Patient Experiences with Acute Inpatient Hospital Care in British Columbia

2008

Michael A. Murray PhD
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## Contents

**Acknowledgements** ................................................................. 3

**Executive Summary** ............................................................... 4
  - Survey Overview .......................................................... 4
  - About the Questionnaires .................................................. 4
  - Understanding Survey Results .......................................... 4
  - Survey Highlights .......................................................... 5

**Introduction** ........................................................................... 6
  - Background ................................................................. 6
  - About the Questionnaires .................................................. 6
  - About the Respondents .................................................... 7
  - About the Results .......................................................... 7
  - About the Report ........................................................... 7

**Overall Quality of Care** .......................................................... 8

**Patient-Centred Care Dimension Results** ................................... 11
  - Overview ................................................................. 11
  - Access to Care ........................................................... 12
  - Continuity and Transition ............................................... 13
  - Coordination of Care .................................................... 14
  - Emotional Support ......................................................... 15
  - Information and Education .............................................. 16
  - Involvement of Family ..................................................... 17
  - Physical Comfort .......................................................... 18
  - Respect for Patient Preferences ....................................... 20

**Other Questionnaire Sections** ............................................... 21
  - Paediatric Care ........................................................... 21
  - Maternity Care ............................................................. 23
  - Patient Safety ............................................................. 24
  - Care Transitions ........................................................... 26
  -Courtesy ................................................................. 26
  - Surgery-Specific Questions ............................................. 27

**High Performing Questionnaire Items & Opportunities for Improvement** ................................................................. 28
  - High Performing Items ................................................ 28
  -Opportunities for Improvement ......................................... 29

**Summary** ................................................................................. 30

**Appendix 1: Participating Facilities** .......................................... 31

**Appendix 2: Survey Methodology** ............................................ 32
  - Statistical Accuracy of Results ........................................ 32
  - Survey Weighting .......................................................... 32
  - Other Canadian Comparison Sample .................................. 33
  - Survey Response Rate ..................................................... 33
  - Sample Characteristics .................................................... 34

**Appendix 3: About the Survey Questionnaires** .......................... 35
  - Questionnaire Contents ................................................ 35

**Appendix 4: Author Bio.** ........................................................ 36
Acknowledgements

Under the direction of the Deputy Minister of Health and Chief Executive Officers of the health authorities of British Columbia, a Patient Satisfaction Steering Committee has undertaken to learn and share information about the experiences that BC residents have with health care they receive in the province. In 2009, that Steering Committee engaged Michael A. Murray PhD to assist them in reporting the results of 2008 surveying in the acute inpatient hospital sector.

The responses of almost 17,400 BC residents to questionnaires asking them about their acute inpatient BC hospital experiences made this report possible.

This project has benefited from the contributions of many other individuals, in particular, the expert advice provided by Lena Cuthbertson, Co-Chair, BC Patient Satisfaction Steering Committee. Baytree Communications provided editorial support and Apogee Communications designed layout and graphics.

This report relies on survey data collected by National Research Corporation (NRC) Canada and on reports created by them. A few select custom analyses of survey data were conducted by Michael Murray.

This report is intended to summarize the results of BC provincial and health authority reports, and is therefore descriptive in nature. Any conclusions are those of the author and no official endorsement by the Government of BC is intended or should be inferred.
Executive Summary

Survey Overview

This report provides descriptive information about British Columbians’ perceptions and reported experiences of inpatient acute care during the last three months of 2008. It summarizes the questionnaire results from almost 17,400 respondents.

Patients who were discharged between Oct. 1 2008 and Dec. 31 2008 were eligible for the survey. Random samples of patients discharged from 78 BC hospitals were sampled and mailed questionnaires about every two weeks by National Research Corporation (NRC) Canada, the patient survey research company selected to conduct the survey. Questionnaires were returned to NRC Canada for processing and reports created for individual hospitals, health authorities, and the province.

Questionnaires were mailed to almost 63 per cent of patients (34,312) discharged in Oct., Nov., and Dec. 2008. Four per cent (1,368) of these could not be delivered. Of the questionnaires that were delivered, 52.8 per cent (17,389) were returned. Because of the high response rate for this type of survey, 32 per cent of all patients discharged from an acute care hospital in BC in the target months (including those who did not meet the inclusion criteria for the survey) actually returned a questionnaire.

This was an extremely large survey, and the results in this report are very accurate. For the province overall, percentage estimates around 50 per cent for all survey sectors combined have a very tight confidence interval of about ± 0.61 per cent.

About the Questionnaires

The acute inpatient questionnaire used in BC in 2008 was first developed by the Picker Institute in the USA and then adapted for Canada in 2002. The BC acute inpatient survey uses three slightly different questionnaires: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, and a maternity questionnaire. The paediatrics and maternity questionnaires include all the general inpatient questions but have additional sector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having paediatric and maternity questions also means that important but more specific information can be obtained.

The three inpatient questionnaires focus primarily on the Picker Institute’s eight dimensions of care:

- Access to Care
- Continuity and Transition
- Coordination of Care
- Emotional Support
- Information and Education
- Involvement of Family
- Physical Comfort
- Respect for Patient Preferences

Questionnaires also asked patients about their overall quality of care, and evaluations of safety, courtesy, and hospital amenities. Sections about surgery and about transitions in care are new in 2008. For more information about the questionnaires, please see Appendix 3.

Understanding Survey Results

The many questions in the different questionnaires use a variety of answer formats. For the purposes of this report, all responses are recoded as either a Positive or Not Positive result. For example, the overall quality question is answered on a five-point answer scale. For it and a few other similar questions, the “Excellent,” “Very Good” and “Good” answers are combined and counted as a Positive response. “Fair” and “Poor” answers are combined and counted as a Not Positive or Problem response.

For the most part, data in this survey are comparable to those obtained in a 2005 BC inpatient survey and to other surveys of Canadian inpatients done in selected provinces in 2007 and 2008\(^1\). Several questions do not have comparison data either because they are new in 2008, for example surgery questions, or because the questions have not been used elsewhere in Canada.

Where possible this report presents results from British Columbia inpatient surveys done in both 2005 and 2008, and the Canadian comparison data. Results are shown for BC overall, and where appropriate, BC’s six health authorities. Results are almost always shown using positive/not positive scoring.

\(^1\) Comparisons of British Columbia overall results to other Canadian data refers to data collected from October 2007 - December 2008 in New Brunswick (n= 273), Ontario (n= 75937), Saskatchewan (n= 7306) and Yukon (n= 320).
Survey Highlights

The purpose of this report is to give an overview description of the experiences of almost 17,400 inpatient respondents as provided by both overall and summary measures and a great many individual questionnaire items.

When asked to give an overall rating about the inpatient care they received in British Columbia’s hospitals in late 2008, 92 per cent of all responding patients gave a positive response. This is virtually identical to the comparison number from other provinces. The Provincial Health Services Authority (PHSA) had a higher figure than that for BC overall, while the remaining five Health Authorities had virtually the same score as BC overall.

“Overall quality” is just one measure of patients’ experience. When asked, 67 per cent of respondents would “definitely” recommend the hospital to family and friends. Only 6 per cent would not. This is virtually identical to other comparable Canadian figures.

Across all the eight Picker dimensions of care, Physical Comfort had the highest BC overall score (81 per cent positive); this is very slightly higher than the other Canadian comparison figure. The Access to Care indicator had the second highest score (80 per cent positive). Continuity and Transition had the lowest dimension score (64 per cent positive).

