



EARLY DEVELOPMENT INSTRUMENT
a population-based measure for communities

EDI Over Time Report

Ontario
**Regional Municipality of
Waterloo**

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





EARLY DEVELOPMENT INSTRUMENT
a population-based measure for communities

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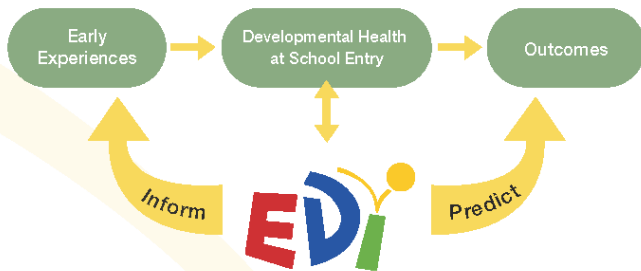
About the EDI in Ontario

Cycle I	Cycle II	Cycle III	Cycle IV	Cycle V	Cycle VI
2003/2004 2004/2005 2005/2006	2006/2007 2007/2008 2008/2009	2009/2010 2010/2011 2011/2012	2014/2015	2017/2018	2022/2023

The Early Development Instrument (EDI) has a long history in the province of Ontario. Between 2003/2004 and 2011/2012 the Ministry of Children and Youth Services (MCYS) sponsored three full provincial collections of the EDI, completed over three-year cycles. Most publicly funded school boards participated in each full provincial collection. Some school boards completed their EDI collection across all three years of a cycle, whereas others completed the entire school board in a single year. The Ministry of Education sponsored the EDI collections in 2014/2015, 2017/2018 and 2022/2023. In contrast to earlier cycles, the fourth, fifth, and sixth provincial collections took place entirely in a single year.

In Ontario, the first province-wide implementation of the EDI was completed between 2004-2006. These data constitute the Ontario "Baseline" or Cycle I, and are used to determine the 10th percentile cut-offs for subsequent reporting for all cycles.

70 school boards across Ontario participated in the Cycle VI EDI data collection. EDI questionnaires completed in 2023 were done so later in the school year than previous EDI cycles. When analyzing EDI results, keep in mind that the Cycle VI cohort is slightly older than previous cohorts.



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 Senior Kindergarten, 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 Regional Municipality of Waterloo EDI Over Time 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.

