

SETTING  
THE STAGE

# CHILDREN & EMERGENCY DEPARTMENT SERVICES

JULY 2021  
(2019/20 DATA)

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# Children & Emergency Department Services: Setting the Stage for Tiers Development

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### HOW TO CITE THE CHILDREN & EMERGENCY DEPARTMENT SERVICES:

We encourage you to share these documents with others and we welcome their use as a reference. Please cite each document in the module in keeping with the citation on the table of contents of each of the three documents. If referencing the full module, please cite as:

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## Children & Emergency Department Services: Setting the Stage for Tiers Development

The Children & Emergency Department (ED) Tiers of Service module is made up three components:

- **Setting the Stage** for Tiers Development: Summarizes the data used to create the module (*this document*).
- **Tiers in Brief** to Support System Planning: Provides a high-level description of the tiers, including responsibilities and requirements.
- **Tiers in Full** to Support Operational Planning: Provides detailed description of the responsibility and requirements at each tier.

### 1.0 Providers of Children's ED Services

Children's ED services are provided by an interdisciplinary team which includes physicians/nurse practitioners, nurses, allied health and other health care team members.

In BC, physicians that work in EDs have one of three types of qualifications:

1. Royal College of Physicians and Surgeons of Canada (RCPSC)-certified.
  - a) Emergency Medicine specialists (FRCP(EM))
    - Physicians that have completed a 5 year post-graduate Emergency Medicine residency and RCPSC Emergency Medicine examination.
    - Pediatrics is a core component of all Emergency Medicine residency programs.
  - b) Pediatric Emergency Medicine specialists (FRCP(PEM))
    - FRCP-certified specialists in Pediatrics or Emergency Medicine that have completed an additional fellowship in Pediatric Emergency Medicine and the RCPS Pediatric Emergency Medicine examination.
2. Canadian College of Family Physician-certified (CCFP(EM))
  - Physicians that have completed a one-year post-graduate Emergency Medicine fellowship after a two-year Family Medicine residency. Must also have completed the CCFP(EM) examination.
3. Family physicians
  - Smaller rural and community hospitals may be staffed by family physicians who work in the ED on a part-time rotating basis.
  - Basic experience is a core component of family medicine training.

## 2.0 The Population

Over 800,000 children ages 0-16.9 years live in BC, making up 16% of the population. The highest number is in the FHA (345,503) and the highest percentage of children to total population is in the NHA (20%). See Table 1.

Table 1: Population, 0 – 16.9 Years & Total Population, by HA (2019 Estimates, PEOPLE 2021, bcstats.ca)

HA	Age					Total, all Ages	% 0 - 16.9 Yrs within HA	% 0 - 16.9 Yrs within BC
	<1	1-1.9	2-13.9	14-16.9	Total 0-16.9			
Interior	6,242	6,622	90,039	23,314	126,217	827,314	15%	16%
Fraser	18,235	18,371	245,586	63,311	345,503	1,906,933	18%	38%
Vancouver Coastal	9,712	9,459	110,824	30,348	160,343	1,193,977	13%	24%
Vancouver Island	6,309	6,619	90,390	23,211	126,529	858,785	15%	17%
Northern	2,821	3,416	40,670	9,756	56,663	284,327	20%	6%
<b>Total</b>	<b>43,319</b>	<b>44,487</b>	<b>577,509</b>	<b>149,940</b>	<b>815,255</b>	<b>5,071,336</b>	<b>16%</b>	<b>100%</b>
<b>% Total 0-16.9 Yrs</b>	<b>5%</b>	<b>5%</b>	<b>71%</b>	<b>18%</b>	<b>100%</b>			

## 3.0 Utilization of ED Services by BC Children

Two sources of provincial-level data were used to describe the utilization of ED services by children. Unfortunately, both sources have limitations:

1. National Ambulatory Care Report System (NACRS): ED data collected via NACRS is available at 29 sites in BC (2019/20). These 29 sites represent 27% of the EDs in B.C. and 66% of the total ED visits (many of the NACRS sites are the higher volume EDs). The NACRS provides patient and aggregate level data (including a breakdown of several variables by age).
2. Health Authority Management Information System (HAMIS): HAMIS data has been collected for several years but only provides aggregate-level data on total visits.

Highlights of the data are provided in the next section. Detailed data and a visual representation (map) are available in Appendices 1 - 3.

### 3.1 Pediatric ED Visits & Visit Rates

In 2019/20, there were approximately 2.5 million visits to EDs in B.C. hospitals (HAMIS data). Percentages from the 2019/20 NACRS data were applied to the 2019/20 BC ED visit data to help understand the utilization of EDs by children ages 0 – 16.9.

The HAMIS/NACRS data suggests:

- There are an estimated 370,040 pediatric visits (children ages 0 - 16.9 years) to BC EDs each year (~1,000 visits per day). This represents 15% of total ED visits. See Table 2 for HA level data and Appendix 3 for hospital-level data on total ED and pediatric ED visits.
- The pediatric ED visit rate averages 454 visits per 1,000 children per year in BC. It ranges from 336 per 1,000 in the Fraser Health Authority (FHA) to 716 in the Northern Health Authority (NHA). See Table 2, including notes 3 and 4.

Table 2: Total ED and Estimated Pediatric ED Visits (2019/20)

HA	Total ED Visits (Adults & Children)	Pediatric ED Visits (Est.)	% Pediatric ED Visits/Tot ED Visits	% Provincial Pediatric ED Visits	Population 0-16.9 years	Pediatric ED Visits (Est.)/1,000 Population Aged 0 – 16.9 years (HA)	Pediatric ED Visits (Est.)/1,000 Population Ages 0 – 16.9 years (HSDA)
IHA	533,427	76,162	14.3%	20.6%	126,217	603	EK: 827 KB: 743 OK: 470 TCS: 680
FHA	732,397	115,955	15.8%	31.3%	345,503	336 <sup>Note 3</sup>	FE: 393 FS: 358 FN: 271
VCH	444,832	31,215	7.0%	8.4%	160,343	490 <sup>Note 3</sup>	Coastal: 420
BCCH	48,499	47,387	97.7%	12.8%			Richmond: 203 <sup>Note 3</sup> Van: 644 <sup>Note 3</sup>
VIHA	454,927	58,725	13.8%	15.9%	126,529	464	NVI: 497 CVI: 571 SVI: 373
NHA	274,691	40,596	14.8%	11.0%	56,663	716	NE: 670 NI: 591 NW: 997
<b>Total</b>	<b>2,488,773</b>	<b>370,040</b>	<b>14.9%</b>	<b>100.0%</b>	<b>815,255</b>	<b>454</b>	<b>454</b>

