



Ontario Health
Cancer Care Ontario



Progress in Prevention: Achievements from the Chronic Disease Prevention Strategy 2015–2020



FOREWORD

The Chronic Disease Prevention Strategy 2015–2020 charted a course for Cancer Care Ontario (now part of Ontario Health) to continue to work in a leadership capacity with partners across the health system to champion chronic disease prevention in Ontario. The strategy aimed to promote chronic disease prevention and reduce new cases of major chronic diseases by decreasing the number of people with or exposed to modifiable risk factors.

Launched in 2015, the strategy was built on our programs, resources and expertise. It incorporated current and planned prevention initiatives, research capacity, data holdings, risk factor surveillance, policy analysis, and program design and implementation. The goals of the strategy focused on promoting the development of coordinated policies and programs that support the health of the population, and improving the health of disadvantaged groups by fostering healthy environments and lifestyles. The strategy also aimed to improve the long-term outcomes of people living with cancer or other chronic diseases.

In 2018, we published a progress report that detailed the achievements made against the goals of the strategy from April 1, 2015, to March 31, 2018. The report is available online at ccohealth.ca/preventionreport. Now at the conclusion of the Chronic Disease Prevention Strategy, we reflect on the great progress made towards the strategy's goals over the last five years and identify opportunities to further strengthen our efforts. The *Progress in Prevention: Achievements from the Chronic Disease Prevention Strategy 2015–2020* report highlights some of Ontario Health (Cancer Care Ontario's) achievements in chronic disease prevention from April 1, 2015, to March 31, 2020, and reports on our overall progress towards the strategy's goals and strategic priorities.

Chronic diseases, including cancers, cardiovascular diseases, chronic respiratory diseases and diabetes, cause about two-thirds of all deaths in Ontario and share four main modifiable risk factors: unhealthy eating, physical inactivity, tobacco use and alcohol consumption. Certain groups of people also have higher rates of chronic diseases and remain more exposed to modifiable risk factors.¹ Given the significant health, social and economic burdens caused by chronic diseases, addressing their risk factors remains a key priority.




As an integrated organization, Ontario Health provides the opportunity to connect and leverage a wide range of resources, expertise and programs to improve chronic disease prevention, including subject matter expertise, access to health administrative databases, system-level reporting, quality improvement, health promotion, program implementation and policy expertise. I look forward to joining with colleagues across Ontario Health, and with our extensive network of partners, in contributing to a sustainable healthcare system and healthier future for everyone in Ontario.

Linda Rabeneck, MD MPH FRCPC
Vice-President, Prevention and Cancer Control, Ontario Health (Cancer Care Ontario)





Summary of our progress

We completed an assessment of Ontario Health (Cancer Care Ontario’s) progress towards the strategic priorities to help us build on our areas of success and to guide future prevention efforts. The assessment considered the number of initiatives, the stage of each initiative (e.g., planning, implementation, evaluation and/or sustaining) and the potential impact of the initiatives under each strategic priority.





Goal 1: Work with partners to champion chronic disease prevention in Ontario.

Strategic Priorities	Assessment
1.1 Establish complementary priorities and roles with Ontario’s chronic disease prevention leadership.	
1.2 Work with partners to strengthen Ontario’s chronic disease prevention system.	
1.3 Engage multiple sectors and levels of government to promote a health in all policies approach to chronic disease prevention.	





Goal 2: Promote chronic disease prevention policies and programs.

Strategic Priorities	Assessment
2.1 Provide advice to government and prevention partners on chronic disease prevention.	
2.2 Promote policies and programs that increase health equity.	
2.3 Monitor the impact of provincial-level policies and programs on chronic disease risk factors.	
2.4 Support the development and implementation of provincial-level prevention strategies.	




Goal 3: Undertake primary, secondary and tertiary prevention.

Strategic Priorities	Assessment
3.1 Ensure prevention is integrated into relevant programs.	
3.2 Expand screening and early detection programs.	
3.3 Increase access to screening and early detection programs.	
3.4 Provide the public with information and tools to reduce their risk of cancer.	

Goal 4: Inform chronic disease prevention through research, and population health assessment and surveillance.

Strategic Priorities	Assessment
4.1 Conduct and support etiologic, prevention and screening research.	
4.2 Optimize our data holdings and data infrastructure to support research and surveillance.	
4.3 Provide risk factor, screening and disease surveillance information, including information on health inequities.	
4.4 Produce and disseminate high-quality knowledge products that inform chronic disease prevention.	

Legend

	Significant progress: Many initiatives (approximately 5 or more) for this strategic priority have been implemented, most of which are complete
	Good progress: Some initiatives (approximately 2 to 4) for this strategic priority are complete or are in the planning and implementation stages
	Some progress: A small number of initiatives (approximately 2 or fewer) are complete or are in the planning and implementation stages



GOAL 1

Work with partners to champion chronic disease prevention in Ontario

1.1 Establish complementary priorities and roles with Ontario’s chronic disease prevention leadership

Our Prevention Advisory Committee was formed in 2016. It provides strategic advice on chronic disease prevention and identifies opportunities to align with chronic disease partners on initiatives in Ontario. The committee consists of leaders in chronic disease prevention across government agencies, non-profit organizations, primary care and the research community. The committee has provided advice on addressing emerging priorities in chronic disease prevention, such as health equity, mental health, cannabis and vaping. The committee also supports and informs our ongoing and new programs and initiatives. For example, it provided valuable guidance that has led to work on a new initiative to increase access to healthy foods in hospitals.

