



Hospitals/Systems Digest | 2015



In this Volume

Hospital Systems' Growing Influence
Bringing ACOs Up-to-Date



10th Edition

Your Online Resource for Chronic Disease Information™

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Leading the Health Care Discussion

The nationally renowned Sanofi **Managed Care Digest Series**[®]—now in its 29th year as the health care delivery landscape continues to evolve—is part of our ongoing commitment to provide you with essential data on the important trends in U.S. health care. Our goal is to help you remain on the leading edge of health care developments in America, and we hope that this information helps you identify trends that may assist your organization.

Sanofi is pleased to provide you with your complimentary copy of this 10th edition of the *Hospitals/Systems Digest*, the first report in the three-part **Managed Care Digest Series**[®] for 2015. This Digest serves as a comprehensive resource for information about hospitals and multihospital systems; the hospitals, physicians, managed care plans and other providers joining together to form integrated health care systems; and detailed diagnosis-related, chronic disease-specific data, including patient-level claims, hospital discharges and retail pharmacy information. These foundational components of health care delivery are analyzed within the context of ongoing industry transformations over the course of time.

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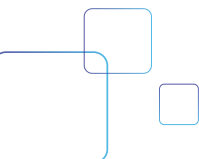
MANAGED CARE DIGEST SERIES[®] 2015

Commissioned, sponsored and underwritten by Sanofi, Bridgewater, NJ
Developed and produced by Forte Information Resources LLC, Denver, CO
Data provided by IMS Health, Parsippany, NJ

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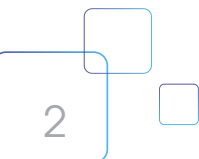
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Comparative information at regional, state and local levels is available by contacting your Sanofi account executive.



INTRODUCTION

Sanofi is pleased to present volume 10 of the *Hospitals/Systems Digest*, the first report in the Sanofi **Managed Care Digest Series**® for 2015. Since 1987, the focus of the **Managed Care Digest Series**® has been on helping health care organizations develop strategies, control costs and assess value. In 2015, the **Managed Care Digest Series**® remains a trusted source for the most reliable health care data and progressive analysis, including detailed diagnosis-related, chronic disease-specific patient claims, hospital discharges and electronic medical records. These data and analysis reflect patient engagement with ongoing transformations in the health care industry. At this crucial time, the **Managed Care Digest Series**® maintains its commitment to leading the health care discussion.

The *Hospitals/Systems Digest* for 2015 provides an extensive overview of the evolving **hospital** market, including comprehensive data on the more than 5,200 short-term, acute-care, nonfederal facilities operating in the U.S. Yet this Digest considers the broader context of these facilities, too, focusing on the coordinated operations of **multihospital systems** and **highly integrated systems**, along with the central role of **medical group practices** and accountable care organizations that operate in these networks. The *Hospitals/Systems Digest* is organized into these four separate provider segments, each of which includes four subsets of data elements: demographics, utilization, financials and pharmacy.

The **hospital** segment profiles the 5,214 acute-care hospitals operating across the nation, and tracks demographic data by geographic region, size, ownership type and multihospital system (MHS) affiliation. Utilization measures for these facilities highlight the effects of patient care coordination efforts and other factors. The Digest examines financial measures as well, such as operating expenses and cost ratios at hospitals. This segment also features Medicare reimbursement rates by chronic disease category. Hospital pharmaceutical costs and retail pharmacy metrics provide additional context, and prescription activity is tracked across a broad range of therapeutic classes.

The **multihospital system** and **integrated system** segments provide demographic, utilization, financial and pharmacy data on hospital chains and the multitude of providers participating in these systems. Detailed demographic and utilization data are provided on the 20 largest MHSs, along with medical and pharmacy data on health maintenance organizations (HMOs) owned by an MHS. Given the importance of system integration to health care reform initiatives, this section includes data that identify the initiators of, and provider units operating within, these important networks. Selected integrated systems and the facilities they encompass are profiled, and system and nonsystem hospitals in the most populated metropolitan statistical areas (MSAs) are juxtaposed to provide additional information on the effects of system affiliation.

The **medical group practice** portion of the *Hospitals/Systems Digest* features a key set of demographic, utilization and pharmacy service measures on practices with at least five full-time-

equivalent physicians, including those affiliated with integrated systems. Twelve common specialties are reviewed, and practices are often broken out by size, visits per week, affiliation and geography. The medical and pharmacy services provided by these practices, such as imaging, laboratory and surgical offerings, are likewise discussed in detail in this section.

Backgrounders at the beginning of each section of the *Hospitals/Systems Digest* define the health care segment under examination, bringing focus on the forces effecting change in that sector of the industry. **Key takeaways** at the conclusion of most pages explore the larger context of the data and their potential implications. **Spotlights** on accountable care organizations, quality measures and even specific markets provide even more in-depth understanding of crucial topics.

For this 10th edition—as in previous years—authoritative **Managed Care Digest Series**® data distinguish the *Hospitals/Systems Digest*. Long-term trends of key industry measures appear throughout, leveraging the Series' historical data to provide greater perspective. Further, patient-level data explore the effects of chronic disease, not only on the patients themselves, but also on the hospitals, systems, physicians, health plans and other providers who are managing the care of these individuals. Moreover, the *Hospitals/Systems Digest* examines important industry trends and disease-state metrics at the regional, state or local levels, enabling insight into how health care is managed and delivered in specific geographies. Accordingly, readers of this Digest will find extensive data on specific hospital chains, integrated systems, managed care organizations and individual institutions.

EXECUTIVE SUMMARY

Hospitals

- After growing from 2010 to 2012, the number of acute-care hospitals operating nationally dipped 0.4% in 2013, to 5,214 from 5,233 in 2012.
- Outpatient case counts per hospital increased for 11 of 12 profiled disease states between 2012 and 2013; conversely, the number of inpatient cases per hospital decreased for nine.
- The ratio of FTE registered nurses per occupied bed grew across hospitals of all sizes from 2011 to 2013. Those with 50–119 beds recorded the largest annual percentage growth (19.8%).
- Average inpatient Medicare charges increased for 11 of 12 disease states in 2013; average Medicare reimbursement rose for seven.
- From 2011 (\$1,304) to 2013 (\$1,406), pharmacy costs per discharge grew by nearly 8% at hospitals nationally; these costs per staffed bed rose by 10.6% over the same two-year period.

Multihospital Systems

- The number of hospitals in multihospital systems (MHSs) edged up 1.9% in 2013, to 3,367 from 3,304 in 2012. The growth lifted the total share of MHS-owned hospitals to 64.6% from 63.1%.
- From 2011 to 2013, staffing ratios per occupied bed for five of 10 full-time-equivalent positions increased more rapidly in MHS-owned hospitals than in their non-MHS-owned counterparts.
- Non-MHS HMOs recorded an average number of hospital days per 1,000 members in 2013 (432.5) that was 7.4% greater than that of their MHS counterparts (402.8). Both rose since 2011.
- From 2012 to 2013, total revenue shrank 1.7% (to \$482.7 million from \$491.0 million) at hospitals in MHSs that owned HMOs, and 0.2% (to \$464.9 million from \$465.8 million) at hospitals in MHSs that did not own HMOs. Inpatient revenue decreased at both MHS and non-MHS hospitals.
- From 2012 to 2013, pharmacy expenditures as a percentage of total operating costs rose to 15.0% from 14.7% for non-MHS HMOs and to 13.2% from 13.1% for MHS-owned HMOs. The overall portion grew to 14.7% from 14.5%.

