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

PARTENARIAT CANADIEN CONTRE LE **CANCER**

Cervical Cancer Screening in Canada:

ENVIRONMENTAL SCAN

Data collected in 2018

Acknowledgements

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Executive Summary

Organized cervical cancer screening programs are available in most provinces. These programs screen eligible women who are asymptomatic (no signs or symptoms of cervical cancer present) and at average risk for cervical cancer. There are no organized cervical cancer screening programs in Northwest Territories, Nunavut, Yukon or Quebec, but opportunistic screening services may be available through primary care providers. As of 2018, Yukon reported that plans are underway to expand Yukon's ColonCheck screening program to include cervical cancer screening. (Table 1).

Provinces and territories recommend that cervical cancer screening begin at age 21 or 25, continue until age 65 to 70 and occur every two to three years (Table 2). Organized cervical cancer screening programs in British Columbia and Alberta have increased their screening start age to 25 to reflect Canadian Task Force on Preventive Health Care recommendations. Once enough data is available, both provinces plan to evaluate the impact of this change. Furthermore, plans to increase the cervical cancer screening start age to 25 are under consideration in Ontario, Nova Scotia, Prince Edward Island and Newfoundland and Labrador (Table 3).

The Pap test is used as an entry level screening test for cervical cancer, utilizing liquid-based cytology or conventional cytology (Table 5). HPV testing is not currently used for primary screening within organized screening programs in Canada. However, several provinces and territories have begun to implement or are piloting HPV testing for the purposes or triage or follow-up after treatment, or are piloting its use for primary screening. Ontario is actively planning the implementation of HPV testing for primary screening and it is under consideration in British Columbia (Table 6).

HPV immunization is offered to children in all provinces and territories, generally between grades 4 and 7. While these programs were initially available to girls only, all school-based immunization programs have now been expanded to include boys (Table 12). For school-aged girls, the provincial/territorial immunization uptake (for final dose) based on the most recent data ranges from 57.1-92.0% (Table 13). For school-aged boys, the immunization uptake (for final dose) based on available data ranges from 67.1-89.7% (Table 14).

Eight provinces have implemented strategies to connect with First Nations, Inuit and Métis, (Table 16) and five provinces have implemented strategies to help address cervical cancer screening participation in other underserved populations (Table 17).

Background

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

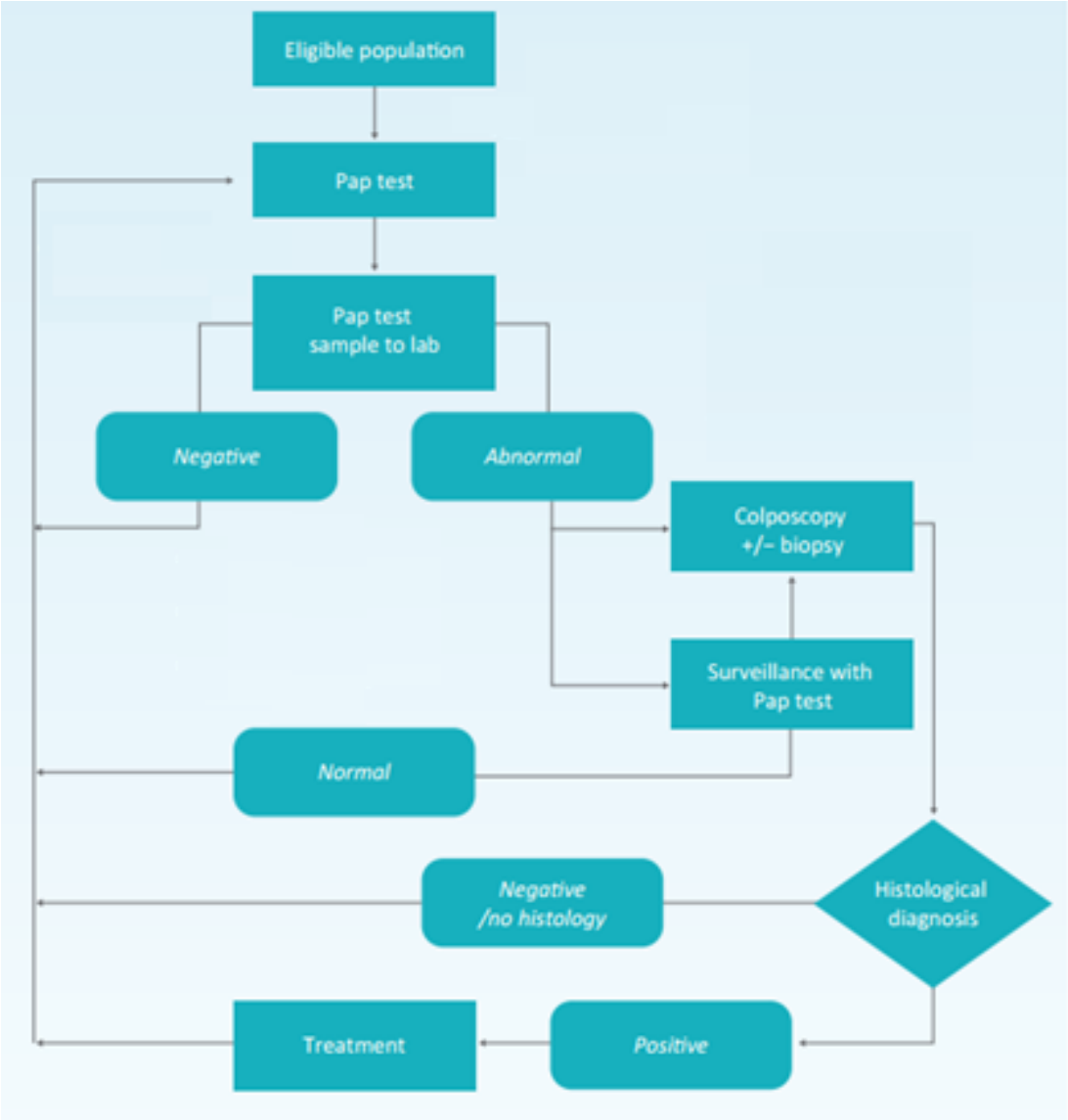
This environmental scan summarizes the data collected from provincial and territorial screening programs and is intended to provide information to inform provincial/territorial decision-making for policy and practice.

The information for this environmental scan was collected in June and July 2018. All provinces and territories responded to the environmental scan.

