



# EARLY DEVELOPMENT INSTRUMENT

MEASURING CHILDREN'S DEVELOPMENTAL HEALTH

NWT CHANGE OVER TIME 2012-2017

Government of  
Northwest Territories

# Measuring children's development

Exposure to positive and stimulating early learning experiences during the first few years of life helps lay the foundations for healthy development.

Many of the challenges children face are preventable or can at least be improved. When everyone works together to provide supportive experiences and early recognition, we can help children make gains and positively impact their growth and development to increase their chances of success.

One way to support early childhood development is to understand children's developmental growth. We can measure children's ability to meet age-appropriate developmental expectations with the Early Development Instrument (EDI).

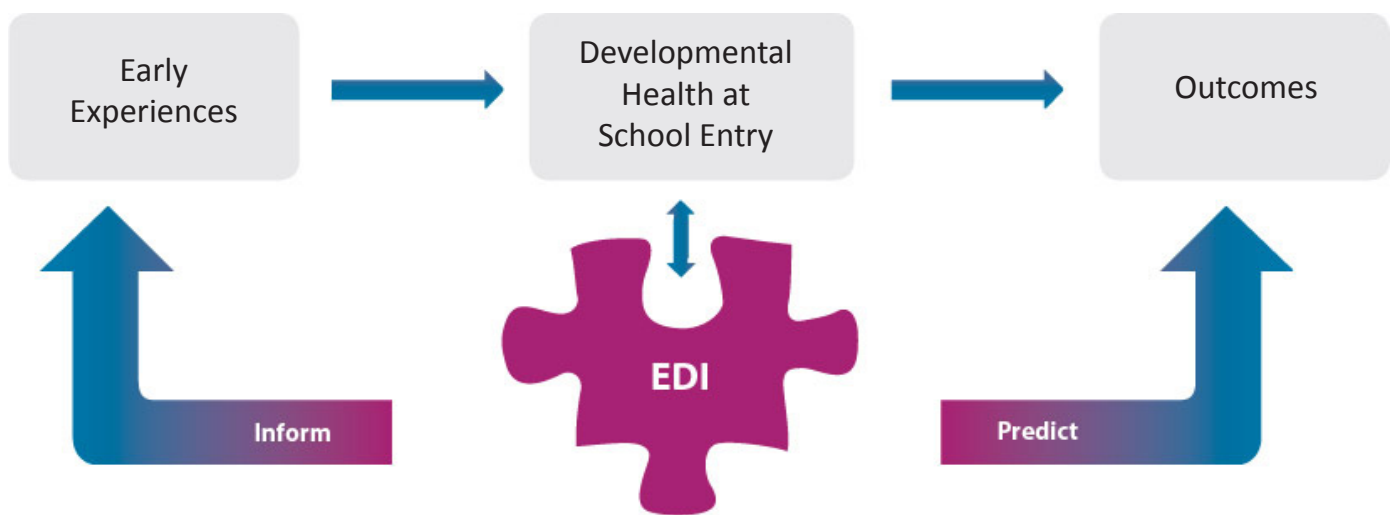
The EDI is a tool that was developed by the Offord Centre for Child Studies at McMaster University to measure the developmental health of five year olds before they enter Grade 1.

The EDI is used in school districts across Canada and in several other countries around the world.

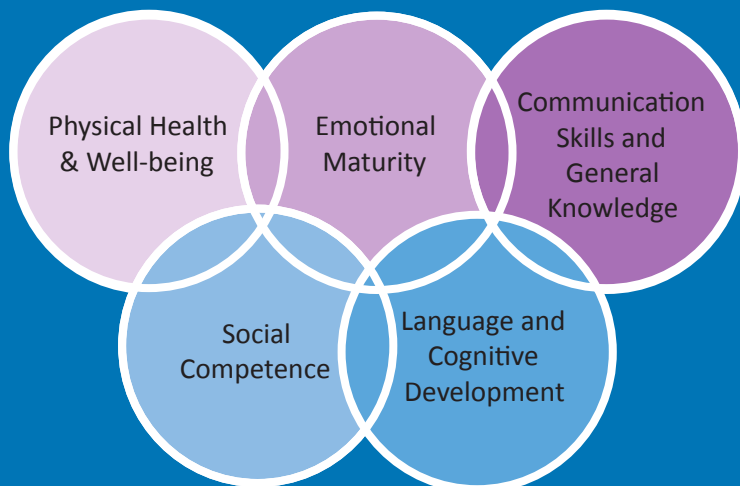


The information gathered through the EDI provides a snapshot of the developmental health of 5-year-old children and predicts the likelihood of children's success with future outcomes as they get ready to enter Grade 1 (Figure 1).

