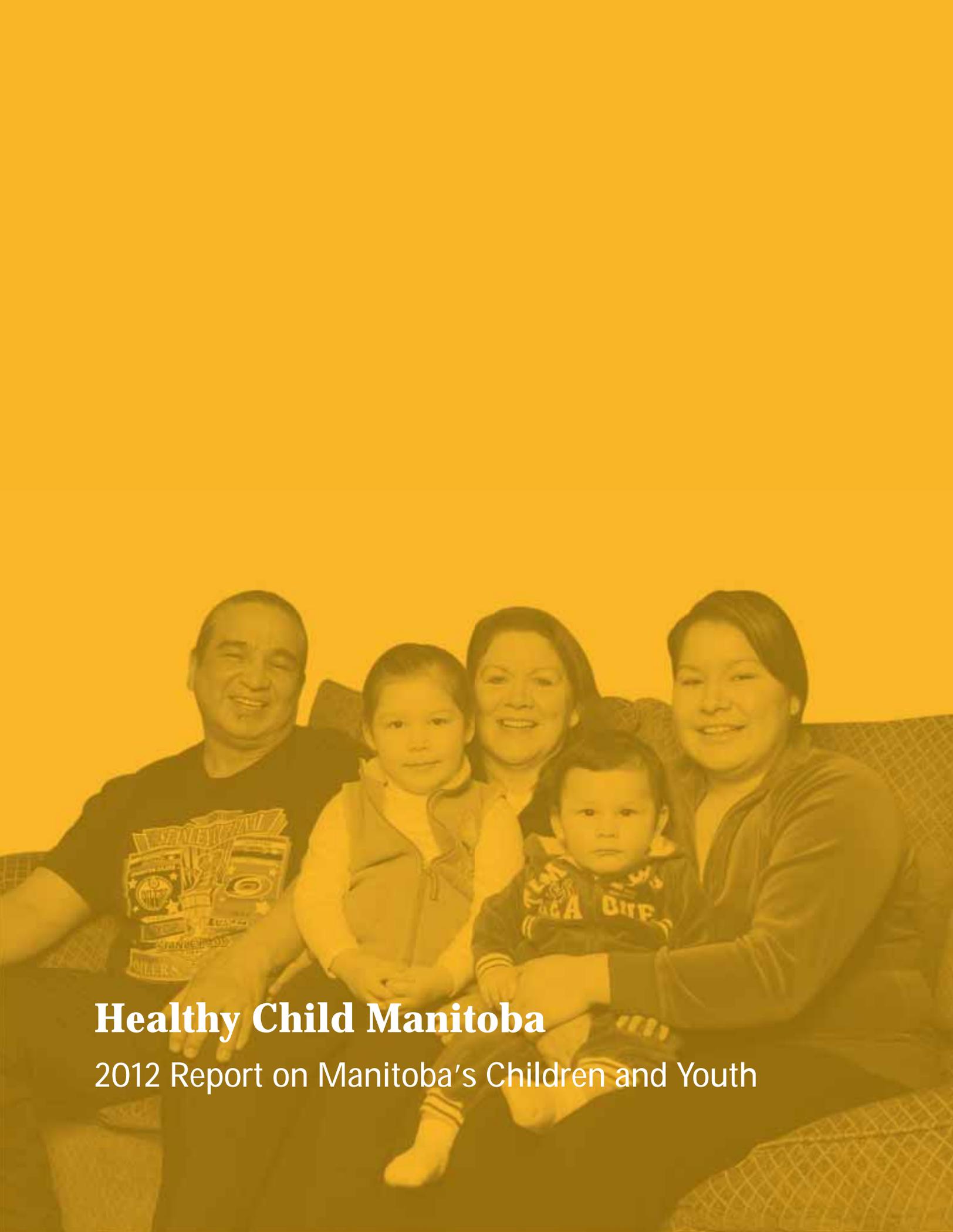




# Healthy Child Manitoba

## 2012 Report on Manitoba's Children and Youth





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# A Message from Manitoba's Healthy Child Committee of Cabinet (HCCC) December 2012

Five years ago, in December 2007, the Legislative Assembly of Manitoba proclaimed its longtime commitment to children and youth in *The Healthy Child Manitoba Act*. This statute enshrined our province's long-term, whole-of-government partnership with communities to improve outcomes from pre-birth to adulthood through prevention and early intervention, the Healthy Child Manitoba (HCM) Strategy.

This inaugural Report on the status of Manitoba's children and youth, with respect to the HCM Strategy, fulfills a major public reporting commitment in *The Healthy Child Manitoba Act*. The Report provides the beginnings of an ongoing story and, we hope, an ongoing public dialogue about what matters most to Manitobans: How are Manitoba's children and youth doing?

*The Healthy Child Manitoba Act* sets out four goals for the strategy: that to their fullest potential, all of Manitoba's children and youth will be physically and emotionally healthy, safe and secure, successful at learning, and socially engaged and responsible (prenatal-18 years). The Report is organized by these four goals, with chapters "growing up" from prenatal, early childhood, middle childhood, to adolescence.

We have gone beyond the legislative requirement and also commissioned an independent companion report with additional statistics and trends, prepared by the Manitoba Centre for Health Policy (MCHP).

The MCHP report was called "How Are Manitoba's Children Doing?" and released two months ago. In the MCHP report and in the Report we share a great deal of emerging data, but we must always remember that every statistic represents a real story about a Manitoban: a pregnant mom, a toddler, a teenager, a family, a community.

As with every comprehensive report, this one and the MCHP report jointly tell a story with both successes and challenges, areas to celebrate and areas to keep working on. We are proud of more than a decade of dedication to children and youth in Manitoba. And we know there is more work to do together.

*The Healthy Child Manitoba Act* commits our province to report every five years on how our young people are doing. The Report and the MCHP report can serve as milestones for measuring future progress.

We invite you to read these reports and, more importantly, talk about them and act on them, with other Manitobans, other friends, family, neighbours, and colleagues. And tell us what you think and how much it matters to you. The future of every one of us depends on what we do collectively for our youngest citizens now. Safe communities, economic prosperity, stewardship of our environment, peace, belonging, identity, and mutual respect, all grow from nurturing environments, right from the start. And our children's futures will be shaped, for better or worse, by our choices today. Will they be healthy, safe, lifelong learners, responsible to themselves and others? All of this is up to all of us.

Our fervent hope is that we will all continue to choose to be champions for all our children. They do not vote (yet) but we can vote for them and be devoted to them, in our daily lives and in the decisions we make in our homes, in our communities, in our Legislature. As adults, together with our youth, we can create better places and spaces, opportunities and experiences, for our children to flourish. We can learn from data about how they are doing, so that they do better, live better, be better. And in doing so, all of our lives will be better for it.

Thank you for your commitment to the children and youth of Manitoba.

Honourable Kevin Chief  
Chair, Healthy Child Committee of Cabinet (HCCC)  
Minister of Children and Youth Opportunities and  
Minister responsible for *The Healthy Child  
Manitoba Act*

Honourable Eric Robinson  
Minister of Aboriginal and Northern Affairs  
and Deputy Premier

Honourable Flor Marcelino  
Minister of Culture, Heritage and Tourism

Honourable Nancy Allan  
Minister of Education

Honourable Jennifer Howard  
Minister of Family Services and Labour,  
Minister responsible for the Status of Women, and  
Minister responsible for Persons with Disabilities

Honourable Theresa Oswald  
Minister of Health and Past Chair of HCCC

Honourable Jim Rondeau  
Minister of Healthy Living, Seniors and  
Consumer Affairs and Past Chair of HCCC

Honourable Kerri Irvin-Ross  
Minister of Housing and Community  
Development and Past Chair of HCCC

Honourable Christine Melnick  
Minister of Immigration and Multiculturalism

Honourable Andrew Swan  
Attorney General and Minister of Justice

# Executive Summary

How are Manitoba's children and youth doing? This is the first Report on Manitoba's children and youth, as legislated by *The Healthy Child Manitoba Act*. It was prepared by the Healthy Child Manitoba Office and the partner departments of the Healthy Child Committee of Cabinet, Government of Manitoba. The Report's objective is to describe Manitoba's children and youth in terms of four outcome goals:

- physical and emotional health
- safety and security
- learning success
- social engagement and responsibility

The Report discusses these outcomes from before birth (prenatal) to age 19 years. It is organized by four stages of child development, each comprising a chapter of the Report. These stages include:

- the prenatal period
- early childhood (birth to age 5 years)
- middle childhood (ages 6 to 12 years), and
- adolescence (ages 13 to 19 years)

## How should I use this Report?

- The information in this Report is descriptive. In other words, it provides information and statistics about the "who, what, where, and when" of the health and well-being of Manitoba's children and youth in each the four stages of child development. It also describes "why" this information is important for all Manitobans to read about, discuss, and act on.
- The information in this Report includes trends over time, and can also be used as a benchmark to look at further changes over time.

## What were the main findings of this Report?

This Report documents significant improvements in child and youth outcomes in Manitoba:

- At the prenatal stage, improvements include less maternal smoking during pregnancy, more mothers (with newborns) having a high school education, and more pregnant mothers accessing prenatal care before the sixth month of pregnancy. Teen pregnancies have also declined steadily.
- At the early childhood stage, rates of high birth weight, large-for-gestational age, and infant mortality have declined. Breastfeeding rates have increased and are higher than the Canadian rates. Hospitalization rates for unintentional injury have decreased. Language and Thinking Skills (as measured in Kindergarten by the Early Development Instrument) have improved significantly. More parents are reading to their child daily. There has been an increase in the percentage of children with access to a regulated child care space, and the total number of spaces has increased.
- At the middle childhood stage, injury hospitalization rates have decreased. There have been increases in the percentages of Aboriginal children that speak or understand an Aboriginal language, participate in cultural activities, and participate in clubs or groups.
- At the adolescence stage, rates of smoking and binge drinking have decreased. Injury hospitalization rates have also decreased. The percentage of First Nations youth with a strong sense of mastery has increased. Grade 7 student engagement is increasing, and the percentage of students that pass the Grade 12 mathematics standards test on time has increased significantly. The high school graduation rate continues to trend upward, and the percentage of high school graduates who enter post-secondary education has increased. Violent criminal code violations have decreased slightly (although the severity index has increased), and there has been a large decline in property crime violations and in the severity of non-violent crime.

In other cases, there are some challenges for Manitoba:

- At the prenatal stage, there has been an increase in the percentage of mothers (with newborns) reporting depression or anxiety, and mothers drinking alcohol during pregnancy remains a concern.
- At the early childhood stage, rates of low birth weight and small-for-gestational age have increased, but remain significantly lower than the Canadian rates. Pediatric dental extractions have increased, and the percentage of children with high scores on physical aggression and indirect aggression has increased. Families with young children (under 6) have the highest prevalence of food insecurity in Manitoba.
- At the adolescence stage, diagnosed rates of both diabetes and attention deficit-hyperactivity disorder (ADHD) have increased significantly. In the 2009 Programme for International Student Assessment (PISA), Manitoba's scores in reading, mathematics, and science decreased from previous assessments. High and increasing rates of incarceration for Aboriginal youth remain an area of concern.

- At all stages, children from vulnerable populations, particularly Aboriginal children and children in low income families, are more likely to experience poor outcomes.

## What data sources and measures were used for this Report?

A variety of data sources were used to prepare this Report. These include large national surveys, such as the Canadian Community Health Survey (CCHS), the General Social Survey (GSS), the National Longitudinal Survey of Children and Youth (NLSCY) and Survey of Young Canadians (SYC), the Aboriginal Children's Survey (ACS), and the Aboriginal Peoples Survey (APS), all of which were provided by Statistics Canada. Other sources include Manitoba's Youth Health Survey (YHS), the First Nations Regional Health Survey (RHS), census and administrative data from Statistics Canada, as well as provincial data from various government departments and offices, including the Healthy Child Manitoba Office, Manitoba Education, Manitoba Family Services and Labour, and Manitoba Health. This report also cross-references a companion report prepared by the Manitoba Centre for Health Policy (MCHP), called "How Are Manitoba's Children Doing?" The MCHP report supports and adds value to this Report, with a particular focus on socioeconomic inequalities in health.

This Report documents a variety of measures of child and youth outcomes in Manitoba. In some cases, a measure represents a snapshot at a specific point in time (e.g., a specific year), and in other cases, we present a measure over a period of time, to show changes in the measure over several years. Wherever possible, we present data over a 10-year period to show trends in measures that may be going up, going down, or remaining mostly the same. In addition, wherever possible, we show or discuss Manitoba's data by broad region, and in comparison to Canada. We also present data for specific groups, based on sex and age, as well as data on Aboriginal or Francophone children and youth, when such detailed data is available. For information on differences based on income, we invite the reader to review the MCHP report, "How Are Manitoba's Children Doing?", which showed that almost all measures of child and youth outcomes showed some inequity, with those living in the lowest income areas of the province having the poorest outcomes.

There are several areas where our information could benefit from improvements in data quality and data availability. For example, in some cases data are only available for Canada, because the sample in Manitoba is too small to be statistically reliable. In other cases, data from the most recent national Census were not yet publicly available. It is also evident that better quality information on some specific groups, such as newcomers, is necessary in order to better describe child and youth outcomes among the diverse social, cultural and ethnic groups in Manitoba.

## Conclusion

Children's opportunities for physical and emotional health, safety and security, success at learning, and social engagement and responsibility are largely determined by their early development. A large and growing body of evidence has led to the indisputable conclusion that the early years, beginning in the prenatal period, have a significant impact on brain development and child outcomes, as well as children's chances of success later in life. Early adversity can have lifelong implications for children, while high-quality, positive family and community environments can stimulate healthy child development and promote long-term well-being. Protecting and improving children's health and well-being enhances their abilities to contribute in positive and meaningful ways, both as children and eventually as adults. This evidence provides a strong basis for investing early in life, and suggests that early investments are a driver of economic growth and productivity.

Healthy early childhood development sets the foundation for positive development and behaviour during middle childhood and adolescence. The physical, emotional, and social changes that occur during middle childhood and adolescence are dramatic. Prevention, early intervention, and supports for children and youth during these stages of development can make a significant contribution to the young people they are today, and the adults they will become in the future as they grow up in Manitoba.

Improving the health and well-being of Manitoba's children and youth is "the shared opportunity and responsibility of all Manitobans." It is hoped that this Report will inspire continued dialogue and accelerate efforts to improve the health and well-being of Manitoba's children and youth, their families and communities.

## Chapter 1: Introduction



# Chapter 1: Introduction

“Health is more than the absence of disease – it is an evolving human resource that helps children and adults adapt to the challenges of everyday life, resist infections, cope with adversity, feel a sense of personal well-being, and interact with their surroundings in ways that promote successful development... children’s health is a nation’s wealth, as a sound body and mind enhance the capacity of children to develop a wide range of competencies that are necessary to become contributing members of a successful society.”

Source: Center on the Developing Child at Harvard University. (2010). The foundations of lifelong health are built in early childhood. <http://www.developingchild.harvard.edu>

Each day we face a great responsibility and an exciting opportunity to shape the health and well-being of children and youth in Manitoba. Our quality of life depends on our commitment to developing a nurturing environment for our young people in their families, preschools, schools, and communities. Manitoba’s children are developing into the people who will grow our food, build our cities, teach our grandchildren, and support us as we grow older.

## I. Healthy Child and Youth Development

This report uses a broad definition of health that goes beyond illness or disease (see text box). It is also based on the consensus that a child’s opportunity for lifelong health, well-being, and success is largely determined by his or her early development.<sup>1</sup> Healthy child and youth development is a complex physical, emotional and social process involving interactions between a child’s genetics, family interactions, and the wider social environment.<sup>2</sup> Healthy communities and healthy families are crucial components of healthy child development. Although people can respond to positive influences during any stage of development, early childhood is particularly sensitive to influence, and early investments are our most efficient use of resources.<sup>3</sup>

Healthy child development can be described in terms of risk factors and protective factors. A risk factor is a characteristic, experience, or event that is associated with an increase in the likelihood of a negative outcome that one might want to prevent.<sup>4,5</sup> A protective factor is associated with a decrease in the likelihood of a negative outcome or with an increase in the likelihood of a positive outcome.<sup>6</sup> Risk and protective factors can be found in children, families, and the larger community.<sup>7</sup> Vulnerability refers to an individual or group’s susceptibility to negative outcomes when exposed to risks. Vulnerability is reduced through individual and social protective factors, which provide resources and strengthen abilities to cope with stressful circumstances. Families, preschools, schools, communities, and government all have a role in working to reduce risks and enhance protective factors in Manitoba’s children, families, and communities.

## II. Healthy Child Manitoba Strategy

In March 2000, the Premier established the Healthy Child Manitoba Strategy and created the Healthy Child Committee of Cabinet to develop and lead child- and youth-centred public policy across government and

facilitate interdepartmental cooperation and coordination with respect to policies, programs and services for Manitoba's children, youth, and families. As a statutory committee of Cabinet, this signals healthy child and adolescent development as a top-level policy priority of government. It is the only legislated Cabinet committee in Canada that is dedicated to children and youth.

Legislated in 2007 by *The Healthy Child Manitoba Act*, Healthy Child Manitoba is the Government of Manitoba's long-term, cross-departmental, evidence-based prevention and early intervention strategy to achieve the best possible outcomes for Manitoba's children (prenatal – 18 years). Under *The Healthy Child Manitoba Act*, at least once every five years, the Healthy Child Manitoba Office will prepare a Report on the status of Manitoba's children and youth in relation to achieving the outcomes of the Healthy Child Manitoba Strategy.

### III. Report on Manitoba's Children and Youth

This is the inaugural Report. In the first chapter, we begin by describing Manitoba's children and youth and their families. The Report is then organized by four stages of child and youth development, each comprising a chapter of the Report:

- the prenatal period
- early childhood (birth to age 5)
- middle childhood (ages 6 to 12), and
- adolescence (ages 13 to 19)

The foundation for healthy child and youth development is reflected in the four outcome goals of *The Healthy Child Manitoba Act*. For each of the four stages of development above, the health and well-being of Manitoba's children and youth will be described (age-appropriately) for each of the four Healthy Child Manitoba outcome goals:

- physically and emotionally healthy
- safe and secure
- successful at learning
- socially engaged and responsible

During each of the four stages of development, each of us and all of us have opportunities to shape how children and youth grow and develop, by building their resilience and reducing their vulnerabilities in each of the four outcomes.

Each chapter of this Report discusses key indicators that can help us learn how Manitoba's children and youth are doing in each of these stages and for each of the four outcomes. When possible, indicators are presented across several years, to show trends over time. In addition, comparisons with Canada are shown (where available), as well as by sex, socioeconomic status, region, and ethnicity, when such data were available. The key indicators, including trends and comparisons, can help guide policy and action, in both government and community.

The best results are achieved when parents, families, neighbourhoods, communities, businesses, and all levels of government work together with a strong foundation of information. We work best when we work together to translate this knowledge into action. This is the purpose and potential of this Report on Manitoba's Children and Youth.

## Chapter 2: Who are Manitoba's children and youth?



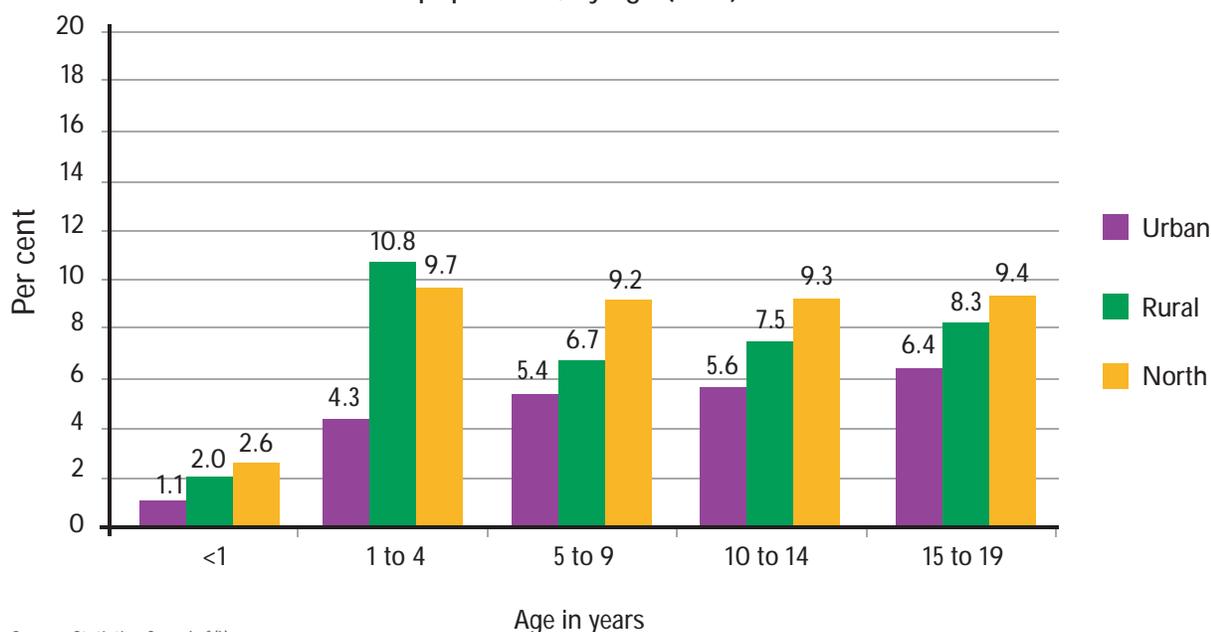
# Chapter 2: Who are Manitoba's children and youth?

Children and youth represent a significant proportion of the population of Manitoba. In this chapter, we describe the characteristics of Manitoba's children and youth (usually up to age 18 or 19 years, depending on the data source) and their families, with attention to indicators such as birth rate, family structure, and economic security. Manitoba's families are diverse with particular needs depending on their geographic location, ethnic and language identity, and family structure. Manitoba's children and youth also have varying degrees of social and economic security, as seen in rates of low income, core housing need, and food insecurity.

## I. Children and Youth as a Percentage of the Population

Manitoba has a higher percentage of children and youth compared to all of Canada. In 2011, children and youth (19 years old and younger) made up 26% (12.6% female, 13.3% male) of Manitoba's population, compared to 23% in Canada. Figure 1 shows the proportion of children and youth is higher in northern and rural parts of the province compared to urban areas.

Figure 1: Manitoba children and youth as a proportion of the region's population, by age (2011)

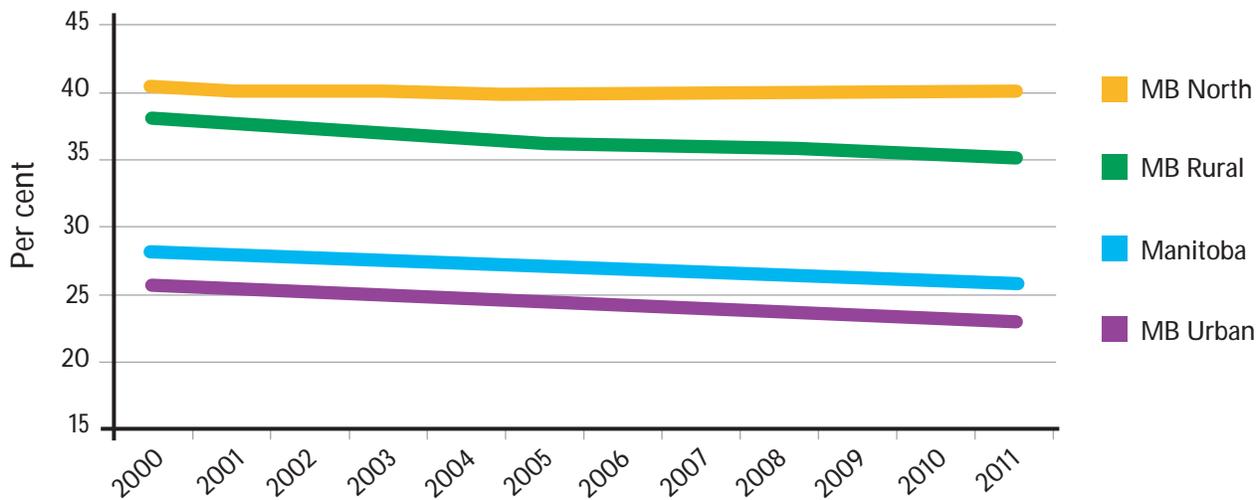


Source: Statistics Canada <sup>(1)</sup>

<sup>(1)</sup> Note: Urban= Winnipeg and Brandon Regional Health Authorities (RHAs), North= Churchill, NOR-MAN, and Burntwood RHAs, Rural=all else. Amalgamation of the Regional Health Authorities began after data preparation for this Report was already well underway. For more detailed age profiles (population pyramids, with 5-year age groups) by sex for regions in Manitoba, please see Brownell, M., Chartier, M., Santos, R., Okechukwu, E., Au, W., et al. (2012). *How are Manitoba's children doing?* Winnipeg, MB: Manitoba Centre for Health Policy.

However, the proportion of Manitoba's population that is children and youth (age 19 years and younger) has been declining over the past decade, from 28% in 2000 to 26% in 2011. There are regional variations: in the North, the proportion of the population that is 19 or under has remained stable, while in other regions of Manitoba it has declined (see Figure 2).

Figure 2: Manitoba children and youth as a proportion of the region's population, by region



Source: Statistics Canada <sup>8 (2)</sup>

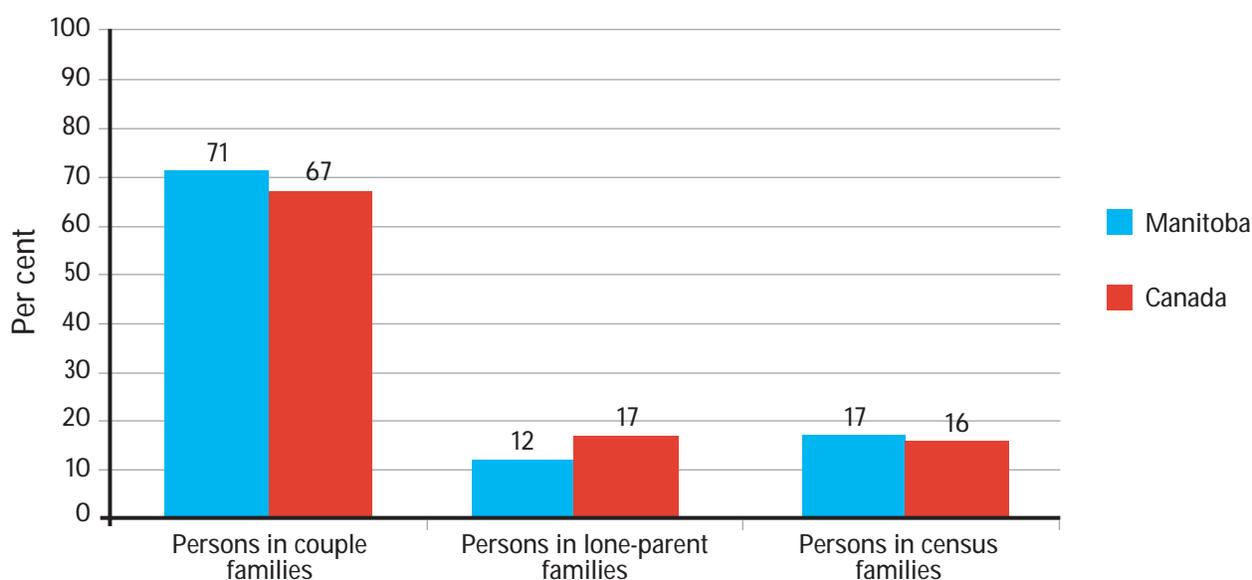
## II. Birth Rate

Although the proportion of children in Manitoba is declining, the number of children is expected to increase in the years to come, particularly for the preschool age group. Population projections suggest that between 2006 and 2028, Manitoba's population under the age of fifteen will increase by 15,000, or 22%.<sup>9</sup>

This projected increase is because Manitoba's birth rate continues to rise and remains above the Canadian average.<sup>10</sup> Again, there are regional variations, with much higher birth rates outside of Winnipeg, particularly in the North. In 2009/10, the crude birth rate (total births per 1,000 residents) was 12 in Winnipeg, compared to 23 in NOR-MAN region and 27 in Burntwood region.<sup>11</sup>

<sup>(2)</sup> Note: Urban= Winnipeg and Brandon Regional Health Authorities (RHAs), North= Churchill, NOR-MAN, and Burntwood RHAs, Rural=all else.

Figure 3: Family structure (2011)



Source: Statistics Canada, 2011 Census <sup>(3)</sup>

### III. Family Structure

In 2011, most families in Manitoba had two parents (71%), while approximately 12% of families in Manitoba had one parent (see Figure 3).

According to the 2011 census, 48% of married and common-law couples in Manitoba had children aged 24 and under living at home, compared to 47% in Canada.<sup>12</sup>

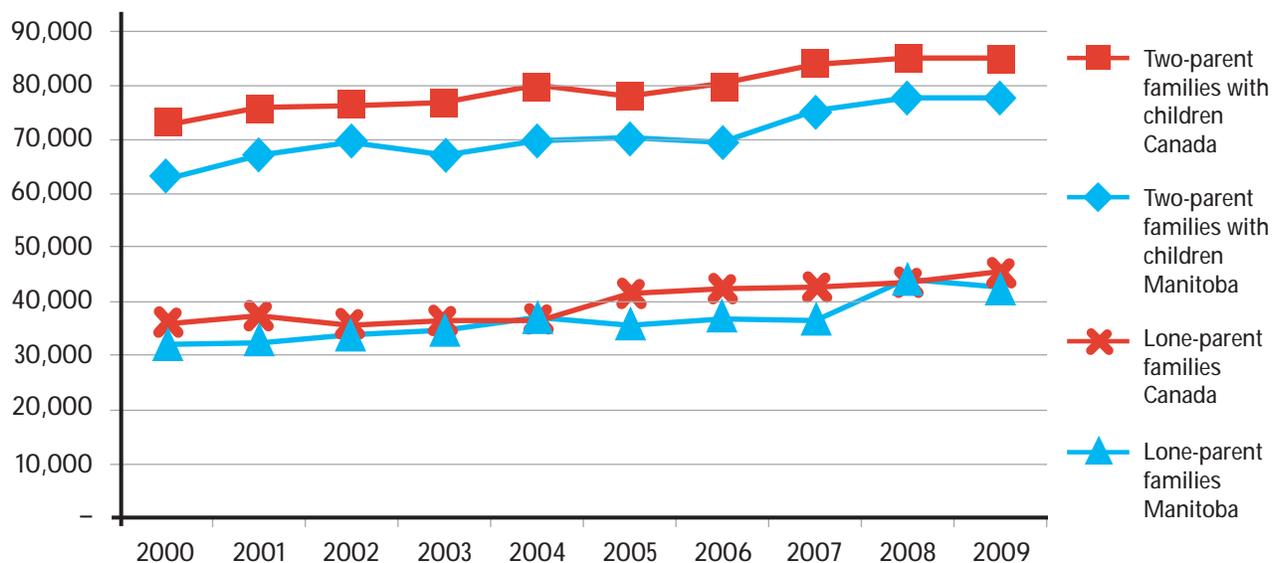
In both Manitoba and Canada, lone-parent families have a higher risk of poverty, and have lower average family incomes (see Figure 4). Most lone-parent families are headed by mothers.<sup>(4)</sup> In 2010, the percentage of children under 18 years in female lone-parent families living in poverty was 38% in Manitoba and 27% in Canada.<sup>(5)</sup> The majority of children living in poverty, however, do not come from female lone-parent families, as this family structure makes up a much smaller proportion of all families.<sup>13</sup>

<sup>(3)</sup> Note: Excludes census data for one or more incompletely enumerated Indian reserves or Indian settlements. According to Statistics Canada, families are comprised of: 1) couples (married or common-law, including same-sex couples) living in the same dwelling with or without children, and 2) single parents (male or female) living with one or more children. Persons who are not matched to a family become persons not in census families. They may be living alone, with a family to whom they are related (e.g. with their married children or with their children who have children of their own), with a family to whom they are unrelated, or with other persons not in census families. *Statistics Canada website*

<sup>(4)</sup> In Canada, there were about four times as many female lone-parent families (1.1 million) as male lone-parent families (281,800) in 2006, a fairly consistent ratio over the past several decades. See Statistics Canada, *Women in Canada: A gender-based statistical report*, catalogue no.89-503-x.

<sup>(5)</sup> Low income is defined using the Market Basket Measure, 2008 base. Source: Statistics Canada, CANSIM table 202-0804 Persons in low income by economic family type, annual.

Figure 4: Average after-tax income, by economic family type



Source: Statistics Canada <sup>(6)</sup>

#### IV. Ethnic, Cultural, and Language Identity

Manitoba families are diverse, reflecting a rich variety of language and ethnic groups.

Manitoba has a high percentage of Aboriginal families and Aboriginal children, and this percentage has been growing.<sup>14</sup> 2006 Census data<sup>(7)</sup> show that 16% of Manitoba's population identified as Aboriginal, compared to 4% for Canada as a whole.<sup>15</sup> In terms of Aboriginal identity<sup>(8)</sup>, 57% identified as North American Indian (Census term for First Nations), and 41% as Metis, with the remainder indicating Inuit, multiple identities, or 'other'. Manitoba's Aboriginal population is significantly younger than the Manitoba average – over 1/3 are under the age of 15 years.<sup>16</sup> Aboriginal children (not including First Nations communities) under six represent 19% of all children under six in Manitoba, compared to 5% in Canada.<sup>17</sup> Children ages 14 and under represent 33% of the Aboriginal identity population in Manitoba, compared to 30% of the Aboriginal identity population for all of Canada.<sup>18</sup>

<sup>(6)</sup> Note: 2009 constant dollars. Source: Statistics Canada, Income Statistics Division (Survey of Consumer Finances and Survey of Labour and Income Dynamics).

<sup>(7)</sup> Note: At the time of writing this Report, 2011 Census data was not yet available for many socio-demographic variables

<sup>(8)</sup> Aboriginal identity refers to those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit. Source: Aboriginal Peoples Technical Report, 2006 Census, Second Edition.

# Aboriginal Children and Youth in Manitoba

Aboriginal Peoples are the descendants of the original inhabitants of Canada. The Government of Canada legally recognizes three distinct subcategories of Aboriginal Peoples: 1) First Nations Peoples, an assembly of many Indigenous Nations, 2) The Métis People, who are of mixed European and Indigenous descent, and 3) The Inuit, who are the original inhabitants of the Northern Territories.

Manitoba is home to a large population of Aboriginal Peoples, including 64 First Nations representing five major linguistic groups, and the highest per capita proportion of urban-dwelling Aboriginal Peoples in Canada, located in the City of Winnipeg. The Aboriginal population in Manitoba is a young and growing population with a higher average birth rate than non-Aboriginals in Manitoba.

The relationship between Aboriginal Peoples, non-Aboriginal Canadians, and Canadian Governments has evolved over time, but has left a legacy that continues to constrain Aboriginal children's life chances.<sup>(9)</sup> High rates of poverty, ill health, family breakdown and suicide disproportionately affect many Aboriginal communities, families, and children in Canada and Manitoba.

Some indicators identified in this Report may reflect the impact of these challenges for Aboriginal children and youth in Manitoba, while others demonstrate unique strengths. Regardless, indicators of Aboriginal children's health and well being are of critical importance for informing policies to promote child and youth health in Manitoba.

*“When researchers use epidemiological statistics to draw attention to inequities in health status, they run the risk of perpetuating a view of Aboriginal communities as sick, disorganized, and dependent — a view that reinforces unequal power relations and that may be used to justify paternalism and dependence”.*

(Dr. John O’Neil, former director of the Manitoba First Nations Centre for Aboriginal Health Research)

Importantly, these statistics must be interpreted in the context of the history of injustices faced by Aboriginal Peoples in Canada, rather than simply attributed to ‘disorganization’ or ‘dependency’ of Aboriginal communities. Further, identifying strengths and protective factors among Aboriginal communities is equally critical for policy formulation as the traditional approach of identifying health and social deficits.

Healthy Child Manitoba is committed to acknowledging the legacy of the history faced by Aboriginal Peoples in Manitoba, building a strong and equitable relationship with Aboriginal Peoples, and developing policies that provide a supportive environment for Manitoba's children and youth to develop to their full potential.

<sup>(9)</sup> Royal Commission on Aboriginal Peoples, 1996

Immigration continues to be a leading contributor to population growth in Manitoba, having increased by more than 200% between 2000 and 2010.<sup>19</sup> Manitoba's newcomers are younger on average than newcomers in Canada overall: According to the 2006 Census, 31% of Manitoba's newcomers (who arrived since 2001) were children under the age of 15, compared to 27% of Canada's newcomers.<sup>20</sup> The majority of recent immigrants in Manitoba are from Southeast and Southern Asia, and Eastern Europe.

At the time of the 2011 Census, the Francophone population (French as mother tongue) in Manitoba was 42,090, or 3.5% of the population (down from 3.9% in 2006).<sup>12</sup>

In 2006, over two thirds of children of Francophone parents in Manitoba were receiving an education in French. French had been passed on as a mother tongue to 39% of the children of couples in which at least one spouse had French as a mother tongue. In spite of the increasing proportion of exogamous (French-English) couples from 1971 to 2006 (from 33% to 66%), the transmission of French to children under 18 increased from 7% in 1971 to 19% in 2006.<sup>21</sup>

According to the 2011 Census, the most commonly spoken non-official languages in Manitoba are German, Tagalog (Filipino), Cree, and Ukrainian. In terms of bilingualism in Canada's official languages, 9% of all Manitoba children 19 and under were English-French bilingual.<sup>12</sup>

## V. Children in Care

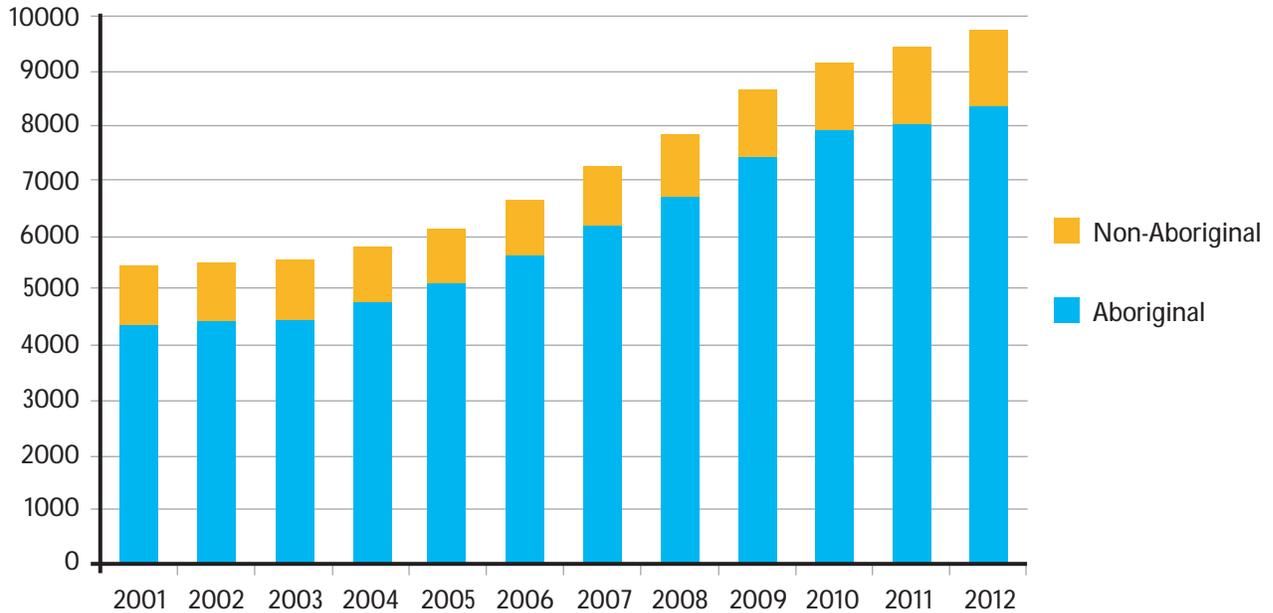
*Children in care* refers to children who are removed from their families of origin and placed into non-familial care, meaning the care of another adult(s) (e.g., foster family, group home, or emergency placement), because of concerns about the proper provision of their care.<sup>22</sup>

A recent study found that the proportion of children in care (as a percentage of all children in Manitoba ages 17 and under) increased from 3.7% in 2000/01-2002/03 to 4.0% in 2006/07-2008/09. The proportion was higher for the youngest (0 to 5) and oldest (13 to 17) age groups. When sex was considered, the highest proportion was for females ages 13 to 17, and the lowest was for males ages 13 to 17. In both rural and urban areas of Manitoba, the highest proportions were found in the lowest income areas.<sup>22</sup>

Children living in First Nations communities are more likely than other Manitoba children to come into care (see Figure 5). Between 2000/01 and 2010/11, the number of Aboriginal children in care increased by 85%, compared to 29% for non-Aboriginal children.<sup>23</sup>

The number of children in care may indicate the degree to which families are struggling to care and provide safety for their children. It may also reflect societal changes, such as breakdowns in families, communities, and supports for families. Finally, increases may reflect changes in definitions, and changes in practice, such as increased vigilance by social workers following the amendment of *The Child and Family Services Act* in 2007/08 to ensure safety as a first priority of assessment.<sup>23</sup>

Figure 5: Number of children in care of Child and Family Services, Manitoba



Source: Manitoba Department of Family Services and Labour, Annual Reports

In some cases, a child is seen as in need of protection or support, but the situation does not involve removing the child from the home. The child may need support because his or her health or emotional well-being is threatened, or the family may need voluntary support services to aid in the resolution of family matters. A recent study found that the percentage of children (ages 0 to 17) in families receiving protection or support services from Child and Family Services decreased significantly, from 14% in 2000/01-2002/03 to 9% in 2006/07-2008/09. Decreases occurred in all regions of the province.<sup>22</sup>

## VI. Socioeconomic Status

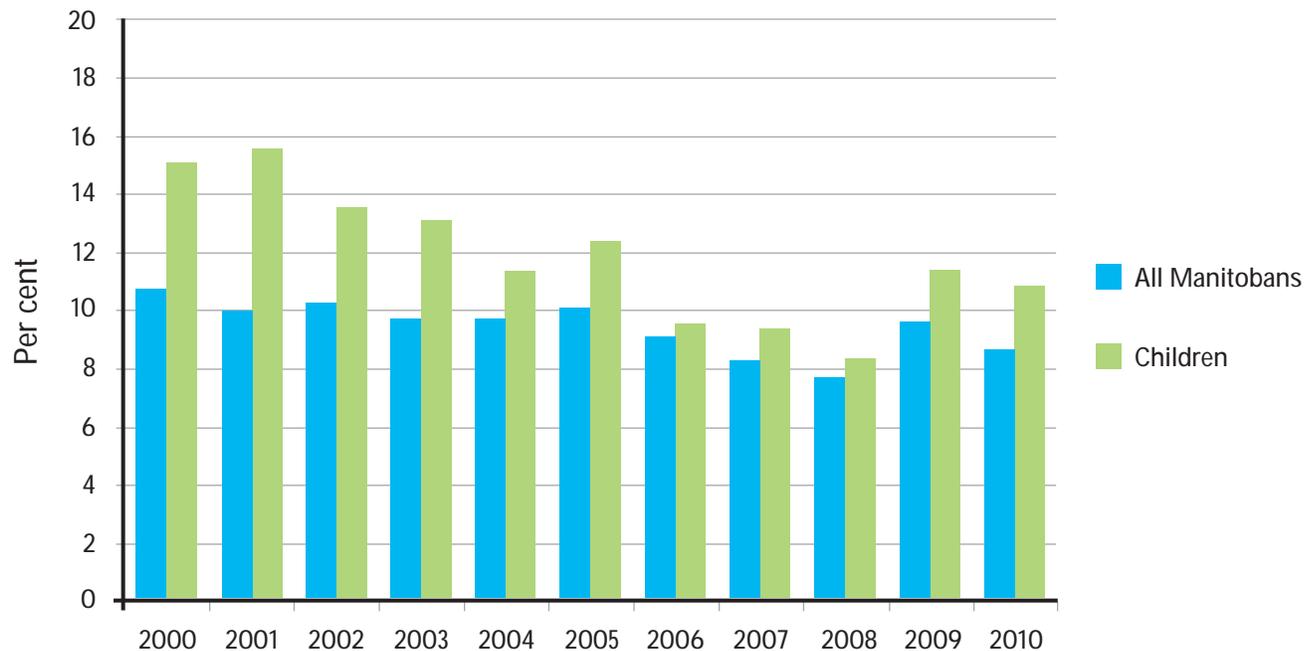
*Socioeconomic status* (often measured by income, education, or occupation, or a combination of two or more of these indicators) is an important factor in child development. Early childhood socioeconomic status can be an important predictor of brain development, learning, behavior and other health outcomes.<sup>24</sup> Children living in lower socioeconomic circumstances are more likely to have adverse childhood experiences and to encounter harmful levels of stress. Children exposed to early, serious and prolonged stress are at much greater risk for behavioural problems and chronic diseases.<sup>25</sup>

## a) Poverty, low income, and income assistance

Children living in poverty are more likely to have chronic diseases such as asthma, visit emergency rooms, and die from injuries. They are also more likely to have a range of emotional, behavioural, learning, and/or social problems. Studies have shown that children living in poverty are more likely to develop a number of chronic conditions as adults, regardless of their income as *adults*. These include cardiovascular disease, type-2 diabetes, respiratory problems, and some forms of cancer.<sup>13</sup>

Fortunately, the percentage of Manitoba children living in low income families has decreased over time (see Figure 6). From 2000 to 2010, the low income rate, as measured by the *Market Basket Measure* (MBM) threshold of the basic basket of goods and services, decreased by 19% for all Manitobans, by 28% for children under the age of 18, and by 21% for children under 18 in female lone parent families.<sup>(10) 26</sup> Among all provinces in 2010, Manitoba had the second lowest rate of all persons living in low income, and the fifth lowest incidence of low income for children.

Figure 6: Low income rate (Market Basket Measure) in Manitoba



Source: Manitoba Department of Family Services and Labour

<sup>(10)</sup> Market Basket Measure (MBM) thresholds are based on the cost of a "basket of goods and services" that includes food, clothing and footwear, shelter, transportation, and a range of other items, such as personal care, household equipment and supplies, telephone services, educational and recreational items, and reading materials. MBM accounts for cost of living differences across Canada.

Some populations in Manitoba are more likely to experience low income, including women, lone parent families (the majority of which are headed by women), and Aboriginal families.<sup>27 28</sup> A recent report also noted that the depth of poverty is a major concern for low income families in Manitoba, particularly for families who receive social assistance or disability assistance.<sup>29</sup>

Income assistance provides financial help to Manitobans who have no other way to support themselves or their families. The percentage of Manitoba families receiving income assistance has been stable, at around 5% between 2006/07 and 2010/11, and is below the Canadian average. Of the provinces, Manitoba consistently has among the lowest percentage of the population receiving income assistance.<sup>26</sup> The percentage varies depending on where you live. For example, in Winnipeg's River East, Inkster, Downtown and Point Douglas communities, rates are much higher than in other Winnipeg community areas.

