

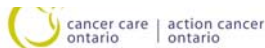
Challenges of Breast Cancer Screening in Canada

Public Health and Cancer Screening: Promises and Perils,
October 26 & 27, 2006
Montreal, Canada

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- 13 provinces and territories – each is responsible for the provision of health care services
- Population Estimate January 2006: 32,422,919
- Largest population: Ontario (12,599,364)
- Smallest population: Nunavut (30,245)
- 7/13 have cancer agencies/boards to plan and oversee cancer services



Cette présentation a été effectuée le 26 octobre 2006, au cours du Symposium "La santé publique et le dépistage du cancer : espoirs et réalités" dans le cadre des Journées annuelles de santé publique (JASP) 2006. L'ensemble des présentations est disponible sur le site Web des JASP, à l'adresse <http://www.inspq.qc.ca/jasp>.

Organized Breast Screening

- The evidence from randomized trials inviting women aged 50-69 to screening with mammography show that mortality from breast cancer is reduced by 25% (WHO, 2002).
 - the reduction in mortality from breast cancer in women 50-69 who accept an invitation to screening has been estimated to be about 35%, by adjustment of the results of the trials for the effect of non- acceptance of the invitation by some women (WHO, 2002).
 - estimates made in some European countries with organized breast screening programs suggest that 20% reduction in mortality can be expected in the long term, taking into account the time it takes to achieve full implementation of national programmes and see the impact of regular screening.
 - effectiveness of national screening programs varies due to differences in: coverage, mammography quality, treatment and other factors
- organized screening programs are more effective in reducing the rate of death from breast cancer than sporadic screening of selected groups of women

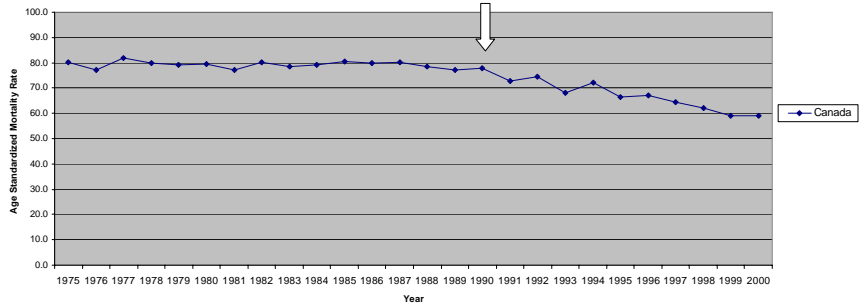


Breast cancer screening programs in Canada – development from 1988 - present

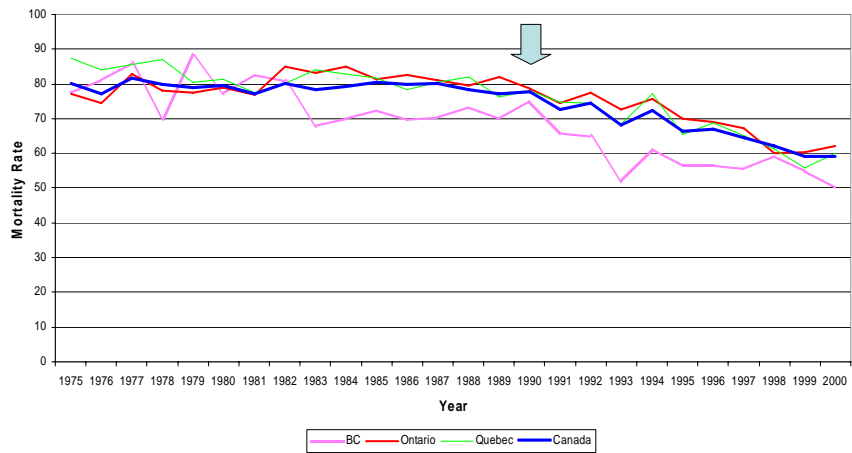
Province/Territory	Program Start Date
British Columbia	1988
Ontario	1990
Saskatchewan	1990
Yukon Territory	1990
Alberta	1990
Nova Scotia	1991
Manitoba	1995
New Brunswick	1995
Newfoundland and Labrador	1996
Quebec	1998
Prince Edward Island	1998
Northwest Territories	2003



Breast Cancer Mortality Rates in Canada 1975 - 2000 Women aged 50-69 years



Breast Cancer Mortality in Canada and 3 Provinces 1975-2000, Women Aged 50-69



What Interventions Are Responsible For the Decline In Breast Cancer Mortality?

