Patient Experiences with Acute Inpatient Hospital Care in British Columbia, 2011/12

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Dec 7, 2012

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Acknowledgements

Under the direction of the Deputy Minister of Health and Chief Executive Officers of the health authorities of British Columbia, the BC Patient Reported Experience Measures 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 2012, that Steering Committee engaged M. Murray to assist them in reporting the results of 2011/12 surveying in the acute inpatient hospital sector.

The responses of almost 15,000 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, Provincial Director, Patient-Centred Performance Measurement & Improvement.

This report relies on survey data collected by 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 is the third report to provide descriptive information about British Columbians' perceptions and reported experiences of inpatient acute care. It highlights results from almost 15,000 respondents to a survey of patients discharged during the last three months of 2011 and the first three of 2012. Previous reports presented data from inpatient acute care surveys in 2005 and 2008.

Patients who were discharged between Oct. 1 2011 and March 31 2012 were eligible for the survey. Random samples of patients discharged from 80 BC facilities were sampled and mailed questionnaires twice a month by NRC Canada, the patient survey research company selected to conduct the survey. New this year is the inclusion of BC's two free-standing rehabilitation facilities. Questionnaires were returned to National Research Corporation (NRC) Canada for processing and reports created for individual hospitals, health authorities, and the province.

Questionnaires were mailed to 30% of patients (36,387) discharged between Oct. 1 2011 and March 31 2012. There were 1,332 (3.7%) questionnaires that could not be delivered. Of the questionnaires that were delivered, 42.8% (14,989) were returned.

This was an extremely large survey, and the results in this report are very accurate. For the province overall, percentage estimates around 50% for all survey subsectors combined have a very tight confidence interval of about ± 0.70%.

About the questionnaires

The acute inpatient questionnaire used in BC in 2011/12 was first developed by the Picker Institute in the USA and then adapted for Canada in 2002. The BC acute inpatient survey uses four slightly different questionnaires: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, a maternity questionnaire, and new in 2011/12, a rehabilitation questionnaire. The subsector questionnaires (paediatrics, maternity, and rehab) include all the general inpatient questions but have additional subsector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having subsector questions also means that important but more specific information can be obtained.

The four 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. A section about surgery was added in 2008 and continued in the most recent questionnaire. There are two new safety-related questions and five new questions about "information at transition points" in care in 2011/12.

Understanding survey results

There are several different sets of answer categories used in the BC questionnaires. 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, results from this survey are compared to those obtained in both the 2005 and 2008 BC inpatient survey. Several questions do not have comparison data because they are new in 2011/12, including, for example, rehabilitation specific questions.

Where possible, this report presents results from British Columbia inpatient surveys done in 2005, 2008, and 2011/12. Results are shown for BC overall, and where appropriate, BC’s six health authorities. Results are almost always shown using positive/not positive scoring.

Survey highlights

The purpose of this report is to give an overview description of the experiences of almost 15,000 inpatient respondents as provided by both overall and summary measures and a great many individual questionnaire items. Questionnaire items specific to the three subsectors (paediatrics, maternity, and rehabilitation) are also presented.

When asked to give an overall rating about the inpatient care they received in British Columbia’s hospitals in late 2011 and early 2012, 92% of all responding patients gave a positive response. This is identical to 2008 and virtually identical to 2005. The Provincial Health Services Authority (PHSA) has a higher score than that for BC overall (6.1% more positive scores), VIHA also has a slightly higher score (2.7% more positive scores), FHA has a slightly lower score (3.0% fewer positive scores) while the remaining three Health Authorities have virtually the same score as BC overall. Interestingly, although the percent positive figure for the province as-a-whole is the same as in 2008, the proportion of ‘excellent’ answers increased slightly from 2008 by 2.7% and from 2005 by 3.3%. Among those respondents giving a positive answer, therefore, more of them are giving *the* most positive answer, ‘excellent’.

“Overall quality” is just one measure of patients’ experience. When asked, 68.5% of respondents would ‘definitely’ recommend the hospital to family and friends. This is virtually identical to 2008 (1.5% higher) and a slight improvement over 2005 (3.0%). Only 5.8% would not recommend the facility where they received care in 2011/12; this is almost identical to previous years.

Across all the eight Picker dimensions of care, Physical Comfort has the highest BC overall dimension score (81% positive). The Access to Care indicator has the second highest score (80% positive). Continuity and Transition has the lowest dimension score (63% positive). Only Involvement of Family has a higher score in 2011/12 compared to 2008: a very small difference of 1.1%.

A great many other results are presented in this report. Many show high performance, with positive scores of 85% or more. There are, however, items with low performance rates which offer opportunities for improvement; these are also shown in this report.

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. Hospitals 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 Columbian patients' perceptions and reported experiences of hospital inpatient acute care in 2011/12, and new this year, results from BC's two free-standing rehabilitation hospitals.

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 Reported Experience Measures 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 province-wide surveys to understand the patient experience in a number of sectors including inpatient acute care, emergency departments, oncology, mental health and substance abuse, and long-term care. The first survey of inpatient acute care in hospitals was conducted in 2005, with a second in 2008.

Patient Experiences with Acute Inpatient Hospital Care in British Columbia, 2011/12 focuses on results from patients discharged between October 1, 2011 and March 31, 2012. It brings together the results and summarizes the findings of almost 15,000 questionnaires. Results are presented for the province overall and, where appropriate, BC's six Health Authorities. Where possible these results are compared to the 2005 and 2008 BC acute inpatient results.

About the questionnaires

The acute inpatient questionnaire first used in BC in 2005 was developed by the Picker Institute in the USA and then adapted for Canada in 2002. The 2011/12 BC inpatient survey uses four slightly different questionnaires: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, a maternity questionnaire, and new in 2011/12 a rehabilitation questionnaire. The subsector questionnaires (paediatrics, maternity, and rehab) include all the general inpatient questions but have additional subsector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having paediatric, maternity, and rehabilitation questions also means that important but more specific information can be obtained.

All four inpatient questionnaires focus primarily on the Picker Institute's eight dimensions of care:

- Access to care
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- 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 were added in 2008 and continued in this most recent questionnaire. New in 2011/12, in addition to rehabilitation questions, are two safety-related questions and five new transition questions. For more information about the questionnaires, please see Appendix 3.

For the purposes of this report, responses to each question 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[1], the "Yes, always" and "Yes, often" answers are considered to be "positive."

About the respondents

Patient experience questionnaires were mailed to more than 36,000 people discharged from 80 hospitals across the province (See Appendix 1) between October 1, 2011 and March 31, 2012. A paediatric questionnaire was mailed to patients under 17 years of age, a maternity questionnaire was mailed to women who had been in hospital to deliver a baby, and a rehabilitation questionnaire was mailed to patients discharged from designated rehab units and BC's two free-standing rehabilitation hospitals.

Random samples of patients discharged from the 80 BC hospitals were sampled and mailed questionnaires twice per month by 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 30% of patients (36,387) discharged between Oct. 1 2011 and March 31 2012. There were 1,332 (3.7%) questionnaires that could not be delivered. Of the questionnaires that were delivered, 42.8% (14,989) were returned. Because of the relatively high response rate for this type of survey, 13% 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 15,000 individuals returned the questionnaire, for a response rate of 42.8% (see Appendix 2 for more details). Although lower than 2008's 52.8% figure, this still represents a

[1] For some negatively worded questions, the "No" response is positive.

very high response rate for this kind of survey. The results presented in this report summarize the experiences of these patients, either as reported by themselves (78.3%), by patients with the help of someone else (14.0%), or by someone on their behalf (7.7%). The number of respondents answering the questionnaire for themselves is very slightly lower than 2008 (1.7% lower).

This was an extremely large survey, and the results in this report are very accurate. For the province overall, percentage estimates around 50% for all survey subsectors combined have a very tight confidence interval of about ± 0.70%. With two exceptions, Health Authority accuracy is within ± 1.6%. Because of smaller sample sizes, NHA and PHSA are accurate at ± 2.7% and ± 4.6% 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 sex bias in the sample. However, while only 25% of the initial sample is aged 60-75, this age group had a higher response rate (53%) than others and as a result, represent more than 31% of the respondents in this report. This is also true for the oldest age category as well; 31% of the initial sample is aged 76+ and a high response rate (48%) equals more than 34% of the respondents in this report. The 0-16 age group only represented 6.6% of the mailed sample but their low response rate (29%) means they only represent 4.5% of respondents.

About the report

The purpose of this report is to give an overview description of the experiences of almost 15,000 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 2005, 2008, and 2011/12. Results are shown for BC overall, and where appropriate, BC's six health authorities. For the most part, results from this survey are comparable to the other results. However, several questions do not have comparison data either because they are new in 2011/12, for example, the information at transition points questions.

In a departure from the 2008 report, but consistent with reports sent to units, facilities, and HAs, results from this survey will not be compared to other Canadian results. In past years, although NRCC has mostly Ontario results in their "other Canadian" comparison figure, they do usually have other provinces' results to include. Possible comparisons for this report, however, do NOT include any provinces other than Ontario. NRCC does not weight Ontario results by hospital size when creating its comparison database[2]. In past years, a more heterogeneous sample meant that a lack of weighting of Ontario's results were not a huge problem for comparisons. This year, without any other provinces' data, the lack of weighting means that we cannot be sure of what population the results are representative of. In addition, in previous years, especially 2005, BC had no experience with acute patient results. Now, in 2012, BC has experience with two previous acute surveys over the past 7 years, and other sector results as well. From a quality improvement perspective, it is much more important to compare one's results over time than it is to compare to an external database with non-representative results.

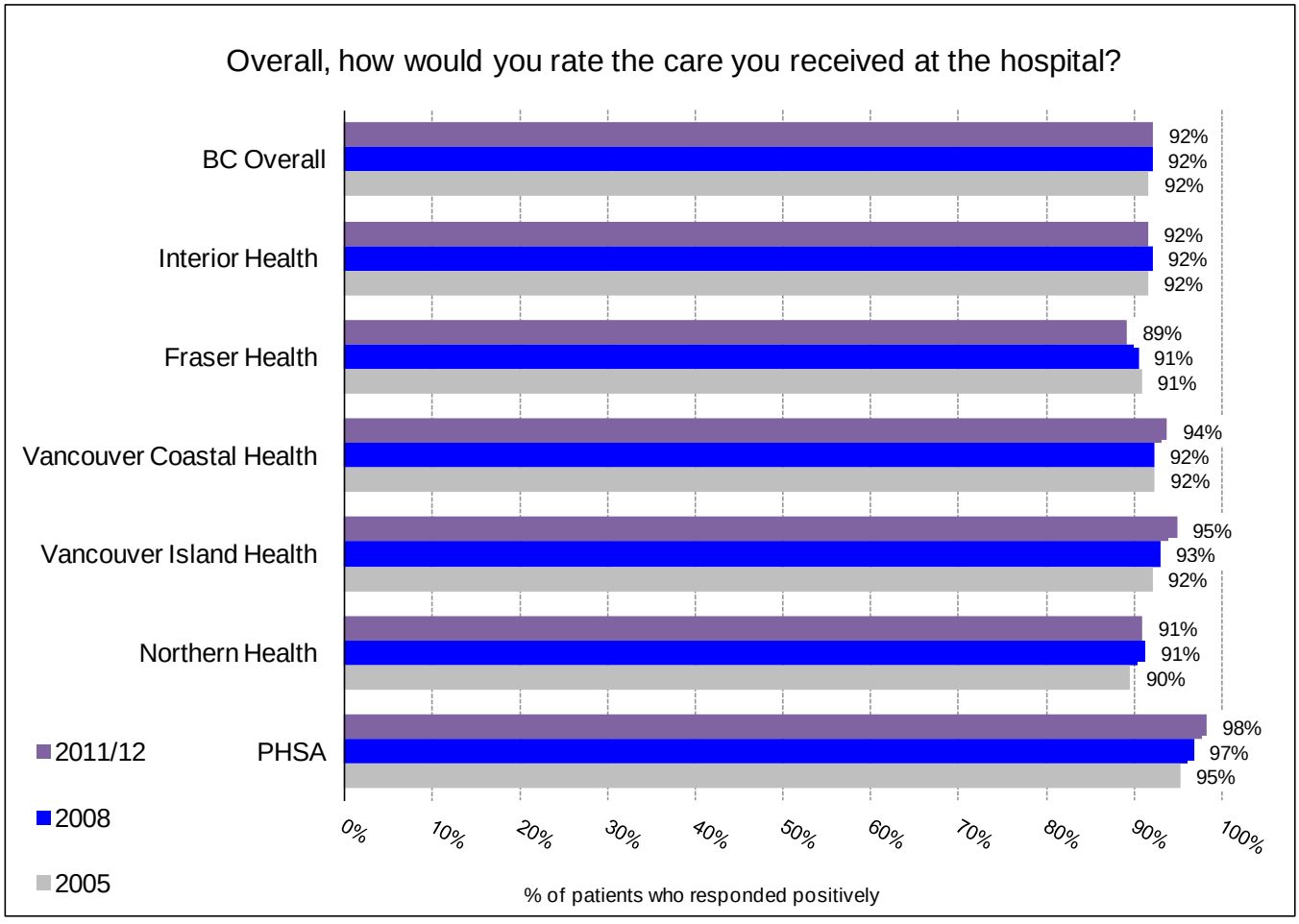
[2] BC's results are weighted appropriately at all levels and for all subsectors.

General Evaluations 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 2011/12, 2008, and 2005; 92 percent of respondents gave positive ratings. This is identical to 2008 and virtually identical to 2005. The Provincial Health Services Authority (PHSA) had a higher figure than that for BC overall (6.1% more "positive scores"), VIHA has a slightly higher score (2.7% more). FHA had a slightly lower score (3.0% fewer) while the remaining three Health Authorities had virtually the same score as BC overall.

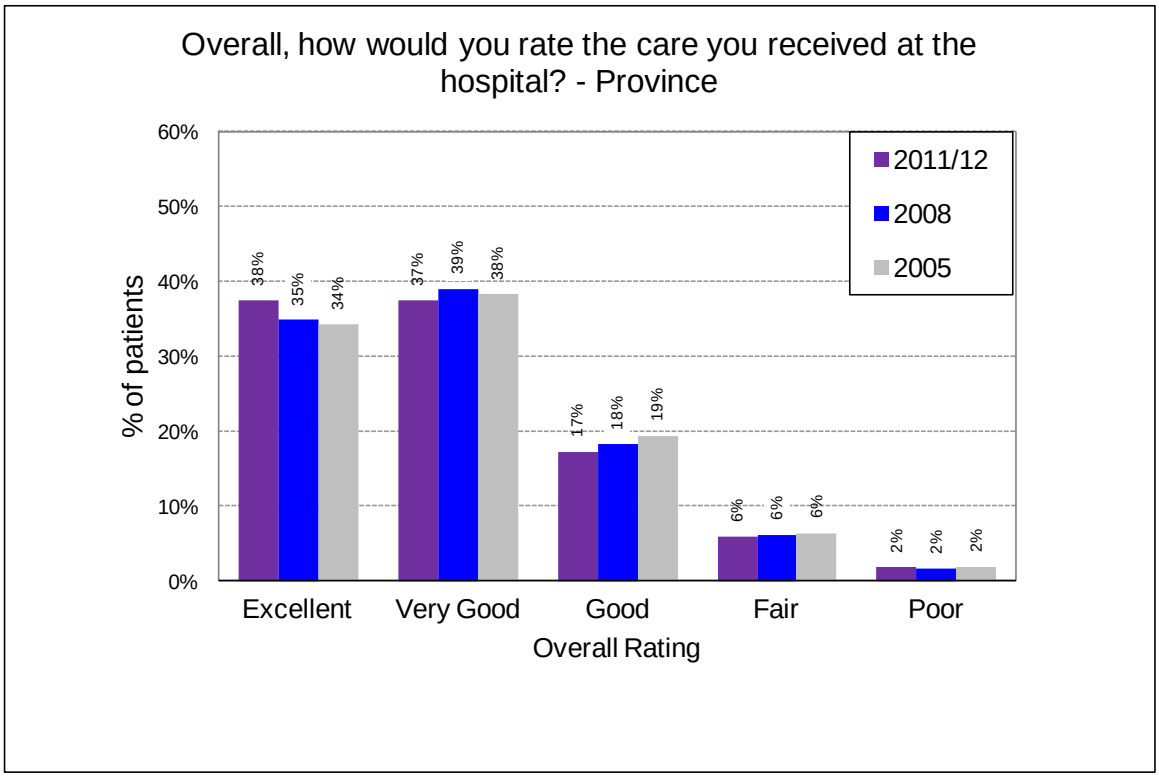
No Health Authority score increased from 2008 in a substantive way.

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



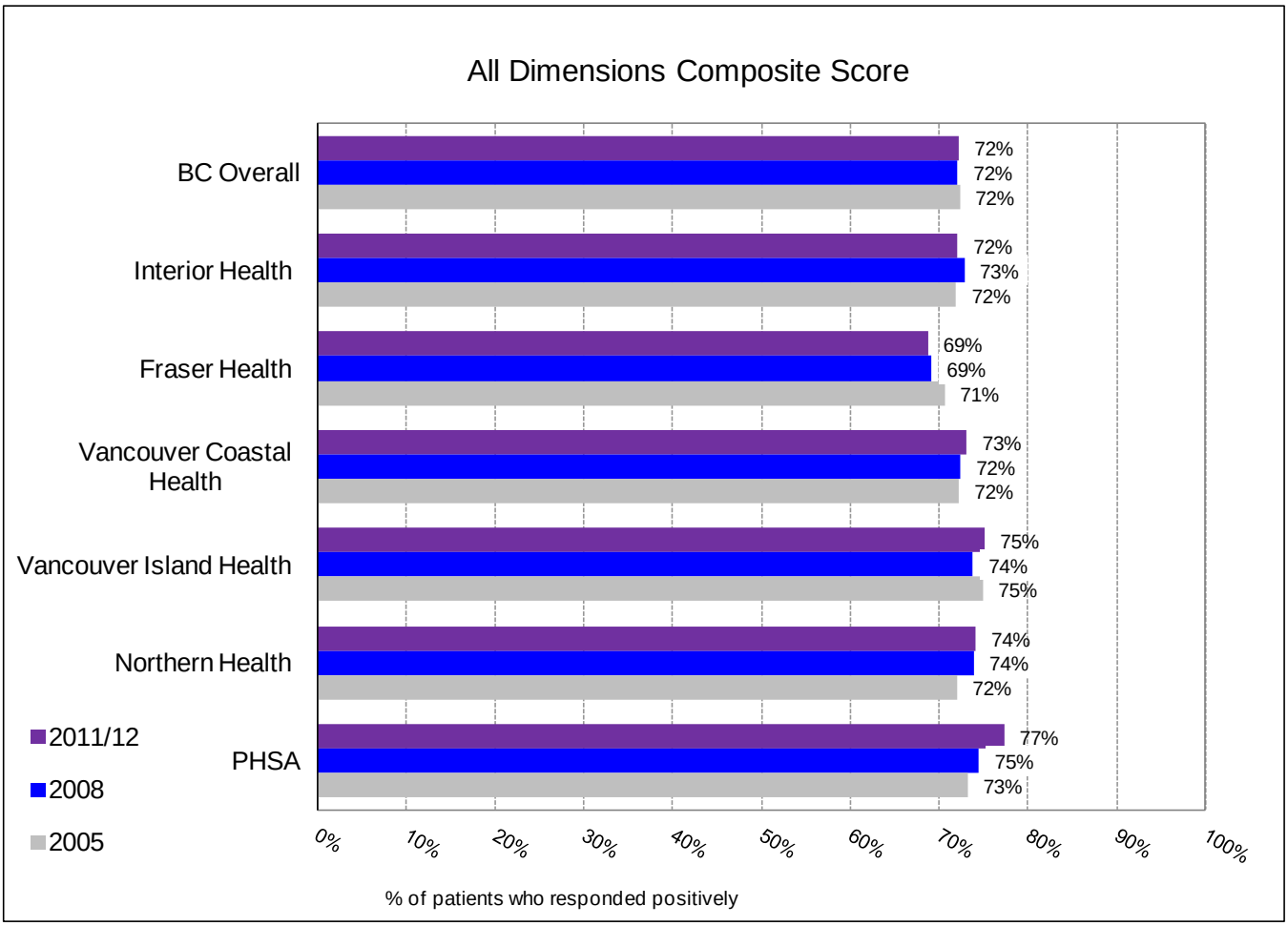
Interestingly, although the percent positive figure for the province as-a-whole is the same as in 2008, Figure 2 shows that the proportion of 'excellent' answers increased from 2008 by 2.7% and from 2005 by 3.3%. Among those respondents giving a positive answer, therefore, more of them are now giving the most positive answer, 'excellent'.

Figure 2: Overall Quality of Care Ratings for Province



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% of all answers were positive. The overall provincial results are the same as 2008 and 2005. No regions changed their score since 2008. PHSA has a higher score than the overall provincial score and VIHA's score is slightly higher. FHA's Combined Score is slightly lower than the province overall.

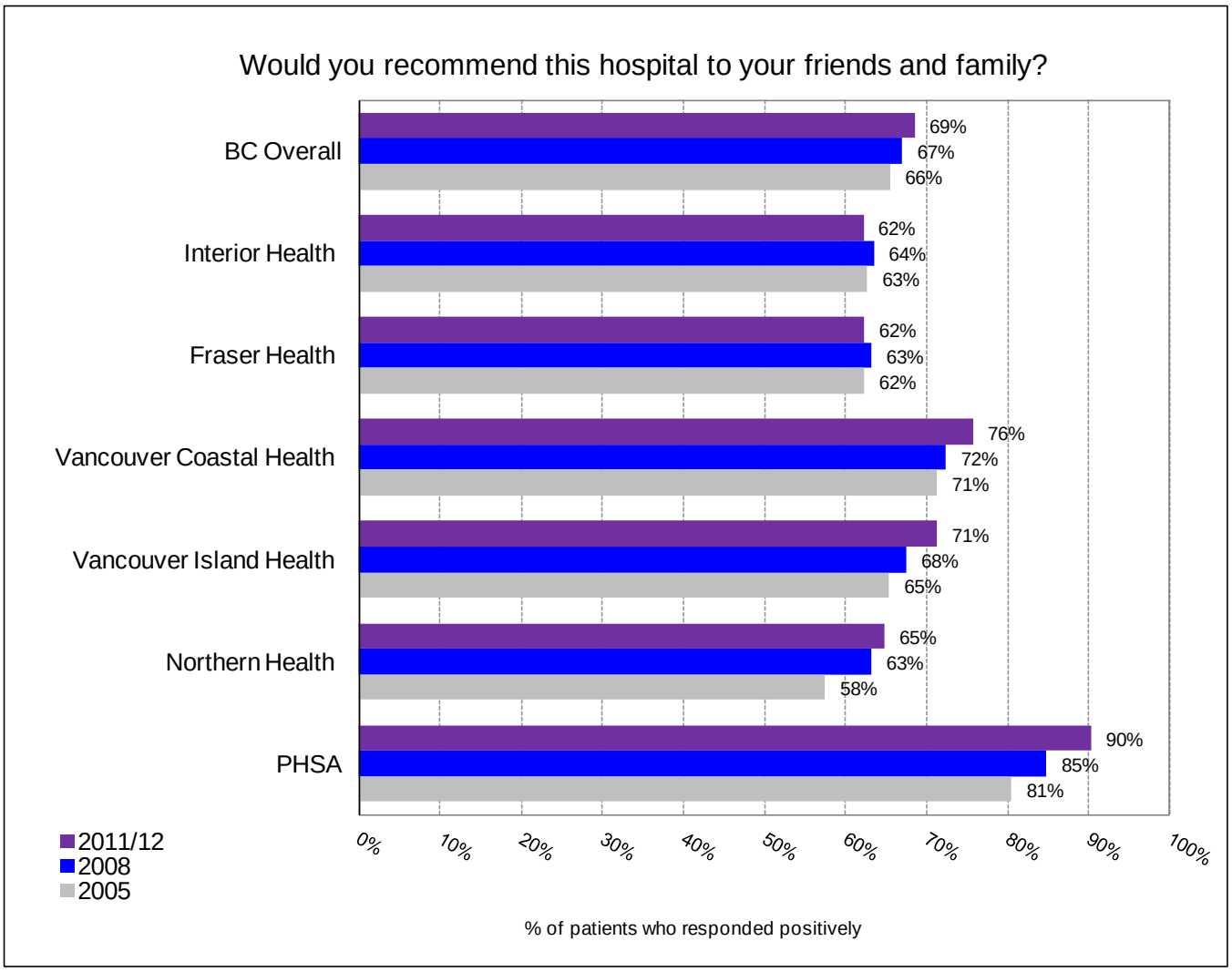
Figure 3: All Dimensions Composite Score for Province and Health Authorities



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. Overall 68.5% of BC patients would "Definitely Recommend" the facility where they received care (Figure 4). The score is virtually the same as in 2008. PHSA and VCHA scores are higher than BC overall; the VIHA score is slightly higher as well. IHA and FHA are lower than the BC overall score; NHA is slightly lower as well.

PHSA results have improved since 2008 as has VCHA and VIHA, but other regions showed no change from 2008.

