

TORONTO STAFF REPORT

February 13, 2006

To: Board of Health

From: Dr. David McKeown, Medical Officer of Health

Subject: The Health of Toronto's Young Children: First Two Reports

Purpose:

"The Health of Toronto's Young Children" is a series of reports that provide the most current available information on the health of Toronto's children from birth to age six. These first two reports introduce the series by setting the context and describing birth outcomes and health status in the first year of life.

Financial Implications and Impact Statement:

There are no financial implications stemming directly from this report.

Recommendations:

It is recommended that:

- (1) the Board of Health request the Minister of Health and Long-Term Care to provide the required support for the Niday Perinatal database, to ensure that the database captures all births in the Province of Ontario, that access to this data is provided to public health units, and that indicators are developed which measure determinants and outcomes relevant to public health;
- (2) the Board of Health request the Public Health Agency of Canada to develop standard indicators for monitoring breastfeeding initiation, duration, exclusive breastfeeding, and introduction of other foods during infancy to aid in promoting healthy infant feeding at the national, provincial, and local levels;
- (3) the Board of Health request the Chief Medical Officer of Health to ensure the reorganized Public Health Division of the Ministry of Health and Long-Term Care and the Ministry

of Health Promotion retain strong expertise and accountability in the mandated areas of reproductive and child health, including monitoring of birth outcomes and infant health status;

- (4) the Medical Officer of Health collaborate with key stakeholders to further investigate disparities in low birth weight (LBW) across Toronto, enhance monitoring and reporting of disparities in LBW, and further develop strategies to address the disparities;
- (5) the Medical Officer of Health report back to the Board of Health on the health impacts of child poverty and measures to mitigate those impacts;
- (6) the Board of Health forward this report to the following key stakeholders for information: Toronto Children's Services, Toronto Best Start Network, Centre for Research on Inner City Health, Child Health Network, Association of Local Public Health Agencies, Ontario Public Health Association, Ontario Ministries of Health and Long-Term Care, Health Promotion, and Children and Youth, and Public Health Agency of Canada;
- (7) the Board of Health forward this report to the Community Services Committee; and
- (8) the appropriate City Officials be authorized and directed to take the necessary action to give effect thereto.

Background:

"The Health of Toronto's Young Children" is a series of reports that provide the most current available information on the health of Toronto's young children from birth to age six.

The reports are intended to inform Toronto Public Health staff, Board of Health members, City staff in other divisions, partner agencies, and other key stakeholders at the local, provincial, and federal levels about the current health status of Toronto's young children, including key issues related to their development and functioning. Information in the reports will be used to inform decisions about policies and programs that promote and protect the health of young children.

The first two reports in the series are being presented to the Board of Health at this time. Executive summaries of the reports are attached (Attachments 1 & 2). Subsequent reports will be presented as they are completed.

Comments:

- (A) The Health of Toronto's Young Children, Volume 1: Setting the Context

The first report presents a model which illustrates a broad positive perspective of children's health. This perspective views children's health as more than the absence of disease, illness, injury and disability and includes two concepts: development and functioning. The model

provides a framework for identifying key issues of significance to young children's health as well as health indicators to be presented in subsequent reports.

This model of child health recognizes that children grow and develop within family, neighbourhood, community, and societal contexts which all influence their current and future health. Healthy development and functioning in early childhood contributes to healthier school age and adolescent development and functioning, thereby, increasing the chances of a healthy adult life. The model recognizes that injuries, diseases, and disabilities can seriously reduce young children's development and functioning temporarily. In some situations, their health may be affected for their entire lives. Serious deprivation, or lack of basic resources, can have serious immediate or long term effects on development and functioning.

The report also provides a socio-demographic portrait of Toronto's young children and their families and presents data on parents' perceptions of their young children's health. In 2001 just over 205,000 children aged six years and younger lived in Toronto. Toronto's ethno-racial diversity is most evident among families with young children. Nearly two thirds of parents with children from birth to age six were born outside of Canada.

Household incomes vary widely in the City. The income gap between low and high income families with children has increased in recent years. Nearly three in ten (29%) of Toronto children from birth to age five -51,000 children- live in low income households. The proportion of young children living in low income households is even higher for certain subgroups of children. There is growing income inequality between Toronto's poorest and wealthiest neighbourhoods.

Eighty-seven percent of Toronto parents with children under six report that their children are in 'very good' or 'excellent' health. However, parents living in low income households and parents born outside Canada are more likely to report that their children are in poorer health.

