2021

HELPING PEOPLE WITH CANCER QUIT SMOKING

A business case to improve access to smoking cessation medications in Canada

CANADIAN PARTNERSHIP AGAINST CANCER

Evidence-based smoking cessation support is a critical component of first-line cancer treatment and high-quality cancer care.

Contents

4 EXECUTIVE SUMMARY: IMPROVING ACCESS TO SMOKING CESSATION MEDICATIONS IN CANADA

6 INTRODUCTION: AN OPPORTUNITY TO IMPROVE CANCER CARE

8 CONTEXT: WHAT THE EVIDENCE TELLS US ABOUT SMOKING CESSATION IN CANCER CARE

- 9 Smoking cessation is critical in cancer treatment
- 9 Supports that help people quit smoking
- 11 Smoking rates in Canada and health inequities

12 PROGRESS: INTEGRATING SMOKING CESSATION INTO CANCER CARE

- 13 Smoking cessation has been implemented in many cancer care settings
- 13 Models of smoking cessation supports in cancer care
- 15 Smoking cessation supports for First Nations, Inuit and Métis with cancer

16 SUCCESSES AND BARRIERS: HOW PEOPLE WITH CANCER ACCESS SMOKING CESSATION MEDICATIONS

- 17 Eligibility and access vary greatly across Canada
- 17 Cancer care settings that provide free smoking cessation medications at point of care
- 19 Barriers to accessing smoking cessation medications

20 COSTS: CONTINUED SMOKING VERSUS QUITTING IN PEOPLE WITH CANCER

- 21 Costs to the health-care system of smoking and smoking cessation
- 22 Average estimated costs of smoking cessation medications
- 22 Average estimated costs of behavioural counselling

23 RECOMMENDATIONS TO IMPROVE ACCESS TO SMOKING CESSATION MEDICATIONS IN CANADA

- 25 Recommendations and key actions for each jurisdiction

28 APPENDICES

- **28 Appendix A: Models of smoking cessation support**
- **29 Appendix B: Financial access to smoking cessation medications**
- **35 Appendix C: Estimated costs of smoking cessation treatments**
- **38 Appendix D: Estimated cost of treatment for top cancers**

39 REFERENCES

EXECUTIVE SUMMARY:

Improving access to smoking cessation medications in Canada

Evidence-based smoking cessation support is a critical component of first-line cancer treatment and high-quality cancer care. Quitting smoking improves people's survival and quality of life and reduces costs to the health-care system. Provinces and territories have been making good progress over several years to integrate smoking cessation supports into their outpatient cancer care settings. Most outpatient cancer care settings in Canada now offer people evidence-based support to quit smoking, and many are working to offer culturally appropriate supports for First Nations, Inuit and Métis people with cancer.

However, gaps in financial coverage and access to smoking cessation medications across Canada have created barriers for many people with cancer who want to quit. These barriers are more acute for people who experience health inequities, many of whom require more support to quit smoking.

Few people in Canada can access free smoking cessation medications when and where they receive cancer treatment – an approach recommended by experts to reduce barriers to quitting. While some provinces have short-term funding to provide free smoking cessation medications in the cancer care setting, Manitoba has the only provincial cancer system with sustainable funding to offer free smoking cessation medications and behavioural counselling to people with cancer at the point of care. Even people who can get smoking cessation medications covered by publicly funded programs, drug benefit programs or private health insurance may experience barriers, including limited access to health-care providers and pharmacies.

Federal, provincial and territorial governments and agencies responsible for cancer care can improve the funding and delivery of smoking cessation medications for people with cancer by implementing the following recommendations. Some governments have already taken action to increase access to smoking cessation medications; others have more work to do to implement these recommendations:

Gaps in financial coverage and access to smoking cessation medications across Canada have created barriers for many people with cancer who want to quit. These barriers are more acute for people who experience health inequities, many of whom require more support to quit smoking.

1

FUND A COMBINATION OF SMOKING CESSATION MEDICATIONS FOR ALL PEOPLE WITH CANCER.

Provincial and territorial governments should fund all types of smoking cessation medications for all people with cancer so they can receive them for free at least 12 weeks a year, and ideally longer. This would provide people with the flexibility to choose the medication or combination of medications that work for them and enable people to use these medications for as long as they need to prevent a relapse.

2

PROVIDE FREE SMOKING CESSATION MEDICATIONS DIRECTLY TO PEOPLE WITH CANCER AT THE POINT OF CARE.

The use of smoking cessation medications helps reduce people's addiction to nicotine and can more than double quit rates. Offering medications at the point of care increases their use and may make it easier for people with cancer to quit. Therefore, provincial, territorial and federal programs, including those that already fund free smoking cessation medications for the general population, should increase access to medications by providing them free at the point of care. For example, the BC Smoking Cessation Program, which already provides 12 weeks a year of free nicotine replacement therapy to residents of British Columbia, may improve uptake and outcomes by providing smoking cessation medications in cancer care settings or mailing them directly to a person's home.

3

COMMIT TO SUSTAINABLE FUNDING FOR PROGRAMS THAT CURRENTLY USE SHORT-TERM FUNDING TO PROVIDE POINT-OF-CARE SMOKING CESSATION MEDICATIONS FOR PEOPLE WITH CANCER.

Provinces that currently provide free smoking cessation medications at the point of care using short-term funding – such as Saskatchewan, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador – should follow Manitoba's example and commit to sustainable, long-term funding to deliver these services.

4

FACILITATE ACCESS TO SMOKING CESSATION MEDICATIONS FOR FIRST NATIONS, INUIT AND MÉTIS WITH CANCER.

Federal, provincial and territorial governments and agencies responsible for cancer care should make a concerted effort to facilitate access to smoking cessation medications for First Nations, Inuit and Métis with cancer by providing culturally appropriate care, improving coordination across providers and programs and making smoking cessation medications more readily available in remote communities.

Each of these investments by provincial, territorial and federal governments would reduce barriers for people with cancer who need help quitting smoking, thereby reducing health inequities, improving smoking cessation rates, increasing the effectiveness of cancer treatments and reducing costs to the health-care system.

INTRODUCTION:

An opportunity to improve cancer care

Provinces and territories have been working for several years to integrate smoking cessation supports into their outpatient cancer care settings. And they are making progress. Most outpatient cancer care settings in Canada now offer people evidence-based support to quit smoking, and many are working to offer culturally appropriate supports for First Nations, Inuit and Métis with cancer.

However, many people in Canada who have cancer face barriers that make them unable to access or pay for smoking cessation medications, which are essential supports that can more than double the likelihood of people quitting smoking. These barriers prevent some people from quitting smoking during cancer treatment – a reality that contributes to health inequities across the country.

When a person quits smoking, their cancer treatment becomes more effective, their quality of life improves and their chance of surviving increases. This makes smoking cessation support a critical component of first-line cancer treatment and high-quality cancer care. Providing free smoking cessation medications to people at the time and place they receive cancer treatment would help more people quit smoking and contribute to achieving equitable cancer care in Canada. Improving access to smoking cessation medications in cancer care settings would also be beneficial for people at high risk who are participating in lung cancer screening. Most provinces are currently establishing organized lung cancer screening programs and are working to integrate smoking cessation supports into these programs.

A note about traditional tobacco

In this document, tobacco refers to commercial tobacco products, not traditional or sacred tobacco. Traditional or sacred tobacco is used by some First Nations or Métis communities in ceremonial or sacred rituals for healing and purifying.

SMOKING CESSATION WORK AT THE PARTNERSHIP

With funding from the Canadian Partnership Against Cancer (Partnership), as well as technical expertise and assistance with program design and implementation, all provinces and territories are working to implement, scale-up or enhance smoking cessation programs in ambulatory cancer care settings.

Working closely with the Pan-Canadian Tobacco Cessation and Cancer Care Network, in 2019 the Partnership published Implementing Smoking Cessation in Cancer Care Across Canada: A Framework for Action, which defines the best actions for implementing smoking cessation supports in the cancer system. The Partnership published a report in June 2021 called Smoking Cessation in Cancer Care Across Canada that reports on progress in integrating smoking cessation in cancer care.

The Pan-Canadian Tobacco Cessation and Cancer Care Network has advised prioritizing better access to smoking cessation medications, which will help people with cancer quit smoking and improve their health.

WHAT THIS BUSINESS CASE REVEALS

This business case describes why smoking cessation medications are a critical part of quality cancer care and how increased access can reduce health inequities among people with cancer as well as health-care costs. It also makes recommendations for what federal, provincial and territorial policy makers can do to improve cancer outcomes.

Over four brief chapters, this business case describes the following:

- **Why smoking cessation is an important part of cancer care**, evidence-based supports that help people quit smoking and a brief description of smoking rates in Canada and health inequities
- **The progress provinces and territories have made** integrating smoking cessation into cancer care
- **The successes and barriers** that people with cancer experience in accessing smoking cessation medications
- **The cost savings to the health-care system** that can result from people with cancer quitting smoking, and the costs of offering evidence-based smoking cessation treatments

Pages 23-27 of the business case provide **recommendations** for federal, provincial and territorial governments and agencies responsible for cancer care to improve financial coverage and delivery of smoking cessation medications. These pages also suggest specific actions the jurisdictions can take that will have the greatest impact on quality of care.

Canadian Strategy for Cancer Control: 2019–2029

The Canadian Partnership Against Cancer is working within the context of the *Canadian Strategy for Cancer Control*: 2019–2029.[1] To provide equitable cancer care, the Strategy, which the Partnership stewards, calls on the health-care system to better adapt services to the specific needs of people of all socioeconomic, geographic and cultural backgrounds, all age groups and all identities. The Strategy also calls for an end to institutional racism and prejudice, which have an impact on care.

CONTEXT:

What the evidence tells us about smoking cessation in cancer care

Key messages

People who smoke when diagnosed with cancer have worse treatment outcomes and a higher risk of dying from cancer and other causes.

Smoking cessation support is a critical component of first-line cancer treatment because quitting smoking makes cancer treatment more effective, improving people's survival by about 40 percent.

