

Screening for Success

A Policy Brief on Implementing Developmental
Screening for Children Aged 0-6



Infant and Early Mental
Health Promotion

SickKids[®]

Problem

Infancy and early childhood are critical periods for a child's brain development. As such, early identification of developmental delays and disorders in children is crucial for providing timely and resource-efficient interventions and support. However, many Canadian children with developmental challenges go undetected in those first years, leading to missed opportunities for support.¹

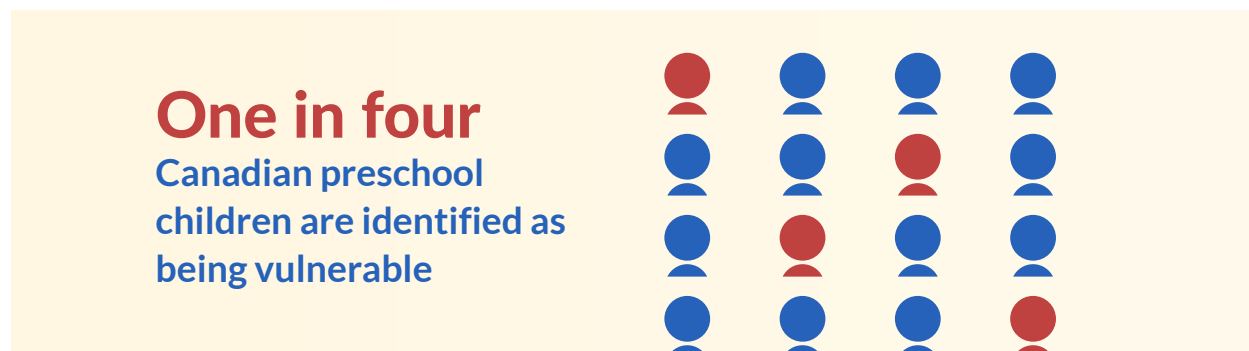
Background/Rationale

The brain is most adaptable within the first three years, and uniquely sensitive to environments and interactions.² In the first few years of life, the brain actively completes its structural maturation, with more than one million new neural connections being formed every second. This time of rapid development is a critical period to introduce early intervention (EI) before the child reaches three years of age.^{2,3} As the brain matures, its ability to reorganize and adapt to new challenges declines, meaning that addressing developmental challenges later will require more resources from government bodies, children and youth professionals, and parents and caregivers.²



One in four Canadian preschool children are identified as being vulnerable in one or more developmental domains – encompassing physical health and well-being, social competence, emotional maturity, language and cognitive development, and general knowledge and communication skills.⁴ As such, there is a significant need to introduce Canadian **programs and interventions that will influence developmental trajectories**

early, when the brain is at its most malleable. Indeed, initiatives supporting early childhood development have illustrated the potential to improve lifelong outcomes, including overall wellbeing, educational success, career security, and budgeting skills.⁵⁻⁷



Tools and data tracking developmental progress in early childhood is lacking. Despite evidence highlighting the importance of early identification before school age, tools used in Canada to track the developmental progress of children, such as the Early Development Instrument (EDI), miss the critical period of the preschool years. The EDI questionnaire measures children’s ability to meet age-appropriate developmental expectations and is not introduced until kindergarten.⁸ **Waiting until age four or five misses a critical period** where early intervention could reshape a child’s life-long adaptability.

Evidence Supporting the Use of Developmental Screening Tools

Developmental screening describes the use of standardized tools to assess a child’s developmental progress and identify areas of potential concern.⁹ Screening is not meant to establish a diagnosis for the child but rather to help professionals determine whether a more in-depth assessment is required, and to direct families to the appropriate resources.⁹

The American Academy of Pediatrics recommends conducting developmental and behavioural screening for every child as part of their well-child visits at 9 months, 18 months, and 30 months of age.^{10,11} Such recommendations are also endorsed by the Canadian Pediatric Society, the Centers for Disease Control and Prevention, and the World Health Organization.^{9,12,13}

Key points that underscore the evidence supporting the implementation of developmental screening tools:

