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**MASSACHUSETTS
HOSPITAL
PROFILES**

INDUSTRY OVERVIEW

DATA THROUGH
FISCAL YEAR 2014

NOVEMBER 2015



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About this brief

This brief presents an overview of the Massachusetts hospital industry, using metrics from fiscal year (FY) 2014. This brief accompanies individual hospital profiles, a databook, and a chartbook. This is the third update in the series. Prior hospital profiles presented data from FY2012 and FY2013.

For detailed descriptions of the metrics mentioned in this brief, please see the technical appendix.

Overview of the Massachusetts Hospital Industry

In FY2014¹, there were a total of 94 hospitals in Massachusetts, including 67 acute hospitals and 27 non-acute hospitals. Of these hospitals, 64%, or 60 hospitals, are non-profit or public, and 68%, or 64 hospitals, are part of a multi-hospital system. There is one municipally owned hospital in the Commonwealth, Cambridge Health Alliance.

During FY2014, there were a number of key transactions in the industry:

- In January 2014, Jordan Hospital was acquired by Beth Israel Deaconess and became Beth Israel Deaconess-Plymouth;
- In March 2014, North Adams Regional Hospital closed, later converting to a satellite emergency facility of Berkshire Medical Center;
- In July 2014, Winchester Hospital joined the Lahey Health system;
- In August 2014, Merrimack Valley Hospital merged with Holy Family Hospital and became Holy Family Hospital at Merrimack Valley;
- In September 2014, Wing Memorial was sold by UMass Memorial Health Care to Baystate Health Systems

For this publication, CHIA assigned each acute hospital to a cohort of similar hospitals: academic medical centers (AMCs), teaching hospitals, community hospitals, and community-Disproportionate Share Hospitals (DSH).^{2,3} For non-acute hospitals, the cohorts are defined by services provided, and include: psychiatric, rehabilitation, and chronic care hospitals. Specialty acute and non-acute hospitals are not identified with a distinct cohort. While CHIA has included profiles for both acute and non-acute hospitals, the remainder of this brief will focus primarily on acute hospitals.

¹ Year ending September 30, 2014.

² A Disproportionate Share Hospital (DSH) is defined in M.G.L. c. 6D, Section 1 as a hospital with a minimum of 63% of patient charges attributed to Medicare, Medicaid, and other government payers, including Commonwealth Care and the Health Safety Net.

³ For definitions of each cohort and hospitals assigned to each cohort, see the technical appendix.

Hospital Utilization

Statewide inpatient discharges continued to decline for the third consecutive year. Between FY2010 and FY2014, inpatient discharges declined by 8%, and between FY2013 and FY2014, discharges declined by 2.6%. Community hospitals had an 11% decrease in discharges between FY2010 and FY2014, the largest decline among all cohorts. Total discharges at teaching hospitals remained flat between FY2010 and FY2014. The teaching hospital cohort is the only cohort that saw no declines in total discharges between FY2010 and FY2014.

Inpatient occupancy rates, which show what percent of a hospital's staffed beds were filled over the course of the year, have increased statewide, from a median of 66% in FY2013 to 68% in FY2014. AMCs had the highest median occupancy rate in FY2014, of 80%, and community hospitals had the lowest occupancy rate during the same period, of 61%.

While inpatient discharges have been declining, statewide outpatient visit trends have remained relatively unchanged between FY2010 and FY2014. There have been differences in trends among cohorts, however. Teaching hospitals saw the largest increase in outpatient visits, increasing by 6% between FY2010 and FY2014. Community-DSH hospitals saw the largest decrease, 3.6%, for the same time period.

Hospital Payer Mix and Relative Prices

There were no significant changes in hospital payer mix statistics between FY2013 and FY2014. Public payers, including Medicare, Medicaid, and other state and federal programs, accounted for 62% of acute hospital gross revenue in FY2014. Community hospitals had the lowest amount of public payer share among all the cohorts, of 54%. By definition, community-DSH hospitals are most dependent on public payers, which accounted for 69% of their gross revenue in FY2014.

Consistent with prior year findings, AMCs and teaching hospitals have the highest relative commercial payer prices. Based on calendar year 2014 data collected by CHIA, AMCs had the highest average composite relative price percentile, the 74th percentile. Community-DSH hospitals had the lowest average composite relative price percentile, the 44th percentile.

