February 2015

How are our young children doing?

Children with special needs in Alberta

Alberta Government

ECMap
Early Child Development Mapping Project Alberta

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Executive Summary

Early Development Instrument (EDI) information collected in Alberta between 2009 and 2013 shows that a significant number of young children — more than one in five — have a diagnosed disability or delay by the time they reach kindergarten. More than 20 per cent of the 70,206 kindergarten-aged children whose data was included in the first provincial baseline results had a diagnosed disability. EDI data for an additional 1,926 children with a severe disability was not included in provincial baseline results.

This report looks specifically at how young children with disabilities are doing, as part of a larger EDI analysis of early childhood development in Alberta. Major findings for this cohort of 16,269 children indicate:

- There were large differences in the percentage of children with diagnosed disabilities from one community to the next and in EDI results for these children.The percentage of kindergarten-aged children with a diagnosed mild/moderate disabilities or delays, for example, varied from 0 per cent to 44 per cent.
- A higher percentage of boys were diagnosed with disabilities than girls.
- In comparison with older children, younger children with mild/moderate disabilities or delays and severe delay involving language tended to score lower on the EDI.
- Children with English as a second language (ESL) were more likely to be diagnosed with a severe delay involving language (SDL). In 12 communities, more than 30 per cent were identified as both ESL and SDL. This raises the possibility that many young children with ESL are mistakenly diagnosed as SDL.

When children with disabilities were removed from the Alberta baseline and the results recalculated, a high percentage of the remaining children — those with no diagnosed disabilities or delays — were still struggling in their development. Twenty-two per cent were experiencing great difficulty in one or more areas of development.

This report recommends the continued collection of EDI information in Alberta and further investigation of the data as it relates to children with special needs in order to more clearly understand the impact of disabilities on children's development in this province. It is important to note, however, that the EDI was more useful in gathering information on children in two categories of disability — those with mild/moderate disabilities or delays and severe delays involving language — than with those in the third category, i.e. severe disabilities. The tool needs to be adapted and further refined to gather better information on children with disabilities, especially severe disabilities, and perhaps used in conjunction with other tools.

Introduction

As part of the research series *How are our young children doing?* produced by the Early Child Development Mapping Project (ECMap) this report looks at the development of young children with special needs in Alberta.

Between 2009 and 2013, information on the development of kindergarten-aged children was collected across Alberta as part of the first province-wide, population-based study of child development in the early years. Using a tool called the Early Development Instrument (EDI), kindergarten teachers completed questionnaires for each child in their classes. Information on 70,206 children was analyzed and reported at the provincial, community and subcommunity levels.[1] This data forms a baseline of how young children are doing throughout Alberta and becomes a starting point for tracking trends in early development over time.

The Offord Centre for Child Studies at McMaster University in Hamilton, Ontario, created the EDI and established the Canadian norms used to analyze EDI data. Using the methods devised by the Offord Centre to analyze the Alberta data made it possible to compare Alberta results with the Canadian norms. Children diagnosed with severe disabilities were not included in the Alberta baseline analysis because they were not part of the Canadian norms. Children with mild/moderate disabilities or delays and those with severe delays involving language were included, because they were part of the Canadian norms. Results for these children were not analyzed separately, however, but as part of the overall provincial baseline.

It became evident that a great deal could be learned, however, from the information that had been gathered on children with special needs. Exploring this data more fully would lead to a better understanding of the developmental outcomes for these children and provide a context for considering the effectiveness of current policies and programs. Given these benefits, a separate analysis of the children with special needs was undertaken, including those that had been part of the Canadian norm and those that weren't. This analysis involved a number of challenges because of the wide range of children's disabilities.

This report summarizes the EDI results for three groups of children with diagnosed disabilities: those with mild/moderate disabilities or delays (M/MD); those with severe delays involving language (SDL); and those with severe disabilities (SD).

The first section describes the distribution of the children with special needs and examines the demographic patterns in those distributions according to sex, age, English language needs (ESL) and repetition of kindergarten. The second section outlines EDI results for the different groups. Both sections provide an overview of community differences in the demographics and EDI results.

The third section of the report provides a brief overview of the links between EDI results for children with special needs and socio-economic status and community resources. 'Questions for further investigation' are inserted throughout the report to spark deeper questions and possible interpretations about the data and information presented. Finally, the last section of the report summarizes the major findings on children with special needs and puts forward recommendations.

The Early Development Instrument (EDI)

Using the EDI with children with special needs in Alberta

In Alberta, children diagnosed with special needs are grouped into three categories and results are reported for each category. The categories are based on those established by Alberta Education as part of its early intervention initiative for children with diagnosed disabilities.[2]

The categories are:

- mild/moderate disabilities or delays (M/MD): includes multiple mild or moderate physical, emotional and behavioural disabilities;
- severe delay involving language (SDL): diagnosed difficulty in communicating in any language; and
- severe disabilities (SD), with six sub-categories — severe cognitive disability; severe emotional, behavioural disability; severe multiple disability; severe physical or medical disability; deafness; and blindness.

The number of children with special needs in this study includes:

- 11,179 children with identified mild/moderate disabilities or delays and 3,164 with a severe delay involving language. This group of 14,343 children was included in EDI baseline results, and in fact makes up more than 20 per cent of the general baseline population.
- 1,926 children diagnosed with severe disabilities (other than language). This group was not included in the analysis of baseline results.

EDI results are reported separately for each of the three categories of disability.

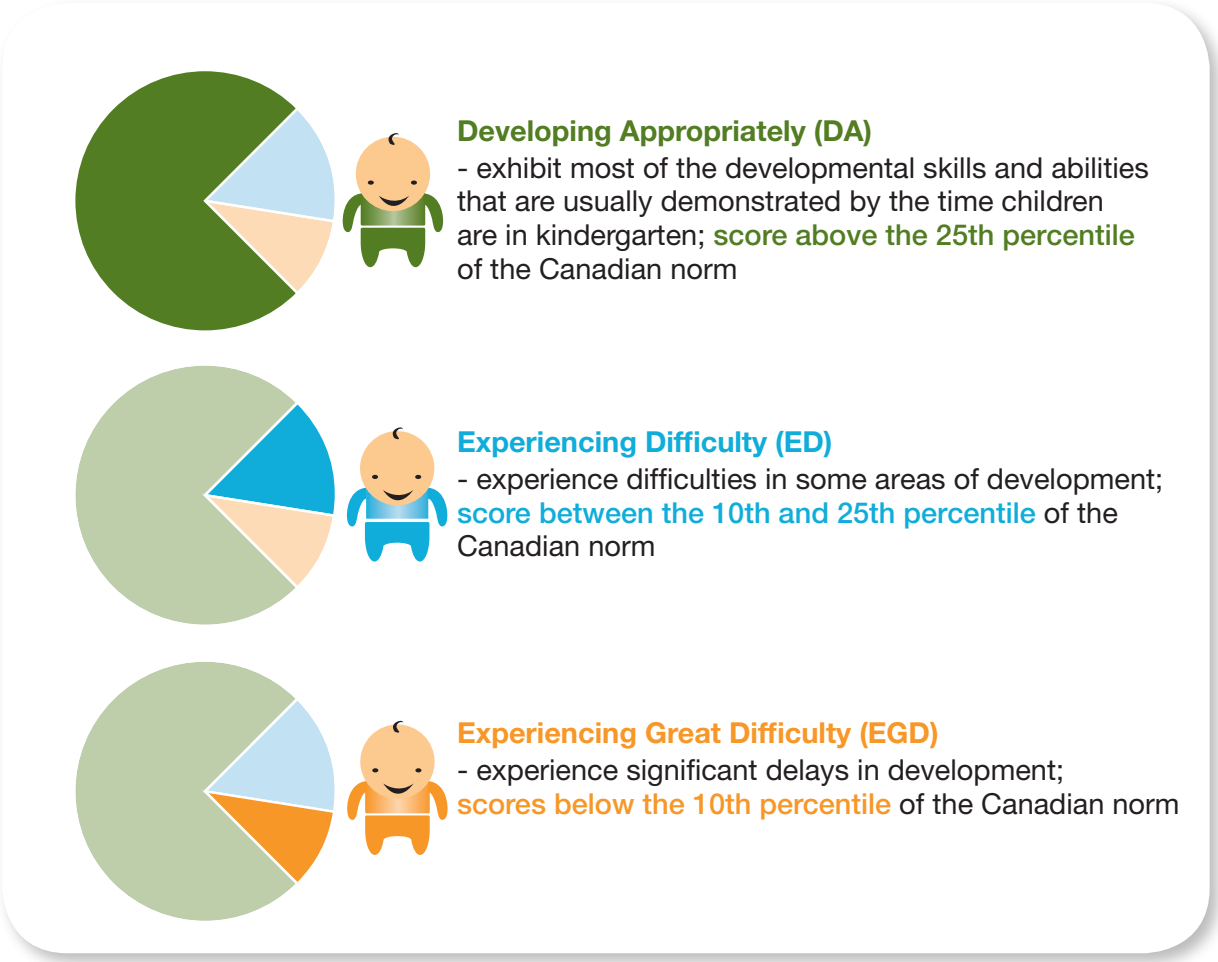
About the EDI

For more information about the EDI, and how the data is collected and analyzed, please go to the report *How are our young children doing? Community profiles of early childhood development in Alberta*. Or check out the ECMap website at www.ecmap.ca.

Analyzing results

Children with mild/moderate disabilities or delays, or severe delay involving language

EDI questionnaires for children in these two categories were scored and grouped into the same scoring categories that were used for the Alberta baseline, which means that their developmental progress was compared to the Canadian norm used for all children.



Developing Appropriately (DA)
- exhibit most of the developmental skills and abilities that are usually demonstrated by the time children are in kindergarten; score above the 25th percentile of the Canadian norm

Experiencing Difficulty (ED)
- experience difficulties in some areas of development; score between the 10th and 25th percentile of the Canadian norm

Experiencing Great Difficulty (EGD)
- experience significant delays in development; scores below the 10th percentile of the Canadian norm

Patterns of children's development were reported:

- **by area of development:** The percentage of children in each scoring category was calculated at the provincial level and community level, where numbers allowed, for each of the five areas of development — physical health and well-being, social competence, emotional maturity, language and thinking skills, and communication skills and general knowledge.

- **across all areas of development:** The percentage of children who are developing appropriately in all five areas of development (DA5), experiencing great difficulty in one or more areas of development (EGD1+), and experiencing great difficulty in two or more areas (EGD2+) was also calculated at the provincial and community levels.

Children with severe disabilities

Children with severe disabilities were not part of the Canadian norm population. Therefore, results for these children could not be reported in the same way as the results for other children. In this study, results for children with severe disabilities are reported for each of the five areas of development, using the mean, or average, score for each area of development on the EDI.

Determining the usability of questionnaires

EDI questionnaires had to meet certain criteria before they could be part of the analysis.[3] The same criteria were used to determine the usability of questionnaires for children with M/MD and SDL as those used for the Alberta baseline and the Canadian norm. Questionnaires were excluded from analysis if:

- the child was in class for less than one month;
- the child was under four years of age or over seven;
- information was missing or incomplete.

In Alberta, parental consent was required for a child's EDI information to be used in the analysis.[4]

Graphic 1 shows parental consent rates for the different groups of children whose EDI information was collected in Alberta between 2010 and 2013.[5] It is interesting to note that the consent rate for the three groups of disabilities was higher than for the Alberta baseline.

Graphic 1: Parental consent in Alberta

Group of children	Parental consent rate
mild/moderate disabilities or delays	89.7%
Severe delay involving language	87.3%
Severe disability	88.1%
No identified special needs	86.1%
Baseline EDI population	86.7%

Demographic trends for special needs

EDI data for children with special needs was analyzed by sex, age and English language proficiency. The Alberta baseline study and research studies elsewhere have found that these three demographic factors are linked to EDI results and to early development. An additional analysis was also done of children with special needs who are repeating kindergarten to see if any trends could be observed.

Frequency of special needs in Alberta

The data indicates that a significant number of children in Alberta — more than one in five — have been diagnosed with a disability of some kind by the time they reach kindergarten. Out of the 70,206 kindergarten-aged children that were included in the Alberta baseline results, more than 20 per cent were children with M/MD and SDL. This percentage does not include children with SD, who were excluded from the baseline analysis. Children with SD made up 2.2 per cent of the total number of children whose EDI information was collected. Graphic 2 provides a breakdown of the EDI questionnaires that were collected for all three groups of children.

Graphic 2: EDI questionnaires collected for children with special needs 2009 - 2013

Category	Number	Percentage	Total EDI
mild/moderate disabilities or delays	11,179	15.9%	usable (out of 70,206)
severe delay involving language	3,164	4.5%	usable (out of 70,206)
severe disability	1,926	2.2%	available (out of 86,564)

Some aspects of the EDI questionnaire made it difficult to use for the analysis of special needs. In particular, the three questions that identify the child's special needs are mutually exclusive but were not answered that way by teachers. This required extensive cross referencing and cleaning of the data files before analysis could begin. In addition, the questions in section D of the questionnaire provided information on special needs that contradicted information provided elsewhere in the questionnaire and eventually were not useful to inform this report.[6]

**Please note: Statistics on EDI results for children with M/MD and SDL are based on the total usable questionnaires after all usability criteria have been applied. Statistics on EDI results for children with SD are based on available questionnaires (the total number with only the parental consent criterion applied). This is true for all analyses in this report.*

Frequency by communities

When examined on a community by community basis, the percentage of kindergarten-aged children with a diagnosed disability or delay varied widely.[7] The percentage of children with SD was as high as 5.8 per cent, SDL as high as 21.5 per cent and M/MD as high as 44 per cent, approaching almost half of the total kindergarten population of the community. (See Appendix B for statistics on the frequency of kindergarten-aged children with special needs in communities.)

Graphic 3: Highest/lowest frequency of special needs in communities

Category	Range across communities	Alberta per cent
Children with mild/moderate disabilities or delays (M/MD)	44.0% to 0.0%	15.9%
Children with severe delays involving language (SDL)	21.5% to 0.0%	4.5%
Children with severe disabilities (SD)	5.8% to 0.0%	2.5%

Questions for further investigation

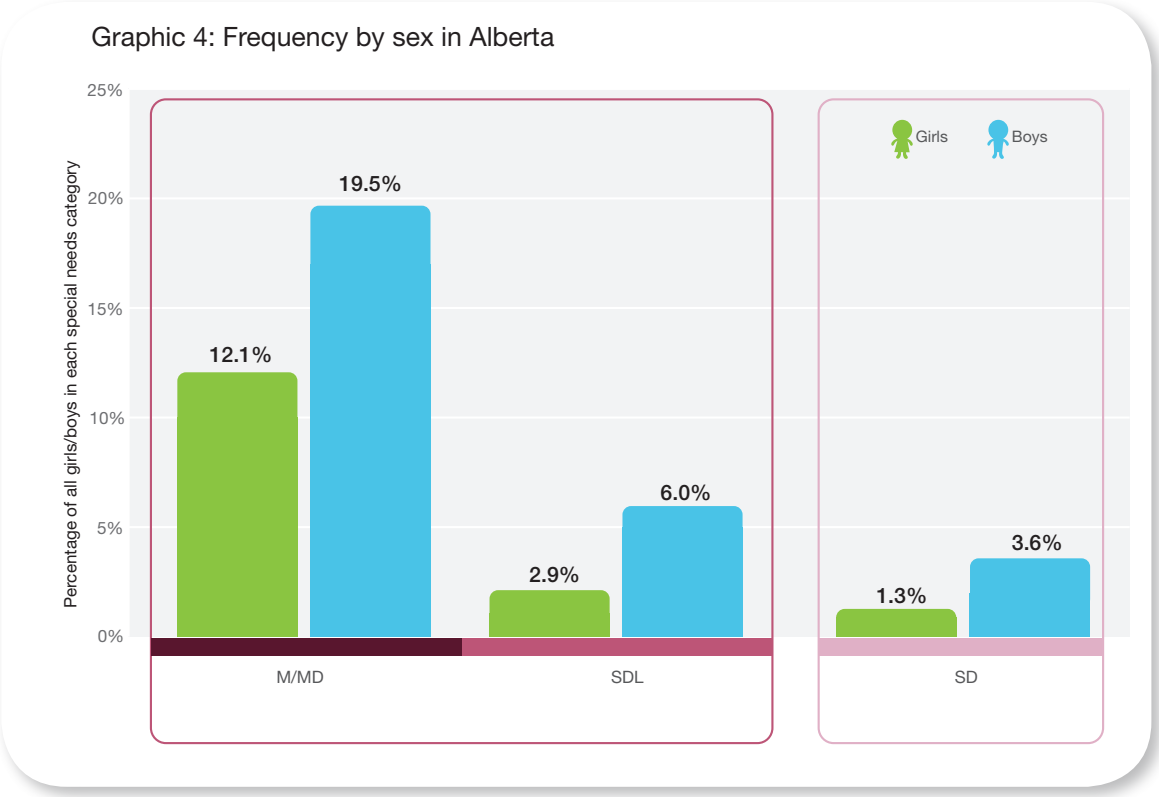
1. Why is there such a variation in the percentage of kindergarten-aged children with special needs between communities?
2. Are the differences real or could they be a result of the funding, assessment and intervention strategies used by government and local school authorities?
3. Does the variation indicate a 'magnet effect' where specialized programs or services draw families to a community?

