BVR
What It's Worth

Hospital Valuations
Insights and Perspectives

VMG HEALTH
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Hospital Transaction Trends

Shifting reimbursement trends driving transaction activity

- Value-Based Purchasing
- Continued shift of volume towards outpatient services
- Bundled Payments

Private Equity transacting a larger portion of healthcare deals

- Abundance of PE dollars on the sidelines
- Private Equity investment in healthcare will continue as the economy expands

Transaction volume expected to continue increasing in the near future

- Larger number of healthcare megadeals
- Reimbursement driving consolidation while lack of alternatives drive private equity

Source: Bain 2017 Global Healthcare PE and Corporate M&A Report

Hospital Transaction Overview

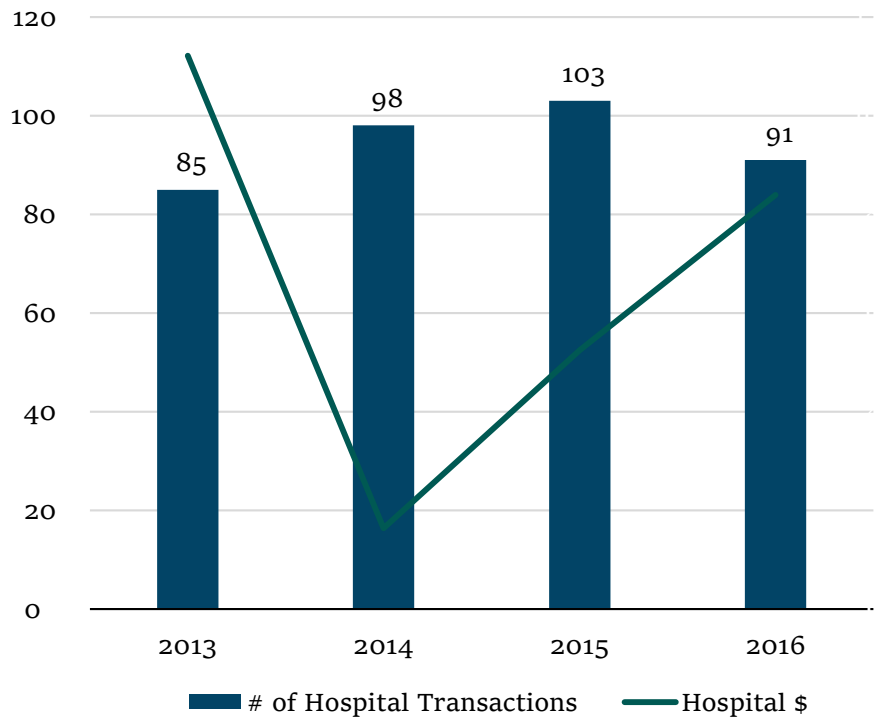
Transaction Volume

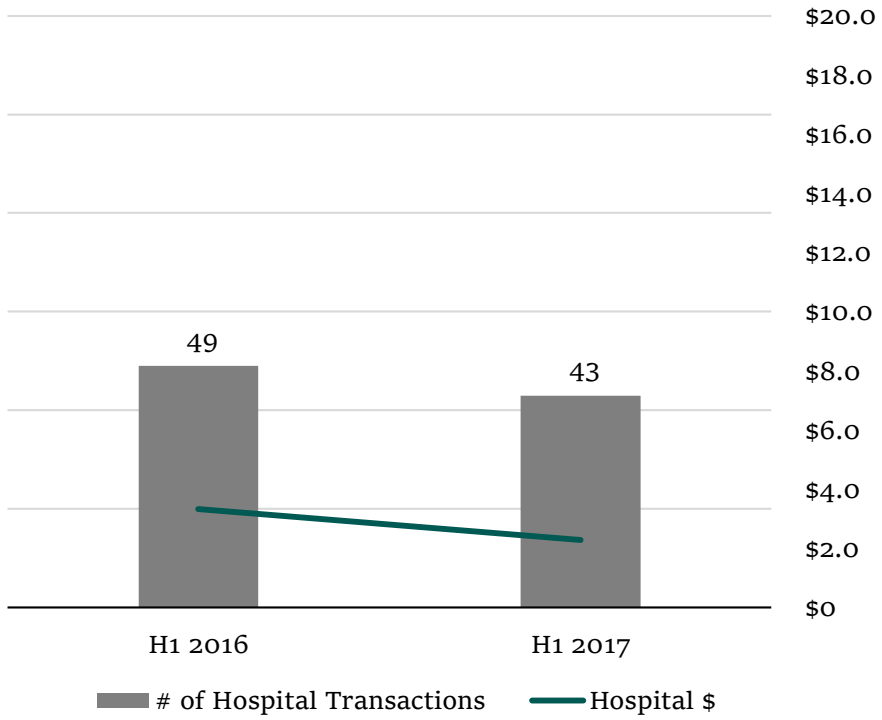
- Compared to 49 deals from January to June 2016 and 91 for FY 2016, transaction volume decreased slightly to 43 deals in from January to June 2017

Commitment Dollars

- Compared to $3.3 billion in transactions from January to June 2016 and $14 billion for FY 2016, transaction value decreased slightly to $2.3 billion from January to June 2017

Deal Volume and Commitments ($bn)





Source: Irving Levin Associates, The Healthcare M&A Report; The Healthcare M&A Information Source

Major Hospital Transactions

5 Largest Transactions in the Twelve Months Ended June 30, 2017

Acquirer	Target	Quarter	Price
Fresenius Hellos	Quironsalud	Q3:16	$6,479,000,000
Medical Properties Trust, Inc.	10 acute care hospitals and 1 behavioral healthcare facility	Q2:17	$1,400,000,000
Medical Properties Trust, Inc.	9 acute care hospitals	Q3:16	$1,250,000,000
University Hospital Authority and Trust	2 Oklahoma hospitals	Q4:16	$750,000,000
HCA Holdings, Inc.	3 Houston hospitals from Tenet	Q2:17	$725,000,000

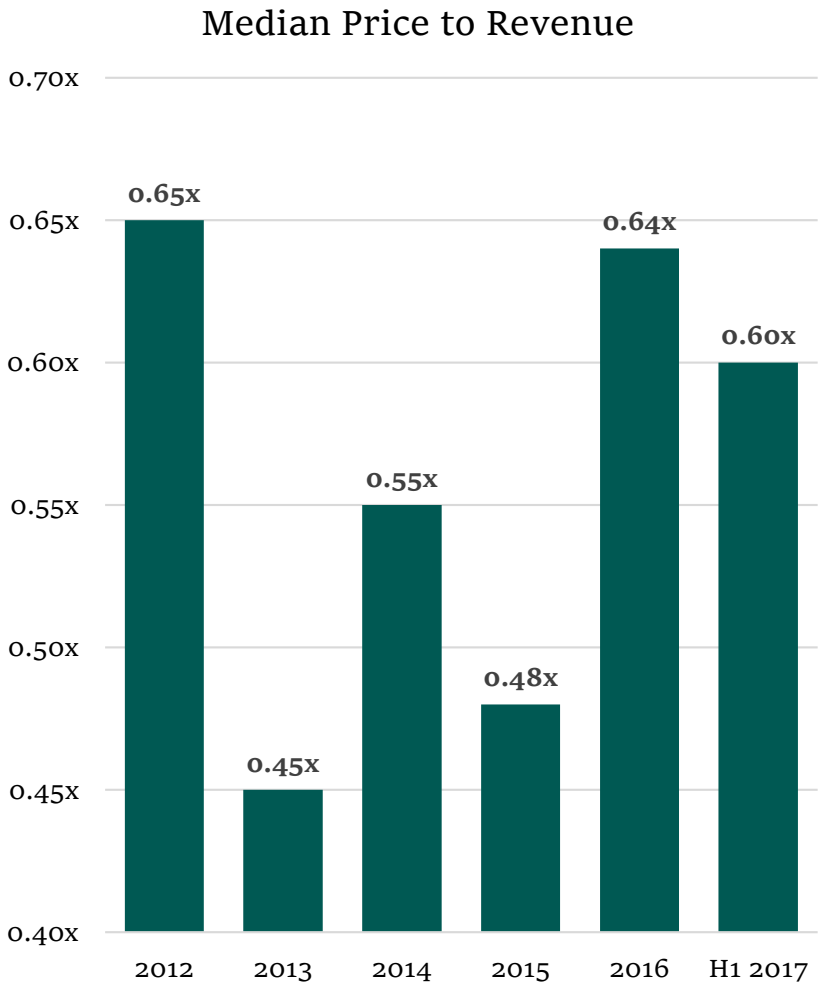
Source: Irving Levin Associates, The Healthcare M&A Report; The Healthcare Information Source

