease risk factors should be enhanced through collaboration of government, health agencies and non-profit organizations on cancer-specific risk factors in order to reduce cancer incidence and mortality. Better linkages and mobilization of our efforts will lead to greater impact and changes through action in the following areas:

- Cancer Care Ontario, in collaboration with other partners (e.g., Ontario Chronic Disease Prevention Alliance), should coordinate provincial cancer prevention efforts with groups who have an interest in similar diseases and risk factors (e.g., diabetes, heart disease, tobacco use, obesity and high-risk drinking).
- Cancer Care Ontario, in collaboration with other partners (e.g., Centre for Behavioural Research and Program Evaluation), should establish an ongoing forum for the exchange of best practices in cancer prevention and screening at the provincial level.
- The provincial government, in collaboration with Cancer Care Ontario and other partners, should develop an inter-ministry process to coordinate government policy and implementation planning for occupational and environmental exposure to carcinogens and for sun safety, including the development of provincial legislation to restrict the use of artificial tanning equipment by those under the age of 18.

Introduction

Cancer[◇] is one of the major *chronic diseases*[◇] in Ontario. Cancer Care Ontario projected that 60,000 *Ontarians*[◇] would be diagnosed with cancer in 2005.³ Almost 26,000 Ontarians died from cancer in 2005.⁵ Unless action is taken now, as Ontario's population grows and ages, the total number of newly diagnosed cancers could increase by 38% by 2015.³

Approximately 50% of cancers that will be diagnosed by 2020 can either be prevented or detected early, before they become a serious health problem.⁴ By taking immediate action on a plan for cancer prevention and *early detection*,[◇] Ontario could save lives and reduce the expected increase in the future costs of cancer services.

About the *Cancer 2020 Action Plan*

In May 2003, Cancer Care Ontario and the Canadian Cancer Society, Ontario Division, jointly released *Targeting Cancer: An Action Plan for Cancer Prevention and Detection (Cancer 2020 Action Plan)*, a long-term cancer prevention and early detection strategy designed to reduce cancer incidence and mortality in Ontario by the year 2020.⁴ *The Cancer 2020 Action Plan* is the result of research and extensive consultation with *stakeholders*[◇] across Ontario that began two years earlier at the request of the Ontario Ministry of Health and Long-Term Care. The action plan provides recommendations of leaders drawn from Ontario's *cancer control*[◇] community, including medical professionals, representatives from non-profit agencies and government, patients and others concerned about cancer.

The *Cancer 2020 Action Plan* is a call for action based on clear *targets*[◇] to lower cancer incidence and mortality. It also defines priorities and provides

measurable goals and a time frame for their achievement. Finally, the *Cancer 2020 Action Plan* provides a framework to monitor progress towards reducing cancer incidence and mortality.

About This Report

This report provides baseline estimates and indicators in several key areas against which future movements towards the Cancer 2020 targets will be measured: tobacco use reduction; nutrition, physical activity, obesity and alcohol; early detection; ultraviolet radiation exposure; and occupational and environmental *carcinogens*.[◇] The primary data source used for these indicators is the second *Canadian Community Health Survey (CCHS)*,[◇] which was conducted in 2003, the same year that the *Cancer 2020 Action Plan* was released. As such, it provides baseline data for monitoring progress in many areas. However, not all aspects of the *Cancer 2020 Action Plan* were included, and some cannot be fully monitored at this time due to a lack of readily available data sources.

This report also highlights a selection of key provincial activities accomplished since the release of the *Cancer 2020 Action Plan*. These initiatives provide a strong foundation upon which the Provincial Cancer Prevention and Screening Council can continue to address *cancer prevention and screening*[◇] in Ontario. However, ongoing government funding and commitment are essential to enable the Council to move forward in its efforts.

Finally, this report identifies further action needed to achieve cancer reduction targets by 2020. By continuing efforts toward an action plan for cancer prevention and detection, Ontario has the potential to reduce the burden of cancer and the accompanying increase in the cost of cancer control.

[◇] See Glossary of Terms and Methods for definition

Update on the *Cancer 2020 Action Plan*

Since the *Cancer 2020 Action Plan* was issued in 2003, there have been a number of initiatives in Ontario with direct or indirect impacts on cancer prevention and early detection. On their own, these activities reflect the efforts of a wide range of organizations and individuals; together they combine to signify preliminary movement towards the *Cancer 2020 Action Plan* targets and contributions to cancer control.

The following sections summarize Cancer 2020 targets and priorities as originally proposed, identify measures that can be used to monitor progress toward these targets, provide highlights of key provincial initiatives undertaken since 2003, and propose recommendations for renewed action. Specific topics examined include:

- ▶ Tobacco use reduction
- ▶ Nutrition, physical activity, obesity and alcohol
- ▶ Screening and early detection
- ▶ Ultraviolet radiation exposure
- ▶ Occupational carcinogens
- ▶ Environmental carcinogens
- ▶ Aboriginal cancer strategy
- ▶ Infrastructure development

The primary data source used to establish baseline estimates for this report has been the 2003 *Canadian Community Health Survey (CCHS)*. This survey provides a comprehensive source of relevant data, but has only recently become available. Additional data from such sources as the Ontario Tobacco Research Unit, the *Rapid Risk Factor Surveillance System*^o (RRFSS), the Ontario Breast Screening Program, the Ontario Ministry of the Environment and the Ontario Cancer Registry have been used where the CCHS does

^o See Glossary of Terms and Methods for definition



not include the required information. Some indicators presented in this report are not necessarily representative of the whole province as they are based on data available only for some regions of the province (these include attempts to quit smoking, unprotected time in the sun, use of tanning equipment and sunburn reporting). Since 2003 is the same year that the *Cancer 2020 Action Plan* was released, this report provides useful baseline data for assessing future progress.

Unfortunately, data are not available to monitor some aspects of Cancer 2020. For example, as noted in the *Cancer 2020 Action Plan*, there is a lack of well documented data on factors associated with environmental and occupational carcinogens. In some cases, this lack of data reflects the complexity of the

issue and should not constitute a barrier to action. Although data may not be ideal, Ontario is breaking new ground in attempting to monitor progress in areas such as reducing involuntary exposure to carcinogens.

Future reports will monitor progress towards achieving the Cancer 2020 targets by reporting on indicators for later years and including data on cancer incidence trends. In addition, reporting will be expanded to include new information that becomes available.

Tobacco Use Reduction

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- 2% of teens are current cigarette smokers
- 5% of adults (ages 18 and older) are current smokers
- 90% of daily smokers make at least one attempt to quit smoking per year
- < 1% of Ontarians are exposed to *second-hand smoke* in the home and in private vehicles
- 100% of public places (including bars, restaurants and gaming facilities) in Ontario are smoke-free

Cancer 2020 Priority:

- implement a comprehensive *tobacco control* strategy

The primacy of tobacco control for cancer prevention is undisputed. Although a *causal link* between smoking and cancer was established in the early 1960s, tobacco consumption remains a significant cause of cancer.⁶ While significant progress has been made, sustained efforts are required to fund and implement a provincial comprehensive tobacco control strategy.

Cancer 2020 Targets: Baseline Data

As shown in the following table and graphs:

- Among teens (aged 12-17), more girls than boys smoke (10% vs. 8%). These rates are well above the Cancer 2020 target of 2%.
- Twenty-six percent of men and 20% of women were current smokers in 2003, much higher than the 5% target set in the *Cancer 2020 Action Plan*.⁸
- Slightly more than half of male (55%) and female (52%) daily smokers make at least one yearly attempt to quit smoking, whereas the Cancer 2020 target is 90% of daily smokers. (Estimates represent data from eight Public Health Units who chose to administer CCHS 2003 optional modules addressing quit attempts).
- Presently, 16% of males and 14% of females are exposed to second-hand smoke in the home and in private vehicles compared to the 1% or less target for the year 2020.
- In 2003, 63% of restaurants and 24% of bars were smoke-free compared to the 100% target set in the *Cancer 2020 Action Plan*. (This will improve with implementation of the *Smoke-Free Ontario Act* in May 2006.)

Smoking rates among youth were highest in the late 1970s, decreased during the 1980s and increased in the 1990s. Smoking rates among youth have been decreasing since the end of the 1990s and are currently at their lowest point since the 1970s.⁷

Smoking prevalence has declined among all age groups since the 1950s. Cigarette smoking among men aged 15 and older has declined significantly from the highest rates in the late 1950s and early 1960s. In Ontario women, smoking rates increased after World War II until the 1970s, when rates began to decrease.⁹

⁶ See Glossary of Terms and Methods for definition

⁸ Data from the 2006 Cancer System Quality Index indicates a similar pattern in Ontario whereby, for a broader age group, 19% of males and 15% of females aged 12 and over smoked daily in 2003.⁸

2003 Levels

TEEN SMOKING	ADULT SMOKING	QUITTING SMOKING	EXPOSURE TO SECOND-HAND SMOKE	SMOKE-FREE SPACE
M 8% F 10%	M 26% F 20%	M 55% F 53%	M 16% F 14%	1) Restaurants: 63% 2) Bars: 24%



Source: Statistics Canada (CCHS 2003)
 *8 Public Health Units

Source: Ontario Tobacco Research Unit (OTRU) 2004

Desired Direction for Change



Indicator Definitions

TEEN SMOKING	ADULT SMOKING	QUITTING SMOKING	EXPOSURE TO SECOND-HAND SMOKE	SMOKE-FREE SPACE
Percent of teens aged 12-17 who are current daily or occasional smokers	Percent of adults aged 18+ who are current daily or occasional smokers and have smoked at least 100 cigarettes	Percent of adults aged 18+ who are current smokers who stopped smoking for at least 24 hours over the past 12 months because they were trying to quit, plus former smokers who quit within the past year	Percent of Ontarians aged 12+ who are not current smokers, who report that someone smokes inside their home daily or almost daily, and/or who report being exposed to second-hand smoke daily or almost daily in a private vehicle in the past month	1) Percent of Ontarians living in communities covered by smoke-free restaurant bylaws (March 2003) 2) Percent of Ontarians living in communities covered by smoke-free bar bylaws (March 2003)

Cancer 2020 Priorities: Highlights of Key Initiatives

Fewer Ontarians will be exposed to second-hand smoke since the Government of Ontario passed the *Smoke-Free Ontario Act* in 2005. This Act protects the health of all Ontarians by prohibiting smoking in all enclosed workplaces and public places in Ontario as of May 31, 2006, toughening laws on tobacco sales to minors and restricting tobacco product displays in retail outlets with a complete ban on displays beginning May 31, 2008.¹⁰ This Act is the cornerstone of the Smoke-Free Ontario Strategy, a comprehensive provincial tobacco control strategy that was implemented in 2004/05.

