

# Least and most advantaged Albertan youth

## Child and Youth Data Laboratory (CYDL)

### Report for *Experiences of Albertan Youth Project*

## Key findings

This report provides a profile of the 2,281 least and 7,517 most advantaged Albertan youth between 12 and 17 years who were receiving provincial government services in 2008/09. *Least advantaged* is defined here as youth who were performing below educational expectations in the K-12 education system, who had a mental health condition, and who were living in the lowest socio-economic status neighbourhoods. Conversely, *most advantaged* youth performed above educational expectations, did not have a mental health condition, and lived in the highest socio-economic status neighbourhoods.

The relationships between advantage status and age, gender, region of residence, and health service use are examined for least and most advantaged youth, in comparison to remaining Albertan youth. The cross-ministry service use of least and most advantaged youth is also considered. The report concludes with a look at the educational achievement of youth experiencing challenges.

- 1.1% of Albertan youth were least advantaged, and 3.6% were most advantaged.
- The least advantaged youth were more likely than the remaining youth to be male, live in rural areas, be hospitalized, visit an emergency room, or receive maltreatment-related services; most advantaged youth were less likely than remaining youth to have these characteristics.
- Additionally, least advantaged youth were more likely than the remaining youth to visit physicians five or more times, to receive Family Support for Children with Disabilities services, to be charged with an offence, or to be involved in corrections. *Psychiatric or pregnancy-related* hospitalizations and *mental or behavioural* emergency room visits were more common among hospitalizations and emergency room visits for least advantaged youth than for the remaining youth.
- Additional analyses looked at challenged youth (such as youth involved in corrections or receiving maltreatment-related services), and found that, despite the challenges they faced, some youth performed well in school. Better educational outcomes were associated with being female, living in a higher socio-economic status neighbourhood, not having a mental health condition, and lower rates of health service use.



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# Least and most advantaged Albertan youth

## Context

Socio-economic status, mental health, and education have interrelated effects on youth. Socio-economic status is a strong predictor of academic outcomes, with lower grades and more school absences for low-income students.<sup>1</sup> Health care services are used twice as much by individuals in the lowest income situations compared to those in the highest income situations.<sup>2</sup> Mental health problems in youth are associated with aggression and delinquent behaviour,<sup>3</sup> negative impacts on families, long-term impairments and high costs for society.<sup>4</sup> Low educational achievement is associated with increased risk for delinquency in adolescence,<sup>5</sup> and difficulties obtaining higher education and employment in adulthood.<sup>6</sup>

Living in an advantaged neighbourhood results in better outcomes for both high and low socio-economic status children;<sup>7</sup> the outcomes for all youth become more positive as the average socio-economic status in a school community increases.<sup>8</sup> Positive mental health can serve as a protective factor against negative behaviours in adolescence,<sup>3</sup> and education can increase positive health,<sup>9</sup> employment and income outcomes<sup>6</sup> across the life course.

Some youth are resilient to the negative effects of the challenges they experience.<sup>10</sup> Individual, family and community factors contribute to this resilience.<sup>10</sup> For example, in one study, youth receiving child intervention services were more likely to succeed if they remained in school longer, which was associated with protective factors such as stability in their education, exposure to positive social activities, and mentorship from an adult who provided guidance and support.<sup>10</sup>

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## The project

The current project, **Experiences of Albertan Youth**, is focused on basic understanding of the experiences of Albertan youth within and across ministries, as they relate to key indicators (age, gender, socio-economic status, educational achievement, and mental health status). It is the first project in a planned series that will link and analyze administrative data on children and youth in Alberta to inform policy, programs, and research.

## List of reports for the project

*Socio-economic status of Albertan youth*  
*Educational experiences of Albertan youth*  
*Mental health status of Albertan youth*  
*Family Support for Children with Disabilities services received by Albertan youth*  
*Maltreatment-related investigations among Albertan youth*  
*Maltreatment-related intervention services received by Albertan youth*  
*Physician visits by Albertan youth*

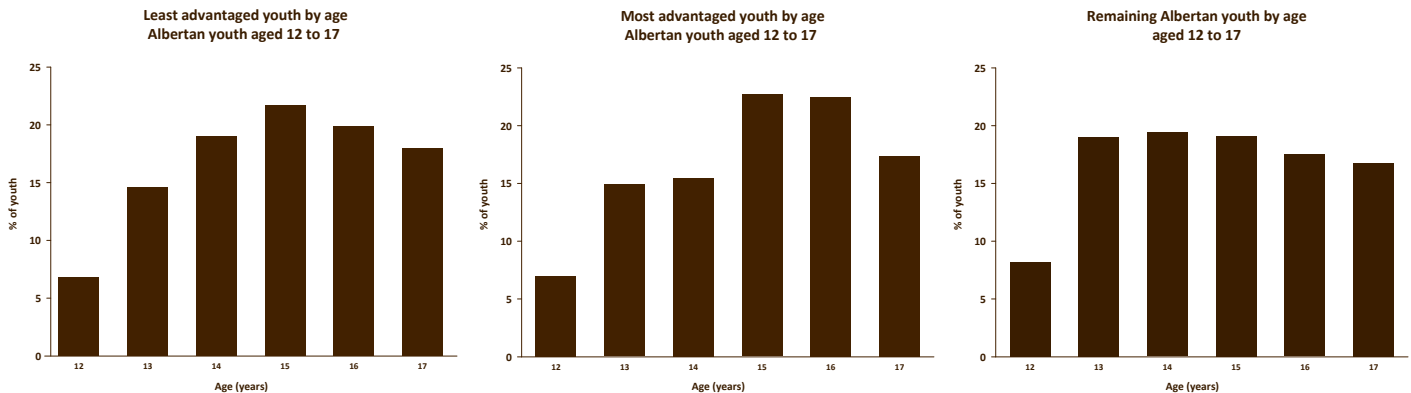
*Emergency room visits by Albertan youth*  
*Hospitalizations of Albertan youth*  
*Offence charges among Albertan youth*  
*Corrections involvement among Albertan youth*  
*Post-secondary students in Alberta*  
*Income support among Albertan youth*  
*Educational experiences of Albertan youth with income support activity*  
*Least advantaged and most advantaged Albertan youth*

# Least and most advantaged Albertan youth

## Least and most advantaged youth by age (Tables 1 and 2)

This analysis considers the least and most advantaged youth (aged 12 to 17 years) in Alberta in 2008/09. *Least advantaged* is defined here as youth who were performing below expectations in school, had a mental health condition, and were living in the most deprived socio-economic neighbourhoods. Conversely, *most advantaged* is defined as youth who performed above expectations, had no mental health condition and were living in the most advantaged socio-economic neighbourhoods. The *remaining Albertan youth* refer to those youth in this sub-population who were neither least nor most advantaged. All of these youth were registered with Education and the Alberta Health Care Insurance Plan.

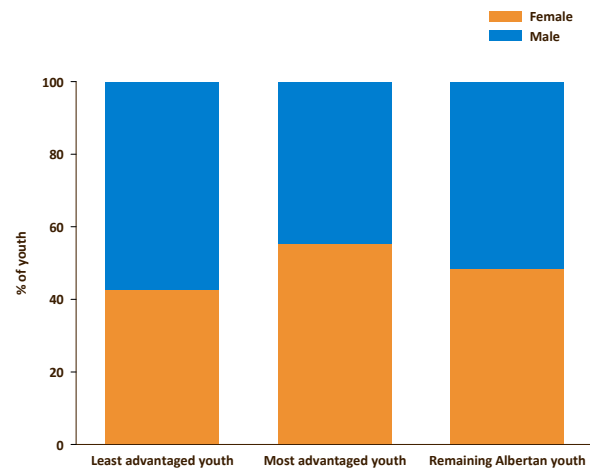
- 1.1% of youth (2,281 youth) were the least advantaged in Alberta, while 3.6% (7,517 youth) were the most advantaged (see Table 1).
- The percentage of 12 year olds is lower than other ages because a proportion of 12 year old Albertan youth is missing from the overall study population; see *Definitions and Notes* (p. 19).
- The most common age for least advantaged youth was 15 years (21.7% of least advantaged), while 15 and 16 were the most common ages for most advantaged youth (22.7% and 22.5% of most advantaged youth, respectively). The remaining youth were fairly evenly distributed across the age range (other than the 12 year olds).