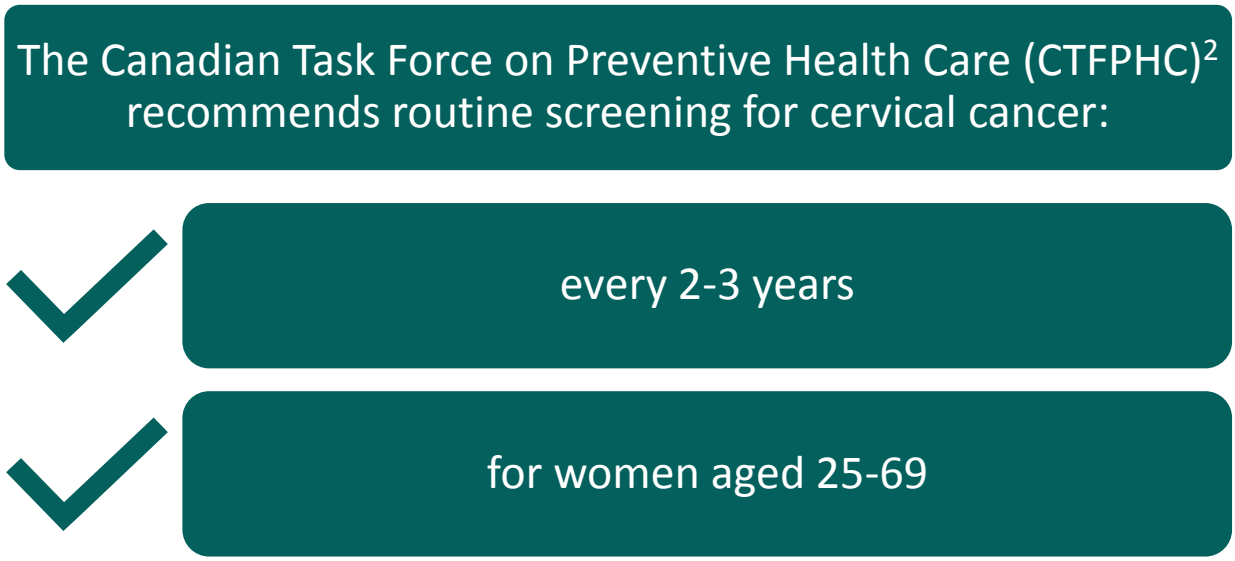
Cervical Cancer Screening Programs and Guidelines

Cervical Cancer Screening Pathway

Figure 1: Cervical Cancer Screening Pathway[1]



Canadian Task Force on Preventive Health Care (2013)



This recommendation is for asymptomatic women who are or have been sexually active. They do not apply to women with symptoms of cervical cancer, previous abnormal screening results (until they have been cleared to resume normal screening), those who do not have a cervix (due to hysterectomy), or who are immunosuppressed.

Additional cervical cancer screening recommendations by CTFPHC include:

- Routine screening for cervical cancer for women aged < 25 is not recommended
- Screening is not recommended for women aged 70 and over who have been adequately screened (i.e. 3 successive negative Pap tests in the last 10 years)
- For women aged 70 and over who have not been adequately screened, the CTFPHC recommends screening until 3 negative test results have been obtained

Cervical Cancer Screening Programs in Canada

Organized cervical cancer screening programs are available in most provinces. These programs screen eligible women who are asymptomatic (no signs or symptoms of cervical cancer present) and at average risk for cervical cancer. There are no organized cervical cancer screening programs in Northwest Territories, Nunavut, Yukon or Quebec, but opportunistic screening services may be available through primary care providers. As of 2018, Yukon reported that plans are underway to expand Yukon's ColonCheck screening program to include cervical cancer screening.

Recent Highlight

Plans are underway in Yukon to implement an organized cervical cancer screening program.

Figure 2: Status of Cervical Screening Programs in Canada

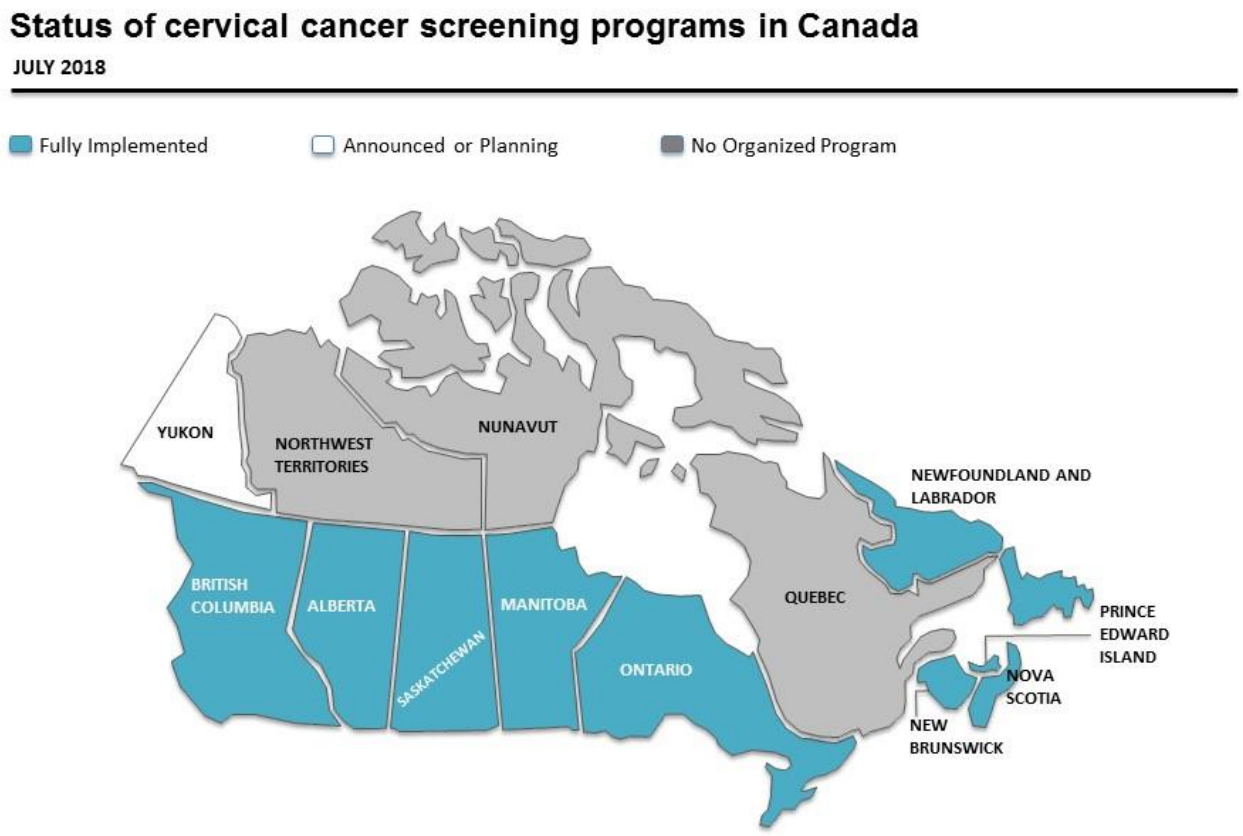


Table 1: Cervical Cancer Screening Programs in Canada

	Program start date	Program name	Agency responsible for program administration
Nunavut (NU)	No organized screening program available		
Northwest Territories (NWT)	No organized screening program available		
Yukon (YK)	No organized screening program available (plans are underway to expand Yukon's ColonCheck screening program to include cervical cancer screening)		Yukon Government Health and Social Services
British Columbia (BC)	1960	Cervical Cancer Screening Program	BC Cancer Agency
Alberta (AB)	2000	Alberta Cervical Cancer Screening Program	Alberta Health Services
Saskatchewan (SK)	2003	Screening Program for Cervical Cancer	Saskatchewan Cancer Agency
Manitoba (MB)	2000	CervixCheck	CancerCare Manitoba
Ontario (ON)	2000	Ontario Cervical Screening Program	Cancer Care Ontario
Québec (QC)	No organized screening program available		
New Brunswick (NB)	2014	New Brunswick Cervical Cancer Prevention and Screening Program	New Brunswick Cancer Network (NB Department of Health)
Nova Scotia (NS)	1991	Cervical Cancer Prevention Program	Cancer Care Nova Scotia, Nova Scotia Health Authority Program of Care for Cancer
Prince Edward Island (PEI)	2001	Cervical Cancer Screening Service	Health PEI
Newfoundland and Labrador (NL)	2003	Cervical Screening Initiatives Program	Cancer Care Program, Eastern Health

Provincial and Territorial Screening Guidelines

Provinces and territories recommend that cervical cancer screening begin at age 21 or 25, continue until age 65 to 70 and occur every two to three years.

