

Performance of the Massachusetts Health Care System

Quality of Care

Technical Appendix
March 2023

Quality of Care in the Commonwealth

TECHNICAL APPENDIX

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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/april_2022_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, 4.0 (beta) 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 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: <ol style="list-style-type: none">1. When you called this provider's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you needed?2. When you made an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed?3. When you called this provider's office during regular office hours, how often did you get an answer to your medical question that same day?	Patient Reported Data/Survey
Office Staff	Survey respondents' scoring of their interactions with office staff. <ol style="list-style-type: none">1. Thinking about your most recent visit, was the staff from this provider's office as helpful as you thought they should be?2. Thinking about your most recent visit, did the staff from this provider's office treat you with courtesy and respect?	Patient Reported Data/Survey

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Integration of Care	<p>Survey respondents' scoring of their satisfaction with their providers' integration of their care.</p> <ol style="list-style-type: none"> 1. During your most recent visit, did the provider seem informed and up-to-date about the care you got from specialists? 2. Did someone from this provider's office follow up to give you those results? 3. During your most recent visit, did you and someone from this provider's office talk about all the prescription medicines you were taking, whether they were prescribed by this office or another provider? 	Patient Reported Data/Survey
Communication	<p>Survey respondents' scoring of their satisfaction with their patient-providers' communication.</p> <ol style="list-style-type: none"> 1. During your most recent visit, did this provider explain things in a way that was easy to understand? 2. During your most recent visit, did this provider listen carefully to you? 3. During your most recent visit, did this provider show respect for what you had to say? 4. During your most recent visit, did this provider spend enough time with you? 	Patient Reported Data/Survey
Knowledge of Patient	<p>Survey respondents' scoring of their satisfaction with how well doctors know them.</p> <ol style="list-style-type: none"> 1. During your most recent visit, did this provider have the medical information they needed about you? 2. How would you rate this provider's knowledge of you as a person, including values and beliefs that are important to you? 	Patient Reported Data/Survey
Adult Behavioral Health	<p>Survey respondents' scoring of whether doctors talked to them about their mental health.</p> <ol style="list-style-type: none"> 1. During your most recent visit, did anyone in this provider's office ask you if there was a period of time when you felt sad, empty, or depressed? 2. During your most recent visit, did you and anyone in this provider's office talk about things in your life that worry you or cause you stress? 	Patient Reported Data/Survey
Self-Management Support	<p>Survey respondents' scoring of whether healthcare providers talked with them and their family about goals for good health and ways to meet these goals.</p> <ol style="list-style-type: none"> 1. During your most recent visit, did you and anyone in this provider's office talk about specific goals for your health? 2. During your most recent visit, did anyone in this provider's office ask you if there are things that make it hard for you to take care of your health? 	Patient Reported Data/Survey
Willingness to Recommend	<p>Survey respondents reported YES, they would definitely recommend their doctor to family and friends.</p>	Patient Reported Data/Survey

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Telehealth*	<p>Survey respondents' scoring of their satisfaction with telehealth services.</p> <ol style="list-style-type: none"> 1. Were you and the provider able to see (for a video visit) and/or hear (for a video or phone visit) each other clearly throughout the visit? 2. Were you able to communicate all of your healthcare needs to the provider? 3. Using any number from 0 to 10, where 0 is the worst visit possible and 10 is the best visit possible, what number would you use to rate your most recent telehealth visit? 4. Would you recommend a telehealth visit to your family or friends if they had a similar health care need? 5. Would you like to have a telehealth visit option in the future? 	Patient Reported Data/Survey

