



2018

Developing the first pan-Canadian acute care patient experiences survey

Salima Hadibhai

Canadian Institute for Health Information, shadibhai@cihi.ca


Jeanie Lacroix

Canadian Institute for Health Information, JLacroix@cihi.ca

Kira Leeb

Canadian Institute for Health Information, Khleeb1@gmail.com

Follow this and additional works at: <https://pxjournal.org/journal>

 Part of the [Health and Medical Administration Commons](#), [Health Policy Commons](#), [Health Services Administration Commons](#), and the [Health Services Research Commons](#)

Recommended Citation

Hadibhai, Salima; Lacroix, Jeanie; and Leeb, Kira (2018) "Developing the first pan-Canadian acute care patient experiences survey," *Patient Experience Journal*: Vol. 5 : Iss. 3 , Article 5.

Available at: <https://pxjournal.org/journal/vol5/iss3/5>

This Research is brought to you for free and open access by Patient Experience Journal. It has been accepted for inclusion in Patient Experience Journal by an authorized editor of Patient Experience Journal.

Developing the first pan-Canadian acute care patient experiences survey

Cover Page Footnote

At the time the CPES-IC was developed, the Inter-Jurisdictional Patient Experience members consisted of the following members and organizations: Western Health (Newfoundland and Labrador), Health PEI (Prince Edward Island), Capital Health (Nova Scotia), New Brunswick Health Council, Commissaire à la santé et au bien-être (Quebec), Ontario Hospital Association, Health Quality Ontario, Manitoba Health, Saskatchewan Health Quality Council, Alberta Health Services, Health Quality Council of Alberta and British Columbia Patient Reported Experience Measures Steering Committee. Accreditation Canada, The Change Foundation and the Canadian Patient Safety Institute also participated on survey development. The co-authors would like to thank: Michael Murray, PhD and Dina Franchi, MA, PhD(c) for their methodological expertise. Lena Cuthbertson, BHSc (OT), MEd, PMP, Kristen Hart BA, MSc., Mary Kwakyepeprah MSc., PhD and Marcia Maguire MSc., for providing background literature and contributions in editing of the paper.

Developing the first pan-Canadian acute care patient experiences survey

Salima Hadibhai, *Canadian Institute for Health Information, SHadibhai@cibi.ca*

Jeanie Lacroix, *Canadian Institute for Health Information, JLacroix@cibi.ca*

Kira Leeb, *Canadian Institute for Health Information, Kbleeb1@gmail.com*

Abstract

The Canadian Institute for Health Information (CIHI) in partnership with stakeholders sought to develop the first pan-Canadian patient experiences survey for inpatient care (CPES-IC). The goal was to provide a national survey standard for comparative patient experience measures to facilitate benchmarking for quality improvement. A cognitive and pilot testing study design was performed using survey data from adult inpatient care settings. Participants included the inter-jurisdictional members (IJ), survey subject matter experts and CIHI (The Group). Cognitive testing of the survey took place in three Canadian jurisdictions in English and French languages. Thirty-nine individuals participated in one-on-one interviews. During pilot testing, twenty-six percent of surveys were completed over a five-month survey period. The main outcome measure was the development of new survey dimensions and Canadian survey questions. Survey dimensions of care important to patients including internal coordination of care, patient-centred care, discharge and transition processes were identified to develop the Canadian survey questions. Following cognitive testing, changes were made to better align the English and French survey questions. In pilot testing, several updates were applied including the adjustment of response categories, reformatting of skipped pattern questions and the omission of five questions due to high response rate of the “not applicable” category and survey questions perceived to be too “vague” by respondents. The Group recommended the implementation of the survey. Consultations using a consensus building approach and rigorous methodology led to the successful implementation of the CPES-IC, which is the first Canadian standardized patient experiences survey for hospital based inpatient care.

Keywords

Patient experience, patient satisfaction, patient-centred care, patient engagement, measurement, HCAHPS, quality of life, consumer engagement, quality of care, qualitative methods, health literacy, healthcare, communication

Introduction

Health care organizations strive to improve delivery of services in ways that are meaningful to patients, and patient experience questionnaires have been a part of these efforts for a number of years. In 2006, the Agency for Healthcare Research and Quality (AHRQ) and the Centers for Medicare and Medicaid Services (CMS) implemented the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)¹ survey, which is the first survey that allowed for objective comparisons of patient experience measures between hospitals nationally, regionally and locally^{2,4} in the United States (U.S). The HCAHPS survey has been rigorously validated and used in the U.S for over a decade, allowing for international benchmarking.¹ In 2008, the U.S department of Health and Human Services publicly reported patient experience measure results for 2,521 hospitals.^{2,3} By 2017, that number had grown to 4,315 hospitals.² Other jurisdictions have also implemented surveys allowing for national comparisons.^{4,7} For example, the National Health Service⁴ of England surveyed all 165 hospitals using a modified Picker inpatient questionnaire⁵ in 2008/2009.