Organized cervical cancer screening programs in British Columbia and Alberta have increased their cervical screening start age to 25 to reflect the CTFPHC recommendation. Once enough data is available, both provinces plan to evaluate the impact of this change. Furthermore, Nova Scotia will be increasing their screening start age to 25 starting in January 2019. This change is also under consideration in Ontario, Prince Edward Island and Newfoundland and Labrador.

Recent Highlight

Since 2016, plans to increase the cervical cancer screening start age to 25 years have changed in several jurisdictions.

Implemented
BC (2016), AB (2016)

In planning stages
NS (expected 2019)

Under consideration
ON, PEI, NL (as of 2018)

Table 2: Provincial and Territorial Screening Guidelines

	Start age	Interval	Stop age
NU[†]	21 if sexually active	3 years	69
NWT[†]	21	Annual until 3 consecutive negative tests then every 2 years	69
YK	No organized screening program available		
BC	25	3 years	70
AB	25	3 years	69
SK	21 or 3 years post first sexual contact, whichever occurs later	2 years until 3 consecutive negative tests then every 3 years	69
MB	21	3 years	69
ON	21 if sexually active	3 years	70 with adequate negative screening history in previous 10 years (i.e. 3 or more negative tests)
QC[†]	21	2-3 years	65 with 2 negative tests in previous 10 years
NB	21 or 3 years post first sexual contact, whichever occurs later	Annual until 3 consecutive negative tests then every 2-3 years	69 with adequate negative screening history in previous 10 years or 3 negative tests (for participants with little/no screening history)
NS	21	3 years	70
PEI	21 if sexually active	2 years	65 with adequate negative screening history in previous

			10 years (i.e. 3 or more negative tests)
NL	21	Annual until 3 consecutive negative tests then every 3 years	70 with adequate negative screening history in previous 10 years (i.e. 3 or more negative tests)

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

Figure 3: Start and Stop Age for Cervical Cancer Screening in Canada

Table 3: Plans to Increase Cervical Cancer Screening Start Age to 25 Years

	Plans to increase cervical cancer screening start age to 25
NU	N/A
NWT	N/A
YK	N/A
BC	Start age has already been increased to 25
AB	Start age has already been increased to 25
SK	No current plans

MB	No current plans
ON	Under consideration
QC	N/A
NB	No current plans
NS	In planning stages, planning to implement change in January 2019
PEI	Under consideration
NL	Under consideration

Screening Recruitment Strategies

Some cervical cancer screening programs send invitations to never-screened women, providing information on screening and eligibility, and inviting women to participate in screening. Currently, five jurisdictions use initial letters of invitation as a recruitment method for their cervical cancer screening programs. In Newfoundland and Labrador, invitation letters are pending, however, a recall list is generated for primary care providers. No recruitment method is used in British Columbia.

Table 4: Cervical Cancer Screening Recruitment Methods in Canada

	Recruitment method
NU ǂ	Phone call
NWT	No organized screening program available
YK	No organized screening program available
BC	N/A
AB	Initial letter of invitation
SK	Initial letter of invitation
MB	Initial letter of invitation
ON	Initial letter of invitation
QC	No organized screening program available
NB	Initial letter of invitation
NS	N/A
PEI	N/A
NL	Letter of invitation is pending, other recruitment methods include routine recall list generated for PCP

ǂ No organized screening program. Response refers to opportunistic cervical cancer screening.

Modalities for Cervical Cancer Screening

Cytology Detection Methods

The Pap test is used as the primary screening test for cervical cancer. Six Canadian jurisdictions use liquid-based cytology in their cervical cancer screening program. British Columbia and Prince Edward Island use conventional cytology and Quebec, New Brunswick, and Nova Scotia use both liquid-based and conventional cytology for their cervical cancer screening programs. Most provincial and territorial cervical cancer screening programs base their terminology on the 2014 Bethesda Cervical Cytology Atlas for standardized cytology reporting.

Table 5: Cytology Detection Methods used in Canada

	Cytology detection methods	Reporting system for standardized cervical cytology reporting
NU	No organized screening program available	
NWT[ǂ]	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
YK	No organized screening program available	
BC	Conventional cytology	2014 Bethesda Cervical Cytology Atlas
AB	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
SK	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
MB	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
ON	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
QC[ǂ]	Conventional cytology and liquid-based cytology	Standardized reports are currently under development and not yet available to clinicians
NB	Conventional cytology and liquid-based cytology	2001 and 2014 Bethesda Cervical Cytology Atlas
NS	Conventional cytology and liquid-based cytology	2014 Bethesda Cervical Cytology Atlas
PEI	Conventional cytology	2014 Bethesda Cervical Cytology Atlas
NL	Liquid-based cytology	2014 Bethesda Cervical Cytology Atlas

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

HPV DNA Testing

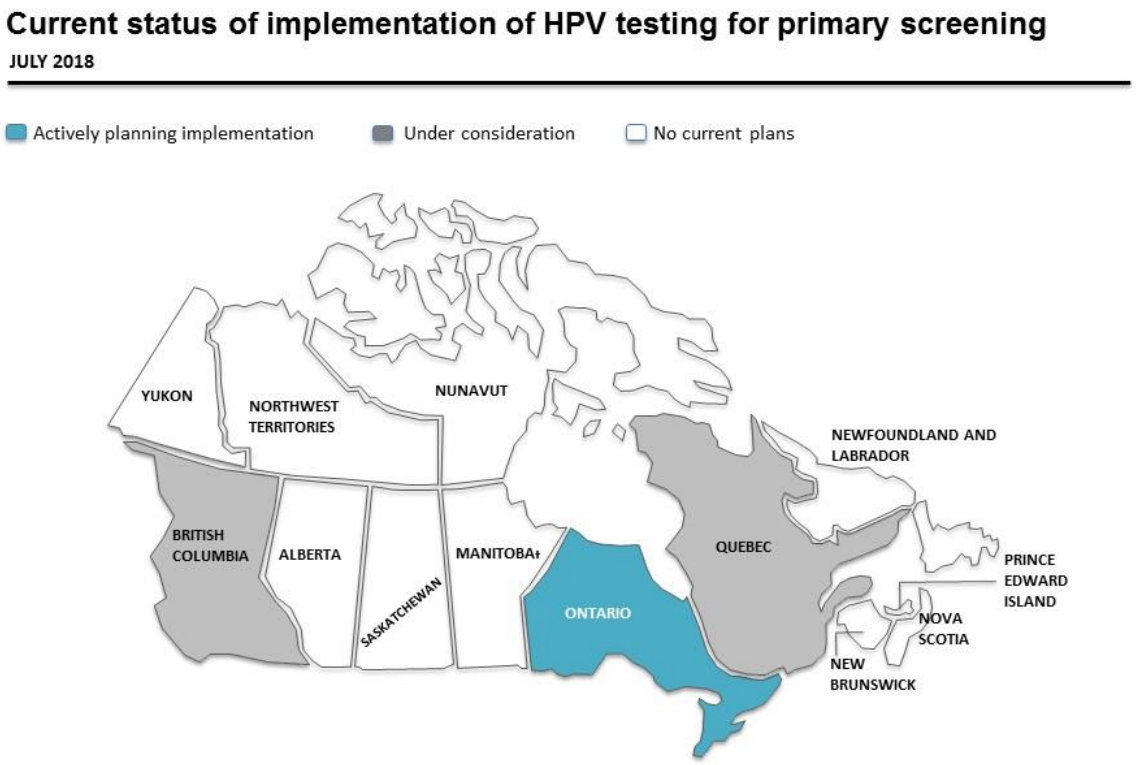
HPV testing is not currently used for primary screening within organized screening programs in Canada. However, several provinces and territories have begun to implement or are piloting HPV testing for the purposes of triage or follow-up after treatment, or are piloting its use for primary screening.