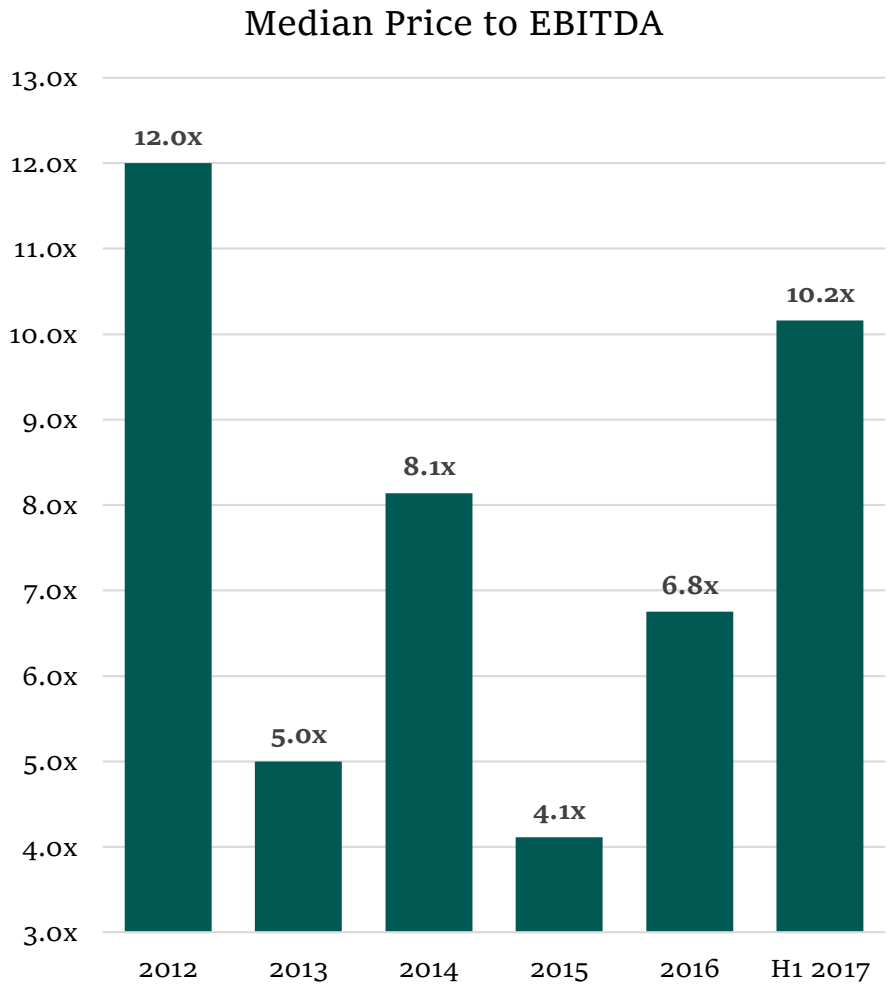
10 Largest Announced Transactions in the Last 5 Years

Acquirer	Target	Quarter	Price
Community Health Systems	Health Management Associates, Inc.	Q3:13	$7,600,000,000
Fresenius Hellos	Quironsalud	Q3:16	$6,479,000,000
Tenet Healthcare Corporation	Vanguard Health Systems, Inc.	Q2:13	$4,300,000,000
Fresenius Helios	43 German hospitals	Q3:13	$4,175,200,000
Mediclinic International Ltd.	Al Noor Hospitals Group plc	Q4:15	$2,300,000,000
Ventas, Inc.	Ardent Health Services	Q2:15	$1,750,000,000
Medical Properties Trust, Inc.	10 acute care hospitals and 1 behavioral healthcare facility	Q2:17	$1,400,000,000
Medical Properties Trust, Inc.	9 acute care hospitals	Q3:16	$1,250,000,000
Catholic Health Initiatives	St. Luke's Episcopal Health System	Q2:13	$1,000,000,000
Medical Properties Trust, Inc.	Capella Healthcare, Inc.	Q3:15	$900,000,000

Source: Irving Levin Associates, The Healthcare M&A Report; The Healthcare Information Source

Hospital Transaction Multiples

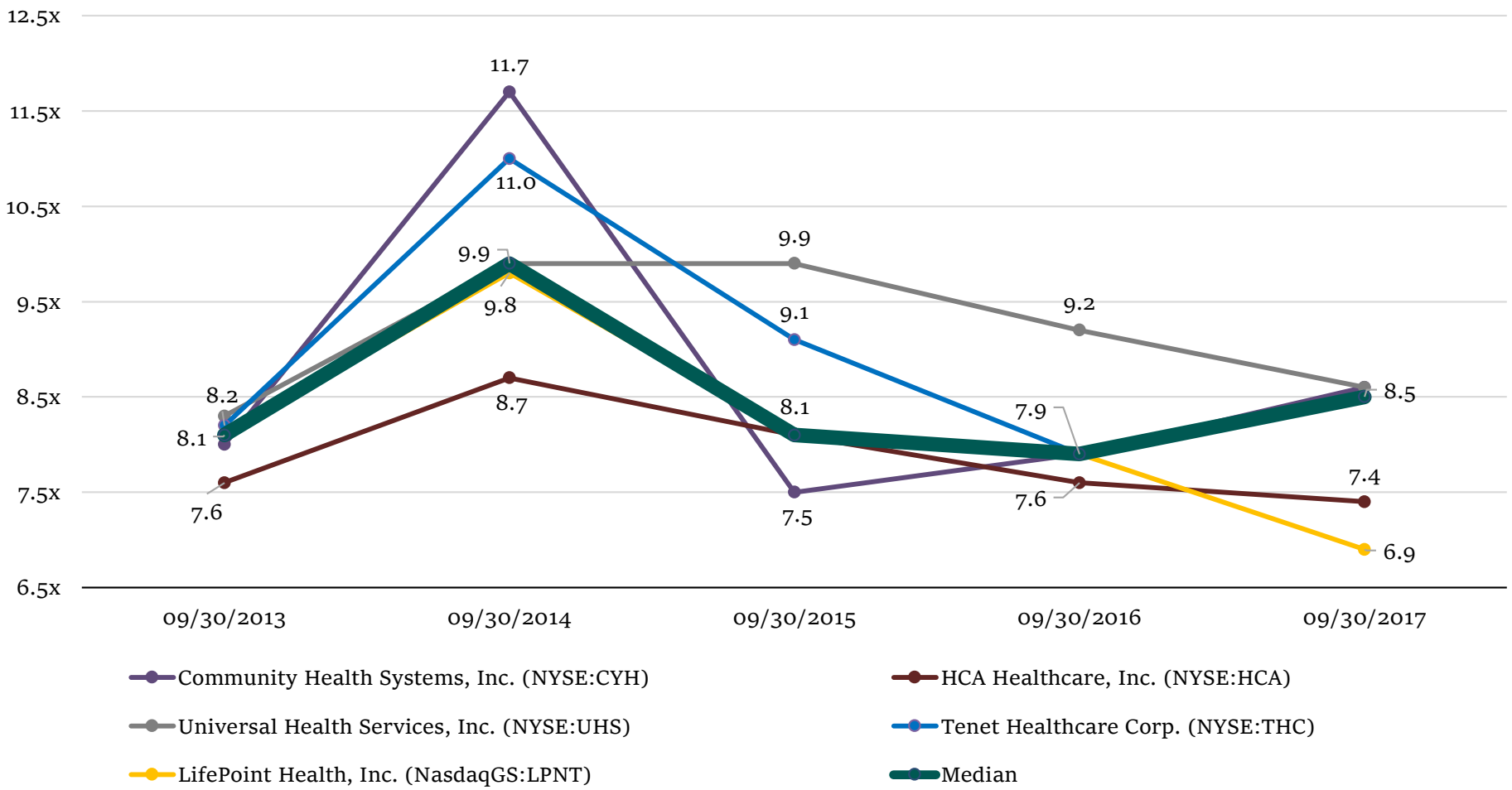




Source: Irving Levin Associates, The Healthcare M&A Report; The Healthcare Information Source