Canadian jurisdictions have also used patient reported experience measures (PREMs) to assess quality of care^{7,8} for a number of years. Previously, surveys implemented across the country were not standardized, including the HCAHPS, Picker and other questionnaires,⁶ restricting the ability to make comparisons across hospitals and jurisdictions. The Canadian Institute for Health Information (CIHI) provides reports on various comparative health system performance indicators.⁹⁻¹¹ In 2011, the Inter-jurisdictional Patient Experience members (IJ) recognizing that Canada had no standardized survey to allow for national comparisons, approached CIHI to develop the first-ever pan-Canadian patient experience survey, later named the Canadian Patient Experiences Survey – Inpatient Care (CPES-IC). The IJ members consisted of individuals responsible for patient experience surveying in their respective jurisdictions (see Acknowledgements section for details about the IJ members). Dr. Michael Murray, a preeminent Canadian survey researcher, acted as methodological expert, providing survey development expertise. Accreditation Canada, The Change Foundation and the Canadian Patient

Safety Institute were also engaged on the survey development.

To facilitate a standard approach in developing the Canadian survey questions, guiding principles were used to build consensus across the country. These guiding principles included using the HCAHPS survey as the base for the development of the Canadian survey, the need for expert engagement, a list of survey dimensions for the development of the survey questions, total number of questions required, implementation of cognitive and pilot testing in English and French languages and requirements for ethics approvals. The goal of this paper was to provide details on the development of a national survey standard for comparative patient experience measures to facilitate benchmarking for quality improvement.

Methods

A cognitive and pilot testing study design was conducted. The survey was cognitively¹¹ tested and then pilot tested between the time period of January 2013 to September 2013. The inclusion criteria were English and French speaking participants who were admitted to the hospital for at least one night, were 18 or more years of age at the time of admission and were treated in either the surgical, medical or maternity units. The exclusion criteria included patients discharged from the sub-specialty units of pediatrics, psychiatry, stand-alone rehabilitation and oncology. The main outcome measures were the development of survey dimensions and questions.

Building the Survey Dimensions and Questions

To evaluate new survey dimensions and create new questions, CIHI, IJ and Dr. Murray (referred to as “The Group”) first examined available data on the dimensions of the health care experience that are important to patients and questions that would measure these dimensions. An examination of the literature on dimensions of patient experience was completed using Worthington’s¹² summary of patient experience theories and dimensions. In addition, an assessment of the literature on patient experience survey instruments used in different jurisdictions in Canada⁶ was completed. The surveys examined were the Patient Judgments of Hospital Quality Satisfaction Surveys,¹³ the Parkside Survey System,¹⁴ the Press Ganey Associate Inpatient Survey,⁶ the HCAHPS² and the Picker Institute and derivations (inpatient and emergency).¹⁵⁻²² These are survey instruments that have been used in four Canadian jurisdictions: Ontario, Saskatchewan, British Columbia and New Brunswick.⁶ Since the HCAHPS is a non-proprietary tool that provides flexibility to add additional questions at the end of the survey instrument, The Group requested that the HCAHPS be chosen as the base survey for the development of the new Canadian survey.

In addition to the review of the literature, patient experience data from the four Canadian jurisdictions were analyzed to inform the new questions and dimensions. Spearman correlation coefficients²³ between Canadian individual questions and “global hospital experience” questions (“helped by hospital stay”, “overall hospital experience”, “will recommend hospital” and “hospital rating”) were calculated. These questions were then categorized into the appropriate identified dimensions of care. Depending on the strengths of the correlations within a dimension of care, it was rated as more or less important to patients with respect to their hospital experience.⁵ In this study, correlations with absolute values between 0.3 and 0.7 were considered preferable.²³⁻²⁵ Correlations above 0.7 were considered to indicate duplication of question content and possible question redundancy. Based on the data and literature evaluated, The Group identified sixteen dimensions of care for evaluation. These dimensions were ranked based on its importance to patients as high (nursing care, staff responsiveness, pain, communication about medicine and participation in decision making), medium (safety, doctors, coordination of care) or low (admission and discharge information, care transitions, environmental and food). The Group compared this data to the existing HCAHPS dimensions. Where the HCAHPS did not cover an area of interest in the Canadian context, new questions were formulated to capture these areas. For example, although HCAHPS provided questions related to discharge information, it did not cover questions related to discharge transition. Subsequently, The Group identified eight new dimensions of care to be covered by the new Canadian survey questions (Table 1). For the demographic dimension, we only had information from respondents on ethnicity. Four working groups created from the IJ committee used a consensus building approach for the selection of questions representing each dimension and consulted with content experts and patients in their own jurisdictions