A great many other results are presented in this report. Many show high performance, with positive scores of more than 85 per cent or more. There are, however, items with low performance rates which offer opportunities for improvement.
Introduction

Every day in British Columbia thousands of people seek and receive health care from hundreds of facilities and many thousands of health care providers. The sickest of these people, the ones with the most acute healthcare needs, are admitted to and treated in the acute hospitals in the province. More than 230,000 patients (not counting repeat visits or newborns) are admitted to BC hospitals every year, and spend more than 2.7 million days total in hospital. BC’s acute hospitals are organized into six health authorities. They range from the largest, tertiary care facilities providing care to patients with complex health needs, to small local hospitals (without inpatient beds) offering front-line care in remote areas of the province. Given the cost, complexity and importance of the services provided in acute care hospitals in BC, health care managers and providers, governments and the public want to understand the quality of care provided and the experience of patients. This report provides descriptive information about British Columbians’ perceptions and reported experiences of hospital inpatient acute care in 2008.

Background

A council comprised of the Deputy Minister of Health, other Ministry executives and the Chief Executive Officers of the health authorities struck a steering committee to commission and oversee surveys of patients across the province. The BC Patient Satisfaction Steering Committee was asked to develop a provincial approach to measure patient experience to provide an important accountability function for health care providers, health authorities, and the provincial government. At the same time as fulfilling the accountability mandate, the approach taken needed to provide information to hospitals and health authorities for quality improvement.

Since 2003, the steering committee has co-ordinated several surveys to understand the patient experience in inpatient acute care, emergency departments, oncology, and long-term care. The first survey of inpatient acute care in hospitals was conducted in 2005.

Patient Experiences with Acute Inpatient Hospital Care in British Columbia, 2008 focuses on results from patients discharged between October and December 2008. It brings together the results and summarizes the findings of almost 17,400 questionnaires. Results are presented for the province overall and, where appropriate, BC’s six health authorities. Where possible these results are compared to the results of the 2005 BC acute inpatient survey and to comparison results from a sample of Canadians who completed the same questionnaire in other provinces in 2007 and 2008.

About the Questionnaires

The acute inpatient questionnaire used in BC in 2005 and then again in 2008 was first developed by the Picker Institute in the USA and then adapted for Canada in 2002. The 2008 BC inpatient survey uses three slightly different questionnaires: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, and a maternity questionnaire. The paediatrics and maternity questionnaires include all the general inpatient questions but have additional sector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having paediatric and maternity questions also means that important but more specific information can be obtained.

The three inpatient questionnaires focus primarily on the Picker Institute’s eight dimensions of care:

- Access to Care
- Continuity and Transition
- Coordination of Care
- Emotional Support
- Information and Education
- Involvement of Family
- Physical Comfort
- Respect for Patient Preferences

Questionnaires also asked patients about their overall quality of care, and evaluations of safety, courtesy, and hospital amenities. Sections about surgery and about transitions in care are new in 2008. For more information about the questionnaires, please see Appendix 3.

The many questions in the different questionnaires use a variety of answer formats. For the purposes of this report, all responses are recoded as either a Positive or Not Positive result. For example, the overall quality question is answered on a five-point answer scale. For it and a few other similar questions, the “Excellent,” “Very Good” and “Good” answers are combined and counted as a Positive response. “Fair” and “Poor” answers are combined and counted as a Not Positive response. A large number of questions use a “Yes, always” or “Yes, often”; “Yes, sometimes;” and “No” answer scale. For the majority of these questions, the “Yes, always” and “Yes, often” answers are considered to be “positive.”

Data collected from Oct. 2007 to Dec. 2008 in New Brunswick (n= 273), Ontario (n= 75937), Saskatchewan (n= 7306) and Yukon (n= 320).

For some negatively worded questions, the “No” response is positive.
About the Respondents

Patient experience questionnaires were mailed to more than 34,000 people discharged from 78 hospitals across the province (See Appendix 1) between October 1 and December 31, 2008. A paediatric questionnaire was mailed to patients under 17 years of age, and a maternity questionnaire was mailed to women who had been in hospital to deliver a baby.

Random samples of patients discharged from 78 BC hospitals were sampled and mailed questionnaires about every two weeks by National Research Corporation (NRC) Canada, the patient survey research company selected to conduct the survey. Questionnaires were returned to NRC Canada for processing and reports created for individual hospitals, health authorities, and the province overall.

Questionnaires were mailed to almost 63 per cent of patients (34,312) discharged in Oct., Nov., and Dec. 2008. Four per cent (1,368) of these could not be delivered. Of the questionnaires that were delivered, 52.8 per cent (17,389) were returned. Because of the high response rate for this type of survey, 32 per cent of all patients discharged from an acute care hospital in BC in the target months (including those not included in the survey) actually returned a questionnaire.

About the Results

Almost 17,400 individuals (52.8 per cent response rate) returned the questionnaire (Appendix 2). The results presented in this report summarize the experiences of these patients, either as reported by themselves (80 per cent), by patients with the help of someone else (13.2 per cent), or by someone on their behalf (6.8 per cent).

This was an extremely large survey, and the results in this report are very accurate. For the province overall, percentage estimates around 50 per cent for all survey sectors combined have a very tight confidence interval of about ± 0.61 per cent. With two exceptions, health authority accuracy is within ± 1.4 per cent. Because of smaller sample sizes, NHA and PHSA are still quite accurate at ± 2.3 per cent and ± 3.6 per cent respectively.

Appendix 2 provides information about the survey method, analyses, accuracy of the survey results, potential response bias, and age and gender differences between mailed samples and respondents. The response rates of men and women are roughly equal and there should be no gender bias in the sample. However, while only 24 per cent of the initial sample is aged 60 to 75, this age group had a higher response rate (64 per cent) than others and as a result, represent more than 29 per cent of the respondents in this report.

About the Report

The purpose of this report is to give an overview description of the experiences of almost 17,400 inpatient respondents as provided by both overall and summary measures and a great many individual questionnaire items. Where possible this report presents results from British Columbia inpatient surveys done in both 2005 and 2008, and the Canadian comparison data. Results are shown for BC overall, and where appropriate, BC's six health authorities. For the most part, data in this survey are comparable to the other results. However, several questions do not have comparison data either because they are new in 2008, for example surgery questions, or because the questions have not been used elsewhere in Canada.
**Overall Quality of Care**

There are several ways to report patients’ overall evaluations of the care they received. The “Overall Rating” question provides a single item summary measure capturing a patient’s full experience of care. Figure 1 shows these results for the province overall and for each health authority for both 2008 and 2005; 92 per cent of respondents gave positive ratings. The provincial results are the same as the “Other Canadian” comparison figure. Neither the province nor any health authority changed scores in a statistically significant way between 2005 and 2008. PHSA scored the most positive results at 97 per cent positive; the other health authorities have the same or virtually the same results as the BC Overall figure in 2008.

**Figure 1: Overall Quality of Care Item for Province and Health Authorities**

![Overall Quality of Care Graph](image)

Responses to the individual answer options for the overall quality question are shown for the province overall in Figure 2. The vast majority of answers are in the “Excellent” and “Very Good” range, with only a small percentage of “Poor” answers. The results have not changed substantially between 2005 and 2008.