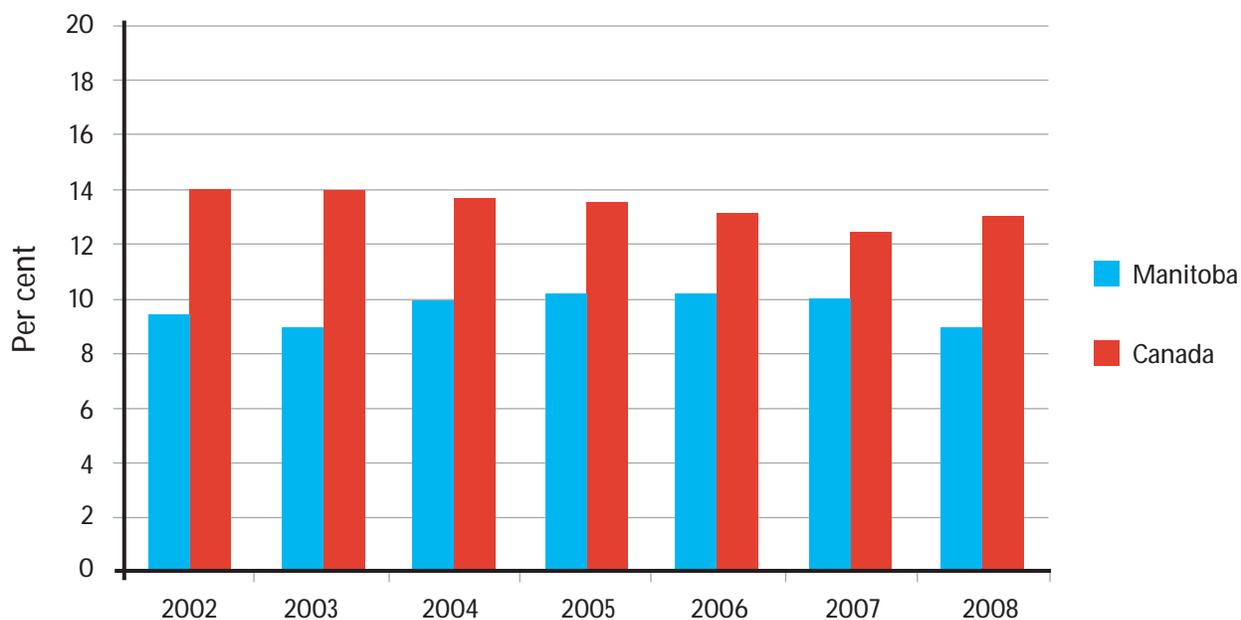
Research has shown that the percentage of Manitoba families receiving income assistance is higher in families with children.<sup>30</sup> A recent Manitoba study found that the proportion of women giving birth who received income assistance decreased from 16% in 2003/04 to 14% in 2008/09, with rates varying widely depending on the region of the province or community area within Winnipeg.<sup>31</sup>

In addition, there is a significant gap in income between the lowest income and highest income groups. Over the last 20 years, this gap in average household incomes has more than doubled for both rural and urban communities in Manitoba. Growing income inequality is accompanied in many cases by profound gaps in health status, including key indicators of child health such as child (under age five) mortality, dental extraction, and the UNICEF index of child wellbeing.<sup>32 33</sup>

## b) Housing

Appropriate shelter is considered a basic prerequisite for good health, and this is particularly true for children. As young children grow and spend more time indoors, they are particularly vulnerable to the environmental effects of substandard housing. Children from low income families are more likely to live in older homes that are damp or moldy, are in poor condition, or were constructed with harmful materials such as lead or asbestos. Studies show that children living in crowded, inadequate or unsafe housing conditions are at an increased risk of 1) chronic and infectious diseases (e.g., influenza, tuberculosis, meningitis, respiratory and gastrointestinal problems); 2) poor parent-child relationships (e.g. parental stress and worry may result in parents who are less responsive or involved, and parenting that is more hostile or rigid); 3) psychological problems (feelings of powerlessness or helplessness, insufficient sleep, fatigue); 4) poor school performance; 5) injuries in the home; and 6) malnutrition due to money being needed for housing costs.<sup>34</sup> Poor housing conditions in childhood are also associated with a higher likelihood of infectious diseases in adulthood and increased adult mortality.<sup>35</sup>

Figure 7: Urban core housing need



Source: Statistics Canada<sup>(1)</sup>

*Core housing need* refers to housing that is inadequate, unsuitable, or unaffordable.<sup>(2)</sup> Manitoba continues to have fewer families in core housing need compared to the rest of the country. Figure 7 shows that in 2008, 9% of urban households in Manitoba were in core housing need, compared to 13% in Canada.

Aboriginal people make up a disproportionately large share of those experiencing substandard housing in Canada. Living conditions in First Nations communities are often poor, and much of existing housing stock requires major repair.<sup>36</sup> In Winnipeg, 5% of the Aboriginal population lives in crowded dwellings, compared to 3% of the non-Aboriginal population; 16% of the Aboriginal population lives in dwellings in need of major repair, compared to 8% of the non-Aboriginal population.<sup>(3)</sup>

<sup>(1)</sup> Survey of Labour and Income Dynamics (SLID). Note: SLID data cover only households in Census Metropolitan Areas (pop. >100,000) and Census Agglomerations (pop.>10,000) in the provinces. In Manitoba, the percentage of households that are in CMAs and CAs is 73.5%.

<sup>(2)</sup> A household is in core housing need if its housing does not meet one or more of the following: 1) adequacy: housing does not require any major repairs, 2) suitability: housing has enough bedrooms for the size and composition of household, and 3) affordability: housing costs less than 30% of before-tax household income. The vast majority of Canadian households in core housing need are unable to meet the affordability standard.

<sup>(3)</sup> "Crowding" is defined as more than one person per room. Dwelling in need of major repairs are those that, in the judgment of the respondent, require major repairs to such things as defective plumbing or electrical wiring, and/or structural repairs to walls, floors, or ceilings, etc. (Statistics Canada, Census of Population, 2006.)

## c) Food insecurity

*Food insecurity* is the term used to describe hunger in rich countries, and it is an important determinant of child health outcomes, including chronic conditions and mental health problems. Food insecurity is closely related to poverty and inequality, and is associated with decreased consumption of healthy, nutrient-rich foods. People in food-insecure households consume fewer fruits, vegetables, milk products, and vitamins than people in food-secure households, and such dietary deficiencies can lead to malnutrition, impaired growth and development, and chronic diseases such as heart disease and food allergies. Food insecurity is also related to feelings of stress and uncertainty, which negatively affect health.<sup>37</sup> In Canada, families that are more likely to experience food insecurity include lone parent families, families receiving social assistance, and Aboriginal families.<sup>38</sup>

The percentage of Manitoba families struggling to access food is higher in Manitoba than in Canada. In 2007/08, 9% of Manitoba households were moderately or severely food insecure, compared to less than 8% of Canadian households.<sup>(14)</sup> The highest rate of food insecurity occurs in families with young children (see Early Childhood chapter). Parents may experience more severe food insecurity because they sacrifice some of their own food in order to feed their children.

One factor that may impact food insecurity is the cost of food. A recent food costing study found that the average monthly cost of healthy eating for a family of four in Manitoba in May 2011 ranged from \$832.66 in Brandon region to \$1184.91 in Burntwood region, and from \$778.90 to \$860.80 in various areas of Winnipeg. Although the cost of eating healthy was similar in many areas of the province, and competitively priced food was available in most areas (with exceptions in very remote/northern areas), transportation costs to purchase food in larger, full service grocery stores were not included in the calculations. In areas where access to healthy foods is low, this becomes a significant factor in the cost of obtaining food. Availability of nutritious foods is also related to the size of grocery stores, with smaller stores having fewer options.<sup>39</sup>

Dependency on food banks is another indicator of food insecurity and reflects deep poverty. Food banks offer emergency assistance to those who need food. Over the past decade, food bank usage has increased across Canada and in Manitoba. In March 2012, food banks provided emergency food assistance to 63,482 people across Manitoba. This figure was up 50% from March 2002, and up 14% from March 2011. Almost half (48%) of those assisted in March 2012 were children.<sup>40</sup>

<sup>(14)</sup> Food insecure households are those that reported more than one sign of difficulties accessing food due to a lack of money during the previous year. These signs may include one or more household members reducing the size of meals, skipping meals or not eating for an entire day. Moderately food insecure households are those that reported multiple indications of food access difficulties due to a lack of money, but few, if any, signs of reduced food intake. Severely food insecure households are those that reported multiple indications of reduced food intake and disrupted eating patterns due to a lack of money for food. (Source: Statistics Canada, Canadian Community Health Survey, Table 105-0546.)

## SUMMARY

- Manitoba has a higher percentage of children and youth, as a proportion of the total population, than the Canadian average. However, this percentage has been declining.
- Despite this decline, we can expect an increase in the number of children in the years to come, primarily because Manitoba's birth rate continues to rise and remains above the Canadian average.
- There are important regional differences: the proportion of children and youth is highest in the North and has been stable, and the birth rate in the North continues to be higher than in other parts of the province.
- Most families in Manitoba (71%) are two parent families, however approximately 12% are lone-parent families. Children in lone parent families are at a higher risk of poverty.
- Manitoba's Aboriginal and newcomer populations are significantly younger than the Manitoba average. In 2006, over 33% of Aboriginal peoples and 31% of Manitoba's newcomers (who arrived since 2001) were under the age of 15.
- French as a mother tongue has declined slightly in Manitoba. In spite of the increasing proportion of exogamous (French-English) couples, the transmission of French to children has increased.
- The proportion of children in care (as a percentage of children in Manitoba ages 17 and under) increased, while the proportion of children in a family receiving protection or support services from Child and Family Services decreased.
- From 2000 to 2010, the low income rate, as measured by the Market Basket Measure (MBM) threshold of the basic basket of goods and services, decreased by 28% for all children under 18 and by 21% for children in female lone parent families.
- While the number of children in low income families has declined, some children in Manitoba are more likely to experience low income, including those in lone parent families (the majority of which are headed by women) and Aboriginal families.
- In 2008, Manitoba had fewer urban families in core housing need (9%) compared to Canada as a whole (13%). Housing is an important concern for Aboriginal families.
- In 2007/08, 9% of Manitoba households were moderately or severely food insecure, compared to 8% of Canadian households. Households with young children are more likely to be food insecure. Use of food banks has increased over the past decade across Canada and in Manitoba.

## Chapter 3: Prenatal



# Chapter 3: Prenatal

Starting at conception, each embryo undergoes the amazing transformation from a single cell into a complex human being composed of specialized organs such as bones, skin, muscles, lungs, heart, and brain. The growth of that one cell into the billions of specialized cells that make a human being is highly sensitive to, and greatly influenced by, the surrounding environment in the womb, and the environment surrounding the mother. Small changes in the physical and social environments experienced by parents can have important effects on the embryo as it develops.<sup>41 42</sup>

## I. Physical Health during Pregnancy

The first three months of pregnancy are a critical period during which many organs are beginning to develop, including neural structures that develop into the brain and spinal cord.<sup>43</sup> The embryo is most sensitive to the mother's physical health during this period. What she eats and drinks, as well as her exposure to environmental toxins or infectious diseases, can affect the developing embryo.

### a) Alcohol consumption and drug use during pregnancy

It is well known that alcohol consumption during pregnancy can have serious effects on fetal development, including the development of social, emotional, mental and behavioural problems associated with alcohol related neurodevelopmental disorders, such as Fetal Alcohol Spectrum Disorder (FASD). Alcohol consumption during pregnancy remains a focus of prenatal health because of the serious and permanent effects it may cause, how common it still is, and because it is preventable.

## FASD

FASD is a lifelong disability caused by maternal alcohol use during pregnancy. The effects of FASD can include physical, intellectual, learning and social disabilities. It is not known exactly how common FASD is, but Health Canada estimates the incidence to be 9 in every 1000 births.

The Manitoba FASD Centre data show that the overall percentage of Manitoba children diagnosed with FASD was steady at 0.2% between 2000/01 -2004/05 and 2005/06 -2009/10. The percentage diagnosed was significantly higher in the North, and significantly lower in the Rural South. Both rural and urban low income areas of Manitoba had a higher percentage of children diagnosed with FASD compared to higher income areas.<sup>22(15)</sup> Not all children with FASD in Manitoba are assessed, so the percentages should not be considered to represent all children with FASD.

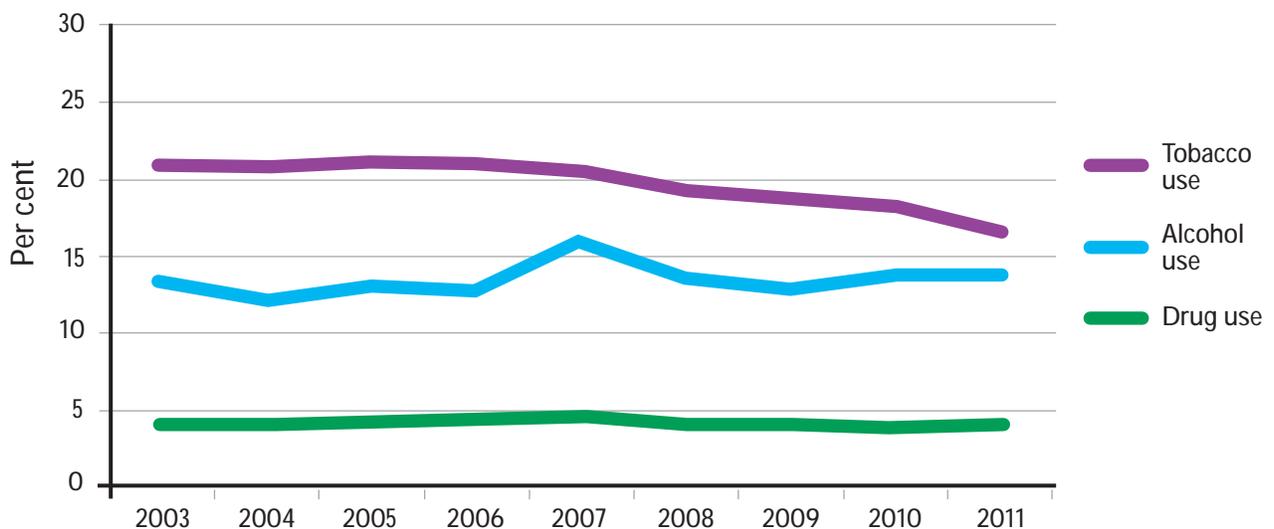
A safe limit of alcohol use has not been determined, so it is recommended that women avoid alcohol completely when pregnant, or when planning pregnancy, to avoid these potential risks.

<sup>(15)</sup> Note: Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); Mid= North Eastman, Interlake, and Parkland RHAs; North= Burntwood, NOR-MAN, and Churchill RHAs.

Manitoba is the first jurisdiction in Canada to implement the collection of population-level information on the prevalence of maternal alcohol use during pregnancy. Public health nurses in Manitoba visit most mothers with newborns (approximately 84%) to see how mother and baby are doing. During this visit, they ask mothers a number of questions about their pregnancy and delivery using a questionnaire called the Families First Screen.

According to information collected with this screen, the percentage of women reporting that they consumed alcohol at some point during pregnancy has increased somewhat since 2003, with 14% of women reporting alcohol consumption during pregnancy in 2011 (see Figure 8).<sup>44</sup> This increase may reflect a true increase in alcohol consumption, but it may also reflect more comfort on the part of public health nurses asking the question during the screening process, or nurses getting better at accessing hard-to-reach families who may be more likely to consume alcohol.<sup>31</sup> A recent study found that maternal alcohol consumption was more common among women who were younger, were lone parents, were receiving income assistance, lived in lower income areas, had not completed Grade 12 education, or had inadequate prenatal care. Other studies have found that Aboriginal and Francophone women had higher rates of alcohol use during pregnancy than other Manitoba women.<sup>45 46</sup>

Figure 8: Alcohol, tobacco, and drug use during pregnancy in Manitoba



Source: Families First Screen, Healthy Child Manitoba

There is a lack of quality Canadian data on drug use during pregnancy, and the short- and long-term consequences of prenatal exposure to illicit drugs are not fully understood. Infant outcomes and child development are affected by many other factors, including multiple drug use, nutrition, and poverty, making it difficult to determine the direct effects of illicit drugs.<sup>47</sup>

Figure 8 shows that the percentage of new mothers reporting drug use during their pregnancy has been relatively low and steady in Manitoba, at less than 5%. Rates differ by region and community area, and are higher for women who are younger, lone parents, socially isolated, living in lower income areas; have not completed grade 12; or had inadequate prenatal care.<sup>31</sup>

### b) Tobacco use during pregnancy

Maternal cigarette smoking can have adverse health effects on the fetus, and is associated with an overall increased risk of infant sickness and death. It increases the risk of premature birth, miscarriage, stillbirth, and sudden infant death syndrome (SIDS). Smoking during pregnancy is also associated with longer-term adverse effects in children, including inattention and attention-deficit/hyperactivity disorder, asthma, and some childhood cancers, including leukemia. The amount and duration of smoking is important, and women who smoke throughout pregnancy are at a higher risk of negative outcomes.<sup>48 49</sup>

Figure 8 shows that smoking during pregnancy has declined significantly in Manitoba, from 21% in 2003 to 17% in 2011, but rates remain considerably higher than those for Canada.<sup>31</sup> Smoking rates during pregnancy are higher among women from vulnerable populations. Women who are younger, and who have lower levels of education and income are more likely to smoke during pregnancy.<sup>31,48</sup> A study conducted in Manitoba found that smoking during pregnancy was more common among women who had inadequate prenatal care, had low support from others, were unmarried, and identified as First Nations or Métis.<sup>50</sup>

Exposure to second-hand smoke is also associated with poorer birth outcomes, particularly low birth weight. In Manitoba and Canada, the proportion of pregnant women reporting exposure to second hand smoke has also decreased over time.<sup>48</sup>

### c) Nutrition during pregnancy

Proper nutrition is important for a healthy pregnancy and a healthy baby. Pregnant women need additional calories as the baby grows, as well as additional nutrients that they may not be getting from their regular diet, including folate (folic acid), iron, and omega-3 fatty acids. Low folate levels may increase the risk of brain and spinal cord problems such as spina bifida among infants, while iron-deficiency anemia during pregnancy is linked to an increased risk of preterm delivery, low birth weight, stillbirth, and newborn death.<sup>43</sup> Iron-deficiency anemia also affects the mother's energy level and immunity. Studies have shown that omega-3 polyunsaturated fatty acid supplements (e.g., fish oil) are associated with a reduction in pre-term births.<sup>51 52</sup>

Rates of folic acid supplementation have increased in Canada. In 2000/01, 47% women who gave birth in the previous five years reported taking folic acid supplements before they found out that they were pregnant, and this increased to 58% in 2005. Folic acid supplementation increases with maternal age and level of maternal education. In 2005, the rate in Manitoba (47%) was lower than the overall Canadian rate.<sup>48</sup>

Prenatal malnutrition can result in increased risk of brain and nervous system problems in infants, including mental illness and learning impairment.<sup>53,54</sup> Research has also linked inadequate maternal nutrition with adverse short-term and long-term effects in children, including childhood and adult obesity, type-2 diabetes, high blood pressure and cardiovascular disease.<sup>55,56,57</sup> Maternal nutrition also impacts the developing immune system; under-nutrition can lead to release of stress hormones in the mother that impair the infant's immune system development. Adults who experienced prenatal and early childhood under-nutrition are more likely to die from infections.<sup>58</sup> Because many serious and avoidable consequences are associated with improper nutrition, prenatal care is important. Low income pregnant women may need additional support in order to meet nutritional requirements.

Overconsumption of calories during pregnancy can also lead to adverse child outcomes, including diabetes and other hormonal disorders.<sup>59</sup> Heavier women also have a greater risk of developing gestational diabetes (GDM) and type-2 diabetes. The prevalence of GDM has increased in Manitoba, and the rate is three times higher among First Nations women than among non-First Nations women.<sup>60</sup> According to the 2002-2003 Manitoba Regional Health Survey, one in eight First Nations women reported having gestational diabetes. Women who have had GDM and their infants are at increased risk of developing type-2 diabetes, with infants further at risk of being high birth weight.<sup>61</sup> Babies born with a high birth weight are at increased risk of developing diabetes even if the mother did not have diabetes.<sup>62</sup>

## II. Social and Emotional Health during Pregnancy

The social and emotional health of the mother and the family are important determinants of the well-being of pregnant women and the health of their newborns.<sup>63</sup> Supportive families and communities are keys to reducing the risk of maternal distress and other adverse issues.

### a) Stress

Pregnancy is a time of significant life change and for some women, increased stress.<sup>64</sup> While a moderate level of stress hormones passing from mothers to the developing fetus is essential for the development of organs such as the lungs and the brain,<sup>65</sup> high levels of stress hormones may have harmful effects on the development of the fetus, increasing the risk of pre-term birth<sup>66</sup> <sup>67</sup>, as well as potential deficits in children's physical, social and emotional development. Among the developmental risks are attention deficit and hyperactivity, anxiety, and language delay.<sup>68</sup>

One source of stress for expecting mothers is relationship distress, or even violence. Abuse (including physical, emotional, and sexual abuse) during pregnancy is associated with adverse pregnancy outcomes and poorer maternal and infant health. Factors associated with physical violence during pregnancy include young maternal age, low level of education or income, single marital status, as well as high levels of stress.<sup>69</sup>

A study found that the proportion of Canadian women who reported physical or sexual abuse in the past two years was 11%, but was higher in Manitoba, at approximately 17%. When asked if the abuse happened during pregnancy, 31% of Canadian women who experienced abuse reported that this had been the case. For 82% of these women, the person perpetrating the abuse knew she was pregnant. Compared with before pregnancy, the level of violence during pregnancy decreased for 47% of Canadian women, and increased for 5% of Canadian women who reported abuse. The level of violence after the birth of the baby decreased for 52% and increased for 16% of Canadian women who reported abuse.<sup>69</sup>

Figure 9 shows that the percentage of mothers reporting relationship distress or violence has declined slightly in Manitoba, from 7% in 2004 to 6% in 2011.

## b) Social support

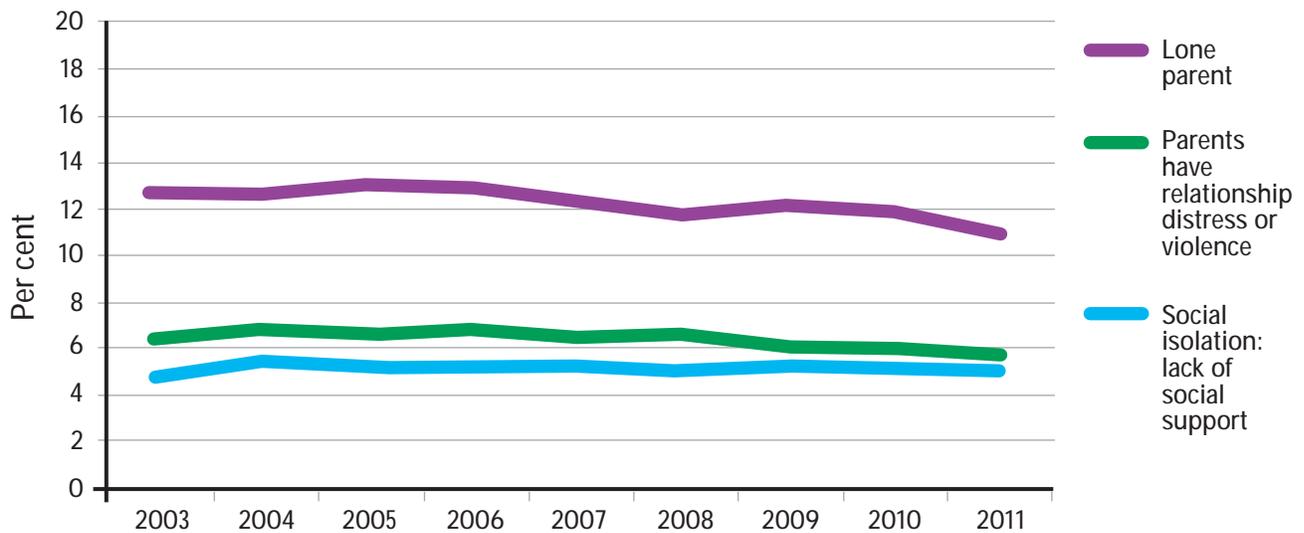
Social support is an important determinant of health, and comes in many forms. Many of us think primarily about social companionship and emotional comfort, but social support may also take the form of informational or financial support. Evidence shows that social support provides a sense of love and belongingness, and also helps to buffer the negative effects of toxic stress.

While social support is important to the mother's health, it is also associated with birth outcomes, as well as the infant's future health as an adult. Research has shown that babies born to mothers with low social support during early pregnancy had an increased risk of lower birth weight, pre-term birth, and problems in neurological development, likely due to the mother's stress response and elevated stress hormones.<sup>70</sup> Lack of social support also increases the risk of child and domestic abuse, and post-partum depression.<sup>71 72</sup> On the positive side, strong support systems can be protective, particularly when there are additional risk factors such as smoking and chronic distress.<sup>70</sup> Teenage mothers who receive social support from their friends, family, and partners have better psychological health and healthier birth weight babies, especially if they are low income.<sup>73</sup>

One source of social support in the prenatal stage is a spouse or partner. Research has shown that a partner's support benefits the mother's well-being as well as the child's health and development. Compared to women whose partners were not involved in their pregnancy, women whose partners were involved were more likely to access prenatal care, and more likely to reduce their alcohol, tobacco, and drug use.<sup>74 75</sup> In addition, fathers who are involved at the prenatal stage are more likely to be engaged with their child in the early childhood years, which will benefit fathers and their children.<sup>76</sup>

Figure 9 shows that the percentage of mothers reporting social isolation (a lack of social support) has been steady and relatively low in Manitoba, at around 5% between 2003 and 2011. A recent Manitoba study found that higher rates of social isolation were reported among women who had less than Grade 12 education, were older (40+), were receiving income assistance, were lone parents, or lived in lower income areas of the province.<sup>31</sup>

Figure 9: Social support and stress



Source: Families First Screen, Healthy Child Manitoba

Although lone parenthood does not necessarily equal a lack of social support, parenting alone can be a potential source of stress. Figure 9 shows that the percentage of lone parent mothers in Manitoba has decreased significantly, from 13% to 11%.

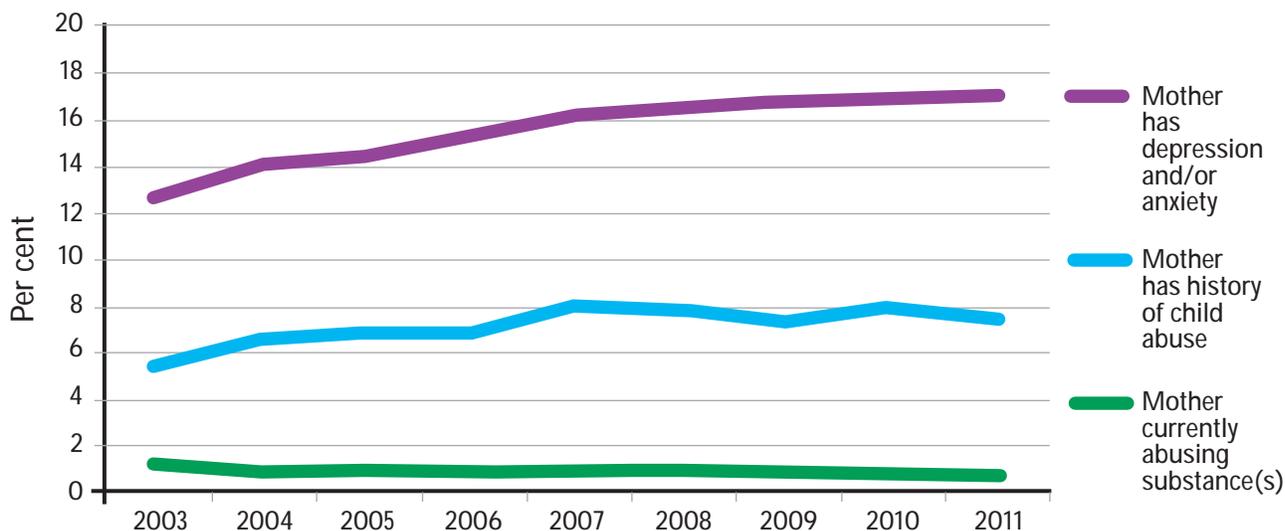
### c) Maternal mental health

Some women develop a mental health problem before, during, or after pregnancy. Although women from all social backgrounds can experience poor maternal mental health, the risk is increased for women who have experienced poverty, stress, family violence or abuse, a previous history of depression, pregnancy and delivery complications, and low social support. Aboriginal women, newcomer women, and Francophone women are more likely to experience maternal depression.<sup>46 77 78</sup>

Mood and anxiety disorders of parents are important in the psychological and social development of children, even before they are born.<sup>79</sup> Maternal depression is a significant risk factor for cognitive functioning and behavioural difficulties in infants<sup>80 81</sup>

Figure 10 shows that between 2003 and 2011 in Manitoba, there appears to have been an increase in depression and/or anxiety (from 13% to 17%), as well as mothers reporting a history of child abuse (from 5% to 8%). However, this may be due to increased reporting of mental health issues through the Families First Screen, rather than an increase in depression or anxiety. One factor explaining the increase may be that public health nurses are better trained and more confident to address mental health issues. Further, the stigma associated with mental health issues may be declining, making mothers more comfortable discussing their mental health.

Figure 10: Maternal mental health



Source: Families First Screen, Healthy Child Manitoba

A recent Manitoba study found that the rate of women who sought physician care, were hospitalized, or received pharmacological treatment for prenatal psychological distress increased significantly in Manitoba between 2001/02 and 2008/09, from 6.5% to 7.5%. This rate may reflect a true increase, or it may reflect increased access to treatment services.<sup>31</sup>

Figure 10 shows that the percentage of mothers reporting that they currently abuse drugs is very low and has decreased to just under 1%.

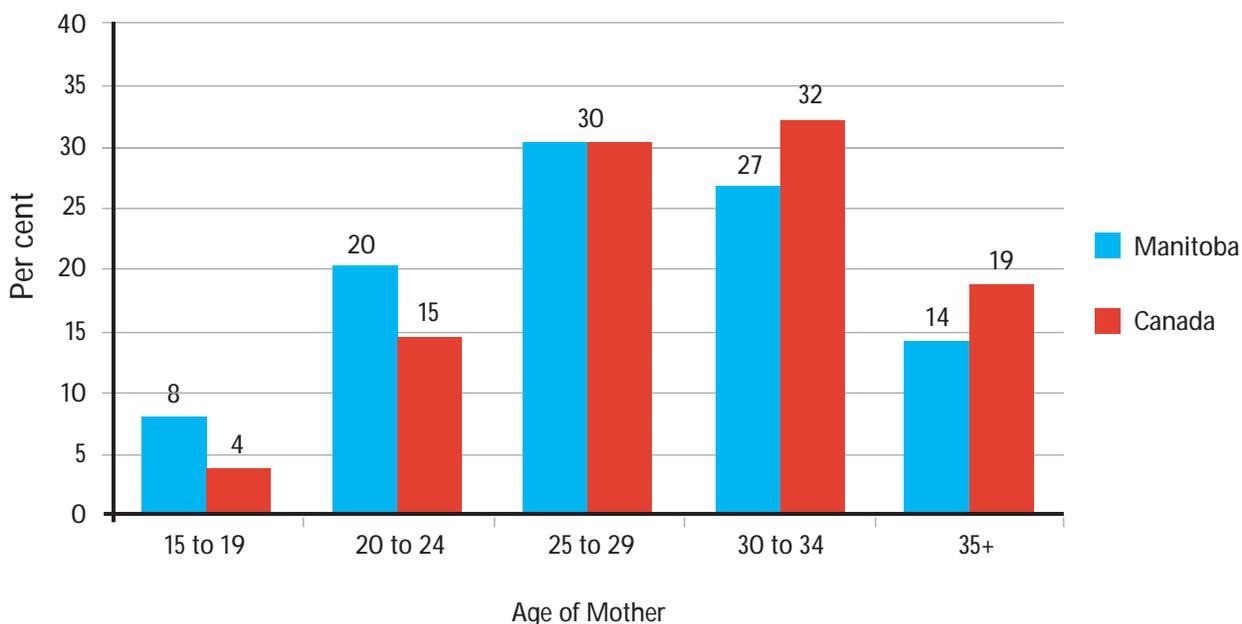
### III. Demographic and Socio-Economic Factors in Pregnancy

Demographic and economic factors play an important role in a healthy pregnancy. The age, education, and income of the mother, as well as her access to health care, have an impact on the healthy development of the fetus.

#### a) Age of mother

In 2010, over three quarters of women who gave birth were between the ages of 20 and 34, in both Manitoba (78%) and in Canada overall (77%). Figure 11 shows that in Canada, there was a higher percentage of older mothers (30 and older), while in Manitoba there was a higher percentage of younger mothers (24 and younger).

Figure 11: Live births, by age of mother (2010)



Source: Statistics Canada<sup>82</sup>

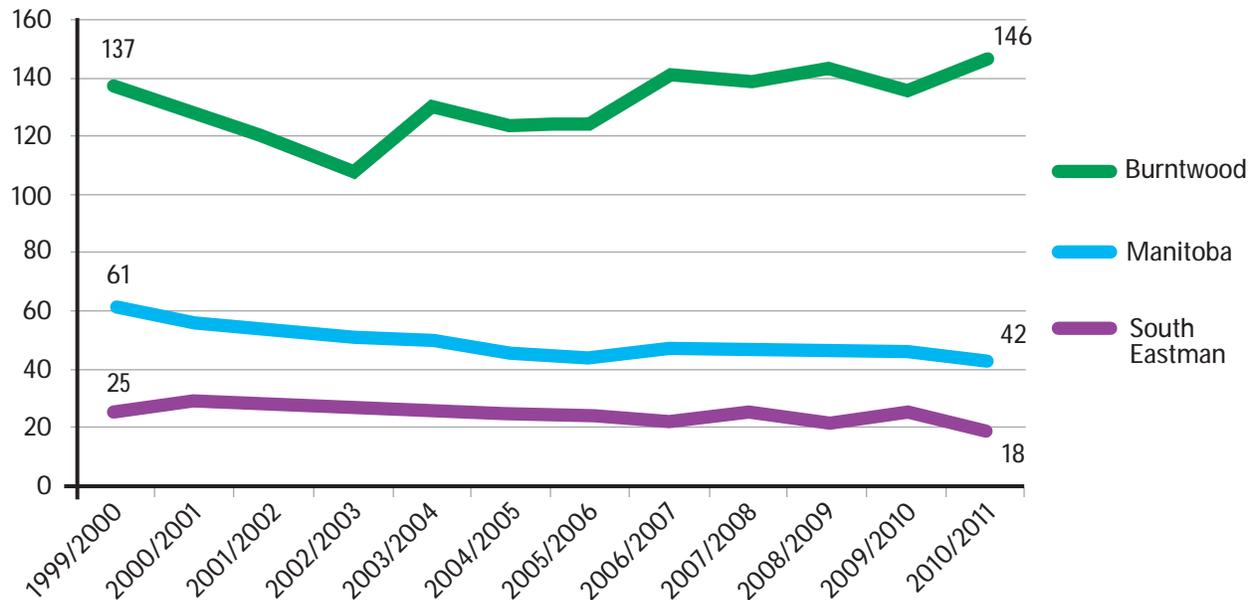
The age of the mother during pregnancy and at the birth of her child is an important predictor of several outcomes. For example, teenage pregnancy has a number of risks for both mother and child.<sup>83</sup> Teenage women tend not to take as good care of themselves when they are pregnant: they are less likely to eat a nutritious diet, and less likely to get prenatal care.<sup>84</sup> Compared to other teenagers, teenage mothers are more likely to be socially isolated, have mental health problems<sup>85</sup>, and have fewer educational and employment opportunities.<sup>86</sup> Compared with children of older

mothers, children born to teen mothers are more likely to have lower birth weights, increased risk of infant mortality, and increased risk of hospital admission in early childhood.<sup>87</sup> Research has shown that children of teen mothers have poorer social, educational, and health outcomes than other children.<sup>88</sup> Children born to teen mothers are also more likely to have less supportive home environments, poorer cognitive development and, if female, a higher risk of becoming teenage mothers themselves.<sup>89</sup> In Manitoba, children born to teen mothers are much more likely to receive services from Child and Family Services.<sup>90</sup>

About four per cent of Manitoba teens get pregnant, more commonly among Aboriginal (First Nations and Metis) and northern Manitobans and women living in low-income areas of Winnipeg.<sup>91,92</sup> Nearly one-quarter of all births in the First Nations population are to teen mothers, and 90% of these births are to single women.<sup>93</sup>

The teen pregnancy rate<sup>(16)</sup> for females ages 15 to 19 has been declining steadily in Manitoba. Figure 12 shows that there are regional differences: in 2010/11, the provincial rate was 42/1000, but the rates ranged from a low of 18/1000 in South Eastman region, to a high of 146/1000 in Burntwood region. Between 2000/01-2004/05 and 2005/06-2009/10, in both rural and urban areas, the teen pregnancy rates were higher in lower income areas.<sup>22</sup>

Figure 12: Teen pregnancy rate in Manitoba



Source: Manitoba Health

<sup>(16)</sup> The teen pregnancy rate was calculated by taking the ratio of all live births, stillbirths, therapeutic abortions and spontaneous abortions for all females aged 15 to 19 to the total female population of the same age. This is then multiplied by 1,000.

The teen birth rate<sup>(17)</sup> was steady at 31/1000 between 2000/01-2004/05 and 2005/06-2009/10, and rates were higher in lower income areas.<sup>22</sup> In 2010, the percentage of live births to teen (15 to 19) mothers in Manitoba (8%) was double the percentage in Canada (4%) (see Figure 11).<sup>82</sup> The percentage in Manitoba was stable from 2001/02 to 2008/09, but there were significant declines in Brandon and Winnipeg.<sup>31</sup>

Pregnancies and births at ages 35 and older are also associated with a higher risk of pregnancy and birth complications (e.g., hypertension, cesarean birth), and poorer birth outcomes (e.g., preterm birth, low birth weight). In 2010, 14% of Manitoba women who gave birth were 35 years of age or older, compared to 19% for Canada overall (see Figure 11).<sup>82</sup> A recent Manitoba study found that the overall rate of women having their *first* live birth at age 35 and older is low for Manitoba, at 3%. From 2001/02 to 2008/09, data show an increasing trend for births to older mothers, particularly in Winnipeg and Brandon. Women of higher socioeconomic status, those who have completed grade 12, and those who were married or partnered were more likely to delay childbearing.<sup>31</sup>

## b) Socioeconomic status

In the previous sections, we have seen that many pregnancy outcomes are associated with the mother or family's socio-economic status, including income and level of education.

Socioeconomic status is an important factor in healthy pregnancy and healthy babies, with higher levels of income and education associated with better outcomes. Low maternal education, defined as the number of mothers with less than a high school education, is typically linked with less healthy choices, including those related to maternal smoking, exposure to second-hand smoke, alcohol consumption during pregnancy, and lower rates of breastfeeding initiation and exclusive breastfeeding.<sup>48</sup> In addition, low maternal education is correlated with younger maternal age, less health care utilization, and poverty. As a result, low levels of maternal education are associated with several adverse birth and infant outcomes, including premature birth, small-for-gestational age, stillbirth and infant death.<sup>94</sup>

For these reasons, it is encouraging to observe an increase in the proportion of Canadian mothers who complete college or university.<sup>48</sup> Figure 13 shows that in Manitoba, the percentage of new mothers with less than a high school education is higher than the national average<sup>31</sup>, but declined significantly from 22% in 2003 to 18% in 2011. Between 2003/04 and 2007/08, Francophone women were more likely to have completed high school than other women in Manitoba.<sup>46</sup>

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<sup>(17)</sup> The teen *birth* rate is the ratio of live births for females aged 15 to 19 to the total female population of the same age.

Figure 13: Socioeconomic status of mothers with newborns



Source: Families First Screen, Healthy Child Manitoba

Paternal education is also important. Fathers with less than a high school education are significantly less likely to be involved in their partner's pregnancy, which has implications for the mother's health behaviours and likelihood of accessing prenatal care.<sup>95</sup> (see social support section in this chapter)

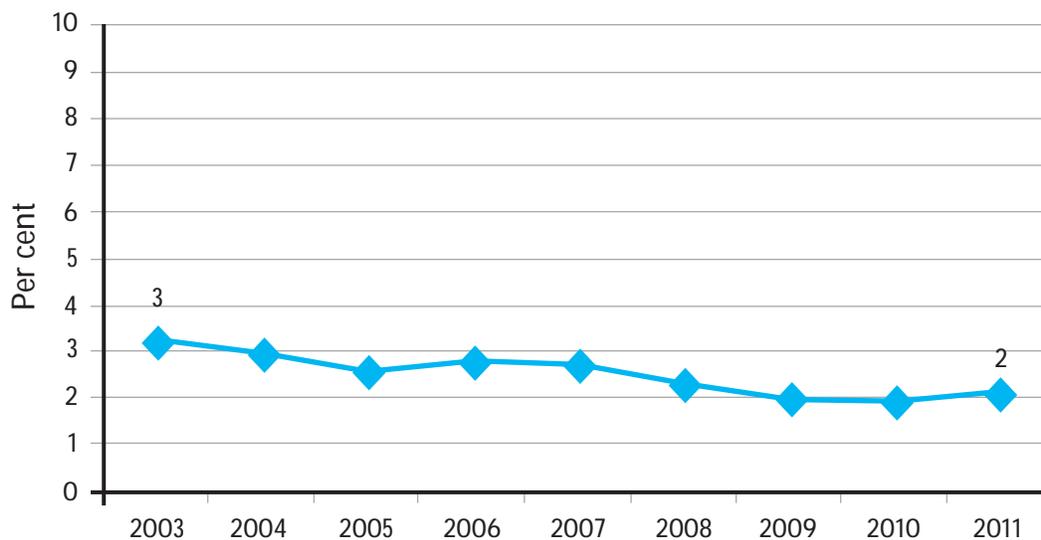
The percentage of Manitoba families reporting financial difficulties fluctuated between 2003 and 2011, at between 16% and 18% (see Figure 13).

### c) Prenatal care

Prenatal care is important for reducing risks to both the mother and infant. The Society of Obstetricians and Gynaecologists of Canada recommends that women have visits for prenatal care every four to six weeks in early pregnancy, every two to three weeks after 30 weeks gestation, and every one to two weeks after 36 weeks gestation.<sup>96</sup> However, appropriate prenatal care depends on the circumstances of each mother and pregnancy. Prenatal care provides a pregnant woman with the opportunity to obtain health information. It is also important for determining the physical health of the mother and developing child, through diagnostic tests for infectious diseases and genetic or chromosomal disorders, and evaluations of the social and emotional needs of the mother and family.<sup>43</sup> Adequate prenatal care is associated with a number of positive outcomes including improved birth weights and reduced premature births.<sup>97 98</sup>

The percentage of women who had no prenatal care before the sixth month of their pregnancy is very low in Manitoba, and declined steadily from over 3% in 2003 to 2% in 2011. However, there are significant social inequalities in the use of prenatal care. Women living in neighbourhoods with the lowest average family income, highest rates of unemployment, lowest levels of education, and highest rates of lone parent families all have rates of inadequate prenatal care between two and three times higher than more advantaged areas. These concentrations of high inadequate prenatal care are clustered in the inner-city areas of Winnipeg and in northern Manitoba.<sup>99</sup>

Figure 14: No prenatal care before 6th month



Source: Families First Screen, Healthy Child Manitoba

A recent Manitoba study found that between 2001/02 and 2008/09, the rate of *late initiation of prenatal care* (after the first trimester) increased from 23% to 26%, the rate of *low number of prenatal visits* (less than five visits prior to delivery) increased from 4.7% to 5.4%, and the rate of *inadequate prenatal care* (determined using the Revised Graduated Index of Prenatal Care Utilization) increased from 11% to 12.5%. There were regional variations for all three indicators, with higher rates in northern regions of the province and lower income areas of Winnipeg. Rates for all three indicators were also higher among women who had less than a grade 12 education, were younger (less than 25 years old), were a lone parent, were socially isolated, lived in lower income areas, or were receiving social assistance.<sup>31</sup>

The Healthy Baby Program in Manitoba includes two components: a prenatal benefit, and community support programs (see text box). A recent report found that the rate of women receiving the prenatal benefit in Manitoba increased from 19% in 2001/02 to 28% in 2007/08. The rate of women participating in the community support programs in Manitoba increased from 9.5% in 2004/05 to 13% in 2007/08, but varied widely depending on the region or community area in Winnipeg. Women who were young, receiving income assistance, a lone parent, socially isolated, had less than grade 12 education, or resided in lower income areas were more likely to receive the prenatal benefit and were more likely to participate in community support programs.<sup>31</sup>

## SUMMARY

The prenatal period is an incredibly sensitive time for human development. Many irreversible adverse mental and physical effects, particularly neurological disorders that alter the brain's architecture, are preventable during this period with adequate nutrition, appropriate prenatal care, and supportive family and community environments. Many of these lifelong conditions such as FASD have high costs for individuals, their families, and society.

Between 2003 and 2011 in Manitoba, the percentage of new mothers reporting that they<sup>(18)</sup>:

- consumed alcohol during pregnancy remained stable at between 13% and 14%
- used drugs during pregnancy remained low and steady at less than 5%
- smoked during pregnancy decreased from 21% to 18%
- had relationship distress or violence declined somewhat from 7% to 6%
- were socially isolated or lacked social support was steady and low at 5%
- suffered from depression or anxiety increased from 13% to 17%
- had experienced child abuse when they were young increased from 5% to 8%

The Healthy Baby Program was introduced in 2001 by the Healthy Child Manitoba Office, with the goal to promote prenatal and perinatal health. One component of the program is the *Manitoba Prenatal Benefit*, which consists of a monthly cheque provided during pregnancy, beginning in the second trimester. The prenatal benefit is available to women whose annual net family income is less than \$32,000. The maximum monthly amount is \$81.41, with almost 90% of recipients getting this amount. Along with the monthly cheque, information is provided regarding the benefits of good prenatal nutrition; the consequences of smoking, drinking, or taking drugs during pregnancy; the importance of regular prenatal care; the benefits of exercise and stress reduction; and the importance of early child development, including the benefits of breastfeeding. The second component of the program is *Healthy Baby Community Support Programs*, which are educational and supportive groups available to all women, regardless of income, from the prenatal period through to the infant's first birthday. These programs are free of charge, and encourage early, regular prenatal care, as well as promote healthy infant development. Most programs offer weekly groups, although in remote communities these may be offered on a bi-weekly or monthly basis. The programs generally include information on prenatal nutrition and health, as well as information on parenting. The programs also offer social support, milk coupons (during pregnancy and up to six months after birth), bus tickets to attend programs, and on-site child care.

<sup>(18)</sup> this data is from the Families First Screen. As this screen is given to approximately 84% of new mothers in Manitoba, it should not be seen as representative of all new mothers. Moreover, First Nations women on reserves are in federal jurisdiction and are not included.

- currently abused drugs was very low and decreased from just over 1% to under 1%
- had less than a high school education declined steadily from 22% to 18%
- had financial difficulties declined from 18% to under 16%
- had no prenatal care before the 6<sup>th</sup> month of pregnancy is very low, and declined steadily from over 3% to 2%

The teen pregnancy rate declined steadily from 61/1000 in 1999/00 to 42/1000 in 2010/11, and the teen birth rate was stable at 31/1000 between 2000/01-2004/05 and 2005/06-2009/10. In 2009, the percentage of live births to teen (15 to 19) mothers in Manitoba (9%) was more than double the percentage in Canada (4%).

Most of these indicators are improving or are stable. However, it is important to note that there are wide variations, and that women from vulnerable populations, particularly Aboriginal women and low income women, are more likely to experience one or more risk factors that may affect their pregnancy.

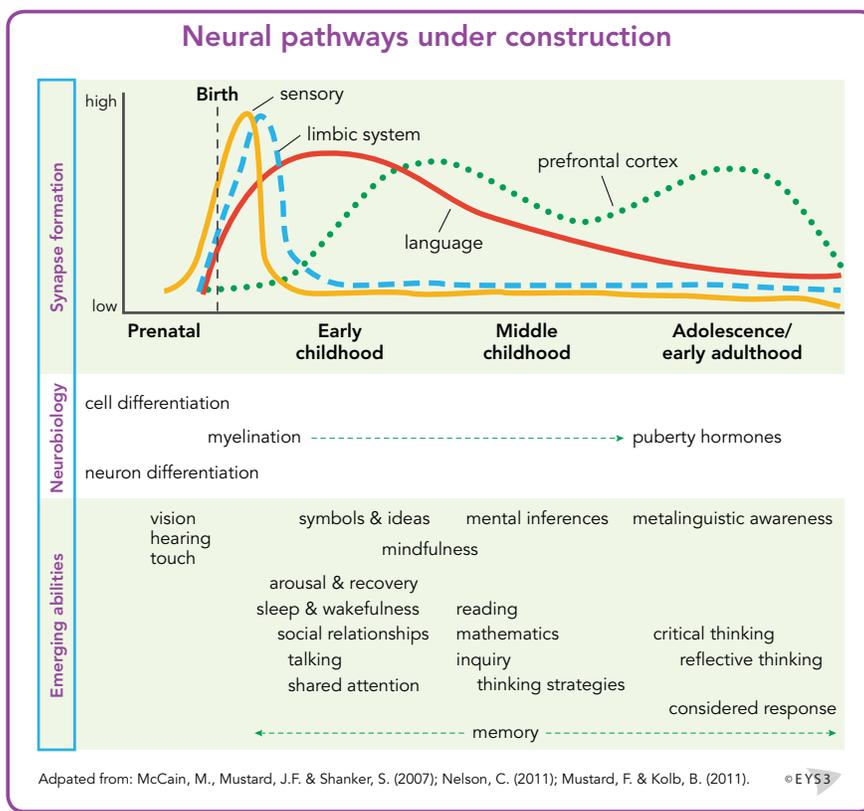
## Chapter 4: Early Childhood (Birth to Age 5)



# Chapter 4: Early Childhood (Birth to Age 5)

Infancy through early childhood is a period of “firsts”, beginning with our first breath, first words, first smiles, first steps, and first friends. The first five years of life after birth is a significant and sensitive period that can profoundly affect the future of the child for many decades to come.