Notes re Table 2:

1. Total ED visits (adults and children) were based on 2019/20 HAMIS data.
2. Estimated pediatric ED visits were based on 2019/20 NACRS data for sites where NACRS data was available. Where NACRS data was not available, the provincial average of 15% (excludes “outlier sites” as listed in Appendix 3) of total ED visits was utilized.
3. VCH and BCCH visit data was combined to determine the VCH pediatric visit rate. Given the provincial role of BCCH and the fact that a significant number of children from FHA also present to BCCH, the VCH visit rate is likely overstated and the FHA rate understated. At an HSDA level, the BCCH visits were assumed to be from Vancouver. This likely overstates the Vancouver visit rate and understates the rates from Richmond, Coastal and FHA Health Service Delivery Areas (especially Fraser North as it is closest to BCCH).
4. Estimated pediatric ED visits/1,000 population is significantly higher in areas outside the Lower Mainland and Victoria. This may reflect limitations in alternative options for obtaining medical care.
5. Population estimates were based on B.C. statistics from BC Stats for 2019.

Considering future population growth, these figures are expected to increase by about 5% in the next 10 years. The predicted future rise in the number of ED visits may also be impacted by changes such as the availability of primary care services and the public’s perception of the ability to obtain an assessment and diagnosis in the community within an appropriate time frame. These factors have historically increased the rate of ED visits faster than the rate of population growth.

### 3.2 Ages & Disposition of Children Utilizing ED Services

The highest proportion of pediatric ED visits was comprised of children ages 1 - 4 years of age (33% of the total child visits). See Table 3.

Of the pediatric visits, 91% were discharged home and 4.4% were admitted to hospital. A few were transferred to other hospitals for admission and/or left without being seen/treated.

Table 3: Ages of Pediatric ED Visits (NACRS data, 2019/20)

Age	% Provincial Pediatric Visits	Disposition after ED Visit						Total
		% Discharged Home	% Left Before End of Visit	% Admitted to Site of Receiving ED	% Transferred to Another Site	% Death On/After Arrival	% Intra Facility TF to Day Surg/Clinic	
<1	11%	86.4%	4.4%	7.9%	0.7%	0.0%	0.6%	100%
1 – 4	32%	91.0%	4.9%	3.4%	0.3%	0.0%	0.3%	100%
5 – 9	24%	92.3%	4.0%	3.2%	0.3%	0.0%	0.2%	100%
10 – 14	22%	91.2%	3.6%	4.6%	0.4%	0.0%	0.2%	100%
15 - 16	11%	88.5%	3.9%	7.0%	0.5%	0.0%	0.1%	100%
<b>Total</b>	<b>100%</b>	<b>90.5%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>0.4%</b>	<b>0.0%</b>	<b>0.3%</b>	<b>100%</b>

Notes re Table 3:

1. Data is based on 2019/20 NACRS data for the sites that are collecting NACRS data.
2. Royal Inland data was excluded from the NACRS data due to data quality issues.

### 3.3 Acuity & Reasons for Children Utilizing ED Services

The acuity levels of children presenting to EDs (NACRS data) are lower than those of adults. Patients triaged at Canadian Triage Acuity Scale (CTAS) levels 4 or 5 comprised 39% of total pediatric ED visits compared to 33% of total adult visits.

Assuming the NACRS percentages are representative of all B.C. EDs, it is estimated that 57,500 children/year present to B.C. EDs with high acuity conditions (CTAS 1 or 2), 161,000 with moderate acuity conditions (CTAS 3) and 147,500 with low acuity conditions (CTAS 4 and 5). See Table 4.

Table 4: CTAS Mix of Pediatric and Adult Visits (NACRS data, 2019/20)

CTAS	Description	Children (0-17)	Adults (18+)	Estimated Pediatric Visits/Year
1	Resuscitation	1%	1%	1,500
2	Emergent	16%	17%	56,000
3	Urgent	43%	49%	161,000
4	Less Urgent	37%	29%	140,000
5	Non-Urgent	2%	4%	8,500
6	Unknown	1%	1%	3,000
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>370,000</b>

Note re Table 4: Data is based on 2019/20 NACRS data for the sites that are collecting NACRS data.

The NACRS data suggests:

- The reasons for pediatric ED visits are diverse, although the ten most frequent presenting complaints<sup>1</sup> make up 55% of total cases.
- Fever is the most frequent presenting complaint overall and for children ages 0 – 9 years, while upper extremity injuries are the most common for ages 10 and over.
- See Table 5.

Table 5: Most Frequent Presenting Complaints to ED, by Age Group (NACRS data, 2019/20)

Rank	Top 10 Presenting Complaints								
	<1 Years Old			1-4 Years Old			5-9 Years Old		
	Presenting Complaint	Visits	%	Presenting Complaint	Visits	%	Presenting Complaint	Visits	%
1	Fever	5,619	21%	Fever	16,991	22%	Fever	7,589	13%
2	Cough/congestion	3,463	13%	Cough/congestion	8,266	11%	Abdominal pain	5,278	9%
3	Nausea and/or vomiting	2,053	8%	Nausea and/or vomiting	4,619	6%	Upper extremity injury	4,636	8%
4	Shortness of breath	1,915	7%	Laceration/puncture	4,575	6%	Cough/congestion	3,695	6%
5	Rash	1,837	6%	Shortness of breath	4,184	5%	Laceration/puncture	3,377	6%
6	Head injury	1,578	5%	Head injury	3,943	5%	Nausea and/or vomiting	2,550	4%
7	Inconsolable crying	811	3%	Rash	3,623	5%	Head injury	2,349	4%
8	Minor complaints NOS	674	2%	Upper extremity injury	2,900	4%	Lower extremity injury	2,086	4%
9	Diarrhea	656	2%	Abdominal pain	2,112	3%	Earache	2,075	4%
10	Neonatal jaundice	591	2%	Earache	1,761	2%	Rash	1,953	3%
<b>Total, top 10</b>		<b>19,197</b>	<b>71%</b>	<b>Total, top 10</b>	<b>52,974</b>	<b>68%</b>	<b>Total, top 10</b>	<b>35,588</b>	<b>62%</b>

Rank	Top 10 Presenting Complaints					
	10-14 Years Old			15 – 16 Years Old		
	Presenting Complaint	Visits	%	Presenting Complaint	Visits	%
1	Upper extremity injury	7,183	13%	Lower extremity injury	2,561	9%
2	Lower extremity injury	5,037	9%	Upper extremity injury	2,498	9%
3	Abdominal pain	4,387	8%	Abdominal pain	2,131	8%

<sup>1</sup> “Presenting complaint” refers to the symptom, complaint, problem or reason for seeking emergency medical care as identified by the patient. The Canadian Emergency Department Information System (CEDIS) Working Group developed the Presenting Complaint List (PCL). This information is captured in the NACRS data.