## Least and most advantaged youth by gender (Table 3)

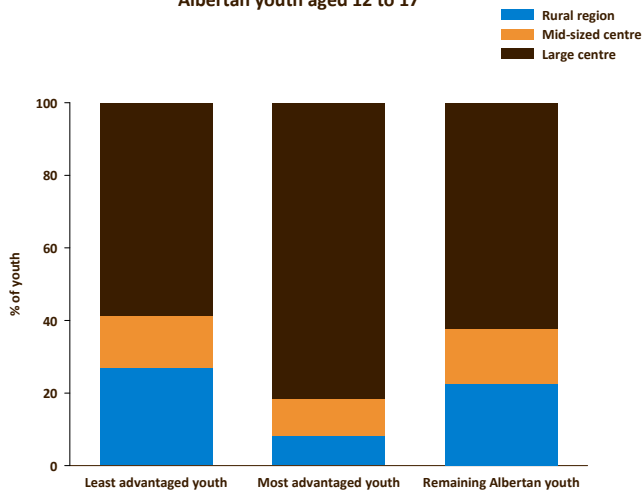
- Female youth between 12 and 17 years tended to be advantaged over same-age males with respect to their socio-economic status, mental health status and educational achievement.
- Among the least advantaged youth, 57% were males and 43% were females. Among the most advantaged, 55% were females and 45% were males.

Advantage status by gender  
Albertan youth aged 12 to 17



# Least and most advantaged Albertan youth

Advantage status by region of residence  
Albertan youth aged 12 to 17



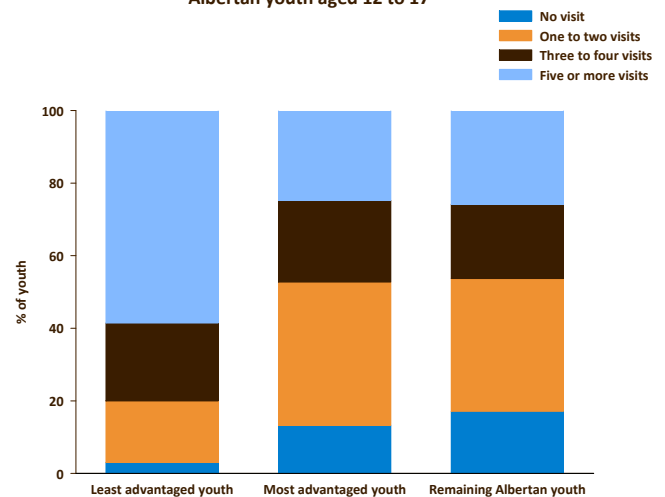
## Least and most advantaged youth by region of residence (Table 4)

- The most advantaged youth were much more likely to be living in large centres (81%) than rural regions (8%).
- Among the least advantaged youth, 27% lived in rural regions; this is similar to the proportion of rural residents among the remaining Albertan youth (23%).

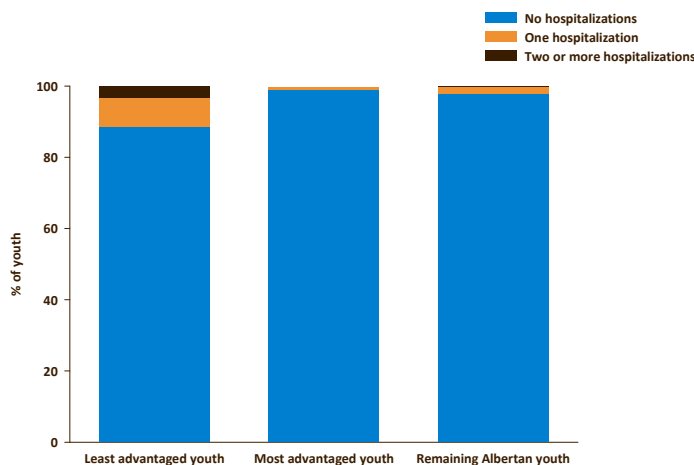
## Least and most advantaged youth by number of physician visits (Table 5)

- Making one to two physician visits per year was more common among the most advantaged youth (39%) than among the least advantaged (17%).
- The least advantaged youth between 12 and 17 years were considerably more likely to see a physician five or more times in a year than the most advantaged youth (least advantaged, 59%, most advantaged, 25%).

Advantage status by number of physician visits  
Albertan youth aged 12 to 17



Advantage status by number of hospitalizations  
Albertan youth aged 12 to 17



## Least and most advantaged youth by number of hospitalizations (Table 6)

- Overall, hospitalizations during the year were rare among the most advantaged youth (1.0%) and remaining Albertan youth (2.2%).
- However, among the least advantaged youth, 11.4% were hospitalized at least once during the year.

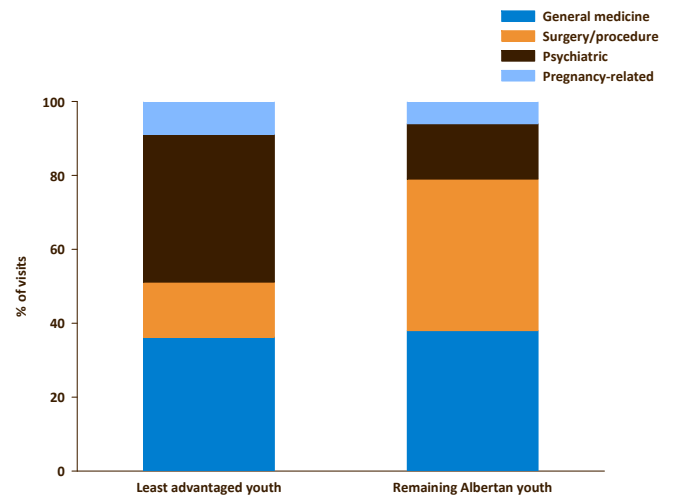
# Least and most advantaged Albertan youth

## Least advantaged youth by type of hospital service (Table 7)

Because the most advantaged youth did not have a mental health condition, they did not appear at all in the *psychiatric* category. Analyses were excluded for all other categories among the most advantaged group due to low numbers.

- Psychiatric services were the most common among hospitalizations of least advantaged youth (40% of hospitalizations), while hospitalizations for surgery or procedures were the most common type among hospitalizations of remaining Albertan youth (41% of hospitalizations).
- Pregnancy-related services were more common among hospitalizations for the least advantaged youth (9%) than for the remaining Albertan youth (6%).

