

Physician visits by Albertan youth

Child and Youth Data Laboratory (CYDL)

Report for Experiences of Albertan Youth Project

Key findings

This report is an overview of 2,361,770 physician visits by 496,787 Albertan youth (12 to 24 years) in 2008/09. Physicians were grouped into two types of providers: specialists and general practitioners. Youth not registered with the Alberta Health Care Insurance Plan in 2008/09 were excluded.

The report contains analyses of the relationships between number of physician visits as well as type of physician with region of residence, socio-economic status, age, gender, educational achievement and mental health status. The cross-ministry service use of youth who visited physicians was also described.

- 49% of youth had one to four physician visits and 26% had five or more physician visits, while 24% of youth had no physician visits. 64% of visits were with a general practitioner and 36% were with a specialist.
- Number of physician visits increased with age for females and decreased with age for males. Youth who were performing above educational expectations or who received services for a mental health condition were more likely to visit a physician.
- About two thirds of visits were to general practitioners; visits to specialists were less common among visits for older youth and females. Visits to specialists were more common among visits by youth who were performing above educational expectations than those below, or among those who had *neurodevelopmental* or *schizophrenia/psychoses* conditions than those with other mental health conditions.
- Socio-economic status and region of residence were unrelated to number of physician visits or to provider types.
- Making five or more physician visits in the study year was more common for youth on income support, youth receiving Family Support for Children with Disabilities services, youth who received maltreatment-related intervention services, and youth who were enrolled in a post-secondary institution, compared to the whole population of youth registered with Alberta Health Care.



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Physician visits by Albertan youth

Context

Adolescence and early adulthood is a time during which youth develop many of the lifestyle patterns they will follow throughout adulthood, including behaviours that enhance health as well as those that are detrimental to health. Making regular (but not frequent) visits to a primary care physician is a behaviour that is associated with better overall health.¹

A survey of the health care utilization of Canadian youth aged 12 to 19 years showed that physician visits were more likely for females, older adolescents, youth from single parent families, youth with lower health status or disability, youth with higher rates of distress, and youth whose lifestyle practices compromised health.²

In another survey on physician visits by Canadian youth 12 to 24 years old, the effect of age group was studied. The average number of visits in the previous year increased with increasing age, from 1.9 visits for 12 to 14 year olds to 2.4 for 15 to 19 year olds to 2.8 for 20 to 24 year olds. Similarly, the percentage of youth who were high users (4 or more visits in the past year) increased with increasing age group (14.5, 19.0, and 21.7% for the three age groups, respectively). The youngest male and female youth were equally likely to use physician services, while among older youth, females were more likely than males to visit a physician³.

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

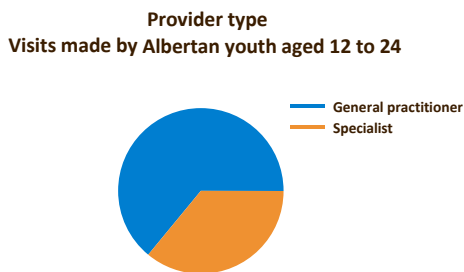
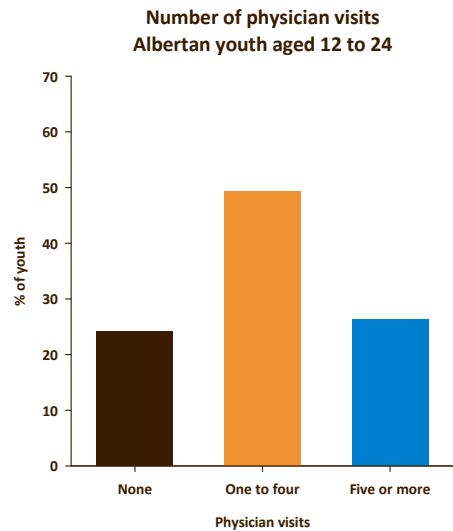
Emergency room visits by Albertan youth
Hospitalizations of Albertan youth
Offence charges among Albertan youth
Corrections involvement among Albertan youth
Post-secondary students in Alberta
Income support among Albertan youth
Educational experiences of Albertan youth with income support activity
Least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

Physician visits by Albertan youth

Number of physician visits (Table 1)

This and the following analyses consider youth (aged 12 to 24 years, unless otherwise stated) who were registered with the Alberta Health Care Insurance Plan at any point in 2008/09. See *Definitions and Notes* (p. 20).

- The number of physician visits was analyzed for 655,758 youth.
- 496,787 of youth had one or more physician visits, representing 76% of Albertan youth.
- 49% of youth had one to four physician visits and 26% had five or more physician visits. 24% of youth had no physician visits.



