

Measure: Child HCAHPS–Hospital Consumer Assessment of Healthcare Providers and Systems

Measure Developer: Center of Excellence for Pediatric Quality Measurement (CEPQM)

Numerator	Denominator	Exclusions	Data Source(s)
All individuals who return a completed survey.	All individuals who meet the following criteria: 1. Parents of children < 18 years old. 2. Admission includes at least one overnight stay in the hospital. 3. Non-psychiatric MS-DRG/principal diagnosis at discharge. 4. Child is alive at time of discharge.	Parents of "no-publicity" patients, court/law enforcement patients, patients with foreign home addresses, patients discharged to hospice, patients discharged to skilled nursing facilities, patients who are excluded because of State regulations, patients who are wards of the State, patients who are emancipated minors, healthy newborns, patients admitted for obstetric care, and observation patients.	Survey: parent / caregiver report.

Note: MS-DRG = medical severity/diagnosis related group.

Measure Importance

In 2009, 6.4 million children between 0 and 17 years old experienced a hospitalization, accounting for 17 percent of all hospital stays. That same year, total costs for children's hospitalizations were $33.6 billion, roughly 9 percent of the total costs for all patients.[1] Child HCAHPS is a tool for measuring family-centeredness by assessing parents' perspectives on their own and their child's inpatient experiences of care. Such evaluations have led to improvements in patient- and family-centered care: after public reporting of Adult HCAHPS scores began in 2008, hospitals were able to implement changes that were associated with increases in their patient experience scores after only 1 year.[2]

Evidence Base[3] for the Focus of the Measure

Research shows that patient- and family-centered care, as measured by patient experience surveys, is important in improving the quality of care and achieving desirable health outcomes.[4,5,6,7] Studies of adults have found that care that is more patient-centered, as measured by patient experience surveys, is associated with lower readmission and mortality rates as well as greater adherence to treatment plans.[4] Studies in the pediatric setting have demonstrated that patient- and family-centered care is associated with improved health outcomes for children and lower overall health care costs.[6,8,9]

Advantages of the Measure

- The Child HCAHPS fills gaps in pediatric quality measurement by serving as a standardized tool to measure the inpatient experience of care for children. It allows for meaningful comparison of pediatric inpatient experience of care across hospitals nationwide.
- Scores are risk-adjusted for case-mix.
- The Child HCAHPS is a non-proprietary instrument designed to complement the Adult HCAHPS.
- Testing showed that hospitals are very interested in having a pediatric-specific inpatient experience of care instrument that can be used for comparison across hospitals.
- Discharge data used to identify the survey sample are easily accessible to hospitals.

Levels of Aggregation Applicable to the Measure

The measure is intended for aggregation and comparison at the State and hospital levels.[10]

Reliability and Validity of the Measure

Hospital-level reliability was evaluated for composite and single-item measures. Reliability was calculated for 300 responses per hospital. (See table.)

Table: Hospital-Level Unit Reliability Estimates of Child HCAHPS Composite and Single Item Measures

Composite and Single-Item Measures	Hospital-Level Unit Reliability at N=300
Nurse-parent communication	0.80
Doctor-parent communication	0.73
Communication about medicines	0.91
Informed about child's care	0.79
Privacy with providers	0.82
Preparing to leave hospital	0.87
Informed in emergency room	0.74
Nurse-child communication	0.77
Doctor-child communication	0.84
Involving teens in care	0.66
Mistakes and concerns	0.90
Call button	0.78
Child comfort	0.91
Child pain	0.79
Cleanliness	0.86
Quietness	0.90
Overall rating	0.89
Recommend hospital	0.93

- Validity was ensured by following the standard HCAHPS development procedures and design principles such as focus groups, cognitive interviews, exploratory factor analysis, internal reliability, and correlations (i.e., item-to-composite, composite-to-composite, and measure-to-overall ratings).
- Exploratory factor analysis, internal reliability, and correlations generally confirmed that the items that grouped together on conceptual grounds were also empirically related.
- Results from cognitive interviews indicated that the Child HCAHPS is easily understandable.

Measure Development and Testing

The Child CAHPS development process included an extensive review of the literature, expert interviews, parent and adolescent focus groups, cognitive testing, pilot testing of the draft survey, a national field test of the survey, psychometric analysis and composite development, and end-user testing of the final survey. CAHPS design principles were followed throughout.

The measure developers began by reviewing over 1,300 abstracts and articles related to inpatient experience of care, reviewing other quality measures, and talking with experts in the field. AHRQ submitted a Federal Register Notice to solicit public comments on potential items and domains for the measure. The developers then conducted focus groups in English and Spanish with parents of recently hospitalized children and with recently hospitalized adolescents in Boston, Los Angeles, and St. Louis.

