



CANADIAN
PARTNERSHIP
AGAINST CANCER



Breast Cancer Screening in Canada

ENVIRONMENTAL SCAN

Version 1.1

Last updated January 13, 2021

2019 - 2020

Background

The Canadian Partnership Against Cancer collects information on national, provincial and territorial breast screening guidelines, strategies and activities.

This environmental scan summarizes the data collected from provincial and territorial screening programs and is intended to provide information to inform provincial/territorial decision-making for policy and practice.

The information for this environmental scan was collected in June and July 2019. All provinces and territories responded to the environmental scan. Many provinces and territories provided updated data in early 2020. Due to the COVID-19 pandemic, some of the included data was not vetted by provincial and territorial screening programs prior to publication.

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Key Highlights – 2019-2020

- ◆ Organized breast screening programs are available in twelve provincial/territorial jurisdictions across Canada. Nunavut does not have an organized breast screening program at this time.
- ◆ Most provinces and territories recommend screening asymptomatic individuals at average risk for breast cancer with a mammogram every two years starting at age 50 until age 74 or 75.
- ◆ In most jurisdictions, participants can be referred to breast screening programs through physician and self-referral. In addition, letters of invitation are used as a recruitment strategy in six provinces.
- ◆ Screening mammography is commonly used as an entry-level screening test for breast cancer. The use of modalities other than mammography may be dependent on a person's risk level.
- ◆ All programs send out result letters to individuals after they obtain a normal mammography result. In the case of an abnormal result, programs send result letters to both primary care providers and participants. Some jurisdictions also follow up with part.
- ◆ Ten Canadian jurisdictions have implemented strategies to increase participation in breast screening among First Nations, Inuit and Métis populations.
- ◆ Nine provinces and one territory have implemented strategies to help support participation in underscreened populations.

Canadian Strategy for Cancer Control, 2019-2029

Since its launch in 2006, the Canadian Strategy for Cancer Control (the Strategy) has helped reduce the burden of cancer on Canadians—serving as a powerful tool for change and improvement. However, the cancer landscape has changed significantly since the Strategy was first developed, presenting new opportunities as well as new challenges. In 2019, the Canadian Partnership Against Cancer (the Partnership) released the refreshed [Canadian Strategy for Cancer Control](#) – a 10-year roadmap to improve equity in the cancer system and to deliver world-class cancer care to all Canadians, while focusing on a sustainable healthcare system for the future.

As the steward of the Strategy, the Partnership has led the modernization and renewal process. The Partnership engaged with Canadians across all provinces and territories, to learn about how cancer affects their lives and what they want from their national cancer strategy. While the Strategy's vision remains as relevant today as it was a decade ago, the priorities and actions have been modernized and refreshed to ensure they continue to guide our collective efforts in the years ahead.

The refreshed Strategy is a visionary and ambitious plan for the cancer and broader health system. Building on its already robust foundation, the refreshed Strategy provides a focused set of priorities and actions that will address the current and persistent challenges in delivering quality care.

Figure 1. Canadian Strategy for Cancer Control Priority 2



PRIORITY 2

Diagnose cancer faster, accurately and at an earlier stage



Action 2: Strengthen existing screening efforts and implement lung cancer screening programs across Canada

Figure 2. Canadian Strategy for Cancer Control Priority 4



PRIORITY 4

Eliminate barriers to people getting the care they need



Action 1: Provide better services and care adapted to the specific needs of underserved groups






Action 2: Ensure rural and remote communities have the resources required to better serve their people

The Strategy calls for the cancer community to continue focusing on the effectiveness of existing screening programs. This includes continuing measures to ensure the right people are getting screened at the right time using the recommended methods, and eliminating barriers to high participation in screening, particularly in underscreened communities. Patients in rural and remote communities often need to travel to urban centres to access screening and follow up services. While not all services and treatments can be located in all communities, the Strategy calls for the adoption of innovations and enablers that allow cancer care to be provided closer to home.

First Nations, Inuit and Métis continue to experience poorer cancer outcomes than other people in Canada, and face inequities and barriers in accessing care (especially culturally appropriate care).^{1,2,3,4,5} Some of the challenges are similar to the burden experienced by other underserved, remote, rural and isolated communities in Canada; however, there are historical and contemporary realities that amplify those challenges experienced by First Nations, Inuit and Métis. Priorities identified and the actions required are Peoples-specific and represent what the Partnership heard through engagement processes. These priorities and actions are an important element of the refreshed Strategy.

Figure 3. Canadian Strategy for Cancer Control First Nations, Inuit, and Métis Priorities

	FIRST NATIONS	INUIT	MÉTIS
<p>PRIORITY 6 Culturally appropriate care closer to home</p> 	<ol style="list-style-type: none"> 1 Recognize and reflect the First Nations wholistic approach to health and wellness. 2 Recognize and eliminate the impacts of racism within the system. 3 Provide equitable access to basic health supports and cancer services. 4 Provide more services closer to home and improve the journey for those who must travel to access care. 5 Improve understanding of cancer and the cancer journey. 	<ol style="list-style-type: none"> 1 Provide equitable access to cancer services closer to home. 2 Improve travel policies. 3 Incorporate Inuit wholistic approaches to health and wellness in cancer care. 4 Recognize and eliminate racism within the system. 5 Improve access to basic health supports. 6 Improve understanding of cancer and the cancer journey. 	<ol style="list-style-type: none"> 1 Provide equitable access to resources, programs and care across the cancer continuum. 2 Create a wholistic system that is responsive to Métis culture. 3 Recognize and eliminate racism within the system. 4 Improve access to basic health supports. 5 Improve understanding of cancer and the cancer journey.
<p>PRIORITY 7 Peoples-specific, self-determined cancer care</p> 	<ol style="list-style-type: none"> 1 Design and deliver First Nations-determined programs and services. 2 Reduce jurisdictional barriers. 3 Improve communication, navigation and coordination across the system. 	<ol style="list-style-type: none"> 1 Design and deliver Inuit-driven programs and services. 2 Improve coordination and navigation of care. 	<ol style="list-style-type: none"> 1 Design and deliver Métis-determined programs and services. 2 Reduce jurisdictional barriers and improve communication, navigation, and coordination.
<p>PRIORITY 8 First Nations-, Inuit-, or Métis-governed research and data systems</p> 	<ol style="list-style-type: none"> 1 Collect First Nations-specific data and set First Nations-specific indicators and targets. 2 Invest in First Nations research capacity. 3 Implement First Nations governance of the collection and use of data and research. 	<ol style="list-style-type: none"> 1 Collect and report on Inuit-specific data. 2 Determine impact of environmental contamination on Inuit health, specifically cancer risk. 	<ol style="list-style-type: none"> 1 Collect Métis-specific data and develop Métis-determined indicators and outcomes. 2 Invest in Métis research capacity.

Executive Summary

Organized breast screening programs are available in most provinces and territories across Canada ([Table 1](#)). The programs screen individuals who are asymptomatic (no signs or symptoms of breast cancer present). Where organized screening programs are not available, screening services may be accessed opportunistically through a primary care provider.

Most provinces and territories recommend screening asymptomatic individuals at average risk for breast cancer with a mammogram every two years starting at age 50 until age 74 or 75. Some jurisdictions accept people under the age of 50 to screen for breast cancer, every one or two years, if a person chooses to be screened, has been identified as high risk, or has a physician recommendation ([Table 2](#)).

Participants are recruited into provincial and territorial breast screening programs using a variety of strategies. In most jurisdictions, participants can be referred to breast screening programs through physician and self-referral. In addition, letters of invitation are used as a recruitment strategy in six provinces ([Table 3](#)).

Mammography is commonly used as an entry-level screening test for breast cancer and is the screening modality recommended by the Canadian Task Force on Preventive Health Care ([Table 5](#)). Other modalities used in Canada to screen individuals for breast cancer are tomosynthesis, magnetic resonance imaging, and

ultrasound ([Table 6](#)). The use of modalities other than mammography may be dependent on a person's risk level. All provinces and territories with an organized program send out result letters or a postcard to individuals after they obtain a normal mammography result ([Table 8](#)). In the case of an abnormal result, programs send result letters to both primary care providers and participants. Some jurisdictions also follow up with participants over the phone to inform them of their results and to schedule a follow-up appointment ([Table 10](#)).

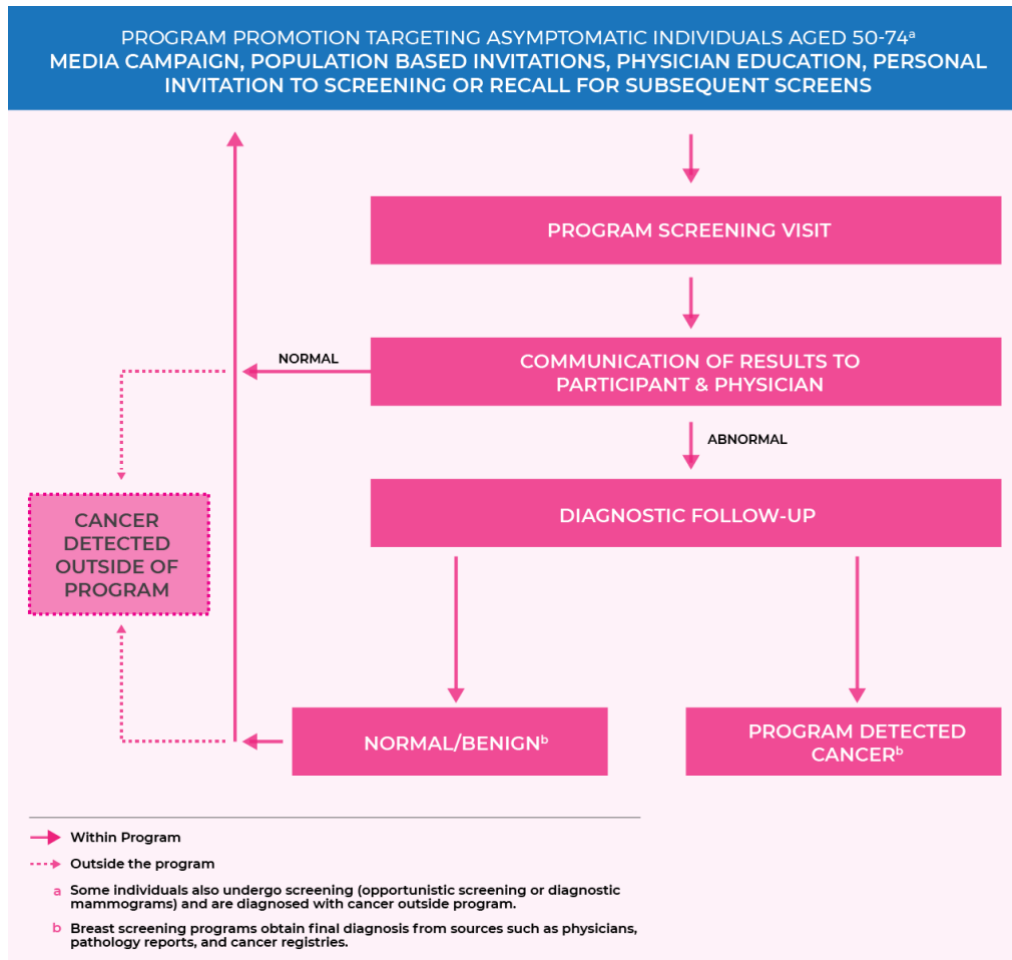
Canadian jurisdictions are engaging with First Nations, Inuit and Métis in decision making and informing approaches to culturally appropriate screening, and program resources specific to First Nations, Inuit, and Métis. Jurisdictions are also engaging with healthcare providers working directly with First Nations, Inuit, and Métis communities (*see [Population Outreach - First Nations, Inuit and Métis section](#)*).

Strategies have also been implemented to help address participation in underscreened populations. These strategies focus primarily on individuals in rural communities, new immigrants and low-income individuals (*see [Population Outreach – Underscreened Populations section](#)*).

1. Breast Screening Programs and Guidelines

1.1 Breast Screening Pathway

Figure 4. Breast Screening Pathway^{6*}



Organized breast screening programs offer screening to asymptomatic individuals without a previous diagnosis of breast cancer. Organized programs in Canada generally involve five elements:

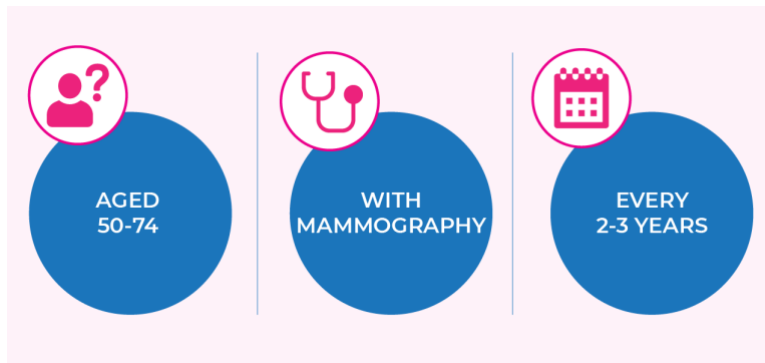
- Identification and recruitment of the target population
- Provision of a screening examination
- Follow-up of any abnormalities detected at screening
- Recall after a normal or benign screening episode
- Monitoring and evaluation.

*Cancer screening pathways are a general representation of the organized screening process, and may not apply to all jurisdictions, especially those which do not have an organized screening program.

1.2 The Canadian Task Force on Preventive Health Care Guidelines

The Canadian Task Force on Preventive Health Care (CTFPHC) develops clinical practice guidelines that support primary care providers in delivering preventive health care.⁷ In addition to supporting primary care providers, the CTFPHC's guidelines are also relevant to community and public health professionals, physician specialists, other health care and allied health professionals, program developers, policy makers, and the Canadian public.

Figure 5. Canadian Task Force on Preventive Health Care Breast Cancer Screening Recommendations (2018)



As of 2018, the breast cancer screening recommendation is a Conditional Recommendation. The Task Force recommends that care providers should engage in shared decision making with individuals who express an interest in being screened.

Average risk is defined as:

- No personal history of breast cancer
- No history of breast cancer in a first-degree relative
- No known mutations in BRCA1/2 genes
- No previous exposure of chest wall to radiation

Additional breast screening recommendations by the CTFPHC include:

- For individuals aged 40 to 49 years, **recommend not** screening with mammography; the decision to undergo screening is conditional on the relative value an individual places on possible benefits and harms from screening.
- For individuals aged 50 to 69 years, **recommend** screening with mammography every two to three years; the decision to undergo screening is conditional on the relative value that an individual places on possible benefits and harms from screening.
- For individuals aged 70 to 74 years, **recommend** screening with mammography every two to three years; the decision to undergo screening is conditional on the relative value that an individual places on possible benefits and harms from screening.
- **Recommend not** using magnetic resonance imaging, tomosynthesis or ultrasound to screen for breast cancer in individuals who are not at increased risk.
- **Recommend not** performing clinical breast examinations to screen for breast cancer.
- **Recommend not** advising individuals to practice breast self-examination to screen for breast cancer.

1.3 Breast Screening Programs in Canada

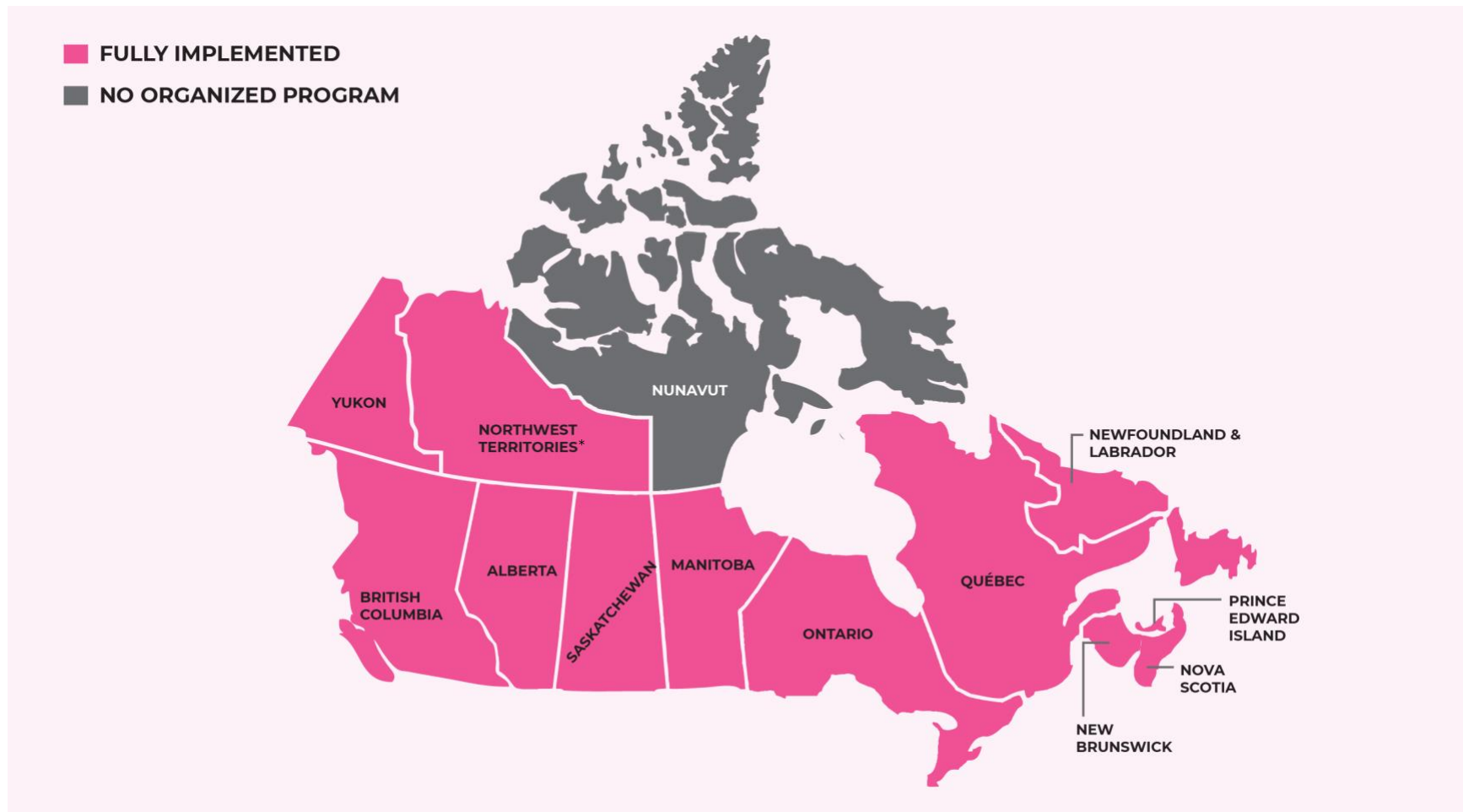
Organized breast screening programs are available in most provinces and territories across Canada. The programs screen individuals who are asymptomatic (no signs or symptoms of breast cancer present) and at average risk for breast cancer. Where organized screening programs are not available, screening services may be accessed opportunistically through a primary care provider (PCP).