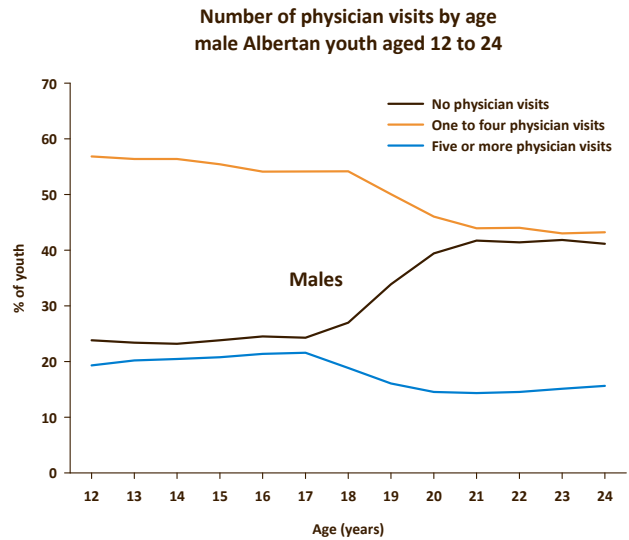
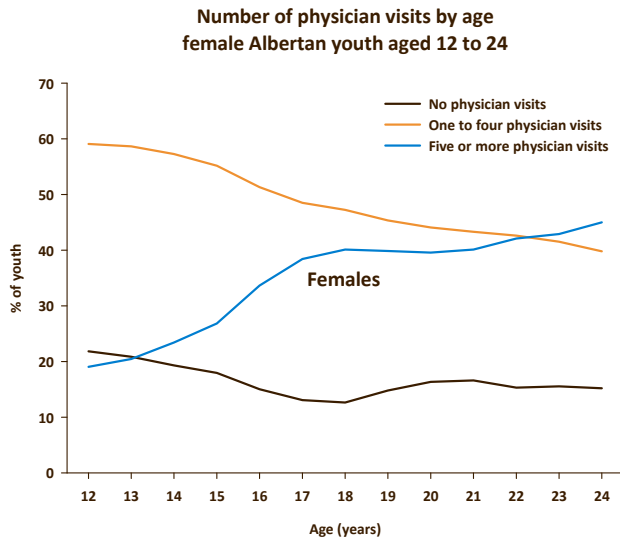
Provider type (Table 2)

In all analyses in this report for provider type, all physician visits are counted, including multiple visits for a given youth.

- There were a total of 2,361,770 physician visits made by 496,787 youth.
- 64% of visits were with a general practitioner and 36% were with a specialist.

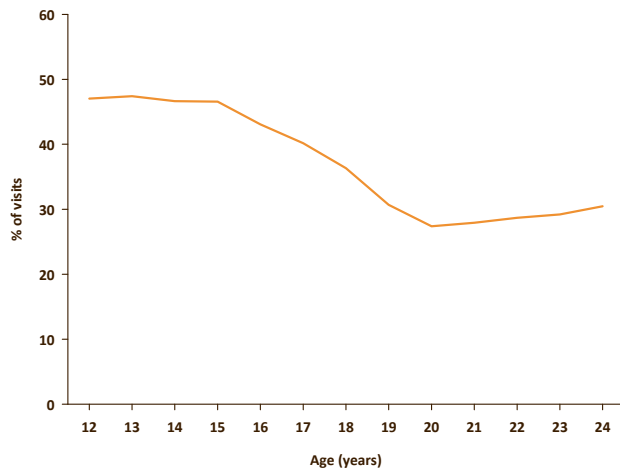
Physician visits by Albertan youth

Number of physician visits by age and gender (Tables 3 and 4)



- Female youth had an increasing rate of high physician visits (five or more) with increasing age. This may be due to use of physician services for prenatal visits in females aged 18 to 24 years.³
- For males, the rate of five or more visits was steady at around 20% of males from 12 to 17 years of age. At age 18, a sharp decrease in physician visits was observed for males. This is consistent with past findings of decreased use physician services by males in adulthood.³

Proportion of visits to specialists by age Albertan youth aged 12 to 24



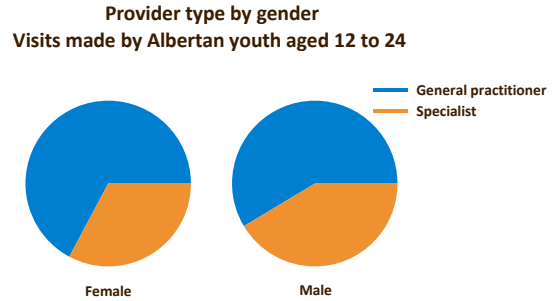
Specialist visits by age (Table 5)

- The percentage of visits to specialists decreased with increasing age.
- Almost half of all visits for youth aged 12 to 15 were with a specialist, whereas less than a third of visits among youth aged 20 to 24 were with a specialist.

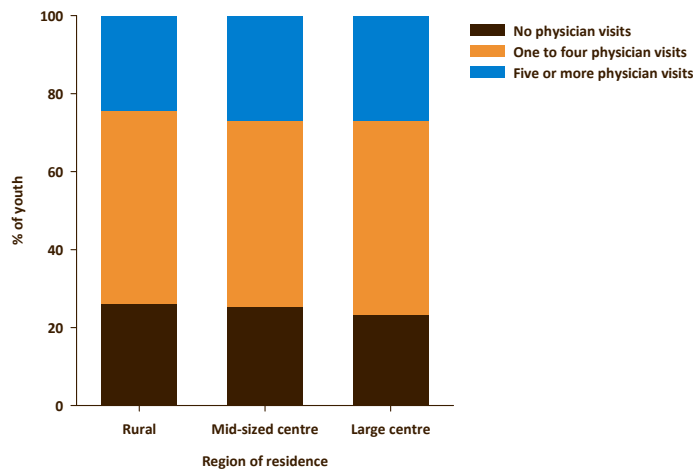
Physician visits by Albertan youth

Provider type by gender (Table 6)

- 33% of visits by females were with specialists.
- 41% of visits by males were with specialists.