Behavioural counselling and smoking cessation medications help people with cancer to quit smoking.

Experts recommend free smoking cessation medications at the point of care for people with cancer.

People with cancer who experience health inequities are more likely to face barriers to quitting smoking.

SMOKING CESSATION IS CRITICAL IN CANCER TREATMENT

Smoking causes many cancers and chronic diseases, including heart disease, stroke and chronic obstructive pulmonary disease. It is the leading preventable cause of cancer. In 2015, an estimated 32,700 cancer cases in Canada were caused by smoking.[2]

People who smoke when they are diagnosed with cancer are more likely to die of cancer and other causes compared to people who have never smoked.[3] Smoking further increases people's risk for developing a second primary cancer and is associated with an increased risk that the cancer treatment will be toxic to the person.[3] In addition, people who continue to smoke after they finish cancer treatment double their risk of dying.[4]

Smoking cessation support is a critical component of first-line cancer treatment because quitting smoking increases the effectiveness of people's cancer treatment and improves their survival by about 40 percent.[5] Quitting smoking substantially reduces cancer survivors' risk of developing heart disease, chronic obstructive pulmonary disease, stroke and other diseases caused by smoking.[5] Smoking cessation also enhances an individual's quality of life by improving their overall health status and well-being.[5]

SUPPORTS THAT HELP PEOPLE QUIT SMOKING

Nicotine is highly addictive and many people require multiple attempts to quit smoking. Well-established, evidence-based guidelines show that behavioural counselling and smoking cessation medications help people with and without cancer to quit smoking.[6,7] These approaches are effective across socioeconomic groups.[8]

Evidence-based smoking cessation treatments include the 5A (Ask, Advise, Assess, Assist, Arrange), 3A (Ask, Advise, Act) and AAR (Ask, Advise, Refer) models.[5,9] These models involve screening people for tobacco use, advising them of the benefits of quitting, offering behavioural counselling and smoking cessation medications and/or referring them to an external smoking cessation program – and following up. Behavioural counselling and cessation medications can, on their own, improve an individual's likelihood of quitting. But they are more effective in combination.[5]

BEHAVIOURAL COUNSELLING

Intensive behavioural counselling over a few weeks often results in higher quit rates than brief counselling. But even brief (less than three minutes) advice from a physician can improve cessation rates and is highly cost effective.[5] Behavioural counselling from other health-care providers, such as nurses, dentists and pharmacists – or other trained tobacco treatment specialists – also helps people quit smoking, as does counselling through a quitline.[5] Interactive behavioural interventions by text or the internet are also effective.[5] Interactive voice response is another intervention that may improve smoking cessation rates when used as a supplement to follow-up support.[10]

Quitting smoking increases the effectiveness of people's cancer treatment and improves their survival by about 40 percent.[5]

SMOKING CESSATION MEDICATIONS

The use of smoking cessation medications, including nicotine replacement therapy (NRT), varenicline and bupropion, can more than double quit rates. Combining a short-acting NRT (gum, inhaler, lozenges, spray) with a long-lasting NRT (patch) is more effective than when any type is used alone.[5]

Varenicline is more effective at helping people quit smoking than bupropion, the nicotine patch or a placebo. In addition, combining varenicline or bupropion with NRT is likely more effective than when varenicline or bupropion are used on their own.[5] Smoking cessation medications are generally used for 12 weeks, but some people may need to use them for longer to prevent relapse.[11] Financial coverage of smoking cessation treatments, including medications, increases people's use of these treatments and improves cessation rates.[5]

ADDITIONAL SMOKING CESSATION SUPPORTS

Life events such as a cancer diagnosis or surgery create teachable moments that can motivate people to try to quit smoking.[5] People are more likely to quit if smoking cessation supports are offered around the time of their cancer surgery.[12] While more intensive smoking cessation treatments have been associated with higher quit rates in people with cancer,[13-17] less intensive interventions, such as phone-based smoking cessation programs, can reach a lot of people with cancer, help them quit and increase survival.[13-15]

In addition to behavioural counselling and smoking cessation medications, the following smoking cessation supports reduce barriers for people with cancer and may improve their chances of quitting.

Using an inclusive lens

An inclusive lens is a key element in developing and delivering smoking cessation supports. By using a diversity, equity and inclusion lens, supports can be developed to meet the specific needs of people of all socioeconomic, geographic and cultural backgrounds, all age groups and all identities.

Types of smoking cessation medications

Nicotine replacement therapy (NRT) delivers nicotine in a safer way than smoking or chewing tobacco. NRT is generally available over the counter as a patch, gum, lozenge, inhaler or spray.

Bupropion and varenicline are prescription medications that chemically interfere with nicotine receptors and addiction pathways in the brain to reduce withdrawal symptoms.

Free point-of-care medications

To reduce barriers to quitting, experts recommend that free smoking cessation medications be offered to people with cancer at the point of care. Offering free smoking cessation medications at the point of care can increase their use.[17] Point-of-care refers to the time at or around a person's cancer care appointment, which can take place either in person or virtually (with medications mailed to the home).

Automatic referrals

An automatic referral (often called "opt-out") is an approach where people automatically receive or are referred for smoking cessation treatment, regardless of their readiness to quit. This approach can increase people's participation in cessation support.[18,19]

Relapse prevention

Follow-up and relapse prevention support during cancer treatment help recent quitters stay smoke-free. This is particularly important for people with cancer, as relapse is common for people coping with a stressful life event.[20]

Family support

Smoking cessation supports for people's families and friends during their treatment help minimize barriers to quitting.[21]

Health-care leadership

For the best health outcomes, people need access to smoking cessation support at diagnosis, during treatment and following treatment. Administrative leadership can ensure that health-care providers at all levels have access to training and resources so they can provide people with evidence-based cessation supports.

SMOKING RATES IN CANADA AND HEALTH INEQUITIES

Across the provinces, an average 14 percent of people with cancer reported smoking in 2017 and 2018 combined, which is similar to the average smoking rate for Canada's total population.[24] But the number of people with cancer who smoke is likely much higher in areas where more of the total population smokes – for example, in Nunavut, where, according to the Canadian Community Health Survey, an estimated 63 percent of people age 12 and older smoke, and in the Northwest Territories, where about 35 percent of people age 12 and older smoke.[24]

People with low income are more likely to smoke than people with high income. Higher smoking rates result from a complex interaction of social determinants of health and other factors, including influence from the commercial tobacco industry. These factors lead to health inequities. People with cancer who experience health inequities are more likely to face more barriers to quitting and require additional supports.

Culturally appropriate supports

First Nations, Inuit and Métis with cancer benefit from culturally appropriate smoking cessation supports.[22] Culturally appropriate care involves recognizing and reflecting Peoples-specific First Nations, Inuit or Métis holistic approaches to health and wellness while working to eliminate racism in the health-care system.

Equitable access to smoking cessation supports, including improving coordination across providers and programs and providing access to smoking cessation medications closer to home, is important for First Nations, Inuit and Métis communities. In addition, health-care staff are better able to provide cessation support in a culturally appropriate manner, without discrimination, when they are trained in cultural competency. This enables them to deepen their understanding of First Nations, Inuit and Métis histories – and provide culturally safe care that respects people's values.[1,23]

What are health inequities?

Health inequities are unfair and unjust systematic differences in health that could be avoided if appropriate interventions were made at the policy and system levels.[25] Health inequities result from an unequal distribution of power and resources due to bias and discrimination. People experiencing health inequities often have greater health risks and poorer health outcomes.

PROGRESS:

Integrating smoking cessation into cancer care

Key messages

All provinces and territories are working towards using evidence-based, culturally appropriate smoking cessation supports in cancer care.

In 2020, more than 85 percent of cancer care settings in Canada offered outpatients support to quit smoking, up from 25 percent in 2016.

Some jurisdictions provide behavioural counselling and/or smoking cessation medications at the point of care.

Some jurisdictions refer outpatients with cancer to a quitline, community smoking cessation program or pharmacist.

SMOKING CESSATION HAS BEEN IMPLEMENTED IN MANY CANCER CARE SETTINGS

Provinces and territories have been working for several years to help people quit by integrating smoking cessation into cancer care settings. Excellent progress is being made. In 2020, more than 85 percent of cancer care settings in Canada offered outpatients support to quit smoking compared to 2016, when only about 25 percent of settings provided support.

Ontario and Manitoba had been providing smoking cessation supports for people with cancer for several years when, in 2016, the Canadian Partnership Against Cancer began supporting this work and its expansion across Canada.

MODELS OF SMOKING CESSATION SUPPORTS IN CANCER CARE

All provinces and territories are working towards implementing or enhancing evidence-based, culturally appropriate smoking cessation supports in cancer care settings that build on existing strengths and resources. Provinces and territories have used the Implementing Smoking Cessation in Cancer Care Across Canada: A Framework for Action implementation checklist to assess their smoking cessation supports and identify steps toward full implementation of smoking cessation in cancer care.

All cancer care settings in Canada that offer smoking cessation use the evidence-based 5A (Ask, Advise, Assess, Assist, Arrange), 3A (Ask, Advise, Act) or AAR (Ask, Advise, Refer) model as follows:

- Patients with cancer are asked if they use tobacco and told about the benefits of quitting to improve their cancer treatment and overall health.
- Depending on the jurisdiction, people are automatically offered smoking cessation treatment or automatically referred for smoking cessation support or are asked if they would like support to quit smoking.
- In some provinces, behavioural counselling and/or free smoking cessation medications are provided at the point of care by health-care providers at the cancer centre or clinic. This occurs either in person or virtually (by telephone or video, with medications mailed to the home).
- In other provinces and territories, outpatients are referred externally to a quitline, community smoking cessation program or pharmacist for behavioural counselling and/or smoking cessation medications.
- Cancer centres in several jurisdictions offer follow-up support to help people stay smoke-free, and some provide additional support to people's family members.