Frequency by sex

The percentage of boys was greater than that of girls in all three disability categories both province-wide and by community. This is consistent with other research on disabilities that shows a higher percentage of boys being diagnosed with disabilities. Graphic 4 provides a breakdown by sex of the frequency for each category of disability

Alberta baseline results also showed more positive results for girls than boys in all areas of development. This trend is reflected in past research which shows that girls tend to outpace boys developmentally in the early years. However, a recent review of studies suggests that the similarities between boys and girls far outweighs the differences.[8]

Graphic 4: Frequency by sex in Alberta

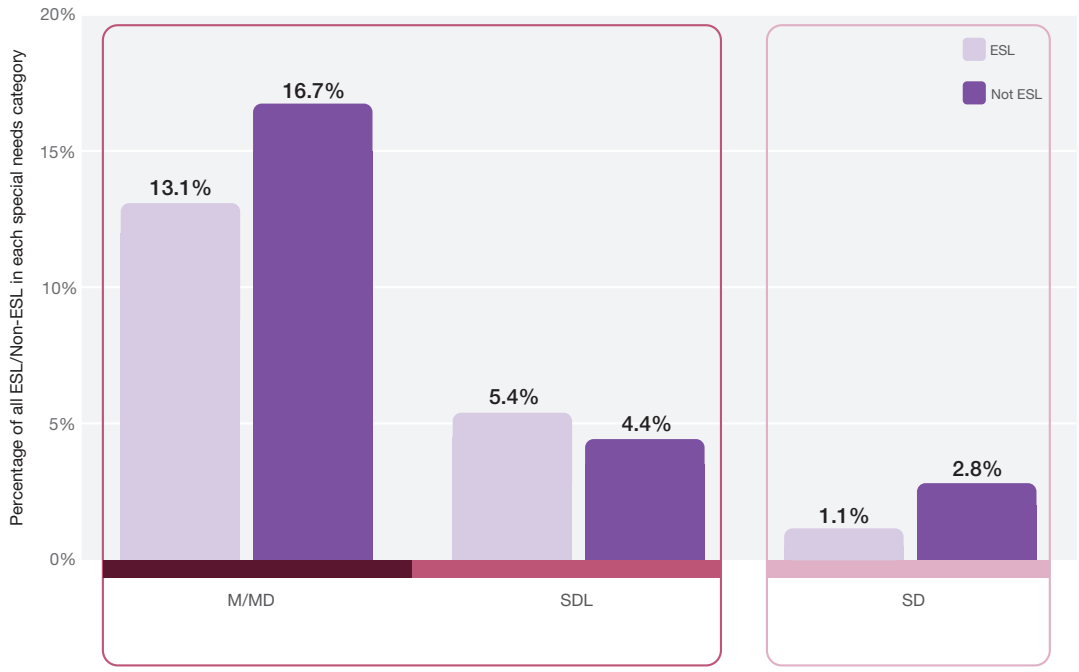


Please note: The graphic shows the proportion of all kindergarten-aged girls who are M/MD, SDL and SD and the proportion of all kindergarten-aged boys who fall into each of these three categories.

Frequency of English as a second language (ESL)

Children identified with ESL needs were slightly less likely to be diagnosed with M/MD or SD. They were slightly more likely to be diagnosed with SDL.

Graphic 5: Frequency of ESL in Alberta



**ESL: English as a Second Language includes both children who are not proficient in English and a small number of Francophone children who are in FSL programs in order to build proficiency in French.*

A wide variation was found in the number and percentage of kindergarten-aged children who were identified as both ESL and SDL at the community level. The majority of communities (62 out of 100 communities) had either no children or only one child with this dual identification. In the remaining communities (38 communities), however, the percentage of children identified as both ESL and SDL ranged from a low of 4.2 per cent to a high of 80 per cent, with 12 communities at over 30 per cent. See Appendix E for maps that show the percentages of children with ESL and SDL in communities.

Please note: There are 100 early childhood development (ECD) communities in Alberta.

Frequency by age

EDI data was collected on kindergarten children as young as four years of age and as old as seven. School authorities set their own starting age cutoffs for kindergarten, which means that the age of children registered in kindergarten can vary considerably across the province.

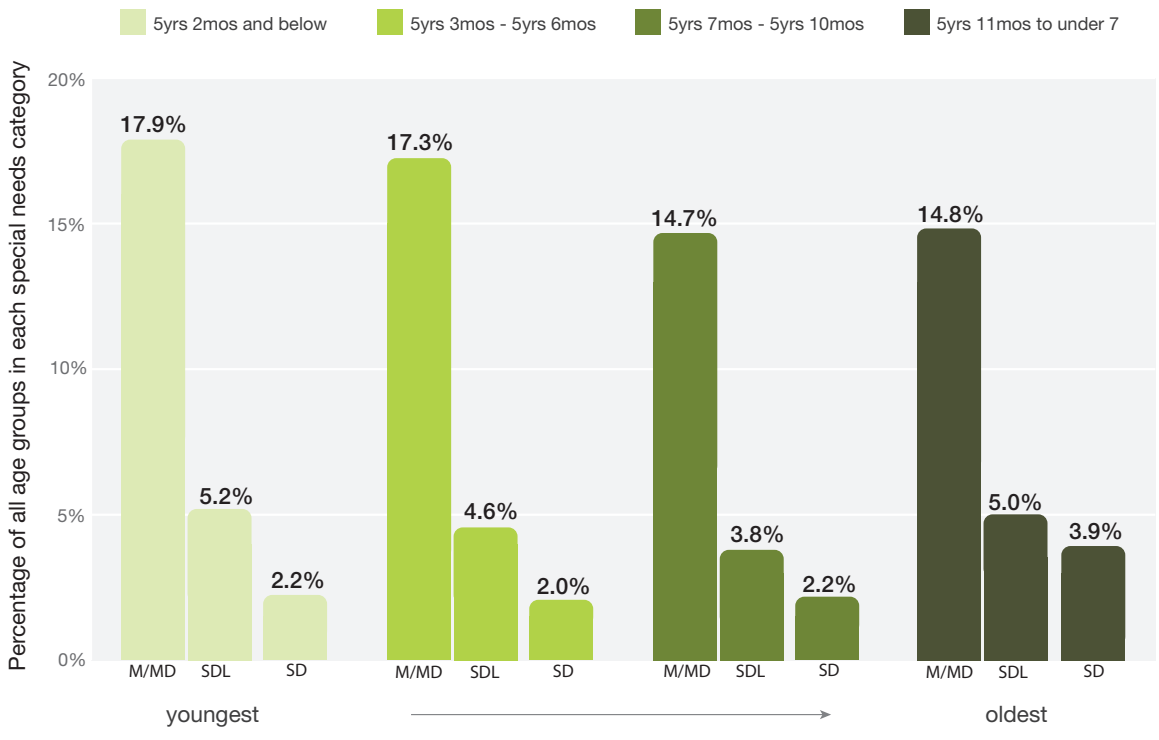
In order to analyze the effect of age on EDI results, children were divided into four age groups:

- 5 years 2 months and younger,
- 5 years 3 months to 5 years 6 months,
- 5 years 7 months to 5 years 10 months, and
- 5 years 11 months to under 7 years.

When examining the data for children with disabilities broken down by age, the following findings emerged:

- The largest percentage of children with mild/moderate disabilities or delays was in the two youngest age groups.
- The largest percentage of children with a severe delay involving language was in the youngest age group and the oldest age group.
- The largest percentage of children with a severe disability was in the oldest group.

Graphic 6: Frequency by age group



Questions for further investigation

1. Why is the largest percentage of children with severe disability found in the oldest age group?
2. Does Alberta Education's identification and/or funding model influence the frequency of disability identified in the different age groups?

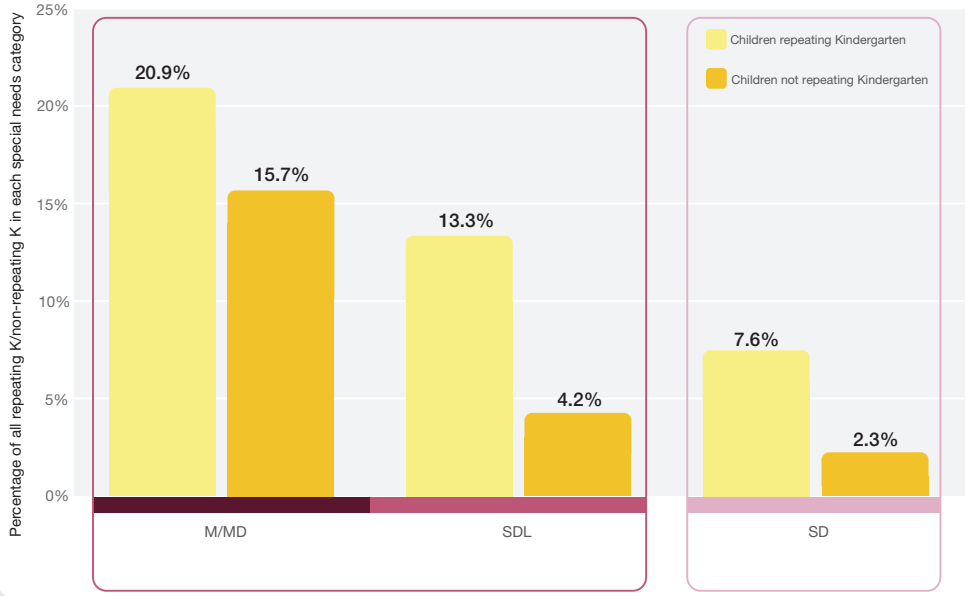
Frequency repeating kindergarten

A higher percentage of children with disabilities/delays repeated kindergarten than the percentage of children in the baseline data. This was true of children in all three categories of disabilities. Overall, 3.4 percent of children in the baseline data repeated their kindergarten year. The frequency of children with disabilities repeating kindergarten was as follows:

- **M/MD** - Out of the 2,407 children who repeated kindergarten in the baseline population, 20.9 per cent (502 children) were diagnosed with M/MD. Out of the 67,743 children who did not repeat kindergarten in the baseline population, 15.7 per cent (10,669 children) were M/MD.
- **SDL** – Out of 2,407 children who repeated kindergarten in the baseline, 13.3 per cent (321 children) were SDL. Of the 67,743 children who did not repeat kindergarten in the baseline, 4.2 per cent (2,840 children) were SDL.
- **SD** – *Information on children in this category was analyzed differently because these children were not included in the baseline. Results were calculated using the total number of EDI questionnaires available that also had parental consent.* Out of the total number of children whose EDI questionnaires fit these criteria, 2,738 repeated kindergarten. Of these, 7.6 per cent (208 children) were SD. Out of the 71,865 children who were not repeating kindergarten, 2.3 per cent (1,652 children) were SD.

Children with disabilities were more likely to repeat kindergarten, but many children in the baseline population who were not identified as disabled were also kindergarten repeaters. Children with M/MD and SDL made up about a third of the number of children repeating kindergarten in the baseline population; the remaining two-thirds were not identified as having special needs.

Graphic 7: Frequency of repeating kindergarten

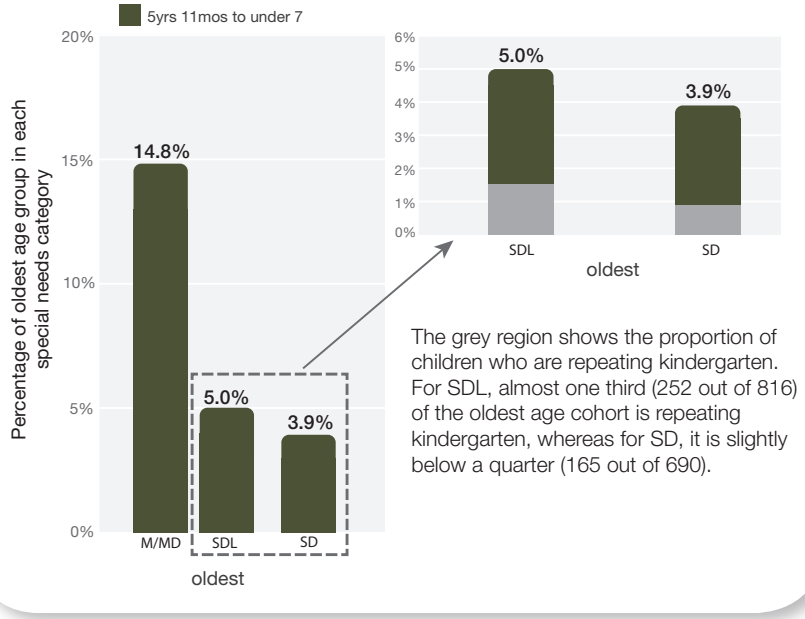


Frequency repeating kindergarten by age

The frequency of children with SDL and SD is most pronounced in the oldest age group. The data was analyzed to determine whether there could be a link between the 'bulge' in the upper age group and the frequency children repeating kindergarten.

Out of the total of 816 children with SDL in the oldest age category, 252 children — or about a third — were repeating kindergarten. Of the children with SD in the oldest category, slightly less than a quarter — 165 out of 690 — were repeating kindergarten. A greater proportion of children with SDL and SD in the oldest age category are not repeating kindergarten. This would suggest that the increase in frequency, or bulge, of children with SDL and SD in the upper age is not primarily due to kindergarten repeaters.

Graphic 8: Frequency of repeating kindergarten by oldest age group

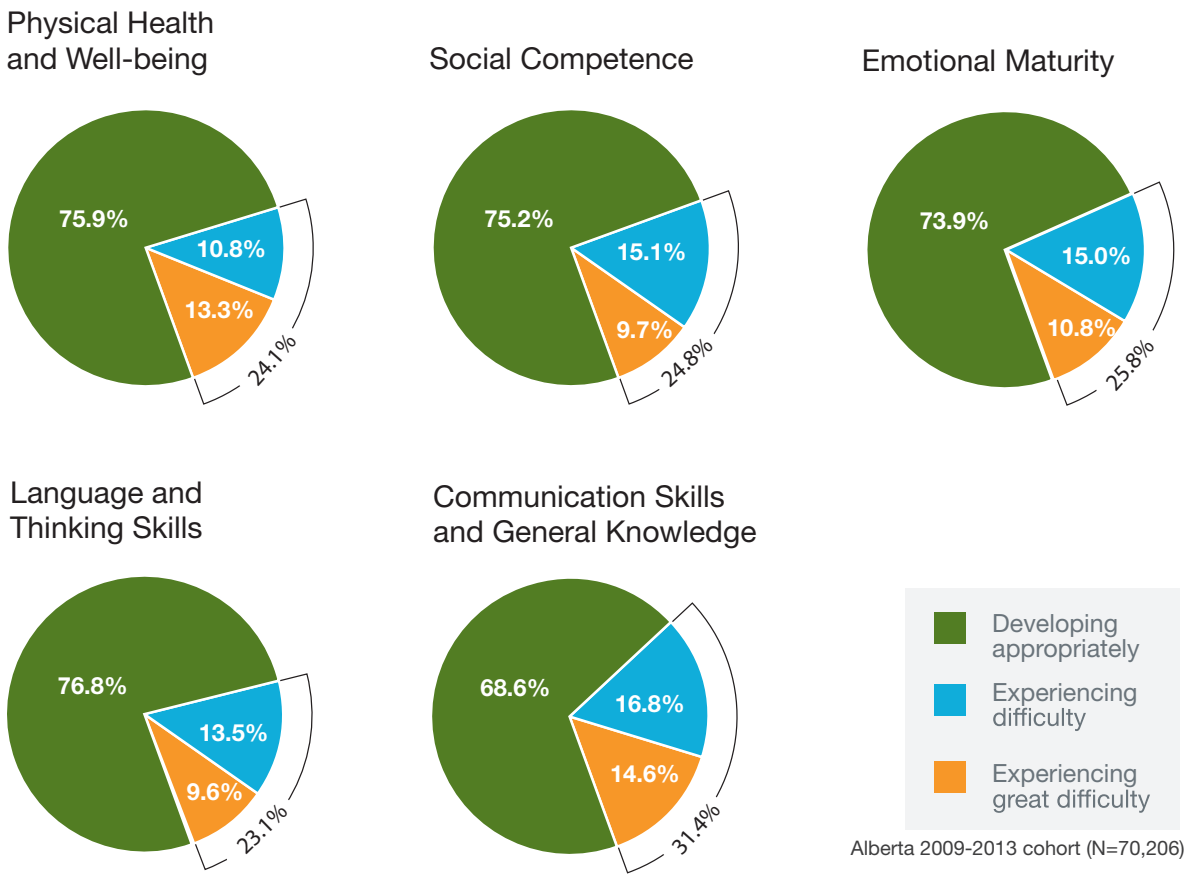


EDI results

Overall

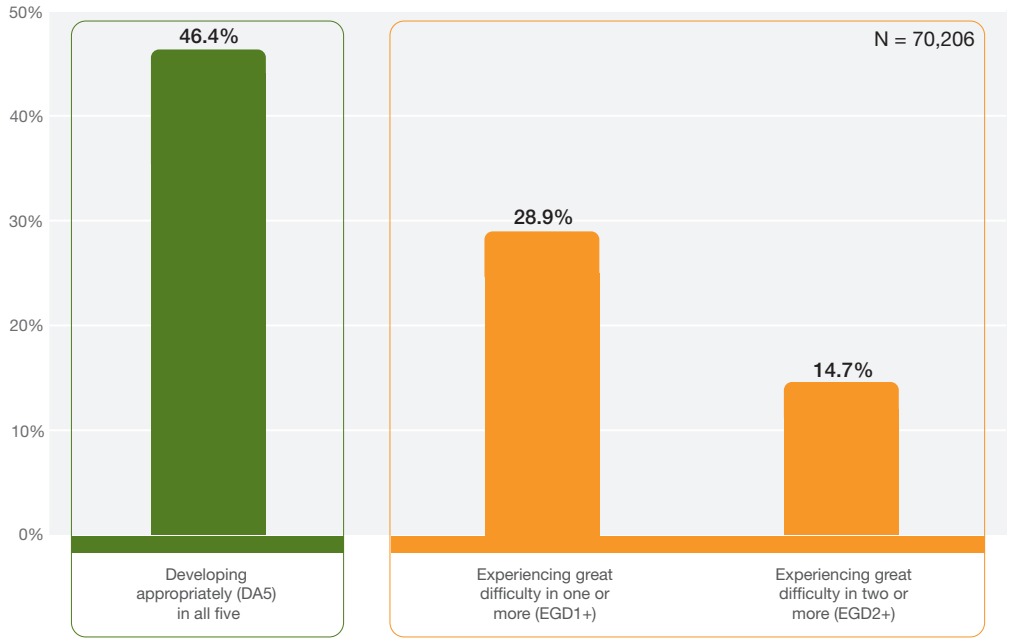
Alberta baseline results include children with mild/moderate disabilities or delays and severe delay involving language. The graphics below show the baseline results for all five areas of development and for development overall in the province for all children except those with SD.

