
HEALTH

Dental Health

According to a 1995 study conducted by Edelstein and Douglas, tooth decay is one of the most prevalent chronic illnesses facing American children today. It is believed that 52 million hours of school instruction time are lost annually as a result of tooth decay and other dental problems (Gift et al. 1992). Oral health problems persist among children, in spite of the fact that advances in dental care have made tooth decay largely preventable through regular dental cleanings and checkups, the use of sealants, and appropriate diet and oral health care. More significant is the report (Kaste et al. 1996) which found that among the 5 to 17 age group 24 percent of children account for 80 percent of the tooth decay disease burden in permanent teeth.

Dental needs act as a helpful social indicator as there are clear socioeconomic disparities in the distribution of oral health problems, with a disproportionate number of problems coming from low-income children. One explanation for the high instances of persistent problems in children from low-income neighborhoods is inadequate access to dental care, not only for acute but also for preventive services. (Milgrom et. al.1998; Vargas et. al. 1998).

Proportion of screened population with urgent dental needs Toronto 1993-94

This group includes the number of children identified with urgent dental needs; pain, hemorrhage, pathology infection, including large open carious lesions and irreversible periodontal disease. The identification is carried out by Toronto Public Health Dental staff through assessments in the schools, attendance at clinics and direct referral from community dentists, public health and school staff. Prevalence of children with urgent dental needs provides an indication of children with no access to dental services: i.e., low income or former welfare recipients with no third party coverage for dental care. Dental services are not covered by the health system in Ontario. Poor dental health tends to be an early marker of diminished access to health care and preventative practices.

Observed Trends: Using data from the **1993-94** provincial survey, approximately 7% of all children who were screened by the Toronto Public Health Dental program (excluding Scarborough) were identified as having urgent dental care needs. The CEHIP (Central East Health Information Partnership) also discovered that the incidence of dental caries is no longer on the decline as was the case though much of the 1980's.

In 1993/94, of those children in Toronto who were screened, 6.7% were deemed to have urgent dental needs. Screening in Toronto in 1997 revealed that this is a growing problem as by then 8.5% of children screened were reported to have had urgent dental needs. The percent of children with urgent dental needs varied from 4% in the former City of North York to a high of 13.6% in the former East York.
<http://www.tdhc.org/reportcard.htm#15>

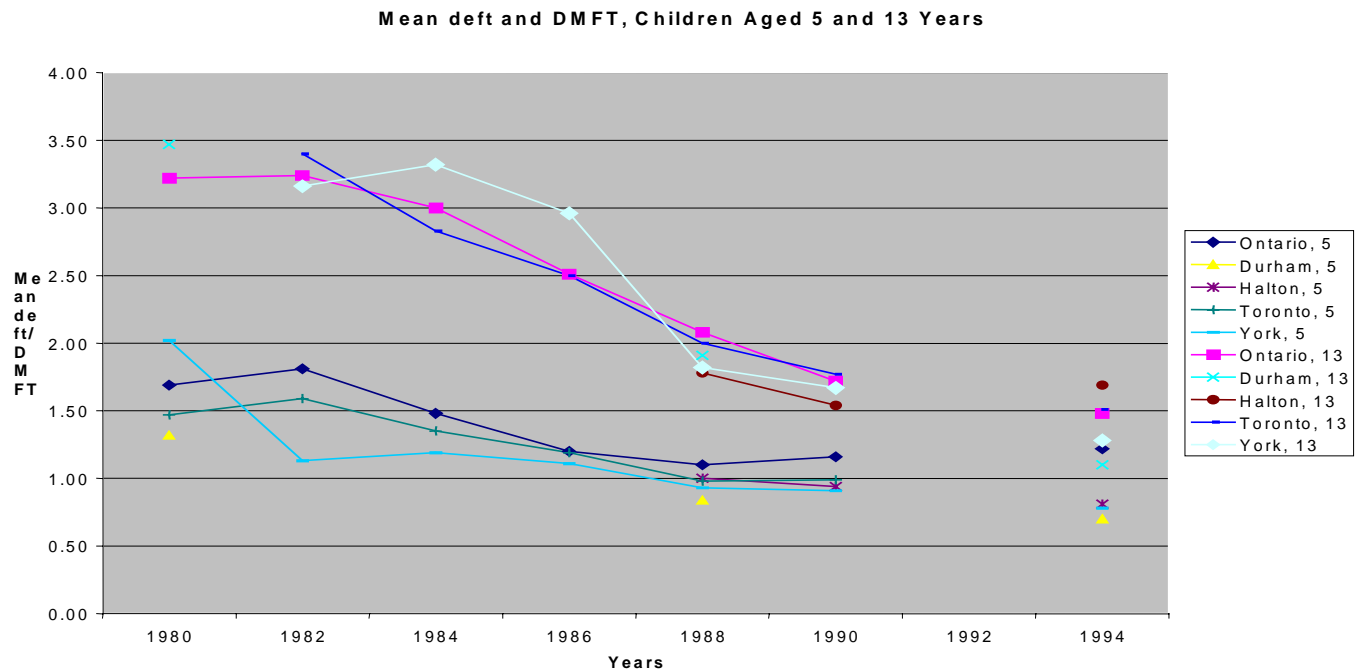
Supporting Data/Information: Previous studies have used two other dental indexes: 1) the DMF index as a general indicator of the dental health status of a population. The DMF (Decayed, Missing and Filled Teeth) index is a routinely used statistical concept in dentistry as it measures past disease experience and treatment. 2) The Community Periodontal Index of Treatment Needs (CPITN) index records the dental health status of the mouth in relation of periodontal health. It records whether the gums are healthy or bleeding (periodontal health), the presence or absence of dental pockets at different depths, and the presence of tartar (calculus).
http://newfederalism.urban.org/html/series_b/b15/b15.html

Re-collection and analysis of data from the Ontario Dental Health Indices Survey July 1999 Central East Health Information Partnership

Difficulties: In the early 1970's the Ontario Ministry of Health began a biennial survey known as the Ontario Dental Health Indices Survey (DHIS) which aimed to gauge the dental health of Ontario school children so that public health departments could better service and distribute funds. They did this by sampling odd-aged school children between 5 years and 13 years old and conducting dental examinations. Unfortunately, when the Central East Health Information Partnership in 1997 requested the data the MOH collected it was discovered that the data could not be located and would not be available except in summary format (CEHIP, July 1999). CEHIP then set about re-collecting and annualizing the DHIS data where available. A Toronto Public Health Department review of the 1997-1998 data revealed that there was no consistency in data collection and reporting procedures. Until this problem has been remedied, reporting on up-dated data is impossible. Nor is switching to data generated by private insurance companies a valid alternative as it can only be used to provide insights into the dental services required by children in Ontario who have access to care. It does not give a picture of those who are in the highest risk groups, namely those without coverage and those with limited financial resources.

Ignoring the difficulties with data collection in the past, the difficulties are likely to continue as budgetary constraints mean that many smaller municipalities whose Public Health budgets have been cut are going to have to cut the frequency of screening in schools or cut them out altogether. In the absence of pre-screening, poor dental health will go undetected thereby exacerbating an already difficult health issue.