See Appendix A, Supplementary Table 1 for a summary of the models of smoking cessation support in cancer care settings in Canada. For more detailed information on the smoking cessation supports offered in cancer care settings in each province and territory, see Smoking cessation in cancer care across Canada, 2020.

Support during COVID-19

During the COVID-19 pandemic, many cancer care settings shifted to providing people with virtual counselling, such as by telephone or online group programs, and mailing smoking cessation medications to people's homes.

All provinces and territories are working towards implementing or enhancing evidence-based, culturally appropriate smoking cessation supports in cancer care settings.

CASE STUDY

Sustainable funding for a successful smoking cessation program in Newfoundland and Labrador

The Provincial Cancer Care Program at Newfoundland and Labrador's Eastern Health started a successful smoking cessation program for outpatients with cancer in 2017. Using pilot funding from the provincial government and project funding from the Canadian Partnership Against Cancer, the program provided free smoking cessation medications (purchased inexpensively through the hospital pharmacy) and behavioural counselling from trained clinicians.

The program helped many people with cancer quit smoking. Of the 209 people who participated in 2020–2021, 35 percent quit smoking and 70 percent reduced their tobacco use. More than 75 percent used smoking cessation medications, underscoring the importance of offering these free at the point of care. The program has been expanded and enhanced so that all outpatients with cancer in the province now have access to point-of-care behavioural counselling and free smoking cessation medications.

Demand for these services continues to grow in 2021. The Provincial Cancer Care Program is putting resources in place to ensure the program is sustainable.

SMOKING CESSATION SUPPORTS FOR FIRST NATIONS, INUIT AND MÉTIS WITH CANCER

First Nations, Inuit and Métis are more likely than the general population to smoke, and face multiple barriers to quitting smoking. For example, many First Nations, Inuit and Métis are more likely to experience institutional racism and prejudice and lower incomes, and are more likely to live in rural and remote communities with limited access to health care.[23] These barriers make it more difficult to access supports to quit smoking.

Many provinces and territories are partnering with First Nations, Inuit and Métis organizations and communities to make culturally appropriate smoking cessation support more available to outpatients with cancer. In 2020, about 44 percent of cancer care settings offered supports. This meant that cultural competency training was available for all staff and, in some centres, culturally specific smoking cessation resources were available for people. For example, most of the regional cancer centres in Ontario offer culturally appropriate supports to First Nations, Inuit and Métis with cancer, such as through Indigenous Navigators, who provide support and advocacy for Indigenous patients and families. Telehealth Ontario, the provincial telephone service provider for smoking cessation, medical advice and wraparound services, has specific protocols to support Indigenous populations. Talk Tobacco, which provides tobacco and vaping cessation services for First Nations, Inuit, Métis and urban Indigenous communities, is also available in Ontario, Manitoba and Saskatchewan.

PATIENT EXPERIENCE

Removing barriers to access in the Northwest Territories

People with cancer who live in remote communities in the Northwest Territories can find it hard to access the medications they need to quit smoking. Some get smoking cessation medications from pharmacies when they receive cancer care outside their communities. But, when they return home, many face barriers.

Most remote communities do not have a pharmacy. And, because smoking cessation medications are not on the territorial formulary, they are not available at the point of care in community health centres. In addition, prescription smoking cessation medications need to be ordered by a physician or nurse practitioner who may not work in the community.

The typical route to accessing smoking cessation medications can be lengthy and cumbersome. After someone makes an appointment at a local health centre, it could be weeks before a nurse is able to obtain a prescription from a physician working offsite, send the information to a pharmacy and receive the medication for pick-up. These waits create barriers for people trying to quit smoking.

The territory has begun work to improve access to smoking cessation medications for people with cancer and others who need support to quit smoking.

SUCCESSES AND BARRIERS:

How people with cancer access smoking cessation medications

Key messages

Few people in Canada can access free smoking cessation medications at the time and place they receive their cancer treatment, despite the clear benefits.

Even people who are eligible to receive free smoking cessation medications may experience barriers to access.

Eligibility for financial support varies greatly across Canada. Manitoba has the only provincial cancer system that provides sustainable funding for free medications and counselling at the point of care.

ELIGIBILITY AND ACCESS VARY GREATLY ACROSS CANADA

Costs related to counselling for smoking cessation are typically covered by federal, provincial or territorial health programs. But despite the clear benefits of smoking cessation medications for helping people quit smoking – and the fact that experts recommend providing them free at the time and place a person receives cancer treatment – few people in Canada have this access.

People with cancer may have access to free or subsidized medications through publicly funded smoking cessation programs, federal, provincial or territorial drug benefit programs, or private health insurance. However, eligibility for these programs and the types, quantities and duration of medications covered varies greatly across Canada. Even people who are eligible for free medications may face barriers to accessing them. See Appendix B for detailed information about programs that provide financial coverage for smoking cessation medications in each province and territory.

CANCER CARE SETTINGS THAT PROVIDE FREE SMOKING CESSATION MEDICATIONS AT POINT OF CARE

Manitoba leads the country as the only province that has long-term provincial funding (as well as ongoing funding from the CancerCare Manitoba Foundation) to provide free point-of-care smoking cessation medications to outpatients with cancer. Newfoundland and Labrador has used short-term funding to provide free point-of-care medications for three years, and is working to sustain the funding. In some cancer care settings in New Brunswick, and in Prince Edward Island (PEI), Nova Scotia and Saskatchewan, these medications are available for free at the point of care only because of short-term, external project funding from the Partnership. Limited free NRT is funded through various sources in Ontario for people with cancer.

In Manitoba, Newfoundland and Labrador, PEI and some cancer care settings in New Brunswick, outpatients with cancer who smoke are offered free smoking cessation medications along with behavioural counselling at the point of care. Medications are provided at cancer centres or clinics, or mailed to a person's home at or around the time of their in-person or virtual appointment. In Manitoba, Newfoundland and Labrador and some cancer care settings in New Brunswick, people have access to unlimited coverage of bupropion, varenicline and NRT during their cancer treatment. People with cancer in PEI have access to unlimited free NRT.

In Saskatchewan and some regions in Ontario, and for people with financial need in Nova Scotia, cancer centres offer outpatients free NRT. One cancer centre in Ontario also offers outpatients free bupropion or varenicline at the point of care. Patients are also referred for behavioural counselling. The amount of NRT offered varies by jurisdiction (see Appendix B, Supplementary Table 2).

PATIENT EXPERIENCE

From three packs a day to slaying the dragon

As a three-pack-a-day smoker for 45 years, Archie had tried every method he knew to quit smoking. Nothing worked. Then, in 2008, Archie learned about varenicline from a television ad. He got a prescription from his doctor and financial coverage through his company's extended health insurance. After a few months on varenicline, says Archie, "the desire to smoke wasn't there anymore and one day I put them down and never picked up a cigarette again. I had slain the dragon."

Archie – who today battles lung and bladder cancers, chronic obstructive pulmonary disease and many other health problems associated with decades of smoking – understands how important it is to make quitting as easy as possible. He says people who smoke must be offered all types of smoking cessation medications for free so they can see which ones work without worrying about the investment.

Archie also lives in a rural area, so he has experienced firsthand some of the barriers people face when they have to travel to receive services to quit smoking. He says that telephone or online smoking cessation counselling, as well as options to receive medications in the mail, would make it easier for people in his situation to quit for good.

SUMMARY OF PROVINCES AND TERRITORIES THAT OFFER PEOPLE FREE POINT-OF-CARE SMOKING CESSATION MEDICATIONS IN CANCER CARE SETTINGS

SMOKING CESSATION MEDICATION	YT	NT	NU*	BC	AB	SK	MB	ON	QC	NB	NS	PE	NL
Bupropion and/or varenicline	✖	✖	✖	✖	✖	✖	✔	▨	✖	▨	✖	✖	▨
Nicotine replacement therapy	✖	✖	✖	✖	✖	▨	✔	▨	✖	▨	▨	▨	▨

✔ = free medications provided in cancer care settings

▨ = free medications provided in cancer care settings, with limited reach or short-term funding

✖ = free medications not provided in cancer care settings

*All Nunavummiut patients with cancer receive care at cancer centres in Ontario, Manitoba, Alberta or Northwest Territories, depending on the region of Nunavut in which they reside.

CASE STUDY

Manitoba's smoking cessation program for people with cancer

Manitoba has been providing smoking cessation supports for people with cancer for several years and is the only province that has long-term funding to provide free point-of-care smoking cessation medications to outpatients with cancer.

Outpatients with cancer in Manitoba are screened for tobacco use and offered a referral to Manitoba's Quit Smoking Program, which provides point-of-care clinical counselling from trained staff, free smoking cessation medications and educational information. The program is also open to family members of people with cancer.

The program has had a positive effect on 83 percent of participants: they either quit smoking, reduced their tobacco consumption or had quit prior to starting the program and were able to remain smoke-free with the help of the program. CancerCare Manitoba is currently conducting an economic analysis of the Quit Smoking Program to demonstrate value for money. Results will be available in 2022.

BARRIERS TO ACCESSING SMOKING CESSATION MEDICATIONS

People with cancer typically receive prescriptions or recommendations for smoking cessation medications when they receive their cancer care. Some have access to free or subsidized smoking cessation medications. However, many people experience financial or other barriers to access. For example, people with low income may be eligible for a provincial drug benefit program, but may not be able to afford NRT to help them quit smoking. Unlike prescription-only medications (varenicline and bupropion), over-the-counter NRT is often not covered by provincial drug benefit programs or even private insurance.[26] In some programs, only one type of smoking cessation medication is covered at a time, whereas combination therapy (e.g., varenicline and a short- and long-acting NRT) is more effective at helping people quit. Some people with cancer may need to try quitting more than once during their treatment but cannot afford to because their medication coverage is limited to 12 weeks a year.

First Nations, Inuit and Métis may face additional barriers to accessing smoking cessation medications. First Nations and Inuit registered with the Non-Insured Health Benefits (NIHB) program through Indigenous Services Canada have coverage for smoking cessation medications. However, NRT is not as readily available in remote communities as in other parts of the country. In addition, getting a prescription can be a barrier in communities where access to physicians or nurse practitioners is limited. Métis are not eligible for NIHB and may face barriers accessing provincial or territorial coverage programs.