The three main goals of the Smoke-Free Ontario Strategy are protection (i.e., protect people from second-hand smoke through legislation), prevention (e.g., help prevent young people from starting to smoke) and cessation (i.e., giving people the tools they need to quit). The strategy includes increased funding for youth prevention programs, cessation, public education and enforcement, as well as initiatives targeted at high-risk populations such as Aboriginal communities and people with low incomes. A youth anti-smoking campaign, called *Stupid.ca*, was developed by and aimed at young people. As part of the tobacco control strategy, the Minister of Finance has begun to increase taxes to bring the price of Ontario cigarettes closer to the national average. The Government is also working with First Nations leaders and communities to implement smoke-free goals, programs and protocols on-reserve and to develop an approach that respects the traditional and sacred use of tobacco. Cancer Care Ontario's Aboriginal Cancer Care Unit is responsible for developing the Aboriginal Tobacco Strategy.

The *Smoke-Free Ontario Act* and its accompanying strategy will have a greater impact on reducing cancer rates than any policy in Ontario's history.

Nutrition, Physical Activity, Obesity and Alcohol

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- ▶ 90% of Ontarians consume five or more servings of vegetables and fruit daily
- ▶ 90% of Ontarians participate in moderate to vigorous activity on most days of the week
- ▶ 10% of Ontarians are obese, as measured by a *Body Mass Index* (BMI) over 30
- ▶ 98% of Ontarians follow the low-risk drinking guidelines set out by the Centre for Addiction and Mental Health

Cancer 2020 Priorities:

- ▶ develop a comprehensive provincial nutrition and healthy body weight strategy, modeled on the Smoke-Free Ontario Strategy
- ▶ support additional investment in an active living strategy in Ontario to impact sedentary lifestyles
- ▶ support efforts to develop a comprehensive alcohol strategy for Ontario

Unhealthy eating, overweight and physical inactivity may be responsible for 30% of cancers in the developed world.¹¹ The consumption of excessive amounts of alcohol has been associated with many health problems, including cancer.⁶ An intensive, sustained, collective strategy involving government and multi-sectoral stakeholders is essential to address obesity, physical activity and nutrition. Such a strategy should be funded at the same level as tobacco control initiatives are within the province.

◊ See Glossary of Terms and Methods for definition

Cancer 2020 Targets: Baseline Data

As illustrated in the following table and graphs:

- Less than half of Ontario females (48%) and males (36%) consume five or more servings of vegetables and fruit daily. The target set in the *Cancer 2020 Action Plan* is 90%.
- Only 53% of males and 46% of females participate in moderate to vigorous leisure time activity on most days of the week, compared to the 90% target set in the *Cancer 2020 Action Plan*. (Not reflected in the estimate of percentage physically active are those who are "inactive" in leisure time but reported walking to work/school at least 6 hours per week or lifting light or heavy loads as usual level of physical activity at work. Together, these suggest that an additional 10%–20% of adults might be considered physically active.)
- The percentage of males (23%) and females (22%) in Ontario who are obese is more than double the 10% target set in the *Cancer 2020 Action Plan*. (The percentages of Ontarians who are obese are derived from measured height and weight collected as part of a small, in-depth version of CCHS conducted in 2004. Therefore, they are considerably higher than percentages derived from CCHS 2003⁹, which were based on self-reported height and weight. Other reports may have lower estimates of obesity if they used self-reported height and weight - known to result in underestimates of BMI compared to measured height and weight.)
- Seventy percent of males and 86% of females either abstain or follow the low-risk drinking guidelines. The target set in the *Cancer 2020 Action Plan* is 98%. Self-reports, such as in CCHS, are thought to underestimate actual alcohol consumption. In

Ontario, per capita alcohol sales decreased from the 1970s to the mid 1990s, but have since increased to 8 litres absolute alcohol per Ontarian aged 15+.¹³



⁹ A similar pattern was also reported in the 2006 Cancer System Quality Index.¹²

2003 Levels

VEGETABLE AND FRUIT INTAKE	PHYSICAL ACTIVITY	OBESITY	ALCOHOL CONSUMPTION
M 36% F 48%	M 53% F 46%	M 23% F 22%	M 70% F 86%



Source: Statistics Canada (CCHS 2003, 2004)

Desired Direction for Change



Indicator Definitions

VEGETABLE AND FRUIT INTAKE	PHYSICAL ACTIVITY	OBESITY	ALCOHOL CONSUMPTION
Percent of adults aged 18+ who eat vegetables and/or fruits at least five times a day	Percent of adults aged 18+ who were active or moderately active during leisure activities in the previous 3 months (based on estimated energy expenditure)	Percent of adults aged 18+ with BMI value of 30 or over (pregnant women excluded)	Percent of adults 19+ who are not current drinkers (no alcohol in the past 12 months) plus current drinkers who follow the low-risk drinking guidelines set out by the Centre for Addiction and Mental Health: ≤2 drinks per day and ≤9 drinks (F) or ≤14 drinks (M) per week

Cancer 2020 Priorities: Highlights of Key Initiatives

In 2004, the Chief Medical Officer of Health of Ontario issued *Healthy Weights, Healthy Lives*, a report that educates Ontarians about the factors that affect their weight and calls for a broad, multi-sectoral community-wide approach to overcome Ontario's current epidemic of overweight and obesity.¹⁴ The report outlines recommendations for all levels of government, the health system, food industry, workplaces, schools, individuals, parents and caregivers. As secretariat for the Ontario Collaborative Group on Healthy Eating and Physical Activity and its Advocacy Subcommittee (formed in late 2004), the Canadian Cancer Society, Ontario Division, led extensive *advocacy*^o efforts calling for the strategy as outlined in the report.

In June 2006, the Ontario Government launched *Ontario's Action Plan for Healthy Eating and Active Living*,¹⁵ as a response to the key findings in the *Healthy Weights, Healthy Lives* report. The \$10 million plan offers new programs and strategies, and builds on existing ones to support healthy eating and active living in Ontario. The four strategies of the plan are to grow healthy children and youth, build healthy communities, champion healthy public policy and promote public awareness and engagement.

To raise awareness about the importance of nutrition to cancer prevention, Cancer Care Ontario and the Canadian Cancer Society, Ontario Division, published three *Insight on Cancer* reports on findings from Cancer Care Ontario's Nutrition and Cancer Prevention Survey. The first report provides an overview of survey results related to daily servings of vegetables and fruit, healthy body weight and daily physical activity.¹⁶ The second report provides detailed analyses on vegetable and fruit intake.¹⁷ The third report provides detailed analyses about food security and cancer prevention in Ontario.¹⁸



Cancer Care Ontario, together with other community partners, developed a program, called TAKE Five™, to encourage women and their families to eat five to ten servings of vegetables and fruit daily.¹⁹ TAKE Five™ is supported by and administered through the Nutrition Resource Centre at the Ontario Public Health Association. The program is delivered by trained facilitators through Community Health Centres and Public Health Units across the province.

In 2004, the Ontario Government launched Active 2010, a comprehensive strategy to increase participation in sport and physical activity throughout Ontario. Active 2010 is committed to creating opportunities for Ontarians to become involved in quality sport activities, enhancing opportunities for Ontarians to participate in daily physical activity and increasing the number of Ontarians who value participation in sport and physical activity and believe it is an integral and essential part of life in Ontario.²⁰

Through its plan to make all of Ontario's schools healthier places for students to learn, the Ontario Government directed school boards in 2004 to ensure

^o See Glossary of Terms and Methods for definition

that all elementary schools restrict the sale of food and beverage items in vending machines to healthy choices²¹ and made daily exercise (at least 20 minutes) a mandatory part of elementary school curriculum in 2005.²²

Cancer Care Ontario and the Centre for Addiction and Mental Health are working together to define potential alcohol use indicators useful in monitoring future progress. In May 2005, the Centre for Addiction and Mental Health became a member of the Provincial Cancer Prevention and Screening Council.

There is continued public support for control measures and other *interventions*²³ that have been shown to reduce chronic damage from high-risk drinking.

Recommendations

- The provincial government should increase funds for and continue to implement *Ontario's Action Plan for Healthy Eating and Active Living*.
- The provincial government should continue to implement and fund a comprehensive school health program to foster individual and environmental change in schools to promote healthy eating and physical activity.
- Cancer Care Ontario, the Centre for Addiction and Mental Health and other relevant partners should promote policies and interventions that will curtail the current rising level in the overall rate of alcohol consumption and reduce the proportion of Ontarians who drink at high risk.

Screening and Early Detection

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- 90% of women aged 50-69 participate in organized breast screening²⁴
- 95% of women who have ever been sexually active participate in organized cervical screening
- 90% of Ontarians participate in an organized colorectal screening program

Cancer 2020 Priorities:

- fund and implement a colorectal screening pilot program, whose findings will inform the expansion of *population-based*²⁵ colorectal screening in Ontario
- strengthen the Ontario Breast and Cervical Screening Programs and adapt these programs to changing technology
- develop an overall provincial screening strategy
- establish a screening panel to objectively review and assess new screening methods and approaches as tools for the average-risk population and to monitor and recommend strategies for genetic testing

Cancer screening offered in the context of an organized program has potential to significantly reduce incidence (cervical and colorectal cancers) and mortality rates (cervical, breast and colorectal cancers).

Screening is most effective at reducing mortality and more cost-effective if delivered through an organized program with components that cover all aspects of the screening process:

- screening and follow-up guidelines;
- initiatives to increase and maintain screening participation;
- routine recall for next screening test;
- procedures to ensure follow-up of abnormal test results;

²³ See Glossary of Terms and Methods for definition

- quality assurance;
- regular monitoring and evaluation of screening program; and
- information system.^{23,24}

Not enough Ontarians take advantage of organized early detection and screening programs and the Province still has a long way to go to reach the *Cancer 2020* Action Plan screening targets.

