

**Using the Patient's Experience  
to Transform Healthcare.**



# British Columbia Patient-Centred Measurement Reporting and Improvement

2018 Emergency Department Sector Survey  
January 1 - March 31, 2018 Discharge Dates

Technical Report  
May 2019





This report was prepared by R.A. Malatest & Associates Ltd. for the  
*2018 Emergency Department Sector Survey.*

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## SECTION 1: INTRODUCTION

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### 1.1 Introduction

Emergency departments provide vital treatment for a broad spectrum of illnesses and injuries to patients in need of immediate medical care. From 2016 to 2017, there were 13,983,731 emergency department visits across Canada, which represents one of the largest-volume patient activities in the country (CIHI, 2017<sup>1</sup>). Within British Columbia (BC), these patients included visits to full service emergency departments, urgent care centres, diagnostic and treatment centres and outpost hospitals.

Understanding the experiences of people who use healthcare services from the patient perspective is a key priority for Canadian health systems. In British Columbia, measurement of patient-reported experiences and patient-reported outcomes in healthcare is a provincial strategic objective, and provides a means to evaluate progress made towards providing patient-centred care. BC's provincially coordinated measurement strategy, spearheaded by the BC Patient-Centred Measurement Working Group, builds on 15 years of continuous improvement in patient-centred data collection, reporting, and action based on feedback from BC's patients and families, including their assessment of the quality and safety of the healthcare services they have received, as well as their experiences with the system of care in the province.

### 1.2 Background

With an aim to enhance public accountability and support quality improvement, the BC Patient-Centred Measurement Working Group has co-ordinated province-wide surveys across a number of sectors including inpatient acute care, emergency department care, cancer care, mental health and substance use care, and long-term care since 2003. The first emergency department care survey was conducted in 2003, with subsequent surveys administered until 2015. Information collected focused on patient appraisals of their experiences and satisfaction with the quality of care and services that they received in one of British Columbia's emergency departments.

The *2018 Emergency Department Sector Survey* marks the first time that information from patient-reported experiences of care measures (PREMs) has been collected simultaneously with patient-reported outcome measures (PROMs) related to an emergency department visit. The *2018 Emergency Department Sector Survey* also includes a methodological change from a mailed survey with an online option to a survey administered by telephone, also with an online option.

R.A. Malatest & Associates Ltd. (Malatest) was contracted by the BC Patient-Centred Measurement Working Group (BCPCMWG) on behalf of the six health authorities to carry out data collection, analysis and reporting for the *BC 2018 Emergency Department Sector Survey*.

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<sup>1</sup> Hospital MIS Statistics. Report ID: CMDDB3 (CIHI, 2017)

### 1.3 Purpose and Structure of the Technical Report

The purpose of this report is to provide a detailed account of the BC 2018 *Emergency Department Sector Survey* methodology (including a description of the respondents and participating facilities/health authorities), survey administration outcomes (e.g. facility-level<sup>2</sup> response rates and margin of errors; final survey universe sizes), as well as an overview of how the research team produced and analyzed the data for the final provincial, peer group, health authority, and facility-level reports and storyboards. This report also outlines the methodology used for the key driver analysis and reporting of the patient-reported outcome measures (PROMs). This report does not discuss specific findings of the survey data.

The 2018 *Emergency Department Sector Survey* targeted patients following an emergency department visit in one of 108 BC emergency departments between January 1, 2018 and March 31, 2018. See in/exclusion criteria for participation in the survey (section 2.1.2).

### 1.4 Participating Health Authorities and Facilities

The following six (6) health authorities and one (1) affiliate organization provided Malatest with a list of eligible discharges from participating facilities on a twice monthly basis over the course of the survey administration period (January 1, 2018 and March 31, 2018):

- Fraser Health Authority (FHA)
- Interior Health Authority (IHA)
- Northern Health Authority (NHA)
- Provincial Health Services Authority (PHSA)
- Vancouver Coastal Health Authority (VCHA)
  - Affiliate Organization: Providence Health Care (PHC)
- Vancouver Island Health Authority (VIHA)

Patient records received by Malatest reflected discharges from the province's 108 emergency departments. Emergency departments are organized into four peer groups based on 2016/2017 annual visit volumes. A breakdown of participating emergency departments by peer group is presented in table 1-1.

**Table 1-1:** Participating Emergency Departments and Associated Health Authority by Peer Group

<b>Large Peer Group: more than 40,000 annual patient visits n=19</b>			
<b>Hospital</b>	<b>Health Authority</b>	<b>Hospital</b>	<b>Health Authority</b>
Abbotsford Regional General Hospital*	FHA	University Hospital of Northern British Columbia*	NHA
Burnaby Hospital*	FHA	BC Children's Hospital*	PHSA
Chilliwack General Hospital*	FHA	Lions Gate Hospital*	VCHA

<sup>2</sup>The term facility is used to represent the emergency department unit that is housed within that facility.

Eagle Ridge Hospital*	FHA	Richmond Hospital*	VCHA
Langley Memorial Hospital*	FHA	St. Paul's Hospital*	PHC†
Peace Arch Hospital*	FHA	Vancouver General Hospital*	VCHA
Royal Columbian Hospital*	FHA	Nanaimo Regional General Hospital*	VIHA
Surrey Memorial Hospital*	FHA	Royal Jubilee Hospital*	VIHA
Kelowna General Hospital*	IHA	Victoria General Hospital*	VIHA
Royal Inland Hospital*	IHA		

**Medium Peer Group: between 20,000 and 39,999 annual patient visits n=20**

Hospital	Health Authority	Hospital	Health Authority
Delta Hospital*	FHA	Mills Memorial Hospital	NHA
Mission Memorial Hospital*	FHA	Prince Rupert Regional Hospital	NHA
Ridge Meadows Hospital*	FHA	Mount Saint Joseph Hospital*	PHC†
Cariboo Memorial Hospital	IHA	Whistler Health Care Centre	VCHA
East Kootenay Regional Hospital	IHA	North Island Hospital Campbell River Campus*	VIHA
Penticton Regional Hospital	IHA	Cowichan District Hospital*	VIHA
Shuswap Lake General Hospital	IHA	Oceanside Health Centre	VIHA
Vernon Jubilee Hospital	IHA	Saanich Peninsula Hospital*	VIHA
Dawson Creek and District Hospital	NHA	North Island Hospital Comox Valley Campus*	VIHA
Fort St. John Hospital	NHA	West Coast General Hospital	VIHA

**Small Peer Group: between 5,000 and 19,999 annual patient visits n=37**

Hospital	Health Authority	Hospital	Health Authority
Fraser Canyon Hospital*	FHA	Fraser Lake Community Health Centre	NHA
100 Mile District General Hospital	IHA	GR Baker Memorial Hospital	NHA
Boundary Hospital	IHA	Kitimat General Hospital	NHA
Castlegar & District Community Health Centre	IHA	Lakes District Hospital and Health Centre	NHA
Chase Health Centre	IHA	MacKenzie and District Hospital and Health Centre	NHA
Creston Valley Hospital	IHA	St. John Hospital	NHA
Elk Valley Hospital	IHA	Stuart Lake Hospital	NHA
Golden and District General Hospital	IHA	Wrinch Memorial Hospital	NHA
Invermere and District Hospital	IHA	Pemberton Health Care Centre	VCHA
Kootenay Boundary Regional Hospital	IHA	Powell River General Hospital	VCHA
Kootenay Lake District Hospital	IHA	Sechelt Hospital	VCHA
Lillooet District Hospital	IHA	Squamish General Hospital	VCHA
Nicola Valley Health Centre	IHA	UBC Hospital*	VCHA
Princeton General Hospital	IHA	Chemainus Health Care Centre	VIHA

Queen Victoria Hospital	IHA	Lady Minto Gulf Islands Hospital	VIHA
South Okanagan General Hospital	IHA	Ladysmith Community Health Centre	VIHA
Bulkley Valley District Hospital	NHA	Port Hardy Hospital	VIHA
Chetwynd General Hospital	NHA	Tofino General Hospital	VIHA
Fort Nelson General Hospital	NHA		
<b>Extra-Small Peer Group: fewer than 5,000 annual patient visits n=33</b>			
<b>Hospital</b>	<b>Health Authority</b>	<b>Hospital</b>	<b>Health Authority</b>
Alexis Creek Outpost Hospital	IHA	Hudson's Hope Health Centre	NHA
Arrow Lakes Hospital	IHA	McBride and District Hospital	NHA
Ashcroft and District General Hospital	IHA	Northern Haida Gwaii Hospital & Health Centre	NHA
Barriere Health Centre	IHA	Stewart Health Centre	NHA
Blue River Outpost Hospital	IHA	Stikine Health Centre	NHA
Dr. Helmcken Memorial Hospital	IHA	Tumbler Ridge Community Health Centre	NHA
Elkford Health Care Centre	IHA	Valemount Health Centre	NHA
Slocan Community Health Centre	IHA	Bella Coola General Hospital	VCHA
South Similkameen Health Centre	IHA	R.W. Large Memorial Hospital	VCHA
Sparwood Health Care Centre	IHA	Bamfield Health Centre	VIHA
St. Bartholomew's Hospital	IHA	Cormorant Island Health Centre	VIHA
Victorian Community Health Centre	IHA	Gold River Health Centre	VIHA
West Chilcotin Health Centre	IHA	Kyuquot Health Centre	VIHA
Atlin Health Centre	NHA	Port Alice Health Centre	VIHA
Haida Gwaii Hospital and Health Centre – XaaydaGwaayNgaaysdII Naay	NHA	Port McNeill and District Hospital	VIHA
Houston Health Centre	NHA	Tahsis Health Centre	VIHA

\* indicates one of the 29 National Ambulatory Care Reporting System (NACRS) emergency departments in BC.

† Providence Health Care is an affiliate of VCHA

## 1.5 The Survey Instrument

The *2018 Emergency Department Sector Survey* instrument was composed of questions that centered on patients' assessments about their experiences (PREMs) and their outcomes relevant to quality of life (PROMs) following a BC emergency visit. A breakdown of survey questions by instrument or module is presented in Table 1-2.



**Table 1-2: 2018 Emergency Department Sector Survey Questions**

Survey Section	Question Blocks or Modules	No of Questions
PREMs	The Emergency Department Patient Experiences with Care (EDPEC): EDPEC Discharged to Community Instrument (ED_DTC) EDPEC Admitted Stand Alone Instrument (ED_ADMIT: EDPEC_IP1 and EDPEC_IP2)*	35 2
PREMs	BC Emergency Department questions (BCED)	18
PREMs	“Hello my name is” questions (QABED)	2
PREMs	Emergency Health Services questions (BCEHS)	6
PREMs	Patients who saw a doctor identifier (DR_SCREEN)	1
PREMs	BC’s Patient Safety module Hand hygiene question bank Medication reconciliation question bank	9 6 3
PREMs	Office of the Seniors Advocate questions (OSA)	5
PREMs	BC’s Continuity across Transitions in Care module (CONT)	14
PREMs	Intravenous Vascular Access questions (IV)	8
PREMs	BC Emergency Medicine Network questions (EMN)	16
PROMs	EQ-5D-5L**	6
PROMs	Veteran’s Rand 12 Item Health Survey (VR-12)**	14
DEMO	Demographic questions	2
APL	Aboriginal Patient Liaison questions***	2
OPEN	Open-ended patient comment question	1
<b>Total</b>		<b>141</b>

\* If the patient was admitted to acute care only.

\*\* Age ≥13 years old only.

\*\*\* Northern Health Authority patients only.

### 1.5.1 Patient-Reported Experience Measures (PREMs)

The PREMs section of the survey was composed of the following instrument and modules of questions:

1. **Emergency Department Patient Experiences of Care (EDPEC)** is a survey designed to understand patient experiences of emergency department care and was selected as the core instrument for seeking feedback from patients who made use of BC’s Emergency Health Services System, including transport by ambulance. Two versions of EDPEC were included: The EDPEC Admitted Stand Alone Instrument (ED\_ADMIT), which has questions specific to patients who were admitted to the hospital following their emergency department visit; and the EDPEC Discharged to Community Instrument (ED\_DTC), which has questions for those who were discharged directly to the community.
2. **BC Emergency Department (BCED)** is a block of questions including global rating questions and questions that address issues of patient-centred care, such as emotional support, respect for culture and traditions, etc.

3. **“Hello my name is” (QABED)** includes two questions developed by the Health Quality Council of Alberta and are used with permission; these questions align with the international campaign, “Hello my name is” <https://hellomynameis.org.uk/>
4. **Emergency Health Services (EHS)** is a series of questions developed and tested with input from PHSA’s BC Emergency Health Services to address the experience of patients who were transported to the emergency department by ambulance.
5. **BC’s Continuity across Transitions in Care module (CONT)** was developed and tested between 2014 and 2016 and fielded for the first time in BC with the Canadian Patient Experiences Survey—Inpatient Care (CPES-IC) in 2016/17.
6. **BC’s Patient Safety module** focuses on two topics, hand hygiene and medication reconciliation. Hand hygiene questions were first developed and tested in 2008 and have been fielded in BC in since 2008 in various sectors; these questions were changed and revalidated in 2015 with input from BC’s Hand Hygiene Working Group. Medication reconciliation questions were first developed and tested in 2008, then updated and revalidated in 2015 with input from BC’s Medication Reconciliation Clinical Expert Group.
7. **Office of the Seniors Advocate (OSA)** questions were developed with the Office of the Seniors Advocate to explore seniors’ experiences with discharge from hospital and emergency departments.
8. **Intravenous Vascular Access Therapy (IVT)** questions were developed to explore patient experiences with intravenous vascular access therapy with input from clinicians specializing in peripheral vascular access with support from BD (Becton, Dickinson and Company).
9. **BC Emergency Medicine Network (EMN)** questions were developed with the BC Emergency Medicine Network to ask patients for feedback about specific conditions of interest to the EMN, such as chest pain, concussion, a substance use issue, etc.

### 1.5.2 Patient-Reported Outcome Measures (PROMs)

Two patient-reported outcome measures, EuroQol’s EQ-5D-5L and the Veterans Rand 12 Item Health Survey (VR-12), were included in the *2018 Emergency Department Sector Survey* in an effort to assess patients’ perceived health outcomes as additional indicators of quality of care.

1. **EuroQol’s EQ-5D-5L** consists of 5 questions measuring mobility, self-care, usual activities, pain/discomfort and anxiety/depression and visual analogue scale for measuring overall self-rated health. Permission for use of the EQ-5D-5L with the ED 2018 survey was granted by EuroQol to compare the performance of the instrument against the VR-12. The results from the EQ-5D-5L survey will not be reported and the raw data will only be used by the Office of Patient-Centred Measurement as a part of the side-by-side study approved by EuroQuol.
2. **Veteran’s Rand 12 (VR-12) Item Health Survey** includes 12 items for measuring physical and mental health and eight (8) corresponding health domains: general health perceptions, physical functioning, role limitations due to physical and emotional problems, bodily pain, energy-fatigue, social functioning and mental health. Two additional questions measure changes in

physical and mental health compared to one year ago. Permission for use of the VR-12 with the ED 2018 survey was granted by Dr. Lewis Kazis, developer of the VR-12.

The order in which the two PROMs questionnaires were presented to study participants was randomly assigned.

According to EuroQol, the EQ-5D-5L is not appropriate for children under the age of 11 years. Therefore a decision was made not to field these questions with the pediatric population. Since EQ5D and VR12 were fielded as a side-by-side study, the VR-12 and the EQ-5D-5L were administered to those  $\geq 13$  years of age, the cut-off age for youth in BC.

### 1.5.3 Demographic, Custom Aboriginal Patient Liaison Module and Open-Ended Question

The *2018 Emergency Department Sector Survey* concluded with two demographic questions: level of education and ethnicity. Patients who self-identified as Indigenous and had an emergency department visit within a Northern Health Authority facility were also asked two custom questions about their experiences with Aboriginal Patient Liaisons (APL). The Aboriginal Patient Liaison Module was designed and implemented to support the information needs of Northern Health Authority exclusively.

The final question offered patients an opportunity to express, in their own words, ideas and suggestions for how patient experiences within BC's emergency departments may be improved. Specifically, patients were asked the question "What is the most important change we could make to improve patient experiences in BC Emergency Departments and ambulance services? We welcome your additional comments". Of the 14,076 patients who completed the *2018 Emergency Department Patient Survey*, 7,938 offered a comment.

### 1.5.4 Survey Variations

Although the *2018 Emergency Department Sector Survey* was designed to be answered by patients who visited an ED during the study period, the administration of certain questions/modules depended on a patient's response to various gateway questions. For example, the intravenous therapy questions were only populated if patients answered "Yes" to the IV module gateway question (*Did you have at least one IV put into a vein during this emergency department visit or while in the ambulance?*). As such, automatic skip patterns built into the survey would determine the number of questions a patient was asked.

Survey variations also depended on three different patient categories:

1. Those admitted to acute care;
2. Those discharged directly to the community; and
3. Those who left the emergency department without being seen (LWBS).

Each of the above groups was presented with unique questions relevant to their grouping. For example, those patients who left the emergency department without being seen (target n=240; 40 surveys from each health authority) were offered a truncated variation of the survey (max. 68

questions). These questions are identified by an asterisk in Appendix B. Results for the LWBS group were populated into a separate database and report<sup>3</sup>.

### 1.5.5 Open-Ended Question Coding

The Malatest research team adapted the coding scheme used in the *2016/17 Acute Inpatient Sector Survey* for use in the *2018 Emergency Department Sector Survey*. The coding scheme was then refined by, and approved by, the BCPCMWG. The coding scheme, which is presented in Appendix A, has 44 individual themes (the *2016/17 Acute Inpatient Sector Survey's* coding scheme had 38 themes). For each theme identified within a patient comment, valence codes were assigned depending on whether the theme was positive, negative, neutral, or positive and negative. Consequently, there was the potential for multiple themes, with differing valence codes, to be derived from each comment.

Open-ended comments were masked prior to reporting, redacting information that could identify a care provider (e.g. doctor, nurse), regardless of whether the comment was positive or negative in nature. Names of elected officials were not redacted. Comments that were insensitive to specific racial or ethnic groups were adjusted so that the group was no longer identifiable.

A copy of the *2018 Emergency Department Sector Survey* instrument, including skip instructions, can be found in Appendix B and the corresponding survey codebook can be found in Appendix C.

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<sup>3</sup> Please note that data from the LWBS group are not included in any of the data presented in this report.

## SECTION 2: SURVEY METHODOLOGY

### 2.1 Participant Recruitment

Patients who received Emergency Health Services from one of BC's 108 emergency departments, urgent care centres, and diagnosis and treatment centres between January 1, 2018 and March 31, 2018 were eligible to participate in the *2018 Emergency Department Patient Survey*.

Twice a month, health authority representatives securely transferred to Malatest the names and contact information of patients discharged from each facility in their purview, from which a random sample of patients was drawn according to the study sample design (see Sections 2.3 & 2.4).

**Table 2-1:** Data Submission Schedule

Submission # (Cohort)	Patient records for Discharges January 1st, 2018 – March 31st, 2018	Submission Due Date
1	Jan 1 - Jan 15, 2018	January 18, 2018
2	Jan 16 - Jan 31, 2018	February 5, 2018
3	Feb 1 - Feb 15, 2018	February 20, 2018
4	Feb 16 - Feb 28, 2018	March 5, 2018
5	Mar 1 – 15, 2018	March 19, 2018
6	Mar 16 – 31, 2018	April 3, 2018

#### 2.1.1 Back Sample

When an organization was unable to submit records according to the above schedule, this resulted in a “back sample” situation. Instead of delaying the project data collection schedule, these late submissions were processed once patient records were received by Malatest. A discussion of how back sampling impacted the project is discussed in Section 4. A complete list of facilities or health authorities that experienced back sampling is presented in Appendix D.

#### 2.1.2 Exclusion Criteria

While the intent of the *2018 Emergency Department Sector Survey* was to capture as wide a range of patient experiences as possible, not all encounters were eligible for inclusion. Exclusion criteria were as follows:

- Patients deceased in hospital (either in the ED or following admission to an Acute Care unit);
- Infants less than or equal to 10 days old at discharge;
- Patients with no fixed address and no telephone number (patients with only a phone number were included);
- Patients residing outside of British Columbia; and
- Patients coded as “Do Not Announce”.

Where possible, the following patients presenting with sensitive issues were also excluded by the organization where the patient received care (in advance of the datafile being submitted to Malatest):

- Patients who presented with confirmed or suspected sexual assault/abuse, elder abuse, or domestic violence;
- Patients who underwent a therapeutic abortion; and
- Patients deceased after discharge.

A copy of the data file submission manual, including the data dictionary approved in the Privacy Impact Assessment for the survey, provided to the health authorities can be accessed here:



Datafile Submission  
Manual ED.pdf

### 2.1.3 Notification Letters

Patients sampled from the discharge files were mailed letters signed by a senior leader with the health authority logo where the patient received ED care. These letters notified patients that the survey was being conducted in compliance with BC's Freedom of Information and Protection of Privacy Act (BCFOIPPA), and provided recipients with instructions on how to participate. Notification letters were personalized with each sampled patient's first and last name in the salutation. The only exception to the standardized approach of notifying patients of their eligibility to participate was for youth (13-17 years of age). While other patients received their notification letters with the health authority and/or operating organization logo(s) presented on the envelope, youth received their letters in an unmarked envelope; this was a risk mitigation strategy should a young person deemed competent to consent to treatment in an ED choose not to notify a parent/guardian in the same household to which the notification letter would be mailed. Notification letters for patients who were children ( $\leq 12$  years) were addressed to parents/guardians who were asked to answer the survey on behalf of their child and include the child in choosing responses, if appropriate. Examples of adult and youth notification letters are provided in Appendix E.

In addition to providing a background to the survey, notification letters also detailed two possible ways (modes) for patients to participate:

- **Telephone participation:** patients were invited to either call Malatest toll-free or wait to receive a phone call from Malatest. Patients interested in the telephone option completed the survey with a surveyor specialized in administering health study surveys.
- **Online participation:** patients could also complete the survey online by logging onto the study URL using their unique Survey ID which was provided in the notification letter.

Notification letters, as well as the introductory script read to patients over the phone or online, communicated to patients that participation was completely voluntary and that patients could choose to skip questions or stop answering questions at any time. Patients with questions about the survey, including its legitimacy, or who had concerns about privacy, were provided with a health

authority contact name/number or the contact information for a hospital's Patient Care Quality Office or Patient Relations Office in the notification letter, on the landing page of the online survey, and over the phone by survey staff (when requested).

While the notification letters were written in English, all letters, with the exception of those mailed to Northern Health Authority patients, accommodated non-English speakers by presenting an information box in the top right-hand corner of the letter (Figure 2-1).

Patients who were more comfortable communicating in French, German, Spanish, Chinese (traditional or simplified), Punjabi, Korean or Vietnamese were invited to call a toll-free number and make an appointment with a surveyor who was fluent in the preferred language. Patients who dialed the toll-free number (1-855-412-1943) would leave a message in a language-specific mailbox requesting that a surveyor call them during a set day/time.

**Figure 2-1:** Invitation for Non-English Speakers

<p><b>To complete the survey in another language call</b>          Si vous souhaitez remplir ce questionnaire en français, veuillez appeler          如妳需要國語(普通話)或粵語(廣東話)來完成本次調查,請致電          如你需要國語(普通話)或粵語(廣東話)來完成本次調查,請致電          한국어 설문지를 원하시면 다음 번호로 연락하십시오          Si usted desea completar esta encuesta en español, sírvase llamar a          ਤੁਹਾਨੂੰ ਪੰਜਾਬੀ ਵਿੱਚ ਇਸ ਸਰਵੇਖਣ ਨੂੰ ਪੂਰਾ ਕਰਨ ਲਈ ਚਾਹੁੰਦੇ ਹੋ ਕਾਲ ਕਰੋ          Nếu quý vị muốn điền bản thăm dò này bằng tiếng Việt, xin gọi          Wenn Sie möchten, dass diese Umfrage in Deutsch zu vervollständigen, rufen Sie bitte die folgende Nummer an  <b>1-855-412-1943 (toll-free)</b></p>
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### 2.1.4 Survey Languages

The 2018 Emergency Department Sector Survey was offered in nine (9) languages; English, French, German, Spanish, Chinese (traditional or simplified), Punjabi, Korean or Vietnamese. The survey was translated by MOSAIC<sup>4</sup> and provided to Malatest for programming. The translations for the EQ-5D module, however, were provided by EuroQuol to adhere to their international language standards. It should be noted that at the time of survey administration, EuroQuol did not have a Punjabi or Vietnamese EQ5D questionnaire available, and thus these questions were omitted for respondents who completed a survey in either of these languages.

### 2.1.5 Patient Requests for Removal

Patients wishing to be removed from the survey could call either their health authority representative or Malatest, as both numbers were included in the notification letter. Health authority representatives who received a patient removal request would notify Malatest either by

<sup>4</sup> <https://www.mosaicbc.org/>

faxing a patient removal request form (Appendix F); calling Malatest directly and speaking to the administrator responsible for Patient Removals; or by submitting the information using an online form. The online option required health authority representatives to log on to Malatest’s patient removal form ([www.research.malatest.com/prod/cwx.cgi?PATIENT\\_REMOVAL](http://www.research.malatest.com/prod/cwx.cgi?PATIENT_REMOVAL)) and enter a patient’s unique Survey ID (found on the notification letter). Users were then prompted to select one of the following reasons for patient removal:

- Patient deceased;
- Privacy concerns;
- Declined to participate;
- Unknown; or
- Other, please specify:

Table 2-2 summarizes the count of patients who contacted their health authority representatives to decline participation:

**Table 2-2:** Patients who Requested Removal from the Study

Health Authority	Reason for Removal				
	Patient Deceased	Privacy Concerns	Declined to Participate	Unknown	Other <sup>5</sup>
FHA	-	-	-	1	-
IHA	2	-	13	14	-
PHSA	-	-	1	-	-
PROVIDENCE	-	-	-	-	-
VIHA	-	-	-	-	-
VCHA	-	-	6	-	-
NHA	-	-	6	9	6

## 2.2 Defining the Sample Universe

To ensure that records met the eligibility criteria of the study, data quality checks of records transferred to Malatest by the health authorities were completed prior to preparation of each sample file. Duplicate records; records outside of the discharge date range; records with missing contact information (telephone number); and records for infants younger than 10 days old were all removed from the sampling pool. Further, records corresponding to patients who had requested to be removed from the study and those for non-BC residents were also removed. Finally, records missing dates of birth were omitted from the sampling pool given the strict privacy considerations when contacting youth. Patient records were also removed from the sampling pool if their Personal Health Number (PHN) was missing as it was the main variable for patient identification. These removals resulted in a “Valid Study Universe” from which a sample was selected based on the size of

<sup>5</sup> ‘Other’ reasons were: “Too old”, “Didn’t feel like answering questions”, “Patient is elderly”, “Do not call him he has bipolar and will get upset”, “Didn’t feel it was worth it; not in long”, and “does not consider Atlin an ER”



the facility (see Appendix G for details of the resulting valid study universe for each facility based on original discharge volumes).

A second data reconciliation step was undertaken using information gained after the sample went to field. This reconciliation step further refined the valid study universe for various reasons that correspond to the original conditions of the study, including: the removal of records with outdated/inaccurate contact information, and patients who had deceased in the time between a facility discharge and when a notification letter arrived in the mail. Also, at the request of Interior Health Authority, patients residing in a long term care home were removed if the only telephone number provided was the central line for the facility (i.e., no alternate (private) phone number provided).

## 2.3 Sample Design

Malatest worked with the Office of BCPCM and local health authority representatives to develop a sample plan with targets at the facility level, with the goal of ensuring sufficient completions to generate a margin of error (MOE) no greater than  $\pm 9\%$  at the facility/site level (at the 95% confidence interval (CI)) using the expected study universe as reference (total expected records after removal of cases not meeting eligibility criteria). To ensure that the respondents to the survey were as representative of BC's emergency facilities as possible, and to ensure statistical accuracy of the results, census samples<sup>6</sup> were conducted for facilities with fewer than 350 emergency department discharges between January 1 – March 31, 2018. All other facilities were randomly sampled with the aim of achieving a balanced number of completions across the 3 months of data collection.

Individual health authorities were given an initial draft sample plan and given the option to customize their proposed sample based on specific internal targets. Consequently, the sample plan was amended to accommodate the following requests:

- Interior Health Authority: additional completions were assigned to Kelowna General and Royal Inland in order for them to achieve a total of 200 completions each, bringing their target MOE down to  $\pm 6.9\%$ .
- Fraser Health Authority: requested additional completions for their three high-priority facilities: Royal Columbian Hospital, Surrey Memorial Hospital and Abbotsford Regional General Hospital, to increase the number of completions up to 250, 500 and 250 and reduce the MOE targets to 6.2%, 4.3% and 6.1% respectively.
- PHSA: request for additional completions to achieve target MOE of  $\pm 4.5\%$ .

In both the sample design phase, and in the assessment of the final survey results, the following formula was used for calculation of the margin of error (E) with correction for a finite population:

$$E = \pm z \sqrt{\frac{\bar{p}(1-\bar{p})}{n}} \times \sqrt{\frac{N-n}{N-1}}$$

<sup>6</sup> 'Census sampling' refers to extending survey invitations to all discharged patients in the facility cohort who have valid contact information.

Where:

$N$  = the size of the valid study universe (discharges after removal of duplicates and cases ineligible for the survey),

$n$  = the size of the survey sample obtained,

$p = 0.50$ , for the maximum sampling error (associated with response proportions of 50%),  
and

$z = 1.96$ , the z-score associated with a 95% confidence level.

## 2.4 Sample Selection

Regardless of sampling approach (census vs. random sample), patient records were de-duplicated following the initial quality check stage to ensure patients were not sampled more than once, even if they had more than one ED visit in the study period.

First, a “within-cohort” de-duplication of patient records was carried out based on PHN. It should be noted that within-cohort de-duplication was carried out with randomized selection of the duplicate patient records, and patients with multiple visits in a single cohort were as likely to have their earlier discharge selected as their later discharge(s).

The second step was a “between-cohort” de-duplication of patient records. In this case, patients who had already been sampled in a previous cohort were removed from consideration for subsequent sampling. This measure was carried out as it was understood that patients would not want to be contacted/expected to participate more than once during the surveying period (i.e. receiving more than one notification letter). The between-cohort de-duplication process was applied at the study level, that is, if a patient was previously sampled for any facility in British Columbia, they were excluded from further sampling universes for the remainder of the study.

## 2.5 Survey Administration Schedule

Full survey administration of the *2018 Emergency Department Sector Survey* began on January 29, 2018, with the majority of surveying completed by April 23, 2018. Limited calling extended to May 9, 2018 but was restricted to pre-set appointments that had been scheduled with respondents who were not able to complete the survey during the active dialing period. The online survey was active until 11:59pm on May 9, 2018.

The calling window for surveying was from 9am to 8pm Monday-Friday, 10am-6pm on Saturdays, and 12pm-8pm on Sundays. No calls were made on the following holidays: Family Day (Feb 12, 2018), Good Friday (Mar 30, 2018), and Easter Sunday (Apr 1, 2018). Surveys completed on these days were by patients who accessed the survey online.

To reduce recall bias, it was important that patients were contacted as quickly as possible following discharge. Table 2-3 summarizes the 18-day survey administration cycle of a single study cohort. In cases where back sampling occurred, the calling window was shifted to accommodate the late receipt of files, as detailed in Appendix D.