The first organized breast screening program began in British Columbia in 1988. Between 1990 and 2008, 11 more Canadian jurisdictions implemented organized breast screening programs. Nunavut does not have an organized breast screening program at this time. In this scan, information on opportunistic screening is provided for Nunavut where available.

Table 1. Breast Screening Programs in Canada

Jurisdiction	Program start date	Program name	Agency responsible for program administration
Yukon (YT)	1990	Yukon Mammography Program	Government of Yukon (Yukon Hospital Corporation)
Northwest Territories (NT)	2004	Yellowknife Breast Screening Program (YKBSP)	Northwest Territories Health and Social Services Authority (NTHSSA)
	2008	Hay River Breast Screening Program (HRBSP)	Hay River Health and Social Services Authority (HRSSA)
Nunavut (NU)	No organized screening program available		
British Columbia (BC)	1988	BC Cancer Breast Screening Program	BC Cancer
Alberta (AB)	1990	Alberta Breast Cancer Screening Program (ABCSP)	Alberta Health Services
Saskatchewan (SK)	1990	Screening Program for Breast Cancer	Saskatchewan Cancer Agency
Manitoba (MB)	1995	BreastCheck	CancerCare Manitoba
Ontario (ON)	1990	Ontario Breast Screening Program (OBSP)	Ontario Health (Cancer Care Ontario)
Québec (QC)	1998	Programme québécois de dépistage du cancer du sein (PQDCS)	Ministère de la Santé et des Services sociaux
New Brunswick (NB)	1995	New Brunswick Breast Cancer Screening Services	New Brunswick Cancer Network (NB Department of Health)
Nova Scotia (NS)	1991	Nova Scotia Breast Screening Program	IWK Health Centre
Prince Edward Island (PE)	1998	PEI Breast Screening Program	Health PEI
Newfoundland and Labrador (NL)	1996	Breast Screening Program for Newfoundland and Labrador	Cancer Care Program, Eastern Health

Figure 6. Status of Breast Screening Programs in Canada (July 2019)



* Yellowknife Breast Screening Program (YKBSP) and Hay River Breast Screening Program (HRBSP) support 15 of 33 NT communities. The remaining 18 communities that are not part of an organized program book mammograms through the diagnostic imaging department that services their region.

1.4 Provincial and Territorial Screening Guidelines

Most provinces and territories recommend screening asymptomatic individuals at average risk with a mammogram every two years starting at age 50 until age 74 or 75. Some jurisdictions accept individuals under the age of 50 to screen for breast cancer, every one or two years, if an individual chooses to be screened, has been identified as high risk, or has a physician recommendation.

Table 2. Provincial and Territorial Screening Guidelines

Jurisdiction	Start age	Interval	Stop age	Exclusion criteria
YT	50 (40 with radiologist recommendation)	2 years	74	<ul style="list-style-type: none"> • Personal history of breast cancer • Breast symptoms • Mammogram of both breast in the last 12 months • Age <40 years • Pregnant or pregnant in the last 4 months • Breastfeeding or breastfeeding in the last 4 months • Breast implants
NT	50 (40 with referral from PCP)	1-2 years	74 (participants age 75+ have the option to continue, encouraged to speak to their PCP to see if screening is right for them)	
NU	No organized screening program available			
BC	50 (40-49 accepted by self-referral but not actively recruited)	2 years	74	<ul style="list-style-type: none"> • Personal history of breast cancer • Breast symptoms • Breast implants
AB	50 (40-49 with PCP referral for first screen)	2 years	74 (75+ with PCP referral to continue screening)	<ul style="list-style-type: none"> • Known diagnosis or history of breast cancer • Bilateral mastectomies • Signs and symptoms which could be associated with breast cancers • Age <40 years • Follow up diagnostic imaging has been suggested • Work-up of an unknown primary malignancy or possible metastatic disease to the breast or axilla • Men and transgender individuals

Jurisdiction	Start age	Interval	Stop age	Exclusion criteria
SK	50 (49 accepted to mobile unit if turning 50 in the same calendar year)	2 years	75+	<ul style="list-style-type: none"> • Breast cancer in the last 5 years • Signs and symptoms of breast cancer • Breast implants
MB	50	2 years	74 (75+ have the option to continue)	<ul style="list-style-type: none"> • Previous breast cancer diagnosis • Symptomatic • Breast implants
ON	50	2 years	74 (75+ with referral from PCP)	<ul style="list-style-type: none"> • Personal history of breast cancer • Mastectomy • Acute breast symptoms • Screening mammogram within the last 11 months • Breast implants
QC	50	2 years	74	<ul style="list-style-type: none"> • Personal history of breast cancer
NB	50 (40 with referral from PCP)	2 years	74 (75+ with referral from PCP)	<ul style="list-style-type: none"> • Personal history of breast cancer • Symptomatic for breast cancer • Breast Implants
NS	50 (age 40-49 accepted by self-referral but not actively recruited)	2 years	74 (75+ accepted by self-referral, but not actively recruited)	<ul style="list-style-type: none"> • Personal history of breast cancer • Breast symptoms • Breast implants
PE	50 (available for age 40-49)	2 years	74	<ul style="list-style-type: none"> • Personal history of breast cancer • Breast symptoms • Screening mammogram within the last 11 months • Breast implants
NL	50	2 years	74 (age 74+ only if previously enrolled in the program)	<ul style="list-style-type: none"> • Personal history of breast cancer • Breast symptoms • Breast implants

1.5 Screening Recruitment Strategies

Participants are recruited into provincial and territorial breast screening programs using a variety of strategies. In most jurisdictions, participants can be referred to breast screening programs through physician and self-referral.

In addition, letters of invitation are used as a recruitment strategy in six provinces. Other recruitment strategies used are advertising and social media, referrals from nurse practitioners and recommendations from healthcare providers.

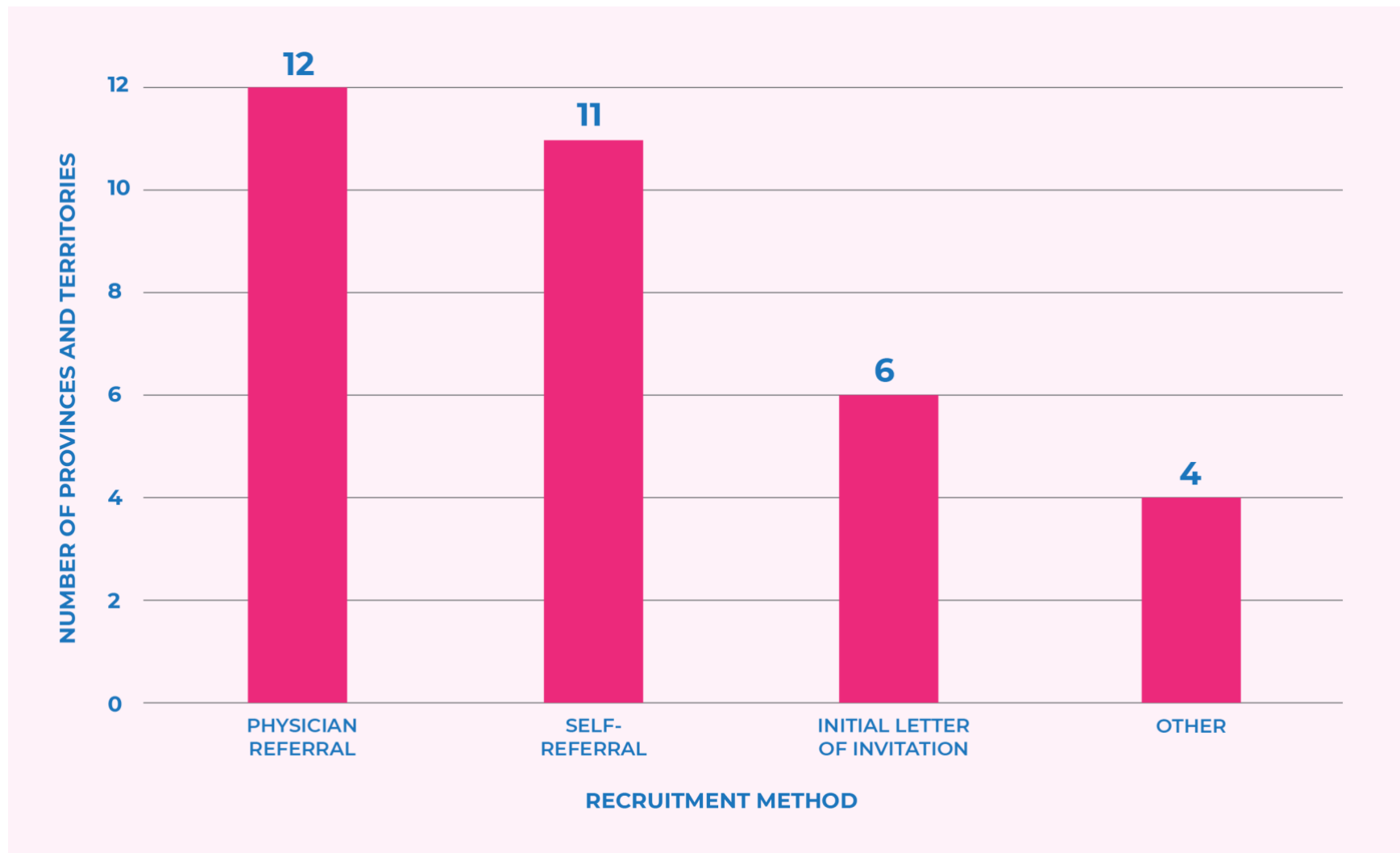
All jurisdictions target those aged 50-74 for recruitment, with the exception of Québec which targets women aged 50-69.

Table 3. Breast Screening Recruitment Methods in Canada

Jurisdiction	Recruitment methods				Target age group for recruitment
	Physician referral	Self-referral	Initial letter of invitation	Other	
YT	✓	✓			50-74
NT	✓	✓*			50-74
NU	No organized screening program available				
BC	✓	✓		Program promotional advertising to encourage women to self-refer	50-74
AB	✓	✓	✓		50-74
SK	✓	✓	✓		50-74
MB	✓	✓	✓		50-74
ON	✓	✓	✓	Referral from nurse practitioner	50-74
QC	✓	✓	✓		50-69
NB	✓	✓	✓		50-74
NS	✓	✓		Healthcare provider recommendation	50-74
PE	✓	✓		Promotions & social media	50-74
NL	✓	✓			50-74

* Yellowknife's BSP accepts self-referrals (50-74) for persons living within the Yellowknife catchment area who have a designated PCP; all other locations they service require a referral from PCP to enter the program. Hay River BSP accepts self-referrals (50-74) for persons living in Hay River catchment with a designated PCP; all other locations they service require a referral from PCP to enter into the BSP.

Figure 7. Breast Screening Recruitment Methods in Canada



1.6 Booking of Breast Screening Test

Provinces and territories manage booking of mammography using several strategies. Ten jurisdictions do not require a referral. NT, AB, NS, NL assist a participant to locate a PCP if they do not have one. Booking appointments is done through local telephone numbers or toll-free calls. Programs provide information online or by letter about multiple locations where screening is available, including at mobile units in seven jurisdictions.

Table 4. Booking of Breast Screening Test (mammography) by Province/Territory

Jurisdiction	Role of PCP in access to test	Booking screening	Screening locations
YT	<ul style="list-style-type: none"> Referral not required Women must identify a PCP PCPs can refer women and program will mail them their appointment time 	<ul style="list-style-type: none"> Women book by calling program number For recall screening, women can fax in a form they are sent by mail and the program will mail them their appointment time 	<ul style="list-style-type: none"> Mammograms available in Whitehorse No mobile screening
NT	<ul style="list-style-type: none"> Requisition from CHC required to support medical travel Women must identify PCP when booking appt (program will refer woman to a CHC if they do not have a PCP already) 	<ul style="list-style-type: none"> Women book by calling toll-free program number Women requiring travel support must coordinate the appointment through their CHC 	<ul style="list-style-type: none"> Screening available in Yellowknife for this program (Hay River and Inuvik also offer screening in separate programs) No mobile screening
NU*	<ul style="list-style-type: none"> Referral from PCP required 	<ul style="list-style-type: none"> No direct access to screening mammography in Nunavut Screening mammograms need to be coordinated with medical travel taking place for another reason 	<ul style="list-style-type: none"> None (diagnostic screening only) No mobile screening
BC	<ul style="list-style-type: none"> Referral not required Must identify a PCP when booking screening; can be a walk-in clinic, nurse practitioner, or naturopath 	<ul style="list-style-type: none"> Call central booking (toll-free) or contact local screening site directly 	<ul style="list-style-type: none"> Screening locations and contact information listed online and available by calling the program Mobile screening units available
AB	<ul style="list-style-type: none"> Referral not required Most screening sites may require PCP be identified when booking mammogram to ensure work up Site assists woman to identify a PCP if she does not have one 	<ul style="list-style-type: none"> Call screening site (local number) or mobile units directly to book appointment (women's choice) Program does not book appointments centrally 	<ul style="list-style-type: none"> Screening locations and contact information listed online and available by calling the program's Client Services Line Facility list sent with every invitation and reminder letter Mobile screening units available
SK	<ul style="list-style-type: none"> Referral not required 	<ul style="list-style-type: none"> Women book by calling toll-free program number 	<ul style="list-style-type: none"> Screening locations and contact information listed online and available by calling the program Mobile screening units available

Jurisdiction	Role of PCP in access to test	Booking screening	Screening locations
MB	<ul style="list-style-type: none"> Referral not required Women encouraged to identify a PCP, but can attend appointment while trying to find a PCP PCPs can refer women for screening. Program will contact woman to set up the appointment 	<ul style="list-style-type: none"> Call (toll-free) program (for mobile and fixed sites) 	<ul style="list-style-type: none"> Screening locations and contact information listed online and available by calling the program Mobile screening units available
ON	<ul style="list-style-type: none"> Referral not required, but PCPs, including nurse practitioners, can refer participants Initial invitation letters sent to those not currently enrolled in the screening program suggesting that they speak to their PCP about screening 	<ul style="list-style-type: none"> If referral was sent directly to a site, the site will contact the participant to schedule an appointment Participants can book by calling individual screening sites Mobile coaches are linked to specific sites and appointments for mobile coaches are set up through these sites 	<ul style="list-style-type: none"> Screening locations and contact information is available online or by calling the program Participant's recall letter also provides the phone number of the screening site where the last screen was completed Mobile screening coaches available
QC	<ul style="list-style-type: none"> Referral not required 	<ul style="list-style-type: none"> Women book by calling screening site (toll-free or local number) 	<ul style="list-style-type: none"> Women provided with a list of nearby screening sites in their invitation letter Mobile screening units available
NB	<ul style="list-style-type: none"> Referral not required; Some sites accept PCP referrals and then contact woman with appointment time 	<ul style="list-style-type: none"> Call closest screening site (mostly local numbers, some toll-free) directly to book appointment 	<ul style="list-style-type: none"> NB Health provides a list of all sites and their contact information on their website No mobile screening
NS	<ul style="list-style-type: none"> Referral from PCP not required Women are asked to identify PCP when booking appointment. Program will work with women to identify PCP if they do not have a PCP already. 	<ul style="list-style-type: none"> Women self-refer by calling toll-free program number. They can choose to be screened at any of the breast screening sites (fixed or mobile). 	<ul style="list-style-type: none"> There are 11 fixed breast screening sites and 30 mobile stops. Location/address information is available on the NSBSP website, or women can call the toll-free program number. Mobile screening available.
PE	<ul style="list-style-type: none"> Referral not required 	<ul style="list-style-type: none"> Women book by calling toll-free program number 	<ul style="list-style-type: none"> Two screening locations No mobile screening available
NL	<ul style="list-style-type: none"> Referral not required Women must identify a PCP Program can help to connect woman with PCP 	<ul style="list-style-type: none"> Women can book by calling program (toll-free), or by calling (local number) or visiting a local screening site 	<ul style="list-style-type: none"> 3 screening centres No mobile screening

* Information for NU in this publication refers to opportunistic breast screening.

2. Modalities for Breast Screening

Mammography is commonly used as an entry level screening test for breast cancer and is the screening modality recommended by the CTFPHC.⁷ All provinces and territories, with the exception of NU, perform mammography screening within organized screening programs. Currently, no provinces or territories recommend clinical breast examinations.

2.1 Mammography Screening Technology

All provinces and territories have transitioned from using analog mammography and are currently using digital radiography (DR) equipment to screen individuals in their programs. In addition, QC and NB are using computed radiography (CR). Most mammography screening is occurring in hospital settings. Other locations where screening is taking place are in mobile units, community clinics, screening centres, and private clinics.