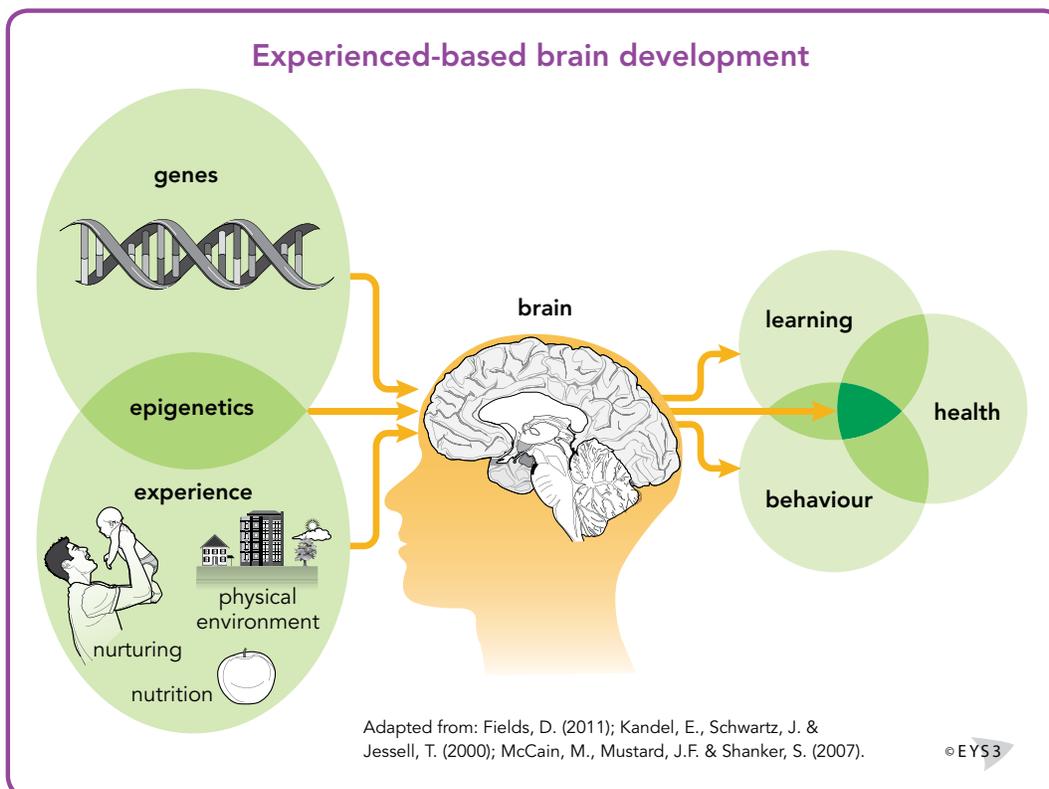
A remarkable amount of physical growth and change occurs in early childhood, and it occurs quickly. During infancy, many parents notice physical growth changes from one day to the next. Bones lengthen and harden, and muscles strengthen. The brain is also going through an extended and intense period of development: The dramatic growth in size and sophistication of a baby’s brain is a process that begins in the womb, and continues after birth. This is the most rapid period of brain development in one’s lifetime. From birth to the age of five, brain development is concentrated primarily in areas such as vision, hearing, language, and other mental processes.<sup>43</sup>



Source: McCain, M.N., Mustard, J. F., & McCuaig, K. (2011). *Early Years Study 3: Making decisions, taking action*. Toronto, ON: Margaret & Wallace McCain Family Foundation. (from p. 32).

For most children, motor skills also develop and improve. Babies learn to hold up their head, roll over, and crawl, and eventually learn to walk, often within the first year. Toddlers graduate to running, jumping, climbing, skipping, and riding a tricycle or bicycle.<sup>43</sup> These physical accomplishments are accompanied by a large expansion in language, emotional development and learning ability. Sometime, usually between 16 and 24 months, toddlers experience an explosion of language as they add new words every day, reaching a vocabulary of about 600 words by the age of two and a half.<sup>100</sup> By the time the average child is ready for kindergarten, they have learned as many as 15,000 words, equivalent to learning 10 words a day.<sup>101</sup>

In early childhood, brain development is very sensitive and responsive to all stimuli, both positive and negative. Experiences build the architecture of the brain, with young children ‘absorbing’ experiences from the social world.<sup>102</sup> Scientists refer to this period as being a time of “high plasticity”, meaning that the brain is highly flexible and adaptable, depending on its stimulation. With this plasticity comes vulnerability, and as a result, children show a great deal of variation in their development.<sup>103</sup> Children who grow up in a stimulating environment will develop more brain connections. This “serve and return” process of caring adults interacting back and forth with babies shapes the circuitry of babies’ brains. Conversely, brain pathways and connections that remain unused due to a lack of stimulation from caregivers may be ‘pruned’, or eliminated, which may have subtle but long-term effects on children’s later development.<sup>43</sup>



Source: McCain, M.N., Mustard, J. F., & McCuaig, K. (2011). *Early Years Study 3: Making decisions, taking action*. Toronto, ON: Margaret & Wallace McCain Family Foundation. (from p. 39).

The most important early social relationship is formed when an infant bonds with primary caregivers. Called attachment, this bond is a way of communicating between parent and child, as the parent learns how to respond to the child's needs and the child learns what to expect from a social relationship. Forming these early bonds is a process that happens over a series of many interactions and is open to positive and negative influences that can alter the pattern of interactions and the nature of the attachment bond. The life circumstances of the family (financial security, parental mental health, marital relationship) can promote or disrupt attachment, either helping the child to develop a sense of security, or conversely fostering a sense of insecurity.<sup>104, 105, 106</sup> In either case, the attachment bond affects how children develop socially and emotionally, and form social relationships later in life. The more secure the attachment is in infancy, the more likely the child is to form stable, secure relationships as an adult.<sup>107, 108</sup>

During the early years, child development is highly dependent on the social and physical environment. Toxic stressors (such as poverty, child maltreatment, and family violence) derail the healthy development of the brain. The family's social and emotional environment is an important contributing factor to the child's physical and emotional well-being. A stable home and secure community with access to basic requirements (such as housing and food) and freedom from physical and emotional harms is crucial for proper brain development and the best possible start in life. This security allows children to engage in the world inside and outside of the family and develop important social skills such as empathy, cooperation and sharing, and control over emotions. As children become more physically mobile and social, there are physical risks of accidents and injuries. Physical safety and security include appropriate parental care, safe homes, and safe neighbourhoods, including safe places to play.

The early childhood period builds from the foundation established in the prenatal period. As we learned in the previous chapter, mothers who have adequate nutrition, good social support systems, and access to prenatal care tend to have healthier babies. Once babies are born, healthy social and physical environments are important to ensure healthy child development. Developmental delays in physical, learning, or behavioural skills typically result in problems later on in school.<sup>109</sup> But children's paths are not set in stone, and children vary in their response to both positive and adverse childhood experiences.<sup>102</sup> Children who do not get the best start can show amazing resilience, and later influences and supports that encourage healthy development can help children to flourish.<sup>3</sup> Early interventions can reduce risk factors and enhance protective factors that affect children's development. Assessments that identify delays in development, and interventions that are implemented in a timely manner, are essential to promoting child health. Because child development is linked to broad factors such as nutrition, poverty and neighbourhood safety,<sup>110</sup> and is especially sensitive to the effects of stress,<sup>111</sup> attention to these determinants is important to the well-being of Manitoba's children.

# A. Physically and Emotionally Healthy (Early Childhood)

## I. Physical health

### a) Birth outcomes

Physical measurements of newborns can tell us a lot about the overall health of Manitobans and can also help us predict the likelihood of several adult health concerns. The majority of babies in Manitoba are born healthy. However, for those that are born with problems, the consequences can be serious, tend to occur more often in lower socioeconomic families, and are often preventable.<sup>112</sup>

Pre-term births<sup>(19)</sup> remain a leading cause of death and disability among newborns and infants.<sup>113</sup> Typically, pre-term infants are low birth weight<sup>(20)</sup> although not all low birth weight (LBW) infants are pre-term. LBW is a very important health measure, because it is associated with a wide range of health problems across the life course. The lower the birth weight, the higher the risk for of significant and lasting learning problems,<sup>114</sup> especially for boys. Studies have found that low birth weight boys have a higher risk of learning disabilities than low birth weight girls.<sup>115</sup> LBW is consistently related to the experience of chronic diseases in adulthood, including heart disease and type-2 diabetes.<sup>13</sup>

Risk factors for low birth weight (LBW) include maternal age (under 20 or over 35), tobacco and alcohol use during pregnancy, and nutrition.<sup>116</sup> Income also has an influence over the likelihood of low birth weight, as well as the risk of poorer outcomes from LBW. A Canadian study found that the LBW rate is 43% higher in the poorest income quintile than in the richest quintile area.<sup>117</sup> Low birth weight children born into low socioeconomic families are at a higher risk for lasting complications than those born into families with more resources.<sup>118</sup>

An infant's growth after birth is also important in predicting the likelihood of positive outcomes. Two commonly used measures are small-for-gestational-age (SGA) and large-for-gestational age (LGA). About 30% to 40% of SGA births in developed countries can be attributed to maternal cigarette smoking during pregnancy; genetically related factors account for about 20% to 30%; and nutritional factors (pre-pregnancy weight, weight gain and low caloric intake) for 10% to 15%. SGA births are associated with increased fetal and infant illness and death, and low birth weight.<sup>48</sup>

Possible risk factors for LGA include maternal diabetes, genetic predisposition and maternal diet. Accelerated fetal growth can result in birth complications for both the infant and the mother. In turn, high birth weight may increase the risk of type-2 diabetes later in the child's life. LGA births are more common among First Nations women, particularly those with gestational diabetes.<sup>48</sup>

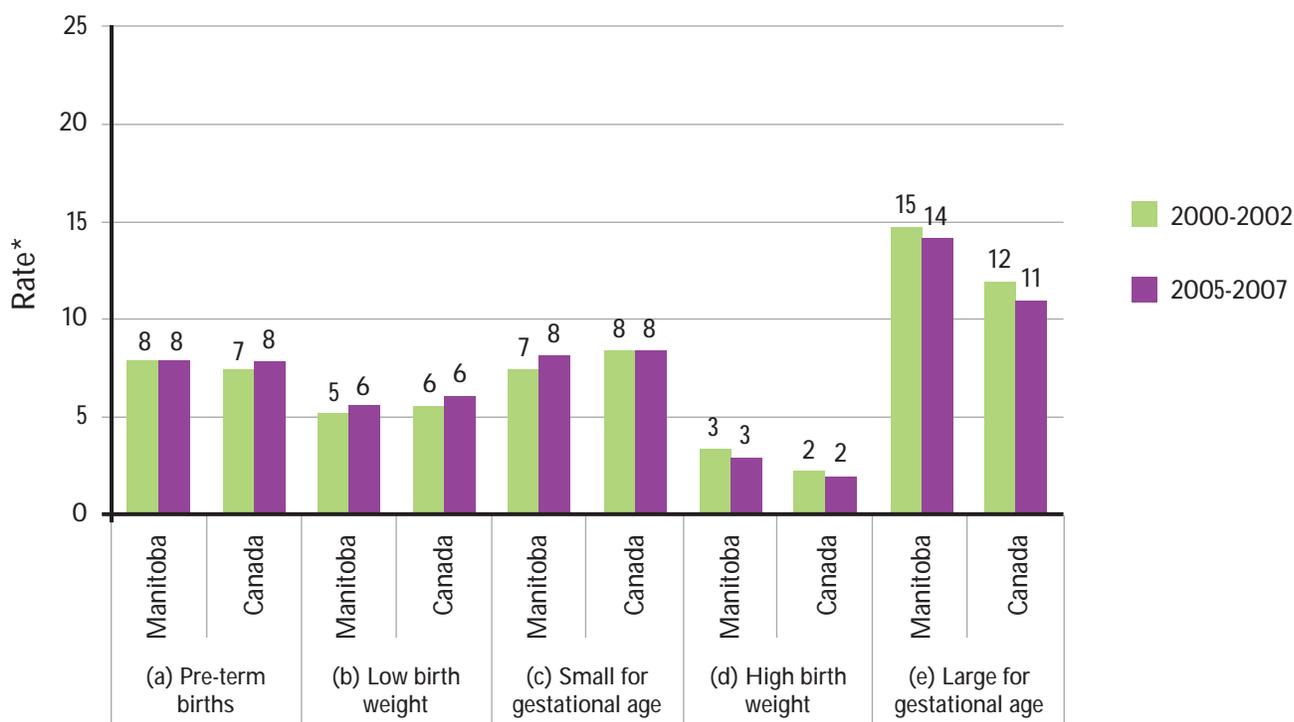
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<sup>(19)</sup> Defined as those that occur prior to 37 weeks gestation, or 3 weeks early.

<sup>(20)</sup> Less than 2500 grams.

Figure 15 shows that in Manitoba, the pre-term birth rate was stable between 2000-02 and 2005-07, and comparable to the Canadian rate. Low birth weight and small for gestational age both increased significantly in Manitoba, but both indicators were significantly lower than the Canadian rate in both time periods. For high birth weight and large for gestational age, rates in Manitoba decreased significantly, but were significantly higher than in Canada in both time periods.<sup>(21)</sup> A somewhat more recent Manitoba study found that rates of pre-term birth, SGA, and LGA were stable between 2001/02 and 2008/09.<sup>31</sup>

Figure 15: Birth-related indicators



Source: Statistics Canada<sup>(22)</sup> 19

<sup>(21)</sup> Note: Significant means statistically significant difference ( $p < 0.05$ .) Source: Statistics Canada, Canadian Vital Statistics, Birth Database. Table 102-4304 - Birth-related indicators (low and high birth weight, small and large for gestational age, pre-term births), three-year average, Canada, provinces, territories

<sup>(22)</sup> Rates for each indicator are defined as follows: (a) Pre-term births: Live births with a gestational age less than 37 weeks expressed as a percentage of all live births (gestational age known). (b) Low birth weight: Live births with a birth weight less than 2,500 grams, expressed as a percentage of all live births (birth weight known). (c) Small for gestational age: Live births with a birth weight less than the 10th percentile of birth weights of the same sex and the same gestational age in weeks, expressed as a percentage of live singleton births with gestational ages from 22 to 43 weeks. (d) High birth weight: Live births with a birth weight of 4,500 grams or more, expressed as a percentage of all live births (birth weight known). (e) Large for gestational age: Live births with a birth weight greater than the 90th percentile of birth weights of the same sex and the same gestational age in weeks, expressed as a percentage of live singleton births with gestational ages from 22 to 43 weeks. Numbers and rates in this table may differ from those found in similar data published by the Vital Statistics program as the data here have been tabulated based on postal codes available for place of residence

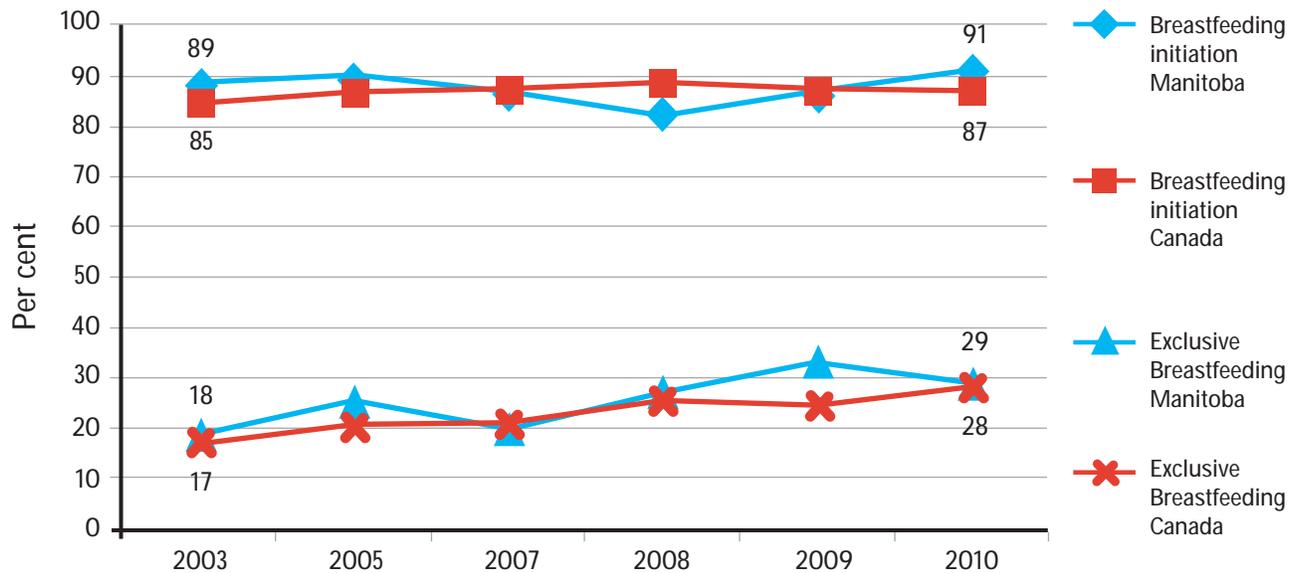
## b) Nutrition

A child's development is also greatly influenced by nutrition. Although the amount of food is important, the quality of food is also key, particularly in regards to important nutrients. Poor nutrition in childhood, including mild undernutrition and micronutrient malnutrition (shortage of vitamins and/or minerals), can alter children's development both physically and mentally. Conditions such as iron deficiency anemia can affect children's physical development as well as their school achievement. Malnutrition may have lifelong effects, resulting in an increased risk of chronic conditions in later life, including arteriosclerosis, some cancers, osteoporosis and diabetes.<sup>120</sup>

Experts recommend that mothers breastfeed exclusively up to six months of age.<sup>121</sup> The benefits of breastfeeding for children are numerous, including a reduction in ear infections, skin conditions, gastrointestinal and respiratory infections, and reduced incidence of asthma and leukemia.<sup>122</sup> Children who are exclusively breastfed up to and beyond 6 months of age demonstrate lower rates of illness when compared to those who 'weaned' or used mixed feeding methods at three or four months.

Breastfeeding also contributes to the development of a close mother-child relationship, and is further encouraged for its potential health benefits to mothers: Breastfeeding is associated with lower rates of type-2 diabetes and cardiovascular disease, as well as lower rates of breast and ovarian cancers.<sup>123</sup>

Figure 16: Breastfeeding initiation & exclusive breastfeeding



Source: Statistics Canada<sup>(23)</sup>

<sup>(23)</sup> Note: includes both sexes. Source: Health Trends. Catalogue no. 82-213-XWE. Ottawa, ON: Statistics Canada

Figure 16 shows that in Manitoba, the majority of mothers initiate breastfeeding, and the rate increased from 89% in 2003 to 91% in 2010, higher than the Canadian rate of 87%. The age standardized rate of exclusive breastfeeding (for at least six months) is lower than the breastfeeding initiation rate, but in Manitoba it increased from 18% in 2003 to 29% in 2010, slightly higher than the Canadian rate of 28%. A recent Manitoba study found that rates of breastfeeding initiation were lower in northern regions of the province and lower income areas of Winnipeg.<sup>31</sup>

### c) Oral Health

Healthy teeth are an important determinant of a child's ability to eat and speak properly. Hence, oral health affects nutrition as well as the ability to communicate, which then affects learning. Poor oral health can impair the development of the face and jaw for adult teeth, and can result in pain and infections.<sup>30</sup> One indicator of poor oral health is paediatric dental extraction, which is the removal of one or more teeth, usually due to severe decay. Between the periods 1996 to 2001 and 2001 to 2006, the number of paediatric (ages 0 to 5) dental surgeries (in hospital) in Manitoba increased, particularly in northern regions. In 2010/11, the paediatric dental extraction rate for Manitoba was 15 per 1,000 children under 6, but it ranged from 7 per 1,000 in Winnipeg and Assiniboine regions, to 77 per 1,000 in Burntwood region.<sup>124</sup> Higher rates of extraction are also associated with lower income areas due to many factors, including poorer nutrition, lack of access to appropriate dental care, lack of dental insurance, and bottle feeding.<sup>125</sup>

### d) Immunization

Over the past 50 years, immunization has saved more lives in Canada than any other health intervention.<sup>126</sup> However, public health systems continue to face challenges to the effective implementation of immunization schedules. Among these challenges are the growing complexity of schedules (i.e. more injections and new vaccines), and public misunderstandings about vaccines and infectious diseases. A recent Manitoba study showed no significant adverse health effects of immunizations. This is important information for the promotion of immunization among the small group of parents who consider vaccinations 'risky' for their children.<sup>127</sup>

Vaccinations for Manitoban children from two months to 18 years of age are recommended based on the Canadian Immunization Guide schedule. The most recent evidence shows that Manitoba is providing consistent and stable immunization rates across time among children and youth, although there are opportunities for improvement. For example, the percentage of Manitoba children that have received all the recommended doses of all routine immunizations from birth declines steadily with age, from 76% at age one to 45% at age 17. In addition, some populations have lower immunization rates. Children born to low-income families, First Nations families, or teen-aged mothers are less likely to receive the full complement of recommended immunizations.<sup>127, 128</sup>

## The Early Development Instrument (EDI)

The EDI is a questionnaire that measures Kindergarten children's readiness for school across several areas of child development, compared to children in other communities or provinces. The EDI is used to help communities identify their strengths and needs so they can best support early childhood development. The EDI tells us how ready children are for school in the following areas of child development:

- physical health and well-being
- social competence
- emotional maturity
- language and thinking skills
- communication skills and general knowledge

The best possible score in each area is 10. 'Very Ready' results reflect the proportion of children whose scores fall within the top 30th percentile of EDI scores. 'Not Ready' results reflect the proportion of children whose scores fall within the bottom 10th percentile of EDI scores. The Very Ready and Not Ready results have been derived using Canadian standardized cut-off scores.

Achieving "school readiness" is one of the most important developmental goals for children before the age of five. Extensive evidence illustrates that readiness for school is a powerful predictor of later success in school.

Source: Santos, R., Brownell, M., Okechukwu, E., Mayer, T., & Soodeen, R.A. (2012). *The Early Development Instrument in Manitoba: Linking socioeconomic adversity and biological vulnerability at birth to children's outcomes at age 5*. Winnipeg, MB: Manitoba Centre for Health Policy

In Manitoba, fewer children are being hospitalized for vaccine-preventable diseases (VPDs).<sup>127</sup> Hospitalizations for VPDs decreased from an average of 0.19 per 1,000 children (1996 to 2001) to 0.08 per 1,000 children (2001 to 2006). 80% of children who were hospitalized for VPDs were under 5 years old, and 60% were infants. Nearly 50% of vaccine preventable hospitalizations from 1996/97 to 2005/06 were due to pertussis (whooping cough). Higher rates of vaccine preventable hospitalizations were found in lower income areas. Not surprisingly, regions with lower immunization rates had higher rates of hospitalizations for VPDs.<sup>127</sup>

### e) Physical health and well-being and school readiness

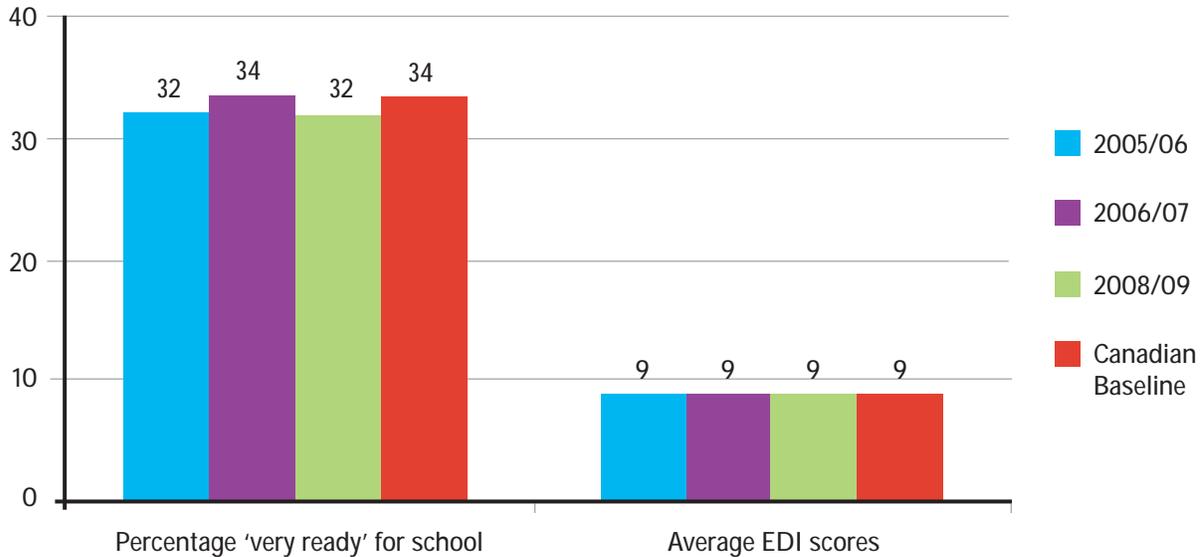
Between birth and age 5, children are developing a tremendous number of skills –physical, mental, social, and emotional - that prepare them for their entry into school. The Early Development Instrument (EDI) is an important tool in assessing school readiness.<sup>129, 130, 131</sup>

Children who are physically ready to learn (appropriately fed, rested, and dressed), and at the appropriate level of independence and motor skill development are more likely to succeed at school.

Figure 17 shows that between 2005/06 and 2008/09, Manitoba's average EDI scores on Physical Health and Well-Being were stable, ranging from 8.7 to 8.8, and Manitoba's baseline average score was not significantly different from the Canadian baseline average score of 8.8. In terms of 'very ready

for school', Manitoba results for Physical Health and Well-Being were stable, ranging from 32 to 34%, and the percentage of children in Manitoba who were 'very ready' did not differ significantly from the Canadian baseline average of 34%.<sup>(24)</sup>

Figure 17: Physical health and well-being  
(Early Development Instrument)



Source: Healthy Child Manitoba<sup>132</sup>

## II. Emotional and mental health

During the infant and toddler years, a child's social network is centred around the home. Even when young children spend a great deal of time outside of the home, such as in early childhood education and care settings, parents and caregivers remain the most important influence on children's lives. Attachment is important in helping children cope with stress, and may have long-term implications for children's emotional and mental health.<sup>134</sup>

Secure attachment tends to occur when caregivers are emotionally available and responsive to the child's communication, such as picking them up and comforting them when they cry, or smiling and talking with them when they smile. Secure and stable relationships strengthen a child's confidence and self-esteem, allowing them to explore the world with a sense of safety and security.<sup>135, 136</sup>

<sup>(24)</sup> The Canadian EDI baseline is from a national representative subgroup of the EDI collected over the years 2004/05, 2005/06 and 2006/07. This represents about 53% of all Kindergarten children in Canada. The Canadian baseline is used to compare to Manitoba scores over three years of data collection. 2005/06 was the first year that all 37 school divisions in Manitoba participated. Collected biennially after 06/07.

## Toxic stress, brain development, and lifelong health

When we get stressed, our bodies respond with increased heart rate, blood pressure, and levels of various hormones such as cortisol. A little bit of stress once in a while can be a positive thing, helping us manage a short-term “fight or flight” response. However, over the long term, stress hormones can literally be toxic.

Persistent high levels of traumatic stress, called toxic stress, can result from insecure environments such as family conflict, violence, neglect, unhealthy living conditions, or hunger. Children from lower socioeconomic backgrounds are more likely to show heightened activation of stress response systems.

Toxic stress can cause serious damage to a developing brain and influence the development of parts of the brain that control abilities such as planning and reasoning. This can lead to impaired judgment, memory, attention, and self control, and a weakened immune system.

Toxic stress in childhood can have severe and lifelong consequences, increasing the chances of developing chronic diseases such as high blood pressure, cardiovascular disease, and diabetes, as well as mental health problems, such as depression or substance abuse, later in life.

(Science of Early Child Development, National Scientific Council, Centre on the Developing Child at Harvard University; Duncan, G.J. & Magnuson, K. (2012). Socioeconomic status and cognitive functioning: Moving from correlation to causation. *WIREs Cogn Sci*, 3:377–386.)

Secure attachment leads to a more positive understanding of friendship, which increases the chances of better social relationships later in life.<sup>137</sup> Infants who develop secure attachment with their caregivers are more likely to be sociable, empathic, and positive, and less likely to be aggressive later in childhood and as adults.<sup>138</sup> They are also more likely to be responsive parents themselves.<sup>139</sup>

Insecure attachment, on the other hand, tends to occur when caregivers are inconsistent, inappropriate, or non-responsive to a child’s verbal and non-verbal communication. Insecure attachment (including avoidant, ambivalent, or disorganized/ disoriented attachment) may result in stress and insecurity, causing the child to avoid their caregiver, be upset when separated from their caregiver, or be confused and apprehensive.<sup>43</sup> Insecure attachment tends to result in more difficulties in relationships.

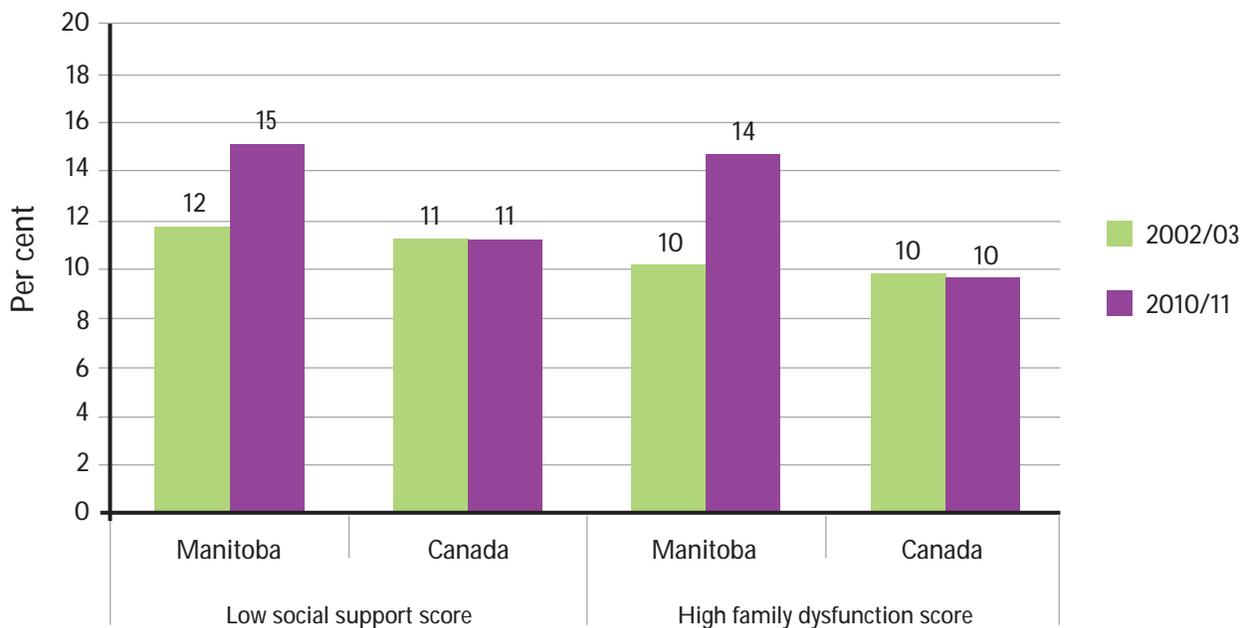
Studies have shown that programs to support caregivers in forming strong bonds can increase the chances of quality attachment.<sup>140</sup> Research has also shown that toddlers are able to bond with not only their parents or other close family members, but also caregivers in early childhood education settings or in other settings.<sup>133</sup> In addition, toddlers who have experienced severe neglect may adjust to new parenting styles and develop strong bonds with their foster caregivers.<sup>141</sup> In other words, both negative and positive influences can change the effects of early attachment.<sup>142</sup>

## a) Parental and family influences:

The emotional and social environment in the early years can have a tremendous impact on a child's mental and emotional health, and their future well-being. In particular, the relationship between family members has a considerable effect on children, and both social support and family functioning are important for well-being.<sup>143</sup> For example, social support is associated with quality of life in general, but is also protective during times of stress.<sup>144</sup> Family functioning is associated with children's mental health, developmental outcomes (especially behaviour), and academic outcomes, such as vocabulary.<sup>145</sup>

Figure 18 shows that between 2002/03 and 2010/11, the percentage of children (5 years old and younger) in families with low social support scores<sup>(25)</sup> and high family dysfunction scores<sup>(26)</sup> increased in Manitoba, and the percentages for both were higher than for Canada overall.

Figure 18: Social support and family functioning scores



Source: 2002/03 (cycle 5) National Longitudinal Survey of Children and Youth; 2010/11 Survey of Young Canadians<sup>(27)</sup>

<sup>(25)</sup> The purpose of the Social Support scale is to collect information on the level of support parents feel they have from friends, family members and members of the community.<sup>144</sup>

<sup>(26)</sup> The Family Functioning scale is aimed at providing a global assessment of family functioning, including adaptability and cohesiveness (e.g., how well family members solve problems together), as well as reflecting the quality of the relationships between parents.<sup>144, 191</sup>

<sup>(27)</sup> Note: 2002/03 data are for children ages 0 to 5, 2010/11 data are for children ages 1-5. High and low social support and family dysfunction scores were determined by the 10th and 90th percentile cutpoints.

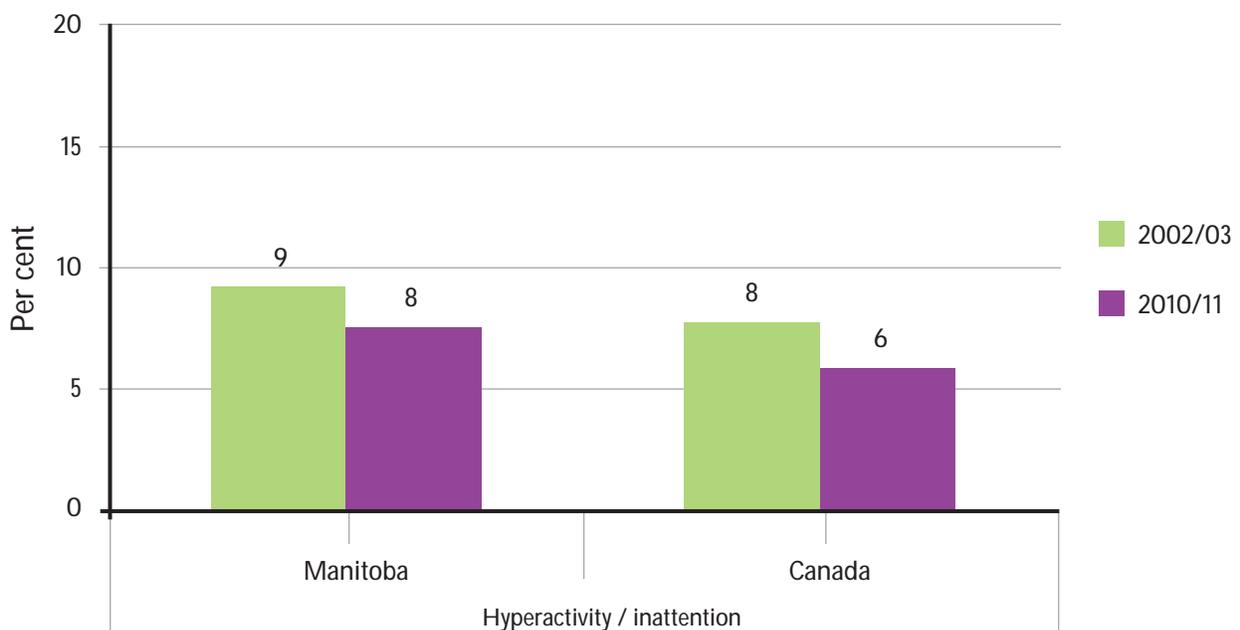
## b) Hyperactive/inattentive behavior

Emotional and behavioural problems in young children are often detected and diagnosed when children enter school. However, early signs of emotional or anxiety disorders and hyperactive/inattentive behaviour can begin to show in early childhood.

One of the causes of emotional and behavioural difficulties in young children is FASD. Alcohol exposure in-utero can have significant effects on brain functioning, resulting in difficulties with focus and attention, learning, communication, memory, and social adaptation.<sup>146</sup> These can all impact the emotional health of a child. Receiving an assessment and diagnosis at an early age can assist children with FASD to be better understood, and ensure they receive appropriate supports early, before school entry, leading to improved emotional health outcomes, including less school disruption, depression, and anxiety.<sup>147</sup>

Hyperactivity/inattention can be characterized by fidgeting, restlessness, difficulty concentrating, or impulsiveness. Figure 19 shows that between 2002/03 and 2010/11, the percentage of young children (ages 2 to 5) with high scores on the hyperactivity/inattention scale<sup>(28)</sup> decreased slightly in Manitoba (from 9% to 8%), but the percentage was higher than in Canada.

Figure 19: Hyperactivity/inattention scores



Source: 2002/03 (cycle 5) National Longitudinal Survey of Children and Youth; 2010/11 Survey of Young Canadians<sup>(29)</sup>

<sup>(28)</sup> The Hyperactivity/Inattention scale identifies children who fidget; are restless and easily distracted; cannot concentrate, pay attention, or stick to an activity for long; are impulsive; or have difficulty waiting their turn in games or groups.<sup>190</sup>

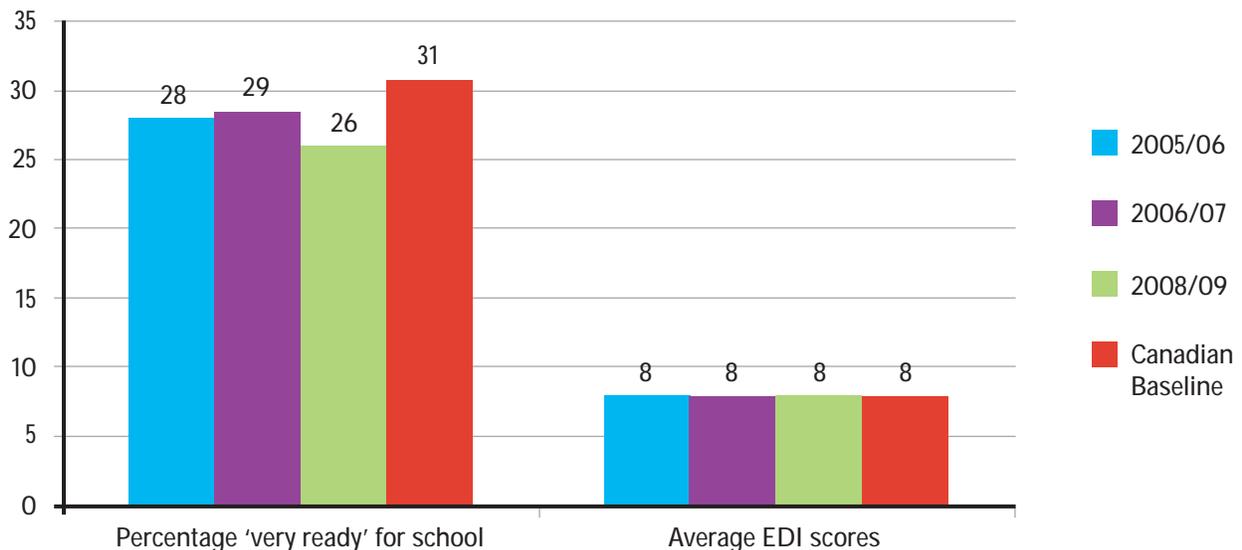
<sup>(29)</sup> Notes: High/low scores were determined by the 10th/90th percentile cutpoints

### c) Emotional maturity and readiness for school

Research has shown that children who score high in emotional maturity are more likely to succeed at school.<sup>148 149</sup>

Figure 20 shows that between 2005/06 and 2008/09, Manitoba average EDI scores for Emotional Maturity were stable, ranging from 7.8 to 8.0 ("10" is the best possible score), but Manitoba's baseline average score was significantly lower than the Canadian baseline average of 8.04. In terms of 'very ready for school', Manitoba results for Emotional Maturity decreased significantly from 28 to 26%, and the percentage of Manitoba children who were 'very ready' for school was significantly lower than the Canadian baseline average of 31%.<sup>(30)</sup>

Figure 20: Emotional maturity  
(Early Development Instrument)



Source: Healthy Child Manitoba<sup>122</sup>

<sup>(30)</sup> The Canadian EDI baseline is from a national representative subgroup of the EDI collected over the years 2004/05, 2005/06 and 2006/07. This represents about 53% of all Kindergarten children in Canada. The Canadian baseline is used to compare to Manitoba scores over three years of data collection. 2005/06 was the first year that all 37 public school divisions in Manitoba participated. The EDI in Manitoba was collected biennially after 2006/07.

## B. Safe and Secure (Early Childhood)

One of the things that makes humans unique from other species is how long we remain in childhood, dependent on caregivers for our survival.<sup>150</sup> At birth, the human brain is not yet fully developed, and will not be fully “constructed” until early adulthood. With this dependency comes both vulnerability and opportunity. A safe home and secure community with access to the basic requirements, and freedom from physical and emotional harm, is crucial for proper brain development and the best possible start in life. The consequences of growing up in a high stress, insecure environment can be lifelong, including mental health and substance use issues and increased likelihood for chronic diseases such as high blood pressure and diabetes.<sup>151</sup>

### I. Safety

#### a) Physical safety: Injuries and mortality

When young children grow up in crowded or substandard housing, lack appropriate supervision, or do not have safe places to play, they are at an increased risk of injury. Injuries are a leading, and preventable, cause of health care use and death. In Manitoba, injuries are not a major cause of hospitalization for 0 to 5 year olds, accounting for only 7% of hospitalizations.<sup>22</sup>

Between 2000/01-2004/05 and 2005/06-2009/10, the injury hospitalization rate for 0 to 5 year olds in Manitoba decreased significantly from 39/10,000 to 35.5/10,000. Rates were stable or declining in all regions except the North, where the rate increased significantly from 106/10,000 to 123/10,000.

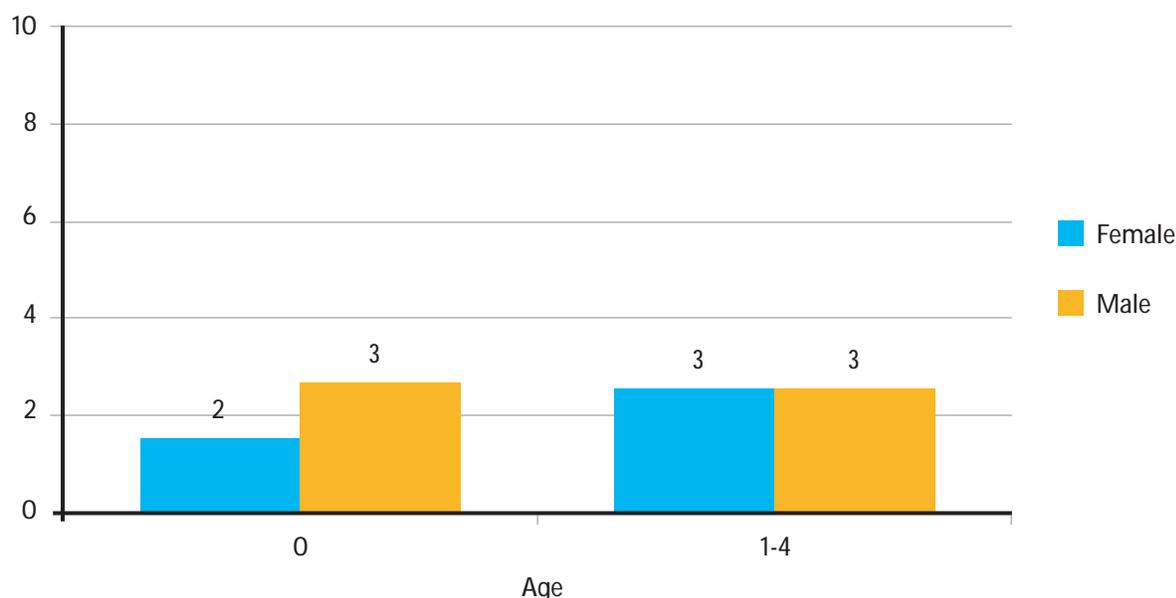
It is important to distinguish between intentional (e.g., self-inflicted or inflicted by others on purpose) and unintentional (e.g., accidental) causes of injury hospitalizations. For the 0 to 5 year old age group, there were very few intentional injuries in Manitoba, and the rate was stable (1.2/10,000 in 2000/01-2004/05 and 1.3/10,000 in 2005/06-2009/10), with a higher rate in the North in both periods. The unintentional injury hospitalization rate declined in all regions except in the North, where the rate was much higher and increased significantly (from 100/10,000 to 117/10,000).<sup>22(31)</sup>

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<sup>(31)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities (RHAs).

In Figure 21, recent data from Manitoba Health show the overall injury hospitalization rate in 2010/11. The rate is low, although it increases with age. Males have a higher injury rate than females in all age groups, including infants and toddlers, and the sex difference increases with age (see middle childhood chapter).

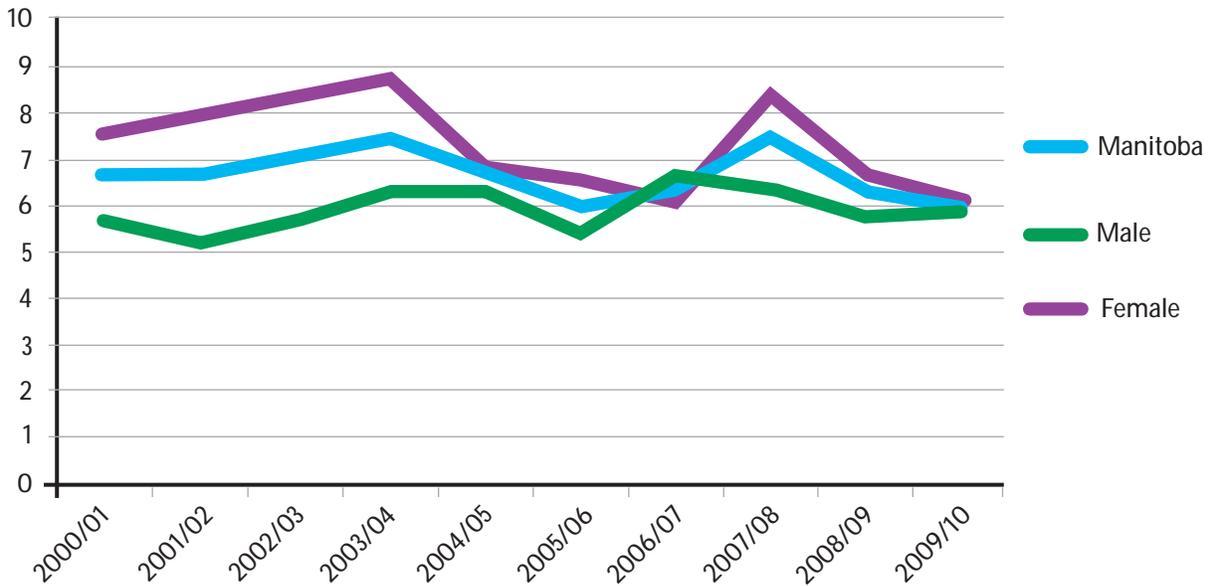
Figure 21: Injury hospitalization rate (2010/11)  
(rate per 1,000 hospitalizations)



Source: Manitoba Health, Annual Statistics 2010-2011. Rate per 1,000 hospitalizations.

Infant and child mortality rates are other indicators of safety and security. Historically, infancy (less than one year of age) and early childhood has been a time of great physical risk. Infant mortality is usually caused by complications in the perinatal period (just before, during and after birth) such as pre-term birth.<sup>91</sup> Infant mortality is considered to be one of the most sensitive indicators of a nation's health, particularly for the poorest members of a society. The infant mortality rate is sensitive to changes in public policy, particularly those affecting health care and income security.<sup>152</sup> In Canada, it has dropped significantly as a result of better nutrition and living standards for the mother and baby, as well as improved prenatal and postnatal medical care.<sup>153</sup> Although infant mortality has decreased overall in Canada, the decrease has been less dramatic for some populations. For example, the infant mortality rate in Canada is 60% higher in the poorest income quintile than in the richest income quintile.<sup>154</sup>

Figure 22: Infant mortality rate in Manitoba  
(crude rate per 1,000 live births)



Source: Manitoba Health, Annual Statistics 2010-2011.