	Top 10 Presenting Complaints					
	10 -14 Years Old			15 – 16 Years Old		
4	Fever	2561	5%	Depression/suicidal/deliberate self-harm	1788	6%
5	Lower extremity pain	2,378	4%	Lower extremity pain	1,083	4%
6	Upper extremity pain	2,354	4%	Head injury	1061	4%
7	Head injury	2269	4%	Laceration/puncture	958	3%
8	Laceration/puncture	2,133	4%	Upper extremity pain	783	3%
9	Depression/suicidal/deliberate self-harm	1,695	3%	Fever	749	3%
10	Cough/congestion	1,422	3%	Sore throat	591	2%
<b>Total, top 10</b>		<b>31,419</b>	<b>58%</b>	<b>Total, top 10</b>	<b>14,203</b>	<b>52%</b>

Of the patients *admitted* as inpatients, the ten most common presenting complaints were:

- |   |                            |
|---|----------------------------|
| 1. Fever                                    | 6. Nausea and/or vomiting  |
| 2. Shortness of breath                      | 7. Seizure                 |
| 3. Depression/suicidal/deliberate self-harm | 8. Upper extremity injury  |
| 4. Abdominal pain                           | 9. Overdose ingestion      |
| 5. Cough/congestion                         | 10. Lower extremity injury |
|   | 11.                        |

Note: These ten complaints accounted for 63% of pediatric admissions from ED.

### 3.4 ED Service Locations

In 2019/20, ED care was provided in 109 hospitals in B.C. (Health Authorities Management Information System (HAMIS) reporting tool).

- An estimated 1,000 physicians and a small number of nurse practitioners provided care, in collaboration with multidisciplinary teams.
- An estimated two-thirds of physicians providing care in EDs in B.C. did so on a part-time basis, in addition to their primary jobs as family physicians.
- Most physicians working in EDs in B.C. graduated from family medicine residency programs and most have no formal emergency medicine training or certification. While statistics are not available in B.C., an Ontario survey reported that 70% of physicians working in EDs in southwestern Ontario had no formal emergency training or certification (Bhimani et al, 2007).

Because children may present to any ED at any time, all EDs in B.C. must be able to provide a high standard of emergent care to children. This includes ensuring appropriate levels of pediatric training for physicians, nurses and other health care providers and the availability of age-appropriate equipment and space that supports child and family-centered care. Processes and protocols must also be in place to support the timely transfer of children to other tiers of service when required.

While ED care is provided in 109 hospitals, relatively few have the capacity to admit children for inpatient care:

- 26/109 (24%) hospitals have designated pediatric beds (including mental health and substance use beds): 173 beds at B.C. Children’s Hospital (BCCH) and 270 in other B.C. hospitals, for a total of 443.



- 31/109 (28%) hospitals do not have any capacity to admit inpatients (adults or children) to their facility.
- Of the 78 hospitals that have capacity to admit inpatients to their facility, 71 admitted children in 2019/20 (>5 inpatient days). 26 of those hospitals have designated pediatric beds, while 34 do not. See Appendix 4 for a list of hospitals with designated inpatient pediatric beds.

## 4.0 References

Bhimani, Munsif et al. (2007). Emergency Medicine Training Demographics of Physicians Working in Rural & Regional Southwestern Ontario Emergency Departments. *CJEM*, 9(6), pp. 449-452.  
[www.ncbi.nlm.nih.gov/pubmed/18072991](http://www.ncbi.nlm.nih.gov/pubmed/18072991). (accessed July 2021)

## Appendix 1: ED and Med/Surg Visits and Days by Facility

- Includes children ages 0 - 16.9 years.
- Surgical procedures: Procedures performed on children by a surgeon regardless of most responsible physician (MRP). Includes children in NICUs, PICUs, med/surg units and in day care settings.
- Med/surg visits and days: Visits and days sorted by MRP. Includes children in PICUs, med/surg units and in day care settings (excludes children in NICUs).
- Day care visits = Surgical or medical day care visits in which an anesthetic was provided.
- Medical and surgical data is for fiscal year 2019/2020. Source is the BC MoH Discharge Abstract Database.
- Emergency Department (ED) visits: Based on 2019/20 National Ambulatory Care Reporting System (NACRS) data for children ages 0-16.9 for sites that submit to NACRS. Where NACRS data was not available, visits were calculated as 15% x total ED visits. 2019/20 MIS data was used for total ED visits.