Integrated Health Systems

- In 2014, the percentage of hospitals tied to highly integrated systems reached 46.5%, an increase of nearly five percentage points from 41.6% in 2010. The total number of such networks also rose, to 342 from 335 (2.1%).
- From 2010 to 2014, the number of physician practices owned by or contracted to highly integrated health systems climbed 18.2%.
- The number of hospitals owned by or contracted to highly integrated health systems increased in 28 states, and by 4.5% overall, to 2,426 nationwide in 2014 from 2,321 in 2013.
- Hospital utilization per short-term staffed bed decreased between 2012 and 2013 for all profiled measures in system-affiliated hospitals.
- From 2012 to 2013, average lengths of stay at system-affiliated hospitals fell in 10 of 20 profiled markets and were unchanged in five others.

Medical Group Practices

- From 2013 to 2014, the shares of eight profiled specialty medical group practices affiliated with integrated systems each rose fractionally; family practice groups had the highest rate of affiliation (42.4%), by specialty type, in 2014.
- In 2014, 21.1% of medical group practices reported 750 or more visits per week, accounting for at least 34,484 physicians.
- For selected specialty medical group practices, X-ray services were the most commonly offered imaging modality in 2014, with shares topping 90% across five specialties.
- Among medical groups that provided any pharmacy services, those in systems were more likely overall (25.6%) to offer full pharmacy services in 2014 than their nonsystem counterparts (16.5%).
- The shares of practices that provided full pharmacy services in 2014 were largest among those with 20 or more physicians—52.2% of system-affiliated medical group practices and 49.3% of unaffiliated medical group practices.

HOSPITALS

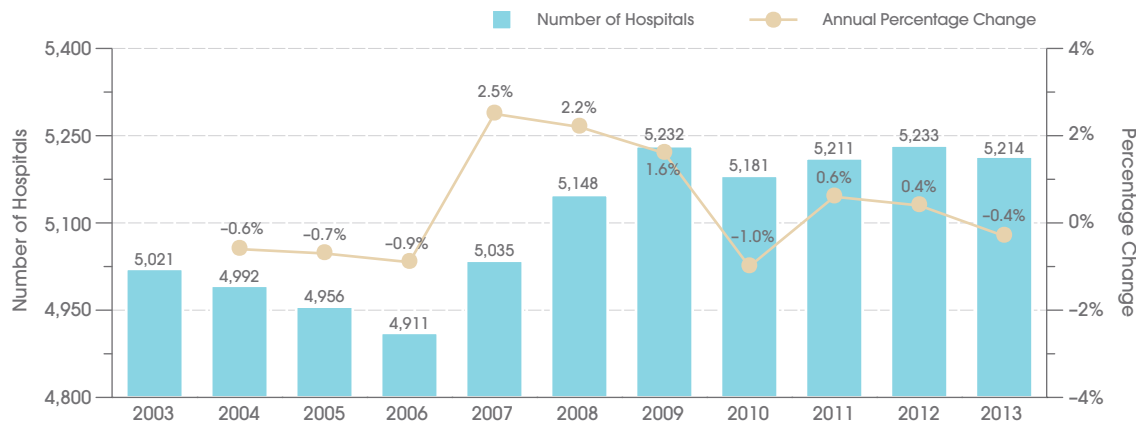
Backgrounder

After two consecutive years of growth, the number of acute-care hospitals operating nationally dipped in 2013, to 5,214 from 5,233 in 2012. This decline, however slight, suggests that players in the hospital market continued to face challenges, even as the U.S. economy recovered by some measures. Reinvigorated interest in the formation of partnerships emerged among health care providers, in the form of accountable care organizations and value-based purchasing arrangements that promised rewards for high

performers, along with penalties for facilities that failed to meet new minimum standards. Amidst all of these changes—and perhaps, in part, because of them—total annual growth in national spending on hospital care slowed, in 2013, to just 4.3%, the lowest such rate since 2000.¹ Such themes appear in the various hospital measures featured in this Digest, which are generally for short-term, acute-care, nonfederal facilities; but long-term care components are included in the total facility measures profiled.

 Number of Hospitals, 2003–2013^{2,3}

LONG-TERM TREND



Data source: IMS Health © 2015

¹ Centers for Medicare & Medicaid Services (CMS). (2014). National Health Expenditure Data. Table 7: Hospital Care Expenditures; Levels, Percent Change, and Percent Distribution, by Source of Funds: Selected Calendar Years 1970–2013. Retrieved from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Tables.zip>

² Hospital data are based on all short-term, acute-care, nonfederal hospitals and are effective as of end-of-year 2013. Psychiatric, rehabilitation and children's hospitals are excluded.

³ Includes hospitals located in Puerto Rico and the U.S. Virgin Islands.

Number of Hospitals Decreases in Four of Eight Regions

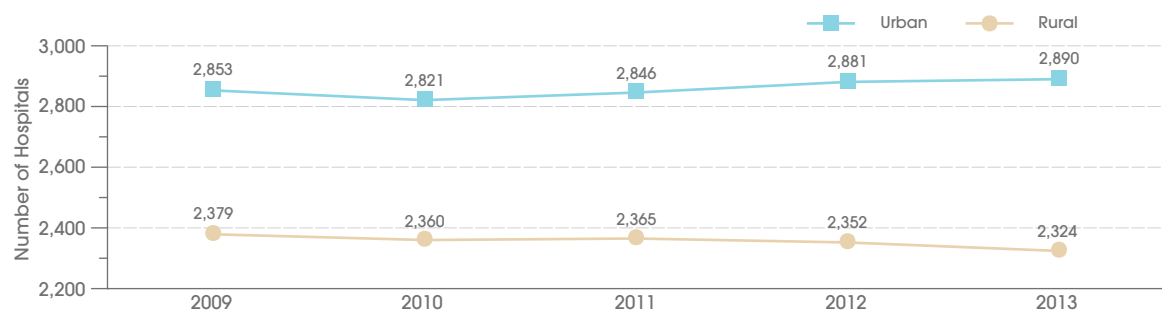
- From 2011 to 2013, the number of short-term, acute-care, nonfederal hospitals in the U.S. fell slightly in four of eight regions; the largest (-1.8%) occurred in the West North Central region.
- Meanwhile, in the regions in which hospital growth occurred, it was negligible. The South Central region recorded the largest increase (1.1%) and the Mountain the smallest (0.2%).

HOSPITAL DEMOGRAPHICS ¹						
REGION	2011		2012		2013	
	# of Hospitals	% of Hospitals	# of Hospitals	% of Hospitals	# of Hospitals	% of Hospitals
Pacific	582	11.2%	581	11.1%	581	11.1%
Mountain	401	7.7	400	7.6	402	7.7
West North Central	712	13.7	714	13.6	699	13.4
East North Central	785	15.1	789	15.1	790	15.2
South Central	1,232	23.6	1,250	23.9	1,246	23.9
New England	210	4.0	209	4.0	207	4.0
Mid-Atlantic	473	9.1	470	9.0	466	8.9
South Atlantic ²	816	15.7	820	15.7	823	15.8
SIZE						
<50 Beds	1,947	37.4%	1,978	37.8%	1,963	37.6%
50-119 Beds	1,029	19.7	1,037	19.8	1,041	20.0
120-249 Beds	1,155	22.2	1,153	22.0	1,142	21.9
250+ Beds	1,080	20.7	1,065	20.4	1,068	20.5
TOTAL	5,211	100.0%	5,233	100.0%	5,214	100.0%

Hospital Count Continues at Once to Rise in Urban Areas and to Fall in Rural Areas

- The total number of hospitals located in urban areas increased 1.3%, to 2,890 (2013) from 2,853 (2009). The growth trend was interrupted only in 2010, when the number edged down 1.1%.
- Over the same five-year span, the number of hospitals located in rural areas declined 2.3% (to 2,324 from 2,379). This trend was broken in 2011, when the number rose 0.2%.