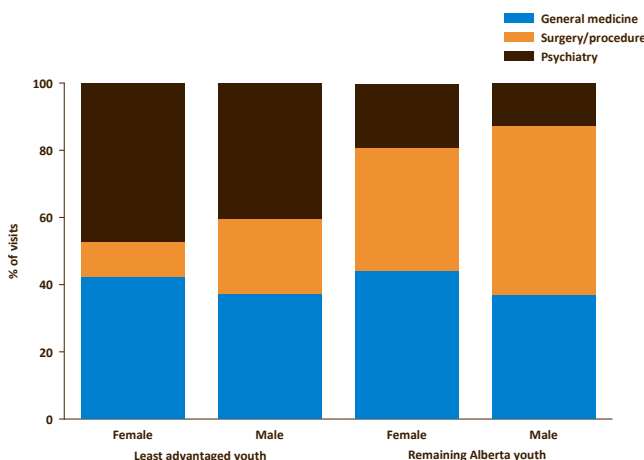
Least advantaged youth by type of hospital service  
Albertan youth aged 12 to 17



### Type of hospital service, main service code examples

Category name	Examples
General medicine	Gastro-intestinal, respiratory, allergy, etc.
Surgery/procedure	Orthopaedic surgery, urology, etc.
Psychiatry	Psychiatry or pediatric psychiatry
Pregnancy-related	Deliveries, antepartum obstetrics, abortions

Advantage status by type of hospital service and gender  
Alberta youth aged 12 to 17



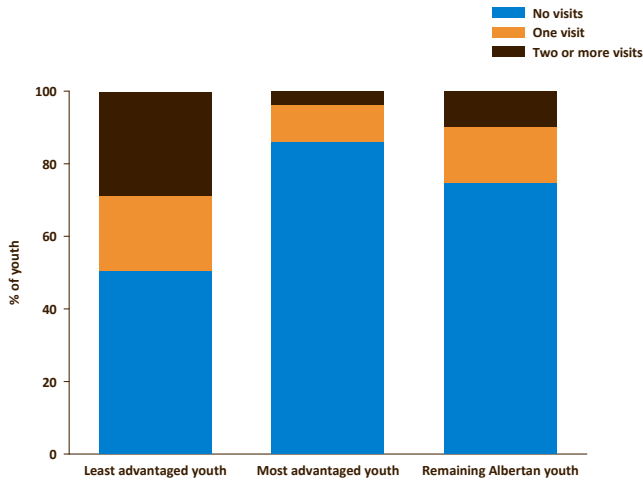
## Least advantaged youth by type of hospital service and gender (Table 8)

Because pregnancy-related visits were relevant to females only, this category was excluded from this gender analysis. Due to low numbers, the most advantaged youth were excluded from this analysis.

- 47% of hospitalizations among least advantaged females were for psychiatric services, compared to 41% of hospitalizations among males.
- The percentage of hospitalizations for surgeries or procedures was higher among hospitalizations for least advantaged males (22%) than females (10%).

# Least and most advantaged Albertan youth

Advantage status by number of emergency room visits  
Albertan youth aged 12 to 17



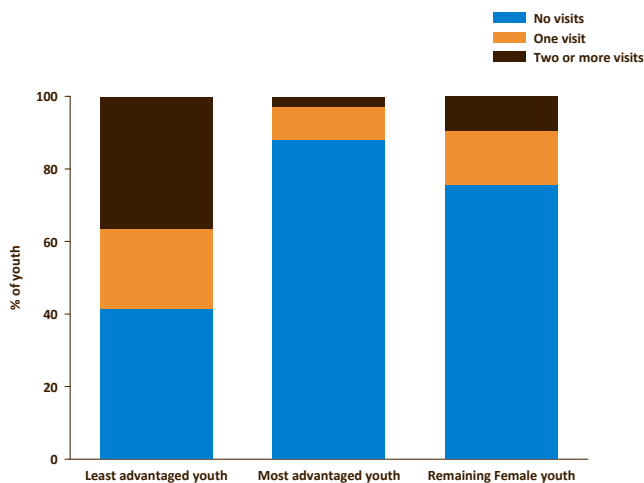
## Least and most advantaged youth by number of emergency room visits (Table 9)

- Among the most advantaged youth, 86% did not visit an emergency room in 2008/09, compared to 51% among the least advantaged youth and 75% among the remaining Albertan youth.
- Two or more emergency room visits were substantially more common among the least advantaged youth (29%), compared to the most advantaged (4%) and remaining Albertan youth (10%).

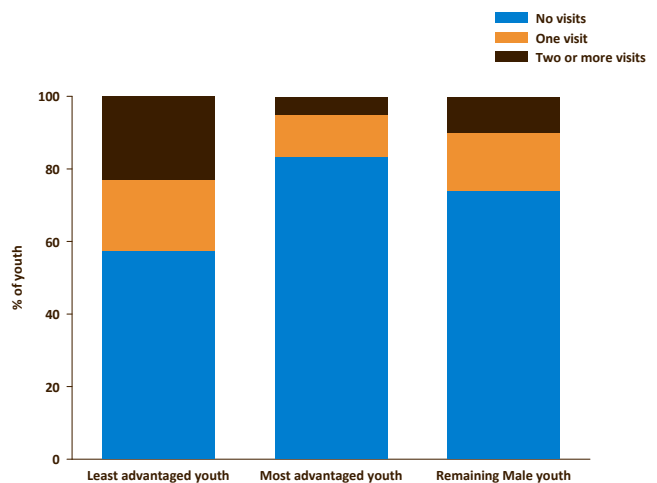
## Least and most advantaged youth by number of emergency room visits and gender (Table 10)

- Emergency room visits varied by gender among the least advantaged youth. Females were more likely than males to visit an emergency room during the year. In contrast, among the most advantaged youth, males were more likely than females to have emergency room visits.
- Among the least advantaged youth, females (36%) were considerably more likely than males (23%) to have visited an emergency room two or more times in 2008/09. However, among the most advantaged youth, more males (17%) than females (12%) had at least one emergency room visit during the year.
- There were minor gender differences for the remaining Albertan youth.

Advantage status by number of emergency room visits  
Female Albertan youth aged 12 to 17



Advantage status by number of emergency room visits  
Male Albertan youth aged 12 to 17

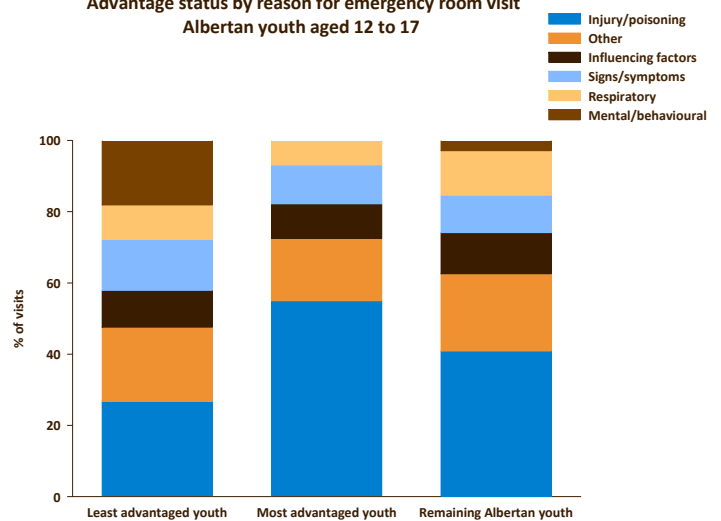


# Least and most advantaged Albertan youth

## Least and most advantaged youth by reason for emergency room visit (Table 11)

- Among emergency room visits, *injury or poisoning* accounted for 55% of most advantaged youth visits, compared to 27% of least advantaged youth visits, and 40% of remaining Albertan youth visits.
- 18% of least advantaged youth visits were due to *mental or behavioural* issues compared to 3% of visits among the remaining Albertan youth. Because the most advantaged youth did not have a mental health condition, they did not appear in the *mental or behavioural* category.

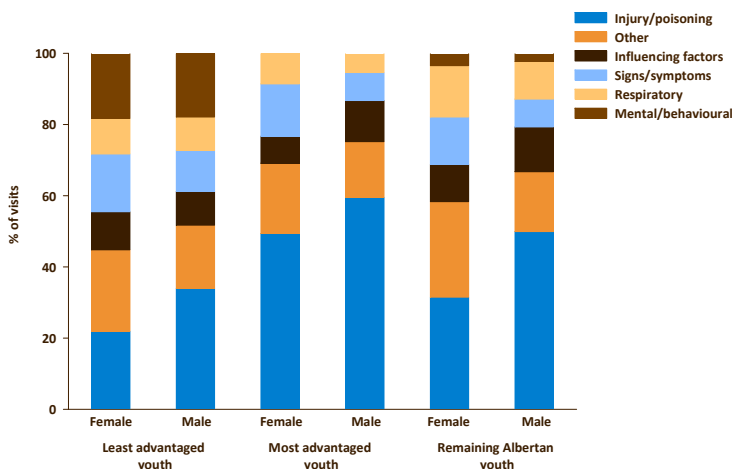
Advantage status by reason for emergency room visit  
Albertan youth aged 12 to 17



### Sample reasons for emergency room visits

Reason for emergency room visit	Examples
Injury/poisoning	Wound, fracture, sprain, allergy unspecified, etc.
Other	Non-infective gastroenteritis (including diarrhoea), urinary tract infections, lower back pain, etc.
Influencing factors	Cast removal, attention to surgical dressing and sutures, chemotherapy, etc.
Signs/symptoms	Headache, abdominal pain, chest pain, etc.
Respiratory	Sore throat, upper respiratory infection, asthma, etc.
Mental/behavioural	Depression, anxiety, mental and behavioural disorders due to use of alcohol or other drugs or psychoactive substances, etc.

