

# HEALTH SURVEILLANCE INDICATORS: PREGNANCY



## Public Health Relevance

Understanding trends, patterns, and population behaviours, provides evidence for planning, evaluating and modifying public health services and policies intended to promote the healthiest possible outcomes for pregnant women and their developing babies. A healthy baby is more likely to grow, learn and thrive, thus setting a foundation for positive health during childhood, adolescence and adulthood.

An important related public health issue is teen pregnancy. This indicator is reported separately to allow for more in-depth analysis.

## Highlights

1. Birth, abortion and pregnancy rates in Toronto decreased from 2004 to 2013. Over the same period, age-specific pregnancy rates indicated a trend towards delayed childbearing.
2. Toronto had significantly higher pregnancy and abortion rates than the rest of Ontario and the rest of the Greater Toronto Area. Toronto's birth rate was significantly lower than the rest of Ontario, but higher than the rest of the GTA.
3. Areas in northwest Toronto, East York and Scarborough had clusters of neighbourhoods with higher pregnancy rates than the city overall.
4. Women aged 25 to 34 years accounted for more than half of the 41,835 pregnancies among those aged 15 to 49 years. Those with lower income tended to have higher rates of pregnancy, birth and abortion.

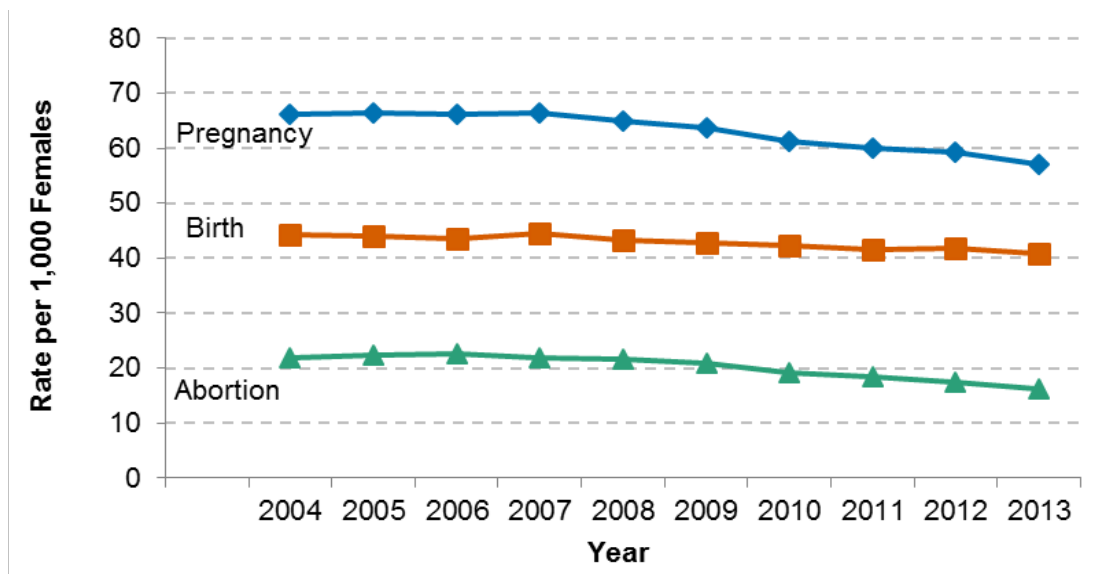
## Trends Over Time

Birth, abortion and pregnancy rates in Toronto decreased from 2004 to 2013. Over the same period, age-specific pregnancy rates indicated a trend towards delayed childbearing.

Figure 1 shows the number of pregnancies, therapeutic abortions and births per 1,000 Toronto women aged 15 to 49 years, from 2004 to 2013.

The total pregnancy rate decreased from about 68 pregnancies per 1,000 women in 2004 to 57 in 2013. The total abortion rate decreased from about 24 abortions per 1,000 women in 2004 to 16 in 2013. The total birth rate, which includes both live and stillbirths, decreased from about 44 births per 1,000 women in 2004 to 41 in 2013.

**Figure 1: Total Pregnancy, Therapeutic Abortion and Birth Rate, Females Aged 15 to 49 Years, Toronto, 2004 to 2013**



Data Source: Live Births and Therapeutic Abortion, see Data Notes for details.

Figure 2 shows the number of pregnancies per 1,000 women in specific age groups for Toronto from 2004 to 2013. Over this 10-year period there were notable changes in the age-specific pregnancy rates, reflecting a trend towards delayed childbearing.

