CANADIAN **PARTNERSHIP** AGAINST **CANCER**

PARTENARIAT CANADIEN CONTRE LE **CANCER**

Implementation Planning Guide for Programmatic Lung Cancer Screening

READINESS ASSESSMENT TOOLKIT

Version 1.0 – March 2020

Accelerating Lung Cancer Screening

In Canada, lung cancer is the leading cause of cancer-related deaths and is the most commonly diagnosed cancer. While no organized lung cancer screening program currently exists in Canada, a number of lung cancer screening program development activities have been undertaken by jurisdictions. These have included the development of business cases, convening advisory committees, and conducting research or pilot studies.

The Canadian Partnership Against Cancer (the Partnership) developed a readiness assessment toolkit as a companion to the standard lung cancer screening business case to advance development and implementation of programmatic lung cancer screening. Efforts to accelerate lung cancer screening program implementation is an identified priority and action of the 2019-2029 Canadian Strategy for Cancer Control (the Strategy) refreshed by the Partnership in its role as steward of the Strategy.

A Priority and Action of the Strategy: Strengthen existing screening efforts and implement lung cancer screening programs across Canada

The Canadian Task Force on Preventive Health Care guidelines recommend screening with low-dose computed tomography (LDCT) for those who are at high-risk of lung cancer [1].

As Canada is in the early stages of establishing lung cancer screening programs, increasing jurisdictional capacity to develop and provide equitable access to lung cancer screening services can ensure those disproportionately impacted by smoking benefit from lung cancer screening.

Eliminating barriers to high uptake of screening, particularly among hard-to-reach individuals and communities, can ensure lung cancer screening is accessible and responsive to the priorities and preferences of underserved populations impacted by high smoking rates and at high risk of lung cancer. Prioritizing opportunities to work with individuals at high risk of lung cancer such as people with low income, those residing in rural, remote and isolated settings, and engaging with First Nations, Inuit and Métis to co-develop approaches to deliver culturally safe lung cancer screening services will be critical to maximize the benefits of lung cancer screening programs.

Intended users

The toolkit will be used by jurisdictional decision makers/leaders at:

- Cancer agencies and programs
- Provincial/territorial ministry department/branch responsible for delivery of cancer care and control, where no provincial/territorial cancer agency/program exists.

What does the toolkit assess?

The readiness assessment toolkit comprises of a series of questions regarding initial considerations to evaluate jurisdictional context and capacity for development and implementation of programmatic lung cancer screening (pre-implementation).

An evidence informed assessment of current context before introducing or scaling-up a cancer screening program can support detailed planning, coordination, and monitoring and evaluation of programmatic cancer screening efforts. This can also support the identification of key partners who are important to engage with as you are planning for the development and implementation of lung cancer screening programs in your jurisdiction (Refer to Appendix A & B for partner engagement planning tool and partner list).

Understanding jurisdictional context is critical to successful program development and implementation

Identification and assessment of system, policy and program level enablers and barriers can support jurisdictional readiness and capacity to advance programmatic lung cancer screening by ensuring:

- Key factors that will impact program success are identified and addressed; and
- Areas identified for action are prioritized when preparing for program development and implementation (and therefore key partners that need to be engaged)

The readiness assessment toolkit will enable programs to build on identified strengths and address gaps to help plan next steps to enhance readiness and capacity for development and implementation of programmatic lung cancer screening.
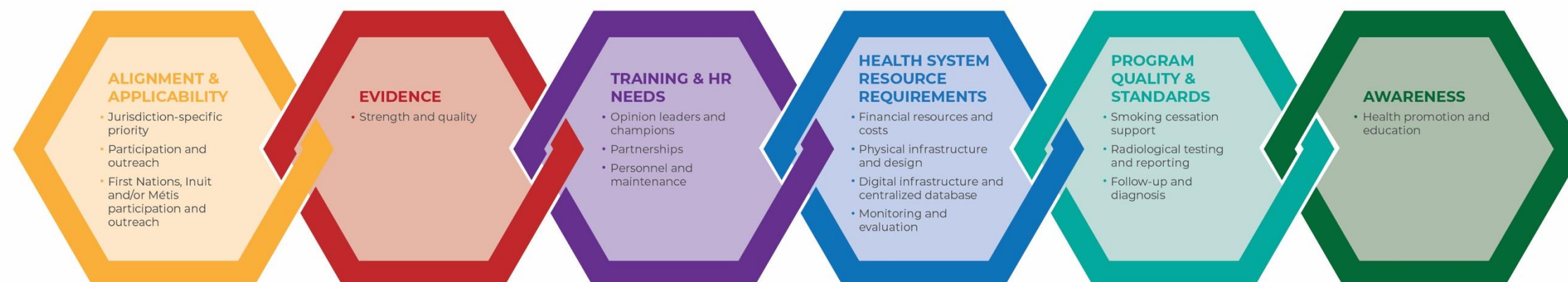
How was the toolkit developed?