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

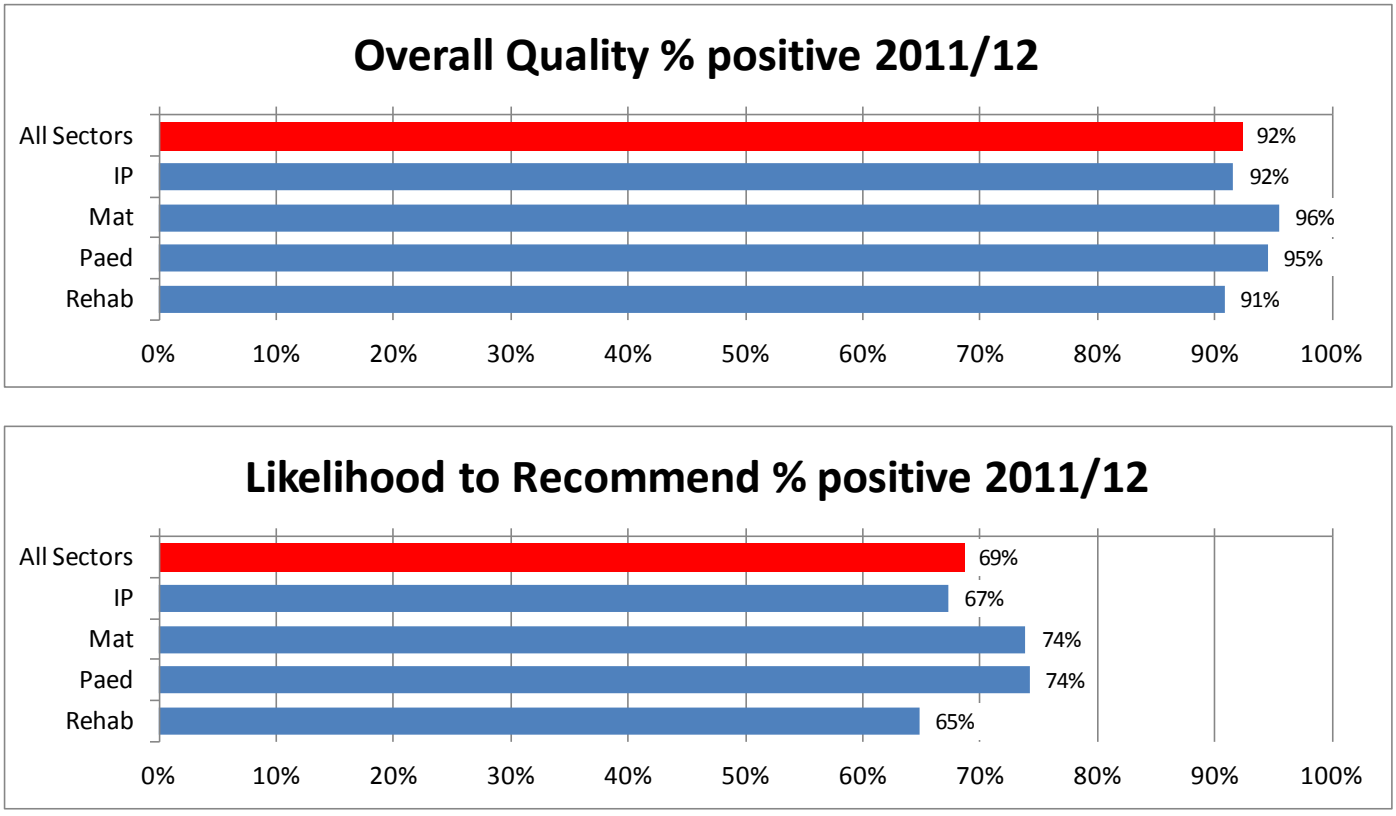


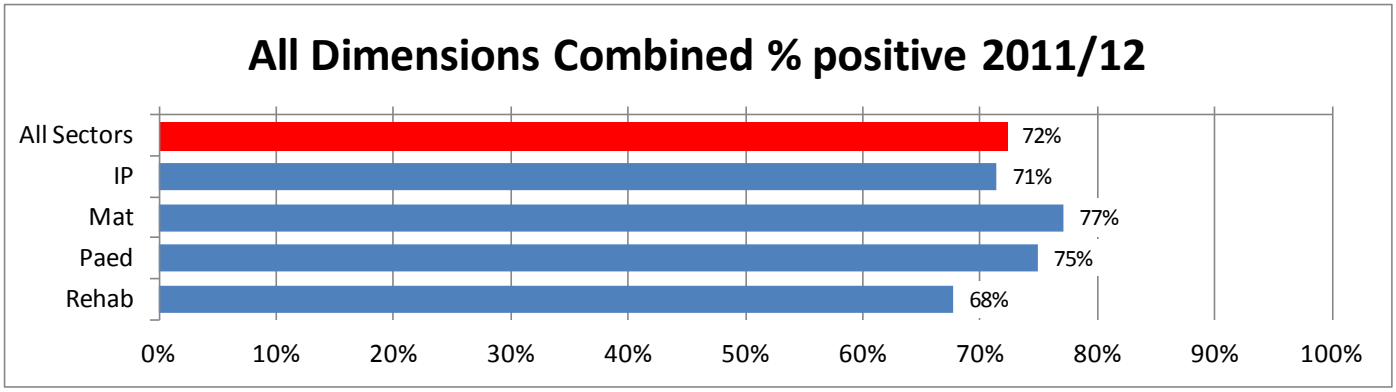
General Evaluations of Care Items by Subsector

There are many ways to look at the results of a survey such as the results of BC's Patient Experience survey discussed in this report. A full examination of all the factors that might influence scores and closer examination of important relationships is beyond the scope of this report. However, since there is a great deal of effort to conduct the survey at the subsector level as well as the general inpatient population, it might be useful to compare subsectors, at least for general evaluations of care. And since facilities do get comparative results in their reports that go beyond just health authority, it is worthwhile to take a 'high-level' look at differences among peer groups as well.

The previously surveyed subgroups of paediatrics and maternity care were joined by expanded surveying in the rehab sector. Previously, inpatient rehab patients in 'general' hospitals were included, but free-standing rehab hospitals were not. This year two free-standing hospitals were included. To make for a clearer, or at least, less mixed subsector comparison, the "All Sectors" results shown previously, which represent all inpatient acute-sector patients in the province, are compared to just inpatients (excluding all subsectors), and all paediatrics, maternity, and rehab patients regardless of location of care. Figure 5 shows results for the overall quality of care rating, likelihood to recommend question, and the aggregate All Dimensions score.

Figure 5: General Evaluations of Care Items by Subsector





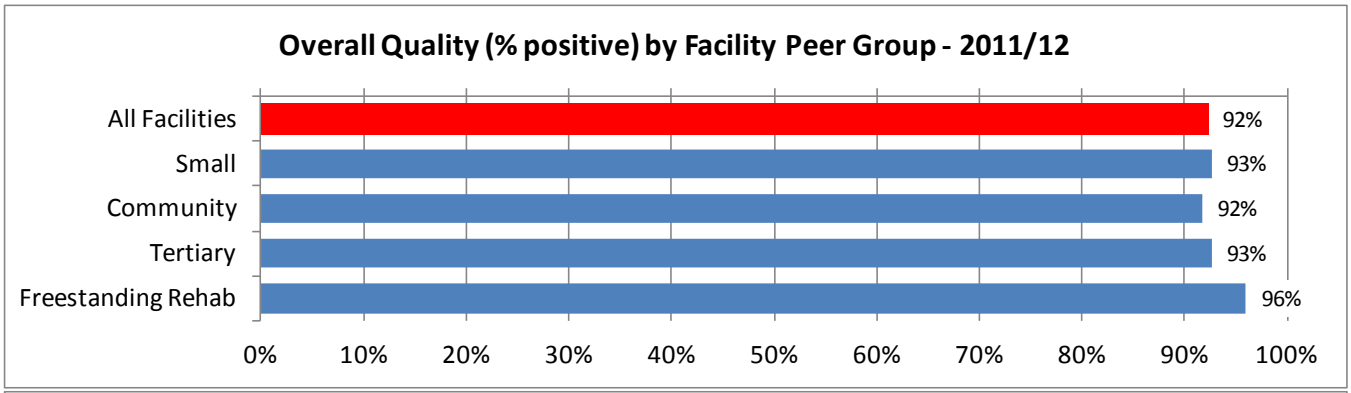
Paeds and maternity respondents are slightly more positive than the 'All Sectors' results on the overall rating of quality; they are also higher on the likelihood to recommend question; and the maternity subsector is higher on the All Dimensions score. The Rehab subsector, however, is as a whole, slightly lower on the latter two questions. The inpatient 'subsector' shares such an overlap in respondents that it is unlikely that its scores would be different, and there are in fact no substantial differences. Performance within the paeds, maternity, and rehab subsectors will be examined in more detail later in the report.

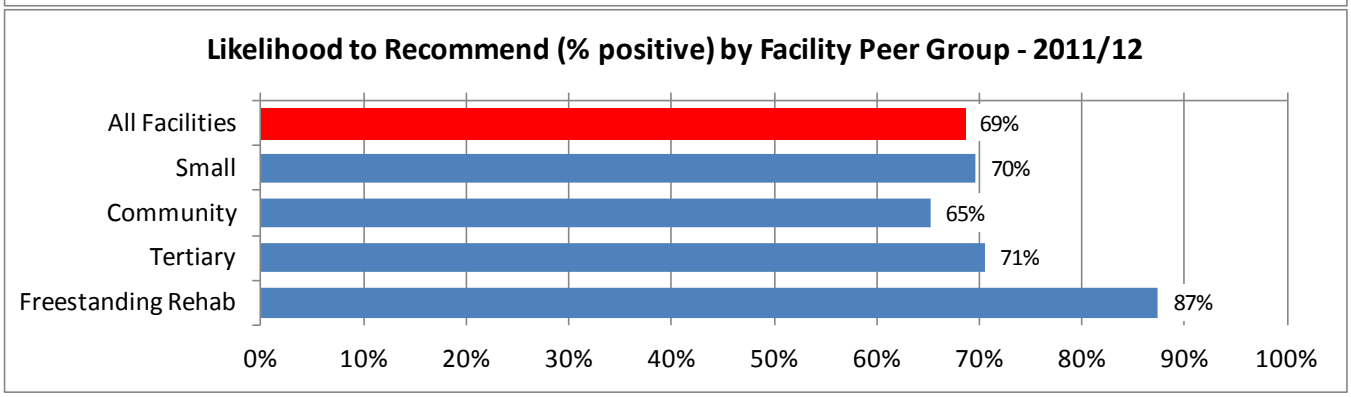
General Evaluations of Care Items by Peer Group

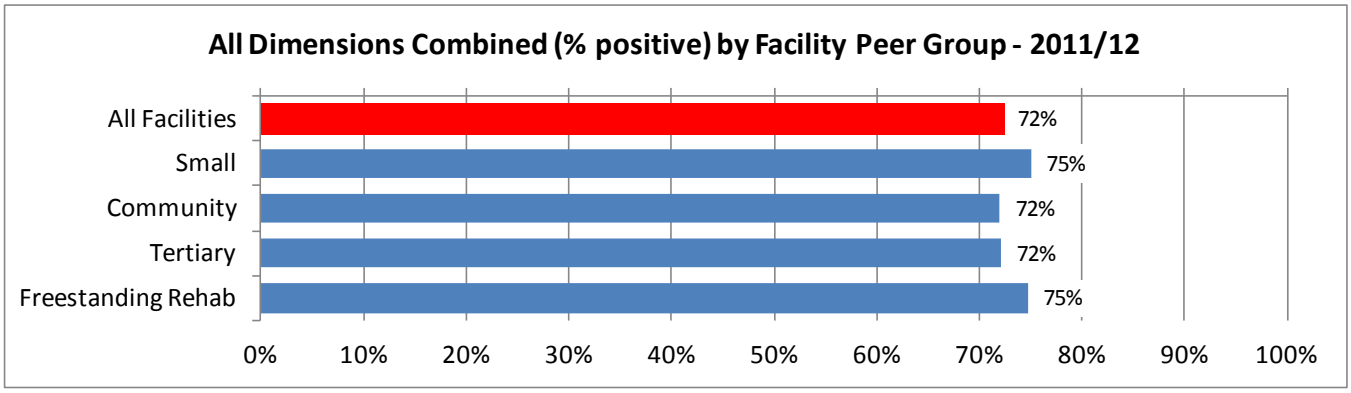
In comparative performance reports, hospitals are often compared to other 'like' hospitals, and BC facilities *are* provided with this information in their individual reports. In this analysis, all patients seen within facility peer groups are put together, so paediatric, maternity, and rehab scores would be spread across different peer groups. However, the two free-standing rehab facilities are treated differently, and are considered to be their own peer group.

Figure 6 shows that there are no differences between any of the four peer groups and the "All Facilities" score on either the overall rating question or the All Dimensions Combined scores; and slight differences on the likelihood to recommend question. The exception to this is the substantial difference between the combined scores of the two free-standing rehab facilities and the All Facility scores on the likelihood to recommend question; the rehab score was over 18% higher than all facilities together. The previous analysis showed that all rehab patients together scored lower than the all sectors score; this will be examined later in this report.

Figure 6: General Evaluations of Care Items by Peer Group







Summary

In summary, respondents to the 2012 BC inpatient survey give overall or summary scores that are very similar to the 2008 survey. Those ratings, at the provincial level and for some HAs, are very positive, as they were in the past.

There are slightly more ‘excellent’ ratings to the Overall Quality rating queston.

When looked at by health authority, subsector, and peer group, the results show that from the perspective of patients who received care in a BC Acute or Freestanding Rehab hospitals that:

- There are some slight differences among health authorities, with PHSA typically having the highest scores and FHA the lowest scores.

- The maternity subsector is slightly higher than the provincal total on all three general measures; paediatrics is slightly higher on two of them. The rehab sector as-a-whole is slightly lower than the provincal total on two of the three measures.

- Differences in general evaluations of care by facility peer group are slight, except that the two free-standing rehab facilities have a substantially higher likelihood to recommend score than the province.

Patient-Centred Dimensions of 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 feel prepared to take care of themselves and know what to watch for when they leave hospital. This includes knowing about their medicines and who to call if they need 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.

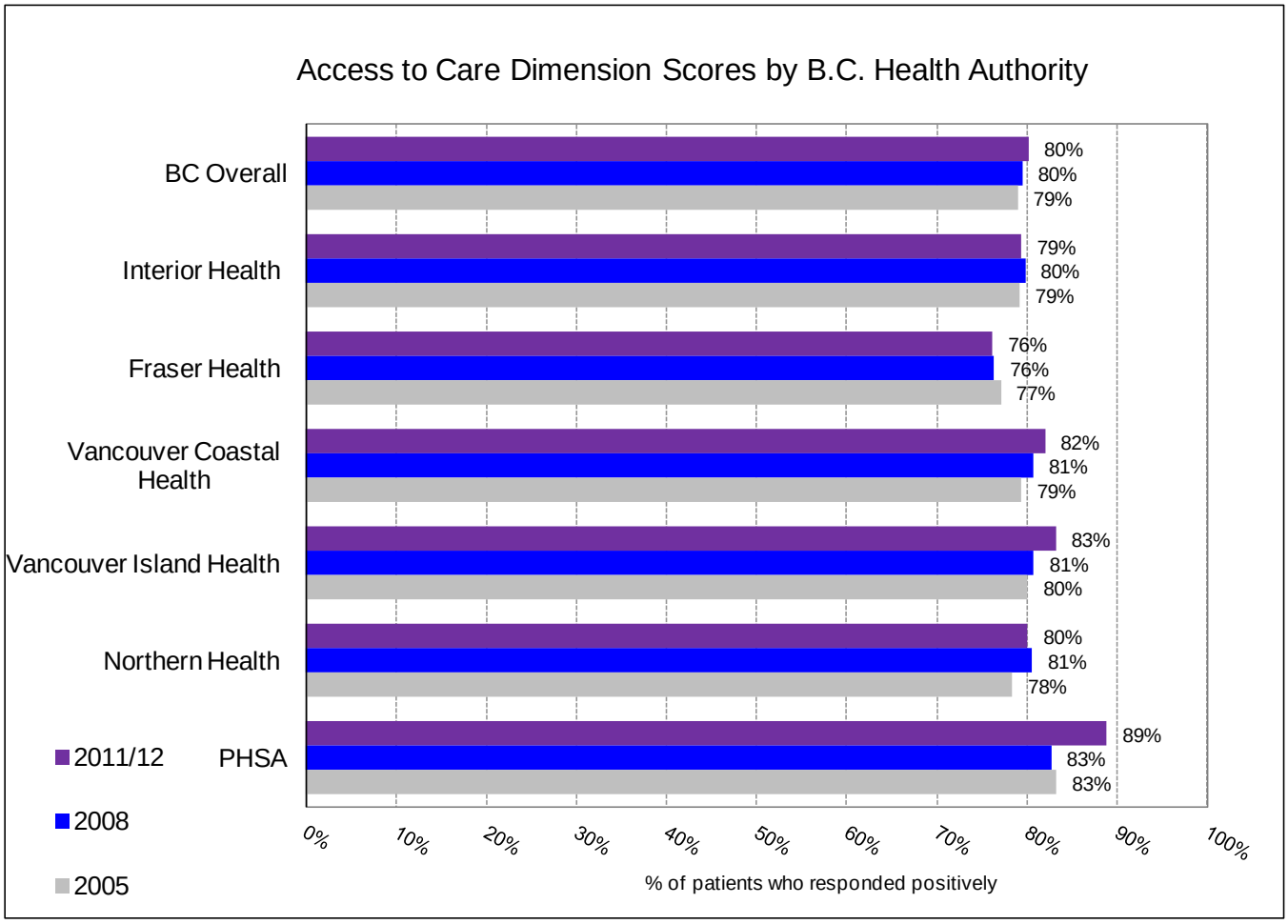
This section of the report provides information about both aggregate dimensions of care scores and individual items from those aggregates. Much like the All Dimensions Composite Score, each dimension gets a score that presents the percent of positive answers across several questions. Dimension-score level results are presented for BC overall and the health authorities. Item level results 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%, as shown in Figure 7, is virtually unchanged from 2008.

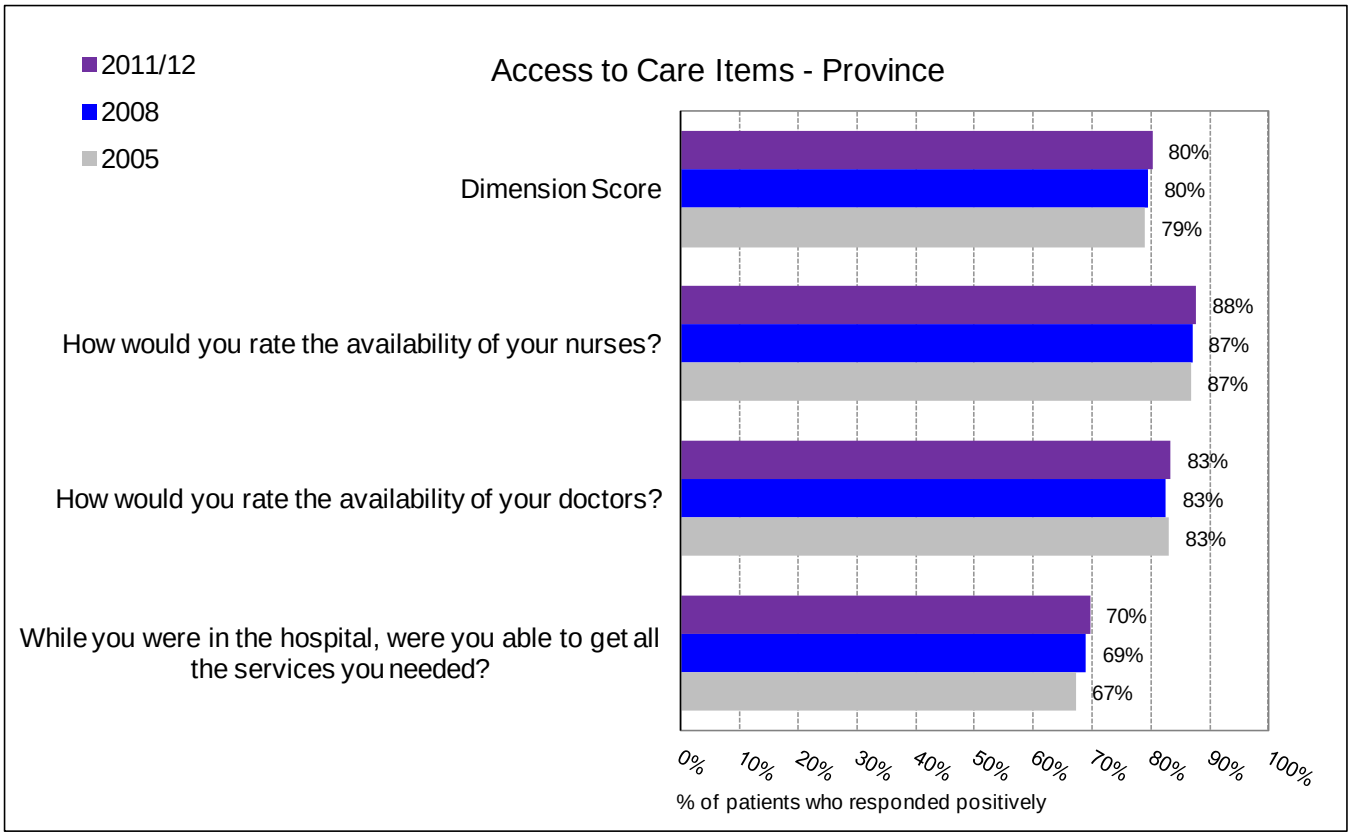
PHSA has a substantially higher score than the province overall, and increased its score from 2008. VIHA has a slightly higher score than the province and increased very slightly from 2008. FHA’s score is slightly lower than the provincial score.

Figure 7: Access to Care Dimension Scores for Province and Health Authorities (Percent Positive)



The “access to care” indicator is a good summary measure. However, 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 8. Positive score ratings of nurse and doctor availability are not substantially different but both are higher than patient ratings about getting all the services they needed. There is no difference in individual item scores compared to 2008.

Figure 8: Access to Care Dimension - Individual Questions (Percent Positive)

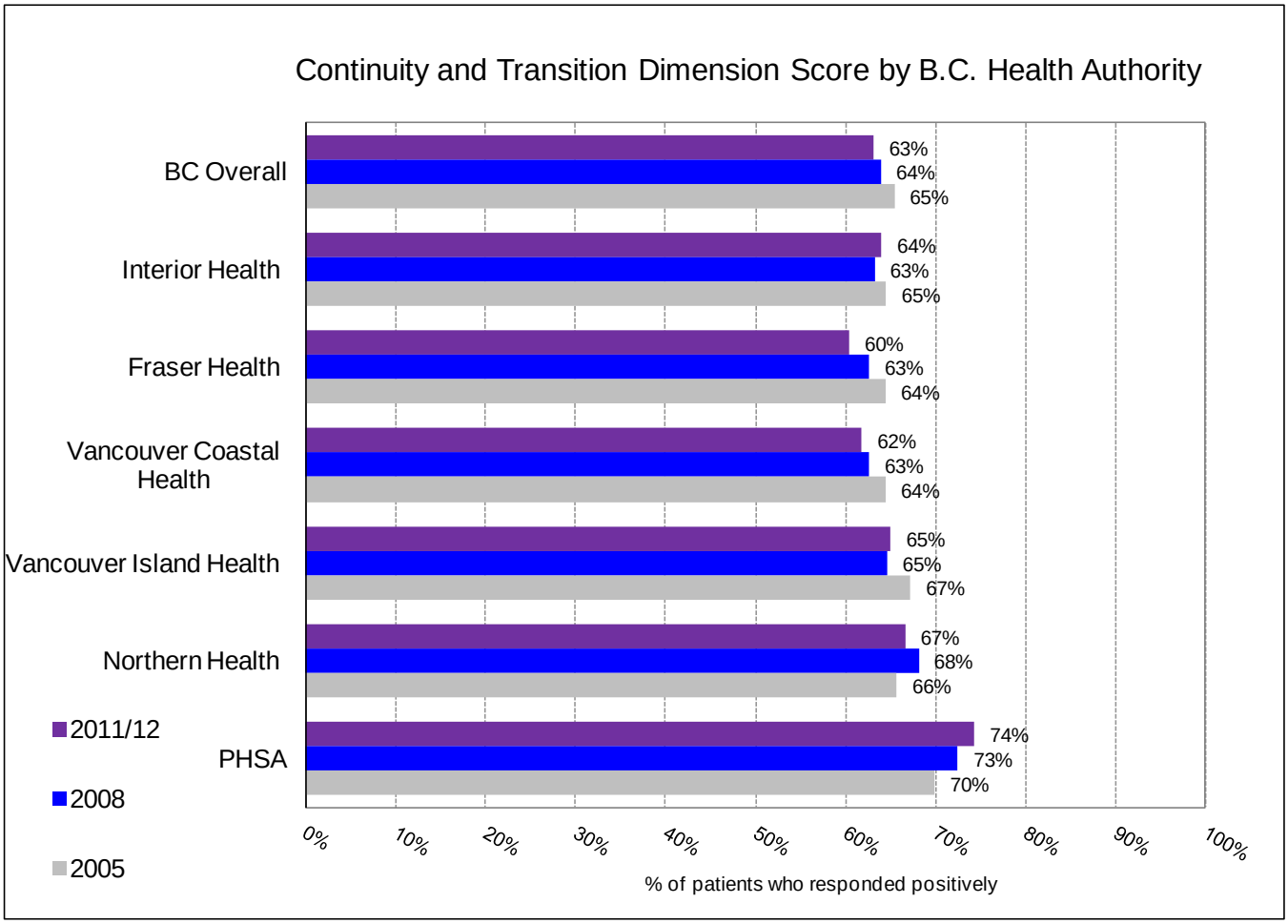


Continuity and Transition

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 show in Figure 9. As a whole, the "continuity and transition" scores are still lower than any other dimension rating as they were in 2008. Ratings for the province have changed little since 2008.