Publicly Traded Hospital Multiples

Total Enterprise Value to TTM EBITDA

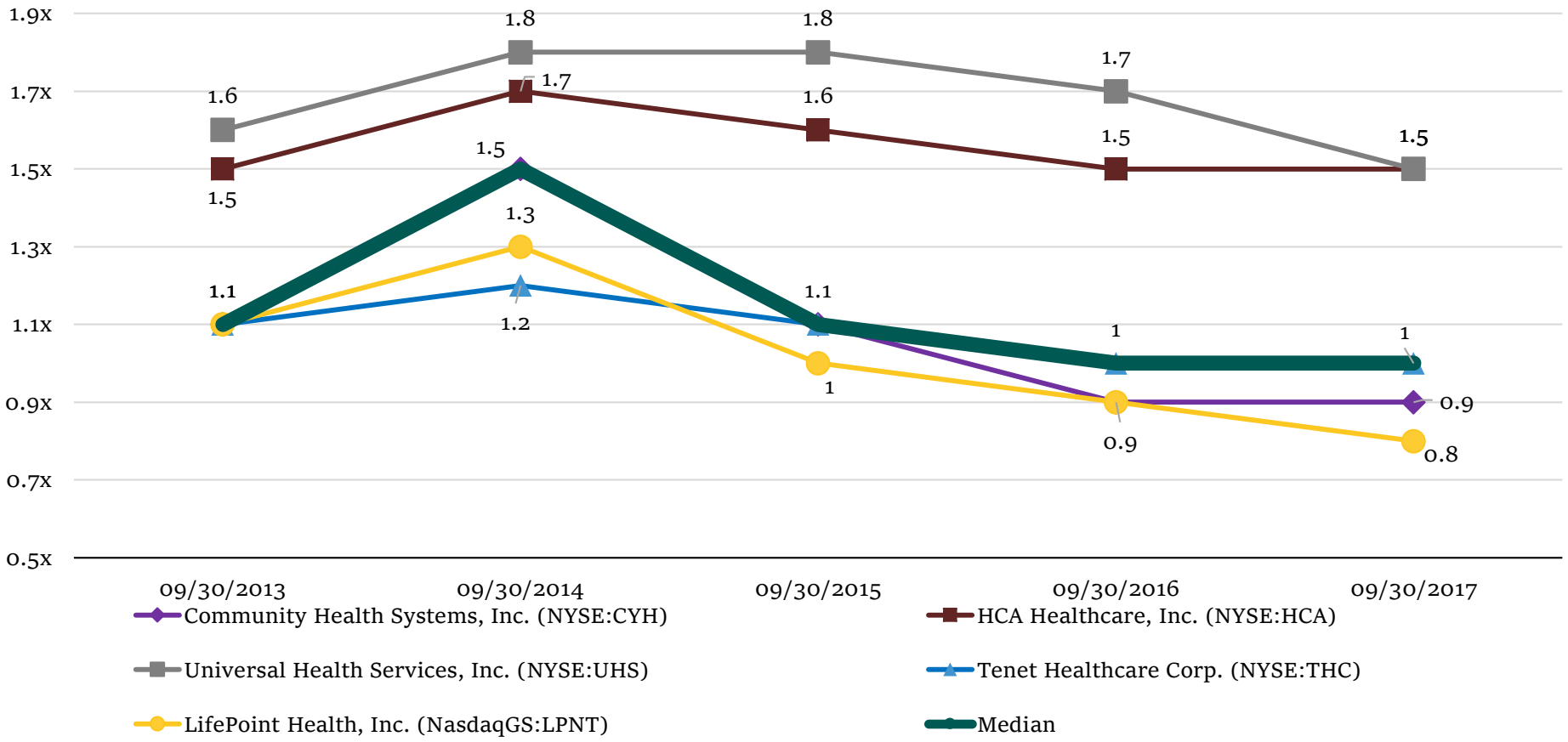


Source: S&P Capital IQ

*Quorum Health Corporation excluded due to limited availability of data

Publicly Traded Hospital Multiples

Total Enterprise Value to TTM Revenue

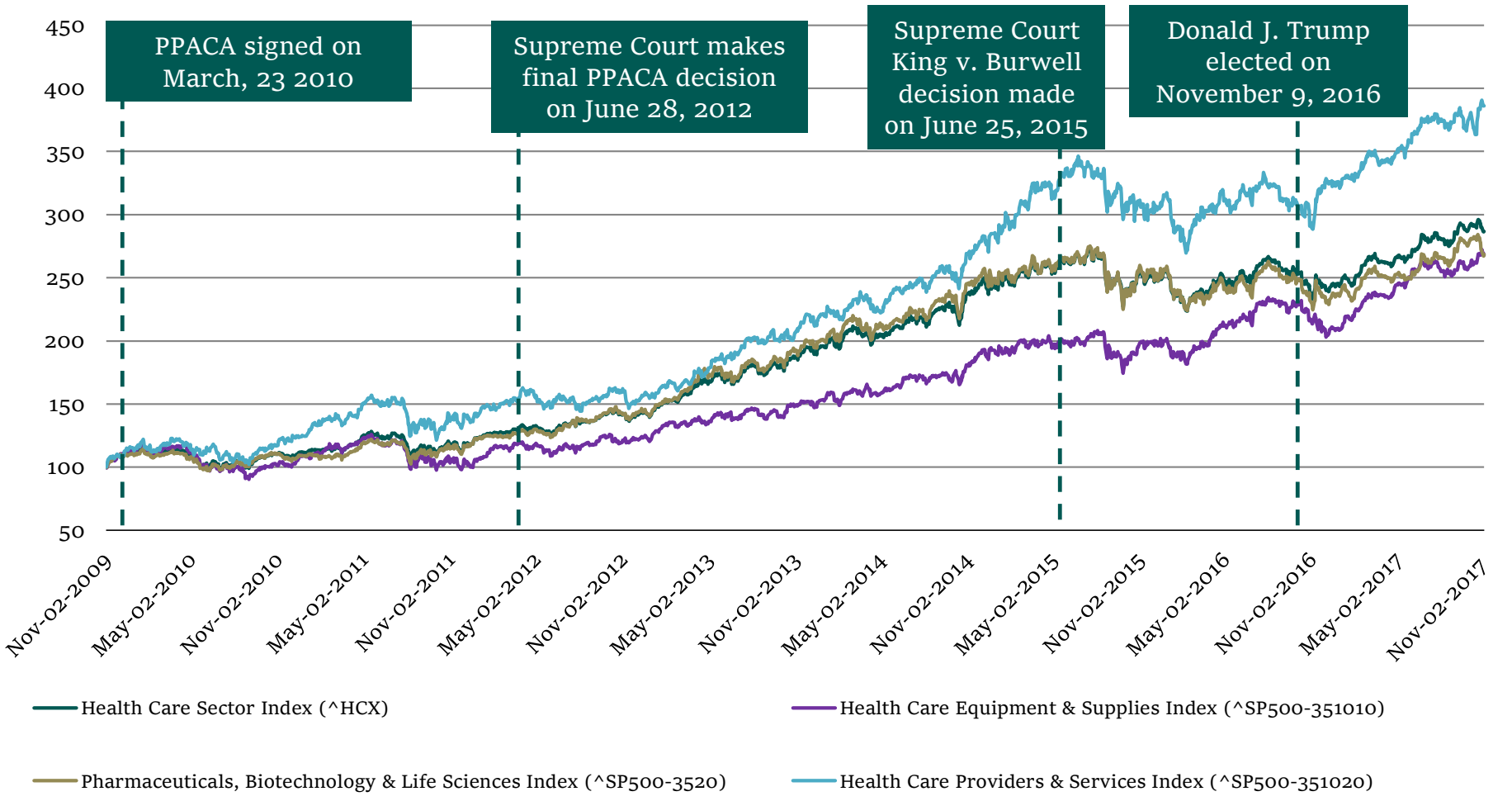


Source: S&P Capital IQ

*Quorum Health Corporation excluded due to limited availability of data

Health Care Industry Performance

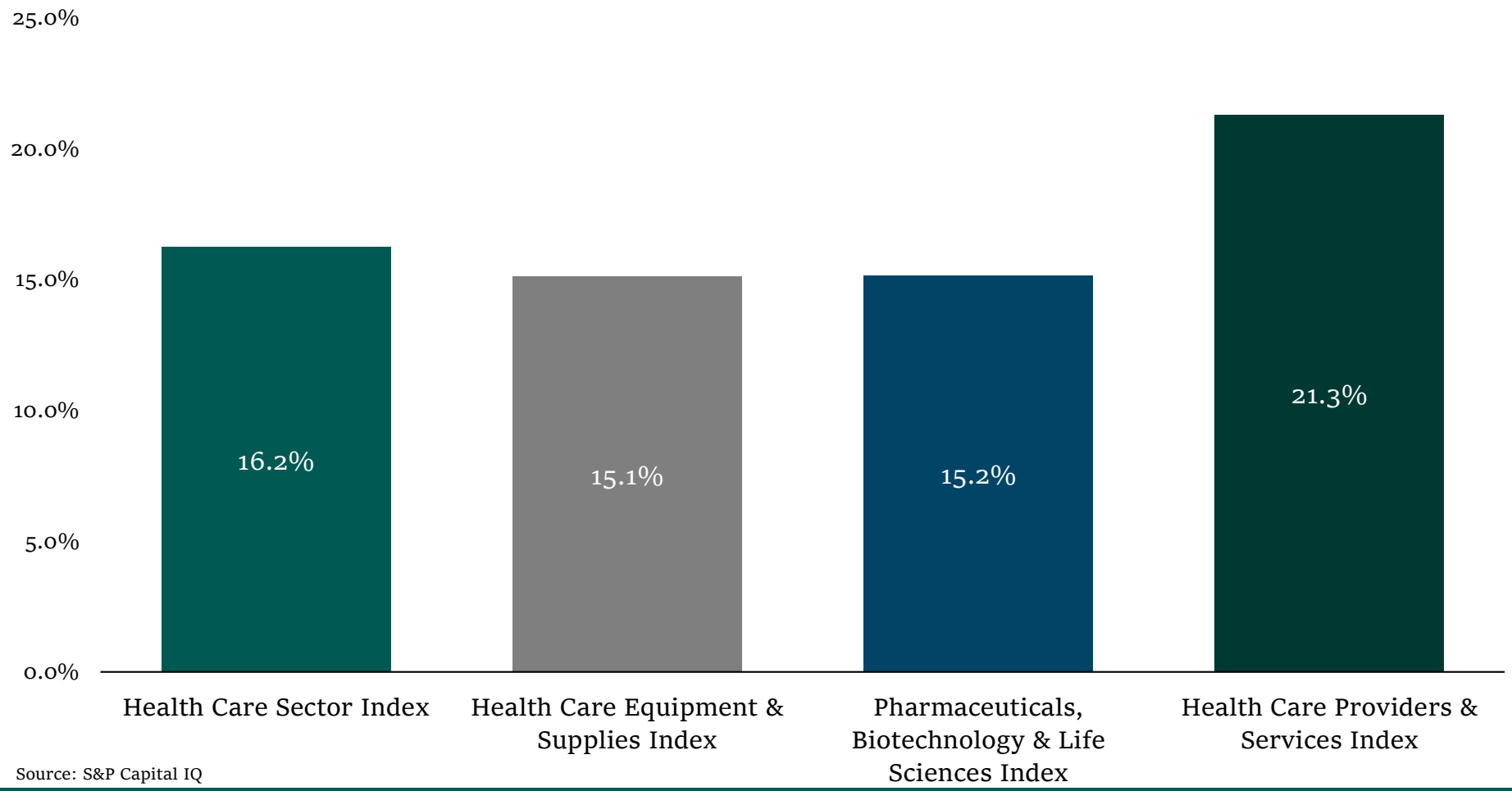
S&P 500 Market Indices



Source: S&P Capital IQ, eHealth Insurance Resource Center

Health Care Industry Performance

