
Data Sources, Methods and Limitations

The main data sources, methods and limitations of the data used in this report are described below:

Local Surveys

The *Survey of Parents of Children 0 to 2 Years—2002*; the *Prenatal Education Classes: Survey of Mothers—2003*; and the 2002 and 2003 *Rapid Risk Factor Surveillance System* surveys were all telephone surveys conducted at the Region of Peel level. Data from these surveys are all based on self-reports from survey respondents or their proxy. Self-reported data may be subject to errors in recall, over or under-reporting because of social desirability, or errors from proxy reporting. These surveys were administered in English only. Additional information about each of these surveys follows.

Survey of Parents of Children 0 to 2 Years—2002

The *Survey of Parents of Children 0 to 2 Years—2002* was conducted by the Region of Peel Health department (Peel Health) in 2002. The sampling frame for this survey was drawn from the Healthy Babies/Healthy Children (HBHC) Database, also referred to as the Integrated Services for Children Information System (ISCIS). Survey respondents consisted of mothers who resided in Peel, delivered a baby in 2000 or 2001, consented to participate in the survey and spoke English. Data were collected between May 6th and October 4th, 2002.

Prenatal Education Classes: Survey of Mothers—2003

The *Prenatal Education Classes: Survey of Mothers—2003* was conducted by Peel Health in 2003. The telephone survey was administered to new mothers from the HBHC Program who resided in Peel, delivered a baby between the months of May and October 2003, consented to participate in the survey and spoke English. Data were collected between June and November of 2003.

2002 and 2003 Rapid Risk Factor Surveillance System Survey

The *Rapid Risk Factor Surveillance System* (RRFSS) is an on-going telephone survey occurring in various public health units across Ontario. On a monthly basis, a random sample of 100 Peel residents, aged 18 years and older, is interviewed regarding risk behaviours, knowledge, attitudes and awareness about health-related topics of importance to public health. The survey content varies from year to year.

Hospitalization

Hospitalization data in this report are collected by the Canadian Institute for Health Information (CIHI). Data for Peel from 1986 to 1994 were obtained from the Ontario Ministry of Health and Long-Term Care, while data for 1995 through 1998 were distributed to Peel Health from the Central East Health Information Partnership (CEHIP). For 1999 and 2001, data were obtained through the Provincial Health Planning Database (PHPDB) initiative at the Ontario Ministry of Health and Long-Term Care.

CIHI data for the years 1986 to 2001 were coded based on the International Classification of Diseases, 9th Revision (ICD-9) system of classifying causes of death and hospital stay.

Limitations of the hospital separation data are as follows:

- Only cases serious enough to require hospital admission are captured;
- Codes presented in the hospital separation data set reflect the cause of stay upon discharge, not admission;
- People admitted to hospital more than once in a year for the same cause are counted for each hospital stay, not as an individual case;
- Other reasons, such as factors related to physician referral, screening and admission practices, may explain changes in the data over time.

Births

Birth data for this report were from the Ontario Live Birth Database, 1986–2000 and were distributed to Peel Health through the Health Planning System (HELPS) initiative of the Ontario Ministry of Health and Long-Term Care. At the time this report was prepared, final data were available up to 2000. Birth data included live and still births.

Limitations of the birth data are as follows:

- Out-of-province births to Ontario mothers were excluded from analyses to ensure consistent comparisons over time;
- Approximately 3% of live births are not recorded in the live birth database.⁶⁸

Additional limitations of birth data are documented on the Association of Public Health Epidemiologists of Ontario Core Indicators Web site⁶⁸ at: http://www.apheo.ca/indicators/pages/resources/data%20sources/live_birth_data.htm

Congenital Anomalies

Congenital anomalies data for this report were from the Canadian Congenital Anomaly Surveillance System (CCASS), 1986–2000. At the time this report was prepared, data were available up to 2000. Data are captured in CCASS through hospital separation information for infants less than one year of age.

Limitations of the congenital anomalies data are as follows:

- Possible over-counting;
- Exclusion of Ontario residents treated outside the province;
- Under-counting for some congenital anomalies due to (a) lack of diagnosis at birth or prior to one year of age, (b) therapeutic abortion due to screening for condition, (c) no hospital separation of infant required for condition, (d) availability or accessibility of care for condition, or (e) administrative policies and procedures. This under-counting may vary over place and time and is more likely for less severe anomalies, e.g., mild forms of spina bifida. In general, the number of reported cases of neural tube defects in births is thought to be accurate because the severity of the anomaly makes it easily diagnosed at birth;⁶⁹
- An underestimate of the true number of neural tube defects (NTDs) because there is no reporting of the number of therapeutic abortions performed due to screening for NTDs. An estimate of hospital-based abortions may be calculated using ICD-9 codes 635+636+637 (abortions) combined with 655.0 (known or suspected central nervous system malformation in fetus);⁶⁹
- The rate of NTDs may change over time and place due to the availability of genetic screening and resultant therapeutic abortion, and the use of folic acid supplementation.⁶⁹

Mortality

Mortality data for this report were from the Mortality Data File, collected by the Ontario Office of the Registrar General and distributed to Peel Health through the Health Planning System (HELPS) initiative of the Ontario Ministry of Health and Long-Term Care. Mortality data for the years 1986–1999 are coded based on the International Classification of Diseases, 9th Revision (ICD-9) system of classifying causes of death and hospital stay.

Mortality data for 2000 are defined using the International Classification of Diseases, 10th Revision (ICD-10).

Immunization data

Immunization data in this report were from the Immunization Records Information System (IRIS), 2000–2003.

Limitations of IRIS data are as follows:

- Immunization of diphtheria, tetanus, polio, measles, mumps and rubella is covered by the Immunization of School Pupils Act. Private schools are not covered by this legislation;⁷⁰
- Data collected through this system reflects information from children who have been screened and therefore may not accurately reflect the true vaccination rate in the community. Data collected for children aged in day cares is limited to licensed day care centres and does not include children who are at home or in unlicensed day care.⁷⁰