

# Children Vulnerable in Areas of Early Development

Name	Children Vulnerable in Areas of Early Development
Short/Other Names	Children Vulnerable in One or More Areas of Early Development
Description	<p>This indicator is an important determinant of health and well-being in later life. It measures the percentage of children who are considered vulnerable in at least 1 developmental domain at school entry, as measured by the Early Development Instrument (EDI). The EDI is a kindergarten teacher-completed checklist that consists of 103 questions and measures 5 areas of early child development:</p> <ol style="list-style-type: none"><li>1) Physical health and well-being</li><li>2) Social competence</li><li>3) Emotional maturity</li><li>4) Language and cognitive development</li><li>5) General knowledge and communication skills</li></ol>
Interpretation	A lower percentage of children considered vulnerable at school entry is a positive indicator of healthy development at approximately age 5.
HSP Framework Dimension	Health System Outcomes: Improve health status of Canadians
Areas of Need	Not applicable
Geographic Coverage	Newfoundland and Labrador, Prince Edward Island, New Brunswick, Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon, Northwest Territories
Reporting Level/Disaggregation	National, Province/Territory, Region
Indicator Results	<a href="#">Accessing Indicator Results on Your Health System: In Depth</a>

## Identifying Information

Name	Children Vulnerable in Areas of Early Development
Short/Other Names	Children Vulnerable in One or More Areas of Early Development
Indicator Description and Calculation	

Description	<p>This indicator is an important determinant of health and well-being in later life. It measures the percentage of children who are considered vulnerable in at least 1 developmental domain at school entry, as measured by the Early Development Instrument (EDI). The EDI is a kindergarten teacher-completed checklist that consists of 103 questions and measures 5 areas of early child development:</p> <ol style="list-style-type: none"><li>1) Physical health and well-being</li><li>2) Social competence</li><li>3) Emotional maturity</li><li>4) Language and cognitive development</li><li>5) General knowledge and communication skills</li></ol>
Calculation: Description	<p>This indicator is calculated by dividing the number of children who are considered vulnerable in at least 1 developmental domain by the total number of children for whom the EDI was completed (indicator reported based on school year, September to June; school year may vary slightly by province/school board). All questionnaires must meet the inclusion criteria to be included in the analyses.</p> <p>A child is considered vulnerable when his or her EDI score in a developmental domain is equal to or lower than the score corresponding to the 10th percentile of all kindergarten children (based on a pan-Canadian set of EDI results) for that developmental domain. Children who are vulnerable in areas of early development are more likely to face greater challenges in school learning than those who are not vulnerable.</p> <p>The pan-Canadian results may vary slightly from those published by provinces and territories because the population of reference is different.</p> <p>The Canadian vulnerability percentage is calculated based on the most recent data for all available provinces and territories.</p> <p>As of September 2016, coverage is not available in Nunavut.</p>
Calculation: Geographic Assignment	Place of residence

