

HEALTH SURVEILLANCE INDICATORS: BREAST CANCER SCREENING



Public Health Relevance

Breast cancer is the most common cancer diagnosed and the second-most common cause of cancer death among Canadian women. A mammogram is a screening test that takes an X-ray picture of the breast. It can detect cancerous and precancerous breast tissue at a stage in the disease when treatment is most likely to be effective.

Cancer Care Ontario recommends that women aged 50 to 74 years who are at average risk for breast cancer receive a screening mammogram every two years. Women aged 40 to 49 years are encouraged to talk to their doctor about mammography, especially if they have a family history of breast cancer. Women aged 30 to 69 years who have been confirmed to be at high risk for breast cancer should have a screening mammogram and breast MRI every year.

Highlights

1. The breast cancer screening participation rate in Toronto remained relatively stable from 2006 to 2013.
2. Toronto had a significantly lower breast screening participation rate than the rest of Ontario and the rest of the Greater Toronto Area.
3. Toronto Central and Central West Local Health Integration Networks (LHINs) had the lowest breast screening participation rate of the five LHINs with portions in Toronto.

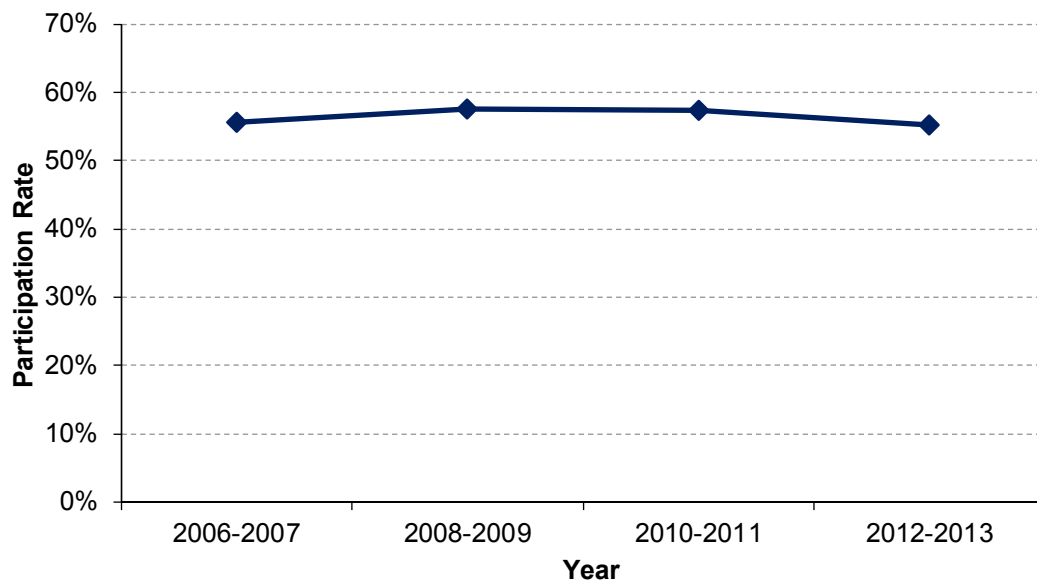
Trends Over Time

The breast cancer screening participation rate in Toronto remained relatively stable from 2006 to 2013.

Figure 1 shows the percent of Toronto women aged 50 to 74 years who received a mammogram within two year periods from 2006 to 2013.

The breast cancer participation rate remained relatively stable and below the national target of 70% or more between 2006 to 2013. In 2012 to 2013, 55% of women received a screening mammogram.

Figure 1: Percentage of Women Aged 50 to 74 Years Who Completed at least One Mammogram within a Two-Year Period, Toronto, 2006 to 2013



Data Source: see Data Notes.

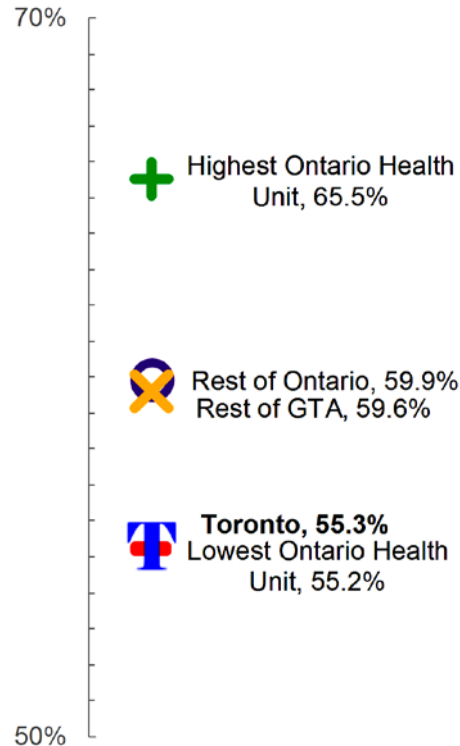
Regional Comparisons

Toronto had a significantly lower breast screening participation rate than the rest of Ontario and the rest of the Greater Toronto Area.

