Canadian Institute for Health Information
Canadian Patient Experiences Survey — Inpatient Care (CPES-IC) Procedure Manual*
Education Session

* May 2014 Edition

Survey Procedures: Logistics of Survey Administration, Sampling Design and Eligibility Criteria
Outline

• Review learning objectives

• Provide overview on
  – CPES-IC and CPERS

• Describe
  – Survey administration: logistics
  – Sampling design (including eligibility criteria)

• Outline additional resources
Learning objectives

By the end of the session, participants will be able to

• Describe the purpose and benefits of using the Canadian Patient Experiences Survey — Inpatient Care (CPES-IC) and Canadian Patient Experiences Reporting System (CPERS)

• Use the procedures manual to find information about
  o Survey administration: logistics
  o Sampling design (including eligibility criteria)

• Access the available resources to support implementation
Overview

1. Canadian Patient Experiences Survey — Inpatient Care (CPES-IC)

2. Canadian Patient Experiences Reporting System (CPERS)
What is the CPES-IC?

The Canadian Patient Experiences Survey — Inpatient Care (CPES-IC) is a standardized questionnaire that enables patients to provide feedback about the quality of care they received during their most recent stay in a Canadian hospital.
Why was the CPES-IC developed?

• In 2011, several Canadian jurisdictions approached CIHI to lead the development of a pan-Canadian acute care inpatient experience survey, using the American HCAHPS* survey as a base.

• Why? Because a standardized pan-Canadian tool for collecting and comparing patient experience information did not exist.

• As of January 2012, acute care patient experiences surveying is mandatory for accreditation.

• The CPES-IC has been endorsed by Accreditation Canada for acute care patient experiences surveying.

* Hospital Consumer Assessment of Healthcare Providers and Systems.
Why is the CPES-IC important?

• The CPES-IC will
  ✓ Aid hospitals in their assessments of patients’ experiences with care
  ✓ Promote the use of patient experience to inform the delivery of patient-centred care and quality improvement initiatives
  ✓ Provide a platform for national comparisons and benchmarking for the measurement of patient experience
CPES-IC Measures: HCAHPS

22 questions from HCAHPS covering the following areas:

- Communication with nurses
- Communication with doctors
- Physical environment
- Staff responsiveness
- Pain control
- Explanation about medications
- Discharge planning
- Ratings (i.e., overall experience from best to worst, intent to recommend)
CPES-IC Measures: Canadian

19 new questions added to address key areas relevant to the Canadian context:

- Admission to hospital (direct or admission through emergency department)
- Person-centred care (i.e., communication, timeliness of testing, involvement in decision-making, emotional support)
- Discharge and transition
- Outcome
- Global ratings (i.e., hospital stay helpful, overall hospital experience)

Why add new questions?

- To capture information about the discharge process within the context of the Canadian health care system
- To understand patient perspectives on quality of care priority areas specific to Canadians, which are not covered in the HCAHPS core set of questions
Overview of the CPES-IC Procedure Manual
What is the CPES-IC Procedure Manual?

• A guide to administering the CPES-IC
• Includes information about the questionnaire and survey administration process
• Provides a standardized approach to administering the CPES-IC that will allow results to be compared across Canada and internationally
CPES-IC Procedure Manual


Patient Experience information

- Inpatient care
- Canadian Patient Experiences Reporting System (CPERS)
- Patient experience across other sectors
- Additional resources

Inpatient care

Canadian Patient Experiences Survey — Inpatient Care

In Canada, many jurisdictions conduct patient experience surveys using a variety of tools and data collection methods.

To support pan-Canadian comparisons of patient experience, CIHI worked with representatives from Canadian jurisdictions—particularly the Inter-Jurisdictional Patient Satisfaction Group—and other leading experts in the field to develop a standardized questionnaire. This enables patients to provide feedback about the quality of care they received during their most recent stay in a Canadian acute care hospital. It also provides standards and supporting documentation for those who are administering the survey.

The Canadian Patient Experiences Survey—Inpatient Care (CPES-IC) has been endorsed by Accreditation Canada and meets the accreditation requirements for patient experience surveying. The survey includes

- 22 items from the Hospital Consumer Assessment of Health Providers and Systems (HCAHPS) survey
- 19 questions that address key areas relevant to the Canadian context (e.g., discharge and transitions)
- 7 questions to collect demographic information

Read more about the survey development process and consultation.

CPES-IC Survey Procedure Manual

The Canadian Patient Experiences Survey—Inpatient Care Procedure Manual provides guidelines to administer the CPES-IC in the field and outlines information about population sampling methods and surveying modes.
Survey administration: logistics
Survey administration: logistics

Demographic questions

• 7 questions to collect demographic information
• Answers to 3 of 7 demographic questions about
  1) Gender (Q45)
  2) Birth date (Q46)
  3) Service line (i.e., maternity) (Q47)

Data elements for these 3 questions can be collected in 2 possible ways

Scenario 1: Use demographic questions in survey tool

Scenario 2: Extract information from administrative data source and combine with all other survey responses*

* These 3 demographic questions can be removed from the survey and up to 3 supplementary questions can be added in lieu.
Survey administration: logistics

Supplementary questions

• Jurisdictions can add up to 10 of their own jurisdiction-specific questions to the survey **before** the “About You” (CPES-IC standard demographic questions) section.

