Breast Cancer Screening in Canada: Monitoring and Evaluation of Quality Indicators

Report Highlights

JANUARY 2011 – DECEMBER 2012

Context

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer death in Canadian women.[i] Between 1992 and 2011, age-standardized mortality for breast cancer declined by 35 per cent in Canada.[ii] This decline was likely due to both improved breast cancer treatment and increasing rates of participation in organized breast cancer screening.

Organized breast cancer screening programs are designed to maximize the benefits of screening while minimizing potential harms for women by providing oversight and evaluating all aspects of breast cancer screening. These screening programs exist in all provinces and two territories and allow for essential controls around participation and quality to ensure that elements such as screening eligibility, interval, modality, and coordination of follow-up, adhere to evidence-based standards.[iii] Although screening policies in provinces and territories vary slightly, the Canadian Task Force on Preventive Health Care guidelines recommend mammography screening every two to three years for average-risk women aged 50 to 74.[iv]

The Canadian Breast Cancer Screening Network, hosted by the Canadian Partnership Against Cancer, regularly collects available data on national quality indicators from organized screening programs.[v] The Partnership, in collaboration with the Network, recently released a report that presented available programmatic data from all provinces and one territory on quality indicators for women aged 50 to 69* for the years 2011 and 2012. A limited number of indicators with data from 2013 and 2014 are also included. Key findings and implications of the results are highlighted here.

Key Findings and Implications

Participation in breast cancer screening increased, but still often occurred outside the organized program environment

Participation across the country in organized breast cancer screening programs increased from 2004, but remained below the national target of 70 per cent.

In 2012, 72.0 percent of women aged 50 to 69 reported having had a mammogram for any reason in the previous two years, while 62.0 per cent of women in this age group reported they had a mammogram for screening purposes.[vi] However, program participation data reported that only 54.0 per cent of eligible women had a screening mammogram in an organized program. This indicates that a significant number of women are being screened opportunistically, where they may not be benefitting to the same degree from the quality assurance practices and effectiveness monitoring offered by organized programs.

Wait times for a definitive diagnosis improved, but need to be further reduced

The percentage of women receiving a final diagnosis within the target timeframe of 5 or 7 weeks (depending on whether a biopsy was required) increased from 2007-08 to 79.1 per cent and 54.9 per cent respectively in 2011-12. However, the national target is for 90 per cent of women to receive their diagnosis within the timeframes indicated.

* This age range reflects Canadian Task Force on Preventive Health Care guidelines at the beginning of the data collection period prior to the most recent update in November 2011.

The rate of false-positive screening results gradually increased

Among women who participated in screening programs, the national abnormal call rate for subsequent screens increased between 2008 and 2012 from 6.1 to 7.4 per cent. However, the invasive cancer detection rate for subsequent screens remained largely unchanged during the same time period at approximately 3.7 per 1,000 screens. This suggests that more women who do not have cancer are being called back for follow-up diagnostic tests, leading to potential harm to the individual and the use of additional system resources.

There was variation between the programs, as some provinces did have lower abnormal call rates. The Network is looking at quality assurance and reporting across the country so that programs can learn from one another and address this issue.

Fewer invasive biopsies were performed, but the rate of biopsies that did not reveal cancer increased

The number of non-malignant biopsies per 1,000 subsequent screens increased compared to previous years – from 7.1 to 8.5 per 1,000 subsequent screens between 2009 and 2012. However, the percentage of non-malignant biopsies that are surgical (and therefore, more invasive) decreased steadily since 2004.

The increase in non-malignant biopsies may, in part, be related to the higher abnormal call rate which can start women down a path of interventions that may lead to biopsy. The Network will examine this issue with programs in the upcoming months.

Why is this important?

Organized screening programs are critical because they allow standardization of processes and more efficient use of resources. More importantly, they permit analysis of the actual outcomes of the screening visit for women. The collaborative monitoring and evaluation work of the Network is critical for identifying areas for quality improvement. The Network and its member programs are working together to identify the causes of the observed increase in abnormal call rates and to design appropriate strategies to optimize the benefits of screening and related system resources.

The continued monitoring and reporting of quality indicators at the national level is essential to track progress, identify opportunities to maximize the quality and benefit, and minimize potential harm of organized screening services offered in Canada.

[i] Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian Cancer Statistics 2016. Toronto, ON: Canadian Cancer Society; 2016.

[ii] Statistics Canada, Canadian Vital Statistics Death Database.

[iii] Canadian Partnership Against Cancer. Quality Determinants of Breast Cancer Screening with Mammography in Canada. Toronto: Canadian Partnership Against Cancer; February, 2013.

[iv] The Canadian Task Force on Preventive Health Care. Recommendations on screening for breast cancer in average-risk women aged 40–74 years. CMAJ November 22, 2011. 183:1991-2001; doi:10.1503/cmaj.110334.

[v] Canadian Partnership Against Cancer. Report from the Evaluation Indicators Working Group: Guidelines for Monitoring Breast Cancer Screening Program Performance (3rd Edition). Toronto: Canadian Partnership Against Cancer; February, 2013.

[vi] Canadian Community Health Survey 2012. Statistics Canada, Public Use Microdata File, Statistics Canada.

FOR MORE INFORMATION

Visit *www.cancerview.ca* for the full report or contact *info@partnershipagainstcancer.ca*

ABOUT THE PARTNERSHIP

The Canadian Partnership Against Cancer was created by the federal government with funding through Health Canada. Since opening our doors in 2007, our sole mandate has been to move Canada's cancer strategy into action and help it succeed.

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