

CENTER FOR HEALTH INFORMATION AND ANALYSIS

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**MASSACHUSETTS  
HOSPITAL  
PROFILES**

INDUSTRY OVERVIEW

DATA THROUGH  
FISCAL YEAR 2016

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JANUARY 2018





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## OVERVIEW

# Number of Massachusetts Hospitals by System Affiliation and Profit Status in FY 2016

In FY 2016 there were a total of 91 hospitals in Massachusetts, including 63 acute care hospitals and 28 non-acute hospitals. This reflects a number of key transactions in the industry: the merger of Baystate Mary Lane into Baystate Wing Hospital; the opening of High Point Hospital and Southcoast Behavioral Hospital, two non-acute hospitals; and the transition of Kindred Boston and Kindred North Shore from acute hospitals to non-acute hospitals. The majority of hospitals were part of a larger hospital system that owned more than one hospital in addition to other lines of business. Sixty-seven hospitals (74%) were affiliated with a multi-hospital system in FY 2016. Thirteen multi-hospital systems encompassed 48 acute care hospitals and five non-acute hospitals. An additional five multi-hospital systems operated a combined 12 non-acute hospitals.

Seventy-four percent of hospitals were part of multi-hospital systems and 36% of hospitals were for-profit hospitals.

	Acute Non-Profit or Public	Acute For-Profit	Non-Acute Non-Profit	Non-Acute For-Profit	TOTAL
Multi-Hospital System	34	12	4	17	67
Individual Hospitals	17	0	3	4	24
Total	51	12	7	21	91

## OVERVIEW

# FY 2016 Acute Hospital Cohorts at a Glance

The Academic Medical Center (AMC) cohort had the highest median percentage occupancy, average commercial relative price, total revenue, and the highest inpatient to outpatient revenue in FY 2016. The AMC cohort includes six hospitals, the smallest of the four cohorts. The community-High Public Payer (HPP) cohort had the largest number of total staffed beds, total discharges, public payer mix, and emergency department visits. The community-HPP cohort is the largest cohort, with 29 hospitals.

There are six specialty hospitals which are not displayed on this table as they are not considered a cohort.

	AMCs	Teaching	Community	Community-HPP
<b>Total Staffed Beds</b>	4,049	2,159	2,119	5,411
<b>Median Percent Occupancy</b>	82.0%	71.1%	58.0%	64.7%
<b>Total Discharges</b>	225,806	126,933	127,425	300,758
<b>Emergency Department Visits</b>	525,129	479,772	527,060	1,510,777
<b>Average Commercial Statewide Relative Price</b>	1.167	0.938	1.053	0.932
<b>Average Public Payer Mix</b>	62.3%	65.5%	55.4%	68.8%
<b>Total Revenue in FY 16 (in millions)</b>	<b>\$11,643</b>	<b>\$3,997</b>	<b>\$2,927</b>	<b>\$6,768</b>
<b>Inpatient:Outpatient Revenue in FY 16</b>	<b>49%:51%</b>	<b>37%:63%</b>	<b>33%:67%</b>	<b>34%:66%</b>

Data Source: Hospital Cost Reports and Relative Price data

## UTILIZATION

# Change in Discharges, by Hospital Type

Hospitals reported a total statewide decrease in inpatient discharges from the previous year, with 806,908 inpatient discharges reported in FY 2016, a 0.1% decrease.

The teaching and community-HPP cohorts, as well as specialty hospitals, saw a decrease in inpatient discharges between FY 2015 and FY 2016, and the AMC and community hospital cohorts saw an increase in the same time frame.

With the exception of the teaching cohort, all other hospital cohorts and specialty hospitals saw a decrease in inpatient discharges between FY 2012 and FY 2016.

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	Hospitals	FY 2012 Discharges	FY 2015 Discharges	FY 2016 Discharges	% of Statewide Discharges	% Change, FY 2012-2016	% Change, FY 2015-2016
<b>Academic Medical Center</b>	6	231,506	223,232	225,806	28%	-2.5%	1.2%
<b>Teaching Hospital</b>	7	125,325	127,182	126,933	16%	1.3%	-0.2%
<b>Community Hospital</b>	15	131,357	126,562	127,425	16%	-3.0%	0.7%
<b>Community-High Public Payer</b>	29	323,581	303,888	300,758	37%	-7.1%	-1.0%
<b>Specialty Hospital</b>	6	26,701	26,593	25,986	3%	-2.7%	-2.3%
<b>Total Statewide</b>	<b>63</b>	<b>838,470</b>	<b>807,457</b>	<b>806,908</b>	<b>100%</b>	<b>-3.8%</b>	<b>-0.1%</b>

Data Source: Hospital Cost Reports

## UTILIZATION

The statewide change in outpatient visits increased by 1.6% between FY 2012 and FY 2016. All cohorts, except for the teaching cohort, saw an increase in outpatient visits between FY 2012 and FY 2016. The teaching cohort saw a 3.8% decrease in outpatient visits.

## Median Change in Outpatient Visits, by Hospital Type

The statewide outpatient visits increased by 1.6% between FY 2012 and FY 2016.

	FY 2012-FY 2013	FY 2012-FY 2014	FY 2012-FY 2015	FY 2012-FY 2016
<b>Academic Medical Center</b>	-1.8%	-1.0%	-3.4%	0.6%
<b>Teaching Hospital</b>	-1.3%	-3.8%	0.3%	-3.8%
<b>Community Hospital</b>	1.0%	-2.2%	1.2%	4.3%
<b>Community-High Public Payer</b>	-2.0%	-2.1%	-0.9%	1.6%
<b>Specialty Hospital</b>	0.9%	1.0%	3.3%	7.2%
<b>Total Statewide</b>	-1.2%	-2.1%	0.3%	1.6%

Data Source: Hospital Cost Reports



## UTILIZATION

Diagnosis Related Groups (DRGs) are used to classify the types of inpatient cases a hospital treats. Neonate births remained the most common reasons for inpatient admissions in FY 2016 and, combined with vaginal and cesarean deliveries DRGs, accounted for 17% of inpatient discharges statewide.