There was an overall decrease in pregnancy rates for younger women in the age groups between 15 and 34. The rates decreased by:

- 49% among teens (from about 37 to 19 pregnancies per 1,000 women);
- 38% among 20 to 24 year olds (from 86 to 54 pregnancies per 1,000 women);
- 25% among 25 to 29 year olds (from about 108 to 81 pregnancies per 1,000 women);
- 7% among 30 to 34 year olds (from about 121 to 112 pregnancies per 1,000 women).

Conversely, there was an overall increase in pregnancy rates for older women in the age groups between 35 and 44. The rates increased by:

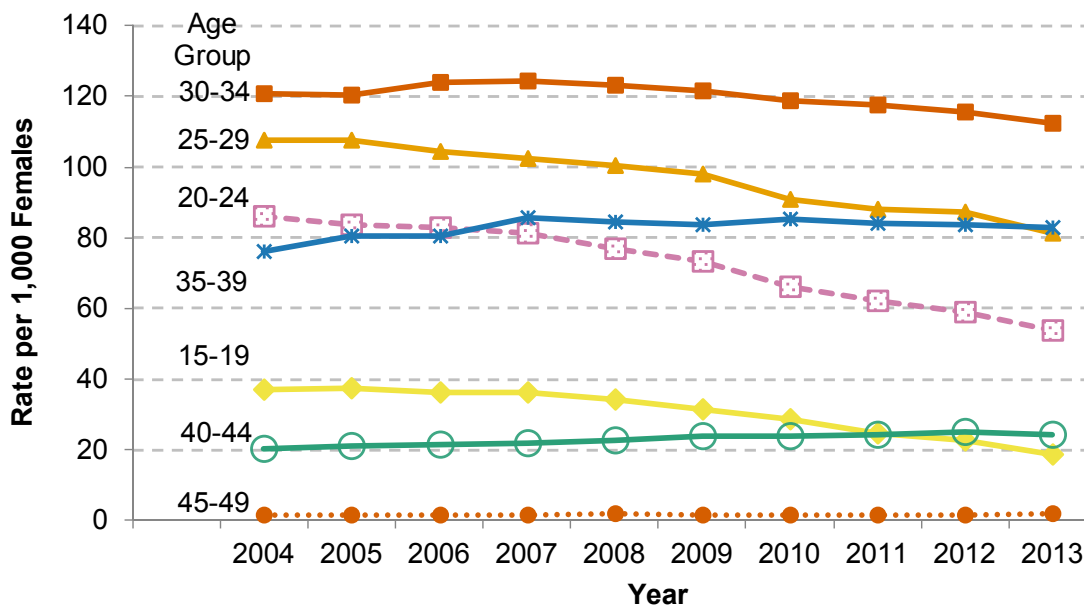
- 9% among 35 to 39 year olds (from about 76 to 83 pregnancies per 1,000 women);
- 20% among 40 to 44 year olds (from about 20 to 24 pregnancies per 1,000 women).

The pregnancy rate for 45 to 49 year olds remained relatively stable over time. In a given year, there were fewer than two pregnancies per 1,000 women in this age group.

Each year between 2004 and 2013, the pregnancy rate was the highest among 30 to 34 year olds and the lowest among 45 to 49 year olds.

Detailed information for the number and percent of pregnancies for each age group in 2013 are provided on page 8.

**Figure 2: Age-Specific Pregnancy Rates, Females Aged 15 to 49 Years, Toronto, 2004 to 2013**



Data Source: Live Births and Therapeutic Abortion, see Data Notes for details.

## Regional Comparisons

Toronto had significantly higher pregnancy and abortion rates than the rest of Ontario and the rest of the Greater Toronto Area. Toronto's birth rate was significantly lower than the rest of Ontario, but higher than the rest of the GTA.