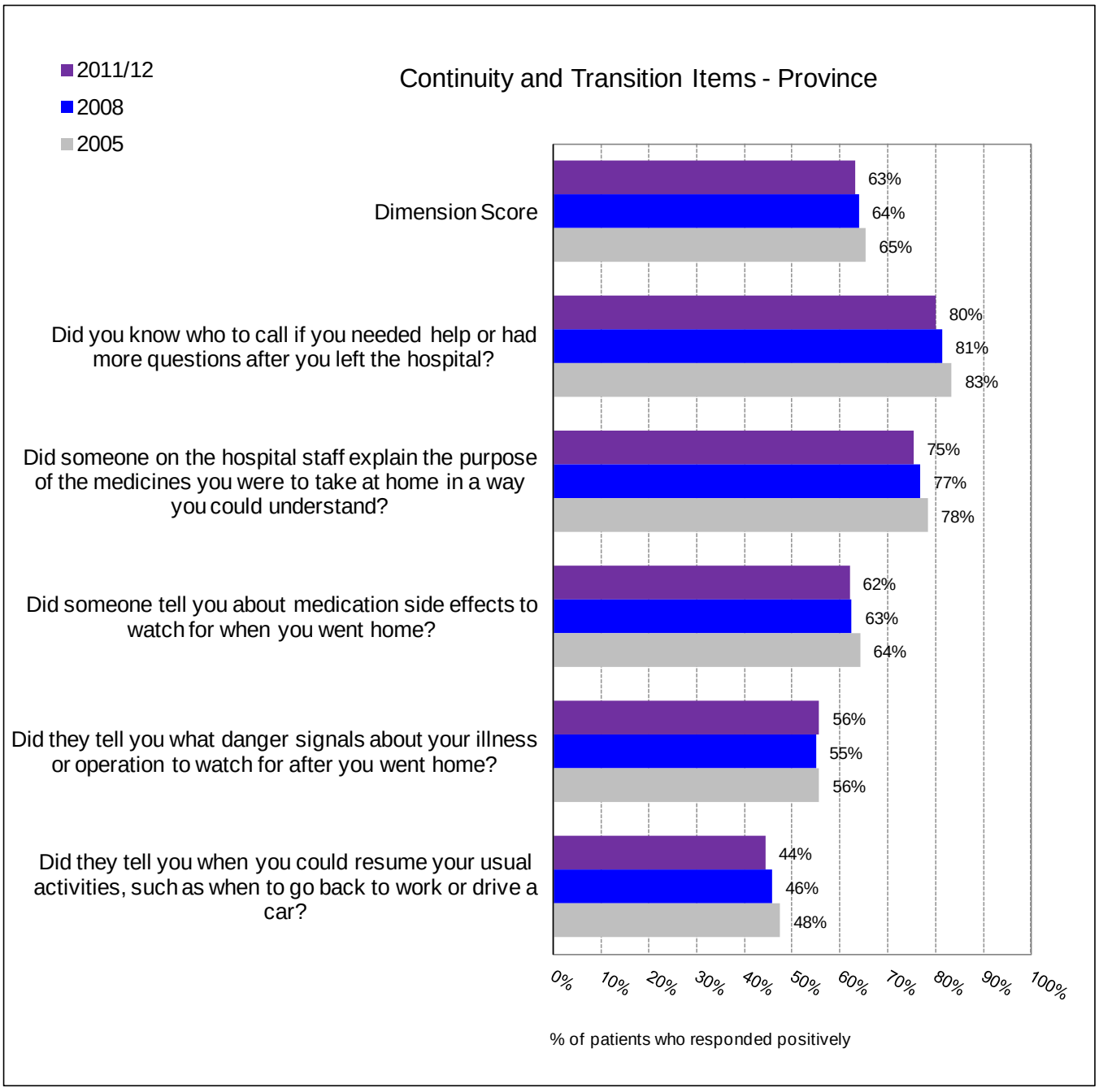
Scores for PHSA and NHA are both higher than the provincial figure; PHSA's score is substantially higher than the province. FHA's score is slightly lower, and it decreased slightly from 2008.

Figure 9: Continuity of Care Dimension Scores for Province and Health Authorities (Percent Positive)



Scores for the five individual questions making up the “continuity and transition” indicator are shown in Figure 10. There is substantial variation in the percent positive scores ranging from a high of 80% for “knowing who to call for help” to a low of 44% for being told about resuming usual activities. Although the dimension score stayed relatively the same as 2008, three items dropped a very small amount. The question asking about whether staff discussed when to resume normal activities has the lowest score of all items on the questionnaire and the only one with fewer than 50% positive answers; in addition, the score on this question decreased 2% each year from 2008 and 2005 for a total of a 4% drop.

Figure 10: Continuity and Transition Dimension - Individual Questions (Percent Positive)

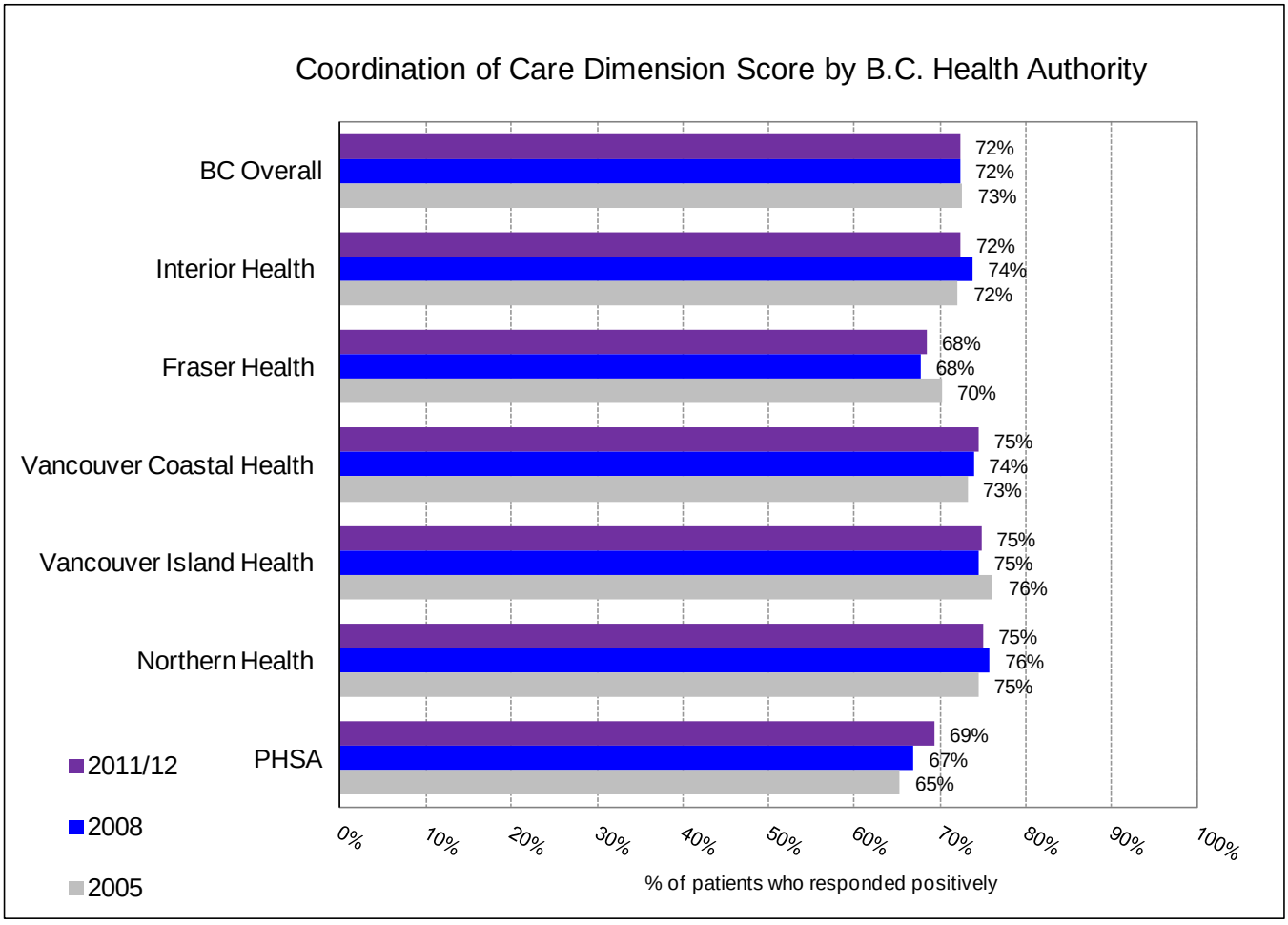


Coordination of Care

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 11Figure 11. Ratings at the provincial level at about 72 percent positive are about the same as in 2008.

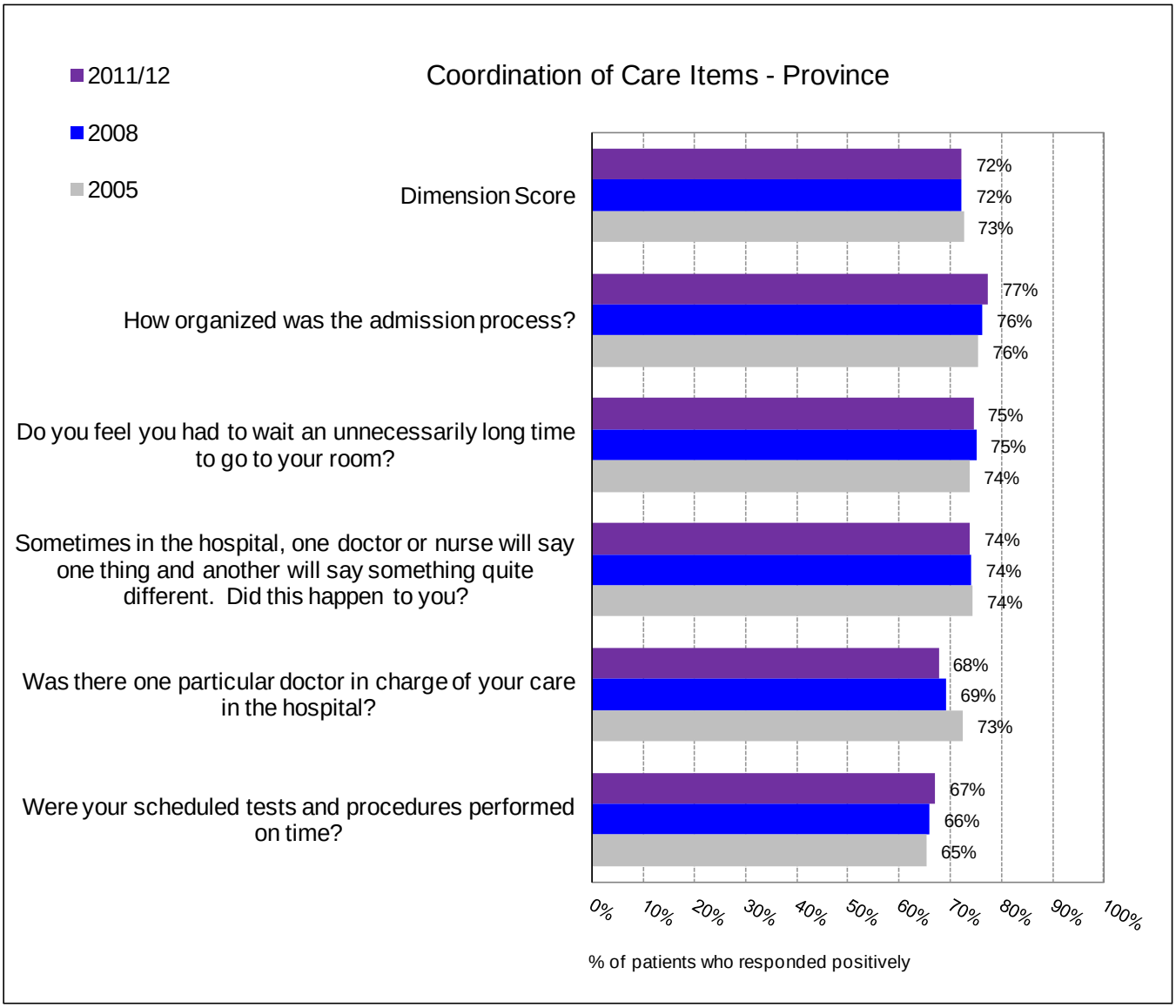
VCHA, VIHA and NHA scores are virtually the same as the provincial result. PHSA and FHA scores are slightly lower than the provincial figure. No HA score changed very much from 2008.

Figure 11: Coordination of Care Dimension Scores for Province and Health Authorities (Percent Positive)



The ratings for the five individual items composing the “coordination of care” indicator are shown in Figure 12. Three of these items had roughly the same performance, around 75% positive, while two had performance around 68%. The scores in 2011/12 are virtually identical to 2008 and 2005, except for the drop in the performance for the “one doctor in charge of your care” question, particularly from 2005.

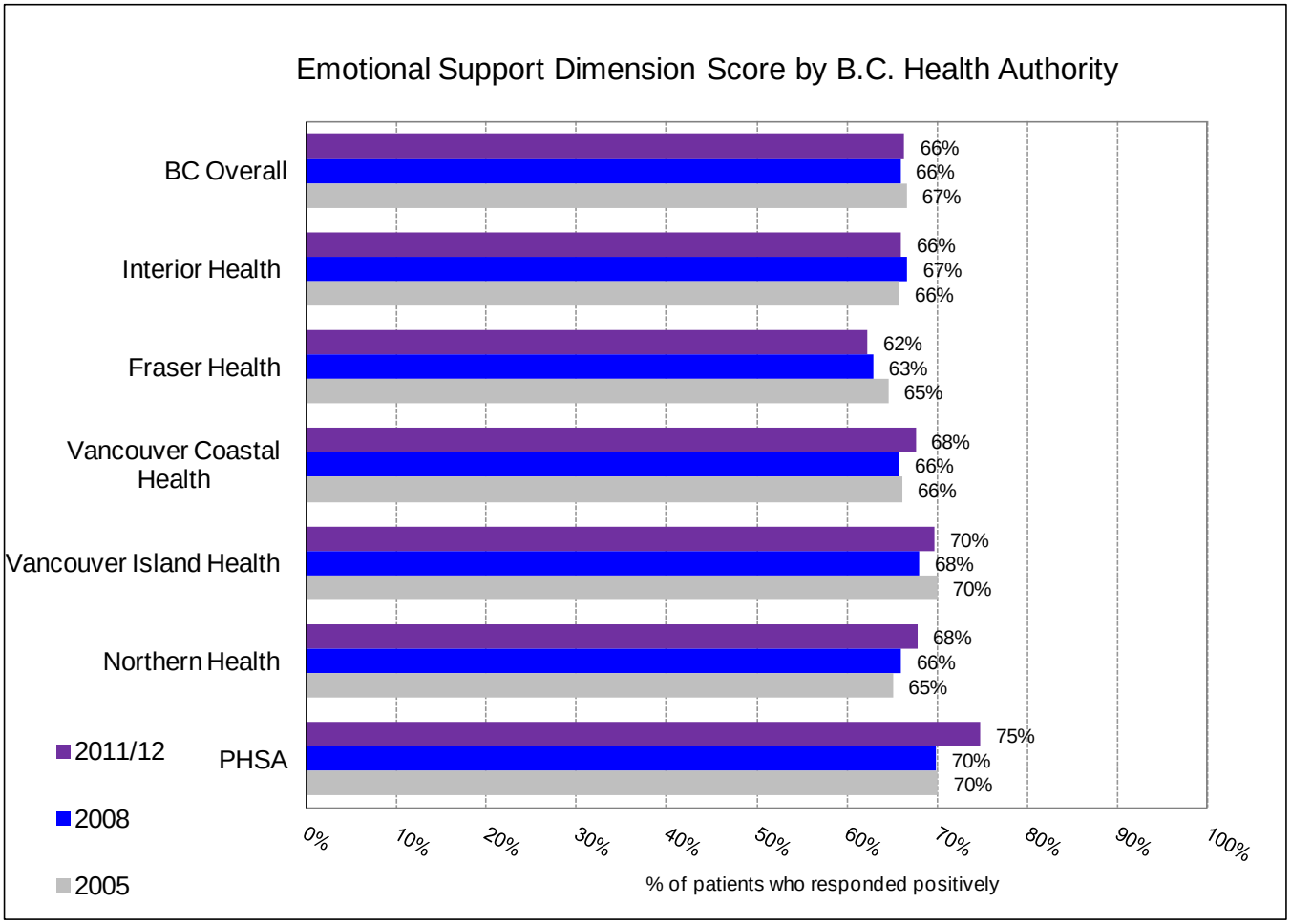
Figure 12: Coordination of Care Dimension – Individual Questions (Percent Positive)



Emotional Support

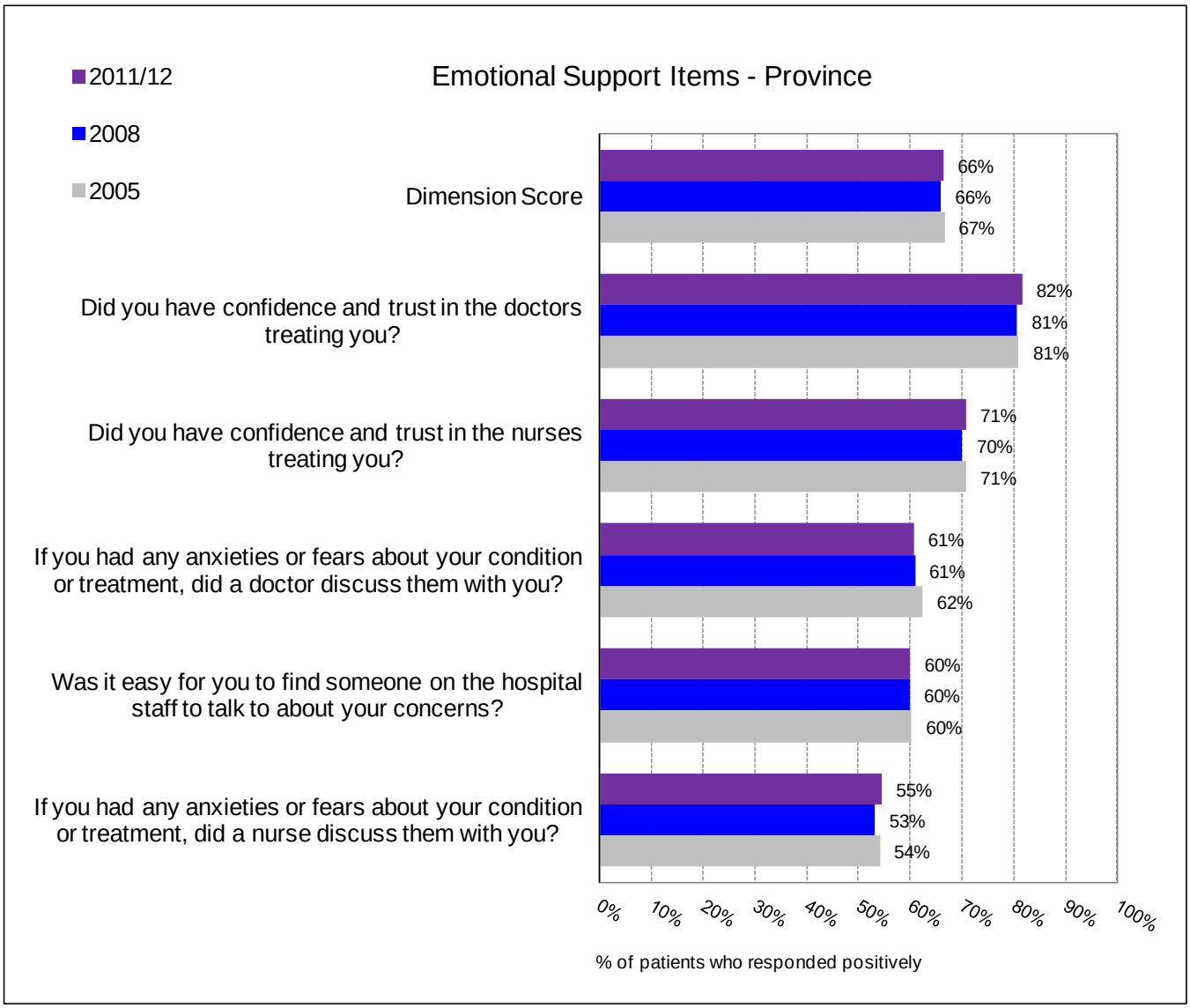
The emotional support dimension focuses on the extent to which patients get help, encouragement and support for the fear, anxiety, and concerns associated with their illness and hospital stay. Five items are included in the "emotional support" indicator, and results province-wide and for individual health authorities are shown in Figure 13. The provincial score in 2011/12 at about 66 percent is not different than the 2008 score. Scores for PHSA are higher than the provincial results, and those for FHA are slightly lower. No other HAs changed scores from 2008.

Figure 13: Emotional Support Dimension Scores for Province and Health Authorities (Percent Positive)



The five items making up “emotional support” varied from a high of 82% positive for patient ratings of confidence and trust in their doctor to 55% positive around patient discussion with nurses about fear and anxiety. These results are shown in Figure 14. There was no substantive change in scores since 2008.

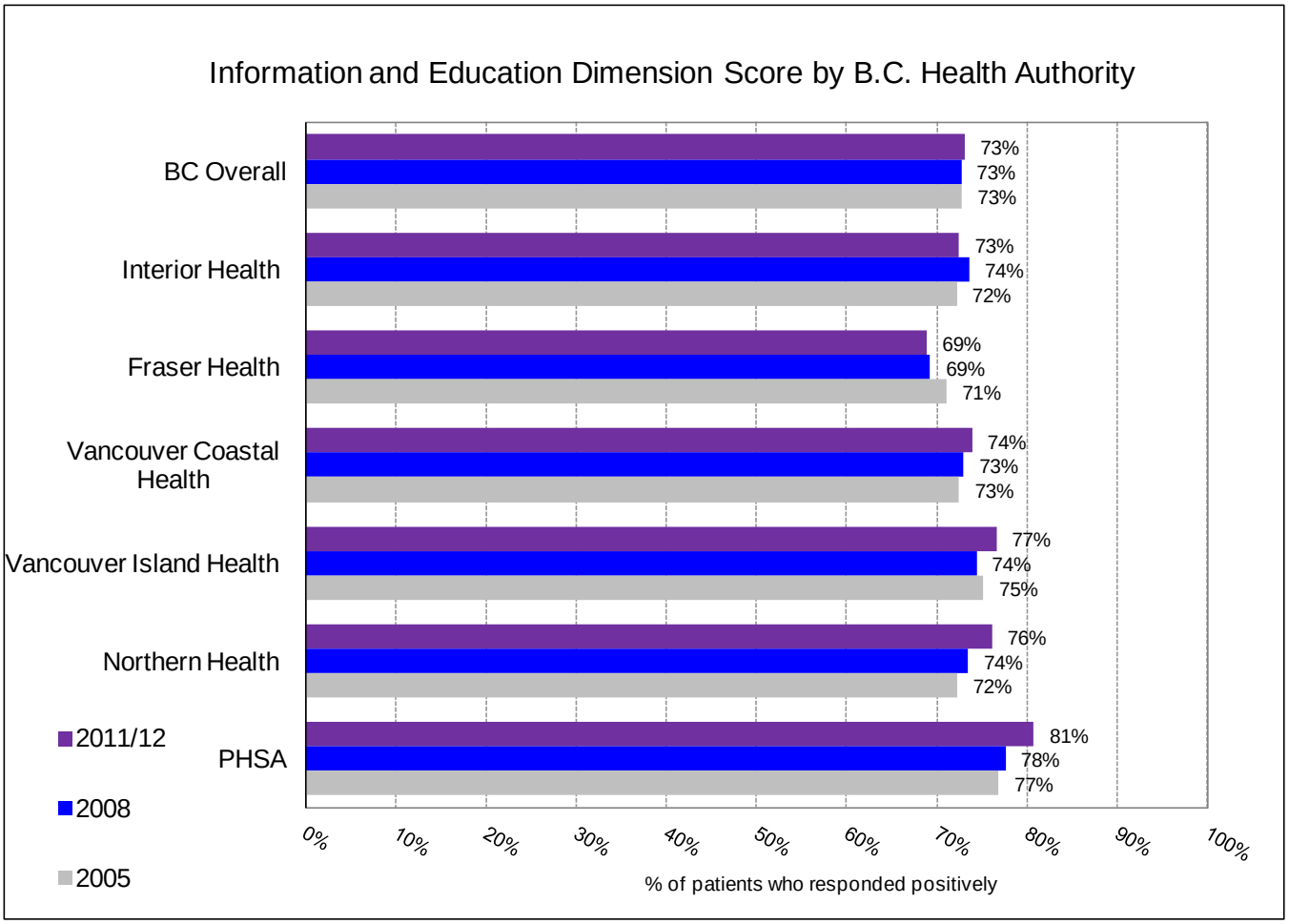
Figure 14: Emotional Support Dimension - Individual Questions (Percent Positive)



Information and Education

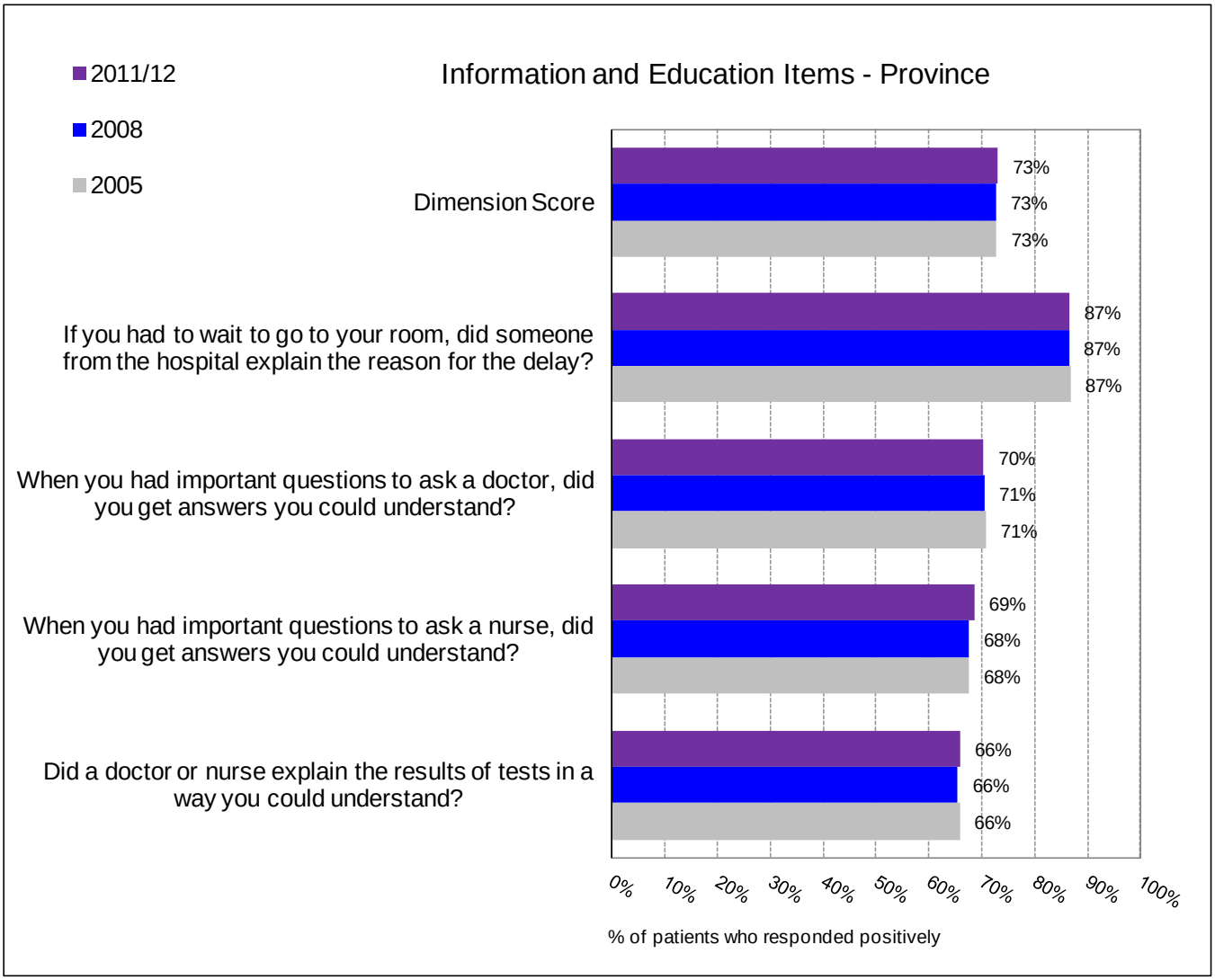
An important role of health care providers is to keep patients informed and answer questions. The "information and education" indicator includes four items, and the results for the province and the health authorities are shown in Figure 15. The 2011/12 results at about 73% positive are identical to 2008 and 2005. Neither the province overall nor any region changed scores in any substantive way between 2011/12 and 2008. PHSA's results are higher than the province-wide result, VIHA and NHS are slightly higher, and FHA's are slightly lower.