Other most frequent DRGs remained largely consistent with prior fiscal years.

## FY 2016 Top Discharges Statewide, by Diagnostic Group

Normal neonate birth remains the most common reason for inpatient admissions in FY 2016.

Rank	DRG	Description	Discharges	% Total Discharges
1	640	Normal neonate birth	61,758	8%
2	560	Vaginal delivery	46,596	6%
3	720	Septicemia & disseminated infections	33,831	4%
4	194	Heart failure	23,959	3%
5	540	Cesarean delivery	21,759	3%
6	302	Knee joint replacement	17,998	2%
7	139	Other pneumonia	17,024	2%
8	140	Chronic obstructive pulmonary disease	14,575	2%
9	301	Hip joint replacement	14,043	2%
10	201	Cardiac arrhythmia & conduction disorders	12,809	2%
		All Other	542,556	67%
		<b>Total Discharges</b>	<b>806,908</b>	<b>100%</b>

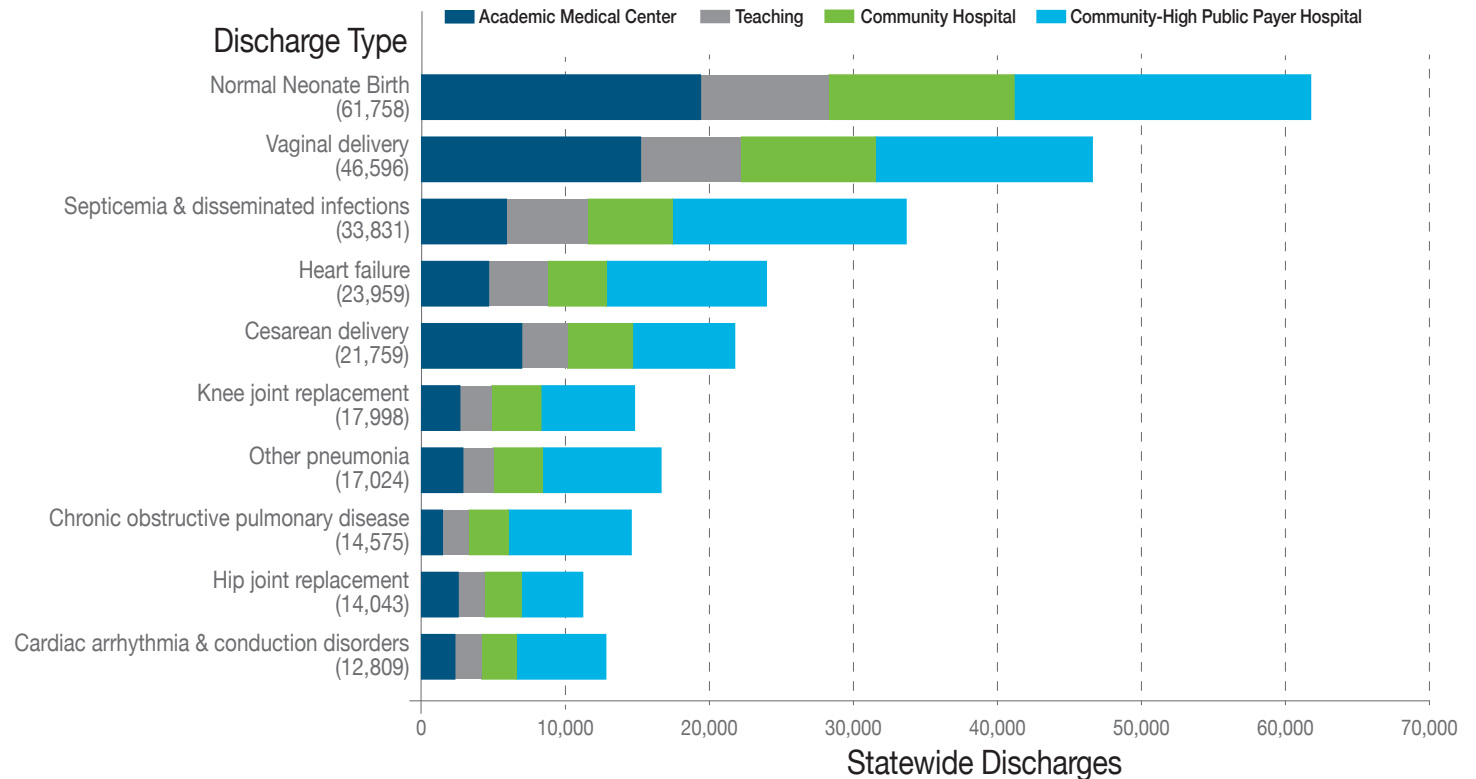
Data Source: Hospital Discharge Database

# UTILIZATION

## FY 2016 Top Discharges Statewide, by Cohort

The community-HPP cohort had the largest number of all the top ten discharge types, except for vaginal deliveries. AMCs had the largest share of vaginal deliveries, which is the second largest discharge group.

Community-HPP hospitals have the largest share of all but one of the top ten discharges types.



Data Source: Hospital Discharge Database

Note: Specialty hospitals are included in the totals but are not displayed as a cohort.