S&P 500 Market Indices CAGR from 11/01/2009 – 11/01/2017



Source: S&P Capital IQ

Payor Mix

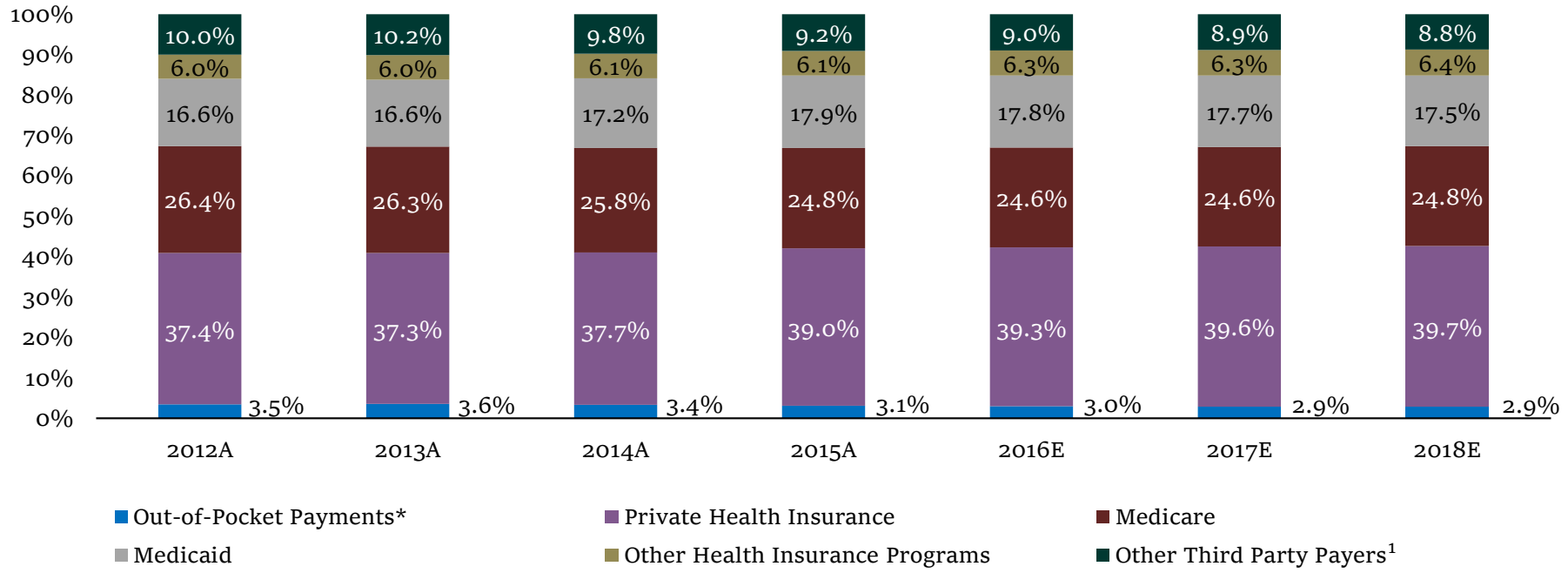
Historical Payor Mix

- Private Insurance and Medicaid spending increased significantly from 37.4% and 16.6% respectively in 2012 to 39.0% and 17.9%, respectively in 2015
- Medicare spending decreased significantly from 26.4% in 2012 to 24.8% in 2015

Payor Mix Trends

- Private Insurance trends are expected to slow, only increasing from 39.0% n 2015 to 39.7% in 2018
- Medicare and Medicaid trends are expected to reverse with Medicaid decreasing slightly from 17.9% in 2015 to 17.5% in 2018 and Medicare remaining flat at 24.8%