Calculation:	Percentage or proportion
Type of Measurement	
Calculation:	
Adjustment Applied	None
Calculation:	
Method of Adjustment	Not applicable
	<b>Description:</b>
	Total number of kindergarten children with valid EDI data
Denominator	<b>Exclusions:</b>
	Cases where the child was in the classroom for less than 1 month, was identified as having special needs, was not in senior kindergarten or was missing too much data in a questionnaire (more than 25%)
	<b>Description:</b>
Numerator	Number of children who are considered vulnerable on at least 1 area of development. The cut-off score used to identify vulnerability on each area of development for this indicator was established using the 10th percentile score of a pan-Canadian set of EDI results.
Background, Interpretation and Benchmarks	
	Healthy child development is an important determinant of health and well-being in later life. It is the outcome of available services and supports for families, effective parenting, as well as the social and economic circumstances in which children live and grow up, such as their housing, neighbourhood and community environment; family income and parents' level of education; and access to nutritious foods and physical recreation.
Rationale	Child development can be assessed at age 5 with the EDI. The EDI was developed to provide a feasible, acceptable and psychometrically sound measuring instrument that assesses developmental health of children before entering Grade 1. The instrument has been designed to provide information for groups of children to
	1) Report on populations of children in different communities
	2) Assess the strengths and deficits of students
	3) Predict how children will do in elementary school and beyond
Interpretation	A lower percentage of children considered vulnerable at school entry is a positive indicator of healthy development at approximately age 5.
HSP Framework Dimension	Health System Outcomes: Improve health status of Canadians
Areas of Need	Not applicable
Targets/Benchmarks	Not Applicable
References	Chief Medical Officer of Health of Ontario. Maintaining the Gains, Moving the Yardstick: Ontario Health Status Report, 2011. 2011 Annual Report of the Chief Medical Officer of Health of Ontario to the Legislative Assembly of Ontario, 2013.
	Offord Centre for Child Studies. Early Development Instrument. <a href="https://edi.offordcentre.com/">https://edi.offordcentre.com/</a> . Accessed December 22, 2015
Availability of Data Sources and Results	
Data Sources	Early Development Instrument (EDI)
	<b>Type of Year:</b>
	School
Available Data Years	<b>First Available Year:</b>
	2004
	<b>Last Available Year:</b>
	2016
Geographic Coverage	Newfoundland and Labrador, Prince Edward Island, New Brunswick, Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon, Northwest Territories
Reporting Level/Disaggregation	National, Province/Territory, Region
Result Updates	
Update Frequency	The frequency of data collection varies across jurisdictions. Some jurisdictions have a 1-year data collection period, while others have a collection period of 2 or more years. The most recent data available is for the following periods: N.L.: 2013–2014; P.E.I.: 2007–2008; N.S.: 2014–2015; N.B.: 2008–2009; Que.: 2011–2012; Ont.: 2014–2015; Man.: 2014–2015; Sask.: 2009–2010 to 2010–2011; Alta.: 2015–2016; B.C.: 2013–2014 to 2015–2016; Y.T.: 2012–2013; N.W.T.: 2014–2015 to 2016–2017. The Canadian average is calculated based on the most recent data for all available provinces and territories.
	<b>Web Tool:</b>
Indicator Results	Your Health System: In Depth
	<b>URL:</b>
	<a href="#">Accessing Indicator Results on Your Health System: In Depth</a>
Updates	Not applicable
Quality Statement	
	To protect confidentiality and to allow for the deduction of meaningful statistics, the Offord Centre for Child Studies suppresses information for units of aggregation that feature EDI results for less than 35 children (when the units are geographic in nature).

**Caveats and Limitations** EDI collection in Alberta was completed via active parent/guardian consent (rather than passive consent, as is done in other provinces/territories). School authorities were given the choice to participate in EDI collection. 2016 is considered a provincial collection, although data was not collected from all school authorities.

Please note that the age of entry into kindergarten may vary by province, specifically in Quebec and Prince Edward Island.

**Trending Issues**

Trending should be conducted with caution given that the frequency of data collection varies across jurisdictions. Some jurisdictions have a 1-year data collection period, while others have a collection period of 2 or more years involving pooled data years. It is important to consider these differences in jurisdictional data collection when evaluating trends over time.

Data is reported by school year (September to June; may vary slightly by province/school board); the first year of available data is for the 2004–2005 school year.

National results are calculated based on the most recent data from all available provinces and territories. Refer to the Update Frequency field above for detailed information on the most recent data available.

**Comments**

Provincial/territorial and health regional data includes all provinces and territories except Nunavut.

Indicator results are also available on

– Your Health System: In Brief (<http://yourhealthsystem.cihi.ca/inbrief/?lang=en#!/indicators/013/children-vulnerable-in-areas-of-early-development>)

– Early Development Instrument (<https://edi.offordcentre.com/>)