Nova Scotia Breast Screening Program

Annual Report 2023

IWK Health

Message from the Program Manager

We are pleased to release our 2023 annual report which includes both program results and on-going work that improves care for the people of Nova Scotia who access breast screening services.

In October 2019, Nova Scotia was the second province to implement breast density notification to all people following a screening mammogram. Nova Scotia was the first province to use software to provide the density assessment ensuring a standardized approach.

In 2020, the COVID-19 pandemic drastically changed the way that the Nova Scotia Breast Screening Program provided services. Screening mammography was suspended for months, and our central booking office had to adjust to working differently to keep our staff and patients safe. Our staff demonstrated resilience and flexibility in the way we worked and continued to provide a high standard of service.

In March 2021, our clinical practice guideline Radiological Breast Screening of High-Risk Women in Nova Scotia was approved. This will provide a standardized approach to radiological screening for breast cancer in high-risk individuals. We continue to work on guideline implementation, including development of educational materials for primary care providers and their patients.

We have recently updated our clinical practice guideline for Average Risk Breast Screening. We are also developing a new website which will greatly improve our ability to make information about breast screening in Nova Scotia more easily accessible.

We look forward to continuing the work we are doing to improve breast screening services to the people of Nova Scotia.

Warmest Regards,

Trena Metcalfe

Trena Metcalfe
Program Manager
Nova Scotia Breast Screening Program

Plan Ahead. Get Screened.

Regular breast cancer screening can find cancer when it is small, easier to treat, and there are more treatment options.

Screening regularly is important to allow the radiologist to look for change – early detection is key. Any concerns about a change in the breasts should be investigated by a health care provider.

Eligible women, trans, gender diverse and non-binary people aged 40 and older can call the Breast Screening Program to book a screening mammogram at any site in Nova Scotia.

VISION
To enhance the quality of life through the early detection of breast cancer.

MISSION STATEMENT
To improve the breast health among the people of Nova Scotia through high quality, accountable and seamless breast imaging and diagnosis ensuring continuity of patient care.

A PATIENT NAVIGATOR OFFERS STEP-BY-STEP SUPPORT TO YOU OR YOUR HEALTH CARE PROVIDER

ASK US

CALL 1-800-565-0548 OR (902) 425-2410
TO SPEAK WITH A PATIENT NAVIGATOR

Call 1-800-565-0548 to book your mammogram

Have your health card ready

Clinical Practice Guidelines

AVERAGE RISK CLINICAL PRACTICE GUIDELINE (CPG) – UPDATE

In 2023, the Average Risk CPG was updated to:

- Standardize screening guidelines for trans, gender diverse and non-binary people
- Include a very high breast density (Category D) as an indication for annual screening
- Remove hormone replacement therapy as an indication for annual screening

HIGH RISK CLINICAL PRACTICE GUIDELINE (CPG)

In 2021, the High Risk CPG was approved by both IWK Health and Nova Scotia Health.

Individuals are at high risk of breast cancer if they fall into one of these risk groups:

1. Known genetic mutation associated with a high lifetime risk of breast cancer (e.g., BRCA1, BRCA2, Cowden's Syndrome)
2. Someone who has declined genetic testing and who is the first degree relative of a known mutation carrier (e.g., BRCA1, BRCA2, Cowden's Syndrome)
3. High lifetime risk (>25%) of breast cancer as established and documented by a standard breast cancer risk assessment model (e.g. including, but not limited to IBIS, BOADICEA)
4. History of having received radiation as cancer treatment to the chest area before age 30. Screening is not indicated until 8 years after end of radiotherapy, or age 30, whichever date is later.

High risk individuals cannot self-refer for High-Risk screening. Providers can refer high risk individuals aged 30–74 for their first screen which will involve a mammogram followed by breast MRI, approximately 30 days later. High risk individuals will be managed by NSBSP to ensure standardization. High-risk screening with mammography and MRI is recommended on an annual basis.

MRI CLINICAL ACCESS GUIDELINE – UPDATE

The NSBSP participated in the updating of the Clinical Access Guideline for Breast MRI which was approved in 2023.

The Clinical Access Guideline was updated to:

- Standardize language for trans, gender diverse and non-binary people.
- Clarify that this does not apply to high risk screening individuals who are confirmed to be at high risk of breast cancer (reference is made to the new High Risk CPG)
- Reflect the current indications for breast MRI

Engagement of Priority Populations

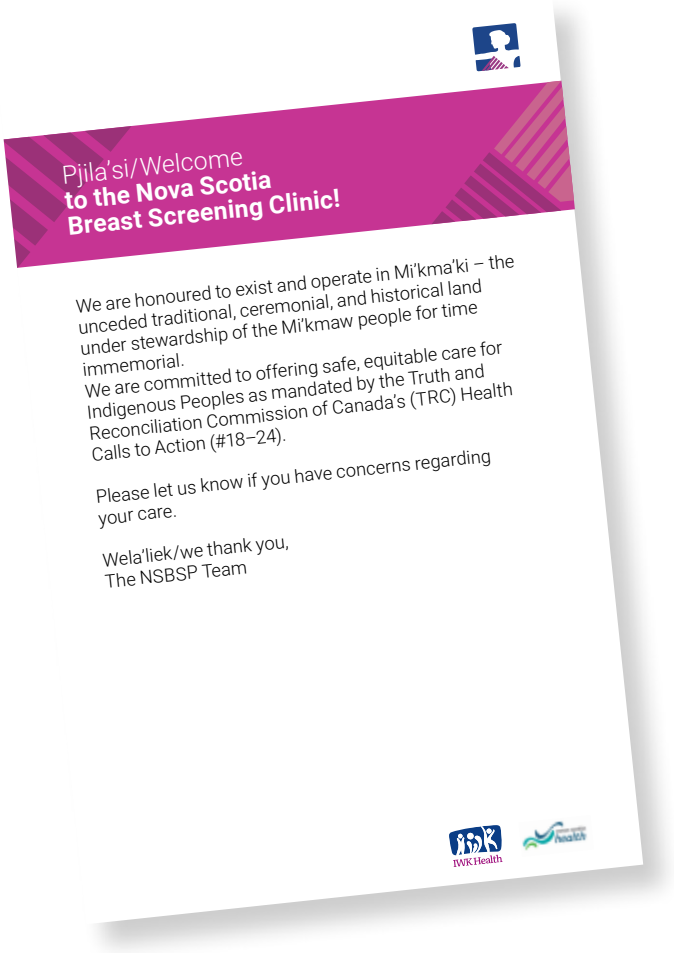
BREAST SCREENING DAY FOR FIRST NATIONS PEOPLE FROM THE MI'KMAW NATIVE FRIENDSHIP CENTRE

Breast Screening can be a time of anxiety for some people. We recognize that providing people with the opportunity to support each other during this appointment can provide a positive experience and encourage screening.

