Cancer: are we making a difference?

The Impact of Prevention and Early Detection in Manitoba

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Epidemiologist / Provincial Director
Population Oncology, CancerCare Manitoba
Learning Objectives

• After attending this session, participants should have an understanding of:
  – how cancer is affecting the Manitoba population now and in the future
  – how CancerCare Manitoba’s screening programs are meeting their goals to decrease the burden of breast, cervix and colon cancer in the population
Overview

• What we know: the burden of cancer in Manitoba

• Why screen?
  – What the stats tell us about Screening
  – How screening is linked to
    • Stage at diagnosis
    • Survival and mortality

• Conclusion
What we know: estimated new cases of cancer

Manitoba ... \((n=6,100)\)
- Colorectal: 870 (14.3%)
- Lung: 830 (13.6%)
- Breast: 800 (13.1%)
- Prostate: 750 (12.3%)
- Cervix: 50 (0.8%)

Canada ... \((n=186,400)\)
- Prostate: 26,500 (14.2%)
- Lung: 25,600 (13.7%)
- Colorectal: 23,300 (12.5%)
- Breast: 22,700 (12.2%)
- Cervix: 1,350 (0.7%)
Cancer now

Cancer incidence, by Regional Health Authority
Age-standardized incidence rates per 100,000 people

*Statistically different from Manitoba rate if p<0.05.

CCMB 2010 Community Health Assessment
Cancer now

Cancer mortality, by Regional Health Authority
Age-standardized rates per 100,000 people

*Significantly different from Manitoba rate (p < 0.05).
Projections: New cases and deaths

Figure 4.1
Actual and projected cancer cases, Manitoba, 1976-2026

Source: Epidemiology Unit, CancerCare Manitoba.
Actual and projected cancer deaths, Manitoba, 1976-2026

Source: Epidemiology Unit, CancerCare Manitoba.
What we know: the burden of cancer in Manitoba: Incidence

<table>
<thead>
<tr>
<th>Cancer Incidence</th>
<th>Past Estimate</th>
<th>Current Estimate</th>
<th>Time Trend</th>
<th>Range of Current Estimates (Lowest RHA - Highest RHA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>age-standardized incidence rates (per 100,000 people), all cancers</td>
<td>484.3</td>
<td>457.8</td>
<td>➡️</td>
<td>397.2 – 519.9</td>
</tr>
<tr>
<td>age-standardized incidence rates (per 100,000 people), by cancer type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lung</td>
<td>70.9</td>
<td>68.8</td>
<td>➡️</td>
<td>56.1 - 102.9</td>
</tr>
<tr>
<td>colorectal</td>
<td>67.2</td>
<td>64.4</td>
<td>➡️</td>
<td>52.2 - 84.7</td>
</tr>
<tr>
<td>breast (f)</td>
<td>122.0</td>
<td>121.3</td>
<td>➡️</td>
<td>87.8 - 139.8</td>
</tr>
<tr>
<td>prostate</td>
<td>148.3</td>
<td>117.9</td>
<td>➡️</td>
<td>88.3 - 154.1</td>
</tr>
</tbody>
</table>
What we know: the burden of cancer in Manitoba: Mortality

<table>
<thead>
<tr>
<th>Cancer Mortality</th>
<th>Age-standardized mortality rates (per 100,000 people), all cancers</th>
<th>Age-standardized mortality rates (per 100,000 people), by cancer type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>220.6</td>
<td>209.1</td>
</tr>
<tr>
<td>lung</td>
<td>53.1</td>
<td>50.4</td>
</tr>
<tr>
<td>colorectal</td>
<td>29.1</td>
<td>26.2</td>
</tr>
<tr>
<td>breast (f)</td>
<td>29.7</td>
<td>28.9</td>
</tr>
<tr>
<td>prostate</td>
<td>38.4</td>
<td>38.5</td>
</tr>
</tbody>
</table>
What we know: the burden of cancer in Manitoba: Survival