Toronto is an ethnically and socio-economically diverse city, and this diversity is increasing. Variations in family income, neighbourhood income, and other demographic characteristics all play a critical role in the development, functioning and health outcomes of Toronto's young children.

(B) The Health of Toronto's Young Children, Volume 2: The First Year of Life in Toronto

The second report in the series focuses on the health of Toronto's infants from birth to their first birthday. It provides information on demographic context, birth outcomes, including diseases and disabilities apparent at birth, and highlights the impact of birth outcomes on short and long term development and functioning. The report also profiles injuries, diseases and disabilities, as well as resources during the first year of life (e.g., nutrition), which have an immediate or long term impact on health.

Highlights from the second report include:

- (a) Births to Toronto mothers account for almost 25% of all births in Ontario.

- (b) Approximately two of every three Toronto babies are born to women who were born outside Canada.
- (c) The majority of Toronto babies have healthy birth outcomes and reach their first birthday free from major diseases, disabilities, and injury. The numbers of congenital infections, vaccine preventable communicable diseases, and hospitalizations for injuries and poisonings are low. The proportion of infant deaths due to Sudden Infant Death Syndrome has decreased.
- (d) Toronto's total and singleton low birth weight (LBW) rates are higher than corresponding rates in the rest of Ontario. Over time, Toronto's total LBW rate has been increasing while the singleton LBW rate has been decreasing.
- (e) LBW and prematurity account for approximately 12% of infant deaths in Toronto.
- (f) LBW rates in some areas of Toronto are 10% to 36% higher than the City's average rate. Factors such as neighbourhood income, mothers' country of birth and maternal age may be contributing to this disparity.
- (g) Congenital anomalies are the second leading cause of death among Toronto infants. The prevalence of selected congenital anomalies (e.g., neural tube defects) has decreased.
- (h) Approximately nine out of ten Toronto women with infants begin to breastfeed. However, many Toronto babies are weaned early and less than 20% of healthy term infants are exclusively breastfed for six months.

The picture of birth outcomes and health during the first year is incomplete. There is currently no Toronto specific population level data on many important aspects of infant health. The report summarizes available data and discusses significant gaps in local infant health data.

In summary, the majority of Toronto infants have healthy birth outcomes and reach their first birthday free from major diseases, disability and injury. However, there is still room for improvement in low birth weight, congenital anomalies, and breastfeeding.

Trends and disparities in LBW rates across the city need to be monitored. Rates of congenital anomalies also need to be monitored to determine future trends. The rates of early weaning and the low rates of exclusive breastfeeding to six months of age suggest that many Toronto babies are not receiving the maximum protective benefits afforded by breastfeeding.

(C) Toronto Public Health Approaches to Health Issues at Birth and During the First Year of Life

A goal of the recently adopted Toronto Public Health (TPH) Strategic Plan, "Toward a Healthy City", is to promote the health of children, youth, and families. TPH uses a number of approaches directed to the entire population and to sub-populations that experience conditions of

risk. These approaches are implemented either by TPH alone or with partners such as other city services, local health and community agencies, and other levels of government. This section describes TPH's current and planned initiatives in health assessment and program and policy approaches that address health at birth and during the first year of life, specifically low birth weight, congenital anomalies and breastfeeding.

(1) Health Assessment

Health assessment involves the measurement and monitoring of health outcomes as well as factors that contribute to these outcomes to identify current and emerging health issues and to inform program and policy decision.

As identified earlier, the picture of birth outcomes and health during the first year is incomplete. TPH is leading a partnership of several health units and the Child Health Network (CHN) to implement the "Niday" perinatal database, which collects information on all births occurring in the Greater Toronto Area. This database provides more timely, complete, and comprehensive information than other current data sources (1, 2).

The Niday database currently captures over 90% of all births in the province. It provides a viable option for province-wide reporting of perinatal information. The current partnership with the CHN has worked well. However the database requires sustainable financial support and assured data access for all Ontario public health units. Local public health units should also be able to influence data collection to address public health planning needs.

There is a need for better measurement and monitoring of infant feeding at the national, provincial, and Toronto level including breastfeeding initiation, duration, exclusive breastfeeding, and the introduction of other foods during infancy. This is important in determining program effectiveness in promoting exclusive breastfeeding to six months and continued breastfeeding with other foods for up to two years and beyond.

TPH has also identified gaps in local data on nurturing and responsive caregiving, violence and neglect, and growth and development. These issues are relevant to the health of children throughout the early years. Therefore, health assessment initiatives related to these issues will be discussed in subsequent reports.