People with cancer who smoke may also experience stigma and could be reluctant to tell health-care providers they smoke, which means they are less likely to receive support to quit smoking. In addition, some health-care providers may have biases that prevent them from providing adequate smoking cessation supports. These barriers limit people's efforts to quit smoking during cancer treatment and can contribute to health inequities.

NRT is not as readily available in remote communities as in other parts of the country. In addition, getting a prescription can be a barrier in communities where access to physicians or nurse practitioners is limited.

Continued smoking versus quitting in people with cancer

Key messages

Continued smoking after a cancer diagnosis increases the risk of cancer recurring, which results in $239 million of additional health-care costs per year just for cancer medications.

For every 5 percent of people who quit smoking, cancer treatment costs decrease by an estimated $50 to $74 million per year.

Evidence-based smoking cessation treatments cost from $573 to $866 per person, while just the first phase of cancer treatment costs about $10,000 to $30,000.

COSTS TO THE HEALTH-CARE SYSTEM OF SMOKING AND SMOKING CESSATION

Evidence-based smoking cessation treatments are very cost effective in the general population[5] and are likely also cost-effective for people with cancer.[27,28]

Continued smoking after a cancer diagnosis significantly increases the risk that cancer will recur, which increases the need for additional cancer treatments. An estimated 4,789 people each year experience cancer treatment failure because they continue to smoke after a cancer diagnosis.[29] Conservative estimates tell us that people with cancer in Canada who continue to smoke need an additional $239 million a year in cancer medications.[29] These costs do not include costs associated with hospitalizations, complications, treatment for other health conditions caused by smoking and costs related to loss of productivity. Therefore, the true cost of continuing to smoke after a cancer diagnosis is far higher. In Ontario, for example, total monthly health-care costs for people with cancer who smoke are almost 20 percent higher than for non-smoking people.[30]

Quitting smoking can substantially reduce health-care costs by reducing people's need for additional cancer treatments, treatment of non-cancer medical conditions and hospitalization.[31,32] Canada could save $50 to $74 million annually in cancer treatment costs for every 5 percent of people with cancer who quit smoking.[29] However, given the cost savings from smoking cessation for other health conditions, it is likely that the true cost savings from smoking cessation by people with cancer would be substantially higher.

Smoking cessation treatment is inexpensive – and much less expensive than traditional cancer treatment. One 12-week smoking cessation treatment, including smoking cessation medications and behavioural counselling, ranges from $573 to $866 per person. Just the first phase of cancer treatment costs about $10,000 to $30,000 per person, depending on the type of cancer. Find details about these cost estimates in Appendices C and D.

CASE STUDY

Quitting smoking leads to cost savings in New Brunswick

At a cancer clinic in New Brunswick, 50 people quit smoking after their cancer diagnosis and remained smoke-free six months later. This resulted in cost savings, as approximately nine of these patients would have been expected to require additional cancer treatment if they had continued to smoke after diagnosis.[33]

Continued smoking significantly increases the risk that cancer will recur, and any recurrence increases the need for additional or "second-line" cancer treatments. In 2017, the estimated average cost of second-line cancer treatment in Canada was $61,671 per patient.[29] Therefore, the estimated cost savings from quitting smoking in those nine patients is $555,039.

But these cost estimates may be modest. Immunotherapy, which is increasingly used as second-line treatment for cancer progression or recurrence, is estimated to cost more than $140,000 per person. This balloons the cost savings for nine patients to $1,260,000. Importantly, these estimates do not include costs associated with management for increased cancer treatment toxicity, increased non-cancer diseases, hospitalizations or end-of-life care.

The cost of supporting 50 patients to quit smoking is much less than providing second-line cancer treatment in patients who continue to smoke after a cancer diagnosis. Behavioural counselling and a combination of three smoking cessation medications costs between $28,650 to $43,300 for 50 patients, based on an estimated cost of between $573 to $866 per person for a 12-week treatment (see page 22).

AVERAGE ESTIMATED COSTS OF SMOKING CESSATION MEDICATIONS

The combination of varenicline, a short-acting NRT (e.g., nicotine gum) and the patch, which is a long-acting NRT, is effective for helping people quit. This 12-week treatment costs $549 (see table below), but prices can be higher or lower depending on the amount of medication used, the length of treatment and the precise combinations. (Some people may need to use these medications for longer to prevent relapse.) As one example, extended treatment with varenicline for up to 24 weeks[5] would add $155 to the smoking cessation treatment for a total cost of $704.

The cost estimates in this table are based on 2021 provincial drug formularies and exclude dispensing fees and mark-up. In some provinces that provide smoking cessation medications to people with cancer at the point of care, the cancer centre or hospital pharmacies report purchasing NRT for less than half of the costs listed here.

COST OF A COMBINATION OF EFFECTIVE SMOKING CESSATION MEDICATIONS FOR A 12-WEEK TREATMENT

SMOKING CESSATION MEDICATION	COST FOR 12-WEEK PERIOD
Varenicline (generic)	$155
Short-acting NRT (nicotine gum)	$166
Long-acting NRT (nicotine patch)	$228
TOTAL	**$549**

See Appendix C for details on the cost estimates for all smoking cessation medications approved by Health Canada, including bupropion and other types of NRT (lozenge, spray and inhaler), which are also effective at helping people quit smoking.

AVERAGE ESTIMATED COSTS OF BEHAVIOURAL COUNSELLING

The most effective smoking cessation treatment combines behavioural counselling with smoking cessation medications.[5] Behavioural counselling can vary widely in duration and intensity. While intensive counselling produces higher rates of quitting, brief counselling can also help people quit and is highly cost effective. The length of counselling can be tailored to a person's needs and counselling methods can be easily adapted to the resources available in the cancer care setting.

The average cost of intensive behavioural counselling, which involves up to 12 weekly sessions, is $317. The average cost of brief behavioural counselling, which involves one 30-minute session, is $24. The estimated costs of behavioural counselling are based on an average of nurse and pharmacist wages in Canada, as these are often the professions providing counselling to people. See Appendix C for details on the cost estimates for behavioural counselling interventions.

RECOMMENDATIONS

To improve access to smoking cessation medications in Canada

Evidence-based smoking cessation support is a critical component of first-line cancer treatment and high-quality cancer care. Quitting smoking improves people's survival and quality of life and reduces costs to the health-care system. However, gaps in financial coverage and access to smoking cessation medications across Canada have created barriers for many people with cancer who want to quit. These barriers are more acute for people who experience health inequities, many of whom require more support to quit smoking.

Few people in Canada can access free smoking cessation medications when and where they receive cancer treatment – an approach recommended by experts to reduce barriers to quitting. While some provinces have short-term funding to provide free smoking cessation medications in the cancer care setting, Manitoba has the only provincial cancer system with sustainable funding to offer free smoking cessation medications and behavioural counselling to people with cancer at the point of care. Even people who can get smoking cessation medications covered by publicly funded programs, drug benefit programs or private health insurance may experience barriers, including limited access to health-care providers and pharmacies.

Quitting smoking improves people's survival and quality of life and reduces costs to the health-care system.

Federal, provincial and territorial governments and agencies responsible for cancer care can improve the funding and delivery of smoking cessation medications for people with cancer by implementing the following recommendations. The table that follows suggests specific actions the jurisdictions can take that will have the greatest impact on quality of care. Some governments have already taken action to increase access to smoking cessation medications; others have more work to do to implement these recommendations:

1

FUND A COMBINATION OF SMOKING CESSATION MEDICATIONS FOR ALL PEOPLE WITH CANCER.

Provincial and territorial governments should fund all types of smoking cessation medications for all people with cancer so they can receive them for free at least 12 weeks a year, and ideally longer. This would provide people with the flexibility to choose the medication or combination of medications that work for them and enable people to use these medications for as long as they need to prevent a relapse.

2

PROVIDE FREE SMOKING CESSATION MEDICATIONS DIRECTLY TO PEOPLE WITH CANCER AT THE POINT OF CARE.

The use of smoking cessation medications helps reduce people's addiction to nicotine and can more than double quit rates. Offering medications at the point of care increases their use and may make it easier for people with cancer to quit. Therefore, provincial, territorial and federal programs, including those that already fund free smoking cessation medications for the general population, should increase access to medications by providing them free at the point of care. For example, the BC Smoking Cessation Program, which already provides 12 weeks a year of free NRT to residents of British Columbia, may improve uptake and outcomes by providing smoking cessation medications in cancer care settings or mailing them directly to a person's home.

3

COMMIT TO SUSTAINABLE FUNDING FOR PROGRAMS THAT CURRENTLY USE SHORT-TERM FUNDING TO PROVIDE POINT-OF-CARE SMOKING CESSATION MEDICATIONS FOR PEOPLE WITH CANCER.

Provinces that currently provide free smoking cessation medications at the point of care using short-term funding – such as Saskatchewan, New Brunswick, Nova Scotia, PEI and Newfoundland and Labrador – should follow Manitoba's example and commit to sustainable, long-term funding to deliver these services.

4

FACILITATE ACCESS TO SMOKING CESSATION MEDICATIONS FOR FIRST NATIONS, INUIT AND MÉTIS WITH CANCER.

Federal, provincial and territorial governments and agencies responsible for cancer care should make a concerted effort to facilitate access to smoking cessation medications for First Nations, Inuit and Métis with cancer by providing culturally appropriate care, improving coordination across providers and programs and making smoking cessation medications more readily available in remote communities.