We established the Path to Prevention Partnership Table in 2017 to collaborate and share knowledge with Indigenous and non-Indigenous partners on preventing cancer and other chronic diseases. The [Indigenous Cancer Care Unit](#) has been working with over 30 partner organizations to implement the recommendations in [Path to Prevention—Recommendations for Reducing Chronic Disease in First Nations, Inuit and Métis](#). This report, published in 2016, provides the Ontario government with 22 evidence-based policy recommendations on reducing the prevalence of four key chronic disease risk factors in First Nations, Inuit and Métis communities: commercial tobacco use, alcohol consumption, physical inactivity and unhealthy eating.

“The collaboration between the Canadian Cancer Society and the Ontario Health (Cancer Care Ontario) Indigenous Cancer Care Unit has led to a partnership where chronic disease prevention initiatives are strengthened from the sharing of knowledge, experience and unique perspectives each organization brings to the Path to Prevention Partnership Table.” - **John Atkinson, Director, Cancer Prevention and Tobacco Control, Canadian Cancer Society**

1.2 Work with partners to strengthen Ontario’s chronic disease prevention system

Our Indigenous Cancer Care Unit launched the [First Nations, Inuit, Métis and Urban Indigenous Cancer Strategy 2019–2023](#) (the fourth Indigenous Cancer Strategy) with the aim to continue the work of the previous Indigenous Cancer Strategies, and embed and capture the growing cancer care needs of urban Indigenous groups. This strategy will focus on addressing system issues, and use chronic disease prevention and behavioural risk factor data, policies and partnerships to inform and develop new and culturally safe approaches to chronic disease prevention. We will continue to work with Indigenous leadership, governance structures, health networks, communities and other health system partners to implement the new strategy.

The [Occupational Cancer Research Centre](#) also works with partners across government and industry to fill knowledge gaps of occupation-related cancers. It uses these findings to inform preventive programs to control workplace carcinogenic (cancer-causing) exposures and improve the health of workers. One approach the Occupational Cancer Research Centre has taken to strengthen efforts in chronic disease prevention is helping to develop and contribute resources to websites such as [Prevent Occupational Disease](#) and [Sun Safety at Work](#), which are intended to help employers, supervisors, safety and health practitioners, and workers alike increase their understanding of occupational diseases and ways these diseases may be prevented.

1.3 Engage multiple sectors and levels of government to promote a health in all policies approach to chronic disease prevention

The [Prevention System Quality Index](#), published by our Population Health and Prevention Unit, monitors and highlights opportunities for system-level policies and programs that can reduce cancer risk factors and exposures in the Ontario population. The *Prevention System Quality Index* supports the cancer prevention work of our partners in governments, non-governmental organizations and public health units from a variety of sectors, including health, education, labour, municipal affairs, transportation, environment and finance. In a survey, 95 percent of respondents said they have used or plan to use the report in their work, 67 percent said they used the report to inform their organization’s work in policy or program development, and 50 percent said they used the report to inform their organization’s work in research or population health assessment.

In addition, the Occupational Cancer Research Centre regularly engages with the Ministry of Labour, Training and Skills Development to promote a health in all policies approach that prevents occupational and environmental cancers. Since stricter regulation was introduced to the construction industry in 2016, the Occupational Cancer Research Centre has engaged extensively with the sector on projects aimed at preventing occupational disease from exposure to hazards such as diesel exhaust, silica, asbestos and solar radiation.



GOAL 2

Promote chronic disease prevention policies and programs

2.1 Provide advice to government and prevention partners on chronic disease prevention

We advise the government and other prevention stakeholders on policies and programs that reduce chronic disease risk factors in the population through letters, published reports, consultation submissions and roundtable discussions. For example, we have advised the Ontario government and prevention partners on emerging issues, such as vaping, cannabis, the modernization of Smoke-Free Ontario, the modernization of the cancer screening programs and developing a provincial alcohol policy framework.

The Occupational Cancer Research Centre also provides advice to the government and prevention partners on many important topics to protect the health of workers. These efforts have included:

- Publishing the [*Burden of Occupational Cancer in Ontario: Major Workplace Carcinogens and Prevention of Exposure*](#) report. The report presents estimates of occupational exposure and the associated burden of cancer by industry, as well as evidence-based policy recommendations to reduce occupational exposure directed at government, Ontario's occupational health and safety system, employers and non-governmental organizations. Key findings from the report supported policy changes such as the ban on asbestos and asbestos-containing products in Canada in 2018.
- Providing advice to the Ministry of Labour, Training and Skills Development on occupational exposure limits for a number of hazardous substances, including a new proposed limit for diesel engine exhaust.

2.2 Promote policies and programs that increase health equity

Populations with health inequities often have more risk factors for cancer and other chronic diseases, and can face geographical, financial and cultural barriers to accessing and receiving healthcare services. All of our system-level plans – the [*Ontario Cancer Plan 5: 2019–2023*](#), the [*Ontario Renal Plan 3: 2019–2023*](#) and the [*Access to Care Plan: 2019–2023*](#) – direct Ontario Health (Cancer Care Ontario) to improve health equity for the people of Ontario in the access and delivery of healthcare and health outcomes, including care services related to chronic disease prevention.