Graphic 9: Alberta baseline results for the five areas of development, 2009 - 2013



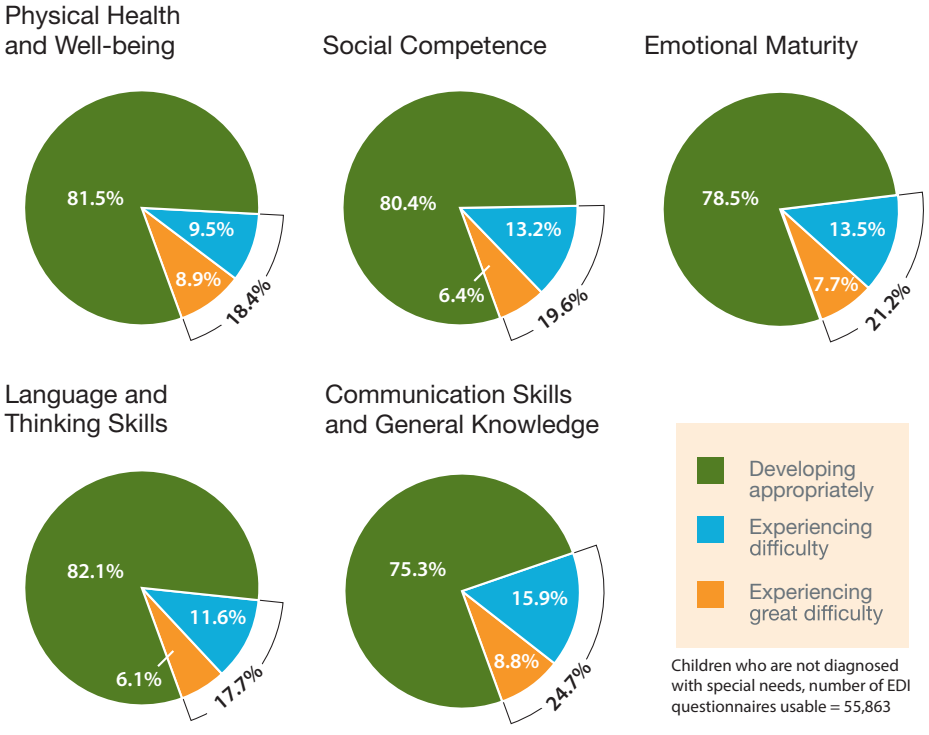
Please note: Percentages may not always add up to 100% due to rounding or missing data

Graphic 10: Alberta baseline results for DA5, EGD1+ and EGD2+



It is interesting to compare results when children with disabilities were removed from the baseline data. This left a cohort of 55,863 children who had not been diagnosed with special needs. EDI results were more positive for children with no diagnosed special needs, but a high percentage of these children still experienced difficulties in their development.

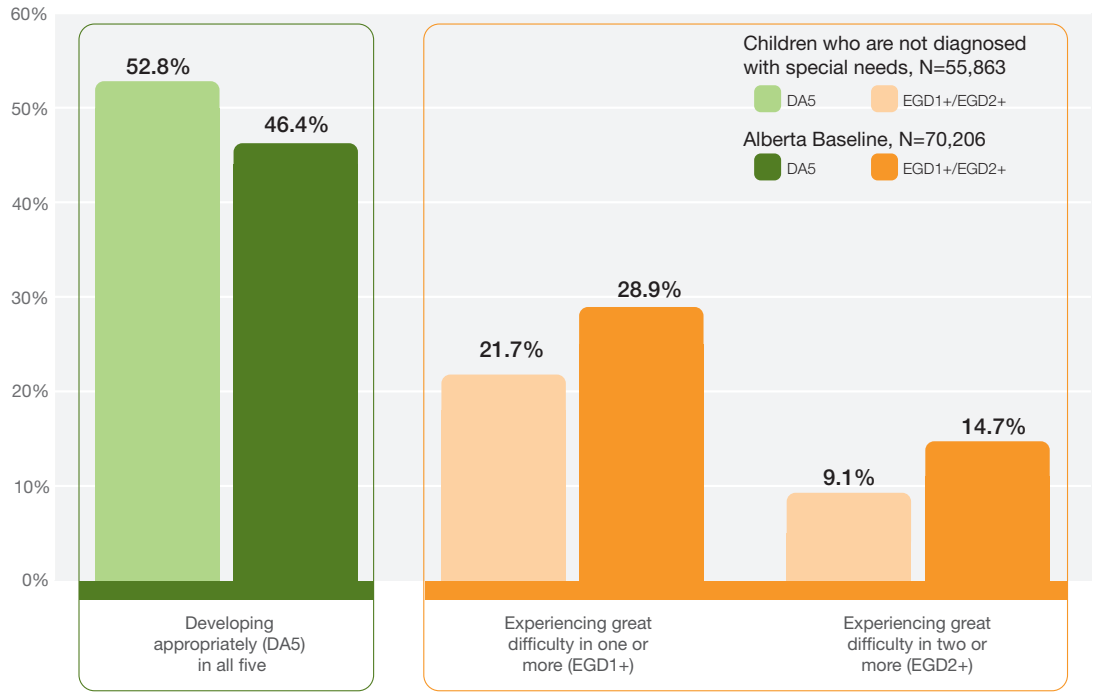
Graphic 11: Five areas of development for children with no diagnosed special needs, 2009 – 2013



Children who are not diagnosed with special needs, number of EDI questionnaires usable = 55,863

Please note: Percentages may not always add up to 100% due to rounding or missing data

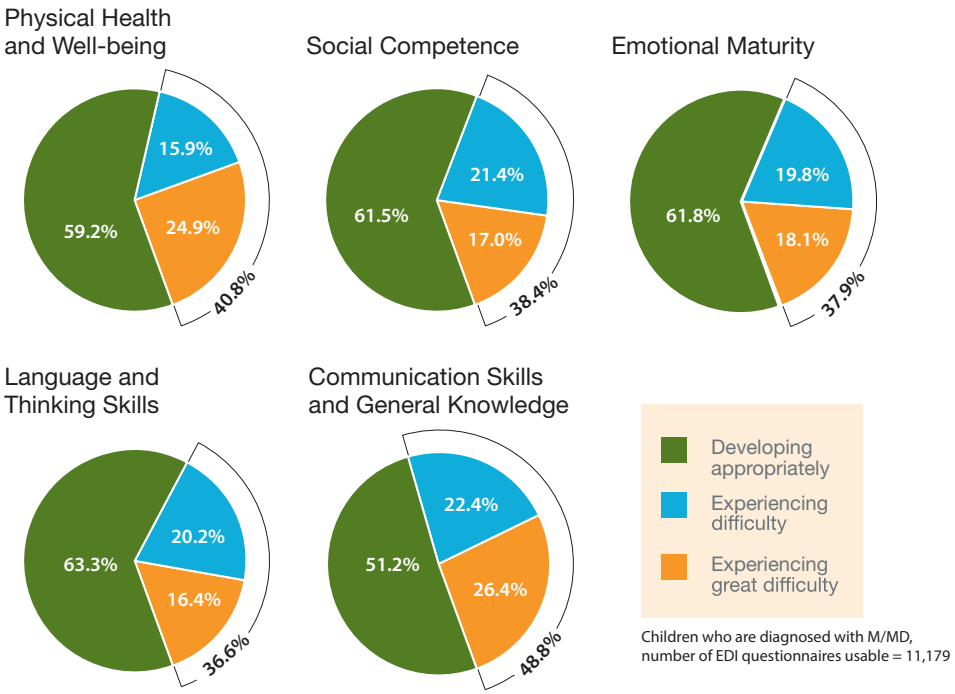
Graphic 12: Children with no diagnosed special needs compared to Alberta baseline



Categories of disabilities

Mild/moderate disabilities or delays (M/MD)

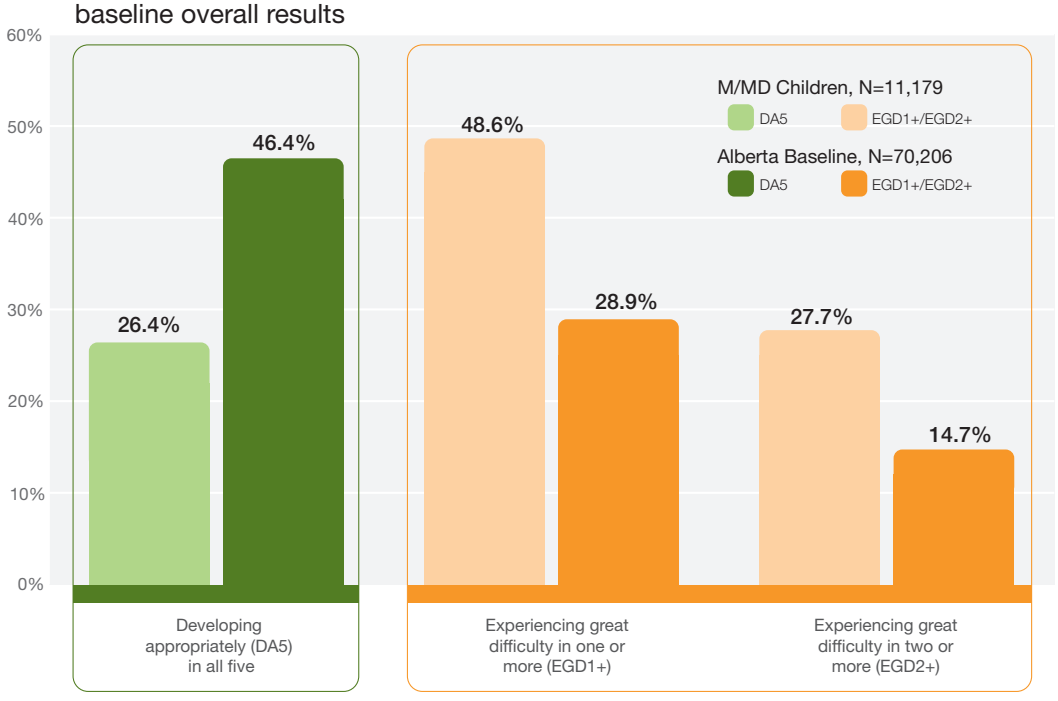
Graphic 13: Mild/moderate disabilities or delays in five areas of development



Please note: Percentages may not always add up to 100% due to rounding or missing data

There were 11,179 children diagnosed with M/MD. The results show that children with M/MD experienced greater difficulty in each developmental area than children in the baseline population. They were also more likely to experience great difficulty in one or more (EGD1+) and in two or more (EGD2+) areas of development than their kindergarten peers. On the other hand, 26.4 per cent of children with M/MD were reported by teachers as developing appropriately in five areas.

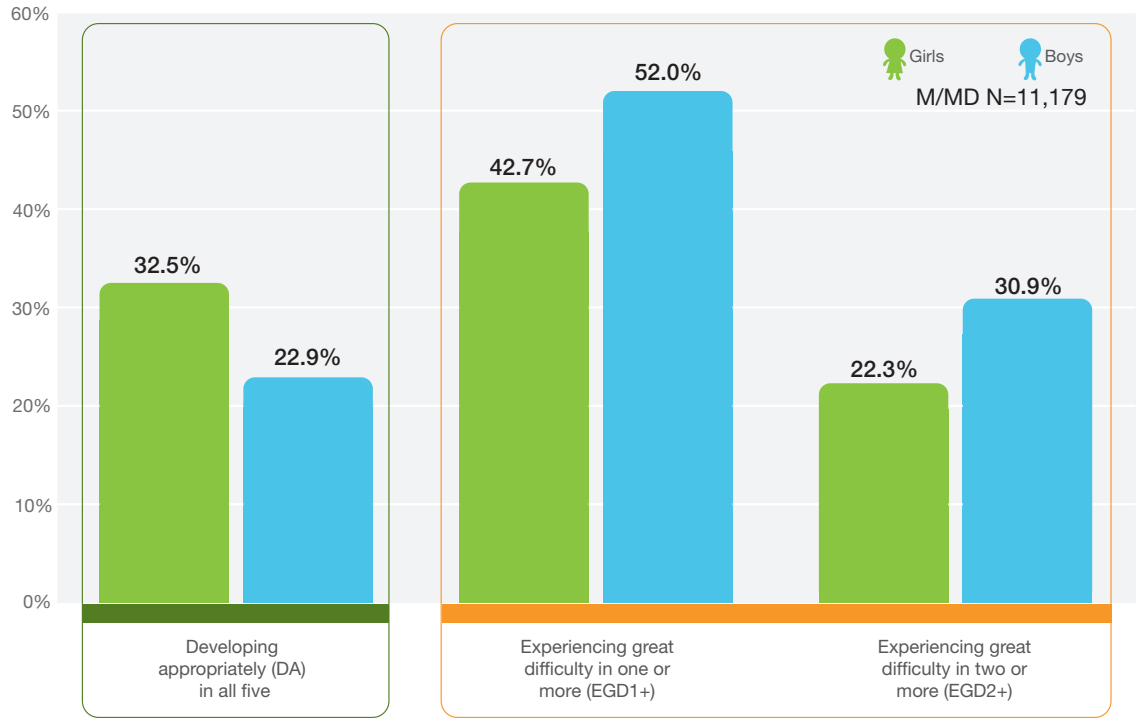
Graphic 14: Mild/moderate disabilities or delays compared to Alberta baseline overall results



Sex differences

Results for children with M/MD confirmed the tendency for boys to do less well than girls on the EDI. A higher percentage of boys in this category experienced great difficulty in one or more areas and two or more areas of development; and a higher percentage of girls was developing appropriately in all five areas. It is also important to note that, although a larger percentage of girls scored higher than boys, 23 per cent of boys with a M/MD were nevertheless developing appropriately in all five areas of development.