Effect of Screening and Adjuvant Therapy on Mortality from Breast Cancer
Berry, Donald et al. For the Cancer Intervention and Surveillance Modelling Network (Cisnet)
Collaborators, NEJM 2005

- Seven statistical models to assess the contributions of screening mammography and adjuvant treatment to the 24% reduction in breast cancer mortality from 1975-2000 in the U.S.
- Because use of adjuvant therapies for breast cancer and screening mammography occurred over nearly the same time period, distinguishing between the two effects is not easy

Results:

A median reduction in breast cancer death rate of

- 15% from screening as practiced in the U.S.
- 19% from adjuvant therapy



What Interventions Are Responsible for the Decline in Breast Cancer Mortality

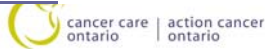
(Berry, D. et al, 2005)

- Screening would have no benefit is not followed by effective treatment
- Treatment is more effective if cancer is detected at earlier stage by screening



Organized Breast Screening Program Commitment in Canada

- 1988: Federal/Provincial/Territorial deputy Ministers of Health agreed to “encourage ongoing dialogue among provinces, the federal government, the Canadian Cancer Society and the National Cancer Institute of Canada to facilitate the introduction and operation of breast cancer screening programs”
- 1990: Interchange '90, a Canadian forum, recommended the establishment of a “National Committee on Breast Cancer Screening”
- 1993: National Forum on Breast Cancer - led to the expansion of the group to form the National Committee for the Canadian Breast Cancer Screening Initiative



Objectives of the National Committee for the Canadian Breast Cancer Screening Initiative (CBCSI)

- To foster the development of organized quality screening programs in Canada
- Assess screening in Canada against a set of recognized criteria and monitor performance of organized screening programs.
- Increase the benefits and reduce the harms of screening
- To foster the continued expansion and use of the Canadian Breast Cancer Screening Database
- Facilitate the use of best practices in screening and assessment.
- Create the evidence base or apply the best available evidence to support policy development



Objectives of the National Committee for the Canadian Breast Cancer Screening Initiative (CBCSI)

- Identify priorities relating to breast cancer screening that would benefit from collaborative action.
- Exchange lessons learned with other chronic disease screening groups.
- Determine processes for addressing the purpose and objectives which includes:
 - the formation of working groups
 - reviewing and approving working group recommendations
 - monitor implementation of working group recommendations
 - monitoring and revising implementation strategies if necessary
- Develop communication strategies in response to the latest research, policy and practice changes, harmonization of key messages



Membership of the National Committee

1. The Chair of the Committee, designated by the Committee
2. Provinces and Territories: Director of Breast Screening Program and/or Government Representative (maximum: 2 representatives by province and territory)
3. Public Health Agency of Canada: Chronic Disease Prevention Division (2)
4. Canadian Cancer Society / National Cancer Institute of Canada (1)
5. Canadian Association of Medical Radiation Technologists (1)
6. Canadian Association of Radiologists (1)
7. Canadian Breast Cancer Foundation (1)
8. Canadian Breast Cancer Network (1)
9. Chairs of the Sub-Committees/Active Working Groups
10. Survivor (1)



Member Survey Results (2003)

How effective has the Canadian Breast Cancer Screening Initiative (CBCSI) been in establishing the ongoing dialogue to facilitate the introduction and operation of breast cancer screening programs?

Very effective	9
Somewhat effective	1
Not very effective	0
Not effective at all	0

"no other avenue to meet"

"excellent, effective method to ensure coordination and collaboration"

"impressed with responsiveness of the groups to address issues"

"it is a group I look to for support, advice and expertise"

"efficiency in combined efforts avoiding duplication"



Member Survey Results (2003)

Has the Canadian Breast Cancer Screening Initiative (CBCSI) fostered the improvement in the quality of breast cancer screening in your Province/ Territory or Program?

Yes	-	10
No	-	0

Specific examples given by respondents:

- improved clarity of screening data collection
- strategies developed based on the Report on Quality Determinants.
- Accreditation of mammography facilities
- Invitation letters to the target population
- Adoption of the times to diagnosis and national definitions
- facilitated referral process to reduce the time to diagnosis after an abnormal screen



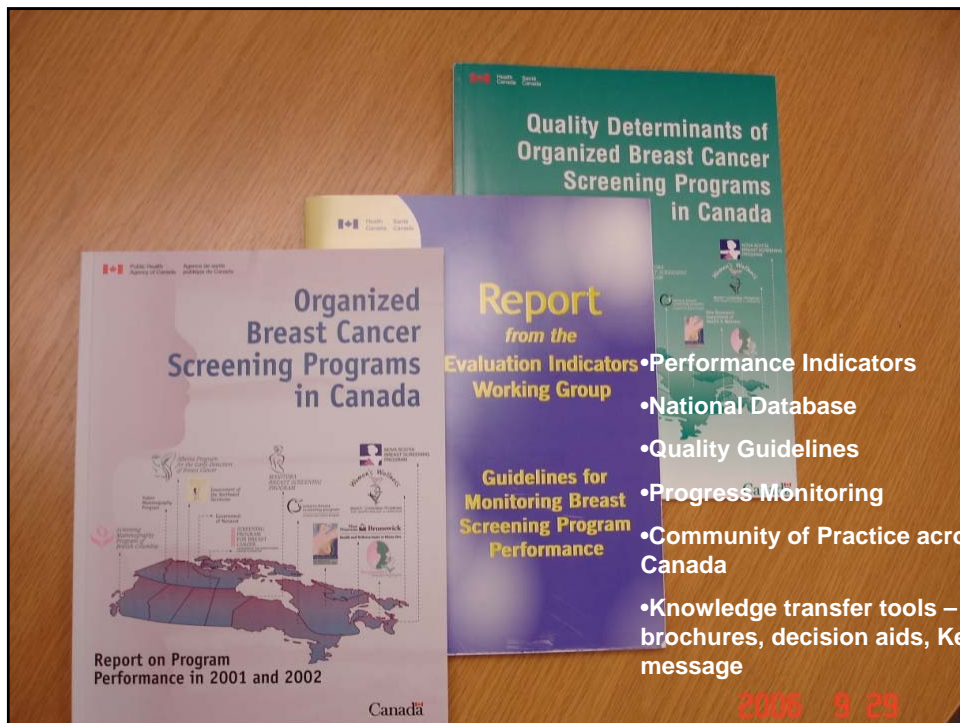
Member Survey Results (2003)

