This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

**TAP/Workgroup** (if utilized): Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

**Note:** If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).

**Steering Committee:** Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

**Evaluation ratings of the extent to which the criteria are met**
- **C** = Completely (unquestionably demonstrated to meet the criterion)
- **P** = Partially (demonstrated to partially meet the criterion)
- **M** = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
- **N** = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
- **NA** = Not applicable (only an option for a few subcriteria as indicated)

### MEASURE DESCRIPTIVE INFORMATION

**De.1 Measure Title:** Validated family-centered survey questionnaire for parents’ and patients’ experiences during inpatient pediatric hospital stay

**De.2 Brief description of measure:** This family-centered survey questionnaire consists of 62 questions that assess various aspects of care experiences during inpatient pediatric hospital stays. The dimensions that are included are overall impressions, interactions with nurses, interactions with doctors, the admission and discharge process, home care preparation, medications, pain management, parent involvement, hospital environment, support staff and food. Demographic questions are included at the end of the survey. The majority of the survey questions are categorical in nature. Ordinal measures enable the rating of experiences, dichotomous measures are used to assess if subsequent questions apply to the experiences of parents and the patient but a small number of questions are open-ended to allow any additional or more detailed comments. Survey will be collected for a given time period, e.g. monthly. The target population is one of the parents, 18 years or older, of a child that stayed for at least one day in an inpatient unit at the hospital and was discharged during the previous time period, e.g. the last month. A random sample will be drawn of all discharged parent-patient units and receive the survey. The instrument is currently validated for mail and phone administration and is in English. All questions are asking about experiences during their last inpatient hospital stay. Further steps include validation for web administration and other languages.

**De.3 Type of Measure:** Patient experience

**De.4 National Priority Partners Priority Area:** Patient and family engagement

**De.5 IOM Quality Domain:** Patient-centered

**De.6 Consumer Care Need:**

### CONDITIONS FOR CONSIDERATION BY NQF

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable
### Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:

**A.** The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.*

**A.1** Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)? Yes

**A.2** Indicate if Proprietary Measure (as defined in measure steward agreement):

**A.3** Measure Steward Agreement: Agreement will be signed and submitted prior to or at the time of measure submission

**A.4** Measure Steward Agreement attached: NQF Measure Stewards-634006429564588555.pdf

**B.** The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section

**C.** The intended use of the measure includes both public reporting and quality improvement.

- **Purpose:** Public reporting, Internal quality improvement

**D.** The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement.

**D.1** Testing: No, testing will be completed within 24 months

**D.2** Have NQF-endorsed measures been reviewed to identify if there are similar or related measures? Yes

(for NQF staff use) Have all conditions for consideration been met?

Staff Notes to Steward (if submission returned):

Met

Staff Notes to Reviewers (issues or questions regarding any criteria):

Staff Reviewer Name(s):

---

### 1. IMPORTANCE TO MEASURE AND REPORT

Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. **Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.** (evaluation criteria)

**1a.** High Impact

(for NQF staff use) Specific NPP goal:

**1a.1** Demonstrated High Impact Aspect of Healthcare: Affects large numbers, Patient/societal consequences of poor quality

**1a.2**

**1a.3** Summary of Evidence of High Impact: In recent decades, health services quality has increasingly been evaluated not only by traditional technical and physiological outcome indicators (mortality, iatrogenic morbidity, medication errors, etc.), but also by the subjective experiences and satisfaction of patients and
their families with the care they received. An Institute of Medicine report laying out the guidelines for quality care in the 21st century highlights the importance of care delivery that is patient-centered, “respectful of and responsive to individual patient preferences, needs, and values.”

Hospital experience surveys are an important tool to provide information about the quality of the hospital to future potential patients. Publicly available data on hospital performance as judged through customer satisfaction will allow patients to decide where to get the best care by comparing hospital ratings. Information from patient experience surveys can also lead to improvements through public accountability and through their use in pay-for-performance reviews. While there is already an NQF-endorsed measurement tool for adult patients in existence (CAHPS®) no standard tool exists to evaluate the experience of parents and patients in a more complex and more family-oriented care setting: the experience as an inpatient in a pediatric hospital.