Breast Screening

Cancer 2020 Targets: Baseline Data

Ontario has a fully organized program for breast screening, the Ontario Breast Screening Program (OBSP) at Cancer Care Ontario, but only 24% of women aged 50-69 were screened within this Program (2002-2003), compared to a target of 90%. Although 61% of women reported having had a screening mammogram in the previous two years, as recommended by OBSP, most occurred at facilities outside the organized program.⁹

CCHS estimates include mammograms both in and out of OBSP. Screening mammogram definitions used in other CCHS analyses may vary and thus yield different proportions of women screened.

Cancer 2020 Priorities: Highlights of Key Initiatives

A policy document addressing how to include all eligible women in the OBSP, change the age eligibility criteria to include women 40-49 years of age and implement Canadian Association of Radiologists accreditation for all mammography sites, was produced by Cancer Care Ontario for the Ontario Ministry of Health and Long-Term Care in June 2005.

The Ontario government announced multi-year funding in its 2006-2007 budget of \$35 million in 2006-2007, growing to \$42 million in 2008-2009 to continue to

increase the number of women screened through the OBSP and move closer to reaching the *Cancer 2020* target. Approximately 40,000 more women will benefit from organized screening in 2006-2007.

The provincial and territorial health ministers established benchmarks in December 2005 for breast cancer screening, creating additional momentum to improve mammography rates in Ontario.

The Canadian Cancer Society raises awareness about the importance of breast screening during Breast Cancer Awareness Month through internal and external communication and community-based outreach activities.

Recommendation

- The Ontario Ministry of Health and Long-Term Care should provide stable, long-term funding for the Ontario Breast Screening Program and ensure all mammography screens are provided through the Program.

Cervical Screening

Cancer 2020 Targets: Baseline Data

Through the Ontario Cervical Screening Program (OCSP) at Cancer Care Ontario, Ontario currently has some elements of an organized cervical screening program, such as screening and follow-up guidelines, extensive health promotion and cervical screening and laboratory quality control, but lacks such key components as a comprehensive information system, systematic recruitment, recall and follow-up.

As shown in the following table and graph, 79% of women aged 18-69 (who have not had hysterectomies) had a Pap test in the past three years, as recommended by the OCSP. The *Cancer 2020* Action Plan target is 95% participation in organized cervical screening.

⁹ A similar pattern of OBSP and non-OBSP participation rates are noted in the 2006 Cancer System Quality Index,²⁵ and the 2005 *Ontario Cancer Plan Progress Report*.³

Cancer 2020 Priorities: Highlights of Key Initiatives

In June 2005, the OCSP released revised Cervical Screening & Follow-up Guidelines which include human papillomavirus (HPV) testing and liquid-based cytology.²⁶ This was followed in September 2005 by a major multidisciplinary continuing medical education event that explained the revised clinical practice guidelines and a national meeting of representatives from provincial and territorial cervical screening programs that addressed technology change issues such as the implementation of liquid-based cytology in Ontario and reflex HPV-DNA testing.

In October 2005, Cancer Care Ontario and the Canadian Cancer Society, Ontario Division, published *Insight on Cancer: News and Information on Cervical Cancer*, offering information on cervical cancer, its incidence and management, the value of screening and the need for a comprehensive, organized cervical screening program within Ontario.²⁴

The Canadian Cancer Society raises awareness about the importance of cervical screening during Cervical Screening Awareness Week through internal and external communication and community-based outreach activities.

The OCSP convened an HPV Working Group in 2005 to identify issues relevant to HPV, including the educational needs of clinicians and the general public, as well as to explore the use of HPV testing as a primary screening test.

Recommendation

- Cancer Care Ontario should monitor and evaluate the potential impact of HPV and HPV vaccine on cervical screening activities in Ontario.

Colorectal Screening

Cancer 2020 Targets: Baseline Data

Currently, there is no organized colorectal screening program in Ontario and very few Ontarians are receiving a Fecal Occult Blood Test (FOBT), the recommended screening test, to screen for colorectal cancer. Fourteen percent of males and 10% of females aged 50 or older had FOBT within the previous two years. (Estimates represent data from 14 Public Health Units who chose to administer the optional CCHS 2003 colorectal cancer screening module.)

Uptake of FOBT appears to be increasing; the proportion of Ontarians aged 50–74 having an FOBT doubled between 2001 and 2004, although it is still very low at 10%.²⁷

Cancer 2020 Priorities: Highlights of Key Initiatives

The Ontario Fecal Occult Blood Test Project was undertaken jointly by Cancer Care Ontario and the Ontario Ministry of Health and Long-Term Care in 2003. Cancer Care Ontario submitted a preliminary project report to the Ontario Ministry of Health and Long-Term Care in June 2005, along with a proposal for an organized provincial colorectal cancer screening program. Final results with follow-up data were submitted on March 31, 2006. Cancer Care Ontario began working with the Ontario government in the spring of 2006 on the policy and implementation plan for a province-wide, population-based colorectal screening program.

The Canadian Cancer Society, Ontario Division, is advocating for an organized province-wide population-based colorectal screening program.

Recommendation

- The Ontario Ministry of Health and Long-Term Care should fund a provincial population-based colorectal

2003 Levels

BREAST SCREENING	CERVICAL SCREENING	COLORECTAL SCREENING
<p>1) participate in the Ontario Breast Screening Program: F 24%</p> <p>2) screening mammogram in past two years: F 61%</p>	<p>F 79%</p>	<p>1) screening Fecal Occult Blood Test (FOBT) within the past two years: M 14% F 10%</p>
<p style="text-align: center;"> — Cancer 2020 target ■ Female, all Ontario </p> <p style="font-size: small;">Source: OBSP; Statistics Canada (CCHS 2003)</p>	<p style="text-align: center;"> — Cancer 2020 target ■ Female, all Ontario* </p> <p style="font-size: small;">Source: Statistics Canada (CCHS 2003) *Women without hysterectomies</p>	<p style="text-align: center;"> — Cancer 2020 target ■ Male, reporting PHUs* ■ Female, reporting PHUs* </p> <p style="font-size: small;">Source: Statistics Canada (CCHS 2003) *14 Public Health Units</p>

Desired Direction for Change



Indicator Definitions

BREAST SCREENING	CERVICAL SCREENING	COLORECTAL SCREENING
<p>Percent of women aged 50-69 who:</p> <ol style="list-style-type: none"> 1) were screened by the OBSP in the relevant 2-year period 2) have had a mammogram in the past 2 years as part of a regular check up or routine screening, because of age, a family history of breast cancer or using hormone replacement therapy 	<p>Percent of women aged 18-69 without hysterectomies who have had a Pap test in the past 3 years</p>	<p>Percent of Ontarians aged 50+ who have had a Fecal Occult Blood Test (FOBT) in the past 2 years as part of a regular check up or routine screening, because of age, race or a family history of colorectal cancer</p>

cancer screening program through the province's organized screening program to ensure consistent quality and safety standards across the province.

Other Cancer Screening

Cancer 2020 Priorities: Highlights of Key Initiatives

Cancer Care Ontario has established a Screening Guidelines Steering Committee as part of the Program in Evidence-Based Care to identify and prioritize the need for provincial screening guidelines. Screening guidelines for skin cancer have been developed and approved for dissemination. Screening guidelines for prostate cancer have been initiated.

Recommendation

- The Ontario Ministry of Health and Long-Term Care should provide funds to pilot innovative cancer screening interventions to reach under-screened populations (e.g., cervical screening).

Ultraviolet Radiation Exposure

Summary of Targets and Priorities from the Cancer 2020 Action Plan

Cancer 2020 Targets:

- ▶ 9% of Ontarians spend unprotected time in the summer sun between 11 a.m. and 4 p.m.*
- ▶ 5% of young adults use tanning equipment*
- ▶ 8% of Ontarians report a sunburn once in the summer*

Cancer 2020 Priority:

- ▶ develop a comprehensive *sun safety*[◇] strategy

There is substantial evidence of a causal link between ultraviolet radiation and both melanoma and non-melanoma skin cancer.⁶ An intermittent pattern of exposure appears to present the greatest risk for development of melanoma and basal cell carcinoma of

the skin.⁶ Artificial tanning equipment is also a source of cancer causing rays and there is evidence that its use increases the risk for skin cancer.⁶ Healthy public policy that considers sun safety and ultraviolet radiation exposure is required.

Cancer 2020 Targets: Baseline Data

** Original Cancer 2020 targets specified 75% reductions in these areas because we did not have baseline prevalence estimates. With the baseline data presented in this report, we can now restate the original Cancer 2020 targets as noted above.*

As shown in the following table and graphs:

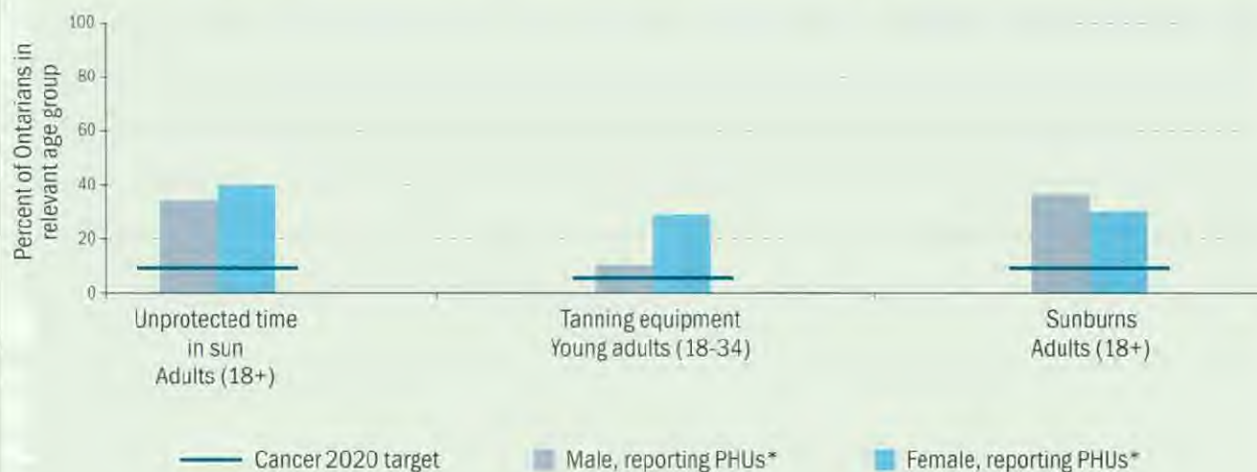
- Ontario adults are spending too much unprotected time in the sun: 34% of males and 40% of females report that they do not avoid the sun between 11 a.m. and 4 p.m. in the summer and do not often wear protective clothing when in the sun, compared to the Cancer 2020 target of 9%.^{*} (Estimates are based on 21 Public Health Units who chose to administer an optional 2003 RRFSS Sun Safety module.)
- The use of tanning equipment remains popular among young adults (aged 18-34) in Ontario, with 12% of males and 29% of females reporting the use of tanning equipment in the past 12 months, compared to the Cancer 2020 target of 5%.^{*} (Estimates are for 2004 and are based on five Public Health Units who chose to administer an optional 2004 RRFSS Tanning Equipment module.)
- In addition, 36% of males and 30% of females have reported a sunburn at least once in the summer, well above the Cancer 2020 target of 8%.^{*} (Estimates are based on 22 Public Health Units who chose to administer an optional 2003 RRFSS Sun Safety module.)