**Table 2-3: Survey Administration Schedule**

Day(s)	Activities
1	<ul style="list-style-type: none"> <li>Malatest receives universe of patients from each health authority or institution via SFTP upload.</li> </ul>
2-3	<ul style="list-style-type: none"> <li>Ministry lead is notified of delinquent files (if necessary) by 9AM (Day 2).</li> <li>Day "1" is adjusted depending on the volume of records that are late.</li> <li>Cleaning, de-duplication, and sampling of files.</li> <li>Malatest sends mail-out file to Aristos* via SFTP that includes a unique ID to allow for quick identification of the patient, and secure and confidential online access.</li> </ul>
4-5	<ul style="list-style-type: none"> <li>Aristos verifies addresses (ensure that the mailing address is valid; corrects postal codes).</li> <li>Aristos prepares mail-out (notification letters).</li> <li>Mail-out by end of Day 5.</li> </ul>
6	<ul style="list-style-type: none"> <li>Earliest possible day that surveys can be completed.</li> <li>Call centre staffed to accept any in-bound calls.</li> </ul>
7-8	<ul style="list-style-type: none"> <li>Earliest possible day of outbound calling. Staggered start to calling (only in areas where the survey was accessed online as evidence that that community had received their letters).</li> </ul>
9-10	<ul style="list-style-type: none"> <li>Full calling begins. All patients to receive at least 2 calls.</li> </ul>
11-18	<ul style="list-style-type: none"> <li>Full calling.</li> <li>Calls are staggered to maximize response rates (evening, weekend, daytime).</li> <li>Ongoing coding and cleaning of open-ended question.</li> <li>Increased calling (minimum 5 calls) to facilities with lower response rates/completions.</li> </ul>
18	<ul style="list-style-type: none"> <li>End of active telephone dialling.</li> </ul>
>18	<ul style="list-style-type: none"> <li>Pre-set appointments are conducted.</li> <li>Completions continue online (minimal).</li> </ul>

\* Aristos is a company that specializes in printing and mailing services. Aristos operates under security and confidentiality agreements which preclude the company from renting, selling, distributing or transferring any confidential information it receives. Data manipulated by Aristos remains the property of its clients at all time.

The number of call attempts patients received during the survey administration period depended on their facility's response rate. Table 2-4 details the follow-up approach used by Malatest:

**Table 2-4: Telephone Call Attempts**

Group	Approach
Facilities with response rates up to 10% higher than the average	<ul style="list-style-type: none"> <li>Patients in facilities with response rates above 60% received two calls.</li> </ul>
Facilities with response rates within $\pm 10\%$ of the average	<ul style="list-style-type: none"> <li>A minimum of three calls were made for patients in facilities that had a response rate between 40% and 59.9%.</li> </ul>
Facilities with response rates more than 10% below the average	<ul style="list-style-type: none"> <li>A <u>minimum</u> of five calls were made to patients in facilities in which the response rate was below 40% (or until the sample is exhausted).</li> </ul>
Census Sites	<ul style="list-style-type: none"> <li>Census site status was determined based on an estimate that includes all facilities with less than 350 unique discharges. A <u>minimum</u> of five calls were made to patients in census sites.</li> </ul>

Note: Participants were still able to complete the survey by calling Malatest or completing online even if completion targets had been met.

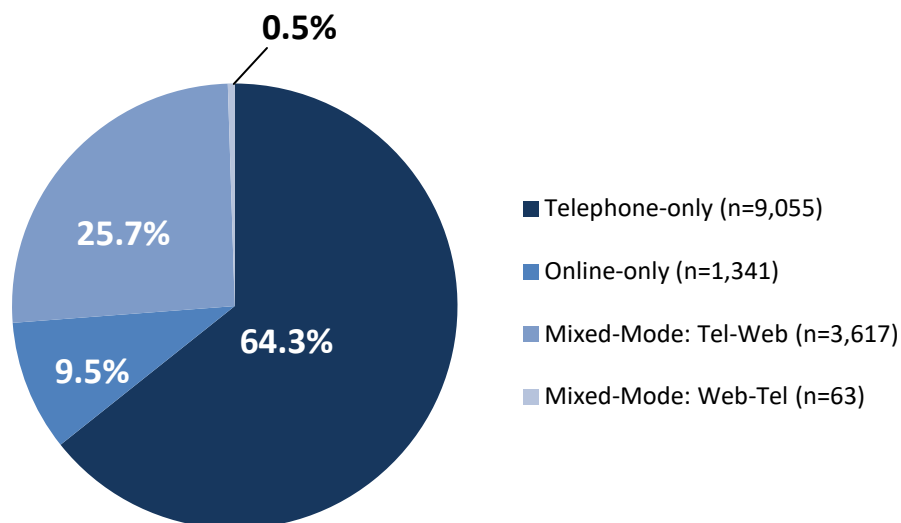
## 2.6 Survey Administration Platform (CallWeb)

CallWeb, a computer-assisted telephone and web interviewing system, was used to conduct both the telephone and online versions of the survey. Once the basic structure of the survey instrument was finalized, the survey was programmed into the CallWeb system. While the survey instrument was being programmed, internal testing was performed on an ongoing basis to ensure the CallWeb system was accurately capturing the data entered into the survey forms. Once the entire survey had been programmed, further testing was completed to ensure the survey matched the paper copy (e.g. quality checks for question ordering, typos, skip patterns).

While the primary mode of survey administration was by telephone (64.3% of participants), respondents who, during the call attempt, expressed a preference to do the survey online were emailed instructions with a link to the online survey. The questions in the online version of the survey were identical to those in the telephone version, with the exception of a few minor wording changes to make questions more appropriate for a self-complete context. These changes are indicated by brackets [ONLINE] in the survey instrument (Appendix B). The online-only mode was utilized by 9.5% of respondents.

In some cases (26.2% of participants), surveys were completed using a mixed-mode approach where respondents began the survey over the phone with a surveyor, then chose to finish the survey online at their convenience; or started the survey online and completed over the phone. The CallWeb system used to conduct both the telephone and online versions of the survey records and stores information after each question. As such, respondents were able to stop the survey at any point and resume at their last completed question.

Figure 2-2 presents the percentage of people who participated in the survey by the three different modes.

**Figure 2-2: Survey Participation by Mode**

Further mode breakdown by population groups show similar patterns, with the majority of people choosing to complete the survey by telephone, as shown in Table 2-5.

Northern Health Authority had the highest telephone-only response, with over 70% of participants using this mode. BC Children’s Hospital (PHSA) had the highest use of the mixed-mode approach, with 39.2% of participants completing the survey online after starting on the phone with a surveyor.

The gender breakdown revealed minimal differences between modes for men and women. By age group, those 65+ preferred the telephone, with just over two-thirds completing their surveys via this mode. Interestingly, this group also had the highest percentage of online-only use, with 12.2% of respondents utilizing this mode. Children and youth had the highest instances of the mixed-mode tel-web approach, with approximately one-third of participants completing the survey online after starting on the phone with a surveyor.

Respondents who completed the survey in a language other than English had generally higher rates of mixed-mode tel-web. Only participants completing in English used the mixed-mode web-tel option.

**Table 2-5: Demographics of Survey Participation by Mode**

	Telephone Only		Online Only		Mixed Mode: Tel-Web		Mixed Mode: Web-Tel	
	n	%	n	%	n	%	n	%
Survey Total	9,055	64.3%	1,341	9.5%	3,617	25.7%	63	0.5%
<b>Health Authority</b>								
FHA	1,793	65.3%	170	6.2%	771	28.1%	11	0.4%
IHA	2,474	63.9%	415	10.7%	964	24.9%	19	0.5%
PHSA	238	50.2%	50	10.5%	186	39.2%	0	-
PROVIDENCE	221	64.6%	29	8.5%	92	26.9%	0	-
VIHA	1,465	61.7%	325	13.7%	570	24.0%	13	0.5%
VCHA	970	60.9%	153	9.6%	460	28.9%	9	0.6%
NHA	1,894	70.7%	199	7.4%	574	21.4%	11	0.4%
<b>Gender</b>								
Male	4,158	63.9%	648	10.0%	1,670	25.7%	30	0.5%
Female	4,896	64.7%	693	9.2%	1,946	25.7%	33	0.4%
<b>Age group</b>								
0-12	1,272	57.0%	182	8.2%	767	34.4%	9	0.4%
13-17	190	57.4%	39	11.8%	101	30.5%	1	0.3%
18-64	4,497	64.5%	566	8.1%	1,880	27.0%	26	0.4%
65+	3096	68.1%	554	12.2%	869	19.1%	27	0.6%
<b>Survey Language</b>								
English	8,976	64.5%	1,323	9.5%	3,546	25.5%	63	0.5%
Chinese (S)	18	32.7%	7	12.7%	30	54.5%	0	-
Chinese (T)	17	65.4%	3	11.5%	6	23.1%	0	-
Punjabi	18	64.3%	2	7.1%	8	28.6%	0	-
Korean	2	11.1%	4	22.2%	12	66.7%	0	-
French	6	42.9%	1	7.1%	7	50.0%	0	-
Spanish	11	84.6%	1	7.7%	1	7.7%	0	-
Vietnamese	5	55.6%	0	-	4	44.4%	0	-
German	2	40.0%	0	-	3	60.0%	0	-

## 2.7 Survey Administration Time

The average amount of time for survey administration depended on several factors such as the number of questions answered based on skip patterns, the age of the respondent, as well as which mode was used to conduct the survey. Patients aged 0-12 were not asked PROMs questions, which include the EQ-5D-5L and the Veteran's Rand 12 Item Health Survey (VR-12) modules, and consist of 20 additional questions.

Upon inspection of the data for individuals who completed the survey online, it was clear that there was significant variability in completion times, ranging from 8.88 minutes to 5717.98 minutes. This variability was primarily attributed to the inability of the current technology to distinguish between when an individual is 'actively' completing questions versus breaking off from the survey and finishing it in one or more sittings. In order to control for this, the following equation was used to determine outliers in the online survey completions group:

$$X > Q_3 + 1.5(Q_3 - Q_1)$$

Where:

Q<sub>1</sub> = the first quartile

Q<sub>3</sub> = the third quartile

As a result, any completion >51 minutes (without PROMs) and >90 (with PROMs) was determined to be an outlier. After removing outliers, the average completion time for an online survey was 34 minutes with PROMs and 22 minutes without PROMs.

As shown in Table 2-6, the average amount of time for survey administration by phone was approximately 39 minutes when PROMs questions were asked. For parents completing the survey on behalf of children, the survey administration times were reduced by 11 minutes to an average time of 28 minutes. Using the method described above, any completion >63 minutes (without PROMs) and >106 minutes (with PROMs) was determined to be an outlier.

Respondents with mixed-mode administration averaged completion times of 37 minutes with PROMs and 24 minutes without PROMs. Using the method described above, any completion >65 minutes (without PROMs) and >119 minutes (with PROMs) was determined to be an outlier.

It should be noted that the formula used did not identify any surveys with a short duration as outliers.

**Table 2-6: Average Survey Administration Time**

Survey Mode	Average Survey Administration Time	
	With PROMs (n=11,846)	Without PROMs (n=2,230)
Online	34 minutes	22 minutes
Telephone	39 minutes	28 minutes
Mixed-Mode	37 minutes	24 minutes

## 2.8 Project Flowchart

A project flowchart for the *2018 Emergency Department Sector Survey* that highlights the key steps from cohort intake through to reporting can be found in Appendix H.

## SECTION 3: ANALYSIS AND REPORTING

### 3.1 Completion and Response Rate Calculations

#### 3.1.1 Completions

Of the 44,135 patients who were sampled over three (3) months, a total of 15,683 patients engaged with the survey and answered at least the first survey question. Survey completion was defined as reaching the 50% mark of the survey (by answering question BCED10). Overall, participant retention for the survey was very high and there was no obvious point in the survey where respondents would break off. As shown in Table 3-1, 87.4% of participants who started the survey completed all questions and 89.8% were counted as completions.

**Table 3-1:** Participant Volumes after Administration of Different Survey Sections

Survey Section	Number of Respondents	Percentage of Respondents
QUESTION 1	15,683	100%
QUESTION 24	15,105	96.3%
QUESTION 55	14,480	92.3%
<b>QUESTION 71 (50% of survey)<sup>7</sup></b>	<b>14,076</b>	<b>89.8%</b>
QUESTION 96	13,896	88.6%
QUESTION 133	13,718	87.5%
QUESTION 141 (last survey question)	13,708	87.4%

#### 3.1.2 Response Rate Calculations

The overall response rate to the survey was 35.9%. Response rates at the provincial, health authority and facility levels were also calculated and monitored. Regardless of level, response rates were calculated as the number of respondents who reached 50% of the survey (and were therefore considered completions) divided by the “valid” sample size. While 44,135 notification letters were mailed (initial sample), 4,967 of those sampled were deemed “invalid” upon telephone follow-up.

Invalid cases were those that upon telephoning the household were discovered to be non-qualifiers for the following reasons: contact information provided by the health authorities was outdated/invalid; patients had deceased in the time between a facility discharge and when a notification letter arrived in the mail; patients were unable to complete a survey due to severe illness/incapacitation (as communicated to Malatest by a member of the household); patients could not be reached because the only contact information received was the reception line of a shelter or

<sup>7</sup> Question 71 was used as a marker for survey completion, and only those who answered this question (and beyond) were included in the n size for reporting.



government institution; patients did not recall having visited an emergency department; and patients who requested the survey in a language other than English or the seven languages supported by the translated versions of the survey.

Completion volumes, response rates, margins of error, and other survey administration details at the provincial, health authority and facility levels, are presented in Appendix G.

### 3.2 Top-Box Calculations

The majority of questions included in the *2018 Emergency Department Sector Survey* were scaled-response questions in which the response is chosen from a range of values, for example, “never” to “always”. To assist interpretation of scaled results and aid comparison across questions within the survey, top-box scores were used for reporting purposes. A top-box score refers to the percentage of respondents who selected the *most* positive response(s) to a scaled survey question. For questions where participants are asked to respond using fewer than five valid response categories, the top-box score is usually defined by the single *most* positive response category (e.g., the “always” response from the options “never”, “sometimes”, “usually” and “always”). For questions where participants are asked to respond using an 11-point scale (i.e., provide a rating from 0-10), the top-box score is defined by the top two *most* positive responses (9 and 10). Top-box scores are based on valid responses only and therefore exclude “don’t know” and “prefer not to answer” responses.

The percentage of respondents who selected the most positive response to a survey item is computed by summing the number of times that the most positive response(s) for that item was selected (i.e., the total frequency of the most positive response(s) for the single item; numerator) and dividing this value by the total number of valid responses to the item (denominator). This resulting ratio is then multiplied by 100 to obtain a percentage.

$$\text{Top-Box Score} = \frac{\sum \text{most positive response}}{\sum \text{valid responses}} \times 100$$

When the scores are calculated using weighted responses, these are predicted percentages of the entire target population, not the actual percentages in the survey sample.

### 3.3 Calculation of Composite/ Dimension Scores

Specific *2018 Emergency Department Sector Survey* questions were grouped for reporting purposes based on the empirically-derived composites for the EDPEC items (RAND) and the conceptually-derived dimensions for the Made-in-BC Modules, BC's Patient Safety Module and BC's Continuity across Transitions in Care Module.

For composite and dimension scores, the percentage of top-box responses for each question was first calculated separately, and then averaged for all dimension/composite questions. In other words, dimension and composite scores are calculated using an “average of the average” approach.

**Dimension Score** = Average (top-box score for all questions)

### 3.4 2018 Emergency Department Sector Survey Reporting Framework

Using data from British Columbia's *2018 Emergency Department Sector Survey*, Malatest provided the Ministry with provincial, health authority, and facility level reports and storyboards. These reports provide a snapshot of patients' assessments of their experiences and their outcomes relevant to quality of life following an emergency department visit between January 1, 2018 and March 31, 2018. All reports had at minimum two main sections: Summary of Key Findings and Detailed Results. In addition to Key Findings and Detailed Results, the facility-level reports also included patient comments which were presented by content theme and valence.

The Key Findings section included six sets of analyses:

1. Global Rating Question scores (PREMs);
2. Identification of Key Drivers (PREMs);
3. Top 10 scoring questions (provincial strengths) (PREMs);
4. Bottom 10 scoring questions (provincial areas of improvement) (PREMs);
5. Composite/Dimension scores (PREMs); and
6. Health Domain scores (VR-12 PROMs).

This Detailed Results section included the results of every question on the *2018 Emergency Department Sector Survey* either individually or grouped with other items. Frequency tables showed the results across all response categories for individual items.

Table 3-2 provides a detailed list of the reports produced for the *2018 Emergency Department Sector Survey* reports, including the report reference group and comparator groups.

**Table 3-2:** 2018 Emergency Department Sector Survey Report Framework

Provincial Peer Group Report	
Reference Group	Comparator Groups
BC Average	Peer Group 1 Average (Large) Peer Group 2 Average (Medium) Peer Group 3 Average (Small) Peer Group 4 Average (X-Small) BC Top 5 Average
Provincial Health Authority Report	
BC Average	FHA Average IHA Average NHA Average PHSA Average VCHA Average* VIHA Average

<b>Large Peer Group Report</b>	
<b>Reference Group</b>	<b>Comparator Groups</b>
BC Large Hospital Average	BC Average BC Top 3 Large Hospitals Average
<b>Medium Peer Group Report</b>	
BC Medium Hospital Average	BC Average BC Medium Hospitals Top 3 Average
<b>Small Peer Group Report</b>	
BC Small Hospital Average	BC Average BC Small Hospitals Top 3 Average
<b>Extra-Small Peer Group Report</b>	
BC Extra-Small Hospital Average	BC Average BC X-Small Hospital Top 3 Average
<b>ED NACRS Facilities Report</b>	
ED NACRS Average	BC Average BC Top 5 Average BC Top 3 NACRS Facilities Average
<b>Health Authority Report 1</b>	
HA Average	BC Average BC Top 5 Average
<b>Health Authority Report 2</b>	
HA Average	BC Average HA Peer Group 1 Average (Large) HA Peer Group 2 Average (Medium) HA Peer Group 3 Average (Small) HA Peer Group 4 Average (X-Small)
<b>Facility/ED Report 1 (based on Peer Group: Large, Medium, Small, Extra-Small)</b>	
Facility Average	HA Peer Group Average BC Peer Group Average BC Peer Group Top 3 Average
<b>Facility Report 2 (ED NACRS Facilities only)</b>	
Facility Average	ED NACRS Facilities Average BC Average BC NACRS Facilities Top 3 Average
<b>BC Children's Hospital Custom Facility Report</b>	
Facility Average	BC ED <18 Years Average BC ED <18 Years Large Peer Group Average

Provincial Self-Reported Aboriginal Report	
Reference Group	Comparator Groups
BC Self-reported Aboriginal Average	BC Non-Aboriginal Average
Health Authority Self-Reported Aboriginal Report (where n sizes warrant)	
HA Self-reported Aboriginal Average	BC Self-reported Aboriginal Average HA Non-Aboriginal Average BC Non-Aboriginal Average
Emergency Health Services Report (EHS patients only)	
BC Average	FHA Average IHA Average NHA Average PHSA Average VCHA Average* VIHA Average ABORIGINAL Average
LWBS Report (patients who left the ED without being seen)	
BC LWBS Average	BC Average

\* Providence Health Care results were included with VCHA results for these reports.

### 3.4.1 Tests for Statistical Comparison

Unadjusted z-tests for independent proportions were conducted to evaluate whether the ED report reference group top-box scores significantly differed ( $p < .05$ ) from the comparator group top-box scores for the PREM items.

### 3.4.2 'Top Performer' Calculations

ED comparator groups included various 'top performers' (i.e. BC top 5 highest performing facilities average, the average for the top 3 highest performing large, medium, small, extra-small and NACRs facilities). Top performing groups were determined by ranking the facility top-box scores for each question in descending order and selecting the top 'X' highest performing facilities for that item. Consequently, the top 'X' facilities may differ between items.

When calculating top-box scores, responses from the top 'X' facilities were treated as one respondent subgroup, with one top-box score for each item for the group. In other words, top-box scores for the top 'X' facilities are not simple averages of the top-box scores of the individual facilities, but are weighted averages that reflect the relative differences in discharge volumes for the individual facilities.

## 3.5 Key Driver Analysis

A key driver analysis was conducted to identify which patient experiences are most likely to affect patients' overall experiences of care. Specifically, the key driver analysis utilized a Structural Equation Modeling approach to identify dimensions (key drivers) and corresponding PREM items

that reflect aspects of care strongly associated with the following four global rating indicators of experiences of care in the Emergency Department:

- EDPEC29. *Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care during this emergency department visit?*
- EDPEC30. *Would you recommend this emergency department to your friends and family?*
- BCED9. *Overall, on a scale of 0 to 10, do you feel you were helped by your visit to the emergency department? Please answer on a scale where 0 is “not helped at all” and 10 is “helped completely.”*
- BCED10. *On a scale of 0 to 10, what was your overall experience with your emergency department? Please answer on a scale where 0 is “I had a very poor experience” and 10 is “I had a very good experience.”*

The key driver analysis process involved the following steps:

- 1) Treatment of missing data
- 2) Factor analysis
- 3) Structural equation modeling
- 4) Variable importance analysis

### 3.5.1 Treatment of missing data

Missing data occurs when an individual’s valid response to a survey question is unknown. Reasons for missing data include an individual not knowing what response to give, an individual preferring not to answer, or a question not being administered to an individual or group (e.g., because the question is not applicable to all people). In a multivariable analysis, missing data are treated by either excluding individuals who do not have a valid value for any of the variables included in the analysis, or by implementing statistical methods to accommodate the missing values. The exclusion of individuals leads to biased estimates in inferential analyses (e.g., the results may no longer be representative of the same population). It is therefore recommended to use statistical methods to adjust for potential biases associated with missing data. Multiple imputation is a statistical method that is widely recommended as a robust approach for minimizing biases due to missing values in multivariable analysis. Prior to running analyses on the 2018 Emergency Department data, *multiple imputation* was used as a method for estimating the values of missing data for the respondents who completed more than 50% of the questionnaire.

Multiple imputation involves an iterative process where unknown values are sequentially imputed based on information from other known values. An algorithm based on the obtained data is used to generate multiple new complete data sets with imputed missing data values. These new data sets are then pooled to generate a single estimate after analysis. The process of multiple imputation includes first identifying the potential source and extent of the missingness. For each item in the survey, the proportion of the sample that provided a usable response (i.e. not missing, no answer, or not applicable) was first determined. Survey items with fewer than 20% usable cases or redundancy due to perfect correlations with one or more other items were excluded from the imputation and further analyses. The following items were excluded: OSA3, EDPEC\_IP1, EDPEC\_IP2, IV7, BCED15,

EMN2-EMN16, EDPEC2, EDPEC24. The MICE procedure and the R software was used to conduct the multiple imputation. Continuous variables (e.g. age) were imputed using a linear model. Binary variables were imputed with logistic regression. Categorical/nominal variables with multiple levels were imputed using polytomous logistic regression. Ordinal variables (most of the survey is Likert-scale) were imputed using proportional-odds regression. Covariates that had an absolute correlation greater than 0.20 with the variable being imputed were included in the imputation model. A total of 40 imputed files were saved and used for subsequent analyses.

### 3.5.2 Factor analysis

Prior to running the analyses, 16 survey dimensions were identified based on previous validation work with the EDPEC items and categorization of new items for the BC ED Survey. A total of 55 items were initially classified into these 16 dimensions, which correspond with composite scores, and three additional dimensions consisting of single items. Factor analyses were conducted using the MPLUS software (version 8) to confirm the plausibility of 16 dimensions as correlated latent factors. A probit link function and mean and variance adjusted weighted least squares estimation was used to fit the model while accommodating the ordered categorical item distributions. The 16-factor model resulted in a reasonable fit. However, the item CONT12 did not correspond well with the managerial continuity domain. Consequently, this item was separated out as a separate dimension, named "CONTACT". The resulting 17 dimensions are provided in Table 3-3.

**Table 3-3:** Dimensions used in the Key Driver Analysis

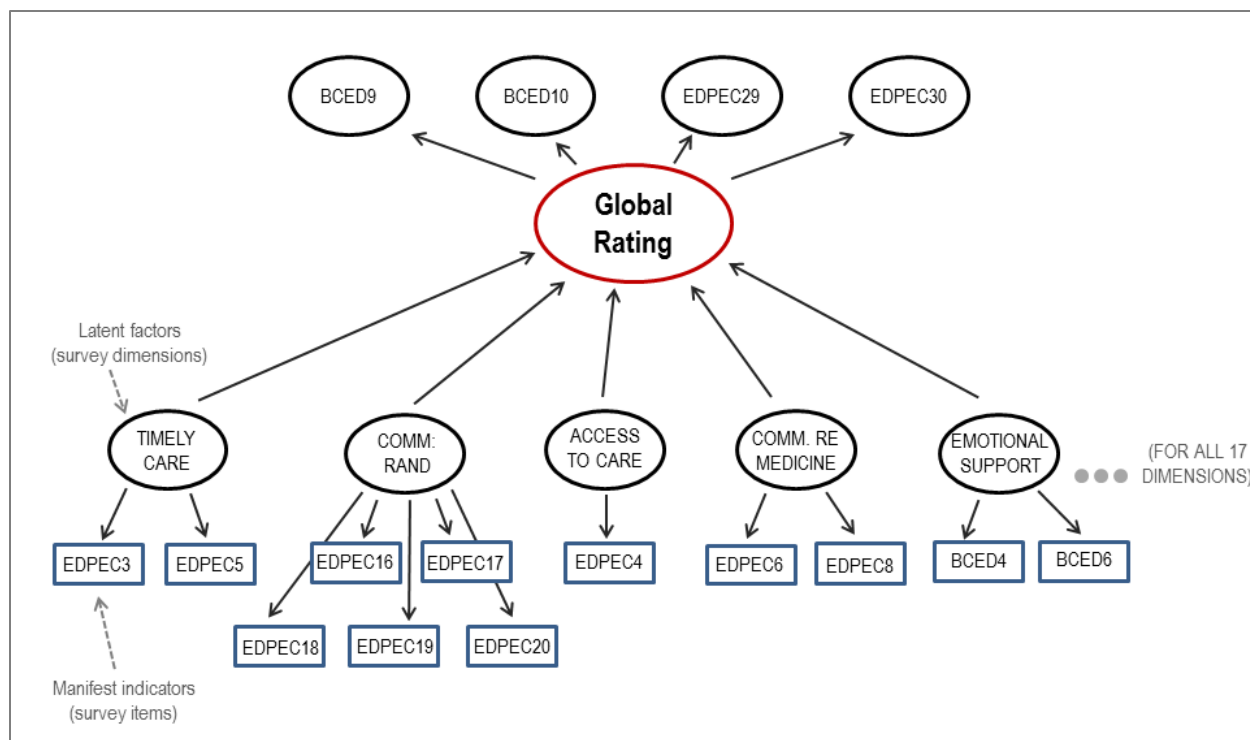
Dimensions	Corresponding Questions	Modifications
Getting Timely Care	EDPEC3, EDPEC5	
How well Emergency Room Doctors and Nurses Communicate with Patients: EDPEC RAND	EDPEC16, EDPEC17, EDPEC18, EDPEC19, EDPEC20, EDPEC21	
Communications with Patients about their Medicines	EDPEC6, EDPEC8, EDPEC9	
How well Emergency Room Doctors and Nurses Communicate with Patients: Emotional Support	BCED4, BCED6	
How well Emergency Room Doctors and Nurses Communicate with Patients: Information Sharing	QABED1, QABED2, BCED5, BCED7, BCED8, EDPEC15	EDPEC28: excluded from this dimension to avoid cross-loading with Communication with Patients about Pain
Communications with Patients about Pain	EDPEC13, EDPEC25, EDPEC28	
Receiving Culturally Responsive and Compassionate Care	BCED13, BCED15, BCED16	
Care of Patients in Pain/Pain Management	EDPEC10,	EDPEC11, EDPEC12, EDPEC24: excluded due to <20% usable cases criterion.
BC Patient Safety - Medication Reconciliation	BCMEDREC1, BCMEDREC2, BCMEDREC3, EDPEC23	
Patient Safety - Hand Hygiene	HYGIENE1, HYGIENE2, HYGIENE3,	

	HYGIENE4, HYGIENE5, HYGIENE6	
BC Continuity Across Transitions in Care - Informational Continuity	CONT1, CONT2, CONT3, CONT4, CONT6, CONT8, CONT9, CONT10, CONT11, CONT14	EDPEC_IP1, EDPEC_IP2: excluded due to <20% usable cases criterion.
BC Continuity Across Transitions in Care - Relational Continuity	CONT5, CONT7	
BC Continuity Across Transitions in Care - Managerial Continuity	CONT13, EDPEC26, EDPEC27	CONT12: included as a separate dimension
Access to Care	EDPEC4	
Physical Environment	BCED11	
Patient Safety - Medical Harm	BCED12	
Contact	CONT12	

### 3.5.3 Structural Equation Modeling

Structural Equation Modeling (SEM) is a statistical technique that combines psychometric factor analysis and multiple regression analysis in a single statistical model. SEM was chosen as an appropriate methodological approach for identifying key drivers because of (1) its ability to account for correlations between survey items and (2) its ability to control for the effects of multiple dimensions on global ratings in order to tease out the unique contributions of each dimension.

The SEM analysis was implemented by specifying the 17 latent factors representing the survey dimensions as predictors of the four global ratings indicators, which were represented as an additional latent factor. This structure is illustrated in the following path diagram:

**Figure 3-1:** Structural Equation Modeling (SEM) Analysis Structure

The defensibility of SEM is evaluated using “fit indices” that indicate the extent to which the model corresponds well with the observed data. For example, a comparative fit index greater than 0.95 and a root mean square error of approximation (RMSEA) less than 0.060 are indicative of good fit. Although the resulting CFI value was slightly lower (0.91), the RMSEA (ranging from 0.051 to 0.054) was well below the desired cut off. Overall, the results indicated that the above model was a defensible representation of the ED survey data.

### 3.5.4 Identification of key drivers

The Pratt index<sup>8</sup> was used to identify key drivers from the SEM analysis. This index can be interpreted as quantifying the relative contribution of each dimension to the total explained variance of the global ratings (the proportion of explained variance in the global ratings attributable to a given dimension). In other words, it helps to answer the question: “What explains why one patient rates their ED visit highly while another rates their ED visit poorly?”

The ED 2018 key drivers are reported at the dimension level, where the key drivers are defined as those dimensions with the highest Pratt index values. The ranked Pratt index values in the table below indicate the relative degree to which each dimension is uniquely associated with patients’

<sup>8</sup> Thomas, D. R., Hughes, E., & Zumbo, B. D. (1998). On variable importance in linear regression. *Social Indicators Research*, 45, 253-275.



global ratings relative to all other dimensions at the provincial level. Dimensions with a higher Pratt index value are relatively more likely to influence improvement in the global ratings. The results indicate that most of the explained variance can be attributed to four dimensions, which are identified as the most influential key drivers. Because dimensions consist of multiple items, the content of the item, the scores for each item (frequencies), as well as the context (e.g. site and region) should be considered to determine whether one or more of the corresponding items should be the focus of improvement initiatives.

