PART V: SUMMARY AND CONCLUSIONS

During the first year of life, development occurs at a pace unsurpassed in later life stages. This report, *The Health of Toronto's Young Children: The First Year of Life in Toronto*, focuses on the health of Toronto's infants during this critical first year. The report profiles key aspects of Toronto infants' development and functioning. It also presents information on injuries, diseases, and disabilities which can have an impact on both short and long term development and functioning, as well as resources (e.g., nutrition) which are necessary for optimal development and functioning.

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The picture of birth outcomes and health during the first year is however, incomplete. For example, although there is Toronto data on low birth weight, accurate data on the proportion of Toronto babies born preterm has not been available. There is currently no population level data on modifiable health practices of pregnant women in Toronto such as prenatal nutrition and the use of prescription/illicit drugs.

Data gaps related to birth outcomes, modifiable health practices, nutrition during infancy and developmental milestones are significant because of the rapid rate of growth and development which occurs during the first year of life.

In addition, data does not exist for resources which have an impact development and functioning during the first year of life. This includes key components of infant nutrition such as adequacy and appropriateness of complementary foods; and nurturing and responsive caregiving or its opposite- the incidence of violence and neglect. Nor is there data on the proportion of infants who meet physical, cognitive, communicative and psychosocial developmental milestones during the first year. These data gaps are significant because of the rapid rate of growth and development which occurs during the first year of life. Moreover, growth and development at this stage of life provides the foundation for growth and development during the early years and beyond. The lack of population level data on key health indicators in the first year of life presents challenges in monitoring the heath status of Toronto infants and planning relevant programs.

The Ontario Government is attempting to address some of the data gaps during the early years through its Best Start Initiative. A Well Baby Expert Panel is developing strategies for a province wide developmental assessment for 18 month old children in Ontario.[93] Although this initiative will not specifically address data gaps during the first year of life, it is a beginning step towards obtaining a more complete picture of child development during the early years.

Work by Toronto Public Health (TPH) has identified concerns with the integrity of the reproductive health and birth data for Toronto provided by the Ministry of Health and Long-Term Care.[20,94] In order to measure birth outcomes in a more timely and complete manner, TPH is leading a partnership of several health units and working with the Child Health Network (CHN) to implement the "Niday" perinatal database, which collects information on all births occurring in the GTA. This database provides more timely, complete, and comprehensive data than other current data sources.

The analysis of data which is available shows that there is good news regarding the health of Toronto's youngest children. The majority of Toronto babies have healthy birth outcomes. The prevalence of Toronto babies born with selected congenital anomalies (e.g., neural tube defects) has decreased. Toronto has lower rates of high birth weight babies than the rest of Ontario.

Available data indicates that the majority of Toronto babies have healthy birth outcomes.

Most Toronto infants reach their first birthday free from major diseases, disabilities, and injury. Rates of vaccine preventable diseases and hospitalization for injuries and poisoning are very low. The proportion of infant deaths due to SIDS has decreased. The majority of Toronto babies start their lives with the optimal food source - breastmilk. Despite this good news, there is some cause for concern about specific health issues, such as low birth weight (LBW) and congenital anomalies.

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Toronto has higher rates of LBW babies than the rest of Ontario. Toronto's total LBW rate gradually increased in the last two years for which data are available. Almost 30% of the LBW babies born in Toronto in 2003 were very low or extremely low birth weight. Perinatal conditions related to short gestation and LBW were a leading cause of death in Toronto from 1995-1999 combined.

Toronto's LBW burden is not evenly distributed across the City. Some areas in Toronto have rates of singleton LBW that are 10-36 % higher than the City's rate. These high rates of singleton LBW may be related to factors such as neighbourhood income, mother's country of birth, and maternal age.

The increase in LBW births, the proportion of very low and extremely low birth weight births, and the disparities in rates of LBW in Toronto needs to be carefully monitored. The proportion of LBW births in Toronto has the potential to increase over the next several years, given the increasing numbers of babies born to older mothers and the high proportion of babies born to mothers not born in Canada. There is an urgent need to increase understanding of factors contributing to disparities in LBW in Toronto. LBW babies, particularly those with concurrent medical or neurological problems and/or those who are very low or extremely low birth weight and/or those exposed to social or environmental risk conditions such as poverty, or poor quality home environment are more likely to require extended hospitalization in neonatal intensive care units immediately following birth. They also have higher rates of childhood illnesses, and both short and long term challenges with development and functioning such as hyperactivity, learning disabilities, academic underachievement, and chronic illnesses during adulthood. These challenges require a long term investment in health and social services.