# UTILIZATION

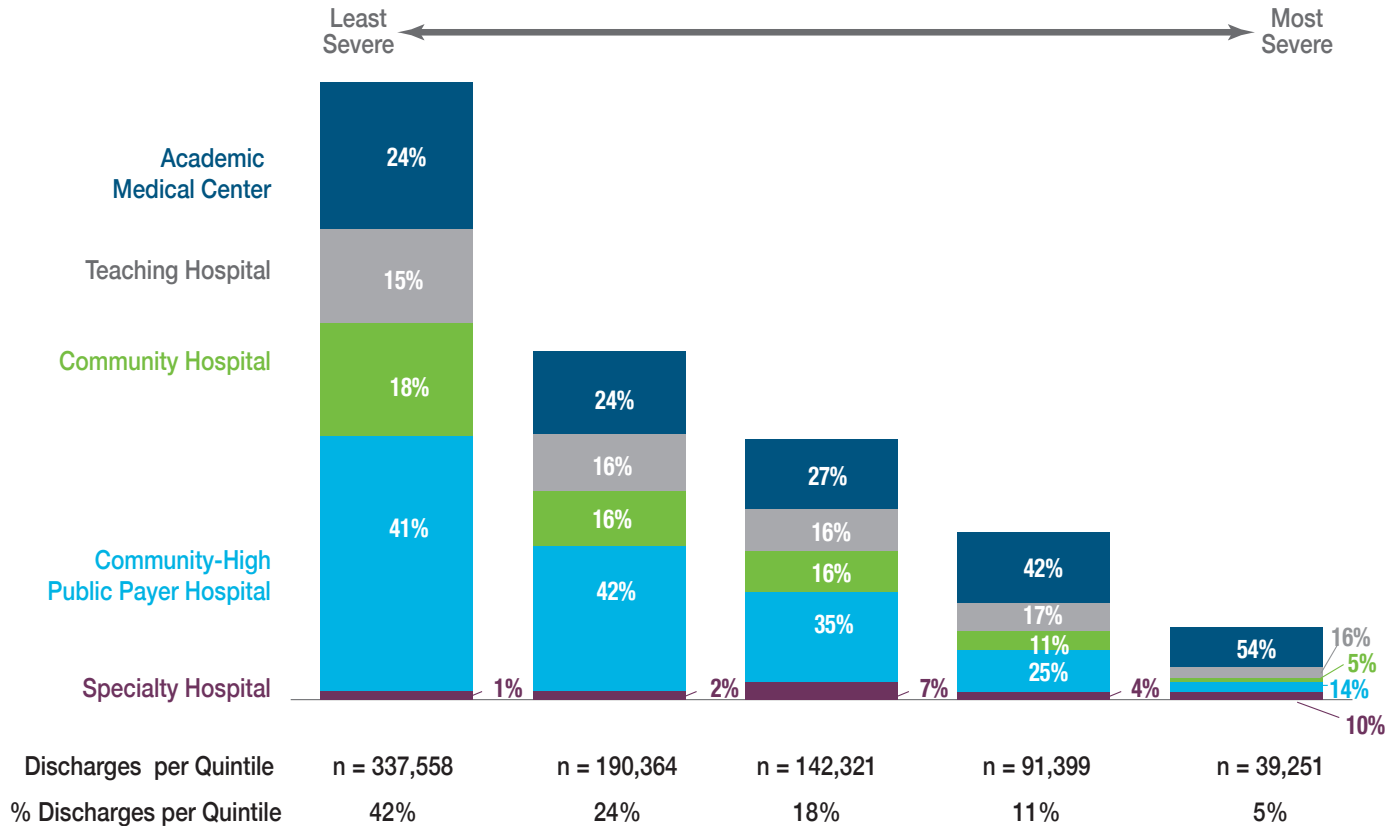
## FY 2016 Statewide Severity Distribution of Inpatient Cases, by Hospital Type

Inpatient hospitalizations are frequently categorized into Diagnosis Related Groups (DRGs) which quantify the predicted resources required to provide care to patients with different medical conditions. This presentation examines the distribution of cases across the range of DRGs by severity grouping (quintiles) and by hospital type.

AMCs and teaching hospitals combined treated approximately 40% of the less severe cases in 2016, while nearly 60% of this level of care was provided in community hospital settings (community and HPP hospitals).

Conversely, AMCs and teaching hospitals provided care to 70% of the most severe cases while approximately 20% of these cases received care in community hospital settings. Specialty hospitals provided care to 10% of the most severe cases.

The least severe quintile contained the highest number of statewide inpatient discharges, at 42%.



Data Source: Hospital Discharge Database

## Median Occupancy Rates, by Cohort

Occupancy rates, which show what percent of a hospital's staffed beds were filled over the course of the year, have decreased statewide from a median 69% in FY 2015 to 67% in FY 2016. AMCs continued to have the highest median occupancy rate at 82% in FY 2016. Community hospitals had the lowest occupancy rate at 58%.

Median occupancy rates remained the same for AMCs and teaching hospitals between FY 2015 and FY 2016, while median occupancy rates decreased for community hospitals and community-HPP hospitals.

	FY 2015 Occupancy Rate	FY 2016 Occupancy Rate
<b>Academic Medical Center</b>	82%	82%
<b>Teaching Hospital</b>	71%	71%
<b>Community Hospital</b>	64%	58%
<b>Community-High Public Payer</b>	66%	65%
<b>Statewide Median*</b>	69%	67%

**Data Source:** Hospital Cost Reports

\* Statewide discharges also includes those at specialty hospitals.