As part of our mandate, we are working to address racism in the healthcare system that can be experienced by First Nations, Inuit, Métis and urban Indigenous people, including when they access prevention-related services. In 2015, we launched the [Indigenous Relationship and Cultural Safety Courses](#) for healthcare professionals to improve person-centred care and outcomes for people with cancer. These 13 e-modules provide content on Indigenous history, rights, issues and governance structures, as well as conflict resolution and social determinants of health, as it relates to the healthcare system. There has been great interest in these modules from provincial medical, public health, nursing and social work schools. Several medical schools have mandated students to complete the courses as part of their curriculum. Health Canada implemented the courses for federal nurses who work on First Nations reserves (Department of Indigenous Services Canada). An evaluation of the courses after Indigenous Services Canada nurses took them demonstrated that these free, online, module-formatted courses were successful at meeting learning objectives.² To date, more than 31,000 people have enrolled in the courses.

We are also working to address the barriers that trans and non-binary people may experience when accessing organized cancer screening services, including the absence of trans-specific cancer screening recommendations for breast cancer and cervical screening. In 2019, we released an [Overarching Policy for the Screening of Trans People in the Ontario Breast Screening Program and the Ontario Cervical Screening Program](#), which contains 17 recommendations on screening eligibility, timing and method for trans and non-binary people at average and increased risk of breast and cervical cancer. The policy also contains guidance on screening recall, follow-up and lab requisition considerations, and encourages healthcare providers to ensure a trans-friendly clinical environment and screening experience. Ontario's cancer screening programs have started planning to implement the new policy to improve the experience for trans and non-binary people in the healthcare system.

2.3 Monitor the impact of provincial-level policies and programs on chronic disease risk factors

The [Prevention System Quality Index](#) report promotes improvements in chronic disease prevention by monitoring Ontario's efforts, including policies and programs implemented in cancer prevention. The 2016 report included data on the burden of cancer related to each risk factor and 21 policy-focused indicators related to tobacco, alcohol, healthy eating, physical activity, ultraviolet radiation, environmental carcinogens, occupational carcinogens and infectious agents. The 2018 report focused on opportunities to reduce cancer risk factors in populations facing health inequities. This report was covered by seven media outlets and generated 1,495,900 impressions (the number of people who had the opportunity to see the stories and key messages). We will continue to regularly publish the *Prevention System Quality Index* to inform the development and implementation of policies and programs aimed at preventing cancer and other chronic diseases in Ontario.

The [Cancer System Quality Index](#) report tracks progress towards better outcomes in cancer care, and advances the quality and performance of the cancer system in Ontario through provincial and international benchmarking. In addition to indicators of cancer incidence and survival, the *Cancer System Quality Index*

monitors the impact of provincial-level policies on chronic disease risk factors by tracking risk factor indicators, such as smoking, alcohol and obesity. It also monitors the impact of provincial-level efforts to expand and increase access to Ontario's organized cancer screening and early detection programs by reporting on screening participation and follow-up.

2.4 Support the development and implementation of provincial-level prevention strategies

We co-led the development of the [Ontario Food and Nutrition Strategy](#), a plan for healthy food and food systems in Ontario that uses a cross-government, cross-sectoral, coordinated approach to developing food policy. The strategy provides evidence-based recommendations for a healthy food environment and to support the well-being of people in Ontario. One recommendation is to increase the availability of healthy food in public sector institutions, which is also a recommendation in the 2012 [Taking Action to Prevent Chronic Disease: Recommendations for a Healthier Ontario](#) report. To address this recommendation, we are embarking on a new Healthy Food in Hospitals initiative. The initiative will involve collaborating with select hospitals and key experts across the province to develop an approach that will increase access to healthy food in retail outlets at hospitals.

In 2014, we launched Health Works, a workplace health promotion program for employees. Over the four years the program ran, Health Works offered employees a wide variety of initiatives spanning physical activity, healthy eating, ergonomics and mental health. These initiatives were positively received, with over 90 percent of employees agreeing that Health Works was a valuable program. A follow-up survey of employees showed that the program resulted in several significant changes to health behaviours, including being less sedentary and increased vegetable intake. As part of the program, we also developed healthy eating and catering guidelines to encourage integrating healthy habits, behaviours and eating patterns into our meeting culture.

In the area of occupational disease, the Occupational Cancer Research Centre supports the provincial Occupational Disease Action Plan. By collecting exposure and surveillance data and conducting epidemiologic and prevention research, the Occupational Cancer Research Centre identifies ways to protect workers from exposure to carcinogens. For example, data presented by the Occupational Cancer Research Centre on lung cancers and mesotheliomas caused by asbestos were used by the Canadian Cancer Society, Canadian Labour Congress and other organizations to successfully lobby for an asbestos ban in Canada.