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Age-standardized five-year relative survival ratios, all cancers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53.4% 56.4% 53.4%-62.6%</td>
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<td></td>
<td>4</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>13.9% 18.9% 12.6%-29.9%</td>
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<td>5</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>53.0% 56.9% 51.1%-68.1%</td>
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<td></td>
<td>6</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>82.9% 83.6% 73.2%-87.4%</td>
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<td></td>
<td>7</td>
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<tr>
<td></td>
<td>83.3% 91.1% 69.9%-96.5%</td>
</tr>
</tbody>
</table>


Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).
Percent of cancer patients diagnosed at late stage (IV), by regional groupings

*Statistically different from Manitoba rate (p<0.05).
What we know: First Nations, Inuit, and Metis Population

- Indigenous peoples in Canada are a large and growing component of the population.
  - Canada: 3.8% (2006)
    - +45% since 1996
    - ... vs 8% for non-Aboriginal population
  - Manitoba: 15%

What we know: First Nations, Inuit, and Metis Cancer Patterns & Risks

- Historically, cancer has been relatively rare in Indigenous peoples
  - US, Australia, Canada (BC, ON, MB)
  - Exceptions: gallbladder, liver, kidney, cervical cancers

Note: most evidence from research focusing on on-reserve, First Nations peoples

- ... but there’s evidence that this is changing ...
### What we know: some of the risk factors for First Nations, Inuit, and Metis Populations

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>First Nations</th>
<th>Canada (General)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking (20+yrs)</td>
<td>56.9%</td>
<td>26.9%</td>
</tr>
<tr>
<td></td>
<td><em>02-03 FNRLHS</em>¹</td>
<td><em>CCHS</em>²</td>
</tr>
<tr>
<td>Smoking (15-17 yrs)</td>
<td>47%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td><em>02-03 FNRLHS</em></td>
<td><em>CCHS</em></td>
</tr>
<tr>
<td>Obesity</td>
<td>36.0%</td>
<td>23.0%</td>
</tr>
<tr>
<td></td>
<td><em>02-03 FNRLHS</em></td>
<td><em>CCHS</em></td>
</tr>
<tr>
<td>Diabetic</td>
<td>15.5%</td>
<td>4.7%</td>
</tr>
<tr>
<td></td>
<td><em>NAHO 2004³, On-reserve</em></td>
<td><em>CCHS</em></td>
</tr>
<tr>
<td>Physically Inactive</td>
<td>78.7%</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td><em>02-03 FNRLHS</em></td>
<td><em>CCHS</em></td>
</tr>
</tbody>
</table>

¹First Nations Regional Longitudinal Health Survey (2002-2003)
²Canadian Community Health Survey (2004)
³National Aboriginal Health Organization (2004)
⁴1997 Manitoba First Nations Regional Health Survey
What we know: First Nations, Inuit, and Metis Cancer Patterns & Risks: Emerging data from Manitoba

All invasive cancers - age standardized incidence First-Nations and Non-first Nations Females

Data from the Manitoba Cancer Registry
What can we do to reduce the burden of cancer?

• Prevent cancer when we can

• Find it early (when we can’t prevent it)

• Treat it, the best way possible
• Prevention:
  – Obesity, Smoking, Alcohol
  – Fruits and Vegetables, Physical Activity

• Access:
  – Screening
  – Wait times
  – Access to Treatment
  – Other Access Indicators

• Outcomes
  – Incidence, Mortality, Survival
  – Patient Satisfaction
  – Projections
# Prevention

## INCREASE YOUR RISK

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Past Estimate</th>
<th>Current Estimate</th>
<th>Time Trend</th>
<th>Range of Current Estimates (Lowest RHA - Highest RHA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obesity</strong></td>
<td>18.2%</td>
<td>18.4%</td>
<td>↑</td>
<td>16.0% - 27.2%</td>
</tr>
<tr>
<td>percent of adults (ages 18+) with Body Mass Index classified as “obese”. Based on self-reported height and weight.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td>24.9%</td>
<td>20.6%</td>
<td>↓</td>
<td>14.2% - 37.1%</td>
</tr>
<tr>
<td>percent of daily current or occasional smokers (ages 12+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>18.0%</td>
<td>17.1%</td>
<td>↑</td>
<td>12.1% - 27.9%</td>
</tr>
<tr>
<td>percent consuming five or more alcoholic drinks on one occasion, at least once a month in the past year (ages 12+)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