Has the development of the National Database had an impact on improving the quality of your Provincial/ territorial screening program database?

Yes	-	10
No	-	0

How so?

- Advocacy and evidence to present to the government the need for a “full” organized program
- Enhancement/evolution of our database is based on Canadian database and data definitions
- Supported linkages to tumour registry
- Have learned from existing programs and are not reinventing the wheel

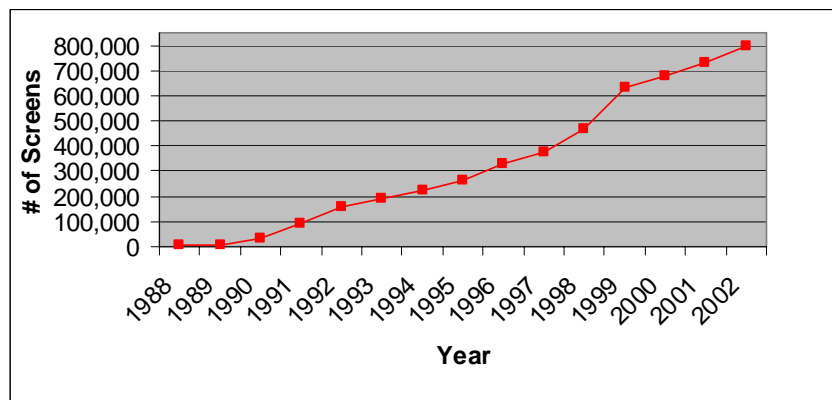


The Main Challenge of Breast Screening in Canada

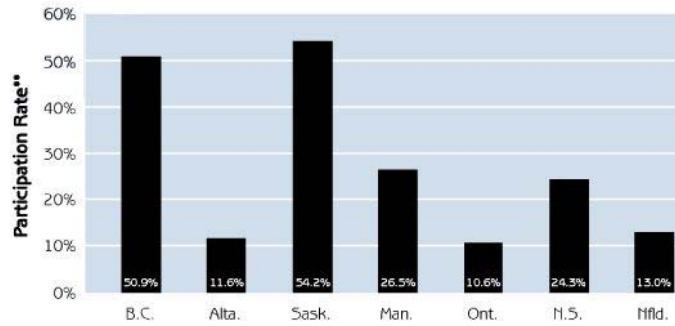
- Participation rates in organized breast screening remain below the national target of 70% participation in women aged 50-69



Annual Programmatic Screening Volume, 1988 to 2002 in Canada



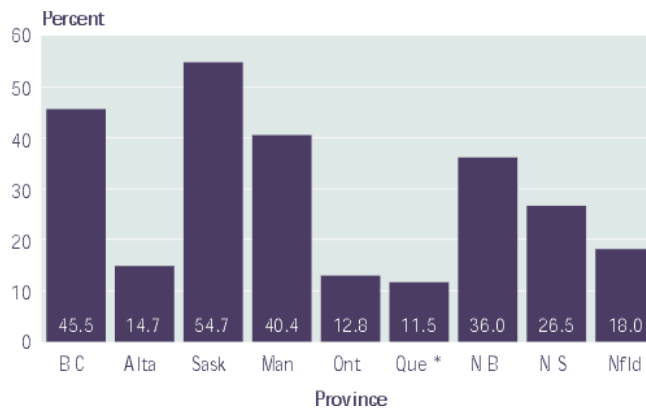
Proportion of target population* who participated in provincial breast cancer screening programs in 1996



*Target population is defined as the population of women aged 50-69. Estimates were derived from Statistics Canada's Population Projections for Canada, Provinces and Territories 1993-2016. The population estimates were halved to approximate participation rates at least once every 2 years.
 **Participation Rate is the number of women aged 50-69 at screening in 1996 who participated in the breast screening programs as a percentage of the target population.