Valentine NB, Bonsel GJ, Murray CJL. Measuring quality of health care from the user’s perspective in 41 countries: psychometric properites of the WHO’s questions on health systems responsiveness. Quality of Life Research. 2007;16:1107-1125.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Most of the conceptual and empirical work done to date has been in the assessment of adult hospital and ambulatory care experiences and satisfaction, with a consensus standard core tool (CAHPS®) recently chosen by the National Quality Forum for use by all health organizations receiving public insurance funds. No such consensus exists, however, regarding the measurement of the experience of pediatric care. This new survey will close this gap through allowing the assessment of the pediatric care experience that is somewhat different from adult care because of the more central role played by a third party, the parent or family, in the care relationship.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:

No consensus tool exists that specifically evaluates the experience of pediatric inpatient care and allows patients to compare quality of care from a subjective parent perspective across hospitals.

1b.3 Citations for data on performance gap:

1b.4 Summary of Data on disparities by population group:
No relevant studies published.

1b.5 Citations for data on Disparities:
No relevant studies published.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population): This survey tool will allow meaningful comparisons of performance across different institutions, hospital services, and hospital
experiences. While positive clinical outcomes are of greatest importance positive customer experiences cannot be underestimated. If pay for performance plans in hospital care settings are realized this survey tool will be indispensable to evaluate parents’ experiences and initiate strategies to improve customer satisfaction.

1c.2-3. Type of Evidence:

1c.4 Summary of Evidence (as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome):
N/A

1c.5 Rating of strength/quality of evidence (also provide narrative description of the rating and by whom):
N/A

1c.6 Method for rating evidence: N/A

1c.7 Summary of Controversy/Contradictory Evidence: N/A

1c.8 Citations for Evidence (other than guidelines): N/A

1c.9 Quote the Specific guideline recommendation (including guideline number and/or page number): N/A

1c.10 Clinical Practice Guideline Citation: N/A
1c.11 National Guideline Clearinghouse or other URL: N/A

1c.12 Rating of strength of recommendation (also provide narrative description of the rating and by whom): N/A

1c.13 Method for rating strength of recommendation (If different from USPSTF system, also describe rating and how it relates to USPSTF): N/A

1c.14 Rationale for using this guideline over others: N/A

| TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Importance to Measure and Report? | 1 |
| Steering Committee: Was the threshold criterion, Importance to Measure and Report, met? Rationale: | 1 | Y | N |

2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)

| 2a. MEASURE SPECIFICATIONS |  |
| S.1 Do you have a web page where current detailed measure specifications can be obtained? S.2 If yes, provide web page URL: |  |
| 2a. Precisely Specified |  |

2a.1 Numerator Statement (Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome):
The 62-item survey evaluates parents' experiences during inpatient pediatric hospital stay.
### 2a.2 Numerator Time Window *(The time period in which cases are eligible for inclusion in the numerator):*
Surveys received from parents of pediatric inpatients that were received within 6 weeks after sending the survey out to the parents that were randomly selected from all parents with children who had inpatient stays during a certain time period prior to sending the survey out, e.g. the prior month.

### 2a.3 Numerator Details *(All information required to collect/calculate the numerator, including all codes, logic, and definitions):*
The dimensions that are included are overall impressions, interactions with nurses, interactions with doctors, the admission and discharge process, home care preparation, medications, pain management, parent involvement, hospital environment, support staff and food. Demographic questions are included at the end of the survey. The experiences are rated with various scales such as “Never to Always,” “Very Easy to Very Hard,” “Very Poorly to Very Well,” “Poor to Excellent,” “Not At All to Very Well,” “Fell Far Below My Expectations to Exceeded My Expectations,” “Very Unlikely to Very Likely,” and “Strongly Disagree to Strongly Agree.” “Not applicable” responses are available whenever applicable.

### 2a.4 Denominator Statement *(Brief, text description of the denominator - target population being measured):*
Randomly sampled parents or caregivers, 18 years or older, of children who had an inpatient stay of at least one night at the hospital and responded to the survey.

### 2a.5 Target population gender: Male, Female
### 2a.6 Target population age range: 18 years or older

### 2a.7 Denominator Time Window *(The time period in which cases are eligible for inclusion in the denominator):*
Six weeks after the survey has been received by the sampled parents/caregivers.