Number of physician visits by region of residence
Albertan youth aged 12 to 24



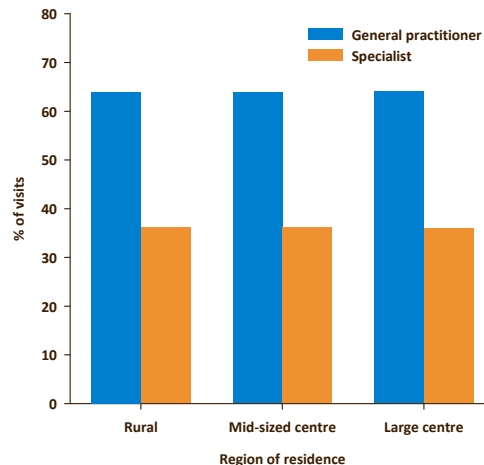
Number of physician visits by region of residence (Table 7)

- Number of physician visits did not vary much by region of residence.
- Youth living in rural regions were slightly more likely to have no physician visits (26%) than youth living in large centres (23%).

Provider type by region of residence (Table 8)

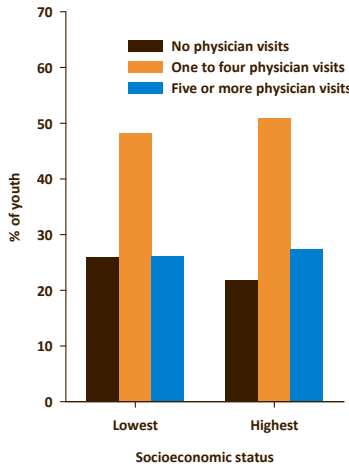
- The percentage of visits with specialists did not vary by region of residence.
- Approximately one third of visits were with specialists among visits by youth living in rural regions (36% of visits), mid-sized centres (36%), and large centres (36%).

Provider type by region of residence
Visits made by Albertan youth aged 12 to 24



Physician visits by Albertan youth

Number of physician visits by socio-economic status
Albertan youth aged 12 to 24



Number of physician visits by socio-economic status (Table 9)

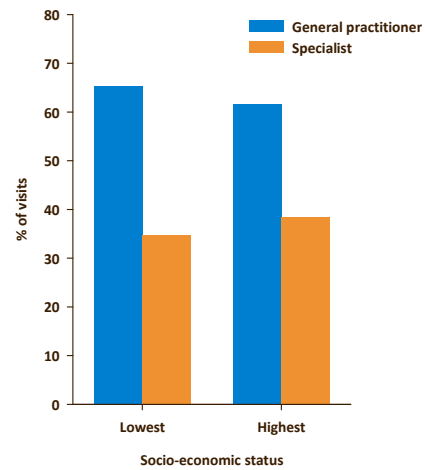
Socio-economic status captures the social and material environments in which youth live. Only the highest and lowest socio-economic status groups are shown in this and the following analysis. See *Definitions and Notes* (p. 19).

- Youth living in the lowest socio-economic status neighbourhoods were slightly more likely to have no physician visits (26%) compared to youth living in the highest socio-economic status neighbourhoods (22%).

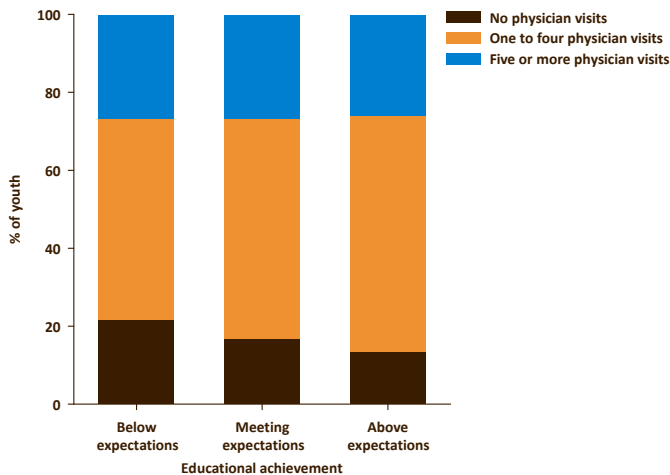
Provider type by socio-economic status (Table 10)

- The percentage of visits with specialists and general practitioners was similar in the highest and lowest socio-economic status areas.

Provider type by socio-economic status
Visits made by Albertan youth aged 12 to 24



Number of physician visits by educational achievement
Albertan youth aged 12 to 20



Number of physician visits by educational achievement (Table 11)

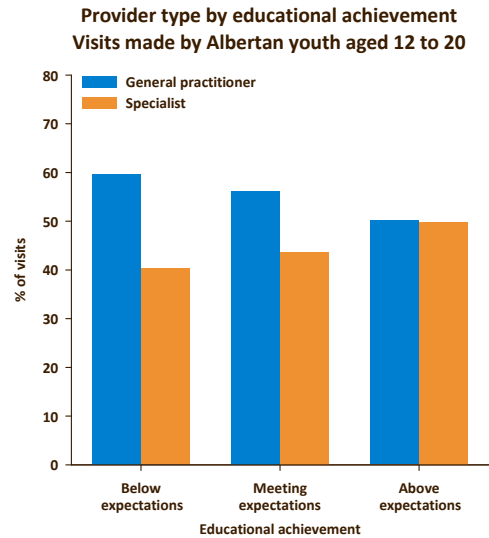
Youth (12 to 20 years) who were enrolled in the K-12 education system in 2008/09 are included in this and the following analysis. See *Definitions and Notes* (p. 19).