NUMBERS OF URBAN VERSUS RURAL HOSPITALS, 2009-2013



Data source: IMS Health © 2015

Key Takeaway

The sluggish economy and implementation of the Affordable Care Act (ACA) over the last several years may have prompted many health care organizations to delay construction of new hospitals and instead focus on additions and upgrades to help them comply with ACA initiatives, like improved technology and infrastructure related to outpatient services and physician integration.³

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals and are effective as of end-of-year 2013. Psychiatric, rehabilitation and children's hospitals are excluded.

² In the South Atlantic region, a total of 58 hospitals were physically located in Puerto Rico.

³ Carpenter, D. (2013). Market Reset. *Health Facilities Management*. Retrieved from http://www.hfmmagazine.com/display/HFM-news-article.dhtml?dcrPath=/templatedata/HF_Common/NewsArticle/data/HFM/Magazine/2013/Feb/0213HFM_FEA_CoverStory

Total Number of U.S. Hospitals Remains Almost Unchanged

- In the two-year period from 2011 (5,211) to 2013 (5,214), the total number of short-term, acute-care, nonfederal hospitals operating in the U.S. remained pretty much stable.
- Yet the number of for-profit hospitals nationally climbed 19.4%, to 1,054 in 2013 from 883 in 2011. As a result, the for-profit share of all hospitals rose, to 20.2% from 16.9% two years prior.

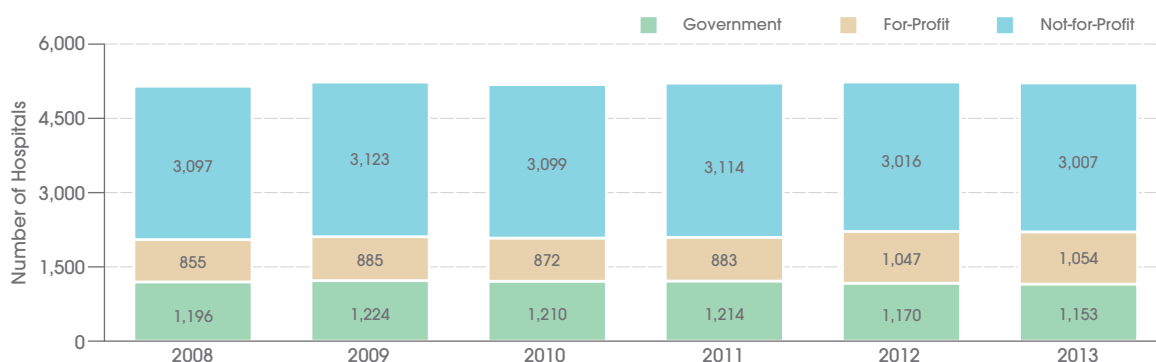
HOSPITAL DEMOGRAPHICS ¹						
OWNERSHIP TYPE	2011		2012		2013	
	# of Hospitals	% of Hospitals	# of Hospitals	% of Hospitals	# of Hospitals	% of Hospitals
Not-for-Profit	3,114	59.8%	3,016	57.6%	3,007	57.7%
For-Profit	883	16.9	1,047	20.0	1,054	20.2
Government	1,214	23.3	1,170	22.4	1,153	22.1
SEVERITY ²						
CMI <1	893	17.1%	879	16.8%	858	16.5%
CMI 1 to <1.2	1,099	21.1	1,089	20.8	1,078	20.7
CMI 1.2 to <1.5	1,493	28.7	1,483	28.3	1,477	28.3
CMI 1.5+	1,269	24.4	1,268	24.2	1,264	24.2
Severity Unknown	457	8.8	514	9.8	537	10.3
TOTAL	5,211	100.0%	5,233	100.0%	5,214	100.0%



For-Profit Part of All U.S. Hospitals Grows by Nearly a Quarter Since 2008

- From 2008 to 2013, the for-profit segment of the hospital market was the only ownership type to grow (23.3%). The total number of such hospitals increased, to 1,054 from 855.
- Conversely, the numbers of not-for-profit (-2.9%) and government (-3.6%) hospitals fell during this period. Not-for-profit hospitals still accounted for the largest share of all hospitals in 2013 (57.7%).

TOTAL NUMBER OF HOSPITALS, BY OWNERSHIP TYPE, 2008-2013¹



Data source: IMS Health © 2015

Key Takeaway

Given sluggish trends in hospital construction over the past several years (see page 6), the significant increase in the number of for-profit hospitals in the five-year period from 2008 to 2013 appears to have been the result of their acquisition of not-for-profit facilities. The latter have been hesitant historically to pursue mergers,³ but severe market conditions may have impacted the trend.

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals and are effective as of end-of-year 2013. Psychiatric, rehabilitation and children's hospitals are excluded.

² Severity is approximated by the case mix index (CMI), which is a statistical measure of the average amount of resources consumed per Medicare inpatient case at a hospital. Hospitals that tend to treat more resource-intensive (i.e., severe) cases will have a higher calculated CMI.

³ Burgdorfer, R., et al. (2012). Current Trends in Hospital Mergers and Acquisitions. *Juniper Advisory*. Retrieved from <http://www.juniperadvisory.com/current-trends-in-hospital-mergers-and-acquisitions-log-in-required/>

DEMOGRAPHICS



CHRONIC DISEASE

Outpatient Case Counts Climb for 11 Disease States

- From 2012 to 2013, outpatient (OP) case counts per hospital rose for 11 of 12 profiled disease states; depression was the exception, with OP case counts falling, to 750.3 from 761.0.
- During this period, the numbers of inpatient cases per hospital decreased for nine of these disease states, but increased for depression (to 350.4), osteoarthritis (176.7) and stroke (180.3).

NUMBERS OF INPATIENT AND OUTPATIENT CASES PER HOSPITAL¹

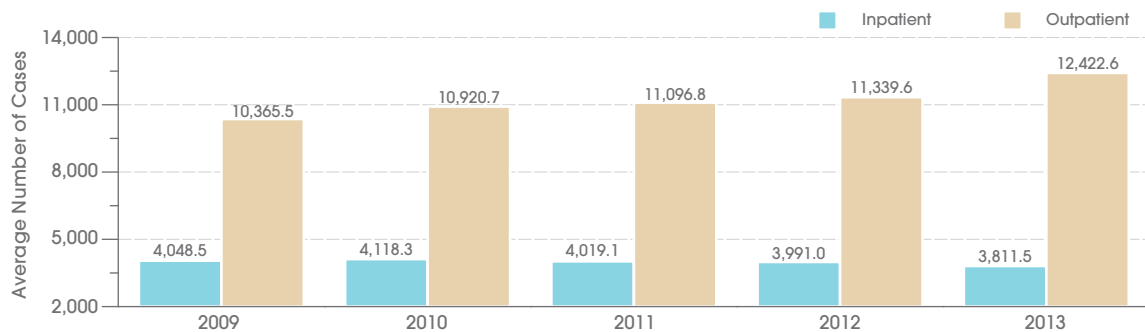
DISEASE STATE	Inpatient Cases		Outpatient Cases	
	2012	2013	2012	2013
Acute Coronary Syndromes (ACS)	81.2	74.7	51.5	54.2
Angina	38.4	33.7	146.7	150.6
Asthma	447.8	433.7	2,047.9	2,249.0
Breast Cancer	41.7	39.8	814.5	954.2
Depression	342.3	350.4	761.0	750.3
Diabetes Mellitus	1,249.3	1,245.5	5,748.0	6,435.5
Hypercholesterolemia	245.8	228.0	1,664.3	1,671.3
Hypertension	1,938.6	1,851.9	8,262.1	8,805.3
Osteoarthritis	171.8	176.7	459.6	584.4
Prostate Cancer	41.0	40.2	491.1	511.1
Rheumatoid Arthritis	74.0	73.2	363.3	409.9
Stroke	176.4	180.3	358.0	424.9

LOCAL SPOTLIGHT

Hypertension Outpatient Case Counts Climb in Florida, as Inpatient Case Counts Drop

- The average number of OP hypertension cases in Florida increased 19.8%, to 12,422.6 in 2013 from 10,365.5 in 2009. By comparison, the national average rose, to 8,805.3 from 6,554.2.
- After rising 1.7% from 2009 (4,048.5) to 2010 (4,118.3), average inpatient hypertension case counts in Florida fell each year from 2011 (4,019.1) to 2013 (3,811.5).