# PAYER MIX

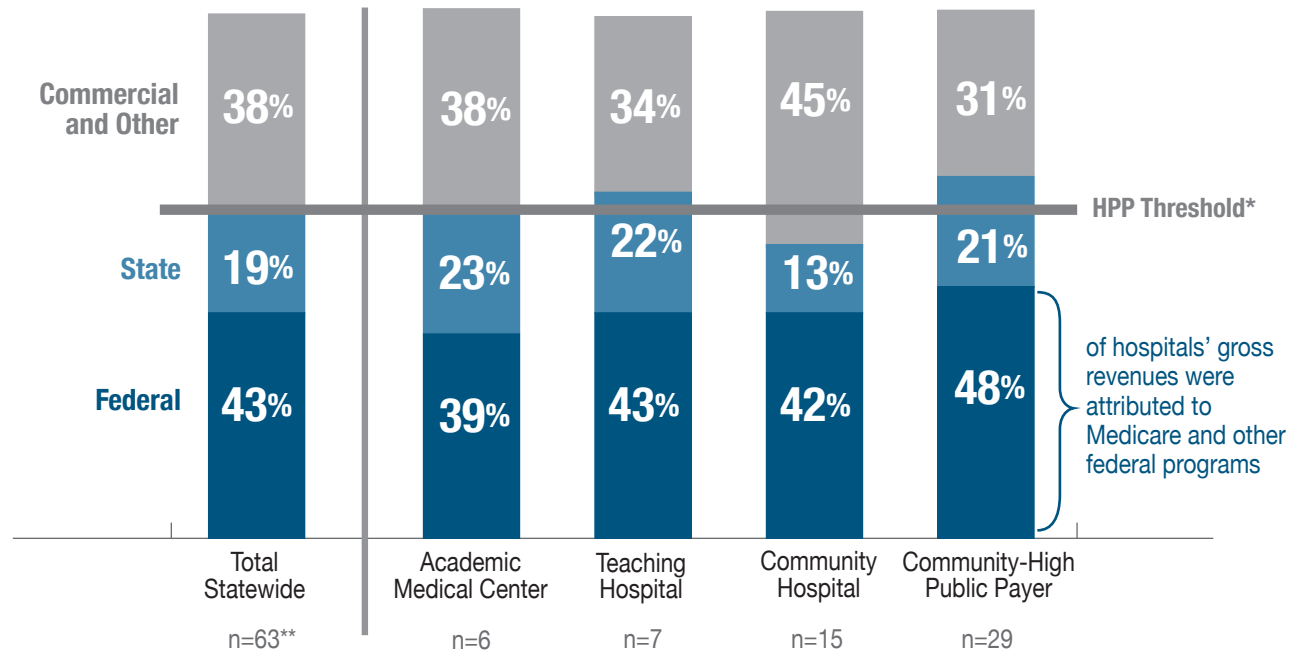
## FY 2016 Payer Mix

In FY 2016, 62% of acute hospital gross revenue statewide was attributed to public payers, including Medicare, Medicaid, and other programs.

Community hospitals had the lowest proportion of public payer revenue, at 55%.

By definition, community-HPP hospitals are more dependent on public payers, which accounted for 69% of their gross revenue in FY 2016.

Other than community-HPP hospitals, teaching hospitals had the second highest share of public payer mix.



Data Source: Hospital Cost Reports

\* Hospitals have High Public Payer (HPP) status if they have 63% or more of gross revenues (GPSR) attributable to Medicare, Medicaid, other government, and the Health Safety Net.

\*\* Statewide Total includes specialty hospitals.

# RELATIVE PRICE

## CY 2015 Statewide Median Commercial Relative Price

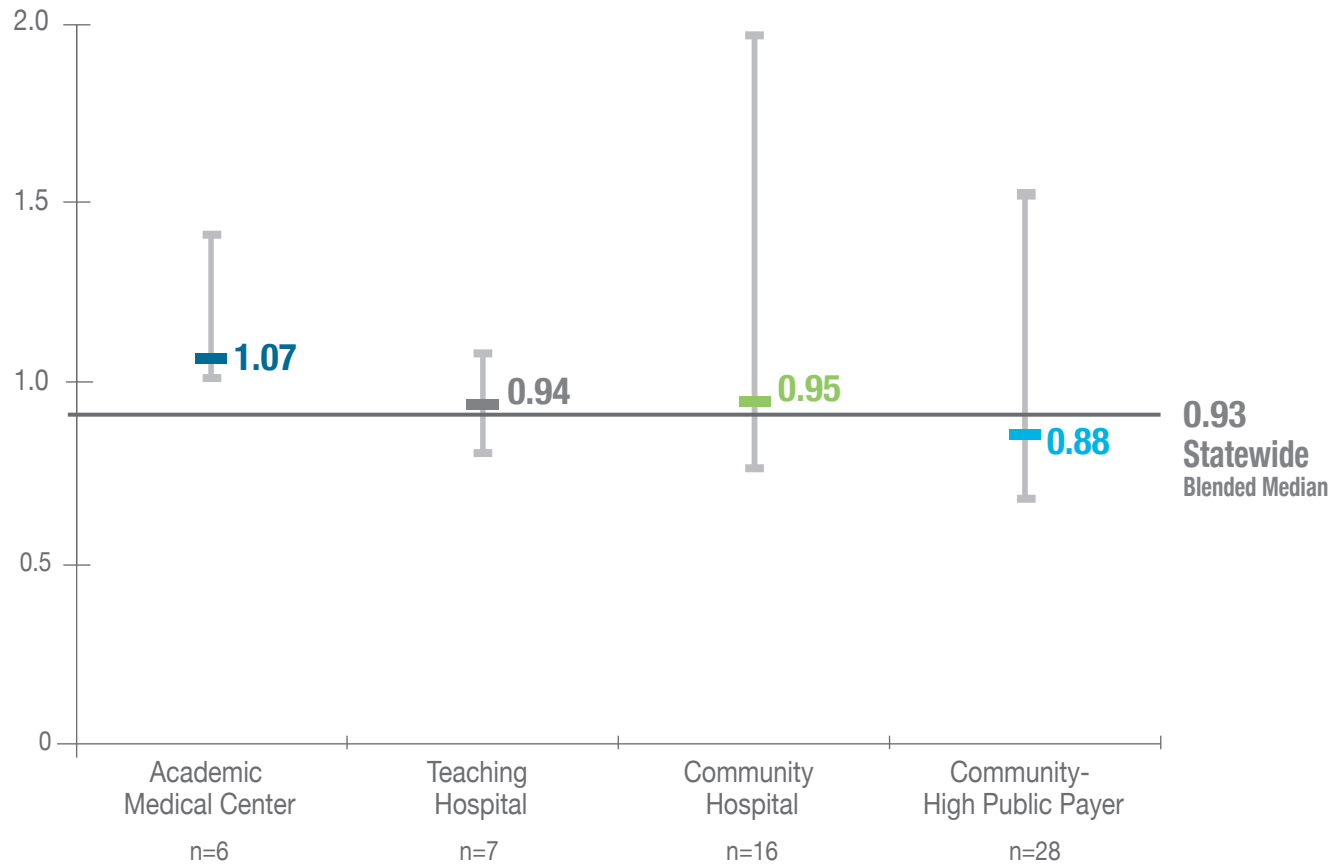
Statewide commercial relative prices varied across hospital cohorts.