(2) Program and Policy Approaches

Low Birth Weight Prevention:

TPH implements prenatal programs for women who have risk conditions associated with LBW, including low income, young maternal age, tobacco use, under nutrition, and lack of social support. TPH uses data to identify priority neighbourhoods for LBW prevention programs and more effectively reach women with risk conditions. These one to one and/or group based prenatal programs are: Healthiest Babies Possible, Canada Prenatal Nutrition Program, Healthy Babies Healthy Children (HBHC) and the At-Risk Pregnant and Parenting Homeless Women Project. Generally, these initiatives offer assessment, education, counselling, skill building,

vitamin supplements, income support in the form of certificates to purchase food, and referrals to community agencies. In addition, some initiatives provide supports such as child care and transportation. While LBW prevention is not an explicit goal of the HBHC program, home visits to young pregnant women provide an opportunity to address risk conditions associated with LBW. TPH plans to pilot a smoking cessation program with young pregnant women in HBHC.

In addition to providing prenatal programs, TPH will continue to collaborate with community partners, to advocate for policies at the provincial and federal levels to address material and social inequalities associated with LBW, such as poverty and food insecurity. TPH is currently conducting an analysis of the impact of poverty on LBW and other child health outcomes to enhance policy options to mitigate the impact of poverty on children's health.

Congenital Anomalies:

Musculoskeletal and cardiovascular anomalies accounted for approximately half of the congenital anomalies that occurred in Toronto; however, the cause of these anomalies is not well understood. Although neural tube defects (NTDs) accounted for a very small proportion of congenital anomalies in Toronto, they can have serious long term consequences for children's development and functioning. Folic acid supplementation can reduce the risk of NTDs. TPH promotes awareness of the need for folic acid supplementation to women of reproductive age and provides vitamin supplements containing folic acid, to women attending prenatal programs.

Breastfeeding:

In 2004, Health Canada and TPH adopted a recommendation by the World Health Organization to promote exclusive breastfeeding to six months and continued breastfeeding with the addition of other foods for up to two years.

TPH implements strategies to promote, support and protect breastfeeding directed to the entire population as well as to women at risk for early weaning. Each year, TPH implements a health communication campaign to raise public awareness about the importance of breastfeeding. TPH also collaborates with community partners and coalitions to advocate for policies that create a welcoming environment for mothers to breastfeed in public facilities and to prohibit the marketing of infant formula/breastmilk substitutes.

TPH provides one-to-one education and skill building to women who are initiating breastfeeding and to those that are experiencing challenges in breastfeeding. TPH works in partnership to provide coordinated services and greater continuity of care for breastfeeding women, especially for women at risk of early weaning. Fundamental to this collaboration is the development of consistent messages regarding breastfeeding, including exclusive breastfeeding.

TPH efforts in early childhood health are supported and influenced by three provincial ministries – the Ministries of Health and Long-Term Care, Health Promotion, and Children and Youth Services. The Chief Medical Officer of Health (MOH) and the Public Health Division of the Ministry of Health and Long-Term Care have primary responsibility for provincially mandated public health programs. A recent reorganization of the division has created uncertainty about

the location and capacity of provincial support for early childhood policy and programs. The Chief MOH should ensure that there is sufficient expertise and clear accountability for child and reproductive health within the Public Health Division and the Ministry of Health Promotion.

Conclusion:

Healthy young children are vital to the current and future health of Toronto. Children are the next generation of adults, and crucial to our society's future well being and prosperity. They are also important in their own right, with independent rights to health, security, and support (3).

"The Health of Toronto's Young Children" is a series of reports that provide the most current available information on the health of Toronto children from birth to age six. The first report provides an introduction to the series. The second report focuses on the health of Toronto's infants from birth to their first birthday. Together these reports highlight a need for more comprehensive data to facilitate monitoring of birth outcomes and health during the first year of life.

Diversity among Toronto's families with young children is a key theme that emerges. Variations in family income, neighbourhood income, and other demographic characteristics, all play a critical role in the experiences, development and functioning of Toronto's young children. The available data shows that the majority of Toronto infants have healthy birth outcomes and reach their first birthday free from major diseases, disability and injury. The numbers of injuries, poisonings, congenital infections, and vaccine preventable communicable diseases are relatively small, but in many cases preventable. There is cause for concern regarding low birth weight, congenital anomalies, and infant feeding. These issues require continued attention.