The toolkit was adapted from other established readiness assessment frameworks to support achievement of sustainable and quality implementation [2-6].

The readiness assessment domains incorporate key elements of a screening program process from invitation to treatment [7]:

- Identifying and inviting eligible participants for screening
- Administering the screening test
- Following-up with screening results and referral for further assessment among those with an abnormal screen
- Ensuring timely pathologic diagnosis, staging and access to effective treatment

Domains of Readiness Assessment

ALIGNMENT & APPLICABILITY
- Jurisdiction-specific priority
- Participation and outreach
- First Nations, Inuit and/or Métis participation and outreach

EVIDENCE
- Strength and quality

TRAINING & HR NEEDS
- Opinion leaders and champions
- Partnerships
- Personnel and maintenance

HEALTH SYSTEM RESOURCE REQUIREMENTS
- Financial resources and costs
- Physical infrastructure and design
- Digital infrastructure and centralized database
- Monitoring and evaluation

PROGRAM QUALITY & STANDARDS
- Smoking cessation support
- Radiological testing and reporting
- Follow-up and diagnosis

AWARENESS
- Health promotion and education

Readiness Assessment Toolkit

Consider using the partner engagement planning tool and list (Appendix A& B) to help answer questions under the domain's alignment and applicability, and training and human resource needs.

Note: Categories and questions identified in the table have been adapted and modified from WHO readiness assessment tool, Consolidated Framework for Implementation Research, the Quality Implementation Framework and the Assessing Jurisdictional Readiness for Scale Up and Scale Out of BETTER tool (see reference list).

Domain
ALIGNMENT & APPLICABILITY

Jurisdiction-specific Priority	Yes	No	Unsure	Notes
1. Are early plans already in place to implement lung cancer screening in your jurisdiction?				
2. Does implementation of organized lung cancer screening align with jurisdictional/organizational mission, priorities, values and strategy?				
3. Does lung cancer screening align with the identified needs of eligible high-risk populations in your jurisdiction?				
4. Are there existing practices and policies available to support implementation of lung cancer screening programs?				

	Yes	No	Unsure	Notes
5. Is lung cancer screening viewed as a priority in your jurisdiction compared to other initiatives?				
6. Have key partners been provided with relevant information and resources to support alignment and decision making for implementation of lung cancer screening programs?				

Participation and outreach	Yes	No	Unsure	Notes
1. Have the priorities of high-risk individuals eligible to participate in lung cancer screening been identified?				
2. Is there alignment with the social and cultural preferences of high-risk individuals eligible to participate in screening provided in a regional hospital environment or mobile unit?				
3. Is there an opportunity (or plans) to engage eligible high-risk individuals in your jurisdiction so they can provide direct input into roll-out/implementation plans?				
4. Are there approaches or systems available to reach high-risk individuals to ensure equitable access to lung cancer screening programs?				
5. Are there existing policies/programs in place to support access to screening programs?				

	Yes	No	Unsure	Notes
6. Are there adequate resources and skills in the cancer system to identify community priorities and cultural preferences of eligible high-risk individuals to support participation in lung cancer screening?				
7. Are there tools and models with a well-defined risk criterion in place to identify eligibility of high-risk individuals to participate in lung cancer screening programs?				
8. Have potential concerns, questions or resistance to implementing lung cancer screening with eligible participants been addressed?				

First Nations, Inuit and/or Métis participation and outreach (Refer to Appendix B for engagement considerations)	Yes	No	Unsure	Notes
1. Is lung cancer screening a priority for First Nations, Inuit and/or Métis governments, organizations and communities in your jurisdiction?				
2. Do relationships exist with First Nations, Inuit and Métis communities and governments that would support the uptake of lung cancer screening in your jurisdiction?				
3. Have you engaged with First Nations, Inuit and/or Métis leaders and key decisions makers about lung cancer screening?				