Notably, AMCs had the highest median statewide commercial relative price and all AMCs had statewide relative prices that exceeded the statewide median.

Community hospitals had the highest variation of statewide commercial relative prices within a cohort though much of the variation was driven by high relative prices at a small number of geographically isolated hospitals.

Data presented here is for calendar year (CY) 2015 and only for the commercial insurance market.

AMCs were paid the highest median prices relative to hospitals in other cohorts.

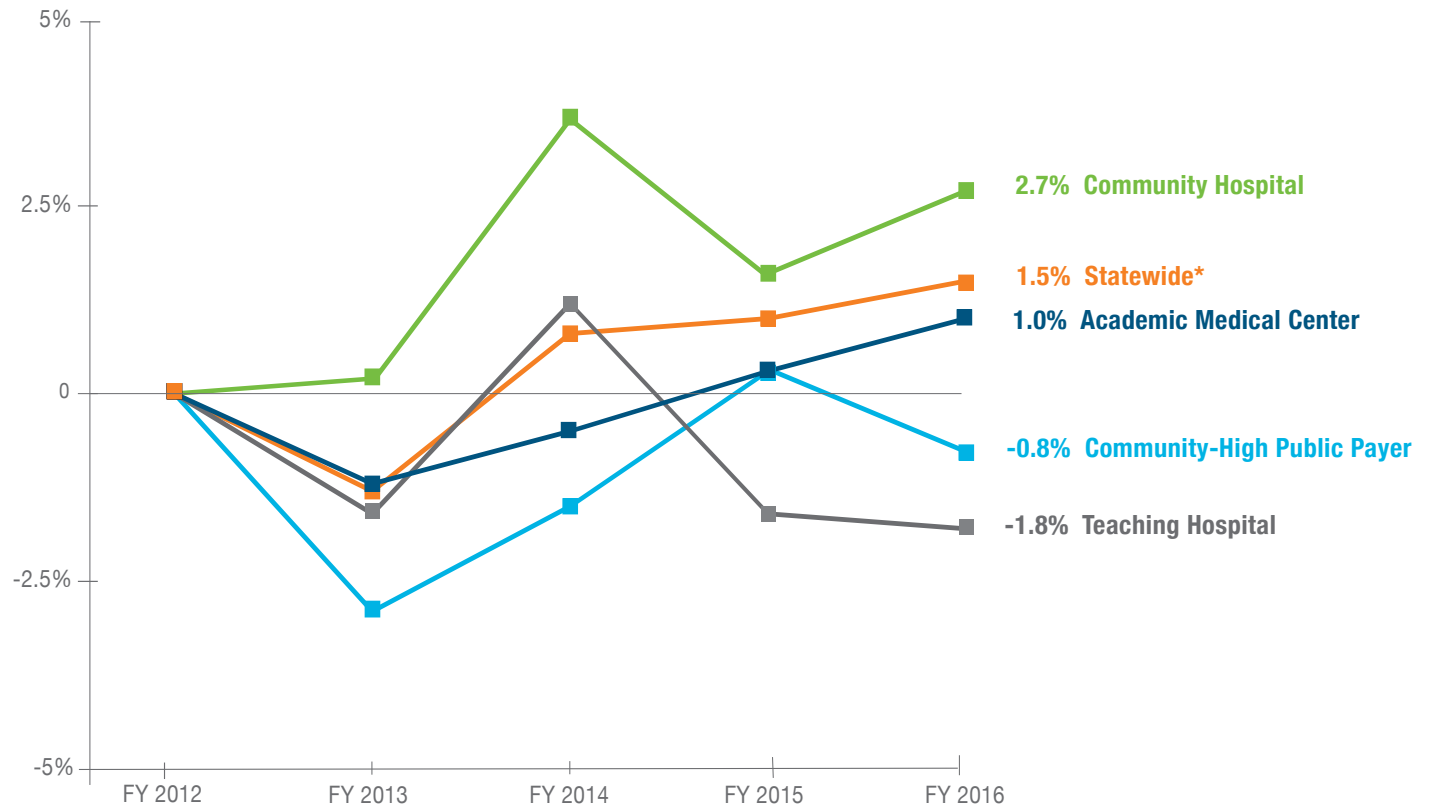


# REVENUE

## Growth in Inpatient Revenue per CMAD, FY 2012 - FY 2016

Inpatient Revenue per Case Mix Adjusted Discharge (CMAD) varied by cohort between FY 2012 and FY 2016. The statewide median increased by 1.5%. The community and AMC cohort increased by 2.7% and 1.0%, respectively. The community-HPP and teaching cohorts both decreased, by 0.8% and 1.8%, respectively.