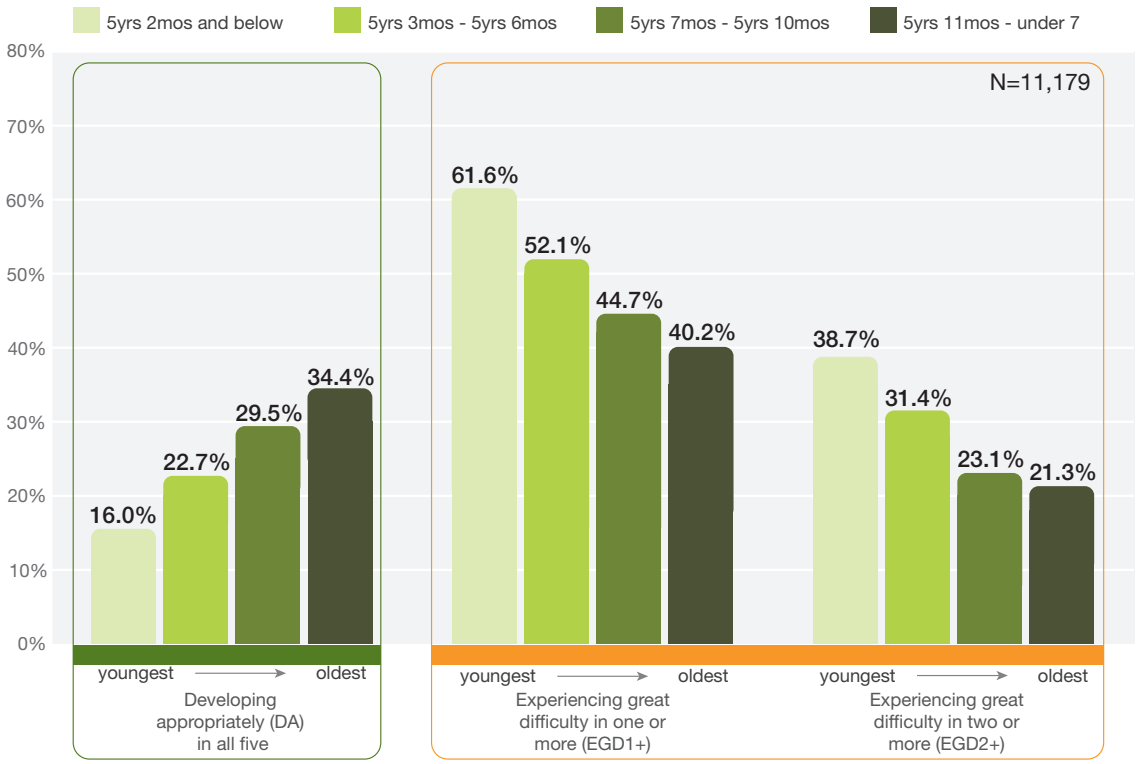
Graphic 15: Mild/moderate disabilities or delays by sex for DA5, EGD1+ and EGD2+



*Please note: the percentage refers only to the boys and girls diagnosed with M/MD.

Age differences

Graphic 16: Mild/moderate disabilities or delays by age for DA5, EGD1+ and EGD2+



Results for children with M/MD by age mirrored baseline results. Children in the youngest cohort experienced the most difficulty in one or more areas and two or more areas of development. Conversely, a larger percentage of children in the older cohorts were developing appropriately in all five areas.

Community differences

Community results for children who were identified with M/MD varied greatly. In a number of communities, children with M/MD appeared to be doing better in some areas of development than the EDI baseline population. Graphic 17 and Graphic 18 show the range in EDI results across communities and how these compared to Alberta EDI baseline results. See Appendix C for full community EDI results for children with M/MD.

Again, please bear in mind that the EDI baseline includes children with M/MD.

Graphic 17: Mild/moderate disabilities or delays range across communities for DA5, EGD1+ and EGD2+

Category	Range across communities	Alberta %
DA all 5	45.8% to 4.0%	46.4%
EDG1+	76.2% to 28.2%	28.9%
EGD 2+	61.9% to 8.7%	14.7%

Please note: Results were only reported for communities with a minimum of 20 children identified with M/MD to make results as representative as possible.

Graphic 18: Mild/moderate disabilities or delays range across communities in five areas of development

Physical Health and Well-being

Category	Range across communities	Alberta %
DA	79.5%to 32.1%	75.9%
ED	25.4% to 4.2%	10.8%
EGD	57.1% to 7.7%	13.3%

Social Competence

Category	Range across communities	Alberta %
DA	83.1% to 33.3%	75.2%
ED	44.4% to 7.7%	15.1%
EGD	42.9% to 0%	19.7%

Graphic 18: continued

Emotional Maturity

Category	Range across communities	Alberta %
DA	84.4% to 33.3%	73.9%
ED	40.0% to 4.2%	15.0%
EGD	52.4% to 0.0%	10.8%

Language and Thinking Skills

Category	Range across communities	Alberta %
DA	82.8% to 23.8%	76.8%
ED	40.0% to 10.0%	13.5%
EGD	47.6% to 0.0%	9.6%

Communication Skills and General Knowledge

Category	Range across communities	Alberta %
DA	83.3% to 21.4%	68.6%
ED	25.4% to 0.0%	16.8%
EGD	57.1% to 7.7%	14.6%

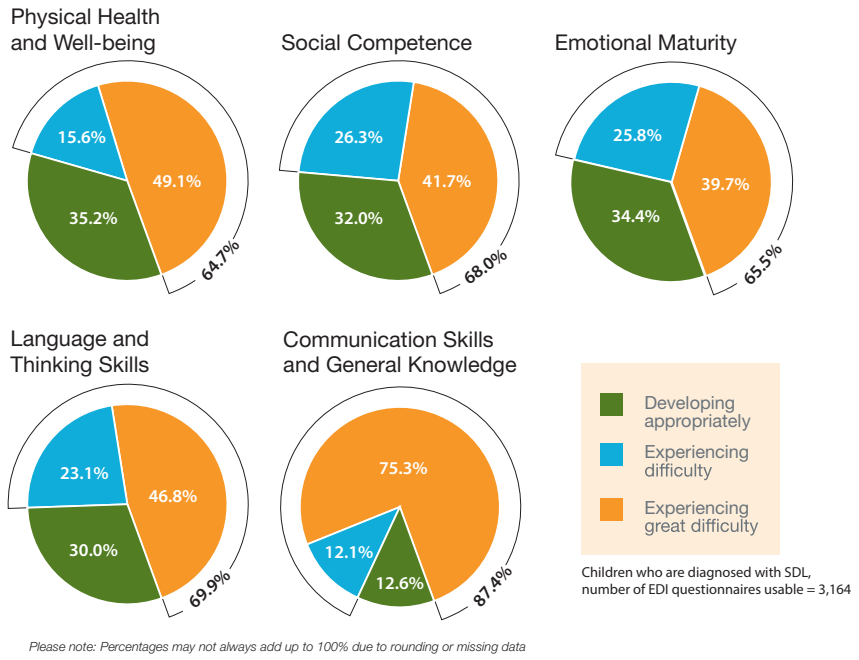
Questions for further investigation

1. Why are the results so varied for children with M/MD from one community to the next?
2. Why are some children with diagnosed M/MD reported as developing appropriately in all five areas of development?

Severe delay involving language (SDL)

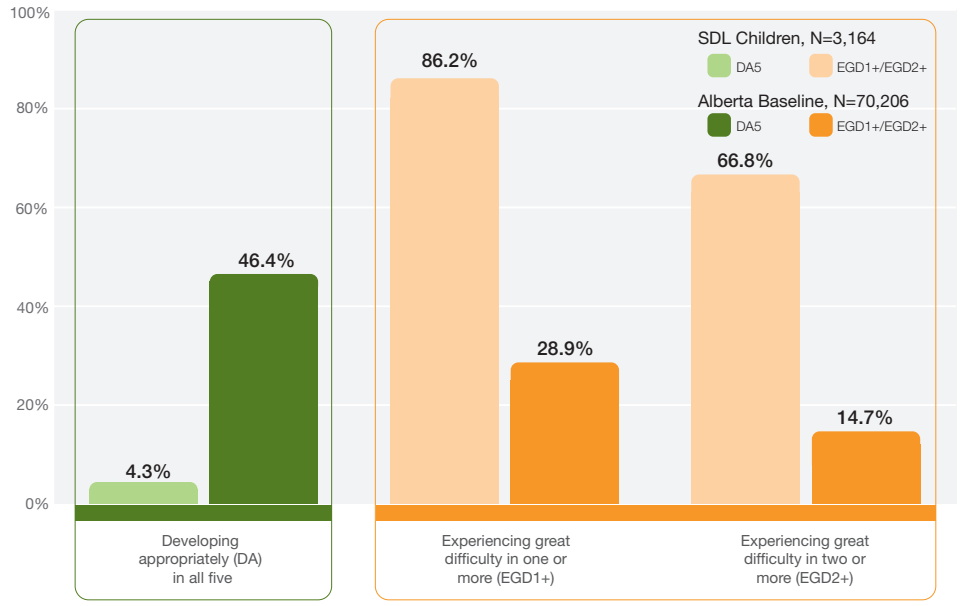
3,164 kindergarten-aged children out of the Alberta baseline cohort were diagnosed with severe delay involving language (SDL). A high percentage of these children experienced difficulty or great difficulty in all five areas of development. Not surprisingly, the area that was most challenging for this group was communication skills and general knowledge; more than 87 per cent experienced difficulty or great difficulty in this area.

Graphic 19: Severe delay involving language for five areas of development



Please note: Percentages may not always add up to 100% due to rounding or missing data

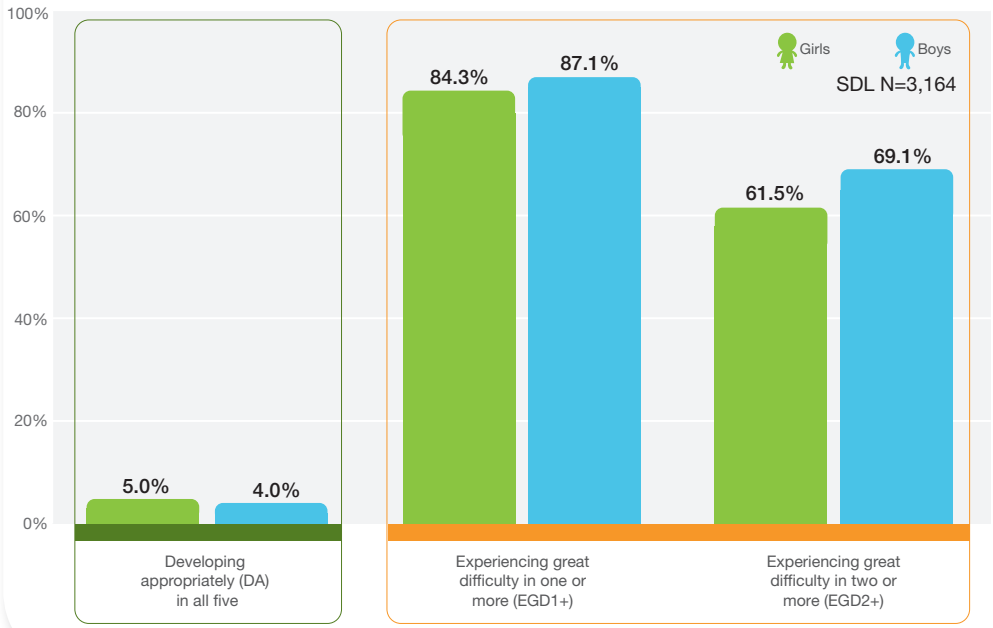
Graphic 20: Severe delay involving language for DA5, EGD1+ and EGD2+



Sex differences

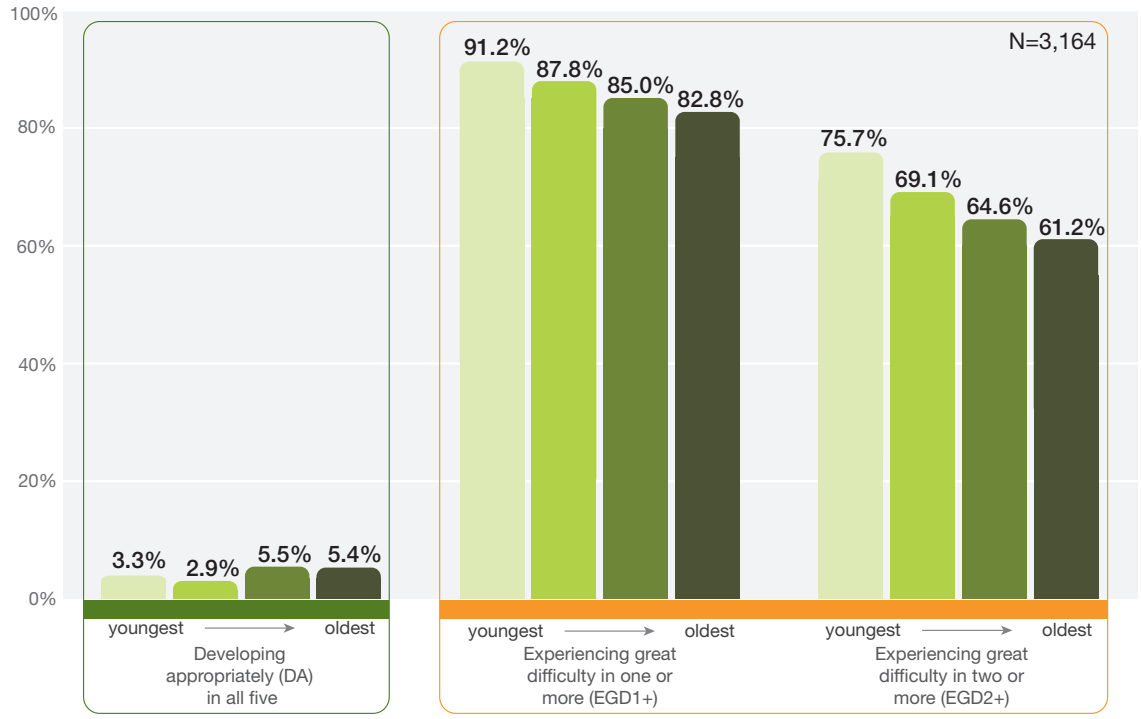
Although girls with SDL did better on the EDI than boys with SDL, the difference was much less than in baseline results

Graphic 21: Severe delay involving language by sex for DA5, EGD1+ and EGD2+



Age differences

Graphic 23: Severe delay involving language by age for DA5, EGD1+ and EGD2+



As with the other groups, more children with SDL in the younger age groups experienced great difficulty in one or more areas of development. A higher percentage of those in the older age cohorts was also developing appropriately in all five areas of development. The difference was small, however, when compared to EDI results by age for children with M/MD and Alberta baseline results.

Community differences

When the results were examined by community, there was some variation but, for the most part, the trend was toward a high percentage of children experiencing difficulty and experiencing great difficulty and a very low percentage of children developing appropriately. There were a few notable exceptions to the latter category, however. In a few communities, children with SDL either exceeded or came close to baseline results for developing appropriately in some areas of development.

See Appendix D for a full listing of EDI results for children who have been diagnosed with SDL by community.

**Please note that the Alberta baseline includes children with SDL.*

Graphic 23: Severe delay involving language across communities for DA5, EGD1+ and EGD2+

Category	Range across communities	Alberta %
DA all 5	20.0% to 0.0%	46.4%
EDG1+	95.7% to 60.1%	28.9%
EGD2+	83.0% to 44.1%	14.7%

Please note: Results were only reported for communities with a minimum of 20 children identified with SDL to make results as representative as possible.

Graphic 24: Severe delay involving language across communities for five areas of development

Physical Health and Well-being

Category	Range across communities	Alberta %
DA	64.7% to 17.4%	75.9%
ED	28.0% to 3.3%	10.8%
EGD	64.7% to 23.5%	13.3%

Social Competence

Category	Range across communities	Alberta %
DA	58.8% to 11.8%	75.2%
ED	46.7% to 13.9%	15.1%
EGD	59.6% to 23.3%	19.7%

Emotional Maturity

Category	Range across communities	Alberta %
DA	52.0% to 11.8%	73.9%
ED	47.6% to 8.3%	15.0%
EGD	60.0% to 15.6%	10.8%

Graphic 24: continued

Language and Thinking Skills

Category	Range across communities	Alberta %
DA	82.8% to 23.8%	76.8%
ED	40.0% to 10.0%	13.5%
EGD	47.6% to 0.0%	9.6%

Communication Skills and General Knowledge

Category	Range across communities	Alberta %
DA	83.3% to 21.4%	68.6%
ED	25.4% to 0.0%	16.8%
EGD	57.1% to 7.7%	14.6%

Although language was the major component of the disability and/or the initial symptoms that led to these children being diagnosed in this particular disability category, the EDI results demonstrated these children were struggling in all developmental areas, not just the areas that might be initially associated with delayed language such as language and thinking skills or communication skills and general knowledge. This could be seen as evidence that SDL impacts more than just language development. It is also interesting to note that 4.3 per cent of children with diagnosed SDL were reported to be developing appropriately in all five areas of the EDI. This may be the result of confusion between SDL and ESL assessments. Children who do not have a proficiency in English may be mistakenly diagnosed as SDL.

Some children who were initially diagnosed with SDL may eventually be diagnosed with a disability that is considered to be more pervasive such as autism or fetal alcohol spectrum disorder or they may be found to have a cognitive disability that is associated with the language delay. This might also explain the apparent pervasiveness of SDL.

Question for further investigation

1. Since SDL appears to connect to delays in all areas development, what does this mean for programs and services?

Severe disability

EDI information on children with severe disability (SD) was not included in Alberta baseline data, as already mentioned. Results for these children were based on 1,926 questionnaires for which parental consent was obtained and there was enough information for the questionnaires to be usable. Children with SD span a very broad range of physical, emotional and behavioural disabilities. The disabilities were grouped and results analyzed for each group in an effort to provide more meaningful information on how children were doing given their particular capabilities and challenges.

