

Performance of the Massachusetts Health Care System

Quality

Technical Appendix March 2021

Quality of Care in the Commonwealth

TECHNICAL APPENDIX

Table of Contents

Metrics: Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)	2
Metrics: Consumer Assessment of Healthcare Providers and Systems Clinician and Group Patient Centered Medical Home Survey (CG CAHPS, 3.0 Survey) – Primary Care (Adult and Pediatrics)	3
Metrics: The Leapfrog Group	5
Metrics: Readmissions	7
Hospital System Affiliations Current as of publication date: March 25, 2021	7

Metrics: Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

Steward: Agency for Healthcare Research and Quality

CHIA Data Source: CMS Hospital Compare

Populations: All Payers, Ages 18+

MEASURE NAME AND ID	DESCRIPTION	PRIMARY DATA SOURCE
Cleanliness of Hospital Environment	Patient response to the individual HCAHPS survey question about the cleanliness of their hospital room during their stay.	Patient Reported Data/Survey
Communication about Medicines	A composite of responses to HCAHPS survey questions about how providers communicated about medications during the hospital stay.	Patient Reported Data/Survey
Communication with Doctors	A composite of responses to HCAHPS survey questions about how doctors communicated during the hospital stay.	Patient Reported Data/Survey
Communication with Nurses	A composite of responses to HCAHPS survey questions about how nurses communicated during the hospital stay.	Patient Reported Data/Survey
Discharge Information	A composite of responses to HCAHPS survey questions about the care instructions given to them by a provider at discharge.	Patient Reported Data/Survey
Overall Hospital Rating	Overall patient rating of the hospital, based on the recent admission, on a scale from 0 (lowest) to 10 (highest).	Patient Reported Data/Survey
Recommend the Hospital	Would the patient recommend the hospital, based on the recent admission.	Patient Reported Data/Survey
Quietness of Hospital Environment	Patient response to the individual HCAHPS survey question about the quietness of their hospital room at night.	Patient Reported Data/Survey
Responsiveness of Hospital Staff	A composite of responses to HCAHPS survey questions about if help was provided when it was needed during the hospital stay.	Patient Reported Data/Survey
Care Transition	A composite of responses to HCAHPS survey questions about how patients understood the care instructions they received at discharge.	Patient Reported Data/Survey

Definition:

All HCAHPS scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the measure is also not included in the report. For more information on CMS's methods, see: https://www.hcahpsonline.org/globalassets/hcahps/star-ratings/tech-notes/october_2020_star-ratings_tech-notes.pdf

The accompanying databook also includes HCAHPS "top-box" scores. These scores reflect the percentage of respondents that gave the most positive response to HCAHPS survey items. Higher scores indicate better patient-reported experiences. For more information on CMS's methods, see: <https://hcahpsonline.org/en/summary-analyses/>

Metrics: Consumer Assessment of Healthcare Providers and Systems Clinician and Group Patient Centered Medical Home Survey (CG CAHPS, 3.0 Survey) – Primary Care (Adult and Pediatrics)

Steward: Agency for Healthcare Research and Quality (AHRQ) and National Committee for Quality Assurance (NCQA)

CHIA Data Source: Massachusetts Health Quality Partners, Patient Experience Survey (PES)

Population:

1. Commercial - Commercially insured members of five health plans in Massachusetts (Blue Cross Blue Shield of Massachusetts, Tufts Health Plan, Harvard Pilgrim Health Care, Fallon Community Health Plan, and Health New England), in an HMO, PPO, or POS health plan product. Adult patients' ages 18+, pediatric patients ages 0 to 17.
2. MassHealth – Sample of members from all 17 MassHealth ACOs. Adult patients' ages 18+, pediatric patients ages 0 to 17.