Advantage status by reason for emergency room visit and gender  
Albertan youth aged 12 to 17



## Least and most advantaged youth by reason for emergency room visit and gender (Table 12)

- Among emergency room visits for least advantaged youth, male visits (34%) were more likely than female visits (22%) to be for *injury or poisoning*, while female visits (23%) were more likely than male visits (18%) to be related to *other* reasons (diarrhoea, lower back pain, etc.).
- Out of all emergency room visits among most advantaged youth, male visits (60%) were also more likely than female visits (49%) to be for *injury or poisoning*, while female visits accounted for a greater percentage of visits for *signs or symptoms* (15% of female versus 8% of male visits).

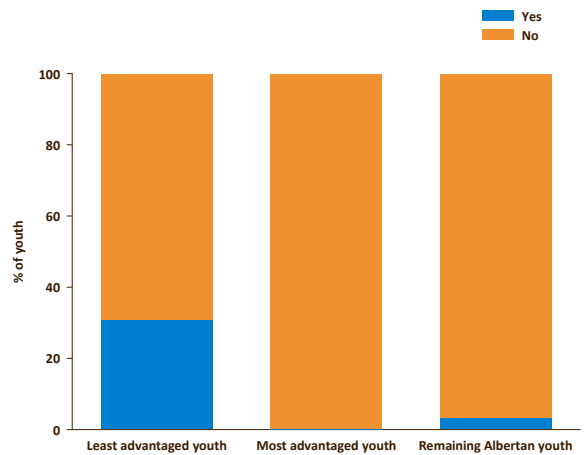
# Least and most advantaged Albertan youth

## Least and most advantaged youth receiving maltreatment-related investigation or intervention services (Table 13)

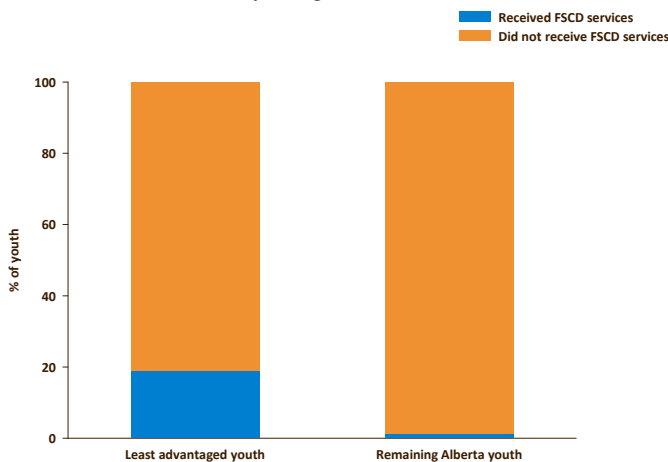
This analysis considers the least and most advantaged youth (aged 12 to 17 years) who received maltreatment-related child investigation or intervention services during 2008/09.

- Among the least advantaged youth, 30.9% (705 youth) were receiving maltreatment-related investigation or intervention services compared to 3.4% of the remaining Albertan youth.
- A small minority of the most advantaged youth were receiving maltreatment-related investigation or intervention services (0.2%; 13 youth).

Advantage status by youth receiving maltreatment-related investigation or intervention services  
Albertan youth aged 12 to 17



Least advantaged youth receiving services from Family Support for Children with Disabilities (FSCD)  
Albertan youth aged 12 to 17



## Least advantaged youth receiving services from Family Support for Children with Disabilities (Table 14)

This analysis considers the least advantaged youth (aged 12 to 17 years) who received services from FSCD during 2008/09.

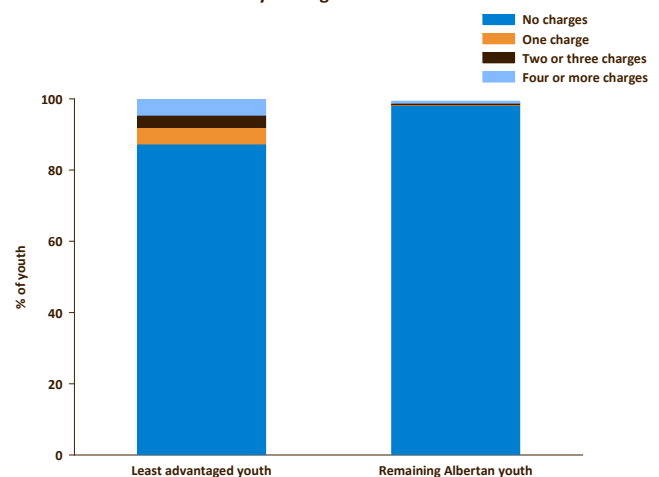
- Among the least advantaged youth, 18.9% (432 youth) were receiving services from FSCD, compared to 1.1% (2,209 youth) among the remaining Albertan youth (excluding the most advantaged youth). This high proportion is due in part to the inclusion of FSCD data in the development of the mental health measure used as part of the definition of most and least advantaged status.

## Least advantaged youth by number of charges (Table 15)

This analysis considers the least advantaged youth (aged 12 to 17 years) who received offence charges during 2008/09. Due to the low number of most advantaged youth with offence charges, they were excluded from this analysis.

- Among the least advantaged youth, 87.3% (1,991 youth) had no offence charges.
- However, 4.6% (105 youth) had four or more offence charges compared to 0.5% (966 youth) of the remaining Albertan youth.

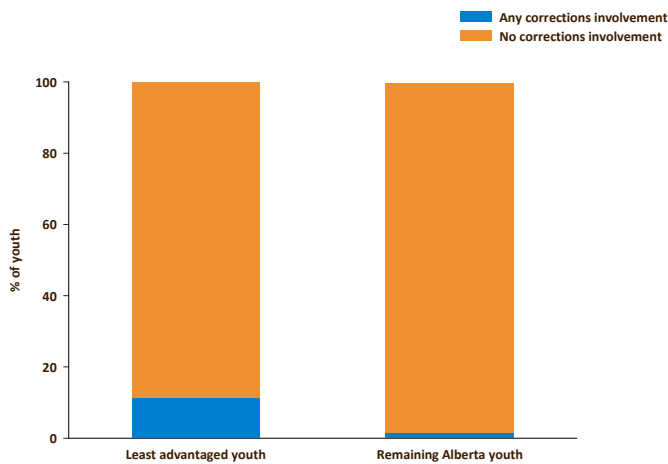
Advantage status by number of charges  
Albertan youth aged 12 to 17





# Least and most advantaged Albertan youth

Least advantaged youth by corrections involvement  
Albertan youth aged 12 to 17



## Least advantaged by corrections involvement (Table 16)

This analysis considers least advantaged youth (aged 12 to 17 years) who were involved in corrections, including youth who were in custody (in which a sentence is served in a young offender facility) or who had a community sentence or pre-trial supervision. Due to the small numbers of most advantaged youth involved in corrections, they were excluded.

- Among the least advantaged youth, 11.4% (260 youth) had some form of corrections involvement compared to 1.6% among the remaining Albertan youth (excluding the most advantaged youth).