Ontario is actively planning the implementation of HPV testing for primary screening and it is under consideration in British Columbia and Quebec. There are no plans to implement HPV testing for primary screening in other provinces or territories at this time.

Recent Highlight

Ontario is actively planning the implementation of HPV DNA testing in screening and colposcopy, and it is under consideration in British Columbia and Quebec.

Figure 4: Current Status of Implementation of HPV Testing for Primary Screening in Canada



ǂ Although there are no current plans to implement HPV testing for primary screening in Manitoba, the province continues to advocate for its use.

Table 6: HPV DNA Testing in Canada

	Capacity in which HPV DNA testing is being used	Current status of implementation of HPV testing for primary screening
NU[ǂ]	N/A	No current plans
NWT[ǂ]	Triage in women	No current plans
YK	No organized screening program available	
BC	Post treatment	Under consideration
AB	Triage in women Reflex HPV test for ASCUS at age 30 and LSIL at age 50	No current plans
SK	Pilot trial (for gynecologist to use only when requested, not a pilot for primary screening)	No current plans
MB	Pilot trials/research Follow-up for research Personal requests Triage in women – under consideration	No current plans, continue to advocate for HPV testing for primary screening
ON	Triage in women (HPV DNA testing is not yet funded, but current recommendations include option to triage ASCUC with HPV testing) Frequent ad hoc use on a patient pay basis and available in some hospital-based colposcopy units for exit testing	Actively planning implementation in screening and colposcopy
QC[ǂ]	Triage in women ≥ 30 with ASCUC	Reviewing the possibility of using HPV as a primary screening method.
NB	Triage in women ≥ 30 with ASCUC or women ≥ 50 with LSIL	No current plans
NS	Colposcopy clinic	No current plans
PEI	Triage in women > 30 with ASCUS and no previous abnormal Pap Follow-up on negative cytology and positive HPV	No current plans
NL	Pilot trials/research Triage in women > 30 with ASCUS	No current plans

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

Correspondence and Follow-Up Strategies for Cervical Cancer Screening

Recall letters and other forms of communication are used to notify women who have been screened by the program in the past to return for screening. Women who have a normal screening result are invited back at regular intervals, as per provincial/territorial screening guidelines, for subsequent screening. Women who have an abnormal screening result are invited for follow-up. A reminder is any correspondence from a cervical screening program to a woman subsequent to previously sent communication.

Recall Following a Normal Pap Test

Seven provinces send recall letters to participants in the screening program at the program-identified interval following a normal Pap test. Four of these provinces send the letter to the participant only, two send it to primary care providers only, and one sends it to both the participant and the primary care provider. Nunavut and Newfoundland and Labrador also use phone calls as a recall method.

In addition, six jurisdictions send reminder letters to screening participants if they did not initiate screening after receiving the recall letter.

Table 7: Provincial and Territorial Recall Following a Normal Pap Test

	Recall method	Recall sent to	Recall issued by	Reminder letter if screening is not initiated	Target age group for recall
NU[†]	Phone call	PCP	Individual well-woman clinics organized by nursing station nurses or clinic nurses organize the recalls based on results received on prior PAP	Yes	-
NWT	No organized screening program available				
YK	No organized screening program available				
BC	Letter	PCP	Screening program	No	-
AB	Letter	Participant and PCP	Screening program	Yes – participants only	50-69
SK	Letter	Participant	Screening program	Yes	21-69
MB	Letter	Participant	PCP and screening program	Yes	21-69
ON	Letter	Participant	Screening program for correspondence, all other recall is clinician dependent	Yes	21-69
QC	No organized screening program available				
NB	Letter	Participant	Screening program	Yes	21-69
NS	N/A	N/A	N/A	N/A	N/A

PEI	No programmatic recall in place				
NL	Letter Phone call	PCP	Screening program and individual PCP	No	21-69

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.
- No information was provided at the time the data was collected.

Follow-Up After an Abnormal Pap Test

Following an abnormal screening result, result letters are sent to participants and/or primary care providers. Five jurisdictions send follow-up notifications to both participants and primary care providers, whereas two jurisdictions follow-up with participants only and two with primary care providers only.

Table 8: Provincial and Territorial Follow-Up After an Abnormal Pap Test

	Follow-up method
NU ǂ	Letter to PCP
NWT	N/A
YK	N/A
BC	Letter to PCP
AB	Letter to participant
SK	Letter to participant Results to PCP from cytology lab
MB	Letter to participant for all high-grade Pap test result Letter to PCP and participant (if necessary) for all low-grade Pap test result where follow-up has not occurred
ON	Letter to participant
QC	N/A
NB	Letter to participant and PCP
NS	Pap smear providers are notified when it appears that a patient with a significant abnormality has not been appropriately managed
PEI	Letter to participant Results to PCP
NL	Letter to PCP then participant

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

Colposcopy Services

Women with abnormal Pap test results requiring follow-up may be referred for colposcopy. Criteria for referring women to colposcopy services vary across jurisdictions.

Table 9: Criteria for Referral to Colposcopy Services

	ASC-US[§] (1st result)	LSIL[§] (1st result)	ASC-US and HPV+ result	Repeated ASC-US/LSIL after previous ASC-US/LSIL	Age ≥ 50 with LSIL and HPV+ result	AGC[§]	HSIL+[§]	Other
NU	No organized screening program available							
NWT[†]		✓	✓	✓	✓	✓	✓	
YK	No organized screening program available							
BC				✓			✓	
AB			✓ (age ≥ 30)	✓	✓	✓	✓	
SK				✓		✓	✓	
MB				✓		✓	✓	
ON		✓	✓	✓	✓	✓	✓	✓ ASC-H (atypical squamous cells, cannot exclude HSIL), atypical endocervical cells, atypical endometrial cells; Squamous carcinoma, adenocarcinoma, and other malignant neoplasms are referred into the cancer system
QC[†]		✓	✓ (age > 30)	✓		✓	✓	✓ Postcoital bleeding or cervicitis
NB			✓ (age ≥ 30)	✓	✓	✓	✓	
NS				✓		✓	✓	
PEI			✓	✓		✓	✓	
NL			✓ (age < 30 repeat ACUS x3 at 6 month interval, if the third Pap is abnormal,	✓		✓	✓	

			refer to colposcopy)					

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.
§ ASC-US: Atypical squamous cells of undetermined significance; LSIL: Low-grade squamous intraepithelial lesion; AGC: atypical glandular cells; HSIL: high-grade squamous intraepithelial lesion

Colposcopy services are most often provided in hospitals, colposcopy clinics and by individual practitioners. Six provinces and one territory currently use HPV testing in colposcopy care, and HPV testing is currently used as a test of cure for discharge purposes in several jurisdictions.