Table 5. Primary Breast Screening Modalities in Canada

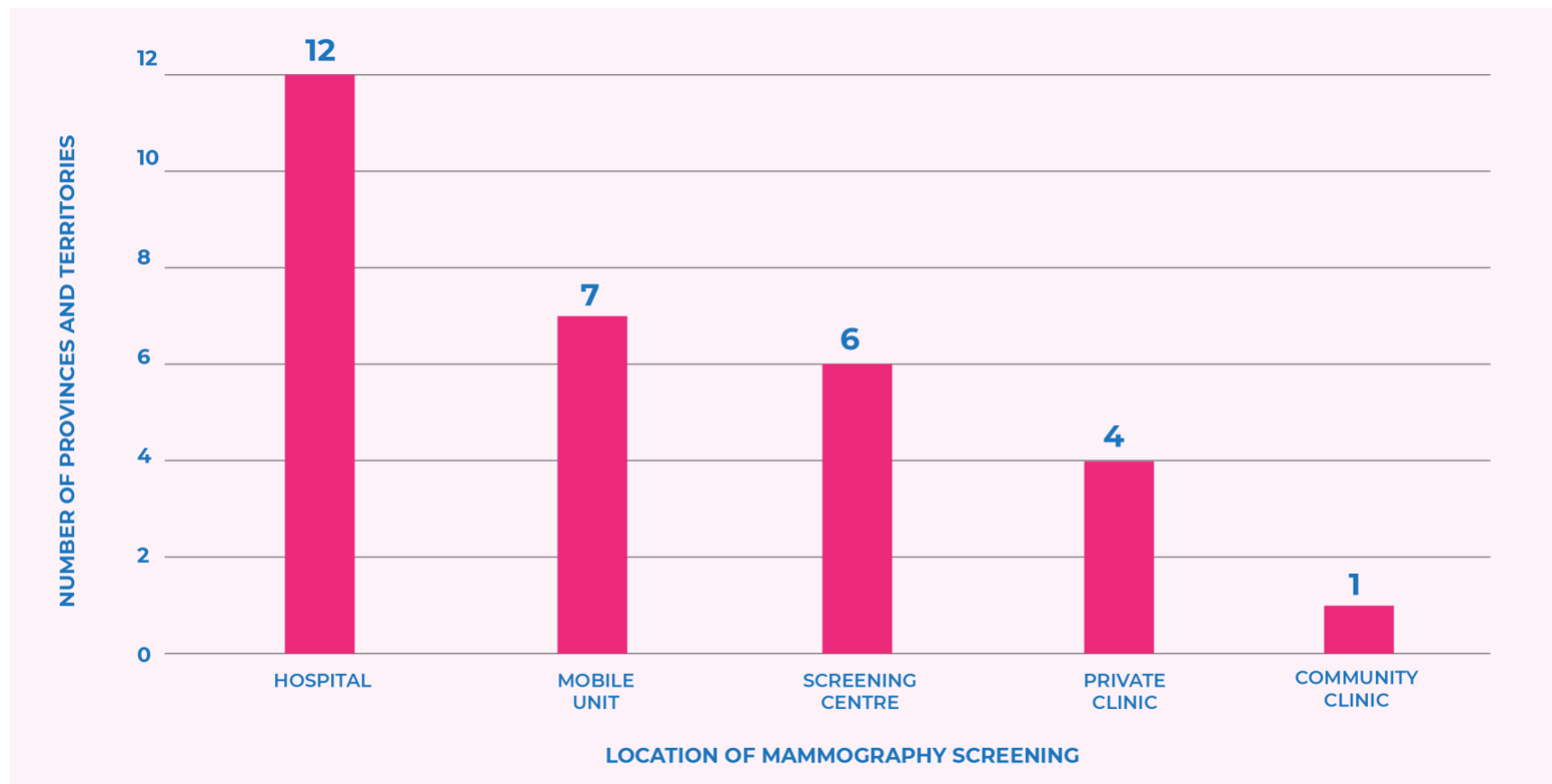
Jurisdiction	Digital mammography [^]		Location where mammography screening is conducted
	Digital radiography (DR)	Computed radiography (CR)	
YT	✓		<ul style="list-style-type: none"> • Hospital
NT	✓		<ul style="list-style-type: none"> • Hospital
NU*	✓		<ul style="list-style-type: none"> • Hospital
BC	✓		<ul style="list-style-type: none"> • Community clinic (privately operated) • Hospital screening centre • Mobile unit
AB	✓		<ul style="list-style-type: none"> • Community clinic (privately operated) • Hospital • Mobile unit
SK	✓		<ul style="list-style-type: none"> • Screening centre • Hospital • Mobile unit
MB	✓		<ul style="list-style-type: none"> • Screening centre • Hospital • Mobile unit

Jurisdiction	Digital mammography [^]		Location where mammography screening is conducted
	Digital radiography (DR)	Computed radiography (CR)	
ON	✓		<ul style="list-style-type: none"> • Independent health facility • Hospital • Mobile coach
QC	✓	✓	<ul style="list-style-type: none"> • Private clinic • Community clinic • Screening clinic • Hospital • Mobile unit
NB	✓	✓	<ul style="list-style-type: none"> • Screening centre • Hospital
NS	✓		<ul style="list-style-type: none"> • Screening clinics • Hospital • Mobile unit
PE	✓		<ul style="list-style-type: none"> • Hospital
NL	✓		<ul style="list-style-type: none"> • Screening centre

* Information for NU in this publication refers to opportunistic breast screening.

[^] Digital mammography: mammography images are captured and manipulated electronically and includes digital radiography (DR) and computed radiography (CR) systems

Figure 8. Location of Mammography Screening in Canada



2.2 Other Breast Screening Modalities

Other modalities used in Canada to screen individuals for breast cancer are tomosynthesis, magnetic resonance imaging (MRI) and ultrasound, and their use may be dependent on a person’s risk level. Tomosynthesis is being used in BC and AB. ON screens individuals at high risk for breast cancer using MRI or ultrasound through the High-Risk Ontario Breast Screening Program. AB, NS, and PE also use supplemental MRI or ultrasound screening for high risk individuals.

Table 6. Other Breast Screening Modalities in Canada

Jurisdiction	3D Tomosynthesis [^]	Use of or plans for Tomosynthesis	MRI	Ultrasound
YT		No plans to implement		
NT		Tomosynthesis is being considered when equipment is due for replacement in 2021.		
NU*	-	-	-	-
BC	✓ (research setting only)	Only used at two sites that are participating in national TMIST trial		
AB	✓	Tomosynthesis used widely with some sites on every screen and others on dense breasts only. Province has modifier billing code.	✓ High risk	Some sites use as supplemental for dense breasts or if patient cannot tolerate MRI
SK		No plans to implement		
MB		No plans to implement		
ON		Not currently recommended. Ontario Health (Cancer Care Ontario) continues to monitor the evidence. However, for sites with digital breast tomosynthesis, this technology can be used as an add-on to the 2D Ontario Breast Screening Program (OBSP) screen as per the site's protocols and with consent from the participant.	✓ High risk	High risk if MRI is not medically appropriate
QC		Not recommended for screening. Used in diagnostic imaging.		
NB		No plans to implement		
NS		Tomosynthesis is currently used in diagnostic imaging at 1 diagnostic centre. No plans to implement	✓ High risk	
PE		No plans to implement but will monitor evidence as it becomes available.	✓ High risk	
NL		No plans to implement		

* Information for NU in this publication refers to opportunistic breast screening.

[^] Tomosynthesis (also known 3D mammography): emerging technology that allows the breast to be viewed three-dimensionally

- No information was provided at the time the data were collected.

3. Correspondence Strategies and Follow-Up for Breast Screening

Recall letters or other forms of communication are used to notify individuals who have been screened by the program in the past to return for screening. Individuals who have a normal screening result are invited back at regular intervals (as per provincial/territorial screening guidelines) for subsequent screening. Individuals who have an abnormal screening result are invited for follow-up.

3.1 Follow-Up After a Normal Mammogram

All provinces and territories, with the exception of Nunavut and Manitoba, send results letters to participants after a normal mammography result, and send follow-up recall reminders, usually at 1- or 2-year intervals, or as recommended by the radiologist.

Table 7. Receiving Results and Follow Up for NORMAL Breast Screening Test Results by Province/Territory

Jurisdiction	Receive normal results	Recall for screening with normal results
YT	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 1-2 years based on radiologist recommendation and/or identified risk factors
NT	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation)
NU*	<ul style="list-style-type: none"> Varies by site; generally sent to PCP who will contact participant to provide results 	<ul style="list-style-type: none"> No formal recalls, up to woman/PCP to initiate screening again
BC	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 1-2 years per identified risk factor program policy
AB	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation)
SK	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation and/or identified risk factors)
MB	<ul style="list-style-type: none"> Mailed to healthcare practitioner (if provided) 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation)
ON	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Most participants are recalled every 2 years; however, some are recalled in one year based on radiologist recommendation and/or identified risk factors.
QC	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years
NB	<ul style="list-style-type: none"> Mailed to participant (most sites) 	<ul style="list-style-type: none"> Recall process varies by site, some call, some mail letters Interval determined by radiologist recommendation
NS	<ul style="list-style-type: none"> Mailed to participant E-faxed to PCP (if participant has a PCP) 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or yearly based on radiologist recommendation)

Jurisdiction	Receive normal results	Recall for screening with normal results
PE	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation and/or identified risk factors)
NL	<ul style="list-style-type: none"> Mailed to participant 	<ul style="list-style-type: none"> Recall reminder mailed every 2 years (or other interval based on radiologist recommendation)

* Information for NU in this publication refers to opportunistic breast screening.

3.2 Recall Following a Normal Mammogram

All provinces and territories, with the exception of NU, send out recall letters or a postcard to individuals after they obtain a normal mammography result. The target age group for recall varies across Canada. Most jurisdictions target individuals aged 40 or 50 to 74. QC recalls individuals aged 50-69.

Table 8. Provincial and Territorial Recall Strategies Following a Normal Mammogram

Jurisdiction	Recall method	Recall sent to	Recall issued by	Target age group for recall
YT	Letter	Participants	Program	40-74 (40-49 with radiologist recommendation)
NT	Letter and phone call (YKBSP and HRBSP) Radiology report to PCP (Inuvik site only, no organized program)	Participants and PCP	Program	50-74 (40-49 with radiologist recommendation)
NU	No organized screening program available			
BC	Postcard Letters sent annually to PCP of participants who are overdue	Participants	Program	40-74
AB	Letter Postcard Phone call	Participants	Centre and program (program sends only after >120 days overdue)	50-74
SK	Letter	Participants	Program	50-74
MB	Letter	Participants	Program	50-74
ON	Letter	Participants	Program	50-74
QC	Letter	Participants	Program	50-69
NB	Letter Phone call	Participants	Regional Health Authorities	50-74
NS	Postcard	Participants	Program	40-74

Jurisdiction	Recall method	Recall sent to	Recall issued by	Target age group for recall
PE	Letter	Participants	Program	50-74 (40-49 with radiologist recommendation)
NL	Letter	Participants	Centre	50-74

Most provinces and territories send out reminder notifications via letter if no response was received after the first communication. Nine jurisdictions issue reminders if participants do not initiate screening after the first recall attempt.

Table 9. Breast Screening Reminder Notifications in Canada

Jurisdiction	Reminder notifications
YT	None
NT	Reminder letter sent to patient 2 weeks before the beginning of the month screening is due, second reminder letter sent 15 days after appointment is due if patient has not been seen or booked for a mammogram
NU	No organized screening program available
BC	A series of up to 3 postcards are sent over a 23-month period as reminder notifications
AB	Reminder letter is sent from the program once when >120 days overdue
SK	Reminder letter sent 2 weeks after initial invite if no appointment is booked.
MB	Reminder letter is sent 3 weeks after the recall letter if an appointment is not scheduled. If continued no response, a recall letter will be sent annually until response or participant ages out (75) of program. A maximum of 4 sets of letters (invitation, recall, and reminder) will be sent.
ON	Recall reminder letter sent by screening program approximately 10 weeks after the recall letter if screening is not initiated
QC	Recall reminder letter sent by screening program approximately 10 weeks after the recall letter if screening is not initiated
NB	None
NS	Reminder postcards are sent 3 months prior to the woman’s due date if screening appointment has not been scheduled
PE	Reminder letter sent 5 months prior to women’s due date with an overdue letter 2 months following the women’s due date if screening in not initiated
NL	None

3.3 Follow-Up After an Abnormal Mammogram

All provinces and territories, with the exception of NU, send results letters to both primary care providers and participants after an abnormal (positive) mammography result. Some jurisdictions also follow-up with participants over the phone to inform them of their results and to schedule a follow-up appointment.

In the absence of a primary care provider, seven provinces help participants find a suitable primary care provider in order to follow up after an abnormal mammography result. Other jurisdictions require participants to have a primary care provider in order to be eligible for a screening mammogram.

When participants cannot be reached (e.g., mail is returned), most provinces and territories contact the primary care provider or obtain current contact information from the primary care provider.

The location for conducting diagnostic mammograms after an abnormal result varies across Canada. Some jurisdictions conduct diagnostic mammograms at the screening centre/program. Other provinces and territories conduct these types of mammograms at diagnostic imaging centres or refer participants to Breast Risk Assessment units.

Table 10. Receiving Results and Follow Up for ABNORMAL Breast Screening Test Results by Province/Territory

Jurisdiction	Receive abnormal results	Follow up of abnormal results	Identification of PCP for follow up	Location of diagnostic mammogram after abnormal result	Return to screening?
YT	<ul style="list-style-type: none"> Mailed to woman Program may also contact women by phone depending on the follow up required (imaging) 	<ul style="list-style-type: none"> Program calls woman to arrange follow up appointments for imaging If biopsy required, the woman must go back to her PCP for referral to biopsy or any other follow up 	<ul style="list-style-type: none"> PCP identified when booking the mammogram 	<ul style="list-style-type: none"> Screening program 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist)

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Jurisdiction	Receive abnormal results	Follow up of abnormal results	Identification of PCP for follow up	Location of diagnostic mammogram after abnormal result	Return to screening?
NT	<ul style="list-style-type: none"> Women receive a phone call from the program as well as a letter 	<ul style="list-style-type: none"> Program calls woman to arrange follow up appointments for imaging If biopsy required, the woman must go back to her PCP for referral to biopsy Program notifies PCP that a patient requires biopsy 	<ul style="list-style-type: none"> PCP identified when booking the mammogram 	<ul style="list-style-type: none"> Stanton Territorial Hospital or a facility in Edmonton, Alberta 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist)
NU*	<ul style="list-style-type: none"> Varies by site; generally sent to PCP who will contact woman to provide results 	<ul style="list-style-type: none"> PCP manages referrals for any follow up required 	<ul style="list-style-type: none"> PCP identified when booking the mammogram 	N/A	N/A
BC	<ul style="list-style-type: none"> Women receive phone call from diagnostic centre to provide results and book follow up Results also sent to PCP and mailed to woman 	<ul style="list-style-type: none"> Diagnostic Centre books follow up and calls woman with appointments 	<ul style="list-style-type: none"> PCP identified when booking the mammogram 	<ul style="list-style-type: none"> Assessment unit 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 1-2 years per identified risk factor program policy
AB	<ul style="list-style-type: none"> Most clinics notify PCPs and/or women in person or by phone. Results also sent to PCP and mailed to woman 	<ul style="list-style-type: none"> Clinic or PCP contacts woman to arrange follow up Some clinics book follow up directly (varies by site) 	<ul style="list-style-type: none"> PCP usually identified when booking the mammogram Sites assist women with abnormal results to identify a PCP if one not already listed at booking 	<ul style="list-style-type: none"> If mammogram was completed at a facility that can do diagnostic mammograms, then usually done at that facility Community clinics Hospital facilities 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist)

Jurisdiction	Receive abnormal results	Follow up of abnormal results	Identification of PCP for follow up	Location of diagnostic mammogram after abnormal result	Return to screening?
SK	<ul style="list-style-type: none"> Women receive results by phone, either from program (navigator) or their PCP 	<ul style="list-style-type: none"> Program navigator arranges follow up if given permission to do so by HCP (otherwise HCP will arrange follow up) If program conducting follow up, they contact woman by phone to arrange appointments 	<ul style="list-style-type: none"> Women asked to identify HCP at time of registration Program can also refer women to a HCP who will manage follow up for women without a HCP 	<ul style="list-style-type: none"> Diagnostic breast imaging centres (hospitals, private radiology clinics, and/or Breast Health Centre) 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist) Women who are diagnosed with cancer return to regular screening once they have been cancer-free for five years although currently our software system does not re-invite them.
MB	<ul style="list-style-type: none"> Women receive phone call from program to provide results Results also sent by letter to participants and their healthcare provider 	<ul style="list-style-type: none"> Referral to diagnostic centre coordinated by program. Woman is advised of follow up appointment by program (phone). 	<ul style="list-style-type: none"> PCP identified when booking the mammogram If PCP was not identified when booking the mammogram, the program will connect women to the Doctor Finder service in the event of an abnormal result 	<ul style="list-style-type: none"> Diagnostic imaging centre 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist) All women informed of their status (i.e., if they will be recalled for screening or are no longer eligible) by letter once diagnostic work up is complete
ON	<ul style="list-style-type: none"> Varies by site: some may call, others send letters, a few may liaise with the PCP who will contact woman to provide results 	<ul style="list-style-type: none"> Follow up varies by site: some sites may coordinate appointments; at other sites the PCP may coordinate follow up 	<ul style="list-style-type: none"> If participant does not have a PCP, the screening site will designate a physician who will manage follow up for the participant until a diagnosis is confirmed 	<ul style="list-style-type: none"> Program assessment sites (hospitals and independent health facilities that conduct diagnostic imaging) Assessment sites outside of the program (hospitals and independent health facilities that conduct diagnostic imaging) 	<ul style="list-style-type: none"> If follow up results are normal, most women are recalled for screening every 2 years

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Jurisdiction	Receive abnormal results	Follow up of abnormal results	Identification of PCP for follow up	Location of diagnostic mammogram after abnormal result	Return to screening?
QC	<ul style="list-style-type: none"> Mailed to woman 	<ul style="list-style-type: none"> Varies; women are directed to contact site or PCP in their results letter, some sites contact the woman proactively to arrange follow up 	<ul style="list-style-type: none"> Voluntary Program Physician is assigned to manage follow up for women without a PCP 	<ul style="list-style-type: none"> Screening program (designated referral centres for investigations) 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist)
NB	<ul style="list-style-type: none"> Most sites contact women by phone 	<ul style="list-style-type: none"> Varies across sites, women typically referred automatically for diagnostic procedure 	<ul style="list-style-type: none"> Approach varies by site 	<ul style="list-style-type: none"> Sites vary across zones 	<ul style="list-style-type: none"> Participants with an abnormal mammogram but no cancer diagnosis can return to the screening program and be recalled for screening with a physician's recommendation
NS	<ul style="list-style-type: none"> Mailed to woman Result letter e-faxed to PCP 3 days before letter sent to woman, so that PCP can notify woman of her abnormal results and of her follow-up appointment information. 	<ul style="list-style-type: none"> Program schedules follow-up appointments per radiologist recommendation; appointment information mailed to PCP and to women in results letters. Booking process for needle core biopsy varies by site – some booked as per radiologist recommendation (without requisition), others require requisition from PCP 	<ul style="list-style-type: none"> PCP identified by woman when booking the screening mammogram. If no PCP, then Program works with woman to identify a PCP who can manage screen abnormal results 	<ul style="list-style-type: none"> Diagnostic breast imaging departments located in hospitals 	<ul style="list-style-type: none"> If follow-up results are normal, then women are recalled for screening every 2 years (or yearly if recommended by radiologist)
PE	<ul style="list-style-type: none"> Mailed to woman (along with notification of follow up imaging required) Results mailed to PCP 	<ul style="list-style-type: none"> Program calls woman to arrange follow up appointments to provide abnormal results If biopsy is required, the PCP contacts the woman 	<ul style="list-style-type: none"> PCP is identified when booking the mammogram If no PCP, program coordinator will inform woman about follow up 	<ul style="list-style-type: none"> Screening program 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist)

Jurisdiction	Receive abnormal results	Follow up of abnormal results	Identification of PCP for follow up	Location of diagnostic mammogram after abnormal result	Return to screening?
NL	<ul style="list-style-type: none"> Mailed to woman Results mailed to PCP 2 days before woman 	<ul style="list-style-type: none"> Program coordinates follow up testing appointments and provides to woman by mail along with abnormal results Appointment with PCP may be made but is not required 	<ul style="list-style-type: none"> PCP should be identified when booking the mammogram If not, program connects with a nurse practitioner (in rural settings) who will manage required follow up for women without a PCP 	<ul style="list-style-type: none"> Diagnostic breast imaging departments located in hospital 	<ul style="list-style-type: none"> If follow up results are normal, women are recalled for screening every 2 years (or as recommended by radiologist or program protocols)

* Information for NU in this publication refers to opportunistic breast screening.