Future Prospects: Dental Health is a life long health issue and the decisions and supports put in place today will impact public health for decades to come for this reason ascertaining an accurate picture of dental health is crucial to gauging residents future health. Expanding this area of data collection to the out lying areas of the GTA is critical to ascertaining the bigger picture as is attempting to address the problems of inconsistent data collection broached by the Toronto profiles report.



Source: CEHIP, December 1998 and The Ontario Dental Health Indices Survey.

HEALTH

Communicable Diseases and Opportunistic Diseases

Measles is an acute, highly communicable viral disease (it can be spread when an infected person coughs, sneezes or talks) with prodromal fever, conjunctivitis, coryza, cough, and Koplik spots on the buccal mucosa. A characteristic red blotchy rash appears on the third to seventh day, beginning on the face and becoming generalized. Measles may be severe, frequently complicated by middle ear infection or bronchopneumonia. [<http://www.cdc.gov/travel/diseases/measles.htm> and <http://www.nfid.org/factsheets/measlesadult.html>]

Influenza, also called the "flu," is a highly contagious respiratory infection. It is spread easily from person to person primarily when an infected person coughs or sneezes. After a person has been infected with the virus, symptoms usually appear within 2 to 4 days. The infection is considered often contagious for another 3 to 4 days after symptoms appear. Flu can cause fever, chills, headache, dry cough, runny or stuffy nose, sore throat, and muscle aches. Unlike other common respiratory infections such as the common cold, influenza can cause extreme fatigue lasting several days to more than a week. Although nausea, vomiting and diarrhea can sometimes accompany influenza infection, especially in children, gastrointestinal symptoms are rarely prominent. The illness that people often call "stomach flu" is not influenza. [<http://www.medicare.gov/Health/FluDetails.asp>]

Both the flu and measles are preventable diseases which have long term health consequences for those infected and the public health system in terms of increased cost due to hospitalization. While people are increasingly being immunized for influenza, immunization for measles seems to be decreasing thus resulting in increased occurrence of this disease. It is possible to determine two different but very important things by tracking the number of laboratory confirmed reported cases of Measles & Influenza after hospitalization in 1996-97. First it give as rough picture of the effectiveness of public inoculation and public education programs, secondly it give a rough picture of overall health as those with poor health are more susceptible to these disease.

<p>The Laboratory center for disease control maintains a national influenza surveillance program, called <u>FluWatch</u> the object of which is to create a national picture of influenza activity across Canada during the flu season.</p>

Influenza and pneumonia are important causes of morbidity in Canada. 12 of the 13 provinces and territories had publicly funded influenza programmes for persons with chronic medical disorders or conditions and residents of long term care facilities. 11 provinces and territories had publicly funded influenza programmes for persons over 65 and 8 provinces had some sort of publicly funded flu programs for health care workers and two provinces had programmes for essential services workers. Only 4 provinces and territories provided publicly influenza immunizations for persons of high risk of flu complications who are embarking on foreign travels to destinations where the virus is likely to be circulating and who have not been immunized against influenza with the current vaccine. Immunization policies together with publicly funded

programmes, have been shown to increase vaccine uptake (a proxy for immunization coverage rates)

In 1996 as part of the pneumococcal immunization programmes, Ontario was the first to launch a 3 year catch up campaign for high risk individuals including those 65 and older. Other provinces and territories soon followed Ontario's lead. Prior to 1996, the average number of doses of pneumococcal vaccine distribution in Canada was less than 20,000 (1990-1995 ranged 4,245 to 33,140). Since 1996, the average number of doses of pneumococcal vaccine distributed increased to more than 600,000 (1996-1999 figures ranged from 496,085 to 674,277). This represents a 30-fold increase in the number of doses of pneumococcal vaccine distributed in Canada. [Canadian Communicable disease report, Vol. 26-17, 1st Sept 2000].

Because flu sufferers often present at hospital emergency wards, Ontario has embarked on a program of widespread free flu inoculations in an attempt to relieve the strain on emergency treatment facilities.

Despite major vaccination campaigns by Public Health officials the number of confirmed influenza cases was higher in the 1988-89 season than in the previous season with the highest infection rates in the GTA, in particular in the region serviced by the Central Public Laboratory. Influenza is a seasonal virus which in susceptible individuals, i.e.; those with immune deficiencies and the elderly, can develop into pneumonia and even death. Vaccination is provided to high-risk person and seniors in retirement and in rest homes as well as to high contact groups like nursing staff.

Laboratory-confirmed cases of influenza reported to LCDC, by laboratory, Canada		
Hospitals	1996 - 1997	1998 - 1999
Kingston Public Health Laboratory	72	86
Central Public Health Laboratory, Toronto	414	1099
Hospital for Sick Children, Toronto	45	114
Windsor Public Health Laboratory	3	7
Thunder Bay Public Health Laboratory	3	1
Toronto Medical Laboratory		16
Wellesley Hospital, Toronto		6

Source: Canada Communicable Disease Report, Influenza in Canada.
By Laboratory Centre for Disease Control

Difficulties: It is impossible to determine whether or not the increase was due to simply a worldwide flu pandemic or the result of lack of inoculations or simply the result of miscalculation of potential pathogen strains thereby resulting in the inoculation of the wrong strain of flu virus. This indicator is important because it provides a indication of the potential life threatening complications from flu epidemics and it does provide a correlation to the overall health of the

regions residents for those with the poorest health are in the most jeopardy of infection, hospitalization and possible even death.

Future Prospects:

We will attempt to expand the timeframe and to explore levels of infection rates versus number of individuals immunized to ascertain general health, vaccine effectiveness and the potential drain to the public health budget due to hospitalization.

Supporting Data/Information: <http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/99vol25/dr2522ea.html>
<http://www.cma.ca>

HEALTH

Leading causes of PYLL (potential years of lost life) by gender in Toronto 1995

Description: Potential years of life lost (PYLL) is the proportion of years of life lost (up to age 74) to the population age 1 to 74. Its significance results from the fact that it awards greater significance to early death than it does to causes of death in the later years and thus serves as an indicator of premature death.

Ten Leading Specific Causes of Potential Years of Life Lost (PYLL) (For Males 1-74 years - Toronto 1995)	
AIDS	15%
Ischemic Heart Disease	10%
Lung Cancer	6%
Suicide	5%
Lymphatic & Hemmorigic Cancer	3%
MV Traffic Accidents	3%
All Other Heart Diseases	3%
Stroke	2%
Diabetes	2%
Poisoning	2%
All Others	50%