Manitoba has made progress reducing infant and child mortality (see Figure 22), including reduced rates of Sudden Infant Death Syndrome. However, rates remain higher than the Canadian average and vary significantly within Manitoba, with higher rates in northern regions of the province and inner city areas of Winnipeg.<sup>31</sup> Infants born in lower socioeconomic groups are still at much higher risk. In urban Manitoba, those in the lowest income group have an infant mortality rate more than double the highest income group, and the rate for First Nations peoples is more than double the rate for other Manitobans.<sup>30</sup>

Very few children die in Manitoba. For children ages 1 to 5, the provincial mortality rate was stable from 2000-04 (rate of 27/100,000) to 2005-09 (26/100,000). The leading causes of death for this age group in both time periods were injury and congenital anomalies.<sup>22</sup>

## b) Safe families

Completely dependent on others for all of their needs, infants and toddlers are extremely vulnerable. Parents and caregivers are the most influential people that can directly affect a child's physical safety.

Because younger children have a smaller social network (primarily family), they are most at risk of violence from members of their family. In Canada, 70% of infant and toddler victims under the age of 3 years were victimized by someone within their own family. Between 2000 and 2010, 98% of family homicides with victims under age 1, and 90% of family homicides with victims ages 1 to 3 years, were committed by parents.<sup>155</sup>

Children under the age of five are particularly vulnerable to abuse (including witnessing violence), neglect, and injury. In Canada in 2008, children under the age of one year were the most likely to be the subjects of investigation for maltreatment, including abuse and neglect, with rates of investigation decreasing with age.<sup>156</sup> For information on Manitoba children in care of Child and Family Services, or receiving protection or support services from Child and Family Services, please refer to the previous chapter “Who are Manitoba’s children and youth?”.

Exposure of a child to family violence is considered a form of maltreatment that necessitates investigation, as well as the provision of services and possible removal of children from violent households. Children’s exposure can be direct, which may include seeing or hearing the violence, as well as indirect, such as seeing a parent’s injuries or witnessing police intervention. Witnessing spousal violence can result in a range of negative consequences to children, including emotional, psychological, learning, social and behavioural problems, including physical and indirect aggression. Another impact of witnessing violence is the potential intergenerational continuation of violence, meaning that children who have witnessed family violence may become violent in their future families. Research suggests that children in the early stages of development suffer the worst effects of witnessing violence compared to older children, presumably because of their dependency on primary caregivers for all aspects of development. According to the General Social Survey (GSS) on victimization, the proportion of spousal violence witnessed by children in Canada increased from 43% in 2004 to 52% in 2009.<sup>229</sup>

Children are vulnerable when there is domestic violence, and may end up in a shelter due to domestic violence against the mother. Data from Statistics Canada indicate that 3,312 children were admitted to shelters in Manitoba in 2010, compared to just over 3,800 in both 2006 and 2008.<sup>157</sup>

Children with disabilities are at a greater risk of maltreatment, including physical, sexual, and emotional abuse, as well as neglect, compared to those who do not have a disability. In Manitoba, it is estimated that 20% to 60% of children in care of the child welfare system live with a developmental disability, versus around 10% in the general population.<sup>158</sup> 17% of children in care in Manitoba have or are suspected of having FASD.<sup>159</sup> Children with FASD tend to come into care at an earlier age, become permanent wards more quickly, and spend a greater proportion of their lives in care than children with other disabilities and children with no disability.<sup>160</sup>

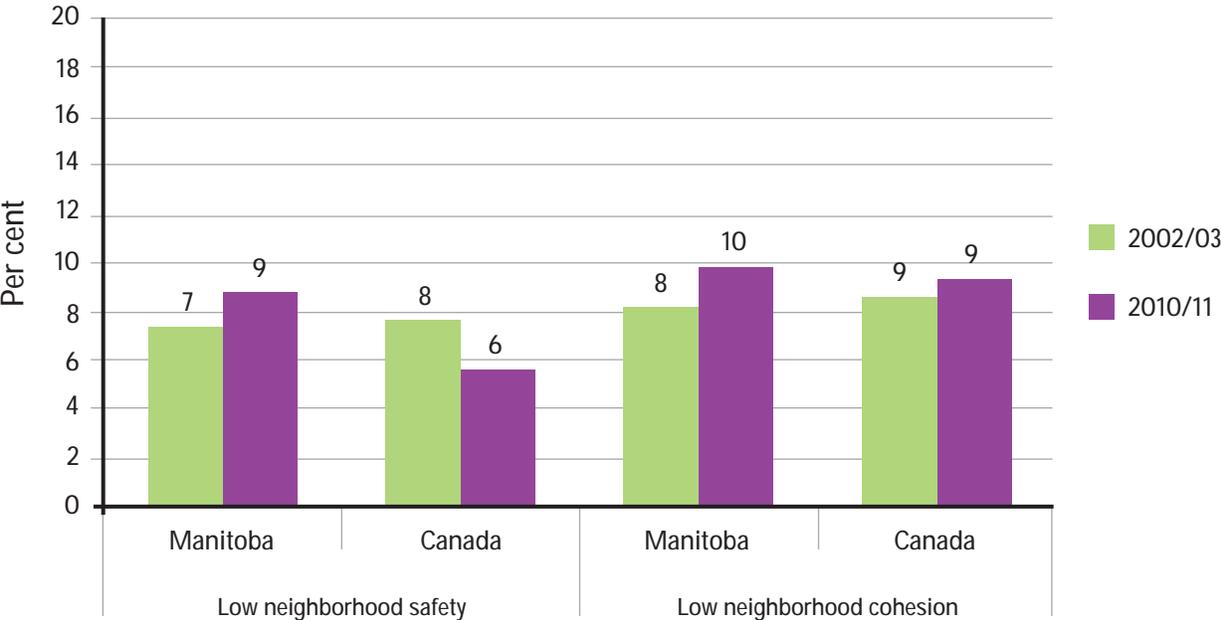
Fortunately, hospitalization and death rates due to injury, assault, and maltreatment have declined in Manitoba, particularly for young children. Over a 20-year period between 1984/85 and 2003/04, the percentage declines in these rates ranged from 16% for assault to 36% for maltreatment. The rates of decline were higher for children three years and younger, with hospitalization or death due to assault and maltreatment declining by 44%.<sup>161</sup>

### c) Safe neighbourhoods

As the saying goes, ‘It takes a village to raise a child.’ Members of the extended family, community, and neighborhood play an important role in the development of a child, providing support to the family and serving as mentors and role models for children.

Neighbourhood safety is an important factor in raising a child. Research has found that parents’ fear of danger and perception of social disorder in the neighbourhood can affect their sense of attachment to the neighbourhood and their parenting strategies.<sup>145</sup> Safer and more cohesive neighbourhoods, and a lack of neighbourhood problems (e.g. gangs), are associated with positive developmental outcomes and better child health.<sup>162</sup>

Figure 23: Neighbourhood safety and cohesion scores



Source: 2002/03 (cycle 5) National Longitudinal Survey of Children and Youth; 2010/11 Survey of Young Canadians<sup>(32)</sup>

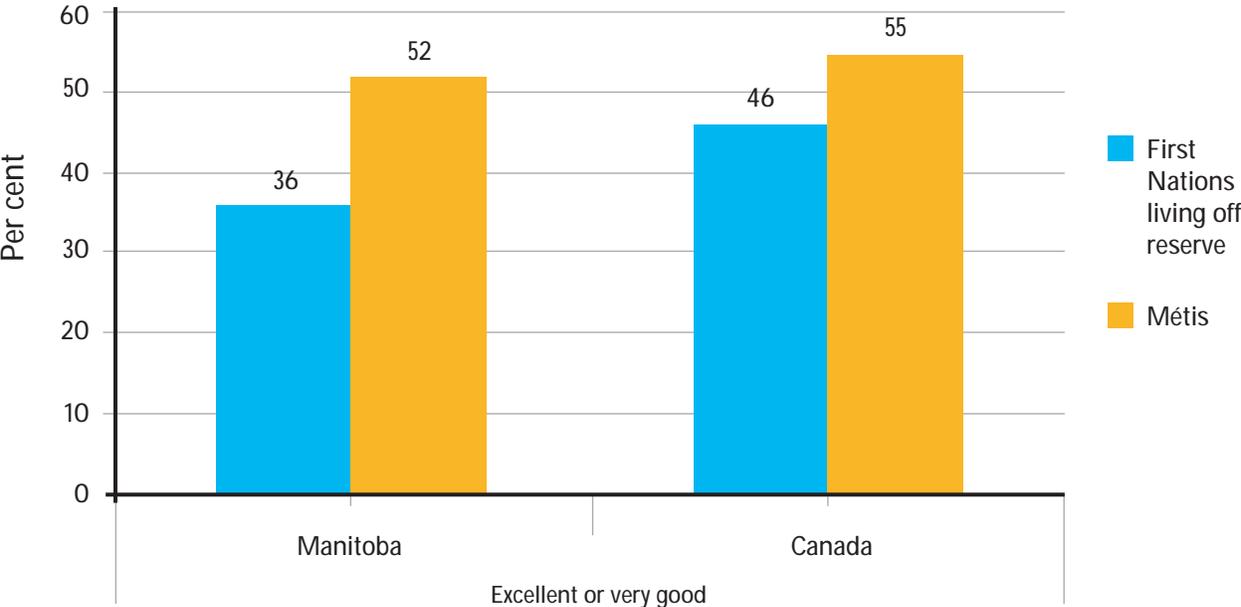
In Figure 23, we can see that the majority of Manitoba families do not have low scores on neighbourhood safety and neighbourhood cohesion. Between 2002/03 and 2010/11, the percentage of children in Manitoba in families with low neighborhood safety scores was low, but increased (from 7% to 9%), and was higher than in Canada overall. The percentage of children in families with low neighborhood cohesion scores was also low in Manitoba, but increased (from 8% to 10%), and was slightly higher than in Canada overall.<sup>(33)</sup>

<sup>(32)</sup> Note: 2002/03 data are for children ages 0 to 5, 2010/11 data are for children ages 1-5.

<sup>(33)</sup> The objective of the two neighbourhood scales is to gather information on the respondents’ perception of neighbourhood safety (three questions), and perception of social cohesion or ‘neighbourliness’ (five questions). Low and high scores were determined by the 10th/90th percentile cutpoints.<sup>144</sup>

In the 2006 Aboriginal Children’s Survey, parents or guardians of Aboriginal (First Nations and Métis) children under six years old (not including First Nations communities) were asked, “How do you feel about your community as a safe community?” Compared to Canada (49%), the percentage of parents/guardians of young children who felt community safety was excellent or very good was lower in Manitoba (44%). Figure 24 shows that Métis parents were more likely than First Nations parents to rate community safety as excellent or very good in both Manitoba (52% compared to 36%) and Canada (55% compared to 46%). First Nations parents without Registered Indian status were more likely to rate community safety as excellent or very good than those with Registered Indian status in both Manitoba (40% compared to 35%) and Canada (51% compared to 42%).

Figure 24: How do you feel about your community as a safe community? (2006)



Source: Aboriginal Children’s Survey <sup>(34), 28</sup>

<sup>(34)</sup> Note: Children were identified as ‘North American Indian’; however in the Aboriginal Children’s Survey analytical article the term “First Nations children” is used throughout the report.

## II. Security

Security of income, food, and housing are important factors in providing a stable, predictable environment in early childhood. Also important to a developing child is emotional security – a positive environment with supportive relationships.

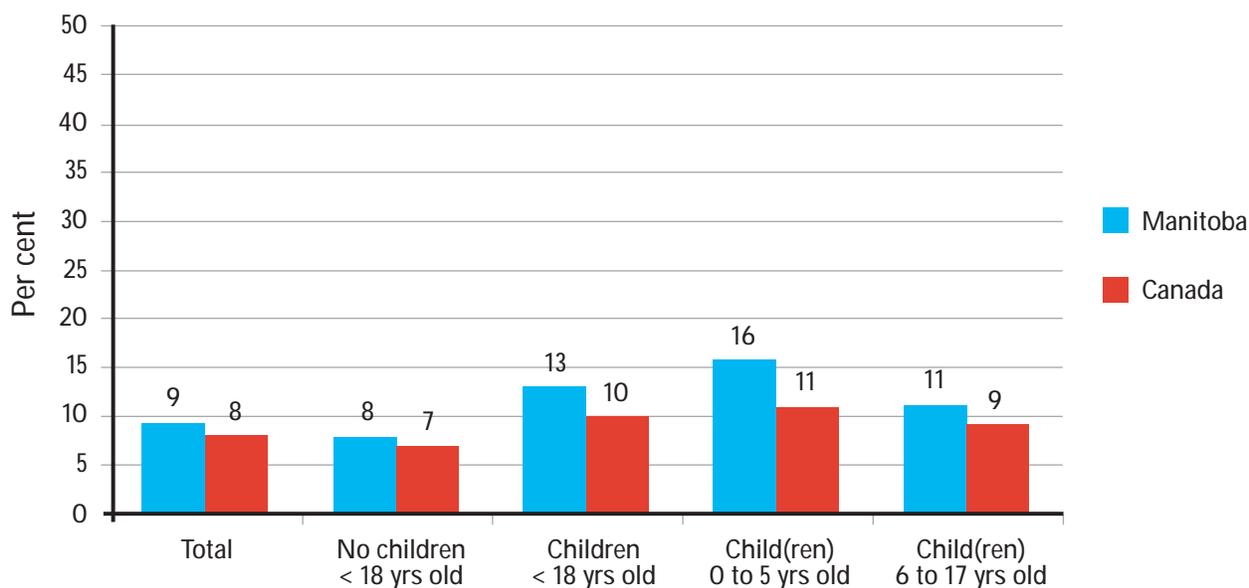
### a) Income security

As noted in the previous demographic chapter, income security has improved in Manitoba. From 2000 to 2010, the low income rate (Market Basket Measure) decreased by 28% for all children and by 21% for children in lone parent families.<sup>163</sup> However, a higher percentage of Aboriginal children under six (not including First Nations communities) live in low income families.<sup>28</sup>

### b) Food security

Food insecurity is closely intertwined with poverty. Children grow rapidly in the early years, and having enough food, as well as quality nutrients, is vital to their development. Children who are hungry are more likely to be hyperactive, more likely to miss school, and are at a higher risk of poor psychological health. Food insecurity may also result in poor physical growth and nutritional deficiencies such as anemia.<sup>164</sup>

Figure 25: Household food insecurity, by presence of children in the household (2007/08)



Source: Canadian Community Health Survey<sup>(35)</sup> 165

<sup>(35)</sup> Food insecure households are those that reported more than one sign of difficulties accessing food due to a lack of money during the previous year. These signs may include one or more household members reducing the size of meals, skipping meals or not eating for an entire day. Moderately food insecure households are those that reported multiple indications of food access difficulties due to a lack of money, but few, if any, signs of reduced food intake. Severely food insecure households are those that reported multiple indications of reduced food intake and disrupted eating patterns due to a lack of money for food.

Figure 25 shows that in 2007/08, the majority of Manitoba households were food secure. Of those who experienced food insecurity, families with young children (under 5) had the highest prevalence, at 16%, which was double that of families without children (8%). The prevalence of food insecurity in Manitoba was higher than for Canada overall, for all family types, particularly for those with children ages 0-5 years.

### c) Emotional security and parenting

Relationships with parents (or adults in primary caretaker roles) are vital to children's well being. While parents provide care and food for children's physical well being, research has also shown that it is through daily interaction with parents that children's brain architecture is formed. Parenting that is loving, supportive, and predictable contributes to a number of positive child outcomes. For example, the ability to self-regulate is one factor developed through parent-child interaction in early childhood, and is predictive of many later outcomes including educational outcomes, antisocial behaviour, and adult financial competence.

Parenting is interconnected with community factors, such as poverty, neighbourhood safety, and quality of child care and education. These community factors are all important to child outcomes, and become increasingly important as children grow. Strong, positive connections between children and parents can buffer risk factors in the community. A community that supports parents and enables them to have nurturing relationships, good communication skills, and positive attention will give children the best opportunity for health and well-being in the future.

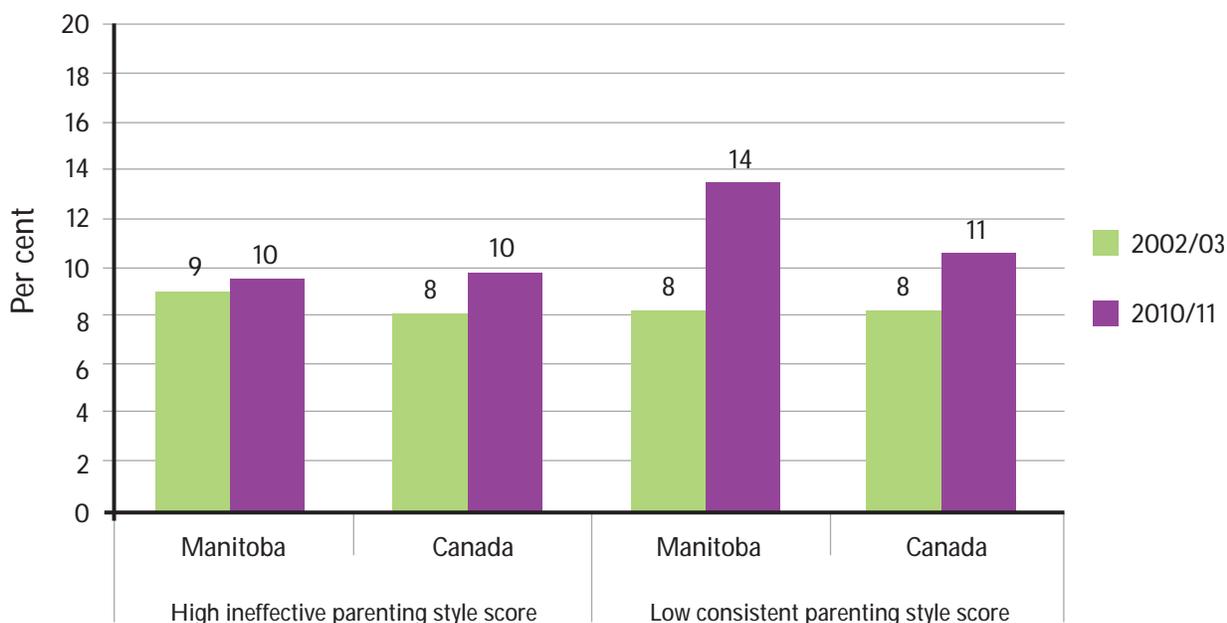
Parenting is particularly important during the sensitive period of early childhood. Parenting remains one of the most important factors affecting child outcomes, and parents supported by high quality programs and cohesive communities create the best chance for positive child outcomes.

(Sources: Caspi & Moffit 2006; Moffit 1987; Moffit et al 2008; Rhee 2008)

A warm, positive relationship with parents is important for children to feel safe, loved, and secure. Harsh, rigid, or inconsistent parenting practices may result in insecure attachment, and they increase the risk that children will develop major behavioural and emotional problems, including substance abuse, antisocial behaviour and juvenile crime.<sup>166</sup>

Figure 26 shows that the percentage of Manitoba children (ages 2 to 5) living in families with high ineffective parenting style scores<sup>(36)</sup> was quite stable between 2002/03 and 2010/11 (9% and 10% respectively), with a similar pattern in Canada overall. However, the percentage of children living in families with low consistent parenting style scores<sup>(37)</sup> increased in Manitoba, from 8% to 14%, and the percentage was higher than in Canada overall.

Figure 26: Parenting style scores



Source: 2002/03 (cycle 5) National Longitudinal Survey of Children and Youth; 2010/11 Survey of Young Canadians

<sup>(36)</sup> Low and high scores were determined by the 10th/90th percentile cutpoints. The ineffective parenting scale consists of seven question related to: how often the parent gets annoyed with their child for misbehaving, the proportion of praise and disapproval when talking to the child about their behavior, how often the parent gets angry when punishing their child, how often the type of punishment given depends on the parent's mood, how often the parent has difficulty managing their child, and how often the parent has to discipline their child repeatedly for the same thing.

<sup>(37)</sup> Low and high scores were determined by the 10th/90th percentile cutpoints. The consistent parenting scale consists of 5 items related to how often the parent follows through on commands or threats of punishment, how often the parent lets the child get away with something that they think should be punished, and how often the child ignores or is able to get out of a punishment.<sup>144</sup>

# C. Successful at Learning (Early Childhood)

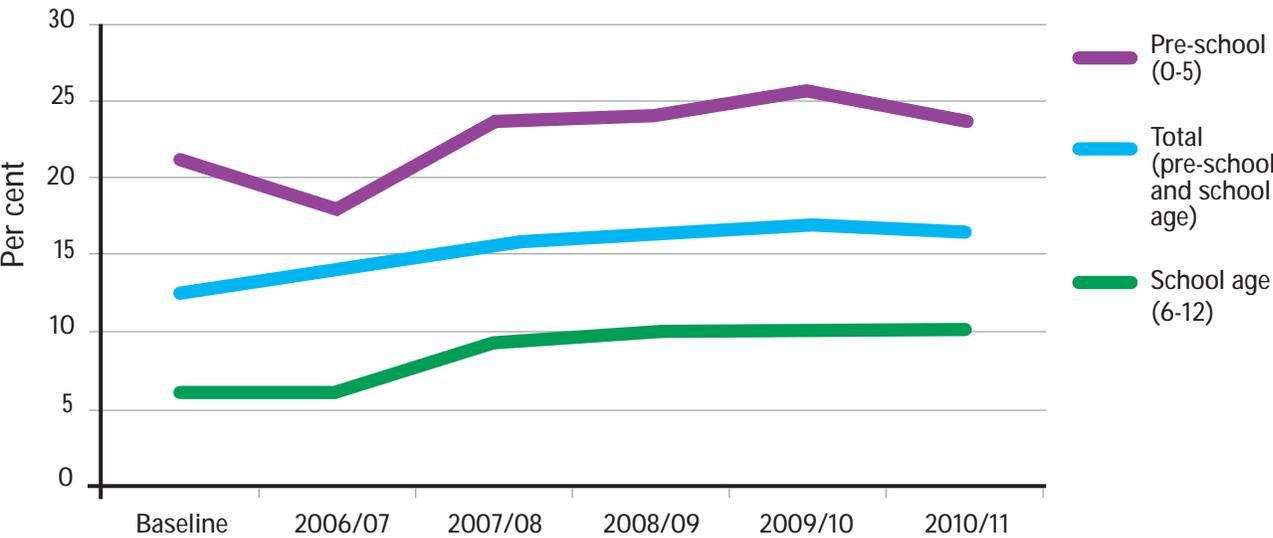
Babies are born with brains that are active and wired to learn.<sup>167</sup> In addition to language and numeracy, young children are developing the ability to think more symbolically. In the pre-school years, these abilities will determine a child’s readiness for school. Young children are also learning about their social space, including important aspects of culture and how to participate in society.

## a) Early Learning and Child Care (ELCC)

The majority of parents in Manitoba work outside of the home, and this means parents require child care. There is considerable evidence that ELCC programs are a central factor in healthy child development, and the benefits are long-term. High quality ELCC provides intellectual and social stimulation that promotes cognitive development and social skills. This is especially true for low-income children: high quality child care has been linked with lower juvenile crime and school dropout rates, and much higher earnings as adults. Child care also facilitates parental employment and training, particularly for women, and thus is linked to family income, which has demonstrated effects on the health and well-being of children.<sup>168</sup>

From 2000/02 to 2011/12, funding allocations were approved for 12, 768 licensed child care spaces in Manitoba, and there has been a steady increase in the number of children with disabilities receiving child care. Between 2007/08 and 2011/12, over 3400 licensed child care spaces were created, for a total of 30,614 licensed spaces in 2011/12.<sup>169</sup> Figure 27 shows the increase in the percentage of Manitoba children (ages 12 and under) with a regulated child care space.

Figure 27: Manitoba children with a regulated child care space



Source: Family Services and Labour Annual Reports. Note: Baseline is 2000/01.

## b) Language and Vocabulary

Language development starts at an early age. Socioeconomic status, amount of language exposure, and health are important factors in predicting a child's language development and ultimately their academic success. Post-birth exposure to language is a predictor of early vocabulary and later verbal and literacy skills.<sup>170, 171</sup> Exposure tends to correlate with socio-economic status: on average, children raised in higher socioeconomic status families are exposed to more words and have larger vocabularies than children in lower socioeconomic status families.<sup>172</sup> Children with low verbal skills at age 3 will tend to have poorer literacy skills entering school and are more likely to have lower academic performance.<sup>173</sup>

Good health outcomes at birth and in early childhood are also associated with improved academics.<sup>174</sup> A Manitoba study found that children's health status before and around the time of birth impacted their readiness for school. For example, a larger proportion of children with low birth weights were not ready for school in one or more areas of development.<sup>175</sup>

Research shows that individual differences in language and vocabulary as children enter school can become worse as children develop. Evidence suggests that early interventions can help to minimize difficulties for children as they get older, by opening doors that might otherwise have been inaccessible at that time in the child's development.<sup>133</sup>

The Peabody Picture Vocabulary Test-Revised (PPVT-R) measures children's receptive vocabulary, which is the vocabulary that is understood by children when they hear the words spoken.<sup>(38)</sup> Data from 2002/03, 2006/07, and 2010/11 show that mean standardized scores on the PPVT-R were relatively stable in both Manitoba (ranging from 98 to 99) and Canada (ranging from 100 to 101).<sup>(39)</sup>

The "Who Am I?" instrument assesses the developmental level of young children, and involves copying and writing tasks. Research has shown that copying skills are strongly related to subsequent school achievement, and are a valid and reliable measure of development. Research also indicates that children's attempts at early writing are associated with their growing understanding of the way spoken sounds are represented in print.<sup>(40)</sup>

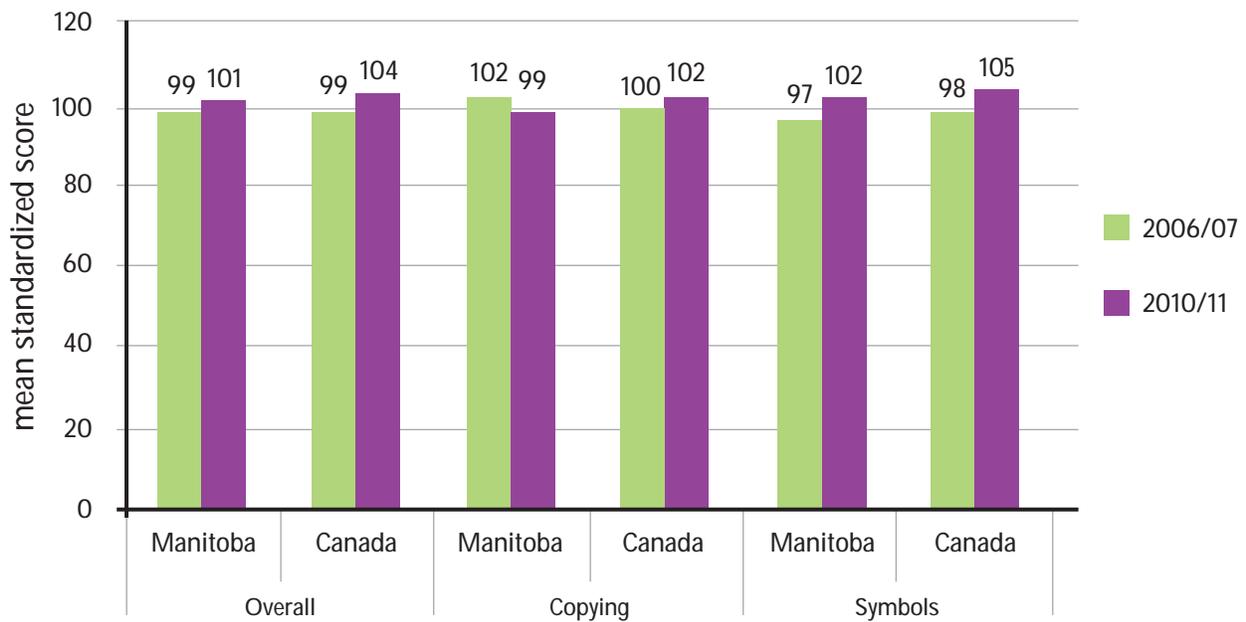
<sup>(38)</sup> Statistics Canada has found that the test continues to provide a reasonable and valid assessment of the child's ability. The test involves having the child look at pictures on an easel and identify the picture that matches the word spoken by the interviewer. A child's performance is scored relative to that of an overall population of children of the same age. A standardized score is then computed for each child, which takes into account the child's age and allows for comparisons of scores across age groups. The PPVT-R is also scaled to an average of 100. A score below 85 is considered to indicate delayed receptive vocabulary; a score above 115, advanced.<sup>144</sup> See also: Handbook for the Pan-Canadian Education Indicators Program Statistics Canada – Catalogue no. 81-582-G.

<sup>(39)</sup> Cycle 5 (2002/03) and Cycle 7 (2006/07) National Longitudinal Survey on Children and Youth; 2010/11 Survey of Young Canadians

<sup>(40)</sup> The use of the copying tasks to assess the level of child development is well established. For more information, see the test publishers, ACER press. Scores are standardized, meaning they take into account the child's age, and allow for comparisons of scores across ages. The five copying tasks are designed to assess the child's ability to conceptualize and reconstruct geometrical shapes, including a circle, cross, square, triangle and diamond. The writing tasks consist of the Symbols scale, which assesses the ability of the child to understand and use symbolic representations. The five tasks include printing their name, and printing some letters, numbers, words and a sentence. The child's ability to complete the copying and writing tasks depends on many factors including maturity, culture, experiences, and language skills. In addition to separate Copying and Symbols scale scores, there is also a combined Overall score, which gives a general overview of the child's developmental level.<sup>144</sup>

Figure 28 shows that between 2006/07 and 2010/11, the mean Overall score for children (ages 4 to 5) in Manitoba increased from 99 to 101, and the mean Symbols score increased from 97 to 102. However, the mean Copying score decreased from 102 to 99. For Canada, mean scores increased and were higher than Manitoba in 2010/11 for the three test outcomes.

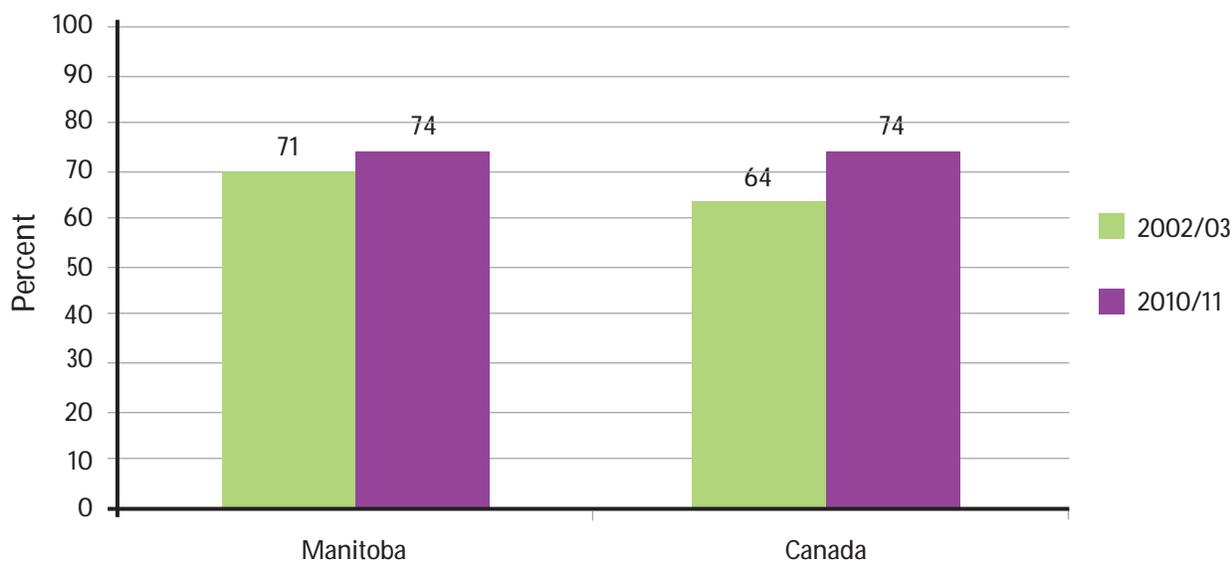
Figure 28: Mean scores of children on “ Who am I?” test



Source: 2006/07 (Cycle 7) National Longitudinal Survey of Children and Youth, 2010/11 Survey of Young Canadians

When parents tell stories or read with their children, they are doing one of the most important things they can to help their child develop language skills. These early language skills become a foundation for later success in school. Both the quantity and quality of reading between parents and children influences language and reading development.<sup>176</sup> Children who are actively engaged in story-reading through questions and answers develop more words than children who passively listen.<sup>177</sup>

Figure 29: Parent reads to child or listens to child read daily



Source: 2002/03 (Cycle 5) National Longitudinal Survey of Children and Youth, 2010/11 Survey of Young Canadians

Between 2002/03 and 2010/11, the percentage of parents (or children ages 3 to 5) that read to their child or listened to their child reading daily increased from 71% to 74% in Manitoba, with a comparable percentage in Canada (74%) in 2010/11 (see Figure 29).

### c) Numeracy

As with reading and language development, early experiences with numbers can increase children's aptitude and readiness for school. Children who are exposed to more numeracy-related experiences at home tend to be more skilled at school-based mathematical activities.<sup>178</sup> A recent analysis of the long-term impacts of several early learning programs found that math skills at the point of school entry are consistently associated with higher levels of academic performance in later grades.<sup>179</sup>

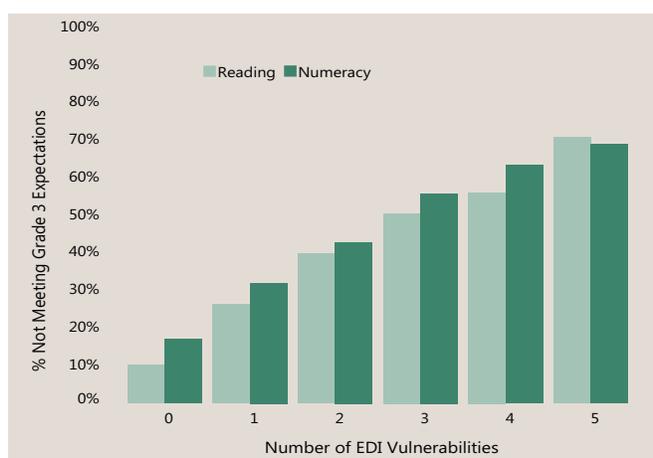
The Number Knowledge Test assesses the development of children's understanding of whole numbers.<sup>(41)</sup> From 2006/07 to 2010/11, mean standardized scores on the Number Knowledge Test decreased slightly in Manitoba (from 101 to 99), and increased slightly in Canada (from 99 to 101).<sup>(42)</sup>

<sup>(41)</sup> Statistics Canada has validated the test and concluded that it should provide "information about the child's acquisition of the necessary skills to succeed at math in school." An age-standardized score is assigned to each child, which takes into account the child's age and allows for comparisons of scores across age groups.

<sup>(42)</sup> 2006/07 (Cycle 7) National Longitudinal Survey on Children and Youth; 2010/11 Survey of Young Canadians

## d) School readiness

When children enter Kindergarten, they start a new and important phase of their lives that exposes them to new stimuli which foster their social, emotional, academic, and physical development. How ready they are for school is an important indicator of how well children will be able to benefit from what school can offer.<sup>180</sup> A recent Manitoba study found a strong association between children’s school readiness (as measured by the EDI) and their outcomes for grade 3 assessments of reading and numeracy, indicating that school trajectories are established when children are very young.<sup>22</sup>



Source: Brownell, M., Chartier, M., Santos, R., Ekuma, O., Au, W., Sarkar, J., MacWilliam, L., Burland, E., Koseva, I., & Guenette, W. (2012). *How are Manitoba's children doing?* Winnipeg, MB: Manitoba Centre for Health Policy. (from p. 213 of full report and p. 3 of report summary)

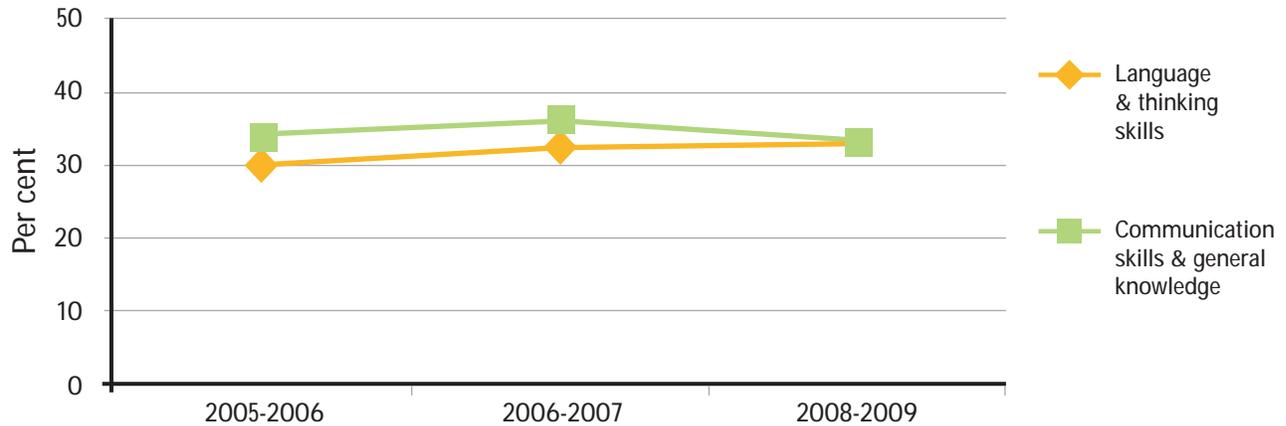
Average scores in the domain “Language and Thinking Skills” increased significantly in Manitoba, from 8.1 in 2005/06 to 8.2 in 2008/09. However, the Manitoba baseline average score was significantly lower than the Canadian baseline average score of 8.4. Average scores in the domain “Communication Skills and General Knowledge” were stable over the time period, ranging from 7.5 to 7.6, and Manitoba’s baseline average score was not significantly different from the Canadian baseline average score of 7.7.

The proportion of children in Manitoba who were ‘very ready’ in 1 or more domains, and in 2 or more domains, was stable and was not significantly different from the Canadian baseline percentages.<sup>(43)</sup>

In Figure 30, we can see that the proportion of children in Manitoba who were ‘very ready’ for school in the domain “Language and Thinking Skills” increased significantly between 2005/06 and 2008/09. However, the percentage was statistically significantly lower than the Canadian baseline percentage. The proportion of children in Manitoba who were ‘very ready’ for school in the domain “Communication Skills and General Knowledge” was stable, and the baseline percentage was significantly higher than the Canadian baseline percentage.

<sup>(43)</sup> The Canadian EDI baseline is from a national representative subgroup of the EDI collected over the years 2004/05, 2005/06 and 2006/07. This represents about 53% of all Kindergarten children in Canada. The Canadian baseline is used to compare to Manitoba scores over three years of data collection. 2005/06 was the first year that all 37 public school divisions in Manitoba participated. The EDI in Manitoba was collected biennially after 2006/07. Results for Physical Health & Well-Being, Emotional Maturity, and Social Competence are discussed elsewhere in this Report.

Figure 30: Language and thinking skills, and Communication skills and general knowledge (Early Development Instrument)



Source: Healthy Child Manitoba<sup>132</sup>

There are many different factors that influence EDI results. Combined data for 2005/06, 2006/07, and 2008/09 showed that average scores in all five domains of the EDI were significantly higher for girls, for children older than 5.6 years, for children without English as an Additional Language (EAL), and for children with non-Aboriginal identity. However, most of the differences between Aboriginal and non-Aboriginal identity children were no longer significant when socio-economic status (income and education) was included in the analysis.<sup>132</sup> A recent study found that Francophone children were more likely to be ‘not ready for school’ compared to other Manitoban children. While the groups were similar for the domains “Physical Well-Being” and “Social Competence”, on average Francophone children scored lower on “Emotional Maturity”, “Language and Thinking Skills”, and “Communication Skills and General Knowledge”.<sup>46</sup>

### e) Cultural and other learning

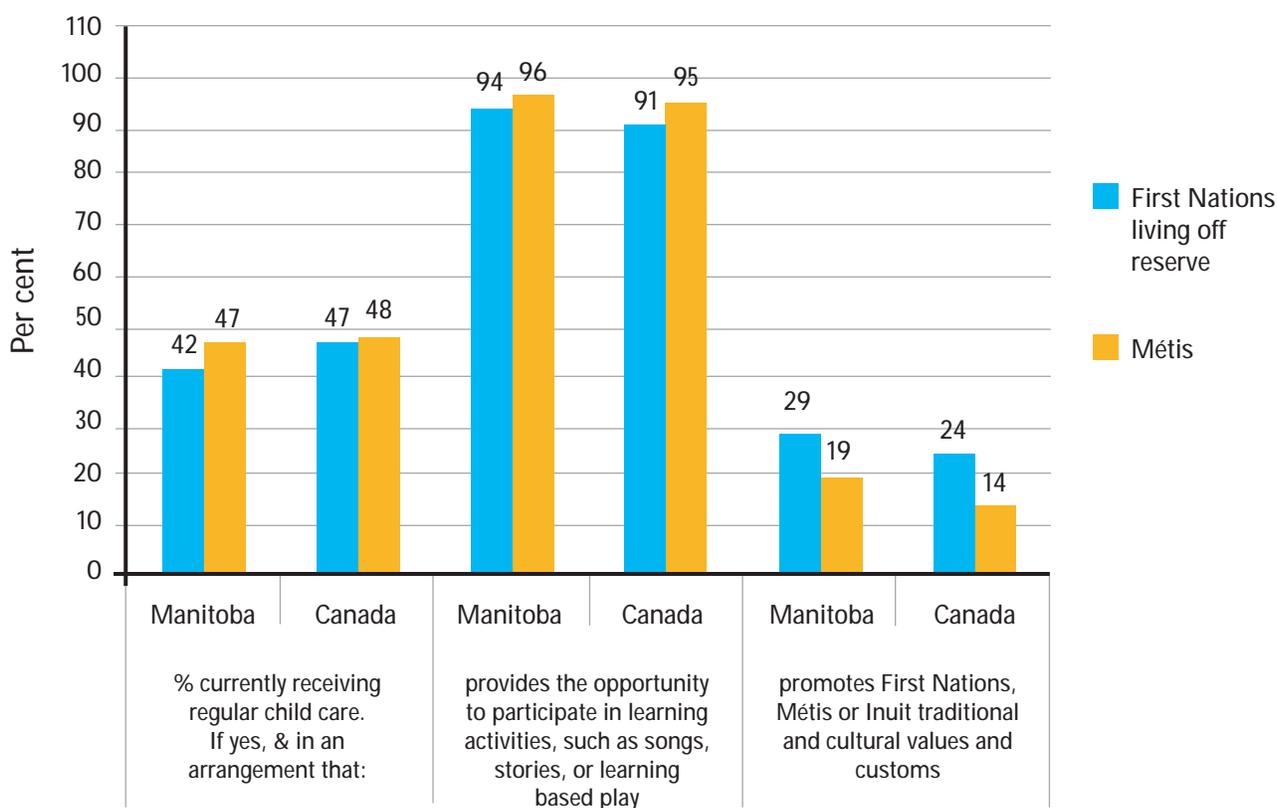
Culture plays an important role in how children interpret and interact with the world around them. Aspects of culture such as symbols, language, and values are an essential part of what we learn. Patterns of understanding and interacting with the world begin to form early, as children orient themselves to the world through repeated interactions with parents and others in a wide variety of everyday events.

Playing is a universal activity, and it is through play and daily interactions that we learn the norms and values of our culture and what makes sense to us as individuals within a social system. In fact, play is how young children learn. Healthy brain development depends on children’s play. Research shows that when children are asked to learn or problem-solve with materials they find familiar and in ways that “make sense” to them, they learn more quickly.<sup>181</sup> This relationship

becomes even stronger as children develop through middle childhood and adolescence. The implication of this research is that ignoring the cultural context of learning can have a negative impact on development.<sup>182</sup>

In 2006, a smaller proportion of Aboriginal children under six years old (excluding those living in First Nations communities) were in regular child care in Manitoba than in all of Canada, and this was particularly true for those without Registered Indian status. However, of those children in regular child care, the proportion 'in an arrangement that provides the opportunity to participate in learning activities' was slightly higher among Aboriginal children in Manitoba than in all of Canada. Moreover, the proportion 'in an arrangement that promotes traditional and cultural values and customs' was higher among Aboriginal children (excluding those living in First Nations communities) in Manitoba compared to in Canada (see Figure 31).

Figure 31: Child care arrangements, Aboriginal children (2006)



Source: Aboriginal Children's Survey, 2006<sup>(44)</sup> 28

<sup>(44)</sup> Notes: Excludes children who are currently attending school. Child care arrangements refer to the care of a child by someone other than a parent, including daycare, nursery or preschool, Head Start, before or after school programs and care by a relative or other caregiver. These refer to regular arrangements that are used consistently, rather than sporadically (e.g. babysitting). These data refer to the main child care arrangement; that is the arrangement in which the child spends the most time.

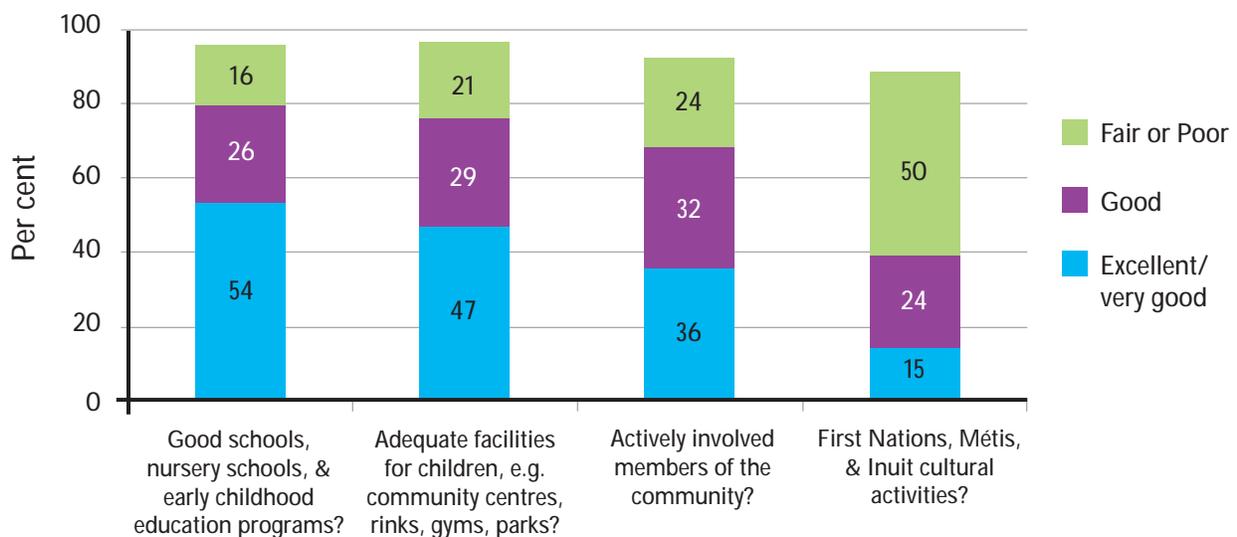
# D. Socially Engaged and Responsible (Early Childhood)

## I. Socially engaged

In early childhood, the most important social environment is the family. However, even infants and toddlers are socially engaged with others, in their preschools and other early childhood education settings, neighbourhoods and communities, and extended families. The quality of these social environments in the early years is an important predictor of future health.<sup>133</sup>

In 2006, parents and guardians of Aboriginal children aged six and under (not including First Nations communities) were asked about the quality of their community environments. Figure 32 shows that in Manitoba, 54% (compared to 55% in Canada) felt that their community had very good or excellent schools, nursery schools, and early childhood education programs. 47% (compared to 51% in Canada) felt that the facilities for children (e.g. community centres, rinks, gyms, and parks) were excellent or very good. In terms of social engagement, just over a third (36%, compared to 40% in Canada) felt that the involvement of community members was very good or excellent. Only 15% (compared to 17% in Canada) felt that there were very good or excellent First Nations, Métis, or Inuit cultural activities in their community.

Figure 32: Community environments (2006):  
How do you feel about your community as a place with...