Table 11. Process When Participants Cannot Be Reached or Do Not Have a Primary Care Provider By Province/Territory

Jurisdiction	Process when participants do not have a PCP	Process when participants cannot be reached
YT	N/A	Follow-up with PCP
NT	Participant must have a PCP in order to be screened	<p>YKBSP: Program Booking Coordinator will contact the patient by telephone if further imaging is required. If it is something that cannot be completed in Yellowknife a letter is sent to inform the PCP, who is responsible for the referral. If letter is returned the program will check electronic and hospital systems to confirm address and then call patient to confirm address with them.</p> <p>HRBSP: No specific policy. Program Coordinator will call the patient's listed phone number if patient is from Hay River or Enterprise, if patient lives in an outlying community a call is placed to the community health centre/PCP.</p>
NU	No organized screening program	
BC	Participant must have a PCP in order to be screened	Follow-up with PCP
AB	Program will assist participant with finding a PCP either before the screen or after an abnormal result	Screen site will notify participant and PCP
SK	Client navigator works with participant to find PCP	Follow-up with HCP for current phone number
MB	Program will assist participant to obtain a PCP though the provincial 'Doctor Finder' initiative. If a PCP cannot be obtained, Program Medical Lead will assume care of patient for follow up testing	A result letter is mailed to the participant and their PCP (includes a notation the we have been unable to reach the participant by phone)
ON	If participant does not have a PCP, the screening site will designate a physician who will manage follow up for the participant until a diagnosis is confirmed	Program site will notify PCP and help schedule a follow up appointment. Program site may also call and/or send a letter to the participant, requesting them to follow up with the screening site

Jurisdiction	Process when participants do not have a PCP	Process when participants cannot be reached
QC	Voluntary PCP is assigned to the participant	Program coordinators contacts participant or PCP 45 days (or less) after an abnormal screening test if no supplementary exam has been confirmed in the information system. If participant is still unreachable after 90 days, send registered mail.
NB	No official process	No official process
NS	In the event of an abnormal screening report, the program works with the coordinator of each screening site to get a local PCP in the area to accept the report	Central booking site will call the participant. If not successful, central booking staff will contact the PCP to obtain participant’s current contact info
PE	Provincial Coordinator (or surgeon on call) contacts the participant	Follow-up with phone call to PCP
NL	Program will assist participant with finding a PCP	Check alternate source for address, if more recent address found re-send. Otherwise follow-up with PCP

3.4 Strategies to Reach the Abnormal Call Rate Target

The abnormal call rate (ACR) – the percentage of mammograms identified as abnormal – is a key quality indicator of breast screening programs. If the ACR is too low, it may be an indication of missed cancers detected, but if the ACR is too high, individuals may be referred to unnecessary follow-up tests. In Canada, an increase in ACR without any corresponding increase in the cancer detection rate has been observed. This means that more people are being told they have an abnormal screening test and are sent for additional testing without finding any more cancers. Improving ACRs could minimize potential harms from

over-screening and avoidable follow-up tests to ensure the benefits of screening are maintained.⁹

Efforts have been made in Canada to support programs in meeting the national ACR target. Additional information on the strategies described in Table 12 to support achievement of optimal ACRs, will be outlined in the *Pan-Canadian Framework for Action to Address Abnormal Call Rates in Breast Screening*, which will be released by the Partnership in 2020.

Table 12. Strategies^a Being Implemented to Reach the Abnormal Call Rate Target by Province/Territory

Jurisdiction	Min. Reading Volume	Double Reading	Audit & performance feedback	Comparisons with prior mammograms	Number of mammographic views	Mammographic compression	Batch reading of mammogram	Fellowship training in breast imaging	Other strategy	Were any of these strategies informed by CPAC work?
YT	-	-	-	-	-	-	-	-	-	-
NT	✓	✓		✓	✓ (4)	✓				Double reading in the process of being implemented. Came about from presentations done at ACR workshop.
NU	-	-	-	-	-	-	-	-	-	-
BC	✓		✓	✓	✓ (4)		✓		Performance feedback stats modified to highlight areas of opportunity for improvement	Strategies have been discussed at ACR workshop with varying levels of evidence
AB	✓	✓ (varies by clinics)	✓ (intend to improve)	✓	✓ (4)	✓ (intend to explore)	✓ (varies by clinics)		Technology – tomosynthesis	CPAC helped reinforced the need for these strategies and further the program's work to address issue.
SK	✓	✓ Tech supervisors only	✓	✓	✓ (4)	✓	✓	✓ - some RADs not all		Strategies implemented based on CPAC guidance and work
MB	✓		✓	✓	✓ (4)	✓	✓		Mandatory on site reading (no remote access) Program stats are published and distributed monthly	Practices in place were supported by evidence provided at meeting Capacity and or need for 'double reads' being evaluated

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Jurisdiction	Min. Reading Volume	Double Reading	Audit & performance feedback	Comparisons with prior mammograms	Number of mammographic views	Mammographic compression	Batch reading of mammogram	Fellowship training in breast imaging	Other strategy	Were any of these strategies informed by CPAC work?
ON	✓		✓	✓						
QC	✓		✓	✓	✓ (4)				Performance feedback stats modified to highlight areas of opportunity for improvement, working group on ACR, strategies have been discussed at ACR workshop with varying levels of evidence	
NB	✓	✓	✓	✓		✓				Network meetings and CAR recommendations
NS	✓	✓	✓	✓	✓ (4)		✓	✓-	Unofficial double reads. In Central zone, abnormal mammograms with low degree of suspicion that have been flagged for additional work-up are reviewed by the lead radiologist, to determine if work-up is truly needed.	

Jurisdiction	Min. Reading Volume	Double Reading	Audit & performance feedback	Comparisons with prior mammograms	Number of mammographic views	Mammographic compression	Batch reading of mammogram	Fellowship training in breast imaging	Other strategy	Were any of these strategies informed by CPAC work?
PE	✓		✓	✓	✓	✓	✓	✓ - some RADs not all		Performance feedback Comparison reads Minimum reading volumes, number of mammo views
NL	✓		✓	✓			✓			Minimum reading volume Audit feedback

~ In Nova Scotia, some radiologists have fellowship training in breast imaging.

^Though the table indicates a strategy is present within a specific jurisdiction, it does not imply that the strategy is implemented province/territory wide. The strategies may only be practiced within select clinics of a jurisdiction.

- No information was provided at the time the data were collected.

4. Breast Screening for Individuals at Elevated and High Risk

4.1 Screening for Individuals at Elevated Risk

Individuals at elevated risk are those who are considered to have a greater than average risk for developing breast cancer, but a risk level less than the highest risk group. This may include people who have a family history of breast cancer, have high breast density, used hormone replacement therapy in the past, or are at high risk for benign breast disease. This differs from individuals at high risk who have a greater lifetime risk of developing breast cancer or developing more aggressive breast cancers at an earlier age due to specific factors (e.g., genetics).

Ten provincial/territorial breast screening programs manage participants at elevated risk of developing breast cancer. Some provincial and territorial screening programs define elevated risk as having first-degree family history of breast

cancer, using hormone replacement therapy, having a breast density of equal to or over 75%, having a history of high-risk benign breast disease, and having a recommendation by a radiologist. Other provincial and territorial breast screening programs only have one to four of these characteristics listed to define elevated risk. Other characteristics that are listed as risk factors include: having personal or first-degree family history of ovarian cancer, having a first-degree male relative with breast cancer, three or more second-degree family history of breast or ovarian cancer, and documented pathology of high-risk lesions. QC and NB do not classify participants as elevated risk of developing breast cancer. Individuals who are found to be at elevated risk of developing breast cancer are in most cases screened annually with a mammogram, starting at age 40 or 50.

Table 13. Provincial and Territorial Definitions of Elevated Risk for Breast Cancer

Jurisdiction	First-degree family history	Hormone replacement therapy	Breast density > or ≥ 75%	History of high-risk benign breast disease	Radiologist recommendations	Other
YT	✓		✓ [^]		✓	
NT	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> • Personal history of breast cancer • Personal history of other cancer (i.e. ovarian cancer) • 3 or more second-degree family history (breast or ovarian)
NU*	✓	✓			✓	
BC	✓			✓		

Jurisdiction	First-degree family history	Hormone replacement therapy	Breast density > or ≥ 75%	History of high-risk benign breast disease	Radiologist recommendations	Other
AB	✓		✓	✓	✓	
SK	✓	✓			✓	<ul style="list-style-type: none"> • Personal history of breast cancer • Personal history of other cancer
MB	✓			✓	✓	<ul style="list-style-type: none"> • At least one 1st or 2nd degree female relative on either maternal or paternal side of the family with a history of breast or ovarian cancer that does not fall into the high increased risk category • Ashkenazi decent
ON	✓		✓		✓	<ul style="list-style-type: none"> • Personal or first-degree family history of ovarian cancer • First-degree male relative with breast cancer • Two or more first-degree female relatives with breast cancer at any age, or one under age 50 • Documented pathology of high-risk lesions
QC	Does not classify participants as elevated risk					
NB	Does not classify participants as elevated risk					
NS	✓	✓		✓	✓	
PE	✓		✓	✓	✓	
NL	✓		✓	✓		<ul style="list-style-type: none"> • Women with four second degree relatives on the same side of the family (grandparent, aunt, uncle, niece, nephew, half sibling with breast or ovarian cancer) • Women with three second degree relatives with breast or ovarian cancer on the same side of the family with one or more of the following: <ul style="list-style-type: none"> ○ One person affected < 50 years of age ○ Breast and ovarian cancer in the same individual ○ Male breast cancer • Women with a personal history of ovarian cancer diagnosed < 50 years of age • Women who have received mediastinal radiation before 30 years of age • Women who have been assessed by genetics and confirmed to be at a high risk of breast cancer

* Information for NU in this publication refers to opportunistic breast screening.

^ Applies to women who receive a 'D' breast density score (BI-RADs category D- extremely dense >75% glandular)

Table 14. Management of Participants at Elevated Risk by Provincial and Territorial Screening Programs

Jurisdiction	Does the program manage participants who are at elevated risk?	Screening recommendations for elevated risk			
		Screening modality	Start age	Interval	Stop age
YT	Yes	Mammography	None given	Annual	None given
NT	Yes	YKBSP: mammography and ultrasound, MRI in some cases HRBSP: mammography	40 (40 with referral from PCP, 50 self-referral)	1-2 years, based on radiologist recommendation	74 (75+ have the option to continue screening)
NU*	Yes. Referred to diagnostic centre.	-	50	-	74
BC	Yes	Mammography	40	Annual for those with family history or history of benign high-risk breast lesions	74
AB	No. Managed by PCP.	N/A	N/A	N/A	N/A
SK	Yes	Mammography	40	Annual for those with family history and high breast density	74 (75+ have the option to continue screening)
MB	Yes	Mammography	50	Varies depending on level of risk and radiologist recommendation	74 (75+ have the option to continue screening)
ON^	Yes	Mammography	50	Ongoing annually for those with family history and/or documented pathology of high-risk lesions	74
QC	No	N/A	N/A	N/A	N/A
NB	No	N/A	N/A	N/A	N/A
NS	Yes	Mammography	50 (40-49 can self-refer)	Annual	74
PE	Yes	Mammography	40	Annual	74

Jurisdiction	Does the program manage participants who are at elevated risk?	Screening recommendations for elevated risk			
		Screening modality	Start age	Interval	Stop age
NL	Yes	Mammography	50~	Annual	74~

* Information for NU in this publication refers to opportunistic breast screening.

^ The OBSP does not use the term "elevated risk", however, there are several reasons a woman in the OBSP will be recalled by the program in one year: documented pathology of high risk lesions; a personal history of ovarian cancer; two or more first-degree female relatives with breast cancer at any age; one first-degree female relative with breast cancer under age 50; one first-degree relative with ovarian cancer at any age; one male relative with breast cancer at any age; breast density ≥ 75 percent at the time of screening; or recommendation by the radiologist at the time of screening or assessment

~ Start/stop age is variable depending on conditions for elevated risk designation (e.g. breast density $\geq 75\%$ may be a transitory condition, therefore start/stop age would be adjusted)

- No information was provided at the time the data were collected.

4.2 Breast Density

Evidence shows that individuals with dense breasts have an increased risk of developing breast cancer, and that having dense breasts can make it more difficult to detect breast cancer by mammogram alone.⁸ What is not clear, however, is whether more frequent mammographic screening or 'supplemental screening' with ultrasound or MRI improves outcomes for these people.⁷

In Canada, some jurisdictions classify individuals with high breast density as being at elevated risk and, consequently, these individuals are, in most cases, eligible for more frequent screening. Most of these jurisdictions define high breast density as $\geq 75\%$ glandular tissue.

Ten provincial/territorial breast screening programs collect information on breast density. In ON and SK, individuals who have dense breasts receive a breast density fact sheet with their mammography results. Participants are also notified that their next mammogram will be in a year due to dense breast tissue. MB and NL advise individuals of their breast density in the result letter. BC also notifies participants of their breast density. NS began advising individuals of their breast density in their results letter starting in fall 2019, as well as including a breast density fact sheet alongside all results letters.

Figure 9. Breast Density Data Collection and Notification in Canada (July 2019)

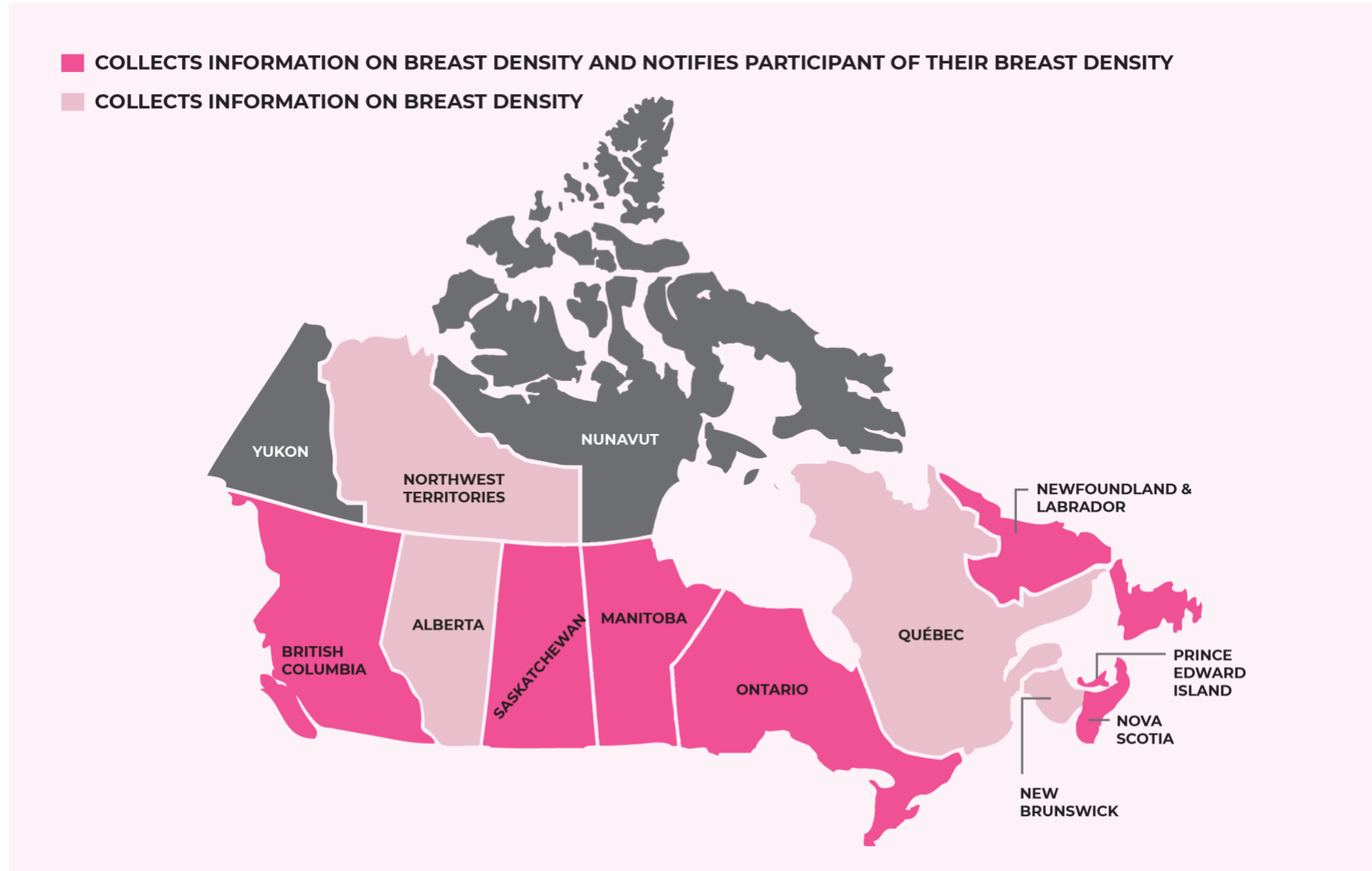


Table 15. Definition and Data Collection for High Breast Density by Screening Programs in Canada

Jurisdiction	Definition of high breast density	Does the program collect information on breast density?	Does the program recommend more frequent screening for those with high breast density?	Are participants notified of their breast density?		If participants are not notified of their breast density, are there any plans to send out notifications?
				Yes	No	
YT	BI-RADS [^] category D	No	✓		✓ Participants can request information from their PCP; all screening reports include density information	Not at this time
NT	≥ 75% glandular tissue	Yes	✓		✓ Documented on mammogram report to PCP	No
NU*	-	-	✓	-	-	-
BC	BI-RADS ^{^~}	Yes	-	✓ They receive their BI-RADS breast density assessment with their results and an informational brochure		NA
AB	≥ 75% glandular tissue	Yes	-		✓ Women can request information from their PCP as all screening radiology reports density information	Program is working on a comprehensive plan to address density including provision of risk information to women & PCP, standardized reporting and appropriate supplemental exams recommendations.