Source: Ontario Mortality Database & CEHIP

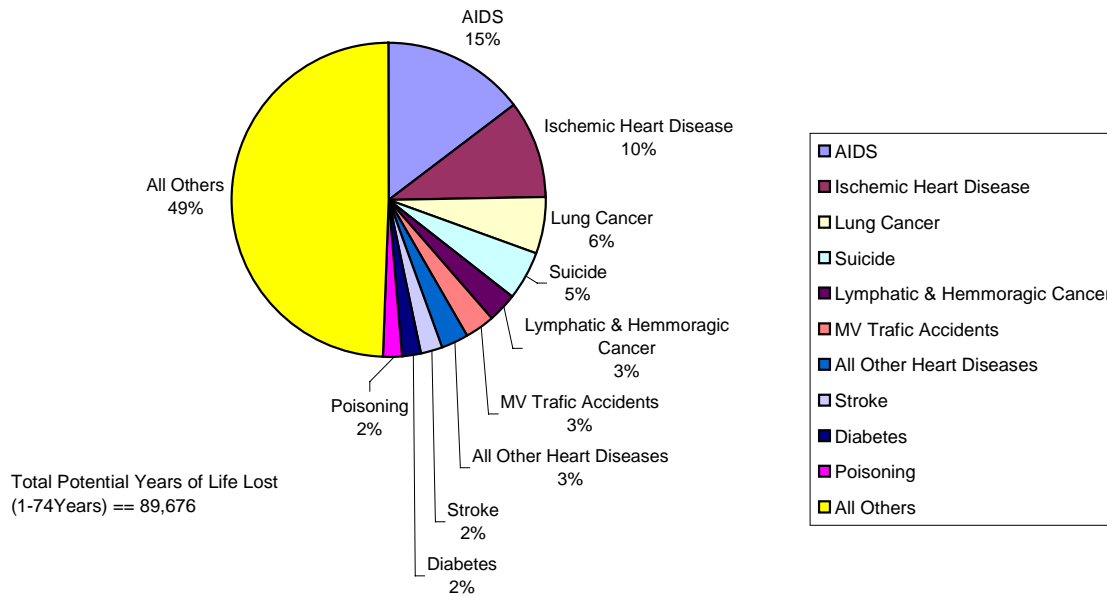
Trends: Between 1992 and 1995 there was little change in the figure for the leading cause of PYLL for men. In 1992, AIDS accounted for 15% of the total PYLL, compared to 10% in 1995. This may be due to the fact that individuals with AIDS are living longer as a result of improvements in drugs and treatment. The three leading causes of PYLL for females changed little between 1992-5, however, the fourth leading cause in 1992 was stroke followed by colorectal cancer. By 1995 it had changed to suicide followed by stroke (no explanation is provided for this). The PYLL for males was nearly twice as high as it was for females for both years, which might be explained by the fact that men typically engage in more risk taking behaviour, leading to death at a younger age than females. In Toronto, the PYLL index for the five leading causes were less than 1 except for AIDS. It should also be noted that the PYLL index for suicide among females was slightly above one.

Ten Leading Specific Causes of Potential Years of Life Lost (PYLL) (For Females 1-74 years - Toronto 1995)	
Breast Cancer	10%
Ischemic Heart Disease	7%
Lung Cancer	6%
Suicide	5%
Stroke	4%
Colorectal Cancer	4%
Lymphatic & Hemmorigic Cancer	4%
Diabetes	2%
COPD	2%
Chronic Liver Disease	2%
All Others	50%

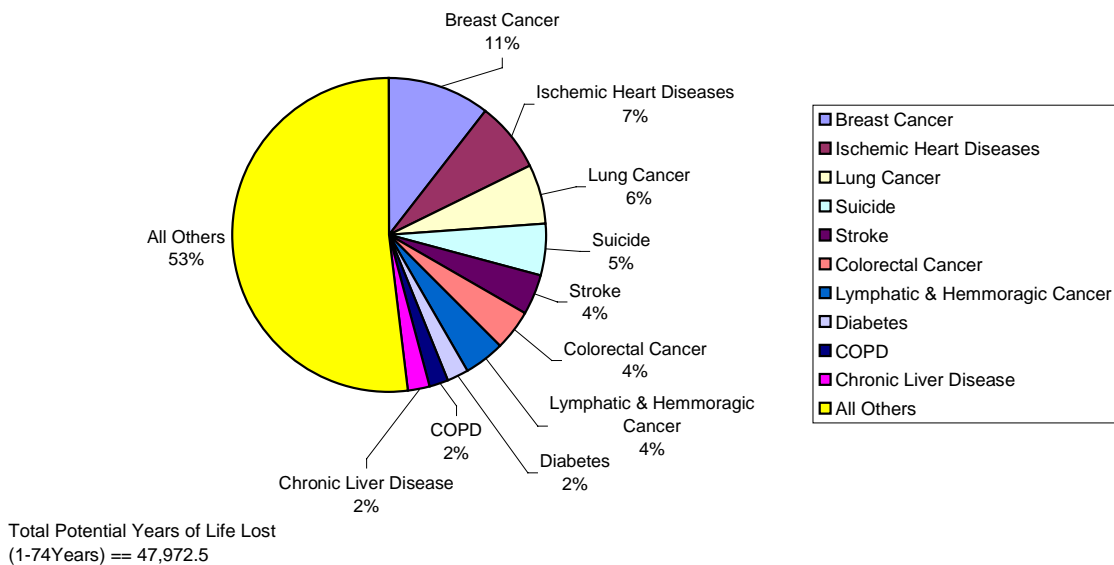
Source: Ontario Mortality Database & CEHIP

Difficulties: PYLL while an important health indicator is difficult to explain to the general public and it can require some medical knowledge. The other difficulty is that it does not break down the data to allow for comparisons between regions to allow conclusions about causes of death in one region relative another.

Ten Leading Specific Cause of Potential Years of Life Lost (PYLL), For Males 1 - 74 Years (Toronto 1995)



Ten Leading Specific Causes of Potential Years of Life Lost (PYLL), For Females 1 - 74 (Toronto 1995)



Source: Ontario Mortality Database & CEHIP

Supporting Data/Information: The PYLL Index is similar to the SMR, i.e. the Toronto PYLL figure is compared against the predicted by the provincial age-specific PYLL rate.

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http://www.kumc.edu/instruction/medicine/pathology/ed/keywords/kw_death.html

Future Prospects: Data collection should be expanded to the outlying regions and there should be an attempt to collect data at a more desegregate level. Some comparison to other large urban centers in Canada and the United States might also be useful.