When reviewing the following table, note that the data

[◇] See Glossary of Terms and Methods for definition

2003 Levels

UNPROTECTED TIME IN SUN	TANNING EQUIPMENT	SUNBURNS
M 34% F 40%	M 12% F 29%	M 36% F 30%



Source: Rapid Risk Factor Surveillance System (RRFSS) 2003, 2004

*21 Public Health Units (PHU) for time in sun, 5 for tanning equipment, 22 for sunburns

Desired Direction for Change



Indicator Definitions

UNPROTECTED TIME IN SUN	TANNING EQUIPMENT	SUNBURNS
Percent of adults aged 18+ who do not avoid the sun between 11 a.m. and 4 p.m. in the summer and who do not often wear protective clothing when in the sun	Percent of young adults aged 18-34 using tanning equipment in past 12 months	Percent of adults 18+ reporting a sunburn once or more in the past 12 months

presented are not province-wide: sun exposure data are based on information collected from approximately 21–22 of the province's 36 Public Health Units and just five Public Health Units for tanning from equipment data. There is a need to collect more comprehensive sun exposure data.



Cancer 2020 Priorities: Highlights of Key Initiatives

In June 2006, Cancer Care Ontario prepared and disseminated an *Ontario Cancer Fact* on sun safety and vitamin D.²⁸

In 2006, a Cancer Care Ontario researcher was awarded a two-year grant from the Canadian Cancer Society/National Cancer Institute of Cancer to conduct a survey on Canadians' sun behaviours. This survey will provide data to help develop skin cancer prevention strategies.

In March 2006, the Canadian Cancer Society and National Cancer Institute of Canada hosted the first

North American scientific conference on UV, Vitamin D and Health. At the conference, clinicians and researchers from Australia, Canada and the United States presented information about the health effects of vitamin D, methods of obtaining vitamin D and the health risks of ultraviolet radiation exposure. Following the conference, national health organizations met to develop consistent health messaging for the public about skin cancer prevention and vitamin D. These messages have been endorsed by the American Cancer Society, American College of Rheumatology, Canadian Cancer Society, Canadian Dermatology Association, Dietitians of Canada, National Council on Skin Cancer Prevention (US), Osteoporosis Canada and the World Health Organization Collaborative Centre for the Promotion of Sun Protection. Several areas where more research is needed were also identified. A more detailed joint position statement will be developed in collaboration with participating national health organizations and expert consultation.²⁹

A number of communities, health agencies and non-profit organizations in Ontario are engaging in debates on the best course of action to reduce artificial tanning access to people 18 years of age and under as recommended by the World Health Organization.

The National Sun Safety Committee has prepared a strategic directions document and is currently seeking support from stakeholders to implement its recommendations.

Recommendation

- The provincial government, in collaboration with Cancer Care Ontario and other partners, should develop an inter-ministry process to coordinate government policy and implementation planning for sun safety, including the development of provincial legislation to restrict the use of artificial tanning equipment by those under the age of 18.

Occupational Carcinogens

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- 100% of workplaces are free from tobacco smoke and other workplace contaminants
- an increased percentage of outdoor workers demonstrate sun-protective safety behaviours

Cancer 2020 Priorities:

- develop an occupational cancer *surveillance*[◇] program
- support the Ontario Ministry of Labour in updating their threshold limit values for designated substances

High-quality surveillance information on the extent of *occupational exposures*[◇] and their link to cancer is needed. At present there is very limited information in Ontario on the burden of occupational cancer. The proportion of cancer cases attributable to occupational exposures is difficult to establish given the long latency of cancer (i.e., the time between exposure to the agent and diagnosis of cancer) and the potential involvement of many factors in the development of cancer. The *Cancer 2020 Action Plan* is guided by both scientific evidence and the *precautionary principle*[◇]. Hence, workplace carcinogens should be eliminated or reduced to the lowest possible levels.

Cancer 2020 Targets: Baseline Data

As illustrated in the following graphs:

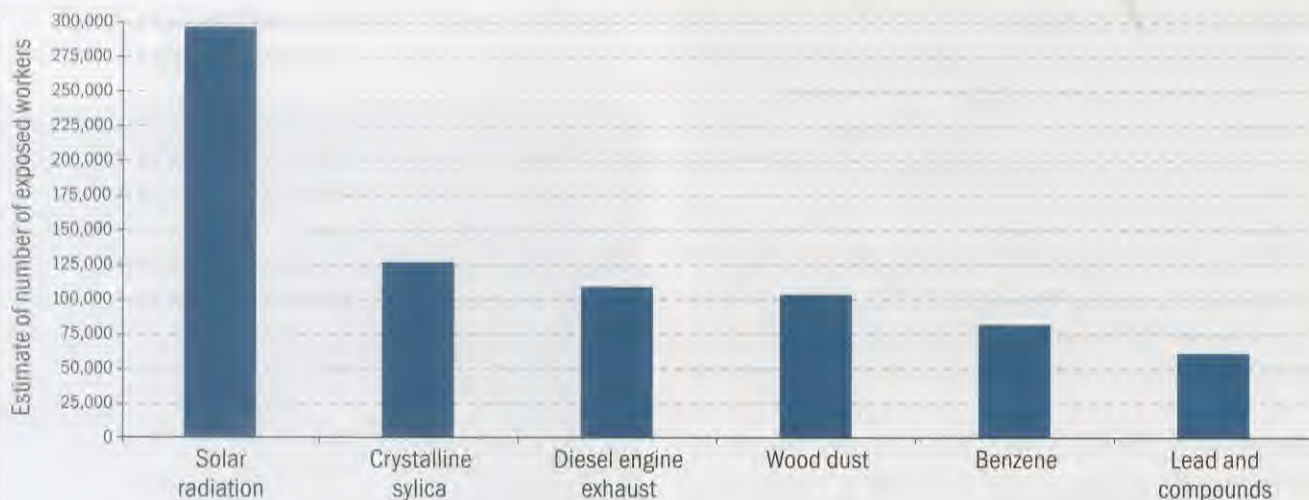
- Eighty-one percent of Ontario workers are not exposed to second-hand smoke in the workplace, compared to the 100% target set in the *Cancer 2020 Action Plan*. (This will improve with implementation of the *Smoke-Free Ontario Act* in May 2006.)
- There are no data available on the percentage of

outdoor workers demonstrating sun-protective safety behaviours.

- In Ontario, exposure to occupational carcinogens continues to be a significant concern. Although limited progress has been made in establishing surveillance tools and systems to measure occupational exposure to carcinogens, very preliminary estimates from *CAREX*[◇] suggest a large number of Ontario workers may be exposed to carcinogens at work. *CAREX* suggests that perhaps as many as 600,000 workers may be exposed to the most common workplace carcinogens, about half of these to solar radiation from working outdoors. These estimates are at present crude and require refinement for the Ontario labour force. It is not known how many workers are exposed to these substances at levels that increase their risk of cancer.
- The link between asbestos exposure and *mesothelioma*[◇] is well established. Mesothelioma is a sentinel occupational cancer that is at least 80% attributable to occupational asbestos exposure. The number of new cases of pleural mesothelioma rose in Ontario between 1982 and 2002 for both males and females. Since symptoms of mesothelioma often do not appear until 20 to 40 years after exposure, individuals diagnosed in 2002 were likely exposed to asbestos in the 1960s and 1970s, when use was greater. For this reason, the rise in cases may continue for the next few years.³⁰

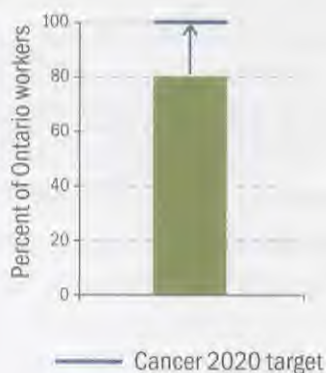
[◇] See Glossary of Terms and Methods for definition

Crude estimates of numbers of workers exposed to common workplace carcinogens, Ontario 2001



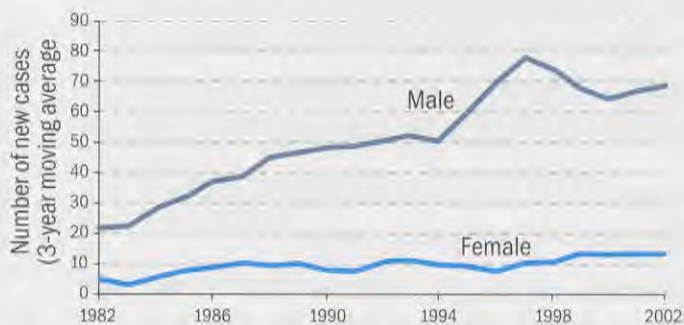
Sources: CARcinogen EXposure Software (CAREX) (Finnish Institute for Occupational Health); 2001 Census (Statistics Canada)

Workplace smoking bans



Source: CAMH Monitor 2003

New cases of pleural mesothelioma in Ontario, by sex, 1982-2002



Source: Cancer Care Ontario (Ontario Cancer Registry, 2004)



Cancer 2020 Priorities: Highlights of Key Initiatives

Cancer Care Ontario and the Workplace Safety and Insurance Board of Ontario collaborated on a three-year pilot project on occupational cancer research and surveillance. The objectives were to design, develop and implement a surveillance program, to identify gaps/deficiencies for effective surveillance and to identify research priorities. The project tracked the incidence of mesothelioma by time and region in Ontario. The pilot project ended December 31, 2005. There is a pressing need for a broad and systematic occupational cancer surveillance program in Ontario to document the scope of the problem and identify priority areas for action if the goals outlined in the *Cancer 2020 Action Plan* are to be reached.

