

Hospital Report 2005: Emergency Department Care

Patient Satisfaction

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Patient Satisfaction Technical Notes (ED)

The results for the patient satisfaction survey (NRC+Picker) were derived by taking each question and assigning a numerical value ranging from 0 to 100 points. Responses were equi-spaced, that is, if there were 5 possible responses, scores were assigned values of 0, 25, 50, 75 and 100. When only three responses were possible, values of 0, 50, and 100 were assigned. All responses were assumed to follow a gradient with poor being coded as 0 and 100 being coded as excellent. Each indicator was then formed by averaging all of the relevant survey questions. If more than half of the questions were missing for a particular patient, then his or her score was recorded as missing. Otherwise, scores were scaled out of 100 points.

The survey questions used to develop the 4 patient satisfaction indicators (consideration, responsiveness, overall impressions, and communication) are listed below.

1) Consideration

A patient's assessment of whether they were treated with consideration. Based on 6 survey questions.

- How would you rate the courtesy of the first person who took your information?
- How would you rate the courtesy of your doctors?
- How would you rate the courtesy of your nurses?
- Did each hospital staff person treat you with dignity and respect?
- Did you have enough say about your care?
- How would you rate the courtesy of the Emergency Department staff?

2) Overall Impressions

A patient's assessment, overall, of their hospital stay. Based on 4 survey questions.

- Did you have confidence and trust in the doctors treating you?
- Did you have confidence and trust in the nurses treating you?
- Overall, how would you rate the care you received at the hospital?
- Would you recommend this hospital to your friends and family?

3) Responsiveness

A patient's assessment of the organization and responsiveness to their needs during their ED stay. Based on 10 survey questions.

- Did you have to wait too long to see a doctor?
- Did you wait too long for this other doctor or specialist?
- How would you rate the availability of your nurses?
- Did you wait too long to get your tests?
- Do you think that the Emergency Department staff did everything they could to help control your pain?
- Overall, how much pain medicine did you get?
- How would you rate the amount of time you spent in the Emergency Department?

- While you were in the Emergency Department, were you able to get all the services you needed?
- While you were in the Emergency Department, were there times when you did not get the help you needed?
- How would you rate how well the doctors and nurses worked together?

4) Communication

A patient's assessment of how well information was communicated to them or their family during their ED stay. Based on 14 survey questions.

- When you arrived at the Emergency Department, did the first person who took your information answer your questions?
- If you had to wait to be seen, did someone from the Emergency Department explain the reason for the delay?
- Did someone in the Emergency Department help get your messages to family or friends?
- When you had important questions to ask a doctor, did you get answers you could understand?
- If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you?
- When you had important questions to ask a nurse, did you get answers you could understand?
- If you had any anxieties or fears about your condition or treatment, did a nurse discuss them with you?
- Did someone explain why you needed these tests in a way that you could understand?
- Did someone explain the results of the tests in a way that you could understand?
- Did they tell you what danger signals about your illness or operation to watch for after you went home?
- Did someone explain how to take the new medications?
- Did someone tell you about medication side effects to watch for when you went home?
- Did you know who to call if you needed help or had more questions after you left the hospital?
- How would you rate the explanation of what was done to you?

In order to fairly assess the level of patient satisfaction across disparate hospitals, adjustments needed to be made for a variety of factors including both age and sex. Statistical risk adjustment models allowed us, in a post-hoc manner, to control for various imbalances in factors that hospitals have no control over (i.e. patient age, sex etc.). The risk adjustment variables employed in the modeling are listed below:

- Age
- Age*Age (2nd order interaction term)
- Sex
- How you would rate your general health
- Do you have a regular family physician?
- In the last six months have you been a patient in a hospital overnight or longer?
- Peer Group (small, teaching, or community hospitals)

Risk Adjustment Models

A recent change in risk adjustment modeling has been to employ a hierarchical approach. That is, we assumed that data were layered at two levels: patient and hospital. This method allowed for the fact that there may be a greater degree of correlation for patients within a given hospital than between hospitals. To account for variability at these two different levels, patient and hospital error terms were modeled separately. If the variation attributable to patients within hospitals was moderate to high compared with the between hospital variation, then the use of standard OLS models might have resulted in underestimates of the standard errors. Furthermore, the risk adjustment models addressed two additional issues: 1) Proxy responses and 2) SARS.