**Figure 1 - The role of EDI**



**Figure 2 - The five developmental domains**



**Social Competence:**

Children are able to play and work well with other children, are curious about the world, and are willing to try new things, and can follow the rules.

**Language and Cognitive Development:**

Children enjoy listening to stories, are developing early reading, writing and number skills, play board games, have the ability to see things that are the same and different, and have the ability to repeat information from memory.

**Physical Health & Well-Being:**  
Children are physically ready to learn at school, have good muscular coordination, can hold a pencil, usually are not tired or hungry, and have enough energy for classroom activities.

**Emotional Maturity:**  
Children often think before acting, show a balance between fearful and impulsive behaviour, have the ability to manage feelings appropriately, and consider the feelings of others.

**Communication Skills and General Knowledge:**  
Children communicate needs and wants in socially appropriate ways, can tell stories, and have some knowledge about life and the world around them.

The EDI measures children's developmental health in five areas of their early development - referred to as developmental domains (Figure 2).

Using the five developmental domains, the results from the EDI determine the percentage of children who are 'on track', 'at risk', or 'vulnerable' (Figure 3) based on cut-off points within the EDI.

Children scoring above the middle cut-off point are considered 'on track' and ready for the learning opportunities of Grade 1.

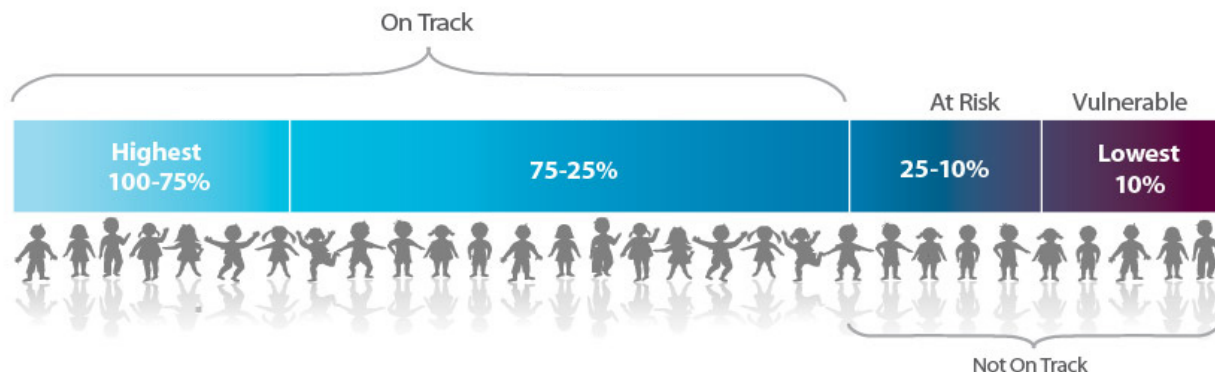
Children scoring between the lowest and middle cut-offs are considered 'at risk'.

Children falling under the lowest cut-off are considered vulnerable.

Being vulnerable means that children are at an increased risk of difficulties and, without additional support, may continue to experience challenges. Vulnerability in one or more domains is the focus when reporting EDI results and the rest of this report.

Vulnerability cannot be attributed to a single cause and cannot be solved with a single solution. Healthy early development is complex and influenced by many factors.

**Figure 3 - EDI Categories Representing Scores**



# Northwest Territories (NWT) and Canada



The national picture shows that Canadian vulnerability has increased from 25% to 27% as reported by the Canadian Institute for Health Information based on the most recent data available from each of the provinces and territories.

The EDI results in the Northwest Territories (NWT) also reflect the national trend of increased vulnerability over time. Including the NWT, half of the provinces and territories in Canada have higher rates of vulnerability than the Canadian average. Currently, the NWT vulnerability ranks the highest in Canada.