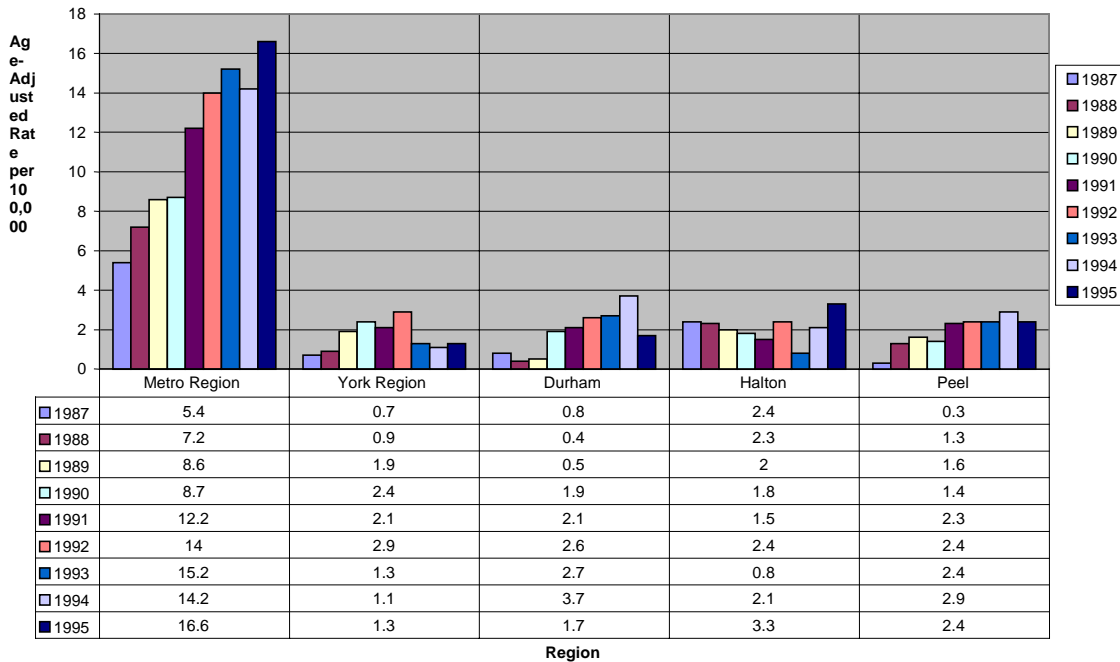
HEALTH

HIV/AIDS

According to the 1996 Joint Programme on HIV/AIDS (UNAIDS) 22.6 million people worldwide have HIV/AIDS and over 6.4 million people have already died as result of infection. In Canada, more than 20,000 AIDS cases have been reported since April 1997 and laboratory reports released in December 1997 estimated that 41,680 people tested positive for HIV and each year as many as 5000 more individuals are infected (over half of these are younger than 25 years). It is hard to know exactly how many Canadians are infected with HIV as not everybody has been tested and those who have been tested anonymously are not included in any statistics. More information is available from the Canadian AIDS Society website at: www.cdnaids.ca. or from Canadian Health Network www.canadian-health-network.ca

What is Aids? AIDS stands for Acquired Immune Deficiency Syndrome. It is caused by HIV (Human Immunodeficiency Virus) which can be found in the blood, semen, saliva, tears, nervous system tissue, breast milk, and female genital tract secretions; however, only blood, semen, female genital tract secretions, and breast milk have been proven to transmit infection to others. AIDS is the final and most serious stage of HIV disease. Transmission of the virus occurs through sexual contact including oral, vaginal, and anal sex; via blood through transfusions or needle sharing; and from a pregnant woman to the fetus or a nursing mother to her baby. Other transmission methods are rare and include accidental needle injury, artificial insemination through donated semen, and kidney transplantation through the donated kidney. The infection is NOT spread by casual contact such as hugging and touching, by inanimate objects such as dishes or toilet seats, or by mosquitoes.

Age Standardized HIV Infection Mortality Rate Per 100,000



Source : Hospital Admissions:Provincial Health Planning Database, Ontario Ministry of Health.

Trends: The Metro region HIV infection mortality rate has been steadily increasing from 1987 to 1995. In Durham region the rate of infection has shown a decrease from 3.7 to 1.7. While Peel region has also shown a decrease, it is not as significant as that shown by Durham. Halton and York regions on the other hand have shown an increase in the rate of HIV infection.

According to predictions, Toronto will have 68% of people in Ontario infected with AIDS. Provincial rates of HIV are increasing among heterosexual partners including women and their infants. HIV infections in 1997 among Ontario women of childbearing age is estimated at 6/10,000 women, three times estimates from 1992 [http://www.city.toronto.on.ca/health/state_health.htm]. According to the HIV Laboratory, Ontario Ministry of Health, from January 1992 to December 1997, in Metro Toronto alone, 87 babies less than 1 year old were diagnosed as HIV positive, 42 children under the age of 16 tested HIV positive and 576 females tested HIV positive. Of these, 466 women were within child-bearing age [<http://www.interlog.com/~teresag/frame-info01.html>].

The stereotype is not true: Homosexual sex and drug abusers are not the only groups at risk. According to the Canadian Health Network more than 20% of reported HIV infections in Canada in 1997 were linked to heterosexual sex, globally the rate is even higher at 75%. They also report that more than 20% of the new cases were among woman and worldwide women account for half of all new cases. Although, according to CHN people who use street drugs account for about half of all new HIV infections in 1996 (CHN, January 1999).

Difficulties: This data only illustrates causes of death as currently defined according to the ninth revision of the WHO International classification of disease and as such comparisons over time and place may be affected by difference in the methods of reporting, selecting and classifying causes of death. Another limitation of this data is that it only reflects fatal disease thus it gives no information on the number of sick people, the quality of their lives or the importance of the disease as a contributing factor in death from some other cause. Nor does the data give any indication of the number of individuals who are infected and are unaware of their status and are thus unwittingly passing on the disease. Another weakness of the data is that refinement to smaller geographical regions can distort its validity as the availability of services tends to be concentrated in the larger metropolitan centers thus skewing the data. In addition, data on this disease is often kept confidential as a means of protecting the privacy of individuals.

Future Prospects: Future research could include data from outlying regions, cost of treatments and the number of hospices in each region. Data on infection rates (for example age of infection) in addition to the most current data available on mortality would be useful. It would also be advantageous to carry out comparisons between Toronto and other large Canadian cities such as Montreal and Vancouver.

Supporting Data/Information:

http://health.yahoo.com/health/Diseases_and_Conditions/Disease_Feed_Data/AIDS/

For info: aidssida@cpha.ca or casinfo@cdnaids.ca

<http://www.cdnaids.ca>

<http://www.unaids.org/>

http://www.kumc.edu/instruction/medicine/pathology/ed/keywords/kw_death.html

http://www.canadian-health-network.ca/faq/faq/hiv_aids-vih_sida/1e.html

HEALTH

Heart and Stroke

While not the leading cause of death in the GTA, Heart and Stroke are expected to rise as a killer of Canadians as more and more Canadians reach their golden years and as younger age groups experience more stress and diet related health problems. The Heart and Stroke Foundation (HSF) predicts that the number of strokes could increase by as much as 68% within the next two decades. (est. are based on the assumption that all factors remain the same other than age.) As pointed out, age is not the only risk factor according to the HSF's Report Card released in February 2000, while Canadians may realize that the stress imposed on them by their hectic lifestyles is bad for their heart, they seem to be doing little about it. More than 43% of all adults 30 and over indicated that they felt overwhelmed by their jobs, families or finances. Dr. Nolan of the Heart and Stroke Foundation (HSF) warns "there simply aren't enough hours in the day of most Canadians to accomplish all they want and need to do." This analysis is supported by the HSF's national survey, which found that 53% of Canadians just don't have enough time to do the things, they need or want to do.

Surprisingly, the study showed no significant gender differences in stress levels except among those women attending to the needs of family members whose stress level exceeded that of their male counterparts. Another interesting, but not terribly surprising observation the HSF report Card made was that 54% of parents with children under 17 reported frequent stress compared to only 37% of those without children. This increase in stress is largely attributable to the time crunch such individuals face. Dr. Susan Abby, a foundation spokesperson and psychiatrist reports that "several international studies have clearly shown that stress on the job can double the risk of a heart attack" (HSF Report Card, Feb. 2000).