## Representation of least advantaged youth by type of ministry service or ministry involvement

Number and percent of youth registered in both Alberta's K-12 education system and the Alberta Health Care Insurance Plan by least advantage status and representation in ministry service or ministry involvement, Albertan youth aged 12 to 17 years, 2008/09

Type of ministry service/involvement	Percent and number of least advantaged youth by ministry service/involvement type	Total number of Albertan youth (aged 12 to 17) by ministry service/involvement type	Ratio*
Maltreatment-related investigation or intervention services	705, 9.2%	7,664	8.4
Family Support for Children with Disabilities services	432, 16.3%	2,646	14.8
Offence charges	290, 7.2%	4,053	6.5
Corrections (custody)	81, 13.4%	603	12.2
Corrections (community)	252, 7.3%	3,474	6.6

\*Least advantaged youth make up only 1.1% (2, 281 youth) of the total population considered in this analysis. The least advantaged to total population ratio is the ratio between the percentage of youth who were least advantaged in a given ministry service/involvement group and percentage of youth who were the least advantaged in the total population (1.1%). A ratio value of over 1 indicates the over-representation of youth in a given type of ministry service or ministry involvement.

This analysis considers the proportion of least advantaged youth (aged 12 to 17 years) who received maltreatment-related investigation or intervention services, or who were charged with an offence, or were involved in corrections (custody or community). The most advantaged youth were not included due to the low representation of these youth in the types of service involvement discussed in this analysis.

- 9.2% of youth receiving maltreatment-related investigation or intervention services were least advantaged.
- 16.3% of youth receiving services from FSCD were least advantaged.
- 7.2% of youth with offence charges, 7.3% of youth involved in community corrections, and 13.4% of youth involved in custody corrections fell into the category of least advantaged youth.
- Overall, the least-advantaged youth in Alberta's 12 to 17 year old population were over-represented in these service involvements, relative to the 1.1% of the total population that was least advantaged. The ratios in the table indicate that the over-representation is large in magnitude.

## Least and most advantaged Albertan youth

### Youth experiencing challenges by socio-demographic characteristics and educational achievement

Number and percent of youth experiencing challenges by socio-demographic characteristics and educational achievement, Albertan youth aged 12 to 17 years registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan, 2008/09

Socio-demographic characteristics	Educational achievement					
	Below expectations		Meeting/above expectations		Total	
	Youth with challenges	Youth with no challenges	Youth with challenges	Youth with no challenges	Youth with challenges	Youth with no challenges
<b>Age</b>						
12	482, 6.0%	2,798, 7.6%	436, 7.5%	14,503, 8.2%	918, 6.6%	17,301, 8.1%
13	1,039, 13.0%	6,029, 16.3%	1,156, 19.8%	34,132, 19.3%	2,195, 15.8%	40,161, 18.8%
14	1,449, 18.1%	7,431, 20.1%	1,001, 17.1%	33,651, 19.0%	2,450, 17.7%	41,082, 19.2%
15	1,696, 21.2%	7,751, 21.0%	1,009, 17.3%	33,466, 18.9%	2,705, 19.5%	41,217, 19.3%
16	1,741, 21.7%	6,635, 18.0%	1,091, 18.7%	31,251, 17.7%	2,832, 20.4%	37,886, 17.7%
17	1,606, 20.4%	6,234, 16.9%	1,153, 19.7%	29,765, 16.8%	2,754, 19.9%	35,999, 16.8%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Gender</b>						
Female	3,204, 40.0%	15,269, 41.4%	2,710, 46.4%	88,932, 50.3%	5,914, 42.7%	104,201, 48.8%
Male	4,809, 60.0%	21,609, 58.6%	3,136, 53.6%	87,836, 49.7%	7,945, 57.3%	109,445, 51.2%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Region of residence</b>						
Rural	1,816, 22.7%	9,695, 26.3%	1,315, 22.5%	37,922, 21.5%	3,131, 22.6%	47,617, 22.3%
Mid-sized centre	1,202, 15.0%	5,843, 15.8%	881, 15.1%	26,405, 14.8%	2,083, 15.0%	32,248, 15.1%
Large centre	4,995, 62.3%	21,340, 58.9%	3,650, 62.4%	112,441, 63.6%	8,645, 62.4%	133,781, 62.6%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Socio-economic status (SES)</b>						
Lowest SES	2,984, 37.4%	11,366, 31.2%	1,845, 31.7%	36,118, 20.6%	4,829, 35.0%	47,484, 22.4%
Low middle	1,374, 17.2%	4,787, 13.1%	931, 16.0%	16,851, 9.6%	2,305, 16.7%	21,638, 10.2%
Middle	1,742, 21.8%	10,158, 27.9%	1,311, 22.5%	47,863, 27.3%	3,053, 22.1%	58,021, 27.4%
High middle	989, 12.4%	5,408, 14.9%	899, 15.4%	34,261, 19.6%	1,888, 13.7%	39,669, 18.8%
Highest SES	886, 11.1%	4,680, 12.6%	838, 14.4%	40,124, 22.9%	1,724, 12.5%	44,804, 21.2%
Total	7,975, 100%	36,399, 100%	5,824, 100%	175,217, 100%	13,799, 100%	211,616, 100%

This analysis and the next one consider a different conceptualization of disadvantaged youth than in previous analyses: those who were experiencing identified challenges during 2008/09. *Youth experiencing challenges* (13,859 youth) are defined here as those youth who received either a maltreatment-related investigation or intervention service, received services from FSCD, had offence charges, or were involved in corrections. Only those youth who were registered in both the K-12 education system and the Alberta Health Care Insurance Plan (AHCIP) were included. The focus of these analyses is the educational achievement of these challenged youth.

- Among youth who faced challenges, those below educational expectations were younger on average, more likely to be male, and more likely to live in the lowest socio-economic status areas than those above educational expectations. Region of residence did not vary with educational achievement for youth with challenges.

## Least and most advantaged Albertan youth

### Youth experiencing challenges by health service use and educational achievement

Number and percent of youth experiencing challenges by health service use and educational achievement, Albertan youth aged 12 to 17 years registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan, 2008/09

Health service use	Educational achievement					
	Below expectations		Meeting/above expectations		Total	
	Youth with challenges	Youth with no challenges	Youth with challenges	Youth with no challenges	Youth with challenges	Youth with no challenges
<b>Physician visits</b>						
None	1,291, 16.1%	7,704, 20.9%	878, 15.0%	28,169, 15.9%	2,169, 15.7%	35,873, 16.8%
One to two	2,293, 28.6%	12,682, 34.4%	1,805, 30.9%	65,430, 37.0%	4,098, 29.6%	78,112, 36.6%
Three or four	1,540, 19.2%	6,849, 18.6%	1,257, 21.5%	37,044, 20.9%	2,797, 20.2%	43,893, 20.5%
Five or more	2,889, 36.1%	9,643, 26.1%	1,906, 32.6%	46,125, 26.1%	4,195, 30.3%	55,768, 26.1%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Emergency room visits</b>						
None	4,734, 59.1%	24,700, 67.0%	3,831, 65.5%	135,227, 76.5%	8,565, 61.8%	159,927, 74.6%
One	1,621, 20.2%	6,494, 17.6%	1,102, 18.9%	26,117, 14.8%	2,723, 19.6%	32,611, 15.3%
Two or more	1,658, 20.7%	5,684, 15.4%	913, 15.6%	15,424, 8.7%	2,571, 18.6%	21,108, 9.9%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Hospitalizations</b>						
None	7,304, 91.2%	35,214, 95.5%	5,538, 94.7%	173,653, 98.2%	12,842, 92.7%	208,867, 9.8%
One	523, 6.5%	1,308, 3.5%	244, 4.2%	2,723, 1.5%	767, 5.5%	4,031, 1.9%
Two or more	186, 2.3%	356, 1.0%	64, 1.1%	392, 0.2%	250, 1.8%	748, 0.4%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,646, 100%
<b>Mental health status</b>						
Any mental health condition	3,592, 44.8%	7,576, 20.5%	1,718, 29.4%	13,128, 7.4%	5,310, 38.3%	20,704, 9.7%
No mental health condition	4,421, 55.2%	29,302, 79.5%	4,128, 70.6%	163,640, 92.6%	8,549, 61.7%	192,942, 90.3%
Total	8,013, 100%	36,878, 100%	5,846, 100%	176,768, 100%	13,859, 100%	213,645, 100%

- Five or more physician visits were more common among youth who were experiencing challenges and who were also performing below educational expectations than among youth facing challenges who were meeting or above expectations.
- Among youth facing challenges, those performing below educational expectations had higher rates of emergency room visits than those who were meeting or performing above expectations.
- Rates of hospitalizations among youth who faced challenges were higher among those performing below expectations compared to youth meeting or exceeding expectations.
- Among youth with challenges, mental health conditions were considerably more common among youth performing below expectations (45%) than those meeting or exceeding educational expectations (29%).