There is not a simple answer for increased vulnerability in Canada and the NWT. Many things influence children's healthy development beginning as early as a mother's health before pregnancy, and continuing throughout the early years. Vulnerability can be influenced by a number of complex factors including poverty, nutrition, the trauma associated with residential schools, access to services, and more.

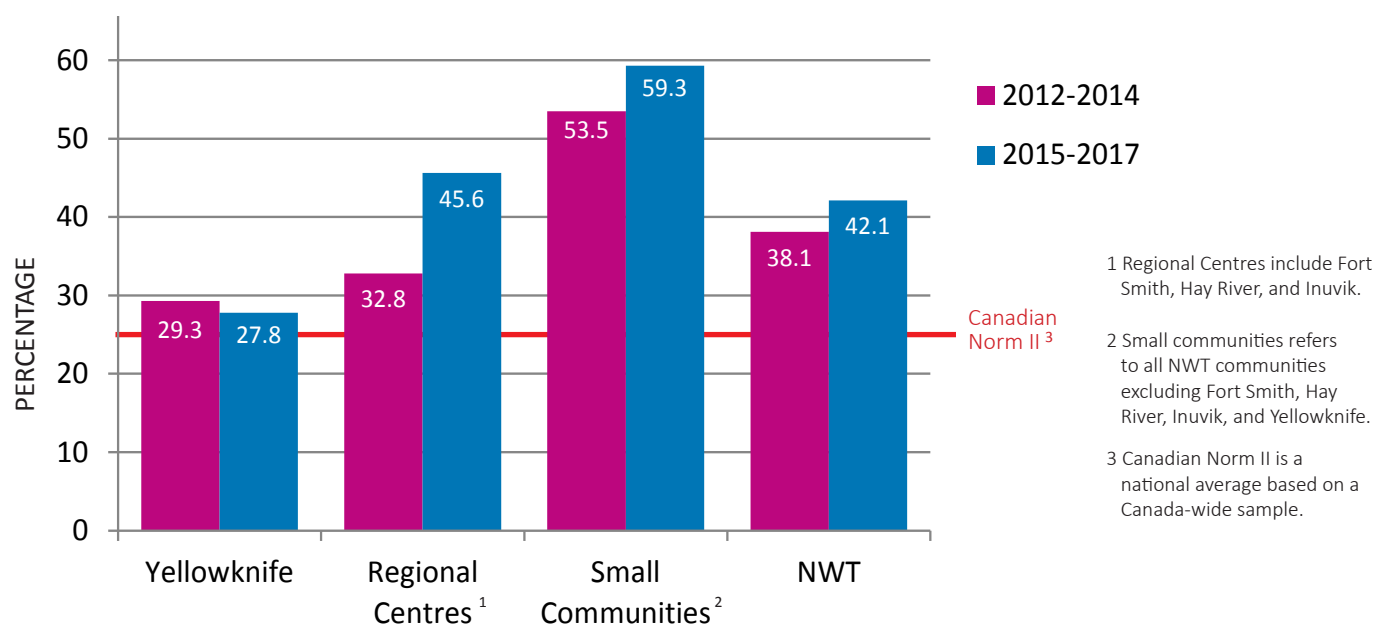
The NWT has collected EDI data each year at a territorial level since 2012. The first three years of data created a baseline which concluded that 38% of children in the NWT were vulnerable on at least one or more domains. In small communities, 53% of children were vulnerable.

Since the 2012-2014 baseline results were reported, another three years of EDI data has been collected. This 2015-2017 data allows us to assess changes by comparing the results to the baseline findings (Figure 4).

When looking at the results, increases or decreases in vulnerability are meaningful only if the changes are large enough to be statistically significant. EDI uses an approach to statistical significance called 'meaningful change'. The change in vulnerability in Yellowknife is not considered to show meaningful change. The increases in vulnerability in the Regional Centres, Small Communities, and NWT do show meaningful change.

Overall, vulnerability in the NWT has increased from 38% to 42% since the baseline results. The highest increase is seen in the Regional Centres category and a smaller increase is noticed in the Small Communities.