Graphic 25: Severe disability by grouping

Grouping	Number of available questionnaires
Severe cognitive disability	insufficient number
Severe emotional/behavioural disability	893
Severe multiple disability	193
Severe physical or medical disability	919
Deafness	31
Blindness	24

*Please note: Results for this group should be interpreted with caution because of the small number of children involved.

Children with SD were not included in the Canadian norm. 2,860 results cannot be reported by categories which were determined by Canadian norm cutoffs (developing appropriately, experiencing difficulty and experiencing great difficulty). Therefore, results for children with SD are reported for each of the five areas of development using the mean or average score for this group. Results are reported provincially, but not for communities because of the small size of this population of children.

Observations of the results for specific severe disability groups include:

- Severe emotional/behavioural disability – This group demonstrated the most difficulty in social competence and emotional maturity. When compared with children in all other SD categories, this group scored the lowest in emotional maturity. These results might be expected based on the diagnosis. These children scored higher in communication skills and general knowledge when compared with all other children with SD.
- Severe multiple disability - When compared to all other children with SD, this group scored lowest in the areas of physical health and well-being, language and thinking skills, and communication skills and general knowledge.
- Severe physical or medical disability – Similar to all other kindergarten children, this group scored lowest in communication skills and general knowledge.
- Deafness - When compared to all other children with a SD, this group had the best results in all areas with the exception of communication skills and general knowledge, where the results were lower than those for all groups except those with a severe multiple disability.
- Blindness - When compared to all other children with SD, this group had the second best results in four of the five areas. The exception was physical health and well-being.

Results for children with severe cognitive disability were not analyzed because of the small number of children in this group.

The EDI relies on the teacher's observations and perceptions as to how a child is developing. In the case of children with a severe disability, there was a great deal of missing information as a result of questions that have been left blank and/or completed as "don't know". This may indicate that teachers were uncertain about aspects of severe disability or that questions were not applicable to children with SD.[9]

Graphic 26: Severe disability (SD) in all five areas of development (mean scores)

Type of disability	Physical Health & Well- Being	Social Competence	Emotional Maturity	Language & Thinking Skills	Communication Skills & General Knowledge
Alberta baseline	8.6	8.4	8.0	7.5	8.3
Severe disability	6.7	5.1	5.5	6.3	4.7
Severe cognitive disability			Insufficent Data		
Severe emotional/behavioural disability	7.3	5.0	5.0	6.0	7.1
Severe multiple disability	4.9	4.3	5.8	2.2	3.4
Severe physical or medical disability	6.4	5.1	5.8	3.9	5.9
Deafness	8.0	7.5	7.7	3.3	7.2
Blindness	5.9	7.1	6.9	5.6	6.5

**Out of a possible 10.0*

Questions for further investigation

1. Is the EDI an appropriate tool for studying the developmental progress of children with SD? Does the amount of missing data indicate poor questions or lack of teacher knowledge about SD?
2. Is scoring objective and consistent across the province? When the teacher is completing a questionnaire for a child with severe disability is the child's development being considered in comparison to that of a 'typically developing' child or in comparison to other children with a disability?
3. Should the EDI guide and training for teachers be modified for use with children diagnosed with SD?

Socio-economic status

Research elsewhere has shown that social, economic and cultural characteristics of families and communities have an impact on children's development. Higher, or more favourable, socio-economic status (SES) is generally linked to more positive early development results and long-term life outcomes, and vice versa.

This appears to be the case in Alberta, as well, where the connection between SES and EDI baseline results for communities was found to be relatively high. SES was measured by developing a socio-economic index (SEI) based on Statistics Canada 2006 census data. Communities with low socio-economic levels generally scored more poorly on the EDI. Communities with more favourable socio-economic levels tended to have better results.[10] No relationship could be established between SES and children with special needs, however.

Community resources

Community resources are the services, programs and other supports that are related to early childhood development. Coalitions in Alberta gathered information on more than 23,100 early childhood development (ECD) resources. Without user rates and other measures of quality, it was not possible to determine if particular types and qualities of resources made a difference to early childhood development, including the development of children with special needs, in Alberta.[11]

Observations and interpretations

1. The EDI appears to have been a useful tool in gathering information on children with M/MD and children with a SDL but not for children with severe disabilities. Teachers responding to the EDI questionnaire for children with SD left more questions unanswered than they did for other children, suggesting the tool may not be appropriate for gauging the developmental progress of children with SD.
2. A number of inconsistencies in the data patterns were found:
   - When children with M/MD or SDL were removed from the baseline data, a large percentage of the remaining children were still identified by teachers as struggling.
   - Many children with diagnosed disabilities (M/MD or SDL) were rated by teachers as doing well on the EDI.
   - Wide variations were reported among communities in the frequency of children diagnosed with disabilities.

   One wonders about these inconsistencies and how they relate to the availability and use of diagnostic assessments across different communities.
3. There was a greater frequency of boys than girls in the M/MD and SDL groups. When EDI results for each category were examined, boys in these groups scored less well on the EDI than girls. However, the difference was less pronounced than in the Alberta baseline. Differences were also evident in the SD group but interpreting the EDI results was not possible due to missing data and small numbers of children.
4. Children who were identified as ESL were less likely to be diagnosed as M/MD or SD. However, they were more likely to be diagnosed with a severe delay involving language (SDL), a category reserved for children with severe disturbances in their overall oral and/or auditory function, regardless of language. There may be a tendency to regard non-English speakers as having a severe delay involving language because there is no one qualified to assess their language functioning in their primary language and SDL becomes the default.
5. Generally, younger age groups of children tended to have higher rates of diagnosed special needs. There were two exceptions to this general trend: there were higher rates of children with SDL and SD in the oldest age group. This anomaly did not appear to be the result of these children repeating kindergarten.
6. When the EDI results were examined by age, younger children with diagnosed M/MD or SDL were doing less well than older children. This pattern followed the general trend in the baseline cohort.
7. Overall, a percentage of children in each group (M/MD, SDL) were scored as developing appropriately in all five areas of development. Particularly noticeable was the result in the SDL group. Most children with this type of delay experienced difficulties across all areas of development, not just language development. However, the EDI analysis indicated, surprisingly, that 4.3 per cent were developing appropriately in all five areas of development despite the severe language delay.

8. Where sufficient numbers of questionnaires were usable, the data was analyzed for each community separately. There was a wide variation in the frequency of special needs across communities, from a low of 0 per cent to a high of 100 per cent in one category. This suggests an inequity across the province in either the distribution of children with special needs or in the diagnostic/assessment methodology in each community.

9. Analysis of the EDI indicated that children with M/MD experienced more difficulties than the baseline population. However 26.4 per cent of the children in this group were scored as developing appropriately in all five areas of development. As well, in some communities, children in this group were reported as doing better than their counterparts who were not diagnosed as M/MD.

Recommendations

1. Continue to gather, analyze and share EDI data on children with mild/moderate disabilities or delays and severe delays involving language as part of a comprehensive early childhood development monitoring system for Alberta; enter into an agreement with the Offord Centre and/or other partners to adapt and test the EDI for use with the group of children diagnosed with severe disabilities.

2. Examine the root causes of the wide differences between communities in the frequency of children in the M/MD and SDL groups, with particular attention to the assessment capacities and to possible assessment irregularities at the community level.

3. Develop and implement a universally available and standardized approach to screening and diagnosis for identifying children with M/MD, SDL and SD for use throughout the province, paying special attention to the community by community inequities that appear to be present using the current approach.

4. Conduct a pilot investigation to determine the cause of the large number of children who are identified both as SDL and ESL. The nature of SDL is such that it is highly unlikely that large numbers of children with this affliction are also ESL. There may be a need to clarify the indicators for and differences between each of the SDL and ESL categories.

5. Create a cross-sectoral team of experts to examine prevention strategies (prenatal, at birth and the first three years of childhood) that can reduce the number of children exhibiting mild to severe disabilities; and from this examination, develop and implement a universal prevention strategy to reduce the number of children needing more targeted intervention programs and services.

6. Examine the programs and services currently provided by several departments of government for relevance to the patterns of EDI data; and review the foundations and principles, funding criteria, eligibility criteria, and nature of the programs/services for root causes of the inequities apparent across the province.

End notes

[1] EDI results for the province, communities and subcommunities can be found on the ECMap website at www.ecmap.ca. Results can also be found in the following How are our young children doing? series of reports: *Community profiles of early childhood development in Alberta* (April 2014) and *Final report of the Early Child Development Mapping Project (ECMap)* (August 2014).

[2] See Special Education Coding Criteria 2012/2013 for more details on these categories. Downloaded Nov. 28, 2014 at http://education.alberta.ca/media/825847/spedcodingcriteria.pdf.

[3] For more details on the criteria used to determine the usability of EDI questionnaires, see pages I-12 and I-13 of the *Community profiles of early childhood development in Alberta* report.

[4] The first three criteria for usability were not applied to questionnaires for children with SD because these children were not included in the Canadian norm or the Alberta baseline analysis. Parental consent was required for EDI questionnaires for children with SD to be used in this study, however.

[5] Parental consent rates were not recorded in 2009.

[6] To download a copy of the Early Development Instrument questionnaire used in Alberta (2011-2012), go to https://www.ecmap.ca/Documents/EDIAlberta_questionnaire_2011-12.pdf.

[7] Statistics on children with special needs are given for communities when there is a minimum of 20 children in each category. This helps to ensure that the statistics are representative.

[8] Cook J.L. and Cook G. *Similarities and Differences between Boys and Girls*. Pearson Allyn Bacon Prentice Hall. Downloaded December 16, 2014 from http://www.education.com/reference/article/similarities-differences-boys-girls/

[9] The approximate percentage of missing data on EDI questionnaires for children with SD was eight per cent.

[10] A more detailed explanation of socio-economic status and an analysis of SES at the community level can be found in the *How are our young children doing? Final report of the Early Child Development Mapping Project (ECMap)*.

[11] For further information on community resources and findings, please go to *How are our young children doing? Community profiles of early childhood development in Alberta* and *Final report of the Early Child Development Mapping Project (ECMap)*. These reports can be found on the ECMap website www.ecmap.ca.

List of abbreviations

ECMap - Early Child Development Mapping Project

EDI - Early Development Instrument

DA - developing appropriately

DA5 - developing appropriately in all 5 areas of development

ED - experiencing difficulty

EGD - experiencing great difficulty

EGD1+ - experiencing great difficulty in one or more areas of development

EGD2+ - experiencing great difficulty in two or more areas of development

ESL – English as a Second Language

M/MD - mild/moderate disabilities or delays

N – number

SD - severe disabilities

SDL - severe delay involving language

SES - socio-economic status

SEI - socio-economic index

Appendices

Appendix A: Alberta Government support for children with special needs

Three Government of Alberta ministries have primary responsibility for development of policy and provision of funding for supports, services and programming for children with special needs. These services, supports and programs are delivered by various agencies and authorities at the local level. The following information was provided by the Ministries of Education, Health and Human Services.

Alberta Education

Alberta Education provides base instruction funding to school authorities that deliver Early Childhood Services (ECS) programs across Alberta. For the majority of children, this means a 475-hour kindergarten program in the year prior to grade one entry. School authorities follow the guiding principles outlined in Alberta Education's kindergarten program statement:

- childhoods differ depending on social and cultural circumstances,
- children's development is influenced but not determined by their early experiences,
- children interact and learn in a variety of contexts,
- children are co-constructors of knowledge and partners in learning,
- children are unique and active contributors to their learning,
- children construct and represent knowledge in a variety of ways,
- children are citizens and active participants in school and society,
- children are active collaborators in and users of assessment,
- children may require specialized programming and supports to develop the knowledge, skills and attitudes that engage them in their learning, and
- children and their families may require coordinated community services to meet their needs.

Children with diverse learning needs require additional supports, accommodations and adaptations to ECS programming as outlined in Alberta's Standards for the Provision of Early Childhood Special Education. The standards promote consistent, quality educational practices within Alberta so that ECS children with special needs can access appropriate programming and services that serve the best interests of the child.

In addition to base instruction funding for ECS programs, Education makes program unit funding (PUF) available to school authorities so they can provide ECS programming for children with severe disabilities/ delays who require additional support beyond that offered in a regular ECS program. A certificated teacher has primary responsibility for the development of an individualized program plan (IPP) that includes goals and objectives that focus on the development of skills to increase independence, developmental competence and the ability to participate in current and future settings. Funding is provided for individualized programming that meets the educational needs of children with a severe disability or a severe delay involving language who are at least 2 years, 6 months of age and less than 6 years of age on September 1. PUF may be accessed for a maximum of three years for each eligible child.

School authorities can also access funding for individualized programming that meets the educational needs of children with an identified mild/moderate disabilities or delays who are 3 years 6 months of age and less than 6 years of age on September 1. This funding may be accessed for a maximum of two years for each eligible child.

School authorities set their own kindergarten entry cut-off date but can access funding for children who are a minimum of 5 years of age on or before March 1 of the program year. Currently, school jurisdictions fall into one of three categories of cut-off dates for beginning kindergarten. Other school authorities such as private schools, charter schools, Francophone regional authorities and private early childhood services operators most often have a cut-off date that corresponds to that of the school jurisdiction in the same geographic area. Children must be five years of age by:

- March 1 of the program year (27 school jurisdictions),
- January 1 of the program year (30 school jurisdictions), and
- September 1 of the program year (4 school jurisdictions).

Alberta Health

Supports and services provided by Alberta Health include assessment and diagnostic services, early intervention programs, rehabilitation/allied health programs, pediatric development services, and child and youth mental health services. Family physicians, pediatricians and public health nurses are often the first point of contact for families with concerns about their child's development and provide referrals to assessment services. Services vary slightly by zone.

Developmental (Neurodevelopment) Assessment Clinics

- Provide assessment and diagnoses of severe, complex developmental delays involving cognitive, socio-emotional, language, and/or motor skills, pervasive developmental disorders such as autism and Asperger syndrome; consultation with schools, preschools, and daycares as needed.
- May offer treatment, recommendations, counselling and referrals to community services as needed.

Services are available from birth to 17 years and programs are typically divided into preschool, 5 to 13 and teen (where available). Some clinics are also specific to particular diagnosis, e.g., autism and fetal alcohol spectrum disorder (FASD).

Behavioural Services (Birth – 12)

- Provide emotional/behavioural consultation, assessment and treatment to children with behavioural needs; counselling (one-to-one and family); teaching for parents; talking with schools and other community resources.
- Offered by CHADS Behavioral Services, Medicine Hat; CASA, Edmonton; and Northern Alberta and Alberta Children's Hospital, Calgary.

Children's Mental Health

Provides services for children with mental health issues, including helping with access to the best service for individuals as quickly as possible (centralized access).

Early Intervention Programs (birth to 3.5 years)

Early Intervention Programs partner with families of children with a developmental delay or disability to:

- complete developmental screening process with families and make referrals as indicated;
- listen to questions and work with families to find answers;
- connect families to community resources and services; and
- provide information regarding development, behaviour challenges and parenting issues.

Occupational Therapy (OT) and Physiotherapy (PT)

OT focuses on the development of fine motor skills, visual-motor skills, perceptual skills, self-care skills, play skills and/or skills in coping within the environment. PT focuses on development of gross motor skills including posture, balance, coordination and the effect of muscles and joints on these skills. These motor delays may be a result of physical impairments, developmental delays or difficulties with sensory integration and are available to children and youth from birth to 18 years of age.

Offer nutrition education and assessment in all areas of nutrition including dealing with sensitivities to food textures, picky eaters, delayed eating skills and general healthy eating for children. Services may include feeding and swallowing clinics and are available to children and youth from birth to 18 years of age.

Speech-Language Therapy (SLP)

Focuses on the assessment and treatment of children for communication and feeding development. Includes pre-speech, early language, speech sound production, speech generating communication devices, use of picture symbol communication, sign language use, fluency (stuttering), chewing, sucking and swallowing and oral motor development. Is available to children and youth from birth to 18 years of age.

Pediatric Home Care or in-home medical supports (0-18)

- work with other health-care providers, such as doctors, ambulatory clinics and PT:
- support family-centred care for the child at home;
- assess and provide for the child's needs in the home/school environment;

- teach and support families as they learn to look after their child's medical needs; and
- may assist when support services such as licensed practical nurses (LPNs) or health care aids (HCAs) with pediatric training are needed.

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Specific names of programs and services vary from zone to zone.

Alberta Human Services

- Children, with differing levels of ability, and their families are provided financial support for child care through the subsidy program.
- The Inclusive Child Care Program, offered by regionally based Child and Family Services, creates flexibility to meet the individual needs of children with special needs within these child-care settings.
- The support system in each region is unique to the area's needs, culture and community resources, and may include training for child-care staff, consultation on programming or inclusion, resource and referral information and/or funding for additional staff.