Table 10: Colposcopy Services in Canada

	Location where colposcopy services are provided	How colposcopy services are provided
NUǂ	• Hospital • Individual practitioner	The hospital in Iqaluit has a colposcope and provides colposcopies for people in the eastern part of the territory. For people in the western and central part of the territory, colposcopy is done in Yellowknife, Edmonton or Winnipeg.
NWTǂ	• Hospital • Colposcopy clinic	Delivery by OB-GYN.
YK	No organized screening program available	
BC	• Hospital • Individual practitioner • Colposcopy clinic	Most colposcopy is done in a colposcopy clinic out of a hospital. A few colposcopists who have completed the BC Colposcopy Training Program provide colposcopy out of their office.
AB	• Individual practitioner • Colposcopy clinic	Colposcopy clinics are key partners of the cervical cancer screening program. Program has standardized colposcopy referral form, and procedure report form.
SK	• Hospital • Individual practitioner • Colposcopy clinic	Colposcopy services are provided by a colposcopy clinic in Regina and by individuals practitioners for the rest of the province, which included gynecologic oncologists as well as general gynecologists.
MB	• Hospital • Individual practitioner • Colposcopy clinic	One formal colposcopy clinic in Winnipeg. Other medical clinics and hospitals also offer colposcopy services by gynecologists.
ON	• Hospital • Individual practitioner	Colposcopy services are not currently organized. The screening program provides clinical guidance for colposcopy services both in hospital and community. Additionally, a toolkit for Ontario colposcopists is provided online.
QCǂ	• Hospital • Colposcopy clinic	Colposcopy services are conducted in hospital settings. Referrals are done by the hospital and there are no formal programs.
NB	• Hospital • Colposcopy clinic	Colposcopies are provided by each of the 8 regional hospitals across NB. Colposcopies are operationalized by the Regional Health Authorities.
NS	• Hospital • Colposcopy clinic	Colposcopy is delivered primarily in hospital based clinics. There are a few private office based clinics that provide initial assessment with treatment performed in a hospital setting.

PEI	• Individual practitioner	Colposcopy services are provided by individual gynecologists primarily in an office setting.
NL	• Hospital • Individual practitioners • Colposcopy clinics	Colposcopy services are provided in 11 sites within the 4 Regional Health Authorities. There are also some colposcopy services available in private practice. A comprehensive review of colposcopy services is completed with a best practice guidelines developed with key indicators.

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

Table 11: Use of HPV Testing in Colposcopy Care in Canada

	Current use or plans to implement HPV testing in colposcopy care	Type of HPV test for colposcopy care	Use of HPV test as a test of cure for discharge purposes
NU	No organized screening program available		
NWTǂ	Yes – limited use, only for women needing to travel long distances for colposcopy service	Hybrid Capture 2 test for high-risk HPV	Yes – occasional use in restricted circumstances
YK	No organized screening program available		
BC	Yes – available annually post treatment	Cobas	Yes – if HPV negative post treatment will be discharged after appropriate follow-up
AB	Yes – in planning stages	No decision yet	In planning stages
SK	Available for colposcopists on special request	Health Canada approved PCR method	Yes – based on colposcopist request
MB	HPV test of cure is used in one organized colposcopy clinic in Winnipeg only	Hologic's Aptima HPV test	Yes – used to confirm success or failure of treatment in colposcopy
ON	Co-testing is advised in colposcopy. HPV in colposcopy is still in the planning stages	No decision yet	No
QCǂ	Yes – used as a diagnosis tool	Cobas	Not frequently
NB	No current plans	N/A	Use is determined and operationalized by some providers and Regional Health Authorities
NS	Yes – used as test of cure and to help with triage of cases	Roche test	Yes – used at 6 months with Pap, not used by all colposcopists
PEI	No current plans	N/A	No
NL	No current plans	N/A	No

ǂ No organized screening program. Responses refer to opportunistic cervical cancer screening.

HPV Immunization Programs

HPV immunization is offered to children in all provinces and territories, generally between grades 4 and 7. While these programs were initially available to school-aged girls only, immunization programs in all provinces and territories have been expanded to include school-aged boys.

As part of the National Immunization Strategy, the government of Canada has set a goal of 90% vaccination coverage by 17 years of age for two or more doses of HPV vaccine by the year 2025[3].

Recent Highlight

As of 2017, all provinces and territories now have HPV immunization programs for both school-aged girls and boys.

Table 12: HPV Immunization Programs in Canada

	Immunization Program for Girls		Immunization Program for Boys	
	Date of implementation	School grade when immunization is given	Date of implementation	School grade when immunization is given
NU	2013	Grade 6	2017	Grade 6
NWT	2009	Grade 4-6	2017	Grade 4-6
YK	2009	Grade 6	2017	Grade 6
BC	2008	Grade 6	2017	Grade 6
AB	2008	Grade 5	2014	Grade 5
SK	2008	Grade 6	2017	Grade 6
MB	2008	Grade 6	2016	Grade 6
ONǂ	2007	Grade 8 (2007-2016) Grade 7 (2016-present)	2016	Grade 7
QC	2008	Grade 4	2016	Grade 4
NB	2008	Grade 7	2017	Grade 7
NS	2007	Grade 7	2015	Grade 7
PEI	2007	Grade 6	2013	Grade 6
NL	2007	Grade 6	2017	Grade 6

ǂ In the 2016-2017 school year, Ontario's program expanded to include boys in additions to girls and switched to delivering immunization in grade 7 instead of grade 8. Grade 8 females were also offered HPV vaccine in the 2016-2017 school year so that this cohort would not be missed in the transition from grade 8 to grade 7 delivery.

HPV Immunization Program for Girls

All provinces and territories have a school-based HPV immunization program for girls. HPV vaccination is offered to girls on a 2 or 3 dose schedule. Immunization uptake data is available for different school years across jurisdictions. The provincial/territorial immunization uptake (for final dose) based on the most recent data ranges from 57-92%.

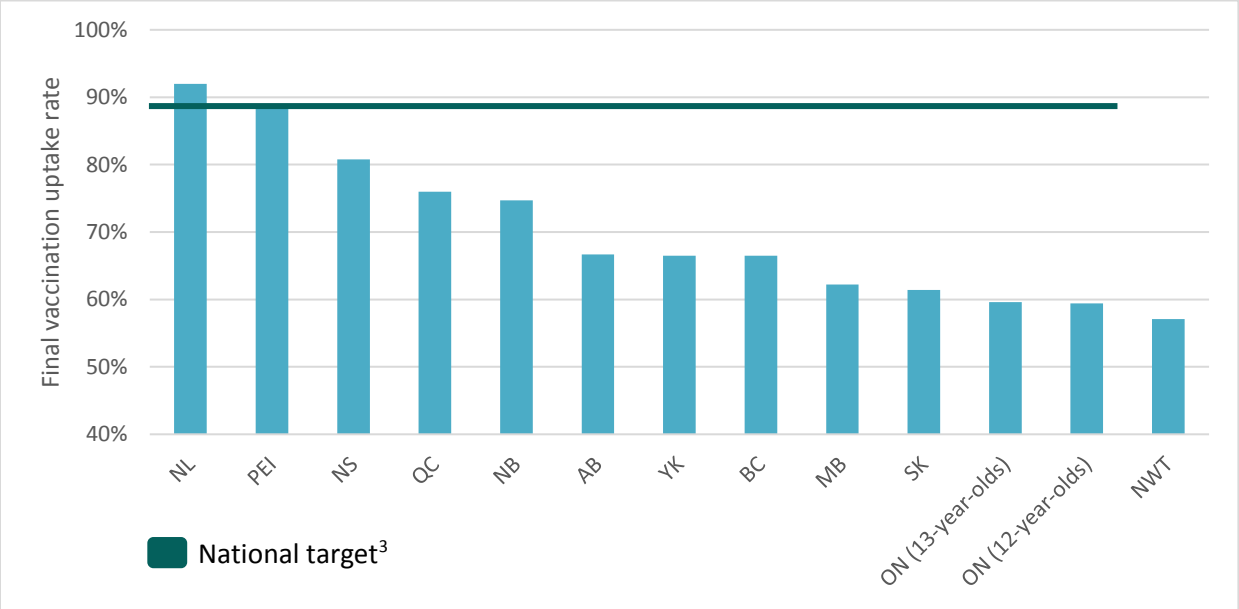
Table 13: Provincial and Territorial HPV Immunization Programs for Girls