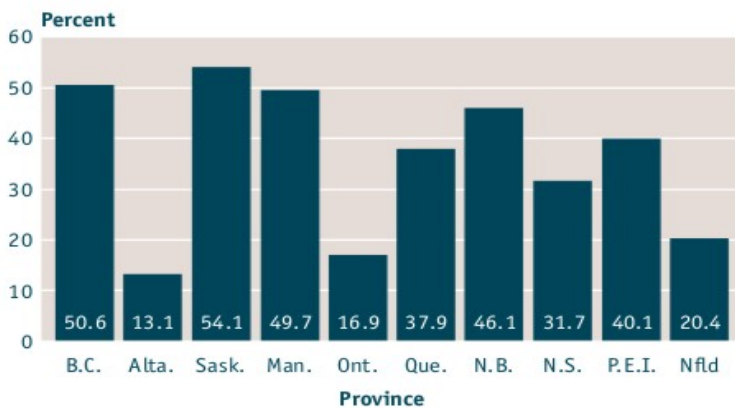
Proportion of women aged 50-69 who participated in provincial breast cancer screening programs in 1997 and 1998



*The 1998 population estimate was halved for Quebec to approximate participation rates at least once every 2 years, as the program was implemented only in 1998. For other provinces, 1997 and 1998 population estimates were averaged.
 Note: Data for the New Brunswick program are incomplete and therefore do not comprehensively reflect program activity.



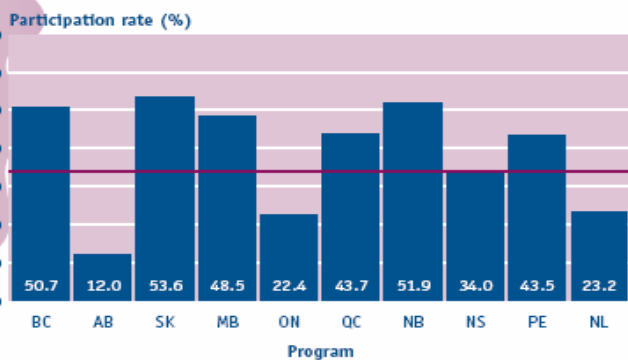
Figure 3
Proportion of women aged 50-69 who participated in provincial breast cancer screening programs in 1999 and 2000



Source: Statistics Canada data are used for denominator values.
 Notes: 1999 and 2000 population estimates were averaged.



Figure 3
Participation in organized breast cancer screening programs, women aged 50-69, 2001 and 2002 screen years

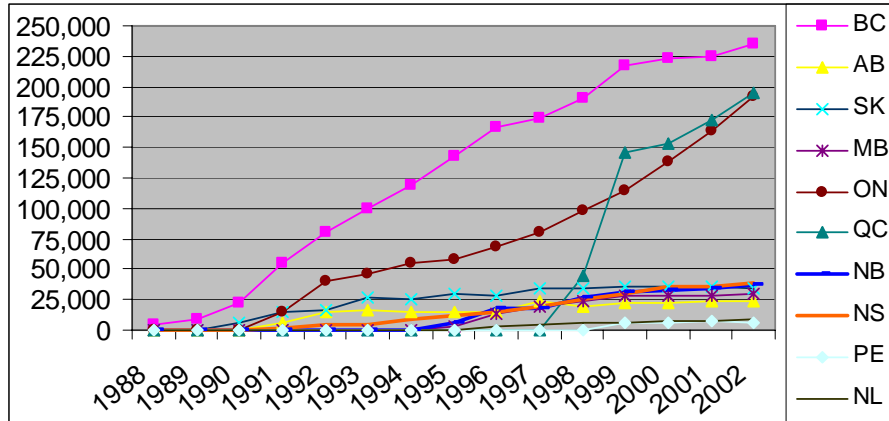


The national participation rate = 33.9%

Source: Statistics Canada data for 2001 and 2002 are used for denominator values.
 Note: Population estimates are averaged. The national participation rate of 33.9% is indicated by the horizontal bar.



Annual Screening Volume by Program, All Ages, 1988 to 2002 Screen Years in the Provinces



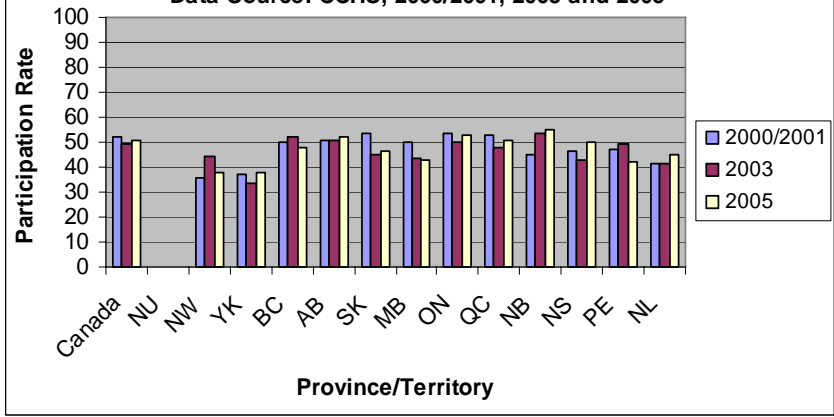
Capacity issues in Breast Screening Program

- The population in the screening age group is increasing each year with the aging of the “baby boomer” generation, meaning that more women must be screened to even maintain the same participation rates for the age-eligible population
- Program budget caps limit annual growth in volumes in some provinces
- Increasing waiting times to get a screening appointment date / or appointment cancellations when short-staffed.
- Capacity in the health care system may be contributing as well - inadequate radiologists and medical radiation technologists to meet needs
- Impact in the future with retirement of the “boomers and the potential for enhanced educational requirements for technologists (university degree) may be even greater shortages.