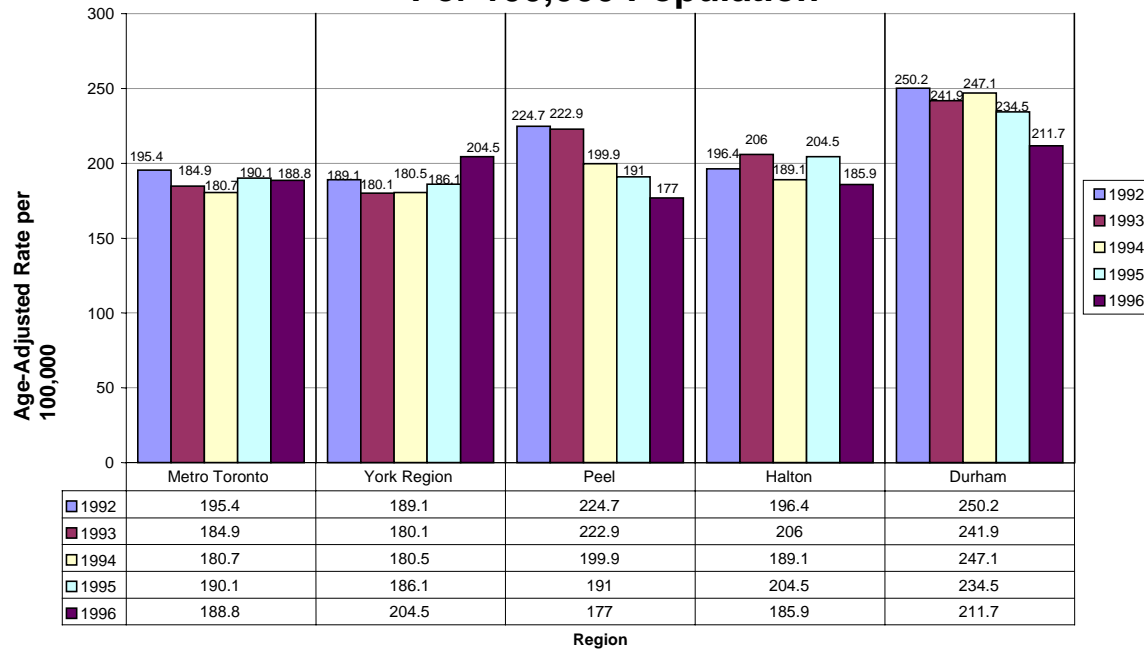
Uncontrolled high Blood pressure or hypertension is another leading cause of stroke according to HSF. It is estimated that almost a million Canadians are putting their health in danger by not taking their blood pressure pills as prescribed by physician (HSF, June 1999). Canadians who fail to control their high blood pressure face up to a 40% risk of stroke within the next 10 years. This is particularly alarming given that one in five adult Canadians (close to five million people) have high blood pressure, and only 16% of which have their blood pressure under control (HSF, June 1999).

Description: The cause indicated corresponds to the primary or principal diagnosis
<http://search.health.yahoo.com/search/yhealth?p=stroke&R=disease>

*****Need to define what type of stroke!!**

While the Age standardized morbidity rate per 100,000 population has decreased in the outlying regions of Peel, Durham and Halton it has risen in York Region from a low of 189.1 to a high of 204.5 per 100,000, despite declines in 1993--5. Metro Toronto experienced a similar decline in the 1993-5 years but its rate has also been higher in the last two years for which data is available. However no clear trends can be ascertained as of today.

Age Standardized Stroke Morbidity Rate Per 100,000 Population



Source: Hospital Admissions:Provincial Health Planning Database, Ontario Ministry of Health.

While encouraging, the decreasing Morbidity rates can be somewhat misleading as decreases may have more to do with improving technology, medicine and public education than with decreased incidence of Heart and Stroke patients. In fact, 50 different organizations in Canada have united to pressure the government to catch up with technology by making available Automatic External Defibrillators (AED) a technology which has proven to increase the potential for surviving a cardiac arrest by 33%. Early detection is the key to surviving a heart attack. Health professionals know that for every minute that passes for a heart patient with out defibrillation the chances of survival decrease between 2-10% and after 10 minuets the chances of survival approach zero (HSF, Nov. 10 2000).

Difficulties: Hospitalization records cannot be taken as a perfect indicator of the number of individuals suffering from heart or stroke ailments as individuals may be hospitalized more than once in a given year. In addition, hospitalization statistics can also be skewed by factors other than the actual health of the populations such as the availability or access to medical care, the cost of pharmaceuticals necessary to treat the condition, or patient diligence in taking medication. This in turn may influence the ability to draw comparisons between areas as well as over time.

Supporting Data/Information:

To examine your own personal stress level and identify the sources of stress in your life take the Hart and Stroke Foundations 60 second stress test either on line at (<http://www.heartandstrok.ca/>) or toll free at 1-888-HSF-INFO

<http://search.health.yahoo.com/search/yhealth?p=stroke&R=disease>

Central East Health Partnership for the Community Health Status Collaboration January 1998

Heart and Stroke Foundation Report Card on the Health of Canadians at:

http://www.hsf.ca/new_release/new_release07_e.htm

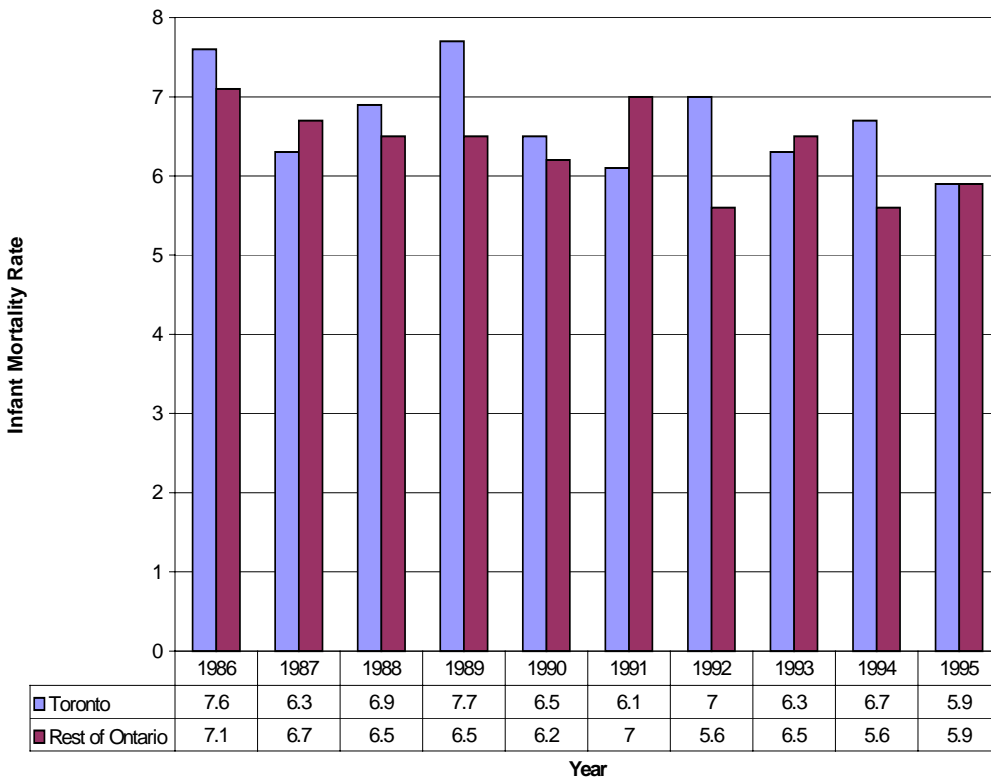
HEALTH

Infant Morbidity and Mortality

Infant mortality rates are often used as an indicator of a country's state of health development. During the last century, significant decreases in infant mortality rates have occurred worldwide, particularly in industrialized countries. Largely due to advancements in technology and nutrition, however the rate has yet to reach zero and this is one reason we still track infant morbidity and mortality.