The Family Support for Children with Disabilities (FSCD) program supports families of children age 0-18. Services are based on each family's individual needs rather than on the child's age or diagnosis. Families of preschool children can access FSCD services listed below. These services are intended to support families and strengthen their capacity to care for and promote their child's development and participation at home and in the community. FSCD services include:

- information and referral;
- assistance with some of the costs of attending medical appointments or hospitalizations including, mileage, parking, meals, accommodations and sibling care;
- assistance with disability related clothing and footwear costs;
- counseling;
- a range of respite options including hourly and 24-hour housekeeping as required due to disability related care demands;
- domestic child care where a nanny is the most appropriate way to address multiple needs;
- child-are supports including aide in daycare, additional space in a day home, assistance with extraordinary disability related costs for private child care, daycare costs for preschool age children who attend for developmental reasons;
- aide supports including behavioural/developmental supports, personal care supports and community support;
- assistance with some of the disability related health costs for dental, prescription drugs, prescribed diets and formulas, ambulance and medical supplies;
- specialized services involving support and consultation from speech, occupational and physical therapists and psychologists; and
- out-of-home placements.

FSCD and Early Childhood Services through Alberta Education work together to provide services to families of preschool-aged children who qualify for both Program Unit Funding (PUF) and FSCD specialized services. The PUF/FSCD common, streamlined approach to services assists families by providing an integrated service plan and a single service team.

Appendix B: Distribution of SD, SDL, and M/MD by communities

ECD Community	# of EDI Available	# of EDI Usable	# of SD	% of SD*	# of SDL	% of SDL**	# of M/MD	% of M/MD***
Athabasca and Area	362	331	5	1.4%	26	7.9%	21	6.3%
Barrhead - Fort Assiniboine	213	193	10	4.7%	7	3.6%	52	26.9%
Beaumont	505	405	6	1.2%	10	2.5%	52	12.8%
Big Lakes - Smoky River	531	384	23	4.3%	30	7.8%	57	14.8%
Bow Valley	425	386	5	1.2%	8	2.1%	66	17.1%
Brazeau County	502	404	14	2.8%	20	5.0%	90	22.3%
Brooks - Newell County	676	556	23	3.4%	27	4.9%	129	23.2%
Calgary Bowness Montgomery	243	179	6	2.5%	7	3.9%	44	24.6%
Calgary Deep South	4178	3088	82	2.0%	80	2.6%	531	17.2%
Calgary Downtown	1569	1258	29	1.8%	18	1.4%	169	13.4%
Calgary East	2238	1661	59	2.6%	133	8.0%	346	20.8%
Calgary North Central	3917	2830	81	2.1%	80	2.8%	451	15.9%
Calgary North of McKnight	3609	2538	70	1.9%	149	5.9%	420	16.5%
Calgary Northwest	2018	1493	40	2.0%	24	1.6%	229	15.3%
Calgary South Central	2063	1569	55	2.7%	72	4.6%	351	22.4%
Calgary Southwest	3207	2458	72	2.2%	41	1.7%	373	15.2%
Calgary West	1501	1247	27	1.8%	17	1.4%	220	17.6%
Camrose and Area	730	608	29	4.0%	24	3.9%	27	4.4%
Cardston County - Warner County North	577	482	15	2.6%	19	3.9%	174	36.1%
Central Peace	163	115	0	0.0%	5	4.3%	32	27.8%
Chestermere - Southeast Rocky View	680	595	13	1.9%	7	1.2%	191	32.1%
Clearwater County	474	405	7	1.5%	14	3.5%	77	19.0%
Cochrane and Area	654	568	4	0.6%	13	2.3%	192	33.8%
Crowsnest Pass and Area	105	88	1	1.0%	3	3.4%	3	3.4%
Cypress County	306	249	7	2.3%	19	7.6%	25	10.0%
Drumheller and Area	295	185	12	4.1%	6	3.2%	40	21.6%
East Grande Prairie County	355	310	6	1.7%	10	3.2%	69	22.3%
East Red Deer County	98	95	1	1.0%	2	2.1%	1	1.1%
Edmonton City Centre	968	727	30	3.1%	92	12.7%	141	19.4%
Edmonton Mill Woods	3430	2907	77	2.2%	218	7.5%	344	11.8%
Edmonton North Central	3436	2757	97	2.8%	265	9.6%	400	14.5%
Edmonton Northeast	2428	1964	92	3.8%	213	10.8%	354	18.0%
Edmonton Southeast	1076	910	27	2.5%	47	5.2%	95	10.4%
Edmonton Southwest	3381	2942	63	1.9%	129	4.4%	346	11.8%
Edmonton West	3630	2976	97	2.7%	231	7.8%	423	14.2%
Edson	358	324	14	3.9%	13	4.0%	53	16.4%
Elk Point and Area	110	92	4	3.6%	2	2.2%	14	15.2%
Fairview - Clear Hills	214	183	1	0.5%	4	2.2%	39	21.3%
Flagstaff - Beaver County	213	189	5	2.3%	8	4.2%	4	2.1%
Fort Macleod and Area	75	68	0	0.0%	2	2.9%	2	2.9%
Fort McMurray	1417	1302	27	1.9%	57	4.4%	574	44.1%
Fort Saskatchewan	467	390	7	1.5%	16	4.1%	85	21.8%
Forty Mile County	122	77	1	0.8%	8	10.4%	10	13.0%
Grande Cache	147	127	4	2.7%	7	5.5%	20	15.7%
Grande Prairie	1794	1481	35	2.0%	39	2.6%	378	25.5%
Hanna and Area	104	84	0	0.0%	1	1.2%		0.0%
Hinton - Jasper	357	317	8	2.2%	5	1.6%	21	6.6%
Innisfail	276	206	1	0.4%	7	3.4%	31	15.0%
Kneehill Area	272	232	6	2.2%	5	2.2%	6	2.6%

** % of SD calculated by: (# of SD) / (# of EDI Available)*
*** % of SDL calculated by: (# of SDL) / (# of EDI Usable)*
**** % of M/MD calculated by: (# of M/MD) / (# of EDI Usable)*
Please see note on Page 6 for further explanation.

ECD Community	# of EDI Available	# of EDI Usable	# of SD	% of SD*	# of SDL	% of SDL**	# of M/MD	% of M/MD***
Lac La Biche	380	297	9	2.4%	15	5.1%	48	16.2%
Lac Ste. Anne and Area	335	261	11	3.3%	4	1.5%	48	18.4%
Lacombe County	841	744	19	2.3%	21	2.8%	51	6.9%
Lakeland Region	1070	897	23	2.1%	34	3.8%	74	8.2%
Lamont County	198	164	5	2.5%	6	3.7%	24	14.6%
Leduc County	1356	1134	30	2.2%	37	3.3%	138	12.2%
Lethbridge	1969	1785	43	2.2%	65	3.6%	307	17.2%
Lethbridge County	620	547	18	2.9%	25	4.6%	71	13.0%
Lloydminster and Area	174	138	10	5.7%		0.0%	7	5.1%
Mackenzie District	576	486	14	2.4%	20	4.1%	39	8.0%
Manning and District	115	88	2	1.7%	3	3.4%	14	15.9%
MD of Foothills	1678	1387	37	2.2%	48	3.5%	133	9.6%
MD of Provost	128	105	2	1.6%	6	5.7%	5	4.8%
MD Taber - Warner County South	557	500	8	1.4%	28	5.6%	98	19.6%
Medicine Hat	1457	1192	69	4.7%	41	3.4%	246	20.6%
Mountain View County	731	649	12	1.6%	14	2.2%	51	7.9%
North Rocky View	1621	1397	33	2.0%	28	2.0%	427	30.6%
Northwest Peace	472	390	8	1.7%	17	4.4%	70	17.9%
Pincher Creek and Area	130	119	1	0.8%	1	0.8%	17	14.3%
Ponoka and Area	292	256	14	4.8%	14	5.5%	28	10.9%
Porcupine Hills - Willow Creek	181	140	3	1.7%	2	1.4%	3	2.1%
Red Deer and Area	2164	1871	84	3.9%	45	2.4%	223	11.9%
Rimbey and Area	131	122	5	3.8%	4	3.3%	5	4.1%
Slave Lake	209	150	2	1.0%	11	7.3%	15	10.0%
Smoky Lake and Area	100	87	5	5.0%	1	1.1%	13	14.9%
Special Area 4 - Paintearth County	144	126	2	1.4%	6	4.8%	25	19.8%
Special Areas 3 and 2 East - MD of Acadia	53	48	0	0.0%	1	2.1%	2	4.2%
Spruce Grove	1023	890	49	4.8%	36	4.0%	88	9.9%
St. Albert	1424	1258	35	2.5%	53	4.2%	84	6.7%
St. Paul and Area	357	268	19	5.3%	10	3.7%	72	26.9%
Stettler County	264	248	7	2.7%	8	3.2%	51	20.6%
Stony Plain - Wildwood	903	754	36	4.0%	20	2.7%	47	6.2%
Strathcona - Rural	598	527	11	1.8%	15	2.8%	88	16.7%
Strathcona - Sherwood Park	1739	1447	43	2.5%	34	2.3%	193	13.3%
Sturgeon County	1058	830	57	5.4%	32	3.9%	134	16.1%
Sylvan Lake and Area	420	318	11	2.6%	17	5.3%	39	12.3%
Two Hills County	177	146	3	1.7%	4	2.7%	23	15.8%
Valleyview and Area	161	117	2	1.2%	7	6.0%	11	9.4%
Vegreville and District	160	139	3	1.9%	6	4.3%	13	9.4%
Vermilion and Area	211	166	5	2.4%	8	4.8%	16	9.6%
Vulcan County	127	109	2	1.6%	4	3.7%	17	15.6%
Wabasca	286	223	4	1.4%	48	21.5%	34	15.2%
Wainwright and Area	313	264	12	3.8%	21	8.0%	21	8.0%
West Grande Prairie County	307	256	4	1.3%	8	3.1%	41	16.0%
West Red Deer County	196	161	5	2.6%	3	1.9%	12	7.5%
Westlock - Thorhild County	363	294	21	5.8%	11	3.7%	45	15.3%
Wetaskiwin and Area	856	646	16	1.9%	41	6.3%	48	7.4%
Wheatland County	584	421	24	4.1%	10	2.4%	38	9.0%
Whitecourt - Swan Hills - Fox Creek	467	403	12	2.6%	12	3.0%	77	19.1%
Wood Buffalo North	96	57	1	1.0%	7	12.3%	3	5.3%

** % of SD calculated by: (# of SD) / (# of EDI Available)*
*** % of SDL calculated by: (# of SDL) / (# of EDI Usable)*
**** % of M/MD calculated by: (# of M/MD) / (# of EDI Usable)*
Please see note on Page 6 for further explanation.

Appendix C: EDI results by area of development for M/MD in communities

ECD Community	Physical			Social			Emotional			Language			Communication		
	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA
Athabasca and Area	33.3%	9.5%	57.1%	14.3%	19.0%	66.7%	14.3%	14.3%	71.4%	23.8%	23.8%	52.4%	28.6%	28.6%	42.9%
Barrhead - Fort Assiniboine	9.6%	23.1%	67.3%	5.8%	19.2%	75.0%	11.5%	11.5%	76.9%	11.5%	32.7%	55.8%	17.3%	26.9%	55.8%
Beaumont	17.3%	11.5%	71.2%	17.3%	7.7%	75.0%	7.7%	25.0%	67.3%	13.5%	17.3%	67.3%	9.6%	11.5%	78.8%
Big Lakes - Smoky River	40.4%	19.3%	40.4%	22.8%	24.6%	52.6%	19.3%	28.1%	52.6%	24.6%	14.0%	61.4%	52.6%	19.3%	28.1%
Bow Valley	24.2%	12.1%	63.6%	15.2%	21.2%	63.6%	21.2%	21.2%	57.6%	7.6%	33.3%	59.1%	13.6%	16.7%	69.7%
Brazeau County	32.2%	15.6%	52.2%	13.3%	28.9%	57.8%	20.0%	20.0%	60.0%	30.0%	24.4%	45.6%	31.1%	33.3%	35.6%
Brooks - Newell County	26.4%	12.4%	61.2%	13.2%	19.4%	67.4%	15.5%	18.6%	65.9%	17.1%	17.8%	64.3%	26.4%	23.3%	50.4%
Calgary Bowness Montgomery	25.0%	13.6%	59.1%	13.6%	27.3%	59.1%	18.2%	18.2%	63.6%	36.4%	25.0%	38.6%	18.2%	47.7%	34.1%
Calgary Deep South	18.1%	15.3%	66.5%	18.1%	18.5%	63.5%	14.3%	16.2%	68.4%	13.4%	15.3%	71.4%	22.6%	16.4%	61.0%
Calgary Downtown	18.3%	17.8%	63.9%	18.9%	18.9%	62.1%	20.7%	17.8%	60.9%	11.2%	19.5%	69.2%	26.0%	15.4%	58.6%
Calgary East	38.7%	18.5%	42.8%	19.4%	26.3%	54.3%	27.5%	16.2%	56.4%	24.0%	20.8%	55.2%	35.0%	22.3%	42.8%
Calgary North Central	22.6%	16.0%	61.4%	16.0%	19.5%	64.3%	17.1%	14.2%	68.5%	13.7%	19.1%	66.3%	26.8%	19.7%	53.4%
Calgary North of McKnight	33.6%	18.6%	47.9%	24.8%	17.1%	58.1%	20.7%	15.7%	62.4%	28.3%	25.0%	46.4%	41.2%	21.9%	36.9%
Calgary Northwest	22.7%	15.3%	62.0%	14.4%	19.7%	65.9%	18.8%	16.6%	64.6%	14.4%	18.8%	66.8%	25.8%	21.0%	53.3%
Calgary South Central	22.5%	17.1%	60.4%	15.7%	17.4%	67.0%	14.5%	16.5%	68.1%	12.3%	17.7%	70.1%	20.2%	22.8%	57.0%
Calgary Southwest	16.9%	19.0%	64.1%	13.7%	19.0%	67.3%	14.7%	16.1%	68.9%	10.2%	19.0%	70.8%	18.5%	24.7%	56.8%
Calgary West	16.8%	16.8%	66.4%	13.6%	15.0%	71.4%	12.7%	14.1%	72.7%	10.0%	14.5%	74.1%	23.6%	27.3%	49.1%
Camrose and Area	25.9%	14.8%	59.3%	11.1%	44.4%	44.4%	29.6%	22.2%	48.1%	29.6%	11.1%	59.3%	40.7%	29.6%	29.6%
Cardston County - Warner County North	10.9%	11.5%	77.6%	4.6%	17.8%	77.6%	12.1%	17.2%	70.7%	6.9%	10.3%	82.8%	17.2%	23.0%	59.8%
Central Peace	18.8%	25.0%	56.3%	15.6%	31.3%	53.1%	25.0%	21.9%	53.1%	15.6%	31.3%	53.1%	28.1%	31.3%	40.6%
Chestermere - Southeast Rocky View	16.8%	16.8%	66.5%	9.4%	18.3%	72.3%	14.7%	20.9%	64.4%	11.0%	16.8%	72.3%	19.4%	23.6%	57.1%
Clearwater County	28.6%	11.7%	59.7%	15.6%	35.1%	49.4%	16.9%	24.7%	58.4%	32.5%	16.9%	50.6%	31.2%	22.1%	46.8%
Cochrane and Area	19.8%	12.5%	67.7%	19.8%	19.3%	60.9%	15.6%	22.4%	62.0%	16.1%	20.3%	63.5%	24.5%	20.3%	55.2%
Crowsnest Pass and Area							Insufficient data								
Cypress County	16.0%	20.0%	64.0%	12.0%	44.0%	44.0%	24.0%	24.0%	52.0%	4.0%	16.0%	80.0%	12.0%	44.0%	44.0%
Drumheller and Area	25.0%	17.5%	57.5%	17.5%	10.0%	72.5%	17.5%	17.5%	65.0%	17.5%	10.0%	72.5%	17.5%	20.0%	62.5%
East Grande Prairie County	14.5%	11.6%	73.9%	8.7%	14.5%	76.8%	7.2%	14.5%	78.3%	15.9%	15.9%	68.1%	29.0%	18.8%	52.2%
East Red Deer County							Insufficient data								
Edmonton City Centre	32.6%	20.6%	46.8%	16.3%	28.4%	55.3%	26.2%	22.0%	51.8%	14.2%	24.8%	61.0%	33.3%	22.7%	44.0%
Edmonton Mill Woods	25.3%	21.8%	52.9%	21.2%	21.8%	57.0%	18.3%	22.1%	59.3%	15.4%	20.1%	64.5%	32.6%	21.2%	46.2%
Edmonton North Central	26.0%	18.5%	55.5%	17.8%	25.5%	56.8%	18.8%	25.3%	56.0%	15.5%	22.0%	62.5%	25.3%	20.5%	54.3%
Edmonton Northeast	32.2%	15.3%	52.5%	19.5%	27.4%	53.1%	25.4%	25.1%	49.4%	15.8%	18.4%	65.8%	25.4%	28.5%	46.0%
Edmonton Southeast	23.2%	12.6%	64.2%	11.6%	22.1%	66.3%	18.9%	16.8%	64.2%	8.4%	16.8%	74.7%	22.1%	14.7%	63.2%
Edmonton Southwest	19.4%	13.0%	67.3%	9.2%	19.9%	70.8%	12.7%	19.7%	67.6%	10.1%	17.3%	72.5%	19.1%	16.8%	64.2%
Edmonton West	32.2%	13.9%	53.9%	15.6%	23.9%	60.5%	22.5%	22.0%	55.6%	13.9%	23.6%	62.4%	26.7%	21.5%	51.8%
Edson	34.0%	11.3%	54.7%	17.0%	26.4%	56.6%	22.6%	18.9%	58.5%	17.0%	22.6%	60.4%	32.1%	34.0%	34.0%
Elk Point and Area							Insufficient data								
Fairview - Clear Hills	25.6%	12.8%	61.5%	33.3%	17.9%	48.7%	23.1%	28.2%	48.7%	12.8%	17.9%	69.2%	33.3%	23.1%	43.6%
Flagstaff - Beaver County							Insufficient data								
Fort Macleod and Area							Insufficient data								
Fort McMurray	29.3%	15.3%	55.4%	16.7%	24.2%	59.1%	15.7%	21.4%	62.9%	14.6%	20.6%	64.8%	22.1%	28.7%	49.1%
Fort Saskatchewan	21.2%	24.7%	54.1%	22.4%	20.0%	57.6%	17.6%	23.5%	58.8%	10.6%	20.0%	69.4%	29.4%	17.6%	52.9%
Forty Mile County							Insufficient data								
Grande Cache	25.0%	20.0%	55.0%	0.0%	40.0%	60.0%	5.0%	40.0%	55.0%	25.0%	10.0%	65.0%	30.0%	20.0%	50.0%
Grande Prairie	26.2%	16.9%	56.9%	22.2%	16.4%	61.4%	20.9%	22.0%	57.1%	13.5%	21.4%	64.8%	26.7%	26.7%	46.6%
Hanna and Area							Insufficient data								
Hinton - Jasper	33.3%	9.5%	57.1%	9.5%	28.6%	61.9%	19.0%	28.6%	47.6%	14.3%	19.0%	66.7%	14.3%	28.6%	57.1%
Innisfail	25.8%	12.9%	61.3%	41.9%	22.6%	35.5%	12.9%	25.8%	61.3%	35.5%	25.8%	38.7%	45.2%	25.8%	29.0%
Kneehill Area							Insufficient data								