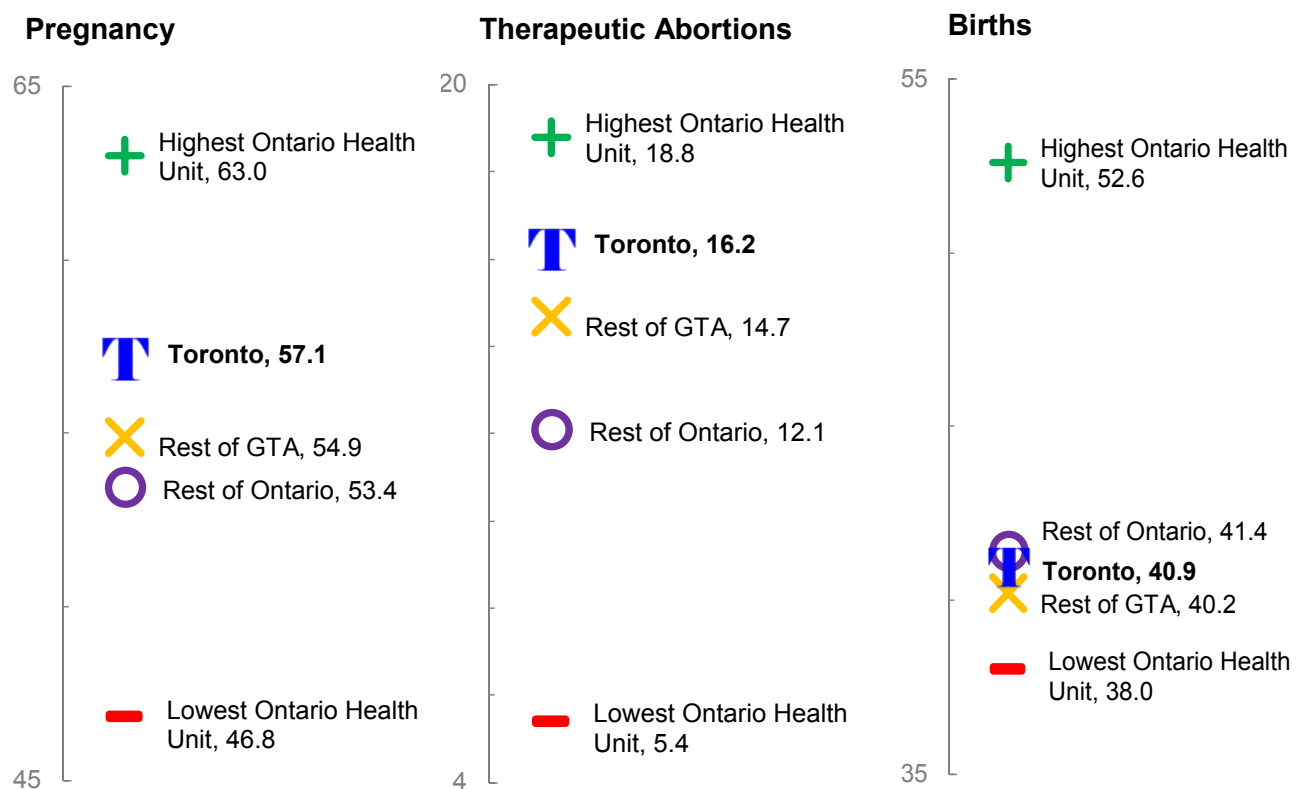
Figure 3 shows the number of pregnancies, therapeutic abortions and births per 1,000 women aged 15 to 49 years for Toronto in 2013, compared to the rest of Ontario (Ontario excluding Toronto), the rest of the Greater Toronto Area (GTA excluding Toronto) and Ontario's health units with the highest and lowest rates.

Toronto's total pregnancy rate was significantly higher than the rest of the GTA and rest of Ontario. Toronto ranked 7<sup>th</sup> of the 36 health units in Ontario, with the first ranked health unit having the highest rate.

Toronto's total abortion rate was significantly higher than the rest of the GTA and rest of Ontario. Toronto ranked 2<sup>nd</sup> of the 36 health units in Ontario, with the first ranked health unit having the highest rate.

Toronto's total birth rate (live and stillbirths) was significantly higher than the rest of the GTA but significantly lower than the rest of Ontario. Toronto ranked 26<sup>th</sup> of the 36 health units in Ontario, with the first ranked health unit having the highest rate.

**Figure 3: Total Pregnancy, Therapeutic Abortion and Birth Rate, per 1,000 Females Aged 15 to 49 Years, Selected Regions in Ontario, 2013**



Data Source: Live Births and Therapeutic Abortions, see Data Notes for details.

## Toronto Neighbourhood Comparisons

Areas in northwest Toronto, East York and Scarborough had clusters of neighbourhoods with higher pregnancy rates than the city overall.

Map 1 shows the total pregnancy rate by Toronto neighbourhood for 2013.