**Table 3-4:** Identification of Key Drivers

Dimension	Beta	SE	p-value	Correlation	Pratt Index
BC Continuity Across Transitions in Care - Managerial Continuity	0.31	0.13	0.01	0.78	0.30
Getting Timely Care	0.32	0.03	0.00	0.71	0.28
Receiving Culturally Responsive and Compassionate Care	0.26	0.05	0.00	0.80	0.26
How well Emergency Room Doctors and Nurses Communicate with Patients: EDPEC RAND	0.22	0.11	0.04	0.76	0.21
How well Emergency Room Doctors and Nurses Communicate with Patients: Information Sharing	0.12	0.06	0.06	0.80	0.12
BC Continuity Across Transitions in Care - Informational Continuity	0.14	0.05	0.00	0.68	0.12
Patient Safety - Medical Harm	-0.10	0.02	0.00	-0.42	0.05
Care of Patients in Pain/Pain Management	-0.04	0.02	0.02	-0.44	0.02
Physical Environment	-0.04	0.02	0.04	-0.49	0.02
Communications with Patients about Pain	-0.02	0.05	0.70	-0.50	0.01
Patient Safety - Hand Hygiene	0.03	0.02	0.16	0.41	0.01
Access to Care	0.03	0.02	0.25	0.03	0.00
Contact	-0.04	0.04	0.26	0.18	-0.01
BC Patient Safety - Medication Reconciliation	-0.07	0.11	0.55	0.65	-0.05
Communications with Patients about their Medicines	0.08	0.05	0.08	-0.57	-0.06
BC Continuity Across Transitions in Care - Relational Continuity	-0.12	0.07	0.06	0.58	-0.09
How well Emergency Room Doctors and Nurses Communicate with Patients: Emotional Support	-0.24	0.11	0.03	0.72	-0.21

Note: Model R-square = 80%. Beta = standardized regression coefficient of the association between the dimension and the global ratings. SE = standard error.  $r$  = the correlation between the dimension and the global ratings. It is noteworthy that five of the Pratt Index values are negative. This could be an indicator of collinearity among the dimensions or variable suppression.

### 3.6 Patient-Reported Outcome Measures (PROMs) Reporting

The Veterans RAND 12 Item Health Survey (VR-12) is a patient-reported outcome measure (PROM) that was administered alongside the Emergency Department Patient Experiences of Care (EDPEC) to patients aged 13 years or older in an effort to more fully assess quality of care by considering health outcomes from the patient’s viewpoint. The VR-12 is an abbreviated version of the more comprehensive SF-36/VR-36. It is a brief and generic health survey that was administered to provide a baseline assessment of health status (for comparison with future surveys) and to allow for group-based comparisons of health status across BC regions.

The VR-12 includes 12 items measuring eight (8) health domains or scales (sometimes referred to as “profile scores”):

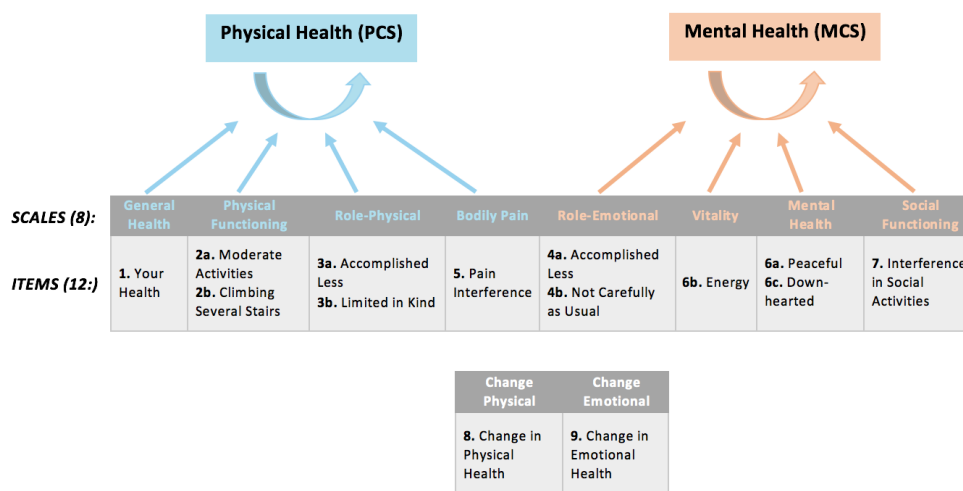
- General health perceptions
- Physical functioning
- Role limitations due to physical problems
- Role limitations due to emotional problems
- Bodily pain
- Energy-fatigue (vitality)
- Social functioning
- Mental health

The 12 items included in the VR-12 are a sampling of items from each of the 8 domains of health from the VR-36, chosen because those 12 items were most effective in approximating the domain scores of the VR-36 surveys, without administering the additional 24 questions. The 8 domains can be summarized into two overarching measures of physical and mental health. Additionally, the VR-12 includes two new items for measuring changes in physical and mental health compared to one year ago, resulting in a total of 14 questions on the survey.

**Figure 3-2:** Overview of the VR-12 Items, Scales and Domains<sup>9</sup>

<sup>9</sup> Found at: <http://www.bu.edu/sph/about/departments/health-law-policy-and-management/research/vr-36-vr-12-and-vr-6d/about-the-vr-36-vr-12-and-vr-6d/>

The VR-12: 2 summary components, 8 scales, 12 items

**Notes:**

- Items correspond with question numbers on VR-12 questionnaire
- Change in physical and change in emotional scales are not used in the calculation of the PCS and MCS summary measures
- All scales contribute to PCS and MCS; however, the arrows reflect greater contribution to PCS or MCS by selected scales

### 3.6.1 VR-12 measures

The VR-12 can be used to obtain four different types of measures:

1. individual items
2. eight domain scales
3. two physical and mental health component scores
4. a health utility score

#### 3.6.1.1 VR-12 Items

The VR-12 items are measured using Likert scales (e.g. excellent, very good, good, fair, poor) that consist of ordered response options (e.g. “excellent” is ranked higher than “very good”). There are different response options for different sets of items (see Appendices B and C documenting the response options for each item). Individual items are typically reported as frequency distributions.

It is important to note that reporting of the VR-12 predominantly focuses on the domains, rather than on individual items. Although VR-12 items are included in static reports for analytical purposes, these are not meant as a primary source of information for quality improvement or other non-analytical purposes.

#### 3.6.1.2 VR-12 Domains

VR-12 domain scales are based on responses to one or two corresponding items that are used to obtain a predicted score for each domain using established scoring algorithms. The 8 domains are

often reported together as “profiles” that allow for comparisons across different domains. The domains are measured using a scale ranging from 0 (worst possible health) to 100 (best possible health). There are no cut-offs for determining “acceptable” values.

### 3.6.1.3 Mental and physical health summary measures

In addition to the domains, the VR-12 can be used to derive mental and physical health summary measures (formally known as “component scores”). Specifically, the domain scores can be summarized into<sup>10</sup>:

- A Physical Health Component Score (PCS), which predominantly represents questions on general health, physical functioning, role physical, and bodily pain.
- A Mental Health Component Score (MCS), which predominantly represents questions on role-emotional, vitality, mental health, and social functioning.

The PCS and MCS are typically represented on a scale ranging from 0 (worst possible health) to 100 (best possible health) and normed on the general population, where 50 represents the population average and a difference score of 10 represents 1 standard deviation. PCS and MCS scores were not computed for the 2018 ED Survey because current scoring algorithms are only available for US population norms. A study on establishing Canadian-based norms and scoring algorithms is currently in progress.

### 3.6.1.4 Utility scores

The VR-12 could also be used to obtain health state valuations (also known as utility scores), which represent the relative value that society places on living in health states defined by responses to VR-12 questions. These scores are particularly useful for economic analysis purposes. Health state valuations are not provided in the report because a validated scoring algorithm is currently not available for the Canadian population. A study on developing a Canadian-based value set for the VR-12 is currently in progress.

## 3.6.2 VR-12 Scoring procedures

The VR-12 scoring procedures for the 2018 ED Survey consisted of the following 4 steps:

- (1) *Missing data analysis*. Multiple imputation<sup>11</sup> was first conducted to accommodate missing responses for any of the VR-12 items. This is necessary for avoiding potential biases associated with missing data.<sup>12</sup> Readers are referred to well-established guidelines on missing data analysis

<sup>10</sup> Boston University School of Public Health. About the VR-36©, VR-12© and VR-6D© Retrieved May 30, 2018, 2018, from <http://www.bu.edu/sph/about/departments/health-law-policy-and-management/research/vr-36-vr-12-and-vr-6d/about-the-vr-36-vr-12-and-vr-6d/>

<sup>11</sup> Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.

<sup>12</sup> Harel, O., Mitchell, E. M., Perkins, N. J., Cole, S. R., Tchetgen Tchetgen, E. J., Sun, B., & Schisterman, E. F. (2018). Multiple Imputation for Incomplete Data in Epidemiologic Studies. *Am J Epidemiol*, 187(3), 576-584.

for further information.<sup>13</sup> The total amount of missing responses to the VR-12 items in the 2018 ED Survey was 2.2% (3,721 out of 165,844 possible responses for respondents of ages 13 and above). The Mplus software (Version 8) was used to implement multiple imputation using a multi-level structural equation modeling approach with mean and variance adjusted least squares estimation. Multi-level modeling was used to account for clustering of data by facility. The ordinal variables were treated as categorical to accommodate distributional assumptions. Both demographic and patient experience variables were included as covariates to improve imputation. A total of 20 imputation files were created for use in subsequent analysis.

- (2) *Computation of domain scores.* Domain scores were calculated using the scoring procedures provided by Kazis.<sup>14</sup> This procedure uses “extensibility algorithms” to produce scores comparable to the SF-36 domain scales.<sup>15</sup> Mode effect adjustments were applied to adjust for social desirability bias resulting from phone versus online survey completion.
- (3) *Weighting.* The facility-level sampling weights were applied to accommodate systematic differences in the probability of selection for individuals within each facility and to obtain correct standard errors. The weights were normed to correspond with the population of respondents with ages of 13 and above.
- (4) *Estimation of point estimates.* Pooled estimates were computed by pooling results across the 20 datasets using the Mplus software and a robust sandwich estimator. Point estimates, standard errors and variances were obtained for all VR-12 items and domain scores. T-tests were conducted to compare domain scores between groups.

The VR-12 results for the Emergency Department Sector Survey are presented as health domain profiles to allow for comparisons across the different domains. Standard deviations are provided as an indicator of variability. The graphs are formatted using the same general template as for the patient experience items. It is noteworthy, however, that comparisons with “Top facilities” are not provided as a benchmark and do not imply those facilities to have better quality of care (as is the case with the patient experience items). Rather, the “Top facility” comparisons for the VR-12 domains are provided as an aid in interpreting the magnitudes of differences in VR-12 domain scores between different groups being compared. The comparisons are based on the average of VR-12 domain scores for all individuals within the facilities that had highest scores on a given VR-12 domain. Three facilities with sample sizes less than 4 were excluded from this analysis because variances for one or more of the VR-12 domain scores could not be computed.

<sup>13</sup> Little, R. J. A., & Rubin, D. B. (2019). *Statistical analysis with missing data* (Third edition ed.). Hoboken, NJ: Wiley.

<sup>14</sup> Kazis, L. E., & et. al. The Veterans RAND 12-Item Health Survey (VR-12) Retrieved June 11, 2018, from [https://www.aaos.org/uploadedFiles/PreProduction/Quality/Measures/Veterans%20RAND%2012%20\(VR-12\).pdf](https://www.aaos.org/uploadedFiles/PreProduction/Quality/Measures/Veterans%20RAND%2012%20(VR-12).pdf)

<sup>15</sup> Selim, A., Rogers, W., Qian, S., Rothendler, J.A., Kent, E. E., & Kazis, L. E. (2018). A new algorithm to build bridges between two patient-reported health outcome instruments: the MOS SF-36® and The VR-12 Health Survey. *Qual Life Res*, 27(8), 2195-2206.

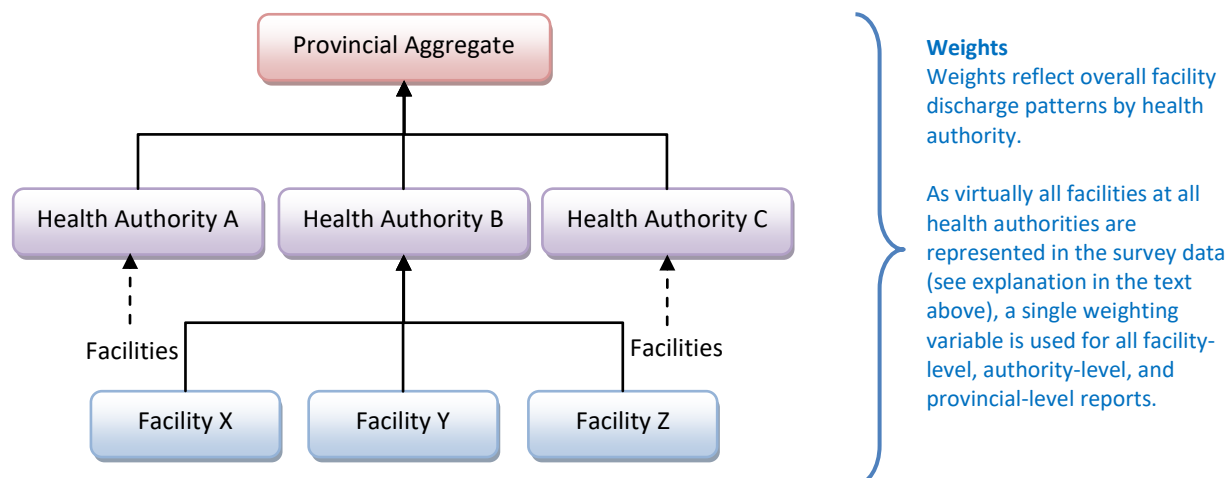
### 3.7 Survey Weighting

Samples of potential respondents were selected from facilities for fielding in the survey, with the sampling method determined by their overall patient volumes. This meant that some facilities were randomly sampled while others were census sampled. As a result, some smaller facilities had their entire patient population sampled while larger facilities did not. This differential sampling fraction meant that the sample of respondents that was fielded was not representative of facilities, health authorities, or the province overall. In addition, survey response rates varied by facility and health authority. To correct for this, survey weights were developed and used in the final reports when the statistic being reported was at the health authority or provincial level. Facility level results were not weighted.

Since some of the analyses within the final reports were comparisons between lower and higher order levels (e.g. facility results compared to health authority or provincial peer group results), a single weighting variable was developed to be used for all levels of analysis beyond the facility level. This variable adjusted the sample for each health authority to match the distribution of the population by facility as represented by total discharges before de-duplication. Virtually all facilities were accounted for within health authorities (with the exception for two facilities within Interior Health, one of which had no discharges and the other had only two discharges but no contact information, so no survey administration was possible). A very slight adjustment to the weights was made to determine the health authority level weights. The two discharges not accounted for in the facility level weights for the one health authority were not enough to make any appreciable difference between the weighted results using facility-level or health-authority-level weights, therefore the health authority level weights were used for all analyses. The final weight was normalized such that the sum of the weights across all health authorities matched the total number of surveys obtained. This is illustrated in Figure 3-3.

Both the final weight variable (*Weights*), which is an expanded weight that sums across all surveys to represent the total discharge population, and the normalized version of the weights (*Weights\_Normal*) are included in the delivered data file.

**Figure 3-3:** Emergency Department Sector Survey Levels of Reporting and Applicable Weights



The code used to calculate weights in *R* is provided in Appendix J.

For the analysis of the PROMs results (which only applied to participants  $\geq 13$  years of age), a variation of the normalized weight was used. This variation adjusted the weight such that the sum of the weights across all health authorities matched the total number of surveys obtained with respondents  $\geq 13$  years of age.

### 3.7.1 Weighting for LWBS Surveys

Not having received treatment, the LWBS group was not the main focus of the ED survey. However, there was interest in obtaining a modest supplementary sample of this group in order to better understand the experiences of those who left without being seen. Samples of respondents with these registration statuses were selected to be administered a reduced version of the survey questionnaire, with the objective of obtaining 40 surveys per health authority. At the end of the survey administration period, 281 survey completions had been obtained, with the final number of surveys obtained for each health authority ranging between 39 and 55 valid completions.

A review of the distributions of the survey completions revealed that the survey sample did not match the distribution of the sample universe by age, facility, peer group (facility size), or health authority. The imbalance by health authority, peer group, and facility was not surprising given the restriction of the survey samples to about 40 survey completions per health authority. Only 39 surveys were obtained for the FHA, which represents over 45% of all LWBS cases in the survey frame, with fully 49 surveys for the PHSA (BC Children's Hospital), which represents only 14% of all LWBS cases. It may also be noted, that at client request, over-sampling of elderly LWBS cases was undertaken at one of the health authorities.

The decision was made to weight by individual age group (10 groups) rather than just the three aggregated age ranges to be used for analysis (0-17, 18-64, 65+). The design effect<sup>16</sup> associated with this data weighting scheme is modestly higher compared with using the three aggregated age ranges, however this scheme does ensure that within the broad 18-64 age group, the 18-30 and 30-45 age ranges (which were notably under-represented in the unweighted sample) are appropriately represented in the weighted sample; and the 0-6, 65-75, and 75-85 age ranges are not disproportionately over-represented within their broader age groups. Thus, when the three broad age groups (0-17, 18-64, 65+) are reported on individually, they should theoretically provide a more accurate representation of the results than without the weighting (notwithstanding the decrease in the effective sample size due to data weighting).

### 3.8 Dynamic Analysis and Reporting Tool (DART)

The BC Dynamic Analysis and Reporting Tool (DART) is an online resource that was developed by Malatest to provide users the ability to continually track patient experience data in close-to-real-time on a 24/7 basis and in an easily-digestible format.

Approved health authority, facility and emergency department staff are able to securely access the DART using registered log-in credentials from an approved IP address by logging onto: [www.bccpm.com/DART](http://www.bccpm.com/DART).

**Figure 3-4:** DART Landing Page

The DART is a complement to the retrospective, static final reports, allowing frontline clinicians and leaders the ability to closely monitor the outcome of local quality improvement efforts and accurately target future efforts for improvement. The DART is currently set up to provide

<sup>16</sup> The sampling design effect is a measure of the extent to which sampling error is increased due to the application of data weights to correct for biases in the survey sample and the resulting decrease in the effective sample size). computed as  $deff = sample\ size\ n * (sum\ of\ the\ squared\ weights) / (square\ of\ the\ summed\ weights)$ . Sampling efficiency =  $1/deff$ . Effective sample size =  $sample\ size\ n * sampling\ efficiency$ .



unweighted reporting on the survey results, without inclusion of the multiple-imputation or data weighting methodologies. The DART reports may differ from the results presented elsewhere in analytical reports that make use of the multiple-imputation and weighting methodologies.

DART features include:

- 24/7 password-protected access;
- Role-based access via a secure network;
- Account features for provincial-level and health authority “Super Users” allows for the activation and deactivation of users as well as the capacity to set a user’s privilege level (i.e. how far a user can either “drill-down” or “roll-up” the data);
- Close-to-real-time quantitative and qualitative data to users at the facility, health authority, and provincial levels;
- Web-based data analysis and visualization tool;
- Ability to create and download analytical reports and query functions for various patient demographics and item responses; and,
  - Follow trends (patterns in key performance metrics over time);
  - Print tables/graphs/charts;
- Access to a searchable database of narrative comments gathered from patients that can be retrieved by theme.

## SECTION 4: LIMITATIONS AND RECOMMENDATIONS

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Conclusions and inferences that can be drawn from patient-reported experience and patient-reported outcome surveys are often limited by operational and methodological issues. It is therefore prudent to document these limitations and provide recommendations to mitigate these challenges in future surveys.

### 4.1 Back Sampling

The *2018 Emergency Department Sector Survey* was significantly impacted by back sampling from certain facilities and health authorities. For example, one health authority was delayed in submitting their discharge files for three cohorts and a number of smaller sites only provided data towards the latter end of the study (see Appendix D for a complete list of all facilities/health authorities who experienced back sample). Back sampling may introduce bias, particularly when considerable time has passed between discharges and when contact is made. Recall biases could affect the accuracy of patient responses; upset to families who have, in the time that has passed, lost a family member; reduction in response rates and an increase in MOEs due to reduction of response rate.

**Recommendation:** Given that back sampling will likely occur in future surveys, one strategy that was applied in an attempt to minimise bias and lessen potential upset to grieving families, was to bias discharge dates towards the end of the data submission window (i.e., sample from January 13-15<sup>th</sup> for the January 1-15<sup>th</sup> data file, if sufficient sample was available) when patients had multiple visits to the Emergency Department, rather than choosing a random visit from within the cohort, as was done for non-back-sampled patients. Future surveys should consider whether this strategy on biasing sampling negatively affects sample representativeness and is an acceptable consequence in these instances. An alternative and more methodologically rigorous solution would be to establish, and adhere to, a cut-off for accepting late patient records submissions prior to going to field. However, this approach could also impact the overall representativeness of the survey results, as not all patients would have had a chance to participate in the survey if their survey records were submitted past a cut-off date.

### 4.2 Sample Restrictions

#### 4.2.1 Inconsistency in Survey Definitions

It became apparent while the survey was in field that the health authority representatives responsible for submitting the patient discharge files were interpreting the terms outlined in the data submission manual differently. Specifically, 'Visit Date' (the date the patient attended the ED) and 'Discharge Date' (the date that the patient left the facility) were inconsistently understood. For example, some HA reps restricted files to only those who were admitted and discharged in the same sample timeframe (i.e. January 1-15<sup>th</sup>). As a result, certain patient populations may have been under-represented if their admission date straddled the previous cohort. Unfortunately, since we do not have access the records that were filtered out prior to submission from each HA, we are unable to determine the exact impact these differences in interpretations may or may not have had on the representativeness of the overall patient population.

**Recommendation:** Clearer definitions are needed within the data submission manual and corresponding training sessions. It should be explicitly stated that the visit date does not have to fall in the sample timeframe. Data should be extracted in the following manner:

1. Ensure discharge date from the FACILITY is within the range (e.g., February 1-15, 2018).
2. If the patient began their encounter with a visit to the emergency department, regardless of being subsequently transferred to another department, then they are eligible.
3. There should be no limits placed on the emergency department 'Visit Date'.

#### 4.2.2 Conflict with Other Research Studies

The valid universe for two facilities (Surrey Memorial Hospital and University Hospital of Northern British Columbia) was lower during identified timeframes due to a restriction in sampling when other research studies were in-field, as shown in Table 4-1. This resulted in the sample for these sites not being representative of the whole cohort for the days with sampling conflict. However, since both of these facilities had sufficient discharges in each cohort to offset the restricted sampling days, their sample sizes were not affected for the *2018 Emergency Department Sector Survey*.

**Table 4-1:** Sampling Restrictions for Facilities Impacted by Concurrent Studies

Cohort	Discharge Dates	Impacted Facility	Sampling Restriction
2	January 15-31, 2018	Surrey Memorial Hospital	Exclude discharges from January 29-31, 2018
3	February 1-15, 2018	Surrey Memorial Hospital	Include only discharges from February 7 and 13-15, 2018
4	February 16-28, 2018	University Hospital of Northern British Columbia	Exclude discharges from February 26-28, 2018
5	March 1-15, 2018	University Hospital of Northern British Columbia	Exclude discharges from March 13-15, 2018
6	March 16-31, 2018	University Hospital of Northern British Columbia	Include only discharges from March 20-21, 25, 27, and 29-31, 2018

**Recommendation:** Where possible, avoid conflicts with other planned surveys/research studies in the survey set-up phase to avoid potential date conflicts and/or patients being invited to participate in more than one survey for the same visit.

#### 4.2.3 Youth

Patient privacy is an integral part of all health care surveys. In order to protect the privacy of youth respondents (aged 13-17 years), safety protocols were implemented to prevent the disclosure of an emergency department visit to other family members. These measures included the removal of any hospital identifiers on the survey invitation and a 'non-identifying' phone introductory script when someone, other than the youth in question, answered the telephone when the surveyor called.

As information that would have helped validate the authenticity of the survey was excluded for privacy reasons, telephone surveyors documented a reluctance, and in many cases refusal (including hang-ups), from parents/care givers to let the surveyor speak to their child due to potential mistrust of the intentions of the caller. The documented Household/Gatekeeper Refusal for youth was 18.0%, which is far higher than the 2.4% Household/Gatekeeper Refusal for non-youth in the study. These numbers suggest that response rates from youth may have been negatively impacted.

**Recommendation:** To increase the numbers of youth completions, the telephone introduction script could be modified to allow for the inclusion of additional information that may increase the perceived authenticity of the survey; this would apply in cases where the young person was accompanied to the ED by a parent or guardian or has chosen to inform a parent or guardian of the visit. Once the youth is on the phone, the surveyor can mention the call is about their specific emergency department visit.

### 4.3 Value of Including Extra-Small Sites

In an attempt to achieve a sample that was representative of all patients attending emergency departments across the province, all facilities were included in the survey regardless of size. It was evident that several extra-small sites struggled to participate in the survey often due to operational barriers. Discharge data from these sites were often incomplete and in back sample which limited sampling. In some cases, to help facilitate participation, additional resources were required including the provision of supplementary staffing and translating handwritten records into data submissions. It should be noted that even with this additional effort, four of the extra-small sites did not achieve sufficient completions ( $n \geq 5$ ) to generate a facility-level report.

**Recommendation:** Assess the return on investment of including extra-small sites in future surveys.

## 4.4 Survey Administration

### 4.2.1 Survey Administration Time

2018 marked the first time that the *Emergency Department Sector Survey* was administered by telephone with an online option, instead of by mail with an online option. In an effort to optimize response rates, given the length of the survey, respondents were able to pause/stop responding at any time throughout the survey (i.e. at the end of any question). If the survey was being completed over the phone, the surveyor would arrange another time to call the respondent back or give them the option to complete the rest of the questions online. Alternatively if the survey was being completed online, the respondent had the ability to log in and out of the survey and complete the survey at their own pace with no time constraints.

A consequence of allowing respondents to complete the survey in multiple sittings is the data pertaining to number of minutes to complete each survey does not reliably reflect the 'actual time' taken to complete the survey (particularly for surveys with multiple accesses, those for which the respondent left the survey browser window open while not responding, and mixed-mode cases).

**Recommendation:** Since increasing accessibility of the survey by mixed-mode approach is a priority in this research, caution should be taken when incorporating survey administration time into analyses. For future studies, adding a timer in each survey module could facilitate the removal of outliers and indicate when a respondent was not actively engaging with the survey. This option would have to be explored in the context of current technological limitations, however (to determine whether the additional time required to process the timer would negatively impact the browser-loading time for online respondents).

#### 4.2.2 Survey Administration Mode

Survey administration mode is determined based on the mode that the respondent is using during the survey introduction and also when completing their last question. As such, three modes of administration are possible (phone, online and mixed-mode). A limitation of this methodology is that cases could be considered mixed-mode if a surveyor called and interacted with the respondent, which would flag as a phone start, even if respondents chose to complete the entire survey online.

Further, although the chance of switching mode within a survey sub-section is lower, questions that are mode-dependent in their analysis (i.e. VR-12 series) may be impacted by a mixed-mode approach. Since the mode was only captured at the beginning and end of a survey, it is not possible to determine the specific mode in which individual modules were completed.

**Recommendation:** It is recommended that mode of survey administration is tracked at more regular intervals throughout the survey, and especially at the beginning of modules for which analyses are mode-dependent, rather than only at the beginning and end.

#### 4.5 CIHI Data Merge

Upon request by BCPCM, Malatest was to merge data provided by the Canadian Institute for Health Information (CIHI) detailing presenting complaint and discharge diagnosis for all patients from NACRS sites whose discharge files were provided for inclusion in the study. Unfortunately, the data fields identified as unique linking variables (i.e. PHN, MRN) to perform the merge were erroneous (either in our survey records from each HA or in the CIHI data) and resulted in unmatched data for presenting complaint and discharge diagnosis for 2-14% of the sample (with the percentage differing by health authority). Two examples of mismatched data are shown below:

	PHN*	Visitor Number	Discharge Date
<i>Mismatched PHN:</i>			
Cohort Files	9241479122	8016328	01022018
CIHI	93244831	8016328	01022018
<i>Mismatched Visitor Number:</i>			
Cohort Files	9145913427	KG0349356	01112018
CIHI	9145913427	KG0349401	01112018

\*PHNs for these examples have been randomly generated to protect patient identity

**Recommendation:** Liaise with participating health authorities to refine data linkage protocols that meet the requirements of the survey prior to going to field. Expand the PIA to include date of birth and gender as an available linking variable in cases where there is a mismatch of PHNs.

#### 4.6 Fort Nelson General Hospital

After reports were completed for the *2018 Emergency Department Sector Survey*, it was discovered that Fort Nelson General Hospital's peer group was mislabelled as 'Medium' rather than 'Small' in the FISH documents sent to Malatest at the beginning of the study.

Since the PROMS analysis and data imputation had already been done for all reports, we explored the impact of the labelling error on the domain scores for the PROMS analysis. As made evident by the following table, there are very small differences in domain scores between the updated dataset (with Fort Nelson General Hospital listed correctly as a Small site) and the original dataset which listed this hospital as a Medium-sized facility.

**Table 4-2:** Differences in Domain Scores between Mislabelled and Updated Datasets

	Domain Scores							
	PF	RP	RE	BP	GH	SF	VT	MH
BC Medium (updated)	60.7	46.6	66.0	58.9	61.1	70.8	51.2	73.5
BC Medium	60.7	46.7	66.0	58.9	61.1	70.8	51.2	73.5
BC Small (updated)	65.6	50.9	67.4	61.4	63.7	73.3	53.5	74.3
BC Small	65.6	50.9	67.3	61.4	63.8	73.3	53.5	74.4
NHA Medium (updated)	63.2	50.1	65.4	59.6	61.0	72.4	52.0	73.7
NHA Medium	63.3	50.5	65.8	59.6	61.0	72.6	52.2	73.7
NHA Small (updated)	64.9	50.4	63.6	61.1	61.5	72.1	53.8	73.6
NHA Small	64.8	50.1	63.0	61.1	61.5	71.9	53.7	73.6

Consequently, the "BC Medium" and "BC Small" peer groups were not updated, as updating these values would have required re-running domain analyses for all reports (since provincial peer groups appear as comparator groups for all reports). We acknowledge that certain reports will not be consistent; however, we believe the difference to be negligible at the provincial level.

The "NHA Medium" and "NHA Small" peer groups were updated. Although the differences were also very small (as shown in the above table), since fewer reports were affected, the decision was made to update the results.

In total, the following 16 reports were updated:

Health Authority Level	
Northern Health Authority Report 2	
Facility Level (Medium)	
Dawson Creek and District Hospital	Mills Memorial Hospital
Fort St. John Hospital	Prince Rupert Regional Hospital
Facility Level (Small)	
Bulkley Valley District Hospital	Lakes District Hospital and Health Centre
Chetwynd General Hospital	MacKenzie and District Hospital and Health Centre
Fort Nelson General Hospital	St. John Hospital
Fraser Lake Community Health Centre	Stuart Lake Hospital
GR Baker Memorial Hospital	Wrinch Memorial Hospital
Kitimat General Hospital	

#### 4.7 Discrepancy between Administrative Data and Patient Self-Reports

Although the data submitted to Malatest contained a variable (AdmitEHS) indicating whether patients had been brought to the Emergency Department by ambulance, it was noted that the number of patients who self-reported having been brought by ambulance (by answering 'Yes' to question EDPEC2 "For this visit, did you go to the emergency department in an ambulance?") did not align with the values in the administrative data. This discrepancy was noted across all health authorities. As shown in table 4.3, 530 (or 28.8%) of respondents who self-reported having gone to the Emergency Department by ambulance did not have this noted in the administrative data.