4. Are there existing policies/programs in place to support First Nations, Inuit and/or Métis access to screening programs (e.g., medical travel, existing culturally appropriate smoking cessation programs)?				
5. Have First Nations, Inuit and/or Métis approaches or strategies been identified or made available to recruit and reach high-risk individuals for lung cancer screening programs?				
6. Have approaches or strategies been identified to deliver culturally safe lung cancer screening programs to First Nations, Inuit and/or Métis?				
7. Is there an opportunity (or plans) to engage First Nations, Inuit and/or Métis in your jurisdiction to inform culturally safe roll-out/implementation plans for lung cancer screening?				
8. Have potential concerns, questions or resistance to implementing lung cancer screening with First Nations, Inuit and/or Métis participants been addressed?				

Domain

EVIDENCE

Strength & Quality	Yes	No	Unsure	Notes
1. Has evidence been provided to get formal buy-in from leadership with decision-making power in your organization/community/region?				
2. Does population-level data demonstrate a need for lung cancer screening in your jurisdiction?				
3. Is First Nations, Inuit and/or Métis specific data available to demonstrate a need for lung cancer screening in your jurisdiction?				
4. Has the most recent evidence documenting the benefits of lung cancer screening been provided to key decision-makers to inform program planning and development (i.e., reduction in stage of disease at diagnosis, reduction in mortality when delivered effectively and linked to treatment)?				
5. Has the most recent evidence documenting the harms of lung cancer screening been provided to key decision-makers to inform program planning and development (i.e., additional tests can potentially lead to utilization of resources, complications, and generate psychological distress among patients)?				

Domain

TRAINING & HUMAN RESOURCE NEEDS

Opinion Leaders & Champions	Yes	No	Unsure	Notes
1. Are there leaders that are champions of lung cancer screening in your jurisdiction?				
2. Have key influential individuals been engaged to obtain formal buy-in with implementation of lung cancer screening?				
3. Is it clear who will lead implementation of lung cancer screening in your jurisdiction?				
4. Have key partners been identified to support outreach and participation of eligible high-risk individuals?				
5. Is there agreement among key partners to support development and implementation of programmatic lung cancer screening?				
6. Have potential concerns, questions or resistance to implementing lung cancer screening with key leaders been addressed?				

Partnerships	Yes	No	Unsure	Notes
1. Are there groups or organizations that currently support lung cancer screening in your province/territory?				
2. Are there established relationships in place between the organizations and partners required to support roll-out of lung cancer screening (e.g. smoking cessation programs, diagnostic units, regional hospitals)?				
3. Have potential concerns, questions or resistance to implementing lung cancer screening with other key partners been addressed (e.g., radiologists, primary care practitioners, health system administrators with responsibility for delivering screening programs)?				

Personnel & Maintenance	Yes	No	Unsure	Notes
1. Have the responsibilities of personnel required to support lung cancer screening program roll-out (referral, enrollment, scanning, interpretation and follow-up) been identified (i.e., radiologist, technologists, support staff, family physicians, respirologists, thoracic surgeons)?				
2. Is there an opportunity to leverage existing staff and/or hire new staff to support roll-out of lung cancer screening in your jurisdiction?				

3. Have the responsibilities and expertise of personnel required to manage decisions of complex screened cases been identified (i.e., multidisciplinary discussions involving radiology, pathology, nuclear medicine, respirology, and oncology)?				
4. Is there formal buy-in from personnel required to deliver lung cancer screening (e.g., health care professionals – see Appendix B for a list of possible partners)?				
5. Are additional radiologists, respirologists, thoracic surgeons, pathologist and/or biomedical laboratory scientists needed and available to perform tests and interpret results for lung cancer screening and follow-up?				
6. Have training needs and resources required to support and enable staff to successfully implement lung cancer screening been identified?				
7. Have potential concerns, questions or resistance to implementing lung cancer screening with front-line staff been addressed?				

Domain

HEALTH SYSTEM RESOURCE REQUIREMENTS

Financial Resources & Costs	Yes	No	Unsure	Notes
1. Is there a clear allocation of funding or available funds for lung cancer screening in your jurisdiction?				
2. Do you have information on the costs of implementing a lung cancer screening program, budget impact and cost-effectiveness in your jurisdiction?				
3. Do you expect to have sufficient financial resources to implement the program?				
4. Are the available resources and systems at each level (province, region or clinic) supportive for program implementation?				