In November 2004, the Ontario Ministry of Labour embarked on a process of regularly updating Occupational Exposure Limits. Council submitted a letter to the Ministry in support of this process.

Stakeholders were convened by Cancer Care Ontario in February 2005 to discuss tools and approaches for occupational cancer surveillance. In addition, Cancer Care Ontario published *Ontario Cancer Facts* on the

rise in mesothelioma cases reflective of past asbestos use (November 2004)³⁰ and on a model for occupational carcinogen exposure surveillance in Ontario (May 2005).³¹ Cancer Care Ontario is recruiting a scientist to develop and implement research in the area of occupational cancer.

The Finnish CAREX system is being modified for use in Ontario as a workplace carcinogen exposure surveillance tool for asbestos and common carcinogens.

The *Smoke-Free Ontario Act* that was passed in June 2005 will ensure that the health of Ontario workers is protected from second-hand smoke. As of May 31, 2006, smoking has been prohibited in all enclosed workplaces, including work vehicles and offices.

Recommendations

- The provincial government, in collaboration with Cancer Care Ontario and other partners, should develop an inter-ministry process to coordinate government policy and implementation planning for occupational exposures to carcinogens.
- Cancer Care Ontario, relevant partners and government ministries should develop and implement a broader provincial occupational carcinogens reduction strategy.
- Commitments from federal and provincial governments are required to develop better surveillance information on the exposures to risks associated with occupational carcinogens.

Environmental Carcinogens

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- ▶ trihalomethanes (THM) and other possible chlorinated disinfection by-products are reduced in drinking water
- ▶ the average annual exposures to fine air particulates in Ontario is reduced by 30% (20% by 2010)
- ▶ 0% of Ontarians are exposed to ambient levels of *environmental carcinogens* [☞] from all sources above the minimum risk level of one in a million excess cancer risk for candidate substances

Cancer 2020 Priorities:

- ▶ develop a surveillance system to estimate and monitor levels of exposure to substances in the air, drinking water and soil/ground water
- ▶ build on existing Ontario lists to identify environmental substances for action
- ▶ advocate for and participate in the development of a strategy to reduce environmental carcinogens

Access to surveillance data on environmental carcinogens is limited. A surveillance system to track these exposure levels is required.

Although the contribution of environmental carcinogens to the burden of cancer is not well-documented, public concern about exposure to environmental carcinogens remains high. The *Cancer 2020 Action Plan* is guided by both scientific evidence and the precautionary principle. Carcinogens should be reduced to the lowest possible levels in the environment.

Drinking Water/Ground Water

Cancer 2020 Target: Baseline Data

Current data for contaminants in drinking water are not available.

[☞] See Glossary of Terms and Methods for definition



Cancer 2020 Priorities: Highlights of Key Initiatives

The Federal-Provincial-Territorial Committee on Drinking Water recently revised the Canadian Drinking Water Guidelines for THM of 100 µg/L and developed a new guideline for bromodichloromethane (BDCM) of 16 µg/L. Consultation on the final document is with the (Ontario) Advisory Council on Drinking Water Quality and Testing Standards.

Ontario's Advisory Council on Drinking Water Quality and Testing Standards is reviewing the current status of disinfection byproducts in the context of water treatment process and toxicology.

On October 1, 2004, the Ontario Government implemented Regulation 153/04 which

- Sets standards for the assessment of properties with potentially contaminated soil and groundwater (including vinyl chloride, trichloroethylene, polycyclic aromatic hydrocarbons, benzene and arsenic);

- Provides for the use of risk assessment, reviewed and approved by the Ontario Ministry of the Environment, to ensure that sensitive receptors and cancer/non-cancer endpoints are considered; and
- Provides incentives for the remediation of properties to meet government standards through filing a record of site condition on a public registry.³²

On October 1, 2005, the government implemented the provisions of Regulation 153/04, which make it mandatory for properties to meet Ministry standards and file a record of site condition prior to changing use of a property to a more sensitive land use. Through the

records of site condition filed on the registry, the government is tracking the number of properties at which risk has been reduced through meeting government-approved standards. In addition, the Ontario Government periodically updates the development of standards based on current best science.³²

Air Pollutants

Cancer 2020 Target: Baseline Data

In 2003, air releases of pollutants suspected of causing cancer in Ontario were 3,132,976 kilograms.³³ $PM_{2.5}$ concentrations in selected cities across Ontario are illustrated in the following graph.



◊ See Glossary of Terms and Methods for definition



Cancer 2020 Priorities: Highlights of Key Initiatives

Continuous monitoring of fine particulate matter (PM_{2.5}) in Ontario has grown over the past decade. Such measurements are an integral part of the provincial Air Quality Index (AQI) monitoring network with data collected at all 38 AQI sites across the province, in both urban and rural communities.

In June 2004, the Ontario Government announced a *Five-Point Action Plan for Cleaner Air*. In August 2005, two new regulations were enacted that require industry to reduce their emissions of harmful air pollutants:

- Regulation 194/05 Industry Emissions – Nitrogen Oxides and Sulphur Dioxide applies tougher nitrogen oxides and sulphur dioxide limits to more industrial sectors than ever before; and
- Regulation 419/05 Air Pollution – Local Air Quality sets new and updated air standards for 40 air pollutants (including six carcinogens and toxins that could pose a threat to human health), achieves a

better picture of industrial emissions through updated technology and introduces a faster, risk-based approach to implementing new air standards.³²

These standards will be phased in over five years. In addition, updating of air standards for 10 carcinogens is under active development by the Ontario Government.³²

In addition, the Government has announced other measures to improve air quality, including phasing out coal plants and has begun to implement additional funding for public transit.

In July 2005, Cancer Care Ontario prepared and disseminated an *Ontario Cancer Fact* on air pollution and lung cancer.³⁴

Environmental Carcinogen Reduction

Cancer 2020 Priorities: Highlights of Key Initiatives

In June 2005, Cancer Care Ontario and the Canadian Cancer Society, Ontario Division, published *Insight on Cancer: Environmental Exposures and Cancer*, which reviewed scientific evidence of the association of several environmental exposures and cancer.³⁵ Related presentations were provided to the Durham Nuclear Health Committee and the Ontario Public Health Association.

In 2005, Cancer Care Ontario convened a number of meetings of provincial environmental stakeholders to identify opportunities for joint collaboration for the prevention of, exposure to, and control of, environmental carcinogens. In preparation for the first meeting in October 2005, the paper entitled *Strategies for the Reduction and Control of Environmental Carcinogens in Canada: What's Happening? What's Missing?* was developed.³⁶ The paper provided an overview of government and industry efforts in relation to environment and cancer. It focused on five

key strategies to address the prevention and control of environmental carcinogens within Canada and elsewhere: surveillance, 'right-to-know' measures, public education initiatives, reductions of carcinogens at the source and legislative/regulatory measures. Identified gaps for each strategy were also highlighted.

The Cancer 2020: Cancer and Environment Stakeholder Group has continued to meet since October 2005 in order to develop and support the implementation of an environmental cancer prevention strategy in Ontario. The Group is currently chaired and staffed by Cancer Care Ontario. Group members include representatives from key provincial and regional organizations and government as well as individuals with interests in environmental and occupational carcinogens.

The Canadian Cancer Society, Ontario Division, assists communities across Ontario to advocate for bylaws banning the ornamental use of pesticides.

Recommendations

- The provincial government, in collaboration with Cancer Care Ontario and other partners, should develop an inter-ministry process to coordinate government policy and implementation planning for environmental exposure to carcinogens.
- Government ministries, Cancer Care Ontario and relevant partners should develop and implement a comprehensive provincial environmental carcinogens reduction strategy, which would include reductions in fine air particulates.
- Commitments from federal and provincial governments are required to develop better surveillance information on the exposures to risks associated with environmental and occupational carcinogens.



Aboriginal Cancer Strategy

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- targets were not specified in the original *Cancer 2020 Action Plan*

Cancer 2020 Priorities:

- fund and implement an Aboriginal Cancer Strategy
- fund and implement an Aboriginal Tobacco Strategy as outlined in the Aboriginal Cancer Unit's 5-Year Plan

Cancer patterns among Aboriginal populations display significant differences from those observed in the general population.³⁷ These patterns, including the increasing incidence of cancer and the presentation of cases at much later stages of cancer development, underscore the need for targeted Aboriginal cancer control strategies.³⁷ Since the Aboriginal Cancer Care Unit was established in 2000, Cancer Care Ontario has demonstrated its commitment to the Aboriginal Cancer Strategy.³⁷ Results from the Aboriginal Cancer Care Unit's *Needs Assessment* provided a foundation to build the Aboriginal Cancer Strategy.³⁷

Cancer 2020 Priorities: Highlights of Key Initiatives

The Aboriginal Cancer Care Unit within Cancer Care Ontario continues its work to develop and implement the Aboriginal Tobacco Strategy and to advance the Aboriginal Cancer Strategy, which embraces a

paradigm shift from an illness-based model to one that is population-based and stresses prevention and *capacity*[⊙] building.³⁸

The Aboriginal Tobacco Strategy supports community processes that increase "tobacco wise" knowledge, attitudes and behaviours and increase community readiness for tobacco wise environments. Priorities include reaching Aboriginal youth, community capacity building and education regarding traditional tobacco. To date, annualized funding for the Aboriginal Tobacco Strategy has resulted in 12 community-based tobacco-wise pilot projects. Two newsletters with a focus on traditional tobacco use and one newsletter on healthy living and colorectal cancer have been disseminated to Aboriginal partners.^{39,40,41}

The Aboriginal Cancer Care Unit's *Needs Assessment* report (2002) strongly recommended that Aboriginal patient navigator (APN) positions be established at cancer care centres.⁴² The role of a navigator is to provide support and advocacy for Aboriginal patients and their family members, to address and promote awareness of the cultural needs of Aboriginal clients, and to network with Aboriginal and non-Aboriginal health groups and organizations. An APN pilot project was funded at the Northwestern Ontario Regional Cancer Centre in Thunder Bay. A major accomplishment of the pilot was the attainment of an APN who spoke the language of the Aboriginal community and understood some of the different dialects spoken in the northwest area of the province. Aboriginal clients were very appreciative of the services provided by the APN; without the knowledge and skills of the navigator, the pilot may not have had the same impact that it did. An evaluation has been completed with a recommendation that a regional patient navigation system be implemented.