**Table 4-3:** Distribution of AdmitEHS by Health Authority for Respondents Self-Reported Having Gone to the ED by Ambulance

AdmitEHS	FHA	IHA	PHSA	PHC	VIHA	VCHA	NHA	Total
Yes (1)	388	353	21	42	231	145	130	1,310
No (0)	69	117	9	15	113	81	126	530
missing	0	0	0	0	2	0	0	2
Total	457	470	30	57	346	226	256	1,842

As a result of this discrepancy, the BCEHS report only included those who self-identified as having gone to the Emergency Department by ambulance (n=1,842).

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**APPENDIX A: CODING SCHEME FOR OPEN ENDED QUESTIONS**

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Code	LABEL	Definition	Example
Amenities	AMENITIES	Comments related to patients having access to amenities such as toiletries, hygiene products; physical comfort involving the surroundings and environment where care is given, as well as the availability of things for patients to do.	<i>Make it so it is not so boring. Take clocks out of the room that your bed is facing. Larger TV in the TV Room that I could actually see. Something in the TV Room, like reading things or puzzle something more interesting, something to make the time go by quicker. Something more interesting, one minute seems like ten hours.</i>
Food	FOOD	Comments related to patients' food, including the quality of the food, the amount of food received, the accuracy of the meal plan, and dietician or food service staff comments.	<i>I know it is not a health issue, but the food that was served at the most was only passable!! Some days totally inedible as far as I was concerned. I ordered a Hamburger on lunch and got a bun and a patty---nothing to put on it.</i>
Physical Environment	PHYS_ENV	Comments related to the physical state of the hospital building, distance to get around the hospital, size of the hospital room, general appearance, and lighting.	<i>General update of facilities, seems dark, cramped and gloomy in most areas. Needs to be brightened up to help brighten the mood of those in recovery.</i>
Parking	PARKING	Comments related to the patient and visitors availability to park, the cost of parking, the distance to parking lot, availability of handicapped parking, transportation to the facility, and parking lot size.	<i>provide free or low-cost parking</i>
Bathrooms	BTHRMS	Comments related to the availability, size, cleanliness, and distance to the bathroom.	<i>bathroom was just cleaned once, I don't know if it was cleaned before</i>
Cleanliness of ED/ Facility	CLEAN	Comments related to the extent to which the hospital and emergency department were swept, dusted, mopped, and the frequency and amount of cleanliness.	<i>The chairs in the waiting area were very dirty.</i>
Privacy	PRIVACY	Comments related to the extent to which patients have 'personal' comforts such as curtains, privacy, and patients of different genders.	<i>I would not want to share my room with a male patient, for the sake my and his privacy.</i>

Code	LABEL	Definition	Example
Noise	NOISE	Comments related to the extent of noise from equipment, staff, family, visitors, and other patients.	<i>Control the Noise level, sometimes it was impossible to sleep at night.</i>
Physical Comfort/Pain Management	PHYS_COM	Comments related to pain management.	<i>My pain medication wore off after four hours and the Nurses would not give me more in this eight hour period.</i>
Medications	MED	Comments related to medication, prescriptions, dosage, amount of medication, and comments related to hospital pharmacy services.	<i>Pain Killers: over medicated, a lot of side effects. Dulled awareness from meds. No options seemed available. Patients should be able to refuse it. Unpleasant dullness for hours at a time.</i>
Medical Equipment	MED_EQUIP	Comments related to machines or equipment used in the hospital.	<i>Make the IV machines quieter as I am noise sensitive and that would help not interrupt my sleeping.</i>
Tests/ Procedures	TEST_PROC	Comments related to the types, amount, and wait times of tests.	<i>Sometimes there's a long wait for blood tests. Perhaps they could have more people taking blood.</i>
Intravenous	IV	Comments regarding receiving an intravenous in the ED	<i>The intravenous went in without a hitch, thanks to a wonderful caregiver!</i>
Hand Hygiene	HYGIENE	Comments relating to hand hygiene of the patient or the ED staff	<i>I never saw the doctor wash her hands but I know she had gloves on so maybe she didn't have to.</i>
Access/ Coordination of Care	COORD_CARE	Comments related to the extent to which clinical services were coordinated, communication between members of the clinical team, availability of services at the appropriate time, and the availability of rooms.	<i>Private recovery rooms would have been ideal to allow for a little more sleep/ rest</i>
Communication: ED Staff	COMM_STAFF	Comments related to the communication between doctors, nurses, midwives, cleaners, and/or receptionists in the emergency department.	<i>There should always be good communication between emergency also receptionist and ward doctor said it was nothing sent me home but the nurse called and said that there was a</i>

Code	LABEL	Definition	Example
			<i>crack.I kept calling and no one responded so I waited for 3 weeks and finally then back to the hospital</i>
Communication: Family	COMM_FAM	Comments related to the communication between hospital staff and family members, as well as allowing patients to communicate with their families.	<i>When I had my family try to phone me, they made it very difficult for me to talk with my family. I was very upset about it.</i>
Communication: Patient	COMM_PT	Comments related to involvement or lack of involvement in communicating plans of care or partnering with patients (or families) in developing plans of care	<i>I think before putting someone on the stretcher and wrapping and strapping them down, you should ask them how they feel about being constricted.</i>
Communication: EHS Staff	COMM_EHS	Comments regarding interaction with paramedic/ambulance staff	<i>There was NO communication between 911 and Ambulance and Ambulance and Hospital staff.</i>
Information: Education	INFO_EDUC	Comments related to information and/or education given to the patient/family about the status and progress of the patient's condition, test results and discussions explained in a way that patient and family can understand.	<i>When prompted for information it was given to me but I feel doctors should be willing to share info and educate patients.</i>
Involvement of Family/Friends/ Supporters	FAM_INVOLVE	Comments related to accommodations, support, and recognition given to family and friends as part of the treatment process.	<i>I think the hospital should enforce their visiting hours.</i>
Patient Safety	SAFETY	Comments relating to the patient's safety being jeopardized and/or a medical error	<i>The nurse failed to read by identification band and as a result I was given treatment I shouldn't have been given</i>
Emotional Support	EMOT_SUPP	Comments relating to the anxiety felt by patients and family, as well as knowledge and availability of clinical staff to address emotional concerns.	<i>The doctor and the staff were so empathetic and knowledgeable. I was so thankful that the staff there was so good. They cared. They handled everything in a timely manner. I say her being alive today is due to British Columbia Children's Hospital.</i>

Code	LABEL	Definition	Example
ED Staff: General	STAFF_GEN	Comments relating to emergency department staff in general.	<i>Staff were excellent!</i>
Responsiveness of Staff	RESPONSE	Comments relating to attentiveness and responsiveness of staff, wait times for attention to call bells, requests to see physicians, nursing staff, nurse manager, midwives, and requests for medications or pain relief.	<i>I felt that most of my care on the unit was initiated when I pressed the call bell. I didn't want to be a bother to the nurses, so I didn't press it often, but I would have preferred being checked on without having to ring the bell for everything.</i>
Hospital Staff: Nice/Helpful	STAFF_NICE	Comments relating to the hospital staff as nice, helpful, going above-and-beyond, caring, friendly, empathetic, compassionate, and culturally sensitive.	<i>The nurses were not caring as patient's arm was hurting. So I requested antibiotic and it was not given.</i>
Hospital Staff: Professional	STAFF_PROF	Comments relating to the hospital staff's professional demeanor, appearance, respect of patient, and professional honesty.	<i>More compassion from some of the nurses. The male nurse lied about my medication and that I had to wait till the next day to get my medication before I left the hospital. The next day in the morning a female nurse gave me pain meds and reported the other nurse for lying about my pain meds. when I was in need of those medications. It discouraged me when the nurse lied about my meds and I wrote a letter to the hospital I don't trust the nurse.</i>
Hospital Staff: Knowledgeable	STAFF_KNOW	Comments relating to the hospital staff's knowledge of tests, procedures, condition, medications, prescriptions, and overall health.	<i>I felt confident in [Doctor's Name]'s experience in his field, and was sorry that he is on the island, and not near my home, so I could continue care with him.</i>
Hospital Staff: Quantity	STAFF_QUANT	Comments related to the number of hospital staff.	<i>The hospital should have more nurses, staff, and doctors. The shortage of doctors inhibits some things like, the time the doctors have with each patient is limited by the number of doctors available.</i>
Doctor/	DOCTOR	Comments related to physician care.	<i>The doctors are amazing here!</i>

Code	LABEL	Definition	Example
Physician			
Nurse(s)	NURSE	Comments related to care from nurses.	<i>Exceptional nursing staff!</i>
Transfers: ED to Hospital	XFR_WITHIN	Comments related to the transfer of patients from one department to another, or from ER to getting a room.	<i>I was only in the hallway for only two hours and I was transferred to very a nice room for myself</i>
Transfers: Between Hospitals	XFR_BTWN	Comments related to the transfer of patients from one facility to another, including ambulance and air transfers.	<i>Communication was a big problem when I left the hospital , I was to be transferred to Vernon from Royal, when Vernon phoned what time I left the Royal Inland hospital person who answered the phone at Royal Inland said the incorrect time , so they discharged me earlier than intended time and had to go back to emergency again at 1:30 am to get admitted.</i>
Admission/ Registration Process	ADMIT_REG	Comments regarding the admission/registration process	<i>When I got to the emergency department there was no registration desk! I had to wait there in pain for a couple minutes before seeing anyone</i>
Wait Times	WAIT_TIMES	Comments regarding the amount of time in triage and waiting to see a doctor in the ED	<i>Waiting 4hrs in excruciating pain to see someone is pure torture and should not be allowed in Canada.</i>
Discharge Process	DC_PROC	Comments related to patient discharge wait times, information, ID requirements, and next steps.	<i>When you taken to hospital by ambulance they pick you up in the clothes you are wearing. When they discharge you they send you home in the same clothes and you often don't have a coat in this cold weather.</i>
Discharge Preparation/ Continuity of Care After Discharge	DC_PREP	Comments relating to preparing the patient (and family, if appropriate) for discharge, and adequacy of that preparation as experienced by the patient post discharge.	<i>On being discharged, I was given a prescription run down/letter which the hospital faxed to the pharmacy. Unfortunately the info on the discharge thing was in error in more than one place. Some prescriptions had nothing to do with my condition or problems. The hospital</i>

Code	LABEL	Definition	Example
			<i>needs to be careful error checking their discharge documents/prescriptions.</i>
Spiritual Care	SPIRITUAL	Comments related to pastoral care, the hospital's religious affiliation, amenities for spiritual reflection (chapel) or spirituality (smudging or other space for First Nations spiritual care) or general spiritual care/support comments.	<i>Having a liaison who could have assisted with emotional or spiritual needs for people who are scared and don't know what to do would be nice. Prayer and council would be really good.</i>
Diversity/ Cultural issues	CULTURE	Comments regarding cultural issues and/or diversity, which include language barriers with patients and/or their families.	<i>The Doctor asked me if there were any treatments that were against my culture. That was so welcoming to hear.</i>
Costs/Billing	PAY_BILL	Comments related to out of pocket costs for treatment at this facility.	<i>They didn't have enough specialist doctors on hand; we had to go too far like Kelowna or Victoria quite often. It was very expensive for us as we have limited coverage.</i>
Overall Impression	OVERALL	Comments related to the patient's overall stay at this facility.	<i>I had a good experience and I am very happy with the hospital and staff.</i>
Other	OTHER	Comments that do not apply to any above-mentioned category.	<i>I have now been diagnosed with Lung Cancer</i>
Other – EHS	OTHER_EHS	Comments related specifically to Emergency Health Services	<i>The ambulance was cold.</i>

**APPENDIX B: 2018 EMERGENCY DEPARTMENT SECTOR SURVEY INSTRUMENT**

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## BRITISH COLUMBIA 2018 EMERGENCY DEPARTMENT PATIENT SURVEY

The Emergency Department Patient Experiences with Care (EDPEC) survey is a Patient-Reported Experience Measure (PREM) designed to understand patient experiences of emergency department care. The EDPEC survey was selected as the core instrument for seeking feedback from patients who made use of BC's Emergency Health Services System, including transport by ambulance and/or a visit to one of the 109 EDs in British Columbia (BC). BC's Emergency Health Services System includes full service Emergency Departments, Urgent Care Centres, Diagnostic and Treatment Centres, and Outpost Hospitals.

The EDPEC has two versions: The EDPEC Admitted Stand Alone Instrument (ED\_ADMIT) has questions specific to patients who were admitted to the hospital following their emergency department visit (EDPEC\_IP1 and EDPEC\_IP2); the EDPEC Discharged to Community Instrument (ED\_DTC) has questions for those who were discharged directly to the community. The questions are numbered EDPEC1 to EDPEC35.

Both groups of patients also answer made-in-BC questions and modules that focus on topics of interest to clinicians and patients in BC, such as care during transport to the ED in an ambulance, discharge planning, intravenous therapy, respect for culture and traditions, and patient safety.

All patients are offered the opportunity to provide additional narrative feedback or comments at the end of the survey with an open-ended question, BCED22.

Both groups are also asked to respond to questions from two Patient-Reported Outcome Measures (PROMs), the EQ-5D-5L and the VR-12.

**EQ-5D™** is a trade mark of the EuroQol Group. Permission to use the EQ-5D-5L PROM survey free of charge has been granted to BC as a pilot.

- Questions EQ5D1 to EQ5D6 are the EQ-5D-5L survey.

Script formatting and prompts were provided by the EuroQol Research Foundation.

The **Veterans RAND 12 Item Health Survey (VR-12)** is a PROM developed from the Veterans RAND 36 Item Health Survey which was developed and modified from the original RAND version of the 36-item Health Survey version 1.0 (also known as the "MOS SF-36"). Questions VR12\_1 to VR12\_14 are the VR-12 survey. Script formatting and prompts were provided by Dr. Lewis Kazis, developer of the VR-12, for phone administration of the VR-12 and were taken from the Canadian Community Health Survey.

**"Made-in-BC" PREMs modules** added to this survey have been developed or adapted by the BC Patient-Centred Measurement Working Group (BCPCMWG). Script formatting and prompts for telephone administration were developed by the BC PCPCMWG.

- Questions **CONT1** to **CONT14** are **BC's Continuity across Transitions in Care module**. Developed and tested between 2014-16; fielded for the first time with the CPES-IC in 2016/17.



- Questions **HYGIENE1** to **HYGIENE6** are **Hand Hygiene** questions from **BC's Patient Safety module**; these questions were first developed and tested in 2008 and have been fielded in BC in 2008, and 2011/12; these questions were revalidated in 2015 with input from BC's HH Working Group.
- Questions **BCMEDREC1** to **BCMEDREC3** are **Medication Reconciliation** questions from **BC's Patient Safety module**; these questions were first developed and tested in 2008, then updated and revalidated in 2015 with input from BC's Medication Reconciliation Clinical Expert Group.
- Questions **OSA1** to **OSA5** were developed with the Office of the Seniors Advocate to explore seniors' experiences with discharge from hospital and emergency departments.
- Questions **IV1** to **IV8** were developed to explore patient experiences with intravenous vascular access with input from clinicians specializing in peripheral access with support from BD, Becton Dickinson.
- Questions **BCEHS1** to **BCEHS6** address the experience of patients who were transported to the emergency department by ambulance and were developed and tested with input from PHSA's BC Emergency Health Services.
- Questions **BCED1** to **BCED22** include global rating questions and questions that address issues of patient-centred care, such as emotional support, respect for culture and traditions, etc.
- Questions **EMN1** to **EMN16** were developed with the BC Emergency Medicine Network to ask patients for feedback about specific conditions of interest to the EMN, such as chest pain, concussion, a substance use issue, etc.
- Questions **QABED1** and **QABED2** were developed by the Health Quality Council of Alberta and are used with permission; these questions align with the international campaign, "Hello my name is" <https://hellomynameis.org.uk/>
- Questions preceded by an asterisk (\*) were included in the survey for patients who left the ED without being seen (LWBS) or who left against medical advice (AMA).

## TELEPHONE INTRODUCTION

I1. Hello, my name is \_\_\_\_\_. I am calling from R.A. Malatest and Associates Ltd. on behalf of the <AUPLD\_FAC\_NAME>. We are doing a survey about healthcare. Is this <AUPLD\_FName><AUPLD\_LName>?

I2. May I please speak with <AUPLD\_FName><AUPLD\_LName>?

[IF UPLD\_PED=1] May I please speak with the parent or guardian of <AUPLD\_FName><AUPLD\_LName>?

Yes .....1 → SKIP TO I3

No .....2 → SKIP TO [Set callback time]

### PARTICIPANT REACHED

I3. I am calling today to talk with you about the recent care you received from <AUPLD\_FAC\_NAME>. You have been randomly chosen from all patients who recently had a care experience at <AUPLD\_FAC\_NAME>. Your opinions are very important, because the results of this survey will be used to improve the care and services provided in our hospitals. The survey may take about 30 minutes to complete. Is now a good time to speak with you?

Your opinions are very important, because the results of this survey will be used to improve the care and services provided in our hospitals. The survey may take about 30 minutes to complete. Is now a good time to speak with you?

Yes, I consent to continue .....1 → SKIP TO PRIVACY

No – set call-back time .....2 → SKIP TO [Set call-back time]

No – does not want to do survey via phone.....3 → SKIP TO I4

No – refuses to participate.....4 → SKIP TO ENDO

### ONLINE OPTION

I4. You may also complete the survey online. This option will take about 30 minutes, however it does not need to be completed all at once. In order for you to complete the survey online, all you need to do is to log onto the website that is shown on the front page of the letter that you received in the mail and enter your secure password. Alternatively, we can send you an email with a link to the survey and your password.

Wants to do survey online and has letter with login ID.....1 → SKIP TO ENDO

Has lost/misplaced letter with login ID and wants this emailed.....2 → SKIP TO I5

Does not want to do survey online either .....3 → SKIP TO ENDO

I5. We will only use your email address for the purpose of sending you a link to this survey. At all times your personal information is protected and will only be used as authorized under the BC Freedom of Information and Protection of Privacy Act. Could I please have your email address?

[enter email]

[SURVEYOR NOTE: re-read email address back to respondent using NATO phonetic alphabet as needed to clarify individual letters.]

We will keep your email address for up to 18 days in order to send a reminder message to you. The email will include an unsubscribe function. If activated, this function will remove your email address from our database.

END0

Thank you for your time. Goodbye.

PRIVACY

Please note your participation in this survey is voluntary and any information you provide is confidential. <AUPLD\_HA> collects health information in accordance with the BC Freedom of Information and Privacy Protection Act for the purpose of providing health services or any other purpose authorized under the Act. If you have any questions or concerns regarding the collection, use or disclosure of your information for this survey, please let me know and I can provide you with the contact information for the project lead.

Any information you provide is voluntary and you can stop the interview at any time. If there are any questions you feel uncomfortable answering, please let me know and I will move on to the next one. Your decision to do the interview will not affect the health care or health care benefits you receive. Your information will be used to improve care and services in BC emergency departments. Your information will not be used to identify or contact you after your participation in the survey. The questions should take approximately 30 minutes to answer. We will NOT record this interview; however, this call may be monitored by my supervisor for Quality Control purposes.

## ONLINE INTRODUCTION

Thank you for taking the time to log into this survey. This survey is about the care you received from < AUPLD\_FAC\_NAME> during your hospital stay that ended around <UPLD\_DDATE>.

You have been randomly chosen from patients who were recently in an emergency department. Your opinions are very important, because the results of this survey will be used to improve the care and services provided in our Emergency Departments.

Would you like to continue?

Yes, I consent to continue .....1 →SKIP TO PRIVACY

No .....2 →SKIP TO END0

END0

Thank you for your time. Goodbye.

PRIVACY

Please note your participation in this survey is voluntary and any information you provide is confidential. <INSERT NAME OF HA>collects health information in accordance with the BC Freedom

of Information and Privacy Protection Act for the purpose of providing health services or any other purpose authorized under the Act.

Any information you provide is voluntary and you can stop the survey at any time. If there are any questions you feel uncomfortable answering, please continue on to the next one. Your decision to do the survey will not affect the health care or health care benefits you receive. Your information will be used to improve care and services in BC emergency departments. Your information will not be used to identify or contact you after your participation in the survey. The questions should take approximately 30 minutes to answer.

## SURVEY INTRO

Please answer the questions in this survey about your experience at <AUPLD\_FAC\_NAME> that ended on <AUPLD\_DDATE>. When thinking about your answers, do not include any other Emergency visits or hospital stays.

**INTRO: The first set of survey questions are about going to the Emergency Department at <AUPLD\_FAC\_NAME>.**

**\*EDPEC1 Thinking about this visit, what was the main reason why you went to the emergency department? Would you say...**

- 1 ... An accident or injury
- 2... A new health problem
- 3... An ongoing health condition or concern
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC2 For this visit, did you go to the emergency department in an ambulance?**

- 1 ... Yes
- [PROGRAMMING: SKIP TO QUESTION BCED3 IF EDPEC2=1]; mark BCED1 as 5 and BCED2 as 1**
- 2... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED1 Why did you choose to go to the emergency department, instead of somewhere else, such as a doctor's office? Would you say... (Check all that apply)**

- 1 ... I (we) thought the emergency department was the best place for my medical problem.
- 2 ... I was told to go to the emergency department rather than somewhere else.
- 3 ... The emergency department was the only choice available at the time.
- 4... The emergency department was the most convenient place to go.
- 5... I was taken to the ED by ambulance.
- 6 ... Other: \_\_\_\_\_
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED2 What was the reason for your recent emergency department visit? Would you say... (Check all that apply)**

- 1 ... It was clearly an emergency
- 2... I was told to go to the emergency department by a health professional
- 3... I was told to go to the emergency department by the nurse on the HealthLinkBC (8-1-1) line
- 4 ... There were no other options available
- 5 ... I didn't know if my health condition was an emergency or not, but I wanted it checked out
- 6 ... I didn't know where else to go
- 7 ... I use the emergency department for all my health concerns

- 8 ... I was waiting to see a specialist but my health condition changed
- 9 ... I was waiting for tests, but my health condition changed
- 10 ... I was waiting for tests, but was anxious to get them done sooner
- 11 ... Other: \_\_\_\_\_
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCEd3 Which, if any, health services did you try to contact or access before going to the emergency department? Would you say... (Check all that apply)**

- 1 ... I did not contact any other health services
- 2... My doctor
- 3... A walk-in clinic
- 4 ... HealthLinkBC (8-1-1)
- 5 ... The BC Health Guide Handbook
- 6 ... Other: \_\_\_\_\_
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: SKIP ALL BCEHS Questions if EDPEC2 = 2|98|99]**

**\*BCEHS1 Did the ambulance staff treat you with courtesy and respect? Would you say...**

- 1 ... Never
- 2... Rarely
- 3... Most of the time
- 4... Always
- 77... [DO NOT READ] I was unconscious during transport.
- [PROGRAMMING: IF BCEHS1=77, AUTOPOPULATE CATEGORY 77 FOR QUESTIONS BCEHS1 THROUGH BCEHS6 AND SKIP RESPONDENT TO EDPEC3]**
- [PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCEHS2 Did the ambulance staff listen carefully to you? Would you say...**

- 1 ... Never
- 2... Rarely
- 3... Most of the time
- 4... Always
- 77... [DO NOT READ] I was unconscious during transport.
- [PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCEHS3 Did the ambulance staff explain things in a way you could understand? Would you say...**

- 1 ... Never
- 2... Rarely
- 3... Most of the time
- 4... Always
- 77... [DO NOT READ] I was unconscious during transport.

**[PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCEHS4 Were you comfortable talking with ambulance staff about your worries or concerns?**

**Would you say...**

1 ... Never

2... Rarely

3... Most of the time

4... Always

77... [DO NOT READ] I was unconscious during transport.

**[PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCEHS5 Did you have confidence and trust in the ambulance staff treating you? Would you say...**

1 ... Never

2... Rarely

3... Most of the time

4... Always

77... [DO NOT READ] I was unconscious during transport.

**[PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCEHS6 Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care from ambulance staff when you were taken to the emergency department by ambulance?**

0 ... Worst care possible

1

2

3

4

5

6

7

8

9

10 ... Best care possible

77... [DO NOT READ] I was unconscious during transport.

**[PROGRAMMING: IF UPLD\_PED=1, CATEGORY 77 IS NOT ASKED]**

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC3 When you first arrived at the emergency department, how long was it before someone talked to you about the reason why you were there? Would you say...**

1 ... Less than 5 minutes

- 2... 5 to 15 minutes
- 3... More than 15 minutes
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC4 Using any number from 0 to 10, where 0 is not at all important and 10 is extremely important, when you first arrived at the emergency department, how important was it for you to get care right away?**

- 0 ... Not at all important
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 ... Extremely important
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC5 During this emergency department visit, did you get care within 30 minutes of getting to the emergency department?**

- 1... Yes
- 2... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC6 During this emergency department visit, did the doctors or nurses ask about all of the medicines you were taking? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: SKIP TO EDPEC10 IF UPLD\_TYPE=3]**

**EDPEC7 During this emergency department visit, were you given any medicine that you had not taken before?**

- 1 ... Yes
- 2 ... No →SKIP TO EDPEC10
- 98... [DO NOT READ] Don't Know →SKIP TO EDPEC10
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO EDPEC10

**EDPEC8 Before giving you any new medicine, did the doctors or nurses tell you what the medicine was for? Would you say...**



- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC9 Before giving you any new medicine, did the doctors or nurses describe possible side effects to you in a way you could understand? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC10 During this emergency department visit, did you have any pain?**

- 1 ... Yes
- 2... No →SKIP TO BCMEDREC1[IF UPLD\_TYPE=3,  
SKIP TO QABED1]
- 98... [DO NOT READ] Don't Know →SKIP TO BCMEDREC1[IF UPLD\_TYPE=3,  
SKIP TO QABED1]
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO BCMEDREC1[IF UPLD\_TYPE=3,  
SKIP TO QABED1]

**[PROGRAMMING: SKIP TO QABED1 IF UPLD\_TYPE=3]**

**EDPEC11 During this emergency department visit, did the doctors and nurses try to help reduce your pain? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC12 During this emergency department visit, did you get medicine for pain?**

- 1 ... Yes
- 2... No →SKIP TO BCMEDREC1
- 98... [DO NOT READ] Don't Know →SKIP TO BCMEDREC1
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO BCMEDREC1

**EDPEC13 Before giving you pain medicine, did the doctors and nurses describe possible side effects in a way you could understand? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**BCMEDREC1** During this emergency department visit, did staff check your identification band before giving you medications, treatments, or tests? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC14** During this emergency department visit, did you have a blood test, x-ray, or any other test?

- 1 ... Yes
- 2 ... No → SKIP TO ABED1
- 98... [DO NOT READ] Don't Know → SKIP TO ABED1
- 99 ... [DO NOT READ] Prefer not to answer → SKIP TO ABED1

**EDPEC15** During this emergency department visit, did doctors and nurses give you as much information as you wanted about the results of these tests? Would you say...

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**QABED1 INTRO:** The next questions are about the people who took care of you during your emergency department visit.

**\*QABED1** During this emergency department visit, how often did nurses introduce themselves to you? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC16** During this emergency department visit, how often did nurses treat you with courtesy and respect? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC17** During this emergency department visit, how often did nurses listen carefully to you? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC18** During this emergency department visit, how often did nurses explain things in a way you could understand? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED4** During this emergency department visit, if you had any anxieties or fears about your condition or treatment, did nurses discuss them with you? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 77 ... [DO NOT READ] Did not have any anxieties or fears.
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED5** During this emergency department visit, when you had important questions to ask a nurse, did you get answers you could understand? Would you say...

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 77 ... [DO NOT READ] Did not have any questions
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

[PROGRAMMING: SKIP TO BCED8 IF UPLD\_TYPE=3]

**QABED2 INTRO:** The next questions are about care received from doctors working in the Emergency Department.

[DO NOT ASK IF UPLD\_TYPE=3]

**DR\_SCREEN:** Were you seen by a doctor in the Emergency Department?

- 1 ... Yes
- 2 ... No →SKIP TO BCED8 [IF UPLD\_PED=1, SKIP TO EDPEC22]
- 98 ... [DO NOT READ] Don't Know →SKIP TO BCED8 [IF UPLD\_PED=1, SKIP TO EDPEC22]

99 ... [DO NOT READ] Prefer not to answer →SKIP TO BCED8 [IF UPLD\_PED=1, SKIP TO EDPEC22]

**QABED2** During this emergency department visit, how often did doctors introduce themselves to you? Would you say...

1 ... Never

2 ... Sometimes

3... Usually

4 ... Always

77 ... [DO NOT READ] Never saw a doctor during ED visit [PROGRAMMING: IF ABED2=77, AUTOPOPULATE CATEGORY 77 EDPEC19 THROUGH EDPEC21 AND SKIP RESPONDENT TO BCED6]

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**EDPEC19** During this emergency department visit, how often did doctors treat you with courtesy and respect? Would you say...

1 ... Never

2 ... Sometimes

3... Usually

4 ... Always

77 ... [DO NOT READ] Never saw a doctor during ED visit

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**EDPEC20** During this emergency department visit, how often did doctors listen carefully to you? Would you say...

1 ... Never

2 ... Sometimes

3... Usually

4 ... Always

77 ... [DO NOT READ] Never saw a doctor during ED visit

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**EDPEC21** During this emergency department visit, how often did doctors explain things in a way you could understand? Would you say...

1 ... Never

2 ... Sometimes

3... Usually

4 ... Always

77 ... [DO NOT READ] Never saw a doctor during ED visit

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**BCED6** During this emergency department visit, if you had any anxieties or fears about your condition or treatment, did doctors discuss them with you? Would you say...

1 ... Never

- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 77 ... [DO NOT READ] Did not have any anxieties or fears.
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**BCED7 During this emergency department visit, when you had important questions to ask a doctor, did you get answers you could understand? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3... Usually
- 4 ... Always
- 77 ... [DO NOT READ] Did not have any questions.
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED8 During this emergency department visit, did someone in the ED help get your messages to family or friends? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 77 ... [DO NOT READ] I did not want or need messages given to family or friends
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

[PROGRAMMING: BCED8 IS NOT ASKED IF UPLD\_PED=1]

[PROGRAMMING: SKIP TO CONT1IF UPLD\_TYPE=1]

[PROGRAMMING: SKIP TO CONT2 IF UPLD\_TYPE=3]

**EDPEC22 INTRO: The next questions are about your experience leaving the emergency department.**

**EDPEC22 Before you left the emergency department, did a doctor or nurse tell you that you should take any new medicines that you had not taken before?**

- 1 ... Yes
- 2 ... No →SKIP TO EDPEC24
- 98... [DO NOT READ] Don't Know →SKIP TO EDPEC24
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO EDPEC24

**EDPEC23 Before you left the emergency department, did a doctor or nurse tell you what the new medicines were for? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC24 Before you left the emergency department, did a doctor or nurse give you a prescription for medicine to treat pain?**

1 ... Yes

2 ... No

→SKIP TO BCMEDREC2

98... [DO NOT READ] Don't Know

→SKIP TO BCMEDREC2

99 ... [DO NOT READ] Prefer not to answer

→SKIP TO BCMEDREC2

**EDPEC25 Before giving you the prescription for pain medicine, did a doctor or nurse describe possible side effects in a way you could understand?**

1 ... Yes

2 ... No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**BCMEDREC2 Before you left the emergency department, did you have a clear understanding about all of your prescribed medications, including those you were taking before your ED visit? Would you say...**

1 ... Not at all

2 ... Partly

3 ... Quite a bit

4 ... Completely

77 ... Not applicable

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**BCMEDREC3 Before leaving the emergency department, patients should receive information in writing about what medicines to stop, change or start taking. Was the written information you received about your medicines easy to understand? Would you say...**

1 ... Not At All

2 ... Partly

3 ... Quite a Bit

4 ... Completely

77 ... I didn't need any medicine.