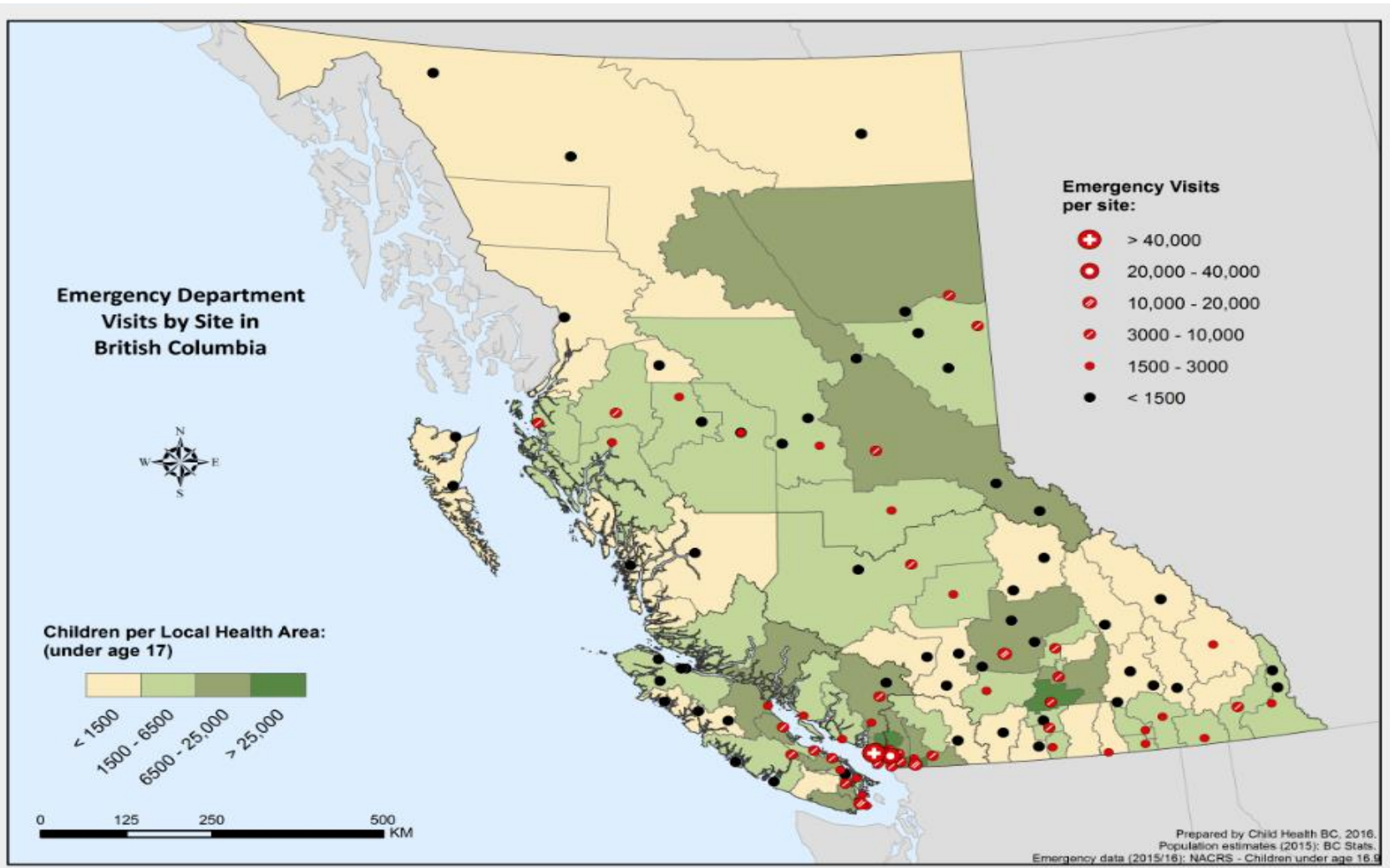
HA/HSDA	Treating Hosp	ED Visits	Surgery							Medical				Med/Surg		Gen Ped Beds
			Day Care Procs	Inpt Procs	Total Procs	Day Care Visits	Inpt Visits	Total Visits	Total Days	Day Care Visits	Inpt Visits	Total Visits	Total Days	Total Visits	Total Days	
<b>Interior HA</b>																
East Kootenay	Creston Valley Hosp	2,386	35		35	34		34		11	19	30	26	64	26	
	East Kootenay Reg Hosp	3,425	282	42	324	282	48	330	75		106	106	249	436	324	2
	Elk Valley Hosp	1,923	46		46	46		46		6	26	32	35	78	35	
	Elkford Health Centre	232														
	Golden and District Hosp	1,350	20		20	20		20		1	11	12	17	32	17	
	Invermere and District Hosp	1,735									9	9	22	9	22	
	Sparwood H Ctre	727														
Kootenay Boundary	Arrow Lakes Hosp	687									1	1	1	1	1	
	Boundary Hosp	1810									2	2	5	2	5	
	Castlegar and District Community H Ctre	1685														
	Edgewood H Ctre	401														
	Kootenay Boundary Regional Hosp	2385	90	31	121	90	30	120	52	1	187	188	393	308	445	4
	Kootenay Lake Hosp	2062	142		142	142	1	143	1		36	36	67	179	68	
	Slocan Community H Ctre	299														
Victorian Community H Ctre of Kaslo	184															
Okanagan	Kelowna General Hosp	9,757	500	183	683	497	157	654	308	7	588	595	1,508	1249	1816	10
	Orchard Medical UPCC	457														
	Penticton Regional Hosp	5,624	47	41	88	47	36	83	63	2	148	150	282	233	345	
	Princeton General Hosp	1,099														
	South Okanagan Gen Hosp	2,532														
	South Similkameen Htlh Ctre	473														
	Summerland Mem Htlh Ctre		560		560	560		560						560		
	Vernon Jubilee Hosp	7,707	188	137	325	185	141	326	205	10	205	215	458	541	663	5
Vernon UPCC	433															
Thompson Cariboo Shuswap	100 Mile District General Hosp	2,002								10	10	20	24	20	24	
	Alexis Creek H Ctre	240														
	Ashcroft Hosp and Community H Ctre	297														
	Barriere H Ctre	200														
	Blue River H Ctre	29.85														
	Cariboo Memorial Hosp	2,911	83	4	87	83	5	88	7	1	95	96	242	184	249	
	Chase and District H Ctre	611														
	Dr. Helmcken Memorial Hosp	533		1	1		1	1	2		1	1	2	2	4	