- **Developmental screening during infancy and early childhood allows for the early detection of developmental delays before they become more pronounced or difficult to address.**² Children who participated in developmental screening programs were more likely to be promptly identified with developmental delays, referred to EI, and found eligible for such services compared to those who underwent surveillance alone.¹⁴

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- **A cost-effective approach to early intervention consists of targeting these interventions to children at risk.** Developmental screening not only identifies these children, but even points to at-risk developmental areas for a child.¹⁵ This could mean a specific path of referral for a child but also early childhood educators, teachers, and caregivers tailoring their teaching and strategies to meet the child's particular needs.¹⁶
- **Traditional mental health assessments designed for older children, youth and adults don't effectively capture the subtle signs of less-than-optimal mental health in infants and young children.**^{17,18} Evidence-based developmental screening tools are designed to assess a child's progress across key developmental areas appropriate for their age.

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- **Developmental screening involves and fosters engagement by parents and caregivers in actively participating in their child's development.**⁹ Parents are given additional valuable insights into their child's development, thereby empowering them to seek appropriate resources and support and be active partners in a family-centered care system.

- **Early identification is likely to optimize resource allocation, by ensuring targeted interventions for children with less-than-optimal development.** It also ensures that such supports are implemented where they are needed most. Furthermore, understanding the areas where support is required can assist governmental bodies in determining which populations to prioritize and how much funding to allocate to maximize benefits.
- **The earlier the investment, the greater the return.** There is strong evidence that investing in effective child programs can make a difference to the economy and to the health of the population.¹⁹⁻²¹ In the Canadian context, studies revealed that for every dollar invested in health yields a return of \$3.30 to the population.^{22,23}

The earlier the investment, the greater the return

- **Standardized, culturally inclusive developmental screening tools help reduce healthcare provider bias.** These tools can be used to avoid culturally inappropriate developmental expectations and to increase effectiveness of identifying the type and level of service intervention required, as well as limit the inaccuracies between identifying children with less-than-optimal development.²⁴
- **Standardized developmental screening tools can be used to track and monitor the well-being of Canadian children.** This can be done by leveraging existing databases such as the Canadian Database of Development, Infancy to Six (CanDDIS) (<https://imhpromotion.ca/CanDDIS>). By having a standardized way to track and monitor progress we can gain a better understanding of our current state and any progress that we make. See **Appendix A** on a national database that has been developed in partnership between Queen’s University and Infant and Early Mental Health Promotion (IEMHP) to track developmental screening results.

Key Considerations



The integration of screening tools into regular practice must be done at a systems level. Governmental cooperation and support are imperative to ensure

consistency and standardized processes across organizations, agencies, and sectors.



Guidelines and standards are essential for the integration of routine developmental screening into regular practice. See **Appendix B** for more information on the recommended implementation of screening tools and a recommended tool.



There are many stakeholders involved. “It takes a village” to provide a safe, healthy environment for children, where they are given the security needed to develop and flourish. Collaboration between different caregivers, organizations, and sectors, such as healthcare, education, and social services, can lead to a comprehensive approach to supporting children’s developmental needs.



It is critical that children who require supports or services are being identified. Identifying children with less-than-optimal development does not automatically mean they have access to further support and resources. Organizations that implement developmental screening tools should have protocols and policies in place for “next steps” to ensure families are not left wondering where to go or what to do.



Identification through screening tools, although important, must be followed-up with additional supports. This comprehensive approach reinforces the long-term effectiveness of early identification initiatives.



There is no universal approach. Emphasis needs to be placed on customizing the implementation to be thoughtful and sensitive to each individual population’s needs.



There are some concerns with population-based screening. Such concerns include: a lack of evidence supporting their use, low specificity tools would lead to a high proportion of false positives, lack of effective treatments for developmental delay, and screening-tools do not offer guidance on developmental surveillance, case finding or diagnosis.²⁵ However, this brief presents evidence that can address many of these concerns and emphasizes that effective collaboration among various stakeholders can help mitigate these challenges.