Insufficient data: EDI data on less than 20 children

ECD Community	Physical			Social			Emotional			Language			Communication		
	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA
Lac La Biche	50.0%	16.7%	33.3%	22.9%	25.0%	52.1%	22.9%	25.0%	52.1%	29.2%	16.7%	54.2%	54.2%	12.5%	33.3%
Lac Ste. Anne and Area	12.5%	14.6%	72.9%	18.8%	18.8%	62.5%	16.7%	18.8%	64.6%	16.7%	10.4%	72.9%	14.6%	22.9%	62.5%
Lacombe County	25.5%	13.7%	60.8%	21.6%	19.6%	58.8%	25.5%	15.7%	58.8%	19.6%	31.4%	49.0%	39.2%	17.6%	43.1%
Lakeland Region	29.7%	12.2%	58.1%	16.2%	14.9%	68.9%	24.3%	13.5%	62.2%	13.5%	29.7%	56.8%	32.4%	28.4%	39.2%
Lamont County	25.0%	4.2%	70.8%	8.3%	33.3%	58.3%	25.0%	4.2%	70.8%	16.7%	25.0%	58.3%	16.7%	0.0%	83.3%
Leduc County	20.3%	13.0%	66.7%	17.4%	23.9%	58.7%	18.1%	23.9%	57.2%	11.6%	18.8%	69.6%	26.1%	23.2%	50.7%
Lethbridge	26.7%	8.5%	64.8%	18.6%	16.3%	65.1%	18.2%	16.3%	64.8%	20.2%	12.1%	67.8%	22.8%	17.9%	59.3%
Lethbridge County	11.3%	12.7%	76.1%	4.2%	12.7%	83.1%	7.0%	14.1%	78.9%	5.6%	22.5%	71.8%	16.9%	19.7%	63.4%
Lloydminster and Area							Insufficient data								
Mackenzie District	20.5%	12.8%	66.7%	17.9%	17.9%	64.1%	17.9%	28.2%	53.8%	5.1%	30.8%	64.1%	43.6%	15.4%	41.0%
Manning and District							Insufficient data								
MD of Foothills	26.3%	8.3%	65.4%	12.0%	22.6%	65.4%	18.0%	22.6%	59.4%	18.0%	18.0%	63.9%	21.8%	16.5%	61.7%
MD of Provost							Insufficient data								
MD Taber - Warner County South							Insufficient data								
Medicine Hat	35.8%	11.0%	53.3%	17.1%	25.6%	57.3%	23.2%	19.1%	57.7%	18.7%	25.6%	55.7%	19.5%	21.5%	58.9%
Mountain View County	11.8%	17.6%	70.6%	17.6%	21.6%	60.8%	15.7%	21.6%	62.7%	23.5%	19.6%	56.9%	17.6%	31.4%	51.0%
North Rocky View	23.0%	22.7%	54.3%	24.8%	17.3%	57.8%	17.3%	22.5%	60.2%	17.1%	17.6%	65.3%	24.6%	29.5%	45.9%
Northwest Peace	28.6%	12.9%	58.6%	12.9%	21.4%	65.7%	15.7%	18.6%	65.7%	20.0%	18.6%	61.4%	38.6%	27.1%	34.3%
Pincher Creek and Area							Insufficient data								
Ponoka and Area	46.4%	21.4%	32.1%	32.1%	21.4%	46.4%	14.3%	32.1%	53.6%	42.9%	14.3%	42.9%	50.0%	28.6%	21.4%
Porcupine Hills - Willow Creek							Insufficient data								
Red Deer and Area	22.9%	14.3%	62.8%	23.8%	21.1%	55.2%	19.7%	23.3%	57.0%	35.0%	21.5%	43.5%	34.5%	19.7%	45.7%
Rimbey and Area							Insufficient data								
Slave Lake							Insufficient data								
Smoky Lake and Area							Insufficient data								
Special Area 4 - Paintearth County	24.0%	24.0%	52.0%	28.0%	28.0%	44.0%	40.0%	16.0%	44.0%	24.0%	40.0%	36.0%	56.0%	20.0%	24.0%
Special Areas 3 and 2 East - MD of Acadia							Insufficient data								
Spruce Grove	27.3%	20.5%	51.1%	15.9%	17.0%	67.0%	11.4%	18.2%	70.5%	17.0%	29.5%	53.4%	37.5%	31.8%	30.7%
St. Albert	26.2%	8.3%	65.5%	10.7%	27.4%	61.9%	17.9%	17.9%	63.1%	10.7%	29.8%	59.5%	22.6%	29.8%	47.6%
St. Paul and Area	31.9%	15.3%	52.8%	18.1%	31.9%	50.0%	19.4%	31.9%	48.6%	37.5%	13.9%	48.6%	38.9%	6.9%	54.2%
Stettler County	15.7%	21.6%	62.7%	17.6%	23.5%	58.8%	19.6%	23.5%	56.9%	21.6%	23.5%	51.0%	33.3%	17.6%	49.0%
Stony Plain - Wildwood	25.5%	14.9%	59.6%	17.0%	40.4%	42.6%	27.7%	19.1%	53.2%	12.8%	23.4%	63.8%	23.4%	23.4%	53.2%
Strathcona - Rural	26.1%	14.8%	59.1%	13.6%	21.6%	64.8%	15.9%	18.2%	62.5%	8.0%	23.9%	68.2%	23.9%	25.0%	51.1%
Strathcona - Sherwood Park	21.2%	25.4%	53.4%	16.1%	20.2%	63.7%	15.5%	21.8%	61.7%	10.9%	23.3%	65.8%	26.4%	18.1%	55.4%
Sturgeon County	19.4%	20.1%	60.4%	9.7%	31.3%	59.0%	18.7%	24.6%	56.7%	20.1%	18.7%	61.2%	23.1%	23.9%	53.0%
Sylvan Lake and Area	7.7%	12.8%	79.5%	15.4%	17.9%	66.7%	10.3%	12.8%	76.9%	5.1%	30.8%	64.1%	20.5%	28.2%	51.3%
Two Hills County	8.7%	17.4%	73.9%	8.7%	21.7%	69.6%	8.7%	17.4%	73.9%	0.0%	39.1%	60.9%	26.1%	13.0%	60.9%
Valleyview and Area							Insufficient data								
Vegreville and District							Insufficient data								
Vermilion and Area							Insufficient data								
Vulcan County							Insufficient data								
Wabasca	26.5%	8.8%	64.7%	17.6%	23.5%	58.8%	20.6%	11.8%	67.6%	5.9%	14.7%	79.4%	8.8%	26.5%	64.7%
Wainwright and Area	57.1%	9.5%	33.3%	42.9%	23.8%	33.3%	52.4%	14.3%	33.3%	47.6%	28.6%	23.8%	38.1%	23.8%	38.1%
West Grande Prairie County	24.4%	9.8%	65.9%	17.1%	17.1%	65.9%	14.6%	14.6%	70.7%	22.0%	26.8%	51.2%	43.9%	22.0%	34.1%
West Red Deer County															
Westlock - Thorhild County	15.6%	17.8%	66.7%	8.9%	11.1%	80.0%		15.6%	84.4%	24.4%	31.1%	44.4%	15.6%	24.4%	60.0%
Wetaskiwin and Area	37.5%	14.6%	47.9%	37.5%	22.9%	39.6%	29.2%	31.3%	39.6%	27.1%	31.3%	41.7%	41.7%	20.8%	37.5%
Wheatland County	28.9%	15.8%	55.3%	21.1%	36.8%	42.1%	21.1%	18.4%	50.0%	18.4%	18.4%	63.2%	34.2%	23.7%	42.1%
Whitecourt - Swan Hills - Fox Creek	35.1%	19.5%	45.5%	19.5%	41.6%	39.0%	22.1%	15.6%	62.3%	19.5%	24.7%	55.8%	29.9%	28.6%	41.6%
Wood Buffalo North							Insufficient data								
Wood Buffalo South							Insufficient data								

Insufficient data: EDI data on less than 20 children

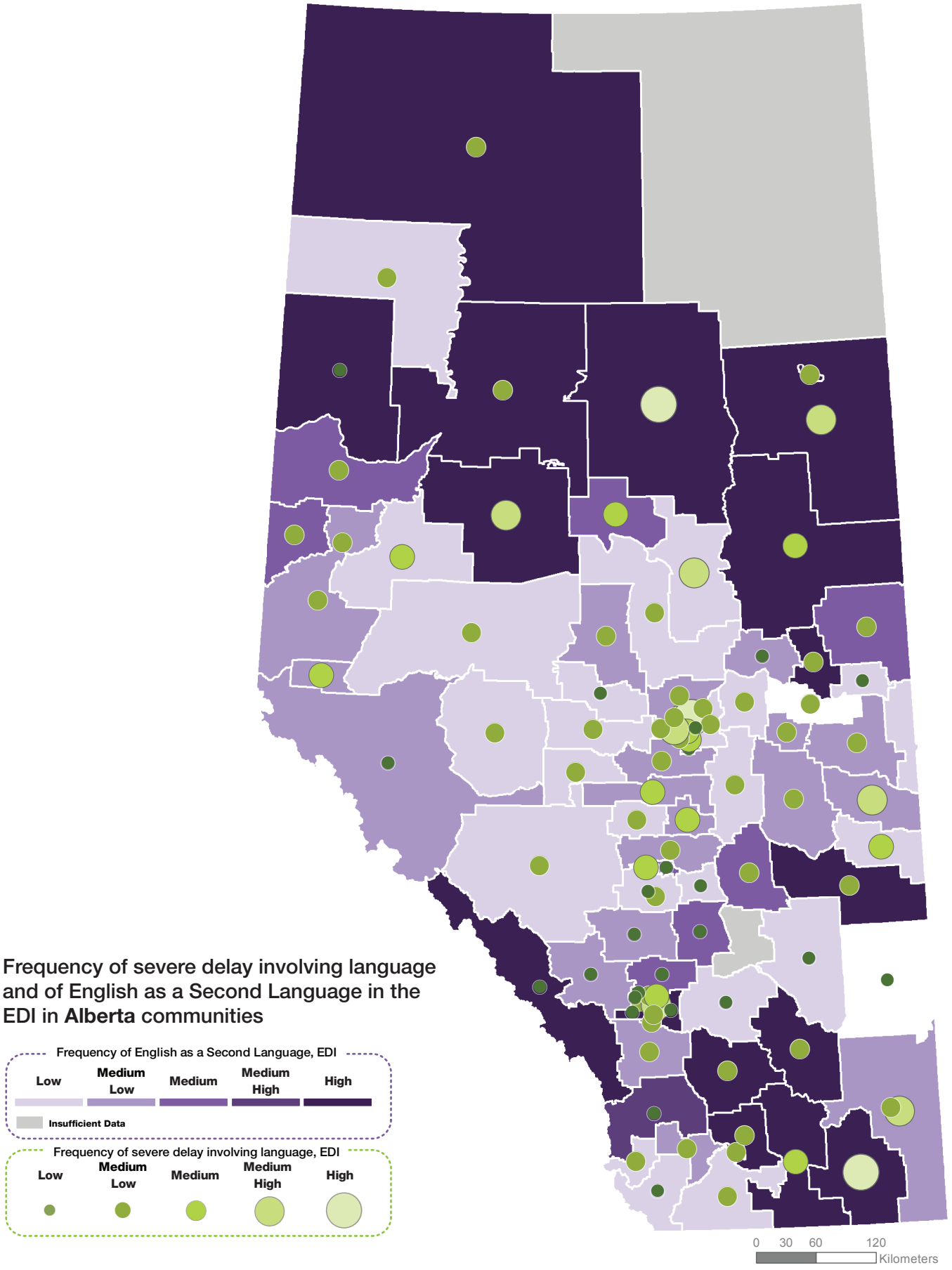
ECD Community	Physical			Social			Emotional			Language			Communication		
	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA
Athabasca and Area	50.0%	7.7%	42.3%	42.3%	19.2%	38.5%	42.3%	19.2%	38.5%	61.5%	23.1%	15.4%	73.1%	11.5%	15.4%
Barrhead - Fort Assiniboine							Insufficient data								
Beaumont							Insufficient data								
Big Lakes - Smoky River	56.7%	3.3%	40.0%	23.3%	46.7%	30.0%	40.0%	40.0%	20.0%	30.0%	33.3%	36.7%	66.7%	20.0%	13.3%
Bow Valley															
Brazeau County	40.0%	10.0%	50.0%	55.0%	15.0%	30.0%	60.0%	15.0%	25.0%	55.0%	5.0%	40.0%	70.0%	10.0%	20.0%
Brooks - Newell County	55.6%	14.8%	29.6%	40.7%	29.6%	29.6%	33.3%	37.0%	29.6%	59.3%	7.4%	33.3%	77.8%	11.1%	11.1%
Calgary Bowness Montgomery															
Calgary Deep South	37.5%	15.0%	47.5%	41.3%	17.5%	41.3%	22.5%	28.8%	48.8%	41.3%	25.0%	33.8%	68.8%	13.8%	17.5%
Calgary Downtown															
Calgary East	62.4%	14.3%	23.3%	54.9%	20.3%	24.8%	46.6%	24.1%	29.3%	57.9%	16.5%	25.6%	89.5%	6.8%	3.8%
Calgary North Central	32.5%	10.0%	57.5%	35.0%	23.8%	41.3%	30.0%	35.0%	35.0%	37.5%	21.3%	41.3%	71.3%	18.8%	10.0%
Calgary North of McKnight	48.3%	18.8%	32.2%	44.3%	22.8%	32.9%	34.2%	21.5%	43.6%	51.0%	23.5%	25.5%	77.2%	8.7%	14.1%
Calgary Northwest	50.0%	4.2%	45.8%	41.7%	29.2%	29.2%	29.2%	41.7%	29.2%	62.5%	12.5%	25.0%	79.2%	12.5%	8.3%
Calgary South Central	50.0%	12.5%	37.5%	44.4%	27.8%	27.8%	43.1%	19.4%	37.5%	55.6%	22.2%	22.2%	83.3%	6.9%	9.7%
Calgary Southwest	41.5%	17.1%	41.5%	46.3%	14.6%	39.0%	46.3%	14.6%	39.0%	31.7%	34.1%	34.1%	65.9%	17.1%	17.1%
Calgary West							Insufficient data								
Camrose and Area	37.5%	8.3%	54.2%	33.3%	25.0%	41.7%	45.8%	8.3%	45.8%	41.7%	25.0%	33.3%	70.8%	12.5%	16.7%
Cardston County - Warner County North							Insufficient data								
Central Peace							Insufficient data								
Chestermere - Southeast Rocky View							Insufficient data								
Clearwater County							Insufficient data								
Cochrane and Area							Insufficient data								
Crowsnest Pass and Area							Insufficient data								
Cypress County							Insufficient data								
Drumheller and Area							Insufficient data								
East Grande Prairie County							Insufficient data								
East Red Deer County							Insufficient data								
Edmonton City Centre	63.0%	19.6%	17.4%	45.7%	29.3%	25.0%	59.8%	16.3%	23.9%	51.1%	25.0%	22.8%	80.4%	8.7%	10.9%
Edmonton Mill Woods	43.6%	20.2%	36.2%	38.1%	24.8%	37.2%	36.2%	23.9%	39.9%	41.7%	23.4%	34.9%	71.6%	15.6%	12.8%
Edmonton North Central	48.7%	18.9%	32.5%	39.2%	30.6%	30.2%	39.6%	27.5%	32.8%	43.4%	24.2%	32.5%	72.1%	13.2%	14.7%
Edmonton Northeast	52.6%	17.8%	29.6%	42.3%	27.2%	30.5%	42.7%	23.9%	33.3%	44.6%	21.6%	33.8%	78.9%	11.3%	9.9%
Edmonton Southeast	57.4%	17.0%	25.5%	59.6%	21.3%	19.1%	53.2%	21.3%	25.5%	48.9%	23.4%	27.7%	85.1%	8.5%	6.4%
Edmonton Southwest	42.6%	19.4%	38.0%	35.7%	28.7%	35.7%	31.8%	29.5%	38.8%	42.6%	24.0%	33.3%	79.8%	7.0%	13.2%
Edmonton West	56.7%	13.0%	30.3%	39.8%	31.6%	28.6%	42.9%	26.8%	30.3%	51.9%	26.4%	21.2%	75.8%	10.8%	13.4%
Edson							Insufficient data								
Elk Point and Area							Insufficient data								
Fairview - Clear Hills							Insufficient data								
Flagstaff - Beaver County							Insufficient data								
Fort Macleod and Area							Insufficient data								
Fort McMurray	57.9%	10.5%	31.6%	52.6%	19.3%	28.1%	36.8%	24.6%	38.6%	49.1%	19.3%	29.8%	78.9%	8.8%	12.3%
Fort Saskatchewan							Insufficient data								
Forty Mile County							Insufficient data								
Grande Cache							Insufficient data								
Grande Prairie	61.5%	17.9%	20.5%	38.5%	33.3%	28.2%	56.4%	12.8%	30.8%	41.0%	33.3%	25.6%	84.6%	7.7%	7.7%
Hanna and Area							Insufficient data								
Hinton - Jasper							Insufficient data								
Innisfail							Insufficient data								
Kneehill Area							Insufficient data								