NUMBERS OF INPATIENT AND OUTPATIENT HYPERTENSION CASES PER HOSPITAL, FLORIDA, 2009-2013



Data source: IMS Health © 2015

Key Takeaway

That outpatient case counts rose in recent years across almost all the common disease states listed should perhaps come as little surprise, given the emphasis in health care on reducing admissions and shifting care to less costly settings. A coincident drop in inpatient admissions count would also be expected. The challenge for providers will be to sustain these trends, which likely means increasing coordinated prevention efforts to help patients minimize chronic disease progression.

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals and are effective as of end-of-year 2013. Psychiatric, rehabilitation and children's hospitals are excluded.



CHRONIC DISEASE

Younger Patients Account for Rising Shares of IP Cases

- The percentages of all inpatient (IP) cases accounted for by patients aged 15–64 increased for eight of the nine profiled disease states between 2012 and 2013 (ACS excepted).
- The age 65-and-over portions of IP cases declined for all nine disease states, but were still the highest, by age group, in 2013 for seven (asthma and depression excepted).

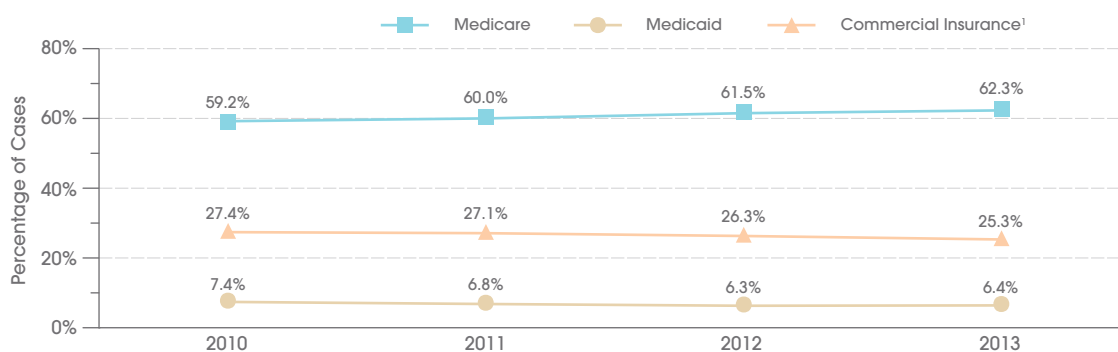
PERCENTAGE OF INPATIENT CASES, 2013

	ACS	Angina	Asthma	Depression	Diabetes Mellitus	Hypercholesterolemia	Hypertension	Osteoarthritis	Stroke
AGE									
0–14	0.0%	0.0%	10.4%	3.1%	0.4%	0.1%	0.1%	0.0%	0.2%
15–44	4.2	4.9	31.6	45.0	11.6	6.5	9.2	2.3	4.3
45–64	41.8	36.3	32.0	36.5	37.2	35.6	36.9	41.4	27.8
65+	54.0	58.8	26.0	15.3	50.8	57.9	53.8	56.2	67.7
GENDER									
Male	61.6%	56.8%	33.9%	43.8%	49.3%	48.8%	46.3%	39.3%	49.8%
Female	38.4	43.2	66.1	56.2	50.7	51.2	53.7	60.7	50.2
PAYER									
Medicare	61.5%	65.5%	35.8%	35.7%	61.3%	62.3%	60.0%	59.0%	70.6%
Medicaid	8.0	7.7	26.3	24.8	11.6	6.4	9.4	3.5	6.2
Commercial Insurance ¹	22.5	19.8	28.0	25.8	18.8	25.3	22.1	32.3	16.4

Commercial, Medicaid Hypercholesterolemia Inpatient Case Shares Decrease

- The commercial (down, to 25.3%) and Medicaid (down, to 6.4%) shares of all inpatient hypercholesterolemia cases declined between 2010 and 2013.
- Meanwhile, Medicare accounted for a larger percentage of all hypercholesterolemia inpatient cases, expanding its share moderately, to 62.3% in 2013 from 59.2% in 2010.

PERCENTAGE OF HYPERCHOLESTEROLEMIA INPATIENT CASES, BY PAYER, 2010–2013



Data source: IMS Health © 2015

Key Takeaway

A decrease in the shares of cases for patients age 65 and over who were admitted with any of the nine common disease states profiled from 2012 to 2013 reversed the trend from 2011 to 2012, when their percentages increased across the board. Although the portion of the overall population age 65 and over has grown, and will continue to do so over the next couple decades, wellness and disease management efforts can lead to further reductions in their inpatient utilization rates.

¹ Includes HMOs, PPOs, point-of-service plans and exclusive provider organizations.



CHRONIC DISEASE

Three in 10 Hypertension Patients Have Hyperlipidemia

- Notable shares of inpatients with hypertension (30.0%), acute coronary syndromes (19.7%) or diabetes mellitus (11.5%) had a concomitant diagnosis of unspecified hyperlipidemia in 2013.
- Hyperlipidemia percentages increased for inpatients with a primary diagnosis of either acute coronary syndromes (from 18.9%) or hypertension (from 29.5%) from 2012 to 2013.

MOST COMMON CONCOMITANT DIAGNOSES FOR INPATIENTS WITH ANY OF THREE PRIMARY DIAGNOSES, BY ICD-9 CODE

ICD-9 CODE		2012	2013
ACUTE CORONARY SYNDROMES			
401.9	Unspecified essential hypertension	26.6%	26.7%
272.4	Other and unspecified hyperlipidemia	18.9	19.7
250.00	Type 2 (non-insulin dependent type) or unspecified type diabetes mellitus without mention of complication, not stated as uncontrolled	11.2	11.3
414.01	Coronary atherosclerosis of native coronary artery	8.6	9.6
530.81	Esophageal reflux	6.4	6.6
HYPERTENSION			
272.4	Other and unspecified hyperlipidemia	29.5%	30.0%
250.00	Type 2 (non-insulin dependent type) or unspecified type diabetes mellitus without mention of complication, not stated as uncontrolled	19.3	19.7
414.01	Coronary atherosclerosis of native coronary artery	13.5	13.6
305.1	Nondependent tobacco use disorder	12.3	12.5
786.59	Other chest pain	11.0	9.8
DIABETES MELLITUS			
401.9	Unspecified essential hypertension	19.2%	18.6%
584.9	Unspecified acute renal failure	11.1	12.0
272.4	Other and unspecified hyperlipidemia	11.5	11.5
357.2	Polyneuropathy in diabetes	8.1	8.6
707.15	Ulcer of other part of foot	8.0	8.4

Nearly 17% of Acute Coronary Syndromes Inpatients Undergo Heart Catheterization

- In 2013, one in six (16.6%) inpatients with a primary diagnosis of acute coronary syndromes underwent a left heart cardiac catheterization, a share that increased slightly from 15.3% in 2012.
- Despite a dip in the share of primary diabetes mellitus inpatients to receive it, hemodialysis replaced venous catheterization as the most common procedure for these patients in 2013.