HA/HSDA	Treating Hosp	ED Visits	Surgery							Medical				Med/Surg		Gen Ped Beds	
			Day Care Procs	Inpt Procs	Total Procs	Day Care Visits	Inpt Visits	Total Visits	Total Days	Day Care Visits	Inpt Visits	Total Visits	Total Days	Total Visits	Total Days		
	Kamloops Urgent Family Care Centre	1818															
	Lillooet Hosp And H Ctre	904	18		18	18		18		2	6	8	17	26	17		
	Nicola Valley H Ctre	2,158															
	Queen Victoria Hosp	1,358	46		46	46		46		5	7	12	19	58	19		
	Royal Inland Hosp	10,246	452	209	661	450	208	658	351	1	303	304	674	962	1025	9	
	Shuswap Lake General Hosp	3,211	22	8	30	22	8	30	8	1	16	17	21	47	29		
	St. Bartholomew's H Ctre	271															
<b>Interior HA Total</b>		<b>76,162</b>	<b>2,531</b>	<b>656</b>	<b>3,187</b>	<b>2,522</b>	<b>635</b>	<b>3,157</b>	<b>1,072</b>	<b>58</b>	<b>1,776</b>	<b>1,834</b>	<b>4,062</b>	<b>4,991</b>	<b>5,134</b>	<b>30</b>	
<b>Fraser HA</b>																	
Fraser East	Abbotsford Regional Hosp and Cancer Centre	12,210	304	200	504	304	211	515	323	1	957	958	2,308	1473	2631	12	
	Chilliwack General Hosp	8,704	84	7	91	84	8	92	10		9	9	12	101	22	4	
	Fraser Canyon Hosp	1,709															
	Mission Memorial Hosp	3,107															
Fraser North	Burnaby Hosp	7,595	1	1	2	1	2	3	2	1	36	37	73	40	75		
	Eagle Ridge Hosp	7,426	209		209	209		209			12	12	12	221	12		
	Ridge Meadows Hosp And Health Care Centre	6,827	194	47	241	194	53	247	88		11	11	13	258	101	4	
	Royal Columbian Hosp	9,586	118	124	242	118	128	246	177	3	612	615	1,341	861	1,518	12	
Fraser South	Delta Hosp	3,032	42	1	43	42	1	43	1		26	26	26	69	27		
	Jim Pattison Outpatient Care and Surgery Centre		1		1	1		1		2		2		3			
	Langley Memorial Hosp	5,710	128	54	182	128	61	189	89		276	276	681	465	770	9	
	Peace Arch District Hosp	5,816	1	1	2	1	1	2	1		1	1	1	3	2		
	Surrey Memorial Hosp	44,233	665	413	1,078	663	436	1,099	609	6	1,246	1,252	3,368	2,351	3,977	16	
<b>Fraser HA Total</b>		<b>115,955</b>	<b>1,747</b>	<b>848</b>	<b>2,595</b>	<b>1,745</b>	<b>901</b>	<b>2,646</b>	<b>1,300</b>	<b>13</b>	<b>3,186</b>	<b>3,199</b>	<b>7,835</b>	<b>5,845</b>	<b>9,135</b>	<b>57</b>	
<b>Vancouver Coastal HA</b>																	
North Shore/Coast Garibaldi	Bella Coola General Hosp	555									10	10	21	10	21		
	Lions Gate Hosp	8,226	170	157	327	169	166	335	313	28	377	405	770	740	1,083	10	
	Pemberton H Ctre	901															
	Powell River General Hosp	2,658	10	3	13	10	3	13	3		15	15	29	28	32		
	R.W. Large Memorial Hosp	605									11	11	24	11	24		
	Sechelt Hosp	2,564	13	2	15	13	2	15	3		19	19	37	34	40		
	Squamish General Hosp	2,223	91	1	92	44		44		52	23	75	29	119	29		
	Whistler H Ctre	2,930															
Richmond	Richmond Hosp	6,325	110	36	146	110	44	154	55		177	177	355	331	410	4	
Vancouver	Mount Saint Joseph Hosp	1,111	12	3	15	12	4	16	6					16	6		
	St. Paul's Hosp	1,253	21	2	23	19	3	22	10	4	82	86	122	108	132		
	UBC Health Sciences Centre	1,733	35	16	51	35	16	51	16	2		2		53	16		
	Vancouver General Hosp	131	31	16	47	30	18	48	168	25	2	27	3	75	171		
<b>Vancouver Coastal HA Total</b>		<b>31,215</b>	<b>493</b>	<b>240</b>	<b>733</b>	<b>442</b>	<b>256</b>	<b>698</b>	<b>574</b>	<b>111</b>	<b>716</b>	<b>827</b>	<b>1,390</b>	<b>1,525</b>	<b>1,964</b>	<b>14</b>	
<b>Island HA</b>																	
Central Vancouver Island	Bamfield H Ctre	283															
	Chemainus Health Care Centre	1,368															
	Cowichan District Hosp	4,303	304	38	342	304	40	344	57		190	190	342	534	399	4	
	Ladysmith Community H Ctre	2,614															
	Nanaimo Regional General Hosp	7,607	733	159	892	733	169	902	246		410	410	988	1,312	1,234	8	
	Oceanside H Ctre	4,840															
	Tofino General Hosp	999										22	22	35	22	35	
West Coast General Hosp	3,800	63	3	66	63	6	69	12	2	43	45	66	114	78			

HA/HSDA	Treating Hosp	ED Visits	Surgery							Medical				Med/Surg		Gen Ped Beds
			Day Care Procs	Inpt Procs	Total Procs	Day Care Visits	Inpt Visits	Total Visits	Total Days	Day Care Visits	Inpt Visits	Total Visits	Total Days	Total Visits	Total Days	
North Vancouver Island	Cormorant Island Community H Ctre	266									1	1	1	1	1	
	Gold River H Ctre	511														
	Kyuquot H Ctre	299														
	The North Island Hosp/ Campbell R & District	2,843	123	37	160	123	29	152	33		87	87	230	239	263	1
	The North Island Hosp Comox Valley	3,802	166	50	216	166	54	220	94	1	104	105	191	325	285	4
	Port Alice H Ctre	115														
	Port Hardy Hosp	1,415									10	10	30	10	30	
	Port McNeill And District Hosp	605									6	6	13	6	13	
	St. Joseph's General Hosp	0														
Tahsis H Ctre	415															
South Vancouver Island	Lady Minto / Gulf Islnds Hosp	1,650								1	5	6	6	6	6	
	Royal Jubilee Hosp	2,428	221	3	224	221	13	234	25		30	30	30	264	55	
	Saanich Peninsula Hosp	2,644	213		213	213		213						213		
	Victoria General Hosp	12,263	1,218	588	1,806	1,218	467	1,685	814	3	1,196	1,199	4,812	2,884	5,626	16
	Westshore UPCC	3,656														
<b>Island HA Total</b>	<b>58,725</b>	<b>3,041</b>	<b>878</b>	<b>3,920</b>	<b>3,041</b>	<b>778</b>	<b>3,819</b>	<b>1,281</b>	<b>7</b>	<b>2,104</b>	<b>2,111</b>	<b>6,744</b>	<b>5,930</b>	<b>8,025</b>	<b>33</b>	
<b>Northern HA</b>																
Northeast	Chetwynd General Hosp	1,094									5	5	13	5	13	
	Dawson Creek and District Hosp	3,237	79	5	84	79	4	83	11	52	62	114	84	197	95	
	Fort Nelson General Hosp	795	4		4	4		4			8	8	23	12	23	
	Fort St. John General Hosp	4,162	126	4	130	125	3	128	11	51	119	170	316	298	327	
	Hudson's Hope H Ctre	56														
	Tumbler Ridge H Ctre	407														
Northern Interior	Fraser Lake H Ctre	932														
	G.R. Baker Memorial Hosp	2,581	250	19	269	250	20	270	31	4	10	14	15	284	46	
	Lakes District Hosp and H Ctre	1,628									12	12	16	12	16	
	Mackenzie And District Hosp	963									6	6	8	6	8	
	McBride and District Hosp	281									2	2	3	2	3	
	St. John Hosp	1,945	112	9	121	112	4	116	4	19	36	55	58	171	62	
	Stuart Lake Hosp	914														
	The University Hosp of Northern BC	6,416	348	69	417	345	65	410	157	13	449	462	1,294	872	1,451	12
Valemount H Ctre	589															
Northwest	Atlin H Ctre	398														
	Bulkley Valley District Hosp	2,096	55	6	61	55	6	61	9	10	50	60	104	121	113	
	Haida Gwaii Hosp and H Ctre	426									4	4	5	4	5	
	Houston H Ctre	761														
	Kitimat General Hosp	2,018	90	2	92	90	2	92	2	1	23	24	39	116	41	
	Mills Memorial Hosp	3,338	254	27	281	253	24	277	41	2	108	110	265	387	306	
	Northern Haida Gwaii Hosp and H Ctre	611									4	4	8	4	8	
	Prince Rupert Regional Hosp	3,396	137	9	146	137	9	146	14	2	30	32	51	178	65	
	Stewart General Hosp	247														
	Stikine H Ctre	193														
	Wrinch Memorial Hosp	1,111	75		75	75		75			9	9	13	84	13	
<b>Northern HA Total</b>	<b>40,596</b>	<b>1,530</b>	<b>150</b>	<b>1,680</b>	<b>1,525</b>	<b>137</b>	<b>1,662</b>	<b>280</b>	<b>154</b>	<b>937</b>	<b>1,091</b>	<b>2,315</b>	<b>2,753</b>	<b>2,595</b>	<b>12</b>	