6 ... I didn't receive any written information

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**EDPEC26 Before you left the emergency department, did someone discuss with you whether you needed follow-up care?**

1 ... Yes

2 ... No

→SKIP TO EDPEC28

98... [DO NOT READ] Don't Know

→SKIP TO EDPEC28

99 ... [DO NOT READ] Prefer not to answer

→SKIP TO EDPEC28

**EDPEC27 Before you left the emergency department, did someone ask if you would be able to get this follow-up care?**

1 ... Yes

2 ... No

98... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**EDPEC28 Before you left the emergency department, did someone talk with you about how to treat pain after you got home?**

1 ... Yes  
2 ... No  
77 ... I did not need to treat pain after I got home from the emergency department  
[IF UPLD\_PED=1] 77.. I did not need to treat my child's pain after we got home from the emergency department  
98... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: QUESTIONS OSA1 THROUGH OSA5 ARE ONLY ACTIVATED IF UPLD\_TYPE=2]  
[PROGRAMMING: QUESTIONS OSA1 THROUGH OSA5 ARE NOT ACTIVATED FOR UPLD\_PED=1]**

**OSA INTRO: The next questions are about Home Support services.**

**OSA1 Home Support services are provided by community health workers to help people living at home with tasks such as bathing, dressing, feeding, and taking medicines. Before this emergency department visit, were you receiving Home Support services in your home?**

1 ... Yes  
2 ... No  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**OSA2 After you left the emergency department, did you receive Home Support services in your home?**

1 ... Yes  
2 ... No  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**OSA3 Before you left the emergency department, did the doctors, nurses, or other staff ask you, your family, or caregiver(s) what care and services you would need when you returned home? Would you say...**

1 ... Not At All  
2 ... Partly  
3 ... Quite a Bit  
4 ... Completely  
77 ... Not Applicable, I did not require Home Support Services  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**OSA4 Before you left the emergency department, did you receive information in writing or verbally from doctors, nurses, or other staff about services available to help you manage your care at home? Would you say...**

1 ... Not At All

- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 77 ... [DO NOT READ] Not Applicable
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**OSA5 Since your return home, do you and your family have the services you need to manage at home? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 77 ... [DO NOT READ] Not Applicable
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**BC CONTINUITY OF CARE MODULE**

**CONT INTRO: The next set of questions is about your experiences when your care changed.**

**[PROGRAMMING: DO NOT ASK CONT1 if DR\_SCREEN=2|98|99]**

**CONT1 During your emergency department visit, did doctors tell you what would happen next during your care? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*CONT2 During your emergency department visit, did nurses tell you what would happen next during your care? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: SKIP TO CONT12 IF UPLD\_TYPE=3]**

**CONT3 During your emergency department visit, did you get consistent information from your doctors, nurses and other staff? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always



98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: DO NOT ASK CONT4 AND CONT5 if DR\_SCREEN=2|98|99]**

**CONT4 During your emergency department visit, when your doctors changed, did the next doctor seem up-to-date on your care? Would you say...**

1 ... Never  
2 ... Sometimes  
3 ... Usually  
4 ... Always  
77 ... There were no changes in the doctors treating me **[PROGRAMMING: IF CONT4=77, AUTOPOPULATE CATEGORY 77 FOR CONT5 AND SKIP RESPONDENT TO CONT6]**  
**[PROGRAMMING: IF CONT4=77, AUTOPOPULATE CATEGORY 77 FOR CONT5 AND SKIP RESPONDENT TO CONT6]**  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**CONT5 During your emergency department visit, when your doctors changed, did you have confidence in the care the next doctor provided? Would you say...**

1 ... Never  
2 ... Sometimes  
3 ... Usually  
4 ... Always  
77 ... There were no changes in the doctors treating me  
[IF UPLD\_PED=1] 77.. There were no changes in the doctors treating my child  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**CONT6 During your emergency department visit, when your nurses changed, did the next nurse seem up-to-date about your care? Would you say...**

1 ... Never  
2 ... Sometimes  
3 ... Usually  
4 ... Always  
77... Not Applicable  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**CONT7 During your emergency department visit, when your nurses changed, did you have confidence in the care the next nurse provided? Would you say...**

1 ... Never  
2 ... Sometimes  
3 ... Usually  
4 ... Always  
77... Not Applicable  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

[PROGRAMMING: SKIP TO EDPEC29 IF UPLD\_TYPE=1]  
[PROGRAMMING: CONT8 IS NOT ASKED IF UPLD\_PED=1]

**CONT8 Before you left the emergency department, did the doctors, nurses or other staff give your family or someone close to you enough information to help care for you? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 5 ... I did not want information provided to anyone
- 6 ... I did not need information provided to anyone
- 7 ... I had no family or friends involved
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**CONT9 Before you left the emergency department, did doctors, nurses or other staff talk with you about whether you would have the help you needed when you went home? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**CONT10 Before you left the emergency department, did you get enough information from the doctors, nurses, and other staff about appointments and tests you needed after you left the emergency department? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 77 ... I did not need appointments or tests after I left the ED
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**CONT11 Before you left the emergency department, were you told when you could resume your usual activities, such as when to go back to work or drive a car? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*CONT12 After you left the emergency department, did someone contact you to see how you were doing? Please select all that apply:**

- 1 ... Yes – Someone from the hospital or emergency department
- 2 ... Yes – Someone from my doctor's office
- 3 ... Yes – Someone else
- 4 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: SKIP TO EDPEC29 IF UPLD\_TYPE=3]**

**CONT13 After you left the emergency department, did the doctors or other staff who usually provide your medical care seem informed and up-to-date about the care you received in the emergency department? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 5 ... I did not need care after I left the ED
- 77 ... I do not have a place where I usually receive medical care
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**CONT14 During this emergency department visit, did you get information in writing about what symptoms or health problems to look out for after you left the emergency department?**

- 1 ... Yes
- 2 ... No
- 77 ... [DO NOT READ] Not Applicable
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC29INTRO: The next questions are about your overall experience in the emergency department at <AUPLD\_FAC\_NAME>.**

**\*EDPEC29 Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care during this emergency department visit?**

- 0 ... Worst care possible
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 ... Best care possible
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC30** Would you recommend this emergency department to your friends and family?

**Would you say...**

1 ... Definitely no

2 ... Probably no

3... Probably yes

4 ... Definitely yes

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCED9** Overall, on a scale of 0 to 10, do you feel you were helped by your visit to the emergency department? Please answer on a scale where 0 is "not helped at all" and 10 is "helped completely."

0 ... Not helped at all

1

2

3

4

5

6

7

8

9

10 ... Helped completely

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCED10** On a scale of 0 to 10, what was your overall experience with your emergency department visit? Please answer on a scale where 0 is "I had a very poor experience" and 10 is "I had a very good experience."

0 ... I had a very poor experience

1

2

3

4

5

6

7

8

9

10 ... I had a very good experience

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**\*BCED11** During this emergency department visit, did you find the ED was kept clean? Would you say...

1 ... Yes, definitely

2 ... Yes, somewhat

3 ... No

- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[PROGRAMMING: SKIP TO EDPEC31 IF UPLDTYPE=2]**  
**[PROGRAMMING: SKIP TO EDPEC31 IF UPLD\_TYPE=3]**

**EDPEC\_IP1: This next question is about your experience leaving the emergency department.**

**EDPEC\_IP1** Once you found out you would have to stay in the hospital, were you kept informed about how long it would be before you went to another part of the hospital? Would you say...

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**EDPEC\_IP2** Before you left the emergency department, did you understand why you needed to stay in the hospital? Would you say...

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC 31 INTRO: The next questions are about your health care.**

**\*EDPEC31** In the last 6 months, how many times have you visited any emergency department to get care for yourself? Please include the emergency department visit you have been answering questions about in this survey. Would you say...

- 1 ... 1 time
- 2 ... 2 times
- 3... 3 times
- 4 ... 4 times
- 5 ... 5 to 9 times
- 6 ... 10 or more times
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC32** Not counting the emergency department, is there a doctor's office, clinic, or other place you usually go if you need a check-up, want advice about a health problem, or when you are sick or hurt?

- 1 ... Yes
- 2 ... No →SKIP TO IV1 [IF UPLD\_TYPE=3, SKIP TO BCED13]
- 98... [DO NOT READ] Don't Know ..... →SKIP TO IV1 [IF UPLD\_TYPE=3, SKIP TO BCED13]

99 ... [DO NOT READ] Prefer not to answer..... →SKIP TO IV1 [IF UPLD\_TYPE=3, SKIP TO BCED13]

**\*EDPEC33** How many times in the last 6 months did you visit the doctor's office, clinic, or other place to get care or advice about your health? Would you say...

- 1 ... None
- 2 ... 1 time
- 3... 2 times
- 4 ... 3 times
- 5 ... 4 times
- 6 ... 5 to 9 times
- 7 ... 10 or more times
- 98... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

[PROGRAMMING: SKIP TO BCED13 IF UPLD\_TYPE=3]

**IV1 INTRO:** Sometimes an intravenous (IV) catheter is put into a vein with a needle so patients can receive fluids or medication. The next questions ask about your experiences if you had an IV put into a vein during your emergency department visit or in the ambulance.

**IV1** Did you have at least one IV put into a vein during this emergency department visit or while in the ambulance?

- 1 ... Yes
- 2 ... No →SKIP TO HYGIENE1
- 98 ... [DO NOT READ] Don't Know ..... →SKIP TO HYGIENE1
- 99 ... [DO NOT READ] Prefer not to answer..... →SKIP TO HYGIENE1

**IV2** Who put the IV(s) into your vein? Check all that apply:

- 1 ... One or more nurses
- 2 ... One or more doctors
- 3 ... One or more other staff
- 4 ... An ambulance paramedic
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IV3** Were you told what to expect when your IV was being put into your vein? Would you say...

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IV4** When you think about the IVs you had during this emergency visit, how many times on average did the nurse, doctor or paramedic try to put an IV into your vein?

- 1 ... 1
- 2 ... 2
- 3 ... 3

- 4 ... More than 3
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IV5 After an IV was started in the Emergency Department, were you told to call a nurse if you had any problems such as pain, redness around the catheter, swelling, or blood?**

- 1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IV6 During this emergency department visit, did you experience any of the following problems with your IV? Would you say... (Check all that apply)**

- 1 ... Pain
- 2 ... Soreness
- 3 ... Redness
- 4 ... Swelling
- 5 ... Bruising
- 6 ... My IV fell out
- 7 ... I had no problems →SKIP TO IV8
- 98 ... [DO NOT READ] Don't Know →SKIP TO IV8
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO IV8

**IV7 During this emergency department visit, how often did your nurses, doctors or paramedics handle the problems in a timely manner? Would you say...**

- 1 ... Never
- 2 ... Rarely
- 3 ... Most of the time
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IV8 If you needed an IV in the future, would your experience having an IV during this ED visit make you feel...? Would you say...**

- 1 ... More worried or anxious about having another IV
- 2 ... Less worried or anxious about having another IV
- 3 ... No difference in my worry or anxiety about having another IV
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENEINTRO (BC Hand Hygiene Module): Cleaning one's hands is the single most important thing you, your care providers, your family members and your visitors can do to prevent infections. All care providers in emergency departments are expected to clean their hands before caring for you. Hand cleaning includes washing with soap and water or using an alcohol-based hand rub. [PROGRAMMING: SKIP HYGIENE1 if DR\_SCREEN=2|98|99]**

**HYGIENE1 During this emergency department visit, did you notice your doctor(s) wash or clean their hands before caring for you? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENE2 During this emergency department visit, did you notice your other care providers wash or clean their hands before caring for you? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENE3 During this emergency department visit, did emergency department staff tell you about the importance of washing or cleaning your own hands? Would you say...**

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENE4 During this emergency department visit, did emergency department staff show you how to properly wash or clean your own hands? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENE5 During this emergency department visit, did emergency department staff tell you about products available for you to wash or clean your own hands? Would you say...**

- 1 ... Never
- 2 ... Sometimes
- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**HYGIENE6 During this emergency department visit, would you have been comfortable asking your care providers if they had washed or cleaned their hands before caring for you? Would you say...**

- 1 ... Never
- 2 ... Sometimes



- 3 ... Usually
- 4 ... Always
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**BCED12** During this emergency department visit, do you believe you or your family members suffered personal injury or harm, which resulted from a medical error or mistake?

Would you say...

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED13** During this emergency visit, do you feel that your care providers were respectful of your culture and traditions? Would you say...

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED14** Do you feel your spiritual needs were an important part of your care in the emergency department?

- 1 ... Yes
- 2 ... No →SKIP TO BCED16
- 77 ... I do not have spiritual needs. →SKIP TO BCED16
- 98 ... [DO NOT READ] Don't Know →SKIP TO BCED16
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO BCED16

**\*BCED15** During this emergency department visit, were your spiritual needs met? Would you say...

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely
- 77 ... I did not want spiritual care
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED16** During this emergency visit, do you feel your care providers treated you with compassion? Would you say...

- 1 ... Not At All
- 2 ... Partly
- 3 ... Quite a Bit
- 4 ... Completely

- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EMN1INTRO: Emergency department physicians and nurses across the province are making changes to how they provide care for patients who present with certain complaints. We would like to know if you went to the emergency department because you were experiencing any of the following (please check all that apply):**

**\*EMN1**

- 1 ... Chest pain  
[PROGRAMMING: DO NOT ASK IF UPLD\_PED=1] →ASK EMN2-EMN4
- 2 ... A stroke that got better (also called a TIA or Transient Ischemic Attack)  
[PROGRAMMING: DO NOT ASK IF UPLD\_PED=1] →ASK EMN5-EMN8
- 3 ... An abscess →ASK EMN9
- 4 ... A concussion →ASK EMN10
- 5 ... Asthma →ASK EMN11
- 6 ... A mental health issue  
[PROGRAMMING: DO NOT ASK IF UPLD\_AGE <5] →ASK EMN12-EMN14
- 7 ... A substance use issue  
[PROGRAMMING: DO NOT ASK IF UPLD\_PED=1] →ASK EMN15-EMN16
- 77... None →SKIP TO PROMSFLAG
- 98 ... [DO NOT READ] Don't Know →SKIP TO PROMSFLAG
- 99 ... [DO NOT READ] Prefer not to answer →SKIP TO PROMSFLAG

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN2 You indicated that you went to the emergency department for chest pain. Did the doctor you saw in the emergency department order a stress test during or after your visit to the ED? Would you say...**

- 1 ...Yes, I had a stress test during my visit to the ED
- 2 ...Yes, I received a referral for a stress test that I was to have after I left the ED
- 3 ...No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN3 Before you left the emergency department, were you given a referral to see a cardiologist (heart specialist)?**

- 1 ... Yes → ASK EMN4
- 2 ... No →NEXT SECTION
- 98 ... [DO NOT READ] Don't Know →NEXT SECTION
- 99 ... [DO NOT READ] Prefer not to answer →NEXT SECTION

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN4 Since you left the emergency department, have you seen a cardiologist (heart specialist)?**

- 1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN5** You indicated that you went to the emergency department for a stroke that got better (also called a TIA or Transient Ischemic Attack). A carotid ultrasound checks for narrowed arteries that lead to the head and neck. Did you have the carotid ultrasound within 48 hours (2 days) of your emergency department visit?

1 ... Yes

2 ... No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN6** A computed tomography angiogram (CT Angiogram) uses an injection of iodine and CT scanning to help diagnose blood vessel diseases or conditions, such as blockages. Did you have a CT Angiogram within 48 hours (2 days) of your emergency department visit?

1 ... Yes

2 ... No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN7** Before you left the emergency department, were you given a prescription for Aspirin or Plavix to take at home?

1 ...Yes, Aspirin and Plavix

2 ...Yes, Plavix only

3 ...Yes, Aspirin only

4 ...No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN8** Before you left the emergency department, were you told to return to the emergency department immediately if your symptoms returned?

1 ... Yes

2 ... No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN9** You indicated that you went to the emergency department for an abscess. Before you left the emergency department, were you given a prescription for an antibiotic to take at home?

..1 ... Yes

2 ... No

98 ... [DO NOT READ] Don't Know

99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN10 You indicated that you went to the emergency department for a concussion. Before you left the emergency department, were you given instructions for how to care for yourself at home?**

- 1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN11 You indicated that you went to the emergency department for asthma. Before you left the emergency department, were you given a prescription for steroids or medicine to take at home?**

- 1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN12 You indicated that you went to the emergency department for a mental health issue. While you were in the emergency department, did you have a mental health assessment?**

- ..1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN13 Before you left the emergency department, did the doctor you saw in the ED make a referral for mental health care after discharge in the community?**

- 1 ... Yes
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[DO NOT ASK IF UPLD\_TYPE=3]**

**EMN14 Before you left the emergency department, did the doctors and nurses make a plan with you for follow up in the community? Would you say...**

- 1 ... Yes, definitely
- 2 ... Yes, somewhat
- 3... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EMN15 You indicated that you went to the emergency department for a substance use issue.**

**While you were in the emergency department, were you asked about your substance use issue?**

- 1 ... Yes
- 2 ... No

98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**\*EMN16 Before you left the emergency department, were you provided with a take-home naloxone kit?**

1 ... Yes  
2 ... No  
98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**\*EQ-5D**

**[PROGRAMMING NOTE: IF UPLD\_PED=1 DO NOT ASK EQ-5D1 THROUGH VR12\_14. SKIP RESPONDENT TO EDPEC34]**

**PROMSFLAG**

1 ... EQ5D series of questions administered first  
2 ... VR12 series of questions administered first

**[IF PHONE] We are trying to find out what you think about your health. I will first ask you some simple questions about your health TODAY. I will then ask you to rate your health on a measuring scale. I will explain what to do as I go along but please interrupt me if you do not understand something or if things are not clear to you. Please also remember that there are no right or wrong answers. We are interested here only in your personal view.**

**First I am going to read out some questions. Each question has a choice of five answers. Please tell me which answer best describes your health TODAY. Do not choose more than one answer in each group of questions.**

**[IF WEB, NO INTRO]**

**\*EQ5D1**

**[PHONE]**

**First I'd like to ask you about mobility. Would you say that:**

- 1 ... You have no problems in walking about?
- 2 ... You have slight problems in walking about?
- 3 ... You have moderate problems in walking about?
- 4 ... You have severe problems in walking about?
- 5 ... You are unable to walk about?

98 ... [DO NOT READ] Don't Know  
99 ... [DO NOT READ] Prefer not to answer

**[ONLINE]**

Please click the ONE box that best describes your health TODAY.

**MOBILITY**

Choose one of these items / levels

- 1 ... I have no problems in walking about
- 2 ... I have slight problems in walking about

- 3 ... I have moderate problems in walking about
- 4 ... I have severe problems in walking about
- 5 ... I am unable to walk about

- 98 ... Don't Know
- 99 ... Prefer not to answer

**\*EQ5D2**

**[PHONE]**

**Next I'd like to ask you about self-care. Would you say that:**

- 1 ... You have no problems in washing or dressing yourself?
- 2 ... You have slight problems in washing or dressing yourself?
- 3 ... You have moderate problems in washing or dressing yourself?
- 4 ... You have severe problems in washing or dressing yourself?
- 5 ... You are unable to wash or dress yourself?

- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[ONLINE]**

Please click the ONE box that best describes your health TODAY.

**SELF-CARE**

Choose one of these items / levels

- 1 ... I have no problems washing or dressing myself
- 2 ... I have slight problems washing or dressing myself
- 3 ... I have moderate problems washing or dressing myself
- 4 ... I have severe problems washing or dressing myself
- 5 ... I am unable to wash or dress myself

- 98 ... Don't Know
- 99 ... Prefer not to answer

**\*EQ5D3**

**[PHONE]**

**Next I'd like to ask you about your usual activities, for example work, study, housework, family or leisure activities. Would you say that:**

- 1 ... You have no problems doing your usual activities?
- 2 ... You have slight problems doing your usual activities?
- 3 ... You have moderate problems doing your usual activities?
- 4 ... You have severe problems doing your usual activities?
- 5 ... You are unable to do your usual activities?

- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[ONLINE]**

Please click the ONE box that best describes your health TODAY.

**USUAL ACTIVITIES (e.g. work, study, housework, family or leisure activities)**

Choose one of these items / levels

- 1 ... I have no problems doing my usual activities
- 2 ... I have slight problems doing my usual activities
- 3 ... I have moderate problems doing my usual activities
- 4 ... I have severe problems doing my usual activities
- 5 ... I am unable to do my usual activities

98 ... Don't Know

99 ... Prefer not to answer

**\*EQ5D4**

**[PHONE]**

**Next I'd like to ask you about pain or discomfort. Would you say that:**

- 1 ... You have no pain or discomfort?
- 2 ... You have slight pain or discomfort?
- 3 ... You have moderate pain or discomfort?
- 4 ... You have severe pain or discomfort?
- 5 ... You have extreme pain or discomfort?
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[ONLINE]**

Please click the ONE box that best describes your health TODAY.

**PAIN / DISCOMFORT**

Choose one of these items / levels

- 1 ... I have no pain or discomfort
- 2 ... I have slight pain or discomfort
- 3 ... I have moderate pain or discomfort
- 4 ... I have severe pain or discomfort
- 5 ... I have extreme pain or discomfort

98 ... Don't Know

99 ... Prefer not to answer

**\*EQ5D5**

**[PHONE]**

**Finally I'd like to ask you about anxiety or depression. Would you say that:**

- 1 ... You are not anxious or depressed?
- 2 ... You are slightly anxious or depressed?
- 3 ... You are moderately anxious or depressed?
- 4 ... You are severely anxious or depressed?
- 5 ... You are extremely anxious or depressed?
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**[ONLINE]**

Please click the ONE box that best describes your health TODAY.

**ANXIETY / DEPRESSION**

Choose one of these items / levels

- 1 ... I am not anxious or depressed
- 2 ... I am slightly anxious or depressed
- 3 ... I am moderately anxious or depressed
- 4 ... I am severely anxious or depressed
- 5 ... I am extremely anxious or depressed

98 ... Don't Know

99 ... Prefer not to answer

**\*EQ5D6**

**[PHONE] Now, I would like to ask you to say how good or bad your health is TODAY.**

I'd like you to try to picture in your mind a scale that looks rather like a thermometer. Can you do that? The best health you can imagine is marked 100 (one hundred) at the top of the scale and the worst health you can imagine is marked 0 (zero) at the bottom.

I would now like you to tell me the point on this scale where you would put your health today.

**[PROGRAM A SLIDER WITH PARAMETERS ACCEPTING VALUES 0 to 100 ONLY. DON'T KNOW AND PREFER NOT TO ANSWER OPTIONS AVAILABLE]**

**[ONLINE]**

We would like to know how good your health is TODAY.

This scale is numbered from 0 to 100.

100 means the best health you can imagine.

0 means the worst health you can imagine.

Please click on the scale to indicate how your health is TODAY.

**[PROGRAM A SLIDER WITH PARAMETERS ACCEPTING VALUES 0 to 100 ONLY. DON'T KNOW AND PREFER NOT TO ANSWER OPTIONS AVAILABLE]**



**\*VR12\_1 INTRO:** This set of questions asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. If you are unsure how to answer a question, please give the best answer you can.

**\*VR12\_1** In general, would you say your health is....?

- 1 ... Excellent
- 2 ... Very good
- 3 ... Good
- 4 ... Fair
- 5 ... Poor
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_2 INTRO:** The following questions are about activities you might do during a typical day. As I read each item, please tell me if your health now limits you a lot, limits you a little, or not limit you at all.

**\*VR12\_2** Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?

- 1 ... Yes, limited a lot
- 2 ... Yes, limited a little
- 3 ... No, not limited at all
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_3** Climbing several flights of stairs?

- 1 ... Yes, limited a lot
- 2 ... Yes, limited a little
- 3 ... No, not limited at all
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_4 INTRO:** During the past week, have you had any of the following problems with your work or other regular activities as a result of your physical health?

**\*VR12\_4** Accomplished less than you would like?

- 1 ... No, none of the time
- 2 ... Yes, a little of the time
- 3 ... Yes, some of the time
- 4 ... Yes, most of the time
- 5 ... Yes, all of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_5** Were limited in the kind of work or other activities?

- 1 ... No, none of the time
- 2 ... Yes, a little of the time

- 3 ... Yes, some of the time
- 4 ... Yes, most of the time
- 5 ... Yes, all of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_6 INTRO: During the past week, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?**

**\*VR12\_6 Accomplished less than you would like?**

- 1 ... No, none of the time
- 2 ... Yes, a little of the time
- 3 ... Yes, some of the time
- 4 ... Yes, most of the time
- 5 ... Yes, all of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_7 Didn't do work or other activities as carefully as usual?**

- 1 ... No, none of the time
- 2 ... Yes, a little of the time
- 3 ... Yes, some of the time
- 4 ... Yes, most of the time
- 5 ... Yes, all of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_8 During the past week, how much did pain interfere with your normal work (including both work outside the home and house work)?**

- 1 ... Not at all
- 2 ... A little bit
- 3 ... Moderately
- 4 ... Quite a bit
- 5 ... Extremely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_9 INTRO: These questions are about how you feel and how things have been with you during the past week. For each question, please give the one answer that comes closest to the way you have been feeling.**

**How much of the time during the past week:**

**\*VR12\_9 Have you felt calm and peaceful?**

- 1 ... All of the time
- 2 ... Most of the time
- 3 ... A good bit of the time

- 4 ... Some of the time
- 5 ... A little of the time
- 6 ... None of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_10      Did you have a lot of energy?**

- 1 ... All of the time
- 2 ... Most of the time
- 3 ... A good bit of the time
- 4 ... Some of the time
- 5 ... A little of the time
- 6 ... None of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_11      Have you felt downhearted and blue?**

- 1 ... All of the time
- 2 ... Most of the time
- 3 ... A good bit of the time
- 4 ... Some of the time
- 5 ... A little of the time
- 6 ... None of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_12      During the past week, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?**

- 1 ... All of the time
- 2 ... Most of the time
- 3 ... Some of the time
- 4 ... A little of the time
- 5 ... None of the time
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_13 INTRO: Now we'd like to ask you some questions about how your health may have changed.**

**\*VR12\_13      Compared to one year ago, how would you rate your physical health in general now?**

- 1 ... Much better
- 2 ... Slightly better
- 3 ... About the same
- 4 ... Slightly worse
- 5 ... Much worse
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*VR12\_14** Compared to one year ago, how would you rate your emotional problems (such as feeling anxious, depressed or irritable) now?

- 1 ... Much better
- 2 ... Slightly better
- 3 ... About the same
- 4 ... Slightly worse
- 5 ... Much worse
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC34** In general, how would you rate your overall health? Would you say...?  
**[IF UPLD\_PED=1] In general, how would you rate your child's overall health? Would you say...**

- 1 ... Excellent
- 2 ... Very good
- 3 ... Good
- 4 ... Fair
- 5 ... Poor
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*EDPEC35** In general, how would you rate your overall mental or emotional health?  
**[IF UPLD\_PED=1] In general, how would you rate your child's overall mental or emotional health?**

- 1 ... Excellent
- 2 ... Very good
- 3 ... Good
- 4 ... Fair
- 5 ... Poor
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED17** In general, how would you rate your overall physical health?  
**[IF UPLD\_PED=1] In general, how would you rate your child's overall physical health?**

- 1 ... Excellent
- 2 ... Very good
- 3 ... Good
- 4 ... Fair
- 5 ... Poor
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**INTRO:** These last few questions are about you. This information will only be used to organize our results into groups.

**\*BCED18** What is the highest grade or level of school that you have completed?

**[SURVEYOR NOTE: ACADEMIC TRAINING BEYOND A HIGH SCHOOL DIPLOMA THAT DOES NOT LEAD TO A BACHELORS DEGREE SHOULD BE CODED AS “Undergraduate degree or some university”. IF THE RESPONDENT DESCRIBES NON-ACADEMIC TRAINING, SUCH AS TRADE SCHOOL, PROBE TO FIND OUT IF S/HE HAS A HIGH SCHOOL DIPLOMA AND CODE “ High school or high school equivalency certificate ”OR“ Some high school, but did not graduate”, AS APPROPRIATE.]**

- 1 ... 8<sup>th</sup> grade or less
- 2 ... Some high school, but did not graduate
- 3 ... High school or high school equivalency certificate
- [PROGRAMMING: IF UPLD\_PED=1, DO NOT ASK CATEGORIES 4|5|6]**
- 4 ... College, CEGEP or other non-university certificate or diploma
- 5 ... Undergraduate degree or some university
- 6 ... Post-graduate degree or professional designation
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED19 The following question will help us to better understand the communities that we serve. Do you consider yourself to be...? (Select all that apply)**

**[SURVEYOR NOTE: READ OPTIONS UNTIL OPTION IS SELECTED, BUT CONTINUE TO READ ALL RACE CATEGORIES PAUSING AT EACH RACE CATEGORY TO ALLOW THE RESPONDENT TO REPLY TO EACH RACE CATEGORY (FOR MULTI-RACIAL INDIVIDUALS).**

- 1 ... White
- 2 ... Chinese
- 3 ... First Nation
- 4... Inuit
- 5 ... Métis
- 6 ... Indigenous/Aboriginal (not included elsewhere)
- 7 ... South Asian (for example, East Indian, Pakistani, Sri Lankan, etc.)
- 8 ... Black
- 9 ... Filipino
- 10 ... Latin American
- 11 ... Southeast Asian (for example, Vietnamese, Cambodian, Malaysian, Laotian, etc.)
- 12 ... Korean
- 13 ... Japanese
- 14 ... Other
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**IF THE RESPONDENT REPLIES, “WHY ARE YOU ASKING ABOUT MY RACE? THE COLOUR OF MY SKIN?”:**

**We ask this question, so we can be sure that the people we survey accurately represent the diversity of people who live in and receive healthcare in British Columbia. This question comes from Statistics Canada and is used for the census.**

**IF THE RESPONDENT REPLIES, “I ALREADY TOLD YOU”:**

Many people come from more than one background. So we use the same responses that are used in the Canadian census. If any of the response options do not apply to you please answer no. Thanks for your patience.

[PROGRAMMING NOTE: BCED20 is to be asked only if BCED19=(3 | 4 | 5 | 6). If this condition is not met then respondents should skip to BCED22].

**\*BCED20** Were you visited by an Aboriginal Patient Liaison during your emergency visit?

- 1 ... Yes
- 2 ... No, did not visit →Skip to BCED22
- 3 ... No, but would have liked a visit →Skip to BCED22
- 98 ... [DO NOT READ] Don't Know →Skip to BCED22
- 99 ... [DO NOT READ] Prefer not to answer →Skip to BCED22

**\*BCED21** Did the visit(s) by the Aboriginal Patient Liaison help meet your needs?

- 1 ... Not at all
- 2 ... Partly
- 3 ... Quite a bit
- 4 ... Completely
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

**\*BCED22 INTRO:** This next section allows you to provide any additional feedback you may have on your ambulance or emergency department experience.

**\*BCED22** What is the most important change we could make to improve patient experiences in BC Emergency Departments and ambulance services? We welcome your additional comments.

- 1 ... [ENTER COMMENT]
- 2 ... No
- 98 ... [DO NOT READ] Don't Know
- 99 ... [DO NOT READ] Prefer not to answer

## **SURVEY END**

Thank you for taking the time to complete this survey. Your answers are greatly appreciated. The results will be posted on the Ministry of Health public website when the survey project is complete.