Infant mortality refers to the death of infants that occurs within the first year of life. The rate of infant mortality is defined as the number of infant deaths within the first year of life per 1,000 live births per year. While no comparable statistics are readily available for Canada, the rate of infant mortality in the United States has declined dramatically since the beginning of the century. In 1900, the rate was 97.3 infant deaths per 1,000 live births; in 1990, the rate was 9.2 infant deaths per 1,000 live births.

Infant Mortality Rates*, Toronto & Rest of Ontario

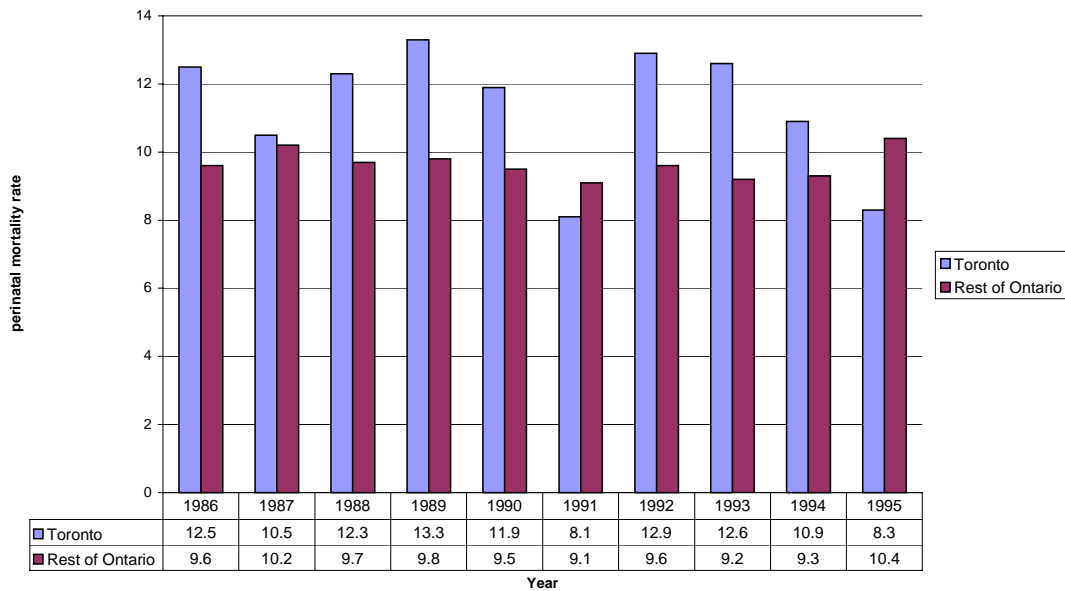


* Infant Death: From live birth to 1 year
 Infant Mortality Rate: # of Infant deaths / # of live births x 1000
 Source: Ontario Mortality Database & CEHIP

There are several different measures used to define deaths of infants. “Fetal death” is defined as a death that occurs at 20 or more weeks of gestation. “Perinatal deaths” includes fetal deaths plus deaths to infants who die within the first 28 days of life. Neonatal deaths occur to infants after 28 days of life but before the first year.

Some major factors associated with infant deaths include congenital malformations, perinatal conditions and infections, and SIDS. Sudden infant death syndrome (SIDS), which peaks between the second and fourth month of life, remains an unexplained cause of infant mortality. More information is available at the following website: <http://hlunix.hl.state.ut.us/matchiim/main/infntdth/define.htm>. Infant mortality is widely used internationally as a health indicator and as an indirect measure of prenatal care.

Perinatal Mortality Rate*, Toronto & Rest of Ontario



* # of perinatal deaths (i.e. sum of still births and early neonatal deaths) / (# of total births x 1000)

Source: Ontario Mortality Database & CEHIP

1b) Perinatal mortality rates in Toronto and rest of Ontario 1996-95

Number of perinatal deaths (i.e., sum of still births and early neonatal deaths) per 1,000 total births (sum of live births and still births). Please note: Still births refer to a product of conception weighing 500grams or more or of 20 or more weeks gestational period which, after being completely delivered shows no signs of life. An early neonatal death refers to an infant born alive but who dies before the 7th day of life.

Trends: There has been a considerable drop in the infant death rate in the past 20 years – there are now fewer deaths per 1000 infants less than one year of age. But, babies born in poor neighbourhoods continue to have a greater risk of death than infants from wealthy neighbourhoods (in fact, their risk of dying is almost double).

Infant mortality rate is a good indicator of the level of economic and social development, however since infant deaths tend to be concentrated in the first days of life, perinatal mortality rate is a better indicator of the effects of the socioeconomic environment. The perinatal mortality rate is influenced by such factors as maternal age, birth order, socioeconomic conditions, birth weight and lifestyle risk factors as well as by the efficiency of maternal and newborn health care services.

Future Prospects: Data regarding infant mortality rates at the Toronto CMA level would help in determining the relationship between those rates and poverty. In addition, it might be of interest to determine the relationship (if any) between infant mortality rates and ethnicity as this would provide an idea of the level of the economic and social development of individual ethnic groups.

Supporting Data/Information: **Torontoprofile III Part I**, page 163

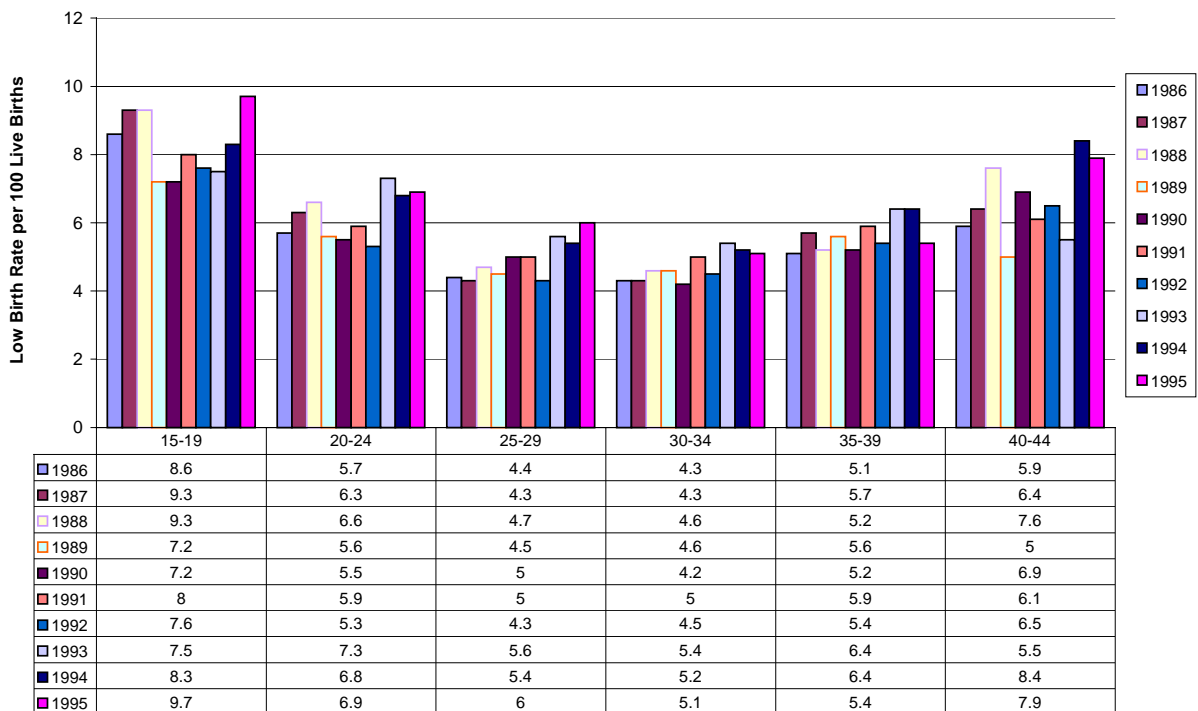
Social and Economic Environment — Determinants of Health [available at: http://www.crime-prevention.org/english/publications/children/health/social_e.html]