Language Translations

The goal of the translation analysis was to ensure that the new Canadian instrument reflects idioms specific to each language while preserving consistency in meaning between the English and French survey versions. The HCAHPS survey instrument had been extensively tested and validated in the U.S in English and had previously been translated, cognitively tested, and pilot tested in French by the New Brunswick Health Council²² and the McGill University Health Centre (MUHC)²⁶ in Quebec. The new Canadian survey questions were translated by CIHI translators into French and reviewed by the IJ members who were professional translators or linguistic experts from three of the jurisdictions with large French-speaking communities (Ontario, Quebec and New Brunswick). The survey was then back translated into English by an independent professional translator.²⁷ A proposed and

Table 1. HCAHPS dimensions and new Canadian survey dimensions

HCAHPS dimensions	New Canadian dimensions
<ul style="list-style-type: none"> • Communication with nurses • Communication with doctors • Physical environment • Responsiveness of staff • Pain control • Communication about medications • Discharge information • Global hospital experience: <ul style="list-style-type: none"> ○ Will recommend hospital ○ Hospital rating 	<ul style="list-style-type: none"> • Admission to hospital • Internal coordination of care • Person-centred care • Discharge and transition • Patient safety • Outcome • Demographic • Global hospital experience: <ul style="list-style-type: none"> ○ Helped by hospital stay ○ Overall hospital experience

Abbreviation: Hospital Consumer Assessment of Healthcare Providers and Systems

alternative French translation was recommended for testing of the new Canadian questions. The translations of the questions were reviewed extensively to ensure that the question captured the same meaning as the English source question and the translation was clear and appropriate for use in French-speaking communities across Canada.

Cognitive Testing

Qualitative cognitive testing of both the English and the French versions of the survey was completed using cognitive interviewing method. Cognitive interviewing methods involve administering a questionnaire and asking respondents for additional verbal information (i.e. their thoughts and interpretations)²⁸⁻²⁹ to examine whether questions are understood and interpreted as they are intended. This was completed by the Questionnaire Design and Resource Centre (QDRC) at Statistics Canada between January 2013 and February 2013.³⁰ One-on-one cognitive interviews were completed by the same analyst at the QDRC. Testing took place in three jurisdictions in both English and French. Thirty-nine individuals participated: nine in New Brunswick (Moncton), 12 in Alberta (Calgary), 18 in Ontario (10 in Toronto; eight in Ottawa). Study participants were recruited by CIHI in conjunction with participating hospitals. Testing was also conducted at participating hospitals in Moncton and Calgary and in CIHI offices in Toronto and Ottawa. Both the QDRC analyst and one CIHI representative were present for each interview. Each participant was asked to complete a paper version of the questionnaire. The interviewer used probing questions on the response scales, translation and double-barreled questions. An iterative approach to improving the survey was taken based on any problems that were identified during the cognitive testing phase. Cognitive testing was completed for the new Canadian English questions by English speaking respondents and the new French questions by French speaking respondents. HCAHPS survey questions in

English were included in the testing to ensure the flow between the two sets of survey questions was logical. For cognitive testing conducted in the French language, the New Brunswick HCAHPS questions were used. If any translations in this version of the survey were unclear to the respondent, probing by the QDRC analyst was conducted using the MUHC HCAHPS translations.

Pilot Testing

The pilot testing took place in Alberta, British Columbia and Ontario. The choice of hospital and random sampling of participants from each of the hospitals for the pilot study was done in conjunction with CIHI through the British Columbia Ministry of Health, Alberta Health Services, and the Ontario Hospital Association. A total of 13 hospitals agreed to participate, three from British Columbia, three from Alberta and seven from Ontario. Within these jurisdictions, hospitals were selected based on location (rural or urban), type of hospital (community or teaching), size of hospital, and whether the population served by the hospital spoke primarily English or French. A criteria for selecting a study sample was developed by CIHI.

Two survey modes were tested, telephone and mail. The telephone script was modified to include the new Canadian questions. Since there was already English language computer assisted telephone interview (CATT) systems in place, the pilot testing jurisdictions (three hospitals in Alberta and one hospital in Ontario) conducted interviews in English only and not French. For mail survey mode, six hospitals in Ontario used a mail survey mode in both English and French whereas British Columbia used a mail survey mode for the English version of the questionnaire. The mailed survey instruments containing a cover letter and a short questionnaire feedback form were prepackaged by CIHI and mailed to coordinators in the appropriate participating jurisdictions.