“The national asbestos ban was a very important step for Canada, and will help protect the health of workers and the public. Estimating the true impact of asbestos exposure was a key component in driving the ban forward. Putting numbers to a problem makes it real and supports evidence-based decision-making.” - Paul Demers, Director, Occupational Cancer Research Centre, Ontario Health (Cancer Care Ontario)



GOAL 3

Undertake primary, secondary and tertiary prevention

3.1 Ensure prevention is integrated into relevant programs

People with cancer have a better prognosis if they quit smoking. Evidence suggests that someone's risk of dying could be lowered by 30 to 40 percent by quitting smoking when they are diagnosed.³ Since 2013, we have implemented [smoking cessation programs](#) in all 14 Regional Cancer Programs. People who are newly diagnosed with cancer are screened for tobacco use, advised on the benefits of quitting smoking and referred to cessation services for support.

Integrating smoking cessation programs into Regional Cancer Programs has resulted in more people with cancer being screened for tobacco use, which has given them a better opportunity to become smoke-free and get the best results from their cancer treatments. From 2015 to 2019, the proportion of people newly diagnosed with cancer who were screened for tobacco use in the Regional Cancer Programs increased from 46 percent to 70 percent. Work is underway to expand these smoking cessation programs beyond the original target audience of new ambulatory cancer patients at the regional cancer centres.

We are working to integrate prevention into the cancer care system through clinical tools, such as cancer [pathway maps](#) and [guidelines](#). Several cancer pathway maps identify relevant risk factors. They also advise healthcare providers to screen for tobacco use and refer their patients who smoke to a smoking cessation program, if applicable. We have developed prevention and early detection pathway maps that outline the risk assessment and preventive care process for breast, esophageal and cervical cancer.

One of our strengths is our ability to engage directly with physicians. An example of this is the [Provincial Primary Care and Cancer Network](#), which is chaired by the Provincial Primary Care Lead and is made up of Regional Primary Care Leads and Regional Indigenous Cancer Leads from across the province. Through the Provincial Primary Care and Cancer Network, primary care providers are encouraged to share knowledge about cancer screening successes and incorporate best-practice prevention interventions into their patient encounters. Tools are provided to help primary care providers learn and adhere to cancer screening guidelines, with the overall goal of improving their cancer screening rates.

In addition, the Ontario Renal Network has developed resources that support primary care providers in the care of people with chronic kidney disease. These resources include:

- A [Medication Safety List](#) that outlines commonly prescribed medications that should be avoided or dose-adjusted to prevent further kidney function decline in people with chronic kidney disease or who are at risk of chronic kidney disease.
- The [KidneyWise Clinical Toolkit](#) that helps primary care providers identify and manage people with chronic kidney disease. The toolkit continues to be updated based on new evidence and feedback from stakeholders. In collaboration with eHealth Centres of Excellence, the toolkit was integrated into the most commonly used electronic medical record systems by primary care providers, and additional electronic medical record integration is being considered. The College of Family Physicians of Canada recently endorsed the toolkit.

"A smoking cessation program for cancer patients is a tremendously important initiative that Ontario Health (Cancer Care Ontario) is undertaking in partnership with cancer centres and programs across the province. By providing tools and resources to support cancer patients to quit smoking, we're giving them the opportunity to get the best outcome from their cancer treatments."

- **Michael Sherar, former President and CEO, Ontario Health (Cancer Care Ontario)**

3.2 Expand screening and early detection programs

We plan, implement and evaluate the province's three organized cancer screening programs: the Ontario Breast Screening Program, the Ontario Cervical Screening Program and ColonCancerCheck. In 2017, we also launched the [Lung Cancer Screening Pilot for People at High Risk](#). We are committed to expanding screening and early detection programs, and adopting innovative evidence-based approaches to screening. We have been involved in several new initiatives since 2015, including:

- Transitioning from the guaiac fecal occult blood test (gFOBT) to the fecal immunochemical test (FIT) as the recommended screening test in the ColonCancerCheck program for people at average risk of colorectal cancer. Compared with gFOBT, FIT has many benefits, such as being better at detecting colorectal cancer and some pre-cancerous polyps, and being more user-friendly. Therefore, an increase in colorectal cancer screening participation is anticipated as a result of the transition. Implementing FIT required extensive engagement with the Ministry of Health, Regional Cancer Programs, regional planning committees and labs across the province. From the launch of FIT in June 2019 to the end of January 2019, more than 720,000 FIT kits have been mailed to people in Ontario.

- Working with the Regional Cancer Programs to transition facilities into the Ontario Breast Screening Program (OBSP) if they have been performing screening mammography outside the OBSP. This transition will allow all eligible screening participants to receive breast screening services in an organized and integrated fashion. A total of 56 non-OBSP screening sites transitioned to the OBSP from January 2016 to December 2019. As new facilities begin offering mammography services, we will work towards integrating them into the OBSP.
- Transitioning from cytology to human papillomavirus (HPV) testing as the recommended cervical screening test for the Ontario Cervical Screening Program (OCSP), as well as implementing HPV testing for exit testing in colposcopy. In cervical screening, HPV testing will better detect pre-cancers and when combined with appropriate cytology triage testing, it will more accurately inform referrals to colposcopy. HPV testing in colposcopy will give healthcare providers objective criteria for discharging their patients from colposcopy and subsequent risk-based screening intervals. To support participants and healthcare providers in the transition to HPV testing, a comprehensive change management and education strategy is being developed. For example, the Provincial Primary Care and Cancer Network and the OCSP's Colposcopy Community of Practice will be key forums for engaging primary care and colposcopy service providers throughout the transition to HPV testing in Ontario.
- Launching the Lung Cancer Screening Pilot for People at High Risk in June 2017 at certain hospitals in Ontario. The main purpose of the pilot is to assess how to best implement organized lung cancer screening for people at high risk across Ontario. Providing smoking cessation support is a key element of the pilot, and the impact and outcomes of embedding smoking cessation services into the screening pathway are being evaluated.