Insufficient data: EDI data on less than 20 children

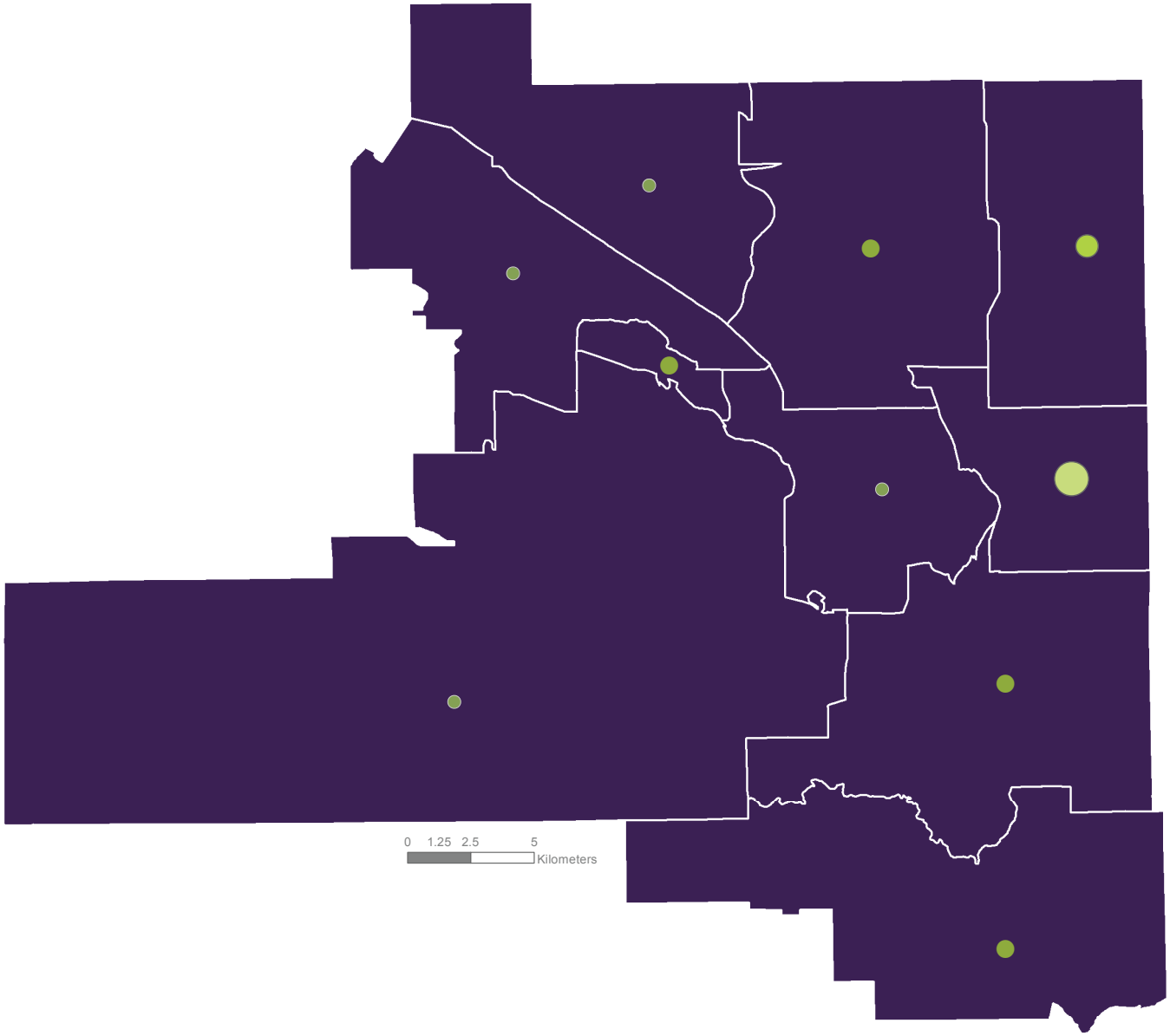
ECD Community	Physical			Social			Emotional			Language			Communication		
	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA	EGD	ED	DA
Lac La Biche							Insufficient data								
Lac Ste. Anne and Area							Insufficient data								
Lacombe County	33.3%	23.8%	42.9%	28.6%	23.8%	47.6%	23.8%	47.6%	28.6%	42.9%	28.6%	28.6%	71.4%	4.8%	23.8%
Lakeland Region	64.7%	11.8%	23.5%	55.9%	32.4%	11.8%	52.9%	35.3%	11.8%	67.6%	14.7%	17.6%	85.3%	11.8%	2.9%
Lamont County							Insufficient data								
Leduc County	56.8%	8.1%	35.1%	40.5%	32.4%	27.0%	43.2%	29.7%	27.0%	45.9%	29.7%	24.3%	83.8%	16.2%	0.0%
Lethbridge	49.2%	18.5%	32.3%	43.1%	24.6%	32.3%	40.0%	23.1%	36.9%	47.7%	20.0%	32.3%	83.1%	9.2%	7.7%
Lethbridge County	32.0%	28.0%	40.0%	28.0%	16.0%	56.0%	24.0%	20.0%	52.0%	52.0%	24.0%	24.0%	76.0%	16.0%	8.0%
Lloydminster and Area							Insufficient data								
Mackenzie District	35.0%	20.0%	45.0%	50.0%	30.0%	20.0%	45.0%	35.0%	20.0%	50.0%	15.0%	35.0%	85.0%	10.0%	5.0%
Manning and District							Insufficient data								
MD of Foothills	60.4%	14.6%	25.0%	41.7%	25.0%	33.3%	39.6%	22.9%	37.5%	39.6%	18.8%	41.7%	64.6%	12.5%	22.9%
MD of Provost							Insufficient data								
MD Taber - Warner County South	53.6%	7.1%	39.3%	25.0%	25.0%	50.0%	21.4%	28.6%	50.0%	39.3%	28.6%	32.1%	71.4%	17.9%	10.7%
Medicine Hat	48.8%	12.2%	39.0%	36.6%	26.8%	36.6%	41.5%	24.4%	34.1%	36.6%	14.6%	48.8%	61.0%	12.2%	26.8%
Mountain View County							Insufficient data								
North Rocky View	28.6%	25.0%	46.4%	46.4%	25.0%	28.6%	28.6%	32.1%	39.3%	32.1%	28.6%	39.3%	78.6%	7.1%	14.3%
Northwest Peace							Insufficient data								
Pincher Creek and Area							Insufficient data								
Ponoka and Area							Insufficient data								
Porcupine Hills - Willow Creek							Insufficient data								
Red Deer and Area	51.1%	13.3%	35.6%	42.2%	22.2%	35.6%	42.2%	22.2%	35.6%	66.7%	11.1%	22.2%	80.0%	2.2%	17.8%
Rimbey and Area							Insufficient data								
Slave Lake							Insufficient data								
Smoky Lake and Area							Insufficient data								
Special Area 4 - Paintearth County							Insufficient data								
Special Areas 3 and 2 East - MD of Acadia							Insufficient data								
Spruce Grove	36.1%	16.7%	47.2%	50.0%	13.9%	36.1%	38.9%	25.0%	36.1%	44.4%	25.0%	30.6%	77.8%	8.3%	13.9%
St. Albert	39.6%	13.2%	47.2%	37.7%	28.3%	34.0%	37.7%	34.0%	28.3%	30.2%	43.4%	26.4%	67.9%	24.5%	7.5%
St. Paul and Area							Insufficient data								
Stettler County							Insufficient data								
Stony Plain - Wildwood	60.0%	10.0%	30.0%	45.0%	25.0%	30.0%	40.0%	20.0%	40.0%	60.0%	30.0%	10.0%	80.0%	5.0%	15.0%
Strathcona - Rural							Insufficient data								
Strathcona - Sherwood Park	23.5%	11.8%	64.7%	23.5%	17.6%	58.8%	26.5%	29.4%	44.1%	29.4%	32.4%	38.2%	55.9%	20.6%	23.5%
Sturgeon County	50.0%	12.5%	37.5%	34.4%	28.1%	37.5%	15.6%	37.5%	46.9%	40.6%	21.9%	37.5%	53.1%	25.0%	21.9%
Sylvan Lake and Area							Insufficient data								
Two Hills County							Insufficient data								
Valleyview and Area							Insufficient data								
Vegreville and District							Insufficient data								
Vermilion and Area							Insufficient data								
Vulcan County							Insufficient data								
Wabasca	47.9%	14.6%	37.5%	37.5%	33.3%	29.2%	43.8%	25.0%	31.3%	45.8%	18.8%	35.4%	54.2%	25.0%	20.8%
Wainwright and Area	57.1%	4.8%	38.1%	52.4%	23.8%	23.8%	42.9%	38.1%	19.0%	61.9%	19.0%	14.3%	66.7%	19.0%	14.3%
West Grande Prairie County							Insufficient data								
West Red Deer County							Insufficient data								
Westlock - Thorhild County							Insufficient data								
Wetaskiwin and Area	56.1%	14.6%	29.3%	41.5%	29.3%	29.3%	48.8%	22.0%	29.3%	41.5%	26.8%	31.7%	68.3%	22.0%	9.8%
Wheatland County							Insufficient data								
Whitecourt - Swan Hills - Fox Creek							Insufficient data								
Wood Buffalo North							Insufficient data								
Wood Buffalo South							Insufficient data								

Insufficient data: EDI data on less than 20 children

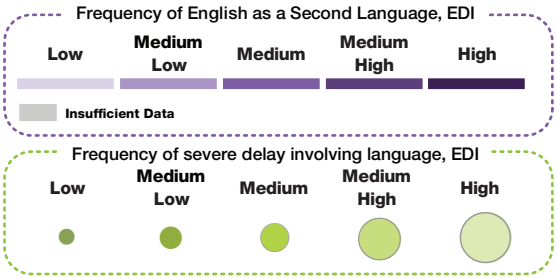
Appendix E: Frequency of SDL and ESL by communities

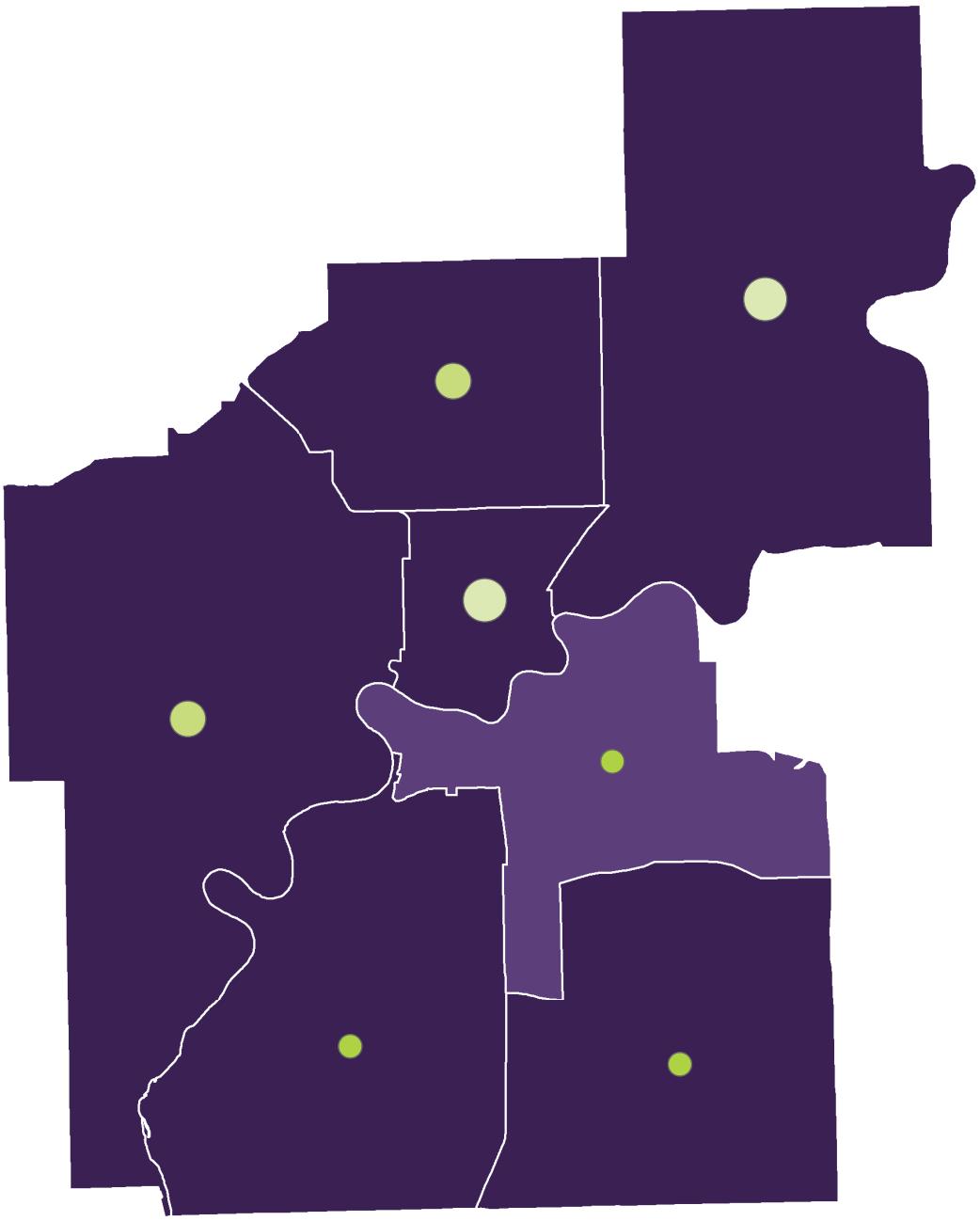


Frequency of severe delay involving language and of English as a Second Language in the EDI in **Alberta** communities

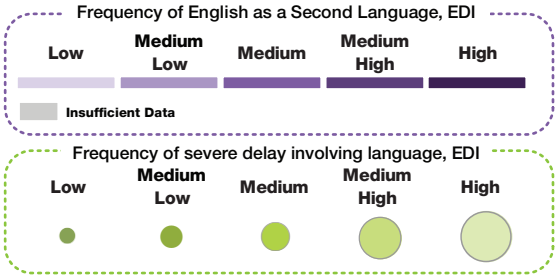


Frequency of severe delay involving language and of English as a Second Language on the EDI in **Calgary** communities





Frequency of severe delay involving language and of English as a Second Language on the EDI in **Edmonton** communities



Mapping a bright future for Alberta's young children

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