**Figure 2: Overall Quality of Care Ratings for Province**

![Overall Quality of Care Ratings Graph](image)
Another way to assess patients' overall view of their care is to calculate an aggregate score that summarizes all responses to all items included in Picker dimension scores. The All Dimensions Combined Score aggregates results from 35 individual questions, and shows positive patient ratings across all these questions together. The All Dimensions Score counts positive answers over a wide range of much more specific reports and ratings of patient experience as compared to the overall quality rating which is a single five-point rating scale item asking about care in general. As shown in Figure 3, about 72 per cent of all answers were positive. The overall provincial results are the same as 2005 and virtually the same as the “Other Canadian” results. All regions have the same or virtually the same score as the province except for FHA which has a very slightly lower score.

Figure 3: All Dimensions Composite Score for BC and Health Authorities
Finally, it is possible to look at another single item indicator of patients’ overall feelings about the facility where they received care, the Likelihood to Recommend question.

Figure 4 shows that overall 67 per cent of BC patients would “Definitely Recommend” the facility where they received care. There is a slight increase in scores between 2005 and 2008. The PHSA results are substantially higher than other regions, and have improved since 2005. The NHA results have also improved from 2005, but they remain slightly lower than the provincial score. Other regions showed no change from 2005. VIHA scores the same as BC overall. VCHA scores were higher than BC overall, and IHA, FHA, and NHA very slightly lower.

Figure 4: “Likelihood to Recommend” Question for Province and Health Authorities

Would you recommend this hospital to your friends and family?

<table>
<thead>
<tr>
<th>Health Authorities</th>
<th>2008</th>
<th>2005</th>
<th>% of patients who responded positively</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC Overall</td>
<td>67%</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Interior Health</td>
<td>64%</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td>Fraser Health</td>
<td>63%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Vancouver Coastal Health</td>
<td>72%</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>Vancouver Island Health</td>
<td>68%</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Northern Health</td>
<td>63%</td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td>Provincial Health Services (PHSA)</td>
<td>85%</td>
<td>81%</td>
<td></td>
</tr>
</tbody>
</table>

In summary, respondents to the 2008 BC inpatient survey give overall or summary scores that are very similar to the 2005 survey. They are comparable to or just slightly lower than the responses in “Other Canadian” comparator figures. Finally, there are some slight differences among health authorities.
Dimensions of Patient-Centred Care

Overview

Most of the questions in the three inpatient questionnaires are formed around the eight dimensions of care originally identified by the Picker Institute:

- **Access to Care** measured patients’ experience in getting care during their hospital stay. It taps three aspects of internal access: getting all the services they needed, and how they felt about the availability of doctors and nurses.
- **Continuity and Transition** asked patients if they felt prepared to take care of themselves and knew what to watch for when they left hospital. This included knowing about their medicines and who to call if they needed help.
- **Coordination of Care** measured patient experience about how organized the admission process was, whether tests were done on time and if staff explanations were consistent.
- **Emotional Support** asked patients if they received help, encouragement and support for any fear, anxiety and concerns associated with their illness and hospital stay.
- **Information and Education** measured whether patients were kept informed and if their questions were answered.
- **Involvement of Family** asked patients if family members were sufficiently informed during their hospital stay.
- **Physical Comfort** measured patient experience around pain management and how long it took for a response after help was requested.
- **Respect for Patient Preferences** asked patients if they were treated with respect and had sufficient privacy during their hospital stay.

This section of the report provides information about both aggregate dimensions of care scores and individual items from those aggregates. Much like the All Dimensions Composite Score, each dimension gets a score that presents the per cent of positive answers across several questions. Dimension scores are presented for BC overall and the health authorities. Results for individual questions are presented for the overall BC results.
Access to Care

The "access to care" indicator measures patient experiences in getting care during a hospital stay. It taps three aspects of this internal access experience: getting all the services patients needed, and how patients felt about the availability of doctors and nurses. The provincial score at about 80 per cent, as shown in Figure 5, is virtually unchanged from 2005, and is very slightly below the "Other Canadian" comparison value. No region changed scores across time. FHA is very slightly below the provincial figure.

The "access to care" indicator is a good summary measure. Performance on the individual questions that make up this indicator are also useful as a guide to specific areas for improvement. The results for the overall score and its three component parts for the province are shown in Figure 6.

Positive score ratings of nurse and doctor availability are not substantially different. At 87 per cent and 83 per cent respectively, both are higher than patient ratings about getting all the services they needed (69 per cent).
Continuity and Transition

Patients need to be prepared for leaving hospital – it is important that they know how to take care of themselves, what to watch for, who to call if they need help and information about medicines they may be taking. The "continuity and transition" indicator includes five items, and the aggregate values for the province and health authorities are shown in Figure 7. As a whole, the "continuity and transition" scores are lower than any other dimension rating at about 64 per cent. Ratings for the province have changed little since 2005, and the 2008 scores are virtually the same as the "Other Canadian" comparator numbers. Scores for PHSA and NHA are both higher than the provincial figure; PHSA is substantially higher.

Scores for the five individual questions making up the "continuity and transition" indicator are shown in Figure 8. There is substantial variation in the per cent positive scores ranging from a high of 81 per cent for "knowing who to call for help" to a low of 46 per cent for being told about resuming usual activities.

Figure 7: Continuity of Care Dimension Scores for Province and Health Authorities (per cent Positive)

Figure 8: Continuity and Transition Dimension - Individual Questions (per cent Positive)
**Coordination of Care**

When patients come to a hospital, they expect care to be coordinated: that admission processes will be organized, tests will be done on time, and that staff explanations will be consistent. The "coordination of care" indicator aggregates five individual questions, and the results for the province and the health authorities are shown in Figure 9. Ratings at the provincial level at about 72 per cent positive are about the same as in 2005, and are very slightly lower than the “Other Canadian” comparator score. NHA scores are slightly higher than the provincial result. PHSA and FHA scores are lower than the provincial figure. The remaining regions are the same or virtually the same as BC overall.

The ratings for the five individual items composing the "coordination of care" indicator are shown in Figure 10. Three of these items had roughly the same performance, around 75 per cent positive. Sixty-six per cent of patients gave a positive score for the on-time performance of scheduled tests and procedures.
Emotional Support

The emotional support dimension focuses on the extent to which patients get help, encouragement and support for the fear, anxiety, and concerns associated with their illness and hospital stay. Five items are included in the “emotional support” indicator, and results province-wide and for individual health authorities are shown in Figure 11. The provincial score in 2008 at about 66 per cent is not different than the 2005 score, but is very slightly lower than the “Other Canadian” comparison score. Scores for PHSA are higher than the provincial results, and those for FHA are very slightly lower.

Figure 11: Emotional Support Dimension Scores for Province and Health Authorities (per cent Positive)

The five items making up “emotional support” varied from a high of 81 per cent positive for patient ratings of confidence and trust in their doctor to 53 per cent positive around patient discussion with nurses about fear and anxiety. These results are shown in Figure 12.

Figure 12: Emotional Support Dimension - Individual Questions (per cent Positive)
Information and Education

An important role of health care providers is to keep patients informed and answer questions. The “information and education” indicator includes four items, and the results for the province and the health authorities are shown in Figure 13. The 2008 results at about 73 per cent positive are virtually the same as the “Other Canadian” comparison number. Neither the province overall nor any region changed scores between 2005 and 2008. PHSA’s results are higher than the province-wide result, and FHAs are very slightly lower.

Figure 13: Information and Education Dimension Scores for Province and Health Authority (per cent Positive)

There were slight differences in scores in three questions about receiving understandable answers and explanations to questions about tests. Eighty-seven per cent of patients waiting to get into a room at admission provided positive answers when asked if the reason for the delay was explained to them. There were negligible differences between 2005 and 2008.