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Jurisdiction	Definition of high breast density	Does the program collect information on breast density?	Does the program recommend more frequent screening for those with high breast density?	Are participants notified of their breast density?		If participants are not notified of their breast density, are there any plans to send out notifications?
				Yes	No	
SK	≥ 75% glandular tissue	Yes	✓	✓** Approximately one week after their mammogram they receive a letter informing them that they have breast density along with a recommendation to screen annually and an information leaflet about breast density		N/A
MB	≥ 75% glandular tissue	Yes	-	✓ Breast density is reported on the patient and PCP result letter, indicated as <75% or ≥75% (extremely dense)		N/A
ON	≥ 75% glandular tissue	Yes	-	✓‡ Participant receives a screening result letter accompanied by a breast density fact sheet. The letter will inform the participant that their next mammogram should be in one year due to dense breast (greater than or equal to 75%) tissue as seen on their mammogram.		N/A
QC	≥ 75% glandular tissue	Yes	-		✓ PCP receives report with breast density. PCP can inform the patient.	No

Jurisdiction	Definition of high breast density	Does the program collect information on breast density?	Does the program recommend more frequent screening for those with high breast density?	Are participants notified of their breast density?		If participants are not notified of their breast density, are there any plans to send out notifications?
				Yes	No	
NB	Adoption of BI-RADS [^] classification in progress; will be C or D	Yes; however only if categorized as < or > 50%; data is not consistently submitted	Recommendations for the management of High Breast Density are under planning and development; Currently supplemental screening is based on Radiologist recommendations		✓ Currently, participants can request their breast density results according to RHA data request processes	Recommendations are in progress to include breast density results on all radiology reports so that PCPs can inform women of their breast density results
NS	Category C (heterogeneously dense) or Category D: (extremely dense)	Yes	Radiologist can recommend more frequent breast screening.	✓ Starting in Fall 2019, women are notified of their breast density (BI-RADS category) in their screening results letter, accompanied by a breast density fact sheet		N/A
PE	≥ 75% glandular tissue	Yes	-	✓ Participant receives a screening result letter with the breast density and a density fact sheet as of January 2020. Prior to 2020, the PCP was notified of breast density information.		N/A
NL	≥ 75% glandular tissue	Yes	✓	✓ Patient are told in results letter that their screening interval is 12 months due to the nature of their breast tissue		N/A

* Information for NU in this publication refers to opportunistic breast screening.

[^] Breast Imaging and Reporting Data System (BI-RADS) categories for breast density: A- almost entirely fatty (<25% glandular); B- scattered fibroglandular densities (25-50% glandular); C- heterogeneously dense (51-75% glandular); D- extremely dense (>75% glandular).

~ BC radiologists categorize breast composition using BI-RADS to assess the volume of breast density. The C and D categories are commonly referred to as “dense”. BC Breast Screening currently provides BI-RADS assessment for women and providers; however, it has no definition for “high breast density”.

**Informed that they have dense breasts, but not informed what their dense percentage is
 ‡Only participants with normal results who have dense breasts, as defined by the program, are informed
 - No information was provided at the time the data were collected.

4.3 Screening for Individuals at High Risk

Individuals at high risk have a greater lifetime risk of developing breast cancer or developing more aggressive breast cancers at an earlier age. Currently, there are no national guidelines for screening individuals at high risk and screening protocols vary across jurisdictions. The definition of high risk of developing breast cancer also varies across Canada.

Table 16. Provincial and Territorial Definitions of High Risk for Breast Cancer

Jurisdiction	Known carrier of a deleterious gene mutation (e.g. BRCA1, BRCA2)	First-degree relative of a mutation carrier (e.g. BRCA1, BRCA2) and have declined genetic testing	At ≥ 25% lifetime risk of breast cancer (assessed using IBIS or BOADICEA risk assessment tool)	Received chest radiation before age 30 and at least 8 years previously	Other
YT	Does not classify participants as high risk				
NT	✓	✓		✓	
NU	✓	✓	✓	✓	
BC	✓	✓	✓	✓	<ul style="list-style-type: none"> • Very strong family history of breast cancer: 2 cases of breast cancer in close female relatives on the same side of the family, both diagnosed before age 30, or 3 or more cases of breast cancer in close female relatives on the same side of the family, with at least one diagnosed before age 50
AB	✓	✓	✓	✓	<ul style="list-style-type: none"> • Ashkenazi decent • ADH, ALH, LCIS
SK					<ul style="list-style-type: none"> • Abnormal mammograms • Breast density • ADH, LCIS • physician/radiologist request
MB	✓	-	✓	-	<ul style="list-style-type: none"> • The 'Claus model' of risk assessment • Ashkenazi decent • ADH, ALH, LCIS
ON	✓	✓	✓	✓	<ul style="list-style-type: none"> • Ages 30-74 • No acute breast symptoms

Jurisdiction	Known carrier of a deleterious gene mutation (e.g. BRCA1, BRCA2)	First-degree relative of a mutation carrier (e.g. BRCA1, BRCA2) and have declined genetic testing	At ≥ 25% lifetime risk of breast cancer (assessed using IBIS or BOADICEA risk assessment tool)	Received chest radiation before age 30 and at least 8 years previously	Other
					<ul style="list-style-type: none"> Deleterious gene mutations that confer higher risk of breast cancer (e.g., TP53, PTEN, CDH1)
QC					Does not classify participants as high risk
NB					Does not classify participants as high risk
NS	✓	✓	✓	✓	
PE	✓	✓	✓	✓	
NL	✓	✓		✓	

* Information for NU in this publication refers to opportunistic breast screening.

Abbreviations: Atypical Ductal Hyperplasia (ADH)[^], Atypical Lobular Hyperplasia (ALH)[^], and Lobular Carcinoma in Situ (LCIS)[~]

[^] <https://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/hyperplasia-of-the-breast-ductal-or-lobular.html>

[~] <https://www.cancer.org/cancer/breast-cancer/non-cancerous-breast-conditions/lobular-carcinoma-in-situ.html>

Six provincial/territorial breast screening programs manage participants identified as high risk of developing breast cancer. Their management strategies include recommending mammography, MRI and/or ultrasound screening. Some programs do not manage high-risk participants directly but refer those individuals to a high-risk program or clinic. Depending on the province or territory, guidelines recommend that individuals at high risk start screening at age 30, 40 or 50 and stop at age 69 or 74.

Table 17. Management of Participants at High Risk by Provincial and Territorial Screening Programs

Jurisdiction	Does the program manage participants who are high risk?		How are high risk participants managed?	Screening recommendations for high risk			
	Yes	No		Screening modality	Start age	Interval	Stop age
YT		✓	-	N/A	N/A	N/A	N/A
NT	✓		Mammography only other modalities managed by PCP	YKBSP: mammography and ultrasound; MRI in some cases HRBSP: mammography	40	Based on radiologist recommendation	74
NU*	✓		Referred to diagnostic centre	Mammography	Varies	-	74
BC		✓	Eligible for annual routine screening, but no supplemental screening, referred to high risk clinic	Mammography	40	Annual	74
AB		✓	Managed by PCP or high risk clinics	Mammography & screening breast MRI	No earlier than 25 and no later than 40	Annual	74
SK		✓	-	N/A	N/A	N/A	N/A
MB	✓		Recalled for routine screening	Mammography	50	Annual (can vary) Or as per radiologist recommendations	74 (75+ have option to continue screening)
ON^	✓		Referred to the High Risk OBSP	30-69: Mammography and MRI (or ultrasound if MRI is not medically appropriate) 70-74: Mammography only	30	Annual	74
QC		✓	-	N/A	N/A	N/A	N/A
NB		✓	Currently managed by radiologist	N/A	N/A	N/A	N/A

Jurisdiction	Does the program manage participants who are high risk?		How are high risk participants managed?	Screening recommendations for high risk			
	Yes	No		Screening modality	Start age	Interval	Stop age
NS~	✓		Eligible for annual screening mammography and screening breast MRI. Annual requisitions for MRI required.	Screening Mammography and MRI spaced 30 days apart	30	Annual	74
PE	✓		Annual screening (referral from PCP is required)	Mammography and MRI	40 (or as recommended by a radiologist)	Annual	74
NL		✓	Eligible for annual routine screening, but no supplemental screening, PCP may order supplemental testing – MRI	N/A	N/A	N/A	N/A

* Information for NU in this publication refers to opportunistic breast screening.

^ Participants must have no acute breast symptoms and require a physician referral, a valid Ontario Health Insurance Plan number, and confirmed high risk status based on program criteria to participate in the High Risk Ontario Breast Cancer Screening Program (High Risk OBSP).

~ Nova Scotia Breast Screening Program is working on obtaining approval of high-risk screening clinical practice guidelines.

- No information was provided at the time the data were collected.

5. Breast Screening Pilots and Studies

Several jurisdictions conduct or participate in pilots or studies related to breast screening. AB has undertaken a study to assess cancer screening and outcomes among First Nations people in Alberta. BC participates in the Tomosynthesis Mammographic Imaging Screening Trial, which is a randomized breast screening study. ON did a study to assess the comparative effectiveness of tailored and non-tailored Facebook ads on social media engagement and intention to get screened among women aged 50-59 years in three targeted areas. NS conducted or participated in three studies:

A study to describe the rate of false-positive (FP) screening mammograms and to describe the extent of the investigations after an FP; a radiologic review of interval breast cancer cases to determine rates of true interval and missed cancers in NS; and a study to compare pathologic characteristics and clinical outcomes of true interval and screen-detected invasive breast cancers among program participants. Please note that the pilots and studies described in this section are not a complete list of all breast cancer research activities happening across Canada.

Table 18. Breast Screening Pilots and Studies in Alberta

Title	Assessing cancer screening and outcomes among First Nations people in Alberta
Purpose of the Study	The purpose of the study is to assess cancer screening and outcomes among First Nations people in Alberta.
Start and end date	March 2019 – March 2020
# of individuals recruited	Retrospective data
Study/ Pilot Inclusion Criteria	1) ATOP CPG for breast, cervical & CRC cancers 2) Target populations + First Nations
Results	TBD
Referral process	Retrospective data
Recruitment methods	Database
First Nations, Inuit and Métis Recruitment	Partnership with Alberta’s First Nations Information Governance Centre using the First Nations identifiers.
Reference (if the study has been published)	Not published yet.

Table 19. Breast Screening Pilots and Studies in Canada

Title	The Tomosynthesis Mammographic Imaging Screening Trial
Purpose of the Study	The Tomosynthesis Mammographic Imaging Screening Trial (TMIST or study EA1151) is a randomized breast screening study by the ECOG-ACRIN Cancer Research Group. The trial is being funded by the National Cancer Institute through the NCI Community Oncology Research Program. The phase III trial is studying whether screening for breast cancer with tomosynthesis mammography is superior to digital mammography, and whether it reduces the need for additional imaging or treatment.
Start and end date	July 2017 - Ongoing (estimated primary completion date is 2025)
# of individuals recruited	Currently enrolling about 165,000 women who are planning to have regular mammograms.
Study/ Pilot Inclusion Criteria	Women ages 45 to 74 who are planning to get a routine screening mammogram are eligible for this trial. The trial is taking place in around 150 mammography clinics in the United States and Canada. In Canada, patients are being recruited in 6 centres in Vancouver, London, Toronto, Ottawa, Quebec City, and Montreal.
Results	TBD
Recruitment Methods	Women attending routine screening mammogram examinations are approached to participate.
First Nations, Inuit and Métis Recruitment	As this study is led in the United States there are no specific provisions for recruitment of First Nations, Inuit, or Métis participants.
Recruitment for Underscreened Populations	There is an attempt to include representative numbers from underscreened populations according to race and some socio-economic factors. This is accomplished via selection of study sites and translation of study materials into multiple languages, appropriate to the catchment sites. Recruitment rates for these populations are continuously monitored to guide initiatives to obtain representative recruitment.
Reference (if the study has been published)	https://ecog-acrin.org/tmist

Table 20. Breast Screening Pilots and Studies in Ontario

Title	2018 Breast Cancer Facebook Study: Findings Report
Purpose of the Study	To assess the comparative effectiveness of tailored and non-tailored Facebook ads on social media engagement and intention to get screened among women aged 50-59 years in three targeted areas.
Start and end date	Six ads ran for a month on Facebook starting on January 25th 2018.
# of individuals recruited	Facebook ads reached 59,478 women across all three sites (Hamilton: 18,556; Ottawa: 31,629; Sudbury: 9,293).
Study/ Pilot Inclusion Criteria	Women ages 50 to 59 years with Facebook accounts and living in one of the three study sites: Sudbury, Hamilton, Ottawa.
Results	Tailored ad content generated more engagement (i.e., clicks, engagements, link clicks) with the ad than non-tailored ad content. Tailored ad content generated more intention pledges than non-tailored ad content in Hamilton and Sudbury, but not in Ottawa.
Recruitment methods	Facebook geotargeting methods were used to target ads to accounts of women ages 50 to 59 years in Sudbury, Hamilton, and Ottawa.
Recruitment for Underscreened Populations	Hot spot analysis was conducted at the census subdivision (CSD) level to identify the statistically significant urban CSDs of high counts of women aged 50-59 years who had not had a mammogram in the last 5 years (as of July 2016).

Table 21a. Breast Screening Pilots and Studies in Nova Scotia

Title	The Burden of False-Positive Results in Analog and Digital Screening Mammography: Experience of the Nova Scotia Breast Screening Program
Purpose of the Study	The Canadian Task Force on Preventive Health Care released recommendations for breast screening, in part, based on harms associated with screening. The purpose of this study was to describe the rate of false-positive (FP) screening mammograms and to describe the extent of the investigations after an FP.
Start and end date	January 01 2000 to December 31 2011
# of individuals recruited	608,088 screening mammograms <ul style="list-style-type: none"> • 408,620 analogue • 199,468 digital
Study/ Pilot Inclusion Criteria	Historical cohort of screening mammograms performed with women ages 40-69 years old at screen
Results	<ul style="list-style-type: none"> • False-positive (FP) screening mammogram rate decreased with increasing age • FP rate higher among first screens compared with rescreens • The need for further investigation varied by age group, with invasive procedures being more heavily used as women age
Reference (if the study has been published)	Payne JI, Martin T, Caines JS, Duggan R. The burden of false-positive results in analog and digital screening mammography: experience of the Nova Scotia Breast Screening Program. Canadian Association of Radiologists Journal 2014; 65: 315-320. DOI: https://doi.org/10.1016/j.carj.2014.03.002 .

Table 21b. Breast Screening Pilots and Studies in Nova Scotia

Title	A review of interval breast cancers diagnosed among participants of the Nova Scotia Breast Screening Program
Purpose of the Study	To conduct a radiologic review of interval breast cancer cases to determine rates of true interval and missed cancers in Nova Scotia, Canada
Start and end date	January 01 1991 to December 31 2004
# of individuals recruited	<ul style="list-style-type: none"> • 115,433 breast screening participants • These women underwent 302,234 screening examinations • 342 interval breast cancer cases
Study/ Pilot Inclusion Criteria	Interval breast cancer cases diagnosed among women aged 40-69 from 1991 through 2004, who were participants in the Nova Scotia Breast Screening Program
Results	<ul style="list-style-type: none"> • True interval cancer rates should be differentiated from missed cancer rates as part of on-going quality assurance. • The rate of missed cancers per 1000 women screened annually was one-half of the true interval rate (for ages 40-49, 0.45 vs 0.93; for ages 50-69, 1.08 vs 2.22). • Among women aged 50-69 years who were screened biennially, the rate of missed cancers per 1000 women screened was one-third of the true interval rate (0.90 vs 3.15). • The rate of missed cancers per 10,000 screening examinations was one-half of the true interval rate among those 40-49 years old (1.95 vs 3.99) and one-third of the true interval rate among those 50-69 years old (3.34 vs 10.44).
Reference (if the study has been published)	Payne JI, Caines JS, Gallant J, Foley TJ. A review of interval breast cancers diagnosed among participants of the Nova Scotia Breast Screening Program. Radiology 2013; 266 (1): 96-103. DOI: 10.1148/radiol.12102348 .

Table 21c. Breast Screening Pilots and Studies in Nova Scotia

Title	Comparison of clinical-pathological characteristics and outcomes of true interval and screen-detected invasive breast cancer among participants of a Canadian breast screening program: a nested case-control study
Purpose of the Study	To compare pathologic characteristics and clinical outcomes of true interval and screen-detected invasive breast cancers among participants of a Canadian, population-based, breast screening program.
Start and end date	January 01 1991 to December 31 2004
# of individuals recruited	115,433 breast screening participants. These women underwent 302,234 screening examinations, and were diagnosed with 1202 screen-detected invasive cancers
Study/ Pilot Inclusion Criteria	Screen-detected cases were selected from among the program participants screened during 1991-2004, and matched to true interval cases on a 2:1 basis by (1) 5-year age group at diagnosis, (2) recommended screening interval length, and (3) time period
Results	True interval breast cancers have more adverse prognostic factors compared with screen-detected cases, and despite receiving more adjuvant chemotherapy, are associated with significantly poorer survival outcomes.
Reference (if the study has been published)	Rayson D, Payne JI, Abdoell M, Barnes PJ, MacIntosh RF, Foley T, Younis T, Burns A, Caines J. Comparison of clinical-pathologic characteristics and outcomes of true interval and screen-detected invasive breast cancer among participants of a Canadian breast screening program: a nested case-control study. <i>Clinical Breast Cancer</i> . 2011; 11(1): 27-32. DOI: 10.3816/CBC.2011.n.005 .