## Least and most advantaged Albertan youth

### Tables

**Table 1. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan and advantage status, Albertan youth aged 12 to 17 years, 2008/09**

	Least and most advantaged youth			
	Least advantaged youth	Most advantaged youth	Remaining Albertan youth	Total
Number of youth	2,281	7,517	201,840	211,638
Percent of youth	1.1	3.6	95.4	100.0

**Table 2. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and age, Albertan youth aged 12 to 17 years, 2008/09**

	Age in years	Advantage status			
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	Total
Number of youth	12	154	526	16,457	17,137
	13	334	1,120	38,341	39,795
	14	433	1,166	39,093	40,692
	15	494	1,707	38,641	40,842
	16	455	1,692	35,388	37,535
	17	411	1,306	33,920	35,637
	Total	2,281	7,517	201,840	211,638
	Percent of youth	12	6.8	7.0	8.2
13		14.6	14.9	19.0	18.8
14		19.0	15.5	19.4	19.2
15		21.7	22.7	19.1	19.3
16		19.9	22.5	17.5	17.7
17		18.0	17.4	16.8	16.8
Total		100.0	100.0	100.0	100.0

**Table 3. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and gender, Albertan youth aged 12 to 17 years, 2008/09**

	Gender	Advantage status			
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	Total
Number of youth	Female	976	4,166	98,041	103,183
	Male	1,305	3,351	103,799	108,455
	Total	2,281	7,517	201,840	211,638
Percent of youth	Female	42.8	55.4	48.6	48.8
	Male	57.2	44.6	51.4	51.2
	Total	100.0	100.0	100.0	100.0

## Least and most advantaged Albertan youth

### Tables (continued)

**Table 3a. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and age and gender, Albertan youth aged 12 to 17 years, 2008/09**

	Age in years	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
<b>Female</b>					
Number of youth	12	41	310	7,962	8,313
	13	110	577	18,639	19,326
	14	159	647	19,014	19,820
	15	217	988	18,567	19,772
	16	238	963	17,222	18,423
	17	211	681	16,637	17,529
	Total	976	4,166	98,041	103,183
Percent of youth	12	4.2	7.4	8.1	8.1
	13	11.3	13.9	19.0	18.7
	14	16.3	15.5	19.4	19.2
	15	22.2	23.7	18.9	19.2
	16	24.4	23.1	17.6	17.9
	17	21.6	16.3	17.0	17.0
Total	Total	100.0	100.0	100.0	100.0
<b>Male</b>					
Number of youth	12	113	216	8,495	8,824
	13	224	543	19,702	20,469
	14	274	519	20,079	20,872
	15	277	719	20,074	21,070
	16	217	729	18,166	19,112
	17	200	625	17,283	18,108
	Total	1,305	3,351	103,799	108,455
Percent of youth	12	8.7	6.4	8.2	8.1
	13	17.2	16.2	19.0	18.9
	14	21.0	15.5	19.3	19.2
	15	21.2	21.5	19.3	19.4
	16	16.6	21.8	17.5	17.6
	17	15.3	18.7	16.7	16.7
Total	Total	100.0	100.0	100.0	100.0

**Table 4. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and region of residence, Albertan youth aged 12 to 17 years, 2008/09**

	Region of residence	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
<b>Number of youth</b>					
	Rural region	615	620	45,437	46,672
	Mid-sized centre	328	775	30,830	31,933
	Large centre	1,338	6,122	125,573	133,033
	Total	2,281	7,517	201,840	211,638
<b>Percent of youth</b>					
	Rural region	27.0	8.2	22.5	22.1
	Mid-sized centre	14.4	10.3	15.3	15.1
	Large centre	58.7	81.4	62.2	62.9
Total	Total	100.0	100.0	100.0	100.0

## Least and most advantaged Albertan youth

### Tables (continued)

**Table 5. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and number of physician visits, Albertan youth aged 12 to 17 years, 2008/09**

	Number of physician visits	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
Number of youth	No visit	69	1,000	34,429	35,498
	One to two visits	387	2,964	73,948	77,299
	Three to four visits	489	1,694	41,311	43,494
	Five or more visits	1,336	1,859	52,152	55,347
	Total	2,281	7,517	201,840	211,638
Percent of youth	No visit	3.0	13.3	17.1	16.8
	One to two visits	17.0	39.4	36.6	36.5
	Three to four visits	21.4	22.5	20.5	20.6
	Five or more visits	58.6	24.7	25.8	26.2
	Total	100.0	100.0	100.0	100.0

**Table 6. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and number of hospitalizations, Albertan youth aged 12 to 17 years, 2008/09**

	Number of hospitalizations	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
Number of youth	No hospitalization	2,020	7,445	197,439	206,904
	One hospitalization	187	62	3,746	3,995
	Two or more hospitalizations	74	10	655	739
	Total	2,281	7,517	201,840	211,638
Percent of youth	No hospitalization	88.6	99.0	97.8	97.8
	One hospitalization	8.2	0.8	1.9	1.9
	Two or more hospitalizations	3.2	0.1	0.3	0.3
	Total	100.0	100.0	100.0	100.0

**Table 7. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and type of hospital service, Albertan youth aged 12 to 17 years, 2008/09**

	Type of hospital service	Advantage status	
		Least advantaged youth	Remaining Albertan youth
Number of visits	General medicine	141	2,062
	Surgery/procedure	58	2,226
	Psychiatric	156	815
	Pregnancy-related	35	328
	Total	390	5,431
Percent of visits	General medicine	36.2	38.0
	Surgery/procedure	14.9	41.0
	Psychiatric	40.0	15.0
	Pregnancy-related	9.0	6.0

## Least and most advantaged Albertan youth

### Tables (continued)

**Table 8. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and type of hospital service and gender, Albertan youth aged 12 to 17 years, 2008/09**

	Type of hospital service	Advantage status		
		Least advantaged youth	Remaining female youth	Total
Female				
Number of visits	General medicine	74	1,092	1,166
	Surgery/procedure	18	909	927
	Psychiatry	83	478	561
	Total	175	2,479	2,654
Percent of visits	General medicine	42.3	44.1	43.9
	Surgery/procedure	10.3	36.7	34.9
	Psychiatry	47.4	19.3	21.1
Male				
Number of visits	General medicine	67	970	1,037
	Surgery/procedure	40	1,317	1,357
	Psychiatry	73	337	410
	Total	180	2,624	2,804
Percent of visits	General medicine	37.2	37.0	37.0
	Surgery/procedure	22.2	50.2	48.4
	Psychiatry	40.6	12.8	14.6

**Table 9. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and number of emergency room visits, Albertan youth aged 12 to 17 years, 2008/09**

	Number of emergency room visits	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
Number of youth	No visit	1,152	6,461	150,991	158,604
	One visit	473	769	30,987	32,229
	Two or more visits	656	287	19,862	20,805
	Total	2,281	7,517	201,840	211,638
Percent of youth	No visit	50.5	86.0	74.8	74.9
	One visits	20.7	10.2	15.4	15.2
	Two or more visits	28.8	3.8	9.8	9.8
	Total	100.0	100.0	100.0	100.0