- Youth who were performing below educational expectations accessed physicians less often than youth who were meeting or achieving above expectations.
- 22% of youth performing below expectations had no physician visits, compared to 17% of youth meeting expectations and 14% of youth achieving above expectations.

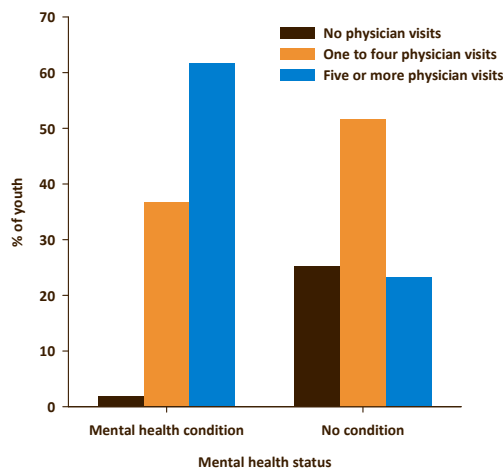
Physician visits by Albertan youth

Provider type by educational achievement (Table 12)

- Visits for youth who were exceeding educational expectations were equally likely to be with general practitioners and specialists.
- 50% of visits for youth who were achieving above educational expectations were with specialists. This percentage was slightly lower for youth who were below (40%) or meeting expectations (44%).



Number of physician visits by mental health status
Albertan youth aged 12 to 24



Number of physician visits by mental health status (Table 13)

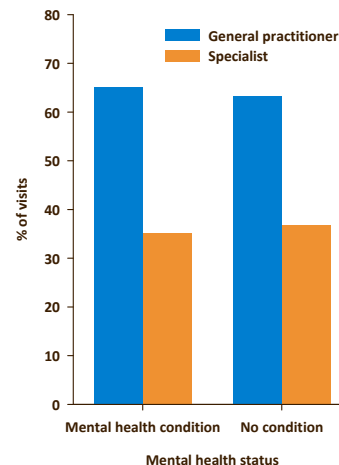
Mental health status refers to presence or absence of a mental health condition. Mental health conditions are defined as receipt of services related to mental health conditions; that is, receipt of services is used here as a proxy for confirmed presence of a mental health condition. See *Definitions and Notes* (p. 20).

- Youth with a mental health condition were markedly more likely to have a high number of physician visits (62%) compared to youth with no mental health condition (23%) which may be partially due to how mental health status was defined.

Provider type by mental health status (Table 14)

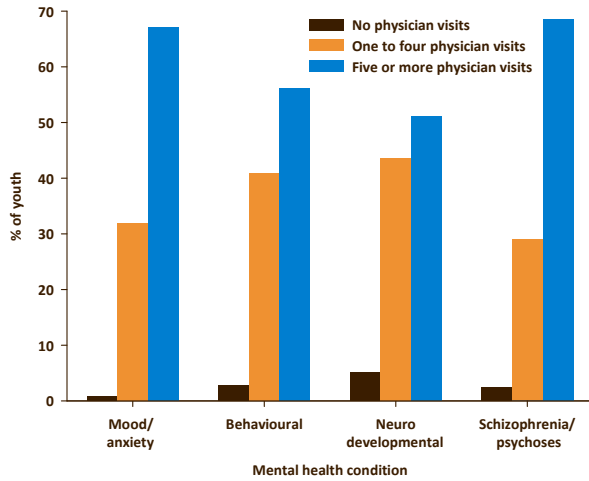
- The percentage of specialist visits by youth with a mental health condition was not different than the percentage of specialist visits by youth with no mental health condition.

Provider type by mental health status
Visits made by Albertan youth aged 12 to 24



Physician visits by Albertan youth

Number of physician visits by mental health condition
Albertan youth aged 12 to 24



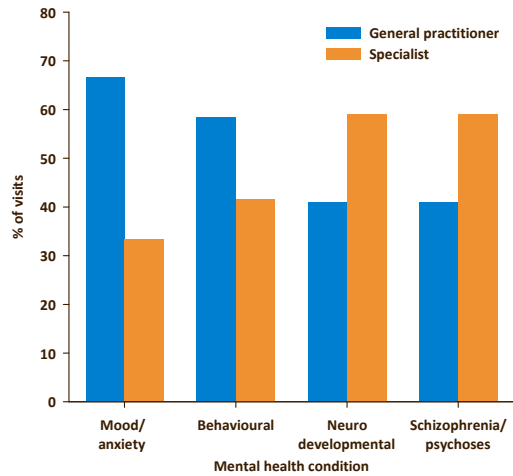
Number of physician visits by mental health condition (Table 13)

- Youth with *mood/anxiety* (67%) or *schizophrenia/psychoses* (69%) conditions were more likely to have five or more physician visits than youth with *behavioural* (56%) or *neurodevelopmental* (51%) conditions.