From this formative work, the developers drafted an initial survey. They conducted 109 in-depth cognitive interviews in English and Spanish in Boston, Los Angeles, Miami, and St. Louis and used the results to inform revisions of the survey. The revised draft survey was pilot tested in eight hospitals across the country. It was administered by mail, in English and Spanish. In addition, the developers administered 60 surveys by phone and performed behavioral coding and analyzed audio recordings to identify problematic items.

After further survey revisions and additional cognitive interviews, the developers conducted a national field test of the survey, administering it in 70 hospitals. These included a selection of freestanding children's hospitals, children's hospitals within adult hospitals, and pediatric wards. The survey was sent out to parents of children 0 to < 18 years old) with a recent hospital stay. The developers used the field test data for psychometric testing, composite development, development of the case-mix adjustment approach, and non-response analysis. They conducted end-user cognitive testing to ensure understandability of composite groupings and labels.

Selected Results from Tests of the Measure

- The final Child HCAHPS survey has 62 items; these items are grouped into 18 composite and single-item measures.
- The range of average hospital top-box scores (a top-box score is the highest or best answer option for a survey item) for the composite and single-item measures ranged from 56-84 percent.
- Average hospital top-box scores varied substantially among hospitals.

Caveats

- Assessments of patient experience can only address aspects of care for which parents are the only or best source of information (e.g., patients are not asked about the quality of anesthesia when undergoing surgery or whether the correct antibiotic was used for a specific infection).
- HCAHPS surveys are sampled from the general patient population, and thus, there usually is not a large enough sample to evaluate the experiences of subgroups.

For More Information

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Coming soon: Link to measure details on the AHRQ Web site.

For more information about the PQMP, visit www.ahrq.gov/CHIPRA.

Notes

[1]Yu H, Wier LM, Elixhauser A. Hospital Stays for Children, 2009: Statistical Brief #118. Rockville (MD): Agency for Health Care Policy and Research (US); 2006. Available at: http://www.ncbi.nlm.nih.gov/books/NBK65134/.

[2]Elliott MN, Lehrman WG, Goldstein EH, et al. Hospital survey shows improvements in patient experience. Heal Aff Proj Hope. 2010;29(11):2061–7. doi:10.1377/hlthaff.2009.0876.

[3]An evidence base comprises the breadth and rigor of studies demonstrating valid relationship(s) among the structure, process, and/or outcome of health care that is the focus of the measure. For example, evidence exists for the relationship between immunizing a child or adolescent (process of care) and improved outcomes for the child and the public. If sufficient evidence existed for the use of immunization registries in practice or at the State level and the provision of immunizations to children and adolescents, such evidence would support the focus of a measure on immunization registries (a structural measure).

[4]Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. J Fam Pract. 2000;49(9):796–804.

[5]Stewart MA. Effective physician-patient communication and health outcomes: a review. CMAJ Can Med Assoc J J Assoc Medicale Can. 1995;152(9):1423–33.

[6]Palfrey JS, Sofis LA, Davidson EJ, et al. The Pediatric Alliance for Coordinated Care: evaluation of a medical home model. Pediatrics. 2004;113(5 Suppl):1507–16.

[7]Veroff D, Marr A, Wennberg DE. Enhanced support for shared decision making reduced costs of care for patients with preference-sensitive conditions. Heal Aff Proj Hope. 2013;32(2):285–93. doi:10.1377/hlthaff.2011.0941.

[8]Jessop DJ, Stein RE. Providing comprehensive health care to children with chronic illness. Pediatrics. 1994;93(4):602–7.

[9]Homer CJ, Klatka K, Romm D, et al. A review of the evidence for the medical home for children with special health care needs. Pediatrics. 2008;122(4):e922–37. doi:10.1542/peds.2007-3762.

[10]The Children's Health Insurance Program Reauthorization Act required measures developed under this program to "permit comparison of quality and data at a State, plan, and provider level." The measure developer identified the intended levels of aggregation and comparison as reported here.

The Children's Health Insurance Program Reauthorization Act (CHIPRA) called for establishment of a Pediatric Quality Measures Program (PQMP) as a followup to identifying the initial core set of children's health care quality measures. This fact sheet was produced by the Agency for Healthcare Research and Quality (AHRQ), based on information provided by the AHRQ-CMS Center of Excellence for Pediatric Quality Measurement (CEPQM), which was funded by an AHRQ/CMS award. A listing of all submitted PQMP Centers of Excellence measures can be found at www.ahrq.gov/CHIPRA. All measures are publicly available for noncommercial use.

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