In May of 2023, we coordinated with the Mi'kmaw Native Friendship Centre to provide an opportunity for their clients to book their screening mammograms as a group so they can support each other during their screening appointment. We have offered this service in the past with great results from those who participated in the event.

As part of this collaboration we had the opportunity to discuss how to make the screening environment welcoming and inclusive. As a result, we had a Welcome sign created for the Halifax Screening Clinic, purchased Indigenous artwork to be displayed in the waiting room, and a provincial poster recognizing the Land Acknowledgement.

The positive collaboration between the people we have worked with at the Mi'kmaw Native Friendship Centre has resulted in permanent monthly screening appointments available at the Halifax Shopping Centre Clinic being made available to people who visit the Wije'winen Health Centre.



Program Updates

PROGRAM PERFORMANCE AND IMPACT OF COVID

When the pandemic was declared in March 2020, breast screening services were paused completely across the province. By the fall of 2020, all sites had resumed screening services with different sites ramping up at different speeds depending on local context. Social distancing between clients in the clinic wait area was implemented, additional time was allotted between each client to disinfect the equipment, and masks became mandatory.

Once lockdowns ended and breast screening resumed, filling all available appointments and building capacity in the system was a priority for NSBSP. However, there were multiple factors that led to a reduction in individuals in the target age group 50–74 choosing to be screened in 2021, and fewer individuals returned to breast screening 30 months after being screened in 2019. This in turn impacted the breast screening participation rates and breast screening retention rates. More information on program performance, as measured by quality indicators, can be found in the annual statistical supplement (Appendix).

The Nova Scotia Breast Screening Program will continue to monitor the implications of delayed breast screening. The true impact of Covid on breast screening and breast cancer outcomes will likely not be understood for several years.

QUALITY OF SCREENING MAMMOGRAPHY

The Nova Scotia Breast Screening Program is anticipating the implementation of new mammography image quality software at all screening clinics, beginning in the fall of 2023. By providing standardized image quality assessments, intelliMammo™ will be available to support technologists in maintaining good image quality. It is anticipated that this implementation will support a reduction in technical recalls due to positioning issues, streamline reporting to the Canadian Association of Radiologists (CAR) Mammography Accreditation (MAP) program, and enable performance benchmarking.

NEW NOVA SCOTIA BREAST SCREENING PROGRAM WEBSITE

The Nova Scotia Breast Screening Program launched a refreshed and more mobile friendly website in January 2024. The website will support patients and providers with more accessible and timely information. Patients and providers will be able to find breast screening/ diagnostic mammography/ breast imaging guidelines, yearly mobile schedule, and breast density information. In the event of inclement weather, storm closure information for affected clinics across the province will be posted on the website.

Looking Ahead

APPOINTMENT REMINDER EMAILS

Nova Scotia Breast Screening Program wants to improve the way it provides appointment reminders and notification that it is time to book the next screening mammogram. Clients have been expressing interest in receiving email reminders and NSBSP is working to have this solution implemented.

In preparation for this implementation, clients are asked if they are interested in receiving email reminders when they call to book their screening appointments. When a client consents to receiving future reminder emails, their email addresses are entered into the Breast Information System. Implementation of the email reminder system is planned for 2024.

NOVA SCOTIA **BREAST SCREENING PROGRAM** 2021

PARTICIPATION RATES
Ages 50–74:
37%

RETENTION RATES FOR SUBSEQUENT SCREENS
Ages 50–74:
57%

NOTE:
The participation rate is calculated for the 30 months ending Dec. 31, 2021 (July 01, 2019 to Dec. 31, 2021).

Retention Rate for subsequent screens is calculated for individuals (who had had at least one prior screening mammogram), who came to screening during 2019 and returned within 30 months.

141,220†
APPOINTMENTS BOOKED BY CENTRAL BOOKING

100,972
CALLS TO CENTRAL BOOKING

53,627*
SCREENING MAMMOGRAMS

3,864*
FURTHER IMAGING

994*
NEEDLE CORE BIOPSIES

314*
CANCERS

NOTES:

† Appointments booked by Central Booking include: screening mammograms, diagnostic mammograms, ineligible screens, follow-up mammograms, work-up mammograms, 6-month post-cores, ultrasounds and rebooks.

* This data is presented for women of all ages who came to breast screening during calendar year 2021.

APPENDIX

Annual Statistical Supplement

EXECUTIVE SUMMARY

Monitoring and evaluation of the Nova Scotia Breast Screening Program (NSBSP) makes it possible to understand the impact of organized breast screening, and to determine areas for improvement.

In 2020, the COVID-19 pandemic drastically changed the way that the Nova Scotia Breast Screening Program (NSBSP) provided services. Screening mammography in Nova Scotia was suspended for months, and that impact continues to be reflected in the declining breast screening participation rates, even after restrictions were eased.

Highlights:

- The participation rate for those aged 50–74 (37.1%) continues to be well below the national target of 70%, and has been declining since 2019
- The retention rate for those aged 50–72 also fell well below the national target:
  - Only 20.4% returned to screening after a first screen (target: 75%)
  - Only 57.0% returned to screening after a subsequent screen (target: 90%)
  - Both figures have declined over the last couple of years
- Other quality indicators appeared stable

What follows is an overview of the NSBSP Quality Indicator Framework (Section A), time trends in the quality indicators (2018–2021) (Section B), and an in-depth report by site (2021) (Section C).