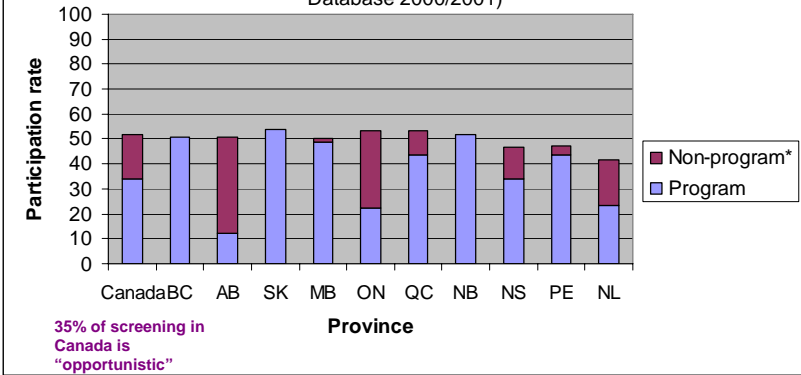
Self-Reported Screening Mammography by Province, 2000/2001, 2003 and 2005

Data Source: CCHS, 2000/2001, 2003 and 2005



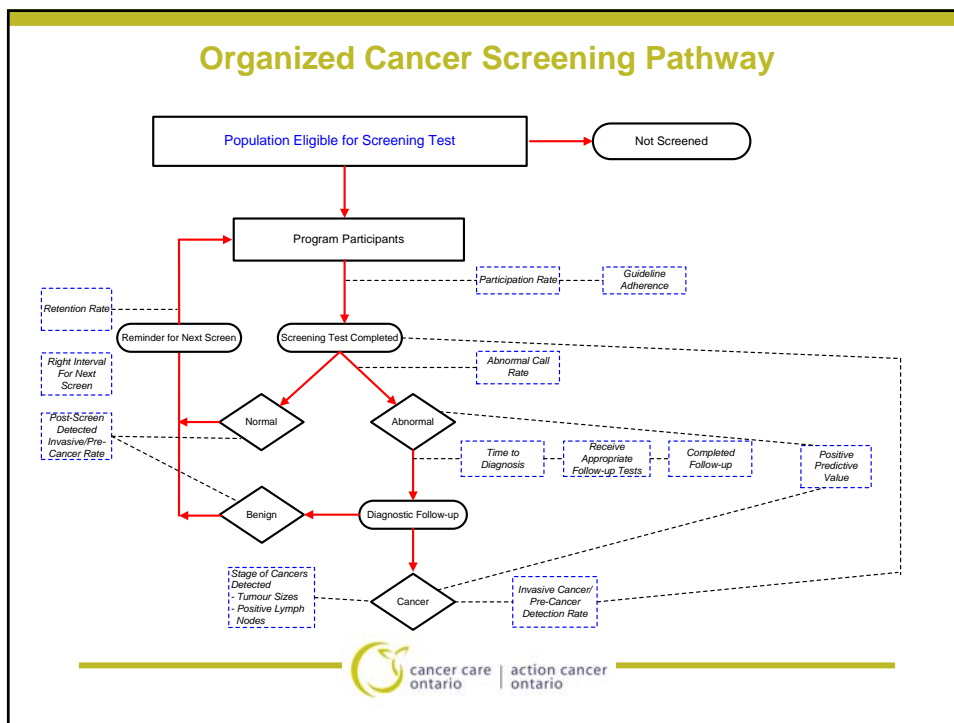
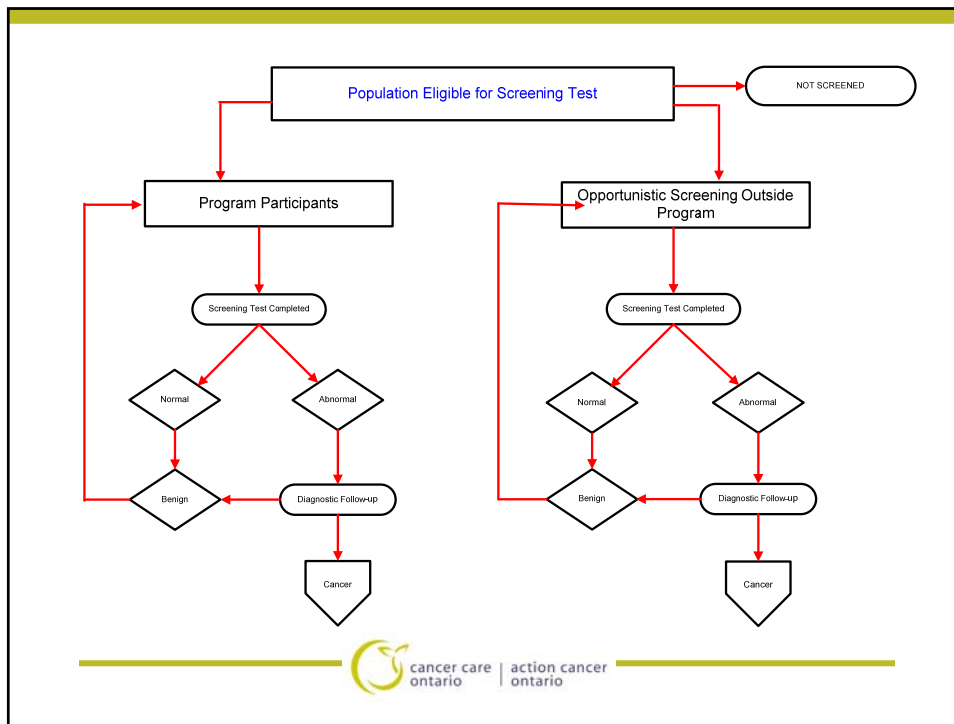
Programmatic vs Opportunistic Screening Participation, by Province 2000/2001