These first two reports are intended to help TPH and other key stakeholders to better understand the health of Toronto's youngest residents, to identify where more information is needed and to work collaboratively to improve health outcomes. The next two reports in the series will focus on the growing child and the influence of family and neighbourhoods on children's development and functioning.

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List of Attachments:

- Attachment 1: The Health of Toronto's Young Children, Volume 1 - Setting the Context (Executive Summary)
- Attachment 2: The Health of Toronto's Young Children, Volume 2 - The First Year of Life in Toronto (Executive Summary)

References:

- (1) Ng, W. 2003, "Information for planning reproductive health programs: Information utility and data quality". Central East Health Information Partnership Discussion Paper. URL: www.healthinformation.on.ca/ce.html
- (2) Health Information & Planning, Toronto Public Health. 2002. "Live births in Ontario: Data quality issues". Health Status News, (1-2). URL: [//Toronto.ca/health/hsi/hsi_newsletter_2002.htm](http://Toronto.ca/health/hsi/hsi_newsletter_2002.htm)
- (3) United Nations Resolution. 1989. "Convention on the Rights of the Child". United Nations Resolution, Canadian Heritage, No. 44/25, URL: www.pch.gc.ca/progs/pdp-hrp/docs/crc/cn_e.cfm

EXECUTIVE SUMMARY



The Health of Toronto's Young Children is a series of reports on the health of Toronto children from birth to age six. The series provides the most current available information on the health of Toronto's young children. These reports provide a unique representation of the health of Toronto's youngest residents to help identify challenges, set priorities and monitor success in improving young children's health.

This first report sets the stage for the rest of the series. It presents a model of child health which illustrates a broad positive perspective of children's health. This model provides a framework for identifying key issues of significance to young children's health and health indicators presented in subsequent reports. The report also provides a socio-demographic portrait of Toronto's young children and their families and presents data on parents' perceptions of their young children's health.

The model of child health identifies that health has two dimensions – development and functioning. Healthy development involves acquiring the range of skills and abilities that can be attained through physiological maturation. Healthy functioning involves using these developed skills and abilities, as well as having and using all the other resources needed to cope, adapt, realize aspirations, and satisfy everyday needs successfully. Healthy development and healthy functioning in early childhood contribute to healthier school age and adolescent development and functioning, thereby increasing the chances of a healthy adult life.

This first report highlights the following key points:

- In 2001, just over 205,000 children aged six years and younger lived in Toronto.
- There are some areas of Toronto with much higher concentrations of young children than others.
- Several trends account for the decreasing numbers of young children in the city. These include the trends towards having fewer children or no children and a decrease in the number of women of childbearing age.
- Toronto's ethno-racial diversity is most evident among families with young children. In 2001, close to two-thirds (62%) of Toronto parents with children from birth to age six were born outside of Canada.
- Toronto's children are growing up in a variety of family structures. Far more children now experience major family change in their early years, such as parental separation or living in blended families.
- The average size of Toronto's families has decreased. The likelihood of having brothers or sisters varies significantly among Toronto's ethnocultural groups.

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- The average age of mothers in Toronto is rising. In 2000, more babies were born to women 40 years of age or over than to women under 20.
 - Nearly three in 10 or 51,000 Toronto children from birth to age five lived in low income households in 2000. The proportion of young children living in low income households is even higher for certain subgroups of children.
 - There is growing income inequality among Toronto's poorest and wealthiest neighbourhoods.
 - The vast majority (87%) of Toronto parents with children from birth to age six reported their children to be in 'very good' or 'excellent' health. However, parents living in low income households and parents not born in Canada were more likely to report that their children were in poorer health.
 - Diversity among Toronto's families with young children is a key theme emerging from this report. This plays a critical role in the experiences, development and functioning of young children. Ultimately, this diversity may result in differences in health outcomes.

Other reports in the series explore particular aspects of health status in Toronto's young children and the impact of diverse conditions on child health outcomes. Some of the key issues discussed include birthweight, breastfeeding, parenting practices, family functioning, safety, physical activity, injury, communicable diseases, and oral health.

EXECUTIVE SUMMARY



The Health of Toronto's Young Children

The *Health of Toronto's Young Children* is a series of reports that provide the most current available information on the health of Toronto children from birth to age six. These reports provide a picture of the health of Toronto's youngest residents. The series of reports use a model of child health, described in the first report of the series, as a framework to identify key issues of significance to young children's health and indicators of young children's health. The model identifies two components of young children's health - development and functioning. The model recognizes that injuries, diseases, and disabilities can seriously reduce young children's development and/or functioning temporarily, or in some situations, their health may be affected for their entire lives.