Physical Infrastructure and Design	Yes	No	Unsure	Notes
1. Is there infrastructure to accommodate and sustain implementation of lung cancer screening: • Changes in scope of practice				
• Policies				

• Information systems				
• LDCT capacity				
• Rapid diagnostic assessment unit				
• Smoking cessation program				
• Radiologist capacity				
2. Is there adequate LDCT capacity to accommodate the projected number of scans?				
3. Is there sufficient capacity within your jurisdiction to appropriately plan, implement and evaluate the program?				
4. Is there adequate capacity in the diagnostic system for those who screen abnormal?				

Digital Infrastructure and Centralized Database	Yes	No	Unsure	Notes
1. Are there systems in place to record and govern population-level data to demonstrate a need for lung cancer screening in your jurisdiction?				
2. Are systems already in place in the province/territory that could be leveraged to identify eligible individuals to participate in lung screening?				
3. Is there a digital infrastructure in place in your jurisdiction to collect and report on patient data and outcomes of lung cancer screening?				
4. Are there resources in place to invite and recall eligible high-risk individuals?				
5. Have resources been established for follow-up diagnostic assessment among those with an abnormal screen with recall mechanism and systematic evaluation?				
6. Are there adequate resources and programs in your province/territory to ensure follow-up care of people with an abnormal screen?				

Monitoring & Evaluation	Yes	No	Unsure	Notes
1. Is there a plan to evaluate the process of implementing lung cancer screening (e.g., strengths, challenges and opportunities for improvement)?				
2. Have relevant indicators, outcomes, and performance measures been identified that will support/enable lung cancer screening program roll-out?				
3. Are there systems/infrastructure in place that will enable monitoring and measurement of program performance?				
4. Have discussions taken place to plan an evaluation of the program (e.g. process-based and outcome-based designs)?				
5. Are there human resources available to monitor performance, implement and manage an evaluation?				
6. Is there a plan to share process data and feedback with those involved in implementing lung cancer screening to support opportunities for improvement (e.g., partners, administrators, front-line practitioners)?				

Domain

PROGRAM QUALITY & STANDARDS

Smoking Cessation Support	Yes	No	Unsure	Notes
1. Do smoking cessation and relapse prevention programs exist in your jurisdiction that are accessible to screening participants and the general population?				
2. Is there an inventory of smoking cessation and relapse prevention programs available in your jurisdiction?				
3. Is there buy-in to integrate smoking cessation support within a lung cancer screening program?				
4. Is there capacity to collect data and report on assessment and referral to smoking cessation support within lung cancer screening programs?				
5. Where smoking cessation supports and relapse prevention programs do not exist, have evidence-based approaches been identified to fill these gaps prior to or in conjunction with initiating a lung cancer screening program?				
6. Have resources required to integrate smoking cessation support within a lung cancer screening program been identified?				
7. Have staffing resources required to support screening and referral to smoking cessation programs been identified (i.e., outside or within the lung cancer screening program)?				

	Yes	No	Unsure	Notes
8. Have training needs and resources required to support assessment and referral to smoking cessation programs been identified?				
9. Do culturally competent smoking cessation support programs specific to First Nations, Inuit and/or Métis exist in your jurisdiction?				

Radiological testing and reporting	Yes	No	Unsure	Notes
1. Does your jurisdiction have the capacity to develop guidelines (e.g., eligibility, recommended screening intervals) pertaining to the use of the LDCT scan?				
2. Are there guidelines, frameworks or protocols in place to support management of screen detected lung nodules and incidental findings?				
3. Are there technical protocols established to promote adherence to standards in personnel training and scanner operation to ensure a low dose protocol is used to minimize radiation exposure?				
4. Are there guidelines for measurement techniques and standardized reporting of low dose computed tomography?				
5. Are guidelines available for technical parameters and dosage levels of low dose computed tomography?				

	Yes	No	Unsure	Notes
6. Have formal screening LDCT reports and tools been established to support health care providers with clear communication and accurate interpretation of results and next steps (ie., return to regular screen, early repeat LDCT or referral to specialized lung nodule clinic for diagnostic work up)?				
7. Have lay-language screening LDCT reports been developed for screening participants providing clearly defined results and next steps (i.e., referral to specialist, clinical signs and symptoms of lung cancer, smoking cessation support)?				

Follow-up and diagnosis	Yes	No	Unsure	Notes
1. Has a process for synoptic reporting for lung biopsy specimens been established?				
2. Has a process been established to support patient navigation through the screening process?				
3. Has a pathway been established to ensure appropriate follow-up for normal screen test results?				
4. Has a pathway been established to ensure appropriate follow-up for abnormal screen test results and access to diagnostic tests and treatment?				