Adult Primary Care and Pediatric Patient Experience Survey Measures

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Organizational Access	Survey respondents' scoring of satisfaction with their ability to get timely appointments, care, and information.	Patient Reported Data/Survey
Office Staff	Survey respondents' scoring of their interactions with office staff.	Patient Reported Data/Survey
Integration of Care	Survey respondents' scoring of their satisfaction with their providers' integration of their care.	Patient Reported Data/Survey

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Shared Decision-Making	Survey respondents' scoring of their satisfaction with their involvement in decisions about their care.	Patient Reported Data/Survey
Communication	Survey respondents' scoring of their satisfaction with their patient-providers' communication.	Patient Reported Data/Survey
Knowledge of Patient	Survey respondents' scoring of their satisfaction with how well doctors know them.	Patient Reported Data/Survey
Coordination	Survey respondents' scoring of how well their doctors and other care providers coordinate care.	Patient Reported Data/Survey
Adult Behavioral Health – Adult Only	Survey respondents' scoring of whether doctors talked to them about their mental health.	Patient Reported Data/Survey
Self-Management Support	Survey respondents' scoring of whether healthcare providers talked with them and their family about goals for good health and ways to meet these goals.	Patient Reported Data/Survey
Willingness to Recommend	Survey respondents reported YES, they would definitely recommend their doctor to family and friends.	Patient Reported Data/Survey
Child Development – Pedi Only	Survey respondents' scoring of whether doctors talked to them about how well their child was growing, moving, speaking, learning, and getting along with others.	Patient Reported Data/Survey
Pediatric Preventive Care – Pedi Only	Survey respondents' scoring of whether doctors gave advice about keeping their child safe and healthy.	Patient Reported Data/Survey

All scores for measures of patient experience in medical groups were pre-calculated by and received from the Massachusetts Health Quality Partners (MHQP).

Patient Experience measures scores are rated on a scale from 0 to 100. Each survey response is converted to numeric format, with 100 as the most favorable response. Related questions are averaged to create a respondent-level score for each measure. The respondents' measure scores are then case mix adjusted before aggregating to the medical group level and a statewide score.

MHQP does not report scores for practices or groups with insufficient sample size, but individuals from these small practices or groups are counted at more aggregated levels, once sufficient sample size is reached.

Metrics: The Leapfrog Group

Steward: Varied

CHIA Data Source: The Leapfrog Group Hospital Survey

Population: All Payers, All Ages

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
NTSV Cesarean Section	Percent of cesarean sections for first-time pregnancy (nulliparous) that has reached 37th week or later (term) and consists of one fetus (singleton) in the head-down position (vertex). Fully Meets Standard < = 23.9% Substantial Progress > 23.9% and < = 27.0% Some Progress > 27.0% and < = 33.3% Willing to Report > 33.3%	Hospital Survey derived from health records
Elective Delivery Prior to 39 Completed Weeks Gestation	Percent of deliveries that were elective and not medically necessary prior to 39 completed weeks gestation. Fully Meets Standard < = 5% Substantial Progress > 5% and < = 10% Some Progress > 10% and < = 15% Willing to Report > 15%	Hospital Survey derived from health records
Rate of Episiotomy	Percent of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed. Fully Meets Standard < = 5% Substantial Progress > 5% and < = 10% Some Progress > 10% and < = 15% Willing to Report > 15%	Hospital Survey derived from health records
Medication Reconciliation	The number of unintentional medication discrepancies identified between the Gold Standard Medication History obtained by a trained pharmacist and the admission and discharge orders <ul style="list-style-type: none"> To fully meet the standard, a hospital must use a nationally endorsed protocol to collect data on the accuracy of its medication reconciliation process and report the data collected to Leapfrog. Hospitals choose to report using a 3-month or 6-month reporting period, but report only the end date. CHIAs databook includes a start date assuming a 6-month reporting period since this would capture the full time frame possible. For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithm_ms_20190401_v8.0.pdf 	Hospital Survey derived from health records