	School year of most recent available data	Total size of eligible cohort (girls only)	Immunization uptake (girls only)		
			1st dose	2nd dose	3rd dose
NU	-	-	-	-	-
NWT	2015-2016	Not available	74.7%	64.4%	57.1%
YK	2016-2017	-	84.7%	66.5%	Two-dose schedule
BC	2016-2017	21,570	-	66.5%	Two-dose schedule
AB	2016-2017	23,744	76.0%	-	66.7%
SK	2015-2016	6,580	75.7%	71.9%	61.4%
MB	2015-2016	-	69%	62.2%	Two-dose schedule
ONǂ	2016-2017	72,472 (12-year-olds) 72,539 (13-year-olds)	72.0% (12-year-olds) 70.7% (13-year-olds)	59.4% (12-year-olds) 59.6% (13-year-olds)	Two-dose schedule
QC	2016-2017	42,786	81.2%	76.0%	Two-dose schedule
NB	2016-2017	3,479	79%	74.7%	Two-dose schedule
NS	2015-2016	5,014	89.4%	80.8%	Two-dose schedule
PEI	2016-2017	678	91.9%	88.4%	Two-dose schedule
NL	2015-2016	2,791	-	92%	Two-dose schedule

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

ǂ In the 2016-2017 school year, Ontario's program expanded to include boys in additions to girls and switched to delivering immunization in grade 7 instead of grade 8. Grade 8 females were also offered HPV vaccine in the 2016-2017 school year so that this cohort would not be missed in the transition from grade 8 to grade 7 delivery. Age cohorts are used to approximate the grades at which students are eligible for school-based immunization programs (12-year-olds born in 2004 for grade 7, 13-year-olds born in 2003 for grade 8).

Figure 5: Final Dose Uptake Rates for HPV Vaccination for Girls in Canada



HPV Immunization Program for Boys

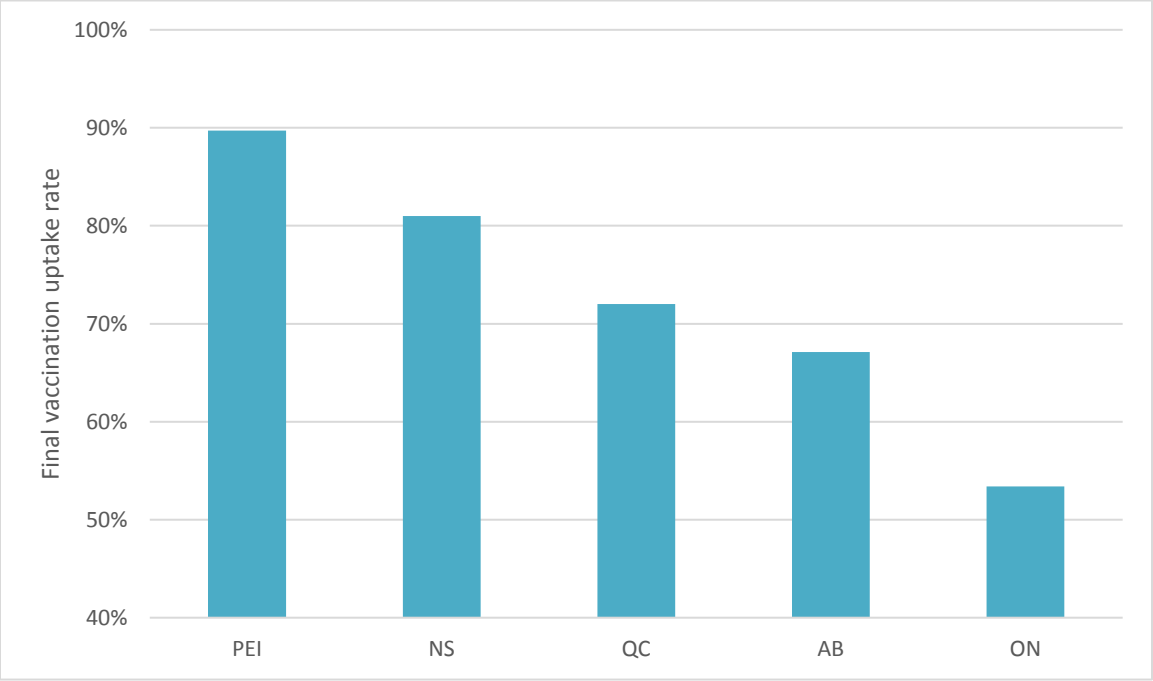
All provinces and territories have extended school-based HPV vaccination programs to include boys. The immunization uptake (for final dose) based on available data ranges from 67.1-89.7%.

Table 14: Provincial and Territorial HPV Immunization Programs for Boys

	School year of most recent available data	Total size of eligible cohort (boys only)	Immunization uptake (boys only)		
			1st dose	2nd dose	3rd dose
NU	-	-	-	-	-
NWT	Data not available				
YK	-	-	-	-	-
BC	-	22,643	Data not available		
AB	2016-2017	24,532	77.2%	-	67.1%
SK	Data not available				
MB	-	-	-	-	-
ON	2016-2017	76,626	66.9%	53.4%	Two-dose schedule
QC	2016-2017	44,999	77.6%	72.0%	Two-dose schedule
NB	Data not available				
NS	2015-2016	5,239	89.4%	81.0%	Two-dose schedule
PEI	2016-2017	-	93.0%	89.7%	Two-dose schedule
NL	2017-2018	2,700	-	-	-

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

Figure 6: Final Dose Uptake Rates for HPV Vaccination for Boys in Canada



Extended Eligibility Programs

All provinces and territories, with the exception of Yukon and British Columbia, have extended eligibility programs. This allows for those who did not receive or did not complete the HPV vaccine series at the provincially-specified grade or age to receive the publicly-funded vaccine if meeting certain eligibility criteria.

Table 15: Provincial and Territorial Extended Eligibility Programs for HPV Immunization

	Extended eligibility component	Start date	End date	Target population	Location
NU	Yes	2017	N/A	-	• Public health unit • Medical clinics • Nursing station
NWT	Yes	-	-	Ages 9-26 for girls and boys	• Public health unit • Nursing station
YK	-	-	-	-	-
BC	N/A	-	-	-	-
AB	Yes – Grade 9 catch up program	Girls: 2008 Boys: 2014	-	-	• School
SK	Yes	2008	N/A	Females born since January 1, 1996 who are in grade 6 or who did not	• School

				receive or complete a series when in grade 6, HIV infected males 9-17 years (3-dose series)	
MB	Yes		No end date unless otherwise stated	Females born during or after 1997 and males born during or after 2002. In addition, the following individuals are considered at high-risk of HPV infection and are also eligible for the publicly funded HPV vaccine (3 doses): • Immunocompetent HIV-infected individuals born during or after 1997 • Immunocompromised individuals born during or after 1997 • Females born between 1986 and 1996 with increased risk of HPV infection, who started the vaccine series before March 31, 2014. • Males born during or after 2000 (≤ 26 years of age) who are, or who have ever been, incarcerated. • Individuals who are currently, or who have previously been diagnosed with, recurrent respiratory papillomatosis. • Patients currently under the care of a haematologist or oncologist from CancerCare Manitoba (CCMB) who have the following conditions and have been provided a CCMB directed Immunization Schedule: 1. Malignant neoplasms (solid tissue and haematological) including leukemia and lymphoma, or clonal blood disorder, and who will receive or have completed immunosuppressive therapy including chemotherapy or radiation therapy, or 2. Patients	• Public health unit • Physicians • Pharmacy • Nurse practitioners (limited amount) • School (in some regions)