Hospital Expenditure Payor Mix by Year

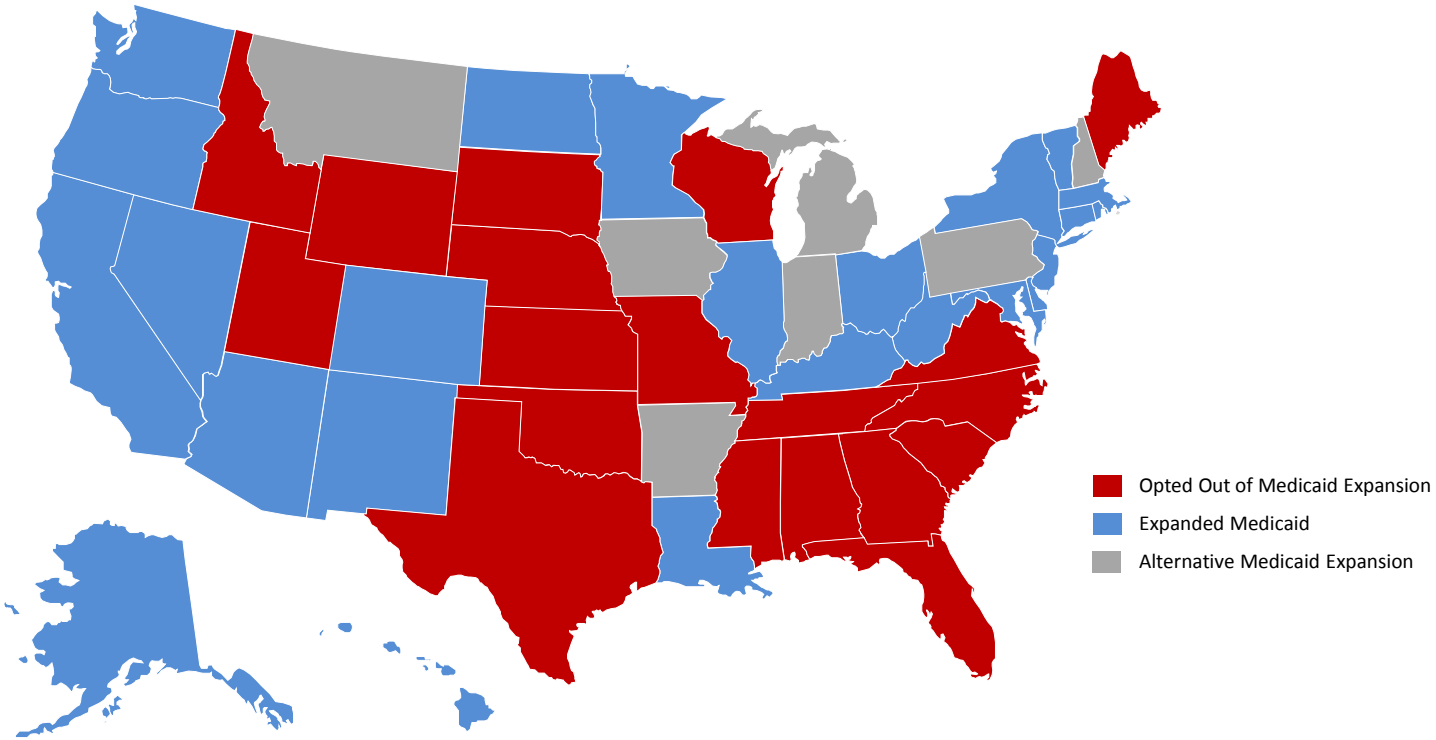


Source: CMS

1) Includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs, Substance Abuse and Mental Health Services Administration, other state and local programs, and school health.

Medicaid Expansion by State

Current State of Medicaid Expansion in 2017



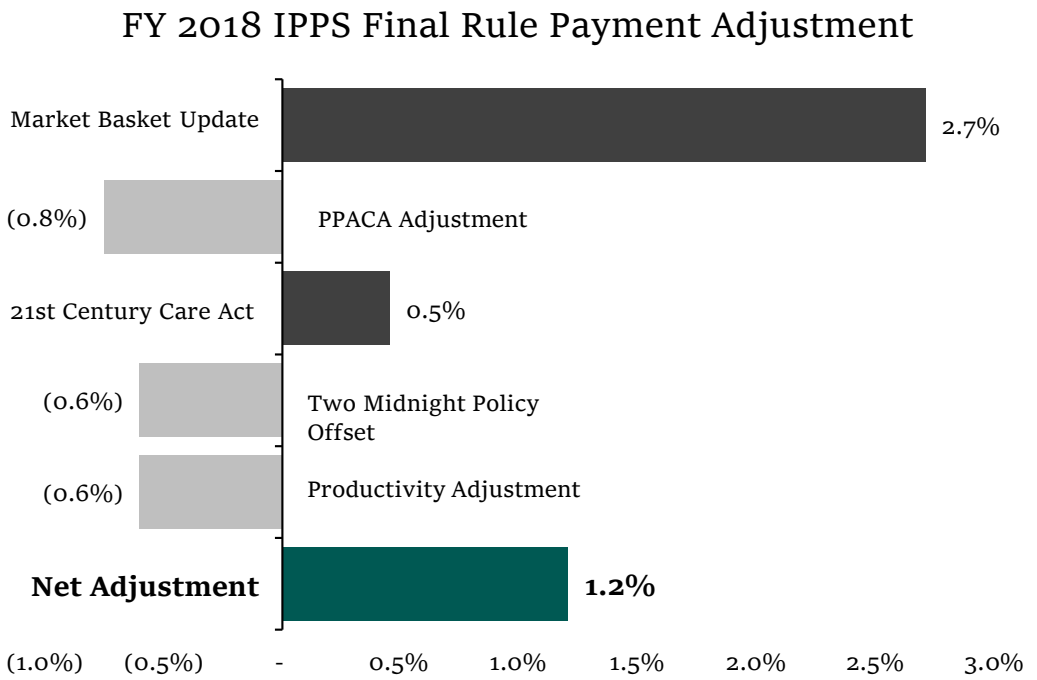
Medicaid enrollment in states that have chosen to expand Medicaid coverage has increased 6.7% annually from 2011 to 2015. Over the same time period, Medicaid enrollment in states that have not elected to expand Medicaid coverage has increased 1.5% annually from 2011 to 2015.

Source: The Henry J. Kaiser Family Foundation: Status of State Action on the Medicaid Expansion Decision

Medicare IPPS FY 2018 Final Rule

On August 2, 2017 the Centers for Medicare and Medicaid Services released the Inpatient Prospective Payment System fiscal year (FY) 2018 final rule which called for a 1.2% increase in hospital operating payments for hospitals reporting all quality metrics. The increase is slightly below the proposed increase of 1.6%. The increase is the result of the following adjustments:

- Market Basket Update (Inflation) – The hospital market basket update for FY 2018 of positive 2.70%.
- PPACA Reduction – The ACA mandated reduction for FY 2018 of negative 0.75%.
- 21st Century Care Act – One time increase mandated by 21st Century Care Act of positive 0.45%
- Two-Midnight Policy Offset – One time adjustment to offset the previous increase related to Two-Midnight Rule of negative 0.60%.
- Productivity Adjustment – The productivity adjustment for FY 2018 of negative 0.60%.