[PHONE] Have a nice evening / good day. Goodbye

**APPENDIX C: 2018 EMERGENCY DEPARTMENT SECTOR SURVEY CODEBOOK**

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Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
PREMs								
Thinking about this visit, what was the <u>main</u> reason why you went to the emergency department?	Main reason for ED visit	EDPEC1	1	An accident or injury	No	*	*	*
			2	A new health problem	No	*	*	
			3	An ongoing health condition or concern	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
For this visit, did you go to the emergency department in an ambulance?	Transported to ED by ambulance	EDPEC2	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Why did you choose to go to the emergency department, instead of somewhere else, such as a doctor's office?	Reason went to ED rather than somewhere else	BCED1	1	I thought the emergency department was the best place for my medical problem	Yes	*	*	*
			2	I was told to go to the emergency department rather than somewhere else	Yes	*	*	
			3	The emergency department was the only choice available at the time	Yes	*	*	
			4	The emergency department was the most convenient place to go	Yes	*	*	
			5	I was taken to the ED by ambulance	Yes	*	*	
			6	Other	Yes	*	*	
			98	Don't Know	Yes	*	*	
			99	Prefer not to answer	Yes	*	*	
What was the reason for your recent emergency department visit?	Reason for ED visit	BCED2	1	It was clearly an emergency	Yes	*	*	*
			2	I was told to go to the emergency department by a health professional	Yes	*	*	
			3	I was told to go to the emergency department by the nurse on the HealthLinkBC line 811	Yes	*	*	
			4	There were no other options available	Yes	*	*	
			5	I didn't know if my health condition was an emergency or not, but I wanted it checked out	Yes	*	*	
			6	I didn't know where else to go	Yes	*	*	



Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			7	I use the emergency department for all my health concerns	Yes	*	*	
			8	I was waiting to see a specialist but my health condition changed	Yes	*	*	
			9	I was waiting for tests, but my health condition changed	Yes	*	*	
			10	I was waiting for tests, but was anxious to get them done sooner	Yes	*	*	
			11	Other	Yes	*	*	
			98	Don't Know	Yes	*	*	
			99	Prefer not to answer	Yes	*	*	
Which, if any, health services did you try to contact or access before going to the emergency department?	Other health services tried before ED visit	BCEd3	1	I did not contact any other health services	Yes	*	*	*
			2	My doctor	Yes	*	*	
			3	A walk-in clinic	Yes	*	*	
			4	HealthLinkBC 811	Yes	*	*	
			5	The BC Health Guide Handbook	Yes	*	*	
			6	Other	Yes	*	*	
			98	Don't Know	Yes	*	*	
			99	Prefer not to answer	Yes	*	*	
Did the ambulance staff treat you with <u>courtesy and respect</u> ?	Ambulance staff show courtesy and respect	BCEHS1	1	Never	No	No	No	14
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Did the ambulance staff <u>listen carefully</u> to you?	Ambulance staff listen carefully	BCEHS2	1	Never	No	No	No	14
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			99	Prefer not to answer	No	*	*	
Did the ambulance staff <u>explain things</u> in a way you could understand?	Ambulance staff explain things	BCEHS3	1	Never	No	No	No	14
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Were you comfortable talking with ambulance staff about your worries or concerns?	Ambulance staff provide emotional support	BCEHS4	1	Never	No	No	No	14
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Did you have confidence and trust in the ambulance staff treating you?	Ambulance staff instill confidence and trust	BCEHS5	1	Never	No	No	No	14
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care from ambulance staff when you were taken to the emergency department by ambulance?	Rating of care from ambulance staff	BCEHS6	0	Worst care possible	No	No	No	*
			1		No	No	No	
			2		No	No	No	
			3		No	No	No	
			4		No	No	No	
			5		No	No	No	
			6		No	Yes	No	
			7		No	Yes	No	
			8		No	Yes	No	
9		No	Yes	Yes				

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			10	Best care possible	No	Yes	Yes	
			77	I was unconscious during transport	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
When you first arrived at the emergency department, how long was it before someone talked to you about the reason why you were there?	Time from arrival in ED to first talking to someone	EDPEC3	1	Less than 5 minutes	No	Yes	Yes	1
			2	5 to 15 minutes	No	Yes	No	
			2	More than 15 minutes	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Using any number from 0 to 10, where 0 is not at all important and 10 is extremely important, when you first arrived at the emergency department, how important was it for you to get care right away?	Rating of getting care right away	EDPEC4	0	Not at all important	No	*	*	*
			1		No	*	*	
			2		No	*	*	
			3		No	*	*	
			4		No	*	*	
			5		No	*	*	
			6		No	*	*	
			7		No	*	*	
			8		No	*	*	
			9		No	*	*	
			10	Extremely important	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you get care within 30 minutes of getting to the emergency department?	Care within 30 minutes of arrival	EDPEC5	1	Yes	No	Yes	Yes	1
			2	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did the doctors or nurses ask about <u>all</u> of the medicines you were taking?	Patients were asked about any medicines they were taking	EDPEC6	1	Yes definitely	No	Yes	Yes	3
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department	Patients were given	EDPEC7	1	Yes	No	*	*	*

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
visit, were you given any medicine that you had not taken before?	new medicine		2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before giving you any new medicine, did the doctors or nurses tell you what the medicine was for?	Patients were told reason for new medicine	EDPEC8	1	Yes definitely	No	Yes	Yes	3
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before giving you any new medicine, did the doctors or nurses describe possible side effects to you in a way you could understand?	Possible side-effects of new medication explained	EDPEC9	1	Yes definitely	No	Yes	Yes	3
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you have any pain?	Patients had pain	EDPEC10	1	Yes	No	*	*	8
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did the doctors and nurses try to help reduce your pain?	ED staff tried to reduce patient pain	EDPEC11	1	Yes definitely	No	Yes	Yes	8
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you get medicine for pain?	Patients received medicine for pain	EDPEC12	1	Yes	No	*	*	8
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before giving you pain medicine, did the doctors and nurses describe possible side effects in a way you could understand?	Possible side-effects of pain medication explained	EDPEC13	1	Yes definitely	No	Yes	Yes	6
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department	Patient identification	BCMEDRE	1	Never	No	No	No	9

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
visit, did staff check your identification band before giving you medications, treatments, or tests?	band was checked by staff before administration of medications, treatments, or tests	C1	2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you have a blood test, x-ray, or any other test?	Tests and procedures were performed	EDPEC14	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did doctors and nurses give you as much information as you wanted about the results of these tests?	Receive enough information about test results	EDPEC15	1	Yes definitely	No	Yes	Yes	5
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, how often did <u>nurses introduce themselves</u> to you?	Nurses introduce themselves	QABED1	1	Never	No	No	No	5
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, how often did nurses treat you with <u>courtesy and respect</u> ?	Nurses show courtesy and respect	EDPEC16	1	Never	No	No	No	2
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, how often did nurses <u>listen carefully to you</u> ?	Nurses listen carefully	EDPEC17	1	Never	No	No	No	2
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
During this emergency department visit, how often did nurses <u>explain things</u> in a way you could understand?	Nurses explain things	EDPEC18	1	Never	No	No	No	2
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, if you had any anxieties or fears about your condition or treatment, did nurses discuss them with you?	Nurses provide emotional support	BCED4	1	Never	No	No	No	4
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Did not have any anxieties or fears	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, when you had important questions to ask a nurse, did you get answers you could understand?	Nurses gave understandable answers to questions	BCED5	1	Never	No	No	No	5
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Did not have any questions	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Were you seen by a doctor in the Emergency Department?	Patients seen by doctor	DR_SCREEN	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, how often did doctors introduce themselves to you?	Doctors introduce themselves	QABED2	1	Never	No	No	No	5
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Never saw a doctor during ED visit	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department	Doctors show	EDPEC19	1	Never	No	No	No	2

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
visit, how often did doctors treat you with <u>courtesy and respect</u> ?	courtesy and respect		2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Never saw a doctor during ED visit	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, how often did doctors <u>listen carefully to you</u> ?	Doctors listen carefully	EDPEC20	1	Never	No	No	No	2
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Never saw a doctor during ED visit	No	*	*	
			98	Don't Know	No	*	*	
During this emergency department visit, how often did doctors <u>explain things</u> in a way you could understand?	Doctors explain things	EDPEC21	1	Never	No	No	No	2
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Never saw a doctor during ED visit	No	*	*	
			98	Don't Know	No	*	*	
During this emergency department visit, if you had any anxieties or fears about your condition or treatment, did doctors discuss them with you?	Doctors provide emotional support	BCED6	1	Never	No	No	No	4
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Did not have any anxieties or fears	No	*	*	
			98	Don't Know	No	*	*	
During this emergency department visit, when you had important questions to ask a doctor, did you get answers you could	Doctors gave understandable answers to questions	BCED7	1	Never	No	No	No	5
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
understand?			77	Did not have any questions	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did someone in the ED help get your messages to family or friends?	Help given to get messages to family or friends	BCED8	1	Yes definitely	No	Yes	Yes	5
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			77	Did not want or need messages given to family or friends	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did a doctor or nurse tell you that you should take any new medicines that you had not taken before?	Before leaving the ED, patients were given new medicine	EDPEC22	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did a doctor or nurse tell you what the new medicines were for?	Before leaving the ED, patients were told reason for new medicine	EDPEC23	1	Yes definitely	No	Yes	Yes	9
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did a doctor or nurse give you a <u>prescription</u> for medicine to treat pain?	Before leaving the ED, patients were given pain medicine	EDPEC24	1	Yes	No	*	*	8
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before giving you the prescription for pain medicine, did a doctor or nurse describe possible side effects in a way you could understand?	Possible side-effects of pain medication explained	EDPEC25	1	Yes	No	Yes	Yes	6
			2	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did you have a clear understanding about all of your prescribed medications, including	Before leaving the ED, patients had an understanding of prescribed	BCMEDRE C2	1	Not at all	No	No	No	9
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	



Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
those you were taking before your ED visit?	medications		77	Not applicable	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before leaving the emergency department, patients should receive information in writing about what medicines to stop, change or start taking. Was the <u>written information</u> you received about your medicines easy to understand?	Before leaving the ED, patients were given written information about medications	BCMEDRE C3	1	Not at all	No	No	No	9
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Did not need any medicine	No	*	*	
			6	Did not receive any written information	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did someone discuss with you whether you needed follow-up care?	Before leaving the ED, patients were asked if follow-up care was needed	EDPEC26	1	Yes	No	Yes	Yes	13
			2	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did someone ask if you would be able to get this follow-up care?	Before leaving the ED, patients were asked if follow-up care was available	EDPEC27	1	Yes	No	Yes	Yes	13
			2	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did someone talk with you about how to treat pain after you got home?	Before leaving the ED, patients were told how to treat pain at home	EDPEC28	1	Yes	No	Yes	Yes	5 & 6
			2	No	No	No	No	
			77	Did not need to treat pain after I got home from the emergency department	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Home Support services are provided by community health workers to help people living at home with tasks such as bathing, dressing, feeding, and taking medicines. Before this emergency department visit, were you receiving Home Support services in	Patient receiving home support before ED visit	OSA1	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
your home?								
After you left the emergency department, did you receive Home Support services in your home?	Patient receiving home support after ED visit	OSA2	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did the doctors, nurses, or other staff ask you, your family, or caregiver(s) what care and services you would need when you returned home?	Before leaving the ED, patients were asked about help needed at home	OSA3	1	Not at all	No	No	No	*
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Not applicable, did not require Home Support Services	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did you receive information in writing or verbally from doctors, nurses, or other staff about services available to help you manage your care at home?	Before leaving the ED, patients received information about home care services	OSA4	1	Not at all	No	No	No	*
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Not applicable	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Since your return home, do you and your family have the services you need to manage at home?		OSA5	1	Not at all	No	No	No	*
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Not applicable	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, did doctors tell	During ED visit, doctors informed	CONT1	1	Never	No	No	No	11
			2	Sometimes	No	No	No	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
you what would happen next during your care?	patients about what would happen next in their care		3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, did nurses tell you what would happen next during your care?	During ED visit, nurses informed patients about what would happen next in their care	CONT2	1	Never	No	No	No	11
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, did you get consistent information from your doctors, nurses and other staff?	Patients received consistent information from ED staff	CONT3	1	Never	No	No	No	11
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, when your doctors changed, did the next doctor seem up-to-date on your care?	Following a change in doctors, patients perceived the next doctor to be up-to-date on their care	CONT4	1	Never	No	No	No	11
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	There were no changes in the doctors treating me	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, when your doctors changed, did you have confidence in the care the next doctor provided?	Following a change in doctors, patients were confident in the care provided by the next doctor	CONT5	1	Never	No	No	No	12
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	There were no changes in the doctors treating me	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
During your emergency department visit, when your nurses changed, did the next nurse seem up-to-date about your care?	Following a change in nurses, patients perceived the next nurse to be up-to-date on their care	CONT6	1	Never	No	No	No	11
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Not Applicable	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During your emergency department visit, when your nurses changed, did you have confidence in the care the next nurse provided?	Following a change in nurses, patients were confident in the care provided by the next nurse	CONT7	1	Never	No	No	No	12
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			77	Not Applicable	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did the doctors, nurses or other staff give your family or someone close to you enough information to help care for you?	Before leaving the ED, ED staff provided families/supports with adequate care information	CONT8	1	Not at all	No	No	No	11
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			5	Did not want information provided to anyone	No	*	*	
			6	Did not need information provided to anyone	No	*	*	
			7	Had no family or friends involved	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did doctors, nurses or other staff talk with you about whether you would have the help you needed when you went home?	Before leaving the ED, staff asked patients whether they had help at home	CONT9	1	Not at all	No	No	No	11
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency	Before leaving the	CONT10	1	Not at all	No	No	No	11

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
department, did you get enough information from the doctors, nurses, and other staff about appointments and tests you needed after you left the emergency department?	ED, patients received enough information about upcoming appointments and tests		2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Did not need appointments or tests after I left the ED	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, were you told when you could resume your usual activities, such as when to go back to work or drive a car?	Before leaving the ED, patients were told when they could resume regular daily activities	CONT11	1	Not at all	No	No	No	11
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
After you left the emergency department, did someone contact you to see how you were doing?	Patients were contacted after leaving the ED to see how they were doing	CONT12	1	Yes - Someone from the hospital or ED	Yes	Yes	Yes	13
			2	Yes - Someone from my doctor's office	Yes	Yes	Yes	
			3	Yes - Someone else	Yes	Yes	Yes	
			4	No	Yes	No	No	
			98	Don't Know	Yes	*	*	
			99	Prefer not to answer	Yes	*	*	
After you left the emergency department, did the doctors or other staff who usually provide your medical care seem informed and up-to-date about the care you received in the emergency department?	After leaving the ED, doctors or other staff who usually provide medical care seemed informed and up-to-date about care received in the ED	CONT13	1	Not at all	No	No	No	13
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			5	Did not need care after I left the ED	No	*	*	
			77	Did not have a place where I usually receive medical care	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you get information <u>in writing</u> about what symptoms or health problems to look out for	Patients received written information about what symptoms or health	CONT14	1	Yes	No	Yes	Yes	11
			2	No	No	No	No	
			77	Not Applicable	No	*	*	
			98	Don't Know	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
after you left the emergency department?	problems to look out for after leaving the ED		99	Prefer not to answer	No	*	*	
Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate your care during <u>this emergency department visit</u> ?	ED Rating	EDPEC29	0	Worst care possible	No	No	No	*
			1		No	No	No	
			2		No	No	No	
			3		No	No	No	
			4		No	No	No	
			5		No	No	No	
			6		No	Yes	No	
			7		No	Yes	No	
			8		No	Yes	No	
			9		No	Yes	Yes	
			10	Best care possible	No	Yes	Yes	
			98	Don't Know	No	*	*	
99	Prefer not to answer	No	*	*				
Would you recommend this emergency department to your friends and family?	Intent to recommend ED	EDPEC30	1	Definitely No	No	No	No	*
			2	Probably No	No	No	No	
			3	Probably Yes	No	Yes	No	
			4	Definitely Yes	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Overall, on a scale of 0 to 10, do you feel you were helped by your visit to the emergency department? Please answer on a scale where 0 is "not helped at all" and 10 is "helped completely."	ED visit Helpful	BCED9	0	Not helped at all	No	No	No	*
			1		No	No	No	
			2		No	No	No	
			3		No	No	No	
			4		No	No	No	
			5		No	No	No	
			6		No	Yes	No	
			7		No	Yes	No	
			8		No	Yes	No	
			9		No	Yes	Yes	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			10	Helped completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
On a scale of 0 to 10, what was your overall experience with your emergency department visit? Please answer on a scale where 0 is "I had a very poor experience" and 10 is "I had a very good experience."	ED Experience	BCED10	0	Had a very poor experience	No	No	No	*
			1		No	No	No	
			2		No	No	No	
			3		No	No	No	
			4		No	No	No	
			5		No	No	No	
			6		No	Yes	No	
			7		No	Yes	No	
			8		No	Yes	No	
			9		No	Yes	Yes	
			10	Had a very good experience	No	Yes	Yes	
			98	Don't Know	No	*	*	
99	Prefer not to answer	No	*	*				
During this emergency department visit, did you find the emergency department was kept clean?	ED Cleanliness	BCED11	1	Yes definitely	No	Yes	Yes	*
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Once you found out you would have to stay in the hospital, were you kept informed about how long it would be before you went to another part of the hospital?	Patient kept informed about transfers within the hospital	EDPEC_IP 1	1	Yes definitely	No	Yes	Yes	11
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did you understand why you needed to stay in the hospital?	Before leaving the ED, patients understood why they needed to stay in hospital	EDPEC_IP 2	1	Yes definitely	No	Yes	Yes	11
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
In the <u>last 6 months</u> , how many	Number of visits to	EDPEC31	1	1 time	No	*	*	*

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
times have you visited <u>any</u> emergency department to get care for yourself? Please include the emergency department visit you have been answering questions about in this survey.	the ED in the last 6 months		2	2 times	No	*	*	
			3	3 times	No	*	*	
			4	4 times	No	*	*	
			5	5 to 9 times	No	*	*	
			6	10 or more times	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Not counting the emergency department, is there a doctor's office, clinic, or other place you usually go if you need a check-up, want advice about a health problem, or when you are sick or hurt?	Other provider available for health advice or when sick or hurt	EDPEC32	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
How many times in the <u>last 6 months</u> did you visit the doctor's office, clinic, or other place to get care or advice about your health?	Number of visits to doctor's office, clinic, or other place to get health care or advice in the last 6 months	EDPEC33	1	None	No	*	*	*
			2	1 time	No	*	*	
			3	2 times	No	*	*	
			4	3 times	No	*	*	
			5	4 times	No	*	*	
			6	5 to 9 times	No	*	*	
			7	10 or more times	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Did you have at least one IV put into a vein during this emergency department visit or while in the ambulance?	At least one IV administered	IV1	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Who put the IV(s) into your vein?	IV administered by	IV2	1	One or more nurses	Yes	*	*	*
			2	One or more doctors	Yes	*	*	
			3	One or more other staff	Yes	*	*	
			4	An ambulance paramedic	Yes	*	*	
			98	Don't Know	Yes	*	*	



Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			99	Prefer not to answer	Yes	*	*	
Were you told what to expect when your IV was being put into your vein?	Patients told what to expect when IV was administered	IV3	1	Yes definitely	No	Yes	Yes	*
			2	Yes somewhat	No	Yes	No	
			3	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
When you think about the IVs you had during this emergency visit, how many times on average did the nurse, doctor or paramedic try to put an IV into your vein?	Number of times IV administered by ED staff	IV4	1	1	No	Yes	Yes	*
			2	2	No	No	No	
			3	3	No	No	No	
			4	More than 3	No	No	No	
			98	Don't Know	No	*	*	
After an IV was started in the Emergency Department, were you told to call a nurse if they had any problems with their IV	Patients told to call nurse if they had any problems with their IV	IV5	1	Yes	No	Yes	Yes	*
			2	No	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you experience any of the following problems with your IV?	Problems experienced with IV	IV6	1	Pain	Yes	*	*	*
			2	Soreness	Yes	*	*	
			3	Redness	Yes	*	*	
			4	Swelling	Yes	*	*	
			5	Bruising	Yes	*	*	
			6	IV fell out	Yes	*	*	
			7	Had no problems	Yes	Yes	*	
			98	Don't Know	Yes	*	*	
99	Prefer not to answer	Yes	*	*				
During this emergency department visit, how often did your nurses, doctors or paramedics handle the problems in a timely manner?	IV problems handled in a timely manner	IV7	1	Never	No	No	No	*
			2	Rarely	No	No	No	
			3	Most of the time	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			99	Prefer not to answer	No	*	*	
If you needed an IV in the future, would your experience having an IV during this ED visit make you feel...?	Impact of IV experience on future IVs	IV8	1	More worried or anxious about having another IV	No	*	*	*
			2	Less worried or anxious about having another IV	No	*	*	
			3	No difference in my worry or anxiety about having another IV	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you notice <u>your doctor(s)</u> wash or clean their hands before caring for you?	Patients noticed doctors wash or clean their hands before caring for them	HYGIENE1	1	Never	No	No	No	10
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did you notice <u>your other care providers</u> wash or clean their hands before caring for you?	Patients noticed other care providers wash or clean their hands before caring for them	HYGIENE2	1	Never	No	No	No	10
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did doctors, nurses or other staff tell you about the importance of washing or cleaning <u>your own hands</u> ?	Hospital staff told patients about the importance of washing/cleaning their own hands	HYGIENE3	1	Not at all	No	No	No	
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, did emergency department staff show you how to properly wash or clean <u>your own hands</u> ?	Hospital staff showed patients how to properly wash/clean their own hands	HYGIENE4	1	Never	No	No	No	10
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
During this emergency department visit, did doctors, nurses or other staff tell you about products available for you to wash or clean <u>your own hands</u> ?	Hospital staff told patients about products available for washing/cleaning hands	HYGIENE5	1	Never	No	No	No	10
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, would you have been comfortable asking your care providers if they had washed or cleaned <u>their hands</u> before caring for you?	Patients were comfortable asking care providers whether they had washed their hands prior to caring for them	HYGIENE6	1	Never	No	No	No	10
			2	Sometimes	No	No	No	
			3	Usually	No	Yes	No	
			4	Always	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department visit, do you believe you or your family members suffered personal injury or harm, which resulted from a medical error or mistake?	Patients believed they or their family member(s) suffered medical injury or harm due to a medical error/mistake	BCED12	1	Not at all	No	Yes	Yes	*
			2	Partly	No	No	No	
			3	Quite a bit	No	No	No	
			4	Completely	No	No	No	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency visit, do you feel that your care providers were respectful of your culture and traditions?	Patients felt ED staff were respectful of their culture and traditions	BCED13	1	Not at all	No	No	No	7
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Do you feel your spiritual needs were an important part of your care in the emergency department?	Patients felt their spiritual needs are an important part of their care in the ED	BCED14	1	Yes	No	*	*	*
			2	No	No	*	*	
			77	Did not have spiritual needs	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency department	Patient spiritual	BCED15	1	Not at all	No	No	No	7

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
visit, were your spiritual needs met?	needs were met		2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			77	Did not want spiritual care	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During this emergency visit, do you feel your care providers treated you with compassion?	Patients who feel care providers treated them with compassion	BCED16	1	Not at all	No	No	No	7
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
We would like to know if you went to the emergency department because you were experiencing any of the following.	Patients who experienced EMN specified conditions	EMN1	1	Chest pain	Yes	*	*	*
			2	A stroke that got better (also called a TIA or Transient Ischemic Attack)	Yes	*	*	
			3	An abscess	Yes	*	*	
			4	A concussion	Yes	*	*	
			5	Asthma	Yes	*	*	
			6	A mental health issue	Yes	*	*	
			7	A substance use issue	Yes	*	*	
			77	None of the above	Yes	*	*	
			98	Don't Know	Yes	*	*	
			99	Prefer not to answer	Yes	*	*	
You indicated that you went to the emergency department for chest pain. Did the doctor you saw in the emergency department order a stress test during or after your visit to the ED?	Patients with chest pain who were ordered a stress test	EMN2	1	Yes I had a stress test during my visit to the ED	No	*	*	*
			2	Yes I received a referral for a stress test that I was to have after I left the ED	No	*	*	
			3	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency	Patients with chest	EMN3	1	Yes	No	*	*	*
			2	No	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
department, were you given a referral to see a cardiologist (heart specialist)?	patients who were given a cardiologist referral		98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Since you left the emergency department, have you seen a cardiologist (heart specialist)?	Patients with chest pain who have seen a cardiologist since leaving the ED	EMN4	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for a stroke that got better (also called a TIA or Transient Ischemic Attack). A carotid ultrasound checks for narrowed arteries that lead to the head and neck. Did you have the carotid ultrasound within 48 hours (2 days) of your emergency department visit?	Patients with a TIA who were given a carotid ultrasound within 48 hours	EMN5	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
A computed tomography angiogram (CT Angiogram) uses an injection of iodine and CT scanning to help diagnose blood vessel diseases or conditions, such as blockages. Did you have a CT Angiogram within 48 hours (2 days) of your emergency department visit?	Patients with a TIA who were given a CT Angiogram within 48 hours	EMN6	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, were you given a prescription for Aspirin or Plavix to take at home?	Patients with a TIA who were given a prescription for Aspirin or Plavix to take at home	EMN7	1	Yes, Aspirin and Plavix	No	*	*	*
			2	Yes, Plavix only	No	*	*	
			3	Yes, Aspirin only	No	*	*	
			4	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency	Patients with a TIA	EMN8	1	Yes	No	*	*	*

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
department, were you told to return to the emergency department immediately if your symptoms returned?	who were told to return to the ED immediately if symptoms returned		2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for an abscess. Before you left the emergency department, were you given a prescription for an antibiotic to take at home?	Patients with an abscess who were given an antibiotic prescription to take at home	EMN9	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for a concussion. Before you left the emergency department, were you given instructions for how to care for yourself at home?	Patients with a concussion who were given home care instructions	EMN10	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for asthma. Before you left the emergency department, were you given a prescription for steroids or medicine to take at home?	Patients with asthma who were given a prescription for steroids or medicine to take at home	EMN11	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for a mental health issue. While you were in the emergency department, did you have a mental health assessment?	Patients with a mental health issue who received a mental health assessment	EMN12	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, did the doctor you saw in the ED make a referral for mental health care after discharge in the community?	Patients with a mental health issue who received a referral for mental health care after	EMN13	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
	discharge							
Before you left the emergency department, did the doctors and nurses make a plan with you for follow up in the community?	Patients with a mental health issue who received a plan for follow up in the community	EMN14	1	Yes definitely	No	*	*	*
			2	Yes somewhat	No	*	*	
			3	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
You indicated that you went to the emergency department for a substance use issue. While you were in the emergency department, were you asked about your substance use issue?	Patients with substance use issue who were asked about their substance use issue	EMN15	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Before you left the emergency department, were you provided with a take-home naloxone kit?	Patients with substance use issue who were provided with a take-home naloxone kit	EMN16	1	Yes	No	*	*	*
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
PROMs								
EQ-5D-5L								
Please click the ONE box that best describes your health TODAY. [MOBILITY]	Patient description of health today	EQ5D1	1	No problems in walking about	No	*	*	*
			2	Slight problems in walking about	No	*	*	
			3	Moderate problems in walking about	No	*	*	
			4	Severe problems in walking about	No	*	*	
			5	Unable to walk about	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Please click the ONE box that best describes your health TODAY. [SELF-CARE]	Patient description of health today	EQ5D2	1	No problems in washing or dressing myself	No	*	*	*
			2	Slight problems in washing or dressing myself	No	*	*	
			3	Moderate problems in washing or dressing myself	No	*	*	
			4	Severe problems in washing or dressing	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
				myself				
			5	Unable to wash or dress myself	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Please click the ONE box that best describes your health TODAY. [USUAL ACTIVITIES]	Patient description of health today	EQ5D3	1	No problems doing your usual activities	No	*	*	*
			2	Slight problems doing your usual activities	No	*	*	
			3	Moderate problems doing your usual activities	No	*	*	
			4	Severe problems doing your usual activities	No	*	*	
			5	Unable to do usual activities	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Please click the ONE box that best describes your health TODAY. [PAIN/DISCOMFORT]	Patient description of health today	EQ5D4	1	No pain or discomfort	No	*	*	*
			2	Slight pain or discomfort	No	*	*	
			3	Moderate pain or discomfort	No	*	*	
			4	Severe pain or discomfort	No	*	*	
			5	Extreme pain or discomfort	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Please click the ONE box that best describes your health TODAY. [ANXIETY/DEPRESSION]	Patient description of health today	EQ5D5	1	No anxiety or depression	No	*	*	*
			2	Slight anxiety or depression	No	*	*	
			3	Moderate anxiety or depression	No	*	*	
			4	Severe anxiety or depression	No	*	*	
			5	Extreme anxiety or depression	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Please click on the scale to indicate how your health is TODAY.		EQ5D6	0	Worst health	No	*	*	*
			100	Best health	No	*	*	
VR-12								
In general, would you say your	Patient description of	VR12_1	1	Excellent	No	*	*	*
			2	Very good	No	*	*	



Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
health is....?	health today		3	Good	No	*	*	
			4	Fair	No	*	*	
			5	Poor	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?	Health limitations on moderate activities today	VR12_2	1	Yes, limited a lot	No	*	*	*
			2	Yes, limited a little	No	*	*	
			3	No, not limited at all	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Climbing several flights of stairs?	Health limitations on climbing several flights of stairs today	VR12_3	1	Yes, limited a lot	No	*	*	*
			2	Yes, limited a little	No	*	*	
			3	No, not limited at all	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Accomplished less than you would like? (PHYSICAL HEALTH)	Patient accomplished less than they would have liked due to physical health problems during the past week	VR12_4	1	No, none of the time	No	*	*	*
			2	Yes, a little of the time	No	*	*	
			3	Yes, some of the time	No	*	*	
			4	Yes, most of the time	No	*	*	
			5	Yes, all of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Were limited in the kind of work or other activities?	Physical health problems limited the kinds of work or other activities the patient could do during the past week	VR12_5	1	No, none of the time	No	*	*	*
			2	Yes, a little of the time	No	*	*	
			3	Yes, some of the time	No	*	*	
			4	Yes, most of the time	No	*	*	
			5	Yes, all of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Accomplished less than you would like? (EMOTIONAL PROBLEMS)	Patient accomplished less than they would	VR12_6	1	No, none of the time	No	*	*	*
			2	Yes, a little of the time	No	*	*	
			3	Yes, some of the time	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
	have liked due to emotional health problems during the past week		4	Yes, most of the time	No	*	*	
			5	Yes, all of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Didn't do work or other activities as carefully as usual?	Patient didn't do work or activities as carefully as usual during the past week	VR12_7	1	No, none of the time	No	*	*	*
			2	Yes, a little of the time	No	*	*	
			3	Yes, some of the time	No	*	*	
			4	Yes, most of the time	No	*	*	
			5	Yes, all of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During the past week, how much did pain interfere with your normal work (including both work outside the home and house work)?	Pain interfered with normal work during the past week	VR12_8	1	Not at all	No	*	*	*
			2	A little bit	No	*	*	
			3	Moderately	No	*	*	
			4	Quite a bit	No	*	*	
			5	Extremely	No	*	**	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Have you felt calm and peaceful?	Patient felt calm and peaceful during the past week	VR12_9	1	All of the time	No	*	*	*
			2	Most of the time	No	*	*	
			3	A good bit of the time	No	*	*	
			4	Some of the time	No	*	*	
			5	A little of the time	No	*	*	
			6	None of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Did you have a lot of energy?	Patient had a lot of energy during the past week	VR12_10	1	All of the time	No	*	*	*
			2	Most of the time	No	*	*	
			3	A good bit of the time	No	*	*	
			4	Some of the time	No	*	*	
			5	A little of the time	No	*	*	
			6	None of the time	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Have you felt downhearted and blue?	Patient felt downhearted and blue during the past week	VR12_11	1	All of the time	No	*	*	*
			2	Most of the time	No	*	*	
			3	A good bit of the time	No	*	*	
			4	Some of the time	No	*	*	
			5	A little of the time	No	*	*	
			6	None of the time	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
During the past week, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?	Physical health or emotional problems have interfered with patient's social activities	VR12_12	1	All of the time	No	*	*	*
			2	Most of the time	No	*	*	
			3	Some of the time	No	*	*	
			4	A little of the time	No	*	*	
			5	None of the time	No	*	*	
			98	Don't Know	No	*	*	
Compared to one year ago, how would you rate your physical health in general now?	Patient's physical health now compared to one year ago	VR12_13	1	Much better	No	*	*	*
			2	Slightly better	No	*	*	
			3	About the same	No	*	*	
			4	Slightly worse	No	*	*	
			5	Much worse	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
Compared to one year ago, how would you rate your emotional problems (such as feeling anxious, depressed or irritable) now?	Patient's emotional problems now compared to one year ago	VR12_14	1	Much better	No	*	*	*
			2	Slightly better	No	*	*	
			3	About the same	No	*	*	
			4	Slightly worse	No	*	*	
			5	Much worse	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
ABOUT YOU								
In general, how would you rate your overall health?	Patient's overall health	EDPEC34	1	Excellent	No	*	*	*
			2	Very good	No	*	*	
			3	Good	No	*	*	
			4	Fair	No	*	*	
			5	Poor	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
In general, how would you rate your overall mental or emotional health?	Patient's overall mental or emotional health	EDPEC35	1	Excellent	No	*	*	*
			2	Very good	No	*	*	
			3	Good	No	*	*	
			4	Fair	No	*	*	
			5	Poor	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
In general, how would you rate your overall physical health?	Patient's overall physical health	BCED17	1	Excellent	No	*	*	*
			2	Very good	No	*	*	
			3	Good	No	*	*	
			4	Fair	No	*	*	
			5	Poor	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
What is the highest grade or level of school that you have completed?	Highest level of education achieved	BCED18	1	8th grade or less	No	*	*	*
			2	Some high school, but did not graduate	No	*	*	
			3	High school or high school equivalency certificate	No	*	*	
			4	College, CEGEP or other non-university certificate or diploma	No	*	*	
			5	Undergraduate degree or some university	No	*	*	
			6	Post-graduate degree or professional designation	No	*	*	
			98	Don't Know	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
			99	Prefer not to answer	No	*	*	
The following question will help us to better understand the communities that we serve. Do you consider yourself to be...? (Select all that apply)	Ethnicity	BCED19	1	White	Yes	*	*	*
			2	Chinese	Yes	*	*	
			3	First Nation	Yes	*	*	
			4	Inuit	Yes	*	*	
			5	Métis	Yes	*	*	
			6	Indigenous/Aboriginal (not included elsewhere)	Yes	*	*	
			7	South Asian (for example, East Indian, Pakistani, Sri Lankan, etc.)	Yes	*	*	
			8	Black	Yes	*	*	
			9	Filipino	Yes	*	*	
			10	Latin American	Yes	*	*	
			11	Southeast Asian (for example, Vietnamese, Cambodian, Malaysian, Laotian, etc.)	Yes	*	*	
			12	Korean	Yes	*	*	
			13	Japanese	Yes	*	*	
			14	Other	Yes	*	*	
98	Don't Know	Yes	*	*				
99	Prefer not to answer	Yes	*	*				
<b>ABORIGINAL PATIENT LIAISON</b>								
Were you visited by the Aboriginal Patient Liaison during your emergency visit?	Patients were visited by the Aboriginal Patient Liaison during their hospital stay	BCED20	1	Yes	No	Yes	Yes	*
			2	No, did not visit	No	No	No	
			3	No, but would have liked visit	No	No	No	
			97	Not applicable	No	*	*	
Did the visit(s) by the Aboriginal Patient Liaison help meet your needs?	Patients felt that visit(s) by Aboriginal Patient Liaison helped meet their needs	BCED21	1	Not at all	No	No	No	
			2	Partly	No	No	No	
			3	Quite a bit	No	Yes	No	
			4	Completely	No	Yes	Yes	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	

Label	Report Text	Question	Value	Scale Label	Multiple Response	Positive	Top Box	Dimension **
OPEN ENDED QUESTION								
What is the most important change we could make on this hospital unit? We welcome your additional comments		BCED22	1	COMMENT	No	*	*	
			2	No	No	*	*	
			98	Don't Know	No	*	*	
			99	Prefer not to answer	No	*	*	
What is the most important change we could make on this hospital unit? We welcome your additional comments	We welcome your additional comments	BCED22_COMMENT			No			

\*= Invalid response

\*\*= Dimensions Key

Dimension/ Composite Code	Dimension/Composite Description	Corresponding Questions
1	<b>Getting Timely Care:</b> EDPEC RAND Composite Measure	EDPEC3, EDPEC5
2	<b>How well Emergency Room Doctors and Nurses Communicate with Patients:</b> EDPEC RAND Composite Measure	EDPEC16, EDPEC17, EDPEC18, EDPEC19, EDPEC20, EDPEC21
3	<b>Communications with Patients about their Medicines:</b> EDPEC RAND Composite Measure	EDPEC6, EDPEC8, EDPEC9
4	<b>How well Emergency Room Doctors and Nurses Communicate with Patients:</b> BC Emotional Support Composite Measure	BCED4, BCED6
5	<b>How well Emergency Room Doctors and Nurses Communicate with Patients:</b> Information Sharing Composite Measure	QABED1, QABED2, BCED5, BCED7, BCED8, EDPEC15, EDPEC28
6	<b>Communications with Patients about Pain:</b> BC Composite Measure	EDPEC13, EDPEC25, EDPEC28
7	<b>Receiving Culturally Responsive and Compassionate Care:</b> BC Composite Measure	BCED13, BCED15, BCED16
8	<b>Care of Patients in Pain/Pain Management:</b> BC Composite Measure	EDPEC10, EDPEC11, EDPEC12, EDPEC24
9	<b>BC Patient Safety - Medication Reconciliation:</b> BC Composite Measure	BCMEDREC1, BCMEDREC2, BCMEDREC3, EDPEC23
10	<b>Patient Safety - Hand Hygiene:</b> BC Composite Measure	HYGIENE1, HYGIENE2, HYGIENE3, HYGIENE4, HYGIENE5, HYGIENE6
11	<b>BC Continuity Across Transitions in Care - Informational Continuity:</b> BC Composite Measure	CONT1, EDPEC_IP1, CONT2, EDPEC_IP2, CONT3, CONT4, CONT6, CONT8, CONT9, CONT10, CONT11, CONT14
12	<b>BC Continuity Across Transitions in Care - Relational Continuity:</b> BC Composite Measure	CONT5, CONT7
13	<b>BC Continuity Across Transitions in Care - Managerial Continuity:</b> BC Composite Measure	CONT12, CONT13, EDPEC26, EDPEC27
14	<b>BC Emergency Health Services Composite Score</b>	BCEHS1, BCEHS2, BCEHS3, BCEHS4, BCEHS5

**APPENDIX D: HEALTH AUTHORITIES/FACILITIES THAT EXPERIENCED BACK SAMPLING**



Facility	Cohort	Date records DUE	Date records SUBMITTED to Malatest	Reason for back sample	Adjusted Calling Window
<b>INTERIOR HEALTH AUTHORITY</b>					
Alexis Creek Outpost Hospital	1	January 18, 2018	April 4, 2018	Health Authority Process Delay	n/a*
Alexis Creek Outpost Hospital	5	March 19, 2018	April 4, 2018	Health Authority Process Delay	n/a
Blue River Outpost Hospital	1	January 18, 2018	March 23, 2018	Health Authority Process Delay	March 29 – April 9, 2018
Blue River Outpost Hospital	2	February 5, 2018	March 23, 2018	Health Authority Process Delay	March 29 – April 9, 2018
Blue River Outpost Hospital	3	February 20, 2018	March 23, 2018	Health Authority Process Delay	March 29 – April 9, 2018
Blue River Outpost Hospital	4	March 5, 2018	March 23, 2018	Health Authority Process Delay	March 29 – April 9, 2018
Blue River Outpost Hospital	5	March 19, 2018	March 23, 2018	Health Authority Process Delay	March 29 – April 9, 2018
West Chilcotin Health Centre	5	March 19, 2018	April 4, 2018	Health Authority Process Delay	n/a
<b>VANCOUVER COASTAL HEALTH AUTHORITY</b>					
Sechelt General Hospital	3	February 20, 2018	March 9, 2018	Failure to pass data quality check	March 14 – March 27, 2018
R.W. Large General Hospital	6	April 4, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
<b>VANCOUVER ISLAND HEALTH AUTHORITY</b>					
Tahsis Health Centre	1	January 18, 2018	March 8, 2018	Health Authority Process Delay	March 14 – March 27, 2018
Tahsis Health Centre	2	February 5, 2018	March 8, 2018	Health Authority Process Delay	March 14 – March 27, 2018
Tahsis Health Centre	3	February 20, 2018	March 19, 2018	Health Authority Process Delay	March 27 – April 13, 2018
Tahsis Health Centre	4	March 5, 2018	March 19, 2018	Health Authority Process Delay	March 27 – April 13, 2018
Kyuquot Health Centre	1	January 18, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
Kyuquot Health Centre	2	February 5, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
Kyuquot Health Centre	3	February 20, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
Kyuquot Health Centre	4	March 5, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
Kyuquot Health Centre	5	March 19, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
Kyuquot Health Centre	6	April 4, 2018	April 13, 2018	Health Authority Process Delay	April 20 – May 3, 2018
<b>NORTHERN HEALTH AUTHORITY</b>					
All	1	January 18, 2018	March 5, 2018	Health Authority Process Delay	March 12 – March 28, 2018
All	2	February 5, 2018	March 5, 2018	Health Authority Process Delay	March 12 – March 28, 2018
All	3	February 20, 2018	March 5, 2018	Health Authority Process Delay	March 12 – March 28, 2018

\*n/a: no records from these facilities were available for sampling once data reconciliation steps were applied. See Section 2.2 Defining the Sample Universe for more details.

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**APPENDIX E: SURVEY NOTIFICATION LETTER TEMPLATE (ADULT & YOUTH)**

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[FIRST] [LAST]  
 [ADDRESS 1]  
 [ADDRESS 2]  
 [CITY] [PROV] [POSTAL]  
 [MAILING DATE]

Dear [FIRST] [LAST]:

At [FACILITY NAME], we strive to provide the highest quality of care possible for all patients cared for in our hospitals. To ensure we're doing just that, we need to know what we're doing right and what may need improvement. Who better to provide us with this information than our patients, including you?

We ask for feedback while patients are in our care, as well as after discharge. Your name has been randomly selected to provide feedback about the quality of your care after discharge. Your participation is very important to us, because **your feedback will be used to improve how we provide care.**

R.A. Malatest and Associates Ltd. (Malatest), an independent research company, has been selected to conduct a survey that asks questions about your most recent emergency visit at [FACILITY NAME], ending on [DISCHARGE DATE]. Completion of the survey is completely voluntary.

The survey can be completed by phone or online. Regardless of the format you choose, we hope you will feel free to express your opinions frankly and be assured that your responses will be held in the strictest confidence. At all times any personal information you choose to disclose is protected and will only be used as authorized under the BC Freedom of Information and Protection of Privacy Act.

You may complete a web version of the survey at [www.EDSurvey.malatest.com](http://www.EDSurvey.malatest.com). Your password for the web survey is [SURVEY ID]. The survey is available online in English, French, Chinese, Punjabi, German, Vietnamese, Spanish, and Korean. Or, you may wait for a call from Malatest, which you can expect to receive in the next three to five days, to complete the survey over the phone. Another option is for you to call Malatest directly to schedule a convenient time for your interview in any of the languages listed above by calling 1-855-412-1943 (toll free).

If you have any questions or wish to be removed from the survey, please call the Fraser Health Patient Care Quality Office at 1-877-880-8823.

By completing this survey you will help us provide better care to all our patients.

Yours sincerely,

Michael Marchbank  
 President and Chief Executive Officer  
 Fraser Health Authority

**To complete the survey in another language call**

Si vous souhaitez remplir ce questionnaire en français, veuillez appeler

如妳需要國語(普通話)或粵語(廣東話)來完成本次調查,請致電

如你需要國語(普通話)或粵語(廣東話)來完成本次調查,請致電

한국어 설문지를 원하시면 다음 번호로 연락하십시오

Si usted desea completar esta encuesta en español, sírvase llamar a

ਤੁਹਾਨੂੰ ਪੰਜਾਬੀ ਵਿਚ ਇਸ ਸਰਵੇਖਣ ਨੂੰ ਪੂਰਾ ਕਰਨ ਲਈ ਚਾਹੁੰਦੇ ਹੋ ਕਾਲ ਕਰੋ

Nếu quý vị muốn điền bản thăm dò này bằng tiếng Việt, xin gọi

Wenn Sie möchten, dass diese Umfrage in Deutsch zu

vervollständigen, rufen Sie bitte die folgende Nummer an

**1-855-412-1943 (toll-free)**

**To complete the survey online go to:**

**[www.EDSurvey.malatest.com](http://www.EDSurvey.malatest.com)**

**Your password is [SURVEY ID]**

**To schedule an interview to complete the survey by phone, call:**

**R.A. Malatest 1-855-412-1943 (toll free)**



[FIRST] [LAST]  
[ADDRESS 1]  
[ADDRESS 2]  
[CITY] [PROV] [POSTAL]

[MAILING DATE]

Dear [FIRST] [LAST]:

At [FACILITY NAME], we strive to provide the highest quality of care possible for all patients cared for in our hospitals. To ensure we're doing just that, we need to know what we're doing right and what may need improvement. Who better to provide us with this information than our patients, including you?

We ask for feedback while patients are in our care, as well as after discharge. Your name has been randomly selected to provide feedback about the quality of your care after discharge. Your participation is very important to us, because **your feedback will be used to improve how we provide care.**

R.A. Malatest and Associates Ltd. (Malatest), an independent research company, has been selected to conduct a survey that asks questions about your most recent emergency visit at [FACILITY NAME], ending on [DISCHARGE DATE]. Completion of the survey is completely voluntary.

The survey can be completed by phone or online. Regardless of the format you choose, we hope you will feel free to express your opinions frankly and be assured that your responses will be held in the strictest confidence. At all times any personal information you choose to disclose is protected and will only be used as authorized under the BC Freedom of Information and Protection of Privacy Act.

You may complete a web version of the survey at [www.EDSurvey.malatest.com](http://www.EDSurvey.malatest.com). Your password for the web survey is [SURVEY ID]. The survey is available online in English, French, Chinese, Punjabi, German, Vietnamese, Spanish, and Korean. Or, you may wait for a call from Malatest, which you can expect to receive in the next three to five days, to complete the survey over the phone. Another option is for you to call Malatest directly to schedule a convenient time for your interview in any of the languages listed above by calling 1-855-412-1943 (toll free).

If you have any questions or wish to be removed from the survey, please call the Fraser Health Patient Care Quality Office at 1-877-880-8823.

By completing this survey you will help us provide better care to all our patients.

Yours sincerely,

Michael Marchbank  
President and Chief Executive Officer  
Fraser Health Authority

To complete the survey online go to:  
[www.EDSurvey.malatest.com](http://www.EDSurvey.malatest.com)  
Your password is [SURVEY ID]

To schedule an interview to complete the survey by phone, call:  
**R.A. Malatest 1-855-412-1943 (toll free)**

**To complete the survey in another language call**

Si vous souhaitez remplir ce questionnaire en français, veuillez appeler

如妳需要國語(普通話)或粵語(廣東話)來完成本次調查, 請致電

如你需要國語(普通話)或粵語(廣東話)來完成本次調查, 請致電

한국어 설문지를 원하시면 다음 번호로 연락하십시오

Si usted desea completar esta encuesta en español, sírvase llamar a

ਤੁਹਾਨੂੰ ਪੰਜਾਬੀ ਵਿਚ ਇਸ ਸਰਵੇਖਣ ਨੂੰ ਪੂਰਾ ਕਰਨ ਲਈ ਚਾਹੁੰਦੇ ਹੋ ਕਾਲ ਕਰੋ  
Nếu quý vị muốn điền bản thăm dò này bằng tiếng Việt, xin gọi

Wenn Sie möchten, dass diese Umfrage in Deutsch zu vervollständigen, rufen Sie bitte die folgende Nummer an  
**1-855-412-1943 (toll free)**

---

**APPENDIX F: PATIENT REMOVAL REQUEST FORM (FAX)**

**CONFIDENTIAL FAX FORM****RE: Removal of Patient from BC Emergency Department Sector Survey**

Date: \_\_\_\_\_

To: **R.A. MALATEST & ASSOCIATES LTD.**FAX: **1-888-384-2774**

Phone: 1-800-665-5848

From: \_\_\_\_\_

FAX: \_\_\_\_\_

(HOSPITAL)

Phone: \_\_\_\_\_

(Name and Title)

Urgent:  Confidential: 

**Attention:** This facsimile is directed in confidence and is intended for use only by the individual in the position for which it is specifically addressed. Any other distribution, copy, or disclosure is strictly prohibited. The contents of this facsimile may also be subject to privilege and all rights to that privilege are expressly claimed and not waived. If you have received this facsimile in error, please notify the sender immediately by telephone. Thank you.

---

**For Hospital Contact Use:** On their request, please remove the following patient from the British Columbia acute care inpatient survey:

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

\* Survey ID: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Health Authority: \_\_\_\_\_

\*The patient's SurveyID, which is a unique identifier for that patient, is the best way to process a removal. A unique identifier is assigned exclusively to each patient who has received a survey. It is found on the cover letter mailed to the patient and is called a **Survey ID**. Each **Survey ID** will be formatted according to the following: BIPNNLLNL (where N = number and L = letter).

**Reason for Removal:**

- |  |   |
|--|---|
| <input type="checkbox"/> Patient deceased        | <input type="checkbox"/> Unknown                |
| <input type="checkbox"/> Privacy concerns        | <input type="checkbox"/> Other, please specify: |
| <input type="checkbox"/> Declined to participate |   |
- 

**For Malatest Use:**

- Patient identified and removed from sample
- Date: \_\_\_\_\_
- Patient removed prior to mailing of follow-up survey
- Facility contact advised of removal status

**\*\*\*Important\*\*\***

**To receive a return faxed confirmation of this removal, please be sure to include your fax number above.**

**APPENDIX G: SURVEY DISPOSITION RESULTS**

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## Definitions

**Discharges:** Total volume of patient records received from the health authorities.

**Study Universe:** Remaining records after removal of cases that did not meet the eligibility criteria (e.g. missing or foreign contact information, infants under 11 days, missing birthdates or PHNs) as well as within and between cohort de-duplications.

**Sampled:** Volume of records that were sampled (sent to field).

**Invalid:** Records coded as non-qualifying given information learned after calling the household (e.g. contact information provided by the health authorities was outdated/invalid; patients had deceased in the time between a facility discharge and when a notification letter arrived in the mail; patients were unable to complete a survey due to severe illness/incapacitation). This category also includes patients who requested a survey in a language other than English but could not complete the survey as translated surveys were not made available to the vendor.

**Valid Sample:** *Valid Sample = Sampled – Invalid*

**Valid Study Universe:** *Valid Study Universe = Study Universe - Invalid*

**Surveys Completed:** Number of surveys in which a respondent consented to participation and answered at least 50% of survey questions.

**Response Rate:**  $Response\ Rate = \frac{Surveys\ Completed}{Valid\ Sample}$

**Margin of Error:** The maximum number of percentage points a statistical value may differ from the true population value due to error associated with randomly selecting a survey sample from the larger population, at a 95% confidence level, or 19 times out of 20. This data quality indicator was calculated using the formula for margin of error with finite population correction factor, using the valid study universe (the universe after removal of duplicates and ineligible cases) as the population size (N).



	Discharges	Study Universe	Sampled	Invalid	Valid Sample	Valid Study Universe	Surveys Completed	Response Rate	MOE
<b>PROVINCIAL TOTAL</b>	<b>525,068</b>	<b>412,108</b>	<b>44,135</b>	<b>4,967</b>	<b>39,168</b>	<b>407,141</b>	<b>14,076</b>	<b>35.9%</b>	<b>0.8%</b>
<b>FRASER HEALTH AUTHORITY TOTAL</b>	<b>171,407</b>	<b>136,931</b>	<b>9,040</b>	<b>1,033</b>	<b>8,007</b>	<b>135,898</b>	<b>2,745</b>	<b>34.3%</b>	<b>1.9%</b>
Abbotsford Regional General Hospital	17,750	14,428	913	110	803	14,318	287	35.7%	5.7%
Burnaby Hospital	20,208	15,925	825	108	717	15,817	220	30.7%	6.6%
Chilliwack General Hospital	13,899	11,414	627	77	550	11,337	190	34.5%	7.1%
Delta Hospital	7,871	6,025	518	41	477	5,984	167	35.0%	7.5%
Eagle Ridge Hospital	12,364	10,262	661	55	606	10,207	200	33.0%	6.9%
Fraser Canyon Hospital	2,267	1,833	396	37	359	1,796	121	33.7%	8.6%
Langley Memorial Hospital	10,658	9,112	527	55	472	9,057	174	36.9%	7.4%
Mission Memorial Hospital	5,275	4,146	576	71	505	4,075	147	29.1%	7.9%
Peace Arch Hospital	12,079	10,009	644	64	580	9,945	201	34.7%	6.8%
Ridge Meadows Hospital	10,116	8,700	649	78	571	8,622	170	29.8%	7.4%
Royal Columbian Hospital	18,757	16,173	925	113	812	16,060	297	36.6%	5.6%
Surrey Memorial Hospital	40,163	28,904	1,779	224	1,555	28,680	571	36.7%	4.1%
<b>INTERIOR HEALTH AUTHORITY TOTAL</b>	<b>102,618</b>	<b>82,462</b>	<b>11,114</b>	<b>1,147</b>	<b>9,967</b>	<b>81,315</b>	<b>3,872</b>	<b>38.8%</b>	<b>1.5%</b>
100 Mile District General Hospital	2,039	1,676	321	35	286	1,641	113	39.5%	8.9%
Alexis Creek Outpost Hospital	2	0	-	-	-	-	-	-	-
Arrow Lakes Hospital	580	439	247	18	229	421	98	42.8%	8.7%
Ashcroft and District General Hospital	362	295	235	23	212	272	86	40.6%	8.9%
Barriere Health Centre	268	199	194	17	177	182	73	41.2%	9.1%
Blue River Outpost Hospital	28	19	19	5	14	14	8	57.1%	27.1
Boundary Hospital	1,966	1,618	325	34	291	1,584	117	40.2%	8.7%
Cariboo Memorial Hospital	4,275	3,554	439	49	390	3,505	157	40.3%	7.6%
Castlegar and District Community Health Centre	2,287	1,944	348	31	317	1,913	126	39.7%	8.4%
Chase Health Centre	885	725	277	27	250	698	103	41.2%	9.0%

	Discharges	Study Universe	Sampled	Invalid	Valid Sample	Valid Study Universe	Surveys Completed	Response Rate	MOE
Creston Valley Hospital	2,656	2,070	275	29	246	2,041	126	51.2%	8.5%
Dr. Helmcken Memorial Hospital	512	399	256	25	231	374	94	40.7%	8.8%
East Kootenay Regional Hospital	4,745	3,754	399	35	364	3,719	138	37.9%	8.2%
Elk Valley Hospital	2,493	1,598	391	27	364	1,571	118	32.4%	8.7%
Elkford Health Centre	253	195	193	19	174	176	71	40.8%	9.3%
Golden and District General Hospital	1,560	996	329	34	295	962	108	36.6%	8.9%
Invermere and District Hospital	1,876	1,107	270	28	242	1,079	110	45.5%	8.9%
Kelowna General Hospital	17,900	15,003	784	97	687	14,906	235	34.2%	6.3%
Kootenay Boundary Regional Hospital	3,420	2,790	437	37	400	2,753	154	38.5%	7.7%
Kootenay Lake District Hospital	2,681	2,226	349	27	322	2,199	128	39.8%	8.4%
Lillooet District Hospital	1,153	859	334	36	298	823	108	36.2%	8.8%
Nicola Valley Health Centre	3,070	2,448	459	49	410	2,399	133	32.4%	8.3%
Penticton Regional Hospital	8,044	6,583	558	65	493	6,518	183	37.1%	7.1%
Princeton General Hospital	1,266	978	319	32	287	946	110	38.3%	8.8%
Queen Victoria Hospital	1,687	1,058	378	26	352	1,032	112	31.8%	8.8%
Royal Inland Hospital	16,161	13,697	645	50	595	13,647	237	39.8%	6.3%
Shuswap Lake General Hospital	3,772	3,080	383	27	356	3,053	141	39.6%	8.1%
Slocan Community Health Centre	247	186	175	11	164	175	83	50.6%	8.0%
South Okanagan General Hospital	3,651	2,709	395	69	326	2,640	136	41.7%	8.2%
South Similkameen Health Centre	416	303	209	35	174	268	85	48.9%	9.0%
Sparwood Health Care Centre	1,094	793	322	42	280	751	109	38.9%	8.7%
St. Bartholomew's Hospital	268	209	208	62	146	147	47	32.2%	12.6
Vernon Jubilee Hospital	10,889	8,865	555	39	516	8,826	193	37.4%	7.0%
Victorian Community Health Centre	103	83	82	7	75	76	30	40.0%	14.3
West Chilcoten Health Centre	9	4	4	-	4	4	2	50.0%	56.6

	Discharges	Study Universe	Sampled	Invalid	Valid Sample	Valid Study Universe	Surveys Completed	Response Rate	MOE
<b>VANCOUVER COASTAL HEALTH AUTHORITY TOTAL</b>	<b>76,010</b>	<b>57,241</b>	<b>5,218</b>	<b>532</b>	<b>4,686</b>	<b>56,709</b>	<b>1,592</b>	<b>34.0%</b>	<b>2.4%</b>
Bella Coola General Hospital	503	342	289	46	243	296	97	39.9%	8.4%
Lions Gate Hospital	15,448	13,017	711	88	623	12,929	229	36.8%	6.4%
Pemberton Health Care Centre	1,248	823	439	56	383	767	113	29.5%	8.6%
Powell River General Hospital	4,031	3,172	351	31	320	3,141	132	41.3%	8.4%
R.W. Large Memorial Hospital	202	161	159	22	137	139	40	29.2%	13.5
Richmond Hospital	13,662	10,194	601	63	538	10,131	191	35.5%	7.0%
Sechelt Hospital	3,557	2,951	393	37	356	2,914	136	38.2%	8.2%
Squamish General Hospital	3,759	2,814	588	50	538	2,764	138	25.7%	8.1%
UBC Hospital	5,467	4,067	442	19	423	4,048	147	34.8%	7.9%
Vancouver General Hospital	21,736	16,762	649	81	568	16,681	228	40.1%	6.4%
Whistler Health Care Centre	6,397	2,938	596	39	557	2,899	141	25.3%	8.1%
<b>PROVIDENCE HEALTH AUTHORITY TOTAL</b>	<b>23,440</b>	<b>18,217</b>	<b>1,171</b>	<b>138</b>	<b>1,033</b>	<b>18,079</b>	<b>342</b>	<b>33.1%</b>	<b>5.2%</b>
Mount Saint Joseph Hospital	7,329	5,923	523	56	467	5,867	160	34.3%	7.6%
St. Paul's Hospital	16,111	12,294	648	82	566	12,212	182	32.2%	7.2%
<b>VANCOUVER ISLAND HEALTH AUTHORITY TOTAL</b>	<b>82,396</b>	<b>67,141</b>	<b>7,025</b>	<b>751</b>	<b>6,274</b>	<b>66,390</b>	<b>2,373</b>	<b>37.8%</b>	<b>2.0%</b>
Bamfield Health Centre	18	6	6	-	6	6	3	50.0%	43.8
Chemainus Health Care Centre	1,392	1,134	400	39	361	1,095	117	32.4%	8.6%
Cormorant Island Health Centre	271	167	164	33	131	134	40	30.5%	13.5
Cowichan District Hospital	6,687	5,356	419	43	376	5,313	154	41.0%	7.8%
Gold River Health Centre	725	360	301	54	247	306	103	41.7%	8.2%
Kyuquot Health Centre	13	8	8	3	5	5	1	20.0%	98.0
Lady Minto Gulf Islands Hospital	2,065	1,608	386	32	354	1,576	132	37.3%	8.2%
Ladysmith Community Health Centre	3,151	2,556	390	29	361	2,527	134	37.1%	8.2%
Nanaimo Regional General Hospital	13,694	11,376	522	44	478	11,332	194	40.6%	7.0%

	Discharges	Study Universe	Sampled	Invalid	Valid Sample	Valid Study Universe	Surveys Completed	Response Rate	MOE
North Island Hospital Campbell River Campus	5,130	3,919	412	39	373	3,880	139	37.3%	8.2%
North Island Hospital Comox Valley Campus	6,026	5,034	468	55	413	4,979	154	37.3%	7.8%
Oceanside Health Centre	5,946	4,949	383	20	363	4,929	157	43.3%	7.7%
Port Alice Health Centre	91	46	45	2	43	44	26	60.5%	12.6
Port Hardy Hospital	1,336	898	440	73	367	825	114	31.1%	8.6%
Port McNeill and District Hospital	722	534	398	59	339	475	101	29.8%	8.8%
Royal Jubilee Hospital	11,574	9,567	493	59	434	9,508	186	42.9%	7.1%
Saanich Peninsula Hospital	5,188	4,207	350	14	336	4,193	150	44.6%	7.9%
Tahsis Health Centre	159	58	57	11	46	47	18	39.1%	19.3
Tofino General Hospital	1,054	796	382	50	332	746	111	33.4%	8.6%
Victoria General Hospital	13,278	11,301	580	44	536	11,257	201	37.5%	6.9%
West Coast General Hospital	3,876	3,261	421	48	373	3,213	138	37.0%	8.2%
<b>NORTHERN HEALTH AUTHORITY TOTAL</b>	<b>56,879</b>	<b>39,402</b>	<b>9,259</b>	<b>1,309</b>	<b>7,950</b>	<b>38,093</b>	<b>2,678</b>	<b>33.7%</b>	<b>1.8%</b>
Atlin Health Centre	265	99	99	19	80	80	29	36.3%	15.4
Bulkley Valley District Hospital	3,128	2,366	458	44	414	2,322	135	32.6%	8.2%
Chetwynd General Hospital	1,699	994	532	55	477	939	118	24.7%	8.5%
Dawson Creek And District Hospital	4,339	2,998	539	64	475	2,934	143	30.1%	8.0%
Fort Nelson General Hospital	1,214	771	405	37	368	734	111	30.2%	8.6%
Fort St. John Hospital	5,919	4,641	440	39	401	4,602	152	37.9%	7.8%
Fraser Lake Community Health Centre	385	246	245	48	197	198	81	41.1%	8.9%
GR Baker Memorial Hospital	3,711	2,979	421	76	345	2,903	131	38.0%	8.4%
Haida Gwaii Hospital and Health Centre	603	401	344	51	293	350	99	33.8%	8.6%
Houston Health Centre	1,267	635	377	53	324	582	107	33.0%	8.6%
Hudson's Hope Health Centre	21	16	16	2	14	14	7	50.0%	28.7
Kitimat General Hospital	2,000	1,421	400	76	324	1,345	120	37.0%	8.6%