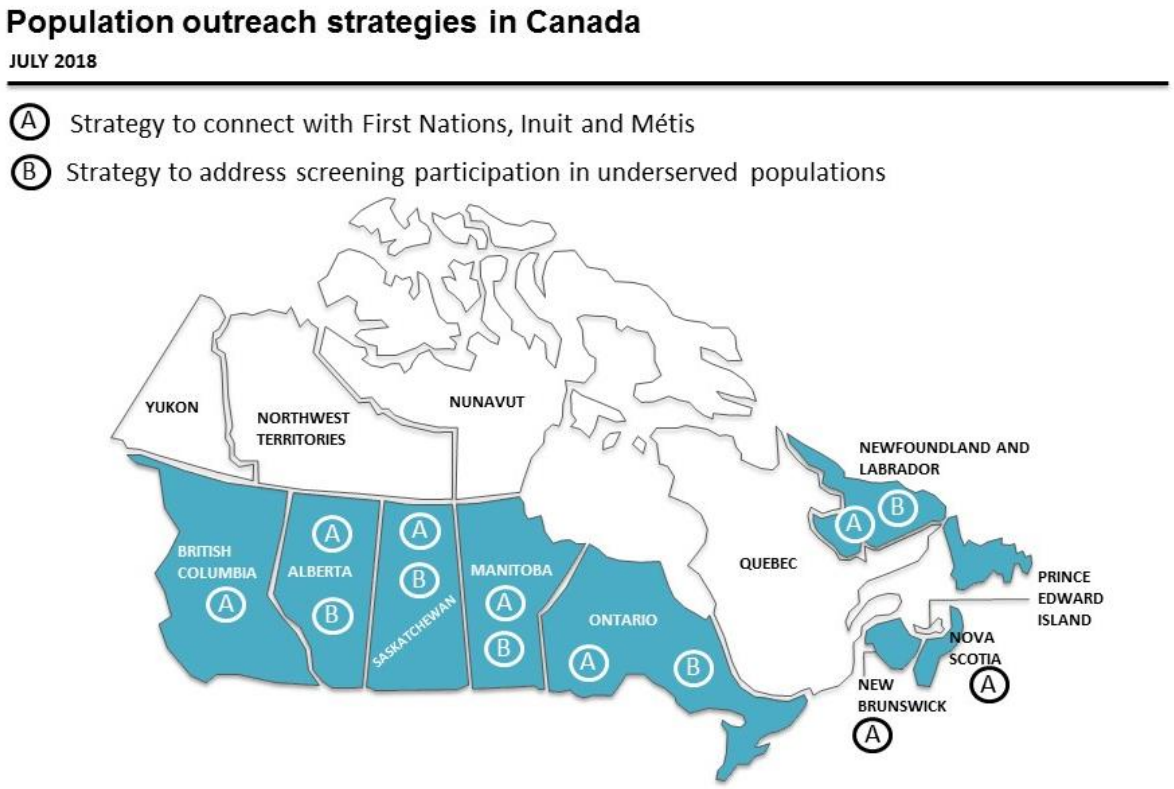
				who are hypo- or asplenic (Sickle Cell Disease, etc.)	
ON	Yes	-	-	Students eligible in grade 7 who do not receive the vaccine	• Public health unit
QC	Yes	2008	N/A	Immunization is free for girls under 18 years of age for the 1st dose and women and men who are immunosuppressed or HIV-infected up to 26 years of age. Since January 2016, it is also free for men who have sex with men.	• Public health unit • Medical clinics • School
NB	Yes	2008	N/A	Criteria for eligibility is based on date of birth, therefore someone born in the eligible year may be vaccinated	• Public health unit
NS	Yes	Girls: 2007 Boys: 2015		Youth who have missed or refused HPV vaccine as part of the school-based program up to and including 18 years of age	• Public health unit
PEI	Yes	2016	N/A	Males ages 18-26 with specified risk factors, females ages 18-45 with specified risk factors, immunocompetent males and females who have HIV, men who have sex with men	• Public health unit • Nursing station • Local Health PEI Public Health Nursing Office
NL	Yes - For females whose parents refused and who are now old enough to decide they want the vaccine	N/A	N/A	Females born 1994 or after	• Public health unit

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

Population Outreach

In general, screening participation rates are low among First Nations, Inuit and Métis[4]. This is also the case for low-income individuals, new immigrants, individuals living in rural communities, and other underserved populations[5]. A variety of strategies have been implemented across Canada to help address screening participation in underscreened populations.

Figure 7: Population Outreach Strategies in Canada



First Nations, Inuit and Métis

8 Canadian jurisdictions have implemented strategies to connect with First Nations, Inuit and Métis

In general, participation rates for cervical cancer screening are much lower among First Nations, Inuit and Métis than non-Indigenous people in Canada.[4]

The cervical cancer screening program in Northwest Territories collects Indigenous and/or people-specific data (e.g. First Nations, Inuit, and/or Métis identifiers) through healthcare numbers. In Ontario, the Aboriginal Cancer Control Unit (ACCU) is currently working with First Nations, Inuit and Métis communities, leadership and governance to explore access, use and reports relating to identifiers. No other Canadian jurisdictions collect this type of data as part of their cervical cancer screening program.

Eight provinces have implemented strategies to connect with First Nations, Inuit and Métis. Strategies identified addressed engaging with First Nations, Inuit and Métis in decision-making and informing approaches to culturally appropriate screening, reaching First Nations, Inuit and Métis through program resources, 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 to reach First Nations, Inuit and Métis communities, along with other programs resources such as culturally appropriate material, presentations, pilots 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, such as screening toolkits, cultural sensitivity training and more.

Table 16: Strategies to Connect with First Nations, Inuit and Métis Communities in Canada