A. NSBSP QUALITY INDICATOR FRAMEWORK

NSBSP monitors annual program performance by way of quality indicators[1], informed by those used nationally. Quality indicators are grouped into five domains:

1. Coverage
   - Participation Rate
   - Retention Rate

2. Follow-up
   - Abnormal Call Rate
   - Diagnostic Interval

3. Quality of screening
   - Benign to Malignant Core Biopsy Ratio
   - Benign to Malignant Open Biopsy Ratio
   - Positive Predictive Value (PPV)

4. Detection
   - In situ cancer detection rate
   - Invasive cancer detection rate

5. Disease extent at diagnosis
   - Screen-detected invasive cancer tumour size
   - Proportion of screen-detected invasive cancers that are node negative

Time trends are presented for these quality indicators for individuals ages 50–74 (2018–2021), followed by quality indicators for each site separately (2021).

1 Canadian Partnership Against Cancer. *Breast Cancer Screening in Canada: Monitoring and Evaluation of Quality Indicators – Results Report, January 2011 to December 2012*. Toronto: Canadian Partnership Against Cancer; 2016.

B. TIME TRENDS IN QUALITY INDICATORS (2018–2021)

1. Participation Rate (Domain 1: Coverage)

Definition: The percentage of individuals who have a screening mammogram during a 30-month period ending December 31, as a proportion of the target population.

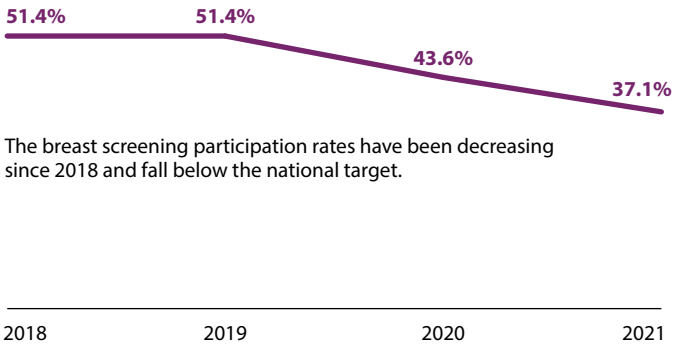
Note: The participation rate is calculated for individuals ages 50–74 who came to screening during the 30-month period July 1, 2019 – December 31, 2021.

Results (Figure 1):

- This year (2021), 37.1% of eligible Nova Scotia individuals participated in breast screening.
- Over time (2018–2021), the breast screening participation rate has been decreasing and remains well below the national target.

FIGURE 1: Participation Rate

National target: At least 70% of eligible individuals in Nova Scotia participate in breast screening.



The breast screening participation rates have been decreasing since 2018 and fall below the national target.

2. Retention Rate (Domain 1: Coverage)

Definition: The percentage of individuals who returned for screening within 30 months of their previous screen. It is calculated separately for initial screens (first time individuals) and for subsequent screens.

Note: The retention rate is calculated for individuals ages 50–72 who came to screening in 2019 (e.g., February 2019) and returned within 30 months (i.e., by August 2021).

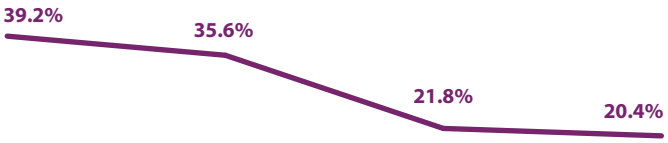
Results:

- Initial Screens (Figure 2a):
  - This year (2021), 20.4% of initial-screened individuals who received their first mammogram in 2019 returned to screening.
  - Over time (2018–2021), the proportion of initial-screened individuals who returned to screening has been decreasing and remains well below the national target.

- Subsequent Screens (Figure 2b):
  - This year (2021), 57.0% of subsequent-screened individuals in 2019 returned to screening.
  - Over time (2018–2021), the proportion of subsequent-screened individuals who returned to screening has been decreasing and remains well below the national target.

FIGURE 2A: Retention Rate Initial Screens

National target: At least 75% of first time individuals return to screening within 30 months.

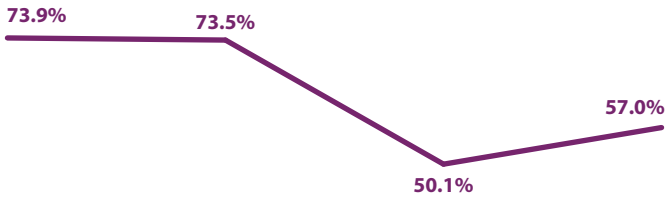


The proportion of initial-screened individuals who return to screening within 30 months have been declining since 2016 and fall below the national target.

2018 2019 2020 2021

FIGURE 2B: Retention Rate Subsequent Screens

National target: At least 90% of subsequent-screened individuals return to screening within 30 months.



The proportion of subsequent-screened individuals who return to screening within 30 months have been declining since 2016 and fall below the national target.

2018 2019 2020 2021

3. Abnormal Call Rate (Domain 2: Follow-up)

Definition: The percentage of screening mammograms that are reported as abnormal. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The abnormal call rate is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial Screens (Figure 3a):
  - This year (2021), 15.3% of initial screening mammograms were reported as abnormal.
  - Over time (2018–2021), the proportion of screening mammograms that were reported as abnormal has remained stable over time.

- Subsequent Screens (Figure 3b):
  - This year (2021), 6.1% of subsequent screening mammograms were reported as abnormal.
  - Over time (2018–2021), the proportion of subsequent screening mammograms that were reported as abnormal has remained stable.

FIGURE 3A: Abnormal Call Rate Initial Screens

The proportion of first time screening mammograms that were identified as abnormal remained steady over time, but did not meet the national target.