HA/HSDA	Treating Hosp	ED Visits	Surgery							Medical				Med/Surg		Gen Ped Beds	
			Day Care Procs	Inpt Procs	Total Procs	Day Care Visits	Inpt Visits	Total Visits	Total Days	Day Care Visits	Inpt Visits	Total Visits	Total Days	Total Visits	Total Days		
PHSA																	
PHSA	B.C. Cancer Agency																
	B.C. Children's Hosp	47,387	5,922	3,334	9,256	5,920	2,189	8,109	8,703	914	3,704	4,618	22,615	12,727	31,318	97	
	B.C. Women's Hospital		7	334	341	7		7			218	218	280	225	280		
<b>PHSA Total</b>		<b>47,387</b>	<b>5,929</b>	<b>3,668</b>	<b>9,597</b>	<b>5,927</b>	<b>2,189</b>	<b>8,116</b>	<b>8,703</b>	<b>914</b>	<b>3,922</b>	<b>4,836</b>	<b>22,895</b>	<b>12,952</b>	<b>31,598</b>	<b>97</b>	
<b>Grand Total</b>		<b>370,040</b>	<b>15,271</b>	<b>6,440</b>	<b>21,711</b>	<b>15,202</b>	<b>4,896</b>	<b>20,098</b>	<b>13,210</b>	<b>1,257</b>	<b>12,641</b>	<b>13,898</b>	<b>45,241</b>	<b>33,996</b>	<b>58,451</b>	<b>243</b>	

## Appendix 2: Map of Pediatric ED Visits in BC



Note: This map utilizes 2015/16 data. Total estimated pediatric visits in 2015/16 was 366,841. This compares to 2019/20 total estimated pediatric visits of 369,992. The distribution of visits across health authorities/sites was similar in both years.

### Appendix 3: Total ED & Estimated Pediatric ED Visits by Hospital

1. Total ED visits (pediatrics and adult) were based on 2019/20 HAMIS data.
2. Sites that submitted NACRS data in 2019/20 are highlighted in yellow.
3. Sites that do not have inpatient beds are highlighted in grey.
4. Pediatric ED visits were based on 2019/20 National Ambulatory Care Report System (NACRS) data for children ages 0 to 16.9 years [1] in sites where NACRS data was available. NACRS data was available for 29/109 EDs in B.C., representing 27% of sites and 66% of the total ED visits.
5. Where NACRS data was not available, 15% of total ED visits was utilized to estimate the number of pediatric visits.

HSDA	Hosp Name	2018/2019 ED Visits (Pediatrics & Adult)	% of Prov ED Visits	Est % Pediatric Visits	Est Pediatric Visits/Yr	% of Prov Pediatric ED Visits
<b>Interior Health Authority</b>						
East Kootenay	Creston Valley Hospital	15,907	0.6%	15%	2,386	0.6%
	East Kootenay Regional Hospital	22,835	0.9%	15%	3,425	0.9%
	Elk Valley Hospital	12,820	0.5%	15%	1,923	0.5%
	Elkford Health Centre	1,548	0.1%	15%	232	0.1%
	Golden and District Hospital	8,998	0.4%	15%	1,350	0.4%
	Invermere and District Hospital	11,564	0.5%	15%	1,735	0.5%
	Sparwood Health Centre	4,847	0.2%	15%	727	0.2%
Kootenay Boundary	Arrow Lakes Hospital	4,583	0.2%	15%	687	0.2%
	Boundary Hospital	12,068	0.5%	15%	1,810	0.5%
	Castlegar and District Community Health Centre	11,233	0.5%	15%	1,685	0.5%
	Edgewood Health Centre	2,672	0.1%	15%	401	0.1%
	Kootenay Boundary Regional Hospital	15,899	0.6%	15%	2,385	0.6%
	Kootenay Lake Hospital	13,748	0.6%	15%	2,062	0.6%
	Slocan Community Health Centre	1,996	0.1%	15%	299	0.1%
	Victorian Community Health Centre of Kaslo	1,229	0.0%	15%	184	0.0%
Okanagan	Kelowna General Hospital	81,433	3.3%	12%	9,757	2.6%
	Orchard Medical Urgent and Primary Care Centre	3,045	0.1%	15%	457	0.1%
	Penticton Regional Hospital	37,493	1.5%	15%	5,624	1.5%
	Princeton General Hospital	7,328	0.3%	15%	1,099	0.3%
	South Okanagan General Hospital	16,880	0.7%	15%	2,532	0.7%
	South Similkameen Health Centre	3,152	0.1%	15%	473	0.1%
	Vernon Jubilee Hospital	51,383	2.1%	15%	7,707	2.1%
	Vernon Urgent Primary Care Centre	2,889	0.1%	15%	433	0.1%
Thompson Cariboo Shuswap	100 Mile District General Hospital	13,345	0.5%	15%	2,002	0.5%
	Alexis Creek Health Centre	1,602	0.1%	15%	240	0.1%
	Ashcroft and District General Hospital	1,977	0.1%	15%	297	0.1%
	Barriere Health Centre	1,333	0.1%	15%	200	0.1%
	Blue River Health Centre	199	0.0%	15%	30	0.0%
	Cariboo Memorial Hospital	19,405	0.8%	15%	2,911	0.8%
	Chase and District Health Centre	4,070	0.2%	15%	611	0.2%
	Dr. Helmcken Memorial Hospital	3,550	0.1%	15%	533	0.1%
	Kamloops Urgent Family Care Centre	12,117	0.5%	15%	1,818	0.5%
	Lillooet Hospital and Health Centre	6,029	0.2%	15%	904	0.2%
	Nicola Valley Hospital and Health Centre	14,385	0.6%	15%	2,158	0.6%
	Queen Victoria Hospital	9,053	0.4%	15%	1,358	0.4%
	Royal Inland Hospital	77,598	3.1%	13%	10,246	2.8%
	Shuswap Lake General Hospital	21,409	0.9%	15%	3,211	0.9%
St. Bartholomew's Health Centre	1,805	0.1%	15%	271	0.1%	