### 2a.8 Denominator Details *(All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions):*
The denominator includes all parents and caregivers:
1. Whose child stayed at least one night on an inpatient unit at the hospital
2. Was discharged during a certain time period
3. Was randomly selected
4. Answered the survey within 6 weeks after the end of the time period

### 2a.9 Denominator Exclusions *(Brief text description of exclusions from the target population):*
The denominator excludes surveys that are received after 6 weeks after sending it out to the parents/caregivers. Patients from the hospital, e.g. ambulatory patients, that did not have an inpatient stay are not included in the target population and therefore not in the denominator.

### 2a.10 Denominator Exclusion Details *(All information required to collect exclusions to the denominator, including all codes, logic, and definitions):*
The denominator excludes surveys that are received after 6 weeks after sending it out to the parents/caregivers. Patients from the hospital, e.g. ambulatory patients, that did not have an inpatient stay are not included in the target population and therefore not in the denominator.

### 2a.11 Stratification Details/Variables *(All information required to stratify the measure including the stratification variables, all codes, logic, and definitions):*
N/A

### 2a.12-13 Risk Adjustment Type: No risk adjustment necessary

### 2a.14 Risk Adjustment Methodology/Variables *(List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method):*
N/A

### 2a.15-17 Detailed risk model available Web page URL or attachment:
### 2a.18-19 Type of Score: Rate/proportion

**2a.20 Interpretation of Score:**

**2a.21 Calculation Algorithm (Describe the calculation of the measure as a flowchart or series of steps):**

There are a number of ways the data collected by this survey with its measures can be used to assess the experiences of parents during a pediatric hospital stay. The level of how satisfied parents of pediatric patients are is usually measured by using the arithmetic mean or the percentage of respondents with valid answers that choose the most positive category. Valid answers are considered any answers except for refusals, don’t know and inapplicable codes.

**2a.22 Describe the method for discriminating performance (e.g., significance testing):**

This survey should be used to either monitor patient satisfaction over time or to compare patient satisfaction between e.g. departments, hospitals, patient subgroups determined by race, ethnicity, insurance and other characteristics. If the survey is used to compare patient satisfaction between groups, t-tests, ANOVAs, Chi-square tests and other appropriate statistical analyses techniques should be employed to assess if there are significant differences in satisfaction and experiences between them. If the survey is used to look at trends of patient satisfaction over time regression models with time as a predictor could be used to determine if there are significant changes in scores over time. If only mean scores should be compared over time an ANOVA with the different time points as the categorical variable can simplify the assessment of significant differences over time. Depending on the type of measures chosen (binary or categorical) and the statistic considered (e.g. mean, percentages) other statistical analyses methods can be adequate to assess differences between groups or across time.

**2a.23 Sampling (Survey) Methodology If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):**

This survey should be administered to a random sample of all parents of pediatric inpatients that were discharged during a certain time period. A list of all of these parents together with addresses, phone numbers, and other contact information should be extracted. The sample should then be randomly drawn. All parents selected into the sample have to be provided with the opportunity to fill out the survey. As of today, this survey has been conducted with parents through phone interviews or self-administered mail questionnaires. Reminder phone calls and/or reminder postcards should be included into the survey protocol since these have been shown to increase response rates during the validation study.

The minimum sample size necessary is dependent on what groups want to be compared and how similar or different the measured scores are between the groups. The Children's Hospital Boston aims to get about 250 completed surveys per quarter which allowed us to look at differences across most groups on a half-yearly basis. With falling response rates in surveys in general, currently a response rate between 25 and 35% seems to be the standard of what can be achieved with a survey protocol including reminders but no incentives. The minimum sample size should therefore be multiplied by a factor between 3 and 4 to account for nonresponse.