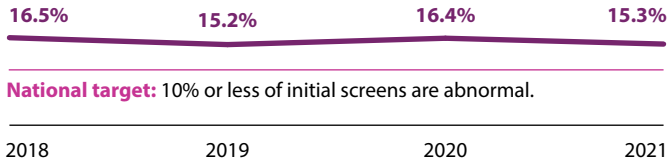
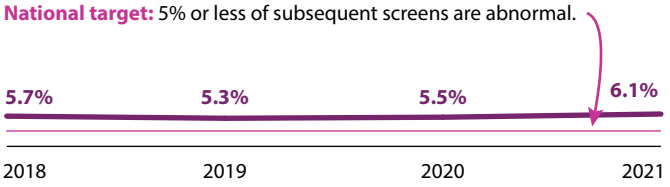


FIGURE 3B: Abnormal Call Rate Subsequent Screens

The proportion of subsequent-screened mammograms that were identified as abnormal remained steady over time, but a slight increase was observed in 2021.



4. Diagnostic Interval (Domain 2: Follow-up)

Definition: The time from abnormal screen to definitive diagnosis. It is calculated separately for a) when tissue biopsy is not needed to reach definitive diagnosis, b) when tissue biopsy is needed to reach definitive diagnosis and is reported as a percentage achieving target.

Note: The diagnostic interval is calculated for individuals ages 50–74 who came to screening in 2021

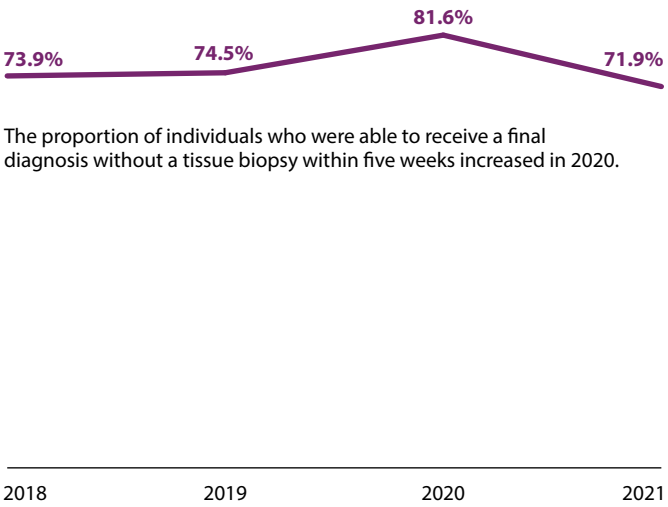
Results:

- No Tissue Biopsy (Figure 4a):
  - This year (2021), 71.9% of individuals received their diagnosis within the target timeframe (no biopsy required).
  - Over time (2018–2021), the proportion of individuals who received a diagnosis (without a biopsy) within the target timeframe dropped substantially from last year.

- Tissue Biopsy (Figure 4b):
  - This year (2021), 55.1% of individuals received their diagnosis within the target timeframe (biopsy required).
  - Over time (2018–2021), the proportion of individuals who received a diagnosis (with a biopsy) within the target timeframe dropped substantially from last year.

FIGURE 4A: No Tissue Biopsy

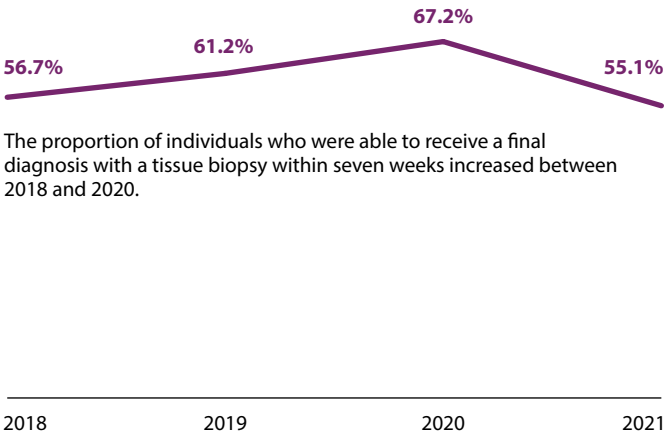
National target: 90% or more of abnormal screens that do not need a tissue biopsy are diagnosed within five weeks.



The proportion of individuals who were able to receive a final diagnosis without a tissue biopsy within five weeks increased in 2020.

FIGURE 4B: Tissue Biopsy

National target: 90% or more of abnormal screens that need a tissue biopsy are diagnosed within seven weeks.



The proportion of individuals who were able to receive a final diagnosis with a tissue biopsy within seven weeks increased between 2018 and 2020.

5. Benign to Malignant Core Biopsy Ratio (Domain 3: Quality of Screening)

Definition: Among core biopsies, the ratio of benign cases to malignant cancer cases. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The benign to malignant core biopsy ratio is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial Screens (Figure 5a):
  - This year (2021), among initial-screened individuals who had core biopsies, 4.78 benign findings were detected for every one malignant finding.
  - Over time (2018–2021), among initial-screened individuals, the ratio of benign to malignant core biopsy findings has been increasing since 2019.

- Subsequent Screens (Figure 5b):
  - This year (2021), among subsequent-screened individuals who had core biopsies, 1.95 benign findings were detected for every one malignant finding.
  - Over time (2018–2021), among subsequent-screened individuals, the ratio of benign to malignant core biopsy findings has remained stable.

FIGURE 5A: Benign to Malignant Core Biopsy Ratio Initial Screens

Among first time screens that required core biopsies, the ratio of benign to malignant findings was lowest in 2019.