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Computerized Physician Order Entry (CPOE)	<ul style="list-style-type: none"> The percentage of medication orders entered electronically via a computer system that includes decision support software to reduce prescribing errors. To fully meet standard, must be at least 85%. Electronic system checks medication orders for common prescribing errors, such as incorrect dosage, incorrect medication, and drug interactions, and catches at least 60%. For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithm_20190401_v8.0.pdf 	Hospital Survey derived from health records
Bar Code Medication Administration (BCMA)	<ul style="list-style-type: none"> Percentage of applicable units in which BCMA is implemented. Compliance with scanning patients and medications during administration. BCMA system includes decision support checks. Structures are in place to monitor and reduce workarounds. For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithm_20190401_v8.0.pdf 	Hospital Survey derived from health records
Antibiotic Stewardship Practices	<p>Hospitals are scored on their adoption and implementation of the <i>CDC's Core Elements of Antibiotic Stewardship Programs</i>.</p> <ul style="list-style-type: none"> Based on hospital responses to the 2018 NHSN Patient Safety Component – Annual Hospital Survey To fully meet the standard, the hospital must implement all seven Core Elements identified by the CDC for a successful Antibiotic Stewardship Program. For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithm_20190401_v8.0.pdf 	Hospital Survey derived from health records
NQF Safe Practices	<p>The Leapfrog Safe Practices Score (SPS) measures hospitals' progress on five of the NQF's Safe Practice areas. Each practice area is assigned an individual weight, which is factored into the overall score.</p> <ul style="list-style-type: none"> For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithm_20190401_v8.0.pdf For complete description of practice areas factored into overall score, see: https://www.leapfroggroup.org/sites/default/files/Files/2019HospitalSurvey_20190529_v8.0%20%28version%203%29.pdf 	Hospital Survey

Definition:

Quality performance data were received from The Leapfrog Group as pre-calculated scores, including comparisons to standards defined by The Leapfrog Group. Participation in the Leapfrog Hospital survey is voluntary; where a

hospital does not complete the survey or report on certain items in the survey, the data for that entity is also not included in the report.

For more information on Leapfrog's scoring methods, see:

https://www.leapfroggroup.org/sites/default/files/Files/2019ScoringAlgorithms_20190401_v8.0.pdf

For more information on measure specifications and calculations, see:

https://www.leapfroggroup.org/sites/default/files/Files/2019HospitalSurvey_20190529_v8.0%20%28version%203%29.pdf

Metrics: Readmissions

Please refer to the Hospital-Wide Adult All-Payer Readmissions Report (published in December 2019), and to the Behavioral Health and Readmissions in Massachusetts Acute Care Hospitals Report (October 2020) Technical Appendices for information on methodology for these calculations. The full reports and accompanying materials, including the Technical Appendix are available at:

Hospital-Wide Adult All-Payer Readmissions in Massachusetts: SFY 2011-2018

<https://www.chiamass.gov/hospital-wide-adult-all-payer-readmissions-in-massachusetts-sfy-2011-2018/>

Behavioral Health and Readmissions in Massachusetts Acute Care Hospitals

<https://www.chiamass.gov/behavioral-health-and-readmissions-in-massachusetts-acute-care-hospitals/>

Hospital System Affiliations

Current as of publication date: March 25, 2021

HOSPITAL NAME	AFFILIATION
Noble Hospital	Baystate Health
Baystate Franklin Medical Center	Baystate Health
Baystate Wing Hospital And Medical Centers	Baystate Health
Baystate Medical Center	Baystate Health
Fairview Hospital	Berkshire Health System
Berkshire Medical Center Inc	Berkshire Health System
New England Baptist Hospital	Beth Israel Lahey
Beth Israel Deaconess Hospital - Needham	Beth Israel Lahey
Beth Israel Deaconess Hospital-Milton Inc	Beth Israel Lahey
Anna Jaques Hospital	Beth Israel Lahey
Beth Israel Deaconess Hospital - Plymouth	Beth Israel Lahey
Beth Israel Deaconess Medical Center	Beth Israel Lahey