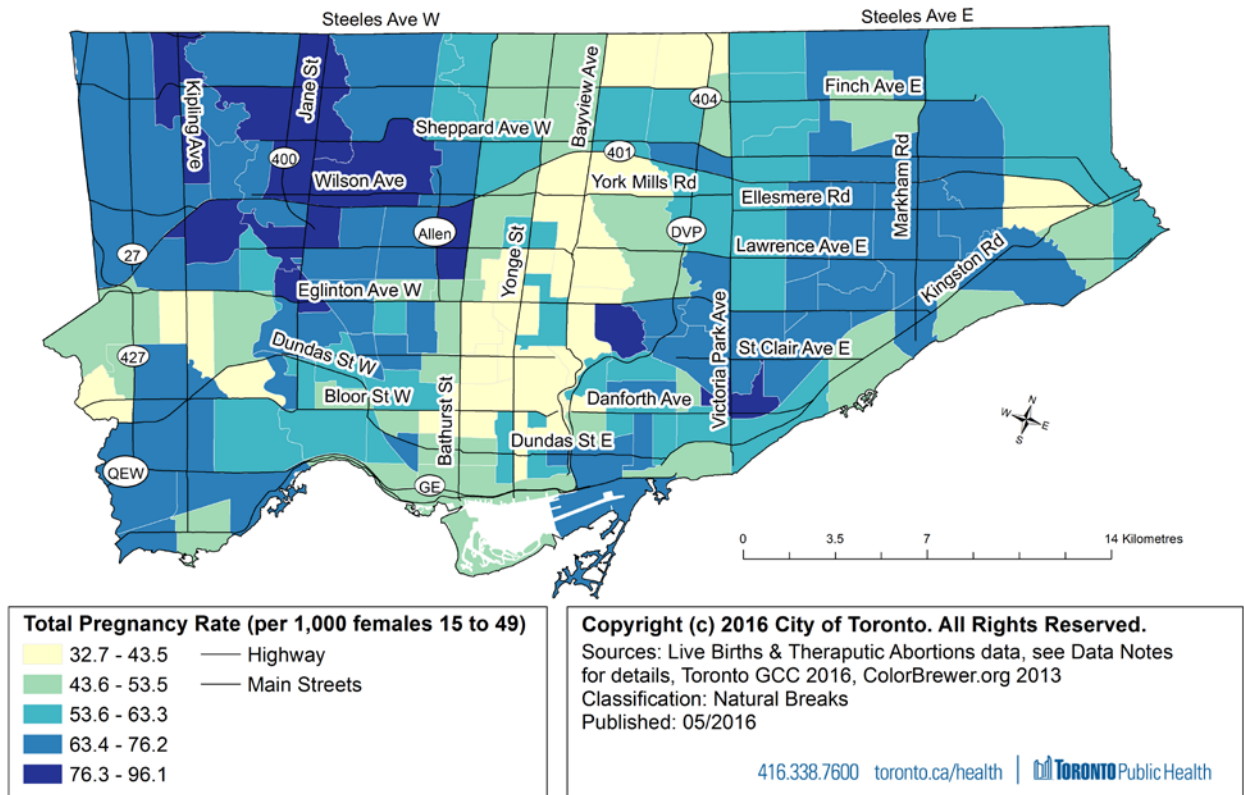
Areas in northwest Toronto and East York had clusters of neighbourhoods with higher rates than the city overall. Some neighbourhoods with significantly higher rates include :

- Black Creek
- Glenfield-Jane Heights
- Mount Olive-Silverstone-Jamestown
- Mount St. Dennis
- Oakridge
- Taylor-Massey (formerly Crescent Town)
- Thorncliffe Park
- Weston

Some areas in central Etobicoke, central Toronto, and North York had clusters of neighbourhoods with lower rates than the city overall. Some neighbourhoods with significantly lower rates include:

- Annex
- Bridle Path-Sunnybrook-York Mills
- Cabbagetown-South St. Jamestown
- Church-Yonge Corridor
- Forest Hill South
- Hillcrest Village
- Kingsway South
- Princess-Rosethorn
- University

**Map 1: Total Pregnancy Rate by Neighbourhood, Females Aged 15 to 49 Years, Toronto, 2013**



## Socio-demographics

Women aged 25 to 34 years accounted for more than half of the 41,835 pregnancies among those aged 15 to 49 years. Those with lower income tended to have higher rates of pregnancy, birth and abortion.