MOST COMMON PROCEDURES FOR INPATIENTS WITH ANY OF EIGHT PRIMARY DIAGNOSES, BY ICD-9 CODE

PRIMARY DIAGNOSIS	ICD-9 Code	Procedure	2012	2013
Acute Coronary Syndromes (ACS)	37.22	Left heart cardiac catheterization	15.3%	16.6%
Angina	88.56	Coronary arteriography using two catheters	22.0	23.2
Breast Cancer	85.43	Unilateral extended simple mastectomy	24.5	23.4
Diabetes Mellitus	39.95	Hemodialysis	6.8	6.7
Hypertension	88.72	Diagnostic ultrasound of heart	4.4	4.6
Osteoarthritis	81.54	Total knee replacement	80.3	81.8
Prostate Cancer	17.42	Laparoscopic robotic assisted procedure	45.5	46.2
Stroke	00.40	Procedure on single vessel	16.0	15.4

Data source: IMS Health © 2015

DEMOGRAPHICS

Ratio of Total FTE Staff Members to Occupied Bed Contracts

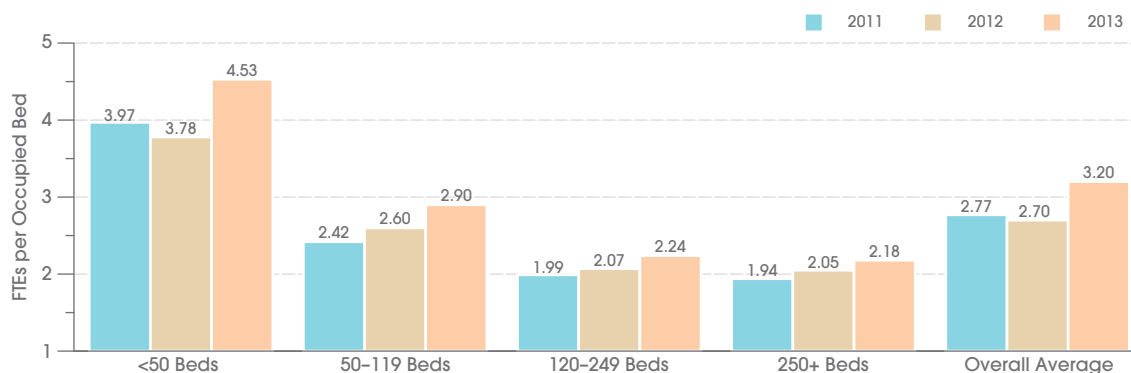
- From 2011 to 2013, the ratio of total full-time-equivalent (FTE) staff members per occupied hospital bed declined 8.9%. The physician-assistant ratio decreased most (-10.0%).
- Among the profiled FTE staffing ratios that increased from 2011 to 2013, physical therapists (17.6%), registered nurses (15.5%) and registered pharmacists (14.3%) recorded the largest gains.

HOSPITAL STAFFING RATIOS ¹			
FTEs PER OCCUPIED BED	2011	2012	2013
Staff Physicians	0.38	0.35	0.41
Resident Physicians	0.35	0.34	0.37
Registered Nurses	2.77	2.70	3.20
Licensed Practical Nurses	0.66	0.59	0.64
Physician Assistants	0.20	0.15	0.18
Registered Pharmacists	0.14	0.14	0.16
Occupational Therapists	0.09	0.08	0.10
Inhalation Therapists	0.24	0.22	0.25
Physical Therapists	0.17	0.17	0.20
All Other Employees	7.13	6.91	7.11
TOTAL FTE STAFF²	12.13	11.65	11.05

Number of Registered Nurses per Occupied Bed Rises at Hospitals, Regardless of Size

- The ratio of FTE registered nurses per occupied bed, by number of beds, increased in hospitals of all sizes between 2011 and 2013. Those with 50–119 beds recorded the largest rise (19.8%).
- Hospitals with fewer than 50 beds had the highest ratio of FTE registered nurses per occupied bed in 2011 (3.97), 2012 (3.78) and 2013 (4.53). Each year, this ratio topped the overall average.

NUMBER OF FTE REGISTERED NURSES PER OCCUPIED BED, BY NUMBER OF BEDS



Data source: IMS Health © 2015

Key Takeaway

Many rural areas report a shortage of health care providers, particularly in primary care.³ Over the last decade, a number of federal programs designed to improve access to and reduce the costs of care in rural areas have focused on using registered nurses, as well as advanced practice registered nurses, to deliver care, possibly accounting for high nurse-to-occupied bed ratios in small hospitals.

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals and are effective as of end-of-year 2013. Psychiatric, rehabilitation and children’s hospitals are excluded.

² Column totals represent the average of each facility’s total full-time-equivalent employees. Therefore, the totals cannot be derived by adding the numbers in the columns.

³ Gorski, M. (2011). Advancing Health in Rural America: Maximizing Nursing’s Impact. AARP Public Policy Institute. Retrieved from <http://campaignforaction.org/sites/default/files/rural-health-nursing-gorski.pdf>

Admission Counts Decline Across All Hospital Ownership Types

- Facility admissions per hospital counts dipped overall (to 7,107 in 2013 from 7,143 in 2012) and regardless of hospital ownership type; patient-day counts also fell, to 34,944 from 35,791.
- Meanwhile, outpatient visits per day counts increased for all hospitals, to 228.3 from 226.4. Emergency department (ED) visits per day counts also rose, to 77.3 in 2013 from 76.6 in 2012.

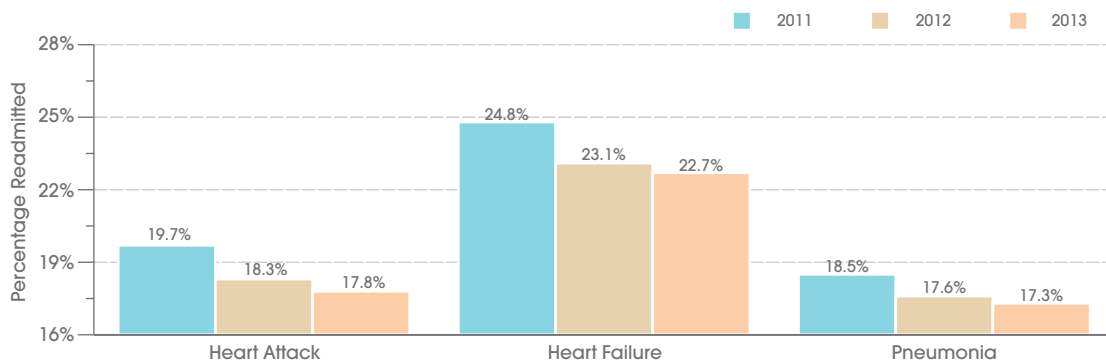
HOSPITAL SERVICE VOLUME, BY OWNERSHIP TYPE

SERVICE VOLUME	Not-for-Profit		For-Profit		Government		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013	2012	2013
Total Facility Admissions	8,855	8,805	5,659	5,594	4,097	4,096	7,143	7,107
Total Facility Patient-Days	44,169	43,205	25,891	24,893	23,060	22,593	35,791	34,944
Outpatient Visits/Day	287.5	289.9	121.3	123.2	161.9	165.5	226.4	228.3
Emergency Room Visits/Day	89.8	90.1	68.4	69.8	50.1	51.1	76.6	77.3

Readmission Rates for Heart Attack, Heart Failure and Pneumonia Continue to Fall

- Thirty-day hospital readmission rates for heart attack, heart failure and pneumonia all declined from 2011 to 2013. The rate was highest, among the three conditions, for heart failure (22.7%).
- The 30-day readmission rate for heart attack cases dropped, to 17.8% in 2013 from 19.7% in 2011; the rate of pneumonia cases was also down, to 17.3% from 18.5%.

