

Factors Influencing Screening Mammography Participation

Among Canadian Women Aged 40-74 in 2012

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Outline

- ▶ Overview of screening mammography
- ▶ Objectives
- ▶ Data source and methods
- ▶ Findings
- ▶ Policy implications

Screening mammography

- ▶ Expected burden of breast cancer in 2014¹:
 - 24,600 diagnosed
 - 5,100 deaths
- ▶ Represents a secondary preventative tool for breast cancer death

¹ Canadian Cancer Society. Canadian Cancer Statistics 2014.

Screening recommendations

- ▶ Canadian Task Force on Preventative Health Care (2011):
 - Age for routine screening extended from 69 to 74
 - Interval from 2 to 2–3 years for women aged 50–69
 - Women aged 40–49 recommended to ***not*** routinely screen

Study objectives

- ▶ Update mammography participation levels:
 - for the age range (40–74) where screening is relevant
 - by province/territories
- ▶ How does screening mammography participation vary by:
 - socio-demographics
 - lifestyle-related factors

Data source


- ▶ Cross-sectional 2012 Canadian Community Health Survey (61,707 responses)
- ▶ Survey includes Canadian residents 12 years and older from all provinces and territories with few exclusions
- ▶ Sample of 18,312 weighted to represent 7.6 million women in the same age range (40–74)
- ▶ Section on mammography utilization

Methods

► Survey asks:

- Have you ever had a mammogram, that is, a breast x-ray?
- When was the last time?
- Why did you have it?

**Screening
reasons**



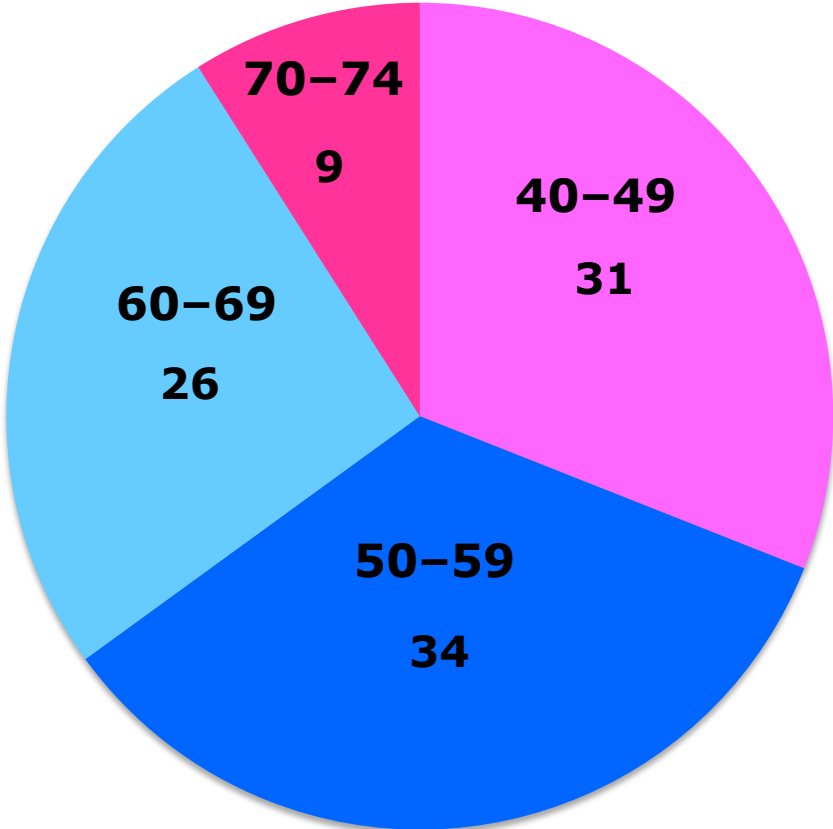
Age	
Regular check-up	Previously detected lump
Family history	Breast problem
On hormone replacement therapy	Follow-up from breast cancer treatment

Methods

- ▶ Descriptive statistics were performed
- ▶ Logistic regressions to examine associations between screening participation and socio-demographic and lifestyle-related variables
- ▶ Models were adjusted for:
 - age
 - marital status
 - household income