Table 2. Characteristics for the pilot test study

Analysis subgroup	Language	Survey mode	Patient population	Jurisdiction	# of questionnaires mailed / interviews attempted	Number of surveys completed
1	English	Mail	Medical/ Surgical)	ON	900	301
				BC	733	240
2	English	Mail	Maternity	ON	400	52
				BC	267	29
	French	Mail	Medical/ Surgical	ON	641	135
4	French	Mail	Maternity	ON	321	68
5	English	Telephone	Medical/ Surgical	AB	338	111
				ON	680	89
6	English	Telephone	Maternity	AB	68	68
				ON	38	37
Total					4386	1130

Abbreviations: ON, Ontario; BC, British Columbia; AB, Alberta

For each mailing, six to eight weeks were allowed for surveys to be returned, and each hospital also had either an email or telephone helpline. No follow up reminders were carried out (Table 2).

The completed anonymized mail surveys were sent directly to CIHI from survey respondents and telephone responses were sent in a separate anonymized file to CIHI. CIHI reviewed and coded survey responses for further analysis. Survey results were analyzed based on measures including missing data, skipped pattern questions, distribution of responses, use of the “not applicable” response category and correlations between survey items and “global hospital experience” questions.

Results

A total of eight new Canadian dimensions important to patients including admission to hospital, internal coordination of care, patient-centred care and discharge and transition processes were identified to develop the new Canadian survey questions through cognitive and pilot testing (Table 1).

Cognitive Testing

The QDRC made nine recommendations and 11 points for consideration regarding the survey questions based on the cognitive testing results. “Recommendations” were defined as required changes to survey questions, while “considerations” were defined as points that needed review and discussion.

All of the cognitive testing recommendations pertained to issues of translation. Of the nine issues, six were regarding the French translation of the new Canadian questions. In each of these six cases, when the proposed and alternate French translations were tested, the alternate version was recommended since it was a closer translation of the English question. The remaining three were HCAHPS questions. In each case when the MUHC and New Brunswick translations were compared, the New Brunswick translation was chosen. This is because the New Brunswick French translation was closer to the English meaning and tested well in both Ontario and the New Brunswick French speaking population than the MUHC French translation version.

Of the 11 points for consideration, all were pertaining to the new proposed questions for the Canadian survey and could be placed into one of three categories: a) seven of the considerations were regarding potential adjustment to response categories of the scale “not at all”, “partly”, “quite a bit”, and “completely”; b) two of the considerations were regarding the use of questions with multiple but related target objects which could be categorized as “double barreled” and c) two considerations regarding issues of translation. For the seven questions regarding the four-point response categories of the scale “not at all”, “partly”, “quite a bit”, and “completely”, it was perceived by Statistics Canada that the appropriateness of fit was questionable during testing and suggested these questions should be changed to dichotomous answers, “yes/no”. During subsequent discussion by The Group and the professional translators,

other surveys with similar response scales were reviewed (e.g. SF-36, Canadian Community Health Survey).³¹ Before making a decision about the response scale, The Group took into consideration the fact that neither English nor French respondents reported inability to answer any of the questions with the four-point scale. As such, The Group agreed that the use of a dichotomous scale (yes/no) would only be considered if subsequent pilot test results showed that the four-point scale was in question.

For those questions that could be considered “double barreled”, one question combined the concepts of the diagnosis of respondents’ health condition and treatment received. In another question, the concepts of tests and procedures were combined. The Group and translators considered the burden for respondents in answering a question with two concepts paired in this way. However, they agreed that these concepts are highly associated with a patient’s experience where diagnoses of a health condition and delivery of treatment are related components of a hospital episode for a patient. Furthermore, during cognitive interviews, respondents did not experience any difficulty answering these questions. As a result, the decision regarding the “double barreled” was to keep these concepts together.

Changes were made for the remaining two considerations, both regarding translation issues. The first was the translation of the English scale “not at all”, “partly”, “quite a bit” and “completely”. It was decided that in French the scale would be: “pas du tout”, “un peu”, “moyennement” and “complètement”. The second change was regarding a question on the availability of interpreter services at the hospital, “*If you do not speak English as your primary language, was there an interpreter at the hospital that could explain everything you needed to know about the care you received?*” This question was removed as it did not apply across all Canadian jurisdictions. There were no further questions that required changes.

Overall respondents felt that the questionnaire was clear and easy to complete. When probed, most respondents felt that the questions asked gave a good overview of the different aspects of their hospital experience. Cognitive testing results led to a set of 55 questions to be used for quantitative evaluation in the pilot testing of the survey.