Organizational & Provincial Recommendations (also includes partnerships and other governments)

- **Implement comprehensive training programs** to ensure that professionals involved in childcare and early education are equipped with the knowledge and skills needed to conduct accurate screenings.
- **Develop *care pathways* to identify children with less-than-optimal development** as they map out the most effective way for children and families to get to, through, and out of care. The care pathways should ensure that children and their families are matched with the best services, at the right time. See **Appendix C** for more information about the Infant and Early Mental Health Care Pathways Initiative currently being accomplished by IEMHP in partnership with community organizations.
- **Establish a protocol for making temporary resources more readily available**, while waiting for a more personalized assessment. For example, *Hand in Hand and Nurturing the Seed* are resources created by IEMHP that practitioners can use to provide families with immediate strategies (a Developmental Support Plan) to mitigate developmental concerns. See **Appendix D** for more information on the Hand in Hand and Nurturing the Seed resources.
- **Utilize knowledge exchange to educate parents, caregivers, and communities** about the importance of infant and early mental health, as well as the positive impact of developmental screening tools on children's well-being.

Federal Recommendations:

- **Develop and implement guidelines for the routine use of developmental screening tools.** Such guidelines are to outline what tool(s) should be used, key times such tools should be used (e.g., well-child visits), locations the screenings will take place (e.g., early education settings), and who will be conducting them (e.g., practitioners, early childhood educators).
- **Facilitate the seamless sharing of developmental screening data** amongst relevant organizations, ensuring continuity of care and support.

- **Set up funding mechanisms for organizations to support the establishment and ongoing operation of developmental screening programs.** This could include collaboration with government, non-profit organizations, and private sector providers.

Conclusion & Next Steps

Canada's lack of early and timely developmental assessments represents a missed opportunity for early intervention during a critical developmental phase. By embedding routine screening into practice through organizations that engage with young children and families, we can effectively identify less-than-optimal development early on, ensure timely intervention, and transform developmental trajectories for those who need it most. While it is important to recognize that screening is an important first step, it's just the beginning. These recommendations pave the way for broader spectrum of services and supports that extend beyond early identification. To create lasting impact, we must focus on a continuum of care that addresses the diverse needs of children and their families, providing comprehensive support throughout their developmental journey.

Appendix A – National Database for Tracking Developmental Screening Results

In collaboration with Queen’s University in Kingston, Ontario, and various Canadian community organizations, IEMHP is actively developing the inaugural national database for preschool child development in Canada: the Canadian Database of Development, Infancy to Six (CanDDIS).

This database contains valuable insights into the progression of children as they reach crucial developmental milestones. Additionally, it offers insights into the specific areas of child development that may require additional assistance, facilitating the provision of timely and efficient support and resources.

Through established partnerships, service providers collect ASQ information alongside demographic data from consented families and the data is entered into the CanDDIS. The database provides us with information about the growth and development of children across various settings, such as child welfare organizations, community-based organizations, and Indigenous communities. As more organizations and communities become part of this database, our understanding of early childhood development within specific and diverse contexts grows.

By establishing a comprehensive national resource for early development and mental health, we can gain a deeper understanding and more effective response to ensure that every child enjoys the best possible start in life right from the beginning. Ultimately, this approach allows for our knowledge regarding early child development to be tailored to the needs of the young children in our society.

As of August 2023, the CanDDIS contains more than 2000 individual child records from nine partner organizations.

From the data currently entered in the CanDDIS, the following findings have been deduced:

- In a comparison of 314 children between child welfare and community samples, children in the child welfare group scored significantly lower in all developmental domains assessed by the ASQs.

- In a comparison of 80 children between Indigenous communities in Ontario and Saskatchewan, 29% of the children in the Saskatchewan sample had at least one area of developmental delay, compared to 25% of children in the Ontario sample.
- In a comparison of 384 children between Indigenous children in their community and Indigenous children involved with child welfare, 19% of Indigenous children in their community had at least one area of developmental delay, compared to 68.8% in the child welfare sample (Peterson-Katz, 2023).

Peterson-Katz, K. (2023). Putting Knowledge to Practice: Bridging the Gap Between Early Intervention, Child Development, and Organizational-Level Implementation Following Training and Coaching. *Manuscript submitted for Publication. Queen's University.*

Appendix B – Guidelines and Considerations to Implementing Developmental Screening

1. The selected tool(s) should meet the following criteria:

✓ Validated

- Developmental screening tools that are acceptable require high sensitivities (i.e., few false negatives) and specificities (i.e., few false positives) of, at minimum, 70% to 80%.^{15,26} This attempts to reduce the over- and under-identification of less-than-optimal development in children.