Provider type by mental health condition (Table 14)

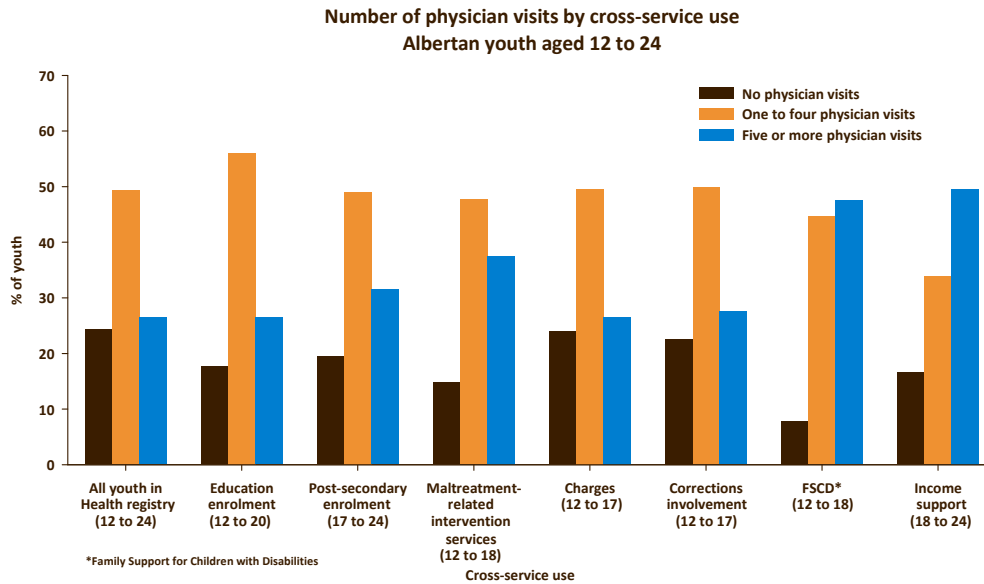
- The percentage of visits to specialists varied with mental health condition.
- 33% of visits by youth with a *mood/anxiety* condition were with a specialist, compared to 42% of visits by youth with *behavioural* conditions, 59% of visits by youth with *neurodevelopmental* conditions, and 59% of visits by youth with *schizophrenia/psychoses* conditions.

Provider type by mental health condition
Visits made by Albertan youth aged 12 to 24



Physician visits by Albertan youth

Number of physician visits by cross-service use (Table 15)

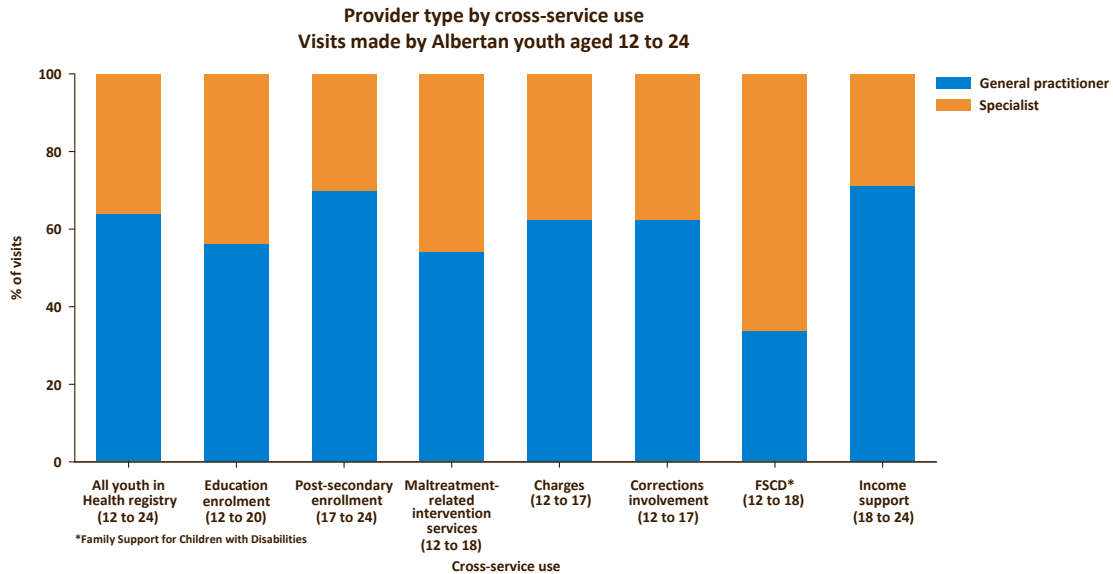


Youth were considered in this and the following analysis if they were registered with the Alberta Health Care Insurance Plan (AHCIP; see *Definitions and Notes*, p. 20). The effects should be interpreted with caution; they cannot be generalized to youth not registered with AHCIP.

- A high rate of five or more physician visits was observed for youth receiving income support (50%), youth receiving serviced from the Family Support for Children with Disabilities (FSCD) program (47%), youth who received maltreatment-related intervention services (38%), and youth who were enrolled in a post-secondary institution (32%).
- 26% of all youth registered with the Alberta Health Care Insurance Plan had five or more physician visits.

Physician visits by Albertan youth

Provider type by cross-service use (Table 16)



- The percentage of visits to specialists was high among visits by youth who received support from FSCD (66% of visits), visits by youth who received maltreatment-related investigation services (46%), and visits by youth enrolled in the K-12 education system (44%).
- 36% of visits by all youth in the Alberta Health Care Insurance Plan were to specialists.
- Visits made by youth on income support or visits by youth enrolled in a post-secondary institution were mostly to general practitioners (71% and 70% of visits, respectively).