## REDUCE YOUR RISK

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Past Estimate</th>
<th>Current Estimate</th>
<th>Time Trend</th>
<th>Range of Current Estimates (Lowest RHA - Highest RHA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fruits and Vegetables:</strong></td>
<td>30.8%</td>
<td>36.1%</td>
<td>↑</td>
<td>25.5% - 40.3%</td>
</tr>
<tr>
<td>percent consuming fruits and vegetables five or more times a day (ages 12+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Physical Activity</strong></td>
<td>61.3%</td>
<td>67.2%</td>
<td>↑</td>
<td>64.8% - 77.6%</td>
</tr>
<tr>
<td>percent of employed residents at moderate or active physical activity (ages 15 – 75) (Note: Includes work, travel/ and leisure time activity.)</td>
<td></td>
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</tr>
</tbody>
</table>

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Eugenie Mercedi started the Blue Light Project in November through the Chronic Disease Prevention Initiative (CDPI), she bought blue lights with her partner Reg Mercedi went door-to-door asking people if they smoked. If the house was smoke-free, she gave them a blue light bulb about it,” she said. By the time Christmas rolled around, the communities of Cross Lake and “it really looked awesome.”

Mercedi quit smoking three years ago. As an aboriginal dancer who has become aware of practicing healthy eating and activity levels. In conjunction with Manitoba Foods, she helped set up a cooking class that attracted 21 participants. A lot of people at Cross Lake are children who eat their meals with free seeds from Manitoba Hydro.

Cross Lake, Blue Lights for Smoke-Free Homes
MANITOBA STONES, CHRONIC DISEASE PREVENTION INITIATIVE (CDPI)

Source: Canadian Community Health Survey Cycles 1.1 (2001), 2.1 (2003), and 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

Note: Trend arrows are based on or > 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).

RHA refers to Regional Health Authority
How do we decide to provide screening programs?

- Major health problem
- A test that will find the cancer sooner
- Effective treatment
- Evidence that cases and/or deaths are decreased
- Overall benefits of testing outweigh the risks
It’s time to Check.

Breast cancer screening saves lives!

BreastCheckmb.ca

5-25 Sherbrook Street
Winnipeg, Manitoba R3C 2B1
(204) 788-8000 1-800-903-9290
breastcheck@cancercare.mb.ca
Why get screened?

• Regular screening mammograms can reduce deaths from breast cancer by 25% in women ages 50 to 69.

• Over 800 cases of invasive breast cancer are diagnosed in Manitoba each year & over 80% are in women over the age of 50.

• The program goal is to screen 70% of women age 50 to 69.
How are we doing?

Percentage of women 50-69 years of age who had a screening mammogram (April 2007 to March 2009)

*Rates in First Nation communities range from 6% (Gardenhill) to 66% (Easterville).
Incidence: Breast Cancer

Data from the Public Health Agency of Canada
Cancer Surveillance On-Line
Percent of breast cancer patients diagnosed at late stage (IV), by regional groupings


s = numbers suppressed where s = 6
Breast cancer survival, by regional groupings

Age-standardized five-year relative survival (%)

Source: Manitoba Cancer Registry, patients diagnosed 2000-2002
Breast cancer mortality, by regional groupings
Age-standardized rates per 100,000 women

Percent of women (ages 50 – 69) receiving a mammogram in the past two years, by regional groupings

Source: Manitoba Health fee for service billing data for mammography, women (ages 50 – 69) April 1, 2006 – March 31, 2008.
Manitoba Breast Screening Program Database, women (ages 50 – 69) screened April 1, 2006 – March 31, 2008.
* Significantly different from Manitoba rate (p<0.05).
Tell her how much you care

Tell her about Pap tests.
TellEveryWoman.ca

5-25 Sherbrook Street
Winnipeg, Manitoba R3C 2B1
(204) 788-8626 1-866-616-8805
cervixcheck@cancercare.mb.ca
Why get screened?