**2a.24 Data Source (Check the source(s) for which the measure is specified and tested) Survey: Patient**

**2a.25 Data source/data collection instrument (Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.):**

Children's Hospital Boston Inpatient Experience Survey

**2a.26-28 Data source/data collection instrument reference web page URL or attachment:** Attachment 2a.26 Data Source IES Core Module.pdf

**2a.29-31 Data dictionary/code table web page URL or attachment:** Attachment 2a.29 Code Table.doc

**2a.32-35 Level of Measurement/Analysis (Check the level(s) for which the measure is specified and tested)**

Facility/Agency

**2a.36-37 Care Settings (Check the setting(s) for which the measure is specified and tested)**

Hospital

**2a.38-41 Clinical Services (Healthcare services being measured, check all that apply)**

Other Hospital-wide measure for inpatient care, not developed to evaluate specific clinical services
### TESTING/ANALYSIS

#### 2b. Reliability testing

**2b.1 Data/sample (description of data/sample and size):** The data used for psychometric reliability analyses are based on responses to a 3-time point study of 353 parents of children who were inpatients at the Children's Hospital Boston. The parents were recruited on the inpatient floors and asked to participate in the study. When recruited they were asked to fill out a short questionnaire currently used to evaluate the family-centered nursing services (FCNCS). After discharge parents received the Children's Hospital Boston Inpatient Experience Survey (CHB-IES) by mail or phone on two occasions to allow establishing test-retest reliability.

**2b.2 Analytic Method (type of reliability & rationale, method for testing):** Test-retest reliability of single items was established using Cohen’s kappa statistic and crude agreement rates between Time 1 and Time 2 answers to each measure. Test-retest reliability of uni-dimensional factors created through factor analysis was evaluated through intraclass correlation coefficients (ICC). Cronbach’s alpha was used to evaluate the internal consistency of the scales measuring a number of underlying theoretical constructs.

**2b.3 Testing Results (reliability statistics, assessment of adequacy in the context of norms for the test conducted):** Kappa statistics and crude agreement rates are available for each item and can be received upon request for the full sample as well as for subgroups. To illustrate our results we are using one item, the parents’ evaluation of the safety of the care that their child received, that reached a kappa of 0.51 and showed no significant differences with regard to test-retest reliability across subgroups.

#### 2c. Validity testing

**2c.1 Data/sample (description of data/sample and size):** The data used for psychometric reliability analyses are based on responses to a 3-time point study of 353 parents of children who were inpatients at the Children's Hospital Boston. The parents were recruited on the inpatient floors and asked to participate in the study. When recruited they were asked to fill out a short questionnaire currently used to evaluate the family-centered nursing services (FCNCS). After discharge parents received the Children's Hospital Boston Inpatient Experience Survey (CHB-IES) by mail or phone on two occasions. We only used the FCNCS and the first administration of the CHB-IES to establish structural validity of the scales, convergent/discriminant validity and concurrent validity to allow establishing test-retest reliability.

**2c.2 Analytic Method (type of validity & rationale, method for testing):** Structural validity of the scales was evaluated through exploratory factor analysis. Convergent/discriminant validity was established for items measured in the FCNCS as well as the CHB-IES through correlation coefficients. Concurrent validity was evaluated through comparing mean scores of overall satisfaction ratings through t-tests across the indicator variable where respondents specified if they were ever upset or concerned.

**2c.3 Testing Results (statistical results, assessment of adequacy in the context of norms for the test conducted):** Again, psychometric analysis results for each type of validity can be obtained for all items/scales if appropriate.

#### 2d. Exclusions Justified

**2d.1 Summary of Evidence supporting exclusion(s):** The only exclusion that has been made at this point was parents who did not speak English well enough to understand and answer the survey because the survey is currently only available in English. We plan to translate the validated survey into several other languages.

**2d.2 Citations for Evidence:** N/A
### 2d. Data/sample (description of data/sample and size): N/A

### 2d.4 Analytic Method (type analysis & rationale):
N/A

### 2d.5 Testing Results (e.g., frequency, variability, sensitivity analyses):
N/A

### 2e. Risk Adjustment for Outcomes/ Resource Use Measures

#### 2e.1 Data/sample (description of data/sample and size): N/A

#### 2e.2 Analytic Method (type of risk adjustment, analysis, & rationale):
N/A

#### 2e.3 Testing Results (risk model performance metrics):
N/A

#### 2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: This survey was used only at the Children’s Hospital Boston at this time where we expect our services to be comparable across units.