(Data Sources: CCHS 2000/2001, Canadian Breast Cancer Screening Database 2000/2001)



35% of screening in Canada is "opportunistic"





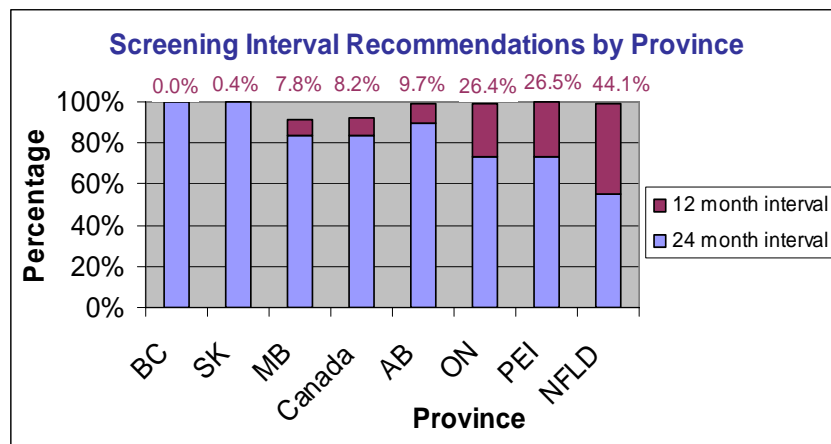
Screening Interval

- Biennial is the default interval
- Allowances have been made by programs for annual screening interval for a variety of factors that constitute “increased risk”



Screening Interval for Program Participants, 1998-2002

Source: Canadian Breast Cancer Screening Database

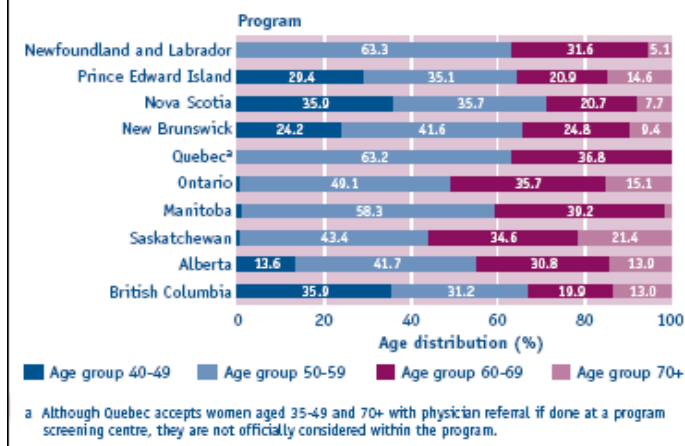


Outside of Target Age Group Screening Impact

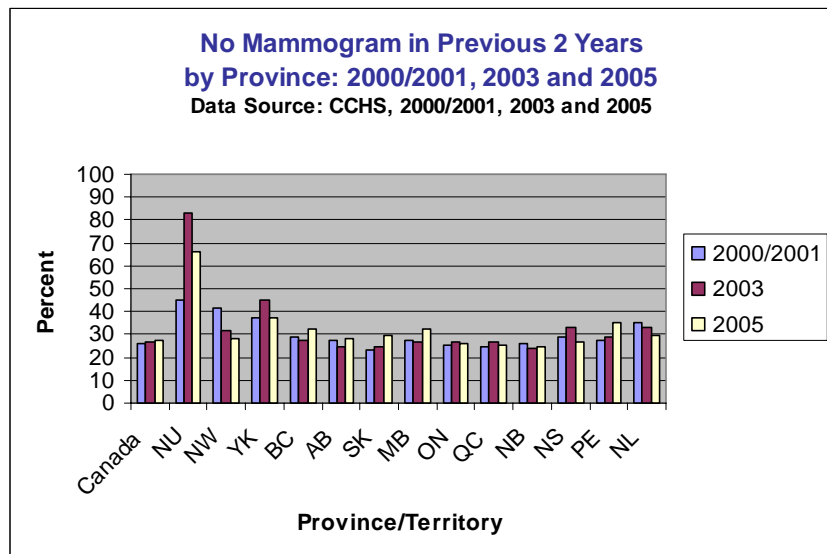
- While the target age group for all programs is 50-69:
 - Some programs also provide screening for women under the age of 50.
 - All programs screen women who are older than 69 to a varying degree
 - Appointment times taken up by women in these age groups mean less are available to slot in the 50-69 year olds



