PublicHealth
WELLINGTON-DUFFERIN-GUELPH
Stay Well.

Promoting the Healthy Social and Emotional Development of Children

TO:	Chair and members of the Board of Health	
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Recommendations

It is recommended that the Board of Health:

1. Receive this report for information.

Key Points

- The Family Health Division at Wellington-Dufferin-Guelph Public Health has identified a new strategic direction for 2018: promoting the healthy social and emotional development of children.
- Healthy social and emotional development is foundational to all future brain development, including physical, cognitive, and language capabilities.
- Adverse childhood experiences (ACEs), such as abuse, neglect or other forms of trauma, can severely negatively impact social and emotional development.
- ACEs are associated with a significantly increased risk of adopting negative health behaviours, such as smoking or alcoholism later in life.
- These types of early experiences are also associated with developing seven out of the 10 leading causes of death in Canada (i.e., cancer, heart disease, stroke, chronic lower respiratory diseases, diabetes, suicide).

- Intervening in early childhood when the brain is most susceptible to change, is an effective, upstream, preventative solution that has potential for significant cost-savings for primary care, along with other sectors such as education, social services, and justice.
- Resilience can mitigate the relationship between ACEs and negative outcomes later in life.
- The Family Health Division is working both within Wellington-Dufferin-Guelph Public Health and with our community partners to develop a comprehensive population health approach aimed at improving social and emotional development outcomes for children.

Discussion

The Family Health Division at Wellington-Dufferin-Guelph Public Health (WDGPH) has identified *promoting the healthy social and emotional development of children* as a strategic direction that can help to guide program planning decisions for 2018 and beyond.

This topic has been singled out as an important priority for this division because the social and emotional development of children is foundational for other important developmental outcomes, such as cognitive and language abilities, which influence school readiness and future academic success.[1,2,3] In addition, research has clearly established the link between poor social and emotional development in the early years and negative health outcomes in adulthood, such as cardiovascular disease, diabetes, obesity, and depression.[4] Focusing on this issue in the early years is an upstream solution that will not only improve child development outcomes, but also reduce the chronic disease burden on the healthcare system as children age into adulthood.

Work related to this strategic direction began as part of an initiative undertaken to ensure that all Family Health Division programming was grounded in a robust and transparent evidence-base. To uphold the WDGPH organizational mission of delivering evidence-informed programs and services, a comprehensive inventory of all Family Health Division client-facing programming was developed. An analysis of this inventory indicated that 17 of 18 unique family health programs (94%) integrate some concepts related to social and emotional development into their programming. In addition, 50% of programs have core concepts related to social and emotional development as part of their program theory.

Despite the fact that social and emotional development concepts are prevalent in Family Health Division programming, it was recognized that a transparent evidence-base and common language was not being used across the Division to describe this work. A series of evidence summaries addressing this topic were generated in order to:

- provide operational planning guidance and a clear rationale for programs related to the social and emotional development of children;
- build capacity among WDGPH staff to understand the evidence-base related to these concepts and use common language; and
- engage community partners outside WDGPH who provide direct services to parents and families.

This report relates the key findings of the evidence summaries and describes the role that local data and community partners can play in this work moving forward.

Healthy Social and Emotional Development of Children

Healthy social and emotional development is defined as a child's capacity to:
- "experience, manage and express the full range of positive and negative emotions;
- develop close, satisfying relationships with other children and adults; and
- actively explore their environment and learn".[1]

The first few years of a child's life represents the most significant period of brain development. Given that changes to brain structure can happen more easily and with less effort during the first few years of life, it is more efficient and less costly to intervene to improve social and emotional development during this time than to try to change established brain structure later in life.[3,5]

An infant or child's interaction with their environment, particularly with a primary caregiver, stimulates the physical development of brain cells and connections between brain cells. These early connections create the platform for all further brain development and functioning.[6,7] The presence of toxic stress in utero or in the early years has been proven to negatively influence brain development primarily through chronic exposure to elevated levels of cortisol, a stress hormone. This can manifest as learning problems, self-regulation issues, 'misbehaviour', attention difficulties, or limited metacognition.[6,7] Through a process called epigenetics, elevated stress hormones can actually change the way a cell's DNA is expressed, thereby raising the risk of expression of genetically influenced health conditions.