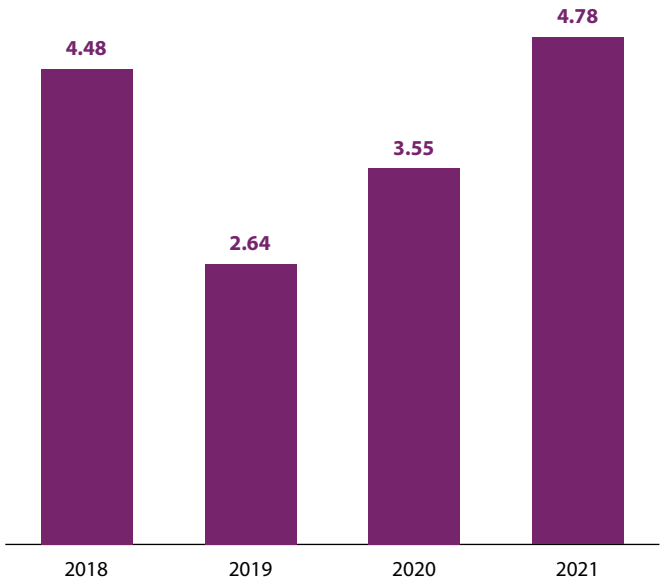
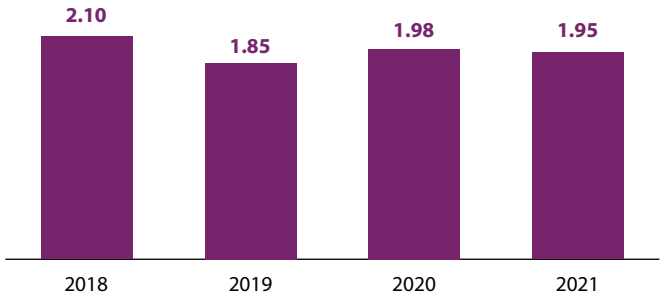


FIGURE 5B: Benign to Malignant Core Biopsy Ratio Subsequent Screens

Among subsequent screens that needed core biopsies, the ratio of benign to malignant findings remained steady.



6. Benign to Malignant Open Biopsy Ratio (Domain 3: Quality of Screening)

Definition: Among open surgical biopsies, the ratio of benign cases to malignant cancer cases. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The benign to malignant open biopsy ratio is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial Screens (Figure 6a):
  - This year (2021), among initial-screened individuals who had open surgical biopsies, 0.5 benign findings were detected for every one malignant finding.
  - Over time (2018–2021), among initial-screened individuals, the ratio of benign to malignant open biopsy findings fluctuated.

- Subsequent Screens (Figure 6b):
  - This year (2021), among subsequent-screened individuals who had open surgical biopsies, 0.07 benign findings were detected for every one malignant finding.
  - Over time (2018–2021), among subsequent-screened individuals, the ratio of benign to malignant open biopsy findings has remained stable.

FIGURE 6A: Benign to Malignant Open Biopsy Ratio Initial Screens

Among first time screens that required open surgical biopsies, the ratio of benign to malignant findings fluctuated with time.

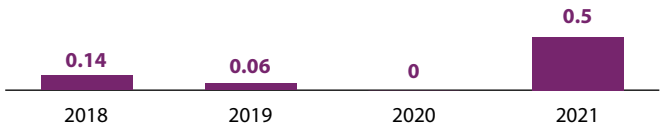


FIGURE 6B: Benign to Malignant Open Biopsy Ratio Subsequent Screens

Among subsequent screens that needed open surgical biopsies, the ratio of benign to malignant findings remained steady over time.

7. Positive Predictive Value (PPV) (Domain 3: Quality of Screening)

Definition: The percentage of abnormal cases diagnosed with breast cancer (invasive or in situ) after diagnostic work-up. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The positive predictive value is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial screens (Figure 7a):
  - This year (2021), 5.2% of initial-screened individuals with abnormal mammogram results were diagnosed with breast cancer.
  - Over time (2018–2021), the proportion of initial-screened individuals with abnormal mammogram results has decreased since 2019.

- Subsequent Screens (Figure 7b):
  - This year (2021), 9.9% of subsequent-screened individuals with abnormal mammogram results were diagnosed with breast cancer.
  - Over time (2018–2021), the proportion of subsequent-screened individuals with abnormal mammogram results has remained stable.

FIGURE 7A: Positive Predictive Value (PPV) Initial Screens

The proportion of abnormal first-time screening mammograms that were diagnosed with breast cancer peaked in 2019, then declined in 2020 and 2021

National target: 5% or more of abnormal first-time mammograms are diagnosed with breast cancer.

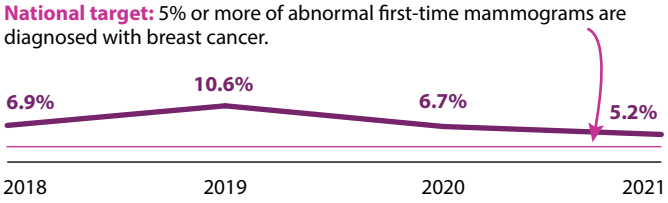
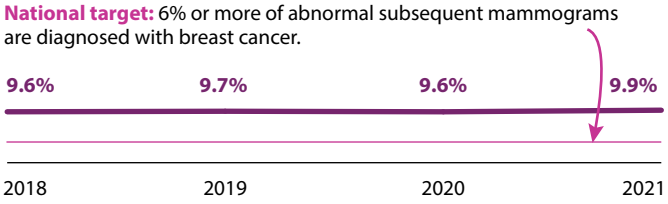


FIGURE 7B: Positive Predictive Value (PPV) Subsequent Screens

The proportion of abnormal subsequent screening mammograms that were diagnosed with breast cancer remained steady since 2018.

National target: 6% or more of abnormal subsequent mammograms are diagnosed with breast cancer.



8. In Situ Cancer Detection Rate (Domain 4: Detection)

Definition: The number of ductal carcinoma in situ (DCIS) cancers detected per 1,000 screens. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The in situ cancer detection rate is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial Screens (Figure 8a):
  - This year (2021), among initial-screened individuals, 0.47 in situ cancers were detected per 1,000 screens.
  - Over time (2018–2021), the number of in situ cancers detected per 1,000 initial screens has decreased since 2019.

- Subsequent Screens (Figure 8b):
  - This year (2021), among subsequent-screened individuals, 1.07 in situ cancers were detected per 1,000 screens.
  - Over time (2018–2021), the number of in situ cancers detected per 1,000 subsequent screens has remained stable.