The Aboriginal Cancer Care Unit has provided the Aboriginal Relationship Development and Training Program to enhance health professionals' knowledge about *Aboriginal peoples*[⊙], Aboriginal world-view, perceptions of health and well-being and the expectations of Aboriginal patients and their families.

The Canadian Cancer Society, Ontario Division, is working with the Aboriginal Cancer Care Unit to raise awareness about cancer prevention and early detection in Aboriginal communities. In December 2005, an Awareness Campaign with a series of eight culturally competent fact sheets was launched and disseminated to health professionals working with Aboriginal populations.

In 2003, Cancer Care Ontario hosted the First Nations Cancer Research and Surveillance workshop that brought together researchers, First Nation leaders, cancer agencies and government to identify research and surveillance priorities in Canadian First Nations populations. A report on the workshop was prepared and disseminated.⁴³

Cancer surveillance data on First Nations has been updated to 2001. Further work and partnership development is required to expand data to the Métis population.

Recommendation

- The federal and provincial governments should continue to fund and support implementation of the Aboriginal Cancer Strategy.

[⊙] See Glossary of Terms and Methods for definition

Infrastructure Development

Summary of Targets and Priorities from the *Cancer 2020 Action Plan*

Cancer 2020 Targets:

- ▶ targets were not specified in the original *Cancer 2020 Action Plan*

Cancer 2020 Priorities:

- ▶ provide sufficient funds to build the capacity of regional cancer prevention and screening networks across Ontario so they can develop plans and produce annual reports on progress toward *Cancer 2020 Action Plan* targets
- ▶ integrate *Cancer 2020 Action Plan* targets into the revised chronic disease and early detection program standards of the Mandatory Health Programs and Services Guidelines under the Health Promotion and Protection Act
- ▶ develop an expanded surveillance system to track *risk factor*[◇] prevalence, cancer incidence and mortality and initiation of other relevant surveillance activities to support measurement of progress toward *Cancer 2020 Action Plan* targets provincially and regionally
- ▶ increase the level of funding in areas of *primary prevention*[◇] and screening and continue to support, conduct, monitor and evaluate research in areas such as: cancer risk factors, environmental carcinogens, *gene-environment interactions*,[◇] occupational carcinogens, nutrition, physical activity, overweight and obesity, high-risk drinking and population-level and community-level intervention research including, but not limited to, the evaluation and effective dissemination of interventions
- ▶ monitor research on the use of medications and supplements as anti-cancer agents to determine their future clinical application for high-risk and population-based approaches

Building capacity within the provincial cancer prevention and detection system, and the broader public health system, enhancing surveillance, and enhancing research agendas and investments are all

critical components of a comprehensive strategy to prevent cancer.

Building System Capacity

Cancer 2020 Priorities: Highlights of Key Initiatives

Cancer Care Ontario has provided annual grants to help regional cancer prevention and screening networks resource their activities. These networks are linked to the Regional Cancer Programs in each Local Health Integration Network across Ontario. Cancer Care Ontario is increasing funds dedicated to cancer prevention and early detection by aligning with 14 Local Health Integration Network areas as opposed to the earlier structure of eight regional cancer prevention and screening networks.

Cancer Care Ontario established the Regional Cancer 2020 Network in 2005 to coordinate regional implementation of the Cancer 2020 goals and targets. Cancer Care Ontario currently chairs and staffs the Network.

In 2004, the Canadian Cancer Society, Ontario Division, provided a one-time grant to the regional networks. Some outcomes from these projects will be investigated for future transferability to prevention and screening practice in Ontario.

Through a request for proposals process, the OCSP is supporting regional community capacity initiatives to increase cervical screening participation among unscreened and/or under-screened populations.

Integration of *Cancer 2020 Action Plan* targets into the Ontario Mandatory Health Programs and Services Guidelines for Public Health Units is pending the initiation of a formal review of these guidelines.

[◇] See Glossary of Terms and Methods for definition



Recommendations

- The Ontario Ministry of Health and Long-Term Care, with support of Cancer Care Ontario, should ensure integration of *Cancer 2020 Action Plan* targets into the Mandatory Health Programs and Services Guidelines.
- The provincial government should expand incentive systems for physicians and other health care professionals (particularly in Family Health Teams) to engage in cancer prevention and screening education with their patients/clients.
- The provincial government should continue to increase investment in and strengthen public health infrastructure.[◇]
- Cancer Care Ontario should continue to build capacity within regional cancer prevention and screening networks to help regions work towards achieving *Cancer 2020* targets.
- Cancer Care Ontario, in collaboration with other partners (e.g., Ontario Chronic Disease Prevention Alliance), should coordinate provincial cancer prevention efforts with groups who have an interest in similar diseases and risk factors (e.g., diabetes,

heart disease, tobacco use, obesity and high-risk drinking).

- Cancer Care Ontario, in collaboration with other partners (e.g., Centre for Behavioural Research and Program Evaluation), should establish an ongoing forum for the exchange of best practices in cancer prevention and screening at the provincial level.
- Cancer Care Ontario and relevant partners should pilot and evaluate innovative chronic disease prevention and health promotion interventions for cancer.

Enhancing Surveillance

Cancer 2020 Priorities: Highlights of Key Initiatives

Cancer Care Ontario used existing risk factor survey data to establish 2003 baselines for *Cancer 2020 Action Plan* target areas. Standardized defined indicators have been developed for consistent future monitoring of the targets. Additional data sources and indicators are currently being developed and evaluated.

Cancer Care Ontario is working with others to improve cancer-related surveillance through its representation on Ontario's Chronic Disease Surveillance Strategy Development Advisory Group and the Provincial Health Indicators Work Group.

Recommendations

- Cancer Care Ontario, the Canadian Cancer Society and other partners should participate in and support provincial and federal efforts in developing coordinated surveillance systems on cancer prevention and early detection.
- Commitments from federal and provincial governments are required in order to expand the cancer surveillance system to support the measurement of progress toward all target domains set out in the *Cancer 2020 Action Plan*.

[◇] See Glossary of Terms and Methods for definition



Research

Cancer 2020 Priorities: Highlights of Key Initiatives

Since 2003, the Canadian Cancer Society has directed over \$4.5-million dollars through the National Cancer Institute of Canada to prevention-focused research across the country. Recently, cancer prevention research has been identified by the Canadian Cancer Society and the National Cancer Institute of Canada as a major gap requiring specific new investment. The level of funding from all sources for primary prevention and screening research in the province is currently unknown.

In December 2005, the provincial government announced the creation of the Ontario Institute for Cancer Research.⁴³ This Institute will undertake research addressing the entire cancer spectrum, which

includes opportunities for cancer prevention research. Scientists from a wide range of disciplines are developing a cancer research initiative that would position Ontario at the forefront of cancer research internationally. The foundation of this initiative is the establishment of a large-scale 'cohort', consisting of up to 250,000 Ontarians who would participate in innovative and high-impact research studies to advance our understanding of cancer and improve the health of all Ontarians.

In addition, the creation of the Public Health Agency of Ontario may present a unique opportunity for health promotion and population health research partnerships within the province.

Recommendations

- Cancer Care Ontario, the Canadian Cancer Society and other partners should participate in and support provincial and federal efforts in developing coordinated research agendas on cancer prevention and early detection.
- Cancer research funders (e.g., National Cancer Institute of Canada, Ontario Institute for Cancer Research, Ontario Government) should increase research funding for primary prevention and screening. Funders should build a well-developed, long-term research agenda to guide investment, particularly on population-based cancer research and on risk factors that have traditionally received less attention (i.e., alcohol, environmental and occupational exposures to carcinogens, sun safety and ultraviolet exposure).
- Cancer Care Ontario and other relevant research bodies should increase research, monitoring and evaluation on the link between risk factors and cancer.

Recommendations

It is encouraging to report on preliminary progress that has been made in Ontario through the efforts of agencies, non-profit organizations, public health, health care professionals and government departments since the *Cancer 2020 Action Plan* was released in 2003. These prevention and early detection initiatives, combined with improvements in treatment, are setting Ontario on the right track towards reducing the burden of cancer by the year 2020.

A major challenge is the aging baby boom generation. If efforts to create the supportive environments that enable people to make healthy choices are not increased, more and more Ontarians will be diagnosed with cancer, further straining a health care system that is being stretched to its limits. Screening is especially important to reduce the burden of cancer. In addition to the human and social costs of cancer, Ontario will face treatment shortages and growing waiting lists. The Province will need to direct additional resources into expanding the availability of treatment, resources that might have been better used in helping to prevent cancer and other chronic diseases in the first place. Increased investments in public health infrastructure are also needed to support regional and local implementation of prevention initiatives.

Cancer 2020 Action Plan priorities are based on the knowledge and recommendations of Ontario's leading researchers and practitioners in cancer control. Priorities for action focus on risk factors that are well established and where the association with cancer is strong. It is essential that a series of prevention and screening targets and goals are set out that are consistent with an ambitious agenda and provide a benchmark against which progress can be measured.

One of the most significant challenges is a lack of ongoing surveillance mechanisms, particularly in the area of involuntary exposures in the workplace and

environment. Although well-defined indicators have been established to measure ongoing progress towards meeting some of the targets set in the *Cancer 2020 Action Plan*, Ontario still faces a lack of reliable data sources. In order to better identify gaps, determine appropriate strategies and really measure progress, more resources must be put into the collection and measurement of data.