RECOMMENDATIONS AND KEY ACTIONS FOR EACH JURISDICTION

JURISDICTION	APPLICABLE RECOMMENDATIONS AND KEY ACTIONS
Canada and all provinces and territories	**Recommendation 4:** Facilitate access to smoking cessation medications for First Nations, Inuit and Métis with cancer. • **Key action:** Federal, provincial and territorial governments and agencies responsible for cancer care should make a concerted effort to facilitate access to smoking cessation medications for First Nations, Inuit and Métis with cancer by providing culturally appropriate care, improving coordination across providers and programs and making smoking cessation medications more readily available in remote communities.
Yukon	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free varenicline and bupropion for all people with cancer. **Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, currently offered through the Quitpath smoking cessation program, and varenicline and bupropion, directly to people receiving cancer care.
Northwest Territories	**Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion, currently covered by health benefits programs, directly to people receiving cancer care.
Nunavut	**Recommendation 2:** Provide free smoking cessation medications directly at the point of care to people who have received cancer treatment and smoking cessation services at cancer centres outside of the territory.* • **Key action:** Provide free NRT, varenicline and bupropion, currently covered by health benefits programs, directly to people with cancer. *All Nunavummiut patients with cancer receive care at cancer centres in Ontario, Manitoba, Alberta or Northwest Territories, depending on the region of Nunavut in which they reside.
British Columbia	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free varenicline and bupropion and a combination of different types of NRT for all people with cancer. **Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion directly to people receiving cancer care.
Alberta	**Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion, currently offered through QuitCore, AlbertaQuits and other smoking cessation programs, directly to people receiving cancer care.

JURISDICTION	APPLICABLE RECOMMENDATIONS AND KEY ACTIONS
Saskatchewan	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free NRT, varenicline and bupropion for all people with cancer. **Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion directly to people receiving cancer care. **Recommendation 3:** Commit to sustainable funding for programs that currently use short-term funding to provide point-of-care smoking cessation medications for people with cancer. • **Key action:** Provide sustainable funding to continue offering free point-of-care NRT to people with cancer – currently funded through the Canadian Partnership Against Cancer until March 2022 – and expand to other medications.
Manitoba	Manitoba leads the country with sustainable funding to offer free point-of-care smoking cessation medications for people with cancer.
Ontario**	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free NRT, varenicline and bupropion for all people with cancer. **Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion directly to people receiving cancer care.
Quebec	**Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion directly to people receiving cancer care.
New Brunswick	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free NRT, varenicline and bupropion for all people with cancer. **Recommendation 3:** Commit to sustainable funding for programs that currently use short-term funding to provide point-of-care smoking cessation medications for people with cancer. • **Key action:** Provide sustainable funding to continue offering free point-of-care smoking cessation medications to people with cancer – currently funded through the Canadian Partnership Against Cancer until March 2022.

JURISDICTION	APPLICABLE RECOMMENDATIONS AND KEY ACTIONS
Nova Scotia	**Recommendation 1:** Fund a combination of smoking cessation medications for all people with cancer. • **Key action:** Provide free NRT, varenicline and bupropion for all people with cancer. **Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion directly to people receiving cancer care. **Recommendation 3:** Commit to sustainable funding for programs that currently use short-term funding to provide point-of-care smoking cessation medications for people with cancer. • **Key action:** Provide sustainable funding to continue offering free point-of-care NRT to people with cancer who have financial need – currently funded through the Canadian Partnership Against Cancer until March 2022, and expand eligibility to all people with cancer, as well as to other medications.
Prince Edward Island	**Recommendation 2:** Provide free smoking cessation medications directly to people with cancer at the point of care. • **Key action:** Provide free NRT, varenicline and bupropion – currently offered through the PEI Smoking Cessation Program – directly to people receiving cancer care. **Recommendation 3:** Commit to sustainable funding for programs that currently use short-term funding to provide point-of-care smoking cessation medications for people with cancer. • **Key action:** Provide sustainable funding to continue offering free point-of-care smoking cessation medications to people with cancer – currently funded through the Canadian Partnership Against Cancer until March 2022, ideally through the PEI Smoking Cessation Program.
Newfoundland and Labrador	**Recommendation 3:** Commit to sustainable funding for programs that currently use short-term funding to provide point-of-care smoking cessation medications for people with cancer. • **Key action:** Provide sustainable funding to continue offering free point-of-care smoking cessation medications to people with cancer – previously provided through a provincial pilot program.

**Implementing these recommendations would require the approval of additional funding.

Each of these investments by federal, provincial and territorial governments would reduce barriers for people with cancer who need help quitting smoking, thereby reducing health inequities, improving smoking cessation rates, increasing the effectiveness of cancer treatments and reducing costs to the health-care system.

Appendices

APPENDIX A: MODELS OF SMOKING CESSATION SUPPORT

SUPPLEMENTARY TABLE 1: MODELS OF BEHAVIOURAL COUNSELLING AND SMOKING CESSATION MEDICATION DELIVERY IN CANCER CARE SETTINGS IN THE PROVINCES AND TERRITORIES, 2021

PROVINCE/TERRITORY	EXTERNAL REFERRAL* OR POINT-OF-CARE** BEHAVIOURAL COUNSELLING	FREE POINT-OF-CARE** BUPROPION AND/OR VARENICLINE	FREE POINT-OF-CARE** NICOTINE REPLACEMENT THERAPY
Yukon	External referral	No	No
Northwest Territories	N/A	No	No
Nunavut	External referral	No	No
British Columbia	External referral	No	No
Alberta	External referral	No	No
Saskatchewan	External referral	No	Yes (funded until 2022)
Manitoba	Point-of-care	Yes	Yes
Ontario	External referral (point-of-care in some cancer centres)	Yes (in one cancer centre)	Yes (in some cancer centres)
Quebec	External referral	No	No
New Brunswick	Point-of-care	Yes (in some cancer centres, funded until 2022)	Yes (in some cancer centres, funded until 2022)
Nova Scotia	External referral	No	Yes (for patients with low income, funded until 2022)
Prince Edward Island	Point-of-care	No	Yes (funded until 2022)
Newfoundland and Labrador	Point-of-care	Yes	Yes

*External referral: Person is referred to a quitline, community-based program or pharmacist for behavioural counselling, depending on the jurisdiction. People can also access many of these services without a referral.

**Point-of-care: The time at or around a person's cancer care appointment, which can take place either in person or virtually (with medications mailed to the home).

APPENDIX B:
FINANCIAL ACCESS TO SMOKING CESSATION MEDICATIONS

Patients with cancer in some jurisdictions in Canada can access free smoking cessation medications in the cancer setting. Other patients with cancer can get financial coverage of at least some types of smoking cessation medications through publicly funded provincial/territorial smoking cessation programs, drug benefit programs or private health insurance, as described below and in Supplementary Table 2. A summary of coverage of smoking cessation medications is also available in a map format.

SMOKING CESSATION PROGRAMS THAT PROVIDE FREE OR SUBSIDIZED MEDICATIONS

Some provinces and territories have smoking cessation programs that provide free medications for any resident, including people with cancer. British Columbia's program has the fewest barriers: any resident with a provincial health card can receive 12 weeks per year of free nicotine replacement therapy (NRT) through their local pharmacy, without enrolling in a smoking cessation program. Residents of Prince Edward Island (PEI) can receive 12 weeks a year of one type of NRT or bupropion or varenicline from their local pharmacy after they meet with a nurse for counselling and with a primary care provider for the prescription medications.

In some provinces and territories, such as in Alberta, Yukon and Nova Scotia, there are some community smoking cessation programs that offer free smoking cessation medications. These programs are typically organized and funded by the province or territory.

DRUG BENEFIT PROGRAMS THAT PROVIDE FREE OR SUBSIDIZED SMOKING CESSATION MEDICATIONS

Some people with cancer are eligible to receive free or subsidized smoking cessation medications through drug benefit programs aimed at the general population. For example, most provinces and territories provide free or subsidized smoking cessation medications through drug benefit programs aimed at specific populations, such as individuals with low income, people enrolled in a social support program, or seniors.

First Nations and Inuit registered with the Non-Insured Health Benefits (NIHB) program through Indigenous Services Canada are eligible for 12 weeks of smoking cessation medications (and up to 36 weeks of nicotine patches). Most people in Nunavut and the Northwest Territories (NWT) are covered under NIHB; people who are not eligible and are otherwise uninsured, such as through private insurance, can receive coverage through territorial programs. Métis living in the Northwest Territories and registered with the NWT Métis Health Benefits Program can access the same coverage as provided by the NIHB. Quebec also has an insurance program that provides 12 weeks a year of smoking cessation medications coverage to anyone who does not have private insurance.

PRIVATE HEALTH INSURANCE PLANS THAT PROVIDE SMOKING CESSATION MEDICATIONS COVERAGE

About 70 percent of people in Canada have private health insurance.[34] People with cancer who have private health insurance may receive coverage for smoking cessation medications, but most insurance plans do not reimburse members for NRT.[35]

SUPPLEMENTARY TABLE 2: PROGRAMS THAT PROVIDE FINANCIAL COVERAGE OF SMOKING CESSATION MEDICATIONS, BY PROVINCE/TERRITORY, 2021

NRT = nicotine replacement therapy (e.g., patch, gum, lozenge, spray, inhaler)

BUP = bupropion (prescription medication)

VAR = varenicline (prescription medication)

= Program that provides financial coverage of smoking cessation medications specifically for people with cancer