Regional Municipality of Waterloo

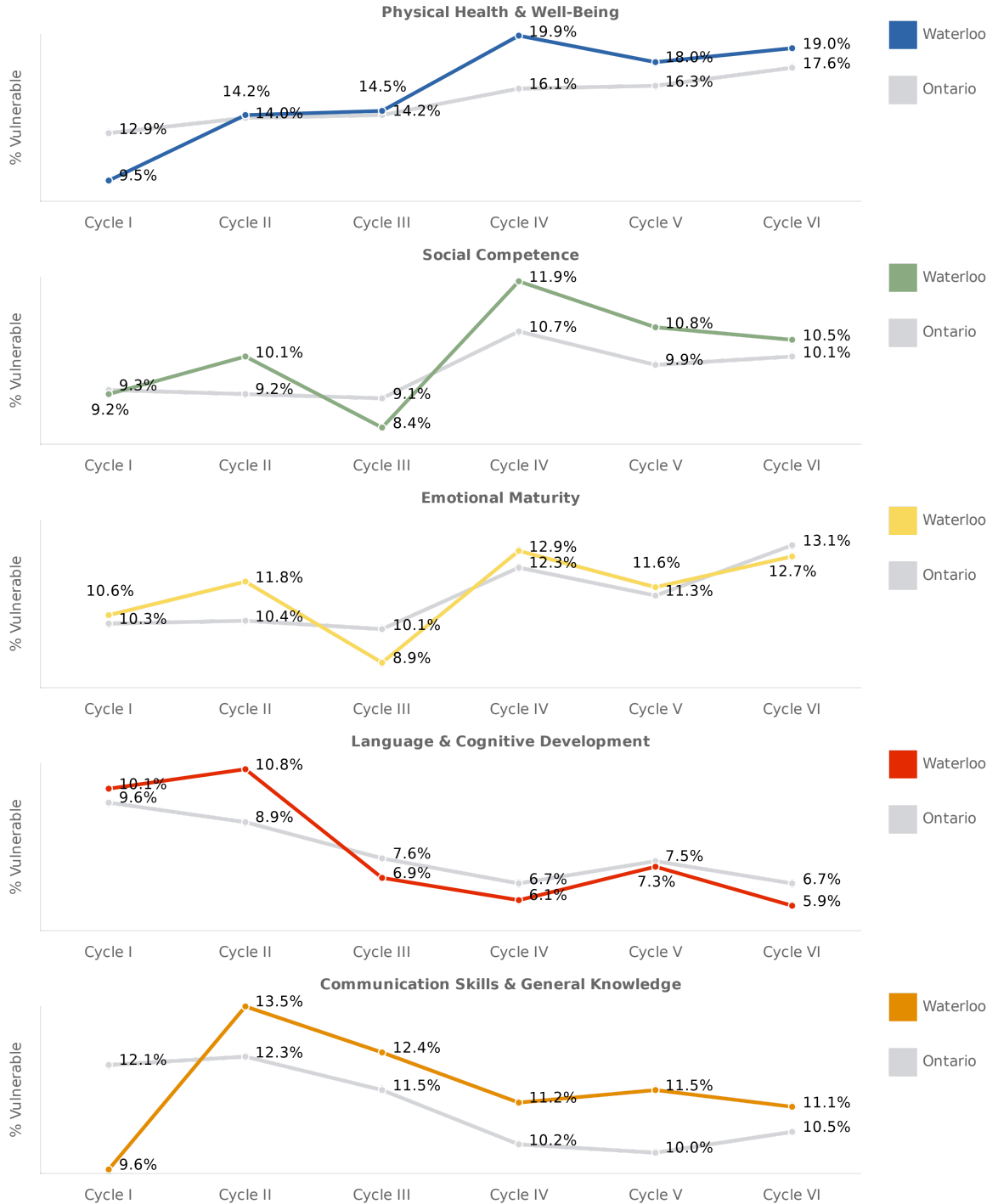
	Cycle I	Cycle II	Cycle III	Cycle IV	Cycle V	Cycle VI
Children included in this report	5213	5216	4947	5464	5456	5406
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Girls	2576 49.4%	2586 49.6%	2503 50.6%	2725 49.9%	2709 49.7%	2726 50.4%
Boys	2632 50.5%	2630 50.4%	2444 49.4%	2739 50.1%	2747 50.3%	2678 49.5%
Child's Language Status (ELL/ALF)	422 8.1%	544 10.4%	712 14.4%	503 9.2%	535 9.8%	1006 18.6%
Children requiring further assessment	519 10.0%	499 9.6%	487 9.8%	763 14.0%	675 12.4%	665 12.3%
Average age (in years)	5.6	5.6	5.7	5.7	5.7	5.9
Average days absent	32.3	3.7	3.5	6.7	8.2	21.9



Vulnerable Children - Regional Municipality of Waterloo

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

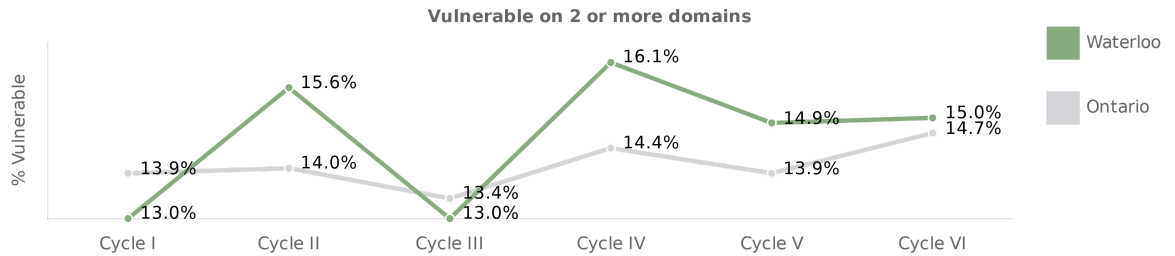
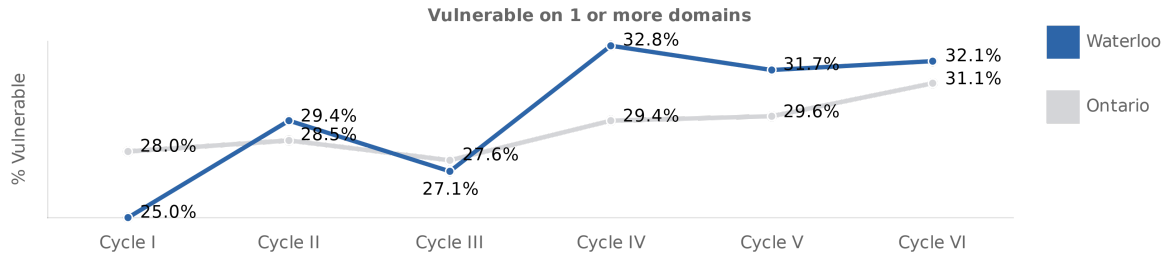
"Vulnerable" describes the children who score below the 10th percentile cut-off of the Ontario Baseline population on any of the five domains. Higher vulnerability indicates that a greater percentage of children are struggling in comparison to the Ontario Baseline data. As a comparison, we have included the results for all six cycles for Ontario. This will allow you to compare your site's results to those for the entire province.



