

## **About the Data: Prevention of Diabetes & Cancer prevention**

Last Updated: September 08, 2015

Prevention of Diabetes: 2010-2012

Cancer prevention: 2009-2011

### **Introduction**

The following information was derived from documentation available from the Institute for Clinical Evaluative Sciences (ICES): <http://www.ices.on.ca/>

The proportions of people who underwent cancer prevention screening for breast, cervical and colorectal cancers were derived from physician service and lab claims from the Ontario provincial health insurance database (OHIP), records from the Ontario Cancer Registry (OCR), the Ontario Breast Screening Program (OBSP), Cytobase and physician enrollment model codes, all of which are maintained by the Institute for Clinical Evaluative Sciences (ICES).

Information regarding persons eligible for health care coverage in Ontario was derived from the Registered Persons Database (RPDB). Please note that Community Health Centre (CHC) claims and non-OHIP visits are not available.

Prevention of Diabetes: 2010-2012

### **Eye Exams Among People with Diabetes**

The project examined what proportion of people 40 years or older with diabetes has had an eye exam in the previous two years (April 1, 2010 to March 31, 2012)

#### Data sets used:

Ontario Diabetes Database (ODD)

Ontario provincial health insurance database (OHIP)

Registered Persons Database (RPDB)

#### Outcome (exam) definition:

At least one eye exam from ophthalmologist or optometrist during April 1, 2010 to March 31, 2012

Additional stratifications: males/females, age groups: 40+, 40-64, 65+

## Cancer prevention: 2009-2011

### **Mammography**

All women who were aged 52-69 and living in the City of Toronto on March 31<sup>st</sup>, 2011 were included. In addition, women had to be eligible for OHIP in fiscal years 2009 and 2010 (April 1<sup>st</sup>, 2009 – March 31<sup>st</sup>, 2011).

#### Exclusions

Women were only excluded from the analysis if they had ever (up to the end of the observation period) had a diagnosis of Breast Cancer (ICD-9 code 174, Patient enrollment model tracking code Q141A) or if they died within the observation period. Ontario Cancer Registry (OCR) data was also used to identify women with a history of breast cancer.

#### Outcome Definitions

Women were considered to have received a mammogram if they had a physician billing code of X185, X172, X178 or a patient enrollment model tracking code of Q131A or had been screened through the Ontario Breast Screening Program (OBSP) between April 1<sup>st</sup>, 2009 and March 31<sup>st</sup>, 2011.

Rates were produced using two denominators. The first denominator includes all women aged 52-69 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP. The second denominator includes only women aged 52-69 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP **and** who had used services in past 3 years. The latter denominator attempts to remove those women from the analysis who may no longer be living in Ontario.

Age-adjusted rates were created using 5 year age groups and the 1991 Canada census population as the standard population.

### **Pap smears**

All women who were aged 24-69 and living in the City of Toronto on March 31<sup>st</sup>, 2011 were included. In addition, women had to be eligible for OHIP in fiscal years 2008, 2009, 2010 (April 1<sup>st</sup>, 2008 – March 31<sup>st</sup>, 2011).

#### Exclusions

Women were only excluded from the analysis if they:

1. Had a previous diagnosis of cervical cancer
  - ICD-9 codes: 180.0, 180.1, 180.8, 180.9; ICD-10 equivalent
2. Had a hysterectomy
  - S810, S757, S758, S759, Q140A (patient enrollment model code for women with history of hysterectomy or cervical disease)

- CIHI prcode 80.3, 80.4, 80.5, 80.6, 80.7, 86.42; incode 1RM89, 1RM91, 5CA89
3. Women with colposcopy (ever)
    - OHIP code Z730, Z731
  4. Died within the observation period.

### Outcome Definitions

Women were considered to have received a Pap smear if they had an OHIP code (G365A, G394A, or E430), patient enrollment model tracking code (Q011A), lab code for Pap smear billing (L713, L733, or L812) or were present in Cytobase between April 1<sup>st</sup>, 2008 and March 31<sup>st</sup>, 2011.

Rates were produced using two denominators. The first denominator includes all women aged 24-69 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP. The second denominator includes only women aged 24-69 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP **and** who had used services in past 3 years. The latter denominator attempts to remove those women from the analysis who may no longer be living in Ontario.

Age-adjusted rates were created using 5 year age groups and the 1991 Canada census population as the standard population.

## **Colorectal cancer screening**

Colorectal cancer screening can involve a number of different screening tests including Fecal occult blood testing (FOBT), Colonoscopy, Rigid sigmoidoscopy, Flexible sigmoidoscopy, single or double contrast barium enema. In Ontario, FOBT and colonoscopy are the most commonly used screening options. For that reason, three separate outcomes were used in these analyses (any colorectal cancer screening, colonoscopy and FOBT). All individuals were included who were aged 52-74, alive and living in the City of Toronto on March 31<sup>st</sup>, 2011. In addition, individuals had to be eligible for OHIP in fiscal years 2009 and 2010 (April 1<sup>st</sup>, 2009 – March 31<sup>st</sup>, 2011).

### Exclusions

Individuals were excluded from the analysis if they:

1. Had a previous diagnosis of colorectal cancer (using the Ontario Cancer Registry)
  - ICD-9 codes: 153.0-153.4, 153.6-154.1
2. Had been diagnosed ever with severe inflammatory bowel disease
  - ICD-9 codes: 556, 556.0-556.9, 555, 555.0-555.9; ICD-10 equivalents

### Outcome Definitions

1. Any Colorectal Investigation

For eligible men and women, individuals categorized as 'screened' if they had undergone

any of the following tests:

- Fecal occult blood testing (L181, G004, L179, Q152, Q043 or Q133A) within 2 years;
- Rigid sigmoidoscopy (Z535, Z536) within 5 years;
- Flexible sigmoidoscopy (Z555 – without E740, E741, E747 or E705 on the same day; Z580) within 5 years;
- Single (X112) or double (X113) contrast barium enema within 5 years;
- Colonoscopy (Z555 plus one of E740, E741, E747 or E705 on the same day) within 10 years.

## 2. Colonoscopy

For eligible men and women, individuals were categorized as 'screened' by colonoscopy if they had undergone a colonoscopy (Z555 plus one of E740, E741, E747 or E705 on the same day) within the past 10 years.

## 3. Fecal Occult Blood Testing (FOBT)

For eligible men and women, individuals were categorized as 'screened' by FOBT if they had undergone Fecal occult blood testing (L181, G004, L179, Q152, Q043 or Q133A) within 2 years;

- Further exclude those individuals with:
  - Z535 or Z536 (rigid sigmoidoscopy) within 5 years or
  - Z555 (without E740 or E741 or E747 or E705 on the same day) or Z580 (flexible sigmoidoscopy) within 5 years or
  - X112 (single contrast barium enema) within 5 years or
  - X113 (double contrast barium enema) within 5 years or
  - Z555 plus one of E740 or E741 or E747 or E705 on the same day (colonoscopy) within 10 years
  - a patient enrollment model exclusion code of Q142A indicating that they had known cancer, inflammatory bowel disease, a colonoscopy in the last 5 years or had a history of malignant bowel disease

## Analysis

Rates for all outcomes were produced using two denominators. The first denominator includes all individuals aged 52-74 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP. The second denominator includes only individuals aged 52-74 years on March 31<sup>st</sup>, 2011 who were eligible for OHIP **and** who had used services in past 3 years. The latter denominator attempts to remove those individuals from the analysis who may no longer be living in Ontario.

Age-adjusted rates were created using 5 year age groups and the 1991 Canada census population as the standard population.