HOSPITAL NAME	AFFILIATION
Mount Auburn Hospital	Beth Israel Lahey
Lahey Hospital & Medical Center, Burlington	Beth Israel Lahey
Winchester Hospital	Beth Israel Lahey
Northeast Hospital	Beth Israel Lahey
Addison Gilbert Hospital	Beth Israel Lahey
Falmouth Hospital	Cape Cod Health Care
Cape Cod Hospital	Cape Cod Health Care
Athol Memorial Hospital	Heywood Health
Heywood Hospital	Heywood Health
Brigham And Women's Faulkner Hospital	MassGeneral Brigham
Newton-Wellesley Hospital	MassGeneral Brigham
Massachusetts Eye And Ear Infirmary	MassGeneral Brigham
Cooley Dickinson Hospital Inc, The	MassGeneral Brigham
Massachusetts General Hospital	MassGeneral Brigham
Nantucket Cottage Hospital	MassGeneral Brigham
Brigham And Women's Hospital	MassGeneral Brigham
North Shore Medical Center	MassGeneral Brigham
Martha's Vineyard Hospital Inc	MassGeneral Brigham
Boston Medical Center Corporation	Non-Affiliated
Harrington Memorial Hospital	Non-Affiliated
Adcare Hospital Of Worcester Inc	Non-Affiliated
Emerson Hospital	Non-Affiliated
Milford Regional Medical Center	Non-Affiliated
Cambridge Health Alliance	Non-Affiliated
Sturdy Memorial Hospital	Non-Affiliated
Mercy Medical Center	Non-Affiliated
Franciscan Children's Hospital & Rehab Center	Non-Affiliated
Boston Children's Hospital	Non-Affiliated
Southcoast Hospital Group, Inc	Non-Affiliated
Shriners' Hospital For Children - Boston, The	Non-Affiliated
Shriners' Hospital For Children (The)	Non-Affiliated
South Shore Hospital	Non-Affiliated
Holyoke Medical Center	Non-Affiliated
Signature Healthcare Brockton Hospital	Non-Affiliated
Lawrence General Hospital	Non-Affiliated
Northampton Va Medical Center	Non-Affiliated

HOSPITAL NAME	AFFILIATION
Dana-Farber Cancer Institute	Non-Affiliated
Cambridge Health Alliance - Everett Hospital	Non-Affiliated
Saint Luke's Hospital	Non-Affiliated
Tobey Hospital	Non-Affiliated
Nashoba Valley Medical Center	Steward Health Care Systems
Carney Hospital	Steward Health Care Systems
Good Samaritan Medical Center	Steward Health Care Systems
Holy Family Hospital	Steward Health Care Systems
St Elizabeth's Medical Center	Steward Health Care Systems
Saint Anne's Hospital	Steward Health Care Systems
Norwood Hospital	Steward Health Care Systems
Morton Hospital	Steward Health Care Systems
Holy Family Hospital - Merrimack Valley	Steward Health Care Systems
Metrowest Medical Center	Tenet Healthcare
St Vincent Hospital	Tenet Healthcare
Leonard Morse Hospital	Tenet Healthcare
Marlborough Hospital	UMass Memorial Health Care
Clinton Hospital Association	UMass Memorial Health Care
Umass Memorial Medical Center Inc	UMass Memorial Health Care
HealthAlliance-Clinton Hospital	UMass Memorial Health Care
Umass Memorial Medical Center - Memorial Campus	UMass Memorial Health Care
HealthAlliance-Clinton Hospital - Clinton	UMass Memorial Health Care
Umass Memorial Medical Center - University Campus	UMass Memorial Health Care
Bedford Va Medical Center	VA
Va Boston Healthcare System - Jamaica Plain	VA
Lowell General Hospital - Main Campus	Wellforce
Hallmark Health System	Wellforce
Tufts Medical Center	Wellforce
Lowell General Hospital - Saints Campus	Wellforce