HSDA	Hosp Name	2018/2019 ED Visits (Pediatrics & Adult)	% of Prov ED Visits	Est % Pediatric Visits	Est Pediatric Visits/Yr	% of Prov Pediatric ED Visits
<b>Total, IHA</b>		533,427	21.4%	14%	76,162	20.6%
<b>Fraser Health Authority</b>						
Fraser East	Abbotsford Regional Hospital and Cancer Centre	75,326	3.0%	16%	12,210	3.3%
	Chilliwack General Hospital	60,748	2.4%	14%	8,704	2.4%
	Fraser Canyon Hospital	11,899	0.5%	14%	1,709	0.5%
	Mission Memorial Hospital	21,248	0.9%	15%	3,107	0.8%
Fraser North	Burnaby Hospital	82,763	3.3%	9%	7,595	2.1%
	Eagle Ridge Hospital and Health Care Centre	51,475	2.1%	14%	7,426	2.0%
	Ridge Meadows Hospital and Health Care Centre	44,143	1.8%	15%	6,827	1.8%
	Royal Columbian Hospital	77,355	3.1%	12%	9,586	2.6%
Fraser South	Delta Hospital	34,246	1.4%	9%	3,032	0.8%
	Langley Memorial Hospital	46,995	1.9%	12%	5,710	1.5%
	Peace Arch District Hospital	52,802	2.1%	11%	5,816	1.6%
	Surrey Memorial Hospital	173,397	7.0%	26%	44,233	12.0%
<b>Total, FHA</b>		732,397	29.4%	16%	115,955	31.3%
<b>Vancouver Coastal Health Authority</b>						
North Shore / Coast Garibaldi	Bella Coola General Hospital	3,377	0.1%	15%	555	0.1%
	Lions Gate Hospital	65,764	2.7%	13%	8,226	2.4%
	Pemberton Health Centre	5,552	0.2%	15%	901	0.2%
	Powell River General Hospital	17,902	0.7%	15%	2,658	0.7%
	R.W. Large Memorial Hospital	3,333	0.1%	15%	605	0.1%
	Sechelt Hospital	17,060	0.7%	15%	2,564	0.7%
	Squamish General Hospital	14,173	0.6%	15%	2,223	0.6%
	Whistler Health Centre	19,509	0.8%	15%	2,930	0.8%
Richmond	Richmond Hospital	58,916	2.4%	12%	6,325	1.8%
Vancouver	Mount St. Joseph Hospital	33,832	1.4%	4%	1,111	0.3%
	St. Paul's Hospital	88,427	3.6%	2%	1,253	0.4%
	U.B.C. Health Sciences Centre	23,091	0.9%	7%	1,733	0.5%
	Vancouver General Hospital	95,823	3.9%	0%	131	0.0%
<b>Total, VCHA</b>		444,832	17.9%	7%	31,215	8.4%
<b>Island Health Authority</b>						
Central Vancouver Island	Bamfield Health Centre	1,885	0.1%	15%	283	0.1%
	Chemainus Health Care Centre	9,121	0.4%	15%	1,368	0.4%
	Cowichan District Hospital	33,010	1.3%	13%	4,303	1.2%
	Ladysmith Community Health Centre	17,425	0.7%	15%	2,614	0.7%
	Nanaimo Regional General Hospital	67,462	2.7%	11%	7,607	2.1%
	Oceanside Health Centre	32,268	1.3%	15%	4,840	1.3%
	Tofino General Hospital	6,658	0.3%	15%	999	0.3%
	West Coast General Hospital	25,332	1.0%	15%	3,800	1.0%
North Vancouver Island	Cormorant Island Health Centre	1,770	0.1%	15%	266	0.1%
	Gold River Health Centre	3,406	0.1%	15%	511	0.1%
	Kyuquot Health Centre	1,996	0.1%	15%	299	0.1%
	North Island Hospital, Campbell River & District	25,090	1.0%	11%	2,843	0.8%
	North Island Hospital, Comox Valley	32,102	1.3%	12%	3,802	1.0%
	Port Alice Health Centre	769	0.0%	15%	115	0.0%
	Port Hardy Hospital	9,433	0.4%	15%	1,415	0.4%
	Port McNeill and District Hospital	4,030	0.2%	15%	605	0.2%
	St. Joseph's General Hospital		0.0%	15%	0	0.0%
Tahsis Health Centre	2,769	0.1%	15%	415	0.1%	