Pediatric Primary Care Patient Experience Survey Measures

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Organizational Access	<p>Survey respondents' scoring of satisfaction with their ability to get timely appointments, care, and information:</p> <ol style="list-style-type: none"> 1. When you called this provider's office to get an appointment for care your child needed right away, how often did you get an appointment as soon as your child needed? 2. When you made an appointment for a check-up or routine care for your child with this provider, how often did you get an appointment as soon as your child needed? 3. When you called this provider's office during regular office hours, how often did you get an answer to your medical question that same day? 	Patient Reported Data/Survey
Office Staff	<p>Survey respondents' scoring of their interactions with office staff.</p> <ol style="list-style-type: none"> 1. Thinking about your child's most recent visit, was the staff from this provider's office as helpful as you thought they should be? 2. Thinking about your child's most recent visit, did the staff from this provider's office treat you with courtesy and respect? 	Patient Reported Data/Survey
Integration of Care	<p>Survey respondents' scoring of their satisfaction with their providers' integration of their care.</p> <ol style="list-style-type: none"> 1. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 6 months, did your child see a specialist for a particular health problem? 2. During your most recent visit, did the provider seem informed and up-to-date about the care your child got from specialists? 3. Did someone from this provider's office follow up to give you those results? 	Patient Reported Data/Survey

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Communication	<p>Survey respondents' scoring of their satisfaction with their patient-providers' communication.</p> <ol style="list-style-type: none"> 1. During your child's most recent visit, did this provider explain things in a way that was easy for your child to understand? 2. During your most recent visit, did this provider listen carefully to your child? 3. Did this provider give you enough information about what you needed to do to follow up on your child's care? 4. During your child's most recent visit, did this provider explain things about your child's health in a way that was easy to understand? 5. During your child's most recent visit, did this provider listen carefully to you? 6. During your most recent visit, did this provider show respect for what you had to say? 7. During your most recent visit, did this provider spend enough time with your child? 	Patient Reported Data/Survey
Knowledge of Patient	<p>Survey respondents' scoring of their satisfaction with how well doctors know them.</p> <ol style="list-style-type: none"> 1. During your child's most recent visit, did this provider seem to know the important information about your child's medical history? 2. How would you rate this provider's knowledge of your child as a person – special abilities, concerns, fears? 	Patient Reported Data/Survey
Self-Management Support	<p>Survey respondents' scoring of whether healthcare providers talked with them and their family about goals for good health and ways to meet these goals.</p> <ol style="list-style-type: none"> 1. During your child's most recent visit, did you and anyone in this provider's office talk about specific goals for your child's health? 2. During your child's most recent visit, did anyone in this provider's office ask you if there are things that make it hard for you to take care of your child's health? 	Patient Reported Data/Survey
Willingness to Recommend	<p>Survey respondents reported YES, they would definitely recommend their doctor to family and friends.</p>	Patient Reported Data/Survey
Pediatric Development	<p>Survey respondents' scoring of whether doctors talked to them about how well their child was growing, moving, speaking, learning, and getting along with others.</p> <ol style="list-style-type: none"> 1. During your child's most recent visit, did you and anyone in this provider's office talk about your child's learning ability? 2. During your child's most recent visit, did you and anyone in this provider's office talk about the kinds of behaviors that are normal for your child at this age? 3. During your child's most recent visit, did you and anyone in this provider's office talk about how your child's body is growing? 4. During your child's most recent visit, did you and anyone in this provider's office talk about your child's moods and emotions? 	Patient Reported Data/Survey

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
Pediatric Preventive Care	<p>Survey respondents' scoring of whether doctors gave advice about keeping their child safe and healthy.</p> <ol style="list-style-type: none"> 1. During your child's most recent visit, did you and anyone in this provider's office talk about things you can do to keep your child from getting injured? 2. During your child's most recent visit, did you and anyone in this provider's office talk about how much time your child spends on a computer and in front of a TV? 3. During your child's most recent visit, did you and anyone in this provider's office talk about how much or what kind of food your child eats? 4. During your child's most recent visit, did you and anyone in this provider's office talk about how much or what kind of exercise your child gets? 5. During your child's most recent visit, did you and anyone in this provider's office talk about how your child gets along with others? 6. During your child's most recent visit, did you and anyone in this provider's office talk about whether there are any problems in your household that might affect your child? 	Patient Reported Data/Survey
Telehealth*	<p>Survey respondents' scoring of their satisfaction with telehealth services.</p> <ol style="list-style-type: none"> 1. Were you and/or your child and the provider able to see (for a video visit) and/or hear (for a video or phone visit) each other clearly throughout the visit? 2. Were you and/or your child able to communicate all of your child's healthcare needs to the provider? 3. Using any number from 0 to 10, where 0 is the worst visit possible and 10 is the best visit possible, what number would you use to rate your child's most recent telehealth visit? 4. Would you recommend a telehealth visit to your family or friends if they had a similar health care need? 5. Would you like to have a telehealth visit option in the future? 	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.