The community hospital cohort experienced the greatest growth between FY 2012 and FY 2016.



Data Source: Hospital Cost Reports and Hospital Discharge Database

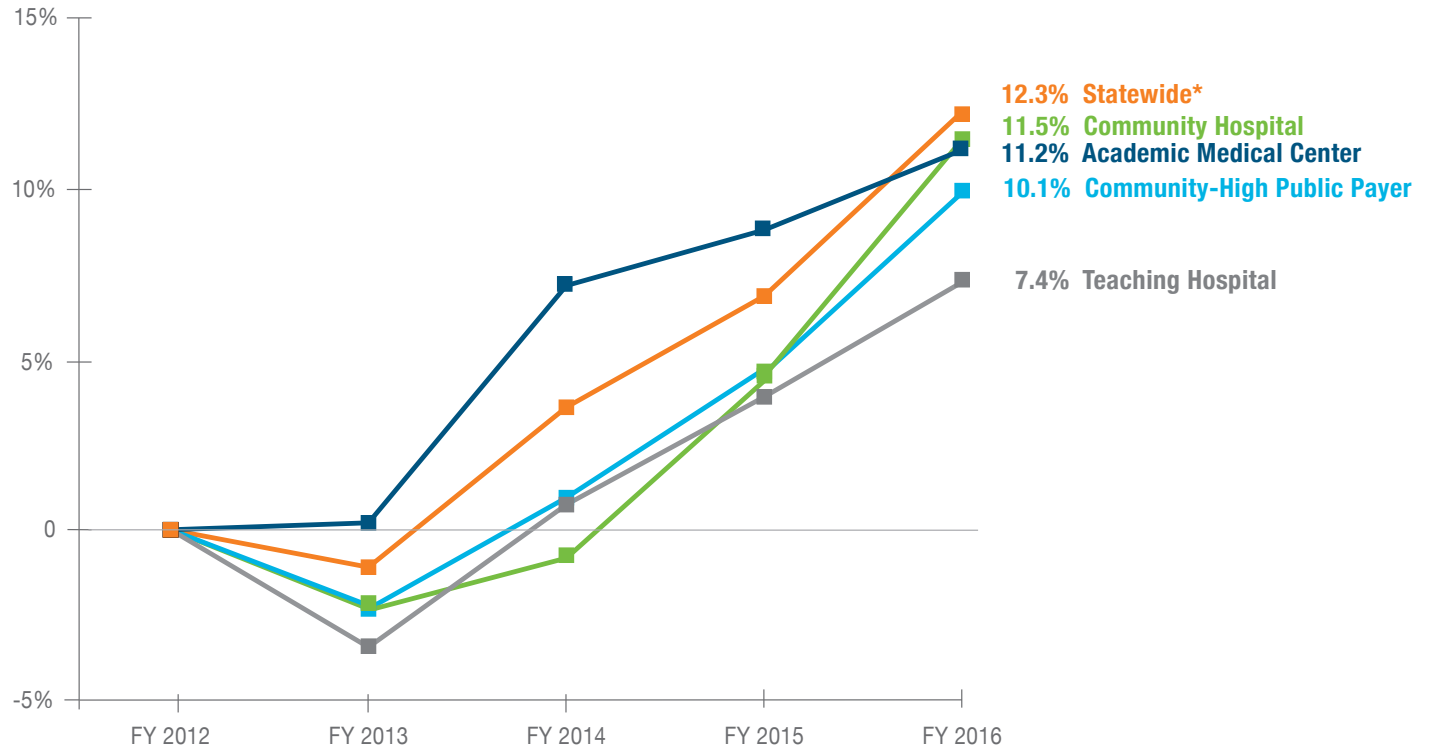
\* Statewide data includes specialty hospitals.

# REVENUE

## Growth in Outpatient Revenue, FY 2012 - FY 2016

The statewide outpatient revenue grew by 12.3% between FY 2012 and FY 2016. All cohorts experienced a growth in the same period of time. The community cohort saw the largest growth at 11.5%. The teaching cohort saw the smallest amount of growth at 7.4%.

The community hospital cohort experienced the greatest growth between FY 2012 and FY 2016.



Data Source: Hospital Cost Reports

\* Statewide data includes specialty hospitals.