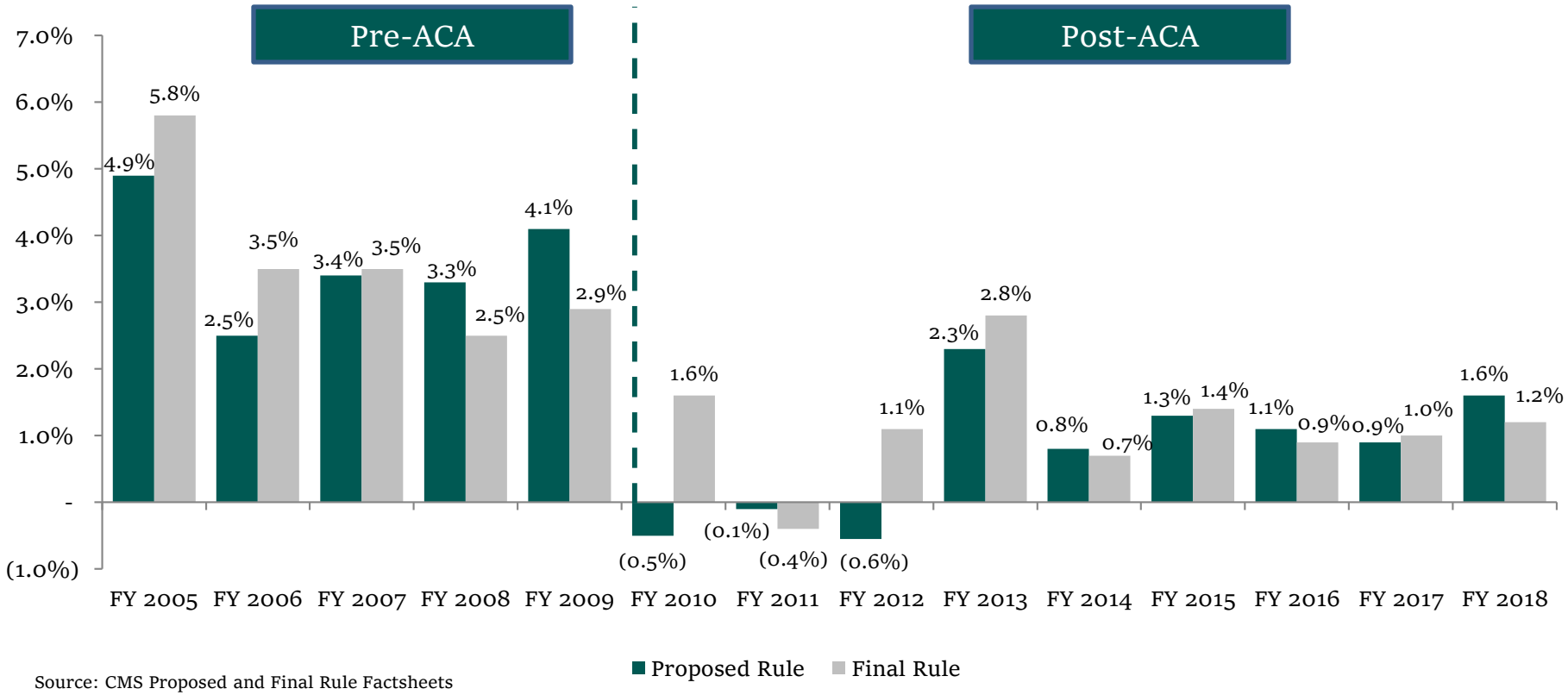
Source: CMS

Medicare IPPS Trends

Historical IPPS Reimbursement

Presented in the chart below are the net proposed and final IPPS payment increases for the past thirteen years. Since FY 2010 the average annual payment increase has been approximately 1.1% which is below the average annual increase for the five prior years of 3.6%.

Proposed and Final Rule for IPPS Payment Rate Changes by Fiscal Year



Source: CMS Proposed and Final Rule Factsheets

Medicare OPPS CY 2017 Final Rule

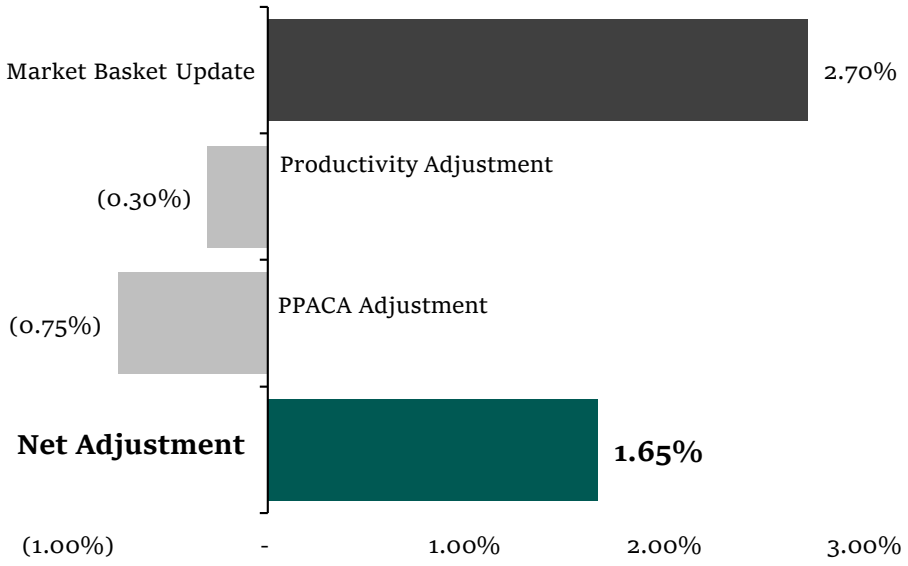
On November 1, 2016, CMS released the CY 2017 OPPS final payment update which resulted in an increase of 1.65% for hospital outpatient departments ("HOPDs") The increase is the result of the following adjustments:

- Inflation Update – The OPPS market basket update for CY 2017 is positive 2.70%.
- Productivity Adjustment – The multi-factor productivity adjustment for CY 2017 is negative 0.30%.
- PPACA Reduction – The PPACA mandated reduction for CY 2017 is negative 0.75%.

Other miscellaneous payment provisions from the CY 2017 ruling include:

- Certain provider-based departments that started billing under the OPPS on and/or after November 2, 2015 will no longer be paid for most services under the OPPS. On January 1, 2017 these facilities will be reimbursed at a site neutral rate. Services provided in a dedicated emergency department will continue to be paid under the OPPS.

CY 2017 OPPS Final Rule Payment Adjustment

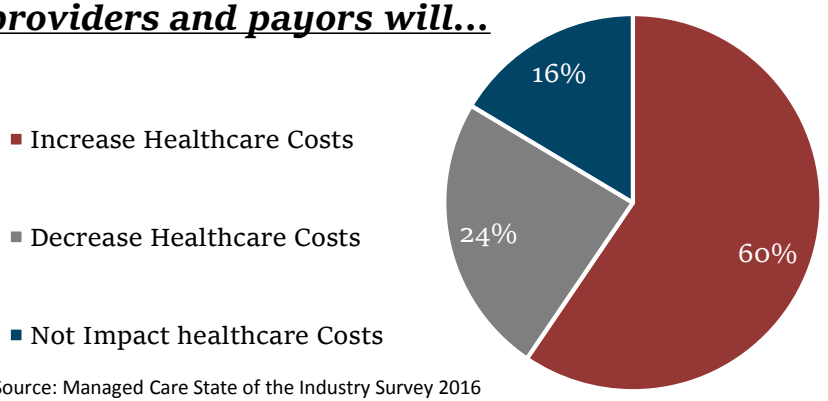


Sources: CMS CY 2017 OPPS Final Rule Fact Sheet

Future of Hospital Consolidation

Consolidation & Healthcare Costs

The increasing consolidation of providers and payors will…



Source: Managed Care State of the Industry Survey 2016

Consolidation Drivers

Increased Margin Pressures:
- Changes in payor mix
- Increased competition

Increased Operational Integration:
- Value-based delivery systems
- Coordination of care
- Operational efficiencies

Payment Reforms
- Bundled payments
- Value-based purchasing
- Declining Medicare reimbursement rates