Figure 14: Information and Education Dimension - Individual Questions (per cent Positive)
Involvement of Family

Family and loved ones play an important role in a patient's care. The three items of the "involvement of family" indicator touch on whether family members were sufficiently informed during the hospital stay. The 2008 provincial results at about 67 per cent positive, shown in Figure 15, are very slightly lower than the "Other Canadian" comparator figures. Neither the province overall nor any health authority changed substantially between 2005 and 2008. PHSA results are higher than the provincial result, while NHA's results are very slightly higher.

Figure 15: Involvement of Family Dimension Scores for Province and Health Authorities (per cent Positive)

Results for the three questions in the "involvement of family" indicator varied substantially. Almost 85 per cent of patients gave positive ratings to the amount of information given to family, while 57 per cent gave positive ratings to questions about the amount recovery information provided to family and the opportunity for family to talk to the patient's doctor.

Figure 16: Involvement of Family Dimension - Individual Questions (per cent Positive)
Physical Comfort

Patients’ physical comfort and pain management are important aspects of patient-centred care. Six items are used to form the “physical comfort” indicator, and the results for the province and the health authorities are shown in Figure 17. At 80.5 per cent, BC’s results are virtually identical to the “Other Canadian” comparator and about the same as the 2005 results. No health authority’s score has changed from 2005. All regions had the same or virtually the same scores as the province overall except for FHA, where scores are very slightly below the overall figure.

Figure 17: Physical Comfort Dimension Scores for Province and Health Authorities (per cent Positive)
The six items in the “physical comfort” indicator can be broken down into questions about amount of time and medicine, and questions about patient ratings of experience. Results for these questions are shown in Figure 18. About 68 per cent of patients were positive about the time it took to receive help to get to the bathroom. In general, 97 per cent of patients reported getting help within 15 minutes when they used the call bell. Patients felt 66 per cent positive about whether the wait was reasonable. About 88 per cent of patients who experienced pain and requested medication reported receiving it within 15 minutes. Most patients were positive when asked if staff did everything they could to control pain (76 per cent positive), and 90 per cent of patients responded that they received the right amount of pain medication.

Figure 18: Physical Comfort Dimension - Individual Questions (per cent Positive)

- When you needed help getting to the bathroom, did you get the help in time? 66% (2008), 69% (2005)
- How many minutes after you used the call button did it usually take before you got the help you needed? 97% (2008), 96% (2005)
- In general, after you used the call button, was the time you waited for help reasonable? 66% (2008), 64% (2005)
- How many minutes after you requested pain medicine did it usually take before you got it? 88% (2008), 88% (2005)
- Do you think that the hospital staff did everything they could to help control your pain? 76% (2008), 76% (2005)
- Overall, how much pain medicine did you get? 90% (2008), 90% (2005)
Respect for Patient Preferences

Increasingly, patients are viewed as partners in their care and caregivers are paying closer attention to their preferences. This includes treating patients with respect and providing privacy during their hospital stay. Four items make up the “respect for patient preferences” indicator and results for the province overall and the health authorities are shown in Figure 19. At 77 per cent, the provincial results are the same as the “Other Canadian” comparator result. Neither the province nor any region has changed since the 2005 survey. All regions are the same or virtually the same as the provincial result.

Figure 19: Respect for Patient Preferences Dimension for Province and Health Authorities (per cent Positive)

Ratings of the four questions making up the “respect of patient preferences” indicator vary appreciably. Patients responded positively (79 per cent to 87 per cent range) to three questions about respect and dignity, while 54 per cent responded positively about patients having enough say in their treatment.

Figure 20: Respect for Patient Preferences Dimension - Individual Questions (per cent Positive)
Other Questionnaire Sections

Paediatric Care

Paediatric patients, both children and youth, account for only a small proportion (about 6 per cent) of all hospital inpatient discharges. But they are important enough that BC Children’s Hospital is organized specifically for paediatric care. Although the largest number of paediatric patients (22 per cent) come from BC Children’s Hospital, paediatric patients are found in 48 hospitals.

A modified version of the BC Inpatient questionnaire was used for the paediatric patients in all hospitals. Questionnaires were delivered to 2,502 patients under the age of 17 (excluding those having babies), and 900 (36 per cent) were returned.

Results of surveys with NRC Canada’s paediatric questionnaire were reviewed in preparation for the first acute inpatient survey in 2005. It was decided to use the basic acute inpatient questionnaire but add 10 questions to help capture the paediatric patient experience. In 2008, another review was conducted and five more questions added.

Respondents to the paediatric questions, whether parents or youth, gave very slightly higher positive scores to the overall rating question compared to the non-paediatric and non-maternity patients (92.8 per cent versus 91.7 per cent). However, the All Dimensions Combined and Likelihood to Recommend scores were virtually identical.

The paediatric questionnaire has 15 unique questions aimed exclusively at paediatric care. The responses for 12 non-surgery questions are shown in Figure 21. The highest scoring question (almost 93 per cent) asked if parents felt welcome to stay with their child as long they wanted.

Figure 21: Paediatric Non-surgery Questions (per cent Positive)

4 Questionnaires were delivered to 2,502 patients: 2,614 were mailed, 112 were returned as undeliverable.

5 Some questions were only asked in 2008 and have no comparison data.
The second-highest ranked question (77 per cent) asked whether the child received all the care he or she needed. Eight questions scored between 63 per cent and 70 per cent. Finally, only 48 per cent were positive about the availability of doctors to answer questions or concerns, and 48 per cent of respondents who experienced emergency department care thought the care was well organized.

Almost 57 per cent of paediatric patients had an operation or procedure, and responses of their parents are shown in Figure 22. The five survey questions address communication and information issues between hospital physicians and staff and either the patient or the parent. Four questions received more than 79 per cent positive responses. Finally, 72 per cent responded positively when asked if information was provided about how the child would feel after the operation. As a whole, the surgery-related questions were answered more positively than the non-surgery questions.

Figure 22: Paediatric Surgery Items, 2008 only (per cent Positive)
**Maternity Care**

There were more than 43,000 live births in BC in 2008, and the vast majority were in one of 42 BC hospitals. Fifteen per cent were at BC Women’s Hospital. While most women deliver their babies without major problems, there are occasionally complicated deliveries and approximately 30 per cent of all births in BC are by caesarean section.

A modified version of the BC Inpatient questionnaire was used for women who came to the hospital to deliver a baby; 4,594 questionnaires were delivered to patients and 2,178 (47.4 per cent) were returned.

This maternity version of the questionnaire asked 15 unique questions about the childbirth experience. These items were taken from NRC Canada’s maternity survey tool. The results from 14 evaluative questions are shown in Fig 23.

Respondents to the maternity questions gave very slightly higher positive scores to the overall rating question compared to the non-paediatric and non-maternity patients (93.5 per cent versus 91.7 per cent). Their All Dimensions Combined (73.9 per cent versus 71.8 per cent) and Likelihood to Recommend (69.9 per cent versus 66.4 per cent) scores were also higher.

Four questions had a positive response rate higher than 80 per cent, while another five had ratings between 58 and 63 per cent. Five items, however, had scores at or below 50 per cent. More than 55 per cent of women did not think positively about how well their pain was controlled, and only 40 per cent were positive about the information provided about blood tests and immunizations for their babies.

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6 Questionnaires were delivered to 4,594 patients: 4,748 were mailed, 154 were returned as undeliverable.

7 Some questions were only asked in 2008 and have no comparison data.
Patient Safety

In addition to all other aspects of their hospital experience, patients expect safe care. Three questions8 were asked about perceived harm and two practices indicative of safe care. In response to the crucial question of whether patients or families suffered personal injury or harm from a medical error or mistake, 96 per cent of respondents said “No” as shown in Figure 24. There are no differences by health authority.