Physician visits by Albertan youth

Tables

Table 1. Number and percent of youth by number of physician visits and age group, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Age group (years)					
		12 to 17	12 to 18	12 to 20	17 to 24	18 to 24	12 to 24
Number of youth	One to four visits	157,466	182,732	230,362	191,229	165,979	323,445
	Five or more visits	67,861	82,393	110,502	120,112	105,481	173,342
	Any visit	225,327	265,125	340,864	311,341	271,460	496,787
	No visits	59,804	69,752	96,648	108,418	99,167	158,971
	Total	285,131	334,877	437,512	419,759	370,627	655,758
Percent of youth	One to four visits	55.2	54.6	52.7	45.6	44.8	49.3
	Five or more visits	23.8	24.6	25.3	28.6	28.5	26.4
	Any visit	79.0	79.2	77.9	74.2	73.2	75.8
	No visits	21.0	20.8	22.1	25.8	26.8	24.2
	Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 2. Number and percentage of physician visits by provider type and age group, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Age group (years)					
		12 to 17	12 to 18	12 to 20	17 to 24	18 to 24	12 to 24
Number of visits	General practitioner	522,928	644,422	909,981	1,104,539	988,925	1,511,853
	Specialist	424,441	493,728	602,457	503,081	425,476	849,917
	Total visits	947,369	1,138,150	1,512,438	1,607,620	1,414,401	2,361,770
Percent of visits	General practitioner	55.2	56.6	60.2	68.7	69.9	64.0
	Specialist	44.8	43.4	39.8	31.3	30.1	36.0
	Total visits	100.0	100.0	100.0	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 3. Number and percent of female youth by number of physician visits and age, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Age (years)													Total
		12	13	14	15	16	17	18	19	20	21	22	23	24	
Female															
Number of youth	One to four visits	12,968	13,360	13,245	12,668	12,170	11,596	11,456	11,484	11,227	11,101	11,506	11,599	11,460	155,840
	Five or more visits	4,179	4,664	5,421	6,167	7,980	9,185	9,726	10,095	10,078	10,284	11,367	11,985	12,954	114,085
	Any visit	17,147	18,024	18,666	18,835	20,150	20,781	21,182	21,579	21,305	21,385	22,873	23,584	24,414	269,925
	No visits	4,796	4,752	4,465	4,126	3,566	3,122	3,067	3,744	4,165	4,257	4,134	4,341	4,371	52,906
	Total	21,943	22,776	23,131	22,961	23,716	23,903	24,249	25,323	25,470	25,642	27,007	27,925	28,785	322,831
Percent of youth	One to four visits	59.1	58.7	57.3	55.2	51.3	48.5	47.2	45.4	44.1	43.3	42.6	41.5	39.8	48.3
	Five or more visits	19.0	20.5	23.4	26.9	33.6	38.4	40.1	39.9	39.6	40.1	42.1	42.9	45.0	35.3
	Any visit	78.1	79.1	80.7	82.0	85.0	86.9	87.4	85.2	83.6	83.4	84.7	84.5	84.8	83.6
	No visits	21.9	20.9	19.3	18.0	15.0	13.1	12.6	14.8	16.4	16.6	15.3	15.5	15.2	16.4
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4. Number and percent of male youth by number of physician visits and age, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Age (years)													Total
		12	13	14	15	16	17	18	19	20	21	22	23	24	
Male															
Number of youth	One to four visits	13,421	13,640	13,825	13,566	13,353	13,654	13,810	13,100	11,819	11,462	11,783	11,920	12,252	167,605
	Five or more visits	4,557	4,890	5,014	5,083	5,275	5,446	4,806	4,203	3,733	3,735	3,895	4,188	4,432	59,257
	Any visit	17,978	18,530	18,839	18,649	18,628	19,100	18,616	17,303	15,552	15,197	15,678	16,108	16,684	226,862
	No visits	5,627	5,657	5,688	5,825	6,051	6,129	6,881	8,859	10,128	10,882	11,078	11,597	11,663	106,065
	Total	23,605	24,187	24,527	24,474	24,679	25,229	25,497	26,162	25,680	26,079	26,756	27,705	28,347	332,927
Percent of youth	One to four visits	56.9	56.4	56.4	55.4	54.1	54.1	54.2	50.1	46.0	44.0	44.0	43.0	43.2	50.3
	Five or more visits	19.3	20.2	20.4	20.8	21.4	21.6	18.8	16.1	14.5	14.3	14.6	15.1	15.6	17.8
	Any visit	76.2	76.6	76.8	76.2	75.5	75.7	73.0	66.1	60.6	58.3	58.6	58.1	58.9	68.1
	No visits	23.8	23.4	23.2	23.8	24.5	24.3	27.0	33.9	39.4	41.7	41.4	41.9	41.1	31.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 5. Number and percent of physician visits by provider type and age, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Age (years)													
		12	13	14	15	16	17	18	19	20	21	22	23	24	Total
Number of visits	General practitioner	68,169	73,528	79,514	84,496	101,607	115,614	121,494	131,188	134,371	135,812	146,379	155,556	164,125	1,511,853
	Specialist	60,520	66,292	69,504	73,651	76,869	77,605	69,287	58,038	50,691	52,583	58,876	64,142	71,859	849,917
	Total visits	128,689	139,820	149,018	158,147	178,476	193,219	190,781	189,226	185,062	188,395	205,255	219,698	235,984	2,361,770
Percent of visits	General practitioner	53.0	52.6	53.4	53.4	56.9	59.8	63.7	69.3	72.6	72.1	71.3	70.8	69.5	64.0
	Specialist	47.0	47.4	46.6	46.6	43.1	40.2	36.3	30.7	27.4	27.9	28.7	29.2	30.5	36.0
	Total visits	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6. Number and percent of physician visits by provider type and gender, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Gender		
		Female	Male	Total
Number of visits	General practitioner	997,646	514,207	1,511,853
	Specialist	486,830	363,087	849,917
	Total visits	1,484,476	877,294	2,361,770
Percent of visits	General practitioner	67.2	58.6	64.0
	Specialist	32.8	41.4	36.0
	Total visits	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 7. Number and percent of youth by number of physician visits and region of residence, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Region of residence			
		Rural	Mid-sized centre	Large centre	Total
Number of youth	One to four visits	69,125	48,607	205,675	323,407
	Five or more visits	34,171	27,413	111,741	173,325
	Any visit	103,296	76,020	317,416	496,732
	No visits	36,694	25,827	96,391	158,912
	Total	139,990	101,847	413,807	655,644
Percent of youth	One to four visits	49.4	47.7	49.7	49.3
	Five or more visits	24.4	26.9	27.0	26.4
	Any visit	73.8	74.6	76.7	75.8
	No visits	26.2	25.4	23.3	24.2
	Total	100.0	100.0	100.0	100.0