Figure 15: Information and Education Dimension Scores for Province and Health Authority (Percent Positive)



There were no differences in scores in any of the four questions in this dimension across time (Figure 16). Eighty-seven% 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. However, only 66% of respondents felt positive about whether results of tests were explained understandably.

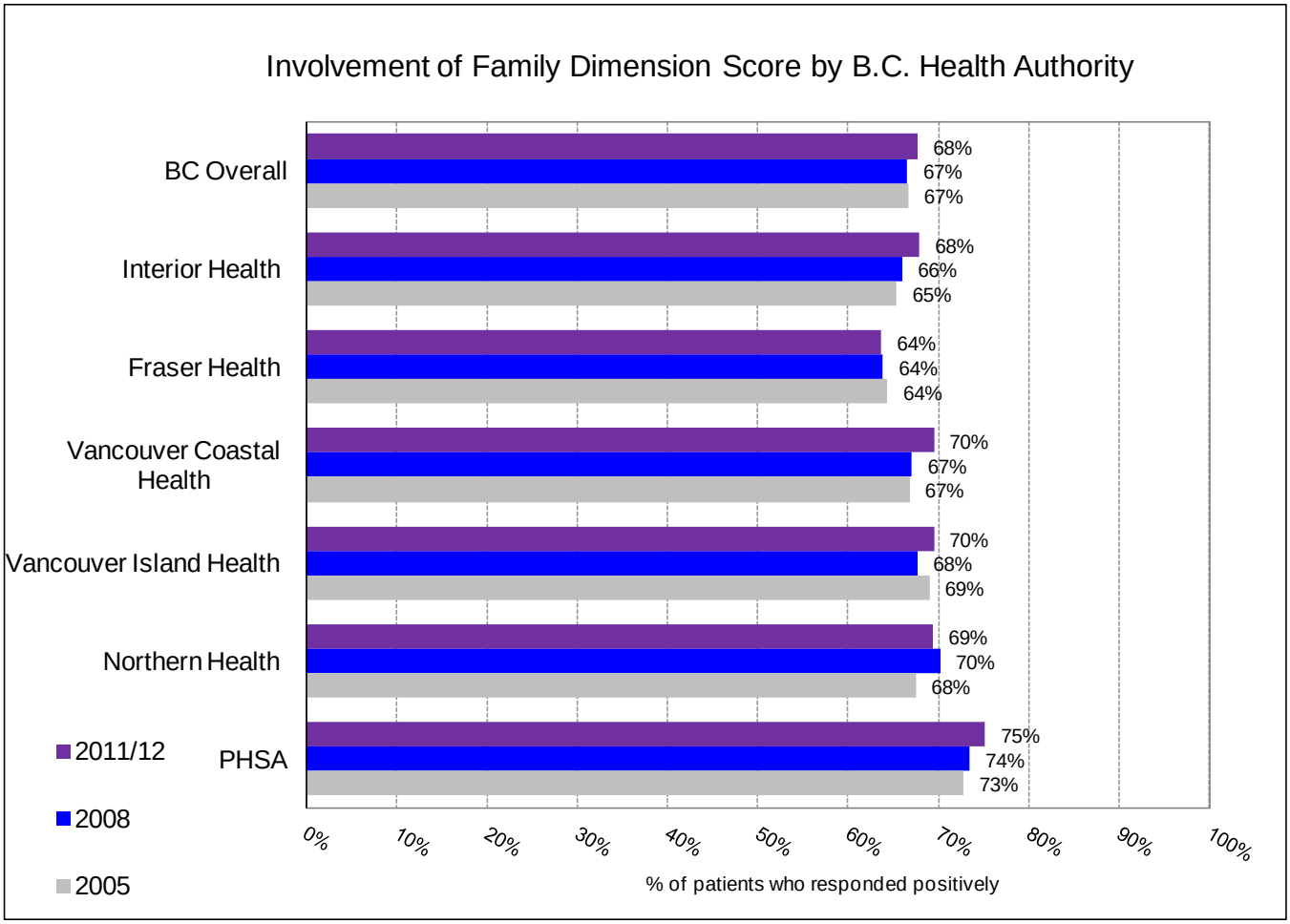
Figure 16: Information and Education Dimension - Individual Questions (Percent Positive)



Involvement of Family

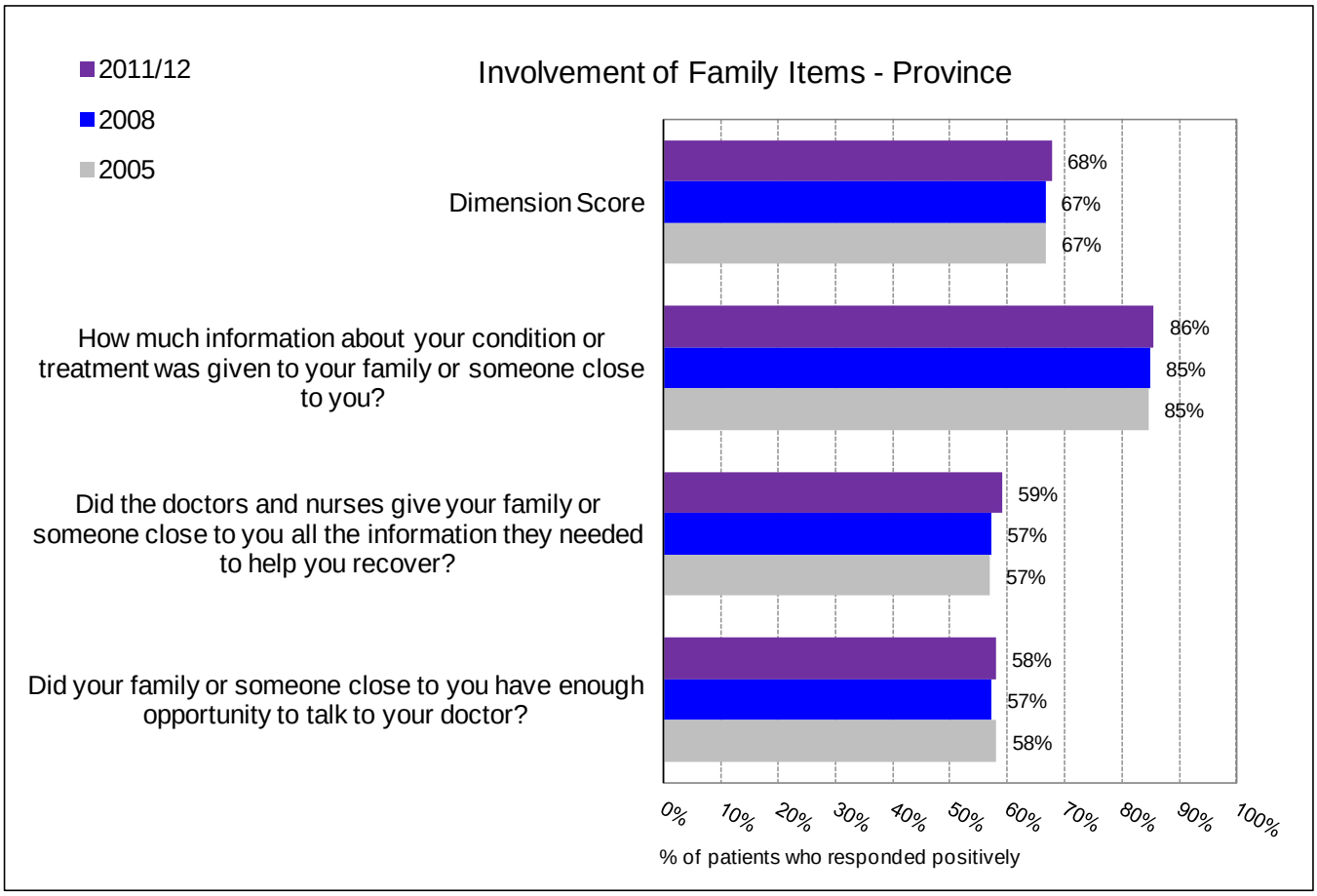
Family and loved ones play an important role in a patient's care. The three items of the "involvement of family" indicator touch on whether family members were sufficiently informed during the hospital stay. The 2011/12 provincial results at about 68 percent positive, shown in Figure 17, are virtually the same as 2008 and 2005. Only VCHA improved slightly since 2008. PHSA results are higher than the provincial result, while FHA's results are lower.

Figure 17: Involvement of Family Dimension Scores for Province and Health Authorities (Percent Positive)



Results for the three questions in the “involvement of family” indicator varied substantially as shown in Figure 18. Almost 86% of patients gave positive ratings to the amount of information given to family, while only 59% gave positive ratings to questions about the amount recovery information provided to family, which is virtually the same as 2008, and only 58% were positive about the opportunity for family to talk to the patient’s doctor.

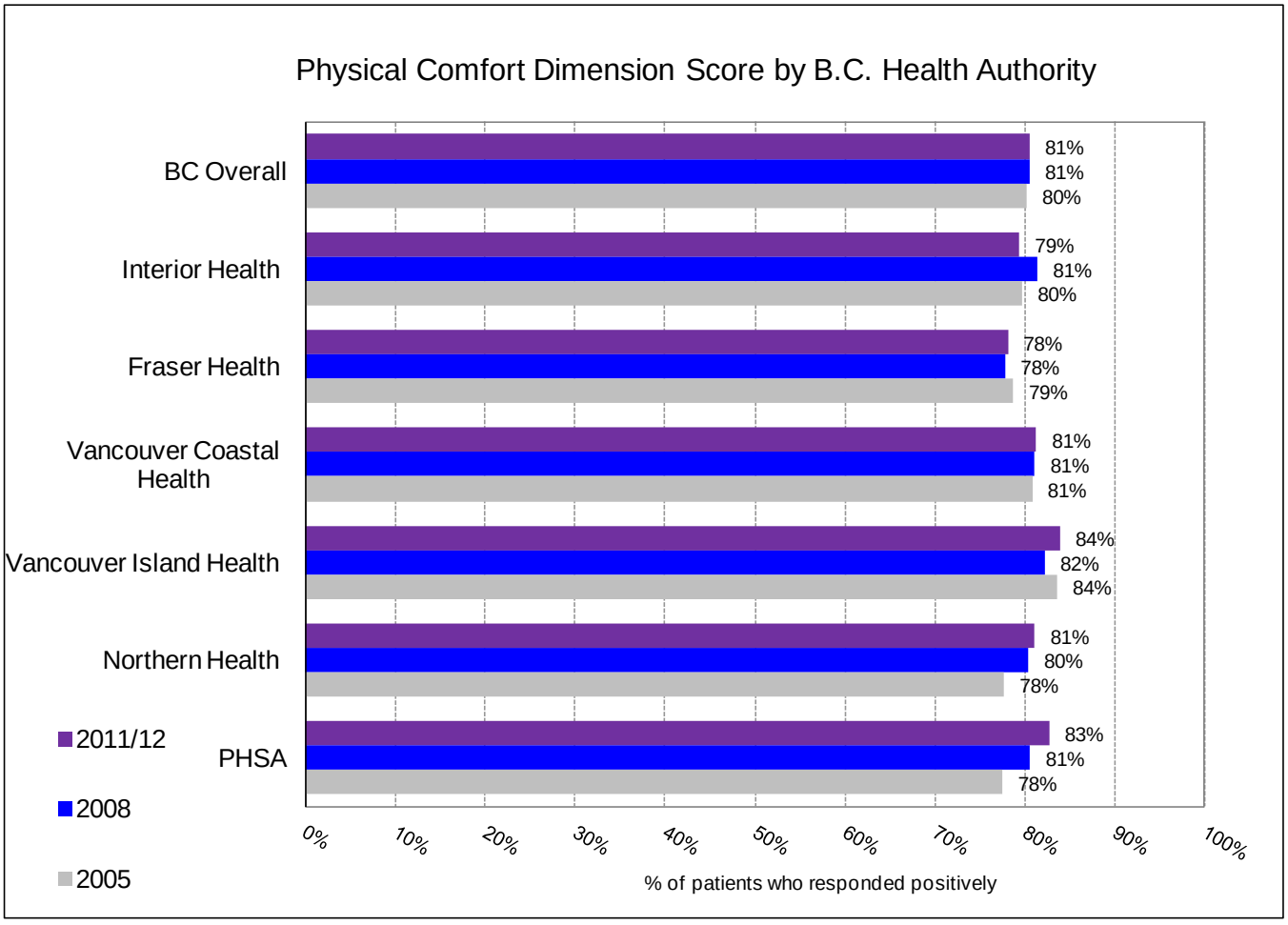
Figure 18: Involvement of Family Dimension - Individual Questions (Percent Positive)



Physical Comfort

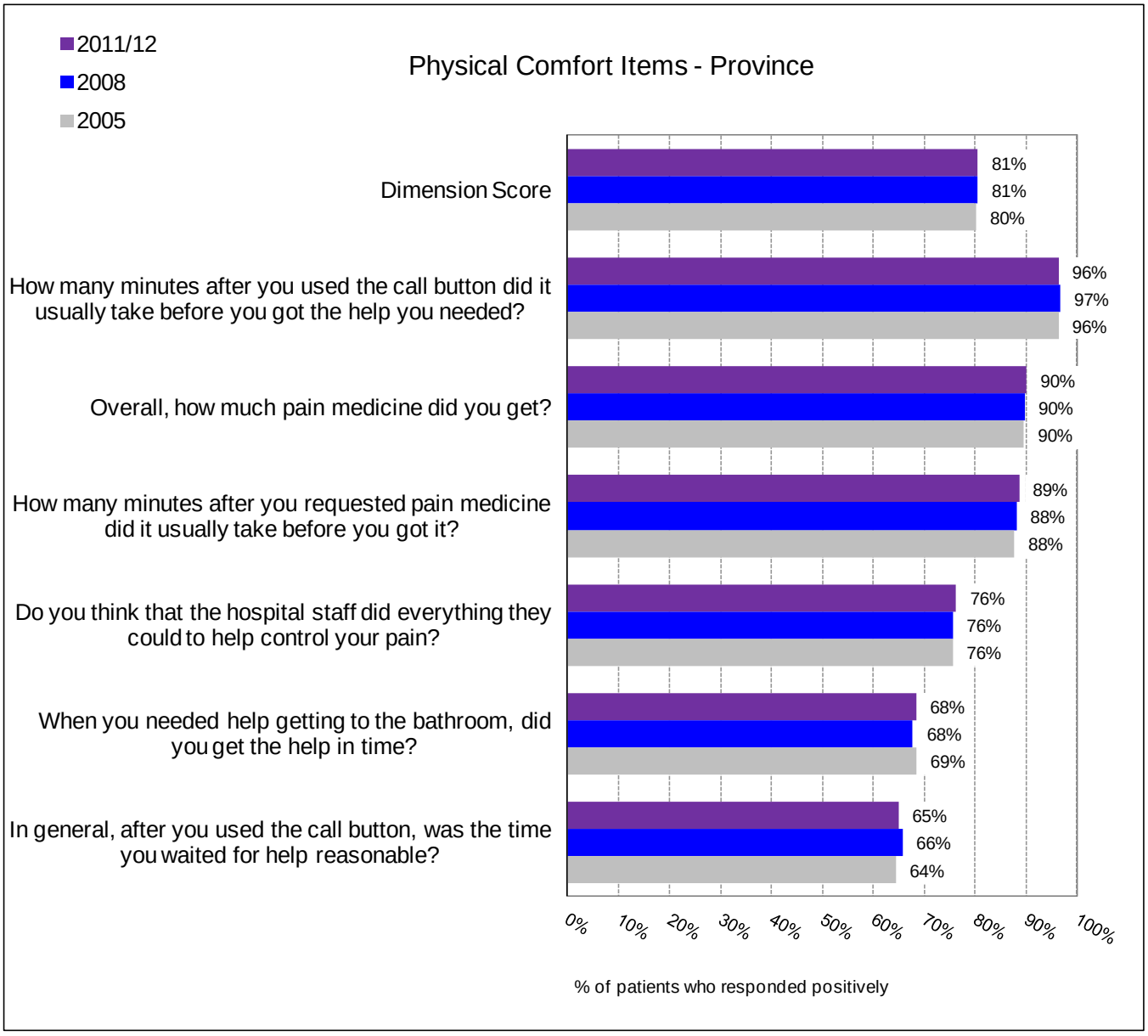
Patients' physical comfort and pain management are important aspects of patient-centred care. Six items are used to form the "physical comfort" indicator, and the results for the province and the health authorities are shown in Figure 19. BC's 2011/12 results are identical to the 2008 results. All regions had the same or virtually the same scores as the province overall, except for VIHA with scores slightly higher than the province and FHA, where scores are slightly below the overall figure. No health authority's score has changed substantially from 2008.

Figure 19: Physical Comfort Dimension Scores for Province and Health Authorities (Percent 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 20. There were no changes in scores since 2008 or 2005. In general, 96% of patients reported getting help within 15 minutes when they used the call bell[3]. About 68% of patients were positive about the time it took to receive help to get to the bathroom. Patients felt 65% positive about whether the wait was reasonable after using the call button. About 89% 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% positive), and 90% of patients responded that they received the right amount of pain medication.

Figure 20: Physical Comfort Dimension - Individual Questions (Percent Positive)

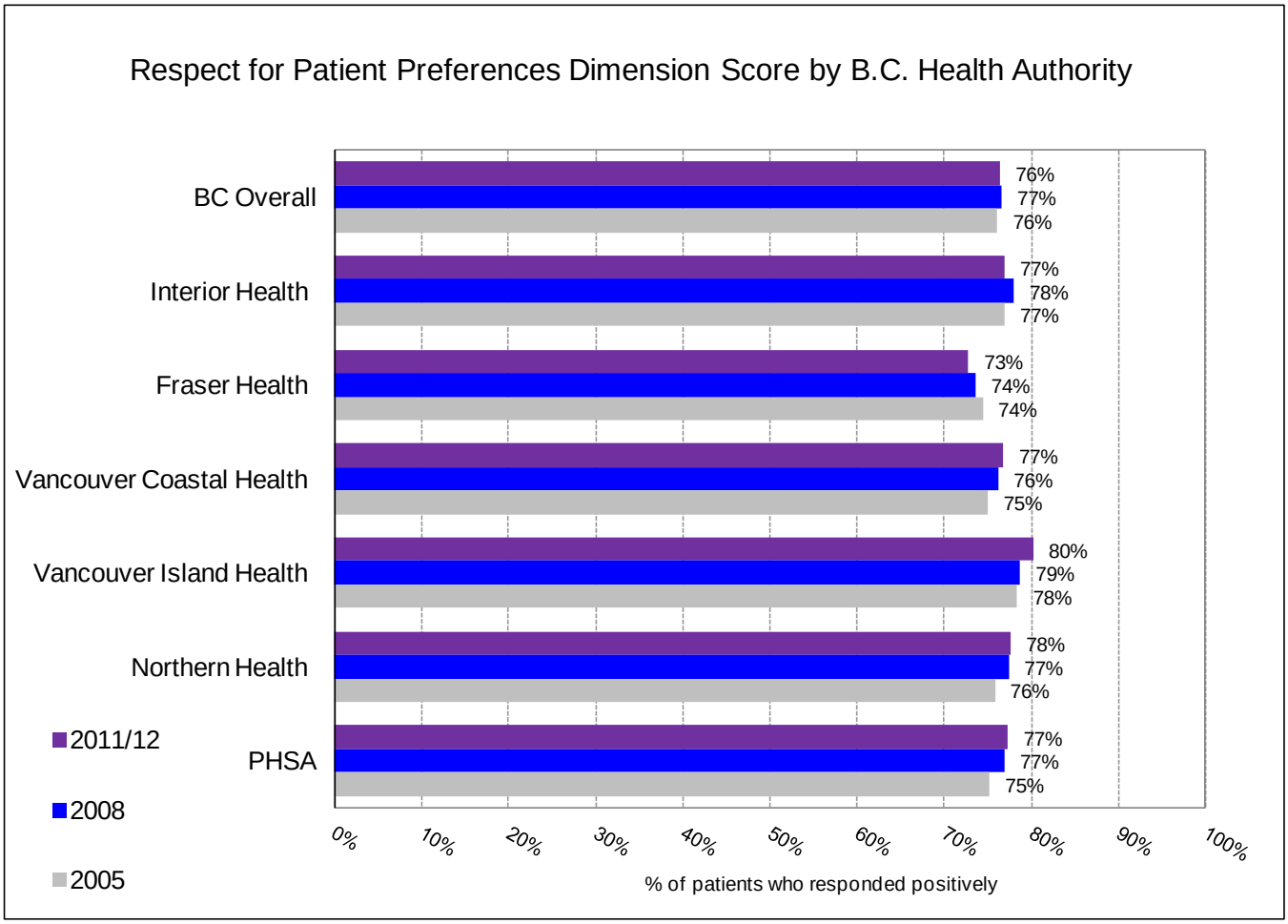


[3] For more detailed analyses of wait times for call bells, see Appendix 4.

Respect for Patient Preferences

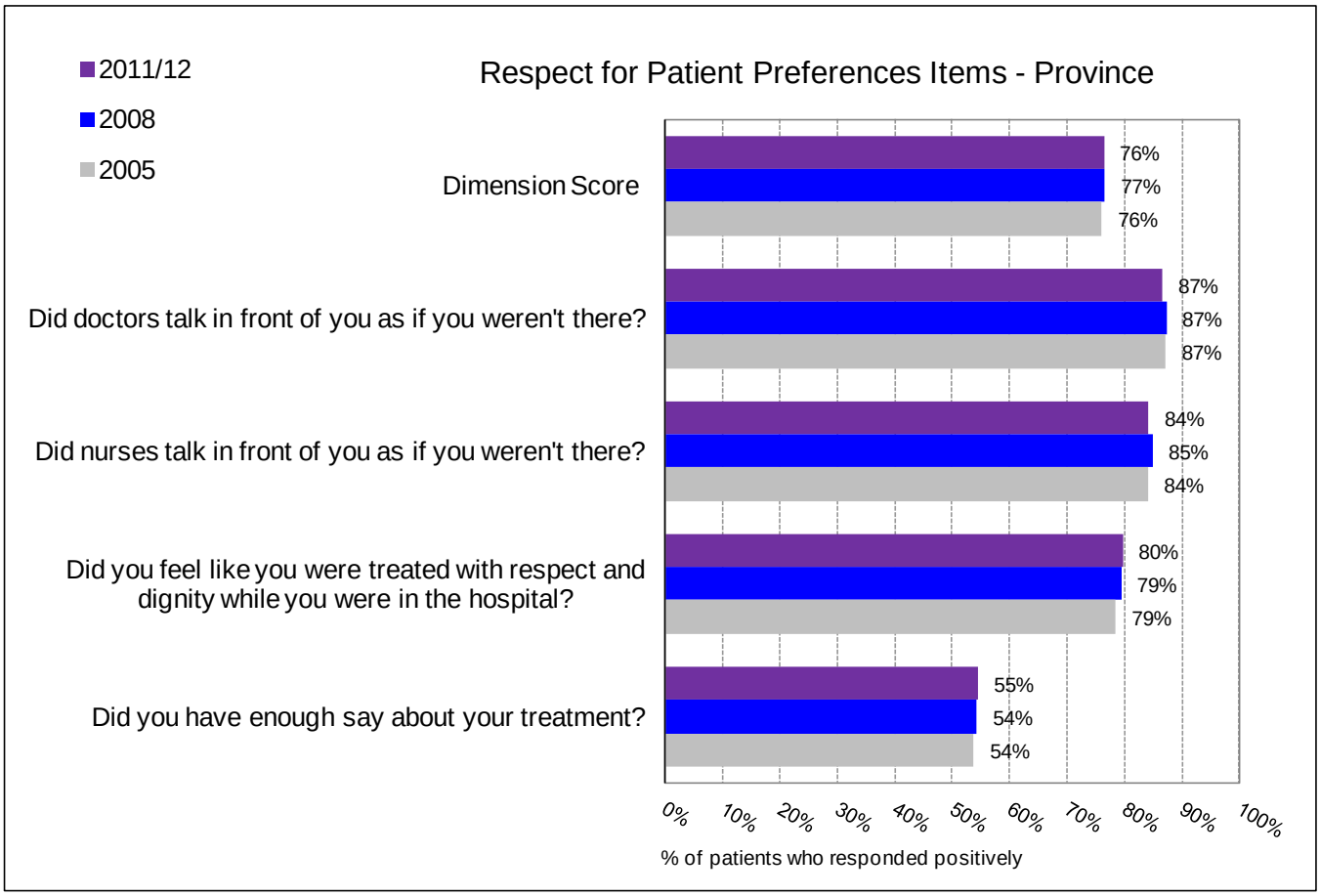
Increasingly, patients are viewed as partners in their care and caregivers are paying closer attention to their preferences. This includes treating patients with respect and providing privacy during their hospital stay. Four items make up the "respect for patient preferences" indicator and results for the province overall and the health authorities are shown in Figure 21. The provincial score did not change from 2008. No region has changed scores since the 2008 survey. VIHA's score is slightly higher than the provincial score while FHA's is slightly lower.