Vulnerable Children - Regional Municipality of Waterloo

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

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





For more information on critical difference please view HELP's webinar for communities looking to better understand critical difference

youtu.be/pEG8YWmco

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.

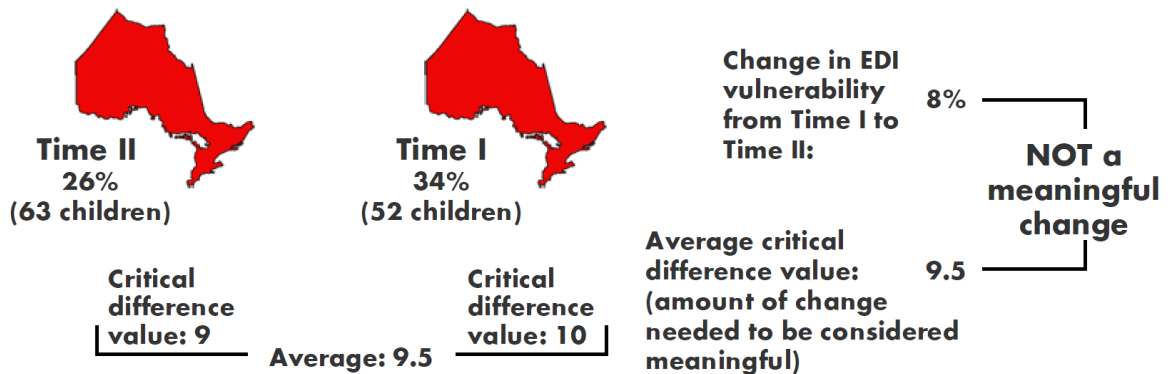
Critical difference is the amount of change over two time points in an area's EDI vulnerability rate that is large enough to be statistically meaningful.

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 Cycle V vs. Cycle VI data is provided for your site.

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.

*denotes a meaningful difference in vulnerability between cycles.

Regional Municipality of Waterloo - Vulnerability

The table below displays vulnerability rates for EDI Cycles V and VI in the Regional Municipality of Waterloo. The most recent two cycles are used to calculate meaningful change for this report, however meaningful change can be calculated for any two EDI cycles. Please contact the EDI Team for assistance with additional calculations.

	Cycle V		Cycle VI	
	Number of Children	% Vulnerable	Number of Children	% Vulnerable
Physical Health & Well-Being	981	18.0%	1025	19.0%
Social Competence	590	10.8%	570	10.5%
Emotional Maturity	632	11.6%	686	12.7%
Language & Cognitive Development	399	7.3%	317	5.9%
Communication Skills & General Knowledge	628	11.5%	598	11.1%
Vulnerable on at least ONE EDI domain	1732	31.7%	1738	32.1%

Critical Difference

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

	Cycle V vs Cycle VI		
	Change in Vulnerability	Increase / Decrease	Critical Difference Value
Physical Health & Well-Being	1.0	↑	1.0
Social Competence	0.3	↓	0.7
Emotional Maturity	1.1*	↑	0.7
Language & Cognitive Development	1.4*	↓	0.6
Communication Skills & General Knowledge	0.4	↓	0.8
Vulnerable on at least ONE EDI domain	0.4	↑	0.9