Source: Aboriginal Children's Survey, 2006<sup>28</sup>

## II. Socially responsible

Relationships with other children begin to develop remarkably early: Interest in other babies can begin as early as 2 months.<sup>183</sup> As they get older, children begin to interact with other children in preschools and other early childhood settings, in community centres, as well as on the playground. As children develop mentally and emotionally, they learn behaviours that help them navigate through their increasingly social world. Key skills developed in this social environment include how to play, how to form and maintain friendships, and how to handle conflict.<sup>133</sup> While they tend to view the world from their own point of view, many preschoolers are developing empathy skills and the ability to control their own emotional expressions.<sup>184</sup>

### a) Aggression

Physically aggressive behaviour in situations of social conflict is most prevalent by age two, after which most children learn to control their behaviour and verbally negotiate instead. Measuring physical aggression is important: studies have shown that children who are not able to control their physical aggression by school age are at a high risk of both failing a grade and engaging in antisocial behaviour by adolescence.<sup>185 186</sup>

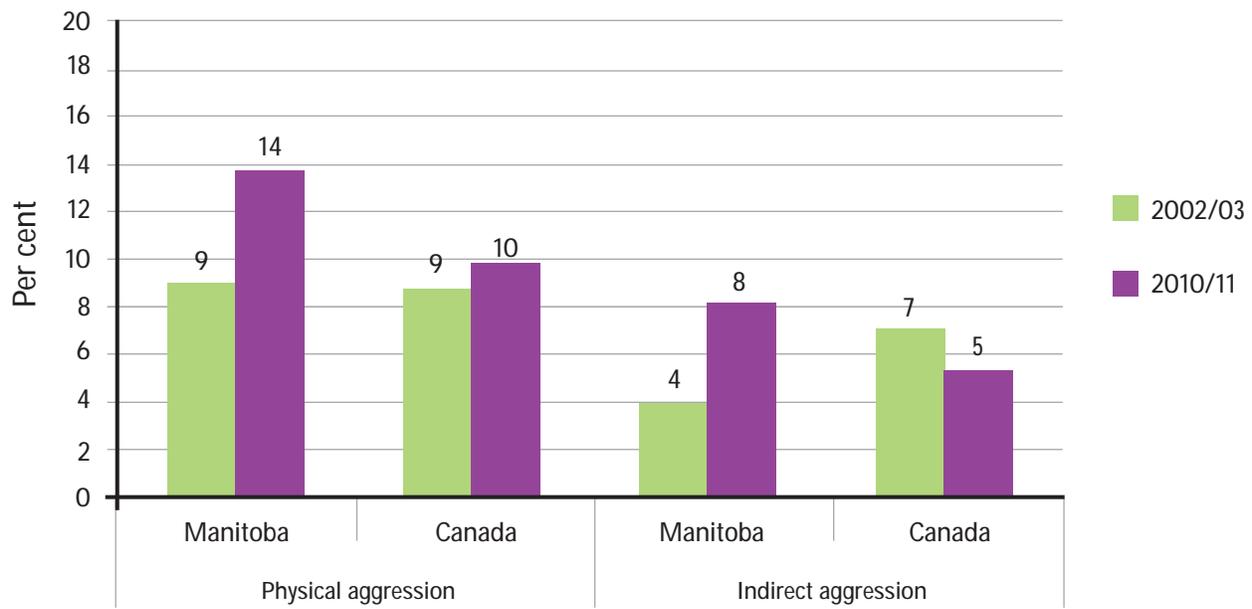
Indirect aggression is also important, and includes behaviours such as socially excluding other children, telling someone's secrets, and gossiping or spreading rumours. It begins in preschool (around age 4) and increases through middle childhood.<sup>187</sup> Children who are indirectly aggressive are at a *lower* risk of later adjustment problems commonly associated with physical aggression, such as school difficulties or delinquency, but are at a *higher* risk of feelings of loneliness, anxiety and depression.<sup>188</sup>

Both physical aggression and indirect aggression are associated with harsh and overly-controlling parenting, and a lack of parental warmth and positive encouragement during the preschool years.<sup>189, 190</sup>

Figure 33 shows that between 2002/03 and 2010/11, the percentage of children (ages 2 to 5) with high scores on the physical aggression scale<sup>(45)</sup> <sup>191</sup> increased in Manitoba (from 9% to 14%) and in Canada (from 9% to 10%), with higher scores in Manitoba in 2010/11.

The percentage of children (ages 2 to 5) with high scores on the indirect aggression scale<sup>(46)</sup> also increased in Manitoba (from 4 to 8%) but decreased in Canada (from 7% to 5%), with lower scores in Manitoba in 2002/03 and higher scores in Manitoba in 2010/11.

Figure 33: Physical and indirect aggression scores



Source: 2002/03 (Cycle 5) National Longitudinal Survey on Children and Youth, 2010/11 Survey of Young Canadians

A recent study has shown that early intervention in the parent-child interactions of high risk families can prevent physical aggression in early childhood.<sup>192</sup>

<sup>(45)</sup> Physical aggression/conduct disorder: this scale identifies children who get into many fights or react with anger. Also included are children who kick, bite, hit, or physically attack other children or people; and who threaten people, are cruel, or bully others.<sup>190</sup>

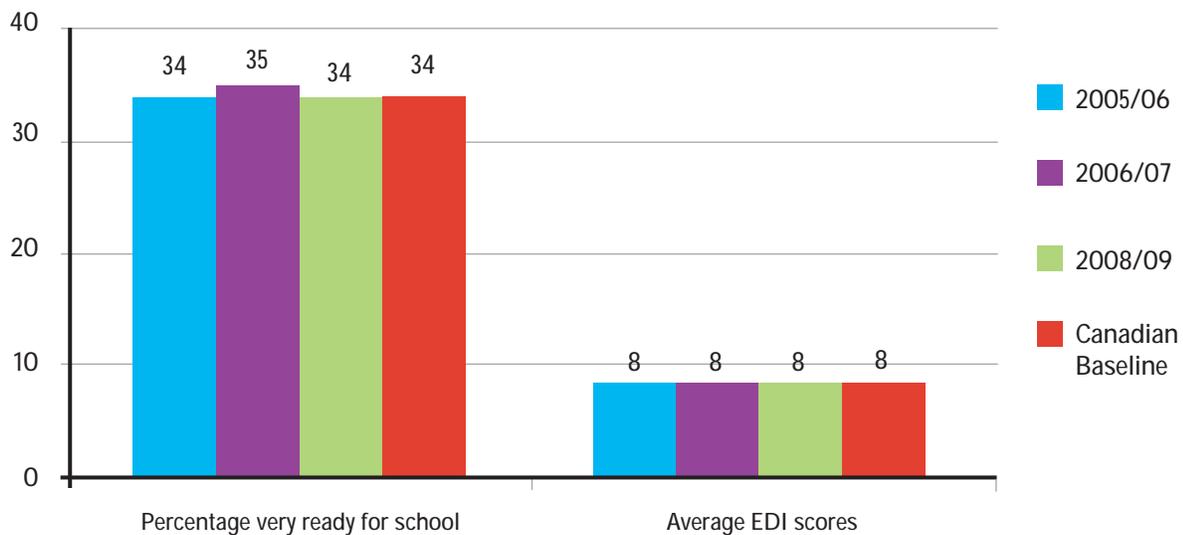
<sup>(46)</sup> The indirect aggression scale identifies children who, when angry with someone, try to get others to dislike that person; become friends with someone for revenge; say bad things behind someone's back; encourage others to dislike or exclude someone; or tell someone's secrets to a third person.<sup>190</sup>

## b) Social competence

Social competence reflects a young child's ability to successfully navigate the social world. Aspects of social competence can include social skills such as cooperation with others, respect for others and their belongings, taking responsibility for one's actions, problem solving, and independent exploring. Positive social interactions are a key component of readiness for school.

Figure 34 shows that in Manitoba, average EDI scores for the domain Social Competence were stable between 2005/06 and 2008/09, ranging from 8.3 to 8.4 ("10" is the best possible score). Manitoba's baseline average score was significantly higher than the Canadian baseline average score of 8.3. The percentage of children 'very ready' in the Social Competence domain was stable in Manitoba (between 34% and 35%), and was slightly higher than the Canadian baseline percentage (34%).<sup>(47)</sup>

Figure 34: Social competence  
(Early Development Instrument)



Source: Healthy Child Manitoba<sup>132</sup>

<sup>(47)</sup> The Canadian EDI baseline is from a national representative subgroup of the EDI collected over the years 2004/05, 2005/06 and 2006/07. This represents about 53% of all Kindergarten children in Canada. The Canadian baseline is used to compare to Manitoba scores over three years of data collection. 2005/06 was the first year that all 37 public school divisions in Manitoba participated. The EDI in Manitoba was collected biennially after 2006/07.

## SUMMARY

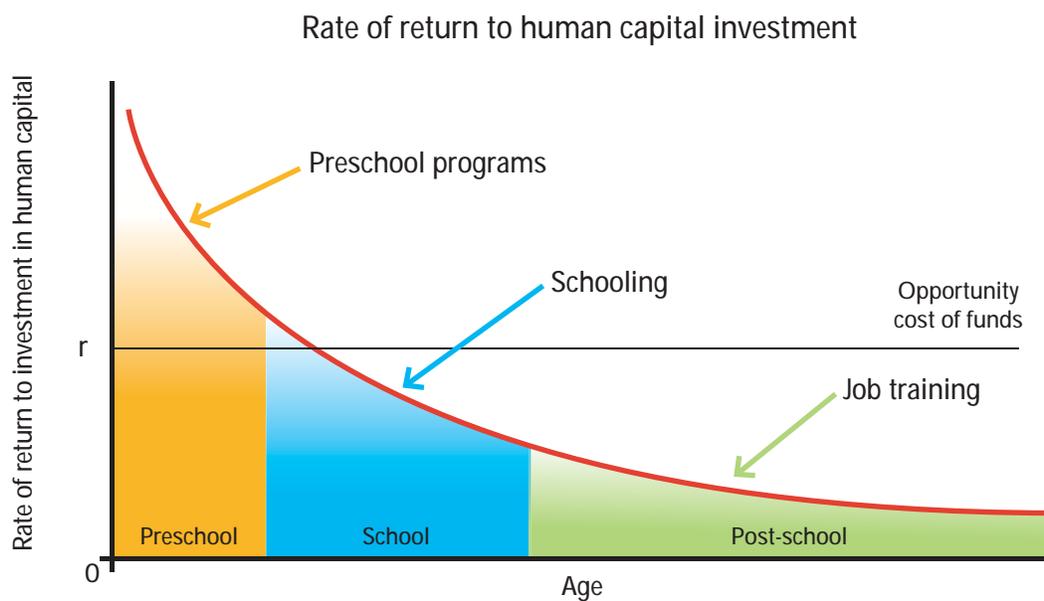
The first five years of life are a significant and sensitive period that can profoundly affect the future of a child. In early childhood, brain development is very responsive to all experiences, both positive and negative. Healthy social, emotional, and physical environments in the home and broader community are therefore important in order to ensure healthy child development. It is important to note that many child health outcomes differ depending on a number of factors, including region of residence, ethnicity, family structure, and family income.

A number of child outcomes show clear signs of improvement, and indicate that a growing proportion of Manitoba's young children are getting the best possible start in life. Rates of high birth weight, large-for-gestational age, and infant mortality have declined. Hospitalization rates for both unintentional injury and vaccine-preventable diseases have decreased. Rates of both breastfeeding initiation and exclusive breastfeeding have increased and are higher than the Canadian rates. Language and Thinking Skills (as measured by the Early Development Instrument), reflected in the average score and the percentage of children who are 'very ready' for school, have increased significantly. The percentage of parents that read to their child daily has also increased. Finally, there has been an increase in the percentage of children with a regulated child care space. The total number of spaces has increased, and the number of children with disabilities receiving care has increased.

Other outcomes have been stable. The pre-term birth rate is stable and similar to the Canadian rate. Manitoba also has consistent and stable immunization rates. Most results from the Early Development Instrument are stable: average scores in the domains Physical Health and Well-Being, Emotional Maturity, Communication Skills and General Knowledge, and Social Competence have been stable, and the percentage of children 'very ready' for school in 1 or more domains has been consistent. The percentage of children with high scores on the hyperactivity/ inattention scale, and the percentage of parents with high scores on the ineffective parenting style scale, have been relatively stable.

A number of indicators of child health present challenges to address. Rates of low birth weight and small-for-gestational age have increased, but remain significantly lower than the Canadian rates. Pediatric dental extractions, which reflect poor oral health, have increased. The percentage of families with low social support scores, high family dysfunction scores, low neighborhood safety and cohesion scores, and low consistent parenting style scores have all increased somewhat, but the percentages remain quite low. The percentage of children with high scores on the physical and indirect aggression scales has increased. Of concern is that families with young children (under 6) have the highest prevalence of food insecurity in Manitoba.

A poor start affects not only the child and family, but also society through increased health, social service, and justice system costs, reduced economic productivity, and a collective reduction in well-being and quality of life.<sup>193</sup> Clearly, early interventions are important in minimizing both individual and societal costs. As Nobel Prize winning economist James L. Heckman has said “the best evidence supports the policy prescription: invest in the very young.”<sup>3</sup>



Source: Heckman, J. J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 312, 1900-1902. (from p. 1901)

Chapter 5:  
Middle Childhood  
(Ages 6-12 years/  
Grades 1-6)



# Chapter 5: Middle Childhood (Ages 6-12 years/Grades 1-6)

Middle childhood is often overlooked, yet it is a period in which significant developmental milestones are achieved. For children ages 6 to 12, developmental tasks and stages include increasing physical, emotional, learning, and social abilities and capacities. Physically, children continue to develop rapidly, growing 5 to 8 cm and adding about 2.75 kg in weight each year. Along with growing bones and muscles, children's brains are also developing in middle childhood, leading to improved motor skills and muscle coordination, as well as increases in cognitive speed, memory, logical and abstract thinking, and language development. With these changes comes the ability to engage with and explore the world in new and more sophisticated ways. This can include the development of new skills such as riding a bicycle, mastering sports, and playing musical instruments, as well as the ability to plan, communicate, and pay attention.<sup>43</sup>

Identity formation and healthy self-concept are important aspects of emotional development in middle childhood. Children begin to develop a more complex "image of self": a set of perceptions and feelings about who they are, what they like, and what they are able to do. The self-concept is now defined in relation to others: children evaluate themselves against their peers, and these judgments become key components of self-esteem. Self-esteem is also shaped by the overall support, love, and acceptance children feel they are receiving from parents, peers, and others. Like attachment, self-esteem is crucial to social and emotional development, but it is not cast in stone. Later influences can improve or damage self-esteem.<sup>43</sup>

In middle childhood, children enter school, make new friends, and begin to engage more with the world outside of the home. One of the hallmarks of middle childhood is the first day of school. Many of us can remember that first day vividly. Moving from the safe familiarity of home and family to a school with new people and new activities is, for many, an exciting experience. Parents relive it as they help their children take the same first step into a new world. Will she be okay? Will other kids like him? Have I prepared her to cope on her own? Sometimes, the first day of school is harder on the parents than it is on the child!

From the first day of school, two worlds begin to develop: one in the home and the other at school. While family remains an important "home base", school age children become increasingly social with children their own age, and peers and close friends begin to play a more important role. Often during middle childhood, a "best friend" develops who is more than just a playmate, but is also a person of trust and confidence.<sup>194</sup> Children learn to not only build relationships, but also manage conflict. These developing social skills form an important foundation for adolescent and adult relationships.

With increased time outside of the home, there is also increasing autonomy and testing of limits. However, independence and risk taking can lead to increased vulnerability. Some of the risks for children ages 6 to 12 are different than those in early childhood. While risks inside the home continue to be important, risks are increasingly found outside of the home: in neighbourhoods and schools, in the cyber world, and in some peer groups, such as gangs. As the importance of peers increases, so does the vulnerability to peer pressure and bullying.

School is also the beginning of a structured environment in which children are evaluated in the context of their peers. Entry into school marks a new period of learning that is oriented to academics. Teachers and staff become increasingly important in a child's life and can help build self-esteem.<sup>195</sup> Thus, school becomes a major part of children's lives, and school experiences have a great impact not only academically, but also socially and emotionally.<sup>196 197 198</sup>

# A) Physically and Emotionally Healthy (Middle Childhood)

## I. Physical health

As children continue to grow and develop through middle childhood, a number of potential physical risks and opportunities are present. These include challenges and resiliencies associated with chronic illness and disability, as well as opportunities to develop behaviours and routines that can contribute to good physical and emotional health, including oral hygiene, physical activity, and nutrition.

### a) Chronic illness development

Two common chronic diseases begin to appear in middle childhood. Asthma is the most common chronic condition in children. Generally, asthma rates decline with age, with some children 'growing out of' asthma in the teen years.<sup>91</sup> The diagnosed asthma rate for children 6 to 12 years old has remained stable in Manitoba over the last decade, at 16%. Rates are highest in Winnipeg and lowest in the North.<sup>22 (48)</sup> Among First Nations Children ages 6 to 11 in Manitoba, the asthma rate is lower, at 10%.<sup>199</sup> Respiratory disorders were the top cause of hospitalization among Manitoba children ages 6 to 12 in Manitoba, accounting for 23% of hospitalizations between 2000/01 and 2009/10.<sup>22</sup>

The diagnosed diabetes (type 1 and type 2) rate has been relatively stable among 6 to 12 year olds in Manitoba, at 0.24% in 2001/01-2003/04 and 0.28% in 2007/08-2009/10. However, rates increased in Winnipeg (from 0.23% to 0.26%) and the North, (from 0.25% to 0.35%). The rate was lowest in the Rural South, where it decreased (from 0.23% to 0.20%), and highest in the North.<sup>22(49)</sup>

### b) Disability

There is very little information in Manitoba and Canada regarding children with disabilities. Furthermore, the approach to collecting information has been primarily deficit based – rather than focusing on strengths or assets. As a result, the available information sheds little light on the resilience of children with disabilities.<sup>200</sup>

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<sup>(48)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities (RHAs).

<sup>(49)</sup> Note: Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs.

According to the Participation and Activity Limitation Survey, the disability rate among children aged 5 to 14 has increased in Canada, from 4.0% in 2001 to 4.6% in 2006. This increase was primarily due to the increase in learning disabilities (from 2.6% to 3.2%). Most children reported having a mild disability (33.5%) followed by moderate (24.0%), severe (23.6%), and very severe (18.9%) disabilities. Almost three-quarters of school-aged children with a disability reported having multiple disabilities. A higher rate of disability was reported for boys compared to girls. Learning disabilities, chronic health conditions, and communication (speech) disabilities were the three most commonly reported disabilities among children aged 5 to 14.

The transition from home to school is a key time in identifying disabilities in children. Learning disabilities in particular are not always apparent until the child begins school. The percentage of Canadian children with disabilities enrolled in formal education did not change between 2001 and 2006: 84% attended mainstream public or private schools. Of these children, 23% were enrolled in schools with special education classes, while 7% were attending special education schools. Children with severe to very severe disabilities in special education schools were more likely to have an unmet need than children with mild to moderate disabilities (29% versus 18%).<sup>201 202</sup>

Adapting educational programming to meet the specific needs of students with diverse needs is a key objective for providing an optimal learning environment for school-aged children. The rate of children (ages 5 to 12) receiving Special Education funding in Manitoba increased from 20/1000 to 36/1000 between 2000/01 and 2009/10.<sup>22(50)</sup> In other words, more students are receiving Special Education funding in Manitoba.

### c) Oral health

Good oral health is important for children to eat, speak, and relate to each other without embarrassment, pain, or infection, all of which affect people's ability to fully function in society. Poor oral hygiene in children can result in poor concentration, sleep disturbances, behavioural problems, low self-esteem, and fewer friends.<sup>203</sup> The major condition of children's (ages 6 to 11) oral health is tooth decay. Although we don't have data on Manitoba, we know that in Canada, 57% of children aged 6 to 11 years are affected by tooth decay. There are no differences between boys and girls, however the rates are significantly higher among children from Aboriginal families (89%) and from families with lower education (72%). The lowest rate (50%) is seen among children born outside of Canada. The rates and severity of tooth decay in Canadian children have been declining for decades.<sup>204</sup>

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<sup>(50)</sup> Note: Includes Level II and III funding, see Brownell et al (2012) report for details.

Results of the recent Regional Health Survey (2008-10) in Manitoba show that among Aboriginal families with children ages 6 to 11, the majority of parents (85%) said their child has seen the dentist in the last year: over half (55%) of these had received dental care in the last 6 months. Two out of every three parents (69%) said that their child needed a check-up and/or a cleaning, while 23% reported that their child did not currently have any dental care needs. Just over half of children (53%) needed a filling.<sup>205</sup>

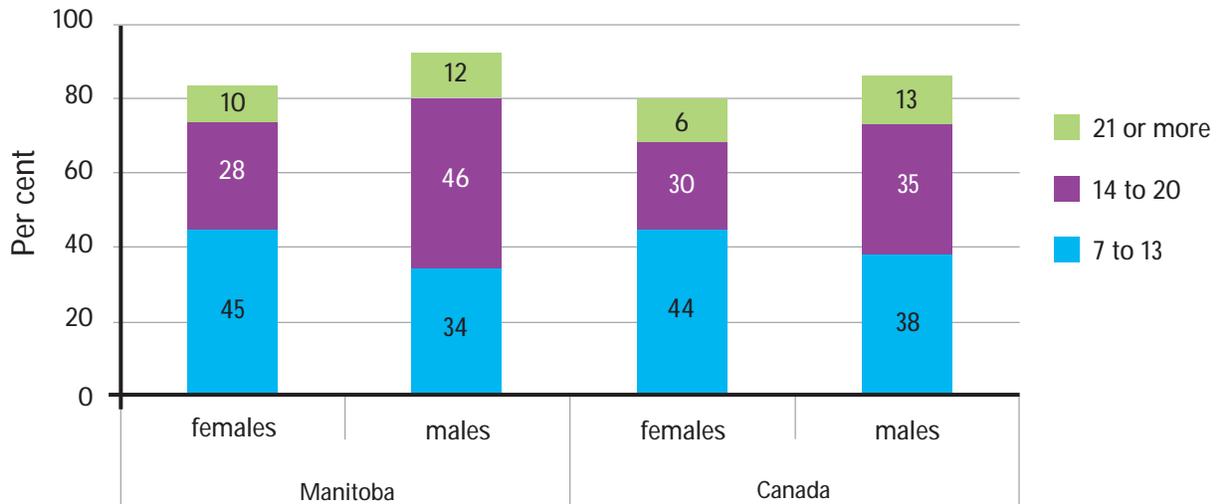
#### d) Physical Activity (includes overweight/obesity)

Over the past 25 years, the proportion of Canadian children with unhealthy body weight has almost tripled. In Canada, nearly 18% of Canadian children between the ages of 6 and 11 are overweight and 8% are obese.<sup>206</sup> Within some populations, rates of overweight and obesity are much higher. For example, the rates of First Nations children are 2 to 3 times higher than the Canadian average.<sup>207</sup> The rate of overweight (including obese) children and youth is also higher in lower socioeconomic neighbourhoods.<sup>208</sup>

The longer a child remains overweight, the greater the likelihood the child will remain overweight into adulthood<sup>207</sup>: half of overweight children in elementary school continue to be overweight adults.<sup>209</sup> Overweight and obese children are predisposed to developing chronic diseases such as type-2 diabetes, cancer and cardiovascular disease later in life.<sup>207</sup> Obesity is also associated with poor emotional and mental health.<sup>210</sup> Increasing physical activity and improving nutrition are important strategies, but addressing the broader determinants of these lifestyle behaviours, including socioeconomic status, is also important.

In middle childhood, children begin to establish patterns of activity and eating, which can continue throughout their lives and lead to increased or decreased risks of chronic illnesses. Physical activity is important not only for healthy bodies, but also healthy minds, reducing the risk of mental health issues such as depression. During middle childhood, the development of coordinated muscle groups, strong bones, and a more complex nervous system enables children to move with greater speed, strength and precision.<sup>43</sup> Physical activity is very important in this development. *Canadian Physical Activity Guidelines* indicate that children ages 5 to 11 should get 60 minutes of moderate to vigorous activity such as biking, playing, running, or swimming over the course of the day.<sup>211</sup>

Figure 35: Participation in physical activities  
(hours per week, 2004)



Source: Canadian Community Health Survey, cycle 2.2 <sup>(51)</sup>

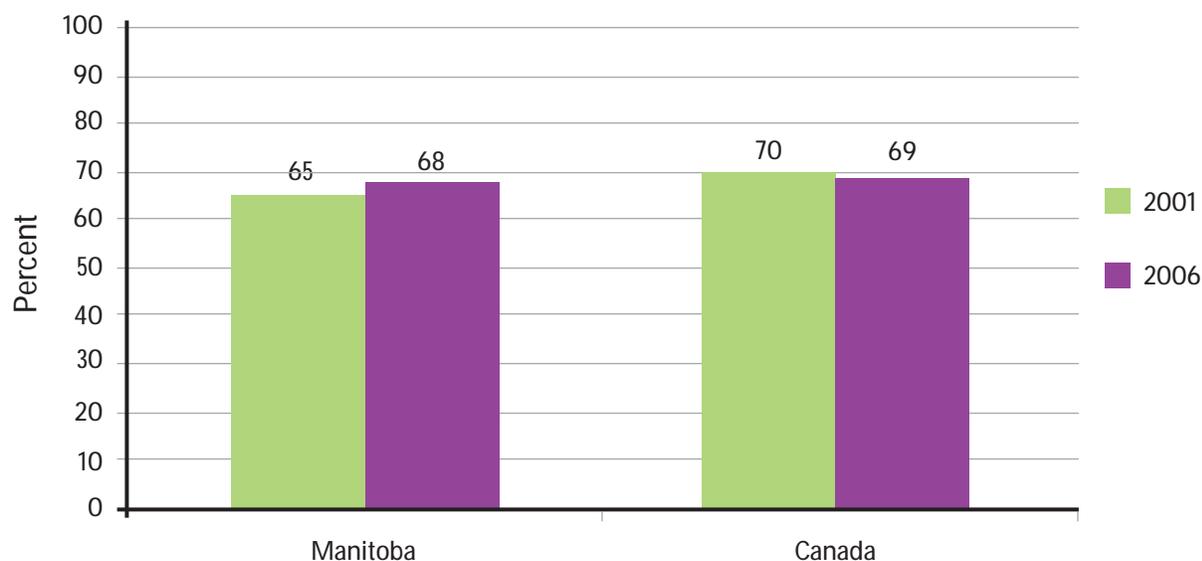
In 2004, according to the Canadian Community Health Survey, the majority of Manitoba children ages 6 to 11 reported meeting the physical activity guidelines of 7 or more hours of physical activities per week (see Figure 35). A higher proportion of male children (91%) reported 7 or more hours compared to female children (83%). Boys in Manitoba were considerably more active than in Canada overall: in Manitoba, 58% reported at least 14 hours of participation in physical activities per week, compared to 48% in Canada overall. Girls in Manitoba, on the other hand, reported a similar level of physical activity compared to girls in Canada overall.

Over two thirds of Aboriginal children (ages 6 to 14) in Manitoba and Canada (not including First Nations communities) play sports at least once per week, according to the Aboriginal Peoples Survey (see Figure 36). The percentage of Aboriginal children ages 6 to 14 that reported playing sports, including taking lessons, at least once per week or more, increased slightly in Manitoba, from 65% in 2001 to 68% in 2006, and was comparable to the percentage in Canada in the most recent year.

Children should also minimize time when they are not active; the Canadian Society for Exercise Physiology recommends limiting screen time (watching TV or videos, playing video games, or using a computer to play games, e-mail, chat, surf, etc.) to no more than 2 hours per day.<sup>211</sup>

<sup>(51)</sup> Note: the results for "less than 7 hrs per week" were suppressed due to unacceptably high sampling variability in the Manitoba male sample. The results for 21 or more hours per week should be treated with caution in the Manitoba sample due to sampling variability associated with the estimates.

Figure 36: Aboriginal children who play sports, including taking lessons, once per week or more



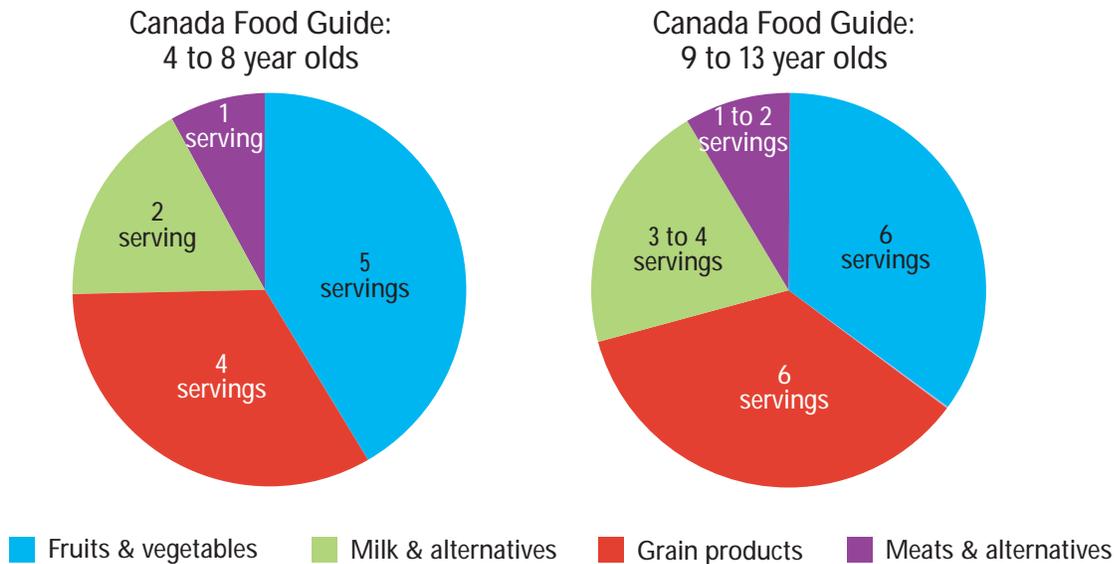
Source: Aboriginal Peoples Survey

However, the media plays an important role in children's lives. School age children watch a lot of television, and are technologically savvy, accessing the Internet in increasing numbers. According to Statistics Canada, Canadian parents of children ages 6 to 11 reported that their children had an average of 2.5 hours of screen time per day, 25% higher than the recommended amount. Directly measured sedentary time (measured with an accelerometer) was considerably higher, at an average of 7.6 hours a day.<sup>212</sup> In addition to affecting children's physical health, screen time may also affect their emotional health and safety, by exposing them to violence, and making them vulnerable to predators, bullying and harassment on the Internet.<sup>200</sup> Screen time has also been linked with sleep deprivation<sup>213</sup>, which worsens both physical and emotional health.

### e) Nutritional requirements

In addition to getting adequate physical activity and minimizing sedentary time, eating a healthy diet is also vital to healthy child development, affecting children's ability to reach their growth and height potential. Nutritious, well-balanced diets are also important to children's cognitive development, learning outcomes, and behaviour.<sup>214 215</sup> Poor nutrition can contribute to childhood obesity, which is linked with a number of health concerns, including type-2 diabetes.

Figure 37: According to Health Canada, children between the ages of 4 and 13 should be eating:



Schools play an important role in a healthy diet. In 2009, 535 schools in Manitoba filled out a school nutrition survey. The results indicated that over 95% of cafeterias and canteens used Manitoba’s guidelines for healthy foods served and sold at school. There were significant changes in the profile of ‘top 10 foods’ sales between 2006 and 2009. In *cafeterias*, cookies, pizza, French fries, and soft drinks were no longer among the top 10 foods sold, while muffins, fresh fruit, yogurt, and raw vegetables had become more popular. In *canteens*, white milk, hot rods, yogurt, processed cheese and crackers, soup, and fresh fruit had replaced candy, pizza, chips, hot dogs, chocolate bars, soft drinks, and ice cream as the top foods sold. In *vending machines*, the availability of soft drinks continued to decline, and water was the most popular choice, followed by 100% fruit or vegetable juice. Baked snacks and uncoated granola bars were more prevalent, compared to 2006 when fried snacks and coated bars were most popular. The number of breakfast programs had increased significantly since the first survey in 2001.<sup>216</sup>

## II. Emotional and mental health

Parents and family continue to have an important influence on children’s mental health in middle childhood, as do relationships with peers and other adults in the school and community. It is during middle childhood, when children begin school and are frequently monitored and evaluated, that mental health and behavioural issues such as anxiety

disorders, depression, ADHD, and aggression are more frequently recognized and addressed. Mental health issues in childhood are strongly associated with indicators of childhood adversity, including poverty, homelessness, stress, and family disruption.<sup>217</sup>

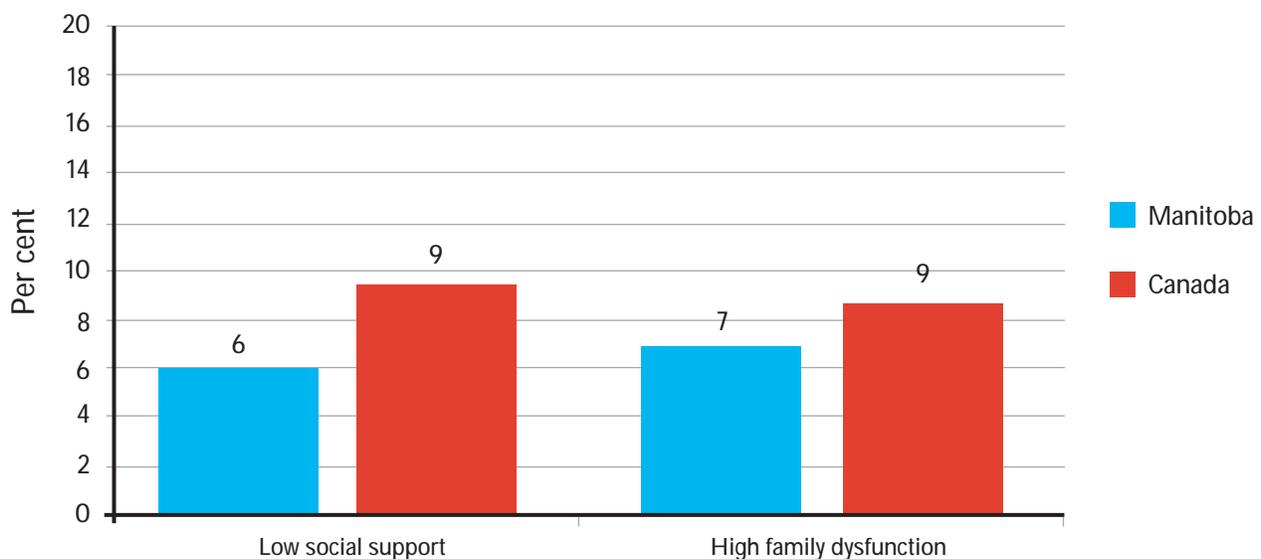
### a) Parental and Family Influences

Positive, stable, and nurturing relationships are essential to healthy development in middle childhood, contributing to children’s sense of security and self-esteem. Positive parenting, an important influence on emotional health in early childhood, continues to be important in middle childhood, and can decrease the risk of children developing social and emotional problems.<sup>218</sup>

<sup>219</sup> Parental mental health, social supports, and family functioning are all important as well. A Canadian study found that higher levels of physical aggression and lower levels of prosocial behaviour were found in children whose mothers were depressed and used harsher methods of punishment.<sup>220</sup> As noted in the previous chapter, family functioning is associated with children’s mental health, behavioural, and educational outcomes. Children in negative family environments tend to have an increased chance of social, emotional, and mental problems later in life.<sup>221 222</sup>

Compared to Canada, Manitoba families are doing better in social support and family functioning (see Figure 38). In the 2006/07 National Longitudinal Survey of Children and Youth, the percentage of children (ages 0 to 9) with parents reporting low social support was lower in Manitoba (6%) compared to all of Canada (9%). The percentage with parents reporting high family dysfunction was somewhat lower (7%) compared to all of Canada (9%).

Figure 38: Social support and family functioning scores (2006/07)



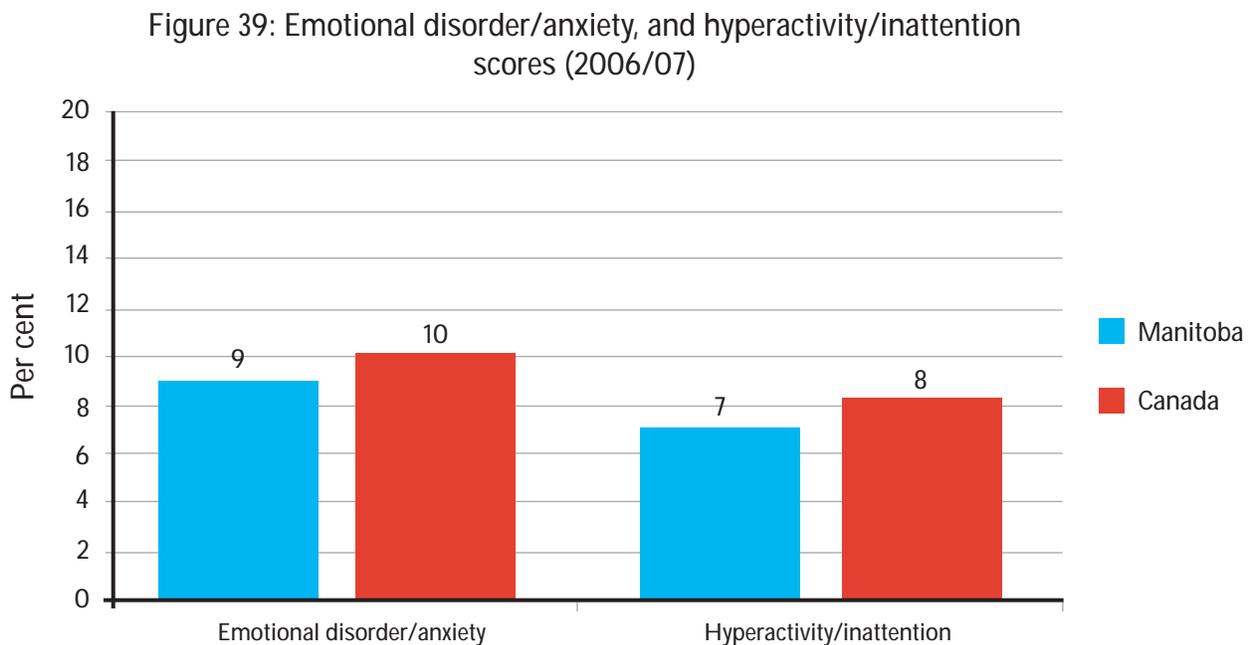
Source: National Longitudinal Survey of Children and Youth, cycle 7 (Refer to Early Childhood chapter for definitions of these two scales)

Having supportive adults besides a child’s parent(s) is also important. A caring adult in the school or community can make a tremendous difference in a child’s life by mentoring, modeling positive behaviours, and being supportive, thus contributing to a child’s self-esteem and autonomy. Children who are involved in quality mentoring programs are less likely to skip school, and less likely to begin using alcohol or illegal drugs.<sup>223</sup> Other positive effects of mentoring include improvements in youth’s grades and family relationships.<sup>224</sup>

## b) Hyperactive/inattentive behaviour and anxiety

Hyperactivity is the most common behavioural disorder identified in school-aged children.<sup>91</sup> Children who are overly restless and unable to concentrate are less likely to succeed academically, and more likely to experience family conflict and poor peer relationships.<sup>22</sup> There was a significant increase in diagnosed rates of ADHD<sup>(52)</sup> for 6 to 12 year olds in Manitoba between 2000/01 (3.2%) and 2009/10 (4.5%). Rates were highest in Brandon (increased from 4.1% to 5.9%), and lowest in the North (increased from 1.5% to 2.5%).<sup>22 (53)</sup>

Figure 39 shows that in the 2006/07 National Longitudinal Survey of Children and Youth, the percentage of children (ages 2 to 9) with high scores on the hyperactivity scale was similar in Manitoba (7%) and Canada overall (8%). The percentage with high scores on the emotional disorder/anxiety scale was also similar in Manitoba (9%) and Canada overall (10%).



Source: National Longitudinal Survey of Children and Youth, cycle 7 (Refer to Early Childhood chapter for definitions of these two scales)

<sup>(52)</sup> Measured by a diagnosis of ADHD or a prescription for medication

<sup>(53)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities (RHAs).

### c) Sleep

Sleep is an important contributor to healthy physical and emotional development and growth in middle childhood. School-age children who do not get enough sleep or have interrupted sleep patterns are more likely to have mental health problems. Studies have shown that children who are sleep deprived are more likely to be hyperactive, and may find it difficult to concentrate and retain information, thus affecting their performance in school. Lack of sleep also increases the risk of accidents and injury, and may affect social relationships.<sup>225</sup> Further, consistent short sleep duration may be associated with a higher risk of obesity among children.<sup>226 227</sup>

## B) Safe and Secure (Middle Childhood)

### I. Safety

Increased mobility and independence in middle childhood result in increased vulnerability to injury and other risks both inside and outside the home. Safety in the home, neighbourhood, and school is important in order for children to thrive physically, mentally, academically, and socially.

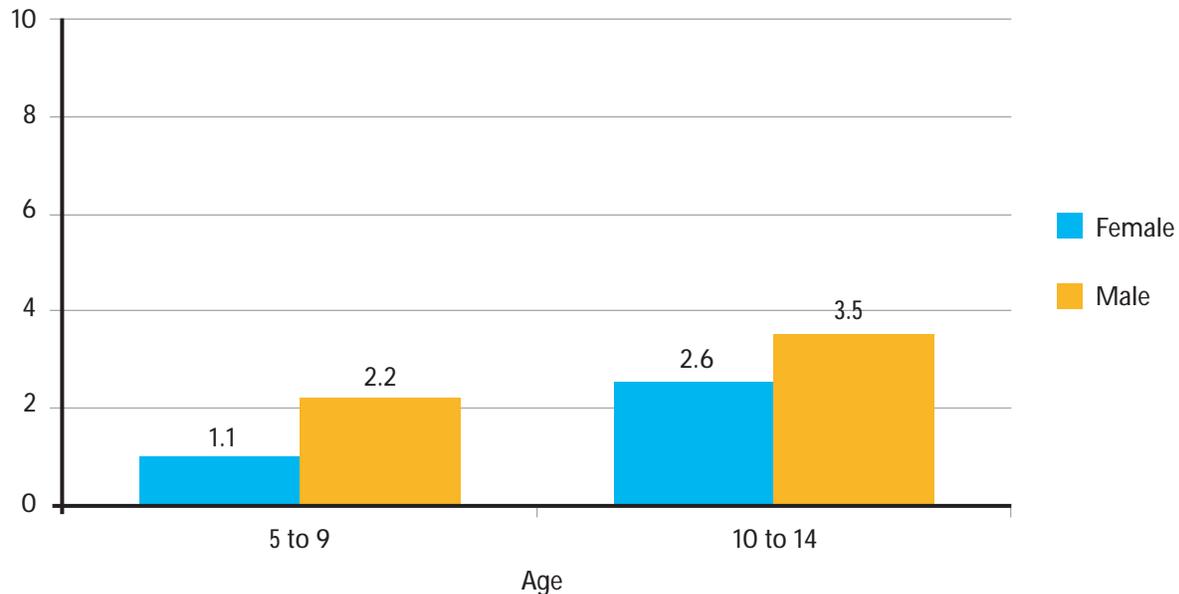
#### a) Physical risks: Injury and mortality

Injuries are a leading and preventable cause of health care utilization and death, and also pose a risk for both short-term and long-term disabilities.<sup>228</sup> Injuries remain a top cause of hospitalization and death for 6 to 12 year old children in Manitoba. In this age group, most injuries are *unintentional* (accidental, e.g., falls, motor vehicle accidents). The unintentional injury hospitalization rate for 6 to 12 year olds decreased significantly between 2000/01-2004/05 and 2005/06-2009/10 in all regions of Manitoba except Mid and Northern regions. There were very few *intentional* (e.g., assault, suicide) injury hospitalizations for this age group in Manitoba, and the rate decreased significantly over the ten years, particularly in the North.<sup>22 (54)</sup>

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<sup>(54)</sup> Note: Mid= North Eastman, Interlake, and Parkland Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs.

Figure 40: Injury hospitalization rate in Manitoba (2010/11)  
(crude rate per 1,000 hospitalizations)



Source: Manitoba Health<sup>(55)</sup>

In Figure 40, we can see that injury hospitalizations increase steadily with age. Male children have a higher injury hospitalization rate than female children at every age, due to their higher likelihood of risk-taking behaviour.

Although a relatively rare occurrence, childhood deaths do occur. The provincial mortality rate for children ages 6 to 12 has increased in Manitoba (from 15/100,000 in 2000-2004 to 17/100,000 in 2005-2009). The rate was highest in the North, where it increased from 25/100,000 to 35/100,000. The top cause of mortality for children 6 to 12 in both time periods was injuries.<sup>22(56)</sup>

## b) Safe families

The home environment remains a central space in middle childhood. However, not all home environments are safe, and victimization or witnessing of violence does occur within the home or family. For information on Manitoba children in care of Child and Family Services, or receiving protection or support services from Child and Family Services, please refer to the previous chapter “Who are Manitoba’s children and youth?”.

<sup>(55)</sup> Rate per 1,000 hospitalizations. Crude rate, not adjusted for age or sex. Source: Manitoba Health (2012). Annual Statistics 2010-2011.

<sup>(56)</sup> Note: North= Burntwood, NOR-MAN, and Churchill RHAs.

Although statistics are not available for Manitoba, recent data for Canada indicate that of all children ages 3 to 11 who are violently victimized (e.g. physically or sexually assaulted, threatened, etc.), almost half (47% in 2010) are victimized by someone within their own family network.<sup>229</sup> Over half (60% in 2009) of children ages 3 to 11 who are victims of police-reported family-related violence are assaulted by their parent.<sup>230</sup>

There are important age and sex differences. For 3 to 11 year old victims, family-related violence is more common than non-family related violence for females (54% and 46% respectively in 2010), while non-family related violence is more common for males (41% and 59% respectively in 2010). The leading contributor to the higher rates of family violence among girls, particularly as they get older, relates to their much higher risk of being sexual abused. In 2009, the rates of sexual offences committed by family members against children and youth peaked between 5 and 8 years of age for boys, and around 14 years of age for girls. For 3 to 11 year old Canadian children who were victims of police-reported family violence in 2010, the most common types of incidents were physical assaults (49%), sexual offences (34%), and 'other' violent offences (e.g., uttering threats) (14%).<sup>231</sup>

Child abuse and maltreatment statistics were not available specifically for Manitoba. However, a Canadian report found that in 2008, the most frequently occurring categories of confirmed maltreatment for children under 18 were exposure to intimate partner violence (34%), neglect (34%), and physical abuse (20%), followed by emotional maltreatment (9%) and sexual abuse (3%). In terms of sex differences, there were more male victims reported in the 8 to 11 year old group and more females reported in the adolescent group. Twenty-two percent of confirmed cases involved children of Aboriginal heritage.<sup>156</sup>

Child abuse and maltreatment places children at risk of a number of difficulties, particularly in school. Nearly half (46%) of children who are abused have functioning issues including academic difficulties (23%), depression/anxiety/ withdrawal (19%), and child aggression (15%). Other functioning issues included attachment issues (14%), Attention Deficit Hyperactivity Disorder (11%), and intellectual or developmental disabilities (11%).<sup>156</sup>

Risk factors and stressors among primary caregivers of maltreated children include being a victim of domestic violence (46%), having few social supports (39%), and having mental health issues (27%).