Figure 21: Respect for Patient Preferences Dimension for Province and Health Authorities (Percent Positive)



Ratings of the four questions making up the “respect of patient preferences” indicator vary appreciably, as shown in Figure 22. Patients responded positively (79% to 87% range) to three questions about respect and dignity, while 55% responded positively about patients having enough say in their treatment; this is the 4th lowest rating of all questionnaire items. No scores changed since 2008.

Figure 22: Respect for Patient Preferences Dimension - Individual Questions (Percent Positive)

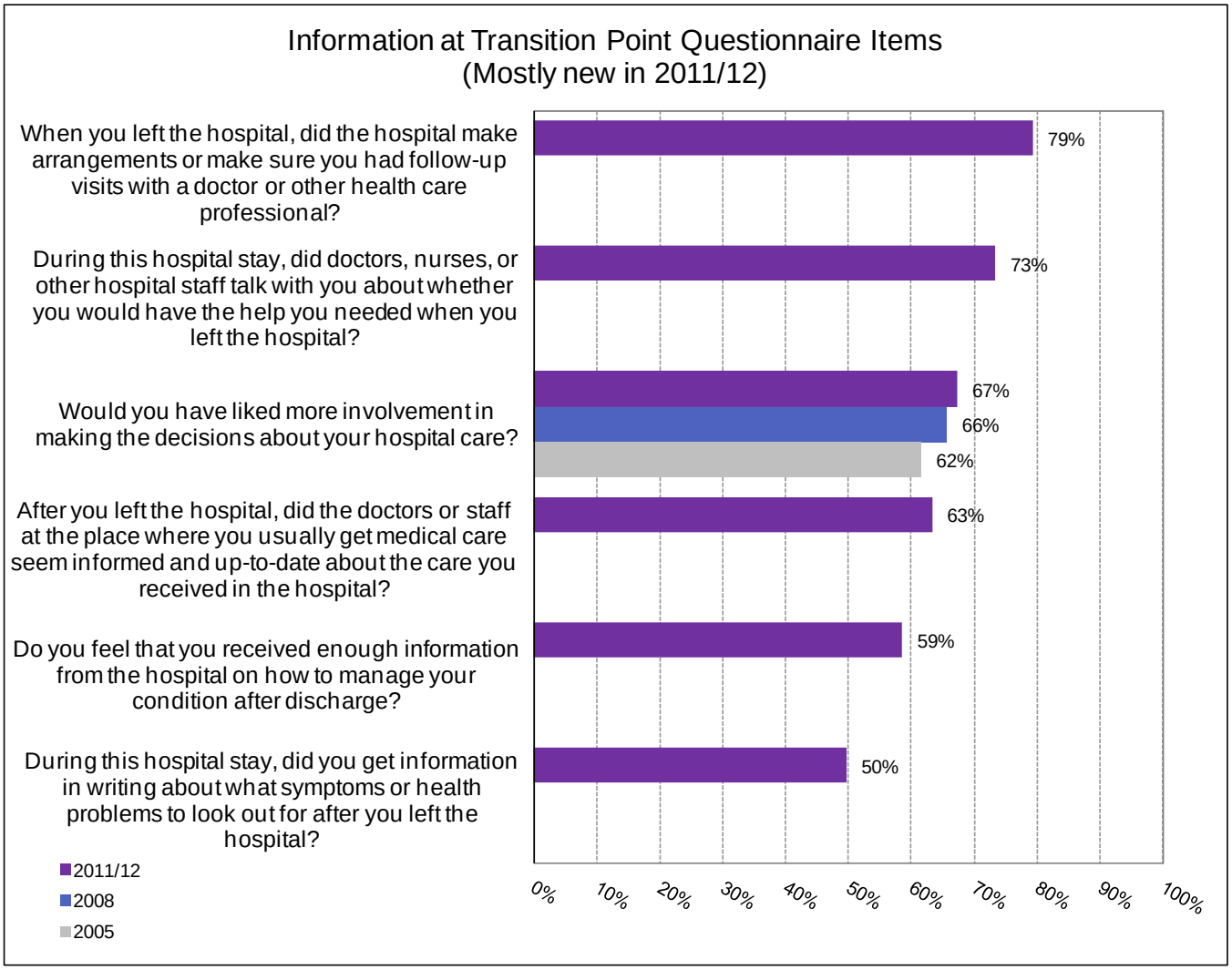


BC Questionnaire Content

Information at Transition Points

Five new questions were added to the BC questionnaire in 2011/12 to examine patients' experience with information given during transitions from hospital to home. These questions replace three questions that came from the Care Transitions Measure, which were new to the 2008 questionnaire, but subsequently found to be inadequate in providing useful information to providers. One question about involvement in decision making has been used since 2005, and does show improvement since then. As shown in Figure 23, the other questions range from a score of 79% to two scores below 60%, which would have put them near the bottom of performance on all questions.

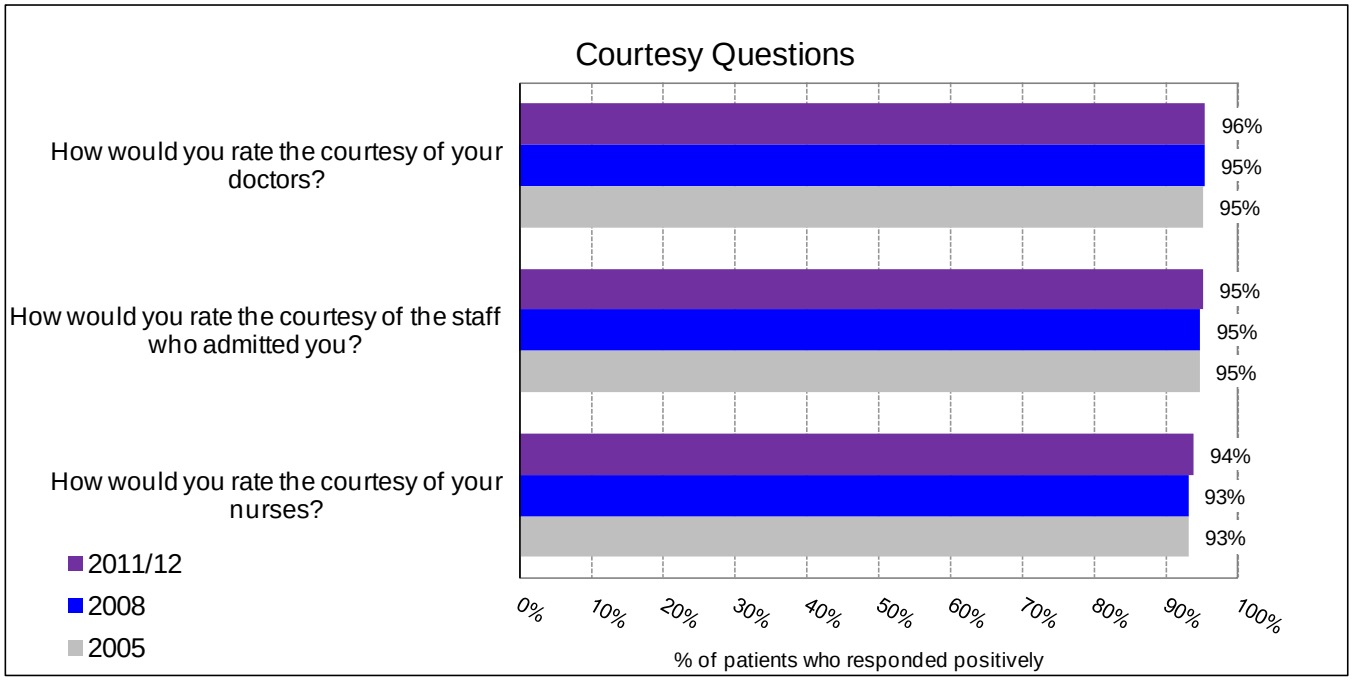
Figure 23: Information at Transition Point Items, mostly new in 2011/12 (Percent Positive)



Courtesy

BC patient-experience data shows that courtesy is an important component of a positive hospital experience. Three questions have been asked about this since 2005; results are shown in Figure 24. Patients are overwhelmingly positive about the courtesy shown them by doctors, nurses, and admitting staff. There were no changes across time.

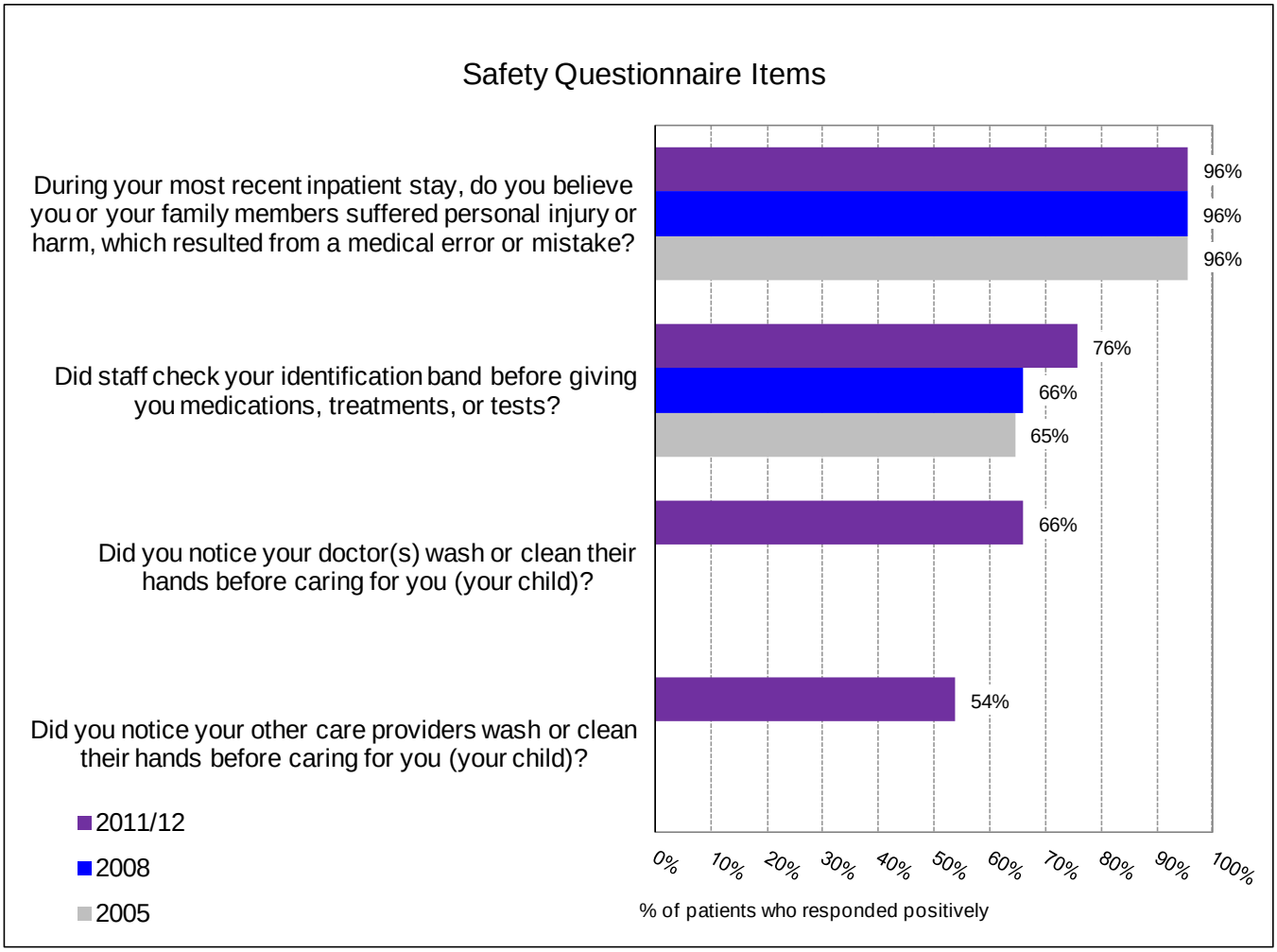
Figure 24: Courtesy Questions (Percent Positive)



Patient Safety

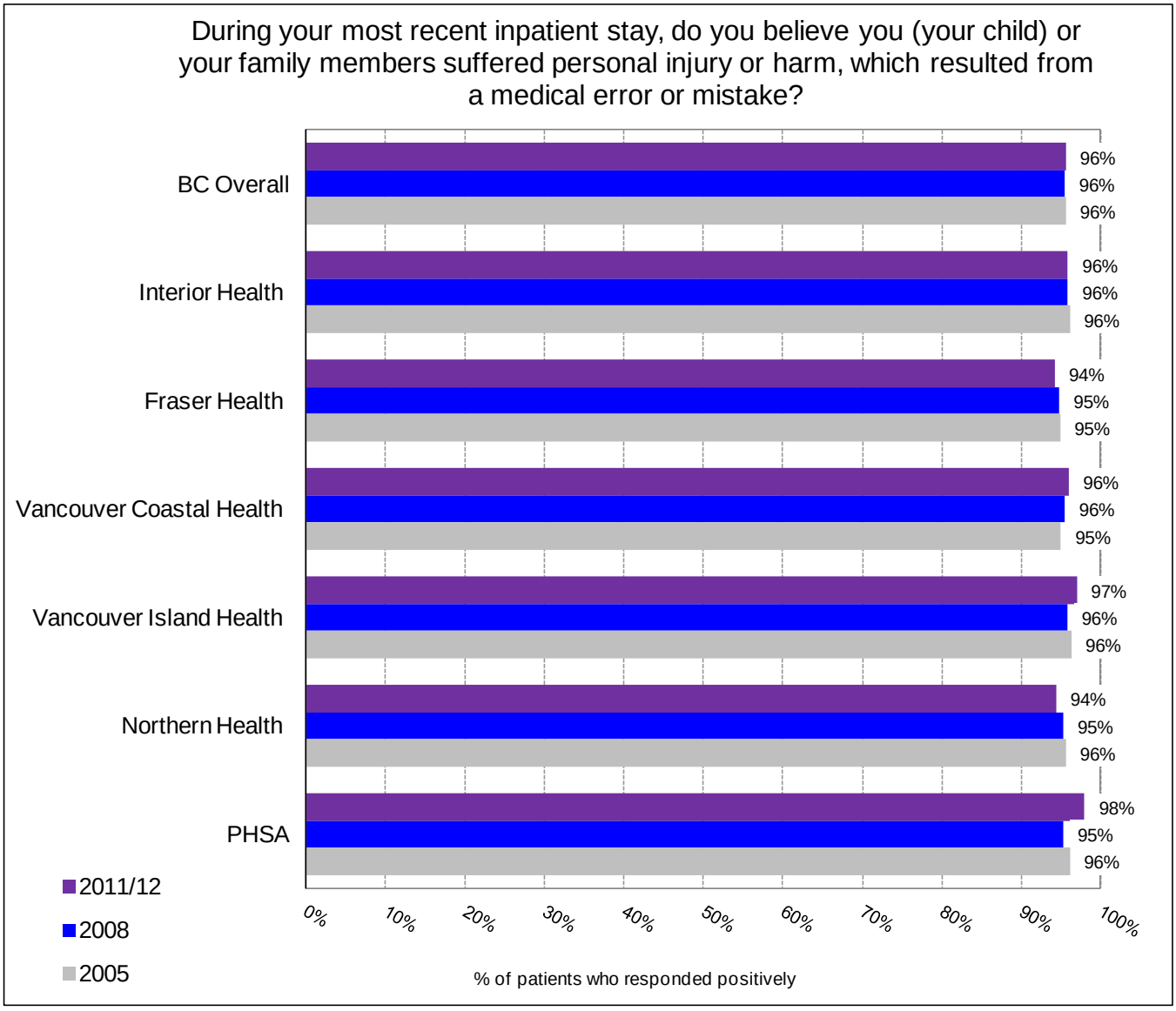
In addition to all other aspects of their hospitals experience, patients expect safe care. Four questions were asked about perceived harm and two practices indicative of safe care; one question from 2008 was replaced with two new questions. In response to the crucial question of whether patients suffered personal injury or harm from a medical error or mistake, 96% of respondents said “No” as shown in Figure 25. This is exactly the same score as 2008. There are no differences by health authority across time, and no differences from 2008

Figure 25: Safety Questions



The ‘personal injury or harm’ question shows remarkable consistency across Health Authorities and time, as shown in Figure 26. The “percent positive” score for this question is from the answer category of ‘No’.

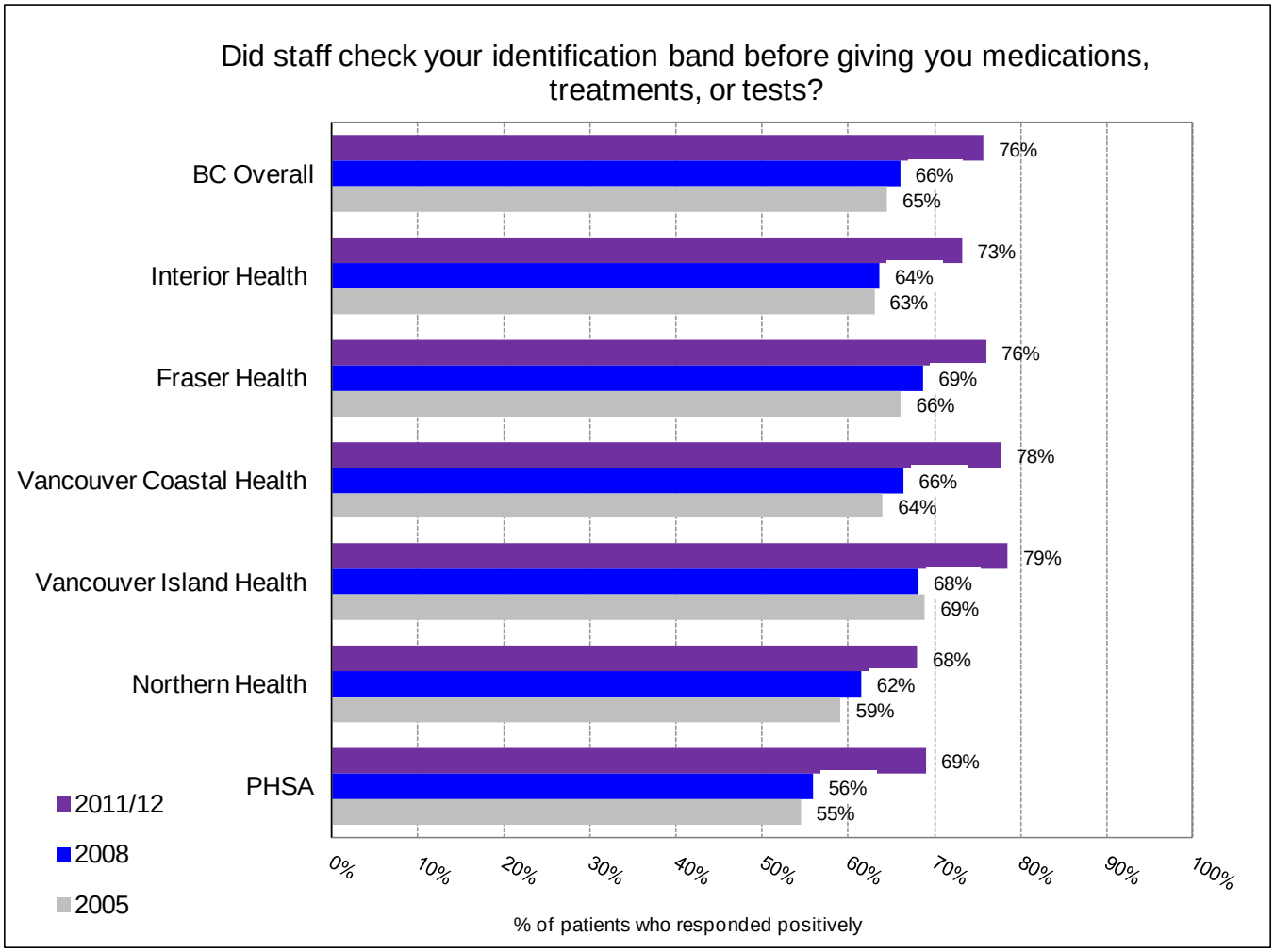
Figure 26: Suffered Personal Injury or Harm” Scores for Province and Health Authorities (Percent Positive)



A great many factors contribute to safety in hospitals including safe practices done by staff and physicians. Figure 27 and Figure 28 show responses for three questions about these, two of which are new in 2011/12.

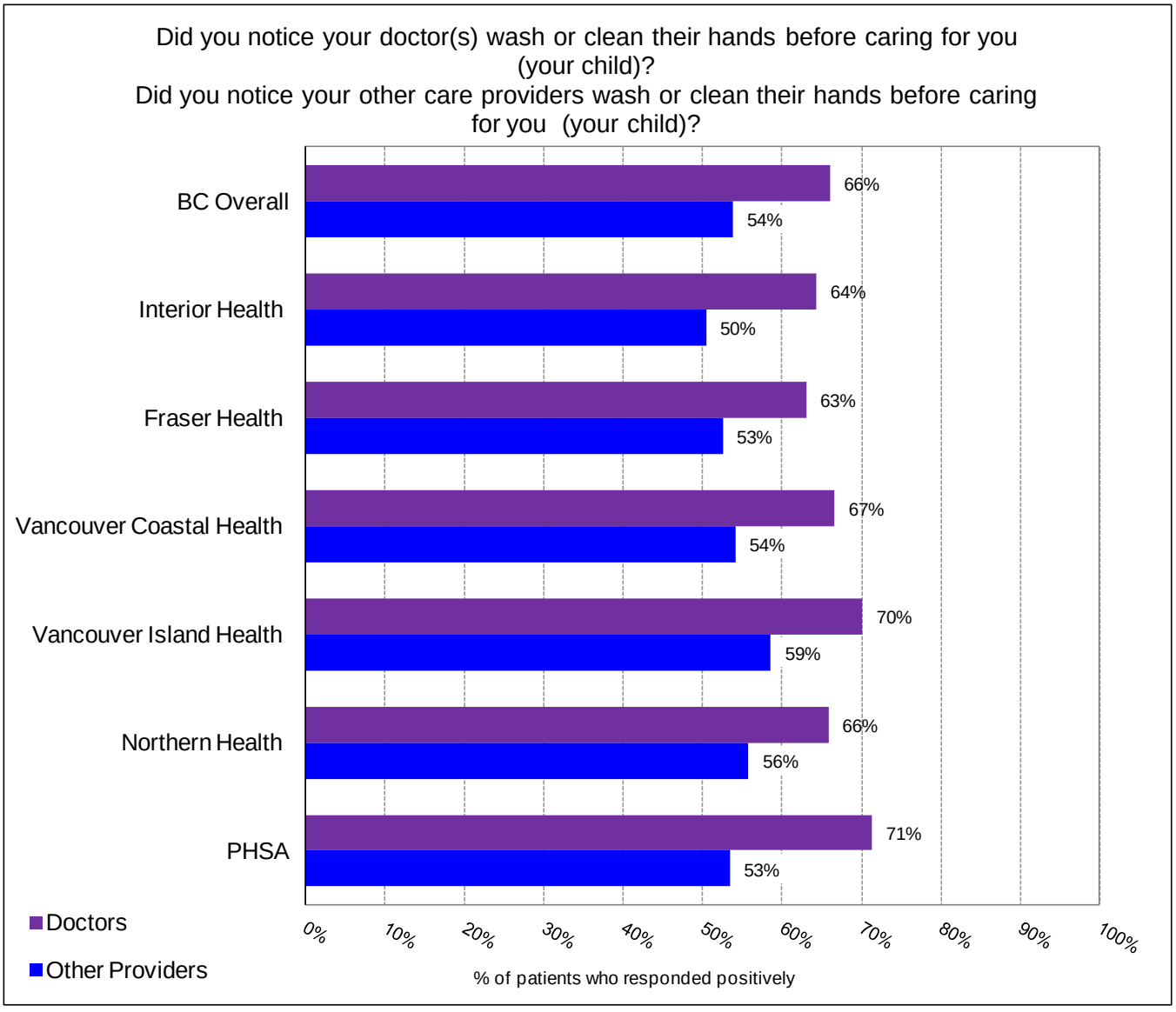
On the ID band checking question shown in Figure 25, the BC score overall improved substantially between 2011/12 and 2008. All Health Authorities also improved since 2008 and 2005. It is important to note that the context for the question in the questionnaire changed substantially since 2008 with new questions in the section and a substantially different question order. This might be contributing to the difference between years, but there is no way of knowing with these survey results. It will be important to continue to monitor this aspect of patient safety over time. VIHA had scores that were slightly above the overall BC figure; NHA and PHSA had scores that were lower.

Figure 27: Staff checked identification band



In 2008 there was a single hand washing question that asked about whether patients noticed 'staff' washing their hands. In 2011/12 this was replaced with two new questions, one asking about doctors and the other asking about 'other care providers'. VIHA had scores for both questions that were higher than the province total; PHSA had higher scores for doctors. FHA had slightly lower scores for doctors while IHA had slightly lower scores for "other care providers."