## Least and most advantaged Albertan youth

### Tables (continued)

**Table 10. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and number of emergency room visits and gender, Albertan youth aged 12 to 17 years, 2008/09**

		Number of emergency room visits		Advantage status		
		Least advantaged youth	Most advantaged youth	Remaining female youth	Total	
<b>Female</b>						
	Number of youth	No visit	403	3,665	74,172	78,240
		One visit	218	380	14,365	14,963
		Two or more visits	355	121	9,504	9,980
		Total	976	4,166	98,041	103,183
Percent of youth	No visit	41.3	88.0	75.7	75.8	
	One visits	22.3	9.1	14.7	14.5	
	Two or more visits	36.4	2.9	9.7	9.7	
	Total	100.0	100.0	100.0	100.0	
<b>Male</b>						
	Number of youth	No visit	749	2,796	76,819	80,364
		One visit	255	389	16,622	17,266
		Two or more visits	301	166	10,358	10,825
		Total	1,305	3,351	103,799	108,455
Percent of youth	No visit	57.4	83.4	74.0	74.1	
	One visits	19.5	11.6	16.0	15.9	
	Two or more visits	23.1	5.0	10.0	10.0	
	Total	100.0	100.0	100.0	100.0	

**Table 11. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and reason for emergency room (ER) visit, Albertan youth aged 12 to 17 years, 2008/09**

		Reason for ER visit		Advantage status		
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	Total	
Number of visits	Injury/poisoning	814	829	38,009	39,652	
	Other	631	264	20,129	21,024	
	Influencing factors	311	147	10,717	11,175	
	Signs/symptoms	435	165	9,745	10,345	
	Respiratory	294	103	11,570	11,967	
	Mental/behavioural	548	-	2,702	3,250	
	Total	3,033	1,508	92,872	97,413	
Percent of visits	Injury/poisoning	26.8	55.0	40.9	40.7	
	Other	20.8	17.5	21.7	21.6	
	Influencing factors	10.3	9.7	11.5	11.5	
	Signs/symptoms	14.3	10.9	10.5	10.6	
	Respiratory	9.7	6.8	12.5	12.3	
	Mental/behavioural	18.1	-	2.9	3.3	
	Total					



## Least and most advantaged Albertan youth

### Tables (continued)

**Table 12. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and reason for emergency room (ER) visit and gender, Albertan youth aged 12 to 17 years, 2008/09**

	Reason for ER visit	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining female youth	
<b>Female</b>					
Number of visits	Injury/poisoning	394	336	14,201	14,931
	Other	412	134	12,118	12,664
	Influencing factors	193	52	4,726	4,971
	Signs/symptoms	291	100	6,013	6,404
	Respiratory	179	58	6,501	6,738
	Mental/behavioural	327	-	1,593	1,920
	<b>Total</b>	<b>1,796</b>	<b>680</b>	<b>45,152</b>	<b>47,628</b>
Percent of visits	Injury/poisoning	21.9	49.4	31.5	31.3
	Other	22.9	19.7	26.8	26.6
	Influencing factors	10.7	7.6	10.5	10.4
	Signs/symptoms	16.2	14.7	13.3	13.4
	Respiratory	10.0	8.5	14.4	14.1
	Mental/behavioural	18.2	-	3.5	4.0
	<b>Male</b>				
Number of visits	Injury/poisoning	420	493	23,808	24,721
	Other	219	130	8,011	8,360
	Influencing factors	118	95	5,991	6,204
	Signs/symptoms	144	65	3,732	3,941
	Respiratory	115	45	5,069	5,229
	Mental/behavioural	221	-	1,109	1,330
	<b>Total</b>	<b>1,237</b>	<b>828</b>	<b>47,720</b>	<b>49,785</b>
Percent of visits	Injury/poisoning	34.0	59.5	49.9	49.7
	Other	17.7	15.7	16.8	16.8
	Influencing factors	9.5	11.5	12.6	12.5
	Signs/symptoms	11.6	7.9	7.8	7.9
	Respiratory	9.3	5.4	10.6	10.5
	Mental/behavioural	17.9	-	2.3	2.7

**Table 13. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and youth receiving maltreatment-related investigation or intervention services, Albertan youth aged 12 to 17 years, 2008/09**

	Received maltreatment-related investigation or intervention services	Advantage status			Total
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth	
Number of youth	Yes	705	13	6,946	7,664
	No	1,576	7,504	194,894	203,974
	<b>Total</b>	<b>2,281</b>	<b>7,517</b>	<b>201,840</b>	<b>211,638</b>
Percent of youth	Yes	30.9	0.2	3.4	3.6
	No	69.1	99.8	96.6	96.4
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

## Least and most advantaged Albertan youth

### Tables (continued)

**Table 14. Number and percent of youth registered in Alberta's K-12 education system and Alberta Health and Wellness by advantage status and services received from Family Support for Children with Disabilities (FSCD), Albertan youth aged 12 to 17 years, 2008/09**

	Received services from FSCD	Advantage status		
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth
Number of youth	Yes	432	-	2,209
	No	1,849	-	199,631
	Total	2,281	-	201,840
Percent of youth	Yes	18.9	-	1.1
	No	81.1	-	98.9
	Total	100.0	-	100.0

**Table 15. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and number of offence charges Albertan youth aged 12 to 17 years, 2008/09**

	Number of charges	Advantage status		
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth
Number of youth	No charges	1,991	-	198,079
	One charge	108	-	1,732
	Two or three charges	77	-	1,063
	Four or more charges	105	-	966
	Total	2,281	-	201,840
Percent of youth	No charges	87.3	-	98.1
	One charge	4.7	-	0.9
	Two or three charges	3.4	-	0.5
	Four or more charges	4.6	-	0.5
	Total	100.0	-	100.0

**Table 16. Number and percent of youth registered in Alberta's K-12 education system and the Alberta Health Care Insurance Plan by advantage status and corrections involvement, Albertan youth aged 12 to 17 years, 2008/09**

	Corrections involvement	Advantage status		
		Least advantaged youth	Most advantaged youth	Remaining Albertan youth
Number of youth	Any corrections involvement	260	-	3,274
	No corrections involvement	2,021	-	198,566
	Total	2,281	-	201,840
Percent of youth	Any corrections involvement	11.4	-	1.6
	No corrections involvement	88.6	-	98.4
	Total	100.0	-	100.0