**Figure 4:** Percentage of children vulnerable in the NWT by community type.





**Table 1 - Percentage of Vulnerable Children For Each Domain from 2012-2014 and 2015-2017**

	Yellowknife		Regional Centres		Small Communities		NWT	
	2012-2014	2015-2017	2012-2014	2015-2017	2012-2014	2015-2017	2012-2014	2015-2017
Physical Health & Well-Being	14.8%	14.2%	16.9%	23.4%*	35.1%	33.7%	22.0%	22.6%
Social Competence	8.3%	8.5%	10.2%	19.0%*	22.9%	25.1%*	13.6%	16.3%*
Emotional Maturity	11.2%	10.7%	15.1%	28.4%*	25.3%	28.1%*	16.8%	20.5%*
Language & Cognitive Development	12.5%	8.2%*	11.5%	17.7%*	27.6%	29.7%*	17.3%	17.3%
Communication Skills & General Knowledge	13.0%	14.0%	15.1%	17.7%	29.0%	30.8%	18.8%	20.2%
* indicates that there was meaningful change over time								

We learn even more by looking at the domains of children's development. Table 1 shows the percentage of NWT children who were deemed vulnerable in each of the five domains. Small fluctuations are not statistically significant.



Children in the NWT have remained relatively stable in the area of Communication Skills & General Knowledge with no meaningful change in any community type.

In Small Communities, there has been an increase in vulnerability in three domains- Social Competence, Emotional Maturity, and Language & Cognitive Development.

Vulnerability in Yellowknife has been fairly stable with a decrease in vulnerability in the Language & Cognitive Development domain and no other meaningful changes across the remaining domains.

Vulnerability has risen in four domains in the Regional Centres category with the more significant increase seen in Emotional Maturity. It is important to note that this category includes fewer schools and fewer children so large fluctuations are more common. However, it is still an area of concern to monitor for meaningful change over time.

Looking at the vulnerability in each of the domains provides more detailed information into areas of children's overall development. However, healthy growth and development is a result of accumulative experiences in the early years and there is no single answer to explain changes in vulnerability.

**Table 2 - EDI Subdomains**

Physical Health & Well-Being	Social Competence	Emotional Maturity	Language & Cognitive Development	Communications & General Knowledge
Physical Readiness for the school day	Overall social competence	Pro-social & helping behaviour	Basic literacy	Communication skills and general knowledge
Physical independence	Responsibility & respect	Anxious & fearful behaviour	Interest in literacy/numeracy & memory	
Gross & fine motor skills	Approaches to learning	Aggressive behaviour	Advanced literacy	
	Readiness to explore new things	Hyperactivity & inattention	Basic numeracy	

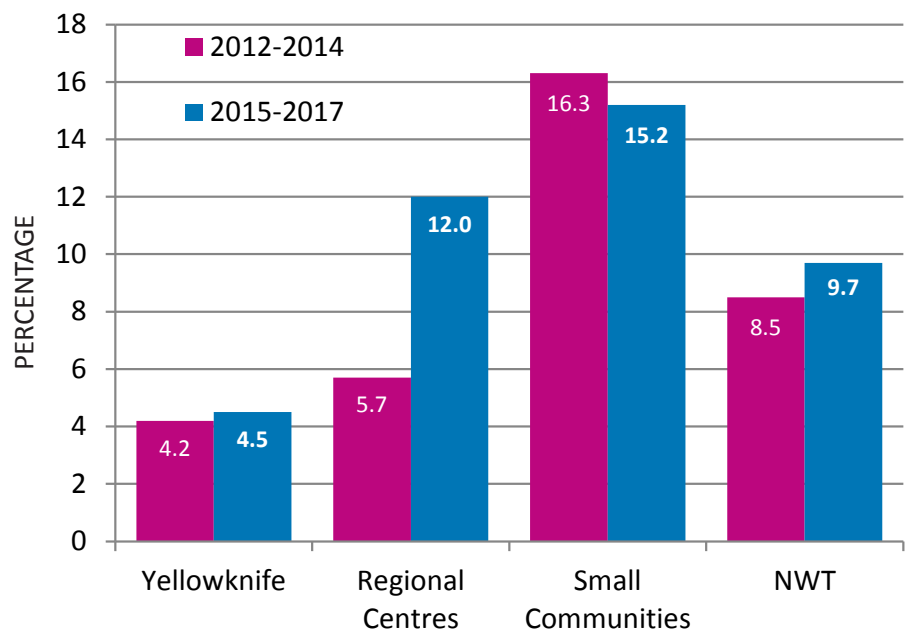
The domains are further divided into sixteen subdomains (Table 2). Subdomains are areas that focus on specific aspects of development. Children who score low in nine or more of the subdomains are considered to be facing multiple challenges. Having multiple challenges means that children may experience significant difficulties to meet developmental expectations. Figure 5 shows the percentage of children with multiple challenges in the NWT.