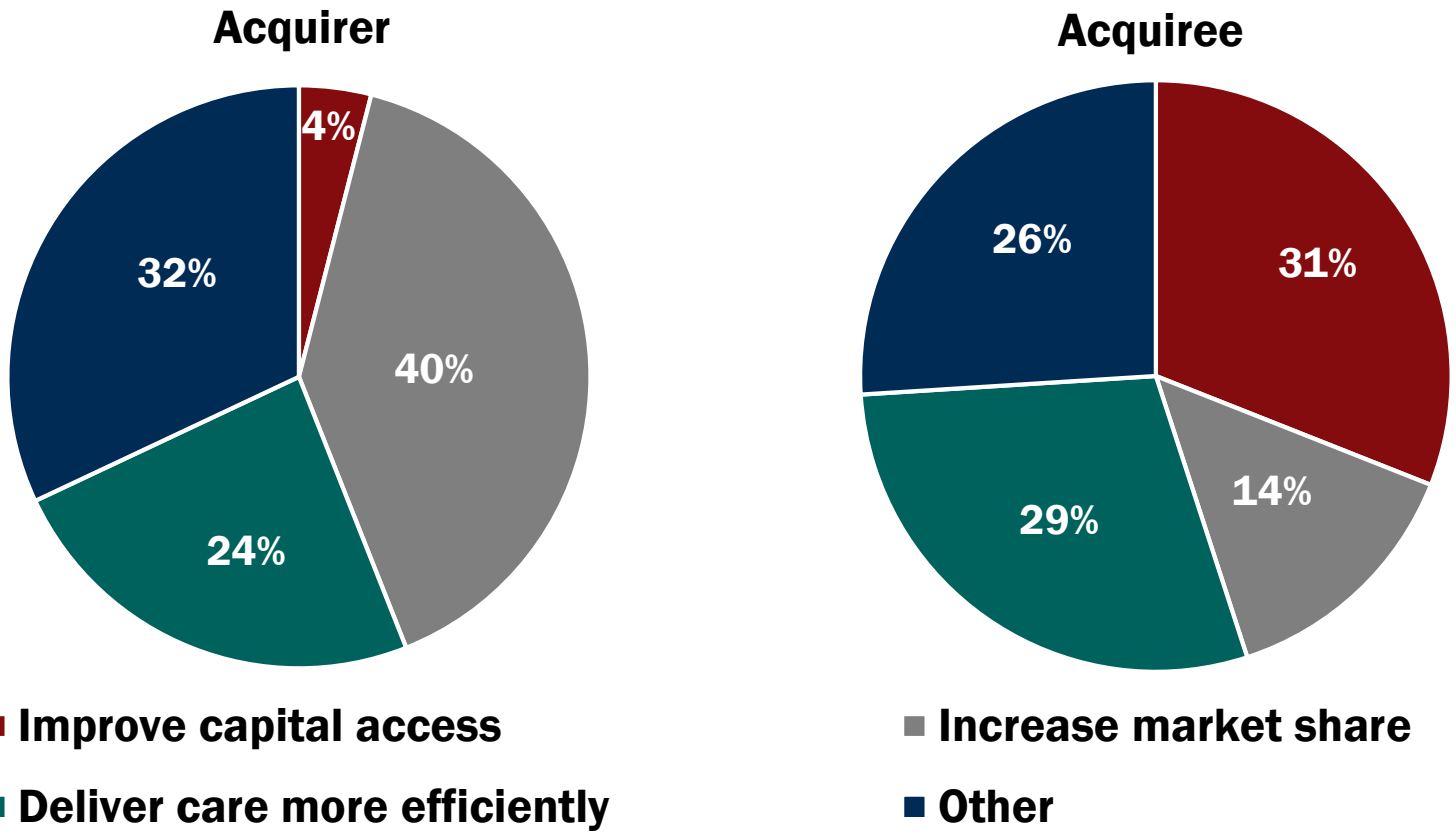
Areas of Hospital Expansion

What patient-centered area is your organization most focused on to expand and secure market share? (select all that apply)

Source: Managed Healthcare Executive's Managed Care State of the Industry Survey 2016

Drivers of Hospital M&A

What has been the top driver of transactions for your organization?



Source: HFMA 2017 survey of executives involved in M&A transactions

General Healthcare Outlook

Selected Provider Business Models	Hospital Trends				Comments
	Profitability	Volume Growth	Risk	Marketability	
General Acute Care Hospitals	↓	↓	↑	→	The industry has been experiencing decreased volume and marketability compared to higher profitability alternatives. Costs have largely outpaced reimbursement changes while regulatory uncertainty increases risk
Rehab Hospitals	→	↑	→	→	While the industry shows growth in both volume and reimbursement, increasing costs are keeping both profitability and marketability flat
Physician Owned Hospitals	→	→	↓	↓	No new Hospitals allowed; limitations on future growth of established hospitals
LTACH	↓	↓	↑	↓	Changing admission criteria have decreased both volume and marketability in recent years. Costs have outpaced changes in reimbursement, driving down margins, though the moratorium on new LTACHS expired recently, on September 30,2017

Not-For-Profit Hospital Outlook

Fitch September 27, 2016, "US Nonprofit Hospital Performance May Decline in 2016-2017"

- Operating margins slightly increased in 2015 due to increasing cost efficiency though changes in reimbursement are expected to compress margins for smaller hospitals
- Larger and more integrated health systems are poised for more success in coming years as healthcare transitions to risk-based payer contracts

S&P January, 16 2017, "Cautiously: Not-For-Profit Healthcare Outlook Stable in 2017"

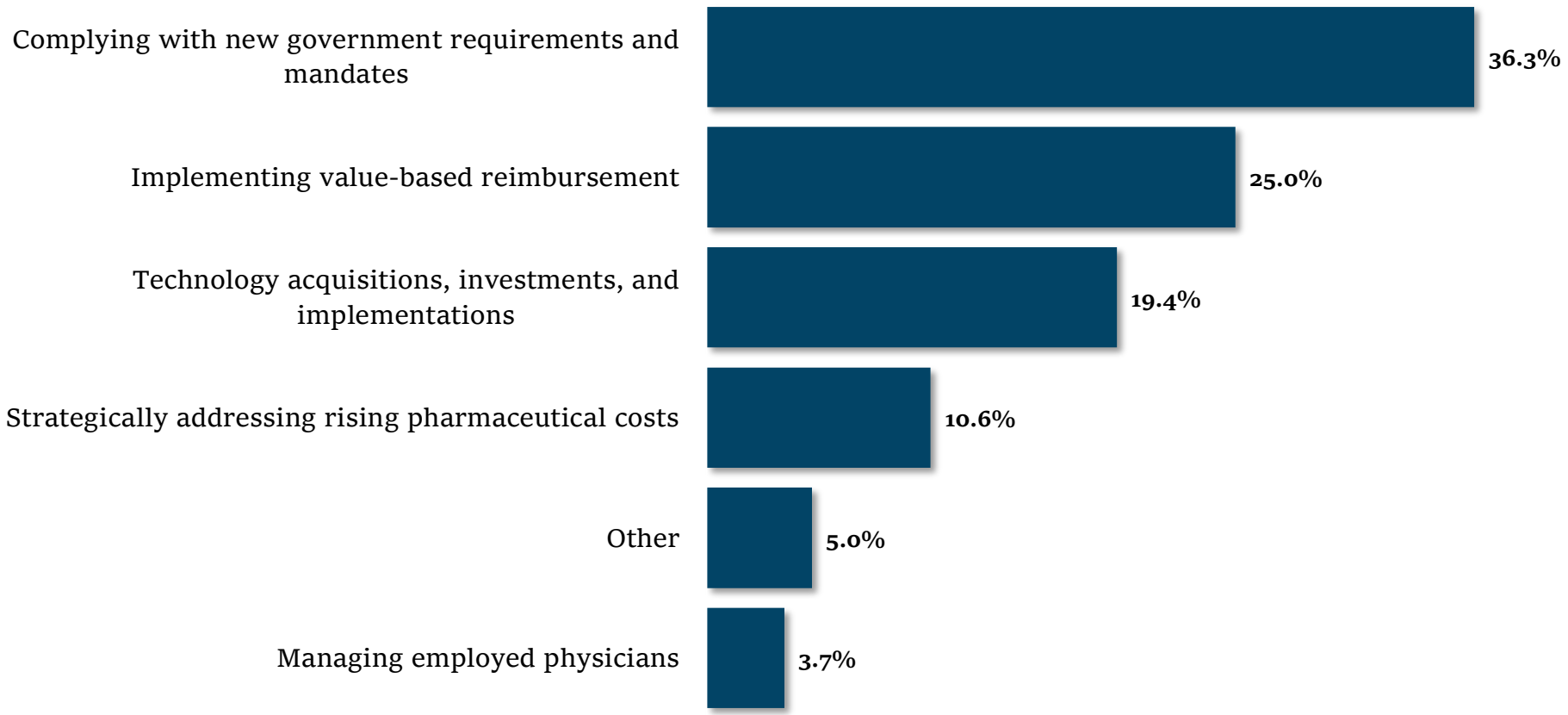
- The first three quarters of 2016 were a positive trend with respect to upgrades, but flat-lined in the fourth quarter with 11 upgrades and 11 downgrades
- Hospitals facing risk due to uncertainty surrounding administrative change and the ACA

Moody's August 23, 2017, "Margins are getting tighter in the not-for-profit sector"

- After several years of restrained costs, FY 2016 annual expense growth rate of 7.2 percent outpaced its annual revenue growth rate of 6 percent
- For the first time, outpatient visits and surgeries are outpacing inpatient growth rates for Moody's-rated hospitals

Challenges Facing Hospitals

What do you think is the biggest challenge facing healthcare organizations?