Figure 24: Personal Injury or Harm Question

During your most recent inpatient stay, do you believe you (your child) or your family members suffered personal injury or harm, which resulted from a medical error or mistake?

<table>
<thead>
<tr>
<th>Health Authorities</th>
<th>2008</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC Overall</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Interior Health</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Fraser Health</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Vancouver Coastal Health</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td>Vancouver Island Health</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Northern Health</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>Provincial Health Services (PHSA)</td>
<td>95%</td>
<td>96%</td>
</tr>
</tbody>
</table>

8In the pediatric questionnaire, the phrase “your child” was used instead of the word “you.”
9These are custom questions used almost solely in BC, and as a result, there are no reliable comparison figures.
A great many factors contribute to safety in hospitals including safe practices done by staff and physicians. Figure 25 and Figure 26 show responses for two questions about these.

Figure 25: Staff Wash Hands Question

Did you notice staff wash or disinfect their hands before caring for you?

<table>
<thead>
<tr>
<th>Health Authorities</th>
<th>2008</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC Overall</td>
<td>60%</td>
<td>62%</td>
</tr>
<tr>
<td>Interior Health</td>
<td>59%</td>
<td>64%</td>
</tr>
<tr>
<td>Fraser Health</td>
<td>59%</td>
<td>61%</td>
</tr>
<tr>
<td>Vancouver Coastal Health</td>
<td>62%</td>
<td>64%</td>
</tr>
<tr>
<td>Vancouver Island Health</td>
<td>60%</td>
<td>61%</td>
</tr>
<tr>
<td>Northern Health</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>Provincial Health Services (PHSA)</td>
<td>65%</td>
<td>59%</td>
</tr>
</tbody>
</table>

On the hand washing question, the BC overall score has decreased very slightly from 2005, and all health authorities had about the same score as the overall provincial score. The IHA score decreased from 2005.

On the Identification band checking question, the BC overall score improved very slightly between 2005 and 2008. FHA and VCHA also improved very slightly across time. FHA and VIHA had scores that were very slightly above the overall BC figure; IHA, NHA, and PHSA had scores that were lower.

Figure 26: Check Identification Band Question

Did staff check your identification band before giving you medications, treatments, or tests?

<table>
<thead>
<tr>
<th>Health Authorities</th>
<th>2008</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC Overall</td>
<td>66%</td>
<td>65%</td>
</tr>
<tr>
<td>Interior Health</td>
<td>64%</td>
<td>63%</td>
</tr>
<tr>
<td>Fraser Health</td>
<td>69%</td>
<td>63%</td>
</tr>
<tr>
<td>Vancouver Coastal Health</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td>Vancouver Island Health</td>
<td>68%</td>
<td>64%</td>
</tr>
<tr>
<td>Northern Health</td>
<td>62%</td>
<td>59%</td>
</tr>
<tr>
<td>Provincial Health Services (PHSA)</td>
<td>56%</td>
<td>55%</td>
</tr>
</tbody>
</table>

0% 20% 40% 60% 80% 100%
% of patients who responded positively

% of patients who responded positively

% of patients who responded positively
Care Transitions

In 2008, three new questions were added to the BC questionnaire to examine patients’ experience with the care transitions as they left the hospital to return home. These questions came from The Care Transitions Measure, a public domain questionnaire. These questions are different than most of the questions in the questionnaire in two ways. First, they use a four-point Agree-Disagree answer format. Second, and more importantly, two of them ask patients to reflect on their own understanding of medications or managing their own health. This is a departure from most questions that ask about patient experience and evaluations of care and services.

Patients had quite positive responses to the new questions about care transitions, as shown in Figure 27. More than 92 per cent of respondents reported understanding the purpose of their medications: 61 per cent agreed and 31 per cent strongly agreed. About 91 per cent of respondents reported a good understanding of their responsibilities to manage their own health (65 per cent agreed and 26 per cent strongly agreed). Finally, 87 per cent of respondents felt that staff did take their preferences into account (67 per cent agreed and 20 per cent strongly agreed).

Figure 27: Continuity of Care Items, 2008 only (per cent Positive)

<table>
<thead>
<tr>
<th>Care Transitions Questionnaire Items (asked in 2008 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I left the hospital, I clearly understood the purpose for taking each of my medications.</td>
</tr>
<tr>
<td>Yes, somewhat</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>8%</td>
</tr>
<tr>
<td>When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.</td>
</tr>
<tr>
<td>Yes, somewhat</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>9%</td>
</tr>
<tr>
<td>The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.</td>
</tr>
<tr>
<td>Yes, somewhat</td>
</tr>
<tr>
<td>0%</td>
</tr>
<tr>
<td>13%</td>
</tr>
</tbody>
</table>

Courtesy

Patients expect to be treated with courtesy while receiving hospital care. Three questions were asked in both 2005 and again in 2008 about this; results are shown in Figure 28. Patients are overwhelmingly positive about the courtesy shown them by doctors, nurses, and admitting staff.

Figure 28: Courtesy Questions (per cent Positive)
Surgery-Specific Questions

Each year, approximately 490,000 surgeries are performed in BC. Over the past few years, several major initiatives have been undertaken to increase access, decrease wait times and improve continuity of care.

This is the first time BC patient survey results from surgical inpatients only have been presented. Among the almost 17,400 respondents, 55 per cent (n=9,613) \(^{10}\) responded “yes” when asked if they had an operation or procedure while an inpatient (Figure 29).

The four surgery-specific questions focus on communication of information before and after surgery.

Figure 29: Surgery Questions, 2008 only (per cent Positive)

Beforehand, did a member of staff answer your questions about the operation or procedure in a way you could understand? 73%

Beforehand, did a member of staff explain the risks and benefits of the operation or procedure in a way you could understand? 72%

After the operation or procedure, did a member of staff explain how the operation or procedure had gone in a way you could understand? 62%

Beforehand, were you told how you could expect to feel after you had the operation or procedure? 53%

\(^{10}\) Unweighted numbers; includes paediatric surgery results. This represents 60 per cent of weighted cases.
High Performing Questionnaire Items & Opportunities for Improvement

High Performing Items

Although more than 60 different questions were asked across all versions of the BC inpatient questionnaires, most patients were asked core questions. Figure 30 shows the 10 highest performing of these items – responses with the highest positive percentages. The provincial performance was very high in these areas. Notably, three distinct questions relating to the courtesy of caregivers rated very highly. Three questions about physical comfort also received high ratings.

Figure 30: Core Questions with Highest per cent Positive Scores

- How many minutes after you used the call button did it usually take before you got the help you needed? 97%
- How would you rate the courtesy of your doctors? 95%
- How would you rate the courtesy of the staff who admitted you? 95%
- Overall, how would you rate the care you received from your doctors? 94%
- How would you rate the courtesy of your nurses? 93%
- How would you rate how well the doctors and nurses worked together? 93%
- Overall, how much pain medicine did you get? 90%
- How many minutes after you requested pain medicine did it usually take before you got it? 88%
- Did doctors talk in front of you as if you weren’t there? 87%
- How would you rate the availability of your nurses? 87%
Opportunities for Improvement

Figure 31 shows the 10 core questionnaire items with the lowest per cent positive scores. These give insight into general areas for improvement across all BC hospitals.