Pilot Testing

During the pilot test, a total of 1130 surveys were completed and returned by mail or via telephone interview to CIHI by the end of the five-month survey period. The overall response rate was 26% (1130/4386). For interviews conducted by phone in Alberta and Ontario, the response rates were 44% and 18% respectively. Among sites that administered the mail survey in English in both British Columbia and Ontario, the response rate was 27% each (see Table 2). Out of the 55 questions evaluated in the

pilot testing, there were 10 questions that required further discussion and recommendations. These questions were related to issues regarding (1) skipped pattern questions (2) wait times questions (3) questions with a large number of “not applicable answers” and (4) safety questions not considered relevant by respondents.

Regarding the skipped pattern questions, missing data were more common in the mail mode than telephone. The error rates ranged from 0.4% to 13.7% with the largest error rates related only to two skipped pattern questions. For instance, the skipped pattern questions associated with the question “*When you arrived at the hospital, did you go to the emergency department?*” would have those who said “yes” proceed to questions related to their emergency department experience, and those who said “no” to proceed to questions related to their direct admission experience. There were many respondents erroneously answering questions related to direct admission when in fact they had answered “yes” to the emergency department admission question. To help guide respondents more clearly, a new skipped pattern question format was adopted for these questions.

Questions asking respondents about their experience of “wait times” which were embedded in the skipped pattern questions, underperformed in relation to “global hospital experience” questions. If respondents are positive about their “global hospital experience” and give low ratings to a specific question such as the “wait times” questions (resulting in a low correlation), then this indicates that the specific question is not that important to the sample of respondents. It should be noted that the following questions on “wait times” “*Did you have to wait too long from the time when you first knew you needed to go to the hospital until your admission day?*” and “*From the time you arrived at the hospital, did you feel that you had to wait too long to get to your bed in the hospital?*” had answers scored in such a way that the less positive answer was given a higher numerical score, thereby showing negative correlations. On a four point answer scale of the score used, (“not at all” coded as 1, “partly” coded as 2, “quite a bit” coded as 3, “completely” coded as 4), the “not at all” which was the lower score was the favorable response and “completely” which was the higher score was the unfavorable response. The questions “*Did you have to wait too long from the time when you first knew you needed to go to the hospital until your admission day?*” and the question “*From the time you arrived at the hospital, did you feel that you had to wait too long to get to your bed in the hospital?*” had correlations with values ranging from -0.13 to -0.07 and -0.12 to -0.08 respectively. Even though some of the values observed in the range were statistically significant, $p=0.01$, because of the low correlations, these two questions were removed. Correlations values regarding the “global hospital experience” questions and the questions “*Do you feel that there was good communication about your care between doctors, nurses and other hospital staff?*” and “*Was your transfer*

Table 3. Correlations between new Canadian questions and "global hospital experience" questions

New Canadian questions	Global hospital experience questions			
	Hospital rating ^a	Would you recommend this hospital to your friends and family? ^b	Overall hospital experience rating ^c	Overall, do you feel you were helped by your hospital stay? ^d
<i>Do you feel that there was good communication about your care between doctors, nurses and other hospital staff?</i>	0.56	0.53	0.53	0.53
<i>Was your transfer from the Emergency Department into a hospital bed organized?</i>	0.53	0.49	0.48	0.45
<i>How often did doctors, nurses and other hospital staff seem informed and up-to-date about your hospital care?</i>	0.52	0.47	0.50	0.53
<i>Did you get the support you needed to help you with any anxieties, fears or worries you had during this hospital stay?</i>	0.50	0.47	0.54	0.51
<i>Were your family or friends involved as much as you wanted in decisions about your care and treatment?</i>	0.29	0.28	0.33	0.35
<i>During your hospital stay, did you understand the information given to you about how you can be more involved in reducing unplanned harm related to your care?</i>	0.27	0.25	0.31	0.33
<i>Before coming to the hospital, did you have enough information about what was going to happen during the admission process?</i>	0.24	0.27	0.20	0.21
<i>After you knew that you needed to be admitted to a hospital bed, did you have to wait too long before getting there?</i>	-0.24	-0.27	-0.31	-0.32
<i>Did you have to wait too long from the time when you first knew you needed to go to the hospital until your admission day?</i>	-0.13	-0.10	-0.07	-0.09
<i>During your hospital stay, did anyone ever talk to you or give you written information about how you can be more involved in reducing unplanned harm related to your care?</i>	-0.13	-0.13	-0.21	-0.22
<i>From the time you arrived at the hospital, did you feel that you had to wait too long to get to your bed in the hospital?</i>	-0.10	-0.12	-0.10	-0.08