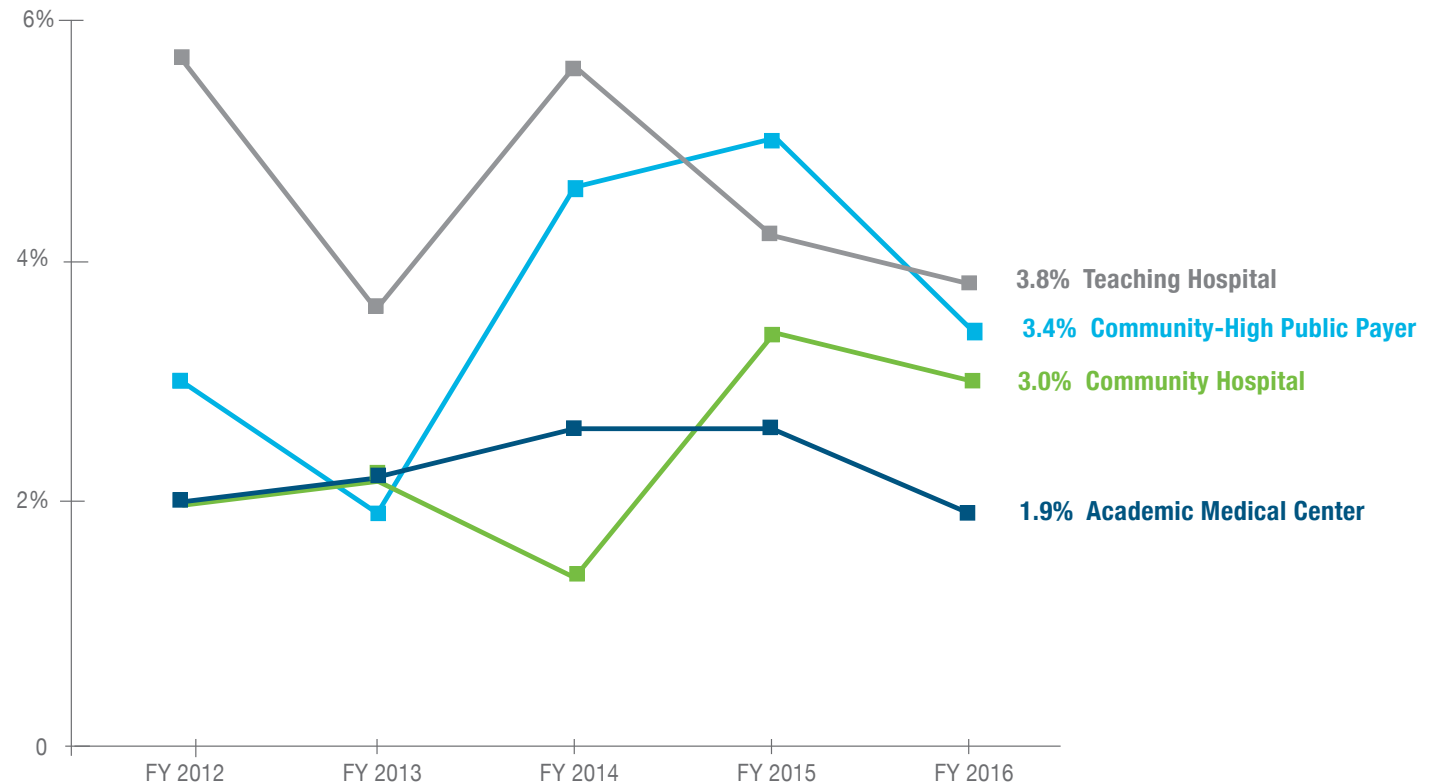


# FINANCIAL PERFORMANCE

## FY 2016 Median Operating Margin, by Cohort

In FY 2016, the teaching cohort had the highest median operating margin at 3.8%. Over the past five fiscal years between FY 2012 and FY 2016, the AMC and teaching cohorts have seen decreases in the median operating margin, while the community and community-HPP cohorts have seen increases in operating margins.

The teaching hospital cohort had the highest operating margin in FY 2016 at 3.8%.