Source: Managed Healthcare Executive's Managed Care State of the Industry Survey 2016

Reimbursement Reform

Bundled Payments

- Bundled Payments for Care Improvement (BPCI) Initiative established in 2013
- As of July 1, 2017, the BPCI initiative had 1,244 participants, of which, 315 were acute care hospitals
- Four models of care link payments for the multiple services that beneficiaries receive

Source: CMS

Future of Bundled Payments

- **Uncertainty around bundled payments due to current administration changes**
- On August 15th CMS proposed the cancellation of two alternative payment models; the Episode Payment Models(EPMS) and Cardiac Rehabilitation(CR) incentive payment model
- CMS also reduced the number of geographic areas required to participate in the Comprehensive Care for Joint Replacement (CJR) model

Models of Care

	Model 1	Model 2	Model 3	Model 4
Episode	All DRGs; all acute patients	Selected DRGs; hospital plus post-acute period	Selected DRGs; post-acute period only	Selected DRGs; hospital plus readmissions
Services included in the bundle	All Part A services paid as part of the MS-DRG payment	All non-hospice Part A and B services during the initial inpatient stay, post-acute period and readmissions	All non-hospice Part A and B services during the post-acute period and readmissions	All non-hospice Part A and B services (including the hospital and physician) during initial inpatient stay and readmissions
Payment	Retrospective	Retrospective	Retrospective	Prospective
Participants	1	649	862	10

Source: CMS

Reimbursement Reform

Hospital Value-Based Purchasing (HVBP)

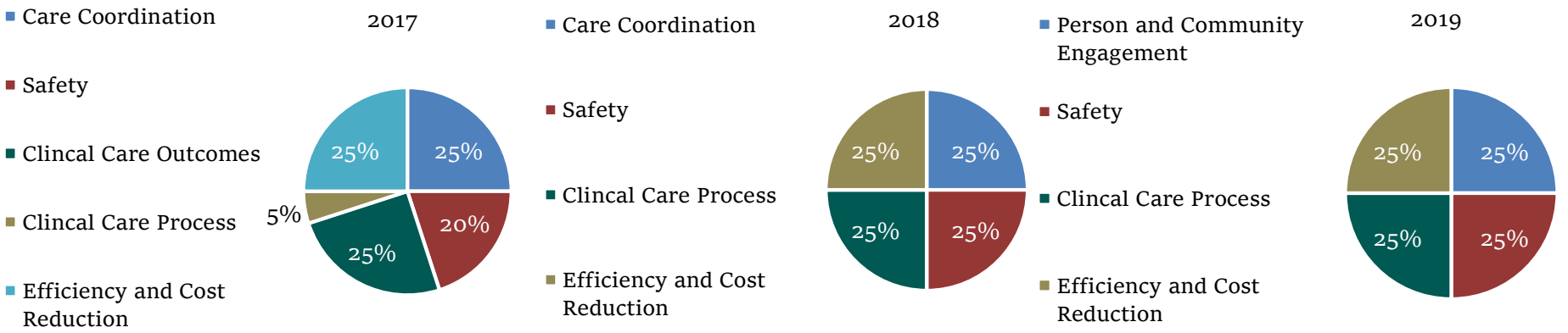
- Medicare MS-DRG payments are reduced by 2% with eligible hospitals earning a portion back based on performance scores in 2017
- Scoring for 2018 & 2019 combines the clinical care subdomains and decreases total clinical care weighting from 30% to 25%
- Scoring changes also increases the safety category weight from 20% to 25% in 2018 and replaces the care coordination category with Person and Community Engagement for 2019

Reweighting

- Hospitals meeting must meet the minimum case requirements for at least 3 out of 4 categories (Clinical Care counts as one) to receive a performance score.
- Scores are reallocated amongst the categories a hospital is eligible for when not meeting the minimum volume for all categories

Source: CMS

Hospital Scoring



Source: CMS

Valuation and Financial Metrics

Valuation Metrics

- Inpatient Admissions
  - The number of patients admitted to the hospital
- Inpatient Days
  - The number of days an inpatient is in the hospital
- Average Length of Stay ("ALOS")
  - Total inpatient days divided by total inpatient admission
- Average Daily Census ("ADC")
  - Inpatient days divided by the 365 days in a year
- Occupancy Rate
  - ADC divided by the total number of hospital beds in service
- Outpatient Visits
- Adjusted Patient Days ("APD")
  - [(Inpatient Revenue + Outpatient Revenue)/ (Inpatient Revenue)] * Patient Days

Financial Performance

- Gross Revenue:
  - Gross inpatient revenue per day
  - Gross outpatient revenue per visit
  - Total gross patient revenue per APD
- Net revenue
  - Net inpatient revenue per day
  - Net outpatient revenue per visit
  - Total net patient revenue per APD
- Bad Debt Expense
  - As a percentage of net revenues
- Salaries and Benefits expense
  - As a percentage of net revenues
  - Per full-time equivalents (FTEs)
- Medical Supplies Expense
  - Per APD
  - Ad a percentage of net revenues

Source: CMBVR/AHLA Guide to Healthcare Industry Finance and Valuation

Your Experts in Hospital Valuation

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Don Barbo is a managing director with VMG Health. He specializes in healthcare business valuations involving mergers and acquisitions, divestitures, partnership transactions, leasing arrangements, commercial damages, and financial reporting. His extensive healthcare valuation engagements have included hospitals (acute care, long-term care, critical access, and surgical), physician practices (variety of primary care and hospital-based), ambulatory surgery centers, diagnostic imaging centers, cardiac catheter labs, pathology and clinical labs, cancer treatment centers, and dialysis centers. Mr. Barbo has also performed engagements for various contracts between hospitals and physicians, including medical director agreements, on-call agreements, lithotripsy service agreements, purchase services agreements, and management services agreements.

Mr. Barbo has spoken extensively to various legal and valuation organizations and has published articles regarding business valuation issues. He also serves as an expert witness in litigated matters for his clients, including testifying before the U.S. Tax Court.

Mr. Barbo has been performing healthcare valuations since 1998. Prior to his valuation career, he served as the chief financial officer for a physician practice management company that provides management services to a variety of physician practices. Before that, he served as the controller/financial officer for various emerging companies. He began his professional career as an auditor with an international accounting firm.

Mr. Barbo is a CPA, holds the Accreditation in Business Valuation from the AICPA, is a member of the Medical Group Management Association (MGMA), and a member of the Healthcare Financial Management Association (HFMA). He also serves on the Technical Advisory Board for the AICPA's Forensics & Valuation Section Consulting Digest. He holds a BBA in Accounting from Texas Tech University, and an MBA from the Cox School of Business, Southern Methodist

Awards and Honors:

- Recognized by the Dallas Business Journal as 1 of 25 recipients on its annual "Who's Who in DFW Health Care" for 2014; announced October, 2014
- Recognized by Nightingale's Healthcare News as 1 of 10 recipients on its 2010 "People to Watch in Healthcare Transactions in the Southwest", May 5, 2010, Southwest Healthcare Transaction Conference, Dallas, TX

Your Experts in Hospital Valuation

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John Meindl is a director with VMG Health and is based in the Dallas office. In addition to providing valuation and transaction advisory services, Mr. Meindl is also involved in the firm's Dispute Resolution and Litigation Advisory service line.

Mr. Meindl's valuation experience includes providing advisory services for management planning, dispute resolution, transaction advisory, financial reporting, and tax purposes. He has provided dispute resolution and advisory services in matters including lost profits, business interruption, breach of contract, fraud, clinical compensation disputes, trademark infringement, patent infringement, and breach of fiduciary duty, among other various matters involving public and private entities.

Prior to VMG Health, Mr. Meindl was a senior analyst at Ernst and Young in the Transaction Advisory Services group where he performed valuation, transaction advisory, and dispute resolution services to the firm's corporate and private clients.

Mr. Meindl received a Bachelors of Business Administration from Wake Forest University, and a Masters of Business Administration from Southern Methodist University.