30-DAY HOSPITAL READMISSION RATES, NATION



Data source: IMS Health © 2015

Key Takeaway

A drop in inpatient admission counts at not-for-profit, for-profit and government hospitals from 2012 to 2013 was accompanied by an increase in outpatient visit counts. The two seem indicative of progress toward the goal of shifting care to less intensive and expensive settings. Meanwhile, readmission rates continue to fall for heart attack, heart failure and pneumonia cases. However, ED visits per day increased slightly overall, which may point to ingrained patient behavior regarding treatment settings or the need for earlier interventions and continued coordination of care.

UTILIZATION

Outpatient Share of Surgeries Is Up at Not-for-Profit Hospitals

- The outpatient shares of all surgeries rose to 69.8% at not-for-profit and 77.7% at government facilities, but remained at 70.9% overall for hospitals nationwide in 2013.
- From 2012 to 2013, the ratio of inpatient surgeries per staffed bed (11.8) was unchanged for hospitals across the nation, as was the ratio of outpatient surgeries per day (10.6).

HOSPITAL SERVICE VOLUME, BY OWNERSHIP TYPE

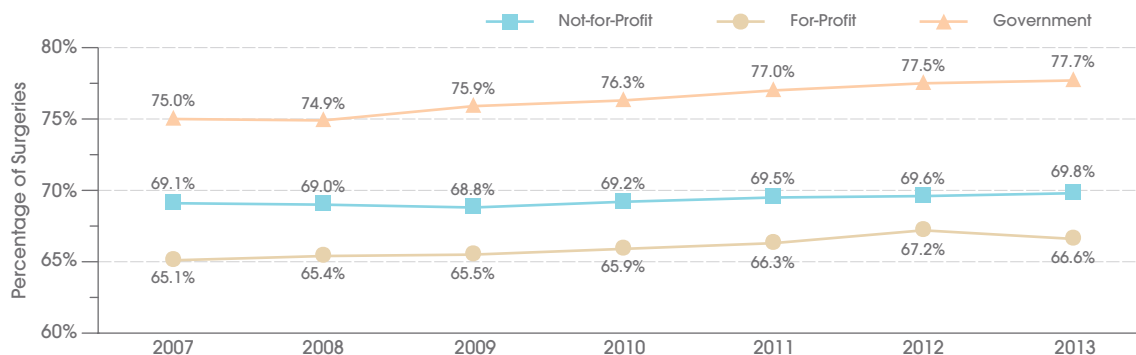
SERVICE VOLUME	Not-for-Profit		For-Profit		Government		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013	2012	2013
Inpatient Surgeries/Staffed Bed	12.2	12.2	14.7	14.9	7.9	7.9	11.8	11.8
Outpatient Surgeries/Day	12.8	12.7	9.3	9.3	6.0	6.1	10.6	10.6
Outpatient Surgeries as a Percentage of Total Surgeries	69.6%	69.8%	67.2%	66.6%	77.5%	77.7%	70.9%	70.9%



Outpatient Percentage of All Surgeries Falls at For-Profit Hospitals

- The ratio of outpatient surgeries to all surgeries declined at for-profit hospitals, to 66.6% in 2013 from 67.2% in 2012. Government and not-for-profit facilities recorded slight increases.
- Meanwhile, the ratio of inpatient surgeries per staffed bed rose at for-profit facilities, to 14.9 in 2013 from 14.7 in 2012, and remained flat at government and not-for-profit hospitals.

OUTPATIENT SURGERIES AS A PERCENTAGE OF TOTAL SURGERIES, 2007-2013



Data source: IMS Health © 2015

Key Takeaway

The share of all surgeries that were performed in the outpatient setting fell at for-profit hospitals from 2012 to 2013, after rising at least fractionally each year since 2007. This was accompanied by increased inpatient surgeries per staffed bed shares at these facilities during the same year. Whether this represents more than a short-term deviation in the effort to shift more patients to the outpatient setting remains to be seen, as it may only indicate a temporarily higher rate of cases requiring more complex surgical interventions.



CHRONIC DISEASE

ALOS Is Shorter at Non-Profit Hospitals for Five of 10 Diseases

- Average length of stay (ALOS) per inpatient case was lower at not-for-profit facilities than for-profits in five of the 10 profiled chronic diseases in 2013, most notably for diabetes (4.1 days vs. 4.7).
- However, for-profit hospitals trimmed ALOS for six of these diagnoses from 2012 to 2013, whereas not-for-profit facilities reduced this measure for just four during that year.

AVERAGE LENGTH OF STAY (DAYS) PER INPATIENT CASE, 2013

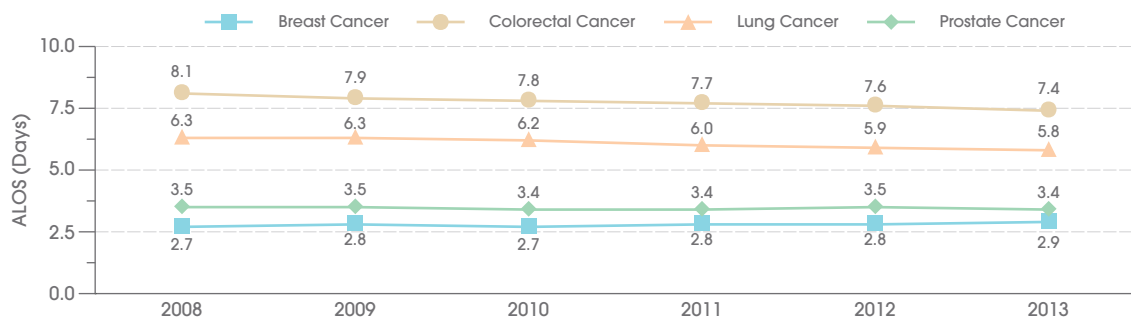
	ACS	Angina	Asthma	Depression	Diabetes Mellitus	Hypercholesterolemia	Hypertension	Rheumatoid Arthritis	Osteoarthritis	Stroke
SIZE										
<50 Beds	1.8	2.0	3.0	5.3	3.8	6.0	2.6	3.2	3.3	3.6
50-119 Beds	1.8	1.9	3.4	5.7	4.1	2.3	2.3	3.3	3.2	3.7
120-249 Beds	1.9	1.9	3.4	5.8	4.4	1.9	2.4	3.5	3.2	4.1
250+ Beds	2.2	2.3	3.4	6.5	4.8	3.3	2.6	3.8	3.2	4.7
OWNERSHIP TYPE										
Not-for-Profit	1.9	2.2	3.3	5.9	4.1	3.1	2.5	3.6	3.1	3.9
For-Profit	2.0	1.9	3.5	5.8	4.7	2.0	2.4	3.5	3.2	4.3
Government	2.1	2.0	3.1	6.5	4.1	3.3	2.7	3.6	3.5	4.1
MHS OWNERSHIP										
MHS Hospitals	2.0	1.9	3.3	6.0	4.3	2.4	2.4	3.5	3.1	4.1
Non-MHS Hospitals	2.0	2.6	3.2	5.9	4.1	5.2	2.8	3.7	3.4	3.9
ALL HOSPITALS	2.0	2.1	3.3	6.0	4.2	3.0	2.5	3.6	3.2	4.0



ALOS Declines for Colorectal, Lung and Prostate Cancer Inpatient Treatment

- Hospitals nationally shortened ALOS per inpatient case from 2012 to 2013 for three of the four cancer types shown; ALOS for colorectal cancer fell five times annually from 2008 to 2013.
- A 0.1-day increase in the national ALOS per inpatient breast cancer case from 2012 (2.8 days) to 2013 (2.9 days) pushed this measure to its highest point in the six years profiled.

