



**EARLY DEVELOPMENT INSTRUMENT**  
a population-based measure for communities

# 3 Cycles of the EDI in Nova Scotia

**Nova Scotia**

*A snapshot of children's  
developmental health at school entry*





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## About the EDI in Nova Scotia

The EDI began in Nova Scotia over ten years ago, with the Understanding the Early Years (UEY), a national initiative aimed at strengthening communities' ability to use research to make decisions to help children thrive. Between 2006 and 2012, five communities in Nova Scotia collected EDI data as part of this initiative. Along with the UEY initiative sites, several school boards also collected EDI data.

In 2013, the first province-wide implementation of the EDI was undertaken, which included all Primary students across the eight school boards. The 2013 data were used to create the Nova Scotia Baseline, which allowed all future collections to be compared to understand how children's development was changing. Since then, the second provincial implementation occurred in 2015 and the third in 2018. The Department of Education and Early Childhood Development partners with the school boards to collect the data. In addition, one school board collects EDI data independently on offset years.

Thanks to all of our partners for their hard work and commitment to the EDI. A very special thanks to all of the teachers who have committed their time and energy to filling out EDI questionnaires over the years. Without you, none of this would have been possible.

All analyses in this report include children that are in Primary, have not been identified by teachers as having special needs, have been in class for more than one month and have a minimum number of items completed on the EDI questionnaire.



## Why look at EDI data over time?

The information collected through the EDI helps us to understand the state of children's developmental health by connecting the conditions of early childhood experiences to learning outcomes and future successes.

Examining how children are doing over time is important for mobilizing stakeholders towards change. Focusing on strengthening the areas in which children are vulnerable allows schools, communities, and governments to make decisions on how to best support early development. Investigating how children's developmental health is changing over time can also allow for evaluation and strategic planning around what is currently being done to support children and their families.

We hope the 3 Cycles of the EDI in Nova Scotia report will assist you in your invaluable work in the early years sector, aid in informing planning and resource allocation, but most of all, help to build, strengthen, and enhance your connections with community partners.

## Nova Scotia

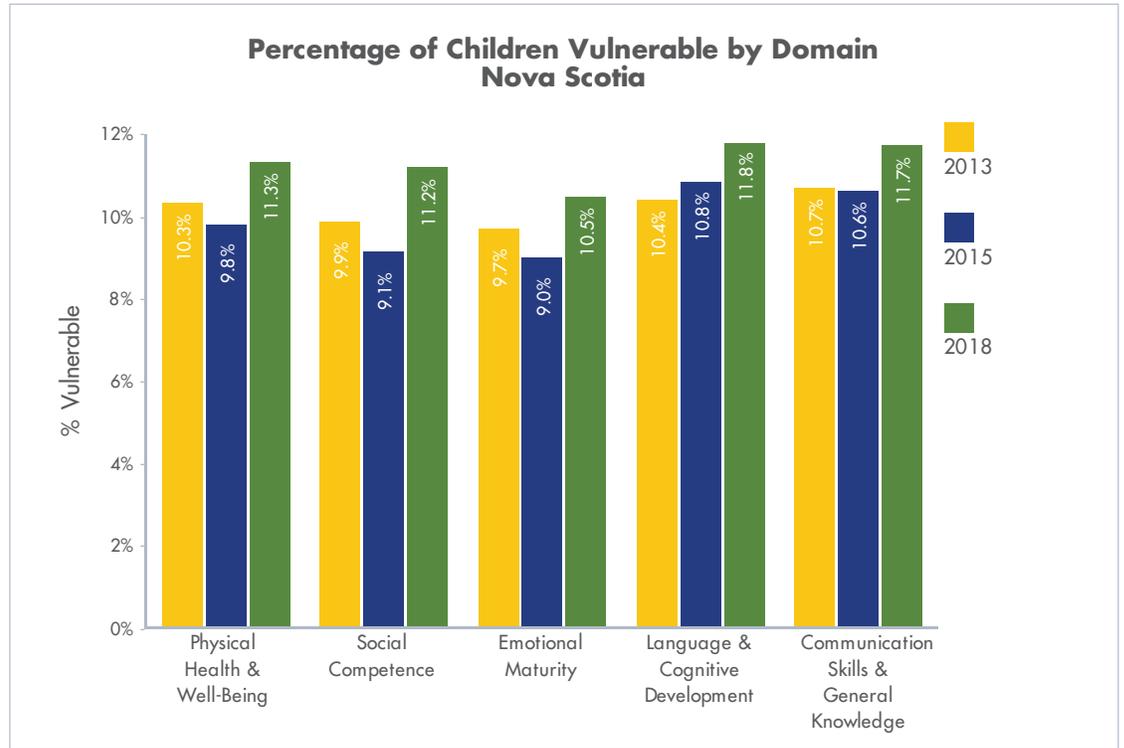
	2013	2015	2018
Children included in this report	7982	7985	5817
	Number (%)	Number (%)	Number (%)
Girls	3915 (49.0%)	3965 (49.7%)	2922 (50.2%)
Boys	4067 (51.0%)	4019 (50.3%)	2895 (49.8%)
Children considered ESL or FSL	450 (5.6%)	523 (6.5%)	623 (10.7%)
Children requiring further assessment	938 (11.8%)	878 (11.0%)	678 (11.7%)
Average age (in years)	5.7	5.7	5.7
Average days absent	6.3	5.7	6.1