Figure 28: Doctor and Other Staff Wash Hands Question, new questions in 2011/12



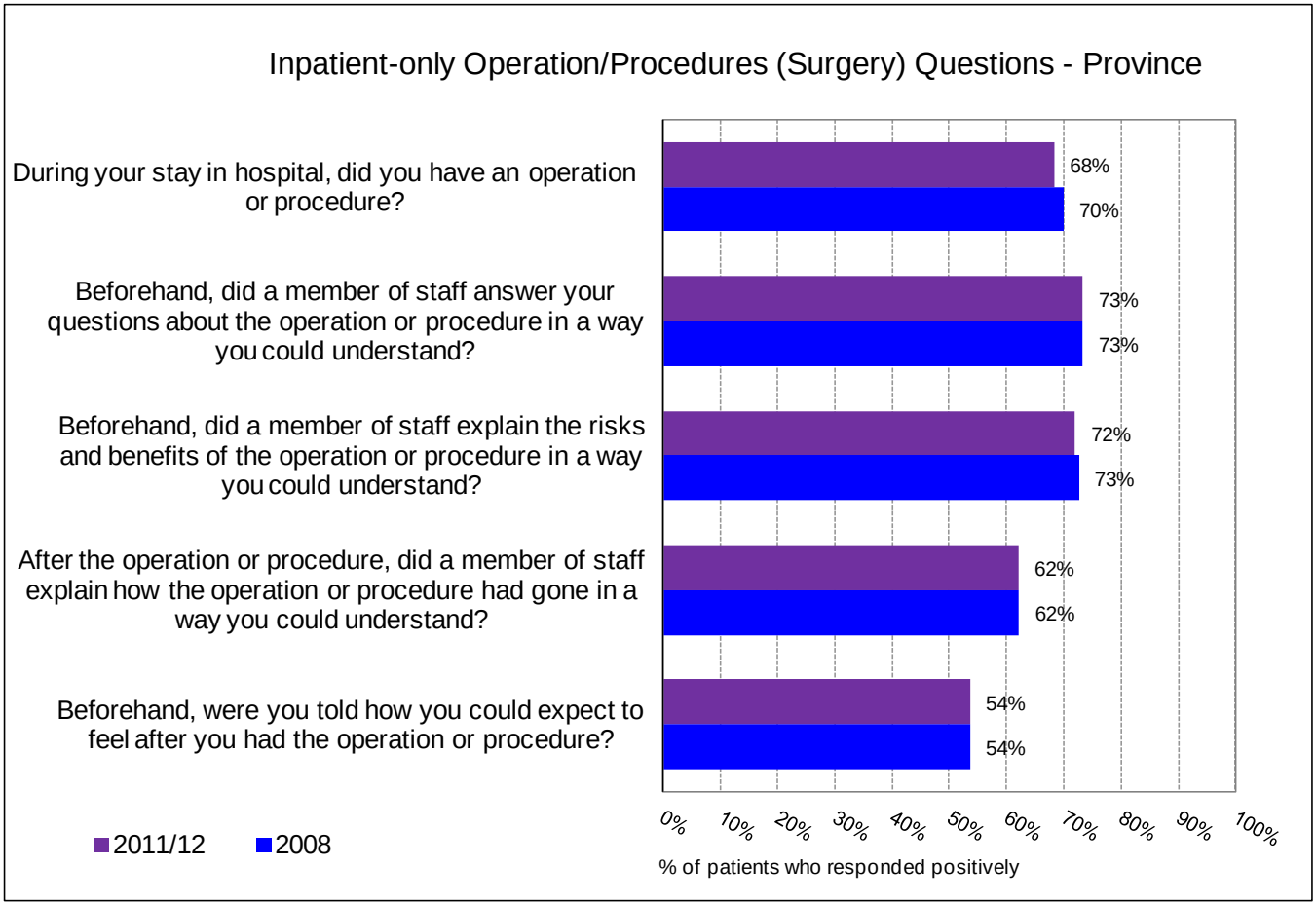
BC Subsector Content

Inpatient Operation or Procedures (Surgery) Section

Each year there are about ½ million surgeries 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 section reports on just non-rehab inpatient respondents' answers to the five 'surgery' section questions. This is the second time these specific survey results are being presented because the questions were added in 2008. The responses of paediatric, maternity, and rehabilitation patients are reported in subsequent sections along with other, more specialty-focused questions. Among the almost 12,000 inpatient respondents, 68% (n=5963) responded "yes" when asked if they had an operation or procedure (Figure 29).

The four surgery-specific questions focus on communication of information before and after surgery. There were no changes in scores between 2008 and 2011/12. The question about being told what to expect after the operation, with a score of 54%, would be among the lowest performing items when looking at all inpatient questions.

Figure 29: Operation/Procedure Questions, 2011/12 & 2008 only (Percent Positive)



Paediatric Care

Paediatric patients, both children and youth, account for only a small proportion 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 respondents to the survey (24%) come from BC Children's Hospital, paediatric patients were found in 37 other hospitals, and respondents came from 27 of those. The majority of paediatric responses, however, other than from BC Children's Hospital, came from 12 other facilities.

An additional paediatrics module was added to the BC IP questionnaire for use with paediatric patients in all hospitals. Questionnaires were mailed to 2397 patients under the age of 17 (excluding those having babies)[4], and 671 (29%) were returned.

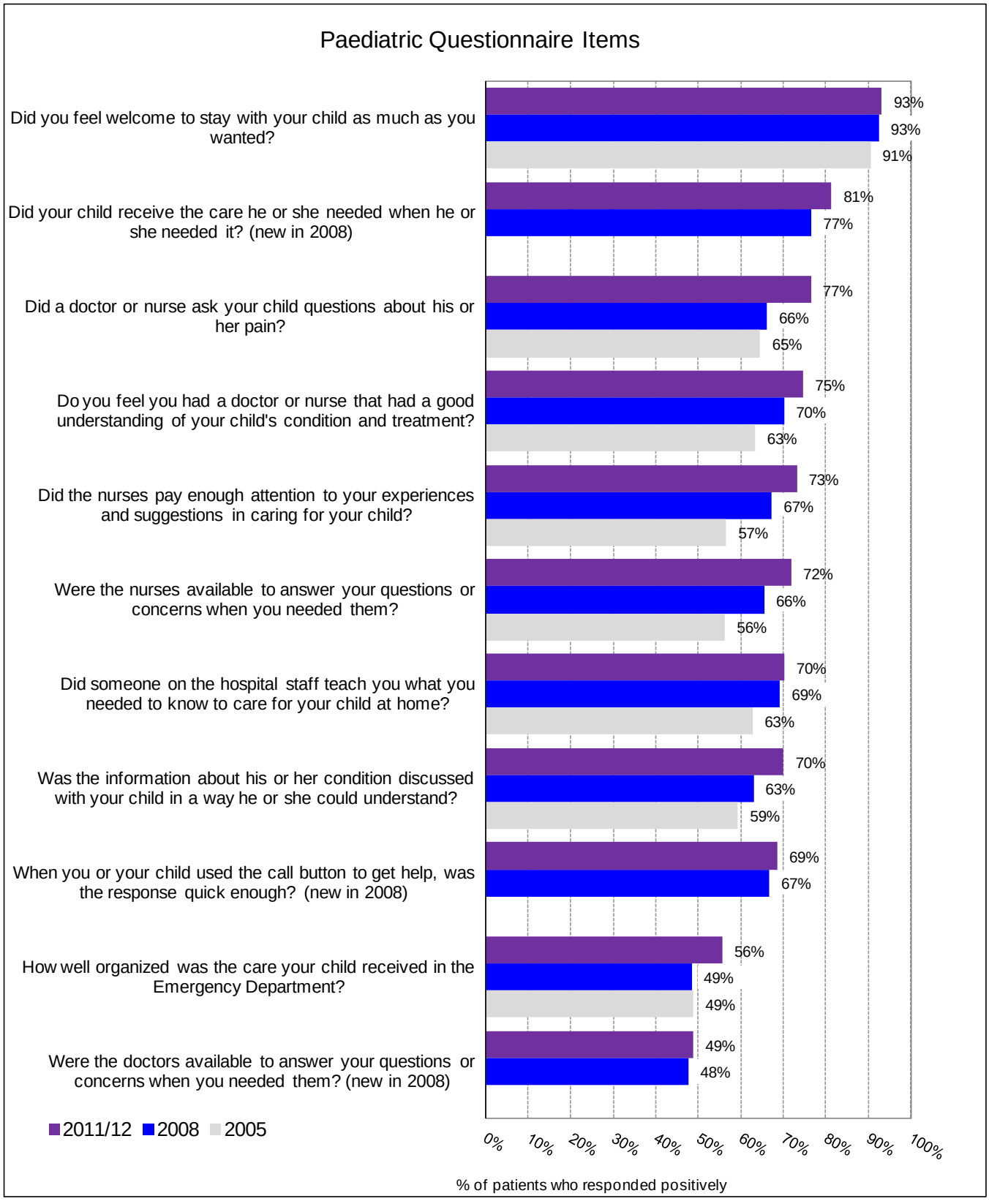
Results of surveys with a Canadian NRC paediatric question were reviewed in preparation for the first acute inpatient survey in 2005. It was decided to use the basic acute inpatient questionnaire and add 10 questions to help capture the paediatric patient experience. In 2008, another review was conducted and several more questions added. For the 2011/12 questionnaire, the new transition questions were included.

Respondents to the paediatric questions, whether parents or youth, gave higher positive scores to the overall rating question compared to the All Sectors score (94.5% versus 92.2%). The paediatric Likelihood to Recommend score was also higher (74.2% versus 68.5%). However, the All Dimensions Combined was virtually identical (74.9% versus 72.2%),

The paediatric questionnaire has 18 unique questions aimed exclusively at paediatric care. The responses for 11 non-surgery questions are shown Figure 30. The highest scoring question (almost 93%) asked if parents felt welcomed to stay with their child as long they wanted. The second-highest ranked question (81%) asked whether the child received all the care he or she needed; this is an improvement of 4.8% over 2008. Seven questions scored between 69% and 77%; five of those represent improvements since 2008. Finally, only 49% were positive about the availability of doctors to answer questions or concerns; this number did not change from 2008. Almost 56% of respondents who experienced emergency department care thought the care was well organized; this is an improvement over 2008 by 7.2%.

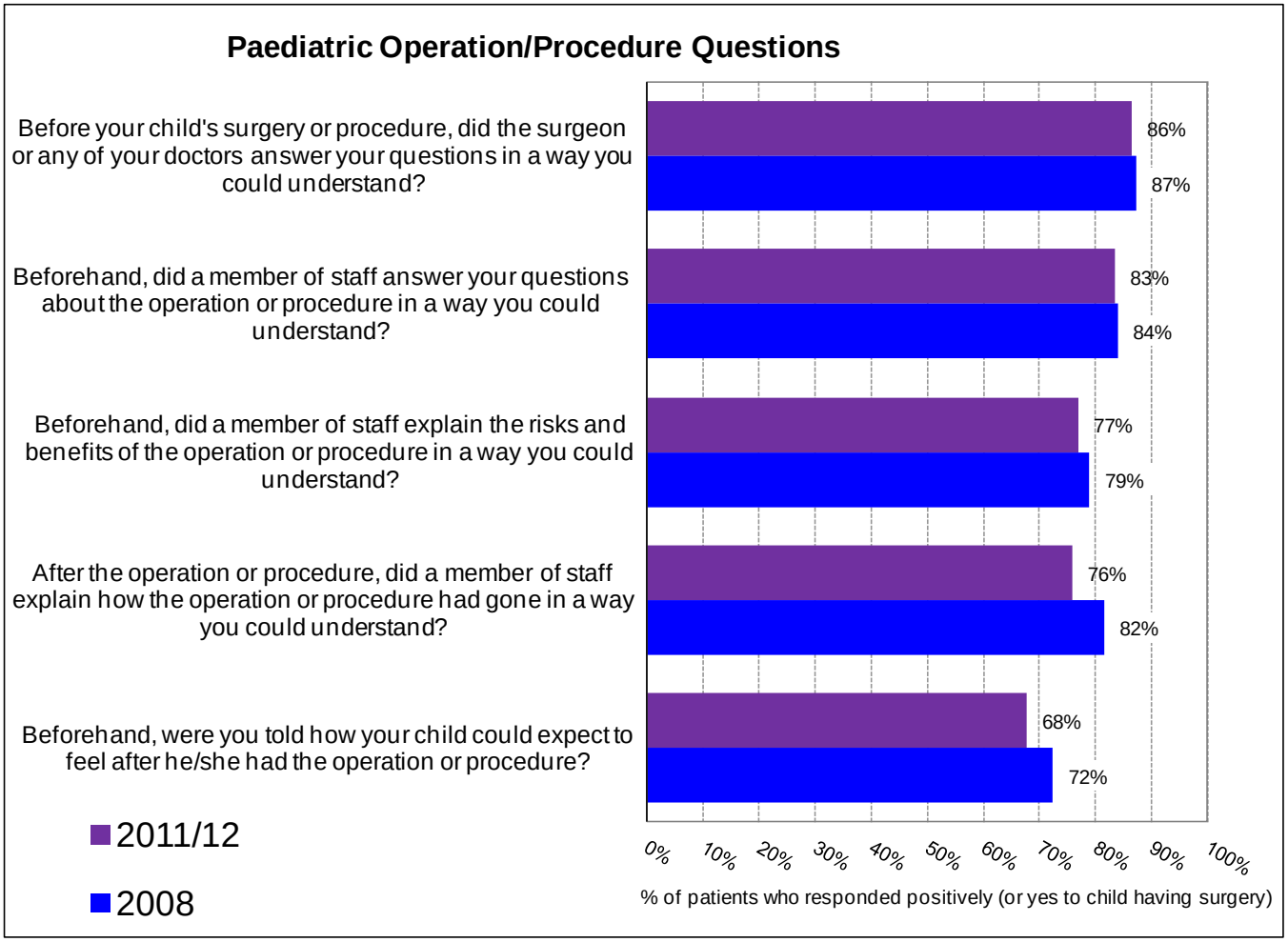
[4] Eight questionnaires could not be delivered and are removed in calculation of the response rate.

Figure 30: Paediatric Non-surgery Questions (Percent Positive)



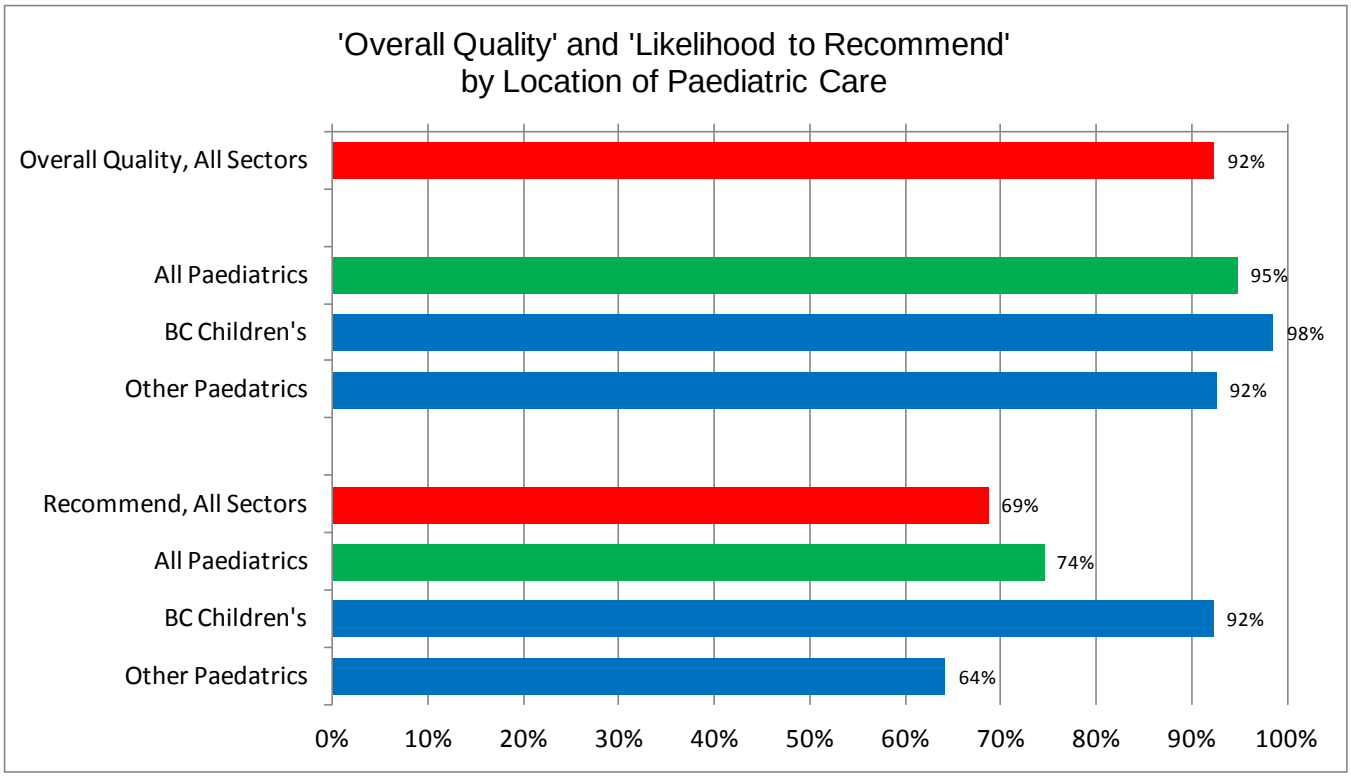
About 38% of paediatric patients had an operation or procedure, and responses of their parents are shown in Figure 31. The five survey questions address communication and information issues between hospital physicians and staff and either the patient or the parent. Two questions received more than 83% positive responses. The other ranged from 68% to 77%. As a whole, the paediatric surgery-related questions, with the exception of the lowest performing question, were answered more positively than the majority of paediatric non-surgery questions;

Figure 31: Paediatric Surgery Items, started in 2008 (Percent Positive)



About 24% of paediatric-care respondents answered their questionnaire after being at BC Children's Hospital. Figure 32 shows results for the overall quality rating and likelihood to recommend for the province, all paediatric respondents, and for broken down by location of care, between BC Children's and all other facilities. This is the first report of this kind to identify specific individual facilities, like BC Children's; that is partly because they are unique and because it has a provincial role to play in improving paediatric care.

Figure 32: Overall Quality and Likelihood to Recommend by Location of Paediatric Care



NOTE: These subsector results are from special, custom analyses and not from NRCC's Action Plan Reports. As a result, the "All Dimensions" results for the sub-subsectors are not included in this analysis.

Although the paediatric subsector as a whole had a slightly higher overall quality of care score than the province total, when broken down by location of care, BC Children's score is even higher, 98% than other scores at 92%. The difference on the likelihood to recommend question is even more substantial, with a 28% point difference between BC Children's Hospital score and all other facilities combined.

Maternity Care

There are close to 50,000 live births in BC every year, and the vast majority happen in one of 30 BC hospitals[5]; close to 15% were at BC Women's Hospital. While most women deliver their babies without major problems, there are occasionally complicated deliveries and approximately 30% of all births in BC are by caesarean section.

A modified version of the BC IP questionnaire was used for women who came to the hospital to deliver a baby; 4,797 questionnaires were mailed to patients[6] and 1717 (36.8%) were returned.

Prior to the 2005 survey, a review was done of two NRC Picker maternity questionnaire versions. Questions were added to the core general inpatient questionnaire specifically about the maternity and childbirth experience; the maternity version of the questionnaire asked 14 unique questions. Results are shown in Figure 33[7].

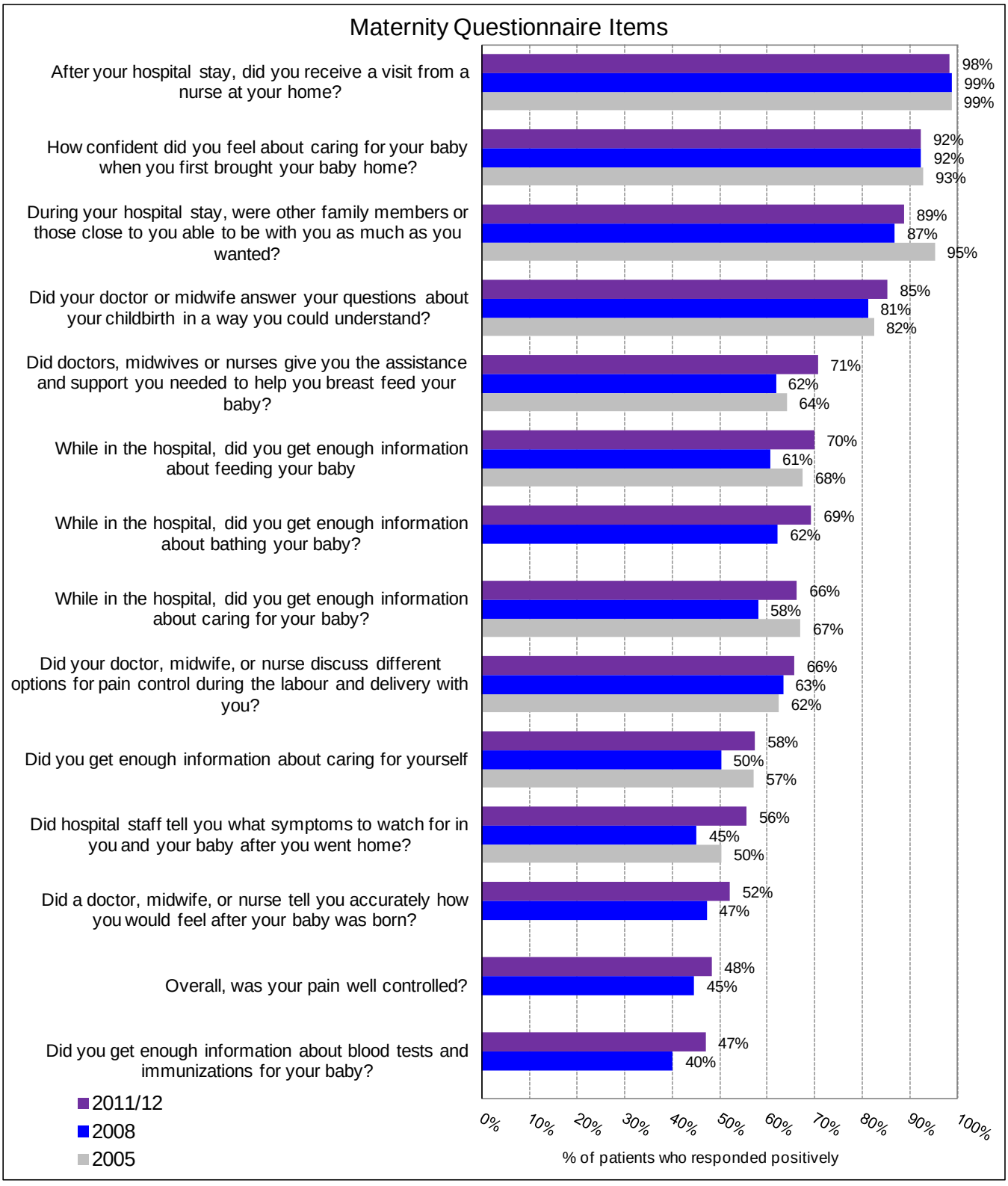
Respondents to the maternity questions gave slightly higher positive scores to the overall rating question compared to the All Sectors results (95.5% versus 92.2%). Their All Dimensions Combined (77.1% versus 72.2%) and Likelihood to Recommend (73.9% versus 68.5%) scores were also higher.

Two questions had a positive rate higher than 92%, while another two had ratings above 85%. Five items had scores at or below 58%, but all of those were improved compared to 2008, sometimes substantially. More than 48% of women, however, did not think positively about how well their pain was controlled, and only 42% were positive about the information provided about blood tests and immunizations for their babies, although both of these represented improvements over 2008.

There is an unusual pattern to the results across time. In 7 of the 10 times that there were questions with data for three years, performance takes a 'dip' in 2008, but generally the 2011/12 level is as high or higher than 2008. For the four questions introduced in 2008, current performance is at least 4% points higher than before. In total, 9 of 14 items have higher scores in 2011/12. Because these results come from sample surveys, the first place to look for the differences is in the sample response rates and composition. Further analyses of both 2005 and 2011/12 surveys shows that in both years there was a higher response rate for BC Women's, but that difference is the same in each year (5% higher). There is a non-significant difference in the ratio of BC Women's respondents to other facility respondents; roughly 15% of the maternity sample is from Women's in both years.

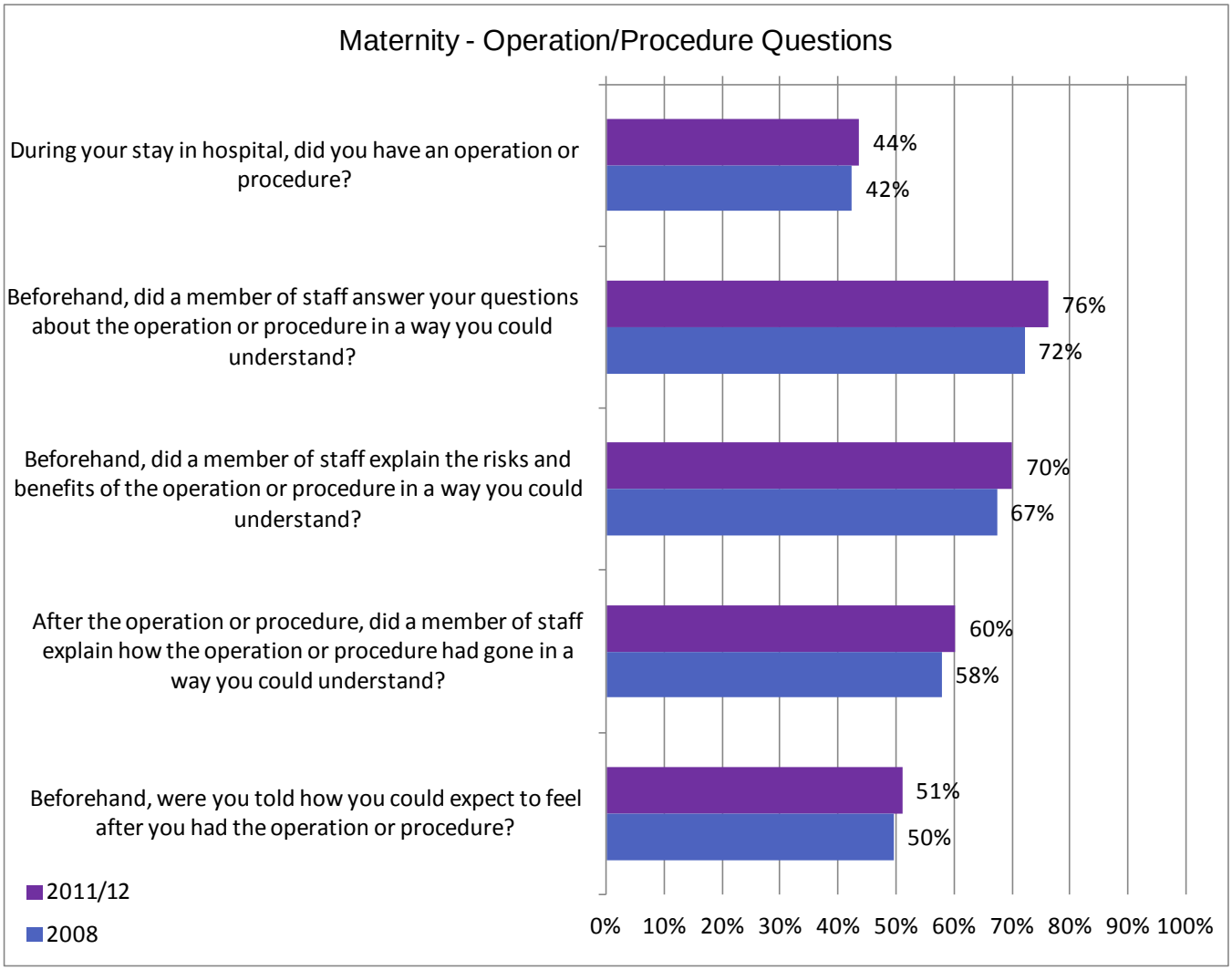
[5] There were a small number of deliveries in another dozen small hospitals.
[6] A small number of questionnaires (n=131) could not be delivered and are removed for response rate calculations.
[7] Some questions were new in 2008 and there are no comparison data to 2005.