In the absence of mitigating factors inherent in the child or found within their environment, the impacts of early exposure to toxic stress can be cumulative and lifelong.[6] The collective impacts of toxic stress can lead to challenges with academic and life success, social success, and mental health. Toxic stress and poor parent-child interactions can be perpetuated in an intergenerational cycle, meaning that without intervention to prevent and mitigate these issues, they will continue to effect generations to come.[6,8]

Factors that Influence Social and Emotional Development of Children

Social and emotional skills form essential building blocks for brain development and are inextricably linked with other important developmental domains.[2,3] In the first few years of life the developing brain is forming more than a million new neural connections a second.[3] All of the experiences a child has during this time, both positive and negative, contribute toward shaping brain development. Healthy social and emotional development can be fostered by mitigating and preventing adverse childhood experiences, and promoting resilience in children.

Adverse childhood experiences

Negative childhood experiences can be instrumental in shaping a person's lifelong health.[9] The term adverse childhood experiences (ACEs) is used to describe "…types of abuse, neglect, and other traumatic experiences that occur to individuals under the age of 18."[9] This term was first coined by a 1998 study[9,10] conducted in California that examined 10 specific types of ACEs and their relationship to health and behaviour outcomes later in life. Specifically, the study examined the following ACEs:

- Physical abuse
- Emotional abuse
- Sexual abuse
- Physical neglect
- Emotional neglect
- Parental mental illness
- Parental incarceration
- Violent treatment of one's mother
- Parental substance abuse
- Parental separation or divorce[9]

ACEs are associated with a significantly increased risk for developing seven out of 10 of the leading causes of death in Canada (i.e., cancer, heart disease, stroke, chronic lower respiratory diseases, diabetes, suicide).[11] As the number of ACEs a person faces increases, the risk of developing adverse outcomes increases as well.[12] For example, individuals with four or more ACEs are significantly more likely to be a smoker or an alcoholic, or to have depression, cancer, or diabetes (Table 1).[10]

Table 1. Dose response relationship between number of ACEs, and behavioural and health outcomes

Outcome	**Risk* of outcome for individuals four or more ACEs (as compared to individuals with no ACEs)[10]**
Current smoker	2 times more likely
Considers self an alcoholic	7 times more likely
Depression	4.5 times more likely
Any cancer	2 times more likely
Diabetes	1.5 times more likely

*Risk is based on adjusted odds ratio[10]

Many large-scale studies across the United States and Canada have replicated these results.[13,14] The original ACEs study and subsequent replications of this research have indicated that ACEs are very prevalent in society. Almost two thirds of the population report experiencing at least one ACE.[9]

The categories of ACEs most commonly reported in the original study cohort were:

- Physical abuse - 28%
- Parental substance abuse - 27%
- Parental separation or divorce - 23%[9]

Resilience

Resilience is defined as “the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress.”[15] In other words, it refers to a person’s ability to ‘bounce back’ from difficult experiences.[15] An individual’s resilience is formed as a result of the complex interaction between genetics, natural temperament, knowledge and skills, social supports, cultural and societal resources and past experiences.[8]

The most common factor that determines development of resilience in a child is the presence of a supportive and stable relationship with at least one adult.[16] This can be a parent, a primary caregiver, or any other adult (e.g., a coach, a teacher).[6,16] Supportive relationships can help children manage stress, as well as build other skills that allow them to adapt to difficult situations (e.g., the ability to plan, problem-solve, and monitor and regulate behaviour).[6,16,17]

Research indicates that resilience can mitigate some of the effects of ACEs.[8,18,19] For example, a recent study found that resilience moderated the relationship between ACEs and adult depression, meaning that individuals who had ‘high’ resilience (as determined using a validated screening tool) were less likely than those with ‘low’ resilience to experience depression, despite having the same ACEs score.[19]

The Role of Public Health

Public health is uniquely poised to take action in this field. Through the work of the Family Health Division, WDGPH interacts with parents (or future parents) at distinct periods across the life course: preconception, prenatal, postpartum and early childhood periods. Through different settings and programs, there is an opportunity to address modifiable parental factors that can promote the social and emotional development of children. By targeting parents there is an opportunity to modify behaviours and adjust the life trajectory of the next generation. The Family Health Division has identified some concrete and actionable strategies for embedding this research into existing programming at each life stage. Examples of this are found in the table below:

Table 2. Examples of how the Family Health Division can begin integrating this evidence-base into existing programs