The Ontario Renal Network works with Indigenous partners to promote screening in people who are at high risk for chronic kidney disease. In First Nations communities, healthcare workers are trained to run point-of-care tests for chronic kidney disease and associated risk factors. The screening results are used to determine individual chronic kidney disease risk and each screening participant receives an individualized treatment plan. To date, this initiative has been implemented in three First Nations communities and over 600 people have been screened for chronic kidney disease.

“By making it easier for the people of Ontario to participate in colon cancer screening, we are increasing the chances of finding cancer early when it is easier to treat and may even be able to prevent cancer before it starts.” - **Dr. Jill Tinmouth, Lead Scientist, ColonCancerCheck, Ontario Health (Cancer Care Ontario)**

3.3 Increase access to screening and early detection programs

We send letters from our three organized cancer screening programs (breast, cervical and colorectal) inviting eligible people in Ontario to get screened, reminding them when it is time to get screened again and informing them of their screening test results. The letters align with internationally accepted best practices and are part of our mandate to encourage cancer screening in people in Ontario.

There have also been enhancements to ColonCancerCheck's correspondence based on the findings from studies we conducted, including implementing invitation letters that target men and expanding physician-linked correspondence (screening letters sent on behalf of someone's family physician).⁴ Similarly, the Ontario Cervical Screening Program invitation letters were modified based on behavioral science evidence (including findings from a literature review and focus groups) to help increase uptake of cervical screening. The revised letters were developed through a collaboration with the Ministry of Health, the Treasury Board's Behavioural Insights Unit and Cancer Care Ontario.

In addition, the Ontario Renal Network has established six specialty clinics across Ontario to make sure people living with glomerulonephritis (inflammation of the tiny filters of the kidneys) have access to standardized, timely and high-quality specialized care. These specialty clinics also support and educate healthcare providers so they can care for patients closer to where they live. The clinics help ensure that people living with glomerulonephritis receive the right treatment at the right time from the right team so their condition can be effectively managed and their kidney disease is prevented from progressing.

3.4 Provide the public with information and tools to reduce their risk of cancer

In 2015, we launched [My CancerIQ](#), an online tool that allows people in Ontario to complete risk assessment questionnaires for melanoma, female breast, cervical, colorectal, kidney and lung cancer. The tool also provides users with personalized health action plans containing information on cancer prevention and screening, and credible behaviour change resources. We encourage primary care providers to incorporate My CancerIQ into their discussions with patients about cancer risk, prevention and early detection. We maintain and update My CancerIQ with information based on emerging evidence and guidelines, and we are exploring opportunities to add assessments for new diseases in the future. As of January 2020, there were over 1.2 million visits to the website and over 535,000 cancer risk assessments completed.

The [Indigenous Tobacco Program](#) is delivered through our Indigenous Cancer Care Unit and works with First Nations, Inuit, Métis and urban Indigenous partners to reduce and prevent commercial tobacco use and addiction. The program aims to increase knowledge, build capacity and empower communities with the skills and tools needed to address commercial tobacco cessation, protection and prevention. It addresses commercial tobacco use in a way that is culturally appropriate by working directly with communities. The program helps raise awareness of the risks of commercial tobacco, particularly to youth, through tailored workshops, educational campaigns and events. Since 2015, the Indigenous Tobacco Program has run over 375 cessation workshops and 213 prevention workshops, reaching over 21,300 people.

We have also taken a number of steps to help people better understand and make informed decisions about cancer screening. These steps include:

- Translating select educational materials on screening and correspondence to different languages.
- Developing ColonCancerCheck FIT kit instructions that use images so people at all literacy levels can understand them. The instructions are sent to screening participants along with a letter with more details about the test. Both have been translated into over 30 languages.
- Convening an expert panel led by the Ontario Breast Screening Program to assess how best to support people in making an informed choice on breast cancer screening based on their values and preferences.
- Developing a cancer and screening toolkit for First Nations, Inuit, Métis and urban Indigenous people and healthcare providers that provides culturally appropriate information about cancer, and how to prevent and treat it. The toolkit helps people talk with their healthcare providers about cancer screening and outlines the colorectal, breast and cervical screening programs in Ontario.
- Leading provincial awareness campaigns each year during Breast Cancer Awareness Month (October), Cervical Cancer Awareness Week (October) and Colon Cancer Awareness Month (March) to increase knowledge of and encourage participation in Ontario's organized cancer screening programs. During these campaigns, we share information about the screening programs on social media and develop materials for the Regional Cancer Programs so they can support local initiatives.