Figure 33: Unique Maternity Questions (Percent Positive)



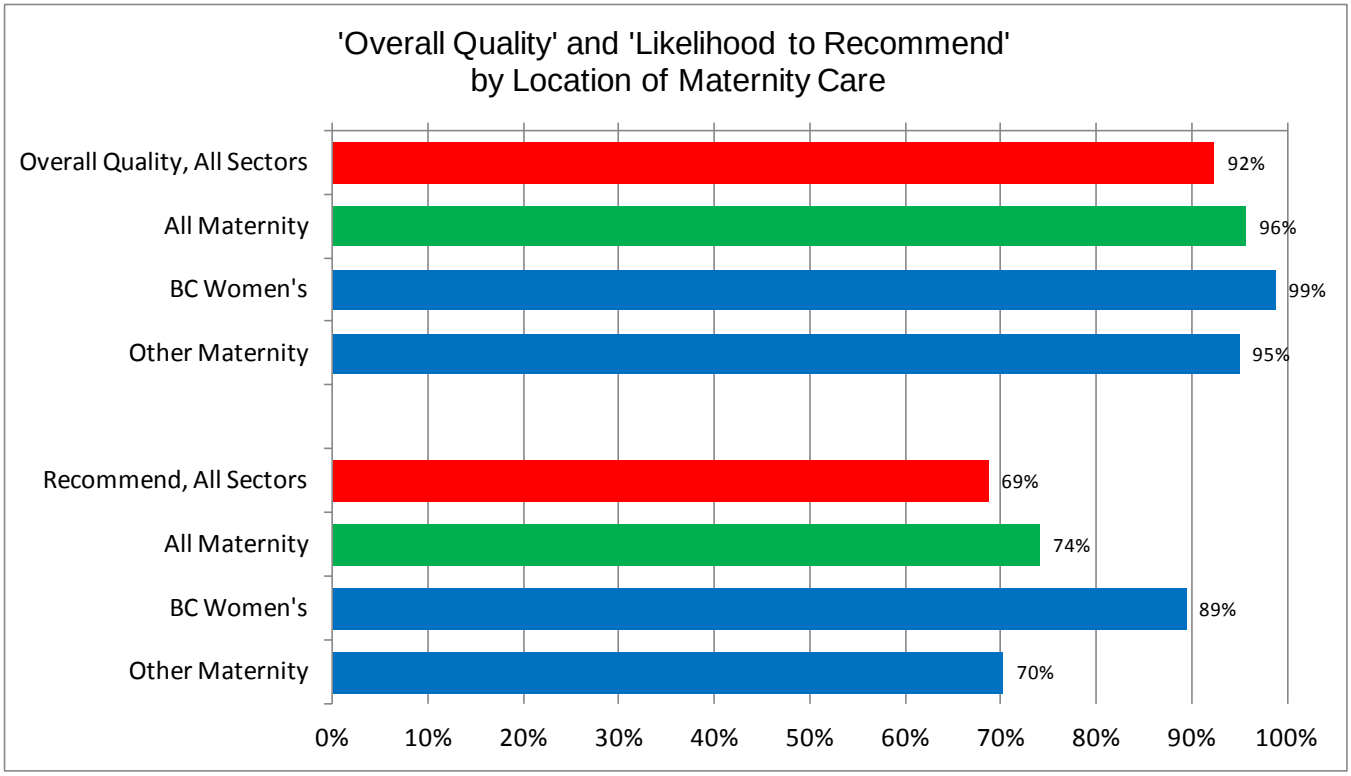
Results for questions about 'operations or procedures' while admission for maternity care show that there were no substantive differences between 2008, the first year the questions were used, and 2011/12. The results also show a tendency to similar pattern to that identified earlier, with 2011/12 scores higher than 2008, but none of the differences were very large.

Figure 34: Maternity Operation/Procedure Questions



About 15% of maternity-care respondents answered their questionnaire after being at BC Women's Hospital. Figure 35 shows results for the overall quality rating and likelihood to recommend for the province, all maternity respondents, and for broken down by location of care, between BC Women's and all other facilities. This is the first report of this kind to identify specific individual facilities, like BC Women's; that is partly because they are unique and because it has a provincial role to play in improving maternity care.

Figure 35: Overall Quality and Likelihood to Recommend by Location of Maternity Care



NOTE: These subsector results are from special, custom analyses and not from NRCC's Action Plan Reports. As a result, the "All Dimensions" results for the sub-subsectors are not included in this analysis.

Although the maternity subsector as a whole had the highest overall quality of care score, when broken down by location of care, BC Women's score is even higher, 99% than other, admittedly high scores at 96%. The difference on the likelihood to recommend question is even more substantial, with a 19% point difference between Women's and all other facilities combined.

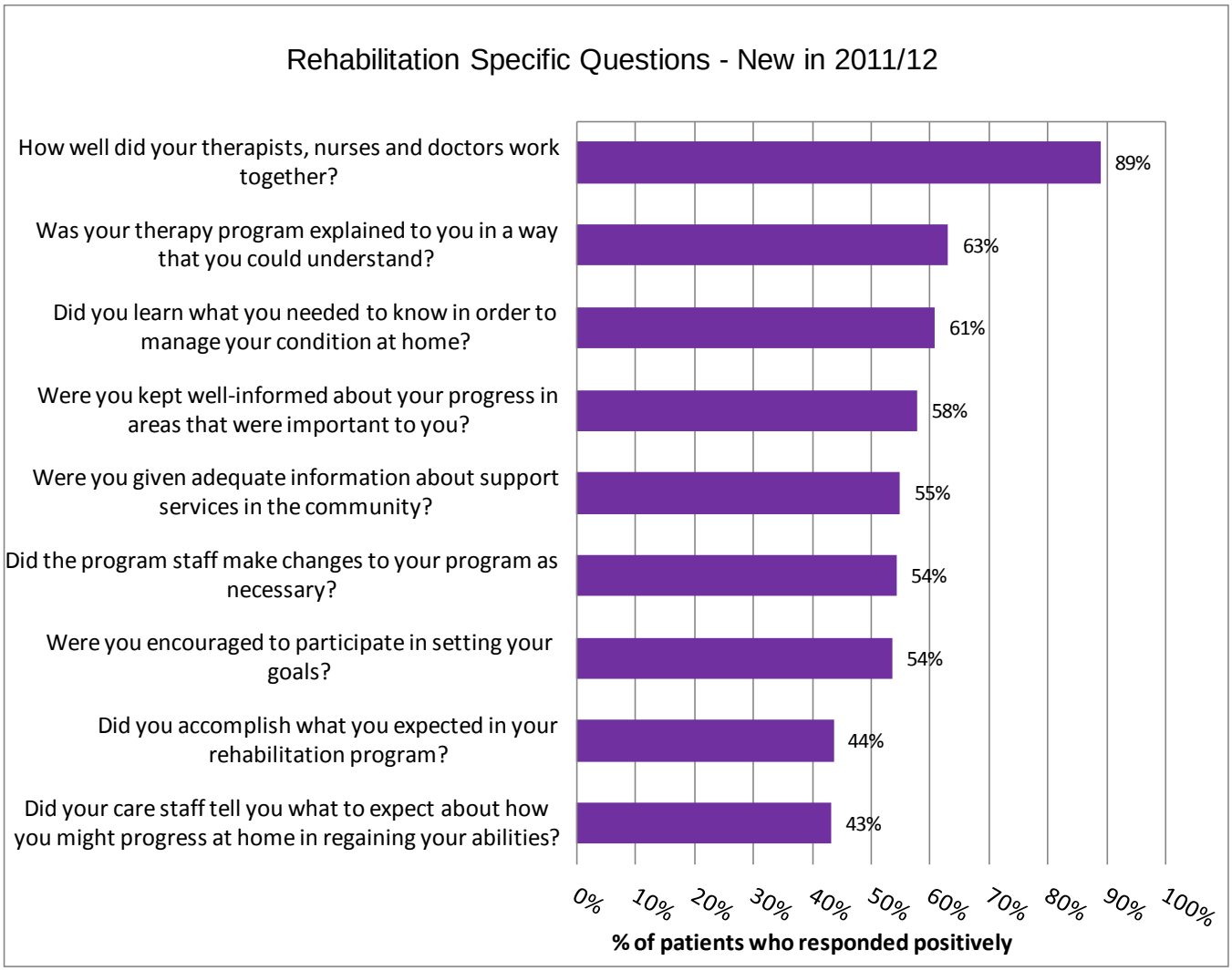
Rehabilitation Care

There are two new aspects to surveying rehabilitation patients in 2011/12; the survey expanded to include two free-standing rehab facilities and the questionnaire expanded to include nine new rehab-specific questions.

Previously-presented results have shown that the rehab sector as a whole has some very slightly lower overall evaluation of care results, but that the two free-standing facilities had slightly higher scores than the province total, especially for the 'likelihood to recommend" questions.

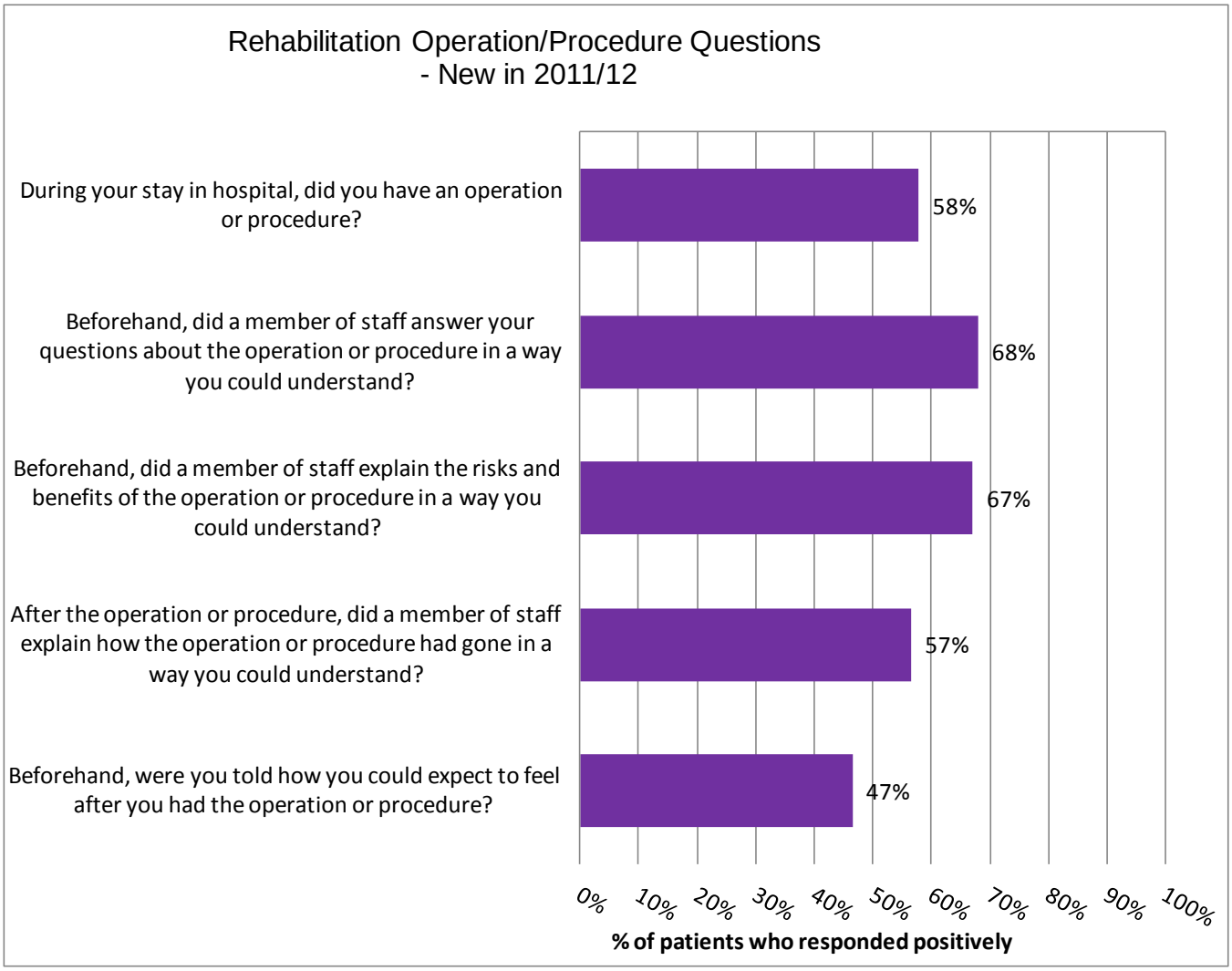
With the exception of the top-ranked question, which would make the list of highest performing questions in the survey, the other scores are not generally as high, as shown in Figure 36. In fact all but the second ranked item would make the list of lowest scoring items. The bottom scoring item is the lowest score for any evaluative questionnaire item in the survey.

Figure 36: Rehabilitation Specific Questions (new 2011/12)



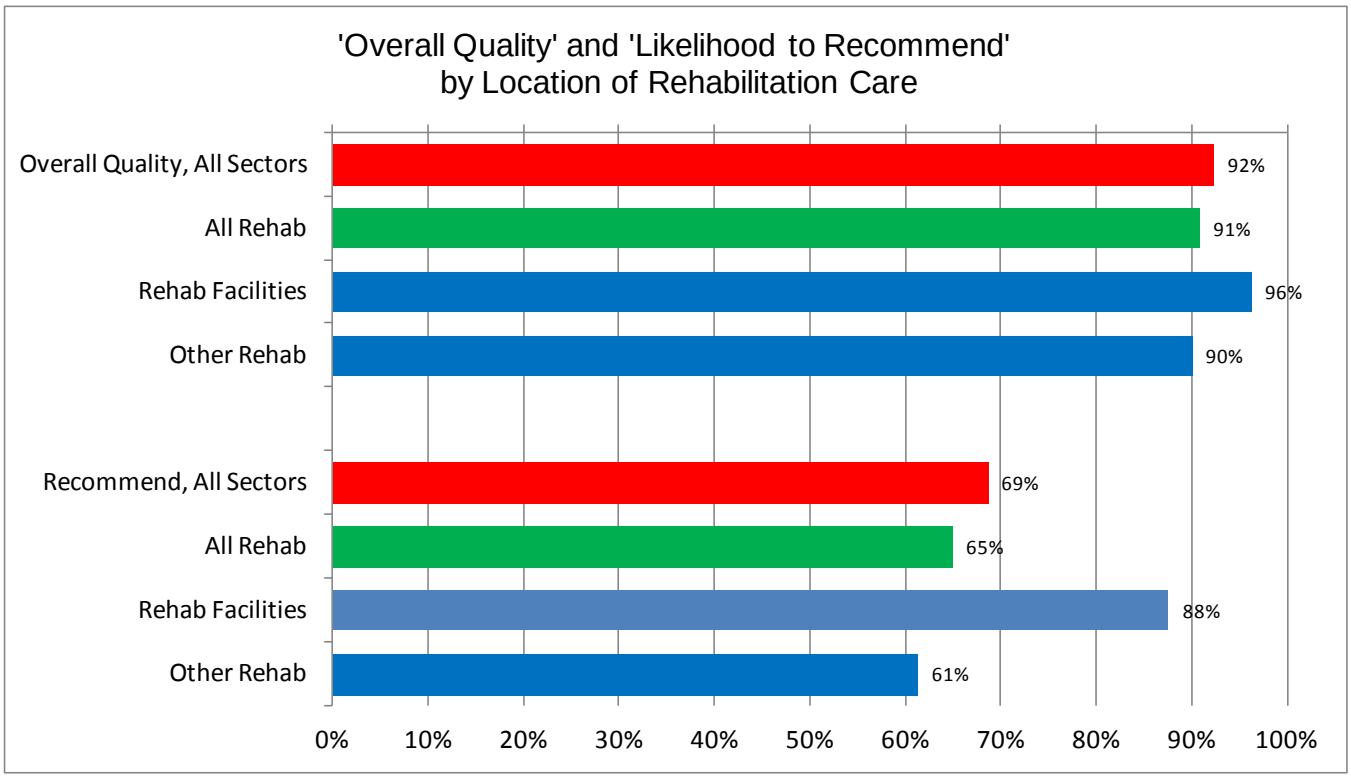
Although rehab patients were surveyed in 2008, they were included in the inpatient population for reporting. Because of this and because the two free-standing sites were added in 2011/12, procedure and operation-specific results for rehab are shown without comparators in Figure 37. Note that there are no surgeries performed in the free-standing facilities, and the following results are for 'other' facilities only. Consistent with the performance of the other rehab-specific questions, these scores are generally lower and sometimes substantially lower than other subsectors.

Figure 37: Rehabilitation Operation/Procedure Questions (new 2011/12)



The differences in the general evaluation questions, and the differences already seen in the paeds and maternity subsectors suggests that location of care will make a big difference in understanding the rehab subsector performance. Figure 38 shows the three general evaluation questions for the province, for the rehab subsector, and for the two free-standing facilities and other facilities separately. The two free-standing facilities show higher scores for the overall quality rating question and substantially higher scores for the likelihood to recommend question. This pattern is consistent with those found in both the paeds and maternity subsectors.

Figure 38: Overall Quality and Likelihood to Recommend by Location of Rehabilitation Care



NOTE: These subsector results are from special, custom analyses and not from NRCC's Action Plan Reports. As a result, the "All Dimensions" results for the sub-subsectors are not included in this analysis.

Special Focus: Results from Self-Reported Aboriginal Respondents

Introduction

The BC Tripartite Framework Agreement on First Nations Health Governance was signed October 13, 2011. The plan includes a new Health Governance Structure where First Nations plan, manage, design and deliver certain health programs and services. The goal for a more integrated Health System with stronger linkages between service providers and reflective of BC First Nations cultures and perspectives is consistent with examining the experience of care through the eyes of patients who received Acute Inpatient Care in the province of British Columbia, and responded to a survey. This chapter provides an overview of the experience of care of those patients who self-reported their ethnicity as "Aboriginal" in response to the Census Canada question used in all sector surveys in BC.

Demographic question

All sector surveys conducted in British Columbia include a demographic question adopted from Statistics Canada's Census questionnaire. The response options for the question provide an opportunity for patients who consider themselves to be an Aboriginal person to self-report their ethnicity as such. Information about the ethnicity of respondents allows analyzes of whether results are representative of the populations served, as well as comparison of experiences across ethnic groups. In this report the experiences of those who self-reported their ethnicity as Aboriginal will be examined in comparison to all others who completed a survey.

> *The following question will help us to better understand the communities that we serve. Do you consider yourself to be …?*
>
> *Aboriginal Person (e.g., North American Indian, Metis, Inuit (Eskimo))*

A very small proportion of respondents to the 2011/12 survey self-identified as themselves as an 'Aboriginal Person': n= 390 respondents (1.1% of the total number of respondents).

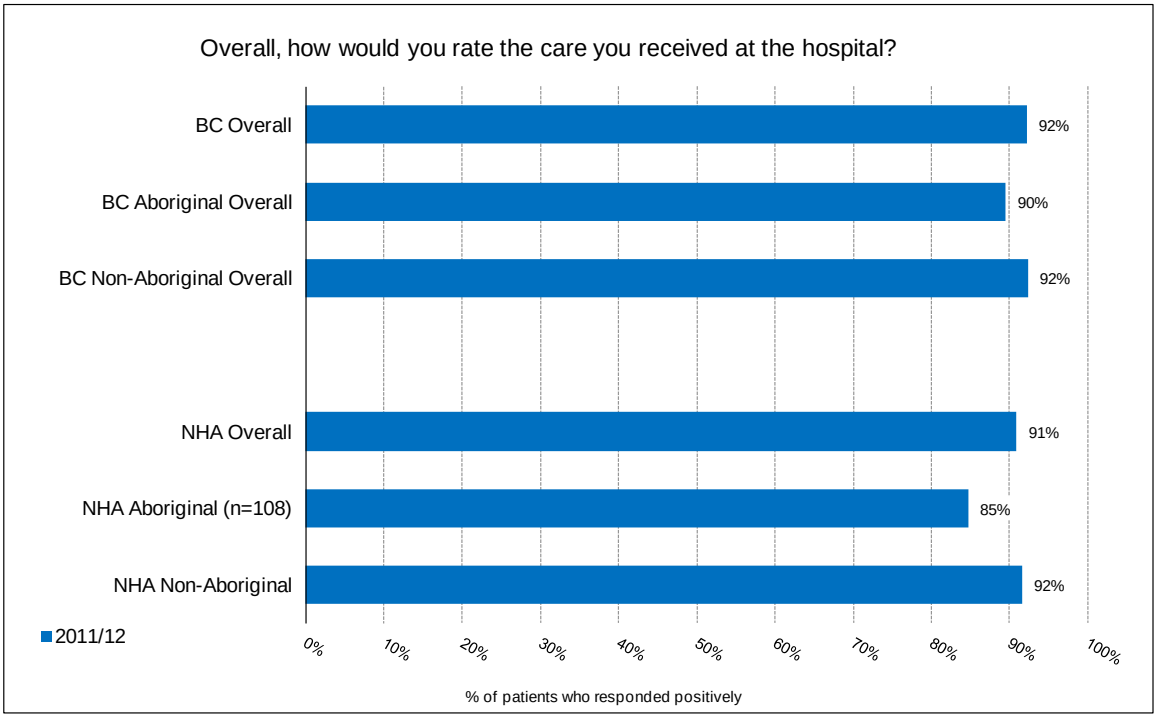
Respondents are distributed across health regions, as shown in Table 1, in such a way that there would be insufficient accuracy to show HA-specific results except for NHA (n=108).

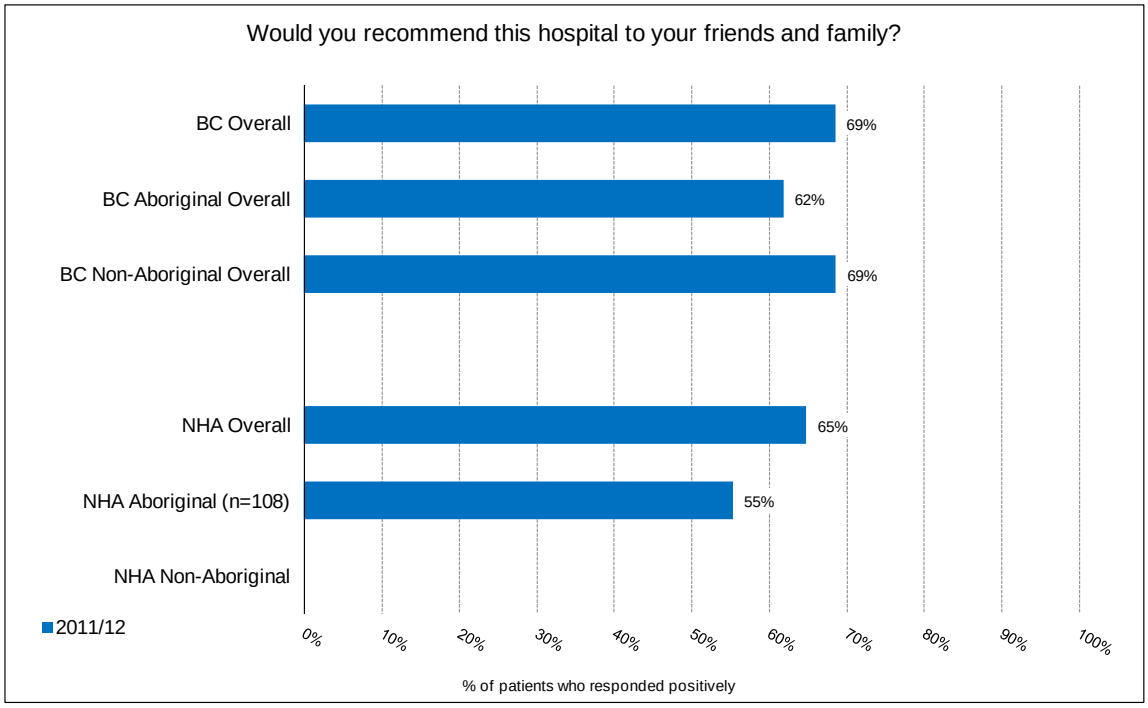
Table 1: Number of Self-Identified Aboriginal Respondents

		Non-Aboriginal Respondents	Aboriginal Respondents	All Respondents
Province	N	35997	390	36387
	%	98.9%	1.1%	100.0%
FHA	N	8882	48	8930
	% within HA	99.5%	.5%	100.0%
IHA	N	7835	88	7923
	% within HA	98.9%	1.1%	100.0%
NHA	N	3181	108	3289
	% within HA	96.7%	3.3%	100.0%
PHSA	N	1117	7	1124
	% within HA	99.4%	.6%	100.0%
VCHA	N	8453	71	8524
	% within HA	99.2%	.8%	100.0%
VIHA	N	6529	68	6597
	% within HA	99.0%	1.0%	100.0%

Figure 39 shows results for the Overall Quality Rating question and the Likelihood to Recommend question for the province-as-a-whole and the NHA, each divided into Aboriginal and Non-Aboriginal respondents.