These added complexities led to the following process for risk adjustment:

- 1) For all available hospitals 90% confidence intervals were computed for the non-SARS months. This was then compared with the mean scores for each of the SARS affected months (April 1, 2003 to July 31, 2003). If these scores fell below the lower 90% confidence bound, then the difference between the score for the SARS affected month and the long term average was added to the relevant case.
- 2) Patients were then separated into data sets according to whether they were proxy responses. Risk adjustment was done for each of the proxy and non-proxy data sets. Age was excluded from the proxy adjustment models. As proxy responses generally resulted in lower scores, controlling for 10 year age groupings, the difference between scores in the proxy and non-proxy respondents were added to all proxy respondents.
- 3) Both proxy and non-proxy data sets were recombined.

Performance Classification

In addition to the modeling issues described above, confidence intervals for purposes of performance classification were stratified according to peer group. As hospitals patient satisfaction scores varied significantly across peer groups, performance classifications were confined to comparisons within the same group. For a given hospital, a 95% confidence interval around each indicator was produced, and compared with a 95% confidence interval reflecting a sample from the complete Ontario cohort (sample peer group mean). For example, if the upper confidence limit for a given hospital fell below the lower confidence limit of the sample peer group mean then its performance is classified as below average. Conversely, if the lower confidence limit of a given hospital was higher than the upper limit of the peer group sample confidence limit, then the hospital was classified as above average for its peer group. Otherwise, the hospital is classified as having an average performance score.

In addition to the four indicators included in the Executive Report, the e-Scorecard also includes eight indicators that are similar to the NRC dimensions of care plus two provider-based indicators. The survey items included in each of these additional indicators is listed below:

1) Respect and Courtesy

A patient's assessment of the courtesy and respect they received while in the ED. Based on 7 survey questions:

- Did you have enough say about your care?
- Did you feel you had enough privacy during your Emergency Department visit?
- Did nurses talk in front of you as if you weren't there?
- How would you rate the courtesy of your doctors?
- How would you rate the courtesy of your nurses?
- How would you rate the courtesy of the first person who took your information?
- How would you rate the courtesy of the Emergency Department staff?

2) Coordination of Care & Access

A patient's assessment of the coordination of their ED stay and of their access to services. Based on 9 survey questions:

- While you were in the Emergency Department, were there times when you did not get the help you needed?
- While you were in the Emergency Department, were you able to get all the services you needed? 8. Did you have to wait too long to see a doctor?
- Did you wait too long for this other doctor or specialist?
- How would you rate the availability of your nurses?
- Did you wait too long to get your tests?
- Once you went to a bed or an examination room, about how long did you have to wait to see a doctor?
- After you arrived at the Emergency Department, how long was it until you talked to a NURSE about your illness or injury?
- Was there one particular doctor in charge of your care in the Emergency Department?

3) Physical Comfort

A patient's assessment of their physical comfort during their ED. Based on 2 survey questions:

- Do you think that the Emergency Department staff did everything they could to help control your pain?
- Overall, how much pain medicine did you get?

4) Emotional Support

A patient's assessment of the emotional support they received by their care providers during their ED stay. Based on 5 survey questions:

- If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you?
- Did you have confidence and trust in the nurses treating you?

- Did you have confidence and trust in the doctors treating you?
- If you had any anxieties or fears about your condition or treatment, did a nurse discuss them with you?
- Did someone in the Emergency Department help get your messages to family or friends?

5) Overall Satisfaction

A patient's assessment, overall, of their ED stay. Based on 5 survey questions:

- How would you rate the amount of time you spent in the Emergency Department?
- How would you rate the explanation of what was done to you?
- How would you rate how well the doctors and nurses worked together?
- Was the entire Emergency Department as clean as it should have been?
- Would you recommend this Emergency Department to family and friends?