5. Has a process been established to maintain communication to referring or family physicians (i.e., providing summary results in plain language, can be part of synoptic reporting)?				
6. Have key recommendations of approaches been identified for tissue submission and handling?				
7. Are there pathways and/or resources to ensure access to appropriate diagnostic investigations and follow-up?				
8. Has a process and/or pathway been established to support patient navigation and appropriate follow-up from diagnosis to treatment?				
9. Are there resources to ensure availability and accessibility of oncologists, radiation therapy, and chemotherapy if appropriate?				

Domain

AWARENESS

Health Promotion & Education	Yes	No	Unsure	Notes
1. Does your jurisdiction have the capacity to develop appropriate patient education and awareness resources and programs to support roll-out?				
2. Has your jurisdiction started to think through a communication or education strategy for getting the word out about the program?				
3. Have you considered developing education and awareness resources of signs and symptoms of lung cancer?				
4. Have you considered developing tools and resources to support patient education and navigation through the screening process?				
5. Have you considered awareness and promotion strategies to support participation in lung cancer screening programs?				
6. Have you considered developing programs and resources to support education and awareness about lung cancer screening among primary care providers?				
7. Are there programs and resources available to support awareness and understandings on approaches to deliver culturally safe lung cancer screening services?				

References

1. Canadian Task Force on Preventive Health Care. (2016). Recommendations on screening for lung cancer. Cmaj, 188(6), 425-432.

2. Centre for Effective Practice, Canadian Partnership Against Cancer, Aubrey-Bassler K, & Campbell C for the Integrated Motivational Program/Policy Action Consultation Team (IMPACT). (2019). Assessing Jurisdictional Readiness for Scale Up and Scale Out of BETTER.

3. Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implementation science, 4(1), 50.

4. Meyers, D. C., Durlak, J. A., & Wandersman, A. (2012). The quality implementation framework: a synthesis of critical steps in the implementation process. American journal of community psychology, 50(3-4), 462-480.

5. Wandersman Center. (2018). Using Readiness. Readiness Building System. Retrieved from https://www.wandersmancenter.org/using-readiness.html

6. World Health Organization. (n.d.). Readiness Assessment Tool. Retrieved from https://www.who.int/reproductivehealth/readiness-assessment-hexagon-tool.pdf

7. World Health Organization. (2017). Guide to Cancer Early Diagnosis. Geneva, Switzerland. World Health Organization

Appendix A: Partner Engagement Planning Tool

Instructions for using this template to identify and plan for partner engagement:

1. Identify the objectives for the proposed work (or phase of work)

2. Brainstorm partners you need to engage to help you achieve your objectives (Refer to Appendix B for a list of possible partners)

3. For each partner, indicate if they are an actor or influencer (see definitions below)

4. Identify partner level of engagement/role (low = 1; med = 2; high = 3) and align with relevant objectives (Tip: as an initial step, it is helpful to start with identifying the #3's first, that is, which partners you think are the most important actors or influencers you need to engage)

5. Determine whether your team has an existing relationship with the partner group or if a new relationship will need to be formed

6. Using the notes column, document initial thinking on how you may engage each partner (see terms below and refer to Appendix B for engagement considerations with First Nations, Inuit and Métis

Partner Engagement Mapping Template

PROJECT NAME:
OBJECTIVE(s):

Partner	Actor (1=Low, 2=Med, 3=High)	Influencer (1=Low, 2=Med, 3=High)	Existing Relationship?	Notes (e.g., inform, consult, collaborate)

Terms used in partner engagement mapping template:

Actors: Partners that play a direct role in implementing the outcomes the project is aiming for. This role could include either leading the change or being a part of the work creating the change

Influencers: Partners with the potential power to influence decisions that are required to achieve the outcomes the project is aiming for

Inform (one-way engagement): Partners receive information without an expectation of two-way dialogue)

Consult (two-way engagement): Proposals and options are presented to partners, who provide feedback that is incorporated into planning. The goal is to benefit from partners' greater knowledge of local conditions and opinions

Collaborate (two-way engagement): partners are authentically engaged in generating options and carrying out actions that emerge from their input. Deciding and acting happen with partners based on shared goals

Appendix B: Partner List

Engagement Considerations with First Nations, Inuit and Métis Governments, Communities and Organizations:

First Nations, Inuit and Métis have the right to self-determination, and a responsibility to be self-determining on health[1]. First Nations, Inuit and Métis also have the solutions to their own health challenges and are key partners in design and implementation of any health initiatives. As such, we recommend the following guiding principles in engaging with First Nations, Inuit and Métis in the design and implementation of organized lung cancer screening programs:

- It is important to engage relevant First Nations, Inuit and Métis partners in the design and implementation process of lung cancer screening programs
- Specific partners will depend on the context in each province/territory but should include
  - Service delivery partners (e.g. Indigenous health authorities, community health centres, etc.)
  - Indigenous health care providers (e.g. through regional or national Indigenous health care provider organizations)
  - Governing mechanisms (e.g. Métis Nations, Tribal Councils, Treaty councils)
  - Patient and family representatives
- Information needs will depend on the regional context, as well as personal preference. Partners should be engaged early and ongoing, and engagement strategies should be co-created.

Partner category	Who are they?	What are their information needs?	Why are they looking?	Examples specific to lung cancer screening

Health system administrators	Health system leaders and managers at the federal, provincial, territorial and municipal levels	• Require in-depth information on all stages of the cancer journey to develop procedures and evaluate performance
		• High-level, regionally comparable data.
		  ○ At the federal level, the information should have a national view
		  ○ At the provincial and municipal levels, the information should be within provinces and regional health authorities [1]
			To implement processes and evaluate performance [1]	• CEOs of cancer agencies
				• Heads of quality programs
				• Regional cancer centre leads
				• VPs
				• Provincial Medical Director for Cancer Screening
				• Chief medical officers
				• Regional health authority leads

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[1] See Getting the relationship right: Guiding principles for working in partnership with the AFN Health Sector. Spring 2018

Health-care professionals	Medical, radiation and surgical oncologists, surgeons, primary care practitioners, nurses, public and community health professionals, allied health professionals and/or their corresponding professional societies	• Summaries and patient-level information on the cancer journey and supportive care [1] • Clinical practice guidelines [1] • Public health nurses seek clinical treatment information [2] • Public health nurse administrators seek information on requests for proposals, community demographics, national norms for various health indicators, health outcomes [2] • Public health agency professionals seek risk reports, information on new interventions, 'best practice' evidence-based resources on emerging practices in preventive behaviour, information on new interventions; synthesized info on health threats, as well as research- and evidence-based guidelines [2]	• To find information for their patients and to stay up-to-date [2] • To answer a clinical question, solve a problem, or support decision making related to clinical practice [2] • Proactively search for cancer information when a higher percentage of their practice is cancer-related [1]	• Radiologists • Family physicians • Respirologists • Thoracic surgeons • Pathologists • Radiation technologists • Nurses • Navigators

Policy specialists	Policy makers at the federal, provincial, territorial, municipal and community or regional levels, as well as advocacy groups and NGOs	• High-level, regionally comparable data
		  o At the federal level, the information should have a national view
		  o At the provincial and municipal levels, the information should be within provinces and regional health authorities
		• Information for all stages of the cancer journey [1]
			• To inform creation of a brief or report for a minister/councilor/senior staff member
			• To inform guidelines and best practices [1]
				• Deputy ministers of health
				• Policy advisors
				• Policy analysts
				• Medical society/associations:
				  o Canadian Association of Radiologist (CAR)
				  o Canadian Association of Medical Radiation Technologists (CAMRT)
				  o Canadian Respiratory Health Professionals/ Canadian Thoracic Society
				  o Canadian Task Force on Preventative Health Care (CTFPHC)
				  o College of Family Physicians of Canada (CFPC)
				  o Canadian Society of Thoracic Radiology (CSTR)

				o Canadian Association of Pathologists o Canadian Cancer Society o Canadian Lung Association o Lung Cancer Canada

Researchers	Health-services researchers, epidemiologists, statisticians, analysts, health economists	• Focus is on informing their research questions and search queries [1]
		• Sources:
		   o Health information databases
		   o Cancer registries
		   o Journals
			• To answer a research question
			• To fulfill a request [1]	

Public and individuals	Residents, families, caregivers, patients	• Health information, awareness, promotion resources and tools to support decision making, and provide information to enhance awareness and understanding of options and outcomes
		• Sources:
		   o Audio/visual
		   o Social media
		   o Decision aids
		   o Networking/engagement activities
			• To increase awareness and understanding to inform decision making	

References:

(1) Results of the End User Insights Study, Nielsen, March 2016

(2) Evidence Synthesis on Acquisition, Dissemination and Implementation of Evidence by Healthcare Target Audiences, Centre for Effective Practice, December 2015