More resources are also needed for screening programs. For example, past funding has not kept pace with the increased participation of women in the OBSP, slowing progress towards the Cancer 2020 breast screening targets. The OBSP budget has increased each year, resulting in more women screened, and the multi-year funding increase in the 2006-2007 budget will enable continued program growth. However, additional increases will be needed in future years to meet the breast screening targets by 2020.

For decades, the immediate health system focus has been on treating disease. This is contributing to mounting pressure on the medical system to treat and manage cancer cases including wait times, professional health practitioners shortages and rising treatment costs.

Ontario has the potential to reduce the growing demand for cancer services by implementing a comprehensive and inter-sectoral approach to cancer prevention and detection, which focuses on research, surveillance and monitoring, policies and programs, and collective action:

Recommendation A: Research, Surveillance and Monitoring

A comprehensive knowledge base, as demonstrated by the Canadian Strategy for Cancer Control,⁴⁵ is needed to improve the observation and management of cancer



in Ontario and in Canada and to demonstrate the *effectiveness*[◇] and impact of cancer prevention and early detection strategies and interventions over time. Substantial investments are required for knowledge development (research), surveillance and monitoring in the following areas:

- Cancer research funders (e.g., National Cancer Institute of Canada, Ontario Institute for Cancer Research, Ontario Government) should increase research funding for primary prevention and screening. Funders should build a well-developed, long-term research agenda to guide investment, particularly on population-based cancer research and on risk factors that have traditionally received less attention (i.e., alcohol, environmental and occupational exposures to carcinogens, sun safety and ultraviolet exposure).
- Cancer Care Ontario and other relevant research bodies should increase research, monitoring and evaluation on the link between risk factors and cancer.
- Cancer Care Ontario, the Canadian Cancer Society and other partners should participate in and support provincial and federal efforts in developing coordinated research agendas and surveillance systems on cancer prevention and early detection. In particular:
 - ▶ Commitments from federal and provincial

◇ See Glossary of Terms and Methods for definition

governments are required in order to expand the cancer surveillance system to support the measurement of progress toward all target domains set out in the *Cancer 2020 Action Plan*.

- ▶ Commitments from federal and provincial governments are required to develop better surveillance information on the exposures to risks associated with environmental and occupational carcinogens.

Recommendation B: Policies and Programs

There is a critical need to continue to create and strengthen supportive environments, in which policies and programs are part of the governmental infrastructure and where sufficient coordinated resources are provided to regions and communities for implementation. In order to achieve the *Cancer 2020 Action Plan* targets, the following policies and programs should be developed and implemented:

General

- The Ontario Ministry of Health and Long-Term Care, with support of Cancer Care Ontario, should ensure integration of *Cancer 2020 Action Plan* targets into the Mandatory Health Programs and Services Guidelines.
- The provincial government should expand incentive systems for physicians and other health care professionals (particularly in Family Health Teams) to engage in cancer prevention and screening education with their patients/clients.
- The provincial government should continue to increase investment in and strengthen public health infrastructure.
- The federal and provincial governments should continue to fund and support implementation of the Aboriginal Cancer Strategy.



- Cancer Care Ontario should continue to build capacity within regional cancer prevention and screening networks to help regions work towards achieving Cancer 2020 targets.

Prevention

- The provincial government should increase funds for and continue to implement *Ontario's Action Plan for Healthy Eating and Active Living*.

- The provincial government should continue to implement and fund a comprehensive school health program to foster individual and environmental change in schools to promote healthy eating and physical activity.
- Cancer Care Ontario, the Centre for Addiction and Mental Health and other relevant partners should promote policies and interventions that will curtail the current rising level in the overall rate of alcohol consumption and reduce the proportion of Ontarians who drink at high risk.
- Government ministries, Cancer Care Ontario and relevant partners should develop and implement a comprehensive provincial environmental carcinogens reduction strategy, which would include reductions in fine air particulates.
- Cancer Care Ontario, relevant partners and government ministries should develop and implement a broader provincial occupational carcinogens reduction strategy.
- Cancer Care Ontario and relevant partners should pilot and evaluate innovative *chronic disease prevention*^o and health promotion interventions for cancer.

Screening

- The Ontario Ministry of Health and Long-Term Care should fund a provincial population-based colorectal cancer screening program through the province's organized screening program to ensure consistent quality and safety standards across the province.
- The Ontario Ministry of Health and Long-Term Care should provide stable, long-term funding for the Ontario Breast Screening Program and ensure all mammography screens are provided through the Program.
- Cancer Care Ontario should monitor and evaluate the potential impact of HPV and HPV vaccine on cervical screening activities in Ontario.
- The Ontario Ministry of Health and Long-Term Care should provide funds to pilot innovative cancer screening interventions to reach under-screened populations (e.g., cervical screening).

Recommendation C: Collective Action

Collective action on common chronic disease risk factors should be enhanced through collaboration of government, health agencies and non-profit organizations on cancer-specific risk factors in order to reduce cancer incidence and mortality. Better linkages and mobilization of our efforts will lead to greater impact and changes through action¹⁶ in the following areas:

- Cancer Care Ontario, in collaboration with other partners (e.g., Ontario Chronic Disease Prevention Alliance), should coordinate provincial cancer prevention efforts with groups who have an interest in similar diseases and risk factors (e.g., diabetes, heart disease, tobacco use, obesity and high-risk drinking).
- Cancer Care Ontario, in collaboration with other partners (e.g., Centre for Behavioural Research and Program Evaluation), should establish an ongoing forum for the exchange of best practices in cancer prevention and screening at the provincial level.
- The provincial government, in collaboration with Cancer Care Ontario and other partners, should develop an inter-ministry process to coordinate government policy and implementation planning for occupational and environmental exposure to carcinogens and for sun safety, including the development of provincial legislation to restrict the use of artificial tanning equipment by those under the age of 18.

^o See Glossary of Terms and Methods for definition

Conclusion



Every day, we move closer to reducing the burden of cancer in the province. Still, every day Ontarians continue to be diagnosed with and die from cancer. While it is important to take the time to highlight accomplishments, we must also recognize that too many people have died from cancer in this province since the *Cancer 2020 Action Plan* was released in 2003.

Ontario still faces significant challenges such as a rising obesity rate and an aging population. There are still knowledge gaps about the burden of cancer and the effectiveness of efforts around cancer prevention and early detection.

The initiatives highlighted in this report provide a strong foundation upon which the Provincial Cancer Prevention and Screening Council can continue to address cancer in Ontario. However, ongoing government funding and commitment are essential to enable the Council and other provincial partners to move forward in their efforts.

The Provincial Cancer Prevention and Screening Council is inspired by what has been accomplished to date and is pleased to support government initiatives and ministries as they provide leadership and direction in health promotion and public health. The Council is committed to working in collaboration with key stakeholder groups and providing input that will advance both the provincial and national chronic disease prevention strategies. Above all, the Council is dedicated to achieving real improvements in cancer prevention and early detection by the year 2020.

Glossary of Terms and Methods

Aboriginal peoples

Indigenous peoples of Canada are identified in Section 35 of the Constitution Act of 1982 as including Indians (status and non-status), Métis and Inuit people.⁴⁷

Advocacy

The act of speaking or of disseminating information intended to influence individual behaviour or opinion, corporate conduct or public policy and law.⁴⁸

Body Mass Index (BMI)

A measure of body weight adjusted for height, calculated as weight in kilograms/(height in metres)².

Canadian Community Health Survey (CCHS)

A survey conducted by Statistics Canada every two years on the Canadian population aged 12 and over; the first year is a health region-level survey consisting of more common and optional content, while the second is a provincial-level survey and focused on a particular topic. Estimates in this report are based mostly on the CCHS 2.1 share file representing the period of January through December 2003 and about 95% of the complete CCHS sample for that year. CCHS employs a multistage stratified cluster sample design and variation is assessed through the bootstrap method. Non-responses (don't know, refused or not stated) were excluded before estimation. All results presented in this report meet accepted reporting criteria, including coefficient of variation less than 33.3%, sample size of 30 or more and at least 5 respondents with the outcome of interest.

Cancer

A general term for more than 200 diseases. Cancer is the uncontrolled, abnormal growth of cells that can invade and destroy healthy tissues. Most cancers can also spread to other parts of the body.⁴⁹

Cancer control

Cancer control aims to prevent cancer, cure cancer and increase survival and quality of life for those who develop cancer, by converting the knowledge gained through research, surveillance and outcome evaluation into strategies and actions.⁵⁰

Cancer prevention and screening

A set of activities that includes: conducting research relevant to the biology of cancer, the underlying causes of cancer and methods for preventing and detecting cancer; developing consensus on the significance and implications of the results of cancer research, surveillance and outcome evaluation; implementing tailored/targeted strategies based on evidence to prevent and screen for cancer; and conducting surveillance to monitor and evaluate progress in cancer prevention and screening.⁵¹

CAREX (CARcinogen EXposure Software)

An information system developed by the Finnish Institute for Occupational Health. CAREX estimates the number of workers exposed to 139 carcinogens as ranked by the International Agency for Research on Cancer (IARC): Group 1 (known carcinogens), Group 2A (probable carcinogens), Group 2B (suspected carcinogens) and some Group 3 exposures (not classifiable, according to IARC, as to carcinogenicity to humans). CAREX combines occupation and industry data (from the Canadian census) with exposure estimates from Finland and the United States to estimate numbers of Ontario workers exposed to carcinogens above a pre-determined threshold (substance-specific), by given industries.

Carcinogens

Any substance that causes cancer.⁵²

Causal link

A cause-effect relationship between a risk factor (cause) and a disease (effect).⁵³

Chronic disease prevention

Action or measures not only to prevent the occurrence of disease, such as risk factor reduction, but also to arrest its progress and reduce its consequences once established. Primary prevention is directed towards preventing the initial occurrence of a disorder. Secondary and tertiary prevention seek to arrest or retard existing disease and its effects through early detection and appropriate treatment or to reduce the occurrence of relapses and the establishment of chronic conditions through, for example, effective rehabilitation. Disease prevention is considered to be action, which usually emanates from the health sector, dealing with individuals and populations identified as exhibiting identifiable risk factors, often associated with different risk behaviours.^{54,55}

Chronic diseases

Diseases or conditions that are generally slow in onset and persist or progress over a long period of time, e.g., cardiovascular disease (heart disease and stroke), cancer, chronic respiratory conditions, diabetes and mental illness.