### c) Safe neighbourhoods and schools

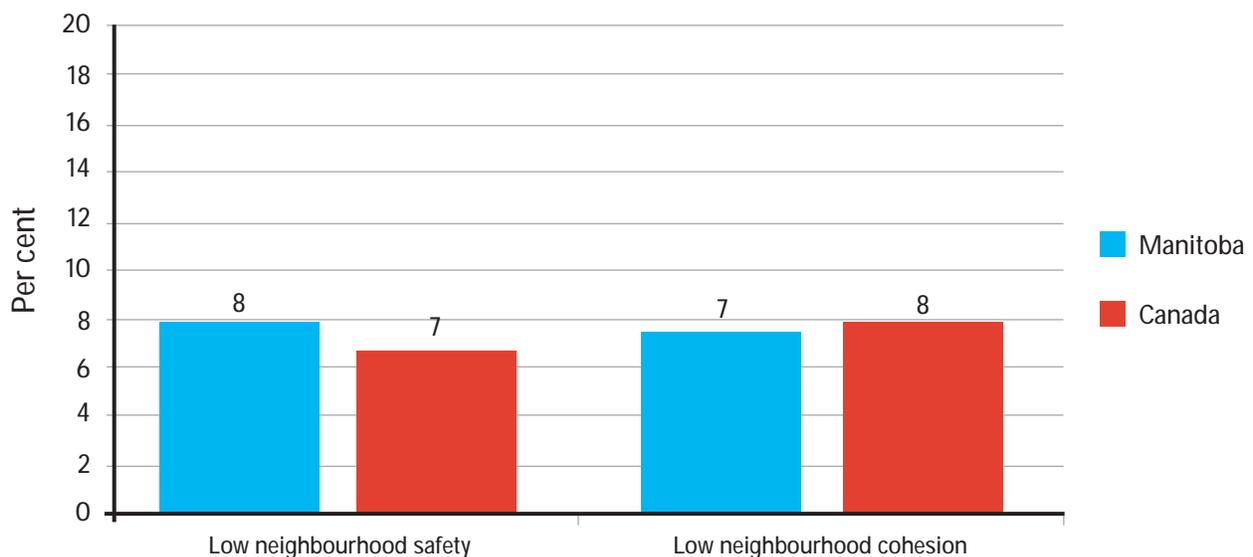
Having a positive neighbourhood environment is critical for children and youth. Children ages 6 to 12 spend a large part of their day outside of the home, interacting with peers and the broader community. They are beginning to explore the world around them, and are doing so with less adult supervision. As a result, children need safe places to play and families need safe communities.<sup>200</sup> Neighbourhood quality (including neighbourhood cohesion<sup>(57)</sup>, neighbourhood problems, and neighbourhood safety) may be associated with conduct<sup>(58)</sup> and emotional disorders, hyperactivity, and non-sports related injuries in 4 to 11 year olds.<sup>232</sup>

When children have access to safe neighbourhoods, parks, and playgrounds, they are more likely to increase their participation in activities that contribute to healthy development, higher school achievement, and positive social behaviour.<sup>218</sup>

According to the NLSCY, the percentage of children (ages 0 to 9) in families with low neighbourhood safety was similar in Manitoba (8%) and in Canada overall (7%), and the percentage with low neighbourhood cohesion was also similar (7% and 8% respectively) (see Figure 41).

In other words, the vast majority (over 90%) of Manitoba families report living in relatively safe and socially cohesive neighborhoods.

Figure 41: Neighbourhood safety and cohesion scores (2006/07)



Source: National Longitudinal Survey of Children and Youth, cycle 7 (Refer to Early Childhood chapter for definitions of these two scales)

<sup>(57)</sup> or 'neighbourliness' (e.g., neighbours get together to deal with problems; people are willing to help their neighbours; adults watch out that children are safe and don't get into trouble).<sup>144</sup>

<sup>(58)</sup> Conduct disorder includes oppositional, defiant, and antisocial behaviours, including lying, stealing, running away, and physical violence

Safety at school, particularly among one's peers, is also an important consideration in middle childhood. Although peers can have a positive influence on children, contributing to feelings of confidence and belonging, they can also have a negative effect. A Canadian study found that 38% of children in grades 1 through 8 reported being bullied at least 'once or twice' during the school year.<sup>233</sup> When children do not feel safe among their peers, there are academic, social, and emotional consequences, and bullying can cause lasting and potentially severe damage. Prolonged bullying is associated with school absenteeism, headaches, stomachaches, depression, anxiety, and in extreme cases, suicide.<sup>234</sup> Other consequences of bullying include conduct disorder<sup>(59)</sup>, aggression, academic problems, and negative peer relationships.<sup>235</sup> Fortunately, the majority of school-aged children in Canada claim to have positive relationships with their peers and siblings.<sup>218</sup>

## II. Security

Meeting the fundamental needs of school age children is essential to their healthy development. Basic necessities related to economic security include food, clothing, and shelter. Emotional security is also important, and this is affected by the child's relationships with family and significant others.

### a) Income security

Chapter 2 ("Who are Manitoba's Children and Youth?") discusses the influence of income security/poverty and housing on children's well-being. In general, school-age children living in poverty are more likely to have disabilities (including vision, hearing, speech, and mobility problems), chronic health problems, difficulties at school, emotional and mental health problems (including low self-esteem, aggression, and hyperactivity), and impaired social relationships.<sup>236</sup>

Income security appears to be improving for Aboriginal families with school-aged children in Manitoba. The 2006 Aboriginal People's Survey (APS) found that 30% of Manitoba households with children ages 6 to 14 were receiving social assistance or welfare benefits the previous year. This was down from 38% in the 2001 APS but remains higher than the percentage of Canadian households (19% in 2006, down from 26% in 2001).

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<sup>(59)</sup> Conduct disorder includes oppositional, defiant, and antisocial behaviours, including lying, stealing, running away, and physical violence

## b) Food security

Food security is an important contributor to children's overall well-being. Although food insecurity is highest among Manitoba households with children ages 0 to 5 (16%), rates of food insecurity among Manitoba households with children ages 6 to 17 (11%) are higher than Manitoba households with no children (8%) and higher than the Canadian average (8%) (see Figure 25 in Early Childhood chapter). When children experience food insecurity, they are more susceptible to illness, and their mental, social, and emotional development is also jeopardized. School-aged children's abilities to learn, do well at school, and make friends decline when they are hungry.<sup>237</sup>

Between 2006 and 2009, the number of schools with breakfast programs increased by 25% in Manitoba. In 2009, 236 schools (44% of schools participating in the school nutrition survey) had funded school food programs. Of these 236 schools, 50% operated a milk program, 48% operated a breakfast program, 30% operated a snack program, and 14% operated a lunch program. 30% of schools operated more than one funded program. The majority of the funded food programs were in the elementary/middle schools category.<sup>238</sup>

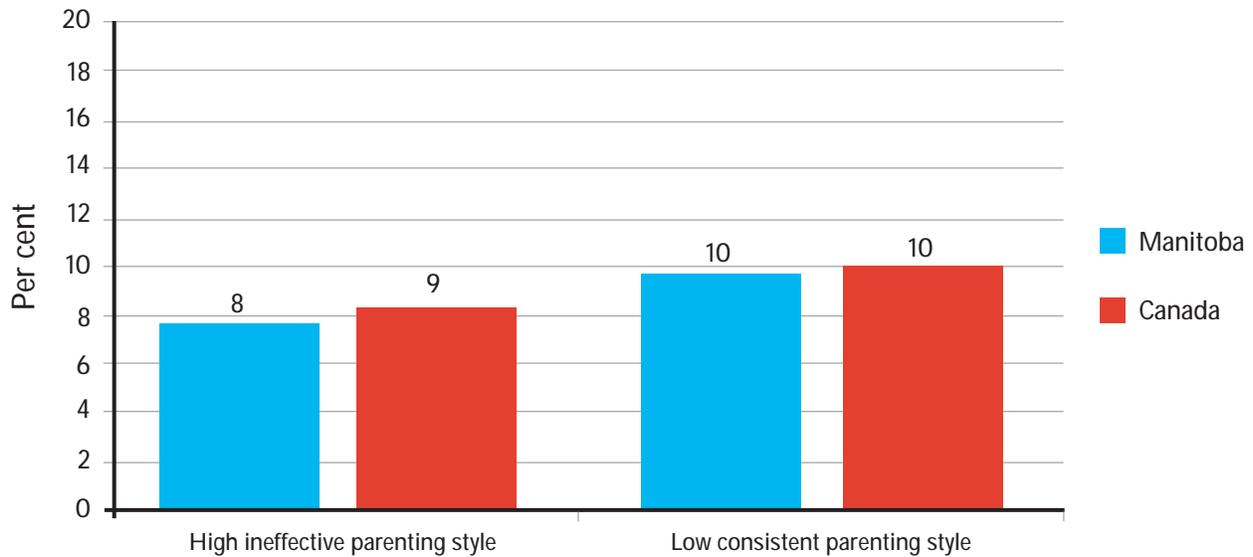
## c) Emotional security and parenting

The way parents interact with their children can have a profound impact on children's physical, mental, emotional, and social well-being. Positive parenting can significantly reduce the risk of children repeating a grade, as well as the risk of having an emotional or conduct disorder.<sup>(60)</sup> For children experiencing poverty, unsafe neighborhoods, or physical or mental health problems, positive parenting can be a protective factor.<sup>239</sup> On the other hand, a negative family environment, including inconsistent or harsh punishment, increases the risk of a child engaging in bullying behaviour.<sup>240</sup>

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<sup>(60)</sup> Conduct disorder includes oppositional, defiant, and antisocial behaviours, including lying, stealing, running away, and physical violence.<sup>217</sup>

Figure 42: Parenting style scores (2006/07)



Source: National Longitudinal Survey of Children and Youth, cycle 7 (Refer to Early Childhood chapter for definitions of these two scales)

Figure 42 shows that in the 2006/07 National Longitudinal Survey of Children and Youth, Manitoba and Canada had comparable scores on the two parenting style indicators: ineffective parenting, and consistent parenting. The percentage of children (ages 2 to 9) in families with high scores on the ineffective parenting style scale was similar in Manitoba (8%) and in Canada overall (9%). The percentage with low scores on the consistent parenting style scale was also similar in Manitoba (10%) and in Canada overall (10%). In other words, the majority (90% or more) of Manitoba parents reported effective and consistent parenting styles.

## C) Successful at Learning (Middle Childhood)

In middle childhood, children enter the structured learning environment of formal primary education. Children are exposed to new ideas and new experiences, and are increasingly being evaluated in academic and social areas. Feedback from parents and teachers on academic performance becomes an important part of children's self-concept. Children also continue to learn outside of school from their experiences in their family and community environments.

# I. Academic Learning

To ensure the best outcomes, schools have the challenging task of providing flexible and adapted learning programs to meet children's multiple educational and social needs. Continued efforts to keep children progressing in school are critical.

## a) Grade repetition

In cases where a student is struggling, some educators believe it is in the child's best interest to repeat the grade.<sup>241</sup> However, research suggests students who repeat a grade are more likely to drop out of school<sup>242</sup>, or if they graduate are less likely to progress to post-secondary education.<sup>243</sup>

The provincial rate of repeating a grade sometime between kindergarten and grade 8 decreased significantly in Manitoba, from 3.5% in 2000/01-2004/05 to 2.5% in 2004/05-2009/10.<sup>22(61)</sup> All regions showed significant decreases over the two time frames. Compared to the provincial average, more students in the North repeated a grade and fewer students in Winnipeg repeated a grade, in both time periods. The 2008/10 Manitoba First Nations Regional Health Study showed that 14% of Aboriginal children ages 6 to 11 had repeated a grade.<sup>244</sup>

## b) Reading and numeracy

Early in the school year, teachers assess grade 3 students in reading and numeracy competencies. 2009/10 was the first year of province-wide assessment in grade 3. A recent report measured Grade 3 *reading* using two reading competencies 1) uses strategies during reading to make sense of texts, and 2) demonstrates comprehension. Grade 3 *numeracy* was assessed with four different numeracy competencies: 1) predicts an element in a repeating pattern, 2) understands that the equal symbol represents an equality of the terms found on either side of the symbol, 3) understands that a given whole number may be represented in a variety of ways, and 4) uses various mental math strategies to determine answers to addition and subtraction questions up to the number.

For each reading and numeracy competency, students were categorized according to one of four levels of achievement for Grade 3 entry level performance standards: 1) meeting expectations, 2) approaching expectations, 3) needs ongoing help, and 4) out of range<sup>(62)</sup>.

For the 2009/10 school year, 80% of Manitoba students were "meeting" or "approaching" expectations on both reading competencies. The percentage ranged from 75% in the North to 81% in Winnipeg. For numeracy, 72% of Manitoba students were "meeting" or

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<sup>(61)</sup> North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

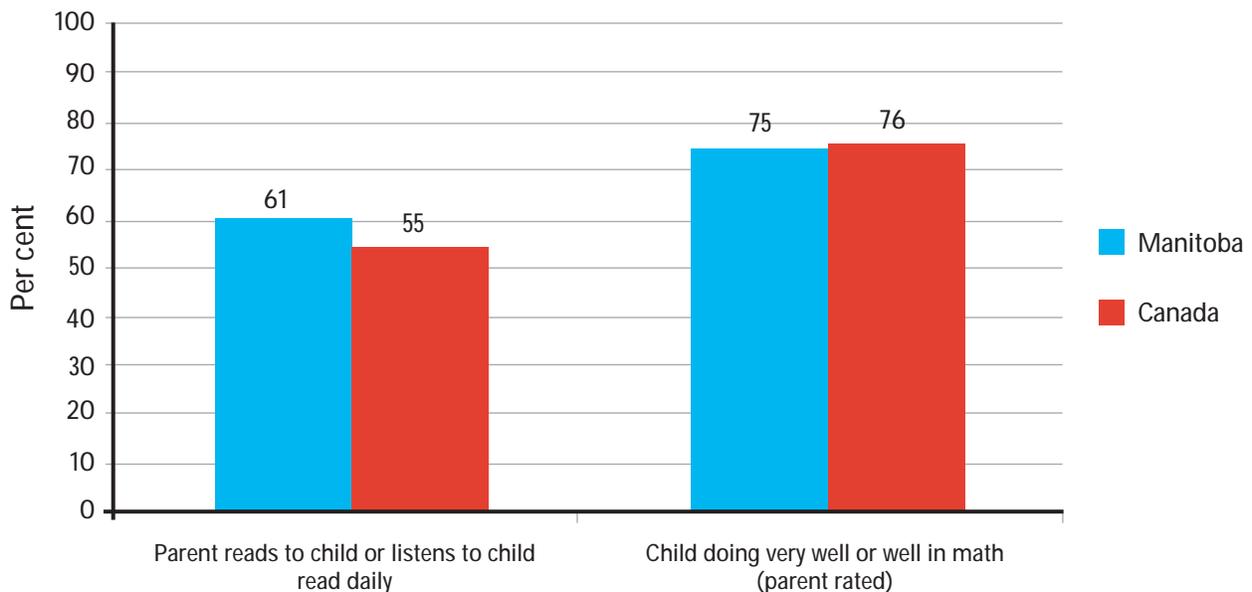
<sup>(62)</sup> Used to describe those students who are working well below grade-level curriculum relative to the competencies assessed due to their learning disabilities or their need for new language learning.

“approaching” expectations on all four numeracy competencies. The percentage ranged from 69% in the North to 76% in Mid regions. For both reading and numeracy, a lower percentage of students was meeting or approaching expectations in lower income rural and urban areas of the province. However, the degree of inequity was relatively low.<sup>22 (63)</sup>

As noted in the previous chapter, a recent Manitoba study found a strong association between children’s school readiness (as measured by the Early Development Instrument) and their outcomes for grade 3 assessments of reading and numeracy, indicating that school trajectories are established when children are very young.<sup>175</sup> In other words, the grade 3 results reflect learning that began well before the middle childhood period.

Another source of information on children’s learning and academic performance, in addition to teacher evaluations, comes from surveys of parents. The National Longitudinal Survey of Children and Youth (NLSCY) collected self-reported information from parents for the year 2006/2007.<sup>(64)</sup> Compared to parents in Canada, a higher proportion of Manitoba parents reported reading with their children (61% vs. 55%), and a similar proportion of Manitoba parents reported that their child was doing well in math (75% vs. 76%) (see Figure 43).

Figure 43: Reading and math (2006/07)



Source: National Longitudinal Survey of Children and Youth, cycle 7<sup>(65)</sup> (Refer to Early Childhood chapter for definitions of these two scales)

<sup>(63)</sup> Notes: Mid= North Eastman, Interlake, and Parkland Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs. Rates by area represent where students live rather than where they attend school. Because some First Nations schools do not participate in the Grade 3 assessments, children in First Nations schools were not included in the analyses (see Brownell et al, 2012 for details). For readers who would like more details on specific competencies and/or specific language programs (English, French Immersion, and Francais), please see “A Profile of Student Learning and Performance in Manitoba, 2006-2010”, Manitoba Education.

<sup>(64)</sup> The 2008/09 NLSCY did not survey middle childhood ages (only 0 to 7 year olds, and 14 to 25 year olds).

<sup>(65)</sup> Note: reading is for ages 3-9, parent-rated math for ages 4-9

## II. Learning gaps and summer learning loss

Building a successful educational environment requires a great deal of support for children in both school and home environments. Parents play an important role in helping children achieve in academics. Research shows having a supportive home learning environment has strong effects on children's educational achievement.<sup>245</sup>

A significant amount of learning takes place outside of school. In fact, children spend most of their time outside of school, but the quality of their non-school environments varies considerably. Research comparing the school season with the non-school (summer) season has shown that socioeconomic and racial/ethnic gaps in academic skills such as reading and math grow primarily during the summer. This suggests that non-school factors, such as family, neighbourhood, and community, play an important role in learning and in educational outcomes, while school offsets some of these inequalities.<sup>246</sup> A US study found that differential summer learning over the elementary school years accounts for much of the income-related differences in high school tracking (university preparation or not), high school completion, and four-year college attendance.<sup>247</sup> Encouraging parents and families to become involved in their child's school and to support their child's learning, both at home and at school, is important.

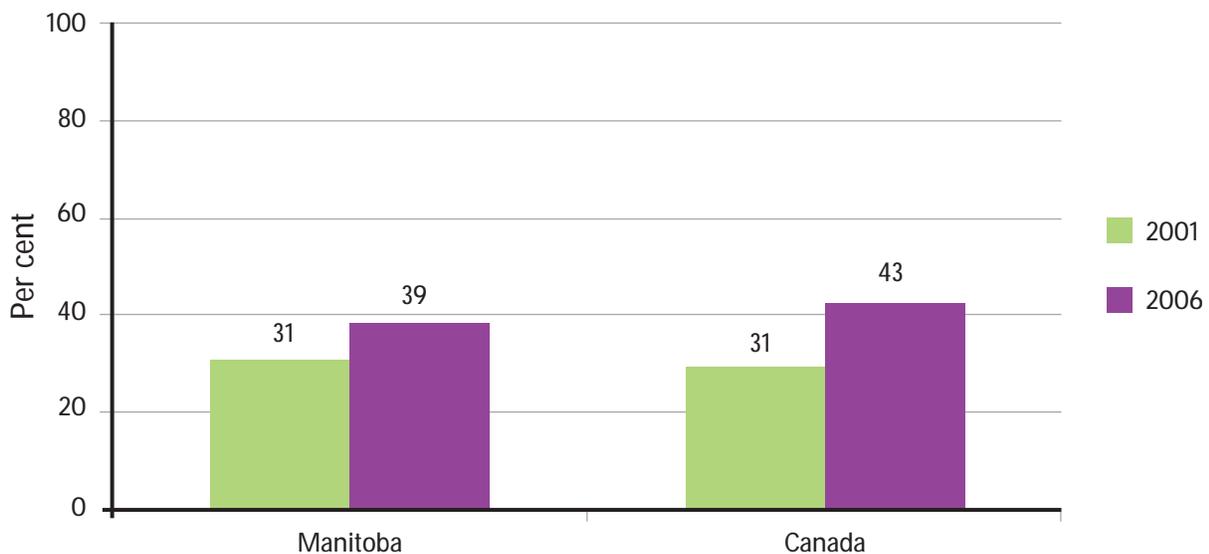
## III. Cultural and other learning

Learning has many dimensions. In addition to academic learning, social and cultural learning serve as major contributors to child development.<sup>248</sup> Understanding our parents' cultures is an important part of the learning process, and contributes to children's sense of identity and self-concept. Further, in a multicultural country such as Canada, gaining cultural knowledge also helps children understand and appreciate the diverse backgrounds of their peers, neighbours and community members.

Cultural learning may also have important effects on the health of communities. A study of British Columbian First Nations communities found that knowledge of an Aboriginal language was a significant predictor of community health, especially among youth.<sup>249</sup> Cultural learning is thus an important tool for promoting healthy future generations in Manitoba.

Results of the Aboriginal Peoples Survey (does not include First Nations communities) show that the percentage of children (ages 6 to 14) that speaks or understands an Aboriginal language increased in Manitoba, from 31% in 2001 to 39% in 2006 (see Figure 44). The percentage is slightly higher in Canada, where it increased from 31% to 43%.

Figure 44: Aboriginal children who speak or understand and Aboriginal language



Source: Aboriginal Peoples Survey <sup>(66)</sup>

The most recent 2008/10 Regional Health Survey, which surveyed 34 Manitoba First Nations communities, found an even higher percentage: 51% of children (ages 6 to 11) could understand or speak a First Nations language, and 12% speak a First Nations language intermediately or fluently.<sup>250</sup>

<sup>(66)</sup> Note: does not include First Nations communities

# D) Socially Engaged and Responsible (Middle Childhood)

## I. Socially engaged

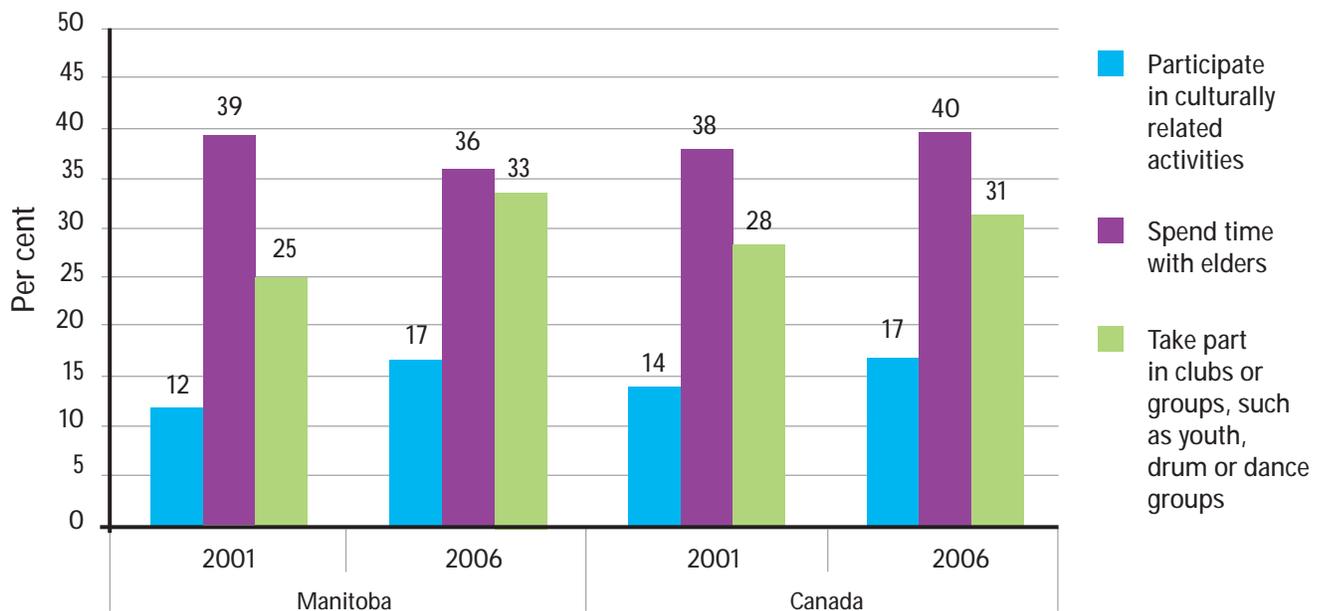
In middle childhood, social competencies include the ability to get along with others, as well as handling increased roles within the family, peer group, and broader community. Social engagement may be reflected in school attachment, engagement in learning, and participation in the community.

School attachment refers to the sense of belonging and support children feel from their school. Children who feel connected to their school tend to do better academically, have higher self-esteem, and are more likely to enjoy school and continue with their education.<sup>251</sup> Engagement in school is also important for a sense of belonging and contributes to good mental health.<sup>252</sup> When children are engaged in their learning, they tend to learn more and be more willing to increase their knowledge. Positive and supportive school environments encourage children to explore, test their abilities, enhance their skills and experience success. Parental involvement, quality mentoring programs, and academic supports all help support engagement in learning.<sup>253</sup>

Access to recreation, leisure, arts, and culture also allows children to socially engage. Organized activities where children can learn and practice their social skills are an important part of developing social competence.<sup>254</sup> Participating in organized or unorganized sports, joining clubs or groups, and taking music, dance or art lessons are examples of ways in which young people can participate in their community, learn valuable new skills, and socialize outside of their families. Children's involvement in cultural and recreational activities helps them to be physically, emotionally, and socially healthy. These activities can improve leadership skills, self-confidence, and social skills such as sharing and cooperation. They also provide children with an opportunity to learn from coaches, instructors and mentors. Unfortunately, the extent to which children participate in leisure, arts, and recreation activities depends on their family's economic resources and on the availability of facilities and programs in their community. The high cost of equipment or supplies, instruction, and facility fees that are often required to participate in many activities, acts as a strong deterrent for lower-income families.<sup>255</sup>

Participation in the neighbourhood and wider community is another way that school-age children socially engage. Community engagement and participation have been linked with positive behaviour, a higher sense of confidence and self-worth, and an increased likelihood of seeking out positive challenges.<sup>256</sup> For Aboriginal people in Manitoba, participation in traditional cultural activities is an important way for children to socially engage. Figure 45 shows the results of the most recent Regional Health Survey (2008/10), which indicate that participation in traditional cultural events is important to Aboriginal peoples in Manitoba: 83% of parents/ guardians of children (ages 6 to 11) think traditional cultural events are somewhat or very important in their child’s lives.

Figure 45: Aboriginal children who participate in cultural activities once per week or more



Source: Aboriginal Peoples Survey<sup>(67)</sup>

The percentage of Aboriginal children (ages 6 to 14) who participate in culturally related activities at least once per week or more increased in Manitoba, from 12% in 2001 to 17% in 2006 (compared to 14% and 17% respectively in Canada). The percentage of children who spend time with elders at least once per week decreased slightly, from 39% to 36% (compared to 38% and 40% respectively in Canada). Participation in clubs or groups such as youth, drum or dance groups increased from 25% to 33% (compared to 28% and 31% respectively in Canada). Overall, participation in cultural events appears to be increasing in Manitoba, and was comparable to Canada in the most recent year (2006).

<sup>(67)</sup> Note: does not include First Nations communities

## II. Socially responsible

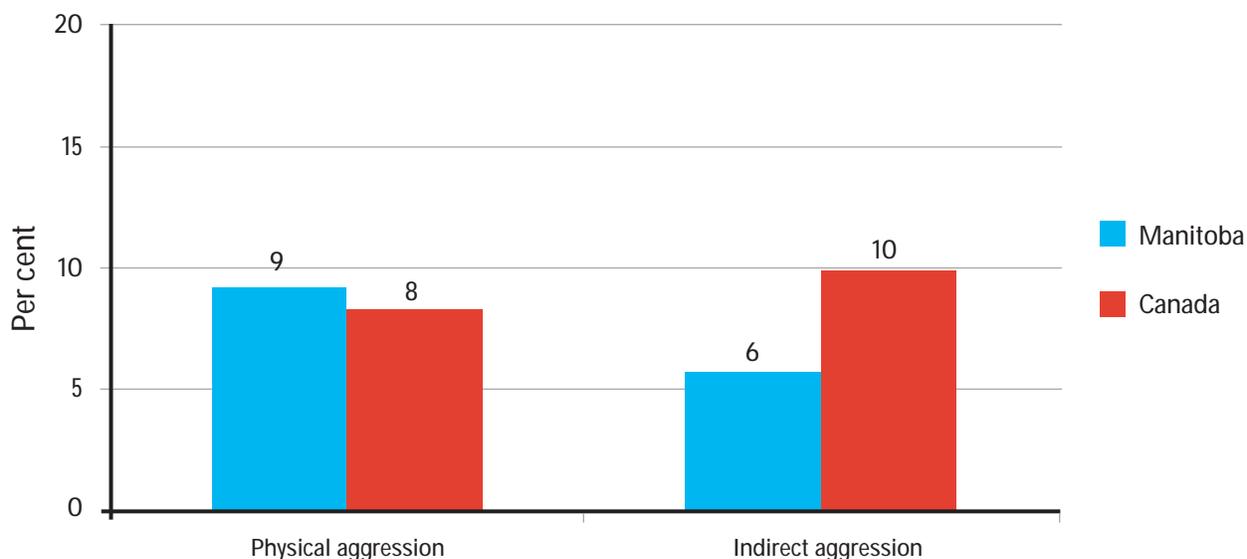
As children grow older, they are expected to be socially responsible, adhering to norms set out by their families, schools, and broader society. Moral reasoning (the ability to make our own judgments about right and wrong) develops during middle childhood<sup>43</sup>, along with self-regulation and prosocial behaviour.

### a) Self-regulation

Self-regulation refers to a child's ability to conform to parental and community expectations of behaviour without direct supervision.<sup>43</sup> While self-regulation begins in early childhood, it is during middle childhood, as children become more independent and function in a world without their parents, that they are increasingly expected to be able to self-regulate. Long-term studies following children over decades have found that developing self-regulation skills in childhood may have lasting effects on a number of physical health, academic, and behavior outcomes, including substance abuse, personal finances, criminal activity and violence, and school failure.<sup>257, 258</sup>

In the 2006/07 National Longitudinal Survey of Children and Youth, the percentage of children (ages 2 to 9) with high scores on the indirect aggression scale was considerably lower in Manitoba (6%) than in Canada overall (10%). The percentage with high scores on the physical aggression scale Manitoba (9%) was comparable to Canada (8%) (see Figure 46).

Figure 46: Physical and indirect aggression scores (2006/07)



Source: National Longitudinal Survey of Children and Youth, cycle 7 (Refer to Early Childhood chapter for definitions of these two scales)

## b) Prosocial behaviour

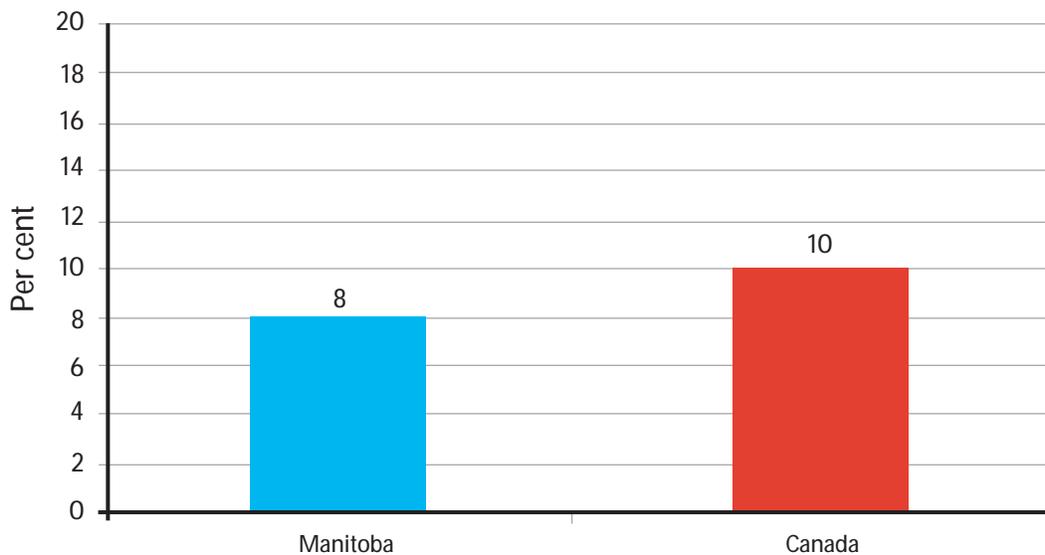
Positive social skills, including the ability to express oneself and to get along with others, are associated with higher self-esteem in school-aged children. Children who lack adequate or age-appropriate social skills may have fewer friends; feel isolated, anxious, or distressed; and struggle in school and social settings.<sup>259</sup>

Prosocial refers to behaviours that promote positive social interactions, including showing sympathy to someone who has made a mistake; trying to help or comfort someone who is hurt, sick, or upset; or volunteering to help clean up someone else's mess. Prosocial behaviour is an important indicator of the ability to successfully participate in the social environment.

Figure 47 shows that Manitoba compares favourably to Canada when it comes to prosocial behavior. In 2006/07, the percentage of children (ages 6 to 9) with low prosocial behaviour scores was lower in Manitoba (8%) than in Canada overall (10%).

In other words, the majority (over 90%) of children ages 6 to 9 in Manitoba had good prosocial behaviour scores.

Figure 47: Prosocial behaviour scores  
(2006/07)



Source: National Longitudinal Survey of Children and Youth, cycle 7

### c) Antisocial behaviour

The link between adverse childhood experiences and involvement in antisocial behaviour is firmly established, and numerous studies have shown that children and youth who are the most disadvantaged and vulnerable are more likely to come into contact with the criminal justice system.<sup>260</sup> It is important to note that only a relatively small group of children persistently engage in antisocial behaviour: more than half of children who show early signs of antisocial behaviour do not persist in it.<sup>102</sup>

Because children under 12 are under the age of legal responsibility, no data are available on gang involvement or criminal activity for middle childhood school-age children in Manitoba. The only data available are from the Turnabout Program, a voluntary provincial prevention program for children under 12 years of age who are (1) behaving in ways that would result in criminal charges if they were 12 or older, and (2) identified as at-risk of coming into contact with the law. Referrals to Turnabout are made by law enforcement, community agencies, schools, child and family service agencies, community members and concerned parents. The program connects at-risk children and their families with appropriate community resources that will support the family and 'turn around' the child's behaviour. On average, 200 referrals are made each year. The most common incidents are firesetting, mischief, and shoplifting. These numbers and types of incidents should not be seen as representative of antisocial type behaviour among children under 12, as the program is based on referrals, and participation is voluntary.

## SUMMARY

Middle childhood is an important time of transition marked by significant milestones, including the first day of school in Grade 1. Children continue to develop physically, mentally, emotionally, and socially. Middle childhood offers the opportunity to sustain children who had a good start in early childhood, and to improve the chances of vulnerable children to become healthy adolescents and adults.<sup>261</sup>

Several outcomes for middle childhood are stable and have changed very little over time in Manitoba. These include indicators of physical health, such as the diagnosed asthma rate and the diagnosed diabetes rate. For other indicators, children in Manitoba and Canada are very similar. These include measures of neighbourhood safety and cohesion, effective and consistent parenting, and physical aggression.

A number of outcomes show signs of improvement in Manitoba. Both the unintentional and the intentional injury hospitalization rates have decreased. There has also been a decrease in the rate of grade repetition for Kindergarten through grade 8.

Outcomes for Aboriginal children are also improving. The percentage of Aboriginal children that speaks or understands an Aboriginal language has increased, the percentage that participates in cultural activities has increased, and the percentage that participates in clubs or groups has increased. There has also been a decline in the percentage of Aboriginal households receiving social assistance benefits.

Manitoba compares very favourably to Canada on several indicators, including a higher percentage of parents that read to or listen to their child read daily, a lower percentage of families with low scores on social support, a lower percentage of families with high scores on family dysfunction, a lower percentage of children with high scores on indirect aggression, and a lower percentage of children with low scores on prosocial behaviour.

Chapter 6:  
Adolescence  
(Ages 13-19 years /  
Grades 7-12)



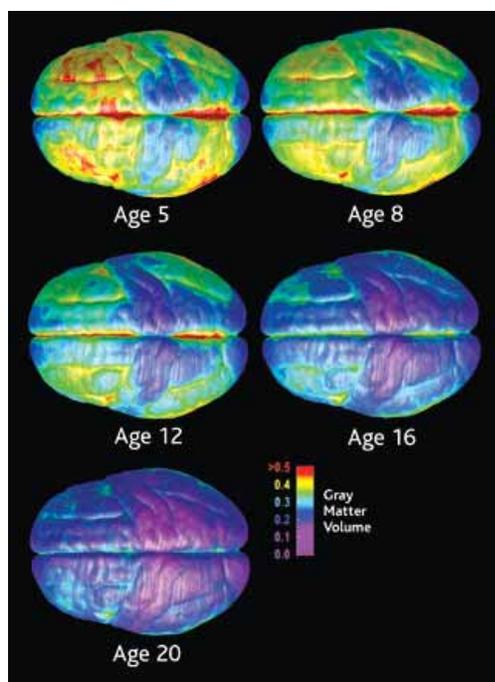
# Adolescence

## (Ages 13-19 years/Grades 7-12)

Adolescence is the period between childhood and adulthood, and puberty marks its beginning. It is a unique period of physical, emotional, and intellectual growth. It's also a time of tremendous psychosocial changes, as adolescents face new expectations about their behaviour, and develop their identity with increasing autonomy from adults. Adolescents are also beginning to develop intimate relationships, often with physical and sexual intimacy.

Adolescence is an important developmental period, particularly because patterns of both emotional and physical health in the teen years often follow individuals into adulthood and throughout their lives.<sup>262</sup>

Teens go through many physical changes in adolescence. Adolescents may grow between 5 and 13 centimetres a year every year for several years. Most girls stop growing around the age of 16 while boys can continue to grow until they are 18 to 20 years old.<sup>263</sup> Respiratory, skeletal, immune, and central nervous systems all mature during the adolescent period.<sup>264</sup>

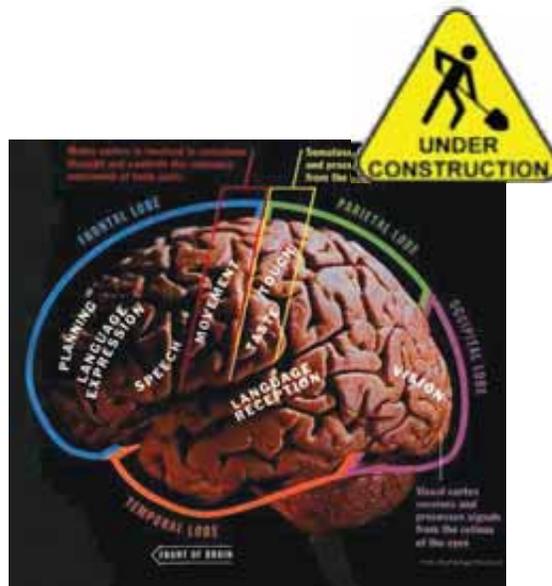


The physical changes that teens are most aware of are often those associated with puberty. Hormonal changes and the development of functioning reproductive systems occur. Because puberty begins at different times for different people, and progresses at varying rates, it is common for adolescents to be at a different stage of physical development from their peers, making some teens self-conscious.

Physical changes in the brain during adolescence play an important role in adolescent development.<sup>265</sup>

During adolescence, the areas of the brain associated with decision-making, planning, and emotions are enhanced. Improvements occur in logical and systematic thinking, allowing adolescents to make increasingly sophisticated judgments and solve more complex problems.<sup>43</sup>

Photo source: Beckman, M. (2004). Crime, culpability, and the adolescent brain. *Science*, 305, 596-598. (from p. 597) Based on Gogtay, N., Giedd, J. N., Lusk, L., Hayashi, K. M., Greenstein, D., Vaituzis, A. C., Nugent, T. F., Herman, D. H., Clasen, L. S., Toga, A. W., Rapoport, J. L., & Thompson, P. M. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101, 8174-8179.



Adolescence is a period of continued brain development: the abilities to control impulses, weigh the consequences of decisions, and to prioritize and strategize continue to develop into the early 20s.<sup>266</sup> Thus, although teens have increased capabilities, they do not always have the ability to manage or regulate their abilities and emotions. Adults may view their behaviour as impulsive and reckless, without understanding that the areas of the brain that affect these behaviours are still developing.

In the teen years, sexual maturation and hormonal changes combine with peer pressure and societal influences to have a substantial impact on adolescent behaviour. This is evident in impulsive and risk-taking behaviours, including the experimental use of alcohol and other substances, or unsafe sex. During the teen years, pregnancy, sexually transmitted infections, substance use, and mental illness become increasingly significant issues.<sup>91</sup> Despite an increase in risk-taking behaviours, adolescence also provides many opportunities for positive growth. Labeling adolescence as a problematic period in development distracts attention from these positive opportunities.

Friendships become increasingly important in adolescence.<sup>198</sup> Parents may feel that they are less able to influence their teen, as the peer group becomes more central. However, even as adolescents become more capable and independent, they continue to need supportive and nurturing families. Adolescence involves a number of transitions, including new experiences in the labour force, the development of autonomous and responsible relationships with others, and the formation of self-concepts and identities.<sup>267</sup> Families and communities help prepare adolescents for these transitions, and teens become increasingly active participants in this preparation process.

In the adolescent years, relationships with families, peers, communities, and schools can be seen as “scaffolding” that help support healthy adolescent development. This scaffolding builds upon the foundations of early and middle childhood. As youth transition into adulthood, they become the role models and teachers for younger generations.

# A) Physically and Emotionally Healthy (Adolescence)

## I. Physical health

### a) Chronic conditions

Asthma is the most common chronic condition in children and youth.<sup>262</sup> In Canada, poverty has an overwhelming impact on adolescent asthma rates. This impact is partly due to smoking and partly due to poorer housing conditions, and this is particularly true for girls.<sup>262</sup> The diagnosed asthma rate for 13 to 19 year olds in Manitoba was stable at 11% in 2000-02 and 12% in 2008-10. While the diagnosed asthma rate increased significantly in Brandon region, it was lowest in the North.<sup>22</sup> Between 2007/08 and 2009/10, the asthma rate in Manitoba was not significantly different from the rate in Canada.<sup>(68)</sup> Among First Nations youth in Manitoba, 7% of those ages 12 to 14, and 11% of those ages 15 to 17, reported having asthma in a 2008-10 survey.<sup>268</sup>

The average age of onset for Type 2 diabetes is 14,<sup>91</sup> making diabetes an important health concern in adolescence. In Manitoba, the diagnosed diabetes rate for 13 to 19 year olds increased significantly from 0.66% in 2001-04 to 0.75% in 2007-10. The highest rate was found in the North, where it increased significantly from 1.2% to 1.5%.<sup>22 (69)</sup>

### b) Oral health

As noted in previous chapters, good oral health contributes to the ability to communicate and eat, and is important for self-esteem. Canadian data show that 59% of adolescents aged 12 to 19 have experienced decay in one or more permanent teeth (63% of females and 55% of males). Rates of decay are higher among the publicly insured than both the privately insured and the non-insured. Rates tend to be higher among Aboriginal youth (76%), youth in lower income families (70%), those born outside Canada (67%), and those living in families where the highest level of education is less than a university degree or diploma (63%).<sup>269</sup>

According to a 2008-10 Manitoba survey, two thirds (67%) of First Nations youth ages 12 to 17 visited a dental clinic within the last year. Six out of ten (62%) said they needed a dental check-up and/or cleaning, and almost half (47%) needed a filling. Almost one in ten (9.5%) said they needed braces. Only one out of every five youth (19%) said that they had dental problems or had dental pain in the last month.<sup>270</sup>

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<sup>(68)</sup> Note: Significant means a statistically significant difference at  $p < 0.05$ . Source: Statistics Canada CANSIM table 105-0502.

<sup>(69)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

### c) Physical activity

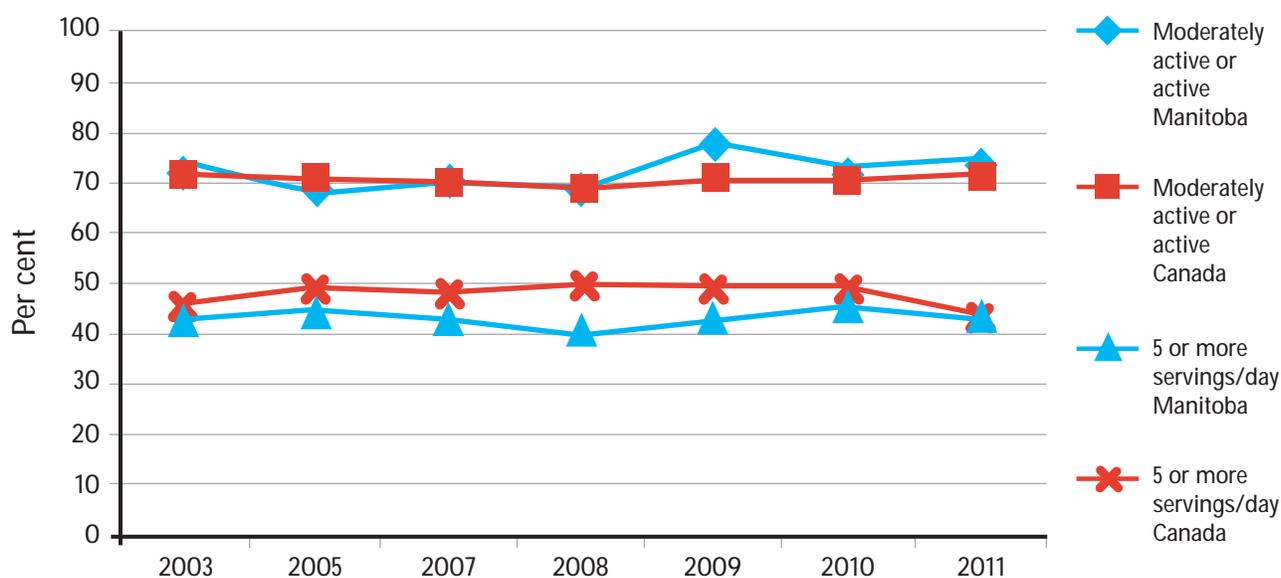
Many of the health practices that contribute to health and well-being in adulthood are established or strengthened during adolescence, often becoming a lifelong pattern.<sup>271</sup> These practices may include physical activity, healthy eating, and substance use or abuse.

Youth are spending significant amounts of time in front of computers, televisions, and video games. A Canadian study of youth in grades 6 through 12 found that over half engaged in more than two hours of screen time per day. Youth who were current smokers, and youth who had lower self-esteem were more likely to report high levels of screen time.<sup>272</sup>

Physical activity has a number of benefits for both physical and mental health. These include a reduced risk of cardiovascular disease, some types of cancer, osteoporosis, diabetes, obesity, and high blood pressure, as well as a reduced risk of depression, stress and anxiety.<sup>273</sup>

According to the Canadian Community Health Survey, 75% of 12 to 19 year olds in Manitoba reported moderately active or active levels of physical activity during leisure time in 2011, similar to the percentage in Canada (72%) (see Figure 48). Physical activity during leisure time was stable between 2003 and 2011, and was not significantly different from Canada.<sup>(70)</sup>

Figure 48: Physical activity and fruit/vegetable consumption

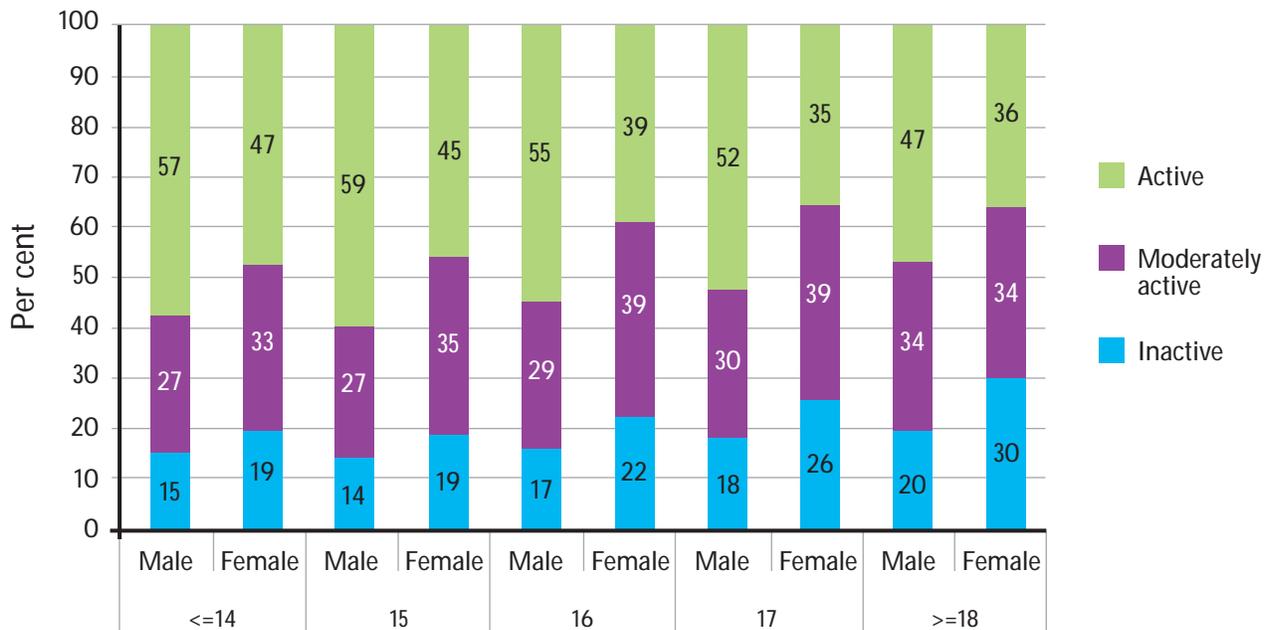


Source: Canadian Community Health Survey

<sup>(70)</sup> Except in 2009, when it increased significantly to 78%, and was significantly higher than in Canada (71%). Notes: significant means a statistically significant difference at  $p < 0.05$ . Respondents are classified as active, moderately active or inactive based on an index of average daily physical activity over the past 3 months. For each leisure time physical activity engaged in by the respondent, an average daily energy expenditure is calculated by multiplying the number of times the activity was performed by the average duration of the activity by the energy cost (kilocalories per kilogram of body weight per hour) of the activity. The index is calculated as the sum of the average daily energy expenditures of all activities. Respondents are classified as follows: 3.0 kcal/kg/day or more = physically active; 1.5 to 2.9 kcal/kg/day = moderately active; less than 1.5 kcal/kg/day = inactive. (Source: Statistics Canada CANSIM Table 105-0501. Data are from the Canadian Community Health Survey)

The Youth Health Survey provides more detail on adolescents' physical activity patterns by age and sex. Figure 49 shows that in Manitoba, the proportion of youth (grades 9 through 12) that report being active is higher for males than for females in every age group. The proportion that is inactive or only moderately active is higher for females than for males in every age group. For both males and females, the proportion that is active declines with each successive age group. In other words, physical activity is least common for the oldest youth, particularly for females. For those aged 18 and over, 20% of males and 30% of females are inactive.