Congenital anomalies are the third leading cause of hospitalization and the second leading cause of death among Toronto infants. Babies with congenital anomalies who survive and who have anomalies such as congenital heart defects and NTDs may experience serious long term disabilities that impact on development and functioning and require life long services and supports.

Although the prevalence of congenital infections in Toronto is low, it is important to continue to monitor the prevalence of infections such as hepatitis C, which may become a life-long infection, and group B streptococcus, which may be contributing to spontaneous abortions, stillbirths, LBW births, deaths or long term disabilities among Toronto infants.

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Despite the high rates of breastfeeding initiation, many Toronto babies are not breastfed / exclusively breastfed for the recommended period of time. Babies of younger mothers, less educated mothers and lone parent mothers are less likely to be breastfed for the recommended period of time. Less than 20% of Toronto infants are exclusively breastfed for 6 months. Thus, many Toronto babies are not receiving the maximum protective benefits against gastrointestinal and respiratory illnesses. Respiratory illnesses are one of the leading causes of infant hospitalization in Toronto. Premature cessation of breastfeeding/exclusive breastfeeding is also a concern due to the protective effect of breastfeeding against SIDS.

Although the number of most vaccine preventable diseases among Toronto infants is low, there is room for improvement.

Although the number of most vaccine preventable diseases (VPDs) among Toronto infants is low, there is room for improvement. Influenza and varicella (chicken pox) are the most frequently occurring VPDs, but generally the impact on development and functioning is not severe. Although occurring less frequently, pertussis can have a significant impact on infant and childhood health, resulting in brain damage, pneumonia and even death. Other VPDs which have a very low prevalence in Toronto can have mild or moderate to severe effects on development and functioning. In some cases recovery times can be long and complications from disease can be very severe. Immunization for several of the VPDs discussed in this report (i.e. measles, mumps, rubella, meningococcal disease and varicella (chickenpox)) is not provided until 12 months of age or later (Appendix B). Primary immunization for other diseases (i.e., diphtheria, pertussis, tetanus, polio, haemophilus B) is recommended at 2, 4, 6 and 18 months of age (Appendix B). Young children are not fully protected from these diseases until they receive the complete primary series.[95,96] Subsequent reports will highlight the prevalence of these diseases in the second year of life and beyond.

Although there are low numbers of infant hospitalizations and deaths due to injuries and poisonings, many are preventable and require continued attention.

Although injuries and poisonings are not one of the leading causes of hospitalization or death among Toronto infants, falls, the leading cause of injury and poisoning related hospitalizations during infancy, may result in serious disability, including traumatic brain injury. Suffocation and choking, burns, and poisonings (combined) accounted for approximately 30% of injury and poisoning hospitalizations among Toronto's infants.[‡‡‡] These injuries may result in significant disability and disfigurement. Many injuries and poisonings are preventable conditions that require continued attention.

[‡‡‡] Source: Hospital Separation Data, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Overall, there is a need to continue to monitor the health of Toronto infants and to obtain a more complete picture of their health, including disparities in health outcomes. The first report in this series revealed that nearly three in ten Toronto children from birth to age five lived in low-income households in 2000. This data suggests that the proportion of Toronto infants living in low income households is a concern as the impact of poverty on health outcomes during later childhood and into adulthood is well documented.

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Every infant in Toronto deserves and must be given, the opportunity for healthy growth and development and long term health. TPH in collaboration with key stakeholders must continue to strive to reach this fundamental goal.

It is also important to have an increased understanding of how the various determinants of health interact to shape these outcomes in the Toronto context. This information will help to inform policy levers and program initiatives to enhance health outcomes for Toronto's children and decrease disparities in these outcomes.

The next two reports in this series on the health of Toronto's young children will focus on the growing child and the influence of family and neighbourhoods on children's development and functioning.