Tables 1 and 2 show the distribution of pregnancies by mother's age group and pregnancy outcome for women aged 15 to 49 years in Toronto in 2013. There were about 41,835 pregnancies to women in this age range. Women in their late twenties and early thirties accounted for more than half (56%) of these pregnancies. Nearly three quarters (72%) of all pregnancies ended in live births or stillbirths.

**Table 1: Pregnancies by Mother's Age Group, Females Aged 15 to 49 Years, Toronto, 2013**

Age Group	Number of Pregnancies	Percent of Total Pregnancies
15 to 19 years	1,430	3.4
20 to 24 years	5,423	13.0
25 to 29 years	9,867	23.6
30 to 34 years	13,671	32.7
35 to 39 years	8,750	20.9
40 to 44 years	2,504	6.0
45 to 49 years	190	0.1

Data Source: Live Births and Therapeutic Abortion, see Data Notes for details.

**Table 2: Pregnancy Outcomes, Females Aged 15 to 49 Years, Toronto, 2013**

Pregnancy Outcome	Number of Pregnancies	Percent of Total Pregnancies
Therapeutic Abortion	11,857	28.3
Live and Stillbirths	29,978	71.7
<b>Total</b>	<b>41,835</b>	<b>100.0</b>

Data Source: Live Births and Therapeutic Abortion, see Data Notes for details.

Table 3 shows the total pregnancy rate, total therapeutic abortion rate and total birth rate by income quintile for Toronto for the years 2011 to 2013 combined. Quintile 1 includes the areas in Toronto with the highest percent of people living below the low income measure (LIM), making it the lowest income quintile. Quintile 5 includes the areas in Toronto with the lowest percent of people living below the LIM, making it the highest income quintile.

Toronto's total pregnancy rate, abortion rate and birth rate all decreased with increasing income. For all three measures, the lowest income group (Quintile 1) had significantly higher rates compared to the highest income quintile (Quintile 5). Conversely, the highest income quintile had significantly lower rates compared to the lowest income quintile.

**Table 3: Total Pregnancy, Therapeutic Abortion and Birth Rate by Income Quintile, Females Aged 15 to 49 Years, Toronto, 2011 to 2013**

Income Quintile	Pregnancy Rate (per 1,000 Females)	Therapeutic Abortion Rate (per 1,000 Females)	Birth Rate (per 1,000 Females)
1 (Lower income)	73.6 <b>H</b>	22.8 <b>H</b>	50.8 <b>H</b>
2	62.7	18.7	43.9
3	58.0	18.1	39.8
4	56.2	14.9	41.3
5 (Higher income)	50.2	11.1	39.1

**H** Significantly higher than Quintile 5, the higher income group, indicating a health inequality.

Data Source: Live Births, Therapeutic Abortions and Income: see Data Notes for details.



## Data Notes

### Notes

- Therapeutic abortions (TAs) in Ontario are performed in three health-care settings: hospitals, free-standing abortion clinics and private physicians' offices (PPO). Historically, TA data released by the Ontario Ministry of Health and Long-Term Care captured only reports of TAs performed in hospitals and clinics. In 2011, the Ministry revised the reporting criteria to include TAs performed in PPO. This revision was informed by research on access to abortion services in Ontario. Based on the revised criteria, the Ministry updated the TA data for 2001 to 2009 and issued the data file in spring 2011. All publications released by Toronto Public Health after June 2011 requiring the use of abortion statistics are based on the updated data. Abortion and pregnancy statistics based on the updated data are higher than in previous reports.
- Adjusted number of therapeutic abortions is used in this analysis as per recommended practice. The adjusted number excludes a second abortion within 40 days of the first because the second abortion was likely a complication from the first procedure. For most age groups and most years, the relative difference between the total number of TAs and the adjusted number was less than 1%.
- Total pregnancies to women under 15 and over 49 years of age were excluded from the analyses. There were 26 pregnancies to these women in 2013.
- Significant differences were estimated using overlapping confidence intervals. Although this method is conservative ( $\alpha < 0.01$ ) and most appropriate when comparing mutually exclusive groups, it was chosen as an objective means of making conclusions on population-based data. Also note that the multiple comparisons performed in the analysis were not taken into consideration when choosing the level of significance to test.
- Time trend analysis is based on data from the most recent 10 year-period or, when there are fewer than 10 years of data, from the earliest available year of complete and reliable data.
- Pregnancy rates for 2011 to 2013 are based on preliminary population estimates and therefore subject to minor adjustments in the future.
- The Toronto estimate in Table 2 is slightly different from that in Figures 1 and 3. This is because, for comparisons by income quintiles, any records that could not be linked to a valid income quintile were excluded from analysis.
- Toronto is compared to Ontario excluding Toronto and to the Greater Toronto Area (GTA) excluding Toronto rather than to Ontario and the GTA including Toronto because Toronto comprises such a large proportion of these two areas. Excluding Toronto therefore results in more meaningful comparisons.
- Denominator Data: Population Estimates Summary, 2004 to 2013. Statistics Canada, Ontario Ministry Finance, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, date extracted: July 2013 (Toronto estimates) and Canadian Census, Statistics Canada, 2011 (smaller geographic levels).