### 2f. Identification of Meaningful Differences in Performance

#### 2f.1 Data/sample from Testing or Current Use (description of data/sample and size): N/A

#### 2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance (type of analysis & rationale):
N/A

#### 2f.3 Provide Measure Scores from Testing or Current Use (description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):
N/A

### 2g. Comparability of Multiple Data Sources/Methods

#### 2g.1 Data/sample (description of data/sample and size): N/A

#### 2g.2 Analytic Method (type of analysis & rationale):
N/A

#### 2g.3 Testing Results (e.g., correlation statistics, comparison of rankings):
N/A

### 2h. Disparities in Care

#### 2h.1 If measure is stratified, provide stratified results (scores by stratified categories/cohorts): Currently the measure is not stratified but plans to do so in near future.

#### 2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:
N/A

---

**TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Scientific Acceptability of Measure Properties?**

**Steering Committee: Overall, to what extent was the criterion, Scientific Acceptability of Measure Properties, met?**

Rationale:

---

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable
### 3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

<table>
<thead>
<tr>
<th>Eval Rating</th>
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<tbody>
<tr>
<td><strong>3a. Meaningful, Understandable, and Useful Information</strong></td>
</tr>
<tr>
<td><strong>3a.1 Current Use:</strong> Testing not yet completed</td>
</tr>
<tr>
<td><strong>3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years):</strong> Measures from the survey tool are intended to be publicly reported. However, no plans have been made yet on how this will be achieved most efficiently.</td>
</tr>
<tr>
<td><strong>3a.3 If used in other programs/initiatives (If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years):</strong> Measures from the survey tool will be used to improve quality of care. Specific initiatives have not yet been established. Testing for interpretability.</td>
</tr>
<tr>
<td><strong>Testing of Interpretability</strong> (Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement)</td>
</tr>
<tr>
<td><strong>3a.4 Data/sample (description of data/sample and size):</strong> N/A</td>
</tr>
<tr>
<td><strong>3a.5 Methods (e.g., focus group, survey, QI project):</strong> N/A</td>
</tr>
<tr>
<td><strong>3a.6 Results (qualitative and/or quantitative results and conclusions):</strong> N/A</td>
</tr>
<tr>
<td><strong>3b/3c. Relation to other NQF-endorsed measures</strong></td>
</tr>
<tr>
<td><strong>3b.1 NQF # and Title of similar or related measures:</strong> NQF # 0166 HCAHPS</td>
</tr>
<tr>
<td><strong>(for NQF staff use) Notes on similar/related endorsed or submitted measures:</strong></td>
</tr>
<tr>
<td><strong>3b.2 Are the measure specifications harmonized? If not, why?</strong> The measures included in the survey tool target the same dimensions and are largely harmonized in the sense that they measure “the same” but in a different care setting leading to slightly different and/or additional questions.</td>
</tr>
<tr>
<td><strong>3c. Distinctive or Additive Value</strong></td>
</tr>
<tr>
<td><strong>3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:</strong> This survey tool is specifically designed to evaluate an inpatient pediatric care setting while the HCAHPS is used for adult patient populations.</td>
</tr>
<tr>
<td><strong>5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:</strong> N/A</td>
</tr>
<tr>
<td><strong>TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Usability?</strong></td>
</tr>
<tr>
<td><strong>Steering Committee: Overall, to what extent was the criterion, Usability, met?</strong></td>
</tr>
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</table>
### 4. FEASIBILITY

**Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)**

#### 4a. Data Generated as a Byproduct of Care Processes

4a.1-2 How are the data elements that are needed to compute measure scores generated?

Survey

#### 4b. Electronic Sources

4b.1 Are all the data elements available electronically? *(elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims)*

No

4b.2 If not, specify the near-term path to achieve electronic capture by most providers.

N/A

#### 4c. Exclusions

4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?

No

4c.2 If yes, provide justification.

#### 4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences

4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.