Table 21d. Breast Screening Pilots and Studies in Nova Scotia

Title	Investigating the relationship between mammographic breast density and triple negative breast cancers in Nova Scotia, Canada
Purpose of the Study	To estimate the association between mammographic breast density (MBD) and triple negative breast (TNBC) cancers, as well as to estimate the discriminatory ability of MBD, alone and with clinical risk factors, in the screening population.
Start and end date	January 01 2009 to December 31 2015
# of individuals recruited	121 TNBC cases and 6807 controls
Study/ Pilot Inclusion Criteria	Cases: All breast cancers (in situ and invasive) diagnosed in Nova Scotia among women who underwent a digital breast screening mammogram. Controls: Randomly selected and 3-to-1 frequency matched to breast cancer cases on age at screen and year of screen.
Results	A significant positive association was found between MBD and TNBC. The addition of clinical factors to density improved the discriminatory ability of the prediction models.

Table 21e. Breast Screening Pilots and Studies in Nova Scotia

Title	Transitioning to full-field digital mammography: the impact of technology change on mammography volumes in Nova Scotia
Purpose of the Study	To evaluate the impact of the transition to digital mammography on screening mammography throughput volumes in Nova Scotia, Canada, and to determine whether the proportion of diagnostic mammograms changed following this transition.
Start and end date	January 01 2006 to December 31 2014
# of individuals recruited	N/A Mammography volumes were analyzed using a multi-group interrupted time-series (ITS) design.
Study/ Pilot Inclusion Criteria	In Nova Scotia, 10 mammography sites transitioned from analog to digital technology between 2007 and 2010. Mammography volumes were obtained for these ten fixed sites of the Nova Scotia Breast Screening Program.
Results	Four sites in Nova Scotia experienced a statistically significant increase in screening throughput volumes following the introduction of digital mammography. The remaining six sites experienced no statistically significant change in screening throughput volumes following the intervention. Pooled analysis for all sites found that at the system level, overall the introduction of digital mammography did not have a statistically significant change the screening throughput volumes, nor the proportion of diagnostic mammograms performed.
Reference (if the study has been published)	Brydon M, Kephart C, Payne J, Blake J. Transitioning to Full Field Digital Mammography in Nova Scotia: using interrupted time series (ITS) methods to study the impact of technology change on mammography volumes. J Med Imaging Radiat Sci (in press).

Table 21f. Breast Screening Pilots and Studies in Nova Scotia

Title	Strength in Numbers*
Purpose of the Study	Historically, First Nations in Nova Scotia did not have access to reliable health data that could help better monitor changes in the health of their communities, make informed decisions about limited health care services, and assist with negotiating services that First Nations communities need. Beginning in October 2012, Nova Scotia First Nations, the province, and Health Canada worked collaboratively to create a First Nations Client Linkage Registry (FNCLR). By linking to the FNCLR, Nova Scotia Breast Screening Program was able to analyze breast screening data for First Nations communities, and to provide them with breast screening indicator reports. Rather than a one-time study, this work is part of an on-going breast screening surveillance partnership between Nova Scotia First Nations and the Nova Scotia Breast Screening Program. First Nations will be provided with regularly updated breast screening indicator reports.
Start and end date	January 01 2004 – Dec 31 2014
Study/ Pilot Inclusion Criteria	Race and ethnicity are not captured in the Nova Scotia Breast Screening Program's information system. Linkage to the FNCLR enabled the identification of First Nations women who came to breast screening from 2004 – 2014.
Results	Breast screening participation rates in First Nations women ages 50-69 were lower than Nova Scotia women ages 50-69. Retention rates were also lower in First Nations women than in Nova Scotia women.
First Nations, Inuit and Métis Recruitment	First Nations individuals were not recruited in the traditional sense. The FNCLR includes First Nations individuals who are Registered Indians (or Status Indians) under the Indian Act who are members of the participating Bands and who: <ul style="list-style-type: none"> • Live on their own reserve, or

Title	Strength in Numbers*
	<ul style="list-style-type: none"> • Live on another reserve (either in NS or another Canadian province), or • Live off reserve
Reference (if the study has been published)	Cancer Bulletin

* This project is a partnership between First Nations in Nova Scotia, Nova Scotia Department of Health and Wellness, multiple provincial programs, Medavie Blue Cross, and our health authorities.

Table 21g. Breast Screening Pilots and Studies in Nova Scotia

Title	Impact of Detection Method and Age on Survival Outcomes in Triple-Negative Breast Cancer: A Population-Based Cohort Analysis
Purpose of the Study	Most investigations have compared triple-negative breast cancer (TNBC) to non-TNBC to elucidate clinical or epidemiologic differences between subtypes. A contemporary cohort of patients with primary TNBC was examined by detection and age at diagnosis within a population-based breast screening program to examine survival outcomes.
Start and end date	January 1, 2005, and December 31, 2012
# of individuals recruited	412 patients comprised the study population
Study/ Pilot Inclusion Criteria	All women with a diagnosis of primary TNBC between January 1, 2005, and December 31, 2012, in Nova Scotia. Clinicopathologic and detection variables were abstracted from the Nova Scotia Breast Screening Program. Patient charts were abstracted for adjuvant therapies and survival outcomes, supplemented by provincial vital statistical data.
Results	Almost half of the study population was aged over 60 years (46.3%) and 30.2% had screen-detected disease. There were no significant differences in prognostic variables between age groups. Younger patients were more likely to receive adjuvant chemotherapy (96.3% ≤ 49 years vs. 31.2% ≥ 70 years), but there were no differences in disease-free or breast cancer-specific survival between the age groups. For those with disease recurrence, median time to recurrence and death was shorter for younger patients (17 vs. 26 months, 16 vs. 33 months respectively; age 40-49 vs. 70+). Those with screen-detected disease had better disease-free, breast cancer-specific, and overall survival outcomes.
Reference (if the study has been published)	Clin Breast Cancer. 2018 Oct;18(5):e955-e960. doi: 10.1016/j.clbc.2018.04.013. Epub 2018 Apr 28. Clin Breast Cancer. 2018. PMID: 29885790 .

Table 21h. Breast Screening Pilots and Studies in Nova Scotia

Title	Utility of Relative and Absolute Measures of Mammographic Density vs Clinical Risk Factors in Evaluating Breast Cancer Risk at Time of Screening Mammography
Purpose of the Study	Various clinical risk factors, including high breast density, have been shown to be associated with breast cancer. The utility of using relative and absolute area-based breast density-related measures was evaluated as an alternative to clinical risk factors in cancer risk assessment at the time of screening mammography.
Start and end date	January 01 2009 to June 30 2011
# of individuals recruited	392 females with unilateral breast cancer (cases) and 817 age-matched controls
Study/ Pilot Inclusion Criteria	A frequency-matched (1:2) case-control study design was employed. Cases and controls were sampled from within the population of females aged 40–75 years who underwent digital mammography through the Nova Scotia Breast Screening Program. Case subjects were restricted to pathologically confirmed cases of unilateral screen-detected breast cancer. Two control subjects were randomly selected from within the screen-normal population and matched on age at screen within 1 year.
Results	The risk factor-based model generated an AUROC of 0.535, while the model including only breast density-related measures generated a significantly higher AUROC of 0.622 ($p < 0.001$). The third combined model generated an AUROC of 0.632 and performed significantly better than the risk factor model ($p < 0.001$) but not the density-related measures model ($p = 0.097$).
Reference (if the study has been published)	Br J Radiol. 2016;89(1059):20150522. doi: 10.1259/bjr.20150522. Epub 2015 Dec 21.Br J Radiol. 2016. PMID: 26689094 .

Table 21i. Breast Screening Pilots and Studies in Nova Scotia

Title	Assessing Breast Cancer Risk Within the General Screening Population: Developing a Breast Cancer Risk Model to Identify Higher Risk Women at Mammographic Screening
Purpose of the Study	To develop a breast cancer risk model to identify women at mammographic screening who are at higher risk of breast cancer within the general screening population.
Start and end date	January 01 2009 to December 31 2015
# of individuals recruited	1882 cases and 5888 controls
Study/ Pilot Inclusion Criteria	All women aged 40-75 diagnosed with screen-detected or interval breast cancer ($n = 1882$) were frequency-matched 3:1 on age and screen-year with women without screen-detected breast cancer ($n = 5888$).
Results	The AUC was 0.597 for a risk model including only image-derived risk factors. The successive addition of core biopsy and family history significantly improved performance (AUC = 0.660, $p < 0.001$ and AUC = 0.664, $p = 0.04$, respectively). Adding the three remaining risk factors did not further improve performance (AUC = 0.665, $p = 0.45$). There was almost perfect agreement ($\kappa = 0.97$) between risk assessments based on a classifier derived from image-derived risk factors, core biopsy, and family history compared with those derived from a model including all available risk factors.
Reference (if the study has been published)	Eur Radiol. 2020 May 1. doi: 10.1007/s00330-020-06901-x. Online ahead of print.Eur Radiol. 2020. PMID: 32358648 .

Table 21j. Breast Screening Pilots and Studies in Nova Scotia

Title	Comparison of Clinical-Pathologic Characteristics and Outcomes of True Interval and Screen-Detected Invasive Breast Cancer Among Participants of a Canadian Breast Screening Program: A Nested Case-Control Study
Purpose of the Study	Previous analyses of interval breast cancers have been limited because of a lack of control for screening interval length and patient age, failure to restrict the interval group to 'true' intervals, and incomplete descriptions of pathology, adjuvant therapies and clinical outcomes.
Start and end date	January 01 1991 to December 31 2004
# of individuals recruited	241 true interval invasive cases, 481 screen-detected cases.
Study/ Pilot Inclusion Criteria	A nested case-control study within the population-based Nova Scotia Breast Screening Program was performed. All true interval cases were identified and matched 1:2 to screen-detected cases (age, screening interval, time period).
Results	Interval cases were more likely to be > 1 cm (odds ratio [OR] = 1.76; 95% CI, 1.10-2.83), grade 3 (OR = 2.71; 95% CI, 1.49-4.92), and have lymphovascular invasion (OR = 3.06; 95% CI, 1.85-5.07). Interval cases received more adjuvant chemotherapy (OR = 4.37; 95% CI, 3.03-6.30) and radiation (OR = 1.43; 95% CI, 1.02-2.00). The 5-year Kaplan-Meier estimates of disease-free and overall survival rates for true intervals and screens were 0.830 (95% CI, 0.770-0.875) versus 0.926 (95% CI, 0.898-0.947) and 0.860 (95% CI, 0.804-0.901) versus 0.937 (95% CI, 0.910-0.956), respectively.
Reference (if the study has been published)	Clin Breast Cancer. 2011 Mar;11(1):27-32. doi: 10.3816/CBC.2011.n.005.Clin Breast Cancer. 2011. PMID: 21421519 .

Table 21k. Breast Screening Pilots and Studies in Nova Scotia

Title	Inter- and Intra-Provincial Variation in Screen-Detected Breast Cancer Across Five Canadian Provinces: A CanIMPACT Study
Purpose of the Study	Breast cancer screening aims to identify cancers in early stages when prognosis is better and treatments less invasive. The purpose of this study is to describe the inter- and intra-provincial variation in the percentage of screen-detected cases under publicly funded healthcare systems and factors related to having screen- vs non-screen-detected breast cancer across five Canadian provinces.
Start and end date	January 01 2007 to December 31 2012
Study/ Pilot Inclusion Criteria	Women aged 40+ diagnosed with incident breast cancer from 2007 to 2012 in five Canadian provinces were identified from their respective provincial cancer registries.
Results	There was significant inter- and intra-provincial variation by age. Screen detection ranged from 42% to 52% in ages 50-69 but women aged 50-59 had approximately 4-8% lower screen detection than those aged 60-69 in all provinces. Screening associations with income quintile and rurality varied across provinces. Those least likely to be screen-detected within a province were consistently in the lowest income quintile; OR ranged from 0.62-0.89 relative to highest income quintile/urban patients aged 50-69. Lack of visits to primary care 30 months prior to diagnosis was also consistently associated with lower odds of screen detection (OR range, 0.37-0.76).
Reference (if the study has been published)	Canadian Journal of Public Health. 2020 Feb 4. Online ahead of print. PMID: 32020541 .

6. Population Outreach

In general, screening participation rates are low among First Nations, Inuit and Métis.⁹ This is also the case for low-income individuals, new immigrants, individuals living in rural communities, and other underserved populations.¹⁰ A variety of strategies have been implemented across Canada to help address screening participation in underscreened populations.

6.1 Framework for Interventions to Improve Cancer Screening

The Community Preventive Services Task Force (CPSTF), supported by the US Centers for Disease Control and Prevention (CDC), carried out an extensive review of factors related to screening for breast, cervical, colorectal and skin cancer. The review focused on interventions that increase community demand and access and increase provider delivery. The interventions identified aim to increase screening rates across the population but could also support efforts to improve screening equity. The framework outlines evidence-based intervention strategies to support decision making.

Table 22. CDC Framework for Interventions to Improve Cancer Screening¹³

Increase Community Demand	Increase Community Access	Increase Provider Delivery
<ul style="list-style-type: none"> • Group Education • One-on-one Education • Client Reminders • Client Incentives • Mass Media • Small Media 	<ul style="list-style-type: none"> • Interventions to Reduce Client Out-Of-Pocket Costs • Interventions to Reduce Structural Barriers <ul style="list-style-type: none"> ○ Reducing Administrative Barriers ○ Providing Appointment Scheduling Assistance ○ Using Alternative Screening Sites ○ Using Alternative Screening Hours ○ Providing Transportation ○ Providing Translation ○ Providing Childcare 	<ul style="list-style-type: none"> • Provider Reminders • Provider Incentives • Provider Assessment and Feedback

6.2 First Nations, Inuit and Métis



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CANADIAN JURISDICTIONS IMPLEMENTING STRATEGIES TO
CONNECT WITH FIRST NATIONS, INUIT AND/OR MÉTIS

According to the limited data specific to First Nations, Inuit and Métis, participation rates for breast screening are much lower among First Nations, Inuit and Métis than non-Indigenous people in Canada. The data also indicate considerable variation in screening participation across geographic location.⁹

The breast screening program in NT collects Indigenous and/or People-specific data (e.g. First Nations, Inuit, and/or Métis identifiers), which is identified through patient health care numbers. This information is utilized to report screening rates by ethnicity to the Northwest Territories Department of Health. BC also collects Indigenous and/or people-specific data (e.g. First Nations, Inuit, and/or Métis identifiers) through self-reporting as part of a background survey.

These data are used to report on program participation rates. Single ethnicity responses are compared with National Household Survey data. Similarly, MB has a questionnaire that participants fill out at their appointment which includes a question asking “Are you a Canadian Aboriginal person (First Nations, Métis, or Inuit). Participants can respond “yes”, “no”, or “no response”. This information is used for internal operations and planning.

Furthermore, AB is currently in the process of working with First Nations groups to obtain these data for their province.

Screening programs in nine provinces and one territory report work with First Nations, Inuit and/or Métis to increase participation in breast screening. This work includes engaging First Nations, Inuit and Métis in decision-making and informing approaches to culturally appropriate screening, program resources specific to First Nations, Inuit and Métis, and engaging with healthcare providers working directly with First Nations, Inuit and Métis communities. Specifically, some programs engage with First Nations, Inuit and Métis in the development of cancer plans and through working groups. Dedicated mobile visits have also been implemented into several screening programs in order to reach First Nations, Inuit and Métis communities, along with other programs resources such as culturally appropriate material, presentations and social media campaigns. In addition, some strategies were put in place to help educate health care providers working directly with First Nations, Inuit and Métis communities.

No strategies related to provider incentives, client incentives or childcare were reported.