Data Source: Hospital Standardized Financial Statements

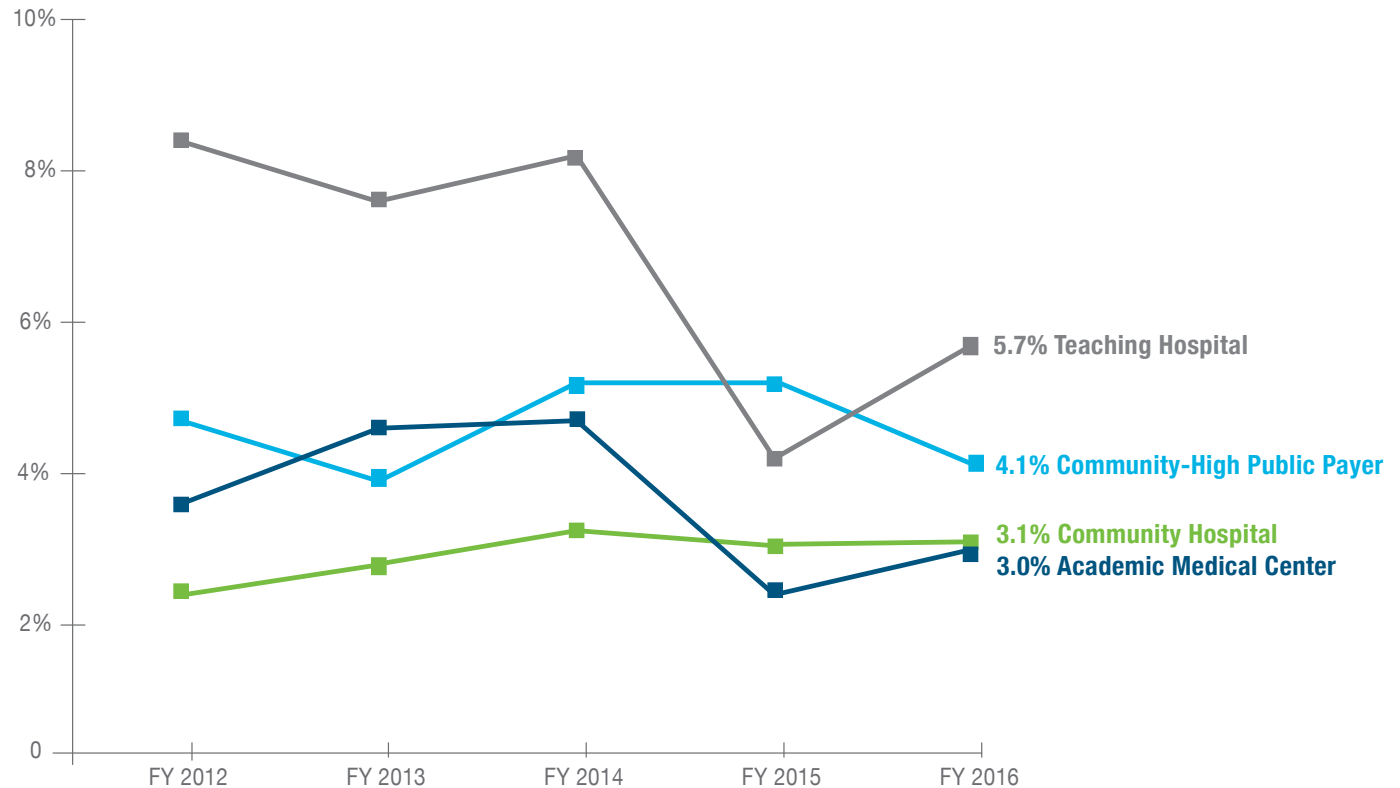
# FINANCIAL PERFORMANCE

## FY 2016 Median Total Margin, by Cohort

The teaching cohort had the highest median total margin in FY 2016 at 5.7%. The teaching cohort experienced the greatest increase in median total margin between FY 2015 and FY 2016.

Over the past five fiscal years, the community hospital cohort experienced a slight increase in median total margin, while the AMC, teaching, and community-HPP cohorts experienced decreases in total margin.

The teaching hospital cohort had the highest median total margin in FY 2016 at 5.7%.



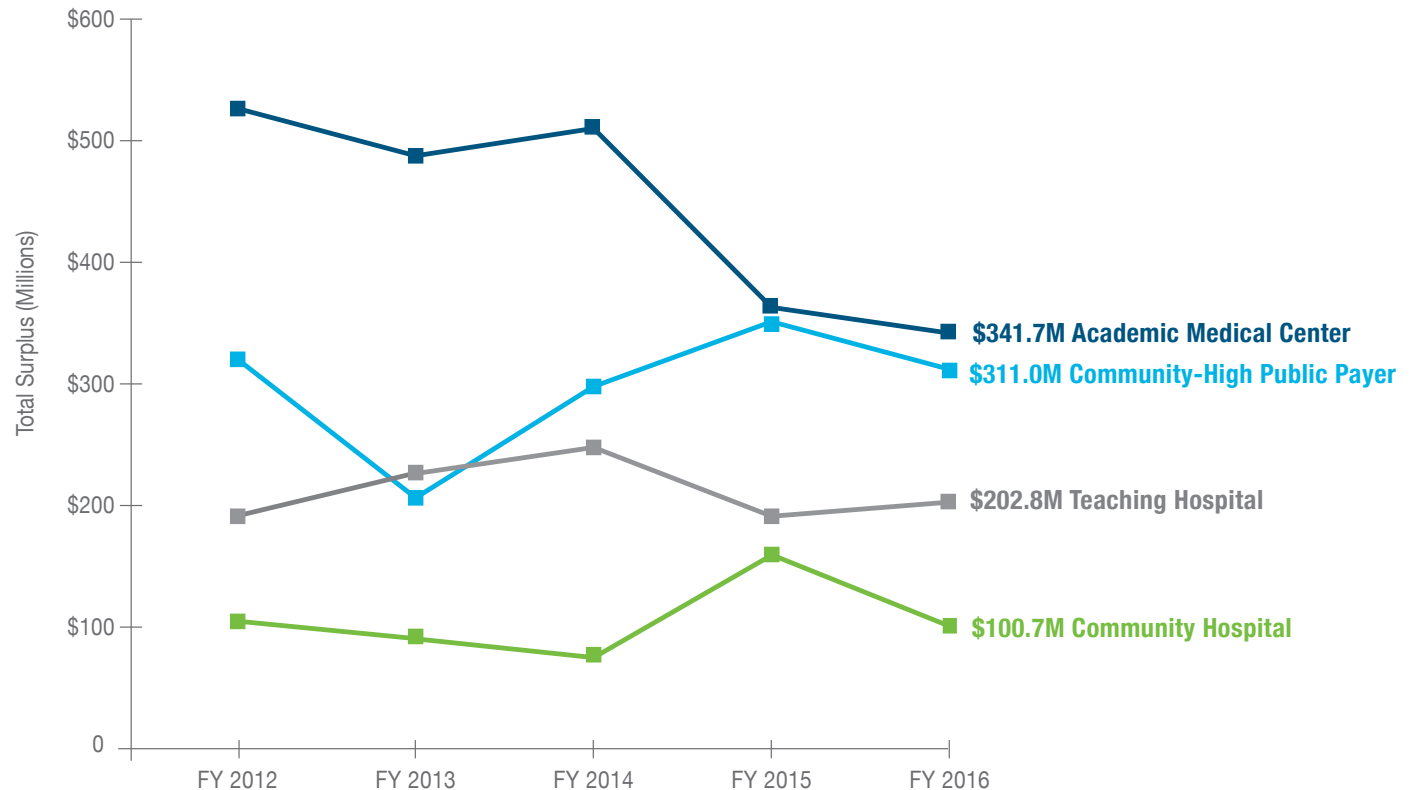
Data Source: Hospital Standardized Financial Statements

# FINANCIAL PERFORMANCE

## FY 2016 Surplus, by Cohort

In FY 2016, the six AMCs had the largest surplus, reporting a combined \$341.7 million dollars in their excess of revenue over expenses. However, this represents a 35% decrease from FY 2012. Between FY 2012 and FY 2016, the teaching cohort experienced an increase in combined surpluses. However, the AMC, community, and the community-HPP cohorts all experienced decreases in combined surpluses.

AMCs collectively had the largest surplus in absolute dollars every year from FY 2012 to FY 2016.



Data Source: Hospital Standardized Financial Statements





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