# Least and most advantaged Albertan youth

## Definitions and Notes

- The study population for this project consisted of all Albertan youth who were registered with the Alberta Health Care Insurance Plan in 2008/09 or who received selected services from one or more of the participating ministries in 2008/09. “All Albertan youth” refers to this study population.
- The study year was fiscal year 2008/09. With the exception of Education and Enterprise and Advanced Education data, all data were for services provided between April 1, 2008 and March 31, 2009, with age determined on March 31, 2009.
  - Data for Enterprise and Advanced Education were for services provided between September 1, 2008 and June 30, 2009, with age determined on March 31, 2009.
  - Data for Education were for services provided to youth who were 12 to 19 years old on September 30, 2008. As a result, youth turning 12 between October 1, 2008 and March 31, 2009 *were not* included in the Education data but were included in other ministries’ data. This resulted in the number of 12 year olds in the Education data being lower (approximately 50% lower) than that of 13 to 17 year olds.
  - Furthermore, although Education only provides services to youth who are under 20, the provision of services is defined by age at September 30. Youth who turned 20 between October 1, 2008 and March 31, 2009 *were* included in the Education data, resulting in the inclusion of 20 year olds in some analyses of Education data.
- **Cross-ministry analyses included only youth that were linked across the relevant ministries.** This means that not all youth in the project were represented in every analysis. As well, only youth with a value for a given indicator were included in analyses involving that indicator (i.e., **missing values** were excluded).
- Age, gender, and postal code (translated into Statistics Canada dissemination areas) were provided for each individual by each participating ministry. In the case of discrepancies between ministries, the most common value for an indicator was chosen. In the event of two or more most common values, the value for the indicator was chosen randomly from the most common values.
- **Mental health status** was defined by the presence or absence of mental health diagnosis codes in Health’s databases (Inpatient—Discharge Abstract Database, Ambulatory Care, and Practitioner Payments), or in the Family Support for Children with Disabilities Information System. Only youth who were registered with Health for the full fiscal year were included in the mental health analyses. **Mental health service use is a proxy for presence of a mental health condition:** Some youth with mental health conditions may not have accessed mental health services in Alberta during the year, and some mental health service use may have occurred for youth who did not in fact have mental health conditions.
  - **Mental health conditions** were grouped based on The Johns Hopkins ACG® Case-Mix System (version 8.2)<sup>11</sup>. Mental health conditions were *mood/anxiety* (anxiety, depression, bipolar disorder, etc.), *behavioural* (attention-deficit disorder, regulatory disorder, mental or behavioural problems due to substance use, etc.), *neurodevelopmental* (autism, fetal alcohol spectrum disorder, cerebral palsy, etc.), or *schizophrenia/psychoses* (schizophrenia, psychosis, delusional disorder, etc.). Conditions were not mutually exclusive; a youth could have a diagnosis in more than one category.
- **Socio-economic status (SES)** captures the social and material environments in which youth live. A youth was assigned a socio-economic status via an index based on the Statistics Canada dissemination area in which he or she resided<sup>12</sup>. Six indicators were included in the index: percent without a high school diploma, the employment ratio, average income, percent of single families, percent of persons living alone, and percent of persons separated, divorced, or widowed. Socio-economic status values fell into five quintiles. In this report, “lowest socio-economic status” refers to the lowest quintile of socio-economic status, while “highest” refers to the highest quintile.
- **Educational achievement** was computed by Alberta Education using age, grade, school type, special education codes, provincial achievement test scores, home education status, number of high school credits earned, number of higher level courses taken, average grade in higher level courses, possession of an Alberta Education certificate or diploma, and Alexander Rutherford scholarship eligibility.

# Least and most advantaged Albertan youth

## Definitions and Notes

Educational achievement was categorized as *above, meeting, or below expectations* for a student's age and grade. An educational achievement rating was not available for 12 to 14 year old youth without scores on provincial achievement tests, for youth in 'other' schools (accredited post-secondary institutions offering high school courses for credit to adults; most youth in these schools were between 18 and 20 years), and for home-schooled high school youth with no credits.

- Dissemination areas of residence were used by CYDL to determine **region of residence**. Urban areas included large centres with urban core populations greater than 100,000 (i.e., Edmonton and Calgary metropolitan areas) and mid-sized centres with urban cores greater than 10,000; all other areas were categorized as rural.
- New and returning Alberta residents, if they are eligible, must register for **Alberta Health Care Insurance Plan** coverage to receive insured health services. Youth in the "**health registry**" refers to all youth who are insured in Alberta. This includes any eligible youth who is a permanent resident of Alberta, living at least 183 days per year in the province. Members of the Canadian Armed Forces, Royal Canadian Mounted Police and federal penitentiary inmates are not eligible (they receive coverage from the federal government), but dependents of these non-eligible residents, who reside in Alberta, are eligible.
- **Physician visits** reflect fee claims made by physicians for services provided when patients visit their offices. In this report, multiple claims by a given physician for a given patient on the same day were counted as a single visit. Reasons for physician visits were not available for this project.
- **Emergency room visits** refer to visits to emergency departments for assessment or treatment. **Reason for emergency room visit** was based on the primary diagnostic code given for each visit. Categories of reasons included *injury/poisoning* (ICD-10-CA<sup>13</sup> Chapter XIX Injury, poisoning and certain other consequences of external causes), *respiratory* (Chapter X Diseases of the respiratory system), *influencing factors* (Chapter XXI Factors influencing health status and contact with health services), *symptoms/signs* (Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified), and *other* (all other ICD-10-CA chapters).
- **Hospitalizations** refer to admissions to hospital for assessment or treatment. **Hospital service type** was defined by the main patient service code (the patient service that contributes to the longest portion of a patient's stay; see the Canadian Institute for Health Information's DAD Abstracting Manual<sup>14</sup> for codes). Categories of services were labelled *general medicine* (patient service codes 01 to 29, 55, 56, 58, 60 to 63, 66 to 76, 82, 91, 96, 99), *surgery/procedure* (patient service codes 30 to 49, 81, 87), *psychiatry* (patient service codes 64, 65), or *pregnancy-related* (patient service codes 51 to 54, 59).
- **Maltreatment-related investigations** occur when there is a concern that the safety or well-being of a youth is threatened. Outcomes of investigation include *in care after investigation* (the youth is taken into care, and placed in a foster home, with family, in a group home, etc.), *out of care services* (the youth remains in the home and the family receives support services), and *no intervention needed*.
- **Maltreatment-related interventions** occur when the safety or well-being of a youth is threatened. Categories of intervention include *in care services* (the youth is taken into care, and placed in a foster home, with family, in a group home, etc.), and *out of care services* (the youth remains in the home and the family receives support services).
- **Family Support for Children with Disabilities (FSCD)** is a ministry of Human Services program that provides a range of supports and services to families that strengthen their ability to support and care for their child with a disability based on their needs.
- Youth with **offence charges** include those charged with criminal offences or administrative offences related to criminal offences (e.g., failure to appear in court, breach of probation, etc.). **Number of offences** in the study year was available, but individual incidents were not available. This means that youth charged with multiple offences may have had multiple charges in a single incident, or they may have been charged in multiple incidents.
- Youth with **corrections involvement** have appeared before the Court or a Justice of the Peace for an offence charge and have been remanded in custody or placed under pre-trial supervision in the community awaiting further court dates, or have been found guilty and sentenced to a community disposition (i.e. Fine, Probation, Community Service Work, Deferred Custody) and/or custody (in which the sentence is served in a young offender facility).

# Least and most advantaged Albertan youth

## Data sources

Ministry	Database	Use in this report
Education	Corporate Data Warehouse (CDW)	Primary and secondary education achievement data
Health	Inpatient – Discharge Abstract Database (DAD)	Hospitalization data
Health	Ambulatory Care (ACCS)	Emergency room visit data
Health	Practitioner Payments (SESE)	Physician visit data
Health	Alberta Health Care Insurance Plan Population Registry (AHCIP registry)	Population registry
Human Services	Child Youth Information Module (CYIM)	Maltreatment and intervention data
Human Services	Family Support for Children with Disabilities Information System (FSCDIS)	Family Supports for Children with Disabilities data
Justice and Solicitor General	Justice Online Information Network (JOIN)	Offence data
Justice and Solicitor General	Alberta Community Offender Management System (ACOM)	Corrections data (community)
Justice and Solicitor General	Correctional Offender Management Information System (CoMIS)	Corrections data (custody)

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## Least and most advantaged Albertan youth

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## The Child and Youth Data Laboratory

The **Child and Youth Data Laboratory** (CYDL) links and analyzes administrative data from child- and youth-serving ministries in the Government of Alberta. The ministries participate in research design and provide data elements that contribute to answering research questions.

The CYDL's research provides groundbreaking opportunities to understand relationships between critical factors in the lives of children and youth in Alberta. The research results can be used to inform policy and program development and evaluation, both within and across ministries, and to inspire further research.

The CYDL is managed by the **Alberta Centre for Child, Family and Community Research** (ACCFRC). The Centre has evolved over its eight year history as a public-sector, innovative resource for evidence. The Centre develops, supports and integrates research across sectors and disciplines to provide a strong, evidence-based foundation for identifying and promoting effective public policy and service delivery to improve the well-being of children, families, and communities in Alberta, Canada, and internationally.

## Our partners

This project was carried out on behalf of six ministries of the Government of Alberta. Each ministry collaborated extensively with the CYDL on this project, and their dedication to the project is gratefully acknowledged:

Enterprise and Advanced Education  
Education  
Health  
Human Services  
Aboriginal Relations  
Justice and Solicitor General

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**Government  
of Alberta ■**