Family & Reproductive Health

According to the International Conference on Population and Development (ICPD) Programme of Action, reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. More information on this topic is available at: <http://www.fhi.org/en/wsp/wspubs/rhetor.html#anchor128012>.

Public health measures such as population rates of low birth weight and infant mortality are important indicators of the status of a nation's health. On a population level, these measures provide an objective overview of the ability to apply specific knowledge of the basic sciences, medical care, social programs, and the consequences of lifestyle behaviors in preventing these undesirable outcomes. Women with lower income or lower levels of education are more likely to have low-birth weight babies, that is, babies weighing less than 2,500 grams at birth. Babies born with low birth weight are at increased risk of death and disability. They are more likely to have serious health problems, physical and developmental, that may continue throughout life. The psychological and financial burden on the family and on society of caring for these babies and children is immense. Several researchers have concluded that the effect of socio-economic status on birth weight is greater than all other associated factors, including physiological ones. Canadian research shows that, in 1986, the percentage of low-birth weight babies was 1.4 times higher in the poorest neighbourhoods than it was in the richest.

Rate of Low Birth Weight (by Age of Mother) - City of Toronto



Source: Ontario Live Birth Database & CEHIP

Trends: There has been an increase in the rate of low birth weights across all ages.

Description: Proportion of live births under 2500 grams to all live births excluding multiple births. Multiple births are those pregnancies that lead to more than one baby. The risk of having a baby with low birth weight is usually higher among multiple births. The birth weight of an infant is related to the pre-conceptional and gestational health of the mother. It is considered to be a key predictor of an infant's chance of survival, as well as an important indicator of population health status in developed countries. There are several medical and neurological hazards of low birth weights which can put children at risk of improper development and physical and mental health. Low socioeconomic status, along with having a mother who is unmarried, a teenager, poorly educated, malnourished, receiving poor prenatal care and a heavy smoker all increase the risk of low birth weight. Social conditions and smoking are thought to be the principal factors implicated in low birth weight.

Difficulties: The data currently available does not include multiple births or births of unknown weight. One also has to consider that the average birth weight of babies differs depending upon population. For example, at one extreme, mean birth weight among infants born in India is about 2,900 grams (6 pounds, 6 ounces); at the other, the average Swedish baby weighs 3,500 grams (7 pounds, 11 ounces). African-American babies weigh on average about 250 grams (9 ounces) less at birth and Asian-American babies, about 150 grams (5 ounces) less than do white American babies, who, in turn, weigh 100 to 150 grams (4 to 5 ounces) less than Scandinavian babies. While readily available social and demographic variables have been studied extensively for their relationship to low birth weight, a more in-depth pursuit of the nature of the relationship of poverty and social dislocation to low birth weight has not yet been carried out. The effects of poverty at the level of the individual, the family, and the community need all to be taken account of. [Additional information on this is available at <http://www.futureofchildren.org/LBW/03LBWPAN.htm>].

While low birth weight may be an indication of the quality of life in general, it is important to realize that using it as an indicator is not without its complications. For instance, although infant mortality is being reduced in certain parts of the world (for instance, the Commonwealth [for more information on this, see <http://trfn.clpgh.org/hspgh/infant%20%20low%20birth%20weight.html>]) this decline is not a result of cost-effective preventative measures designed to reduce the incidence of low birth weight. Rather, infant mortality is being reduced by expensive, sophisticated treatment of premature infants. This costly care and treatment is not available to all families, thus raising the issue of the lack of equal accessibility to such services. In addition, while such treatment may be successful in keeping the infant alive, it by no means guarantees a good quality of life as the child grows older.

Future Prospects: Interesting avenues for future research might be to study the relationship between low birth weight, teenage pregnancy and high school drop out rates. In addition, what role, if any, does family income play in the incidence of low birth weight? *More accurate and detailed analysis will only be possible with the availability of statistics for each of the regions in the Greater Toronto Area.*

Supporting Data/Information:

Toronto Profile III, page 161 <http://www.futureofchildren.org/LBW/02LBWANA.htm>

Social and Economic Environment — Determinants of Health [available at: http://www.crime-prevention.org/english/publications/children/health/social_e.html]

Communicable Diseases and Opportunistic Diseases

Communicable diseases are the number one killer in the world today. In 1993, of the 51 million deaths worldwide, an estimated one third or 16.4 million of these deaths were the result of infectious and parasitic diseases. Despite an ever growing arsenal of diagnostics, drugs, pesticides and vaccines, medical practitioners are constantly struggling against an ever-growing number of emerging infectious diseases, such as HIV and Hepatitis C. In addition, drug resistant strains of many familiar diseases (including malaria and tuberculosis) render formerly effective drugs powerless. But the biggest obstacle to eliminating infectious diseases remains poverty. A 1998 study conservatively estimated that the poorest 20% of the world's population experience 47.3% of deaths that result from communicable and related diseases and these diseases in turn exacerbate poverty, creating a vicious cycle of poverty and disease (Gwatkin, D. and Guillot, M. 1998). It is this close relationship between poverty and the occurrence of communicable and opportunistic diseases, which makes tracking them a useful indicator of the health of a population.