## Definitions

**Age-Specific Pregnancy Rate** is the number of pregnancies experienced by females of particular age group per 1,000 females in the age group.

**GTA excluding Toronto** means the Greater Toronto Area (GTA) with Toronto removed from the GTA data.

**Income Quintiles** are five groups, each containing approximately 20% of the population. They were created by ranking Toronto's census tracts based on the percent of residents living below the Statistics Canada after-tax Low Income Measure (LIM), using the 2012 income tax filer data. Quintile 1 includes the census tracts with the highest percent of people living below the LIM and is therefore the lowest income quintile. Quintile 5 includes the census tracts with the lowest percent of people living below the LIM, making it the highest income quintile. LIM is an income level set at 50% of the median family income in Canada in a given year, adjusted for household size. Income Level is based on the ratio of each survey respondent's annual household income to the low income cut-off corresponding to their household size, divided by the highest such ratio in Toronto. The lower level is the lowest 30% of income ratios, the middle level is the 31st to 70th percent, and the higher level is the top 30%. Approximately 15% of survey respondents included in this analysis had their income level imputed based on other socio-demographic characteristics.

**Number of Pregnancies** is estimated by summing the total number of hospital deliveries (both live and stillbirths) and therapeutic abortions. The total number of pregnancies is underestimated because spontaneous abortions (i.e. miscarriages) and home deliveries are not captured by the data sources used for this analysis. This in turn results in an underestimation of pregnancy rates and birth rates for Toronto.

**Ontario excluding Toronto** means Ontario with Toronto removed from the Ontario data.

**Therapeutic Abortion** refers to the deliberate termination of a pregnancy resulting in the death of the fetus or embryo, otherwise known as induced abortions. This term does not include spontaneous abortions or miscarriages. Abortion data are captured in three data sources: OHIP paid claims, hospital discharges and ambulatory care visits. These aggregated data are prepared by the Ministry of Health and Long-Term Care.

**Total Birth Rate** is the number of hospital deliveries (of both live and stillbirths) by females aged 15 to 49 years per 1,000 females in this age range.

**Total Pregnancy Rate** is the number of pregnancies experienced by females aged 15 to 49 years per 1,000 females in this age range.

**Total Therapeutic Abortion Rate** is the number of therapeutic abortions experienced by females aged 15 to 49 years per 1,000 females in this age range.

## Sources

**Income data:** Statistics Canada. (2012) Table F-18 annual income estimates for census families and individuals (T1 Family File).

**Live Births and Therapeutic Abortions data,** Inpatient Discharges and Hospital and Medical Services Data, 2004-2013; Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: February 2015 (Inpatient Discharges) and March 2015 (Hospital and Medical Services Data).

Used in:

- Figures 1, 2 and 3
- Tables 1, 2 and 3
- Map 1

### **Denominator data:**

**Population for Toronto and Larger Areas:** Population Estimates 2004 to 2013, Ontario Ministry of Health and Long term Care, IntelliHEALTH ONTARIO. Date extracted: July 2015

Used in:

- Figures 1, 2 and 3
- Tables 1 and 2

**Population for Neighbourhood or Service Delivery Areas:** 2011 Canada Census, Statistics Canada.

Used in:

- Map 1
- Table 3

Health Surveillance Indicator: Pregnancy

Category: Reproductive Health

Prepared: December, 2016

This indicator report is part of a series that informs the ongoing assessment of Toronto's health status. For a full list of the indicators, please go to: [www.toronto.ca/health](http://www.toronto.ca/health)