	Discharges	Study Universe	Sampled	Invalid	Valid Sample	Valid Study Universe	Surveys Completed	Response Rate	MOE
Lakes District Hospital and Health Centre	2,768	1,731	409	46	363	1,685	125	34.4%	8.4%
MacKenzie and District Hospital and Health Centre	1,315	839	393	35	358	804	112	31.3%	8.6%
McBride and District Hospital	218	149	149	17	132	132	53	40.2%	10.8
Mills Memorial Hospital	5,940	4,443	471	63	408	4,380	147	36.0%	7.9%
Northern Haida Gwaii Hospital and Health Centre	669	407	376	82	294	325	100	34.0%	8.5%
Prince Rupert Regional Hospital	5,114	3,799	553	75	478	3,724	142	29.7%	8.1%
St. John Hospital	2,227	1,444	478	58	420	1,386	127	30.2%	8.3%
Stewart Health Centre	208	93	92	16	76	77	41	53.9%	11.5
Stikine Health Centre	239	135	135	33	102	102	32	31.4%	15.2
Stuart Lake Hospital	1,344	660	435	81	354	579	110	31.1%	8.5%
Tumbler Ridge Community Health Centre	646	301	251	36	215	265	97	45.1%	8.2%
University Hospital of Northern British Columbia	9,524	6,460	551	65	486	6,395	163	33.5%	7.6%
Valemount Health Centre	494	226	224	58	166	168	78	47.0%	9.0%
Wrinch Memorial Hospital	1,622	1,148	466	80	386	1,068	118	30.6%	8.5%
<b>PHSA TOTAL</b>	<b>12,318</b>	<b>10,714</b>	<b>1,308</b>	<b>57</b>	<b>1,251</b>	<b>10,657</b>	<b>474</b>	<b>37.9%</b>	<b>4.4%</b>
BC Children's Hospital	12,318	10,714	1,308	57	1,251	10,657	474	37.9%	4.4%

## Exclusions Made By Malatest While in Field

### Definitions

**Fielded:** Volume of records that were sampled (sent to field)

**Incorrect Phone Number:** Number not in service, fax, or wrong number

**No ED Visit:** Respondent did not consider their visit an ED visit and/or they left without being seen (LWBS)

**Deceased:** Respondent had deceased in the time between a facility discharge and when a notification letter arrived in the mail

**Serious Illness/Incapable:** Respondent is too ill or incapable of doing the survey either online or by phone

**Language Barrier:** Respondent and/or person answering the phone did not speak any languages provided by the survey

**Institutional Refusal:** The only phone number provided was the main line of a care home, prison or shelter, *and* the receptionist did not place the call through to the respondent

**Valid Fielded:** Fielded records that were not removed due to the above-listed reasons

**Surveys Completed:** Number of surveys in which a respondent consented to participation and answered at least 50% of survey questions

**Response Rate:**  $Response Rate = \frac{Surveys Completed}{Valid Fielded}$

	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
<b>PROVINCIAL TOTAL</b>	<b>44,135</b>	<b>3,117</b>	<b>318</b>	<b>124</b>	<b>1,054</b>	<b>285</b>	<b>69</b>	<b>39,168</b>	<b>14,076</b>	<b>35.9%</b>
<b>FRASER HEALTH AUTHORITY TOTAL</b>	<b>9,040</b>	<b>533</b>	<b>31</b>	<b>30</b>	<b>284</b>	<b>134</b>	<b>21</b>	<b>8,007</b>	<b>2,745</b>	<b>34.3%</b>
Abbotsford Regional General Hospital	913	60	7	8	26	6	3	803	287	35.7%
Burnaby Hospital	825	50	1	2	28	26	1	717	220	30.7%
Chilliwack General Hospital	627	47	-	-	23	3	4	550	190	34.5%

	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/ Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
Delta Hospital	518	16	-	5	19	1	-	477	167	35.0%
Eagle Ridge Hospital	661	27	2	-	14	9	3	606	200	33.0%
Fraser Canyon Hospital	396	21	2	1	12	1	-	359	121	33.7%
Langley Memorial Hospital	527	32	1	1	19	2	-	472	174	36.9%
Mission Memorial Hospital	576	44	4	1	16	4	2	505	147	29.1%
Peace Arch Hospital	644	27	3	1	27	6	-	580	201	34.7%
Ridge Meadows Hospital	649	40	2	4	25	4	3	571	170	29.8%
Royal Columbian Hospital	925	51	2	-	30	28	2	812	297	36.6%
Surrey Memorial Hospital	1,779	118	7	7	45	44	3	1,555	571	36.7%
<b>INTERIOR HEALTH AUTHORITY TOTAL</b>	<b>11,114</b>	<b>711</b>	<b>63</b>	<b>35</b>	<b>294</b>	<b>32</b>	<b>12</b>	<b>9,967</b>	<b>3,872</b>	<b>38.8%</b>
100 Mile District General Hospital	321	24	2	3	5	-	1	286	113	39.5%
Alexis Creek Outpost Hospital	-	-	-	-	-	-	-	-	-	0.0%
Arrow Lakes Hospital	247	15	-	-	3	-	-	229	98	42.8%
Ashcroft and District General Hospital	235	12	4	-	7	-	-	212	86	40.6%
Barriere Health Centre	194	4	-	1	11	1	-	177	73	41.2%
Blue River Outpost Hospital	19	4	1	-	-	-	-	14	8	57.1%
Boundary Hospital	325	20	4	2	7	1	-	291	117	40.2%
Cariboo Memorial Hospital	439	32	2	1	14	-	-	390	157	40.3%
Castlegar and District Community Health Centre	348	13	1	-	12	4	1	317	126	39.7%
Chase Health Centre	277	18	2	-	7	-	-	250	103	41.2%
Creston Valley Hospital	275	18	3	1	5	2	-	246	126	51.2%
Dr. Helmcken Memorial Hospital	256	20	1	-	4	-	-	231	94	40.7%
East Kootenay Regional Hospital	399	24	2	-	7	2	-	364	138	37.9%
Elk Valley Hospital	391	19	3	-	4	1	-	364	118	32.4%
Elkford Health Centre	193	16	1	-	2	-	-	174	71	40.8%

	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/ Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
Golden and District General Hospital	329	18	1	2	11	1	1	295	108	36.6%
Invermere and District Hospital	270	19	3	3	3	-	-	242	110	45.5%
Kelowna General Hospital	784	46	5	2	39	5	-	687	235	34.2%
Kootenay Boundary Regional Hospital	437	25	-	1	11	-	-	400	154	38.5%
Kootenay Lake District Hospital	349	18	2	1	6	-	-	322	128	39.8%
Lillooet District Hospital	334	26	2	-	7	1	-	298	108	36.2%
Nicola Valley Health Centre	459	38	-	2	8	-	1	410	133	32.4%
Penticton Regional Hospital	558	37	1	1	23	2	1	493	183	37.1%
Princeton General Hospital	319	16	4	3	6	1	2	287	110	38.3%
Queen Victoria Hospital	378	17	3	1	4	1	-	352	112	31.8%
Royal Inland Hospital	645	25	1	4	18	2	-	595	237	39.8%
Shuswap Lake General Hospital	383	14	-	2	11	-	-	356	141	39.6%
Slocan Community Health Centre	175	6	1	-	4	-	-	164	83	50.6%
South Okanagan General Hospital	395	43	7	1	12	6	-	326	136	41.7%
South Similkameen Health Centre	209	17	3	-	14	-	1	174	85	48.9%
Sparwood Health Care Centre	322	29	1	1	9	1	1	280	109	38.9%
St. Bartholomew's Hospital	208	53	2	-	7	-	-	146	47	32.2%
Vernon Jubilee Hospital	555	21	-	2	12	1	3	516	193	37.4%
Victorian Community Health Centre	82	4	1	1	1	-	-	75	30	40.0%
West Chilcoten Health Centre	4	-	-	-	-	-	-	4	2	50.0%
<b>VANCOUVER COASTAL HEALTH AUTHORITY TOTAL</b>	<b>5,218</b>	<b>300</b>	<b>42</b>	<b>18</b>	<b>118</b>	<b>45</b>	<b>9</b>	<b>4,686</b>	<b>1,592</b>	<b>34.0%</b>
Bella Coola General Hospital	289	35	2	1	7	-	1	243	97	39.9%
Lions Gate Hospital	711	44	2	5	24	12	1	623	229	36.8%
Pemberton Health Care Centre	439	40	10	1	5	-	-	383	113	29.5%
Powell River General Hospital	351	20	-	-	10	-	1	320	132	41.3%



	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/ Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
R.W. Large Memorial Hospital	159	18	1	-	3	-	-	137	40	29.2%
Richmond Hospital	601	28	4	2	13	15	1	538	191	35.5%
Sechelt Hospital	393	24	-	1	9	3	-	356	136	38.2%
Squamish General Hospital	588	29	11	1	7	2	-	538	138	25.7%
UBC Hospital	442	12	-	-	6	1	-	423	147	34.8%
Vancouver General Hospital	649	26	2	7	30	11	5	568	228	40.1%
Whistler Health Care Centre	596	24	10	-	4	1	-	557	141	25.3%
<b>PROVIDENCE HEALTH AUTHORITY TOTAL</b>	<b>1,171</b>	<b>82</b>	<b>3</b>	<b>1</b>	<b>27</b>	<b>23</b>	<b>2</b>	<b>1,033</b>	<b>342</b>	<b>33.1%</b>
Mount Saint Joseph Hospital	523	22	1	-	16	16	1	467	160	34.3%
St. Paul's Hospital	648	60	2	1	11	7	1	566	182	32.2%
<b>VANCOUVER ISLAND HEALTH AUTHORITY TOTAL</b>	<b>7,025</b>	<b>489</b>	<b>43</b>	<b>23</b>	<b>169</b>	<b>14</b>	<b>13</b>	<b>6,274</b>	<b>2,373</b>	<b>37.8%</b>
Bamfield Health Centre	6	-	-	-	-	-	-	6	3	50.0%
Chemainus Health Care Centre	400	33	1	-	5	-	-	361	117	32.4%
Cormorant Island Health Centre	164	26	2	-	4	-	1	131	40	30.5%
Cowichan District Hospital	419	21	2	3	14	1	2	376	154	41.0%
Gold River Health Centre	301	48	3	-	2	1	-	247	103	41.7%
Kyuquot Health Centre	8	3	-	-	-	-	-	5	1	20.0%
Lady Minto Gulf Islands Hospital	386	23	2	-	7	-	-	354	132	37.3%
Ladysmith Community Health Centre	390	13	5	-	10	1	-	361	134	37.1%
Nanaimo Regional General Hospital	522	19	3	4	16	1	1	478	194	40.6%
North Island Hospital Campbell River Campus	412	21	1	3	13	-	1	373	139	37.3%
North Island Hospital Comox Valley Campus	468	28	1	6	19	-	1	413	154	37.3%
Oceanside Health Centre	383	11	3	1	4	1	-	363	157	43.3%

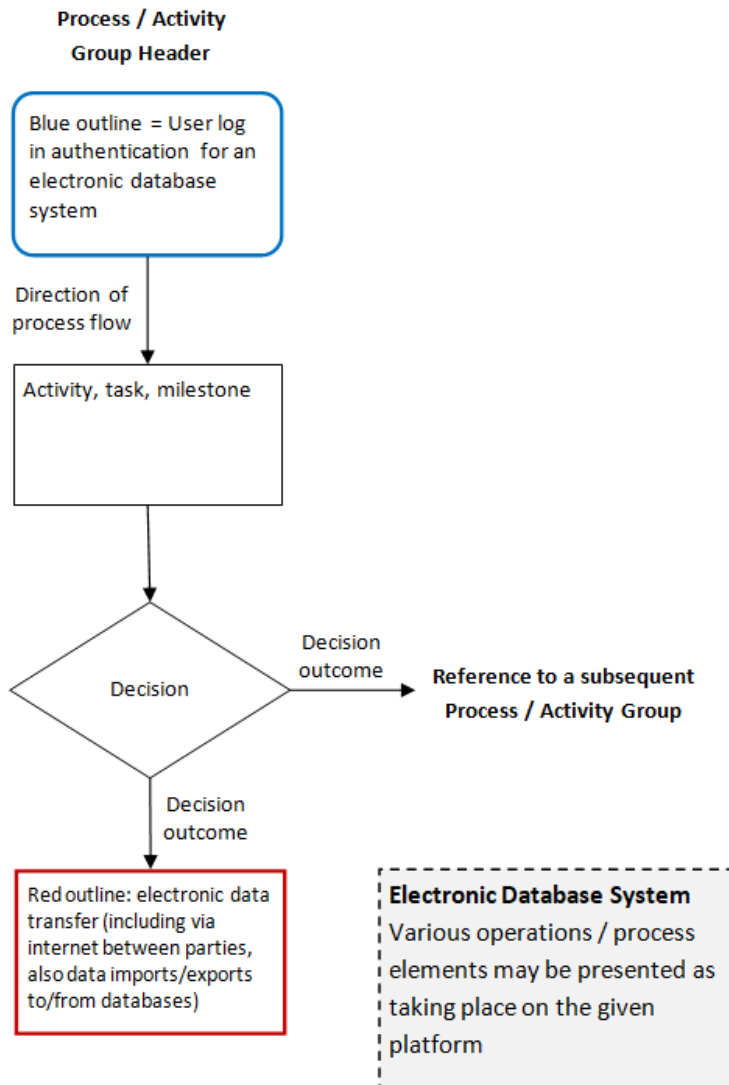
	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/ Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
Port Alice Health Centre	45	1	1	-	-	-	-	43	26	60.5%
Port Hardy Hospital	440	59	2	-	8	2	2	367	114	31.1%
Port McNeill and District Hospital	398	50	2	-	7	-	-	339	101	29.8%
Royal Jubilee Hospital	493	22	4	3	25	4	1	434	186	42.9%
Saanich Peninsula Hospital	350	9	-	-	5	-	-	336	150	44.6%
Tahsis Health Centre	57	4	5	-	2	-	-	46	18	39.1%
Tofino General Hospital	382	43	3	-	4	-	-	332	111	33.4%
Victoria General Hospital	580	24	3	1	11	3	2	536	201	37.5%
West Coast General Hospital	421	31	-	2	13	-	2	373	138	37.0%
<b>NORTHERN HEALTH AUTHORITY TOTAL</b>	<b>9,259</b>	<b>967</b>	<b>135</b>	<b>17</b>	<b>154</b>	<b>24</b>	<b>12</b>	<b>7,950</b>	<b>2,678</b>	<b>33.7%</b>
Atlin Health Centre	99	14	4	-	1	-	-	80	29	36.3%
Bulkley Valley District Hospital	458	33	4	1	5	-	1	414	135	32.6%
Chetwynd General Hospital	532	40	8	1	5	-	1	477	118	24.7%
Dawson Creek And District Hospital	539	46	7	2	8	-	1	475	143	30.1%
Fort Nelson General Hospital	405	21	6	2	6	2	-	368	111	30.2%
Fort St. John Hospital	440	27	4	1	4	3	-	401	152	37.9%
Fraser Lake Community Health Centre	245	39	3	1	4	1	-	197	81	41.1%
GR Baker Memorial Hospital	421	59	3	2	8	3	1	345	131	38.0%
Haida Gwaii Hospital and Health Centre	344	34	7	-	9	1	-	293	99	33.8%
Houston Health Centre	377	32	15	-	6	-	-	324	107	33.0%
Hudson's Hope Health Centre	16	1	-	-	1	-	-	14	7	50.0%
Kitimat General Hospital	400	59	8	-	7	2	-	324	120	37.0%
Lakes District Hospital and Health Centre	409	28	5	1	9	2	1	363	125	34.4%
MacKenzie and District Hospital and	393	29	2	-	4	-	-	358	112	31.3%

	Fielded	Incorrect Phone Number	No ED Visit	Deceased	Serious Illness/ Incapable	Language Barrier	Institutional Refusal	Valid Fielded	Surveys Completed	Response Rate
Health Centre										
McBride and District Hospital	149	11	1	-	4	1	-	132	53	40.2%
Mills Memorial Hospital	471	41	6	2	10	3	1	408	147	36.0%
Northern Haida Gwaii Hospital and Health Centre	376	72	1	-	8	-	1	294	100	34.0%
Prince Rupert Regional Hospital	553	60	3	-	8	2	2	478	142	29.7%
St. John Hospital	478	42	8	2	5	-	1	420	127	30.2%
Stewart Health Centre	92	12	3	1	-	-	-	76	41	53.9%
Stikine Health Centre	135	23	7	-	3	-	-	102	32	31.4%
Stuart Lake Hospital	435	66	10	-	5	-	-	354	110	31.1%
Tumbler Ridge Community Health Centre	251	30	1	-	5	-	-	215	97	45.1%
University Hospital of Northern British Columbia	551	51	1	-	8	3	2	486	163	33.5%
Valemount Health Centre	224	32	13	-	12	1	-	166	78	47.0%
Wrinch Memorial Hospital	466	65	5	1	9	-	-	386	118	30.6%
<b>PHSA TOTAL</b>	<b>1,308</b>	<b>35</b>	<b>1</b>	<b>-</b>	<b>8</b>	<b>13</b>	<b>-</b>	<b>1,251</b>	<b>474</b>	<b>37.9%</b>
BC Children's Hospital	1,308	35	1	-	8	13	-	1,251	474	37.9%

**APPENDIX H: PROJECT FLOWCHART**

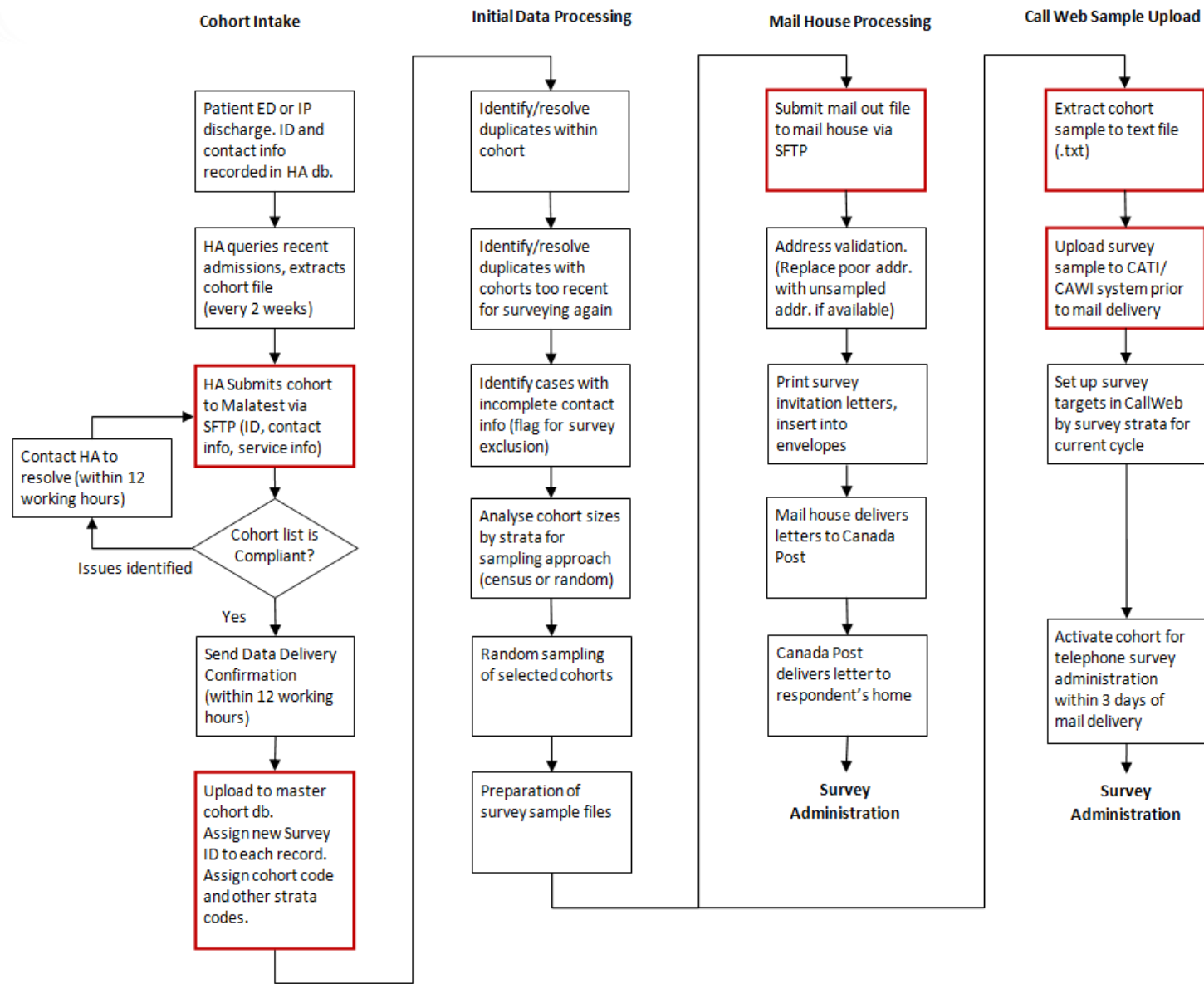
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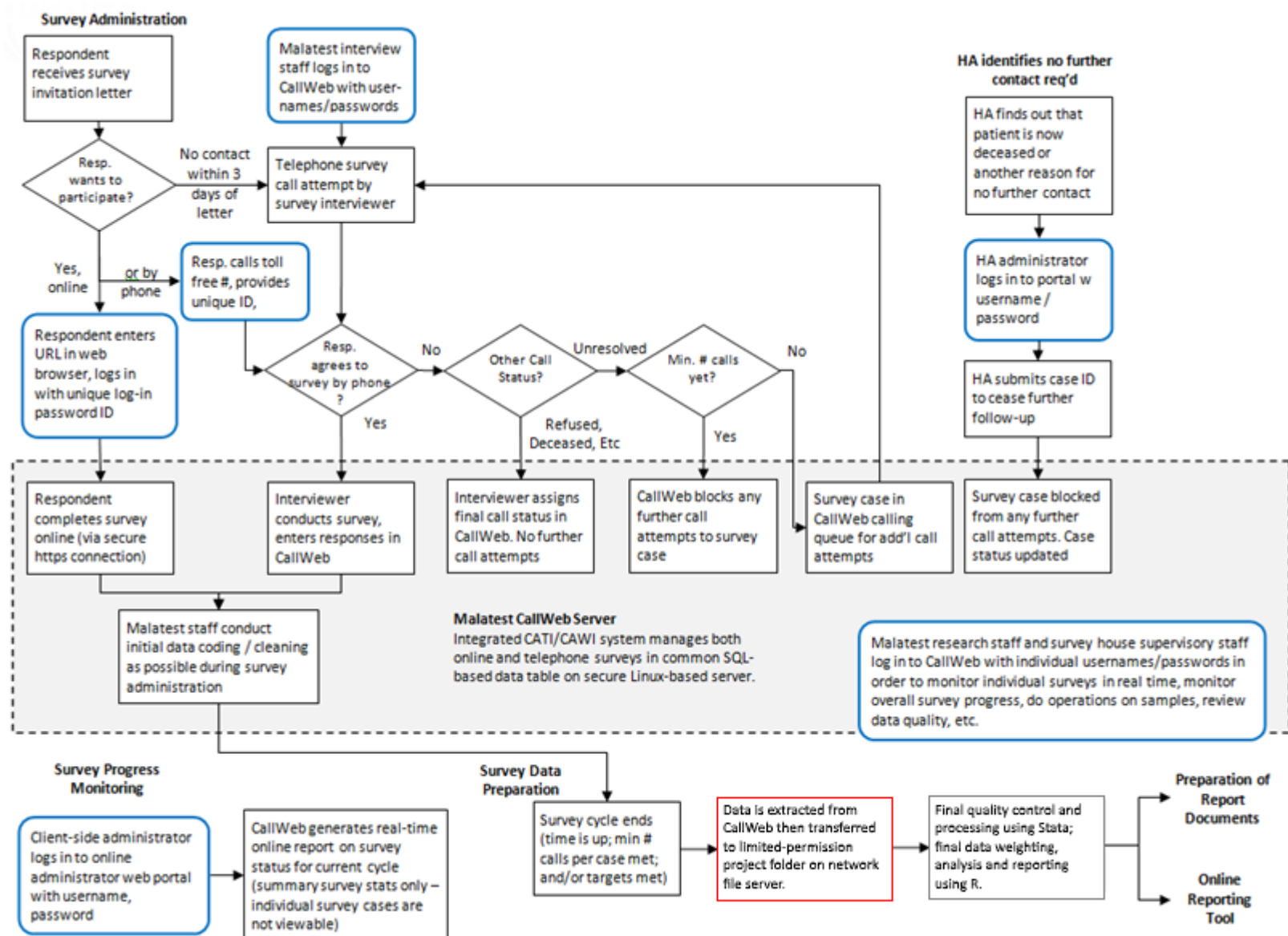
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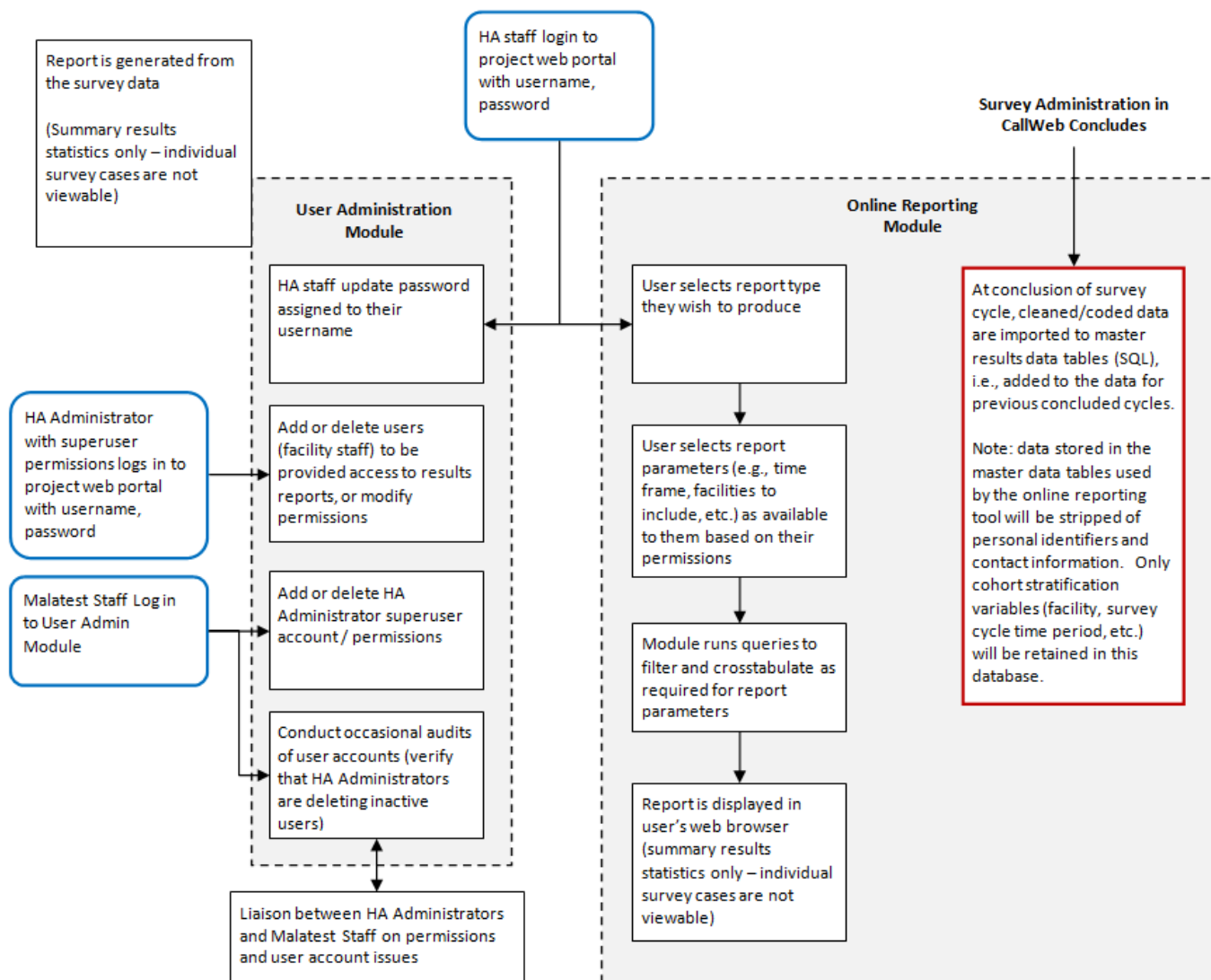
## Abbreviations / Terminology:

HA	Health Authority (individual facility or service provider may be involved in the task)
ED	Emergency Department
IP	Inpatient services
SFTP	Secure File Transfer Protocol
CATI/CAWI	Computer Assisted Telephone/Web Interview System
CallWeb	Name of Malatest's CATI/CAWI system
ID	Identifier (e.g., a unique identifier associated with a patient; or, a unique identifier associated with a survey case)
Addr.	Address (mailing address)
Resp.	Survey respondent
URL	Universal Resource Locator (web address)
Https	A protocol for secure communication over the internet (more secure than http)
SPSS	Name of a common statistical analysis package





## Dynamic Analysis and Reporting Tool (DART)





**APPENDIX J: DATA WEIGHTING CODE**

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## Data Weighting Code in R

The survey post-stratification weights were calculated in two stages using the R survey package. First, to account for the population discharge volume of the participated facilities, and second, to account for facilities not in the final sample due to non-completions or other reasons so that the facility totals sum up to the total number of patients in each health authority. For the purposes of weighting, discharges include all patients in the population frame regardless of their eligible status.

To calculate the weights needed to adjust the sampling distribution to match the population discharge volumes, control tables with the discharge volume by facilities within each health authority were derived from the population frame. As provincial discharge volume is composed of the sum of all health authority discharge volumes, and the health authority discharge volumes are in turn composed of the sum of all facility discharges, weighting at the facility levels was sufficient to account for the distribution of discharges at the health authority and provincial level, therefore no further weighting is necessary, beyond a very slight adjustment to account for a single facility with only two discharges and no survey completes possible due to missing contact information. This adjustment had negligible effect on the weights for all other facilities within the relevant health authority, therefore only one weighting variable was used for all analyses.

```
# Watch for missing NA strata, all strata must be defined
svy.weighted.0 <- toweight_df %>% as_survey_design(ids = 1)

# Post stratify based on universe
# Watch for potential computational issues with zero strata
ps.svy.weighted.0 <- try(postStratify(svy.weighted.0, strata = ~strata,
population = fac_universe_com, partial = TRUE))

# Calculate Facility survey weights based on inverse probabilities
toweight_df$fac_weight <- 1/ps.svy.weighted.0$prob

# Second adjustment to correct for facility with no completes
toweight_df <- mutate(toweight_df, strata = UPLD HA)
svy.weighted.1 <- toweight_df %>% as_survey_design(ids = 1, weights =
fac_weight)
ps.svy.weighted.1 <- try(postStratify(svy.weighted.1, strata = ~strata,
population = ha_universe, partial = TRUE, weights = fac_weight))

# Calculate Facility and HA survey weights based on inverse probabilities
toweight_df$fac_ha_weight <- 1/ps.svy.weighted.1$prob
```