**Figure 31: Core Questions with Lowest per cent Positive Scores**

<table>
<thead>
<tr>
<th>Question</th>
<th>% of patients who responded positively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did they tell you when you could resume your usual activities, such as when to go back to work or drive a car?</td>
<td>46%</td>
</tr>
<tr>
<td>How would you rate the quality of the food (how it tasted, serving temperature, variety)?</td>
<td>52%</td>
</tr>
<tr>
<td>If you had any anxieties or fears about your condition or treatment, did a nurse discuss them with you?</td>
<td>53%</td>
</tr>
<tr>
<td>Did you have enough say about your treatment?</td>
<td>54%</td>
</tr>
<tr>
<td>Did they tell you what danger signals about your illness or operation to watch for after you went home?</td>
<td>55%</td>
</tr>
<tr>
<td>Did the doctors and nurses give your family or someone close to you all the information they needed to help you recover?</td>
<td>57%</td>
</tr>
<tr>
<td>Did your family or someone close to you have enough opportunity to talk to your doctor?</td>
<td>57%</td>
</tr>
<tr>
<td>Was it easy for you to find someone on the hospital staff to talk to about your concerns?</td>
<td>60%</td>
</tr>
<tr>
<td>If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you?</td>
<td>61%</td>
</tr>
<tr>
<td>Did someone tell you about medication side effects to watch for when you went home?</td>
<td>63%</td>
</tr>
</tbody>
</table>
Summary

When asked to give an overall rating about the inpatient care they received in British Columbia's hospitals in late 2008, 92 per cent of patients who reported on their experiences gave a positive response. This is virtually identical to 2005 results and to a comparison number for Canadian ratings in other provinces. Except for PHSA, which had a higher figure than that for BC overall, the other five Health Authorities had virtually the same scores.

But "overall quality" is just one general measure of patients' experience. When asked, 67 per cent of respondents would "definitely" recommend the hospital to family and friends, and only 6 per cent would not. This too is virtually identical to other comparable Canadian figures.

General measures only give a high-level view of patients' experiences in the hospital, and do not provide a detailed understanding about perceptions of quality of care or guide improvement activities. The general inpatient survey questionnaire asked more than 65 specific questions about many different aspects of care, including waiting times, courtesy, pain, instructions about medicines, care transitions, and perceived harm. The paediatric and maternity versions of the questionnaire asked even more questions. Many of the questions were combined into eight composites according to Picker's Dimensions of Patient-Centred Care categories. Across the 35 questions that are included in the Picker dimensions, 72 per cent of respondents' ratings were positive.

Figure 32 shows the BC overall score across all eight dimensions of care:

- **Access to Care** measured patients' experience in getting care during their hospital stay. It taps three aspects of internal access: getting all the services they needed, and how they felt about the availability of doctors and nurses.
- **Continuity and Transition** asked patients if they felt prepared to take care of themselves and knew what to watch for when they left hospital. This included knowing about their medicines and who to call if they needed help.
- **Coordination of Care** measured patient experience about how organized the admission process was, whether tests were done on time and if staff explanations were consistent.
- **Emotional Support** asked patients if they received help, encouragement and support for any fear, anxiety and concerns associated with their illness and hospital stay.
- **Information and Education** measured whether patients were kept informed and if their questions were answered.
- **Involvement of Family** asked patients if family members were sufficiently informed during their hospital stay.
- **Physical Comfort** measured patient experience around pain management and how long it took for a response after help was requested.
- **Respect for Patient Preferences** asked patients if they were treated with respect and had sufficient privacy during their hospital stay.

Across all the dimensions of care, Physical Comfort, at 81 per cent positive, has the highest score and was very slightly higher than the other Canadian comparison figure. At 80 per cent positive, Access to Care has a strong relationship with overall quality ratings. The Continuity and Transition indicator, at 64 per cent positive, had the lowest dimension score.

Respondents to the sector-specific questionnaires for paediatrics and maternity, and the subset of surgery patients within the general inpatient population, gave overall quality ratings very slightly higher than other inpatients.

The purpose of this report was to give an overview description of the experiences of almost 17,400 inpatient respondents as provided by both overall and summary measures, and a great many individual questionnaire items. Many of the individual items show high performance, with positive scores of more than 85 per cent or more. There are, however, items with low performance rates which offer opportunities for improvement.
Appendix 1: Participating Facilities

**Fraser Health Authority**
- Abbotsford Regional Hospital
- Burnaby Hospital
- Chilliwack General Hospital
- Delta Hospital
- Eagle Ridge Hospital
- Fraser Canyon Hospital
- Langley Memorial Hospital
- Mission Memorial Hospital
- Peace Arch Hospital
- Ridge Meadows Hospital
- Royal Columbian Hospital
- Surrey Memorial Hospital

**Interior Health Authority**
- 100 Mile District General Hospital
- Arrow Lakes Hospital
- Boundary Hospital
- Cariboo Memorial Hospital
- Creston Valley Hospital
- Dr. Helmcken Memorial Hospital
- East Kootenay Regional Hospital
- Elk Valley Hospital (Formerly Fernie)
- Golden and District General Hospital
- Invermere and District Hospital
- Kelowna General Hospital
- Kootenay Boundary Regional Hospital
- Kootenay Lake District Hospital
- Lillooet District Hospital
- Nicola Valley Health Centre
- Penticton Regional Hospital
- Princeton General Hospital
- Queen Victoria Hospital
- Royal Inland Hospital
- Shuswap Lake General Hospital
- South Okanagan General Hospital
- Vernon Jubilee Hospital

**Provincial Health Services Authority**
- BC Children's Hospital
- BC Women's Hospital

**Vancouver Coastal Health Authority**
- Bella Coola General Hospital
- Lions Gate Hospital
- Mount Saint Joseph Hospital
- Powell River General Hospital
- R.W. Large Memorial Hospital
- Richmond Hospital
- Squamish General Hospital
- St. Mary's Hospital - Sechelt
- St. Paul's Hospital
- UBC Hospital Urgent Care Centre
- Vancouver General Hospital

**Vancouver Island Health Authority**
- Campbell River and District General Hospital
- Cormorant Island Health Centre
- Cowichan District Hospital
- Lady Minto Gulf Islands Hospital
- Nanaimo Regional General Hospital
- Port Hardy Hospital
- Port McNeill and District Hospital
- Royal Jubilee Hospital
- Saanich Peninsula Hospital
- St. Joseph's General Hospital
- Tofino General Hospital
- Victoria General Hospital
- West Coast General Hospital

**Northern Health Authority**
- Bulkley Valley District Hospital
- Chetwynd General Hospital
- Dawson Creek and District Hospital
- Fort Nelson General Hospital
- Fort St. John Hosp and Health Centre
- GR Baker Memorial Hospital

**Appendix 1: Participating Facilities**

Kitimat General Hospital
Lakes District Hospital and Health Centre
MacKenzie and District Hospital
Masset General Hospital
McBride and District Hospital
Mills Memorial Hospital
Prince George Regional Hospital
Prince Rupert Regional Hospital
Queen Charlotte Islands General Hospital
St. John Hospital
Stuart Lake Hospital
Wrinch Memorial Hospital

**Provincial Health Services Authority**
- BC Children's Hospital
- BC Women's Hospital
Appendix 2: Survey Methodology

In 2005, the BC Patient Satisfaction Steering Committee conducted its first survey to understand British Columbians’ experiences receiving health care as inpatients in BC hospitals. In 2008, the spotlight was again directed toward understanding and reporting on the quality of inpatient services through the eyes of patients. In both time periods, the Committee engaged National Research Corporation (NRC) Canada to conduct the survey using a standardized instrument that was validated for use in Canada in 2002 (BC participated in the Canadian validation).