Potential problems with this survey tool are nonresponse and measurement bias. Nonresponse bias can occur if people answering the survey are different from the respondents with regard to a measure of interest, a single statistic. General ways to potentially minimize nonresponse bias is to either increase the likelihood to respond through follow-up contacts, incentives etc. or to use nonresponse adjustment weights when analyzing the data. The construction of nonresponse adjustment weights is dependent on information from respondents and nonrespondents. Information can potentially be extracted from medical records when sample members are selected. Raking adjustment methods would allow still keeping the survey anonymous. Propensity adjustment methods would require surveys that have unique identifiers that can be linked to administrative data available for respondents and nonrespondents. Measurement bias, also called response bias, is possible if respondents do not understand questions or cannot accurately remember information. This type of bias has been minimized through the use of focus groups and cognitive interviews when the survey was designed. Our results show that the questions are well understood by respondents. Psychometric analyses also indicated which of the measures are performing well with regard to reliability and validity. The survey tool presented here is the selection of the best performing items that reflect all dimensions that we aimed at measuring. The likelihood of memory inaccuracy can be minimized by shortening the time period between the discharge and the administration of the survey. Further research is necessary to assess if a shorter than 4 week time period can improve memory accuracy when answering the survey questions.

#### 4e. Data Collection Strategy/Implementation

4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data
collection, patient confidentiality, time/cost of data collection, other feasibility/implementation issues:
Both mail and phone data collection modes are feasible for administering the survey. Missing data for the items kept in this survey tool is on average less than 1%. If the phone is used to administer the survey interviewer training is indispensable.

4e.2 Costs to implement the measure (costs of data collection, fees associated with proprietary measures):
Not yet evaluated.

4e.3 Evidence for costs:
N/A

4e.4 Business case documentation: N/A

<table>
<thead>
<tr>
<th>TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Feasibility?</th>
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<tbody>
<tr>
<td>Steering Committee: Overall, to what extent was the criterion, Feasibility, met?</td>
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<tr>
<td>Rationale:</td>
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<table>
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<tr>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>(for NQF staff use) Check if measure is untested and only eligible for time-limited endorsement.</td>
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<tr>
<td>Steering Committee: Do you recommend for endorsement?</td>
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<tr>
<td>Comments:</td>
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<table>
<thead>
<tr>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co.1 Measure Steward (Intellectual Property Owner)</td>
</tr>
<tr>
<td>Co.1 Organization</td>
</tr>
<tr>
<td>Children's Hospital Boston, Program for Patient Safety and Quality, 300 Longwood Avenue, Boston, Massachusetts, 02115</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co.2 Point of Contact</th>
</tr>
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<tbody>
<tr>
<td>Nina, Rauscher, MS, RN, CPHQ, <a href="mailto:nina.rauscher@childrens.harvard.edu">nina.rauscher@childrens.harvard.edu</a>, 617-355-6567-</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Measure Developer If different from Measure Steward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co.3 Organization</td>
</tr>
<tr>
<td>Children's Hospital Boston, Program for Patient Safety and Quality, 300 Longwood Avenue, Boston, Massachusetts, 02115</td>
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</tbody>
</table>

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<tr>
<th>Co.4 Point of Contact</th>
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<tr>
<td>Nina, Rauscher, MS, RN, CPHQ, <a href="mailto:nina.rauscher@childrens.harvard.edu">nina.rauscher@childrens.harvard.edu</a>, 617-355-6567-</td>
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<tr>
<th>Co.5 Submitter If different from Measure Steward POC</th>
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| Co.6 Additional organizations that sponsored/participated in measure development |

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<tr>
<td>Workgroup/Expert Panel involved in measure development</td>
</tr>
<tr>
<td>Ad.1 Provide a list of sponsoring organizations and workgroup/panel members’ names and organizations. Describe the members’ role in measure development.</td>
</tr>
<tr>
<td>Sonja Ziniel, PhD</td>
</tr>
</tbody>
</table>
The work group reviewed literature, assessed current measure, conducted focus groups, and designed study to validate the measure and to analyze the data.

| Ad.2 If adapted, provide name of original measure: | N/A |
| Ad.3-5 If adapted, provide original specifications URL or attachment |
| Measure Developer/Steward Updates and Ongoing Maintenance |
| Ad.6 Year the measure was first released: |
| Ad.7 Month and Year of most recent revision: |
| Ad.8 What is your frequency for review/update of this measure? | Every 3 years |
| Ad.9 When is the next scheduled review/update for this measure? |
| Ad.10 Copyright statement/disclaimers: | Applying for CHB copyright. |
| Ad.11-13 Additional Information web page URL or attachment: |
| Date of Submission (MM/DD/YY): | 09/23/2010 |