Figure 39: Overall Evaluation Items by Self-Reported Aboriginal Status





The difference between the scores of respondents who self-reported their ethnicity as Aboriginal compared to all others who did not for the Overall Quality Rating question (2%) is very small, and not statistically significant. The difference for the Likelihood to Recommend question (7%), however, is more substantial with Aboriginal respondents reporting a lower score.

Aboriginal respondents in the NHA report both lower Overall Quality ratings (by 7% points) and Likelihood to Recommend scores (by 10% points). Both differences are statistically significant, and large.

At the provincial level, there were differences for two of the eight Picker dimensions scores between Aboriginal and Non-Aboriginal respondents: Access to Care and Respect for Patient Preferences (as shown in Table 2). Aboriginal respondents gave lower scores, (5.9% and 6.4% respectively).

Table 2: Picker Dimension Scores by Aboriginal Status

Dimension Scores	Aboriginal Respondents	Non-Aboriginal Respondents	All Respondents
Access to Care	74.5%	80.4%	
Respect for Patient Preferences	70.1%	76.5%	

Summary

This section gives a brief look at the survey results of self-reported aboriginal respondents, particularly as compared to non-aboriginal respondents. There are a few differences at the provincial level and for the NHA; self-reported aboriginal respondents reported less positive experiences for the likelihood to recommend question and for two Picker dimension scores.

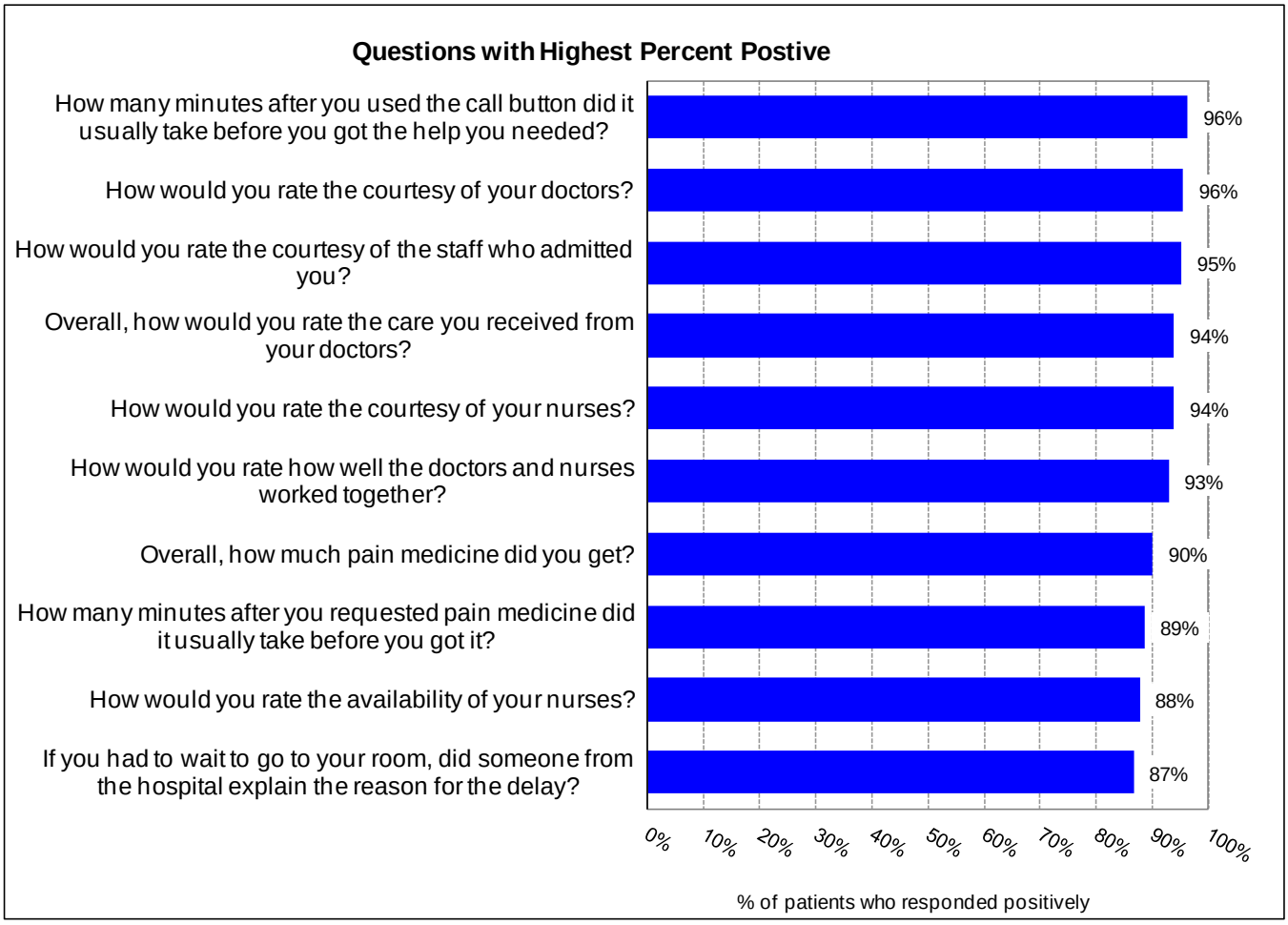
Further, more detailed analysis of results is warranted, both within the sample of self-reported aboriginals (e.g. what matters most to them?) and in comparison to non-aboriginals (e.g. where are the biggest differences and opportunities for improvement?).

High Performing Questionnaire Items & Opportunities for Improvement

High Performing Items

There were many different questions asked across all versions of the BC inpatient questionnaires, including Picker questions, BC specific questions and BC subsector questions. Since all respondents answered the same Picker questions, these are used to look at where BC as-a-whole is doing best and doing least well. Figure 40 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 40: Core Questions with Highest Percent Positive Scores

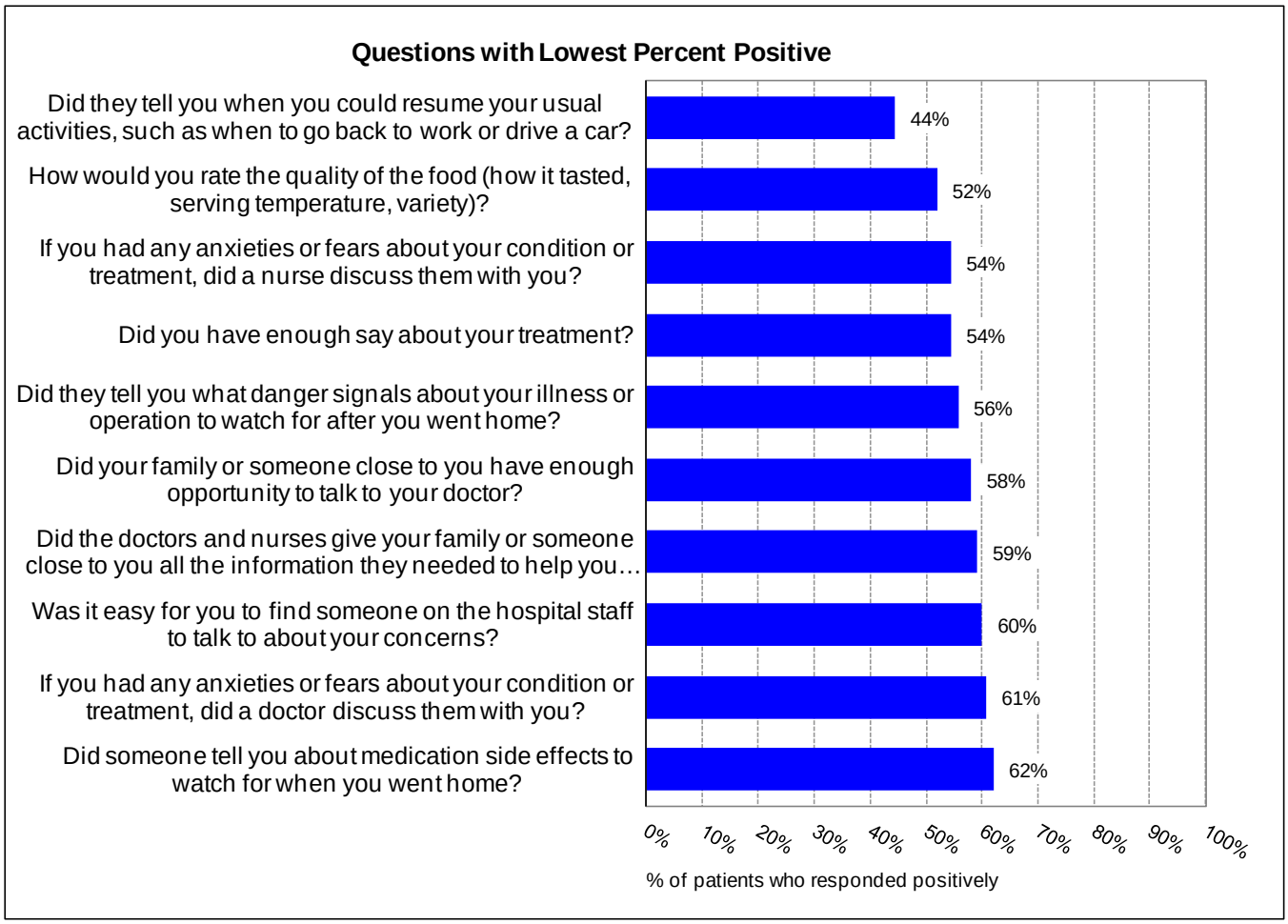


There is remarkable consistency in the results of 2011/12 compared to 2008. The top eight items are identical and in the same order. Only one item from 2008 did not make the top 10 overall, and its score was virtually to the 10th ranked item.

Opportunities for Improvement

Figure 41 shows the 10 core questionnaire items with the lowest percent positive scores. These give insight into general areas for improvement across all BC hospitals. There is even more consistency of the 2011/12 items and 2008 than for the positive items. Every single one of the 10 lowest performers in 2008 is on the 2011/12 list. The only change is a re-ordering of two middle-ranked items. Two items on the list are very slightly higher in 2011/12 while one is very slightly lower.

Figure 41: Core Questions with Lowest Percent Positive Scores



Summary

When asked to give an overall rating about the inpatient care they received in British Columbia's hospitals in late 2011 and early 2012, 92% of patients who reported on their experiences gave a positive response. This is virtually identical to 2008 and 2005 results. PHSA had a higher figure than that for BC as-a-whole, VIHA also had a slightly higher figure, and FHA had a slightly lower figure than the province in 2011/12. The other three Health Authorities had virtually the same scores. In general, there was little change in most scores between 2008 and 2011/12.

But "overall quality" is just one general measure of patients' experience. When asked, 68.5% of respondents would 'definitely' recommend the hospital to family and friends, and only 6% would not.

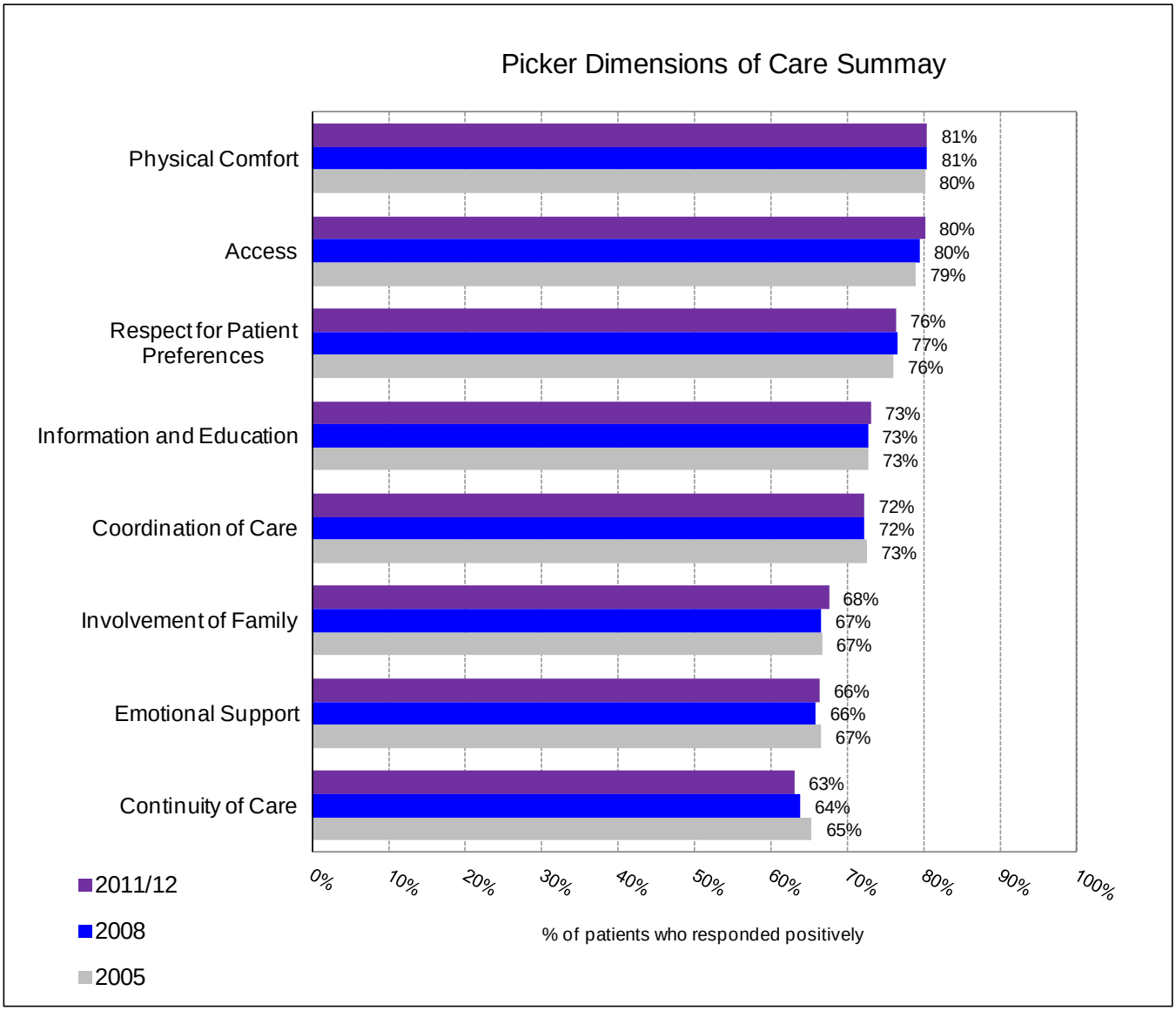
General measures only give a high-level view of patients' experiences in the hospital, and do not provide a detailed understanding about perceptions of quality of care or guide improvement activities. The general inpatient survey questionnaire asked more than 65 specific questions about many different 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 Patient-Centred Dimensions of Care. Across the 35 questions that are included in the Picker dimensions, 72% of respondents' ratings were positive.

Figure 42 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 feel prepared to take care of themselves and know what to watch for when they leave hospital. This includes knowing about their medicines and who to call if they need 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 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.

In summary, across all the dimensions of care, Physical Comfort, at 81% positive, has the highest score and is unchanged since 2008 and 2005 (as shown in Figure 32). The Continuity and Transition indicator, at 63% positive, had the lowest dimension score and although it is unchanged since 2008, it is slightly down from 2005. None of the remaining dimension scores have changed substantially since 2008 or 2005.

Figure 42: Picker Dimensions of Care Scores for BC Overall in 2008



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

The purpose of this report was to give an overview description of the experiences of almost 15,000 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% 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 Gen. Hospital
Vernon Jubilee 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
Haida Gwaii Hospital
Kitimat General Hospital
Lakes District Hosp. and Health Centre
MacKenzie and District Hospital
McBride and District Hospital
Mills Memorial Hospital
Prince George Regional Hospital
University of Northern BC Hospital
Queen Charlotte Islands Gen. Hospital
St. John Hospital
Stuart Lake Hospital
Wrinch Memorial 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
GF Strong (Rehab, added 2011)
Holy Family (Rehab, added 2011)

Vancouver Island Health Authority
Campbell River & District Gen Hosp
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

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. This was repeated in 2008. In 2011, the spotlight was again directed toward understanding and reporting on the quality of inpatient services through the eyes of patients. In all time periods, the Committee engaged National Research Company Canada (NRCC) to conduct the survey using a standardized instrument that has been validated for use in Canada in 2002 (BC participated in the Canadian validation).

The inpatient questionnaire, including the paediatric, maternity, and rehabilitation versions, was mailed to patients in BC who were cared for at one of 80 hospitals between October 1, 2011 and March 31st, 2012. For the purposes of this study an inpatient was defined as "a patient discharged from an acute inpatient hospital who had a physician's code for admission ". 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 was done to ensure a representative sample for each appropriate inpatient unit within each facility. Records of patient visits were provided to NRC+Picker twice per month for the 6 month 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 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 elder or 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 second reminder letter and questionnaire were sent 24 days later to those who had not yet responded. Surveys were in field until July 27th, 2012. 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 14,989 survey respondents reported in this analysis for the province overall

ensures that provincial-level estimates are extremely accurate. For the province overall, a maximum confidence level[8] is equal to ± 0.75% around a proportion of .50 with an Alpha = .95. That is, the true population proportion lies between 49.25% and 50.75% for an estimate of 50%. Estimates much larger or smaller than 50% 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 3000 had a maximum 95% confidence interval from ± 1.5% to ± 1.6%. NHA sample of 1092 had maximum 95% confidence interval of about ± 2.7%. PHSA's sample (n=417) has a maximum 95% confidence interval of ± 4.6%. 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 2011/12 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 125 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 six months selected for sampling. Bigger facilities or those with many inpatient units had larger samples. If the sum of a facility's unit samples did NOT equal 250, and there was unused sample, those cases were sampled up to a target outgo of 250.

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.

[8] Using the population correction factor to adjust the confidence interval around a binomial estimate.

Survey Response Rate

The overall response rate to the survey was 42.8%; this varied from 35% for NHA to 48% for VIHA, as shown in Table 3.

Table 3: Summary of survey activity and return/response rates by Health Authority (Unweighted numbers)

	Mailed		Undelivered N & Rate	Delivered N & Rate		Returned N & Response Rate
FHA	8930		395	8535		3414
			4.4%	95.6%		40.0%
IHA	7923		313	7610		3565
			4.0%	96.0%		46.8%
NHA	3289		127	3162		1092
			3.9%	96.1%		34.5%
PHA	1124		22	1102		417
			2.0%	98.0%		37.8%
VCHA	8524		293	8231		3449
			3.4%	96.6%		41.9%
VIHA	6597		182	6415		3052
			2.8%	97.2%		47.6%
B.C. Total	36387		1332	35055		14989
			3.7%	96.3%		42.8%

Legend

‘Mailed’ is all questionnaires that were sent.

‘Undelivered N & Rate’ represents the number (and rate) of questionnaires that were returned by Canada Post as undeliverable.

‘Delivered N & Rate’ represents the number (and rate) of questionnaires that were delivered by Canada Post as undeliverable. This represents the based denominator in calculating response rates.

‘Return N & Response Rate’ is the number of questionnaires returned to NRCC and the proportion of delivered questionnaires that were returned, the response rate.

Sample Characteristics

The overall distributions of questionnaires mailed and delivered are very similar across age and sex categories. Response rates by sex differed by very little (42% versus 44%), and the resulting sex distribution of the respondent sample is very similar to the mailed sample (Table 3). Response rates by age, however, varied substantially (from 29% to 53%) and the respondent sample is biased towards older respondents (Table 4).

Table 4: Structure of survey sample by Sex (Unweighted numbers)

Mailed & Sample %		Delivered N & Sample %	Returned N & Sample %	Returned N & Response Rate by Sex
Female	20952	20232	8534	8534
	57.6%	57.7%	56.90%	42.2%
Male	15435	14823	6455	6455
	42.4%	42.3%	43.10%	43.5%
Total	36387	35055	14989	14989
	100.0%	100.0%	100.00%	42.8%

Table 5: Structure of survey sample by Age (unweighted numbers)

Mailed & Sampled %		Delivered N & Sample %	Returned N & Sample %	Returned N & Response Rate by Age
0-16	2387	2319	671	671
	6.6%	6.6%	4.5%	28.9%
17-34	5650	5403	1637	1637
	15.5%	15.4%	10.9%	30.3%
35-59	8201	7854	2936	2936
	22.5%	22.4%	19.6%	37.4%
60-75	9003	8777	4623	4623
	24.7%	25.0%	30.8%	52.7%
76+	11146	10702	5122	5122
	30.6%	30.5%	34.2%	47.9%
Total	36387	35055	14989	14989
	100.0%	100.0%	100.0%	42.8%

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 analyses[9], 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 2011/12 BC inpatient survey uses four questionnaire versions: a general inpatient questionnaire, a paediatrics questionnaire for patients under 17, a maternity questionnaire, and new in 2011, a rehabilitation questionnaire. The paediatrics and maternity questionnaires include all the general inpatient questions but have additional subsector specific questions. Having the same core questions means that the whole inpatient experience can be examined for all inpatients together. Having paediatric, maternity, and now rehab 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 feel prepared to take care of themselves and know what to watch for when they leave hospital. This includes knowing about their medicines and who to call if they need 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 it took for a response after help was requested.
- **Respect for Patient Preferences** asked patients if they were treated with respect and

[9] Gerteis, M., Edgman-Levitan, S., Daley, J., and Delbanco, T. (1993). Introduction: Medicine and health from the patient's perspective. In Gerteis, M et al., Through the Patient's Eyes. Jossey-Bass, San Fancisco.
Cleary, P., Edgman-Levitan, S., McMullen, W., & Delbanco, T. (1992). The relationship between reported problems and patient summary evaluations of hospital care. Quality Review Bulletin, 18(2), 53-59.

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 questionnaire[10]. The Care Transitions Measure is a public domain tool that exists in two forms – the full CTM (15 items) and the CTM-3. Analysis of the performance of these questions using BC data indicated that they should be replaced with other questions relating to information at transition points in care, and after a review and question development process, five new questions were added to one other existing question for this section.

The four questionnaires used in BC 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 some of the unique aspects of paediatric care 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 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" answered are combined and counted as a Not Positive response.

[10] Colemen, E. A., Smith, J.D., Frank, J.C., Eilertsen,, T.B., Thiare, J.N., & Kramer, A.M. (2002). Development and testing of a measure designed to assess the quality of care transitions. International Journal of Integrated Care, Vol. 2(1).

Colemen, E. A., Smith, J.D., Frank, J.C., Eilertsen,, T.B., Thiare, J.N., & Kramer, A.M. (2002). Development and testing of a measure designed to assess the quality of care transitions. International Journal of Integrated Care, Vol. 2(1).

Coleman EA, Mahoney E, Parry C. Assessing the Quality of Preparation for Post-Hospital Care from the Patient's Perspective: The Care Transitions Measure. Medical Care. 2005;43(3):246-255.

More information can be accessed at: http://www.caretransitions.org/.

Appendix 4: Detailed Look at Call Bell Wait Time Results

The question about how long it took for a patient to get help after using the call bell is the highest scoring in the Physical Comfort dimension at 96% positive. In fact, as was shown in the list of the 10 most positive items, it is the *highest* performing question of **all** NRCC items in the questionnaire at the provincial level. However, the question about whether patients thought the wait time for help after using the call bell was reasonable is the lowest performing in this dimension at 65% positive. It missed being in the *lowest* 10 questions overall by only a few percentage points. These appear to be contradictory results because both questions are related to "waiting times after using the call bell" and one has such high performance and the other not. Table 1 shows the frequencies for the actual responses for these two questions[11].

Table 1: All answers to the question, "How many minutes after you used the call button did it usually take before you got the help you needed?"

Answer Category	Number of Respondents	% of all respondents	Cumulative %
0 minutes/right away	2274	19.6	19.6
1-5 minutes	6887	59.2	78.8
6-10 minutes	1681	14.5	93.2
11-15 minutes	372	3.2	96.4
16-30 minutes	221	1.9	98.3
More than 30 minutes	102	.9	99.2
Never got help	93	.8	100.0

All answers to the question, "In general, after you used the call button, was the time you waited for help reasonable?"

Answer Category	Number of Respondents	% of all respondents	Cumulative %
Yes, completely	7818	65.5	65.5
Yes, somewhat	3515	29.4	94.9
No	607	5.1	100.0
Total	11940	100.0	

A positive score for the "how long does it take" question includes immediate help (19.6% of all responses), help between 1 and 5 minutes (59.2%) and help between 6 and 15 minutes (another 76.9%).

The 65.5% positive score for "reasonableness of wait time after call button" uses just the top or best answer, "Yes, completely".

Although not shown in the table, about 20% of respondents reported not having used the call bell, so all scores are based on the 80% who did use it.

Most people (95%) who report that they were seen immediately also said 'Yes, completely" to the "reasonableness question". The majority of people (73%) who were seen between 1 and 5

[11] Analyses in this section come from custom analyses and not from NRCC Action Plan Reports. Slight differences in scores between this section and Action Plans come from rounding errors.

minutes also said ‘Yes, completely’ to the question. After that, however, performance on the reasonableness question drops; only 26% of those people saying they waited 6 to 10 minutes and only 4% of those people waiting 11 to 15 minutes gave the ‘Yes, completely” answer.

The vast majority of respondents reported waiting 5 minutes or less to get their call bell answered when they used it, and the majority of those thought the wait was reasonable. However, the discrepancy between one question being answered the most positively of all questions and the other being among the lowest is not just about people’s having a tougher standard for their perceptions of adequacy. There is consistency between shorter (<= 5 minutes) wait times and reasonableness. From the patients’ perspective, waiting 5 minutes or fewer is a very positive answer, and 79% of respondents were seen within that time. Overall, 96% of patients who responded to the survey *and* used the call bell waited less than 15 minutes for assistance.

From a patient-centred care and improvement perspective, it is important to look at both perception of wait time minutes and perception of wait time reasonableness. Although the percent positive results for wait time minutes are extremely positive, this analysis shows that patients feel much more positively about wait times of 5 minutes or less. Health regions and facilities need to consider perceived reasonableness of wait times and what it takes to achieve positive results for that question.

Appendix 5: 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 wide-spread 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 health care improvement collaboratives, and to the use of patient satisfaction methods and indicators.