Life Course Period	Opportunities for Impacting Social and Emotional Development	Integrating Social and Emotional Development into Already Existing Family Health Programs
Preconception **(before pregnancy)**	Inform future parents about preconception health risk factors, including ACEs. Promote strategies that encourage positive overall mental health and resilience	**MyHealth e-snapshot program:** By integrating ACE surveillance questions and education opportunities into the MyHealth e-snapshot tool, individuals can recognize their own ACE-related risk factors. Action can be taken to ensure they are using self-care strategies that will improve their overall health and ultimately make them better parents in the future.
Prenatal **(pregnancy)**	Inform parents about the importance of building safe, supportive and nurturing environments and of minimizing an unborn baby's or child's exposure to toxic stress	**WDGPH prenatal class curriculum:** During this life stage families are often most receptive to behaviour and lifestyle changes because their actions will directly impact the future health of their child. By integrating topics such as minimizing a child's exposure to toxic stress into the revised WDGPH prenatal class curriculum, parents can be aware and learn coping strategies which will ultimately improve their children's social and emotional health.
Postpartum **(first year of a child's life)**	Prevent and mitigate postpartum depression and other mental health issues that can affect parent-infant interactions during this life stage	**Breastfeeding clinics:** Evidence has shown that early "serve and return" interactions between a caregiver and infant stimulate brain connections and set the stage for safe, stable, secure and nurturing relationships.[3] ACEs are significantly associated with mental health outcomes such as depression.[10] Depression is especially important during postpartum period because depressed mothers are less likely to pick up on their infant's cues

		or respond consistently to their needs. In addition to diminished responsiveness, they can be less emotionally expressive, affectionate, and less likely to have appropriate interactions with their infant.[20] Public health nurses can integrate topics such as postpartum depression and serve and return interactions into their discussions at WDGPH breastfeeding clinics.
Early Childhood **(birth to three years old)**	Opportunity to inform parents about the importance of fostering resilience in children	***Let's Talk Parenting* blog posts and social media accounts:** WDGPH's Let's Talk Parenting blog posts and social media accounts can incorporate messaging related to the importance of building a strong and supportive parent-child relationship. Parents can learn strategies for improving their own coping skills and instilling strong coping skills in their children.

The Family Health Division is making a concerted effort to impact the social and emotional development of children during early childhood. However, as this research base has been developed it has been shared across WDGPH to ensure that this work is continued beyond age three. For example, the Health Communities and Public Policy team is currently working with the Dufferin Coalition for Kids to develop a curriculum aid for teachers that focuses on building resilience in children. Intentional partnerships and shared projects across divisions continue to be built on the basis of a life course approach to promoting mental health in children, youth and families.

Relevant Data Sources and Data Development Plans

Existing relevant data sources related to the social and emotional development in children are limited in Wellington-Dufferin-Guelph (WDG). The majority of existing data are available from the Early Development Instrument (EDI) and the WDG Youth Survey.

Early Development Instrument

The EDI is a questionnaire that is completed by kindergarten teachers across the province that assesses children's ability to meet developmental milestones in five domains: physical health & well-being, social competence, emotional maturity, language & cognitive development, and communication skills & general knowledge.[21] The EDI is administered every three years and, as such, it can be useful tool for monitoring population trends related to the social and emotional development of children over time. The EDI can be analyzed at the neighbourhood level and therefore it can help public health practitioners identify which areas are most in need of services. For example, in Guelph the neighbourhoods with the highest overall EDI vulnerability were Brant Waverly, Onward Willow and Two Rivers.[22]

WDG Youth Survey

WDGPH also has access to data from the WDG Youth Survey. The WDG Youth Survey is an in-school survey provided to Grade 4, 7 and 10 students in a three-year cycle.[23] It asks relevant questions related to family support, positive family communication, peer connectedness, personal power, self-esteem, self-rated mental health and stress. These indicators may be useful to determine if there are any geographic areas or priority populations who would most benefit from a targeted approach. For example, data from the WDG Youth Survey indicates that grade 10 females are significantly more likely to report experiencing stress than males. [23] Females are also three times more likely to be at risk for depression than males at this age.

Data Development Plans

Despite being useful sources of data, the EDI and WDG Youth Survey do not provide information related to parenting practices or parent ACE-history. This information is required to inform programming and monitor program success. For this reason, WDGPH is currently planning a WDG ACEs survey. This survey would use the validated ACE questionnaire to examine the prevalence of specific ACEs across WDG. Although the relationship between ACEs and chronic disease outcomes is well-understood, a local study will clearly outline which ACEs (e.g., abuse, neglect, parental mental illness) are most prevalent among WDG adults. This, coupled with demographic data, will help WDGPH make programming decisions about to how prioritize ACE prevention and mitigation efforts. This project will also use a validated resilience questionnaire to examine resilience across WDG.

In addition, in 2018, the Family Health Division will implement a parent knowledge and behaviour survey. This will be a reoccurring survey (implemented approximately every 3-5 years) that WDGPH can use to measure the progress of programs that target parenting knowledge and skills. It can also be used to regularly monitor the programming needs of WDG parents and ensure that WDGPH is meeting those needs.