PROVINCE/ TERRITORY	HEALTH PROFESSIONALS WHO CAN PRESCRIBE BUP AND VAR	PROGRAM NAME	ELIGIBILITY DETAILS	SMOKING CESSATION MEDICATIONS COVERED			COVERAGE DETAILS	ESTIMATED # OF PEOPLE ENROLLED IN PROGRAM EACH YEAR*
				NRT	BUP	VAR		
Federal	See provinces/ territories for professionals who can prescribe BUP and VAR	Non-Insured Health Benefits (NIHB) Program	First Nations and Inuit registered with program	Yes	Yes	Yes	Up to 252 nicotine patches, 12 wks/yr of NRT (gum, lozenge and inhaler, or spray), and 12 wks/yr of BUP and VAR	
Yukon	Physicians and nurse practitioners	Quitpath	Enrolled in Quitpath smoking cessation program (doctor's note required for those under 18)	Yes	No	No	12-20 wks/yr	
		Pharmacare and extended health-care benefits	Yukon resident registered with the Yukon Health Care Insurance Plan and 65+ or 60+ and married to a Yukon resident who is 65+	No	Yes	Yes	Unlimited BUP or VAR	5,546
Northwest Territories	Physicians and nurse practitioners	Extended Health Benefits programs such as the Seniors Program, Specified Disease Conditions Program and Métis Health Benefits Program	Registered with one of the programs	Yes	Yes	Yes	Up to 252 nicotine patches, 12 wks/yr of NRT (gum, lozenge and inhaler, or spray), and 12 wks/yr of BUP and VAR	
		Government of Northwest Territories Department of Health and Social Services tobacco QUIT aids program	18+ with NWT Health Care Plan card and not covered by NIHB or another benefit program	Yes	Yes	Yes	24 wks/yr of nicotine patch and 12 wks/yr of NRT (gum, lozenge or inhaler) and BUP or VAR	
Nunavut	Physicians, nurse practitioners and dentists	Extended Health Benefits	18+ and not covered by NIHB or another benefit program and meet specific criteria	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR	371 (32,500 are covered by NIHB)

PROVINCE/ TERRITORY	HEALTH PROFESSIONALS WHO CAN PRESCRIBE BUP AND VAR	PROGRAM NAME	ELIGIBILITY DETAILS	SMOKING CESSATION MEDICATIONS COVERED			COVERAGE DETAILS	ESTIMATED # OF PEOPLE ENROLLED IN PROGRAM EACH YEAR*
				NRT	BUP	VAR		
British Columbia	Physicians, nurse practitioners and dentists	BC Smoking Cessation Program	Resident of BC with active and valid Medical Services Plan coverage (provincial health insurance); for BUP or VAR, must be registered with Fair PharmaCare or PharmaCare Plan B (Residential Care), C (Income Assistance), G (Psychiatric Medications) or W (First Nations Health Benefits)	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (BUP and VAR may be subject to deductible under Fair PharmaCare Plan)	77,000 (NRT only)
		First Nations Health Authority Health Benefits program	First Nations enrolled with Medical Services Plan and Pacific Blue Cross	Yes	No	No	24 wks/yr of NRT (coverage is supplementary to the BC Smoking Cessation Program)	
Alberta	Pharmacists, physicians and nurse practitioners	QuitCore	Enrolled in a QuitCore smoking cessation program	Yes	Yes	Yes	Up to $500 of NRT, BUP or VAR once/year	1,203
		AlbertaQuits	Working with an AlbertaQuits helpline counsellor to reduce and quit smoking	Yes	Yes	Yes	Up to $500 of NRT, BUP or VAR once/year	
		Alberta Health Services Tobacco Reduction Program	Working with a health-care provider who holds a Certified Tobacco Educator credential and has registered with program to offer a minimum of 4 sessions to individuals interested in stopping tobacco use	Yes	Yes	Yes	Up to $500 of NRT, BUP or VAR once/year	
		Provincial Social Support Programs (Assured Income for the Severely Handicapped, Income Support, Adult Health Benefit, Seniors Health Benefits, Palliative Care Health Benefits, Learner Income Support Benefits)	Enrolled in one of the programs	Yes	Yes	Yes	12 wks/yr of BUP and VAR (special authorization for 24 wks/yr for VAR in conjunction with counselling); up to $1000 of NRT once/lifetime (Seniors Health Benefits and Palliative Care Health Benefits are not covered for NRT)	239,029 (Adult Health Benefit only)
		Non-Group Coverage	A recipient of the coverage	No	Yes	Yes	12 wks/yr of BUP and VAR (special authorization for 24 wk/yr for VAR in conjunction with counselling); co-pay up to $25	79,253

PROVINCE/ TERRITORY	HEALTH PROFESSIONALS WHO CAN PRESCRIBE BUP AND VAR	PROGRAM NAME	ELIGIBILITY DETAILS	SMOKING CESSATION MEDICATIONS COVERED			COVERAGE DETAILS	ESTIMATED # OF PEOPLE ENROLLED IN PROGRAM EACH YEAR*
				NRT	BUP	VAR		
Saskatchewan	Pharmacists, physicians, nurse practitioners and dentists	Saskatchewan Cancer Agency - Smoking Cessation Services	Available to people with cancer (temporary external funding until March 2022)	Yes	No	No	Unlimited NRT (patch or lozenge)	
		Supplementary Health (Social Assistance) Plan	Covered by plan	No	Yes	Yes	12 wks/yr of BUP or VAR (Plan 1 receive for reduced cost, Plan 2 and 3 receive for free)	49,276
		Special Beneficiaries	Approved for coverage under the Paraplegic Program, Cystic Fibrosis Program, Chronic End-Stage Renal Disease Program, or a user of certain no-charge high-cost drugs; physician prescription required	No	Yes	Yes	12 wks/yr of BUP or VAR	11,703
		Palliative Care	Covered under program	No	Yes	Yes	12 wks/yr of BUP or VAR	4,159
		Special Support Program, Income Supplement, Family Health Benefits and Seniors' Drug Plan	Covered under one of the programs	No	Yes	Yes	12 wks/yr of BUP or VAR (at a reduced cost)	222,485
Manitoba	Pharmacists, physicians, nurse practitioners and dentists	CancerCare Manitoba Quit Smoking Program	Available to people with cancer, family members and staff	Yes	Yes	Yes	Unlimited NRT, BUP and VAR	
		Pharmacare	Covered by program	No	No	Yes	12 wks/yr (with deductible)	
		Manitoba Employment and Income Assistance Program	Recipient of program	No	No	Yes	12 wks/yr (deductible may be applicable)	
Ontario	Pharmacists, physicians, nurse practitioners, dentists and licensed health-care professionals practicing within their scope of practice	Ontario Health – Smoking Cessation in Regional Cancer Programs	People with cancer in some cancer centres (4 of 14 offer NRT, 1 of 14 offers BUP/VAR)	Yes	Yes	Yes	Varies from 2 wks to 6 wks to unlimited NRT, BUP and VAR	
		Ontario Drug Benefit Program	18+ and enrolled in program	No	Yes	Yes	12 wks/yr of BUP or VAR	4,000,000
		STOP on the Net	Ontario residents who are 18+, enrolled in the program and willing to make a quit attempt within two weeks of enrollment	Yes	No	No	Approximately 4 wks of NRT (patch and gum or lozenge)	

PROVINCE/ TERRITORY	HEALTH PROFESSIONALS WHO CAN PRESCRIBE BUP AND VAR	PROGRAM NAME	ELIGIBILITY DETAILS	SMOKING CESSATION MEDICATIONS COVERED			COVERAGE DETAILS	ESTIMATED # OF PEOPLE ENROLLED IN PROGRAM EACH YEAR*
				NRT	BUP	VAR		
Quebec	Pharmacists, physicians, nurse practitioners and respiratory therapists	Québec Public Prescription Drug Insurance Program	Seniors	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (plus an additional 12 wks of VAR)	
			Individuals receiving social assistance	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (plus an additional 12 wks of VAR)	396,146
			Individuals without private health insurance	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (plus an additional 12 wks of VAR)	1,855,808 (excludes individuals older than 64)
New Brunswick	Pharmacists, physicians and nurse practitioners	Horizon Health Network Smoking/ Vaping Cessation Program	People with cancer with prescription from oncologist or primary care provider (temporary external funding until March 2022)	Yes	Yes	Yes	Unlimited NRT and 12 wks of BUP or VAR (plus an additional 12 wks of BUP or VAR with prescription if needed)	
		Medavie Blue Cross Seniors' Prescription Program	Uninsured New Brunswickers who are 65+	Yes	Yes	Yes	84 nicotine patches and 960 pieces of gum or lozenges, or 12 wks/yr of BUP or VAR. Special authorization can cover an additional 84 nicotine patches (or 126 nicotine patches for patients accessing Ottawa Model for Smoking Cessation (OMSC) sites), or an additional 12 wks/yr of BUP or VAR; coverage is free for those with low income	17,117
		New Brunswick Prescription Drug Program (NBPDP)	18+ and qualify for program	Yes	Yes	Yes	84 nicotine patches and 960 pieces of gum or lozenges, or 12 wks/yr of BUP or VAR. Special authorization can cover an additional 84 nicotine patches (or 126 nicotine patches for patients accessing OMSC sites), or an additional 12 wks/yr of BUP or VAR	105,344
		New Brunswick Drug Program (NBDP)	18+ and qualify for program	Yes	Yes	Yes	84 nicotine patches and 960 pieces of gum or lozenges, or 12 wks/yr of BUP or VAR. Special authorization can cover an additional 84 nicotine patches (or 126 nicotine patches for patients accessing OMSC sites), or an additional 12 wks/yr of BUP or VAR	12,244

PROVINCE/ TERRITORY	HEALTH PROFESSIONALS WHO CAN PRESCRIBE BUP AND VAR	PROGRAM NAME	ELIGIBILITY DETAILS	SMOKING CESSATION MEDICATIONS COVERED			COVERAGE DETAILS	ESTIMATED # OF PEOPLE ENROLLED IN PROGRAM EACH YEAR*
				NRT	BUP	VAR		
Nova Scotia	Pharmacists, physicians and nurse practitioners	Nova Scotia Health – Tobacco Cessation in Cancer Care	People with cancer experiencing financial hardship can apply (temporary external funding until March 2022)	Yes	No	No	12 wks of NRT (patch or gum)	
		Mental Health and Addictions Stop Smoking Programs	Participant of smoking cessation program	Yes	No	Yes	NRT and VAR at a subsidized cost	600-1200
		Nova Scotia Pharmacare Programs	Registered under a Pharmacare program	No	Yes	Yes	12-24 wks/yr of BUP or VAR	225,823
Prince Edward Island	Pharmacists, physicians, nurse practitioners and dentists	PEI Cancer Treatment Centre	Available to people with cancer (temporary external funding until March 2022)	Yes	No	No	Unlimited NRT (patch and gum, lozenge, inhaler or spray) for duration of cancer treatment	
		PEI Smoking Cessation Program	Resident of PEI and enrolled in program	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR	
Newfoundland and Labrador	Pharmacists, physicians and nurse practitioners	Provincial Cancer Care Program – Eastern Health, Smoking Cessation Program	Available to people with cancer (provincial funding for pilot program)	Yes	Yes	Yes	Unlimited NRT, BUP and VAR	
		Prescription Drug Program's Access Plan	18+ and registered under plan	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (with co-pay of up to $75/year)	10,710
		Prescription Drug Program's Foundation Plan	18+ and registered under plan	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (with co-pay of up to $75/year)	38,405
		Prescription Drug Program's 65Plus Plan	Registered under plan	Yes	Yes	Yes	12 wks/yr of NRT, BUP or VAR (with co-pay of up to $75/year)	45,704