FIGURE 8A: In Situ Cancer Detection Rate Initial Screens

The number of in situ cancers detected per 1,000 initial screens decreased over time.

FIGURE 8B: In Situ Cancer Detection Rate Subsequent Screens

The number of in situ cancers detected per 1,000 subsequent screens remained steady over time.

9. Invasive Cancer Detection Rate (Domain 4: Detection)

Definition: The number of invasive cancers detected per 1,000 screens. It is calculated separately for initial screens (first time individuals) and for subsequent screens (individuals who had at least one prior screening mammogram).

Note: The invasive cancer detection rate is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Initial Screens (Figure 9a):
  - This year (2021), among initial-screened individuals, 7.5 invasive cancers were detected per 1,000 screens.
  - Over time (2018–2021), the number of invasive cancers detected per 1,000 initial screens has decreased since 2019.

- Subsequent Screens (Figure 9b):
  - This year (2021), among subsequent-screened individuals, 4.9 invasive cancers were detected per 1,000 screens.
  - Over time (2018–2021), the number of invasive cancers detected per 1,000 subsequent screens has remained stable.

FIGURE 9A: Invasive Cancer Detection Rate Initial Screens

The number of invasive cancers detected per 1,000 initial screens increased in 2019, then decreased in 2020 and 2021.

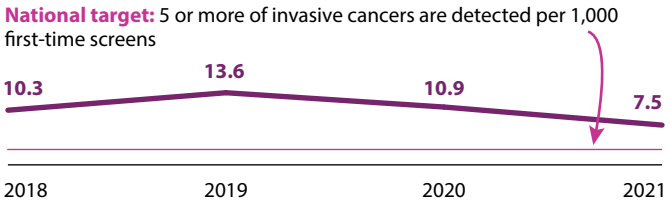
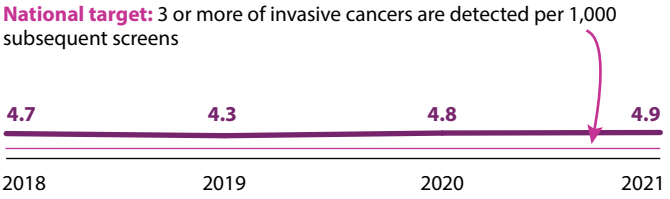


FIGURE 9B: Invasive Cancer Detection Rate Subsequent Screens

The number of invasive cancers detected per 1,000 subsequent screens remained steady over times.



10. Screen-Detected Invasive Cancer Tumour Size (Domain 5: Disease Extent at Diagnosis)

Definition: The percentage of invasive cancers with a tumour size ≤10 mm; the percentage of invasive cancers with a tumour size ≤15 mm

Note: The screen detected invasive cancer tumour size is calculated for individuals ages 50–74 who came to screening in 2021.

Results:

- Invasive cancers with tumour size ≤10 mm (Figure 10a):
  - This year (2021), 34.0% of invasive cancers detected by screening had tumour sizes that were 10mm or smaller.
  - Over time (2018–2021), the proportion of screen-detected invasive cancers with tumour sizes ≤10 mm remained steady.

- Invasive cancers with tumour size ≤15 mm (Figure 10b):
  - This year (2021), 59.5% of invasive cancers detected by screening had tumour sizes that were 15mm or smaller.
  - Over time (2018–2011), the proportion of screen-detected invasive cancers with tumour sizes ≤15 mm decreased in 2021 compared to the prior three years.

FIGURE 10A: Screen-Detected Invasive Cancer Tumour Size ≤10 mm

The proportion of invasive cancers with tumor sizes 10mm or smaller remained steady over time.

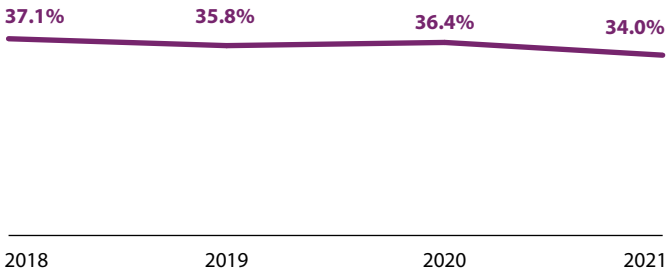
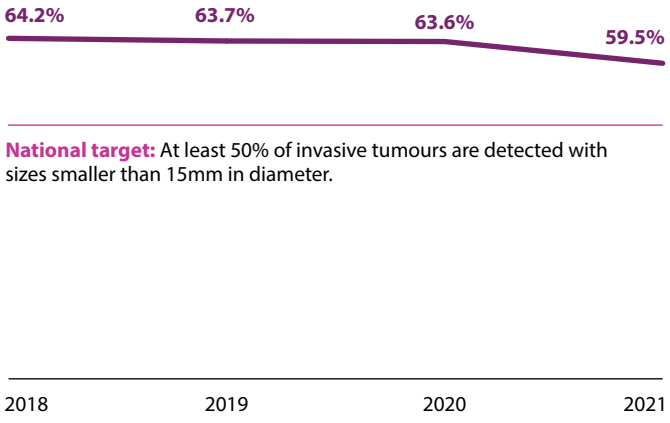


FIGURE 10B: Screen-Detected Invasive Cancer Tumour Size ≤15 mm

The proportion of invasive cancers with tumor sizes 15mm or smaller was lower in 2021 than the previous three years.



National target: At least 50% of invasive tumours are detected with sizes smaller than 15mm in diameter.

11. Proportion of Node Negative Screen-Detected Invasive Cancers (Domain 5: Disease Extent at Diagnosis)

Definition: The percentage of invasive cancers in which the cancer has not invaded the axillary lymph nodes.