AVERAGE LENGTH OF STAY (DAYS) PER INPATIENT CASE, 2008-2013



Data source: IMS Health © 2015

Key Takeaway

As a utilization measure that often tracks with charges, ALOS has been closely monitored by providers and payers alike. Yet steady decreases in ALOS have not corresponded to declines in costs: overall length of stay nationally dropped by 0.2%, on average, each year from 2003 to 2008, and again from 2008 to 2012, even as hospital costs rose 1.8% each year from 2003 to 2012.¹

¹ Weiss, A., and Elixhauser, A. (2014). Overview of Hospital Stays in the United States, 2012. Agency for Healthcare Research and Quality. Retrieved from <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb180-Hospitalizations-United-States-2012.pdf>



CHRONIC DISEASE

Readmit Rates Are Low for Type 2 Patients With Insulin Rx's

- From 2011 to 2013, readmission rates for Type 2 diabetes inpatients were lower in all regions for those who received any insulin products than for those on three non-insulin products.
- At the same time, three-day readmission rates were lower for such patients on insulin pens than for those on insulin vials in all but two regions. This was true in three regions for 30-day rates.

READMISSION RATES FOR PATIENTS DIAGNOSED WITH TYPE 2 DIABETES, BY TYPE OF THERAPY, 2011–2013^{1,2}

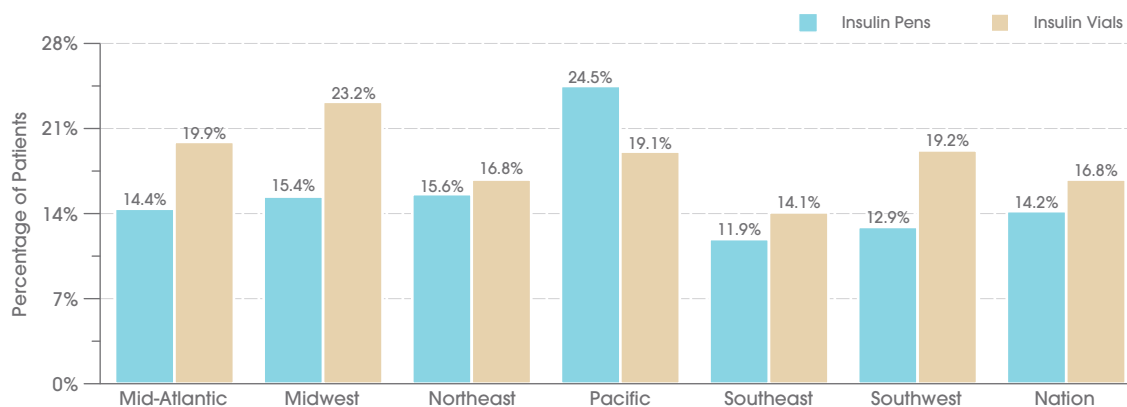
REGION	Three-Day Readmissions				30-Day Readmissions			
	Any Insulin Products	Insulin Pens	Insulin Vials	Three Non-Insulin Products	Any Insulin Products	Insulin Pens	Insulin Vials	Three Non-Insulin Products
Mid-Atlantic	10.2%	7.7%	10.4%	13.9%	19.4%	16.1%	19.0%	25.0%
Midwest	9.4	5.5	9.6	11.4	19.4	15.2	19.4	21.6
Northeast	10.2	6.0	10.5	13.8	20.2	15.2	20.1	24.9
Pacific	8.4	6.8	8.2	11.7	16.5	15.5	15.5	22.0
Southeast	10.0	9.9	9.3	13.9	18.9	18.5	17.6	23.6
Southwest	9.7	11.8	7.2	14.8	17.9	19.6	14.8	24.7
NATION	9.9%	9.0%	9.3%	13.6%	18.9%	17.6%	17.8%	23.9%

LOCAL SPOTLIGHT

Likelihood of Emergency Department Visits Varies by Region and Type of Insulin Therapy

- From 2011 to 2013, Type 2 diabetes patients who received insulin pens were less apt than those who received vials to have at least one emergency department (ED) visit in six regions.
- The Southeast region had the lowest percentages of Type 2 diabetes patients dispensed either insulin pens (11.9%) or insulin vials (14.1%) who had at least one ED visit.

PERCENTAGE OF TYPE 2 DIABETES PATIENTS WITH AT LEAST ONE EMERGENCY DEPARTMENT VISIT, INSULIN PENS AND VIALS, 2011–2013³



Data source: IMS Health © 2015

Key Takeaway

Among the measures Medicare uses to rate Medicare Advantage plans—and determine reimbursement—are readmission rates. Hence, health plans are likely to track the efficacy, side-effects, adherence rates and other measures associated with various medications.

¹ Figures reflect the percentage of Type 2 diabetes patients who were readmitted to an inpatient facility in the three-year period between 2011 and 2013. These percentages include patients who filled multiple prescriptions. Readmissions are not necessarily due to Type 2 diabetes.
² Patients who filled prescriptions for any insulin products may have also filled prescriptions for products in the non-insulin category, and vice versa.
³ Figures reflect the percentages of Type 2 diabetes patients who visited an emergency department between 2011 and 2013. These include patients who filled multiple prescriptions.

Occupancy Falls for MHS and Non-MHS CCUs and ICUs Alike

- Regardless of MHS ownership, occupancy for cardiac care units (CCUs) and intensive care units (ICUs) alike fell between 2011 and 2013. Occupancy was highest in MHS-hospital CCUs.
- Even as occupancy fell, patient-days per hospital rose during this time, at both MHS and non-MHS CCUs, as well as at non-MHS ICUs, but edged down slightly at MHS ICUs.

CCU UTILIZATION, BY MHS OWNERSHIP

SERVICE VOLUME	MHS Hospitals			Non-MHS Hospitals			ALL HOSPITALS		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Average CCU Occupancy	65.4%	64.7%	64.2%	63.9%	60.6%	61.0%	65.2%	64.1%	63.8%
Average CCU Patient-Days per Hospital	3,854	3,973	3,931	2,758	2,606	2,761	3,690	3,768	3,775

ICU UTILIZATION, BY MHS OWNERSHIP

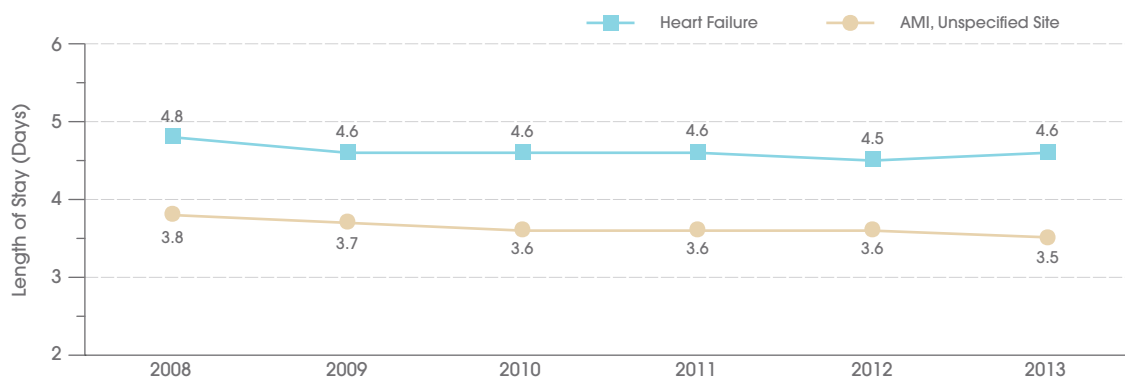
SERVICE VOLUME	MHS Hospitals			Non-MHS Hospitals			ALL HOSPITALS		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Average ICU Occupancy	62.2%	60.6%	59.4%	53.8%	52.0%	52.5%	59.8%	58.2%	57.6%
Average ICU Patient-Days per Hospital	4,107	4,011	3,970	2,227	2,219	2,250	3,537	3,499	3,506

QUALITY SPOTLIGHT

Hospital ALOS for AMI Continues Gradual Decline, While ALOS for Heart Failure Rises

- Hospitals slowly reduced their average lengths of stay (ALOS) per inpatient case of acute myocardial infarction, unspecified (AMI) in 2013, to 3.5 days from 3.8 days in 2008.
- Although still below the 2008 mean of 4.8 days, ALOS per inpatient heart failure case edged up to 4.6 days in 2013 (from 4.5 in 2012), marking the first annual increase in the six years profiled.