6) Information and Education

A patient's assessment of how well their questions were answered and how well these results were explained. Based on 7 survey questions:

- When you had important questions to ask a nurse, did you get answers you could understand?
- When you had important questions to ask a doctor, did you get answers you could understand?
- Did someone explain the results of the tests in a way that you could understand?
- Were the possible causes of your problem explained in a way that you could understand?
- Did someone explain why you needed these tests in a way that you could understand?
- When you arrived at the Emergency Department, did the first person who took your information answer your questions?
- If you had to wait to be seen, did someone from the Emergency Department explain the reason for the delay?

7) Continuity and Transition

A patient's assessment of how well the ED staff prepared them on how to care for themselves after being discharged following their hospital stay. Based on 5 survey questions:

- Did someone explain how to take the new medications?
- Did you know who to call if you needed help or had more questions after you left the Emergency Department?
- Did someone tell you about side effects the medicines might have?
- Were you told what danger signals about your illness or injury to watch out for when you got home?
- Was an appointment made for this treatment before you left the Emergency Department?

8) Physician Care

A patient's assessment of the quality of their physician care. Based on 5 survey questions:

- When you had important questions to ask a doctor, did you get answers you could understand?
- If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you?
- Did you have confidence and trust in the doctors treating you?
- Did you wait too long for this other doctor or specialist?
- How would you rate the courtesy of your doctors?

9) Nursing Care

A patient's assessment of the quality of their nursing care. Based on 5 survey questions:

- When you had important questions to ask a nurse, did you get answers you could understand?
- If you had any anxieties or fears about your condition or treatment, did a nurse discuss them with you?
- Did you have confidence and trust in the nurses treating you?
- How would you rate the courtesy of your nurses?
- How would you rate the availability of your nurses?

Patient Satisfaction by Sex

For the first time, a Women's Health section is integrated into the ED Report. This section includes all indicators in the Patient Satisfaction quadrant stratified by sex. Sex-stratified data and analyses are provided at a provincial level in the Executive Report, and at a hospital and aggregate levels (i.e. peer group, regional and provincial) in the E-Scorecard.

Sex is biological maleness and femaleness. Gender is made up of multiple dimensions, and reflects the interaction of sex with other economic, cultural, environmental, social characteristics (e.g., age, income, ethnicity, social support), as well as roles ascribed to the sexes, and relations between the sexes. Because of the limited availability of other gender-related variables in routinely collected hospital data, the analysis is limited to sex. Pursuing gender-based analysis is an important long-term goal.

Provincial-level means for women and men were included in the women's health section of the Executive Report. In addition, the Report included an analysis of the mean scores for women and men, the values of the differences between women and men on mean scores and the statistical significance of these differences at a provincial level. The indicator quantifying the difference between rates for women and men [i.e. (F-M)] is the value of the difference between women and men - or a value for "equity". At initial release, the E-scorecard included hospital-level risk-adjusted means and components by sex for each indicator. As the E-scorecard is updated, it will include the sex difference values [i.e. (F-M)] for each indicator and an indication of the direction (i.e. F>M or M>F) and the statistical significance of these values at a hospital level. In the interim, participating hospitals may access their own and other hospitals' difference values and the direction (i.e. F>M or M>F) and statistical significance of these differences for each indicator on a password-protected database at <http://www.hospitalreport.ca/participants.html> (see Women's Health - Emergency Department 2005).

The interpretation of these data and notes about suppression will accompany this database. In terms of interpretation, if this value [i.e. (F-M)] is negative, males have higher scores than females; if this value is positive, females have higher scores than males. A value of "0" is used as the benchmark as it represents true equity between women and men. Furthermore, if a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator includes zero, then the hospital is said to have no statistically significant sex difference for that indicator (which is preferred). If a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator does not include zero and is negative, then the hospital is said to have unequal (i.e. M>F) performance or a statistically significant sex difference, in which males have a higher score than females. If a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator does not include zero and is positive, then the hospital is said to have unequal (F>M) performance or a statistically significant sex difference, in which females have a significantly higher score than males.

All boxplots in the Women's Health section of the Executive Report were weighted by sample size.

No performance classifications are provided for the Patient Satisfaction indicators stratified by sex in the Executive Report.

The Executive Report also indicated whether high performing hospitals have statistically significant sex differences across indicators, including those in the Patient Satisfaction quadrant.