*Refers to total enrollment in each program and represents latest data provided by each jurisdiction, where available

APPENDIX C: ESTIMATED COSTS OF SMOKING CESSATION TREATMENTS

SUPPLEMENTARY TABLE 3: ESTIMATED COSTS OF SMOKING CESSATION TREATMENTS IN CANADA, 2021 DOLLARS

TREATMENT	POLICY AND SOURCE	AVERAGE COST ESTIMATE FOR 12 WEEKS	NUMBER NEEDED TO TREAT (NNT)[a]
Bupropion (Zyban and generic versions)	Days 1-3: One 150 mg tablet once a day in the morning Day 4 to the end of treatment: One 150 mg tablet twice a day, once in the morning and once in the early evening (at least 8 hours between doses) The recommended length of bupropion therapy is 12 weeks.[11]	Brand: **$173.25**[b] Generic versions: **$41.25**[c]	11 (abstinence at 6 months)[36]
Varenicline (Champix and generic versions)	Days 1-3: One 0.5 mg tablet once a day Days 4-7: One 0.5 mg tablet twice a day, once in the morning and once at night Weeks 2-12: One 1 mg tablet twice a day The recommended length of varenicline therapy is 12 weeks.[11]	Champix: **$305.25**[d] Generic versions: **$155.10**[e]	8 (abstinence at 6 months)[36]
Nicotine replacement therapy (NRT): Gum (Nicorette, Thrive, Nic-Hit, Actavis, Compliment, Exact, Life Brand, Personnelle)	Weeks 1-6: 8-16 pieces per day Weeks 7-9: 4-8 pieces per day Weeks 10-12: 2-4 pieces per day Beyond 12 weeks: 1-2 pieces per day if needed to manage cravings[11]	Average dose: **$166.32**[f] Weeks 1-6: 12 pieces per day Weeks 7-9: 6 pieces per day Weeks 10-12: 3 pieces per day	15[37]
NRT: Lozenge (Nicorette, Thrive, Nic-Hit)	Weeks 1-6: 8-16 lozenges per day Weeks 7-9: 4-8 lozenges per day Weeks 10-12: 2-4 lozenges per day Beyond 12 weeks: 1-2 lozenges per day if needed to manage cravings.[11]	Average dose: **$180.18**[g] Weeks 1-6: 12 lozenges per day Weeks 7-9: 6 lozenges per day Weeks 10-12: 3 lozenges per day	15[37]

TREATMENT	POLICY AND SOURCE	AVERAGE COST ESTIMATE FOR 12 WEEKS	NUMBER NEEDED TO TREAT (NNT)[a]
NRT: Patch (Habitrol, Nicoderm, Transdermal Nicotine, Actavis, Compliments, Equate, Exact, Life Brand, Personnelle, Pharmasave)	21 mg patch per day, if patient smokes > 19 cigarettes per day 14 mg patch per day, if patient smokes 10-19 cigarettes per day 7 mg patch per day, if patient smokes < 10 cigarettes per day Patch can be used for 10-12 weeks or longer if necessary.[11]	Patch for 12 weeks: **$227.64**[h]	15[37]
NRT: Spray (Nicorette Quickmist)	Weeks 1-6: 32-64 sprays per day Weeks 7-9: 16-32 sprays per day Weeks 10-12: 2-4 sprays per day Use beyond 12 weeks if needed to manage cravings.[11]	Average dose: **$542.43**[i] Weeks 1-6: 48 sprays per day Weeks 7-9: 24 sprays per day Weeks 10-12: 3 sprays per day	15[38]
NRT: Inhaler (Nicorette Inhaler)	6-12 cartridges per day for first 6 weeks, gradually reduce number of cartridges per day in weeks 6-12. Beyond 12 weeks, use 1-2 cartridges per day if needed to manage cravings.[11]	Average dose: **$430.92**[j] Weeks 1-6: 9 cartridges per day Weeks 7-9: 6 cartridges per day Weeks 10-12: 3 cartridges per day	15[38]
Brief Counselling	Ask, Advise, Assist approach.[39,40]	Total: **$23.84**[k] Ask (30 seconds): $0.37 Advise (2 minutes): $1.47 Assist (30 minutes): $22.00	34-40[41,42]
Intensive Counselling	Step 1: Ask, Advise, Assist approach.[39,40] Step 2: First visit to smoking cessation program for counselling with health-care professional Step 3: One visit per week for counselling for 11 weeks Step 4: 26-week follow-up phone call[11]	Total: **$317.17**[k] Step 1: $23.84 Step 2 (1 hour): $44.00 Step 3 (330 minutes): $242.00 Step 4 (10-minute phone call): $7.33	14-27[43,44]

[a] Number needed to treat (NNT) provides a measure of the effectiveness of a treatment and can be defined as the number of patients that need to be treated for the treatment to work on one individual.

[b] Cost per pill of brand bupropion ($1.05) based on the average cost of Zyban from the following drug formularies: British Columbia, Alberta, Ontario, Quebec, Nova Scotia, Yukon, Nunavut, Northwest Territories. Nunavut and Northwest Territories costs based on Alberta Blue Shield.

[c] Cost per pill of generic bupropion ($0.25) based on the average cost of generic bupropion 150 mg sustained release from the following drug formularies: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador, Yukon, Nunavut, Northwest Territories. Nunavut and Northwest Territories costs based on Alberta Blue Shield. Generic would not be covered for cessation purposes in some provinces such as Manitoba.

[d] Cost per pill of brand varenicline ($1.85) based on the average cost of CHAMPIX (0.5 mg or 1 mg) from the following drug formularies: Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Newfoundland and Labrador, Yukon, Nunavut, Northwest Territories. Nunavut and Northwest Territories costs based on Alberta Blue Shield.

[e] Cost per pill of generic varenicline ($0.94) based on the average cost of generic varenicline (0.5 mg or 1 mg) from the following drug formularies: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador, Nunavut, Northwest Territories. Nunavut and Northwest Territories costs based on Alberta Blue Shield.

[f] Cost per piece of gum ($0.24) based on the average cost of reimbursed products (2 mg and 4 mg) from the following formularies: Alberta, Quebec, New Brunswick. New Brunswick had several store brands on their formulary. The store brand cost (same cost for all store brands) was only counted once when estimating the average cost.

[g] Cost per lozenge ($0.26) based on the average cost of reimbursed products (2 mg and 4 mg) from the following formularies: Alberta, Quebec, New Brunswick. New Brunswick had several store brands on their formulary. The store brand cost (same cost for all store brands) was only counted once when estimating the average cost.

[h] Cost per patch ($2.71) based on the average cost of reimbursed products (7 mg, 14 mg and 21 mg) from the following formularies: Alberta, Quebec, New Brunswick. New Brunswick had several store brands on the formulary. The store brand cost (same cost for all store brands was only counted once when estimating the average cost.

[i] Cost per spray ($0.21) based on the cost of reimbursed products from the Alberta formulary.

[j] Cost per inhale ($0.76) based on cost of reimbursed products from the Alberta formulary.

[k] Average of nurse and pharmacist wages.[45,46]

APPENDIX D:
ESTIMATED COST OF TREATMENT FOR TOP CANCERS

SUPPLEMENTARY TABLE 4: ESTIMATED COSTS OF TREATMENT FOR TOP CANCERS, BY TREATMENT PHASE, 2021 DOLLARS[a]

MALES				
TUMOUR SITE	ESTIMATED AVERAGE NET COST ATTRIBUTABLE TO CANCER, BY TREATMENT PHASE[b]			
	PRE-DIAGNOSIS (3 MONTHS)[c]	INITIAL (6 MONTHS)[c]	CONTINUING (ANNUAL)[c]	TERMINAL (12 MONTHS)[c]
LUNG	$2,184	$26,695	$6,591	$46,746
COLORECTAL	$328	$29,946	$6,488	$38,607
PROSTATE	$759	$9,999	$5,977	$20,717
HEAD AND NECK	$709	$23,470	$6,135	$44,489
FEMALES				
TUMOUR SITE	ESTIMATED AVERAGE NET COST ATTRIBUTABLE TO CANCER, BY TREATMENT PHASE[b]			
	PRE-DIAGNOSIS (3 MONTHS)[c]	INITIAL (6 MONTHS)[c]	CONTINUING (ANNUAL)[c]	TERMINAL (12 MONTHS)[c]
LUNG	$2,439	$25,711	$7,447	$42,486
BREAST	$1,449	$14,556	$8,030	$22,150
COLORECTAL	$646	$29,501	$6,372	$37,073
HEAD AND NECK	$1,450	$24,113	$8,397	$43,340

[a] Based on Ontario costs (adapted from de Oliveira et al.[47] and updated to 2021 dollars).

[b] Estimated average net costs for each phase include: costs of chemotherapy and radiation therapy; all physician services (primary care physicians, specialists and other physicians) and diagnostic tests and laboratory services; outpatient prescription drugs for patients aged 65+ and/or on social assistance (only); inpatient hospitalizations (which includes any drugs provided during the hospital stay); ambulatory care (which includes same-day surgeries/procedures and emergency department visits); other institution-based care (which includes complex continuing care and long-term care); and home care. These costs do not cover community service agency costs, costs covered under private health care plans (including outpatient drug costs for those aged <65 years) or other health care costs paid out-of-pocket.