• Regular screening with Pap tests can prevent up to 80% of cervical cancer.
• About 50 women are diagnosed with cervical cancer each year in Manitoba.
• 60% of women diagnosed with cervical cancer have not had a Pap test in 5 years or more
• Over 10,000 women have an abnormal Pap test each year in Manitoba.
How are we doing?

Percentage of women 18-69 years of age who had a Pap test (April 2006 to March 2009)
Incidence trend of invasive and *in situ* cervical cancer
Mortality trend of invasive and *in situ* cervical cancer
Percent of women (ages 18 – 69) who had a Pap test in the last three years, by regional groupings

Source: Manitoba Cervical Cancer Screening Program Database, women (ages 18 – 69) screened April 1, 2006 – March 31, 2009.
*Significantly different from Manitoba rate (p<0.05).
It’s time to Check.

Colon cancer screening saves lives!
ColonCheckmb.ca

5-25 Sherbrook Street
Winnipeg, Manitoba  R3C 2B1
(204) 788-8635  1-866-744-8961
coloncheck@cancercare.mb.ca
Why get screened?

• Regular screening with the Fecal Occult Blood Test (FOBT) can reduce deaths from colorectal cancer by up to 25%.
• Over 800 men and women will be diagnosed with CRC in a year in Manitoba and about 360 will die
• 93% are over the age of 50
How are we doing?

Percentage of men and women 50-74 years of age who report having had a FOBT in the last two years (2006-2008)
Incidence: Colon and Rectum Cancers

Data from the Public Health Agency of Canada Cancer Surveillance On-Line
Percent of colorectal cancer patients diagnosed at late stage (IV), by regional groupings

Source: Manitoba Cancer Registry, patients diagnosed 2005-2007. *Statistically different from Manitoba rate (p<0.05).
Cancer Survival: Colorectal

Figure 3.38
Colorectal cancer survival, by regional groupings
Age-standardized five-year relative survival (%)
Cancer Mortality: Colorectal

Figure 3.26
Colorectal cancer mortality, by regional groupings
Age-standardized rates per 100,000 people

Percent of men and women (ages 50 – 74) who completed a Fecal Occult Blood Test (FOBT) in the last two years, by regional groupings.

Source: Colorectal Cancer Screening: Results of a Survey of Manitobans 50 – 74. Supported by the Canadian Partnership Against Cancer and CancerCare Manitoba PPA Inc., 2008.
Conclusion

• What we know: the burden of cancer in Manitoba
• What the stats tell us about Screening
• How screening is linked to
  – Stage at diagnosis
  – Survival and mortality
## Screening

### Screening Rates

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Colorectal Cancer</strong></td>
<td>N/A</td>
<td>36.3%</td>
<td>NEW</td>
<td>15.7% - 62.5%</td>
</tr>
<tr>
<td><em>NEW</em> FOBT: percent of men and women (ages 50 – 74) who completed a FOBT in the last two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cervical Cancer</strong></td>
<td>69.4%</td>
<td>64.6%</td>
<td></td>
<td>55.5% - 69.1%</td>
</tr>
<tr>
<td>percent of women (ages 18 – 69) who had a Pap test in the last three years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Breast Cancer</strong></td>
<td>61.7%</td>
<td>62.5%</td>
<td></td>
<td>50.4% - 68.1%</td>
</tr>
<tr>
<td>percent of women (ages 50 – 69) who had a mammogram within the last two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percent of women (ages 50 – 69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program.</td>
<td>51.1%</td>
<td>52.1%</td>
<td></td>
<td>46.3% - 60.2%</td>
</tr>
</tbody>
</table>

Source: 1. Colorectal Cancer Screening: Results of a Survey of Manitobans 50 to 74. Supported by the Canadian Partnership Against Cancer and Cancer Care Manitoba. PRA Inc., 2008.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red). RHA refers to Regional Health Authority.
Screening: How do we compare?

- Cancer screening rates in Manitoba are as good as or higher than rates across the country.
- Breast screening rates are similar to the national average.
- Manitoba has a slightly lower percentage of women having Pap tests compared to the national average.
- Based on self-report, Manitoba has the highest colorectal cancer screening rates in Canada.
Any questions?