Figure 6
Age distribution of program screens by province, 2001 and 2002 screen years



Women in the target age group who have not had a screening mammogram in the previous 2 years





7 Provinces have mobile units to provide screening to women in remote areas.

Providing screening Aboriginal women in remote “fly-in” settings has become more challenging as federal funding for travel has been restricted to only treatment-related needs.

Ontario Breast Screening Program in Northern Ontario



Why Ontario Women Aged 50-69 Have Not Had a Mammogram In the Past 2 Years (CCHS, 2003)

Didn't think necessary	34.1%
Have not gotten around to it	27.1%
Doctor didn't think necessary	20.9%



Screening Working Group of the Canadian Strategy for Cancer Control (2002)

A Key Element of an Organized Population Cancer Screening Program:

- Participation in a screening program should be on the **basis of a realistic understanding of the harms and benefits** of screening and the manner in which health information will be managed.



Additional informational Challenge: Supporting Informed Decision-Making

- Making the shift from a promotional approach to the provision of balanced information to support ***informed patient decisions*** about screening.
- The potential benefits and the potential harms....



What is the best way to give the balanced message to a lay audience?

Excerpt from the Ontario Breast Screening Program key messages:

- Breast Screening Saves Lives!
- Between 1989 and 2002, Breast Cancer mortality rates in Ontario women aged 50 - 69 decreased by 29%. This decrease is credited to both improved cancer treatments and increased participation in breast screening.
- A mammogram is not a perfect test. It finds eight out of ten cancers. As well, not all cancers found at screening can be cured. Breast screening may not benefit women with aggressive cancers. However, many studies show that regular mammograms for women age 50-69 reduce deaths from breast cancer by up to a third.



What are the Experts Saying?

Re: latest Cochrane report released last week on
“Screening for breast cancer with
mammography”

- Some are saying that the harms may outweigh the benefits: while others are responding that the benefits of reduced risk of breast cancer mortality outweigh the risks.
- Dr. Michael Baum’s quote in The Daily Telegraph:
“This latest evidence shifts the balance even further towards harm and away from benefits”



Other Challenges besides Recruitment to Screening

- Determining the role of new screening technologies in population screening programs
 - Digital Mammography v.s. Conventional
 - The role of MRI for screening in high risk women
- Dealing with unproven technologies
- Population screening for women in their 40's



Growing Number of Thermography Business in Canada

- *“Should we continue to concentrate our efforts on procedures that can only detect an existing cancer, or should we be focusing on true screening methods that can warn of a pending problem far in advance?”*
- Breast thermography has the unique ability to warn most women far enough in advance to give them a fighting chance.
- Combined with its ability to play a role in primary prevention, the lifesaving implications are incredible. The addition of this technology to every woman's breast health care will make the greatest impact on breast cancer mortality. “
- <http://www.breastthermography.com/articles/beating-breast-cancer.doc>



Major Benefits of Thermography

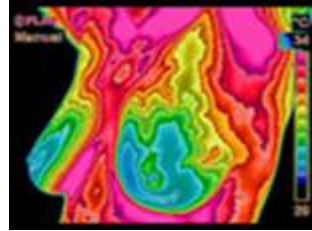
Timeliness Problems can be found before abnormalities are seen on mammograms. **Early detection provides the best outcomes.**

Inclusive Examines the whole chest, breast and armpit areas. Good for all breast types: young/dense, fibrocystic, pregnancy, women on HRT, breast implants. Also can be used for men.

Precise Locates exact problem area allowing for more precise focus with other medical diagnostic tests: ultrasound, mammogram, MRI.

No Risk No harmful rays emitted so can be done as often as needed without risk.

No Pain No squeezing, no pressure, no touching by equipment or technician



North York Medical Thermography Centre Information on website

- Not a stand-alone tool in the screening and diagnosis of breast cancer;
- Early risk indicator
- When positive, a closer look at diet, exposure to environmental pollution, toxins and lifestyle is in order; clinical bloodwork, ultrasound and mammography is essential
- If above tests negative, thermographic monitoring on a quarterly to semi-annual basis for those with a suspicious thermogram
- fee: \$250.00 plus GST - 5 images plus stress (cold challenge) test, complementary consultation.