Figure 49: Physical activity in Manitoba, by age and sex (2007/08)



Source: Youth Health Survey

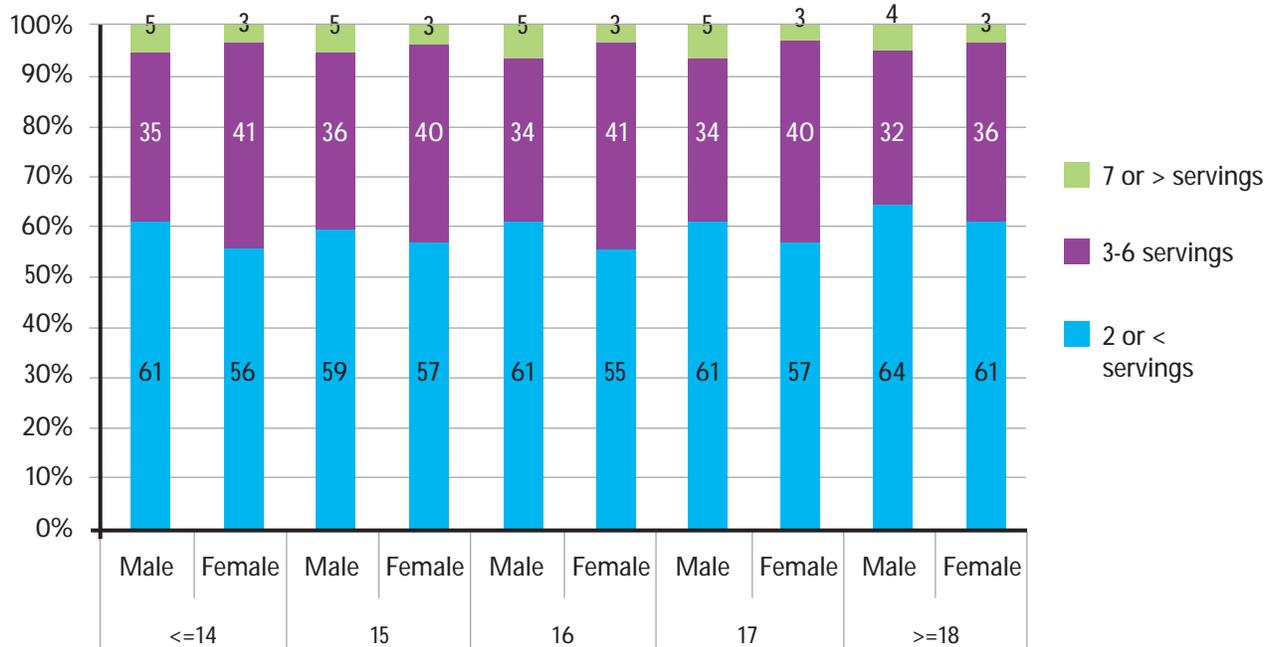
#### d) Nutrition

Nutritional needs increase during adolescence, and boys and girls need to eat different amounts of various nutrients for optimal growth and development. Health Canada recommends the following for teenagers aged 14 to 18:

	Females	Males
Vegetables and fruit	7 servings	8 servings
Grain products	6 servings	7 servings
Milk and alternatives	3 to 4 servings	3 to 4 servings
Meat and alternatives	2 servings	3 servings

According to the Canadian Community Health Survey, 43% of 12 to 19 year olds in Manitoba reported eating fruits and vegetables five times or more per day in 2011, similar to the percentage in Canada (44%) (see Figure 48). Fruit and vegetable consumption was stable between 2003 and 2011, and was not significantly different from Canada.<sup>(71)</sup>

Figure 50: Healthy eating in Manitoba, by age and sex (2007/08)



Source: Youth Health Survey

Adolescent eating habits vary by age and sex. Figure 50 shows that in Manitoba, a higher proportion of females report eating three or more servings of fruits and vegetables in every age group. Fruit and vegetable consumption is fairly similar across age groups, but is lowest in the oldest age group, for both males and females. Of concern is that well over half of Manitoba's youth in grades 9 through 12 report eating two or fewer servings per day.

### e) Healthy weights

Over the past three decades, the rate of overweight and obesity has almost tripled among Canadian youth aged 12 to 17.<sup>274</sup>

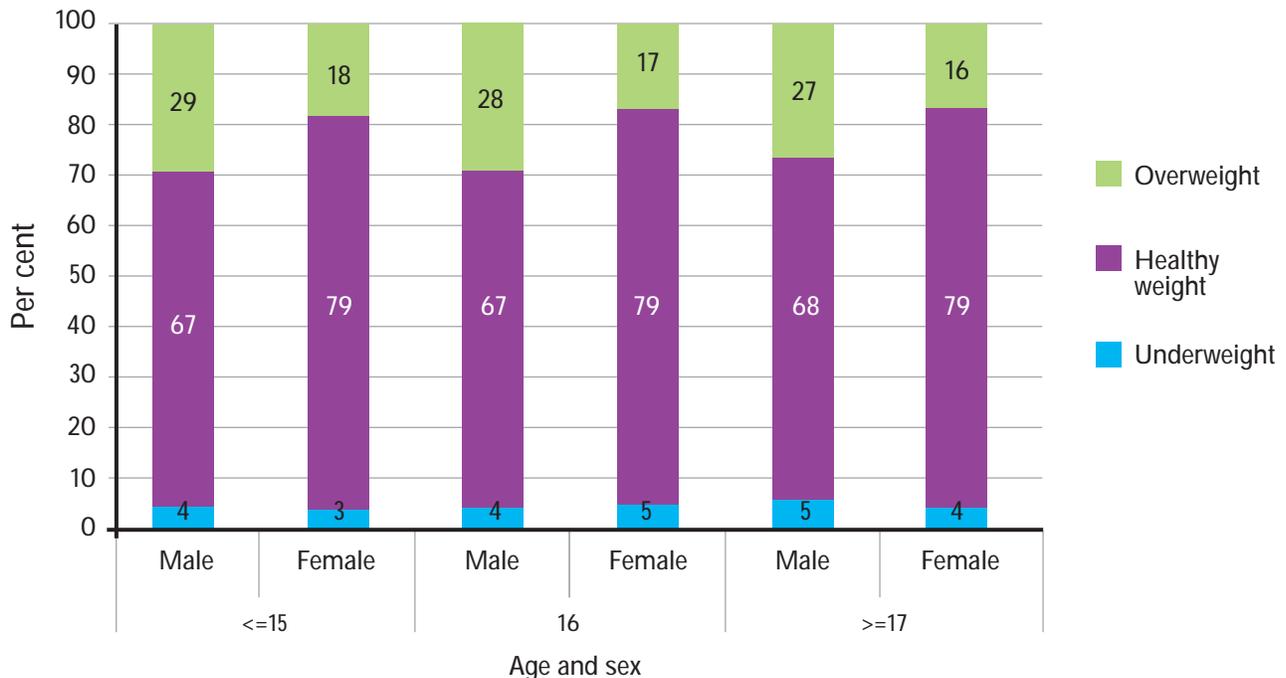
<sup>(71)</sup> except in 2008, when it decreased significantly to 40% and was significantly lower than in Canada (49%). Note: significant means a statistically significant difference at p<0.05. (Source: Statistics Canada CANSIM Table 105-0501. Data are from the Canadian Community Health Survey)

This dramatic increase has the potential to increase the physical, mental and social problems associated with obesity in young people, including cardiovascular disease, depression, and social exclusion.<sup>275, 276</sup> Furthermore, research has shown that obesity tends to persist, with 60% to 90% of obese adolescents remaining obese into adulthood.<sup>277</sup> Lack of moderate or vigorous physical activity, poor diet, and sedentary behaviour are considered to be determinants of adolescent obesity.<sup>278 279</sup> It is important to note that these behaviours are closely related to the broader determinants of health, with youth from higher socioeconomic families and neighbourhoods more likely to engage in healthier lifestyle behaviours.

While most adolescents are at a healthy weight, a significant proportion has an unhealthy body weight that may put their physical, mental, and social well-being at risk. According to the Canadian Community Health Survey, 24% of 12 to 17 year olds in Manitoba were overweight or obese (according to BMI) in 2011. Although this is slightly higher than the percentage in Canada (20%), it is not a statistically significant difference. Overweight and obesity was stable in Manitoba between 2005 and 2011, and was similar to the percentage in Canada.<sup>(72)</sup>

The Youth Health Survey provides further information on adolescent BMI by age and sex (see Figure 51). In Manitoba, a higher percentage of males are overweight (according to BMI) compared to females, in all age groups. The percentage of youth who are overweight declines over the age groups, for both sexes. The percentage that is a healthy weight is relatively similar across age groups, for both males (around two thirds) and females (over three quarters).

Figure 51: BMI in Manitoba, by age and sex (2007/08)



Source: Youth Health Survey

<sup>(72)</sup> Note: significant means a statistically significant difference at  $p < 0.05$ . Source: Statistics Canada CANSIM table 105-0501. Data from the Canadian Community Health Survey.

The Body Mass Index (BMI) is a measure of a person's weight to height ratio (kg/m<sup>2</sup>). BMI is a simple, low-cost and non-invasive measure that estimates body fatness. Body fatness may be harmful for health and contribute to conditions such as heart disease and type-2 diabetes.<sup>(1)</sup>

BMI is intended for use as an estimate of health risks associated with body fat in whole populations. Using the BMI as an indicator of an individual's health risk may be inappropriate for the following reasons:

- 1) BMI doesn't distinguish between weight from fat and non-fat sources (e.g., bones, muscle), and
- 2) BMI doesn't reflect the distribution of fat in the body (e.g., apple vs. pear shape), which is an important indicator of disease risk.<sup>(2)</sup> Fat stored around the mid-section may be more harmful for health.<sup>(3)</sup>

While the measure is not perfect, BMI is useful in providing health risk information for whole populations. Further information, such as physical activity and healthy nutrition, contributes to a better overall picture of risk, and provides targets for improving the health of Manitoba's children.

1) Rhéaume, C., Leblanc, M.É., & Poirier, P. (2011). Adiposity assessment: Explaining the association between obesity, hypertension and stroke. *Expert Rev Cardiovasc Ther.* (12),1557-1564.

2) Baumgartner, R.N., Heymsfield, S.B., & Roche, A.F. (1995). Human body composition and the epidemiology of chronic disease. *Obes Res*, 3, 73-95.

3) McKeigue, P.M., Shah, B., & Marmot, M.G. (1991). Relation of central obesity and insulin resistance with high diabetes prevalence and cardiovascular risk in South Asians. *Lancet.* 337(8738),382-386.

In spite of the higher proportion of females with a healthy weight, only 55% of females (and 56% of males) in grades 9 to 12 perceived their body weight as healthy. Girls (35%) were more likely to perceive themselves to be overweight than boys (25%), despite only 17% of girls (vs. 28% of boys) actually being assessed as overweight.<sup>91</sup>

Society places the most value on thin and youthful bodies, and this is particularly true for girls. Consistent exposure to images of impossibly perfect bodies can have devastating effects on adolescent girls, both mentally and physically.<sup>280</sup> Regardless of an adolescent's actual weight, dissatisfaction with one's body is a predictor of emotional problems, unhealthy eating habits and in extreme cases, eating disorders.<sup>91 281</sup>

Although societal images alone do not cause eating disorders (they often co-occur with other mental illnesses), they do contribute to a large proportion of all youth who are preoccupied with their weight to the point of dieting or purging. Dieting has been identified as a major risk factor for the development of disordered eating.<sup>282</sup> Instead of a focus on weight and body size, which leads to weight bias and stigma and may produce unintended harm, a focus on 'health at every size' will create a healthier environment for all, regardless of their size and body type.<sup>283</sup>

Disordered eating, including anorexia, bulimia, and binge eating, is most likely to occur as youth transition into young adulthood. It is estimated that three per cent of Canadian women will be affected by an eating disorder in their lifetime, compared to one per cent of men.<sup>284</sup> Eating disorders can have very serious health consequences; it is estimated that 10% of those with anorexia nervosa will die within a decade of the onset of the disorder.<sup>285</sup>

## f) Substance Use (smoking, alcohol, other drugs)

Many adolescent health problems are largely preventable, and often result from youth emulating adult behaviours, including smoking, gambling, and drinking. Substance use is also related to feelings of stress or powerlessness. Youth who feel unsafe in their homes or schools, who feel rejected by their peers, or who are living in poverty may use or abuse alcohol or drugs in order to cope with these feelings. For example, youth who have been victims of adult exploitation or abuse have higher rates of alcohol and drug abuse.<sup>262</sup> Thus, although this section of the report discusses substance use under 'physical health', these indicators also reflect emotional and mental health.

It is also important to note that several substances that place youth at risk are manufactured legally, and youth are targeted as a lucrative market and a means to expand profits (e.g., alcohol and tobacco). Moreover, while youth are told to abstain, adults around them engage in these very behaviours.<sup>262</sup>

Peers play an important role in adolescent substance use. Research has shown that adolescents are more likely to engage in potentially risky activities when their friends use alcohol or drugs, are often in trouble, or have a low commitment to school.<sup>286</sup> On the other hand, adolescents with positive peer models are less likely to use tobacco, alcohol, or drugs.<sup>287 288</sup>

## i) Smoking

Tobacco is one of the most addictive substances, and is also one of the most accessible to youth. Smoking may be a way for youth to convey independence or maturity, and establish their identity.<sup>262</sup>

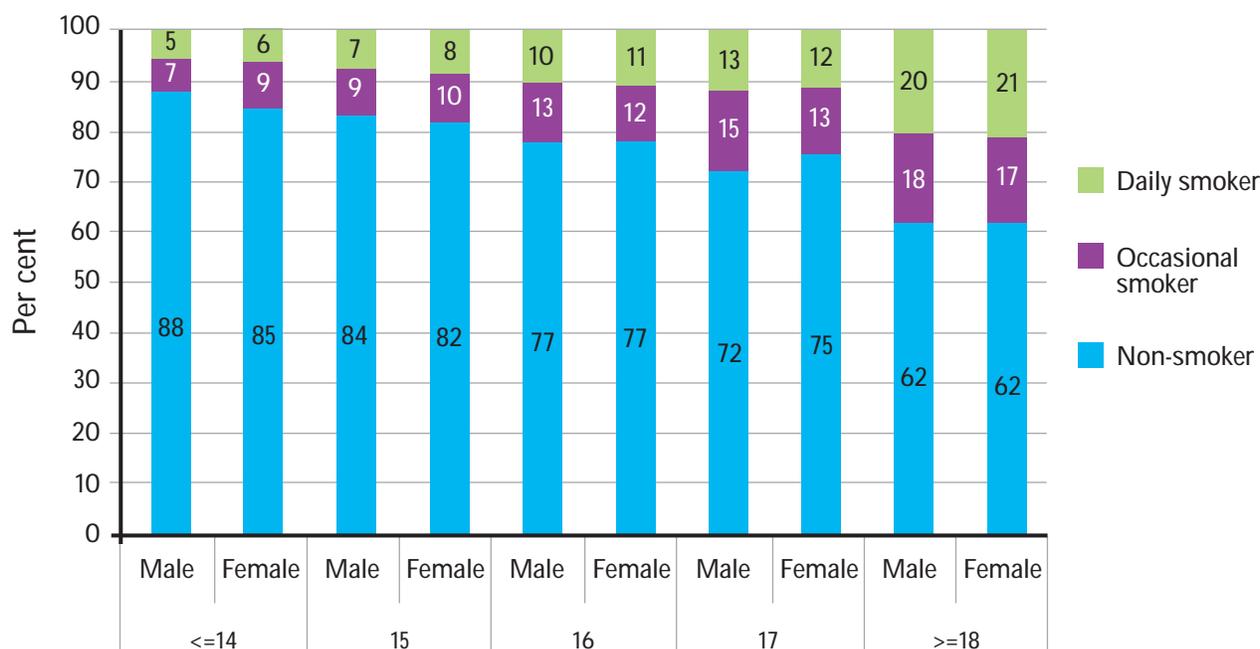
Research has shown that more than 80% of adult smokers began smoking before the age of 18. Smoking remains a leading cause of cancer, and adolescents who smoke have higher rates of respiratory illness compared to non-smokers.<sup>289</sup> Youth living in poverty are at a higher risk of smoking and have a lower success rate when trying to quit.<sup>290</sup>

Between 2000 and 2009, the smoking rate among youth ages 12 to 19 in Manitoba decreased from 20% to 12%.<sup>91</sup> According to the most recent Canadian Community Health Survey, 10% of Manitoba youth ages 12 to 19 reported that they were current smokers (daily or occasional) in 2009/10 (down from 14% in 2007/08), similar to the percentage in Canada (11%).<sup>(73)</sup>

Smoking is more common among Manitoba's First Nations youth. The 2008-10 Manitoba First Nations Regional Health Survey found that smoking was more common among younger adolescents: one third (33%) of youth ages 12 to 14 reported smoking daily, compared to only 10% of youth ages 15 to 17.<sup>291</sup>

<sup>(73)</sup> Note: Significant means a statistically significant difference at  $p < 0.05$ . Source: Statistics Canada, CANSIM table 105-0502. Data from the Canadian Community Health Survey.

Figure 52: Smoking in Manitoba, by age and sex (2007/08)



Source: Youth Health Survey

While smoking is more common among younger First Nations youth (ages 12 to 14), results from the Youth Health Survey (see Figure 52) show that smoking (both daily and occasional) among Manitoba adolescents in grades 9 through 12 increases steadily with each age group for both males and females, with the highest rates in the 18 and over age group. At younger ages, smoking is more common among females than among males.

## ii) Alcohol use and binge drinking

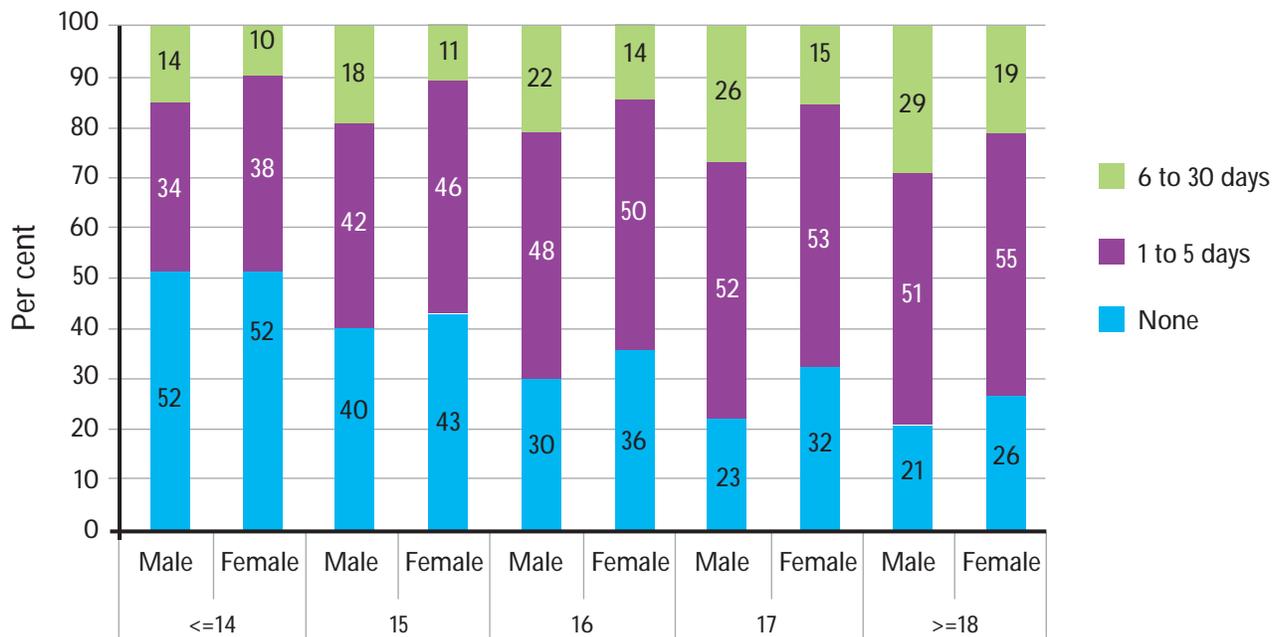
Alcohol use and binge drinking are of concern for a number of reasons. One concern is impaired driving. A 2007 Manitoba study found that approximately 16% of females and 30% of males in grade 12 had driven within an hour of having two or more drinks. Nearly half of grade 11 and grade 12 students reported having ridden in a car driven by someone who had been drinking.<sup>292</sup> Alcohol use and binge drinking is also of concern because it may become chronic, with harmful drinking patterns continuing into adulthood.<sup>91</sup> Chronic alcohol abuse leads to a number of acute and chronic conditions, including liver and pancreatic disease.

According to the Canadian Community Health Survey (CCHS), binge drinking is defined as having five or more drinks on one occasion, at least once per month in the last year. The CCHS found that binge drinking among 12 to 19 year olds in Manitoba decreased significantly, from 18% in 2007/08 to 13% in 2009/10, and was similar to the percentage in Canada (14% in 2009/10).<sup>(74)</sup>

Binge drinking, though defined somewhat differently in the Manitoba First Nations Regional Health Survey (RHS), appears to be more prevalent among Manitoba's First Nations youth. The most recent RHS found that two in ten (21%) youth reported consuming five or more alcoholic beverages on one occasion two to three times per month.<sup>293</sup>

Binge drinking varies by age, sex, and frequency. Figure 53 shows that in Manitoba, binge drinking (defined as five or more drinks of alcohol within a couple of hours) increases with each successive age group, for both males and females. For the 18 and over age group, 3/4 of young women and 4/5 of young men have engaged in binge drinking at least once in the previous 30 days. Frequent binge drinking (on 6 to 30 days over the previous 30 days) is much more common for males than females, in every age group, while occasional binge drinking (on 1 to 5 days over the previous 30 days) is more common for females.

Figure 53: Binge drinking in Manitoba, by age and sex (2007/08)



Source: Youth Health Survey

<sup>(74)</sup> Note: Significant means a statistically significant difference at  $p < 0.05$ . Source: Statistics Canada CANSIM table 105-0502. Data from the Canadian Community Health Survey.

### iii) Illegal drug use

Marijuana is the most commonly used illegal drug in Manitoba<sup>292</sup>, and average age of first use in Canada is about 14 years.<sup>294</sup>

Illegal drug use appears to have increased among First Nations youth in Manitoba. In the 2002-03 RHS, 28% of youth reported using marijuana, and only 3% of youth reported using hard drugs such as cocaine, crack or heroin. In the 2008-10 RHS, over one third (34%) of First Nations Youth reported using marijuana in the past 12 months, and 14% of Youth reported having used cocaine (coke, crack, etc.).<sup>295</sup>

When asked about illegal drug use, 20% of Manitoba students in Grades 9 through 12 responded that they had used street drugs such as cannabis, cocaine, heroin, ecstasy or illegal steroids at least once in the previous 30 days.<sup>91</sup> Results of the Youth Health Survey indicate that illegal drug use, much like smoking and alcohol use, increases with age, for both males and females. For youth ages 18 and over, a quarter of young women and a third of young men reported using illegal drugs at least once in the previous 30 days. Frequent illegal drug use (10 or more times in previous 30 days) is more common among males (5.0% of males compared to 3.3% of females), while occasional illegal drug use (1 to 9 times in previous 30 days) is more common among females (6.3% of females compared to 4.8% of males).

It is important to note that legal drugs are just as much, if not more, of a concern for youth. In the United States, the drugs that send most teenagers to emergency rooms are painkillers and prescription drugs, with only 14% of drug-related admissions of teenagers attributed to street drugs.<sup>296</sup>

## II. Emotional and mental health

It has been estimated that 80% of all psychiatric disorders first emerge in adolescence, and research has shown that a higher percentage of girls are treated (prescribed a medication) for both depression and anxiety compared to boys.<sup>91</sup> Psychological and emotional health problems for youth are closely tied to adverse and stressful living situations, including low income, poor housing conditions, discrimination, and family dysfunction.<sup>297</sup> For adolescents who have immigrated to Canada, the adjustment can be difficult, and racism, conflicting cultural values, and isolation can affect their psychological health.<sup>298</sup> As noted in the section on physical health, substance use or abuse often stems from stress, victimization and trauma, suggesting that these are important considerations for mental health.

### a) Mood and anxiety disorders, and ADHD

In Manitoba, the prevalence of mood and anxiety disorders for adolescents 13 to 19 years of age remained stable between 2000-02 and 2008-10, at 6%. In urban areas, higher prevalence is associated with lower income, and there has been a significant increase in inequities

over time.<sup>22</sup> For First Nations youth (ages 14 to 17), 9% reported they have felt sad, blue, or depressed for 2 weeks or more in a row.<sup>299</sup>

Although typically diagnosed in childhood, attention-deficit hyperactivity disorder (ADHD) is considered a chronic condition that often persists into adulthood.<sup>91</sup> Among 13 to 19 year olds, the diagnosed ADHD rate in Manitoba increased significantly from 2% in 2000/01 to 3% in 2009/10. Increases were seen in all regions of the province. The North continued to be the region with the lowest diagnosed rate.<sup>22 (75)</sup>

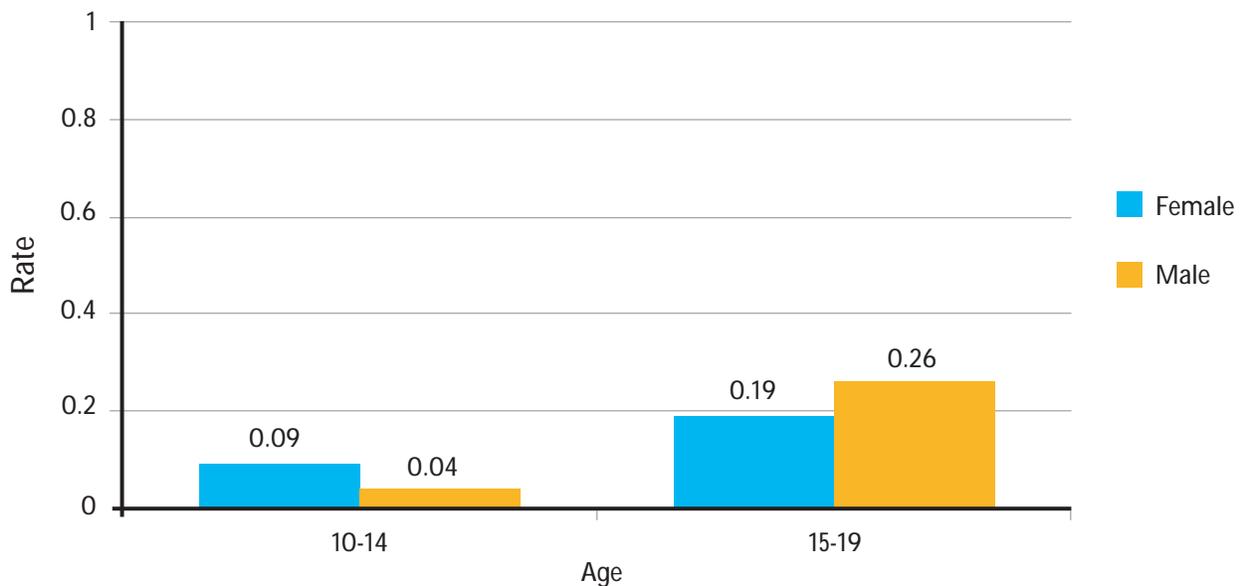
## b) Suicide

In Manitoba, suicide is the leading cause of injury deaths in children 10 and over.<sup>91</sup> Suicide can have devastating effects on family, friends, and the wider community.<sup>300</sup>

Suicide rates are generally higher in males compared to females, which in part may be due to the lethality of methods chosen. Between 2000 and 2009, 61% of suicides in Manitoba were male compared to 39% female. However, the ratio shifted dramatically, from 72% male/28% female in 2000-04, to 52% male/48% female in 2005-09.<sup>22</sup>

In Figure 54, we can see that the suicide rate for females is higher at ages 10 to 14, but is higher for males at ages 15 to 19. For females, the rate peaks at ages 15 to 19, and for males the rate peaks at ages 20 to 24.

Figure 54: Suicide death rate in Manitoba for the period 2005/06 to 2009/10



Source: Manitoba Health<sup>(76)</sup>

<sup>(75)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

<sup>(76)</sup> Crude rate per 1,000 residents (does not include attempts). Source: Manitoba Health, *Annual Statistics 2010-2011*.

The rate of suicide completion for youth ages 13 to 19 in Manitoba was stable between 2000-04 (14/100,000) and 2005-09 (17/100,000). The North had the highest rates overall, significantly higher than the Manitoba average in both time periods (45 and 60 per 100,000 respectively). Rates were also higher in lower income areas of the province.<sup>22 (77)</sup>

Among First Nations youth ages 15 to 24, suicide rates are five times the national average for males and seven times for females. First Nations youth attempt suicide approximately five times more often than non-First Nations youth.<sup>91</sup> The Manitoba Regional Health Survey (2002-2003) found that almost 1 in 5 youth (ages 12 to 17) in First Nations communities had contemplated suicide, and 10% had attempted at least once.

It is important to note that Aboriginal youth suicide rates differ significantly between communities. Studies in British Columbia have shown that suicide rates are much lower in communities in which at least half the band members report a conversational knowledge of their native language, communities with self-government, and communities with control over their land, schools, and services such as health care.<sup>301 302</sup>

### c) Well-being (Mastery, life satisfaction, and perceived mental health)

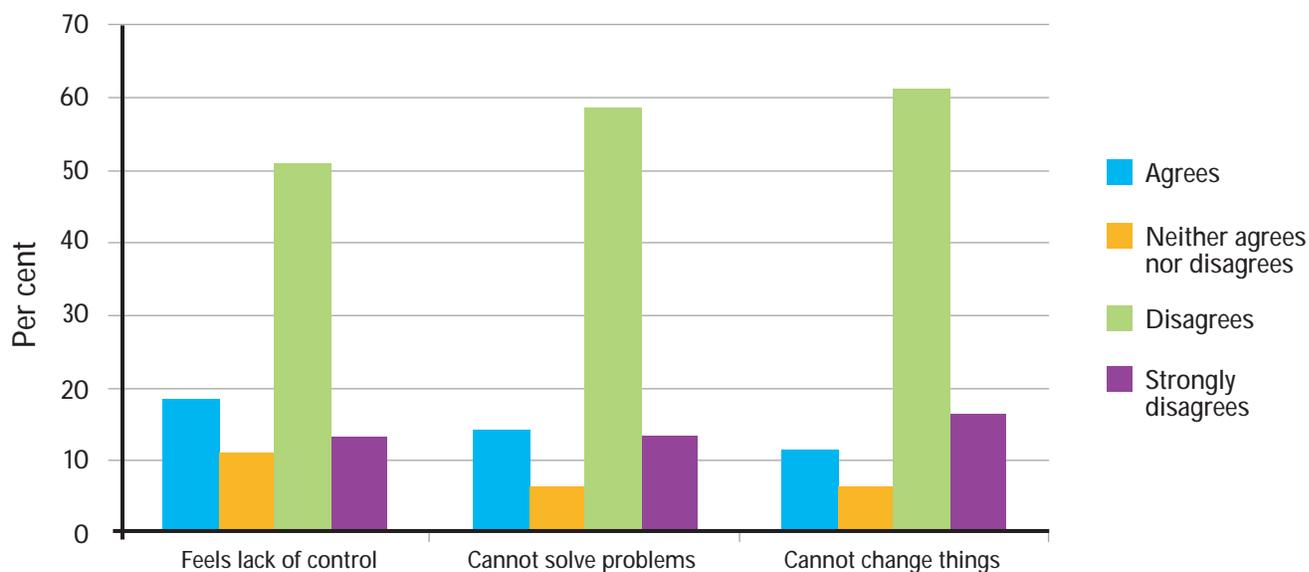
The health status of adolescents is often measured in terms of 'risky' or 'problem' behaviours, including substance and tobacco use, risky sexual behaviours, and obesity. Researchers have pointed to the limitations of approaches that focus on the negative aspects of adolescent health and development, and have argued that a more complete picture of adolescent well-being should include measurement of positive aspects, such as mastery, life satisfaction, and self-reported health.<sup>198 303</sup>

According to the 2009/10 Canadian Community Health Survey, a majority of Manitoba's adolescents (12 to 19 years old) have a strong sense of mastery, including feeling in control, feeling able to solve problems, and feeling able to change things (Figure 55). Only 18% agree that they feel a lack of control, 14% feel they cannot solve problems and 12% feel they cannot change things.

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<sup>(77)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

Figure 55: Mastery (2009/10)



Source: Canadian Community Health Survey 2009/10<sup>(78)</sup>

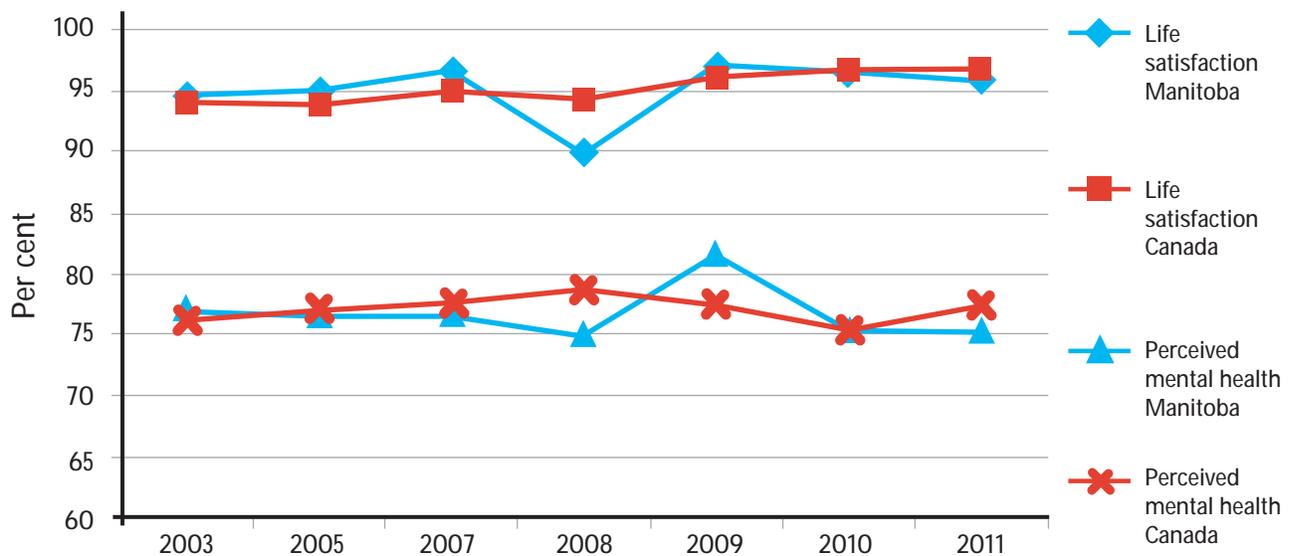
Results from the 2002-03 Manitoba First Nations Regional Longitudinal Health Survey (RHS) suggest that First Nations youth (12-17 years old) have a strong sense of mastery, with 80% agreeing that what happens to them in the future mostly depends on them, and 71% agreeing that they have control over the things that happen to them. However, almost one half (46%) feel that there is little they can do to change the important things in life.<sup>304</sup>

The more recent 2008-10 Manitoba RHS indicates that mastery is improving. The percentage of First Nations youth that agreed, "I can do just about anything I really set my mind to" increased from 80% in 2002-03 to 85% in 2008-10. The percentage that feels they are able to deal with problems in life increased from 63% in 2002-03 to 79% in 2008-10.<sup>305</sup>

<sup>(78)</sup> Note: Manitoba was the only province to complete the Mastery module.

According to the Canadian Community Health Survey, 96% of Manitoba adolescents ages 12 to 19 reported that they were 'satisfied' or 'very satisfied' with their life (compared to 97% in Canada) in 2011 (see Figure 56). Three quarters (75%) reported that their mental health was 'very good' or 'excellent' (compared to 77% in Canada). Between 2003 and 2011, the percentage of youth reporting high life satisfaction, and very good or excellent perceived mental health was mostly stable in Manitoba, and did not differ significantly from Canada in most years.<sup>(79)</sup>

Figure 56: Youth with very good or excellent life satisfaction and perceived mental health



Source: Canadian Community Health Survey

<sup>(79)</sup> Note: significant means a statistically significant difference at  $p < 0.05$ . Perceived mental health was measured as follows: "In general, would you say your mental health is...": excellent, very good, good, fair, or poor? (Source: Statistics Canada, CANSIM table 105-0501)

## B) Safe and Secure (Adolescence)

### I. Safety

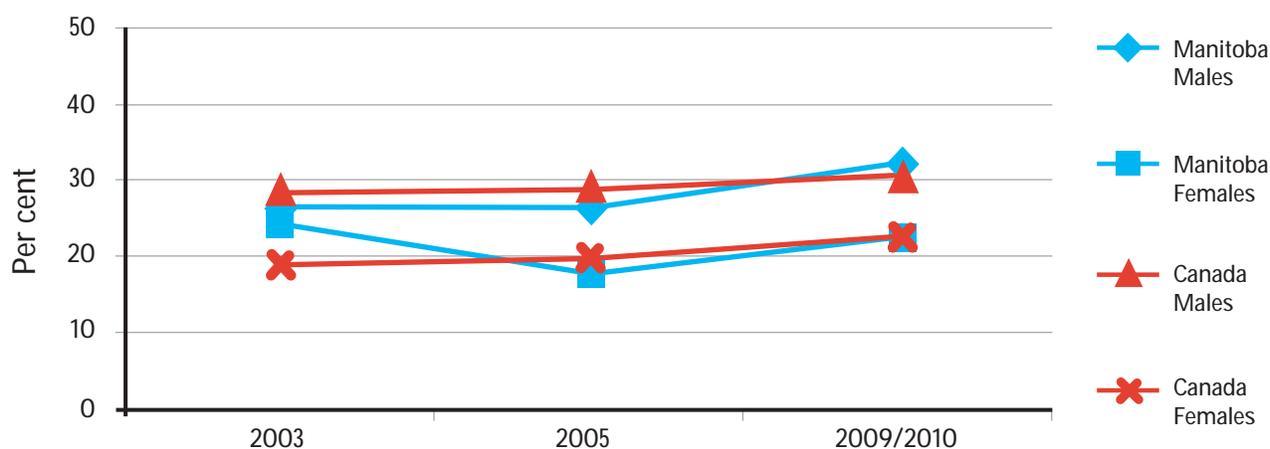
#### a) Physical Risks: Injury and mortality

Injuries are the most common cause of hospitalization for adolescents in Manitoba, accounting for 22% of hospitalizations of 13 to 19 year olds.<sup>22 (80)</sup> Studies have shown that injuries can have long-term effects on adolescents' functioning and quality of life.<sup>306</sup> Between 2005 and 2010, the top cause of injury hospitalization for adolescents in Manitoba was "Other", a category that includes injuries due to foreign bodies (e.g., choking), struck by an object (e.g., hockey puck), and accident by machinery (e.g., farm accident). The other top causes were violence by others, motor vehicle accidents, falls, and violence to self.

In Manitoba between 2000-05 and 2005-10, *unintentional* (accidental) injury hospitalization rates for 13 to 19 year olds decreased for most regions, except in the North where the rate increased significantly.<sup>22 (81)</sup> The rates of hospitalization for *intentional* injuries (i.e., self-inflicted) decreased significantly in the Rural South, Winnipeg, and particularly in the North.<sup>22(82)</sup>

Self-report data from the General Social Survey (see Figure 57) are consistent with injury hospitalization data (see Middle Childhood chapter): males (ages 15 to 19) report more injuries causing activity limitation than do females (ages 15 to 19), both in Manitoba (32% and 22% respectively) and for Canada overall (30% and 23% respectively). Higher injury rates for males are linked to gender roles that encourage risk-taking behaviours.

Figure 57: Injuries in the past 12 months causing limitation of normal activities



Source: General Social Survey

<sup>(80)</sup> When complications with pregnancy or childbirth are excluded.

<sup>(81)</sup> Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

<sup>(82)</sup> Note: Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs.

For 13 to 19 year olds, the Manitoba youth mortality rate has remained relatively stable (59/100,000 in 2000-04 and 54/100,000 in 2005-09). The highest youth mortality rates were in the North.<sup>22 (83)</sup>

## b) Safe relationships and safe sex

Dating relationships can start at a young age. According to the 1998/99 National Longitudinal Survey of Children and Youth, 71% of adolescents aged 15 years and older had a current or previous dating relationship. Of these, over half (55%) had their first dating relationship by the age of 12.<sup>314</sup> Romantic relationships are a way for teens to learn more about themselves. Dating also provides an opportunity to learn healthy communication skills, and to increase a teenager's self-confidence. However, dating also carries risk, including the risk of dating violence. According to police-reported data, young people aged 12 to 14 years represented about 1% of all dating partner violence in Canada in 2010, at a rate of 56 victims per 100,000 population. In 2010, 93% of all victims of dating violence aged 12 to 14 were female. Over half (52%) of victims between the ages of 12 to 14 were sexually assaulted by their dating partner, compared to 3% of victims aged 15 years and older. The other most frequently occurring offences for victims ages 12 to 14 were common assault (23%) and uttering threats (12%).<sup>314</sup>

Close to 42% of Manitoba teens ages 15 to 19 report having had sexual intercourse, similar to the Canadian rate of 43%. Over 75% of Manitoba teens who reported having sex in the previous 12 months said that they used a condom the last time they had sex, consistent with the Canadian average.<sup>(84)</sup>

For 15 to 24 year olds, condom use has been stable. In 2003, 64% of Manitobans ages 15 to 24 reported using a condom at last intercourse. This increased slightly to 65% in 2009/10 but was significantly lower than the national average (68%).<sup>307</sup>

In 2002/03, 27% of Manitoba's First Nations youth (12 to 17) reported they were currently sexually active. When asked about the birth control or protection methods the respondent and/or their partner use, 83% of youth reported using condoms. Only 3% of respondents reported that they had been pregnant or got someone pregnant. Half of respondents indicated they did not have enough access to birth control (50%) or information (48%) about it.<sup>308</sup>

<sup>(83)</sup> Northern adolescent mortality rates were 151/100,000 and 146/100,000 respectively. Note: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities.

<sup>(84)</sup> Data from 2003 and 2005 CCHS, excludes First Nations communities. Source: Brownell, M., et al. (2008). *Manitoba Child Health Atlas Update*. Winnipeg, MB: Manitoba Centre for Health Policy.

Manitoba continues to have high rates of sexually transmitted infections (STIs) among young people. Between 2005 and 2011, the most commonly reported STIs in Manitoba were chlamydia and gonorrhoea.<sup>22</sup> In 2008, over 2000 children and youth under age 20 were diagnosed with chlamydia, and over 300 youth were diagnosed with gonorrhoea.<sup>91</sup> For both chlamydia and gonorrhoea, the percentage of youth with a positive detection was significantly lower in the Rural South and significantly higher in the North, compared to the provincial average. Detections for females were triple those of males for chlamydia, and double those of males for gonorrhoea. For both STIs, the highest percentages were found in the lowest income areas of the province.<sup>22 (85)</sup>

Between 2000 and 2009, there were 23 cases of HIV among female youth (ages 15 to 19) and six cases among male youth. Data from 2010 report two new cases for females and one new case for males.<sup>22</sup>

For information on teen pregnancy, please refer to the Prenatal chapter.

### c) Safe environments: Victimization

Studies have shown that the rate of violence against children and youth tends to increase as children get older. In Canada, the most common types of violent crimes experienced by children and youth under 18 years of age are physical assaults (boys are more likely to be victims) and sexual assaults (the vast majority of victims are female). Child and youth victims of violence experience not only immediate physical and emotional consequences, but also long-term consequences, including an increased risk of behavioural and emotional disorders. These include aggressive, self-destructive, or delinquent behaviour, as well as depression, fear or anxiety.<sup>309</sup>

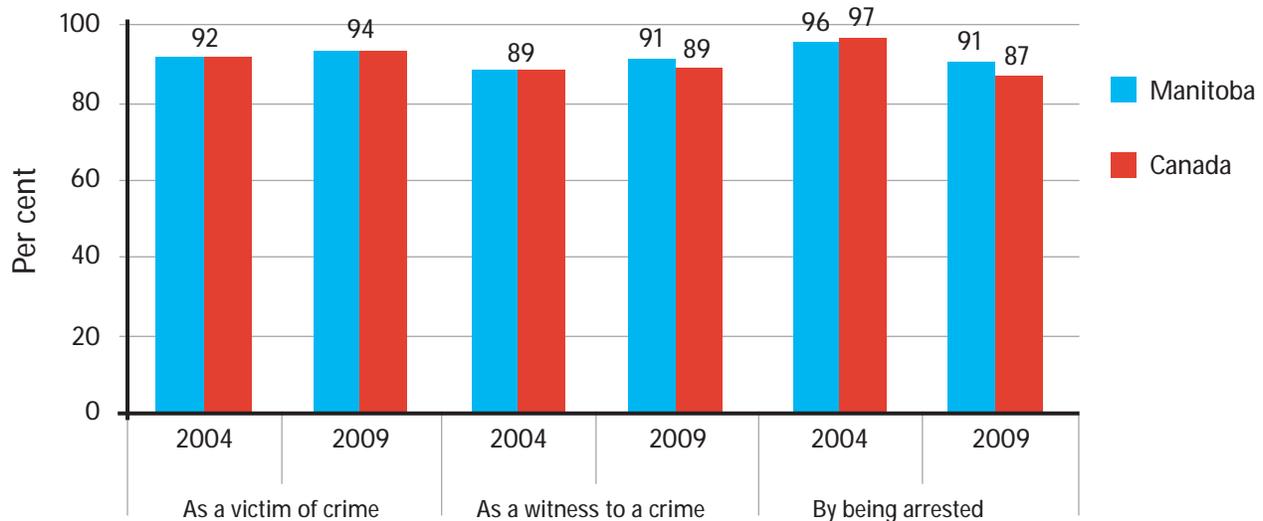
According to a Canadian survey, the percentage of youth (ages 15 to 19) who are 'very satisfied' with their personal safety from crime is slightly higher in Manitoba (50%) compared to Canada overall (48%).<sup>(86)</sup>

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<sup>(85)</sup> Note: Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs.

<sup>(86)</sup> Source: 2009 General Social Survey (Statistics Canada).

Figure 58: Youth who have NOT come into contact with the police...



Source: 2009 General Social Survey

In Figure 58, we can see that the percentage of youth (ages 15 to 19) who have not come into contact with the police as a victim of crime or as a witness to a crime has increased somewhat (by 2%) in Manitoba, which is good news. However, the percentage of youth who have not come into contact with the police by being arrested has decreased considerably in Manitoba (from 96% to 91%) and even more drastically in Canada (from 97% to 87%).