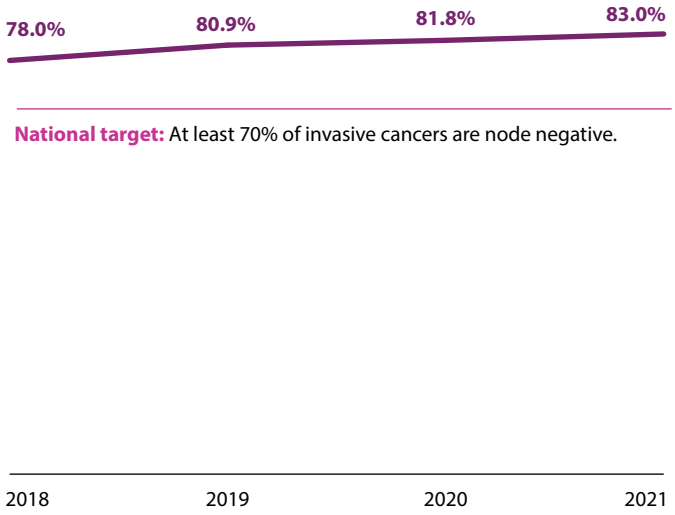
Note: The proportion of node negative screen detected invasive cancer is calculated for individuals ages 50–74 who came to screening in 2021.

Results (see Figure 11):

- This year (2021), 83.0% of invasive cancers were node negative.
- Over time (2018–2021), the proportion of screen-detected invasive cancers that are node negative has been increasing and is above the national target.

FIGURE 11: Proportion of Node Negative Screen-Detected Invasive Cancers

The proportion of invasive cancers in which the cancer has not invaded the axillary lymph nodes (node negative) increased over time.



C. QUALITY INDICATORS BY SITES (2021)

Table 1: Quality Indicators by Site, Zone and Province, Individuals ages 50–74, Screen Year 2021

Indicator	National Target	AM	AN	BR	Central***	KE	NG	SY	TR	YA	Western Zone 1	Northern Zone 2	Eastern Zone 3	Central Zone 4	Nova Scotia§
Number of Individuals Participated in Screening	NA	1,117	1,210	1,960	17,984	3,092	1,569	546	2,682	2,210	7,262	5,368	1,756	17,984	39,547
Number of 1st Screens	NA	91	54	107	860	204	68	36	111	121	432	270	90	860	2121
Number of Screen Detected Cancers	NA	9	9	9	100	15	16	small cell	23	10	34	48	9	100	241
Coverage															
Participation Rate (Ages 50–74), 30 month*	≥ 70%	Data N/A									Data N/A				37.1%
Retention Rate (Ages 50–72)‡															
Initial	≥ 75%	9.3%	20.6%	23.3%	22.7%	17.8%	21.3%	12.3%	16.5%	21.5%	20.4%	15.1%	16.8%	22.7%	20.4%
Subsequent	≥ 90%	51.1%	53.9%	52.6%	60.6%	49.3%	52.7%	48.1%	57.0%	59.4%	52.8%	54.2%	52.4%	60.6%	57.0%
Follow-Up															
Abnormal Call Rate															
Initial	< 10%	12.1%	31.5%	15.9%	14.7%	13.2%	14.7%	16.7%	15.3%	18.2%	15.3%	14.1%	25.6%	14.7%	15.3%
Subsequent	< 5%	5.9%	11.3%	6.6%	5.7%	4.7%	8.9%	3.1%	9.0%	6.8%	5.9%	8.4%	8.8%	5.7%	6.1%
Diagnostic Interval															
A) % notified within 2 weeks of screen	≥ 90%	97.2%	94.7%	98.3%	98.2%	98.8%	99.7%	90.3%	96.4%	82.8%	93.8%	97.5%	93.3%	98.2%	96.9%
B) Time from abnormal screen to definitive diagnosis															
– without tissue biopsy (% diagnosed within five weeks)	≥ 90%	85.7%	37.4%	39.4%	93.2%	71.1%	85.8%	80.7%	51.0%	28.7%	49.3%	66.3%	58.4%	93.2%	71.9%
– with tissue biopsy (% diagnosed within seven weeks)	≥ 90%	86.7%	46.7%	42.9%	52.2%	64.1%	66.7%	89.8%	61.2%	27.6%	42.4%	67.0%	73.4%	52.2%	55.1%
Quality of Screening															
Benign: Malignant Core Biopsy Ratio															
Initial	None	small cell	small cell	small cell	6.14 : 1	small cell	undefined	small cell	small cell	undefined	small cell	small cell	small cell	6.14 : 1	4.78 :1
Subsequent	None	1 : 1	1.57 : 1	2.57 : 1	2.84 : 1	1.14 : 1	1.75 : 1	small cell	1.17 : 1	3.73 : 1	2.34 : 1	1.33 : 1	1.27 : 1	2.84 : 1	1.95 : 1
Benign: Malignant Open Surgical Biopsy Ratio															
Initial	≤ 1 : 1	small cell	small cell	small cell	small cell	small cell	undefined	undefined	small cell	small cell	small cell	small cell	small cell	small cell	0.5 : 1
Subsequent	≤ 1 : 1	0 : 1	small cell	small cell	0.21 : 1	0 : 1	small cell	small cell	small cell	small cell	0.17 : 1	0.16 : 1	small cell	0.21 : 1	0.17 : 1
PPV															
Initial	≥ 5%	small cell	small cell	small cell	4.8%	small cell	0.0%	0.0%	small cell	0.0%	small cell	small cell	small cell	4.8%	5.2%
Subsequent	≥ 6%	9.8%	4.6%	6.6%	9.7%	9.5%	11.9%	small cell	9.5%	7.0%	7.7%	10.3%	6.8%	9.7%	9.9%
Detection															
In-Situ Cancer Detection Rate															
Initial	None	0.00	small cell	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	small cell	0.00	small cell
Subsequent	None	0.00	0.00	small cell	1.28	small cell	small cell	0.00	small cell	small cell	0.88	1.18	0.00	1.28	1.07
Invasive Cancer Detection Rate															
Initial	> 5 per 1,000 screens	small cell	small cell	small cell	7.0	small cell	0.0	0.0	small cell	0.0	small cell	small cell	small cell	7.0	7.5
Subsequent	> 3 per 1,000 screens	5.8	5.2	3.8	4.2	3.8	9.3	small cell	7.0	3.4	3.7	7.5	6.0	4.2	4.9
Disease Extent at Diagnosis															
Screen Detected Invasive Tumour Size															
≤ 10mm †	>25%†	0.0%	small cell	small cell	34.6%	46.2%	small cell	small cell	31.6%	small cell	46.4%	19.0%	small cell	34.6%	34.0%
≤ 15 mm	>50%	small cell	small cell	75.0%	64.1%	76.9%	35.7%	small cell	47.4%	small cell	71.4%	35.7%	50.0%	64.1%	59.5%
Proportion of Node Negative Screen Detected Invasive Cancer	>70%	66.7%	87.5%	75.0%	83.3%	76.9%	64.3%	small cell	84.2%	100.0%	82.1%	73.8%	91.7%	83.3%	90.0%