Small communities have the highest percentage of children with multiple challenges and, along with Yellowknife, have been relatively consistent over time. Regional centres have had an increase in the percentage of children with multiple challenges.

While subdomains alone cannot identify the reasons for children's challenges, they help provide details to consider for further analysis and areas of concern to keep an eye on when continuing to collect EDI data.

**Figure 5 - Percentage of Children with Multiple Challenges**



## Promising Findings - Junior Kindergarten

Although the overall vulnerability in the NWT has increased, there are some promising preliminary findings in regards to the benefits that Junior Kindergarten (JK) might have on children's development.

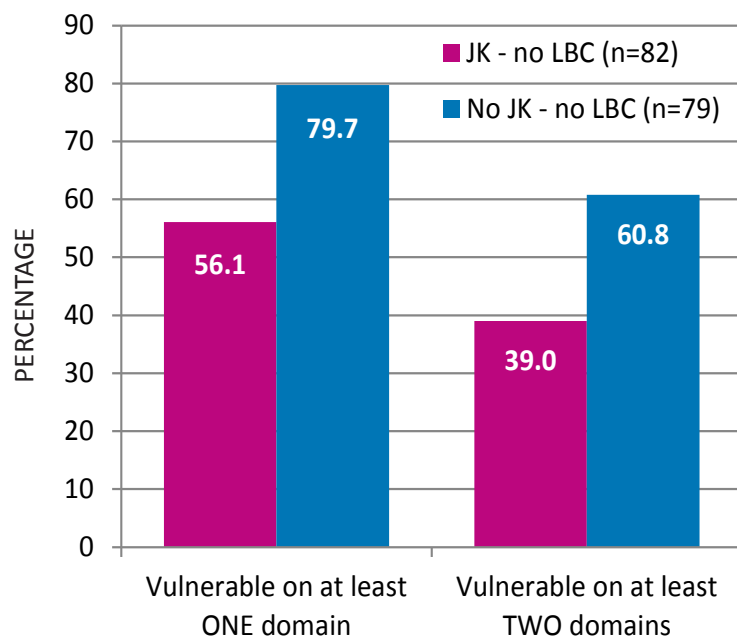
Small Community schools had the option to offer JK programming for 4-year-old children beginning in the 2014-2015 school year.

When looking at EDI data for small communities for years 2015-2016 and 2016-2017, children who had previously attended Junior Kindergarten in small communities were less likely to be vulnerable than those who did not attend (Figure 6).

This analysis excluded children who had previously attended licensed-based care programming to allow for a clearer assessment

of the relationship between JK and vulnerability. These are preliminary findings so results must be interpreted with caution until further evidence is accumulated. Nonetheless, these early results are encouraging.