HSDA	Hosp Name	2018/2019 ED Visits (Pediatrics & Adult)	% of Prov ED Visits	Est % Pediatric Visits	Est Pediatric Visits/Yr	% of Prov Pediatric ED Visits
South Vancouver Island	Lady Minto/Gulf Islands Hospital	10,997	0.4%	15%	1650	0.4%
	Royal Jubilee Hospital	60,012	2.4%	4%	2,428	0.7%
	Saanich Peninsula Hospital	25,042	1.0%	11%	2,644	0.7%
	Victoria General Hospital	59,979	2.4%	20%	12,263	3.3%
	Westshore Urgent Primary Care Centre	24,371	1.0%	15%	3,656	1.0%
<b>Total, Island HA</b>		<b>454,927</b>	<b>18.3%</b>	<b>13%</b>	<b>58,725</b>	<b>15.9%</b>
<b>Northern Health Authority</b>						
Northeast	Chetwynd General Hospital	7,291	0.3%	15%	1,094	0.3%
	Dawson Creek And District Hospital	21,583	0.9%	15%	3,237	0.9%
	Fort Nelson General Hospital	5,302	0.2%	15%	795	0.2%
	Fort St. John General Hospital	27,747	1.1%	15%	4,162	1.1%
	Hudson's Hope Health Centre	374	0.0%	15%	56	0.0%
	Tumbler Ridge Health Centre	2,715	0.1%	15%	407	0.1%
Northern Interior	Fraser Lake Health Centre	6,216	0.2%	15%	932	0.3%
	GR Baker Memorial Hospital	17,208	0.7%	15%	2,581	0.7%
	Lakes District Hospital and Health Centre	10,854	0.4%	15%	1,628	0.4%
	Mackenzie and District Hospital	6,421	0.3%	15%	963	0.3%
	McBride and District Hospital	1,874	0.1%	15%	281	0.1%
	St. John Hospital	12,969	0.5%	15%	1,945	0.5%
	Stuart Lake Hospital	6,092	0.2%	15%	914	0.2%
	The University Hospital of N British Columbia	46,826	1.9%	14%	6,416	1.7%
	Valemount Health Centre	3,924	0.2%	15%	589	0.2%
Northwest	Atlin Health Centre	2,652	0.1%	15%	398	0.1%
	Bulkley Valley District Hospital	13,971	0.6%	15%	2,096	0.6%
	Haida Gwaii Hospital and Health Centre	2,837	0.1%	15%	426	0.1%
	Houston Health Centre	5,076	0.2%	15%	761	0.2%
	Kitimat General Hospital	13,454	0.5%	15%	2,018	0.5%
	Mills Memorial Hospital	22,253	0.9%	15%	3,338	0.9%
	Northern Haida Gwaii Hospital and Health Centre	4,075	0.2%	15%	611	0.2%
	Prince Rupert Regional Hospital	22,637	0.9%	15%	3,396	0.9%
	Stewart General Hospital	1,645	0.1%	15%	247	0.1%
	Stikine Health Centre	1,288	0.1%	15%	193	0.1%
	Wrinch Memorial Hospital	7,407	0.3%	15%	1,111	0.3%
<b>Total, NHA</b>		<b>274,691</b>	<b>11.0%</b>	<b>15%</b>	<b>40,596</b>	<b>11.0%</b>
PHSA	BC Children's Hospital	48,499	1.9%	98%	47,387	12.8%
<b>Total, PHSA</b>		<b>48,499</b>	<b>1.9%</b>	<b>98%</b>	<b>47,387</b>	<b>12.8%</b>
<b>GRAND TOTAL</b>		<b>2,488,773</b>	<b>100%</b>	<b>15%</b>	<b>370,040</b>	<b>100.0%</b>

## Appendix 4: Pediatric Inpatient Beds in B.C.

HA	Hospital	General Pediatric Beds	Pediatric Observation Beds	Ped ICU Beds <sup>2</sup>	Child & Youth MH Beds	Youth SU Beds <sup>3</sup>	Total Ped Beds	NICU Beds
IHA	Kelowna General	10			8		18	12
	Kootenay Boundary (Trail)	4					4	
	East Kootenay (Cranbrook)	2					2	
	Vernon	5					5	
	Royal Inland	9			2		11	8
FHA	Abbotsford Regional	12					12	10
	Langley Memorial	9					9	
	Chilliwack General		4				4	
	Royal Columbian	12					12	24
	Ridge Meadows		4				4	
	Surrey Memorial	16			20		36	28 <sup>4</sup>
	Burnaby							8
	Creekside Withdrawal Management Centre					6	6	
VCHA	Last Door Recovery Centre					10 <sup>5</sup>	10	
	Lions Gate & Carlile Centre	10			10		20	9
	Richmond		4				4	6
	St Paul's							9
	Peak House					8	8	
Island HA	Young Bears Lodge					5	5	
	Nanaimo Regional	8					8	9
	North Island Hosp - Comox	4					4	
	Victoria General/Ledger House	16		5	14 <sup>6</sup>		35	22
	Cowichan District (Duncan)	4					4	
NHA	North Island Hosp - Campbell River	1					1	
	University Hospital of Northern B.C.	12 <sup>7</sup>			6 <sup>8</sup>		18	9
	Nechako Centre					8 <sup>9</sup>	8	
PHSA	B.C. Children's Hospital	97		22	54 <sup>10</sup>		173	
	BC Women's							60
	Ashnola (Keremeos)					22 <sup>11</sup>	22	
<b>TOTAL</b>		<b>231</b>	<b>12</b>	<b>27</b>	<b>114</b>	<b>59</b>	<b>443</b>	<b>214</b>

Source: Survey of health planners & ED working group in each HA.

**Note: Several hospitals in BC do not have designated pediatric beds but admit children and youth to beds on an adult inpatient unit(s). These hospitals are not included on the list above.**

<sup>2</sup> Beds have the capacity for invasive monitoring, inotropic drugs and mechanical ventilation.

<sup>3</sup> Excludes beds in home-based settings.

<sup>4</sup> Plan to increase to 48 beds in the future.

<sup>5</sup> Contracted beds and number of beds fluctuates.

<sup>6</sup> 14 beds: 5 child, 6 youth & 3 special care (assessment/stabilization) beds.

<sup>7</sup> 4 beds have the capacity for more intensive monitoring, up to and including continuous cardiorespiratory monitoring.

<sup>8</sup> 2 beds for planned admissions and 4 for crisis stabilization.

<sup>9</sup> Includes 1 detox bed.

<sup>10</sup> Includes 14 beds at Looking Glass (up to age 24), a residential eating disorders program operated by PHSA (BC Mental Health & Substance Use Services and BCCH) in collaboration with the Looking Glass Foundation.

<sup>11</sup> Includes beds for ages 17 - 24.