✓ Culturally adaptive and multi-lingual

- Canada is multinational and multicultural and, as such, consideration for diverse cultural backgrounds and languages is essential to ensure the accuracy of developmental screenings across different populations.

✓ Appropriate for children aged 0-6

✓ Cost-effective

✓ Incorporate the key developmental domains

✓ User-friendly

- A critical aspect to consider when implementing a developmental screening tool is that it should use simple language at an accessible reading level, such as grade 6 to 8.

✓ Convenient

- Additionally, these tools should be designed to be time-efficient, recognizing that caregivers are more likely to be able to invest 15-20 minutes rather than 60-90 minutes.

2. Organizations should ensure their staff are **appropriately trained** in infant and early mental health as well as the administration and interpretation of developmental screenings.²⁷

3. **Parents and caregivers should be involved** in completing the screening tool as they know their child best.
4. The developmental screening tool used should also be **accessible to all children**, regardless of socioeconomic status, geographic location, or ability.
5. Organizations must **prioritize the privacy and consent** of parents or caregivers when collecting and storing developmental screening data.

Based on the criteria detailed above, the Ages and Stages Questionnaire (ASQ) stands out as the most suitable tool for use in Canada. It's remarkable versatility, user-friendly nature, and strong focus on early intervention sets it apart. In addition to being a cost-effective option, the benefits of the ASQ includes its applicability to be used for children from ages 0-6, addressing key developmental domains, and allowing parents to be actively involved. Founded in research and adaptable to diverse cultural contexts, it seamlessly integrates into existing healthcare and education systems, making it a practical choice for promoting the well-being and development of infants and young children. While other tools exist, the ASQ consistently stands out as the optimal choice for developmental screening in Canada.

Appendix C – Infant and Early Mental Health Care Pathways

System of care pathways guide children, young people, and families to, through and out of care. They ensure that families get the right service at the right time and in the right way.

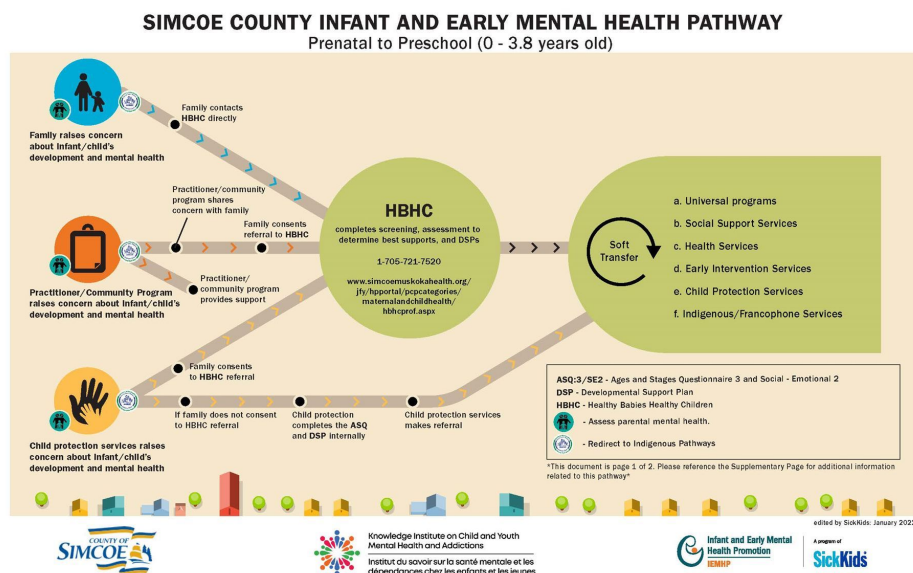
With financial support from the Mental Health in the Early Years Implementation Science grant provided by the Canadian Institutes for Health Research, and in collaboration with the Knowledge Institute on Child and Youth Mental Health and Addictions, Kids Brain Health Network, University of Calgary, and Queen’s University, the Infant and Early Mental Health (IEMH) Care Pathways initiative was established.