**Figure 6 - Vulnerability by attendance in Junior Kindergarten**

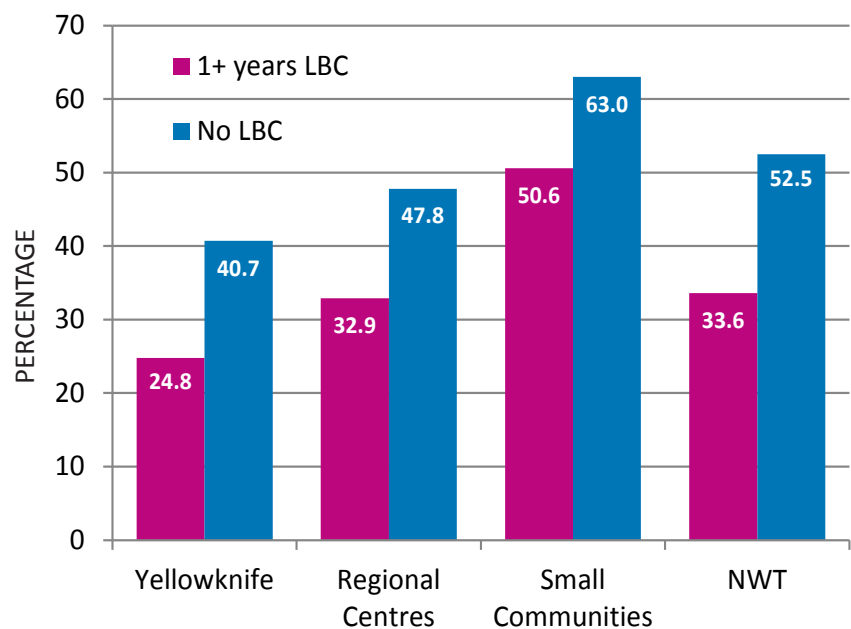


## Promising Findings - Licensed-based Care

Preliminary results also show a relationship between vulnerability and participation in licensed-based care (Figure 7). Looking at the EDI data across Yellowknife, Regional Centres, and Small Communities, children who attended one or more years of license-based care had lower vulnerability rates across all community types.

Again, caution must be exercised when interpreting these results as other factors, such as socio-economic status, may account for some of the differences seen.

**Figure 7 - Vulnerability by attendance in Licensed-based Care**



These are promising findings and, though preliminary at this point, suggests that early childhood programming is one factor in children's lives that is having a positive impact.

This is good news as the Department of Education, Culture and Employment (ECE) continues to support licensed early learning opportunities as an important part of children's development.

It is important to keep in mind that change takes time. As EDI data continues to be collected in the NWT, ECE will continue to monitor and report on trends.

Vulnerability cannot be explained with one simple answer. There is not a single solution and no single group or organization can accomplish change alone. Supporting children from birth requires a collaborative approach with community partners, agencies, and families working together.

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## Looking Ahead: Next Steps

The Government of the Northwest Territories' (GNWT) Mandate includes a strong commitment to supporting quality early childhood development in collaboration with existing organizations. Understanding how large groups of children are developing is foundational to making informed decisions and impacting positive change. The EDI provides a picture of how children are doing at the population-level in the NWT and is one way to identify areas of concern and recognize factors that influence community wellness. The information collected from the EDI should be used to help inform the improvement of public services to promote the health and well-being of all children beginning from birth and throughout the early years of development.

The EDI is only one source of information so it is important to recognize that on its own it does not hold the answers to improving children's development in the NWT. It does, however, provide information that can be explored, considered, and discussed to guide decisions and make changes to better support children and families in the NWT.

The most recent EDI results reflect the reality that many NWT children are still not receiving the proper supports and rich early learning experiences necessary for their overall healthy growth and development.

It is evident that more work needs to continue to focus on early childhood development to ensure that children have the right start. However, there is evidence that some of the targeted investments that the GNWT is under-taking are on the right track to providing quality early learning opportunities.





# Frequently Asked Questions

## Why did the vulnerability of children in the NWT increase?

Vulnerability is the result of the cumulative experiences of children from birth to age five so there is no simple single answer to explain vulnerability. It is a complex picture that will require ongoing inquiry and monitoring to determine the early childhood experiences affecting the overall health and wellbeing of children.

What the EDI does tell us is that children in the NWT are not experiencing the rich early learning experiences and supports needed to prepare them for the learning expectations of Grade 1. As the GNWT continues to collect EDI information, increased opportunities to analyze data and monitor trends will help shed more light into specific aspects of early learning that need further support.

Work is ongoing to collect and use the data to make informed decisions and invest in services to improve the quality of early childhood experiences for all children.

## Why did the vulnerability increase so much in Regional Centres?

The Regional Centres category includes only three communities- Fort Smith, Hay River, and Inuvik. With only three communities contributing in this category there are fewer schools and fewer children. Large fluctuations are more common in small populations. However, it is an area to continue to watch for trends as EDI information continues to be collected to determine if there is meaningful change over time.