The inpatient questionnaire, including the paediatric and maternity variations, was mailed to 34,312 patients in BC who were discharged from one of 78 hospitals between October 1 and December 31, 2008. For the purposes of this study an inpatient was defined as “a patient admitted to an acute inpatient hospital with a stay of greater than or equal to one day.” The definition of inpatients included patients whose acute care admission was further designated during their hospital stay as Alternate Level of Care (ALC), Subacute or Rehabilitation. Parents/guardians received surveys for pediatric patients under the age of 13; youth aged 13-16 received surveys in their own name.

Patients were randomly selected to participate with the sample drawn from the records of patient discharges at the facility level. Sampling ensured a representative sample for each appropriate inpatient unit within each facility. Records of patient visits were provided to NRC+Picker every second week for the survey period. Patients were excluded if they were discharged from a freestanding Rehabilitation facility, received Day Surgery services in an Acute Care Hospital, were discharged from a designated psychiatric unit and/or a designated psychiatric bed, had no fixed address, were deceased in hospital, were less than or equal to 10 days old, had experienced a miscarriage or therapeutic abortion or had been flagged as “do not announce” or some similar designation. Where possible, patients were also excluded for other sensitive issues such as visits for confirmed or suspected sexual abuse or domestic violence.

The survey asked patients to answer questions in eight dimensions of quality. Results represent the percentage of positive responses that patients gave to questions. Percentages were calculated by excluding non-respondents.

Surveys with accompanying cover letters and return envelopes were mailed to patients’ home addresses. The mailed survey was in English, but Chinese, Punjabi, French and German versions were available by calling a toll-free number. The survey also offered respondents a web-based response option (English only) via a unique access code in addition to the paper-and-pencil mail methodology. A reminder letter was sent 5 days after the first mailing, and a second reminder letter and survey were sent 24 days later to those who had not yet responded. Surveys were in field until July 28, 2009. Privacy officers from each of BC’s six Health Authorities approved of this project and a Privacy Impact Assessment was filed with the Office of the Information and Privacy Commissioner.

Statistical Accuracy of Results

Ensuring that sample survey results accurately portray the experiences of the population they are supposed to represent requires, among other things, a valid questionnaire, a random sample, a good response rate and appropriate data handling. One important component of accuracy, the precision of statistical estimates, depends on the size of the sample used to get estimates. The 17,389 survey respondents reported in this analysis for the province overall ensures that provincial-level estimates are extremely accurate. Overall, the survey has a ± 0.61 per cent margin of error at the 95 per cent confidence level, which means the results at the provincial level are accurate within ± 0.61 per cent, 19 times out of 20. For the province, a maximum confidence level is equal to ± 0.61 per cent around a proportion of 0.50 with an Alpha = .95. That is, the true population proportion lies between 49.4 per cent and 50.6 per cent for an estimate of 50 per cent. Estimates much larger or smaller than 50 per cent will have greater accuracy.

Health authority samples varied in size, and therefore vary in accuracy. FHA, IHA, VCHA, and VIHA with samples all larger than 3,300 had a maximum 95 per cent confidence interval from ± 1.2 per cent to ± 1.4 per cent. NHA sample of 1,249 had maximum 95 per cent confidence interval of about ± 2.3 per cent. PHSA’s maximum 95 per cent confidence interval is ± 3.6 per cent. This means that larger differences are needed for PHSA, and to a lesser extent NHA, to get statistically different results compared to the other Health Authorities.

Survey Weighting

The 2008 inpatient survey served multiple purposes. In addition to providing useful information to facilities about the performance of the facility overall and units within the facility, the results were also to be used by Health Authorities and to provide province-wide information. Providing useful information, therefore, required a large enough sample size from each facility. Facility-level results could be combined to provide health authority level and provincial level results.

Samples of potential respondents were selected from units within facilities based on their overall patient volumes. A target of 150 was set for most units and as many patients were selected as possible up to that target. Some smaller facilities had their entire patient population for the three months selected for sampling. Bigger facilities or those with many inpatient units had larger samples.

11 Using the population correction factor to adjust the confidence interval around a binomial estimate.
The differential sampling fractions meant that the “raw” sample of respondents was not representative of facilities, health authorities, or the province overall.

The solution to differing sampling fractions and the differing survey methods was "weighting." Weighting is a statistical manipulation that transforms a collection of results from different strata (i.e., ages, facilities, and health authorities) into a sample that would be obtained as if a "simple random sample" was taken. For example, to get a sample representative of all patients in BC who had an inpatient stay, the raw survey results were weighted to correct for differences in unit volumes and sampling ratios, the differing sizes of facilities in the different health authorities, and differing volumes of patients in each health authority in the province.

Weighting was not done to force the distribution of actual respondents to match either the mailed or delivered samples, that is, post-stratification weighting.

The results in this report are weighted to the provincial level, meaning weights are applied to mailed surveys such that the mailed sample would be representative of the province overall. It is as if potential respondents were selected from across the province rather than from units within facilities.

**Other Canadian Comparison Sample**

For comparison purposes, the BC results are compared to an NRC database of roughly comparable results. The “Other Canadian” comparison dataset contains patients seen from Oct. 2007 to Dec. 2008. The comparison dataset includes cases from New Brunswick (4 facilities with n= 273), Ontario (103 facilities with n= 75937), Saskatchewan\(^\text{12}\) (59 facilities with n= 7306) and Yukon (1 facility with n= 320).

**Survey Response Rate**

The overall return or response rate to the survey was 52.8 per cent; this varied from 44 per cent to 59 per cent across the health authorities, as shown in Table 1.

**Table 1: Summary of survey activity and return/response rates by Health Authority (Unweighted numbers)**

<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Mailed</th>
<th>Undelivered N &amp; Rate</th>
<th>Delivered N &amp; Rate</th>
<th>Returned N &amp; Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHA</td>
<td>8317</td>
<td>298</td>
<td>8019</td>
<td>3952</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.6%</td>
<td>96.4%</td>
<td>49.3%</td>
</tr>
<tr>
<td>IHA</td>
<td>8326</td>
<td>327</td>
<td>7999</td>
<td>4374</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.9%</td>
<td>96.1%</td>
<td>54.7%</td>
</tr>
<tr>
<td>NHA</td>
<td>3045</td>
<td>182</td>
<td>2863</td>
<td>1249</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.0%</td>
<td>94.0%</td>
<td>43.6%</td>
</tr>
<tr>
<td>PHA</td>
<td>1225</td>
<td>48</td>
<td>1177</td>
<td>555</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.9%</td>
<td>96.1%</td>
<td>47.2%</td>
</tr>
<tr>
<td>VCHA</td>
<td>7436</td>
<td>262</td>
<td>7174</td>
<td>3910</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.5%</td>
<td>96.5%</td>
<td>54.5%</td>
</tr>
<tr>
<td>VIHA</td>
<td>5963</td>
<td>251</td>
<td>5712</td>
<td>3349</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2%</td>
<td>95.8%</td>
<td>58.6%</td>
</tr>
<tr>
<td>BC Total</td>
<td>34312</td>
<td>1368</td>
<td>32944</td>
<td>17389</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.0%</td>
<td>96.0%</td>
<td>52.8%</td>
</tr>
</tbody>
</table>

\(^{12}\) Saskatchewan contributes cases to some but not all questions.
Sample Characteristics

The overall distributions of questionnaires mailed and delivered are very similar across age and gender categories. Response rates by gender differed very little, and the resulting gender distribution of the respondent sample is very similar to the mailed sample (Table 2). Response rates by age, however, varied substantially (from 36 per cent to 64 per cent) and the sample is biased towards older respondents (Table 3).