• If additional jurisdiction-specific demographic questions are added, they should be placed **after** the “About You” section.

• Supplementary questions and responses will not need to be submitted to CIHI.

• **Note:** When 3 demographic questions are removed from the survey, jurisdictions can add up to 13 supplementary questions.
Survey administration: logistics

Field period for mail surveying

• Field period must be between 8 and 12 weeks from initial mailing

• Surveys received after 12-week cut-off must not be included in CIHI data submission

For example:

8- to 12-week field period

(surveys mailed on January 1 can be accepted until March 26)

January 1
Initial mailing

March 26
12-week cut-off

Surveys mailed on January 1 are no longer accepted after March 26
Survey administration: logistics

Initial and follow-up contacts (mail)

• **Initial mailing**
  – First survey package must be mailed *no later* than the end of the relevant discharge month and *no sooner* than 48 hours after discharge

• **Follow-up mailing** (when a patient has not yet returned a survey)
  – At minimum, 1 mail follow-up must be sent ~21 days after the initial mailing (include entire survey package and updated cover letter)
  – Recommended to send at least 2 mail follow-ups within the 12-week field period
Survey administration: logistics

*Time periods of surveying*

- The time period for sampling patient discharges must be at minimum 3 consecutive months (at any point in the year).
- This permits organizations to submit data after the close of the field period.
- A longer time period can be used for surveying (i.e., continuous surveying).
- In hospitals with small volumes, this might be necessary to obtain the desired sample size.
Sampling design and eligibility criteria
Sampling protocols

Producing the sampling frame

- **Patient population**
- **Patient meets eligibility/inclusion criteria**
  - NO: Remove patient from CPES-IC sampling frame
  - YES: Patient meets exclusion criteria
    - NO: Patient has principal diagnosis and/or intervention from the CPES-IC Service Line Categories and ICD-10-CA & CCI Classification List
      - NO: Patient has already been surveyed within the previous 12 months
        - NO: CPES-IC sampling frame
        - YES: Select a random sample of eligible patients for surveying
      - YES: Remove patient from CPES-IC sampling frame
    - YES: Remove patient from CPES-IC sampling frame

* The CPES-IC Service Line Categories and ICD-10-CA & CCI Classification List is currently under review

- CPES-IC sampling frame
- Facility has >1,200 unique eligible discharges
  - NO: Conduct census surveying
  - YES: Select a random sample of eligible patients for surveying
Sampling protocol

Step 1: Identify patient population

• Create a data file with all discharges within the appropriate time frame.
  – Time period for sampling patient discharges must be at least 3 consecutive months
  – Survey package must be mailed by the end of the month following the relevant discharge month but not sooner than 48 hours after discharge
Sampling protocol

Step 2: Apply inclusion criteria

• Use the inclusion criteria (listed in the CPES-IC Procedure Manual) to limit the discharge population
  – Exclude patients who do not fall within the inclusion criteria

Inclusion criteria:
  – 18+ at the time of admission
  – Alive at discharge
  – Occupied an inpatient bed
Sampling protocol

Step 3: Apply exclusion criteria

- Use the exclusion criteria to limit the discharge population
  - 3a) Use the exclusion criteria listed in the CPES-IC Procedure Manual
  - 3b) Use the CPES-IC Service Line Categories and ICD-10-CA & CCI Classification List* to identify patients for exclusion based on services received during their hospital stay

Note: In addition to applying the exclusion criteria, also remove patients that have incomplete contact information (address, phone number or email address) in this step.

* The CPES-IC Service Line Categories and ICD-10-CA & CCI Classification List is currently under review.
Sampling protocol

Step 4: Perform de-duplication

- Patients selected for surveying within the same facility in the 12 months prior should not be surveyed again.
- After applying the inclusion criteria, exclusion criteria, and de-duplication in consecutive steps, the resulting data file will become the CPES-IC sampling frame.
Sampling Protocol

Step 5: Sampling frame creation and sampling methodology

• Patients from the sampling frame may be surveyed using various sampling methodologies, depending on the preferences of the facility and the number of unique eligible discharges from the facility.

* Unique discharges in a facility per fiscal year.
Sampling methods

Option 1: Attempted census

CPES-IC sampling frame/eligible discharges

Attempted census (sample all)

<1,200 unique eligible discharges

n = 20

n = 20

= Eligible patient.
Sampling methods

Option 2a: Simple random sampling

CPES-IC sampling frame/eligible discharges

Simple random sample

Randomly pick 10 eligible patients
Sampling rate = 50%

\[ n = 20 \]

- 8 patients from Unit 1.
- 12 patients from Unit 2.

\[ n = 10 \]
Sampling methods

Option 2b: Stratified random sampling

• Stratified random sampling can be used if facilities have >1,200 unique eligible discharges within a fiscal year.