Figure 10. Strategies to Increase Screening Participation Among First Nations, Inuit and Métis (July 2019)

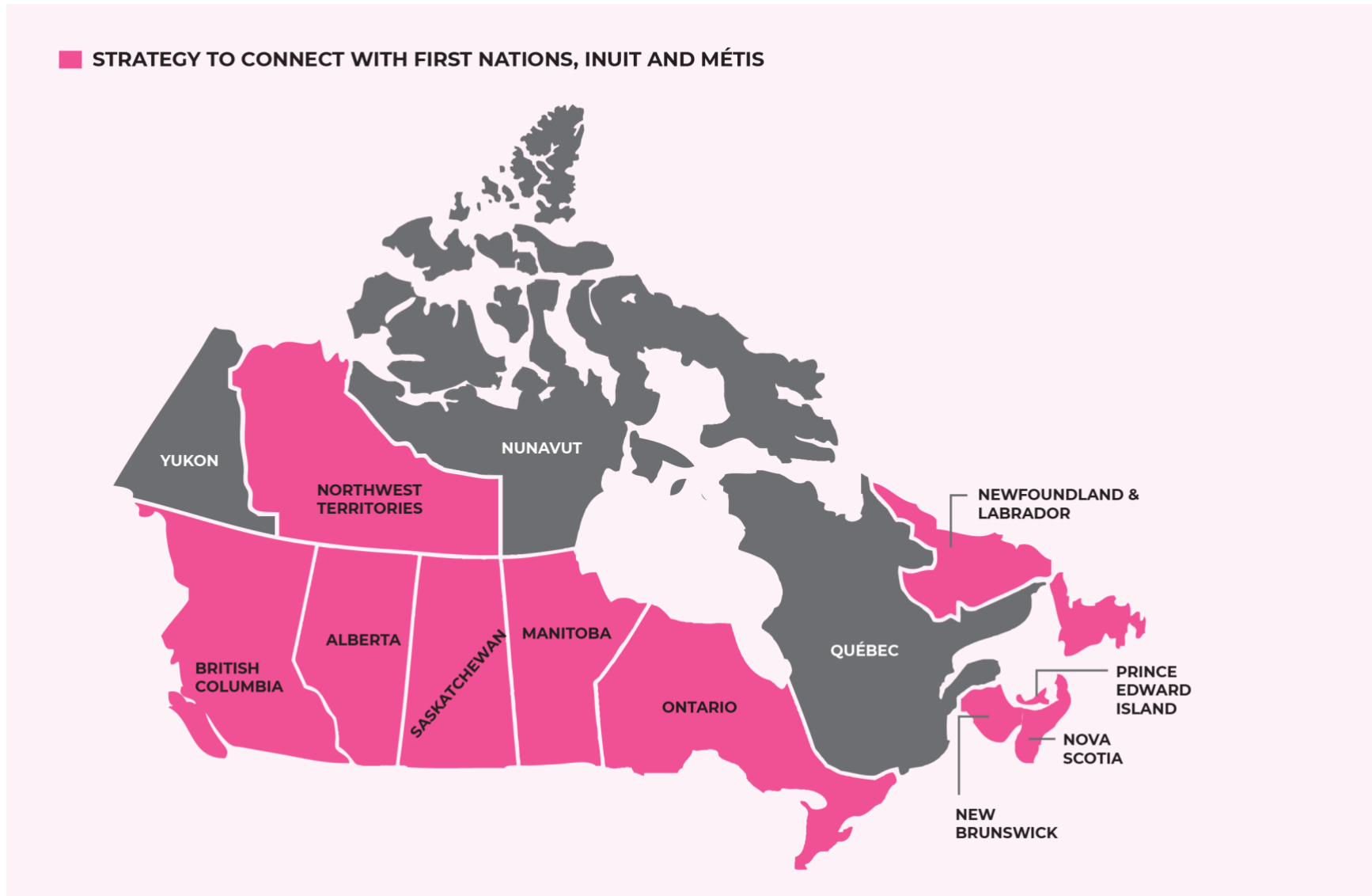


Table 23. Group Education Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓		✓	Conduct outreach educational sessions and attend health fairs in Indigenous communities.
BC	✓	✓	✓	<ul style="list-style-type: none"> Partner with key stakeholders and partner organizations to coordinate group education sessions.
MB	✓	✓	✓	<ul style="list-style-type: none"> Community engagement and outreach through the Screening Program Health Educator group. Partnerships with Regional Health Authorities, Nursing Stations, Health Directors, tribal councils, Wellness Centres, healthcare providers, and valued stakeholders. Partnerships with the regional health authority community engagement liaisons create the opportunity to provide education within most communities across Manitoba.
NB	✓			<ul style="list-style-type: none"> Attend and present on Cancer Screening Programs, including Breast Cancer awareness, at First Nation Wellness events or conferences, upon invitation.
NS	✓			<ul style="list-style-type: none"> The Patient Navigator attends health fair at a First Nations health clinic at the request of the First Nations Health Director. She answers questions about breast screening, and books screening mammograms when requested.
ON	✓	✓	✓	<ul style="list-style-type: none"> Through Indigenous Cancer Care Unit (ICCU), Regional Indigenous Cancer Leads and regional teams, communities have been engaged through workshops and health fairs. Primary care providers are educated through Continuing Professional Development accredited presentations.
PE	✓			<ul style="list-style-type: none"> Provide educational sessions and attend health promotions
SK	✓			<ul style="list-style-type: none"> Mobile Health Unit travels the northern part of the province providing information to First Nation groups about the importance of Early Detection and screening. The coordinators will also attend First Nation Health Fairs and at times present about the screening programs.

One-on-one education activities involve an individual (health care provider or layperson) explaining the benefits of screening and ways to overcome barriers to screening to clients individually either in person or by phone.

Table 24. One-on-One Education Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓		✓	<ul style="list-style-type: none"> • Provided resources to support public health professionals to have screening conversations.
BC	✓	✓	✓	<ul style="list-style-type: none"> • Partner with regional health authorities to coordinate one-on-one education sessions
MB	✓	✓	✓	<ul style="list-style-type: none"> • Screening Program Health Educators available for one on one education on demand • Mammogram technologists provide 1-on-1 education to woman during their mammogram appointments.
NL	✓	✓	✓	<ul style="list-style-type: none"> • Partner with regional health authorities to coordinate one-on-one education sessions
NT	✓	✓	✓	<ul style="list-style-type: none"> • Partner with regional health authorities to coordinate one-on-one education sessions
PE	✓			<ul style="list-style-type: none"> • Health Fairs - One on One discussions with potential participants and educational sessions provided
ON	✓	✓	✓	<ul style="list-style-type: none"> • Partner with regional health authorities and community/organizational leadership to coordinate one-on-one education sessions. There are also more targeted sessions through the ICCU and regional teams with communities/organizations.

Client reminders (e.g., letters, phone calls) are used to remind clients that screening is due and provide follow-up information (e.g., benefits of screening, ways to address barriers, help to schedule appointments).

Table 25. Client Reminder Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
BC	✓	✓	✓	<ul style="list-style-type: none"> When appropriate, community specific inserts are added the letter campaign to help in recruitment.
MB	✓	✓	✓	<ul style="list-style-type: none"> When appropriate, inserts are included in the invitation/recall letters providing instructions on how to book an appointment. For example, direction to call their Nursing Station or Community Health Nurse to schedule their appointment.
ON	✓	✓	✓	<ul style="list-style-type: none"> The ICCU is currently engaged in a study to investigate current correspondence and identify methods to enhance patient reminders. Reminders are sent to all eligible Ontarians through Ontario Health (Cancer Care Ontario)'s cancer screening correspondence letters for both invitations and recalls.
SK	✓	✓	✓	<ul style="list-style-type: none"> We send out our initial invites to the northern communities two weeks earlier than we would for other mobile stops in the province. This allows for additional time for the community travel coordinators to plan travel for the women that have to travel via plane or bus to get to the mobile site. Women booked on the mobile receive a reminder call about their upcoming appointment.

Table 26. Mass Media Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
BC	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible Indigenous population.
MB	✓	✓	✓	<ul style="list-style-type: none"> Use Website and social media (Facebook) to increase awareness about the importance of cancer screening to eligible Indigenous population. We promote access to our mobile breast screening program with a variety of media including radio, newsprint, community targeted social media and more. This has also included using First Nations, Inuit, and Metis mass media sources such as community radio stations and Native Communications Incorporated.
NB	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible population, including NB's Indigenous population.
NL	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible Indigenous population.
NS	✓	✓	✓	<ul style="list-style-type: none"> The coordinator for the mobile van places radio ads about upcoming mobile breast screening dates/locations.
NT	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible Indigenous population.
ON	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible Indigenous population.
SK	✓	✓	✓	<ul style="list-style-type: none"> Use social media to increase awareness about the importance of cancer screening to eligible Indigenous populations. We also provide posters for all mobile stops including their catchment communities throughout the province. We advertise on the MBC and Golden West stations to reach the northern communities. MBC translates the ads into Cree and Dene

Small media include videos and printed materials such as letters, brochures, and newsletters. These materials can be used to inform and motivate people to be screened for cancer. They can provide information tailored to specific individuals or geared towards general audiences.

Table 27. Small Media Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓		✓	<ul style="list-style-type: none"> Developed culturally appropriate Indigenous education resources to support cancer screening.
MB	✓	✓	✓	<ul style="list-style-type: none"> Culturally appropriate brochures and translated leaflets are available. Video with tour of the mobile mammography vehicle and appointment is available online.
NS	✓			<ul style="list-style-type: none"> NSBSP created culturally specific breast screening pamphlet that incorporated colors and symbols that are meaningful to the First Nations community.
ON	✓	✓	✓	<ul style="list-style-type: none"> Cancer Screening Fact Sheets, Toolkit, and awareness postcards were designed and tailored for each First Nation, Inuit and Métis population. Cancer 101 Video: Ontario Health (Cancer Care Ontario) made this video for First Nations people. The video gives basic cancer information and answers many common questions about cancer. Other groups that helped make the video are CAREX Canada, the Occupational Cancer Research Centre and the Canadian Cancer Society.
PE	✓			<ul style="list-style-type: none"> Attend health fairs/ educational opportunities that help promote the importance of screening and early detection Brochures, handouts and promotional items are made available

Table 28. Strategies to Reduce out-of-Pocket Costs for First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓	✓	✓	<ul style="list-style-type: none"> Supported qualified individuals to connect with Federal programs to fund care related costs.
BC	✓	✓	✓	<ul style="list-style-type: none"> Program covers cost of travel for women who live in rural/remote locations with no access to screening.
MB	-	-	-	<ul style="list-style-type: none"> Program covers cost of air travel for women living in remote communities (winter or no road) with no access to screening.
ON	✓	✓	✓	<ul style="list-style-type: none"> The ICCU supports individuals (who are approved and eligible through the First Nation Inuit Health Branch) requiring medical transportation benefits under the Non-Insured Health Benefits (NIHB) program in the area of screening.

- No information was provided at the time the data were collected.

Structural barriers are obstacles (other than those related to economics/finances) that make it difficult to access screening, for example, distance to screening locations, hours of service, setting of screening, administrative procedures, etc. Interventions to reduce structural barriers may include providing mobile screening, reducing administrative burden, providing assistance with scheduling, providing translation, expanding hours of service, etc.

Table 29. Appointment Scheduling Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
BC	✓	✓	✓	<ul style="list-style-type: none"> Block bookings are available for communities.
MB	✓	✓	✓	<ul style="list-style-type: none"> Group trips are organized with Indigenous communities to travel to a nearby mobile or fixed clinic site. Appointments are reserved, and the community is given the responsibility to fill the appointment slots with eligible women.
NS	✓			<ul style="list-style-type: none"> Block bookings for First Nations private clinics are available
SK	✓	✓	✓	<ul style="list-style-type: none"> Early detection coordinator works closely with the community coordinators to arrange “blocked” off times in the schedule for certain communities to come (via plane or bus) to our mobile bus for their screening mammograms

Table 30. Alternative Site Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓		✓	<ul style="list-style-type: none"> Where possible, mobile trailers may provide services on Reserves.
BC	✓	✓	✓	<ul style="list-style-type: none"> The mobile service travels to sites across the province making the program more accessible.
MB	✓	✓	✓	<ul style="list-style-type: none"> 4 fixed sites, 2 mobile clinics that travel to 90 locations every 2 years.
NS	✓			<ul style="list-style-type: none"> Mobile stops are available at 6 First Nations communities.
ON	✓	✓	✓	<ul style="list-style-type: none"> Ontario has a mobile screening coach that offers cancer screening services (including breast screening) in the North West region.
SK	✓	✓	✓	<ul style="list-style-type: none"> 6 satellite sites, 2 permanent sites and over 40 mobile sites.

Table 31. Alternative Hour Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
MB	✓	✓	✓	<ul style="list-style-type: none"> Hours vary and depend on locations
PE	-	-	-	<ul style="list-style-type: none"> Extended hours of operation one day per week, and weekend appointments are available.
SK	✓	✓	✓	<ul style="list-style-type: none"> Over 40 mobile sites open 12 hours (Mon – Thursday) to help accommodate more clients in the communities. All sites will try and accommodate walk ins.

- No information was provided at the time the data were collected.

Table 32. Transportation Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓	✓	✓	<ul style="list-style-type: none"> Supported qualified individuals to connect with Federal programs to fund care related costs.
BC	✓			<ul style="list-style-type: none"> Mobile Health Unit travels the northern part of the province providing information to First Nation groups about the importance of getting cervical, colorectal and breast screening.
MB	✓	✓	✓	<ul style="list-style-type: none"> The 2 mobile clinics travel to 90 locations every 2 years. If the mobile is not set up in their community, a group trip is organized to travel to a fixed or mobile clinic near them. Most communities in Manitoba will have a site within 30 minutes of their home once every 2 years.
NL	✓			<ul style="list-style-type: none"> Mobile Health Unit travels the northern part of the province providing information to First Nation groups about the importance of getting cervical, colorectal and breast screening.
NS	✓			<ul style="list-style-type: none"> The mobile van travels to 6 dedicated First Nations mobile stops in Nova Scotia. NSBSP has a liaison booking clerk who coordinates the mobile van schedule with the First Nations mobile locations, to create dedicated appointments for the First Nations communities.
NT	✓			<ul style="list-style-type: none"> Mobile Health Unit travels the northern part of the province providing information to First Nation groups about the importance of getting cervical, colorectal and breast screening.
ON	✓	✓	✓	<ul style="list-style-type: none"> Ontario has a mobile screening coach that offers cancer screening services (including breast screening) in the North West region.
SK	✓	✓	✓	<ul style="list-style-type: none"> Early detection coordinator works closely with our community travel coordinators in the north to aid in arranging transportation to our mobile sites

Table 33. Translation Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
AB	✓			<ul style="list-style-type: none"> Have some First Nations translated resources.
MB	✓	✓	✓	<ul style="list-style-type: none"> Access to the Language Access Interpreter services for those in Winnipeg to assist with informed consent to participate in breast screening. We also have a basic set of information translated into many languages.
ON	✓	✓	✓	<ul style="list-style-type: none"> Informational resources are available in several Indigenous languages.

Provider reminder and recall systems remind providers that it is time for a client to be screened for cancer or that the client is overdue for a test (e.g., in electronic medical records, via email, etc.)

Table 34. Provider Reminder Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
ON	✓			<ul style="list-style-type: none"> The Screening Activity Report (SAR) is an online report, which provides screening data to help family doctors improve their cancer screening rates and appropriate follow-up. The report allows family doctors to quickly find specific cancer screening information for each patient, including those who are overdue or have never been screened. In June 2018, the SAR was expanded to the Sioux Lookout Zone, which consists of several First Nations communities, providing non-patient enrollment model physicians and nurses access to their community data. This SAR was developed specifically for the Sioux Lookout municipality and the 27 First Nation communities that reside in the Sioux Lookout Zone.

Provider assessment and feedback interventions evaluate provider performance and give providers information about their performance in offering screening services.

Table 35. Provider Assessment & Feedback Strategies to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
MB	✓	✓	✓	<ul style="list-style-type: none"> Feedback from providers about our services: We sit on various committees that create the opportunity for providers from regional health authorities, tribal councils and health directors to provide feedback about our services, identify potential gaps, and opportunities for partnership/outreach.
NL	✓	✓	✓	<ul style="list-style-type: none"> Provide training for healthcare providers working in Indigenous communities to provide increased access to mammography services
NT	✓	✓	✓	<ul style="list-style-type: none"> Provide training for healthcare providers working in Indigenous communities to provide increased access to mammography services
ON	✓	✓	✓	<ul style="list-style-type: none"> Provide training for healthcare providers working in Indigenous communities of both high risk and average risk breast screening (Regional Indigenous Cancer Leads and teams provide education and training). See also the description of SAR under Provider Reminders.

Table 36. Policies / Guidelines to Increase Screening Participation Among First Nations, Inuit and Métis

Jurisdiction	Intended Audience			Description
	First Nations	Inuit	Métis	
BC	✓	✓	✓	<ul style="list-style-type: none"> Policies/guidelines exist to support providers with patient interactions.
ON	✓	✓	✓	<ul style="list-style-type: none"> Through the relationships developed and fostered by the ICCU, regional teams have been able to continue working with communities as guided through the Indigenous Cancer Strategy. The ICCU also works across the programs to inform guidelines and engage in studies to address community requests (i.e. assessing age eligibility for screening).

6.3 Underscreened Populations



10/13

CANADIAN JURISDICTIONS IMPLEMENTING STRATEGIES TO SUPPORT PARTICIPATION IN UNDERSCREENED POPULATIONS

Screening participation rates are low among low-income individuals, new immigrants, those living in rural and remote communities and LGBTQ2S+ populations when compared to the general Canadian population.^{10,11,12}

Nine provinces and one territory have implemented strategies to help address participation in underscreened populations. These strategies focus primarily on individuals in rural communities, new immigrants and low-income individuals. Some of the strategies identified reach

underscreened populations through social media campaigns, presentations, and program material, which focus on increasing awareness and education on breast screening. Other strategies are geared towards healthcare providers, who in turn work directly with underscreened populations. No underscreened population strategies related to client incentives or childcare were reported.