Table 8. Number and percentage of physician visits by provider type and region of residence, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Region of residence			
		Rural	Mid-sized centre	Large centre	Total
Number of visits	General practitioner	300,073	237,717	973,886	1,511,676
	Specialist	169,349	134,323	546,165	849,837
	Total visits	469,422	372,040	1,520,051	2,361,513
Percent of visits	General practitioner	63.9	63.9	64.1	64.0
	Specialist	36.1	36.1	35.9	36.0
	Total visits	100.0	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 9. Number and percent of youth by number of physician visits and socio-economic status (SES), Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Socio-economic status					Total
		Lowest SES	Low middle	Middle	High middle	Highest SES	
Number of youth	One to four visits	72,079	47,818	74,199	56,993	65,652	316,741
	Five or more visits	38,990	26,321	38,601	30,685	35,311	169,908
	Any visit	111,069	74,139	112,800	87,678	100,963	486,649
	No visits	38,784	26,277	34,992	26,126	28,002	154,181
	Total	149,853	100,416	147,792	113,804	128,965	640,830
Percent of youth	One to four visits	48.1	47.6	50.2	50.1	50.9	49.4
	Five or more visits	26.0	26.2	26.1	27.0	27.4	26.5
	Any visit	74.1	73.8	76.3	77.0	78.3	75.9
	No visits	25.9	26.2	23.7	23.0	21.7	24.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 10. Number and percentage of physician visits by provider type and socio-economic status (SES), Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Socio-economic status					Total
		Lowest SES	Low middle	Middle	High middle	Highest SES	
Number of visits	General practitioner	347,068	237,353	338,103	263,017	294,298	1,479,839
	Specialist	184,896	122,068	190,978	153,980	183,508	835,430
	Total visits	531,964	359,421	529,081	416,997	477,806	2,315,269
Percent of visits	General practitioner	65.2	66.0	63.9	63.1	61.6	63.9
	Specialist	34.8	34.0	36.1	36.9	38.4	36.1
	Total visits	100.0	100.0	100.0	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 11. Number and of youth by number of physician visits and educational achievement, Albertan youth aged 12 to 20 years, 2008/09

	Number of physician visits	Educational achievement			
		Below expectations	Meeting expectations	Above expectations	Total
Number of youth	One to four visits	23,000	95,722	16,238	134,960
	Five or more visits	11,935	45,061	6,963	63,959
	Any visit	34,935	140,783	23,201	198,919
	No visits	9,671	28,201	3,614	41,486
	Total	44,606	168,984	26,815	240,405
Percent of youth	One to four visits	51.6	56.6	60.6	56.1
	Five or more visits	26.8	26.7	26.0	26.6
	Any visit	78.3	83.3	86.5	82.7
	No visits	21.7	16.7	13.5	17.3
	Total	100.0	100.0	100.0	100.0

Table 12. Number and percentage of physician visits by provider type and educational achievement, Albertan youth aged 12 to 20 years, 2008/09

	Provider type	Educational achievement			
		Below expectations	Meeting expectations	Above expectations	Total
Number of visits	General practitioner	100,004	345,989	49,080	495,073
	Specialist	67,470	269,054	48,799	385,323
	Total visits	167,474	615,043	97,879	880,396
Percent of visits	General practitioner	59.7	56.3	50.1	56.2
	Specialist	40.3	43.7	49.9	43.8
	Total visits	100.0	100.0	100.0	100.0

Physician visits by Albertan youth

Tables (continued)

