

CENTER FOR HEALTH INFORMATION AND ANALYSIS

**MULTI-ACUTE
HOSPITAL HEALTH
SYSTEM**

TECHNICAL APPENDIX

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Technical Appendix and Overview

This is the technical appendix for the Multi-acute hospital systems profiles. These are defined as systems with more than one acute care facility. Whereas independent health systems for CHIA's reporting purpose are those with only one acute care hospital.

The Center for Health Information and Analysis (CHIA) relied on the following data sources to present financial information: the Annual Massachusetts Hospital Cost Report (MA Hospital Cost Report), the Hospital Discharge Database (HDD), the Hospital Standardized Financial Statement Database, and Audited Financial Statements.

Unless otherwise noted, metrics included in this report are based on financial data reported by acute and non-acute hospitals from Fiscal Year (FY) 2017. Discharge by Zip Code data from FY 2017 included in the acute hospital analyses were reported by acute hospitals in the Hospital Discharge Database. Descriptive acute and non-acute hospital information are from FY 2017 Audited Financial Statements.

Massachusetts Hospital Cost Report:

The Massachusetts Hospital Cost Report is submitted each year by acute and non-acute hospitals and it contains data on costs, revenues, and utilization statistics. Hospitals are required to complete the MA Hospital Cost Report based on their respective fiscal year end.

Hospital Discharge Database (HDD):

HDD data is submitted quarterly by acute hospitals and it contains patient-level data identifying charges, days, and diagnostic information for all acute inpatient discharges. CHIA used FY 2017 HDD data for the service metrics, which include discharges between October 1, 2016, and September 30, 2017, for all acute hospitals.

Hospital Standardized Financial Statements:

The Hospital Standardized Financial Statements are submitted quarterly and annually by all hospitals either as a separate filing or as part of MA Hospital Cost Report filing. They contain information on the hospital's assets, liabilities, revenues, expenses, and profits or losses. They reflect only the hospital's financial information; they do not reflect financial information for any larger health system with which a hospital may be affiliated.

Audited Financial Statements:

Audited Financial Statements are submitted annually by hospitals (or their parent organizations, if applicable). In addition to the financial figures that are found in the Hospital Standardized Financial Statements, the Audited Financial Statements contain an opinion from an independent auditor as well as notes from the hospital or system management that elaborate on the financial performance and standing of the hospital or system during the fiscal year. Audited Financial Statements were used as a source primarily for the multi-acute hospital system profiles.

Multi-Acute Hospital System Affiliation and Location

Massachusetts hospitals are generally affiliated with a larger health system. Health systems may include multiple hospitals and/or provider organizations while others may have only one hospital with associated providers or provider organizations. Multi-acute hospital system membership identifies those health systems with more than one acute hospital. This information was derived from Audited Financial Statements.

Acute Hospitals

Below is a list of Massachusetts multi-acute hospital systems and their acute hospital members as of the end of each system's fiscal year 2016:

Multi-Acute Hospital System	Acute Hospital Member
Baystate Health	Baystate Franklin Medical Center Baystate Medical Center Baystate Noble Hospital Baystate Wing Hospital
Berkshire Health Systems	Berkshire Medical Center Fairview Hospital
Cape Cod Healthcare	Cape Cod Hospital Falmouth Hospital
CareGroup	Beth Israel Deaconess Hospital – Milton Beth Israel Deaconess Hospital – Needham Beth Israel Deaconess Hospital – Plymouth Beth Israel Deaconess Medical Center Mount Auburn Hospital New England Baptist Hospital
Heywood Healthcare	Athol Hospital Heywood Hospital
Lahey Health System	Lahey Hospital & Medical Center Northeast Hospital Winchester Hospital
Partners HealthCare System	Brigham and Women's Hospital Brigham and Women's Faulkner Hospital Cooley Dickinson Hospital Martha's Vineyard Hospital Massachusetts General Hospital Nantucket Cottage Hospital Newton-Wellesley Hospital North Shore Medical Center
Shriners Hospitals for Children[^]	Shriners Hospitals for Children – Boston Shriners Hospitals for Children – Springfield
Steward Health Care System[^]	Morton Hospital Nashoba Valley Medical Center Steward Carney Hospital Steward Good Samaritan Medical Center Steward Holy Family Hospital Steward Norwood Hospital Steward Saint Anne's Hospital Steward St. Elizabeth's Medical Center
UMass Memorial Health Care	Clinton Hospital HealthAlliance Hospital Marlborough Hospital UMass Memorial Medical Center
Tenet Healthcare[^]	MetroWest Medical Center Saint Vincent Hospital
Wellforce	Hallmark Health Lowell General Hospital Tufts Medical Center

[^] Tenet Healthcare Corporation, Steward Health Care System and Shriners Hospitals for Children are multi-state health systems with a large presence outside of Massachusetts

Multi-Acute Hospital Systems: Metric Descriptions

This report consists of individual pages for each system detailing the organizations that comprise it. Organizations within each system profile are grouped into the following categories:

- **Acute Hospitals:** a hospital that is licensed by the Massachusetts Department of Public Health, which contains a majority of medical-surgical, pediatric, obstetric, and maternity beds.
- **Non-Acute Hospitals:** typically identified as psychiatric, rehabilitation, and chronic care facilities. CHIA has defined non-acute hospitals in this publication using the Massachusetts Department of Public Health (DPH) and Department of Mental Health (DMH) license criteria.
- **Physician Organizations:** A medical practice comprised of two or more physicians organized to provide patient care services.
- **Health Plans:** An organization that contracts or offers to provide, deliver, arrange for, pay for, or reimburses any of the costs of health care services.
- **Other Health Care Providers:** any organization within a system that is engaged in providing health care services and is not categorized as an acute hospital, a non-acute hospital, a physician organization, or a health plan.
- **Other Organizations:** all organizations that are not hospitals, physician organizations, health plans, or other health care providers. Operating revenue and net asset values were derived by adding up values for any organization in the financial statements not already categorized in the profile as a health care-related organization.

Unless otherwise noted, metrics and descriptive information included in these profiles are based on financial data from FY 2017.

All revenue and net asset information are sourced from each system's parent organization and affiliates' FY 2017 consolidated Audited Financial Statements.

Unless otherwise noted, each system's total **Operating Revenue** and **Net Assets** equal the sum of the components displayed in the individual system profiles, less any intercompany eliminations.

Consolidating Eliminations are intercompany transactions that are eliminated during the financial consolidation process. Eliminations were totaled from operating revenue and net asset information in the Audited Financial Statement from each system. The total of the operating revenue and net assets after accounting for eliminations may not sum to the overall system operating revenue and net asset values displayed on each profile due to rounding.

Data Verification:

Data verification reports including each system's reported data were sent to each system. Changes made as a result of the data verification process include revisions to the descriptions of some organizations and additional financial information details for certain organizations.

Operating revenue is revenue earned from services associated with patient care, including academic research. It excludes revenue earned from non-operating activities, such as gains associated with the sale of property or income from investments.

Net assets reflect the difference between total assets and total liabilities. It is the not-for-profit equivalent of Owner's Equity.

Total profit/loss (often presented in hospital financial statements as "Excess of revenues over expenses") and **total margin** are measures of the system's overall financial performance, the former

Multi-Acute Hospital Systems: Metric Descriptions

being in dollars and the latter a percentage. CHIA standardized the calculation of total margins to account for the varied presentation of financial statement reporting among health systems.

- **Total profit/loss** was derived from “Excess of revenues over expenses” or “Net profit/loss” figures reported in each system’s consolidated Audited Financial Statements.
- **System calculation:** Total Margin = Total Profit/Loss ÷ (Operating Revenue + Non-Operating Gains/Losses)

Employee statistics show the approximate number of employees in the system.

Research Revenue: As provided by the system.

Acute Hospital Discharges is the sum total of the reported discharges from the component acute hospitals in the system, sourced from the MA Hospital Cost Report.

Acute Hospital Discharges per Zip Code is the sum of patients from that zip code discharged from component acute hospitals of the system, sourced from the HDD. Data from zip codes with 25 or fewer system discharges are suppressed.

The System’s **Percentage of all Massachusetts Acute Hospitals Discharges** shows the proportion of total discharges, case mix adjusted discharges, and inpatient revenue for each system in relation to all acute hospitals in Massachusetts. This information was calculated using data from the Annual Massachusetts Hospital Cost Reports and the Hospital Discharge Database.

Percent of Discharges is the number of inpatient discharges.

- **Data Source:** MA Hospital Cost Report
- **System Calculation:** Discharge Percent = Total discharges across all acute hospitals in a system divided by total statewide acute hospitals’ discharges multiplied by 100

Percent of Inpatient Revenue reflects each system’s inpatient net patient service revenue (NPSR) as a percentage of total inpatient NPSR reported by Massachusetts acute hospitals in FY 2016.

- **Data Source:** MA Hospital Cost Report
- **System Calculation:** Inpatient NPSR Percent = Total inpatient NPSR across all acute hospitals in system divided by total statewide acute hospitals’ inpatient NPSR multiplied by 100

Percent of Case Mix Adjusted Discharges (CMADs) reflects each system’s CMADs as a percentage of total CMADs reported by Massachusetts acute hospitals in 2016.

- **Data Source:** Hospital Discharge Database and MA Hospital Cost Report
- **System Calculation:** The CMAD is computed by multiplying the Case Mix Index* by the Number of discharges
 - CMADs Percent = Total CMADs across all acute hospitals in a system divided by total statewide acute hospitals’ CMADs multiplied by 100

Financial information for **Other Organizations** includes operating revenue and net assets from organizations that did not appear to fit into the other categories (acute hospital, non-acute hospital, health plan, etc.). It includes parent-level entities as well as the organizations listed below within each system. Descriptions of these organizations were sourced directly from Audited Financial Statements.

Baystate Health, Inc.