Engaging Community Partners

There is existing community momentum and interest in improving the social and emotional development of children in WDG. On June 23rd a coalition of children's services providers and community leaders in Guelph and Wellington held an ACEs Community Call to Action Event. This event was covered by local media outlets such as Guelph Today.[24] The purpose was to create a collective impact initiative aimed at designing a comprehensive community strategy for preventing and mitigating ACEs. This group is currently working toward building a common agenda and designing shared measurement tools that can be used by all of the participating organizations to track progress. By partnering with this coalition, the Family Health Division is aligning their strategic direction with a larger community strategy. This will provide additional resources and capacity to create meaningful and measureable impacts.

Community groups across Dufferin County are also very interested in this work. DC Moves is a Dufferin County coalition aimed at ensuring alignment across all human services.[25] One of the group's initiatives involves improving overall community well-being. DC Moves is very interested in the progress that is being made with regards to ACEs in Guelph and Wellington and eager to ensure that any data gathering initiatives related to ACEs and child development outcomes are expanded to include Dufferin.

Similarly, the Dufferin Coalition for Kids is also very interested in opportunities that ACE-related data could present to inform Dufferin child services programming. The Dufferin Coalition for Kids has established an action group dedicated to improving parental supports across organizations in Dufferin. In partnership with multiple child service providers (e.g., Ontario Early Years Centres, Dufferin County, child care facilities, WDGPH) this action group is preparing to launch

an educational campaign to raise awareness about the fact that “80% of brain development happens during the first three years of life”.[26] This campaign provides five simple strategies, called *the Dufferin Basics*, that parents can use during everyday interactions to improve the social and emotional brain development of children aged zero to three.

Conclusion

The social and emotional development of children during the early years is an important public health concern because it sets the foundation of all future brain development. Negative early experiences, such as ACEs, must be prevented and mitigated in order to improve social and emotional development outcomes. By promoting healthy social and emotional development early in life, potential costs associated with chronic disease outcomes and damaging health behaviours can be avoided.

As primary caregivers, parents play essential roles in nurturing child development and building early brain architecture. By integrating research related to healthy social and emotional development into existing programming aimed at parents, WDGPH can design preventative solutions that result in healthier life trajectories for children across WDG.

Next steps:

The Family Division will continue to translate this strategic direction into a range of evidence-based activities designed to promote the healthy social and emotional development of children aged zero to three. Using the principles of effective public health practice, this division will collect and monitor population health data to track progress in this area.

In October Family Health leadership and staff engaged in a division-wide event to share this research internally. The event included a keynote address from child development expert, Dr. Jean Clinton, as well as staff presentations that related child development principles to the existing programming of the Family Health Division. Knowledge translation is also occurring more broadly across WDGPH and with community partners who are doing work in this area. WDGPH will continue to play a lead role on the Guelph-Wellington ACEs Coalition and strive for the development of quality data related to this subject area.

Ontario Public Health Standard

Foundational Standards:

Health Equity

Goal: Public health practice aims to decrease health inequities such that everyone has equal opportunities for health and can attain their full health potential without disadvantage due to social position or other socially determined circumstances

Effective Public Health Practice

Goal: Public health practice is transparent, responsive to current and emerging evidence and emphasizes continuous quality improvement

Program Standards:

Chronic Disease and Injury Prevention, Wellness and Substance Misuse

Goal: To reduce the burden of chronic diseases of public health importance, preventable injuries, and substance misuse

Healthy Growth and Development

Goal: To achieve optimal maternal, newborn, child, youth, and family health

WDGPH Strategic Direction(s)

☒ **Health Equity:** We will provide programs and services that integrate health equity principles to reduce or eliminate health differences between population groups.

☒ **Organizational Capacity:** We will improve our capacity to effectively deliver public health programs and services.

☒ **Service Centred Approach:** We are committed to providing excellent service to anyone interacting with WDG Public Health.

☒ **Building Healthy Communities:** We will work with communities to support the health and well-being of everyone.

Health Equity

Factors effecting social and emotional development of children, such as ACEs, can cross all socioeconomic, racial and ethnic boundaries.[4] For this reason, WDGPH is applying a comprehensive population-based approach including population health assessment and surveillance, and disease prevention and health promotion strategies to target this issue.

A growing body of research suggests that ACEs may be an important determinant that can influence disparities in health.[1,2] Individuals with higher ACE scores are more likely to not complete high school, be unemployed and live in poverty.[2] By conducting a local ACE study, WDGPH will be able to better understand how ACEs effect certain populations in WDG, and design targeted strategies.

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Appendices

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