Characteristics of Canadian women aged 40–74

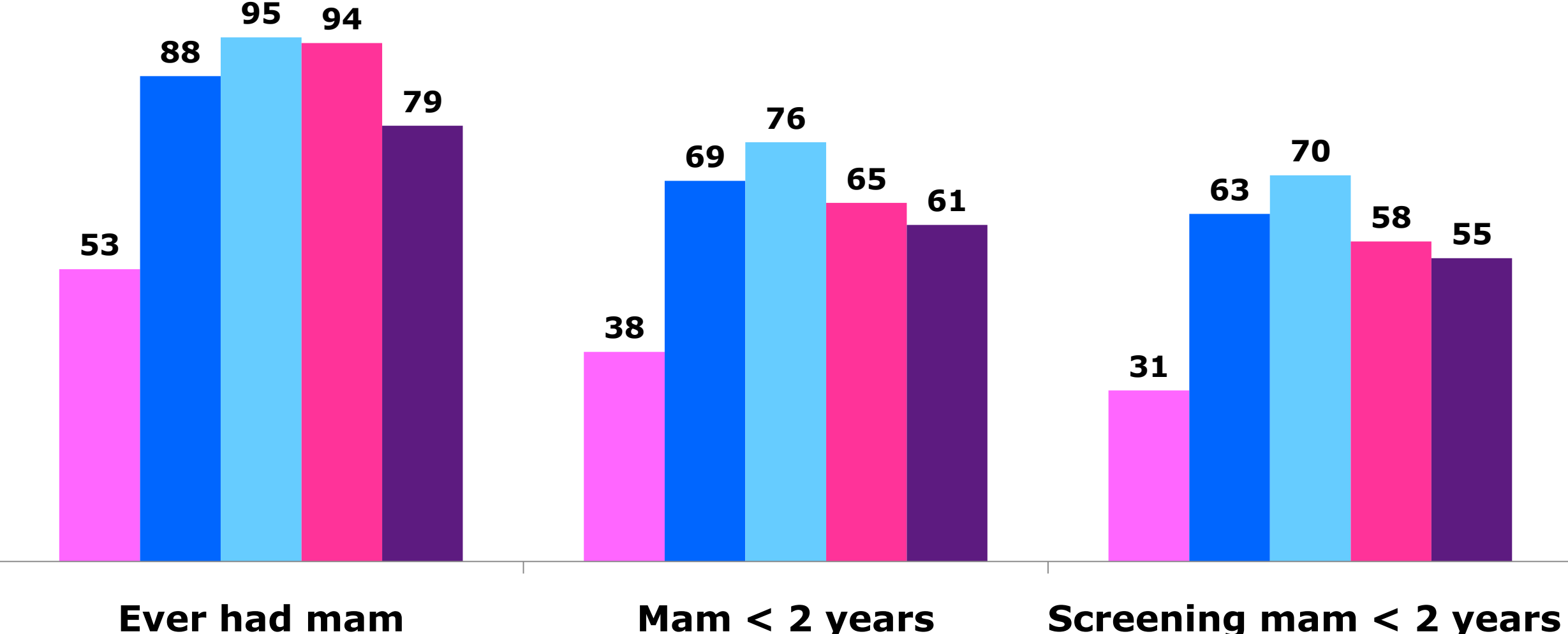
Age-group %



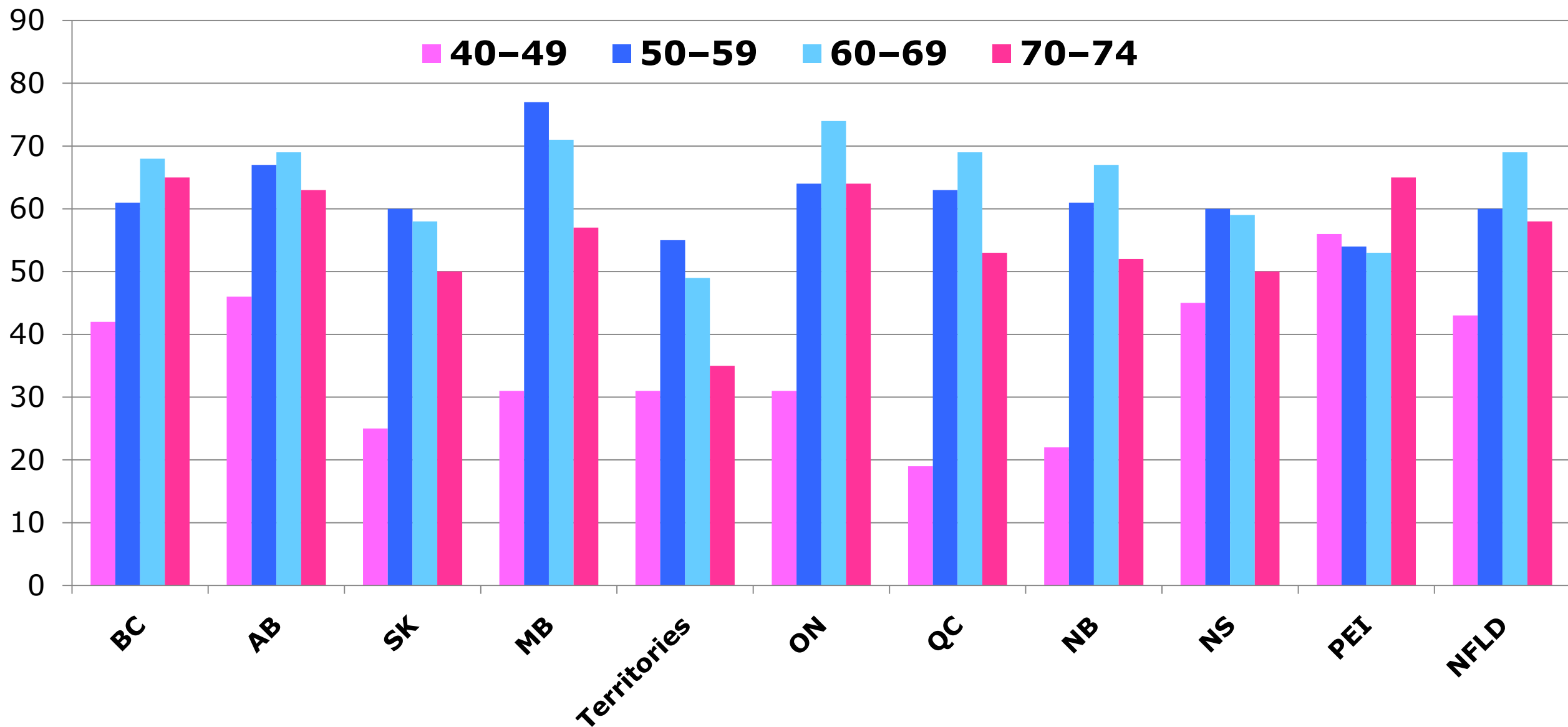
Married/common law	60%
Post-secondary graduation	52%
Household income of \$60,000 +	52%
Not smoker	81%
Has a regular doctor	92%