Challenges other than “Recruitment to Screening”

- Abnormal Call rates are higher than the targets

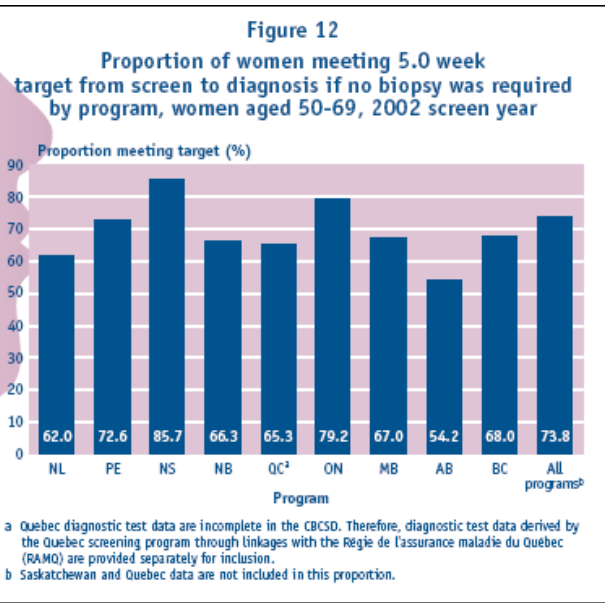
	Targets	1999	2000	2001	2002
Initial	<10	11.2	11.4	12.3	11.7
Rescreen	<5	5.8	5.9	6.6	6.6

Challenges other than “Recruitment to Screening”

- Reaching the Canadian target for times to a diagnosis from an abnormal breast screening result.

Timeliness targets for the investigation of abnormal screening results in organized breast cancer screening programs in Canada, women aged 50-69

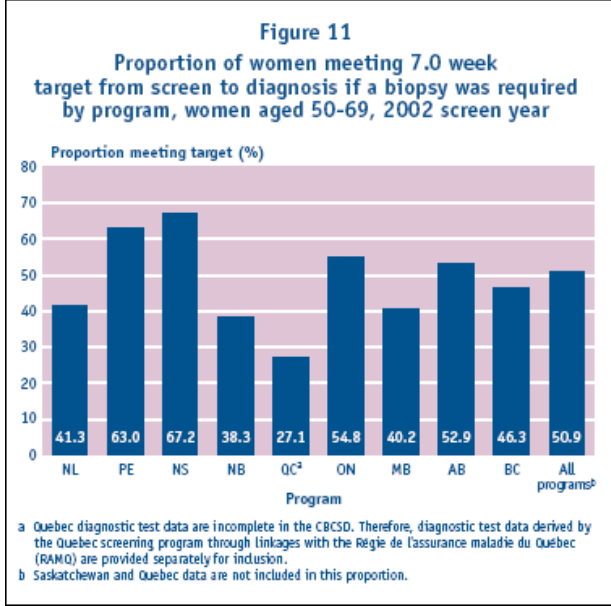
Assessment Interval	Target
Abnormal screen to notification of client	100% to be notified ≥ 90% to be notified within 2 weeks
Notification of client to first assessment	≥ 90% within 2 weeks
Total duration from abnormal screen to first assessment	≥ 90% within 3 weeks
First assessment to diagnosis (if no tissue biopsy)	≥ 70% within 1 week ≥ 90% within 2 weeks
First assessment to diagnosis (if tissue biopsy)	≥ 70% within 3 weeks ≥ 90% within 4 weeks
Diagnosis to notification of the client	≥ 90% within 1 week
Abnormal screen to diagnosis (if no tissue biopsy)	≥ 90% within 5 weeks
Abnormal screen to diagnosis (if tissue biopsy)	≥ 90% within 7 weeks



Target: $\geq 90\%$ diagnosed within 5 weeks if no tissue biopsy required

Overall in Canada:
 1999: 70.7%
 2002: 73.8%

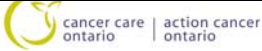




Target: $\geq 90\%$ diagnosed within 7 weeks if tissue biopsy required

Overall in Canada:

1999: 48.3%
2002: 50.9%



Summary

- Screening programs must adopt a culture of continually striving to **increase the benefits** and **minimize the harms** of screening.
- A lot has been accomplished, given the existence of 13 separate jurisdictions, each with their own set of issues and priorities on the delivery of health care, through a strong national collaboration.
- The key benefits have not yet been maximized, given the challenges faced to improved participation rates in women 50-69.



As put by Canadian journalist Andre Picard today in the Globe and Mail:

- “.... We need to take screening off its pedestal and examine it, warts and all. Women need to know, for their own protection and peace of mind, the limitations. They need to know, too, that these shortcomings – possible false positives and overtreatment ---- are not excused for forgoing regular mammography.



Andre Picard (cont.)

- In fact, the biggest problem with mammography in Canada is that fewer than half of postmenopausal women are screened regularly and one in four women has never been screened.”