Table 13. Number and percent of youth by number of physician visits and mental health condition, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Mental health condition*						
		Mood/ anxiety	Behavioural	Neuro developmental	Schizophrenia/ psychoses	Any condition	No condition	Total
Number of youth	One to four visits	15,981	7,964	1,820	664	24,459	287,761	312,220
	Five or more visits	33,497	10,914	2,133	1,571	41,122	128,725	169,847
	Any visit	49,478	18,878	3,953	2,235	65,581	416,486	482,067
	No visits	451	548	217	56	1,211	140,674	141,885
	Total	49,929	19,426	4,170	2,291	66,792	557,160	623,952
Percent of youth	One to four visits	32.0	41.0	43.6	29.0	36.6	51.6	50.0
	Five or more visits	67.1	56.2	51.2	68.6	61.6	23.1	27.2
	Any visit	99.1	97.2	94.8	97.6	98.2	74.8	77.3
	No visits	0.9	2.8	5.2	2.4	1.8	25.2	22.7
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Mental health condition categories are not mutually exclusive

Table 14. Number and percent of physician visits by provider type and mental health condition, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Mental health condition*						
		Mood/ anxiety	Behavioural	Neuro developmental	Schizophrenia/ psychoses	Any condition	No condition	Total
Number of visits	General practitioner	287,202	83,302	11,391	9,838	340,456	1,130,222	1,470,678
	Specialist	143,354	59,358	16,469	14,158	183,345	655,518	838,863
	Total visits	430,556	142,660	27,860	23,996	523,801	1,785,740	2,309,541
Percent of visits	General practitioner	66.7	58.4	40.9	41.0	65.0	63.3	63.7
	Specialist	33.3	41.6	59.1	59.0	35.0	36.7	36.3
	Total visits	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Mental health condition categories are not mutually exclusive

Physician visits by Albertan youth

Tables (continued)

Table 15. Number and percent of youth by number of physician visits and cross-service use, Albertan youth aged 12 to 24 years, 2008/09

	Number of physician visits	Cross-service use							
		All youth in Health registry (12 to 24)	Education enrolment (12 to 20)	Post-secondary enrolment (17 to 24)	Maltreatment intervention (12 to 18)	Charges (12 to 17)	Corrections involvement (12 to 17)	FSCD* (12 to 18)	Income support (18 to 24)
Number of youth	One to four visits	323,445	137,949	41,646	3,188	2,609	2,215	1,572	1,603
	Five or more visits	173,342	64,986	26,801	2,510	1,399	1,223	1,669	2,345
	Any visit	496,787	202,935	68,447	5,698	4,008	3,438	3,241	3,948
	No visits	158,971	43,286	16,497	991	1,258	1,003	277	783
	Total	655,758	246,221	84,944	6,689	5,266	4,441	3,518	4,731
Percent of youth	One to four visits	49.3	56.0	49.0	47.7	49.5	49.9	44.7	33.9
	Five or more visits	26.4	26.4	31.6	37.5	26.6	27.5	47.4	49.6
	Any visit	75.8	82.4	80.6	85.2	76.1	77.4	92.1	83.4
	No visits	24.2	17.6	19.4	14.8	23.9	22.6	7.9	16.6
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Family Support for Children with Disabilities

Table 16. Number and percentage of physician visits by provider type and cross-service use, Albertan youth aged 12 to 24 years, 2008/09

	Provider type	Cross-service use							
		All youth in Health registry (12 to 24)	Education enrolment (12 to 20)	Post-secondary enrolment (17 to 24)	Maltreatment intervention (12 to 18)	Charges (12 to 17)	Corrections involvement (12 to 17)	FSCD* (12 to 18)	Income support (18 to 24)
Number of visits	General practitioner	1,511,853	502,939	247,128	18,269	12,058	10,772	7,921	23,582
	Specialist	849,917	393,234	107,138	15,564	7,302	6,532	15,478	9,599
	Total visits	2,361,770	896,173	354,266	33,833	19,360	17,304	23,399	33,181
Percent of visits	General practitioner	64.0	56.1	69.8	54.0	62.3	62.3	33.9	71.1
	Specialist	36.0	43.9	30.2	46.0	37.7	37.7	66.1	28.9
	Total visits	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Family Support for Children with Disabilities

Physician visits by 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.
- 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.
- **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 resided⁴. 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. 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.

Physician visits by Albertan youth

Definitions and Notes (continued)

- **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 the Alberta Health Care Insurance Plan or 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)⁵. 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.
- **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.
- 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.
- Participation in **education** refers to enrolment in the kindergarten to grade 12 education system in Alberta. No data were available for students who attended schools on First Nations reserves or in Lloydminster.
- Participation in **post-secondary** education refers to enrolment in a post-secondary institution in Alberta. Youth enrolled in apprenticeship programs were not included.
- **Maltreatment-related interventions** occur when the safety or well-being of a youth is threatened.
- 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).

Physician visits by Albertan youth

Definitions and Notes (continued)

- **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.
- **Income support** refers to financial benefits provided to individuals and couples who cannot meet their basic needs.

Physician visits by Albertan youth

Data sources

Ministry	Database	Use in this report
Enterprise and Advanced Education	Learner Enrolment Reporting System (LERS)	Post-secondary education enrolment data
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
Human Services	Central Client Directory (CCD)	Income support 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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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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Physician visits by Albertan youth



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