*Telehealth composite questions were introduced to the survey beginning with 2020 data. These scores are available for only the MassHealth ACO adult and pediatric populations.

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).	Hospital Survey derived from health records
	Fully Meets Standard < = 23.6%	
	Substantial Progress > 23.6% and < = 25.2%	
	Some Progress > 25.2% and < = 29.5%	
	Willing to Report > 29.5%	
Elective Delivery Prior to 39 Completed Weeks Gestation	Percent of deliveries that were elective and not medically necessary prior to 39 completed weeks gestation.	Hospital Survey derived from health records
	Fully Meets Standard < = 5%	
	Substantial Progress > 5% and < = 10%	
	Some Progress > 10% and < = 15%	
	Willing to Report > 15%	
Rate of Episiotomy	Percent of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed.	Hospital Survey derived from health records
	Fully Meets Standard < = 5%	
	Substantial Progress > 5% and < = 10%	
	Some Progress > 10% and < = 15%	
	Willing to Report > 15%	
Hand Hygiene	<ul style="list-style-type: none"> The Hand Hygiene measures processes and protocols that hospitals have in place regarding monitoring hand hygiene practices, fostering a culture of good hand hygiene, offering training and education, and providing equipment. For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2022HospitalSurveyScoringAlgorithm_20220712_v8.3%20(version%201).pdf 	Hospital Survey derived from health records

MEASURE NAME	DESCRIPTION	PRIMARY DATA SOURCE
NQF Safe Practices	<p>Three (3) NQF Safe Practice measures are collected by The Leapfrog Group on the Leapfrog Hospital Survey. They measure a hospital's progress toward implementing NQF-endorsed processes and protocols to reduce and prevent adverse events. Through participation in the Leapfrog Hospital Survey, hospitals are able to earn up to 100 – 120 points for each Safe Practice.</p> <ul style="list-style-type: none"> For complete description of measure scoring, see: https://www.leapfroggroup.org/sites/default/files/Files/2022HospitalSurveyScoringAlgorithm_20220712_v8.3%20(version%201).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/2022HospitalSurveyScoringAlgorithm_20220712_v8.3%20\(version%201\).pdf](https://www.leapfroggroup.org/sites/default/files/Files/2022HospitalSurveyScoringAlgorithm_20220712_v8.3%20(version%201).pdf)

For more information on measure specifications and calculations, see: https://www.leapfroggroup.org/sites/default/files/Files/2022%20Hospital%20Survey_20220608_v8.3%20%28version%20%29.pdf

Metrics: Readmissions

CHIA has adapted the Hospital-Wide All-Cause Unplanned 30-day Readmission Measure (NQF #1789) developed by CMS and the Yale Center for Outcomes Research and Evaluation to report on all-payer readmissions in the Commonwealth. The measure was applied to CHIA's Hospital Inpatient Discharge Database, which is collected from all non-federal acute care hospitals in Massachusetts. This year's report uses the 2022 CMS readmission measure methodology (version 11.0), which uses the V24 CMS-HCC crosswalk and updates the planned readmissions algorithm. Some discontinuity in trends may be attributable to the change in diagnostic coding from ICD-9-CM to ICD-10-CM.

A readmission is defined as an inpatient admission to an acute care facility in Massachusetts occurring within 30 days of an eligible index discharge. Analyses include eligible discharges for adults aged 18 and older with any payer, excluding discharges for obstetric or primary psychiatric care. All readmissions are counted except for those that are considered planned.

Readmission rates are calculated as follows: First, eligible hospital discharges are defined. Second, from among this set of eligible discharges, the number of eligible readmissions within 30 days is derived. Then, the latter is divided by the former and turned into a percentage to calculate the observed readmission rate.