- Baystate Administrative Services, Inc., a management support entity
- Baystate Total Home Care, Inc., a not-for-profit entity that holds, leases, and manages real estate on behalf of Baystate Medical Center
- Baystate Health Foundation, Inc., a charitable organization
- Baystate Health Insurance Company, Ltd., a captive insurance company
- Ingraham Corporation, a holding company for Baystate Health Ambulance

Berkshire Health Systems, Inc.

- BHS Management Services, Inc., a corporation that provides management services to Berkshire's affiliates
- Berkshire Indemnity Company SPC, LTD., a segregated portfolio within Berkshire Insurance Company SPC, LTD., a captive insurance entity
- Tri-State Medical Management Corporation, a corporation that manages a physician office location for the benefit of Fairview Hospital

Cape Cod Healthcare, Inc.

- Cape Health Insurance Company, a captive insurance company
- Cape Cod Hospital Medical Office Building, a for-profit provider of leased and subleased space to Cape Cod Hospital and related affiliations
- Cape Cod Healthcare Foundation, Inc., a not-for-profit corporation organized to provide development and fundraising support to Cape Cod Healthcare and affiliates
- Cape Cod Research Institute, a not-for-profit that conducts clinical research and related educational activities, primarily in the areas of interventional cardiology and heart disease.

CareGroup, Inc.

- Jordan Health Systems, Inc., a not-for-profit management corporation
- New England Baptist Clinical Integration Organization, a limited liability company
- CareGroup Paramenter Home and Hospice

Heywood Healthcare, Inc.

- Heywood Hospital Realty Corporation, a not-for-profit corporation that owns medical office buildings
- Heywood Healthcare Charitable Foundation, a not-for-profit corporation for all fundraising initiatives Quabbin Healthcare, a non-for-profit behavioral health and addiction recovery facility located in Petersham, Massachusetts.

Lahey Health System, Inc.

- Lahey Health Shared Services, Inc., a supporting corporation with the purpose of providing administrative support to the System and its affiliates
- Winchester Community Accountable Care Organization, Inc. (WCACO), an accountable care organization
- Lahey Clinical Performance Accountable Care Organization, LLC, a corporation organized to operate an accountable care organization and participate in the Federal Medicare Shared Savings Program
- Winchester Healthcare Enterprises, Inc., is an organization that owns and manages enterprises that complement and enhance the financial viability of the Winchester Healthcare system. Enterprise owns 50 percent of Winchester Highland Management LLC, which provides managed

care information to Winchester Hospital, Highland Healthcare Associates IPA, Inc., and other clients.

- Lahey Clinic Insurance Company, Ltd., a captive reinsurance company
- Lahey Clinical Performance Network, LLC, a corporation organized to contract with payers on behalf of participating providers and/or care units that are part of the System
- Lahey Clinic Foundation, Inc., a corporation organized to hold capital assets, investments, debt, and infrastructure costs
- Addison Gilbert Society, Inc., a charitable organization
- Winchester Healthcare Management, Inc., is the parent corporation of an integrated health care delivery system in Winchester, Massachusetts
- Winchester Hospital Foundation, Inc., a company organized for the purpose of fundraising and philanthropic activities
- Northeast Health System, Inc., a corporation that functioned as the holding company for Northeast Hospital Corp. and the Northeast affiliates until July 1, 2014
- Lahey Clinic Canadian Foundation, a Canadian foundation that performs fundraising activities directed at citizens and residents of Canada

Partners Healthcare

- Other MGH Affiliates and Eliminations
- Other BWHC Affiliates and Eliminations
- Other PCC Affiliates and Eliminations
- Other NWHCS Affiliates and Eliminations
- Other NSMC Affiliates and Eliminations

Shriners Hospitals for Children

- Includes all other national business

Steward Health Care System, LLC

Steward Health Care System did not submit audited financial statements for FY2017.

Tenet Healthcare Corporation

- Includes all other national business

UMass Memorial Health Care, Inc.

- UMass Memorial Realty, Inc., a real estate company
- UMass Memorial Health Ventures, Inc., a joint venture interest holder that includes UMass's interest in Fairlawn Rehabilitation Hospital
- HealthAlliance Realty, Inc., a company organized to manage and maintain real estate
- UMass Memorial Accountable Care Organization rewards ACO's that lower their growth in health care costs while meeting performance standards on quality.
- Central New England HealthAlliance, Inc., the parent organization of HealthAlliance Hospitals, Inc.

Wellforce Inc.

- New England Quality Care Alliance, Inc. (NEQCA) and Affiliate
- Tufts Medical Center Real Estate Company, Inc., a real estate company operated by Tufts Medical Center Obligated Group
- Cameron M. Neely Foundation for Cancer Care, Inc.
- Tufts Medical Center Indemnity Company Ltd., a captive insurance company
- Provider Network Alliance, a network with NEQCA of contracted hospitals, physicians, ancillary health providers, and other health care practitioners
- LGH Services and Affiliates, management service

- New England Long-Term Care, Inc. Hallmark Health Properties, a real estate management company
- Hallmark Health Indemnity Professional Services, a captive insurance company
- Hallmark Health Enterprises, Inc., other health services