from the Emergency Department into a hospital bed organized? had correlation values in the preferable range (0.3 to 0.7) and were statistically significant in the total sample, $p=0.01$ (Table 3). These questions were not removed. Questions with “not applicable” answers were also examined. If a high number of respondents stated that a question is “not applicable” to them, then the question is only relevant to some people and should be re-considered. Four questions were flagged for consideration based on the number of “not applicable” answers and their correlations with “global hospital experience” questions. The question “*During this hospital stay, how often did staff meet your cultural or spiritual needs?*” was “not applicable” to 60% of respondents, and its correlation with the overall hospital rating and overall helped questions were 0.39 and 0.31 respectively. Only 40% of respondents answered the

question and it was on the lower end of the preferable correlation range. Based on this, it was recommended by The Group that this question be removed as it was not the best question to understand respondents’ needs. In addition, the question, “*Were your family or friends involved as much as you wanted in decisions about your care and treatment?*” was also on the lower end of the preferred correlation range, however, The Group decided to retain it given the high response rate. The other three questions had a higher response rate and were correlated with the overall hospital rating and overall helped questions and were therefore retained, Table 4.

There were two questions related to safety, “*During your hospital stay, did anyone ever talk to you or give you written information about how you can be more involved in reducing*

Table 4. Questions with large numbers of “not applicable” answers and their overall correlations

Question	% of not applicable responses	Correlation with overall hospital rating (worst to best)	Correlation with overall, do you feel you were helped by your hospital stay?
<i>During this hospital stay, how often did staff meet your cultural or spiritual needs?</i>	60.0%	0.39	0.31
<i>Did you get the support you needed to help you with any anxieties, fears or worries you had during this hospital stay?</i>	24.9%	0.50	0.51
<i>During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?</i>	22.1%	0.54	0.40
<i>Were your family or friends involved as much as you wanted in decisions about your care and treatment?</i>	16.6%	0.29	0.35
<i>How often were tests and procedures done when you were told they would be done?</i>	12.6%	0.44	0.41

unplanned harm related to your care? and “*During your hospital stay, did you understand the information given to you about how you can be more involved in reducing unplanned harm related to your care?*” The first question had a skip direction for the second if they did not receive information about reducing unplanned harm. The skipped pattern worked well with 93.9% of respondents answering correctly and only 2.9% with an incorrect answer and 3.2% with an ambiguous answer in the mail mode. Nine percent of people did not answer the question on receiving information about reducing unplanned harm. For the subsequent question about whether respondents understood the information provided, only 37% of people gave a valid answer, 20% of mail survey respondents who likely should have answered this question had missing data which was the highest for any question. Comments from respondents during pilot testing on a questionnaire feedback form included that these two questions were too “fancy” or “vague”. It was recommended by The Group to remove these two questions. Two final questions were examined. This included the question “*Were you in the hospital for a childbirth experience?*” This was read by respondents as “*I was in this hospital previously for childbirth*” or “*I was born in this hospital*”. It was recommended by The Group that this question be re-written as “*Was this hospital stay for a childbirth experience?*” A demographic question that asks respondents to self-report their ethnicity was found to be difficult to answer if the respondent wished to select more than one response option. The Group recommended that including instruction for respondents to ‘check all that apply’ would address this issue. Based on the above analyses and recommendations by The Group, a total of five questions were removed. These include two questions related to waiting too long to get a hospital bed, one question on how hospital staff met your cultural or spiritual needs and two questions related to whether anyone gave you

information about reducing unplanned harm related to your care in hospital. It should be noted that there were no changes required for questions that respondents were able to answer including the four-point scale response categories questions. The Group finally recommended the implementation of the survey. The finalized survey³²⁻³⁴ can be found on CIHI’s patient experience website (<https://www.cihi.ca/en/patient-experience>) and is currently endorsed by Accreditation Canada as a survey for use in acute care hospitals across Canada.

Discussion

The main goal of this pan-Canadian initiative was to fill a gap in health system performance reporting and provide a national survey standard on patient experience measures to allow for the comparison of results among Canadian acute care hospitals and facilitate best practice sharing and benchmarking for quality improvement. The rigorously tested and validated HCAHPS survey, which has been previously used by several Canadian jurisdictions and internationally, was used as the base for the development of the new Canadian survey.^{1-3, 35-39} Survey dimensions of care important to patients such as internal coordination of care, patient-centred care, discharge and transition processes were identified to develop the Canadian survey questions through cognitive and pilot testing. For cognitive testing, changes were made to better align the translations of the English and French questions and skip pattern questions were formatted. In addition, there were 11 considerations related to the new Canadian questions which included the adjustment of the response categories (“not at all”, “partly”, “quite a bit”, and “completely”) and questions which could be categorized as “double barreled”. Pilot test results showed that 10 of the 55 questions required further discussion, which resulted in the

removal of five questions due to low correlations between “global hospital experience” questions and “wait times” questions, high response rate of the “not applicable” category and survey questions perceived to be too “fancy” or “vague” by respondents. The Group recommended the final Canadian survey for use in Canadian acute care hospitals.