Percentage of women who participated in mammography in 2012

40-49 50-59 60-69 70-74 Total



Percentage of women aged 40–74 who reported a screening mammogram < 2 years ago



Odds of reporting a screening mammogram < 2 years ago

	Weighted %	Odds ratio* (95% C.I.)
Age		
40–49	31.4	Reference group
50–59	63.4	5.1 (4.7–5.6)
60–69	70.3	7.6 (6.9–8.4)
70–74	58.4	4.5 (4.0–5.1)
Years since immigration		
0–9 years	43.7	Reference group
10 + years	58.4	1.5 (1.1–2.1)
Not immigrant	54.3	1.4 (1.0–2.0)

* Adjusted for age, marital status & income

Odds of reporting a screening mammogram < 2 years ago

	Weighted %	Odds ratio* (95% C.I.)
Household income (\$)		
< 20,000	47.6	Reference group
20,000–39,999	54.5	1.3 (1.2–1.5)
40,000–59,999	56.8	1.5 (1.3–1.7)
60,000–79,999	53.0	1.7 (1.5–1.9)
80,000 +	55.9	2.0 (1.7–2.2)
Smoking status		
Daily	44.5	Reference group
Occasionally	46.7	1.4 (1.2–1.7)
Never	56.8	1.7 (1.6–1.9)

* Adjusted for age, marital status & income

Odds of reporting a screening mammogram < 2 years ago

	Weighted %	Odds ratio* (95% C.I.)
Regular doctor		
No	28.5	Reference group
Yes	56.9	3.3 (2.9–3.7)
Last physical check-up		
2 + years ago	22.0	Reference group
1–2 years ago	28.4	2.4 (1.8–3.2)
< 1 year ago	64.6	3.1 (2.3–4.1)
Last Pap		
5 + years ago	42.2	Reference group
3–5 years ago	43.8	1.1 (1.0–1.3)
< 3 years ago	60.8	3.5 (3.2–3.8)

* Adjusted for age, marital status & income

Main findings

▶ Participation highest among women aged:

- 60–69 (70%)
- 50–59 (63%)
- 70–74 (58%)
- 40–49 (31%)

Changes over time

▶ Participation among women aged 50–69:

- 40% in 1990¹
- 73% in 2001
- 73% in 2008
- 71% in 2012

¹ Shields M, Wilkins K. An update on mammography use in Canada. Health Rep. 2009;20(3):7-19.

Limitations

- ▶ Cannot perfectly determine whether *last* mammogram was for diagnostic or screening purposes
- ▶ Based on self-reported data
- ▶ Do not know if women are at higher risk of breast cancer
- ▶ Subjective factors were not measured

Main findings

- ▶ Lifestyle-related factors appeared to be more influential:
 - Regular doctor
 - Recent check-up
 - Pap test in last 3 years
- ▶ Consistent with similar studies

Policy implications

- ▶ Smoking associated with increased risk of breast cancer, but smokers were less likely to participate in screening mammography
- ▶ Lifestyle-related factors likely easier to modify and were shown to be more strongly associated with screening mammography
- ▶ Doctor offices may be best venue for communicating the benefits *and harms* of screening mammography

Policy implications

- ▶ 25-year follow-up CNBSS found no reduction in breast cancer mortality with the addition of mammography to physical exams in women aged 40-59
- ▶ CTFPHC will revise guidelines on breast screening late 2016

Thank you!



Image from: <http://imgbuddy.com/hot-pink-cancer-ribbon.asp>