GOAL 4

Inform chronic disease prevention through research, and population health assessment and surveillance

4.1 Conduct and support etiologic, prevention and screening research

Our scientists and staff conduct and support population health research to inform improvements and innovations in disease prevention and screening. Our researchers have been awarded high-profile grants to support this work, including two Canadian Cancer Society Prevention Innovation Grants and a Canadian Institutes of Health Research Catalyst Grant. Since 2015, our scientists and staff have published more than 300 articles and delivered more than 700 presentations, workshops and posters on chronic disease etiology, prevention and screening. Examples of etiologic, prevention and screening research achievements include:

- Investigating the increasing incidence rates (new cases) of colorectal cancer among vulnerable populations, such as young adults (ages 19 to 49) in Ontario and Indigenous people.
- Partnering with sites in Ontario and internationally to conduct breast cancer research that examines how personalized risk assessment, including genetic testing, may help lead to the prevention and early detection of breast cancer.
- Co-leading [The Canadian Population Attributable Risk of Cancer](#) (ComPARE) study, which estimates the current and future number and percentage of new cancer cases due to modifiable risk factors across Canadian provinces. It also estimates how changes in the prevalence (commonness) of these risk factors as a result of prevention efforts could affect the number of future cancer cases.
- Collaborating on a study with support from the Ontario Institute for Cancer Research that looked at reasons for lack of follow-up after someone gets an abnormal colorectal cancer screening test result in the ColonCancerCheck program and exploring the use of centralized regional navigation to improve follow-up with colonoscopy in people with an abnormal screening result.
- Conducting studies to better understand cervical screening and colposcopy services in Ontario, such as the impacts of the cervical correspondence letters and effective care pathways on participants in the Ontario Cervical Screening program.
- Developing statistical methods to produce the [Cancer Risk Factors Atlas of Ontario](#), which identifies high-need populations and areas by providing neighbourhood-level estimates of chronic disease behavioural risk factors. This information helps inform region-specific policies, interventions and programs to improve overall health and reduce health inequities.

“Over the past 5 years, scientists and staff at Ontario Health (Cancer Care Ontario) have generated new knowledge through research assessing the causes of disease, the prevalence of risk factors, the outcomes of policy and program implementation, and the impact of screening and early detection programs. Looking ahead, we will continue to identify and address gaps in etiologic, prevention and screening research, as well as conduct disease and risk factor surveillance to help advance our efforts in disease prevention and screening.” - **Dr. Michelle Cotterchio, Senior Scientist, Population Health & Prevention, Ontario Health (Cancer Care Ontario)**

4.2 Optimize our data holdings and data infrastructure to support research and surveillance

The Ontario Cancer Registry captures data on all Ontario residents diagnosed with cancer or who died from cancer. It allows for the surveillance and ongoing study of trends in cancer incidence, prevalence, mortality and survival. From 2015 to 2019, Cancer Care Ontario scientists and staff or Cancer Care Ontario-funded researchers mentioned using data holdings from the Ontario Cancer Registry in more than 80 research publication abstracts on prevention topics. This research was done before Cancer Care Ontario transitioned into Ontario Health.

We continue to improve the availability of high-quality data from the Ontario Cancer Registry to enable better health planning and research. Examples of initiatives include:

- Implementing data and usability enhancements to a routinely produced [data package](#) that lets public health units, researchers and government agencies access and use de-identified data from the Ontario Cancer Registry for health planning.
- Working with four other provinces to develop a national registry for brain tumours that will allow for a better understanding of the burden of brain cancer and support work in brain cancer early detection.

There are also many initiatives completed or underway that aim to optimize our data holdings and data infrastructure to support research and surveillance. These include:

- Using program performance metrics submitted by the Regional Cancer Programs to conduct several research projects on the regional smoking cessation programs, including an economic evaluation completed in partnership with St. Michael’s Hospital in Toronto, Ontario, which showed that smoking cessation is a cost-effective intervention.⁵
- Developing a pilot initiative, with funding from the Canadian Partnership Against Cancer, that will, for the first time, allow us to collect patient-reported smoking cessation outcomes in Regional Cancer Programs and provide important information on the impact of the smoking cessation programs.

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- Leading the development of the [Occupational Disease Surveillance System](#) through the Occupational Cancer Research Centre. This system links existing provincial health databases with job information to study occupational disease and inform prevention activities, including examining disease trends over time. A website has been launched to share the results with key stakeholders and there is work underway to expand this system across additional provinces.
 - Implementing the Gastrointestinal Endoscopy Data Submission Portal (GI Endo DSP) to replace the Colonoscopy Interim Reporting Tool for collecting colonoscopy data. The GI Endo DSP allows for the evaluation of the quality and effectiveness of colonoscopy procedures, and the expansion of data collection to all hospitals performing colonoscopy in Ontario. With the transition to the GI Endo DSP, improvements were made to the data fields being collected based on findings from a study and feedback from stakeholders.
 - Conducting annual linkages of the Ontario Cancer Registry with the Ontario Health Study (a large chronic disease cohort study) that will allow researchers to get Ontario Health Study data sets in a streamlined and expedited manner for their cancer-related research projects.
 - Partnering with the Sioux Lookout First Nations Health Authority, physicians and nurses to develop and implement cancer Screening Activity Reports that incorporate OCAP® principles, which are a set of standards that establish how First Nations data should be collected, protected, used and shared. This project demonstrates how a healthcare institution has successfully incorporated OCAP® principles into its privacy practices.