	Strategies to connect with First Nations, Inuit and Métis
BC	• Strategies have been implemented to connect with First Nations, Inuit and Métis.
AB	• Program works with Alberta Health Service Indigenous Health Program, First Nations and Inuit Health Branch and Community partners to improve cervical cancer screening.
SK	• A North 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. Awareness is the primary strategy at this time. • The Coordinators attend events held in First Nations communities. These are by invitation by specific communities.
MB	• Provide Pap Test Competency Training for healthcare providers working in Indigenous communities to provide increased access to Pap test services. • Partner with over 40 Pap test clinics in Indigenous communities to provide Pap test services. • Create with and for Indigenous women a series of Pap Test Clinic posters to advertise local Pap test clinic access. • Participate in the First Nations, Metis and Inuit Cancer Initiative with our Underserved Populations Program at CancerCare Manitoba. • Partner with regional health authorities to coordinate education sessions prior to Pap test clinic dates. • Exhibit at local Treaty Days to increase awareness about the importance of cervical cancer screening. • Use social media to increase awareness about the importance of cancer screening to our eligible Indigenous population.
ON	• Following a pilot, CCO implemented automated Screening Activity Reports to support cervical screening with physicians and Department of Indigenous Services Canada (DISC) nurses serving 27 First Nations communities. • Developed and continue to support First Nations, Inuit and Métis communities and healthcare providers in educational initiatives through the use of fact sheets and Cancer Screening Toolkit (including videos and workshops). • Supported a cancer screening pilot program at Wequedong Lodge of Thunder Bay that facilitated access to cancer screening for First Nations community members from remote communities throughout Northwestern Ontario while in Thunder Bay for other medical services. The Wequedong Lodge cancer screening pilot program provided pap tests onsite and other screening services related to breast and colorectal while in Thunder Bay. • Four Under/Never Screened regional pilots to address screening rates with First Nations, Inuit and Métis communities. • Improving Cancer Screening among First Nations and Métis Communities research project – collaboration between CCO's ACCU and Sunnybrook Research Institute (SRI); funded by CIHR and CCO. The project includes an analysis of cancer screening health policy, two community based cancer screening research projects, and an evaluation of CCO's Under/Never Screened initiatives. These projects have supported the development of a Knowledge Translation and Exchange (KTE) action plan that aims to improve cancer screening participation among FNIM populations in Ontario. The KTE action plan includes several recommendations to CCO, RCPs and other stakeholders, as well as several Knowledge Products (For example, cancer screening pathways to help community members navigate the screening process). • Building regional capacity to address First Nations, Inuit and Métis cancer screening through the development Regional Aboriginal Cancer Plans. The plans were developed through direct engagement and feedback from the First Nations, Inuit and Métis communities, the Regional Cancer Programs and CCO. An example of an initiative from a plan includes opportunities to address access to screening using existing Mobile coaches and clinics to reach remote and underserved First Nations, Inuit and Métis communities.

	• Developed a recommendation report to build organizational capacity and plan to develop First Nations, Inuit and Métis identifiers to inform and support cancer screening. • Developed and signed formalized agreements (Relationship Protocols, Memorandums of Understanding) with PTOs, Independent First Nations, Inuit Service Providers, and the Métis Nation of Ontario which outline our approach to working together. • Developed sustainable engagement strategies within the regions. For instance, the Champlain Inuit Service Providers Relationship Table is inclusive of six Inuit health service providers. This table meets quarterly to discuss the development and implementation of cancer-related initiatives, such as recruitment of Inuit within the High Risk Lung Cancer Screening Pilot Project.
NB	• Representatives of the First Nations, Inuit and Métis sit on our Advisory and Education, Promotion and Awareness committees.
NS	• Collaboration with First Nations Health Indicators Working Group.
NL	• Coordinators link with First Nations, Inuit and Métis communities to integrate the importance of cervical screening within health centres. • Provide translated materials (written and verbal) where necessary. • Staff have participated in sensitivity training/workshops.

Underserved Populations

5 Canadian jurisdictions have implemented strategies to help address participation in underserved populations

Screening participation rates are low among low-income individuals, new immigrants and those living in rural and remote communities when compared to the general Canadian population.[5]

Five provinces have implemented strategies to help address participation in underserved populations. These strategies focus primarily on individuals in rural communities, new immigrants and low-income individuals. Some of the strategies identified reach underserved populations through social media campaigns, presentations, and program material, which focus on increasing awareness and education on cervical cancer screening. Other strategies are geared towards healthcare providers, who in turn work directly with underserved populations.

Table 17: Strategies to Address Cervical Cancer Screening Participation in Underserved Populations in Canada

	Populations of interest	Strategy to address participation
AB	-	• Initiation of a Creating Health Equity in Cancer Screening initiative. The goal of the Creating Health Equity in Cancer Screening (CHECS) project is to develop a method to assess the impact of the social determinants of health on cancer screening rates, use a systematic approach to identify under/never screened areas, and to collaborate with the relevant stakeholders in developing a strategy to increase breast, cervical, and colorectal cancer screening. This project will assist policy development, healthcare providers, and community agencies to better support populations that are under/never screened. CHECS will begin in metro Calgary, and will be expanded to other regions of the province, as applicable.
SK	• New immigrants • Low-income individuals • Individuals in rural communities	• The Coordinators for breast, cervical and colorectal screening regularly present at various events attended by underserved populations. Some examples are: ○ The Open Door Society (ODS) is a non-profit organization that provides settlement and integration services to refugees and immigrants. There is one located in Regina and Saskatoon. ODS is committed to meeting the needs of newcomers by offering programs and services that enable them to achieve their goals and participate fully in the larger community. The Coordinators provide education to immigrants on screening. Interpreters may attend these sessions to assist immigrants with translation. PowerPoint slides include several pictures to help immigrants understand the content. ○ Global Gathering Place (GGP), a non-profit drop-in centre that provides services for immigrants and refugees in Saskatoon. Global Gathering Place helps newcomers adapt to life in Canada by offering support and skill development, acceptance, and a welcoming environment. ○ Saskatchewan has implemented a North Mobile Health Unit that travels the northern part of our province providing information to groups about the importance of getting cervical, colorectal and breast screening. Awareness is our primary strategy at this time. These groups can include First Nations, new immigrants, low-income individual and individuals in rural communities. • SIPPA is a 'practice readiness' competency assessment program in Saskatchewan. SIPPA was implemented in 2011 to ensure that internationally trained physicians who wish to practice medicine in Saskatchewan possess the appropriate clinical skills and knowledge to provide quality patient care. The Coordinators discuss the Screening programs to this group of physicians. The physicians will encounter

		underserved populations in their practice. • Healthcare Provider Conferences. The Coordinators are invited to conferences to host a booth or provide an education session. The healthcare providers in turn work with underserved populations in their practices.
MB	• New immigrants • Low-income individuals • Individuals in rural communities	• Presentations to community, newcomer, rural groups. • Maintaining resources in multiple languages. • Offering a module for low literacy (including adult English as an Additional Language) about cancer screening to use in the adult classroom. • Targeting social media posts to specific communities to educate about cancer screening and access points. • Partnering with Community Engagement Liaisons to reach all eligible Manitobans. Program provides them support and resources to reach communities that it cannot get to.
ON	• Low-income individuals • Individuals in rural communities	• Ontario has two mobile screening coaches that offer cancer screening services (including cervical screening), one in the North West region, and the other in Hamilton Niagara Haldimand Brant region.
NL	• New immigrants • Low-income individuals • Individuals in rural communities	• Strategic focus is placed on areas of the province with low uptake rates and among groups such as new Canadians.

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

LGBTQ2+ Communities

In Manitoba, the cervical cancer screening guidelines include specific guidelines for transgender individuals. In addition, the program offers educational resources that target LGBTQ2+ individuals. Consultation with the LGBTQ2+ community helped to ensure that these resources along with the screening program's website use inclusive language.

The Ontario Cervical Screening Program has a trans persons policy, however, this policy is not yet publicly available. The program recommends that transgender men who have retained their cervix should be screened according to the program guidelines.

New Brunswick has recommendations for screening for transgender individuals included in their website's FAQs, and Newfoundland and Labrador has inclusion criteria build into their screening program guidelines.

Improving Screening Program Participants' Experience

Some provinces have implemented strategies to help improve screening participants' experience. For instance, Manitoba has initiated an HPV self-sampling pilot study, and has resources and education for clinicians and the public around counseling strategies, creating a comfortable atmosphere to perform screening in the examination room, and what to expect during a Pap test.

New Brunswick is working with Regional Health Authorities to establish nurse run Pap Test Clinics to increase access to screening. In addition, the province is involved in the Federation of Medical Women of Canada's Pap Awareness/Cervical Cancer Awareness Week (October 15-19, 2018). Lastly, Newfoundland and Labrador has incorporated the importance of cervical screening into a wellness platform/experience for women.

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