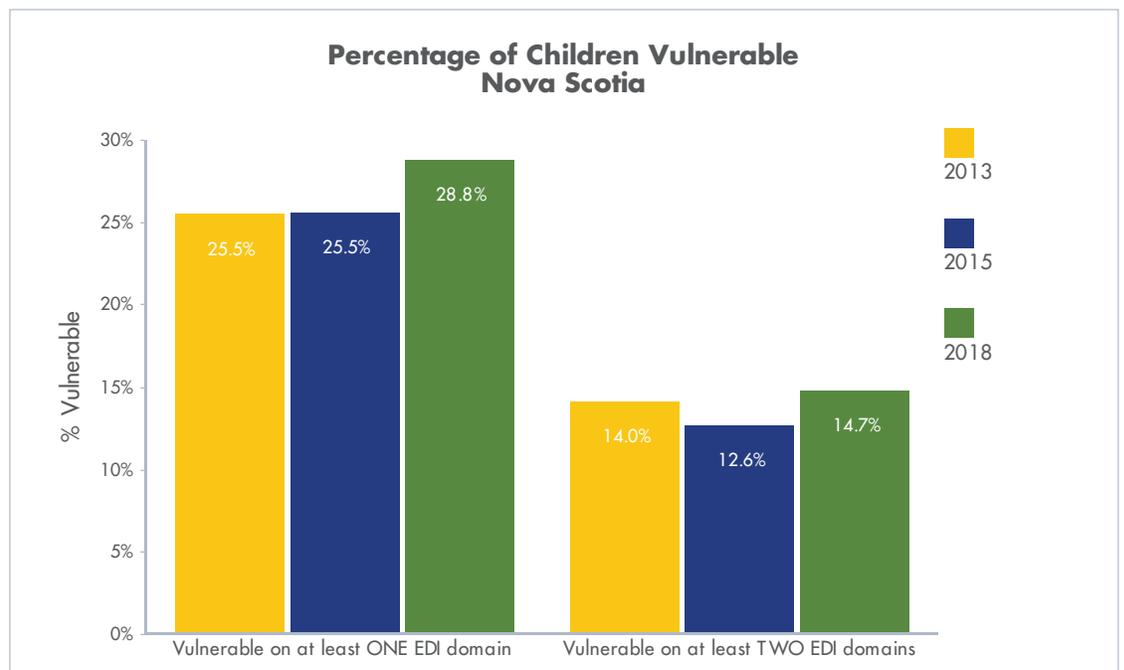


The EDI uses the 10th percentile for vulnerability in a domain because it captures all the children who are struggling, even those whose struggles may not be apparent.

"Vulnerable" describes the children who score below the 10th percentile cut-off of the Nova Scotia Baseline population on any of the five domains. Higher vulnerability indicates that a greater percentage of children are struggling in comparison to the Nova Scotia data.



The graphs below illustrate the percentage of children vulnerable on at least one and at least two domains.





For more information on critical difference or to calculate critical difference in your area, please visit [earlylearning.ubc.ca/supporting-research/critical-difference/](http://earlylearning.ubc.ca/supporting-research/critical-difference/)

HELP also has a webinar for communities looking to better understand critical difference

[youtu.be/pEG8YWmcoq8](https://youtu.be/pEG8YWmcoq8)



## How do we know if children's developmental health is changing over time?

When exploring trends in children's development over time, what we want to know is whether children are doing better, worse, or about the same as in the past. Although the vulnerability rate in an area may have changed over time, we want to know whether or not that change is large enough to be *meaningful*. If we establish that a change in vulnerability rate is meaningful, that means that we are confident that it is real, rather than a result of uncertainty due to sampling or measurement issues.