Figure 2 shows the percent of Toronto women aged 50 to 74 years who received a mammogram in 2012 to 2013 compared to the rest of Ontario, rest of the Greater Toronto Area (GTA), and Ontario's highest and lowest health units.

The breast screening participation rate in Toronto was significantly lower than the rest of Ontario and the rest of the GTA. Toronto had the 2nd lowest participation rate of the 36 health units in Ontario.

Figure 2: Percentage of Women Aged 50 to 74 Years Who Completed at least One Mammogram within a Two-Year Period, Toronto Compared to Other Regions in Ontario, 2012 to 2013



Data Source: see Data Note

Toronto Neighbourhood Comparisons

Toronto Central and Central West Local Health Integration Networks (LHINs) had the lowest breast cancer screening participation rates of the five LHINs with portions in Toronto.

Table 1 shows the percent of women aged 50 to 74 who received a mammogram in the past two years in Local Health Integration Network (LHIN) areas with portions in Toronto in 2012 to 2013.

Central West LHIN had the lowest participation rate and Central had the highest.

Table 1: Percentage of Women Aged 50 to 74 Years Who Completed at least One Mammogram within a Two-Year Period, LHIN Areas with Portions in Toronto, 2012 to 2013.

LHIN	Participation Rate
Central	60.3%
Central East	59.9%
Central West	54.3%
Mississauga-Halton	57.7%
Toronto Central	54.4%
Toronto	55.3%

Data Source: see Data Notes.

Data Notes

Notes

- Women were ineligible and excluded from the analysis if they had a:
 - Missing or invalid health insurance number, date of birth, or postal code
 - Prior diagnosis of invasive or in-situ breast cancer before Jan 1st of the two-year period; prior diagnosis of breast cancer was defined as: ICD-O-3 codes: C50, a morphology indicative of breast invasive or in-situ cancer, microscopically confirmed with a pathology report
 - Mastectomy before Jan 1st of the two-year period. Mastectomy was defined in Ontario Health Insurance Program (OHIP) by fee codes E505, E506, E546, R108, R109, and R117
- Mammograms are identified as:
 - Ontario Breast Screening Program (OBSP) mammograms for screening purposes from the Integrated Client Management System (ICMS). All mammograms in ICMS were counted, including those with partial views; or
 - Non-OBSP mammograms using fee codes in OHIP: X178 (screening bilateral mammogram) or X185 (diagnostic bilateral mammogram).
- Each woman was counted once regardless of the number of mammograms performed in a two-year period; if a woman had both a program and non-program mammogram within a two-year period, the program status was selected.
- Significant differences were estimated using overlapping confidence intervals. Although this method is conservative ($\alpha < 0.01$) and most appropriate when comparing mutually exclusive groups, it was chosen as an objective means of making conclusions on population-based data. Error bars are not shown on the charts as variability of data is very low.
- Toronto is compared to the rest of Ontario (Ontario with Toronto removed) as opposed to the Ontario total because Toronto comprises such a large proportion of the Ontario population. Toronto is also compared to the rest of the Greater Toronto Area (GTA) for the same reason.

Definitions

95% Confidence Interval is the range within which the true value lies, 19 times out of 20.

Age Standardization is a technique based on weighted averaging that removes the effects of the distribution of age when comparing two or more populations.

Breast Cancer Screening (Mammogram) Participation Rate is the percentage of women, 50-74 years old, who completed at least one mammogram within a two-year period, 2006 to 2013.

GTA excluding Toronto means the Greater Toronto Area (GTA) with Toronto removed from the GTA data.

Mammogram is a test that uses low-dose X-rays to look for changes in the breasts that may indicate early signs of breast cancer, even when the changes are too small for a woman or her doctor to feel or see.

Ontario excluding Toronto means Ontario with Toronto removed from the Ontario data.

Sources

Breast Cancer Screening: Cancer Screening Evaluation and Reporting, Cancer Care Ontario.

Used in:

- Figures 1 and 2
- Table 1

Health Surveillance Indicator: Breast Cancer Screening

Category: Chronic Disease

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This indicator report is part of a series that informs the ongoing assessment of Toronto's health status. For a full list of the indicators, please go to: www.toronto.ca/health