Population Groups

- | | | | |
|--|---|---|--|
| <ul style="list-style-type: none"> • Low-Income • Socially Deprived • Materially Deprived • New Immigrants • Long Term Immigrants | <ul style="list-style-type: none"> • Specific Cultural Groups • Refugees • Economic Immigrants • Visible Minorities • Non-English Speakers | <ul style="list-style-type: none"> • Those living in an urban setting • Those living in a rural setting • Those living in a remote setting • LGBTQ2S+ | <ul style="list-style-type: none"> • Those with co-morbidities • Those with mental illness • Those with physical disabilities |
|--|---|---|--|

Figure 11. Underscreened Population Outreach Strategies in Canada (July 2019)

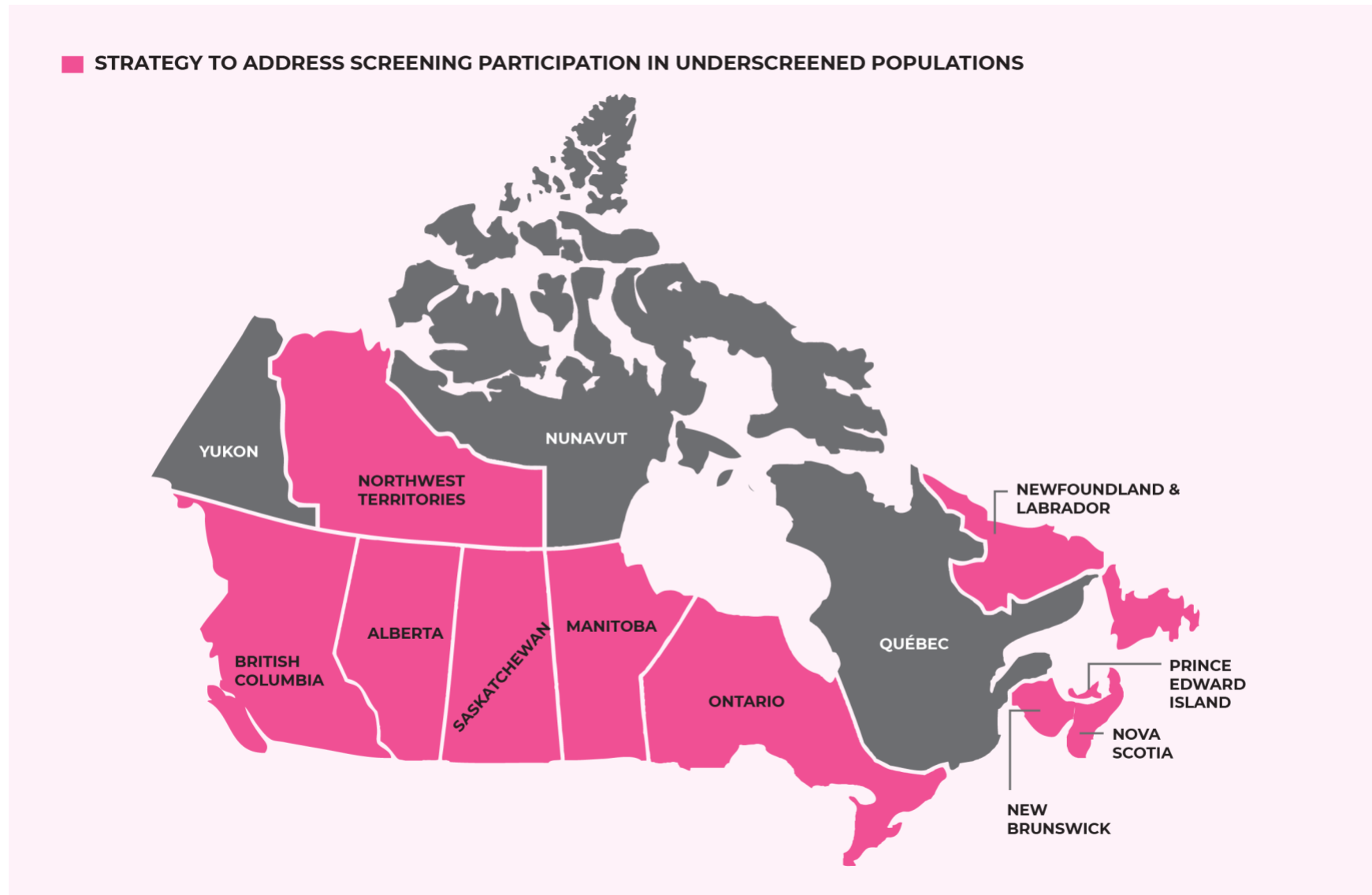


Table 37. Group Education Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
AB	<ul style="list-style-type: none"> • Those living in an urban setting • Refugees • Economic Immigrants • Visible Minorities • Non-English Speakers • Low-Income • Socially Deprived • Materially Deprived • New Immigrants • Long Term Immigrants 	<ul style="list-style-type: none"> • Creating Health Equity in Cancer Screening (CHECS) project is aimed at better understanding sociodemographic and spatial barriers to cancer screening in Alberta. <ul style="list-style-type: none"> ◦ Using a health equity lens, the project developed a systematic approach to identify underscreened communities and collaborated with stakeholders to reduce inequities for breast, cervical, and colorectal cancer screening. ◦ This project used a three-phase community engagement approach. ◦ The first phase developed a systematic approach to identify target communities in Calgary using the Pampalon Deprivation Index (PDI). ◦ The second phase consisted of community engagement to determine barriers and facilitators to cancer screening. ◦ Partnerships with community organizations and healthcare providers in underserved communities were created to support engagement planning. ◦ Phase three will focus on implementation and evaluation of collaborative interventions, carried out in target communities.
BC	<ul style="list-style-type: none"> • New immigrants • Non-English Speakers • Visible Minorities • Low-income individuals • Socially Deprived • Materially Deprived • Specific Cultural Groups 	<ul style="list-style-type: none"> • Coordinators provide education on breast screening at local community health centres.
MB	<ul style="list-style-type: none"> • Newcomers • Low income individuals • Specific cultural groups 	<ul style="list-style-type: none"> • Cancer screening education module created with and for educators with students with low literacy.
NL	<ul style="list-style-type: none"> • New immigrants • Non-English Speakers • Visible Minorities • Low-income individuals • Socially Deprived • Materially Deprived • Specific Cultural Groups 	<ul style="list-style-type: none"> • Coordinators provide education on breast screening at local community health centres.
NS	<ul style="list-style-type: none"> • Incarcerated women • New immigrants 	<ul style="list-style-type: none"> • The Patient Navigator attends a Wellness clinic every year at a federal women's prison and provides breast screening information to the inmates. She also educates the medical staff on how to request mammography screening for the inmates. • Program coordinator provides breast screening education to new immigrant women at the Immigrant Services Association of Nova Scotia (ISANS)

Jurisdiction	Intended Audience	Description
NT	<ul style="list-style-type: none"> • New immigrants • Non-English Speakers • Visible Minorities • Low-income individuals • Socially Deprived • Materially Deprived • Specific Cultural Groups 	<ul style="list-style-type: none"> • Coordinators provide education on breast screening at local community health centres.
SK	<ul style="list-style-type: none"> • New immigrants • Non-English Speakers 	<ul style="list-style-type: none"> • Coordinators provide education on breast screening at local community health centres, Open Door Society Community Fairs and also do classroom presentations both via Open Door Society and Sask Polytech (for new immigrants). <ul style="list-style-type: none"> ◦ Education sessions include pictorial PowerPoint presentations to help new immigrants understand the content

One-on-one education activities involve an individual (health care provider or layperson) explaining the benefits of screening and ways to overcome barriers to screening to clients individually either in person or by phone.

Table 38. One-on-One Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> • Specific Cultural Groups • Materially Deprived 	<ul style="list-style-type: none"> • Patient Navigator who comes from a similar background
NL	<ul style="list-style-type: none"> • Specific Cultural Groups • Materially Deprived 	<ul style="list-style-type: none"> • Patient Navigator who comes from a similar background
NT	<ul style="list-style-type: none"> • Specific Cultural Groups • Materially Deprived 	<ul style="list-style-type: none"> • Patient Navigator who comes from a similar background

Client reminders (e.g., letters, phone calls) are used to remind clients that screening is due and provide follow-up information (e.g., benefits of screening, ways to address barriers, help to schedule appointments).

Table 39. Client Reminder Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> Low-income individuals 	<ul style="list-style-type: none"> Patient Navigator provide reminders via phone calls
MB	<ul style="list-style-type: none"> All underscreened eligible population 	<ul style="list-style-type: none"> “Interpreter services available” listed on all resource materials. Translated inserts are in all of our patient correspondence
NB	<ul style="list-style-type: none"> Those living in Rural Settings Non-English communities Low-income individuals 	<ul style="list-style-type: none"> RHA calls or sends Invitations, Recall and Reminder letters directly to participants via mail.
NL	<ul style="list-style-type: none"> Low-income individuals 	<ul style="list-style-type: none"> Patient Navigator provide reminders via phone calls
NT	<ul style="list-style-type: none"> Low-income individuals 	<ul style="list-style-type: none"> Patient Navigator provide reminders via phone calls

Table 40. Mass Media Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> New immigrants Non-English Speakers Visible Minorities Specific Cultural Groups 	<ul style="list-style-type: none"> Have done radio campaigns specifically targeting South Asian and Chinese communities
MB	<ul style="list-style-type: none"> Women living in rural setting 	<ul style="list-style-type: none"> Media efforts are often translated and are geo-targeted to reach women in rural locations as the mobile clinics travel throughout Manitoba.
NB	<ul style="list-style-type: none"> Non-English Speakers Low Literacy 	<ul style="list-style-type: none"> All Tweets and radio ads are produced in French and English in simple language.
ON	<ul style="list-style-type: none"> Visible Minorities Specific Cultural Groups 	<ul style="list-style-type: none"> Ontario holds a Breast Cancer Awareness Month (BCAM) campaign each October. The campaign includes the development and dissemination of promotional materials to provincial regions. These materials include images which are representative of diverse groups.
PE	<ul style="list-style-type: none"> All clients 	<ul style="list-style-type: none"> Campaign ads and social media

Jurisdiction	Intended Audience	Description
SK	<ul style="list-style-type: none"> All Clients 	<ul style="list-style-type: none"> Posters are sent to mobile communities to advertise our upcoming visit In October our Communications Department does an awareness campaign We have also done some phone and TV interviews to promote our program generally and specifically about the mobile unit

Small media include videos and printed materials such as letters, brochures, and newsletters. These materials can be used to inform and motivate people to be screened for cancer. They can provide information tailored to specific individuals or geared towards general audiences.

Table 41. Small Media Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> New immigrants Non-English Speakers Visible Minorities Specific Cultural Groups 	<ul style="list-style-type: none"> Translated materials are available and posted on our website and available to order free of charge for primary care and community organizations.
NS	<ul style="list-style-type: none"> African Nova Scotians 	<ul style="list-style-type: none"> NSBSP created culturally specific breast screening pamphlet that incorporated colors that are meaningful to the African Nova Scotian community.

Table 42. Strategies to Reduce out-of-Pocket Costs for Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> Women who live in rural/remote locations 	<ul style="list-style-type: none"> Program covers cost of travel for women who live in rural/remote locations with no access to screening.

Structural barriers are obstacles that make it difficult to access screening, for example, distance to screening locations, hours of service, setting of screening, administrative procedures, etc. Interventions to reduce structural barriers may include providing mobile screening, reducing administrative burden, providing assistance with scheduling, providing translation, expanding hours of service, etc.

Table 43. Appointment Scheduling Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> Those with physical disabilities 	<ul style="list-style-type: none"> Extra time available per booking
MB	<ul style="list-style-type: none"> Individuals with physical limitations 	<ul style="list-style-type: none"> Book a double or triple slot to allow for increased time needs
NL	<ul style="list-style-type: none"> Those with physical disabilities 	<ul style="list-style-type: none"> Patient Navigator assist underscreened individuals with appointment scheduling
NS	<ul style="list-style-type: none"> Those with physical disabilities 	<ul style="list-style-type: none"> Patients with physical disabilities, who may need extra time at the screening appointment can let the booking clerk know at the time of booking; the booking clerk will reserve two time slots.
NT	<ul style="list-style-type: none"> Those with physical disabilities 	<ul style="list-style-type: none"> Patient Navigator assists underscreened individuals with appointment scheduling
PE	<ul style="list-style-type: none"> Those with physical disabilities 	<ul style="list-style-type: none"> Extended appointment times are reserved as needed

Table 44. Alternative Site Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	-	<ul style="list-style-type: none"> The mobile service travels to sites across the province making the program more accessible.
MB	<ul style="list-style-type: none"> Rural and remote 	<ul style="list-style-type: none"> The 2 mobile clinics travel to 90 locations every 2 years. If the mobile is not set up in their community, a group trip is organized to travel to a fixed or mobile clinic near them. Most communities in Manitoba will have a site within 30 minutes of their home once every 2 years. Generally ground travel is facilitated by the community, but in select communities air travel is organized and paid for by the program.
ON	<ul style="list-style-type: none"> Low-income Those living in a rural setting Those living in a remote setting 	<ul style="list-style-type: none"> Ontario has a mobile screening coach that offers cancer screening services (including breast screening) in the North West region.

Jurisdiction	Intended Audience	Description
SK	<ul style="list-style-type: none"> • Low-Income • Those living in a rural setting • Those living in a remote setting 	<ul style="list-style-type: none"> • We have 6 satellite sites throughout the province as well as our 2 permanent sites and a mobile unit that travels to approximately 40 sites on an odd/even year basis

- No information was provided at the time the data were collected.

Table 45. Alternative Hours Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	-	<ul style="list-style-type: none"> • The mobile service travels to sites across the province making the program more accessible.
PE	-	<ul style="list-style-type: none"> • Offers extended hours of operation one day a week as well as Saturday appointment options
SK	<ul style="list-style-type: none"> • Rural and remote areas – mobile 	<ul style="list-style-type: none"> • We have a mobile unit that travels to approximately 40 sites on an odd/even year basis

- No information was provided at the time the data were collected.

Table 46. Transportation Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
NS	<ul style="list-style-type: none"> • African Nova Scotians 	<ul style="list-style-type: none"> • NSBSP has a liaison booking clerk who coordinates the mobile van schedule with the African Nova Scotian mobile location, to create dedicated appointments for members of the community.
ON	<ul style="list-style-type: none"> • Low-Income • Those living in a rural setting • Those living in a remote setting 	<ul style="list-style-type: none"> • Ontario has a mobile screening coach that offers cancer screening services (including breast screening) in the North West region.
SK	<ul style="list-style-type: none"> • Those living in a remote setting 	<ul style="list-style-type: none"> • Early detection coordinator works closely with the community travel coordinators in the north to help assist with the planning for the visits to the mobile locations when we are screening up north.

Table 47. Translation Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> • Specific Cultural Groups 	<ul style="list-style-type: none"> • Resources are available in multiple languages. Technologists are also equipped with signage to help facilitate screening with non-English speakers.
MB	<ul style="list-style-type: none"> • Individuals with language barriers 	<ul style="list-style-type: none"> • Coordinate interpreter services for the mammogram appointment. “Interpreter services available” listed on all resource materials. Translated inserts are in all of our patient correspondence. Brochures, booklets, posters, tear offs, and videos translated into a variety of languages.
ON	<ul style="list-style-type: none"> • Non-English speakers 	<ul style="list-style-type: none"> • Ontario Health (Cancer Care Ontario) will translate program material and inquiry responses to various languages upon request.
PE	<ul style="list-style-type: none"> • Specific Cultural Groups 	<ul style="list-style-type: none"> • Some materials are available in Mandarin. Translation services are available through the Health PEI Navigator
SK	<ul style="list-style-type: none"> • New immigrants • Non-English speakers 	<ul style="list-style-type: none"> • Interpreters attend group education sessions as well as Open Door Community Fairs to assist with translation between the Early Detection coordinators and the clients

Provider reminder and recall systems remind providers that it is time for a client to be screened for cancer or that the client is overdue for a test (e.g., in electronic medical records, via email, etc.).

Table 48. Provider Reminder Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
ON	<ul style="list-style-type: none"> • Non-specific 	<ul style="list-style-type: none"> • The SAR is an online report, which provides screening data to help family doctors improve their cancer screening rates and appropriate follow-up. The report allows family doctors to quickly find specific cancer screening information for each patient, including those who are overdue or have never been screened. Depending on the specific practice of the physician, the SAR may support screening in groups such as new immigrants, non-English speakers, those with co-morbidities, and those with mental illness.

Table 49. Provider Incentive Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
MB	<ul style="list-style-type: none"> Underscreened women 	<ul style="list-style-type: none"> CervixCheck sends out fax letter reminders to clinicians whose patients have not received the appropriate follow-up after an abnormal result.
ON	<ul style="list-style-type: none"> Non-specific 	<ul style="list-style-type: none"> To support family doctors in ensuring that their patients participate in eligible screening programs, the Ministry of Health and Long Term Care has implemented Cumulative Preventive Care Bonuses. Through this program, eligible family doctors who practice as part of a Patient Enrolment Model, meaning, patients are formally rostered to a family doctor, may receive bonuses for maintaining specified levels of preventive care to their enrolled patients. Depending on the specific practice of the physician, the Cumulative Preventive Care Bonuses may support screening in groups such as new immigrants, non-English speakers, those with co-morbidities and those with mental illness

Provider assessment and feedback interventions evaluate provider performance and give providers information about their performance in offering screening services.

Table 50. Provider Assessment & Feedback Strategies to Increase Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
ON	<ul style="list-style-type: none"> Non-specific 	<ul style="list-style-type: none"> See description of SAR under Provider Reminders.

Table 51. Policies / Guidelines Related to Breast Screening Participation in Underscreened Populations in Canada

Jurisdiction	Intended Audience	Description
BC	<ul style="list-style-type: none"> LGBTQ2S+ 	<ul style="list-style-type: none"> Policies/guidelines exist to support providers with patient interactions.
MB	<ul style="list-style-type: none"> LGBTQ2S+ 	<ul style="list-style-type: none"> Recommendations for trans men and women are published in our screening guidelines. We also use inclusive language in our materials and website. Routine screening mammograms may be considered for: trans women aged 50-69 who have taken gender affirming hormones for greater than 5 years; trans women aged 60-69 who have taken gender affirming hormones for greater than 5 years and have had breast implants; and trans men aged 50-69 who still have breast tissue. Routine screening is not recommended for trans

Jurisdiction	Intended Audience	Description
		women aged 50-69 who have not taken gender affirming hormones, or have taken gender affirming hormones for less than 5 years.
NS	<ul style="list-style-type: none"> Transgender CPG (awaiting approval from health authorities) 	<ul style="list-style-type: none"> The purpose of this clinical practice guideline is to provide a standardized breast screening approach for individuals in Nova Scotia who self-identify as trans or gender diverse.
ON	<ul style="list-style-type: none"> LGBTQ2S+ 	<ul style="list-style-type: none"> Ontario Health (Cancer Care Ontario) is committed to recognizing and supporting diversity in all forms, including gender diversities. OBSP sites are expected to provide equal treatment without discrimination on any ground protected under the Human Rights Code, R.S.O. 1990, c. H.19, including gender identity and expression. In March 2019, Ontario Health (Cancer Care Ontario) released the overarching policy for screening of transgender people in the Ontario Breast Screening Program and Ontario Cervical Screening Program. The policy contains 17 recommendations on screening eligibility, interval and method for trans people at average and increased risk of breast and cervical cancer. The policy can be found at: www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/61546. An implementation plan is currently being developed and the timeline for implementation is to be determined. In addition, Ontario Health (Cancer Care Ontario) will be moving towards using gender-neutral language in screening products, wherever possible.

6.4 LGBTQ2S+ Communities

In 2016, NS developed a clinical practice guideline for breast screening for trans people. Breast cancer screening is recommended every two years for trans women ages 50-69 who have taken gender-affirming hormones for more than five years. For trans men, if gender-affirming chest surgery has not been performed, then breast screening can start at age 40 and will be followed by the screening program.

In MB, trans men and women who have breast tissue, and do not have breast implants, over the age of 50 can attend BreastCheck. Recommendations for trans men and women are included in screening guidelines and inclusive language is used in materials and on website.

In March 2019, [ON released an overarching policy](#) for screening of trans people in the Ontario Breast Screening Program. An implementation plan is currently being developed and the timeline for implementation is to be determined. In addition, ON will be moving towards using gender-neutral language in screening products.

BC revised their policy in 2018 to further facilitate care for transgender individuals, including using appropriate language and specific screening recommendations.

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