[c] For the average costs of cancer treatment, all patients had a pre-diagnosis phase, which is defined as the 3 months before diagnosis. This phase typically includes diagnostic testing to establish the cancer diagnosis. Following the pre-diagnosis phase, the time between diagnosis and death was divided into three clinically relevant phases of care:

1. Initial: includes the primary course of therapy and any adjuvant therapy (defined as 6 months from date of diagnosis)
2. Continuing: encompasses ongoing surveillance and active follow-up treatment for cancer recurrence and/or new primary cancers (expressed as an annual estimate)
3. Terminal: captures the intensive services, often palliative, provided in the year before death

References

1. Canadian Strategy for Cancer Control 2019-2029. Canadian Partnership Against Cancer, 2019.

2. Poirier AE, Ruan Y, Grevers X, Walter SD, Villeneuve PJ, Friedenreich CM, et al. Estimates of the current and future burden of cancer attributable to active and passive tobacco smoking in Canada. Prev Med 2019; 122: 9-19.

3. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, 2014.

4. Warren G. Cancer Center Cessation Initiative (C3I) All Grantee Webinar: National Cancer Institute, Division of Cancer Control & Population Sciences, 2021.

5. Smoking Cessation. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, 2020.

6. A clinical practice guideline for treating tobacco use and dependence: 2008 update. A U.S. public health service report. *Am J Prev Med* 2008; 35(2): 158-76.

7. NCCN Guidelines, Smoking Cessation. http://www.nccn.org.

8. Kock L, Brown J, Hiscock R, Tattan-Birch H, Smith C, Shahab L. Individual-level behavioural smoking cessation interventions tailored for disadvantaged socioeconomic position: a systematic review and meta-regression. *Lancet Public Health* 2019; 4(12): 628-44.

9. Warren GW, Simmons VN. Tobacco use and the cancer patient. In: DeVita VT, Rosenberg SA, Lawrence TS, eds. Cancer: Principles & Practice of Oncology. 11 ed; 2018.

10. Nahhas GJ, Cummings KM, Talbot V, Carpenter MJ, Toll BA, Warren GW. Who opted out of an opt-out smoking cessation programme for hospitalised patients? *Journal of Smoking Cessation* 2017; 12(4): 199-204.

11. Reid RD, Pritchard G, Walker K, Aitken D, Mullen KA, Pipe AL. Managing smoking cessation. *CMAJ* 2016; 188(17-18): 484-92.

12. Nayan S, Gupta MK, Strychowsky JE, Sommer DD. Smoking cessation interventions and cessation rates in the oncology population: an updated systematic review and meta-analysis. *Otolaryngol Head Neck Surg* 2013; 149(2): 200-11.

13. Notier AE, Hager P, Brown KS, Petersen L, Bedard L, Warren GW. Using a quitline to deliver opt-out smoking cessation for cancer patients. *JCO Oncol Pract* 2020; 16(6): 549-56.

14. Warren GW, Marshall JR, Cummings KM, Zevon MA, Reed R, Hysert P, et al. Automated tobacco assessment and cessation support for cancer patients. *Cancer* 2014; 120(4): 562-9.

15. Dobson Amato KA, Hyland A, Reed R, Mahoney MC, Marshall J, Giovino G, et al. Tobacco cessation may improve lung cancer patient survival. *J Thorac Oncol* 2015; 10(7): 1014-9.

16. Klemp I, Steffenssen M, Bakholdt V, Thygesen T, Sørensen JA. Counseling is effective for smoking cessation in head and neck cancer patients—a systematic review and meta-analysis. *J Oral Maxillofac Surg* 2016; 74(8): 1687-94.

17. Park ER, Perez GK, Regan S, Muzikansky A, Levy DE, Temel JS, et al. Effect of sustained smoking cessation counseling and provision of medication vs shorter-term counseling and medication advice on smoking abstinence in patients recently diagnosed with cancer: A randomized clinical trial. *JAMA* 2020; 324(14): 1406-18.

18. Himelfarb-Blyth S, Vanderwater C, Hartwick J. Implementing a 3As and 'opt-out' tobacco cessation framework in an outpatient oncology setting. *Curr Oncol* 2021; 28(2): 1197-203.

19. Richter KP, Ellerbeck EF. It's time to change the default for tobacco treatment. *Addiction* 2015; 110(3): 381-6.

20. Diaz DB, Brandon TH, Sutton SK, Meltzer LR, Hoehn HJ, Meade CD, et al. Smoking relapse-prevention intervention for cancer patients: Study design and baseline data from the surviving SmokeFree randomized controlled trial. *Contemp Clin Trials* 2016; 50: 84-9.

21. Gritz ER, Fingeret MC, Vidrine DJ, Lazev AB, Mehta NV, Reece GP. Successes and failures of the teachable moment: smoking cessation in cancer patients. *Cancer* 2006; 106(1): 17-27.

22. McKennitt D, Wardman D. Addressing Commercial Tobacco Use among Indigenous Peoples. 2017: 517.

23. Honouring the truth, reconciling for the future: Summary of the final report of the Truth and Reconciliation Commission of Canada Winnipeg: Truth and Reconciliation Commission of Canada. 2015 https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Executive_Summary_English_Web.pdf.

24. Canadian Community Health Survey. Statistics Canada; 2017-18.

25. Loring B. Tobacco and inequities. Guidance for addressing inequities in tobacco-related harm. World Health Organization, 2014.

26. Nicotine Replacement Therapy: The Case & Roadmap for Comprehensive Private Coverage. PDCI Market Access, 2019.

27. Goffin JR, Flanagan WM, Miller AB, Fitzgerald NR, Memon S, Wolfson MC, et al. Cost-effectiveness of lung cancer screening in Canada. *JAMA Oncology* 2015; 1(6): 807-13.

28. Djalalov S, Masucci L, Isaranuwatchai W, Evans W, Peter A, Truscott R, et al. Economic evaluation of smoking cessation in Ontario's regional cancer programs. *Cancer Med* 2018; 7(9): 4765-72.

29. Iragorri N, Essue B, Timmings C, Keen D, Bryant H, Warren GW. The cost of failed first-line cancer treatment related to continued smoking in Canada. *Curr Oncol* 2020; 27(6): 307-12.

30. Isaranuwatchai W, de Oliveira C, Mittmann N, Evans WKB, Peter A, Truscott R, et al. Impact of smoking on health system costs among cancer patients in a retrospective cohort study in Ontario, Canada. *BMJ Open* 2019; 9(6): 26-22.

31. Cartmell KB, Dismuke CE, Dooley M, Mueller M, Nahhas GJ, Warren GW, et al. Effect of an evidence-based inpatient tobacco dependence treatment service on 1-Year postdischarge health care costs. *Med Care* 2018; 56(10): 883-9.

32. Cartmell KB, Dooley M, Mueller M, Nahhas GJ, Dismuke CE, Warren GW, et al. Effect of an evidence-based inpatient tobacco dependence treatment service on 30-, 90-, and 180-day hospital readmission rates. *Med Care* 2018; 56(4): 358-63.

33. Warren GW, Cartmell KB, Garret-Meyer E, Salloum RG, Cummings KM. Attributable failure of first-line cancer treatment and incremental costs associated with smoking by patients with cancer. *JAMA Network Open* 2019; 2(4): e191703-e.

34. Canadian Life and Health Insurance Facts, 2021 Edition. Canadian Life and Health Insurance Association, 2021.

35. Cost of Nicotine Replacement Therapy. https://www.helpthemquit.ca/treatment/costs-coverage.

36. Smoking cessation - pharmacological therapy. 2009. https://bpac.org.nz/BPJ/2009/April/quitting.aspx.

37. Green G. Nicotine replacement therapy for smoking cessation. 2013 https://www.thennt.com/nnt/nicotine-replacement-therapy-for-smoking-cessation.

38. NICORETTE® QuickMist® Nicotine Spray. https://www.nicorette.ca/products/quickmist.

39. CAN-ADAPTT. Canadian smoking cessation clinical practice guidelines. Toronto, Canada: Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment, Centre for Addiction and Mental Health, 2011.

40. Best Practices for Clinical Smoking Cessation in Canada: The Ottawa Model for Smoking Cessation 2011-2012 Highlight Document. University of Ottawa Heart Institute, 2012.

41. Physician advice alone has a small effect on smoking cessation. https://primarycare.cochrane.org/.

42. Shah ZH, Rao S, Mayo HG. What are the most effective ways you can help patients stop smoking? *J Fam Practice* 2008; 57(7): 478-479.

43. PEARLS practical evidence about real life situations: Motivational interviewing may assist smokers to quit. https://primarycare.cochrane.org/.

44. Moore RA, Gavaghan DJ, Edwards JE, Wiffen P, McQuay HJ. Pooling data for number needed to treat: No problems for apples. *BMC Med Res Methodol* 2002; 2(1): 2.

45. Employee wages by occupation, monthly, unadjusted for seasonality. Statistics Canada; 2021.

46. Pharmacist average salary in Canada 2021. https://ca.talent.com/salary?job=pharmacist.

47. de Oliveira C, Pataky R, Bremner KE, Rangrej J, Chan KK, Cheung WY, et al. Phase-specific and lifetime costs of cancer care in Ontario, Canada. *BMC Cancer* 2016; 16(1): 809.

145 King Street West, Suite 900
Toronto, Ontario, Canada M5H 1J8
Tel: 416.915.9222
Toll-free: 1.877.360.1665

For more information, visit:
partnershipagainstcancer.ca/topics/access-smoking-cessation-medications/

Canadian Partnership Against Cancer. Helping people with cancer quit smoking.
A business case to improve access to smoking cessation medications in Canada, 2021.
Available at: partnershipagainstcancer.ca/topics/access-smoking-cessation-medications

Production of this resource has been made possible through financial support from Health Canada.
The views expressed herein do not necessarily represent the views Health Canada.