• Strata can consist of hospital units or programs and can also be created in combination with a time period (e.g., surgical unit January 2016, surgical unit February 2016).

• There are 2 types of stratified random sampling methods:
  – Proportionate stratified random sampling
  – Disproportionate stratified random sampling
Sampling methods

Option 2b(i): Proportionate stratified random sampling

Proportionate stratified random sampling (PSRS)

- A probability sampling method in which different strata in a population (e.g., surgical and maternity units) are identified.
- The number of patients drawn from each stratum is proportionate to the relative number of patients within each stratum of the population.
- For example:
  - The surgical and maternity units of a hospital account for 20% and 30% of the sampling frame, respectively.
  - PSRS can be used to create a survey sample consisting of the same percentage of surgical and maternity patients as the sampling frame (i.e., 20% and 30%, respectively).
Proportionate stratified random sample

CPES-IC sampling frame/eligible discharges

\[ n = 20 \]
\[ = 8 \]
\[ = 12 \]

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Eligible discharges</th>
<th>Sampling ratio</th>
<th>Sampled patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratum 1</td>
<td>12</td>
<td>1/2</td>
<td>6</td>
</tr>
<tr>
<td>Stratum 2</td>
<td>8</td>
<td>1/2</td>
<td>4</td>
</tr>
</tbody>
</table>

>1,200 unique eligible discharges

= patients from 2 different hospital units.
Sampling methods

Option 2b(ii): Disproportionate stratified random sampling

Disproportionate stratified random sample (DSRS)

• A probability sampling method in which the size of the sample drawn from a particular stratum is not proportional to the relative size of that stratum in the population

• For example:
  – The surgical unit in a hospital accounts for only 20% of the sampling frame.
  – DSRS could be used to oversample the surgical unit (e.g., accounts for 40% of the sample) due to a particular interest in the hospital resource consumption of surgical patients.
Disproportionate stratified random sample

CPES-IC sampling frame/eligible discharges

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Eligible Discharges</th>
<th>Sampling Ratio</th>
<th>Sampled Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratum 1</td>
<td>12</td>
<td>1/2</td>
<td>6</td>
</tr>
<tr>
<td>Stratum 2</td>
<td>8</td>
<td>3/4</td>
<td>6</td>
</tr>
</tbody>
</table>

\[ n = \frac{8}{12} \times 20 \]

\[ n = 8 \]

\[ n = 12 \]

>1,200 unique eligible discharges

= patients from 2 different hospital units
Sample size

<table>
<thead>
<tr>
<th>No. of unique discharges in a fiscal year</th>
<th>Sampling method</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥1200</td>
<td>Random</td>
</tr>
<tr>
<td>&lt;1200</td>
<td>Census</td>
</tr>
</tbody>
</table>

- The 100 complete surveys are **minimum** samples to be included in comparative reports.
- Any questionnaire with at least 1 question completed must be submitted.
- There’s no restriction on submitting *more than the required* number of complete questionnaires.
Steps for sample size calculation

1. Estimate required number of complete surveys for each batch
   - A batch could be daily, weekly, bi-weekly or monthly
   - For example: $300 \div 12 = 25$ for monthly continuous sampling

2. Estimate expected response rate
   - Percentage of complete surveys among total number of fielded surveys
   - For example: 25%

3. Estimate sample size to be drawn among unique eligible discharges for each batch
   - Number of complete surveys $\div$ response rate
   - For example: $25 \div 25\% = 100$

4. Suggestion: inflate calculated sample size by 10 to 20% to increase chances of obtaining the required number of complete surveys
   - For example: $100 + 100 \times 20\% = 120$
Administer survey

* The CPES-IC Procedure Manual to be released in winter 2016 will include procedures for administering the CPES-IC in additional modes (i.e., telephone and email).
Additional resources
Additional resources

  - [The Canadian Patient Experiences Survey — Inpatient Care (CPES-IC)](http://www.cihi.ca/en/prems) (DOCX)
  - [Canadian Patient Experiences Survey — Inpatient Care Procedure Manual](http://www.cihi.ca/en/prems) (PDF)
  - [Canadian Preliminary Core Patient Experience Measures: Acute Inpatient Care, April 2015](http://www.cihi.ca/en/prems) (PDF)
  - [Canadian Patient Experiences Survey — Inpatient Care: Frequently Asked Questions](http://www.cihi.ca/en/prems) (PDF)
  - [Canadian Patient Experiences Reporting System Privacy Impact Assessment, January 2015](http://www.cihi.ca/en/prems) (PDF)
Questions

• For more information, contact us at prems@cihi.ca
Thank you!