#### d) Safe families

Adolescents spend most of their time with their peers, and less time with their families than when they were younger. However, a safe family environment continues to be an important determinant of their well-being. Secure attachment between parents and adolescents is an important factor in supporting the transition to adulthood and ensuring healthy development. Secure parental attachments are associated with positive outcomes, including reductions in risky behaviours (e.g., drug use, drinking, unprotected sex) and better mental health.<sup>310, 311</sup>

Parental nurturance (including praising their child and listening to their ideas) and parental monitoring (including taking an interest in their child's activities and setting limits such as curfews) are associated with better adolescent health behaviours and outcomes. Canadian data show that 53% of Canadian youth aged 12 to 15 years report high levels of both parental nurturance and parental monitoring. Higher levels of parental *nurturance*

are associated with better self-rated health and self-worth, lower levels of anxiety, less time with peers who engage in criminal behavior, and less use of substances such as alcohol, tobacco, and marijuana. Higher levels of parental *monitoring* are also associated with less substance use.<sup>198</sup>

Unfortunately, many adolescents face safety and security concerns within their families. Children in care refers to children who are removed from their families of origin and placed into non-familial care, meaning the care of another adult(s) (e.g., foster family, group home), because of concerns about the proper provision of their care.<sup>22</sup> As noted in the chapter “Who are Manitoba’s children and youth?”, the proportion (as a percentage of all children in Manitoba ages 17 and under) of children in care of Child and Family Services or receiving protection or support services from Child and Family Services, is highest for females ages 13 to 17. Aboriginal children are more likely than other Manitoba children to come into care.<sup>312</sup>

Some youth in care have complex needs, meaning there are multiple needs, often as a result of exposure to multiple stressors or adverse life experiences such as physical abuse, sexual abuse, neglect, family violence, or other trauma. These experiences compromise their functioning, health, and well-being in multiple ways, primarily by affecting their behaviour and emotional stability. Youth with complex needs require services across multiple service sectors.<sup>313</sup>

In 2010 in Canada, among youth ages 12 to 17 who had been violently victimized, 18% were victimized by someone within their own family network. Studies have shown that the family member is often a parent. Of those 12 to 17 year olds who were victims of police-reported family-related violence in 2009, 55% were assaulted by a parent (61% of 12 to 14 year olds, and 51% of 15 to 17 year olds).<sup>315</sup>

For 12 to 17 year old victims in 2010, family-related violence was far less common than non-family related violence for females (23% and 77% respectively), and especially for males (13% and 87% respectively).<sup>316</sup> The leading contributor to the higher rates of family violence among girls, particularly as they get older, relates to their much higher risk of sexual violence. 2009 data show that for Canadian girls, the rate of sexual victimization by a family member increased throughout childhood and peaked at 14 years of age, declining each year after that. For boys, rates of sexual victimization peaked in middle childhood. For physical assaults by a family member, rates were highest for both boys and girls in the 12 to 17 year old age group, peaking at 15 to 17 for girls and 15 to 16 for boys.<sup>317</sup>

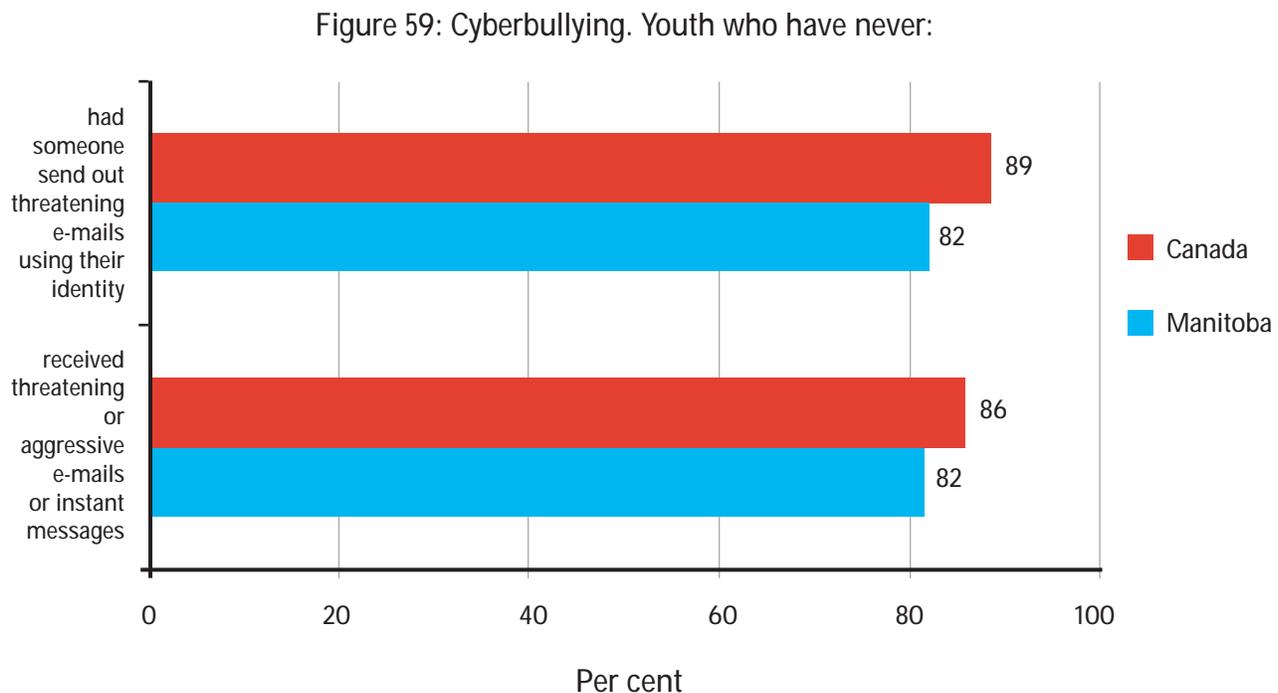
In 2010, for 12 to 17 year olds who were victims of police-reported family violence, the most common incidents were physical assaults (54%), ‘other’ violent offences (29%), and sexual offences (16%).<sup>229 (87)</sup> These numbers are for police reported family violence only. Many incidents are not reported to police and so the full extent of violence against youth is not known.<sup>(88)</sup>

<sup>(87)</sup> Note: over three quarters of physical assaults were level 1 assaults, and over three quarters of sexual offences were level 1 sexual assaults. Level 1 is the least serious form of assault or sexual assault. (Level 2 indicates assault or sexual assault with a weapon or bodily harm, while level 3 indicates aggravated assault or sexual assault). The most common ‘other’ violent offence was uttering threats (4 in 10 of ‘other’ violent offences).

<sup>(88)</sup> Youth may be unable or reluctant to report their victimization due to the fear of consequences. This is in addition to the hidden nature of abuse that can lead to reduced levels of detection and subsequent reporting by others. See Ogrodnik, L. (2010). *Child and youth victims of police-reported violent crime, 2008*. Ottawa, ON: Statistics Canada, catalogue no. 85F0033M, no. 23.

### e) Safe schools and communities

Keeping schools and communities safe is an important priority and a key factor in helping adolescents mature without the negative effects of bullying or violence. Adolescents may bully or harass their peers for a number of reasons, including physical appearance, race/ethnicity, or sexual orientation. Feeling safe at school has been linked to better physical and emotional health, as well as a reduced likelihood of risk-taking.<sup>318</sup>



Source: General Social Survey

Cyber bullying has received more attention as adolescents spend increasing amounts of time online. Figure 59 shows that a higher percentage of youth (ages 15 to 19) in Manitoba have been victims of cyber-bullying (18%), compared to in Canada overall (11-14%). In 2009, the percentage of youth (15-19) who had never had someone send out threatening e-mails using their identity was lower in Manitoba (82%) compared to Canada (89%). Similarly, the percentage of youth who had never received threatening or aggressive e-mail or instant messages was lower in Manitoba (82%) compared to Canada (86%).

Lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ)<sup>(89)</sup> high school students suffer disproportionately from bullying. A study in Canada found that

- 59% of LGBTQ high school students reported they were verbally harassed, compared to 7% of non-LGBTQ students.
- 25% of LGBTQ students indicated being physically harassed due to their sexual orientation, compared to 8% of non-LGBTQ students.
- 31% of LGBTQ students reported personal harassment on the internet or via text messaging, compared to 8% of non-LGBTQ students.
- 73% of LGBTQ students reported they felt unsafe at school, and 20% did not.
- 51% of LGBTQ students reported they did not feel accepted at school, compared to 19% of non-LGBTQ students.<sup>319</sup>

## II. Security

Income security, including adequate housing and food security, is of utmost importance for adolescent health and well-being. Living in poverty is considered to be the greatest health risk for adolescents, and is closely related to their likelihood of physical illness, mental health, obesity, high-risk behaviours, injury, and self-rated health.<sup>262 320</sup> A Canadian study found that family income adequacy was associated with several teen outcomes, including physical activity and self-esteem.<sup>321</sup> Please refer to the chapter “Who are Manitoba’s children and youth?” for further information on poverty and low-income in Manitoba.

Youth receiving income assistance are living in poverty, and are at a higher risk of behavioural and emotional difficulties, poor academic performance, and poorer health outcomes.<sup>22</sup> In Manitoba, the percentage of youth (ages 18 to 19) on income assistance decreased significantly from 10% in 2000/01 to 8% in 2009/10. Significant decreases were found in Winnipeg (from 14% to 9%) and in the North (from 10% to 9%), while significant increases were found in Brandon (from 6% to 14%) and the Rural South (from 3% to 5%).<sup>(90) 22</sup>

<sup>(89)</sup> The study used the acronym LGBTQ. Please note that Healthy Child Manitoba uses the acronym LGBTTO, which includes persons who identify as two-spirit.

<sup>(90)</sup> Note: data underestimates First Nations. Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); North= Burntwood, NOR-MAN, and Churchill RHAs.

## C) Successful at Learning (Adolescence)

During adolescence, academic learning becomes an increasing focus, particularly as adolescents contemplate post-secondary education and eventual entry into the workforce. Studies have shown that early academic success tends to predict success later in life. However, life skills and cultural learning are also important aspects of preparing teens for independence and their roles as adults.

### a) Mathematics, reading and writing<sup>22 (91)</sup>

In Grade 7, students are assessed for various competencies in mathematics throughout the year. In the last two weeks of January, teachers prepare a summary assessment report on each student, based on five mathematics competencies: 1) orders fractions, 2) orders decimal numbers, 3) understands that a given number may be represented in a variety of ways, 4) uses number patterns to solve mathematical problems, and 5) uses a variety of strategies to calculate and explain a mental math problem.

In Grade 8, students are assessed on reading comprehension and writing of informational texts. In the last two weeks of January, the teachers prepare a summary assessment report on each student, based on six reading and writing competencies:

1) understands key ideas and messages in a variety of texts; 2) interprets a variety of texts; 3) responds critically to a variety of texts; 4) generates, selects and organizes ideas to support the reader's understanding; 5) chooses languages (word choices and sentence patterns) to make an impact on the reader; and 6) uses conventions (spelling, grammar, and/or punctuation) and resources to edit and proofread to make meaning clear.

For each mathematics and reading/writing competency, students are categorized according to one of four levels of achievement: 1) meeting expectations, 2) approaching expectations, 3) needs ongoing help, and 4) out of range<sup>(92)</sup>.

Between 2007/08 and 2009/10, the percentage of Grade 7 students "meeting" or "approaching" expectations in all five mathematics competencies was stable in all regions. On average, two thirds (67%) of Manitoba students met or approached expectations in all five competencies. In 2009/10, the rate in Winnipeg (74%) was significantly greater than the Manitoba average, whereas the rate in the North (55%) was significantly lower than the Manitoba average.

<sup>(91)</sup> Notes: North= Burntwood, NOR-MAN, and Churchill Regional Health Authorities. Because students in French Immersion are assessed in both French and English, there are two sets of scores for these students. For most students, their scores are the same; however in some cases students do better in one language. In order to keep only one set of scores for each student, the language where the student's score was the highest was chosen. Rates by area represent where students live rather than where they attend school. Because some First Nations schools do not participate in the assessments, children in First Nations schools were not included in the analyses (see Brownell et al, 2012 for details). For readers who would like more details on specific competencies and/or specific language programs (English, French Immersion, and Francais), please see "A Profile of Student Learning and Performance in Manitoba, 2006-2010", Manitoba Education.

<sup>(92)</sup> Used to describe those students who are working well below grade-level curriculum relative to the competencies assessed due to their learning disabilities or their need for new language learning.

The percentage of Grade 8 students meeting or approaching expectations on all six reading and writing competencies was also stable in all regions. The Manitoba average ranged from 74% in 2007/08 to 77% in 2009/10. In 2009/10, the rate in the North (66%) was significantly lower than the Manitoba average.

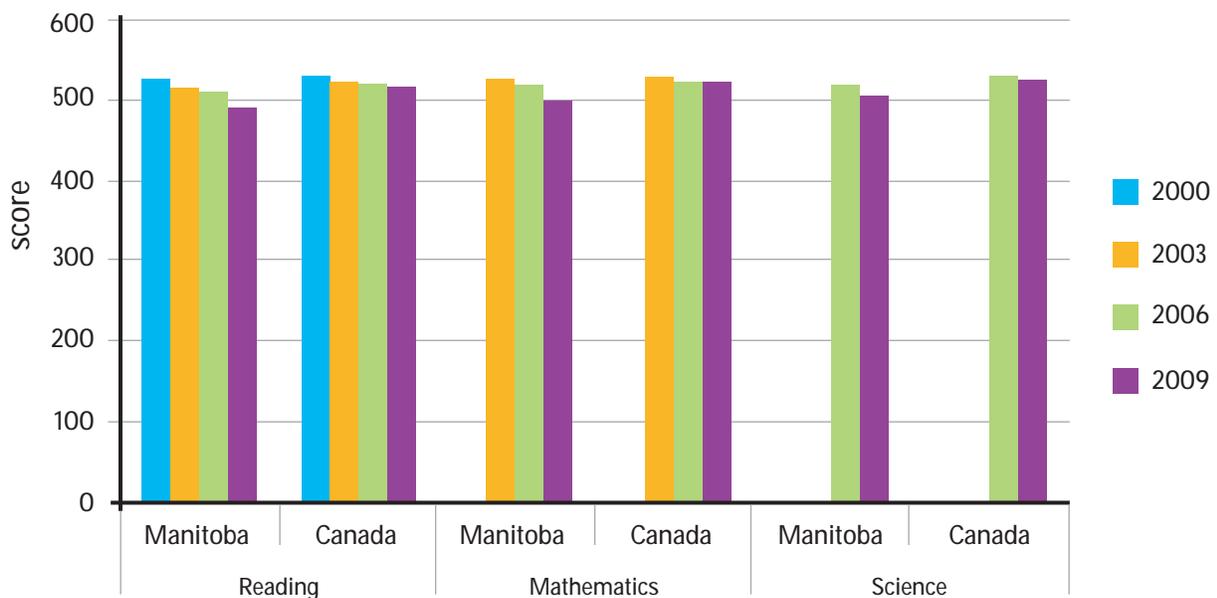
In both rural and urban areas, a higher percentage of children met or approached expectations in higher income areas of the province, for both mathematics and reading/writing competencies. However, the degree of inequity was stable and relatively low.

## b) Programme for International Student Assessment (PISA)

The Programme for International Student Assessment (PISA) was developed by the Organization for Economic Cooperation (OECD) to assess 15-year-old students in member countries of the OECD. PISA measures skills and knowledge that are recognized as key outcomes of the educational process.

In the 2009 PISA, Canada performed among top-level countries in reading. However, there was a significant decrease in reading scores between 2000 and 2009 in five provinces, including Manitoba (see Figure 60), which saw the largest decrease in performance. Manitoba went from performing above the OECD average in 2000 to performing at the OECD average (and significantly below the Canadian average) in 2009. There were no significant differences between English-and French-language schools.<sup>322</sup>

Figure 60: Manitoba results (average scores) from the OECD PISA study



Source: Canadian results of the OECD PISA study

Canada continues to perform well internationally in both mathematics and science, scoring above the OECD average. There was a significant decrease in mathematics scores between 2003 and 2009 in six provinces, including Manitoba (see Figure 59): Manitoba went from performing above the OECD average in 2006 to performing at the OECD average (and significantly below the Canadian average) in 2009. For science, performance decreased in Manitoba (see Figure 59) and PEI, and remained stable in the remaining provinces. Manitoba went from performing above the OECD average in 2006 to performing at the OECD average (and significantly below the Canadian average) in 2009. In addition, the gap between students with the highest and lowest levels of performance in science was highest in Manitoba. There was no significant difference between males and females for either mathematics or science.<sup>322</sup>

### c) Grade 12 Standards tests<sup>22 (93)</sup>

Students in grade 12 in Manitoba are required to write standard provincial examinations in Language Arts and Math. These tests certify academic achievement and are also used by teachers to evaluate academic instruction and to improve student learning. The tests are administered toward the end of the year, and account for 30% of the final course mark. They are curriculum-based and mandatory for all students, with adaptations available for special needs students.<sup>323</sup>

The percentage of students that passed the language arts standards test on time in Manitoba was stable between 2001/02 (53%) and 2009/10 (56%). The percentage increased significantly in Winnipeg (from 56% to 61%) and decreased significantly in the North (from 22% to 16%). A lower percentage of students passed on time in lower income areas of the province.<sup>324</sup>

The percentage of students that passed the mathematics standards test on time in Manitoba increased significantly from 40% in 2001/02 to 46% in 2009/10. On-time pass rates increased significantly in Winnipeg (from 40% to 48%) and Mid (from 35% to 43%) regions. In the North, the on-time pass rate was significantly below the provincial average in both time periods, and it decreased significantly (from 14% to 11%). The rates in the Rural South were significantly higher than the Manitoba average in both time periods (48% and 51% respectively). A lower percentage of students passed on time in lower income areas of the province.

A recent study found that Francophone adolescents were more likely to pass their Language Arts and Mathematics exams compared to other Manitoban adolescents.<sup>46</sup>

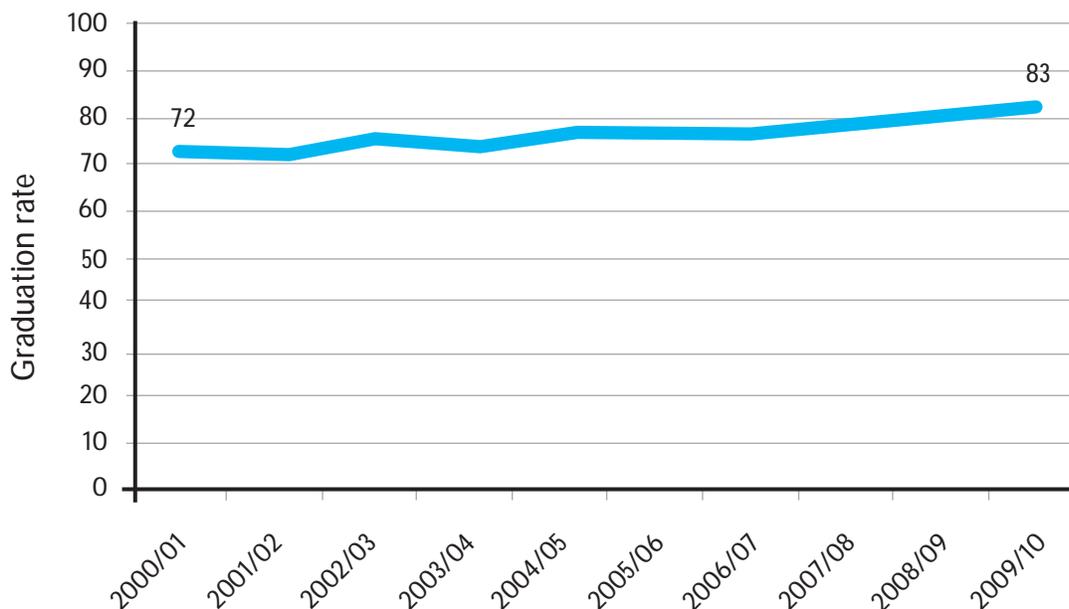
<sup>(93)</sup> Note: Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); Mid= North Eastman, Interlake, and Parkland RHAs; North= Burntwood, NOR-MAN, and Churchill RHAs.

## d) High school graduation and post-secondary enrollment

Education is an important indicator for adolescents. Higher levels of education are associated with better health in adulthood, better employment opportunities, higher income, and more broadly, a sense of control over one's life circumstances.<sup>325</sup> Conversely, a lack of a high school diploma is a predictor of several outcomes, including higher rates of social assistance reliance, and higher rates of teen motherhood.<sup>326</sup>

Figure 61 shows that there has been a marked improvement in the high school graduation rate in Manitoba, and it continues to trend upward. A recent Manitoba report found that between 2002/03 and 2009/10, all regions of Manitoba showed significant increases in high school completion rates, except the North, where the rate remained stable and was significantly lower than the Manitoba average in all years. In both rural and urban parts of the province, lower rates of completion were found in lower income areas.<sup>22 (94)</sup> Another recent report found that Francophone adolescents were more likely to graduate from high school compared to other Manitoban adolescents.<sup>46</sup>

Figure 61: Manitoba high school graduation rate



Source: Annual Reports, Ministry of Education<sup>(95)</sup>

<sup>(94)</sup> Note: MCHP uses a different method to calculate the graduation rate, but it results in fairly similar rates- slightly higher rates in all years except most recent. Rural South= South Eastman, Central, and Assiniboine Regional Health Authorities (RHAs); Mid= North Eastman, Interlake, and Parkland RHAs; North= Burntwood, NOR-MAN, and Churchill RHAs. See also: Brownell, M., Roos, N., Fransoo, R., Guevremont, A., MacWilliam, L., et al. (2004). *How do educational outcomes vary with socioeconomic status? Key findings from the Manitoba Child Health Atlas*. Winnipeg, MB: Manitoba Centre for Health Policy.

<sup>(95)</sup> Note: The Manitoba high school graduation rate is calculated using the same methodology as Nova Scotia and Ontario (Grade 12 graduates divided by Grade 9 enrolment four years previous). While some provinces employ the same methodology but use Grade 8 or Grade 10 previous enrolment, the remaining provinces use a similar rate calculation methodology that divides the number of graduates by either Grade 12 enrolment in the same academic year, or by the population of an age specific group. [http://www.edu.gov.mb.ca/k12/docs/reports/grad\\_rate/grad\\_rate.pdf](http://www.edu.gov.mb.ca/k12/docs/reports/grad_rate/grad_rate.pdf)

In addition to an increase in the high school graduation rate, there has also been an increase in the number of high school graduates entering post-secondary education. In 2001, 4,041 (34% of all Manitoba high school graduates) entered a Manitoba university that year. In 2010, that increased to 4,948 (38% of all Manitoba high school graduates).<sup>327</sup>

### e) Cultural and other learning

Formal education is not the only kind of learning that prepares teens for their roles as adults. Gaining life skills, through learning to drive and taking on part-time employment, helps adolescents become more independent and responsible. Developing cultural knowledge, such as through spiritual practices, is also important, as it contributes to identity development and fosters feelings of connection to others.

Language is a foundational piece of culture. According to the 2008-10 Manitoba First Nations Regional Health Survey, 52% of First Nations youth ages 12 to 17 “understand or speak a First Nation language” (50% of youth ages 12 to 14, and 54% of youth ages 15 to 17). However, only 30% of youth “use a First Nations language most often in daily life” (28% of youth ages 12 to 14, and 31% of youth ages 15 to 17). When asked how important it was “for you to learn a First Nations Language”, most youth said it was important (84% of youth ages 12 to 14, and 87% of youth ages 15 to 17). For all First Nations youth ages 12 to 17, 40% said it was somewhat important, while almost half (46%) said it was very important.<sup>328</sup>

## D) Socially Engaged and Responsible (Adolescence)

During adolescence, relationships begin to change dramatically. As their own identity and self esteem develops, so do adolescent social arrangements. Youth become increasingly autonomous, they may come into more conflicts with their parents, and the role of peers becomes more important. As their sexuality develops, they may have romantic or sexual relationships. Adolescents are also learning how to become socially responsible members of their family, community, and society.

### I. Socially engaged

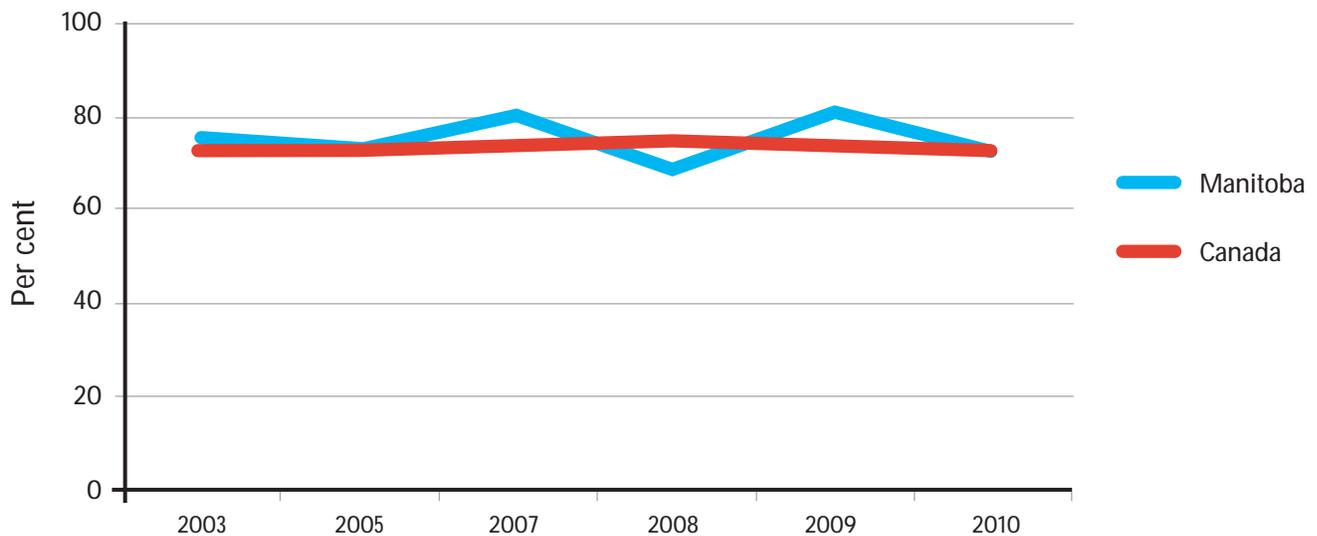
Positive relationships with family, friends, teachers, and people in the wider neighbourhood and community are important for healthy adolescent development.<sup>329 330</sup> Mentorship can play an important role in many aspects of adolescent learning and development, leading to improved grades, school attendance, and family relationships, and reduced likelihood of drug and alcohol initiation.<sup>331</sup>

### a) Sense of belonging to community and school

Adolescent engagement with communities and schools is important.<sup>198</sup> Community engagement and feelings of community belonging are associated with better health.<sup>332</sup>

In Figure 62, we can see that the proportion of youth (12 to 19 years) in Manitoba with a strong sense of belonging to community is high and has been relatively stable. Other than in 2008, there were no significant differences between Manitoba and Canada overall. In the most recent year (2011), well over three quarters (78%) of Manitoba youth reported a somewhat strong or very strong sense of community.<sup>(96)</sup>

Figure 62: Sense of belonging to community (somewhat strong or very strong) among Manitoba youth



Source: Canadian Community Health Survey

Studies have shown that feeling connected to one's school is associated with better emotional well-being, and reduced suicidal and risky behaviours.<sup>333 334</sup> Manitoba youth have a strong sense of school connectedness. According to the 2007/08 Youth Health Survey, over three quarters of Manitoba youth (grades 9 through 12) feel close to people at their school (78%), feel they are a part of their school (79%), and are happy to be at their school (77%).

<sup>(96)</sup> Note: significant indicates a statistically significant difference at  $p < 0.05$ . (Statistics Canada, CANSIM Table 105-0501)

## b) Community engagement

Community engagement takes many forms, but most often occurs through extra-curricular activities and participation in community organizations, such as through volunteering. These activities are associated with better self-reported health and mental health (e.g., self-esteem, feelings of control), and less risk-taking behavior (e.g., tobacco and marijuana use). However, it is important to note that adolescent participation in extra-curricular activities and volunteering is also associated with more anxiety and feeling time-stressed.<sup>(97)</sup>

In Manitoba, First Nations youth are active participants in their communities. In addition, they feel that traditional cultural events are important in their lives. According to the 2002/03 Manitoba First Nations Regional Longitudinal Health Survey<sup>335</sup>, 73% of youth ages 12 to 17 reported participating in community events like carnivals/celebrations, 64% reported going to pow wows, and 64% reported participating in community feasts.

In the more recent 2008/10 Regional Health Survey, two thirds of First Nations youth ages 12 to 17 reported that they take part in their local community's cultural events (47% said 'sometimes', 19% said 'always/almost always'). When asked about the importance of traditional cultural events in their life, over 80% of First Nations youth stated it was important (43% said somewhat important, 38% said very important).<sup>336</sup>

## c) Student engagement

*Student engagement refers to the degree to which students are actively involved in and take responsibility for their education; whether, in short they see schooling as 'theirs'. A considerable body of research, as well as educators' own experience, shows that students' sense of involvement in their education is vital to their effort and success. Moreover, engagement with learning is critical to students' capacity to be lifelong learners and is likely to be predictive of their ability to take on new challenges after they leave school.*<sup>337</sup>

Research has shown that students who are engaged in the learning process tend to learn more and want to pursue more knowledge.<sup>338</sup>

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<sup>(97)</sup> For a review, see: Canadian Institute for Health Information (2005). *Improving the health of young Canadians*. Ottawa, ON: Canadian Population Health Initiative.

In Manitoba, Grade 7 students are assessed on five Student Engagement competencies, including 1) demonstrates an interest in learning, 2) engages in self-assessment, 3) demonstrates awareness of learning goals, 4) participates in lessons, and 5) accepts responsibility for assignments. For each competency, students are categorized into five levels: 1) established (students who nearly always demonstrate the behaviour), 2) developing (frequently demonstrate the behaviour), 3) emerging (occasionally demonstrate), 4) inconsistent (demonstrate it in some settings but not all), and 5) out of scope (student has a profound mental health concern, learning disability or other condition).<sup>22</sup>

The Manitoba average for students with established or developing engagement behaviours in all five measures increased significantly from 54% in 2007/08 to 60% in 2009/10. Three regions showed increases, including Winnipeg (57% to 66%), Rural South (56% to 65%), and North (38% to 48%). In both rural and urban areas, student engagement was higher in higher income areas.<sup>22</sup>

A recent Manitoba study investigated whether grade 7 Student Engagement predicted the completion of 8 or more credits in grade 9. The completion of 8 or more credits in grade 9 has been shown to be a predictor of high school completion. Around 80% of students who were 'developing' engagement, and 90% of students who had 'established' engagement, earned 8 or more credits in grade 9, suggesting that student engagement may be an important predictor of future high school completion. Assessing engagement provides educators with an opportunity to identify students who may be at risk of losing interest, falling behind, or withdrawing from high school, jeopardizing their opportunities for well-being as adults.<sup>22</sup>

## II. Socially responsible

Behaving in a socially responsible way is a key learning task throughout childhood. In adolescence, increased responsibilities in the areas of sexual health, labour force participation, and planning for the future can lead to increased confidence and autonomy, but can also be a source of stress or insecurity. Consequences of socially irresponsible behavior become more severe, particularly if that behaviour is against the law.

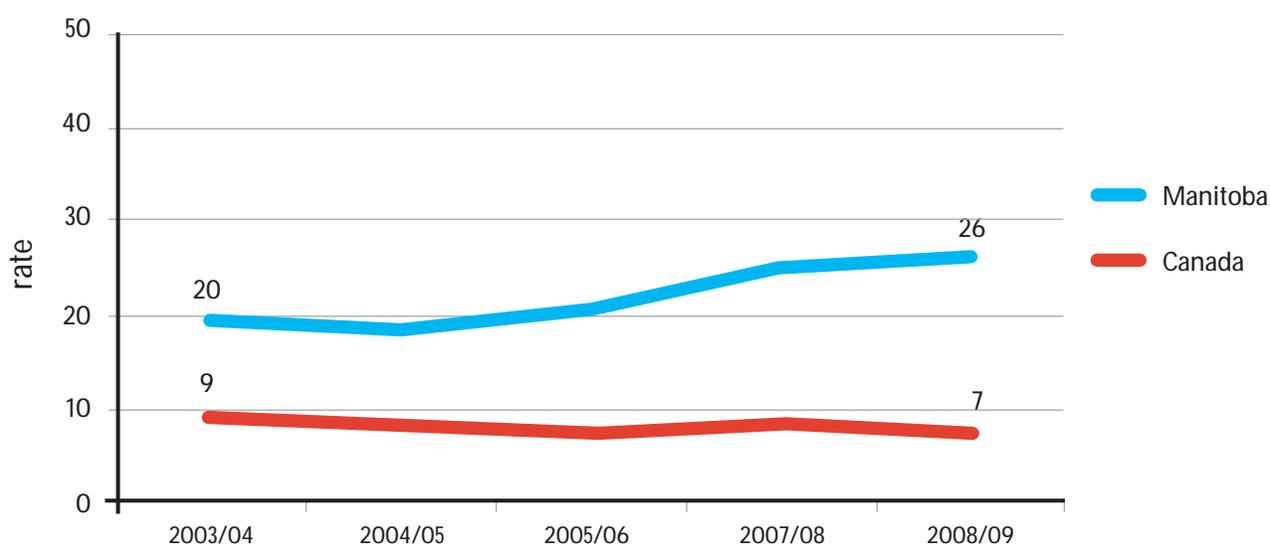
### a) Employment

For many adolescents, participation in the labour force is a major step into the adult world of responsibility. Research has shown that positive work experiences are associated with leadership skills and career motivation. However, adolescents who work 20 hours per week or more also report higher levels of emotional distress.<sup>339</sup> Employment experiences will also depend on the socio-economic status of the family. For teens from financially secure families, paid work may provide them with important skills and experience, provide spending money, and increase their independence. For other teens, paid work may be a necessity in order to contribute to household finances.

## b) Youth crime

In 2003/04, the youth incarceration rate in Manitoba was more than double the Canadian rate, and by 2008/09, the rate in Manitoba was more than triple the Canadian rate (see Figure 63). However, there are differences depending on the type of admission. In Manitoba, the rate of admissions to *remand* increased from 153 in 2004/05 to 176 in 2008/09. Similarly, the rate of admissions to *probation* increased from 78 in 2003/04 to 99 in 2008/09. However, the rate of admissions to *sentenced custody* decreased from 37 in 2003/04 to 33 in 2008/09.<sup>340 (98 99)</sup>

Figure 63: Youth incarceration rates



Criminologists have noted that vulnerable youth, particularly those who have experienced trauma, poverty, discrimination, or abuse, are more likely to be arrested and charged with criminal behavior. A very high proportion of youth admitted to remand, sentenced custody, and probation in Manitoba are Aboriginal. Among youth admitted to *sentenced custody*, the proportion that is Aboriginal has increased in Manitoba, from 80% in 2003/04 to 87% in 2008/09 (compared to 28% and 36% respectively in Canada). On the other hand, the proportion that is female is lower in Manitoba (10% in 2008/09, compared to 17% in Canada) and has been stable in both Manitoba and Canada.<sup>341 (100)</sup>

In the previous decade, many youth violations in Manitoba consisted of property crime violations. The rate of youth charged with property crime violations declined steadily after

<sup>(98)</sup> Notes: The incarceration rate is the average daily counts of remand, secure and open custody per 10,000 youth aged 12 to 17 in the population. National figures exclude Ontario (2003/04 thru 2005/06), and Nunavut (all years) due to incomplete data.

<sup>(99)</sup> Note: Admission counts comply with the nationally recognized definitions developed to provide comparability across jurisdictions. All rates are calculated on the basis of 10,000 youth population aged 12 to 17, based on population estimates from Demography Division at Statistics Canada (populations as of July 1<sup>st</sup>, postcensal for 2008).

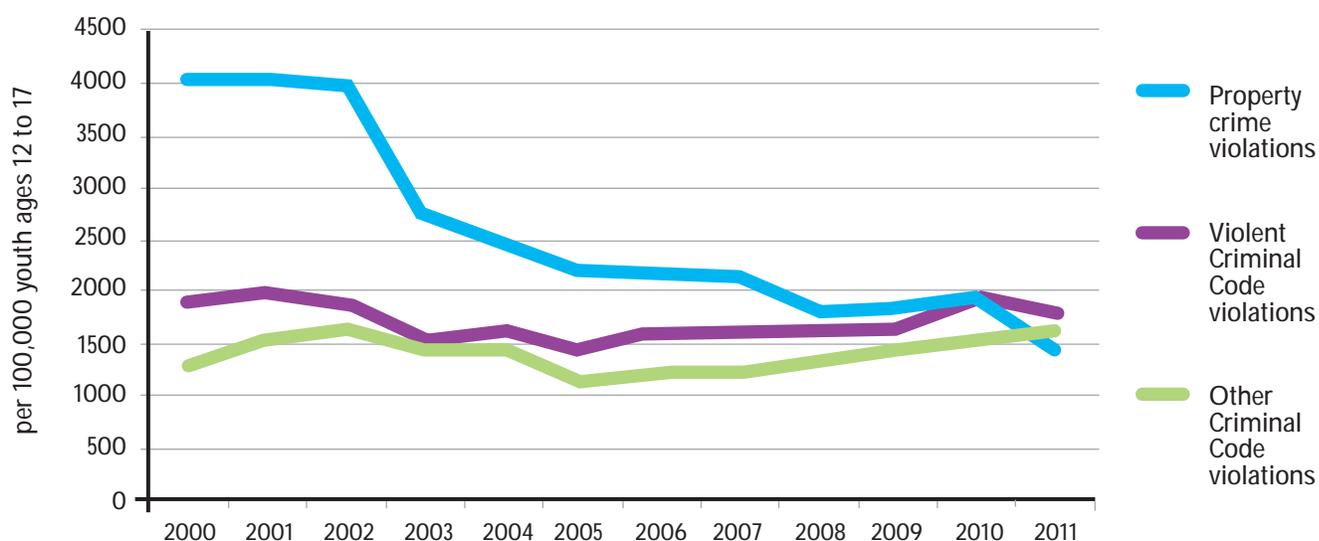
<sup>(100)</sup> Note: Aboriginal youth comprised between 19% and 23% of the youth population in Manitoba, and between 5% and 6% of the youth population in Canada, across the reference years. Canadian totals exclude some provinces in some reference periods, due to missing data, particularly for PEI, Quebec, and the Territories (especially Nunavut).

2002 (see Figure 64). The most common property crime violations are theft under \$5000, mischief, break and enter, and motor vehicle theft, which has decreased significantly since 2007. According to the youth crime severity index, the severity of non-violent crime decreased steadily in Manitoba between 2000 and 2010, but was higher than in Canada overall.<sup>(101)</sup>

The rate of youth charged with violent Criminal Code violations has fluctuated (see Figure 64). The most common violent Criminal Code violations by Manitoba youth are level 1 assault (without a weapon), uttering threats, and level 2 assault (with a weapon). According to the youth crime severity index, the *severity* of violent crime fluctuated and was higher in 2010 compared to 2000, and was considerably higher in Manitoba than in Canada overall.<sup>(102)</sup>

The rate of youth charged for “other” Criminal Code violations has increased somewhat since 2005 (see Figure 64). The most common violations are administration of justice (the majority of which are bail violations and failures to appear in court), and disturbing the peace.<sup>(102)</sup>

Figure 64: Rate of youth charged in Manitoba



Data from the most recent year show improvements in police-reported youth crime statistics. Between 2010 and 2011 in Manitoba, there were decreases in youth rates of robbery (down 14%), major assault (down 8%), total violent crime (down 12%), break and enter (down 23%), motor vehicle theft (down 19%), total property crime (down 24%), and the overall youth crime rate (down 14%). The overall youth crime severity index decreased by 10%, with the youth *violent* crime severity index down by 2% and the youth *non-violent* crime severity index down by 17%.<sup>342</sup>

<sup>(101)</sup> Crime severity index and weighted clearance rate, annual, Uniform Crime Reporting Survey. Note: The Crime Severity Index is calculated using Incident-based Uniform Crime Reporting Survey (UCR2) data. The Youth Crime Severity Index is based on the same principles as the Overall Crime Severity Index, which reflects the relative seriousness of different offences, but uses the number of youth accused instead of an incident count. (Statistics Canada, Table 252-0052)

<sup>(102)</sup> Rates per 100,000 population aged 12 to 17. Includes all youth who are apprehended, including those who are charged and those who are not charged. Source: Statistics Canada Table 242-0051, Incident-based crime statistics, by detailed violations annual (Uniform Crime Reporting Survey). Note: The UCR Survey was designed to measure the incidence of crime in Canadian society and its characteristics. UCR data reflect reported crime that was substantiated by police.

## SUMMARY

Adolescence is an important time of transition and transformation, when roles, relationships, and expectations change.<sup>198</sup> Adolescents are expected to become more independent and responsible, while undergoing dramatic physical and emotional changes, and while facing increased societal and peer pressure. Adolescence is also a time of exploration, and adolescent experiences and behaviours are important, especially because they can have long term effects that last into adulthood. Positive relationships in their families, schools, communities, and peer groups are assets that are associated with positive behaviours and outcomes for adolescents.

Many indicators of adolescent health and well-being are improving, suggesting that the majority of adolescents in Manitoba will transition into adulthood with good developmental outcomes. The percentage of adolescents with healthy lifestyles continues to improve: rates of smoking and binge drinking have decreased. Injury rates are also declining: both the unintentional injury hospitalization rate and the intentional injury hospitalization rate have decreased. Some educational outcomes are improving: Grade 7 student engagement is increasing. The percentage of students that pass the Grade 12 mathematics standards test on time has increased significantly, the high school graduation rate continues to trend upward, and the percentage of high school graduates who enter post-secondary education has increased. In terms of mental health, the percentage of First Nations youth with a strong sense of mastery has increased. Finally, some youth crime rates have improved: violent criminal code violations have decreased slightly (although the severity index has increased), and there has been a large decline in property crime violations and in the severity of non-violent crime.

Other adolescent outcomes are stable. The diagnosed asthma rate and youth mortality rate have both been stable. Rates of physical activity, fruit and vegetable consumption, and overweight/obesity are stable. In terms of mental health, the rates of mood and anxiety disorders and suicide have been stable, and the percentages of youth with highly rated life satisfaction, perceived mental health, and sense of belonging to community have been relatively stable. In terms of learning, the percentage of students meeting or approaching performance expectations in Grade 7 mathematics and Grade 8 reading and writing has been stable, and the percentage of students that passed the language arts standards test on time has been stable. The percentage of youth who have witnessed or been the victim of a crime has been stable (each has decreased by around 2%).

Only a few indicators of adolescent health and well-being present challenges to address. Diagnosed rates of both diabetes and ADHD have increased significantly over the past decade. In the 2009 PISA, Manitoba's scores in reading, mathematics, and science

decreased from previous assessments. Manitoba went from performing above the OECD average to performing at the OECD average (and below the Canadian average) in all three areas. The high and increasing rates of incarceration for Aboriginal youth remain an area of concern.

As noted in previous chapters, it is important to remember that adolescents are a diverse group. Many adolescent health outcomes differ depending on a number of factors, including sex, ethnicity, region of residence, family structure, and family income. In some cases, youth may be influenced by more than one of these factors at the same time, further adding to the diversity and complexity of this group.

## Chapter 7: CONCLUSION



# Chapter 7: CONCLUSION

This is the inaugural Report on Manitoba's children and youth, as legislated by *The Healthy Child Manitoba Act*. It has documented a variety of indicators of child and youth health and well-being in Manitoba. These include snapshots at specific points in time, as well as trends over time. Where possible, we have presented data in comparison to Canada, and we have presented data for subgroups, based on sex and age, as well as data on Aboriginal and Francophone children and youth.

There are several areas where our information could benefit from improvements in data quality and data availability. For example, in some cases data are only available for Canada, because the sample in Manitoba is too small to be statistically reliable. In other cases, data from the most recent census were not yet publicly available. It is also evident that better quality information on important (and sometimes more vulnerable) subpopulations, such as newcomers, is necessary in order to identify and address differences in child health among the diverse social, cultural and ethnic groups in Manitoba.

This Report has described many significant improvements in child and youth outcomes in Manitoba. These include a decline in the teen pregnancy rate, increased rates of both breastfeeding initiation and exclusive breastfeeding, decreased rates of hospitalization for injury, and a marked improvement in the high school graduation rate. In some cases, there remain areas of concern. Pediatric dental extractions, which reflect poor oral health, have increased, and diagnosed rates of both diabetes and ADHD have increased significantly among youth in Manitoba over the past decade. The information in this report can be used as benchmarks for future comparisons for these and many other indicators of child and youth health and well-being.

Children's opportunities for physical and emotional health, safety and security, success at learning, and social engagement and responsibility are largely determined by their early development. A large and growing body of evidence has led to the indisputable conclusion that the early years, including the prenatal period, have a significant impact on brain development, child outcomes, as well as children's chances of success later in life. Early adversity can have lifelong implications for children and youth, while high-quality family and community environments can stimulate healthy child development and long-term well-being.<sup>102</sup> Protecting and improving children's health and well-being means that their ability to contribute in a positive and meaningful way as adults is enhanced. This evidence strongly advocates for investing early, and suggests that early investments are a driver of economic growth and productivity.<sup>1</sup>

Healthy early childhood development sets the foundation for positive development and behaviour during middle childhood and adolescence. The physical, emotional, and social changes that occur during middle childhood and adolescence are dramatic. Prevention and early interventions and supports for children and youth during these stages of development can improve their lives today and make a significant contribution to the adults they will become.

Improving the health and well-being of Manitoba's children and youth is "the shared opportunity and responsibility of all Manitobans."<sup>91</sup> It is hoped that this report will inspire continued dialogue and accelerate efforts to improve the health and well-being of Manitoba's children and youth, and their families and communities.

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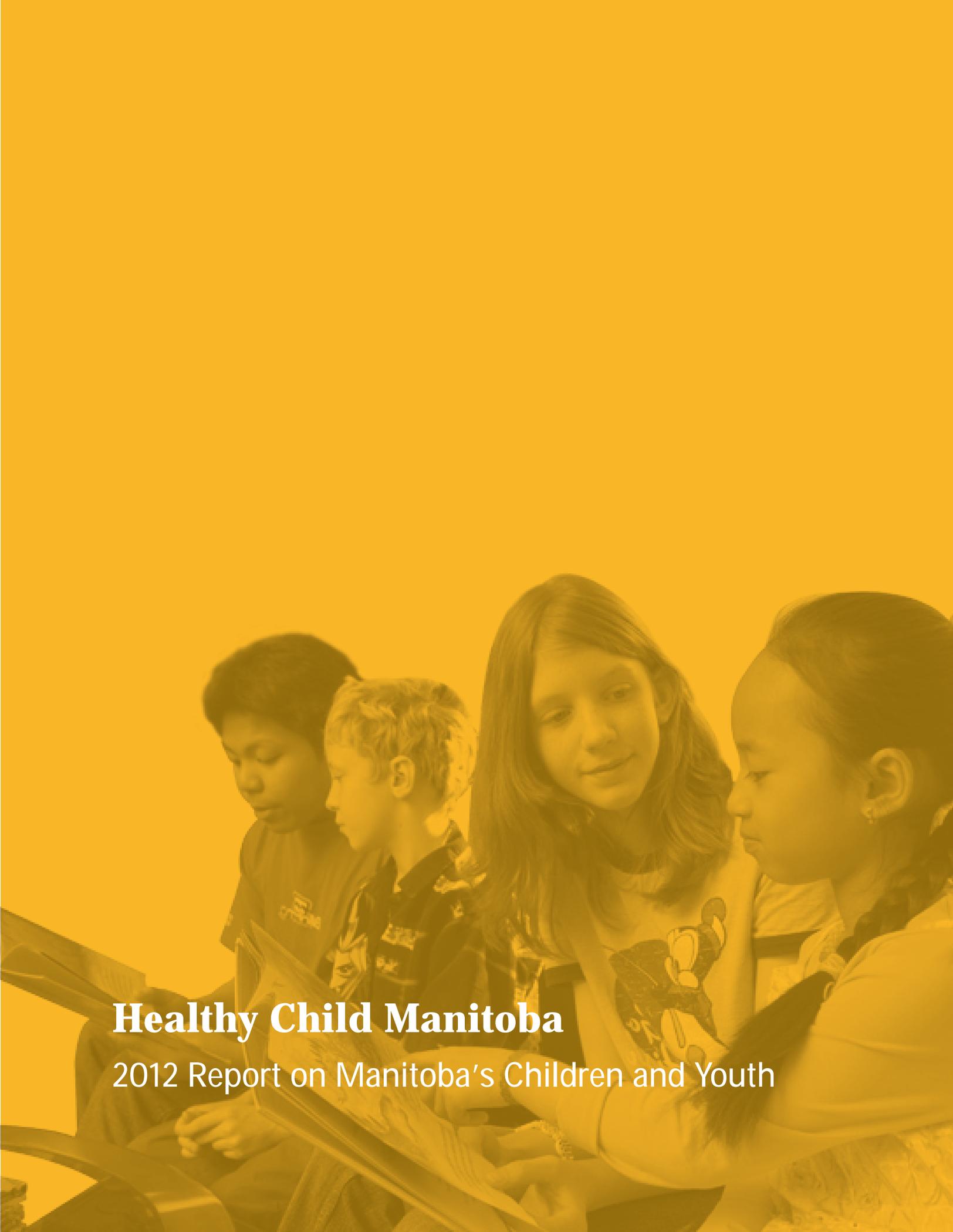
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