Early detection

There are two major components of early detection of cancer: 1) education to promote early diagnosis and 2) screening. Increased awareness of possible warning signs of cancer, among health care providers and the general public, can have a great impact on the disease. Some early signs of cancer include lumps, sores that fail to heal, abnormal bleeding, persistent indigestion and chronic hoarseness. Early diagnosis is particularly relevant for cancers of the breast, cervix, mouth, larynx, colon and rectum and skin.⁵⁶ See also: screening.

Effectiveness

Improvement in a health or behavioural outcome produced by an intervention.⁵⁷

Environmental carcinogens

Natural and manufactured chemicals and physical hazards in the air, water and soil that are determined to be known, probable or possible causes of cancer. For the purposes of Cancer 2020 implementation, environmental tobacco smoke and ultraviolet radiation exposures are dealt with as separate risk factors.

Gene-environment interaction

The interaction of genetic susceptibility factors and environmental factors, broadly defined to include infectious, chemical, physical, nutritional and behavioral factors.⁵⁸

Infrastructure

Human, financial and material resources, or organizational and administrative structures, policies, regulations and incentives which facilitate an organized response to identified issues and challenges.⁵⁵

Intervention

Any program, policy or other planned effort designed to address a risk factor or determinant of health and produce intended changes in a specific population group or the population group as a whole in various settings.

Mesothelioma

A rare and highly fatal form of cancer associated with asbestos exposure, primarily work-related (including household members of exposed workers). Mesothelioma can occur in a number of body sites; the most common site is the pleura, which is a layer of tissue that covers the lung and lines the chest cavity.⁵⁰

Occupational exposure

Exposure to harmful substances at or during employment.

Ontarians

Adults, youth and children living in Ontario.

PM_{2.5}

Particulate matter that has an aerodynamic diameter of less than 2.5 microns.⁵⁹

Population-based

Pertaining to an entire population (or well-defined subgroup).

Precautionary principle

Taking precautionary action in the presence of scientific uncertainty and suspected harm. Shifts the burden of proof to the proponent of an activity rather than the public.

Primary prevention

Addresses factors that lead to the onset of a disease, e.g., cigarette smoking, unhealthy eating, physical inactivity, exposure to ultraviolet radiation and environmental and occupational carcinogens.⁶⁰ The reduction or elimination of such risk factors through policies, programs and media campaigns (or combinations of these) is meant to ultimately decrease the number of new cancer cases.

Rapid Risk Factor Surveillance System (RRFSS)

An ongoing monthly behavioural health survey on the population aged 18 and over in collaborating Ontario Public Health Units. Estimates in this report are based on waves 25 to 36, conducted January through December 2003 and waves 37 to 48, conducted January through December 2004. RRFSS membership in these years included 23 Public Health Units or 85%

of the Ontario population. RRFSS has a stratified cluster design and variance estimates are computed using Taylor's Linearization. Non-responses (don't know, refused or not stated) were excluded before estimation. All results presented in this report meet accepted reporting criteria, including coefficient of variation less than 33.3%, sample size of 30 or more and at least 5 respondents with the outcome of interest.

Risk factor

Social, economic or biological status, behaviours or environments which are associated with a specific disease, health condition or injury.⁵⁵

Screening

The use of simple tests across a healthy population in order to identify individuals who have disease, but do not yet have symptoms. Examples include breast cancer screening using mammography and cervical cancer screening using cytology screening methods, including Pap tests.⁵⁶ See also: early detection.

Second-hand smoke

Smoke that comes from burning any tobacco product, including exhaled smoke from the smoker and side-stream smoke from the burning end of a cigarette, pipe or cigar. Second-hand smoke (also known as environmental tobacco smoke) is a confirmed carcinogen.⁶¹

Stakeholders

Individuals or organizations directly or indirectly affected by or involved in the implementation and results of a plan or activity.

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Sun safety

Practices that protect a person from the harmful effects of exposure to ultraviolet radiation (e.g., reducing time in the sun during peak periods, wearing a hat, sunglasses and other protective clothing, seeking shade when outdoors and using sunscreen).

Surveillance

Tracking and forecasting any health event or health determinant through the ongoing collection of data, the integration, analysis and interpretation of those data into surveillance products and the dissemination of the resultant surveillance product to those who need to know.⁶²

Target

A desired measurable goal toward which a plan or activity is directed.

Tobacco control

A broad range of planned and coordinated activities (e.g. policy, cessation, marketing and price) directed at various audiences and in different settings designed to reduce tobacco consumption and use.

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Appendix: Information about the Provincial Cancer Prevention and Screening Council

From its inception to May 2006, Council was co-chaired and staffed by Cancer Care Ontario and the Canadian Cancer Society, Ontario Division. Starting in May 2006, Council is chaired and staffed by Cancer Care Ontario.

Since its first meeting in October 2003, the Provincial Cancer Prevention and Screening Council has engaged in a range of supportive activities to advance cancer prevention and screening efforts in Ontario. During this time, a key objective was to establish a broad awareness and understanding of the *Cancer 2020 Action Plan* and its targets.

Key Accomplishments

Some of Council's key accomplishments are highlighted below.

Planning

- Council developed strategic priorities and an operational plan to implement the *Cancer 2020 Action Plan*.
- Through a Cancer Prevention Forum held in September 2004, Council members provided input into Cancer Care Ontario's *Ontario Cancer Plan* process to ensure the integration of prevention and screening initiatives. As a result, one of the *Ontario Cancer Plan* priority areas is focused on increasing efforts to ensure successful achievement of Cancer 2020 prevention targets.
- As active members of the Ontario Chronic Disease Prevention Alliance, many Council members have been participating in the development of an integrated approach to chronic disease prevention.
- Regional cancer prevention and screening networks developed annual plans to advance implementation of the *Cancer 2020 Action Plan* and raise awareness about its targets within their regions.

Regional representatives on Council were also involved in exchanging knowledge with their regional counterparts.

Communication and Engagement Activities

- In February 2004, Council members supported successful communication efforts that preserved a municipal budget for public health programs in Ottawa.
- Presentations on Cancer 2020 targets were delivered to various groups, such as Parks and Recreation Ontario, the Ontario Hospital Association and regional venues through prevention and screening networks. In 2004, presentations and posters were also delivered at such conferences as the Canadian Public Health Association Conference, the National Chronic Disease Prevention Conference and the 2nd International Conference on Local and Regional Health Programmes.
- Council members engaged various provincial and federal government representatives in dialogue, including briefings with the Ontario Minister of Health and Long-Term Care and the Ontario Minister of Health Promotion.
- Council worked with provincial government representatives and agencies, including the Chief Medical Officer of Health, the Ontario Minister of Health and Long-Term Care, the Ontario Minister of Health Promotion and the Ontario Ministry of Labour, to advance policy development and action in such areas as tobacco control, healthy weights and occupational exposure limits.

Council Governance

- Council developed its governance structure, including Terms of Reference and expanded its membership to include the following groups: Association of Local Public Health Agencies, Centre

for Addiction and Mental Health, Ontario Chronic Disease Prevention Alliance, Ontario Collaborative Group on Healthy Eating and Physical Activity, Ontario Public Health Association, Ontario Sun Safety Working Group and additional new Regional Cancer Programs.

Regional Activities

- Regional prevention and screening activities ranged from projects and programs related to tobacco control, nutrition and healthy weights, physical activity and sun safety to environmental exposures, breast screening and cervical screening. Many regional activities targeted specific populations, including Aboriginal peoples and new immigrants.

Current Council Priorities for Action

Council is working to help the Ontario Government fulfill its priority to make Ontarians healthier and to be a leader in cancer prevention. For this reason, Council is actively seeking and pursuing opportunities to influence provincial public policy to achieve the priorities that it has set forth:

- Council will provide support for raising tobacco taxes to, at minimum, the current national average of all provinces.
- Council will advocate for a population-based colorectal cancer screening program.
- Council will provide support for the sustainability of the Aboriginal Relationship Development and Training Program as outlined by the Joint Cancer Care Ontario – Aboriginal Cancer Committee.
- Council will promote evidence-based control measures and policies that will curtail the current rising level in the overall rate of alcohol consumption in Ontario and reduce the proportion of Ontarians drinking at high risk.

- Council will advocate to resource and implement a comprehensive multi-sectoral strategy, as outlined by the *2004 Chief Medical Officer of Health Report: Healthy Weights, Healthy Lives*, to address the obesity epidemic affecting Ontarians.
- Council will work to establish the elimination of occupational and environmental carcinogens as a policy and legislative priority of the provincial government in all relevant ministries and agencies.
- Council will raise the need for a coordinated, comprehensive, provincial ultraviolet and sun safety strategy with dedicated resources.



cancer care | action cancer
ontario | ontario

Cancer Care Ontario is an umbrella organization that steers and coordinates Ontario's cancer services and prevention efforts so that fewer people get cancer, and patients receive the highest quality of care. We do this by:

- Directing more than \$500-million public health care dollars annually to prevent and detect cancer and help health care providers deliver high-quality care, as close to home as possible.
- Operating province-wide screening and prevention programs.
- Collecting and monitoring information about the rate and impact of cancer across the province, and putting this information in the hands of policy makers, researchers and care providers.
- Supporting providers by turning research and evidence into standards and guidelines that they can use to improve patient care.
- Promoting accountable and efficient cancer services, and working with doctors, hospitals and other care providers to plan and improve services in regions across Ontario.
- Providing expert advice to the provincial government on all cancer-related issues.



Canadian | Société
Cancer | canadienne
Society | du cancer

The Canadian Cancer Society is a national, community-based organization of volunteers whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer.

The Canadian Cancer Society, in partnership with the National Cancer Institute of Canada, achieves its mission through research, education, patient services and advocacy for healthy public policy. These efforts are supported by volunteers and staff and funds raised in communities across Canada.

The *Cancer 2020 Action Plan* can be found on the Canadian Cancer Society and Cancer Care Ontario Web sites at www.cancer.ca and www.cancercare.on.ca.



Canadian Cancer Society | Société canadienne du cancer



cancer care ontario | action cancer ontario