The Health of Toronto's Young Children: The First Year of Life in Toronto

This second report in the series, *The Health of Toronto's Young Children: The First Year of Life in Toronto*, focuses on the health of Toronto's infants from birth to their first birthday. It provides information on the demographic context of the first year of life for Toronto's infants. It also presents information about birth outcomes, including diseases and disabilities apparent at birth, and highlights the impact of birth outcomes on short and long term development and functioning. The report also profiles injuries, diseases and disabilities, as well as resources during the first year of life (e.g., nutrition), which have an immediate or long term impact on health. The report summarizes available data and discusses the significant gaps in local health data related to infant health status reporting.

Highlights from the second report include:

Demographic Context

- Although the number of births to Toronto mothers is decreasing slightly, close to 25% of all births in Ontario in 2003 were to Toronto mothers.
- Women in Toronto are having children at an older age than women in the rest of the province. The median age of mothers in Toronto who gave birth in 2000 was 31 years, an increase from 29 years in 1991. In 2000, more Toronto babies were born to women 40 years or older than to women under 20.
- In 2001, approximately two out of three Toronto babies were born to women who were born outside of Canada.

Health Behaviours During Pregnancy

- 8.4% of Toronto women who gave birth between 1995 and 2001 reported having smoked during their last pregnancy, which was significantly less than the estimate for the rest of Ontario (15.8%). 8.7% of Toronto women who gave birth between 1998 and 2003 reported they had consumed alcohol.

Birth Weight

- The majority of Toronto babies are born with a healthy birth weight. Toronto has a higher healthy birth weight rate than the rest of Ontario.
- Toronto's total and singleton low birth weight (LBW) rates are higher than corresponding rates in the rest of Ontario. Over time, Toronto's total LBW rate has been increasing while the singleton LBW rate has been decreasing.
- Low birth weight and prematurity account for approximately 12% of infant deaths in Toronto.
- There is considerable variation in the rates of singleton LBW across Toronto. Rates in some areas of Toronto are 10% to 36% higher than the City's average rate of 5.2%. Factors such as neighbourhood income, mothers' country of birth and maternal age may be contributing to this disparity.
- Between 1999 and 2001, the majority of singleton LBW babies born in Toronto were born to women between 25 and 34 years old. Adolescent mothers had the highest singleton and multiple LBW rates of all age groupings.

Congenital Anomalies

- Toronto's congenital anomaly rate in 2000 was 3.9%, which represents the first noteworthy decrease since 1995. Continuous monitoring is important to determine future trends.
- Between 1997 and 2001, congenital anomalies were the third most common reason for infant hospitalizations and the second leading cause of infant death in Toronto.

Congenital Infections

- From 1994 to 2003, 344 cases of congenital infections were reported in newborns in Toronto. The leading congenital infections were Hepatitis C (128 cases), group B streptococci (111 cases), ophthalmia neonatorum (37 cases), and HIV/AIDS (36 cases).

Breastfeeding

- The vast majority of Toronto women (approximately nine out of 10) begin to breastfeed their infants. However, many Toronto babies are weaned early and less than 20% of healthy term infants are exclusively breastfed for six months.
- In Toronto, older mothers, more educated mothers, and mothers living with a partner are more likely to initiate and continue breastfeeding. Mothers born outside of Canada are also more likely to initiate breastfeeding.

Vaccine Preventable Diseases

- The most frequently occurring vaccine preventable disease among Toronto infants less than one year of age is influenza, followed by varicella (chickenpox), and pertussis (whooping cough).

Sudden Infant Death Syndrome (SIDS)

- The proportion of infant deaths due to Sudden Infant Death Syndrome (SIDS) is decreasing in Toronto. From 1995-1999 (combined), SIDS accounted for 4% of all infant deaths in Toronto (43 deaths).

Summary and Conclusions

- The picture of Toronto infants' birth outcomes and health during the first year of life is incomplete.
- Available data indicates that the majority of Toronto babies have healthy birth outcomes and reach their first birthday free from major diseases, disabilities, and injury.
- There is some cause for concern regarding specific health issues such as LBW, congenital anomalies, and breastfeeding.
- Although the numbers of injuries, poisonings, congenital infections and vaccine preventable communicable diseases are relatively small, these issues require continued attention as many of these diseases and conditions are preventable.
- There is a need to continue to monitor the health of Toronto infants and to obtain a more complete picture of their health.