Please refer to the Hospital-Wide Adult All-Payer Readmissions Report (published in February 2023) Technical Appendix for information on methodology for these calculations. The full report and accompanying materials, including the Technical Appendix are available at: <https://www.chiamass.gov/hospital-wide-adult-all-payer-readmissions-in-massachusetts-sfy-2011-2021/>

Hospital System Affiliations

Current as of publication date: March 15, 2023

HOSPITAL NAME	AFFILIATION
Baystate Franklin Medical Center	Baystate Health
Baystate Medical Center	Baystate Health
Baystate Noble Hospital	Baystate Health
Baystate Wing Hospital	Baystate Health
Berkshire Medical Center	Berkshire Health Systems
Fairview Hospital	Berkshire Health Systems
Addison Gilbert Hospital	Beth Israel Lahey Health
Anna Jaques Hospital	Beth Israel Lahey Health
Beth Israel Deaconess Hospital Plymouth	Beth Israel Lahey Health
Beth Israel Deaconess Hospital-Milton	Beth Israel Lahey Health
Beth Israel Deaconess Medical Center	Beth Israel Lahey Health
Beth Israel Hospital - Needham	Beth Israel Lahey Health
Northeast Hospital	Beth Israel Lahey Health
Lahey Hospital and Medical Center	Beth Israel Lahey Health
Mount Auburn Hospital	Beth Israel Lahey Health
New England Baptist Hospital	Beth Israel Lahey Health
Winchester Hospital	Beth Israel Lahey Health
Cape Cod Hospital	Cape Cod Healthcare
Falmouth Hospital	Cape Cod Healthcare
Athol Hospital	Heywood Healthcare
Heywood Hospital	Heywood Healthcare
Boston Children's Hospital	Independent
Boston Medical Center	Independent
CHA Cambridge Hospital	Independent
CHA Everett Hospital	Independent
Dana-Farber Cancer Institute	Independent
Emerson Hospital	Independent
Lawrence General Hospital	Independent
Milford Regional Medical Center	Independent
Signature Healthcare Brockton Hospital	Independent
South Shore Hospital	Independent
Sturdy Memorial Hospital	Independent
Holyoke Medical Center	Independent
Brigham And Women's Hospital	Mass General Brigham
Brigham and Women's Faulkner Hospital	Mass General Brigham
Cooley Dickinson Hospital	Mass General Brigham

HOSPITAL NAME	AFFILIATION
Martha's Vineyard Hospital	Mass General Brigham
Massachusetts Eye and Ear	Mass General Brigham
Massachusetts General Hospital	Mass General Brigham
Nantucket Cottage Hospital	Mass General Brigham
Newton-Wellesley Hospital	Mass General Brigham
North Shore Medical Center Salem Hospital	Mass General Brigham
Shriners Hospitals for Children - Boston	Shriners Hospital for Children
Shriners Hospitals for Children - Springfield	Shriners Hospital for Children
Charlton Memorial Hospital	Southcoast Health System
St. Luke's Hospital	Southcoast Health System
Tobey Hospital	Southcoast Health System
Carney Hospital	Steward Health Care
Holy Family Hospital - Haverhill	Steward Health Care
Holy Family Hospital - Methuen	Steward Health Care
Morton Hospital	Steward Health Care
Nashoba Valley Medical Center	Steward Health Care
Saint Anne's Hospital	Steward Health Care
St. Elizabeth's Medical Center	Steward Health Care
Steward Good Samaritan Medical Center, Inc.	Steward Health Care
Steward Norwood Hospital	Steward Health Care
MetroWest Medical Center	Tenet Healthcare
St Vincent Hospital	Tenet Healthcare
Mercy Medical Center of Springfield	Trinity Health
Lowell General Hospital - Main Campus	Tufts Medicine
Lowell General Hospital - Saints Campus	Tufts Medicine
Melrose-Wakefield Hospital	Tufts Medicine
Tufts Medical Center	Tufts Medicine
Harrington Memorial Hospital	UMass Memorial Health Care
HealthAlliance-Clinton Hospital Clinton Campus	UMass Memorial Health Care
HealthAlliance-Clinton Hospital Leominster Campus	UMass Memorial Health Care
UMass Memorial Medical Center - Memorial Campus	UMass Memorial Health Care
UMass Memorial Medical Center - University Campus	UMass Memorial Health Care
UMass Memorial Health Marlborough Hospital	UMass Memorial Health Care