Our colleagues from the Human Early Learning Partnership (HELP) at the University of British Columbia developed a method to help communities and stakeholders make informed judgements about meaningful change in EDI vulnerability over time. The method is called critical difference.

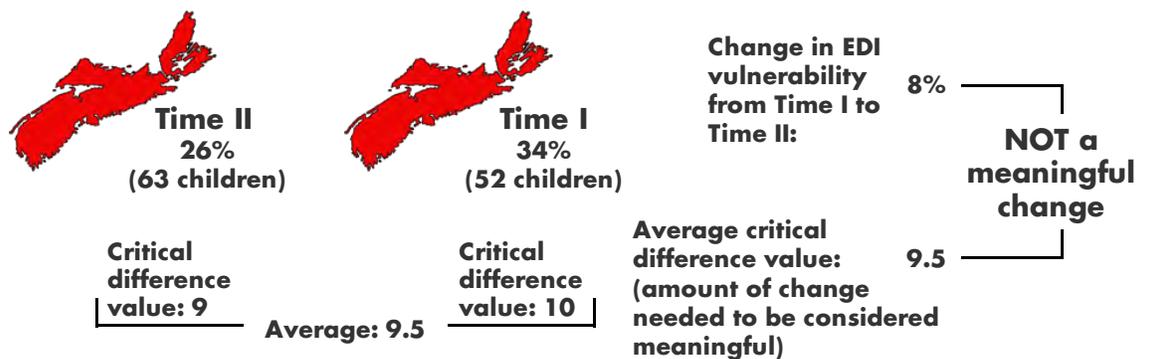
Critical difference is the amount of change over two time points in an area's EDI vulnerability rate that is large enough to be statistically meaningful.

### How to use critical difference: An example

Neighbourhood 'A' has a vulnerability rate on 'one or more domains' of 26% in Time II, based on scores for 63 children. In Time I, the vulnerability rate was 34%, based on scores for 52 children. This means vulnerability has dropped 8 percentage points.

To find out whether this is big enough to be meaningful we must calculate the critical difference percentage for our population size (see next page for your site's calculations). The critical difference for 63 children is 9 percentage points in Time II; the critical difference for 52 children is 10 percentage points in Time I. The average critical difference between both cycles is 9.5 percentage points.

Since the average critical difference is larger than the observed drop in vulnerability of 8 percentage points (34% to 26%), the vulnerability rate has not changed enough to be considered a meaningful difference.



A comparison of 2015 vs. 2018 data is provided for your site. We encourage comparisons with other cycles. To do so please use the online calculator available through the HELP website

<http://earlylearning.ubc.ca/supporting-research/critical-difference/>

**Note:** Research on critical difference values has not been produced for Vulnerable on 2 or more domains, which is why it is not included in the tables.



Domain	Nova Scotia Vulnerability					
	2013		2015		2018	
	# of children	% vul.	# of children	% vul.	# of children	% vul.
Physical Health & Well-Being	7973	10.3%	7980	9.8%	5816	11.3%
Social Competence	7982	9.9%	7984	9.1%	5815	11.2%
Emotional Maturity	7942	9.7%	7950	9.0%	5800	10.5%
Language & Cognitive Development	7969	10.4%	7904	10.8%	5816	11.8%
Communication Skills & General Knowledge	7980	10.7%	7985	10.6%	5816	11.7%
Vulnerable on at least ONE EDI domain	7982	25.5%	7985	25.5%	5817	28.8%

Domain	2015 vs 2018		
	Change in Vulnerability	Increase / Decrease	Critical Difference Value
Physical Health & Well-Being	1.5%*	↑	0.9
Social Competence	2.0%*	↑	0.6
Emotional Maturity	1.5%*	↑	0.6
Language & Cognitive Development	0.9%*	↑	0.5
Communication Skills & General Knowledge	1.1%*	↑	0.7
Vulnerable on at least ONE EDI domain	3.2%*	↑	0.8

This table provides the change in vulnerability from 2015 to 2018. An increase in vulnerability is represented by an upwards arrow, indicating there were more vulnerable children in 2018 than 2015. A decrease in vulnerability is represented by a downward arrow, indicating there were less vulnerable children in 2018 than 2015. Please note that less vulnerability is the more favourable outcome. The required critical difference value for meaningful change is provided as a reference.

\*denotes a meaningful difference in vulnerability between cycles