4.3 Provide risk factor, screening and disease surveillance information, including information on health inequities

We released the [Burden of Chronic Diseases in Ontario: Key Estimates to Support Efforts in Prevention](#) report in 2019, which was developed in partnership with Public Health Ontario. The report provides data and evidence to support health system planning, and policy and program development for preventing chronic diseases, such as cancer, cardiovascular disease, chronic lower respiratory disease and diabetes. The report presents estimates of people living with a chronic disease diagnosis, chronic disease deaths and hospitalizations, new cases of chronic diseases, and prevalence of modifiable chronic disease risk factors for adults and youth (tobacco smoking, alcohol consumption, physical inactivity and unhealthy eating).

We also released [Ontario Cancer Profiles](#) in 2017, which is a self-serve, interactive mapping tool. It provides provincial and regional data on certain modifiable risk factors and social determinants of health, cancer incidence and mortality, and cancer screening participation for Ontario's three cancer screening programs. Since its release, the tool's interface has been changed to improve functionality and create a better user experience. A total of 3,226 users have accessed Ontario Cancer Profiles from November 1, 2017, to March 31, 2019, and there were 1,382 downloads of the data tables, which provide users with customized reports to support prevention efforts.

We continue to publish [Ontario Cancer Facts](#), which are concise knowledge products that are intended for people whose work relates to cancer or other chronic diseases. They provide at-a-glance facts and figures on cancer, screening and cancer risk modifiers based on population health assessment and surveillance work. Since 2015, 42 Ontario Cancer Facts have been published that cover a broad range of topics, including tobacco screening, prevention of cancers caused by infections and residential radon exposure. You can subscribe to Ontario Cancer Facts by visiting our [website](#).

From 2015 to 2017, the Indigenous Cancer Care Unit and its partners produced three reports to address the information gap on cancer risk factors and screening in First Nations, Inuit and Métis populations: [Cancer in First Nations in Ontario: Risk Factors and Screening](#), [Cancer Risk Factors and Screening Among Inuit in Ontario and Other Canadian Regions](#) and [Cancer in the Métis People of Ontario: Risk Factors and Screening Behaviours](#). Since the publication of these reports, the Indigenous Cancer Care Unit has created infographics that provide highlights from each report. The infographics include information on the prevalence of modifiable cancer-related risk factors among First Nations, Inuit and Métis peoples: commercial tobacco use, alcohol consumption, diet (and food insecurity) and physical inactivity.

4.4 Produce and disseminate high-quality knowledge products that inform chronic disease prevention

In 2018, our Population Health and Prevention Unit conducted an evaluation of several knowledge products to assess their utility and inform the planning of future knowledge products so that they best meet audience needs. The evaluation was conducted through an online survey and key informant interviews. We received positive feedback and based on the suggestions, we will be updating the formats of our reports and our communications tools.

In addition, we regularly present our chronic disease prevention work at provincial, national and international academic and professional conferences. Since 2015, we have also presented at Public Health Ontario Grand Rounds on prevention topics, such as the [Prevention System Quality Index](#), understanding the burden of cancer caused by infections in Ontario, the environmental burden of cancer, sun safety, and evaluating system-level policies and programs in cancer prevention. We also regularly present our work to chronic disease prevention stakeholders, such as the Ontario Chronic Disease Prevention Managers in Public Health, the Toronto Cancer Prevention Coalition and Ontario Chronic Disease Prevention Alliance.



LOOKING FORWARD

Ontario Health (Cancer Care Ontario) will continue to work closely with partners to prevent chronic disease and improve the long-term outcomes of people living with cancer or other chronic diseases, and cancer survivors. Below are some examples of chronic disease prevention initiatives already being planned by Ontario Health (Cancer Care Ontario) that will, in different ways, help address the future health and economic burden of chronic disease.

Implementing and improving programs and policies

- Expanding the smoking cessation program to cancer centre partner hospitals and new program areas, including the diagnostic phase.
- Completing the final evaluation of the Lung Cancer Screening Pilot for People at High Risk.
- Transitioning to the human papillomavirus test in cervical screening and colposcopy in Ontario.
- Ensuring that Indigenous community members and healthcare providers have the knowledge and tools needed to deal with emerging trends.
- Implementing a health equity training program at Ontario Health to improve health equity knowledge of our staff at all levels of the organization and ensure equity-informed planning and evaluation of our programs and services. The training program would also ensure that we embrace and embed equity in our culture, policies and processes.

Disseminating evidence and providing advice

- Publishing the *Prevention System Quality Index 2020*, which will include indicators on tobacco, alcohol, healthy eating, physical activity, ultraviolet radiation, environmental carcinogens, occupational carcinogens and infectious agents.
- Expanding Ontario Cancer Profiles to include indicators on cancer survival and prevalence, and altering profile functionality so users can select indicators based on changing geographic reporting boundaries in Ontario.
- Using chronic disease prevention and behavioural risk factor data, policies and partnerships to inform new and culturally appropriate approaches to chronic disease prevention.

Generating knowledge

- Conducting research on radon levels in Ontario workplaces to identify where there are hazardous levels and target appropriate prevention efforts.