Small Cell: when cell size is between 1 and 4, it is suppressed to prevent potential identification of patients, especially in smaller communities/sites.
*** This includes three screening locations: Cobequid, Dartmouth and Halifax
The benign to malignant core biopsy ratio is undefined when the denominator is zero.

§ Nova Scotia totals include M4 (mobile van) data; M4 data not displayed in this table.
* Participation Rate is presented for a 30 month period ending December 31 2021
‡ Retention Rate is presented for individuals screened in 2019, and who were re-screened within 30 months of their previous screen

† No longer monitored at the national level, but NSBSP continues to monitor

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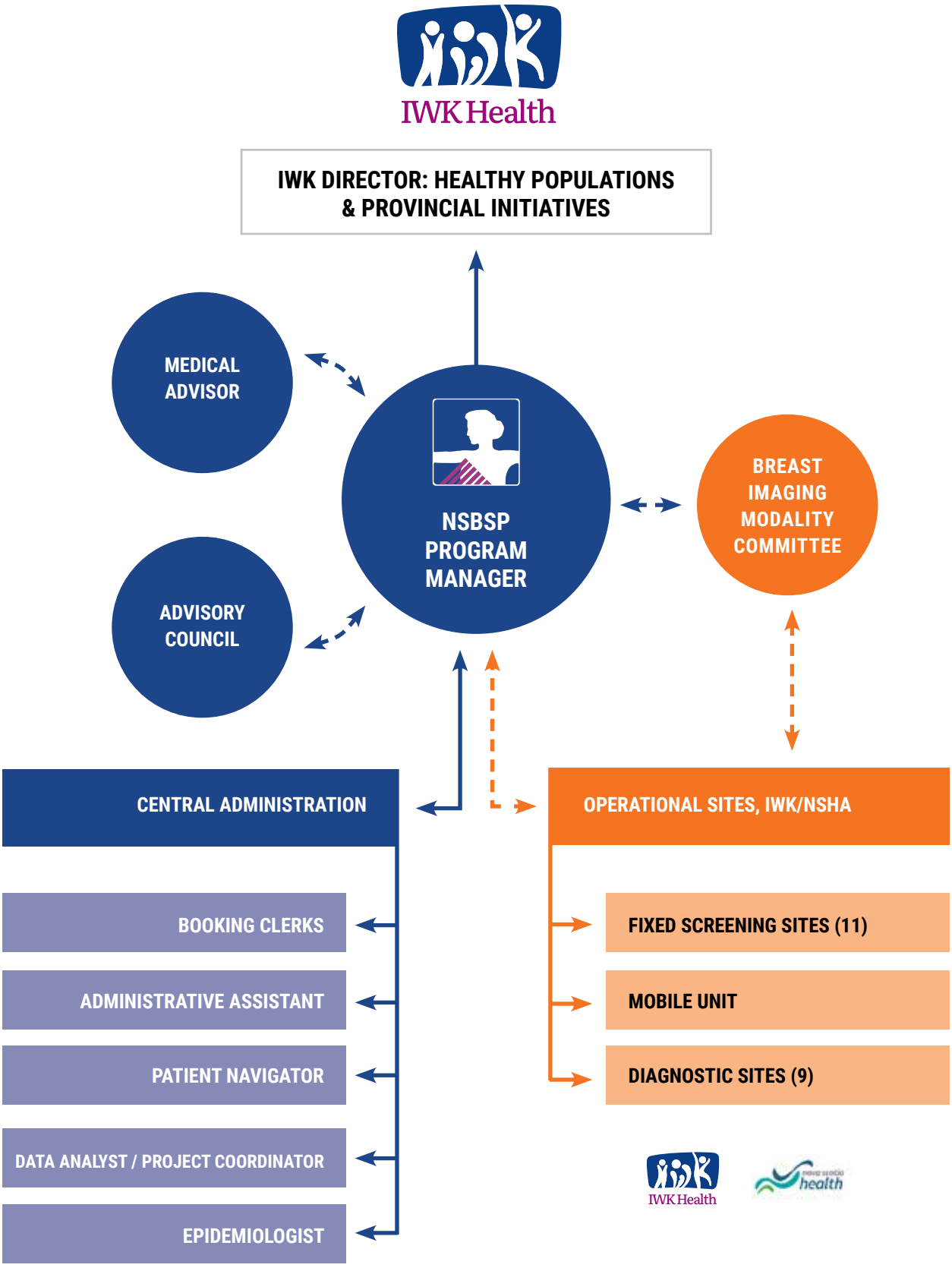
Cobequid	Cobequid Community Health Centre
Dartmouth	Dartmouth General Hospital

Operational Breast Imaging Sites, NSHA Health Authority

Amherst	Cumberland Regional Health Care Centre
Antigonish	St. Martha's Regional Hospital
Bridgewater	South Shore Regional Hospital
Kentville	Valley Regional Hospital
New Glasgow	Aberdeen Hospital
Sydney	Cape Breton Regional Hospital
Truro	Colchester East Hants Health Centre
Yarmouth	Yarmouth Regional Hospital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