The success of Canada’s first pan-Canadian acute care patient experiences survey is a result of rigorous methodology and a collaborative consultation approach among CIHI, the IJ members and survey subject matter experts³³. Developing survey questions through both a qualitative and quantitative lens enabled extensive discussions on health care experiences that mattered to patients. A limitation of the study was that survey testing was only done using mail and telephone administered surveys, but not online.

To date, the CPES-IC has been implemented in seven jurisdictions across Canada including, Nova Scotia, Prince Edward Island, New Brunswick, Ontario, Manitoba, Alberta and British Columbia. Hospital level comparative results, including 22 patient reported experience measures are provided to participating jurisdictions.³⁴ CIHI is working with health system stakeholders to utilize patient reported data for quality improvement in inpatient care services and conducting linkage of patient experience survey information to clinical outcome data to provide additional insights into the patient journey across the health system.

In summary, the development of the first pan-Canadian standardized patient experiences survey for hospital based inpatient care has demonstrated the power of national collaboration. It has evoked a strong commitment across the patient-centred measurement community in Canada to build on this experience in order to explore other opportunities for standardized measurement, as well as learning and sharing of best practices to improve the experiences of Canadians who utilize the healthcare system.

References

- Centers for Medicare and Medicaid Services, Baltimore, MD United States. HCAHPS Hospital Consumer Assessment of Healthcare Providers and Systems. <http://www.hcahpsonline.org/en/>. Accessed April 10, 2018.
- HCAHPS Fact Sheet (CAHPS® Hospital Survey) November 2017. http://www.hcahpsonline.org/globalassets/hcahps/facts/hcahps_fact_sheet_november_2017a.pdf. Accessed April 10, 2018.
- Giordano L, Elliot M, Goldstein E, Lehrman W, Spencer P. Development, Implementation, and Public Reporting of the HCAHPS Survey. *Med Care Res and Rev.* 2010; 67:27-37.
- Hays, RD, Nelson EC, Rubin HR, Ware JE Jr, Meterko M. Patient judgments of hospital quality: report of a pilot study. *Medical care.* 1990;28(9 Suppl):S29-S38.
- National Health Service Surveys. <http://nhssurveys.org/>. Accessed April 13, 2018.
- Murray, M. Background Information supporting a Pan- Canadian Approach to Acute Inpatient Satisfaction Surveying: Environmental Scan, Potential Indicators, and Project Planning Issues. Report prepared for the Canadian Institute for Health Information. March 31, 2010.
- Zolnierek KH, Di Matteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Medical care.* 2009; 47(8):826-34.
- Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open;* 2013. 3(1).
- Canadian Patient Experiences Reporting System Metadata. Canadian Institute for Health Information Ottawa ON Canada <https://www.cihi.ca/en/canadian-patient-experiences-reporting-system-metadata>. Accessed May 22, 2018
- Canadian patient Experiences Survey – Inpatient Care Procedure Manual. December 2017. Canadian Institute for Health Information Ottawa ON Canada. <https://www.cihi.ca/sites/default/files/document/cpes-ic-procedure-manual-2017-en-web.pdf> Accessed May 22, 2018.
- Canadian Institute for Health Information Ottawa ON Canada; http://indicatorlibrary.cihi.ca/download/attachments/1114124/Peer-Group-Methodology_EN.pdf Peer Grouping Methodology. Accessed February 23, 2017.
- Worthington C. Patient satisfaction with health care: Recent theoretical developments and implications for evaluation research. *Canadian Journal of Program Evaluation.* 2005; 20 (3), 41-63.
- Carey R, Seibert J. (1993). A patient survey system to measure quality improvement: Questionnaire reliability and validity. *Medical Care.* 1993; 31 (9): 834-845.
- Charles C, Gauld M, Chambers L, O’Brien B, Haynes RB, Labelle R. How was your hospital stay? Patients’ reports about their care in Canadian hospitals. *Canadian Medical Association Journal.* 1994; 150: 1813-1822.
- Cleary P, Edgman-Levitan S, McMullen W, Delbanco T. The relationship between reported problems and patient summary evaluations of hospital care. *Quality Review Bulletin.* 1992; 18(2): 53-59.
- Cleary P, Edgman-Levitan S, Roberts M, Moloney T, McMullen W, Walker J, Delbanco T. Patients evaluate