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- Publishing the Ontario Cancer Statistics report every two years to provide the most up-to-date statistics on cancer incidence, deaths, prevalence and survival in Ontario. The report includes statistics on emerging topics of interest to health professionals, such as the role of wait times and comorbidities on survival, rare cancers and long-term forecasts for some of the most common cancers.
 - Conducting research through the Measuring Ontario's Small Area Inequalities in Cancer (MOSAIC) study on implementing statistical methods to produce small area estimates of cancer incidence and survival across Ontario. The MOSAIC study aims to identify where inequalities in cancer incidence or survival occur, and explore socio-economic and rural or remoteness factors that may be associated with disparities.
 - Continuing to collaborate and share knowledge with Indigenous and non-Indigenous partners about preventing cancer and other chronic diseases. This collaboration is aimed at implementing the 22 recommendations from the Path to Prevention report to address behavioural risk factors related to cancer and other chronic diseases.

Despite the tremendous progress made in chronic disease prevention over the past five years and the many initiatives already being planned, there remains more to be done to ensure the best health outcomes for the Ontario population and the sustainability of our healthcare system. We must also ensure that our healthcare system is equipped and ready to address emerging and complex issues, such as the health effects of vaping or population inequities.

Ontario Health has tremendous expertise and experience in many areas, such as research, health policy, working with regional and local stakeholders, system-level reporting, health program implementation and improvement, evaluation and measuring outcomes. We have enormous potential to expand our efforts in tackling chronic disease prevention in a systemic and evidence-based way alongside a healthcare system that delivers high-quality care and treatment. We welcome the opportunity to continue working in partnership with others on chronic disease prevention.

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Ontario Health (Cancer Care Ontario) Prevention Advisory Committee

- Chair: Dr. Andrew Pipe, Division of Prevention and Rehabilitation, University of Ottawa Heart Institute and Professor, Faculty of Medicine, University of Ottawa
- Mr. John Atkinson, Director, Cancer Prevention and Tobacco Control, Canadian Cancer Society
- Dr. Paul Demers, Director, Occupational Cancer Research Centre
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APPENDIX A: Public health entities in chronic disease prevention

About Ontario Health

Ontario Health is the government agency responsible for ensuring Ontarians continue to receive high-quality health care services where and when they need them.

Ontario Health is bringing together the knowledge, strength and the many talents of highly skilled staff across various agencies to apply the best of what we collectively do to support those on the frontlines, and to benefit all Ontarians. To learn more about Ontario Health visit ontariohealth.ca.

Cancer Care Ontario, part of Ontario Health, is the provincial government's principal advisor on the cancer and renal systems, as well as on access to care for key health services. We equip health professionals, organizations and policy-makers with the most up-to-date knowledge and tools to deliver high-quality patient care. We also aim to reduce new cases of major chronic diseases by reducing people's exposure to modifiable risk factors. To learn more about Ontario Health (Cancer Care Ontario) visit ccohealth.ca.

About Public Health Ontario

Public Health Ontario (PHO) is a Crown corporation whose mandate is to provide scientific and technical advice and support to clients working in government, public health, healthcare and related sectors. PHO enables informed decisions and actions that protect and promote health and contribute to reducing health inequities. For more information visit publichealthontario.ca.

About the Public Health Units

A Public Health Unit is an official health agency established by a group of urban and rural municipalities to provide a more efficient community health program, carried out by full-time, specially qualified staff. There are 34 public health units in Ontario. Health units administer health promotion and disease prevention programs to inform the public about healthy life-styles, communicable disease control including education in STDs/AIDS, immunization, food premises inspection, healthy growth and development including parenting education, health education for all age groups and selected screening services. For more information visit the [Ministry of Health's website](#).

About Ontario's Ministry of Health

Ministry of Health is responsible for establishing the strategic direction and provincial priorities for Ontario's health care system. The ministry also develops legislation, regulations, standards, policies and directives to support strategic directions related to the health care system; monitors and reports on the performance of the health care system and the health of Ontarians; plans for and establishes funding models and levels for the health care system; and manages key provincial programs including the Ontario Health Insurance Program.

REFERENCES

1. CCO and Ontario Agency for Health Protection and Promotion (Public Health Ontario). The burden of chronic diseases in Ontario: key estimates to support efforts in prevention. Toronto: Queen's Printer for Ontario; 2019.
2. Rand M, Sheppard AJ, Jamal S, Kewayosh A, Mashford-Pringle. Evaluation of the Indigenous Relationship and Cultural Safety Courses among a sample of Indigenous Services Canada nurses. *IJIH*. 2019; 14(1), 29-41. doi: 10.32799/ijih.v14i1.31967
3. U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA; 2014.
4. Tinmouth J, Baxter NN, Paszat L, Sutradhar R, Rabeneck L, Yun L. Physician-linked mailed invitation to be screened improves uptake in an organized colorectal cancer screening program. *BMJ Open*. 2014 Mar 12; 4(3):e004494. doi: 10.1136/bmjopen-2013-004494
5. Evans WK, Truscott R, Cameron E, Rana S, Isaranuwachai W, Haque M, et al. Implementing smoking cessation within cancer treatment centres and potential economic impacts. *Translational lung cancer research*, 2019; 8(Suppl 1), S11–S20. doi:10.21037/tlcr.2019.05.09

Cancer Care Ontario is now part of Ontario Health, a new government agency that, once fully established, will be responsible for ensuring Ontarians receive high-quality health care services where and when they need them. Cancer Care Ontario's work – including that of the Population Health and Prevention Unit – has been taken on by this new agency.

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