This initiative, inspired by the report “[Beyond Building Blocks: Investing in the lifelong mental health of Ontario’s three- to six-year-olds](#),” centers on three core objectives: 1) collaborating with diverse community organizations to create unique care pathway maps, 2) enhancing the knowledge, skills, and capacities of agencies supporting children from prenatal to age 6, and 3) evaluating the impact of these pathways on the capacity to provide infant and early mental health support.

Expected outcomes of the initiative include:

- Ensure high-quality, evidence-based information for service providers across sectors,
- Find opportunities to enhance existing programs, services, knowledge, and policies affecting preschoolers,
- Get rid of barriers between sectors and promote inter-organizational collaboration,
- Develop system of care pathways that will benefit communities, organizations, families, and children,
- Support use of pathways maps in practice,
- Enhance practitioners’ competence, confidence, and capacity,
- Work with Ontario communities in various contexts (rural/urban, multicultural/ Indigenous, etc.),
- Assess the impact of the IEMH Care Pathways on children, families, practitioners, organizations, and communities.

In late 2019 and early 2020, IEMHP and the Knowledge Institute collaborated with three communities; the City of Hamilton, Simcoe County, and Hastings and Prince Edward Counties, to build pathways that would better address the needs of children and their families seeking access to mental health and social-emotional supports. IEMHP invited leaders from various sectors to establish these pathways. Two of the three communities successfully created maps by the pilot's end, with the third finalizing them through consultations. An example of Simcoe County's finalized map is provided below.



The overarching goal of the IEMH Care Pathways initiative is to ensure equitable and early identification and support for children at risk of poor mental health outcomes in Canadian communities. This model, grounded in implementation science, leverages the strengths of each community to build capacity and provide equitable access to IEMH support. Ultimately, the objective is to integrate the science of IEMH into the daily practices of professionals working with children from prenatal to age six and their families. This initiative aspires to pave the way for optimal developmental trajectories for children.

The IEMH Care Pathways initiative is available to offer guidance to agencies, communities, or governments in enhancing care systems for infants, young children, and their families. By aligning care pathways with developmental screening, it ensures that individuals identified with less-than-optimal development have a clear pathway to care, thus ensuring that infants progress through the care system effectively, with their mental health needs met.

Appendix D – Programs Addressing Wait-Times

Despite the strong body of evidence highlighting the significant impact of early experiences on both short- and long-term developmental outcomes, a troubling number of children continue to experience prolonged waiting periods. These wait times are further derailing development. In response to such systemic challenges, two powerful resources that have been developed by IEMHP and partners to support infants and young children and their families awaiting further assistance.

Hand in Hand: An evidence-based resource empowering practitioners to deliver prompt solutions to developmental concerns. The resource is designed to create goals and strategies that align with the child’s developmental requirements, seamlessly integrating into their daily activities and routines. Practitioners can craft family-friendly plans within hours of identifying a developmental concern, ensuring they are responsive to the child’s developmental needs and appreciative of the pivotal role families play in supporting their child’s well-being.

Nurturing the Seed: A tool specifically designed to promote infant and early mental health, to mitigate vulnerabilities and/or to prevent further risks for Indigenous children under 6 years of age in a culturally meaningful way. It does so by allowing service providers to build a developmental support plan tailored to young children and their families, that supports parents/caregivers in including simple activities in their daily routine which will reinforce the parent/caregiver-child relationship and support the child’s development in the five domains. Notably, Indigenous Elders, service providers, and content experts collaborated with IEMHP, ensuring the model prioritizes Indigenous culture, traditions, and ways of being and knowing throughout its development.

These resources have demonstrated their effectiveness in improving infant and early mental health service delivery, enhancing developmental outcomes for children, and promoting the well-being and empowerment of families. Both resources have been shared internationally and are set to make a profound difference in the lives of children and communities around the world.

Recognizing the critical nature of the first three years of a child’s life for brain development, these resources respond to the urgent need for timely support, ensuring that prolonged waiting periods do not impede developmental progress.

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