- their hospital care: A national survey. *Health Affairs*. 1991; 10(4): 254-267.
17. Cleary P, Edgman-Levitan S, Walker J, Gerteis M, Delbanco T. Using patient reports to improve medical care: A preliminary report from 10 hospitals. *Quality Management in Healthcare*. 1993; 2(1): 31-38.
 18. Edgman-Levitan S, Cleary P. What information do consumers want and need: What do we know about how they judge quality and accountability. In Jones, S. & Lewin, M. (Eds), *Improving the Medicare Market: Adding Choice and Protections*. Washington, DC: National Academy Press; 1966.
 19. Gerteis M. What patients really want. *Health Management Quarterly*. 1993; 15 (3): 2-6.
 20. Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL. Introduction: Medicine and health from the patient's perspective. In: Gerteis M, Edgman-Levitan S, Daley J, Delbanco T. (eds) *Through the Patients Eyes*. San Francisco: Jossey Bass, 1993.
 21. Walker J, Hargraves L, Veroff D, Fowler E, Cleary P. Final Report. A second national survey of patient care. 1995; Grant No. 93-75. The Picker Institute, Boston.
 22. New Brunswick Health Council. Care Experience Survey – Cognitive Testing of French Questionnaire. New Brunswick Health Council. December 2009.
 23. Murray M. CIHI Canadian Inpatient Experience Questionnaire Pilot Survey Results. Report Prepared for the Canadian Institute for Health Information. November 22, 2013.
 24. Anhang PR, Elliott MN, Zaslavsky AM, Hays RD, Lehrman WG, Rybowski L, et al. Examining the role of patient experience surveys in measuring health care quality. *Medical Care Research and Review*. 2014; 71(5):522-554.
 25. Harkness J, Van de Vijer F, Moher P. *Cross-Cultural Survey Methods*. Hoboken New Jersey: John Wiley & Sons Inc; 2003: 35-56.
 26. McGill University Health Centre. Montreal QC. 2013. <https://muhc.ca/>
 27. Maneesriwongul W, Dixon JK. Instrument translation process: a methods review. *Journal of Advanced Nursing*. 2004; 48(2):175-186.
 28. Goldstein, E., Farquhar, M., Crofton, C., Darby, C., & Garfinkel, S. (2005). Measuring hospital care from the patients' perspective: An overview of the CAHPS hospital survey development process. *Health Research and Educational Trust*, 40, 1977–1995.
 29. Watt, T., Rasmussen, A., Groenvold, M., Bjoerner, J., Watt, S., & Bonnema, S. (2008). Improving a newly developed patient-reported outcome for thyroid patients, using cognitive interviewing. *Quality of Life Research*, 17, 1009–1017.
 30. Statistics Canada Ottawa, ON Canada; Statistics Canada's Questionnaire Design Resource Center (QDRC). <http://www.statcan.gc.ca/eng/rdc/index>. Accessed February 23, 2017.
 31. Hopman WM, Towheed T, Anastassiades T, Tenenhouse A, Poliquin S, Berger C, et al. Canadian normative data for the SF-36 health survey. *CMAJ*. 2000;163(3):265-71.
 32. Accreditation Canada – CPES-IC survey https://www.cihi.ca/sites/default/files/document/patient_reported_experience_measure_technotes_enweb.pdf
 33. Canadian Institute for Health Information Ottawa ON Canada; <https://www.cihi.ca/en/patient-experience-survey>. Accessed April 27, 2018
 34. Canadian Patient Experiences Survey: Comparative Results. <https://www.cihi.ca/en/patient-experience> Accessed May 22, 2018.
 35. Kemp KA, Quan H, Santana, M. Lack of patient involvement in care decisions and not receiving written discharge instructions are associated with unplanned readmissions up to one year. *Patient Experience Journal*. 2017; 4(2):13-22.
 36. Kemp KA, Santana MJ, Southern DA, McCormack B, Quan H. Association of inpatient hospital experience with patient safety indicators: a cross-sectional, Canadian study. *British Medical Journal*. 2016; 6(7): e011242.
 37. Kennedy GD, Tevis SE, Kent KC. Is there a relationship between patient satisfaction and favorable outcomes *Ann Surg*. 2014; 260(4):592-8.
 38. Isaac T, Zaslavsky AM, Cleary PD, et al. The relationship between patients' perception of care and measures of hospital quality and safety. *Health Serv Res*. 2010; 45:1024-1040.
 39. Vries H, Elliott MN, Hepner KA, Keller SD, Hays RD. Equivalence of mail and telephone responses to the CAHPS® hospital survey. *Health Serv Res*. 2005; 40(6 Pt 2):2120–2139.