Definition, causes and risk factors of tuberculosis:

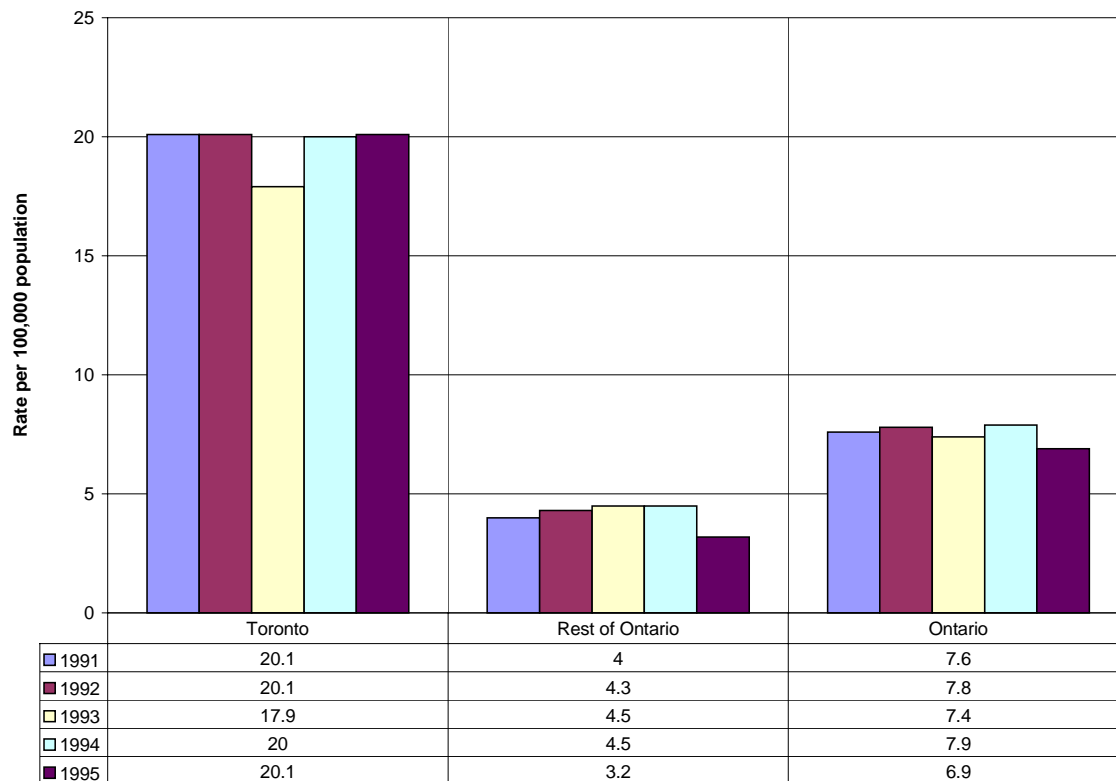
Tuberculosis (TB) is the leading global cause of death associated with infectious diseases. TB is a chronic, contagious bacterial infection caused by mycobacterium tuberculosis, which has spread to other organs of the body by the blood or lymph system. The infection can develop after inhaling droplets sprayed into the air as from a cough or sneeze by someone infected with mycobacterium tuberculosis. The disease is characterized by the development of granulomas (granular tumors) in the infected tissues. The usual site of the disease is the lungs, but other organs may be involved. Primary infection is usually asymptomatic. In the US, 95% of individuals will have healing of their primary tuberculosis lesions with no further evidence of disease. Disseminated disease develops in the minority whose immune systems do not successfully heal from the primary infection. The disease may occur within weeks after the primary infection, or it may lie dormant for years before causing illness. Infants and the elderly are at higher risk for rapid progression of the disease. In disseminated disease, organs and tissues affected can include the lining of the heart (pericardium), lining of the abdominal cavity (peritoneum), larynx, bronchus, cervical lymph nodes, bones and joints, organs of the male or female urinary and reproductive (genitourinary) system, eye, stomach, lining of the brain and spinal cord (meninges), and skin. The risk of contracting TB increases with the frequency of contact with people who have the disease, crowded or unsanitary living conditions and poor nutrition. An increased incidence of TB has been seen recently in the United States. Factors that may be causing this increase is tuberculous infection in people with AIDS and HIV infection, and increasing number of homeless people. Another factor is the development of drug-resistant strains of TB. Incomplete treatment of TB infections (such as not taking medications for the prescribed length of time) can contribute to the proliferation of drug-resistant strains of bacteria. The incidence is 4 out of 10,000 people and increasing. More information is available at:

http://health.yahoo.com/health/Diseases_and_Conditions/Disease_Feed_Data/Disseminated_tuberculosis_infectious/

poverty. A 1998 study conservatively estimated that the poorest 20% of the world's population experience 47.3% of deaths that result from communicable and related diseases and these diseases in turn exacerbate poverty, creating a vicious cycle of poverty and disease (Gwatkin, D. and Guillot, M. 1998). It is this close relationship between poverty and the occurrence of communicable and opportunistic diseases, which makes tracking them a useful indicator of the health of a population.

Trends: In most developed nations the incidences of Tuberculosis or TB cases has been successfully controlled through preventative measures. The overall rate of TB cases has remained relatively stable, however, there is a significant disparity in the number of known cases between regions. Of the 2000 new case in Canada 800 are in Ontario and of that 450-500 of them are in Toronto making them responsible for more than 60% of all known cases of TB in Ontario and 25% of all know TB cases in the country. One of the major reasons for this variance is that a higher percentage of Torontonians that have either immigrated from or are visitors to TB endemic countries. In 1996 foreign-born individuals accounted for 92% of Toronto's TB cases, Canadian-born non-aboriginals accounted for 7% and Canadian born aboriginals for 1%. If left untreated, one person with active TB will infect 10-15 people in a year's time. In addition, the TB infection rate is strongly affected by social factors such as income, housing and homelessness and it is proportionately higher for those with immune deficiencies like HIV and AIDS -- populations which tend to congregate in larger urban centers because of access to treatment facilities or support services. <http://www.oma.org/phealth/tbingo.htm>

**Incidence of Tuberculosis for the City of Toronto, rest of Ontario and Ontario
(1991 - 1995)**



Source: Communicable Disease Control, Summary of Reportable Diseases.

Difficulties: A high proportion of those infected with TB do not seek timely medical treatment particularly in transient and economically strained communities. According to Cathy Crowe in 1996 Toronto's TB infection rate among the homeless was 38% and shelter overcrowding was likely to exacerbate this [<http://csf.colorado.edu/mail/homeless/may98/0017.html>]. This means that infectious individuals can unknowingly infect others, thus generating accurate statistics on infection rates is difficult. Compounding this problem is the fact that even when individuals do seek treatment for persistent coughs a misdiagnosis of TB is not uncommon. This is primarily due to the fact that Public Health immunization initiatives significantly constrained the emergence of new cases of TB for several decades and many doctors have been taken by surprise by the reemergence of this disease.

Future Prospects: It may be possible to expand the recording of data to the outlying regions of the GTA and possibly to track not only number of new cases of TB infection but also to ascertain the virulence of the strains which are prevalent in the GTA. Drug administration programs and treatment support programs such as DOT (Directly Observed Therapy) which closely monitors a patients adherence with TB medications have been shown to greatly impact not only hospitalization rates, but also the emergence of drug resistance of the strains of TB present in the population. It is important to ascertain just how effectively we are treating the disease as incomplete or ineffective treatment programs will contribute not only to more cases but also to more drug resistant forms of TB.

Additional information: CDC division of TB Elimination www.cdc.gov/nchstp/tb
 Toronto profile III Part I (page 209); <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00023040.htm>
 LCDC Division of TB Prevention and Control www.hc-sc.gc.ca/hpb/bah/tb/index.html
 WHO Global TP Program www.who.ch/gtb

(Gwatkin, D. and Guillot, M. 1998. *The Burden of Tropical Diseases and the poorest and richest 20% of the global population*. Report prepared for the Third External Review of the Special Programme on Research and Training in Tropical Diseases (TDR) of the World Bank, the UNDP and WHO, Geneva).
[<http://www.hsph.harvard.edu/Organizations/healthnet/HUpapers/gender/hartigan.html>]