Table 2: Structure of survey sample by Gender (unweighted numbers)

Undelivered Rate = Undelivered / Mailed
Delivered Number (N) = Mailed - Undelivered [this is base N for return rate calculations]
Return Rate = Returned / Delivered

<table>
<thead>
<tr>
<th>Mailed N &amp; Sample %</th>
<th>Delivered N &amp; Sample %</th>
<th>Returned N &amp; Sample %</th>
<th>Return Rate by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20003</td>
<td>19294</td>
<td>10086</td>
<td>52.3%</td>
</tr>
<tr>
<td>58.3%</td>
<td>58.6%</td>
<td>58.0%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14307</td>
<td>13648</td>
<td>7303</td>
<td>53.5%</td>
</tr>
<tr>
<td>41.7%</td>
<td>41.4%</td>
<td>42.0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34310</td>
<td>32942</td>
<td>17389</td>
<td></td>
</tr>
<tr>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Unknown Sex N=2

Table 3: Structure of survey sample by Age (unweighted numbers)

Undelivered Rate = Undelivered / Mailed
Delivered Number (N) = Mailed - Undelivered [this is base N for return rate calculations]
Return Rate = Returned / Delivered

<table>
<thead>
<tr>
<th>Mailed N &amp; Sample %</th>
<th>Delivered N &amp; Sample %</th>
<th>Returned N &amp; Sample %</th>
<th>Return Rate by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16 yrs</td>
<td></td>
<td></td>
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Appendix 3: About the Survey Questionnaires

The inpatient acute questionnaire has been used before in BC and other Canadian provinces. It comes from a family of questionnaires developed by the Picker Institute in the USA in the 1980s, and widely used in the United States. In 2001, the National Research Corporation (NRC) of Nebraska purchased rights to the Picker Institute's questionnaires. In 2002, the NRC brought the survey to Canada, where it was adapted to fit the Canadian health care system. In fact, three BC hospitals were involved in testing the Canadian version.

The original Picker surveys were developed to better understand the patient’s experience with healthcare. Instead of asking patients if they were “satisfied” with a specific aspect of their experience, patients were asked to report on whether something good (or bad) happened, or to evaluate an aspect of care. The Picker Institute developed a set of patient-centred care dimensions that form the basis of all their subsequent questionnaires and report analyses13, and which are still used today. The Picker Institute’s results focused on “problems” which were based on categorizing patients’ reports and ratings of their experience. In Canada, a focus on problems was replaced with a focus on “positive” scores.

The 2008 BC inpatient survey uses three slightly different questionnaires: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, and a maternity questionnaire. The paediatrics and maternity questionnaires include all the general inpatient questions but have additional sector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having paediatric and maternity questions also means that important but more specific information can be obtained.

Questionnaire Contents

Acute inpatient questionnaires focus on Picker’s eight dimensions of care:

- **Access to Care** measured patients’ experience in getting care during their hospital stay. It taps three aspects of internal access: getting all the services they needed, and how they felt about the availability of doctors and nurses.
- **Continuity and Transition** asked patients if they felt prepared to take care of themselves and knew what to watch for when they left hospital. This included knowing about their medicines and who to call if they needed help.
- **Coordination of Care** measured patient experience about how organized the admission process was, whether tests were done on time and if staff explanations were consistent.
- **Emotional Support** asked patients if they received help, encouragement and support for any fear, anxiety and concerns associated with their illness and hospital stay.
- **Information and Education** measured whether patients were kept informed and if their questions were answered.
- **Involvement of Family** asked patients if family members were sufficiently informed during their hospital stay.
- **Physical Comfort** measured patient experience around pain management and how long it took for a response after help was requested.
- **Respect for Patient Preferences** asked patients if they were treated with respect and had sufficient privacy during their hospital stay.

The questionnaire also includes NRC and Picker questions about a variety of other topics including patients’ overall experiences, staff and physician courtesy, and amenities. A five-item section on surgery was included in the general and maternity questionnaires. A six-item surgery section has been added to the paediatric questionnaire. Finally, there are questions added to the BC questionnaires from other sources or developed for BC alone - care transitions, and harm and safety practices, for example.

In 2008, three new questions were added to the BC questionnaire to examine patients’ experience with the care transitions as they left the hospital to return home. These questions came from a previously validated and widely used questionnaire14. The Care Transitions Measure is a public domain tool that exists in two forms – the full CTM (15 items) and the CTM-3. The full tool is described as assessing a single domain (i.e., quality of transition of care) that appears to be adequately measured by three items and, as a result, the three items are often used on their own as the CTM-3. While the initial tool design was focused exclusively on assessing continuity of care for older (age 65+) patients transitioning from hospital acute care to home or facility-based nursing care, more recent development work has positioned it for a general acute inpatient population age 18+.

The three questionnaires share a substantial number of questions (e.g., 66 common to Inpatient and Maternity), creating the opportunity to compare care across the three patient groups. The specific questions also create the opportunity to view unique aspects of paediatric and maternity care.

The many questions in the different questionnaires use a variety of answer formats. For the purposes of this report, all responses are recoded as a Positive or Not Positive result. For example, the overall quality question is answered on a five-point answer scale. For it and similar questions, “Excellent,” “Very Good” and “Good” answers are combined and counted as a Positive response. “Fair” and “Poor” are combined and counted as a Not Positive response.

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Appendix 4: Author Bio

Michael A. Murray PhD is an independent health services consultant, researcher, and educator. He has worked with a number of organizations on quality improvement methods, patient evaluations of care and use of such data to improve healthcare and staff satisfaction/morale. Michael is particularly interested in the use of process and performance indicators, especially involving the use of control charts. He has taught university-level statistics, customer knowledge and improvement courses, as well as general quality improvement, methods and tools, and control chart courses for a variety of organizations. Michael has been a consultant on both methods and measurement issues for several healthcare improvement collaboratives, including an intra-hospital pain collaborative, province-wide collaboratives dealing with a variety of clinical topics, and an Ontario “quality transitions” collaborative.

Dr. Murray received his PhD in psychology from York University. While at York, he worked for the Institute for Social Research which houses the Survey Research Centre and the Statistical Consulting Service. He moved to the University of Toronto in 1985, and stayed there in a variety of faculty and research positions until 2006. Among other projects, he helped develop the Long Term Care / Complex Continuing Care Resident and Family questionnaires which are now used across Canada. While at the U of T, Dr. Murray worked with several Toronto hospitals to Canadianize several standardized patient satisfaction tools from the United States. He facilitated the first Toronto Academic Health Science Centre's collection of data and reporting of inpatient patient satisfaction results using a standardized questionnaire. This led to his being one of the original co-investigators of the Hospital Report Research Collaborative where he was responsible for the patient satisfaction quadrant. In that capacity he worked with the Ontario Hospital Association to bring the Parkside inpatient and emergency department questionnaires to Canada and widespread use in Ontario. He was the lead in production of early Hospital Report collaborative reporting of inpatient results, the transition to using the Picker suite of tools, and worked with Canadian Institute of Health Information (CIHI) on the transition of patient satisfaction reporting methods from the University of Toronto when production of reports moved to CIHI.

For the past few years, Michael has had several contracts related to teaching quality improvement methods, to the design and teaching in healthcare improvement collaboratives, and to the use of patient satisfaction methods and indicators.