## Vulnerability in Yellowknife stayed the same. Why put efforts into early learning opportunities in Yellowknife?

Preliminary EDI data suggests that children who attend one or more years of licensed-based care and/ or JK are likely to have lower vulnerability.

Until the 2017-2018 school year, Yellowknife, licensed-based care and preschool programs for 4-year-old children were user-pay which means that only some children had access to early learning opportunities.

All families deserve equitable access to free early childhood opportunities and that includes families in Yellowknife that cannot afford user-pay programs.



## Is the territorial implementation of JK making a difference?

The impact of territorial JK is not reflected in these reports as the data ranges from 2012-2014 and 2015-2017, which is prior to the territorial implementation of JK in all communities beginning in the 2017-2018 school year.

However, some of the EDI data does include the small communities that implemented JK from 2014-2017. Using this information, preliminary findings suggest that JK does have a positive impact on early childhood development. Children in small communities with access to play-based JK were less likely to be vulnerable than those who did not attend.

This should be interpreted with caution as it is preliminary data. Population measures like the EDI require time and multiple collection points to show trends. The territorial implementation of JK will be an area to monitor as EDI continues to be collected over the next several years.

## What will the GNWT do now that the EDI results show that children in the NWT are still behind developmentally?

The GNWT mandate includes a strong commitment to supporting quality early childhood development in collaboration with existing organizations. The EDI is used as a monitoring tool to assess the impact of the *Right from the Start Framework and Action Plan*, a 10-year strategy developed in partnership between ECE and the Department of Health and Social Services (HSS) to focus investments in early childhood. The Action Plan includes a number of initiatives that support healthy early growth and development, beginning with prenatal care and extending beyond birth into early school experiences.

Preliminary findings suggest that early childhood programming can have a positive impact on the development of young children. ECE and HSS will continue to work together on initiatives outlined in the Action Plan to support all children in the NWT to have access to supports and quality early learning opportunities.

Additional investments in early childhood are required but money alone won't change the vulnerability of children in the NWT. Everyone must work together to ensure the healthy development of children in the territory.



## Why compare children in the NWT to children in the rest of Canada?

While every child is different, experts have a clear idea about the range of normal development from birth to age five. The EDI looks at the development of children holistically. Several studies affirm the cross-cultural reliability and validity of the EDI in a number of contexts and countries.

Additional information regarding the validity and reliability of the EDI can be found at:

<https://edi.offordcentre.com/researchers/validity-and-reliability>.

## Is the EDI culturally appropriate for the NWT?

The EDI has been extensively studied for bias, and in particular towards students with Indigenous background and/or from ethnic minorities, and no evidence of bias has been found. For instance, researchers at the University of British Columbia conducted a study which found that, with regard to Kindergarten teachers' perceptions and ratings of children, the EDI is fair and there is no bias due to gender, English as a Second Language, and Indigenous status.

The Offord Centre has recognized that there may be differences in how children with different cultural backgrounds behave which may impact the interpretation of certain EDI items. The EDI Guide, which teachers receive and are familiarized with during training sessions, has special cultural alerts for a number of items and has been adapted for use in the NWT.

In addition to the EDI training and supports, teachers participate in annual culturally appropriate professional development and training within their regions. The EDI allows for teachers, with the support of school principals and support staff, to complete the EDI questionnaires with knowledge and understanding of cultural norms within their own community context.

## Does the EDI evaluate individual children?

The EDI is not a clinical or diagnostic test nor is it an assessment tool for individual children. The EDI reports at the population level which means it combines scores for groups of children. Population-based surveys are an effective method to learn about community wellness and overall developmental health.

## May I see my child's EDI scores?

No, the EDI does not identify or report on individuals which ensures that the identity of children is protected.

## May I opt my child out of the EDI in Kindergarten?

Yes, contact your child's school and notify them of your choice if you wish to opt out of the EDI.

## Where can I learn more about the EDI?

The Offord Centre for Child Studies has information on their website at <https://edi.offordcentre.com>





[www.rightfromthestart.ca](http://www.rightfromthestart.ca)

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