Quality of Care

The quality measures included in the individual acute hospital profiles were selected from the Commonwealth's Standard Quality Measure Set. Five measures of acute hospital quality are included: all-payer, all-cause unplanned 30-day hospital readmission; rate of early elective deliveries; and three measures of health care-associated infections: central line-associated bloodstream infection, catheter-associated urinary tract infections (CAUTI), and surgical site infection for colon surgery. These measures are hospital-specific quality indicators; the data are reported by hospitals to the Centers for Medicare and Medicaid Services and the Leapfrog Group.

Statewide, unplanned hospital readmissions improved slightly from 15.9% in 2011 to 15.0% in 2013. Across hospitals, rates ranged from 11.8% at the highest performing, non-specialty hospital, to 18.6% at the lowest performing hospital. In 2013, some Massachusetts hospitals under-performed on certain measures of health care-associated infections, notably CAUTI and hospital-onset *C. difficile*. Early elective deliveries are non-medically necessary cesarean or induced deliveries prior to 39 weeks gestation. Between 2011 and 2013, the range in the rates of early elective deliveries between Massachusetts' highest and lowest performing acute hospitals decreased substantially, from 38 percentage points in 2011-2012 to five percentage points in 2012-2013. However, in 2014-2015 the range of hospital performance broadened again to 13 percentage points.

Hospital Costs and Revenue

Between FY2010 and FY2014, the statewide average inpatient revenue per discharge increased by 7.6%.⁴ Among the hospital cohorts, community hospitals had the largest growth during this period, 14.0%, while teaching hospitals saw a decline of 1.6% between FY2010 and FY2014.

In contrast, the rate of adjusted inpatient cost growth was lower than the inpatient revenue growth for this period. The statewide average increase in the adjusted inpatient cost per discharge was 3.9% between FY2010 and FY2014, and 1.9% between FY2013 and FY2014.⁵ Community-DSH hospitals had the largest increase between FY2010 and FY2014, of 6.1%, while teaching hospitals saw a 2.5% decline over the same period. AMCs had average adjusted inpatient costs per discharge that were 13% higher than the statewide average in FY2014.

Total hospital outpatient revenue increased by an average of 9.2% between FY2010 and FY2014. AMCs had the largest increase over this period, of 10.3%, while community hospitals had the lowest rate of increase, 2.6%.

Hospital Financial Performance

Acute hospitals saw little change in their financial performance between FY2013 and FY2014. The statewide⁶ median total margin in FY2013 and FY2014 was 4.2%. Operating margins, which reflect loss or gains from patient care activities, improved slightly statewide, from 2.1% in FY2013 to 2.4% in FY2014.

Among the cohorts, teaching hospitals experienced the strongest financial performance in FY2014, with a median total margin of 8.2%, and a median operating margin of 5.6%. Teaching hospitals and AMCs accounted for 68% of the statewide surplus in FY2014. Community hospitals had the lowest margins among the cohorts, with a total margin of 2.9% and an operating margin of 1.3%. In FY2014, only seven non-specialty hospitals had total margins below 0%.

Multi-Acute Hospital System Financial Performance

Data from the most recent fiscal year available to CHIA shows that the nine multi-acute hospital systems profiled in this publication generated \$22.7 billion in operating revenue, and all but one generated a profit. Performance of these systems declined from the previous year but remained strong as they generated a 4.7% median total margin, down from 5.4%. While acute hospitals accounted for a sizeable portion of revenue within each system, each system contained a variety of other organizations. Some included non-acute hospitals, physician organizations, and health plans, among other types of entities. The specific types of organizations within each system are displayed on the individual system profiles included in this publication.

⁴ Discharges refer to casemix-adjusted discharges (CMADs). Using CMADs adjusts for higher revenue that is attributable to more complex cases, and enables a more standardized comparison among hospital cohorts.

⁵ Inpatient cost per discharge uses casemix-adjusted discharges. In addition, the cost figure was adjusted to exclude direct medical education and physician compensation expenses, which occur only at some hospitals. Statewide average figures do not include specialty hospitals.

⁶ Includes acute Kindred Hospitals and Shriners Hospitals for Children.