AVERAGE LENGTH OF STAY (DAYS) PER CASE, 2008-2013



Data source: IMS Health © 2015

Key Takeaway

With the Affordable Care Act linking hospital Medicare reimbursement to quality measures like readmission rates for key conditions, including AMI and heart failure, hospitals may be shifting patients to more appropriate settings of care, such as non-acute centers, contributing in part to lower occupancy rates at CCUs and ICUs. Yet those patients who do require admissions to CCU/ICU facilities may require even more resources, as evidenced by the continued increase in patient-days.

Cost Ratios Rise for Hospitals, Regardless of MHS Ownership

- From 2012 to 2013, all six profiled cost ratios increased in both MHS-owned and non-MHS-owned hospitals. For the latter, this reversed the trend in 2012, when most ratios decreased.
- In 2013, only salary costs (\$61,657) and total costs per FTE employee (\$170,189) were higher in MHS-owned hospitals than in non-MHS-owned hospitals (\$52,481 and \$130,414).

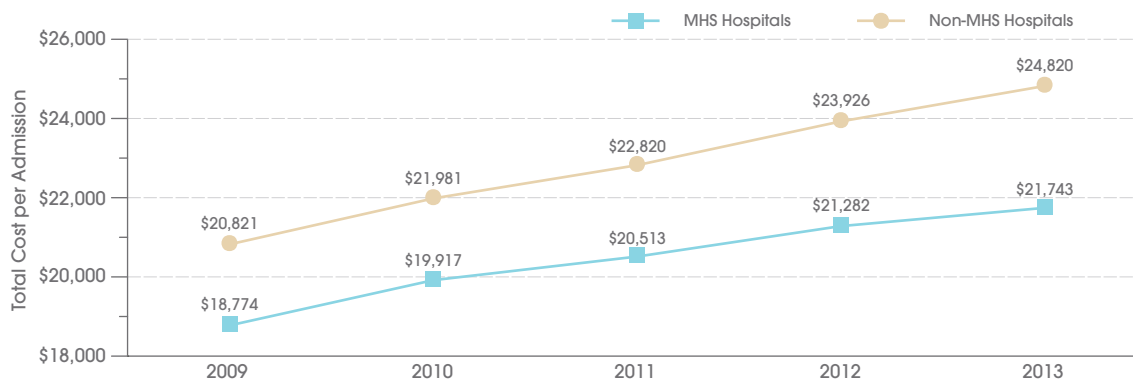
OPERATING EXPENSES PER HOSPITAL, BY MHS OWNERSHIP						
COST MEASURE	MHS Hospitals		Non-MHS Hospitals		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013
Total Costs/Occupied Bed	\$1,762,983	\$1,826,359	\$1,984,432	\$2,124,223	\$1,847,392	\$1,932,959
Total Costs/Admission	21,282	21,743	23,926	24,820	22,286	22,836
Total Costs/Patient-Day	4,934	5,119	5,545	6,023	5,167	5,445
Labor Costs/Patient-Day	2,046	2,113	2,283	2,407	2,134	2,214
Salary Costs/FTE	61,157	61,657	51,764	52,481	57,424	58,206
Total Costs/FTE	168,664	170,189	128,667	130,414	152,715	155,137

Total Costs per Admission Increase Faster Among Non-MHS-Owned Hospitals

LONG-TERM TREND

- Although total costs per admission climbed from 2009 to 2013 for both MHS-owned and non-MHS-owned hospitals, the rate was faster in the latter (19.2%) than it was in the former (15.8%).
- In 2013, total costs per admission in MHS-owned hospitals were 14.2% lower than those in non-MHS-owned hospitals. This disparity grew 3.3 percentage points since 2009.

TOTAL COSTS PER ADMISSION, BY MHS OWNERSHIP, 2009-2013



Data source: IMS Health © 2015

Key Takeaway

The growth in consumer spending on health care nationally was at historically low averages from 2011 to 2013, as was such spending on hospital care.¹ Although many attribute the slow spending partially to the protracted recovery of the U.S. economy, reimbursement and structural changes established by health care reform also played a role.¹ If consumer spending remains low, but the profiled hospital costs continue to rise, hospitals may need to reduce their expenditures.

¹ American Hospital Association. (2014). Issue Brief: Low Spending Growth Persists Through 2013. Retrieved from <http://www.aha.org/research/policy/finfactsheets.shtml>



CHRONIC DISEASE

Inpatient Charges Decline for Most Profiled Disease States

- From 2011 to 2013, inpatient charges per case declined for eight of 11 profiled disease states, most notably for stroke (-22.1%) and diabetes mellitus (-20.3%). Such charges rose 10.7% for hypercholesterolemia and 7.7% for osteoarthritis.
- Per-case inpatient charges were highest in 2013 for osteoarthritis (\$54,336), followed by prostate cancer (\$44,210). The latter supplanted breast cancer (\$40,543) in 2013 as the disease state with the second-highest charges.

INPATIENT CHARGES PER CASE¹

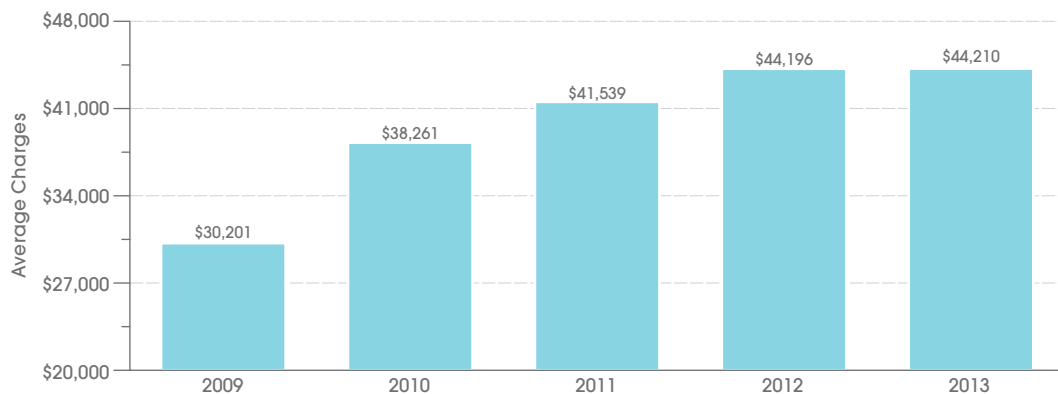
DISEASE STATE	2011	2012	2013
Acute Coronary Syndromes (ACS)	\$25,930	\$24,330	\$22,558
Angina	22,811	23,672	22,186
Asthma	26,131	26,725	22,010
Breast Cancer	40,664	45,542	40,543
Depression	23,552	23,143	22,649
Diabetes Mellitus	36,624	38,672	29,192
Hypercholesterolemia	36,925	40,609	40,870
Hypertension	20,574	20,992	18,825
Osteoarthritis	50,441	52,352	54,336
Prostate Cancer	41,539	44,196	44,210
Stroke	40,177	41,987	31,302



Inpatient Charges per Prostate Cancer Case Climb Nearly 50% Since 2009

- From 2009 (\$30,201) to 2013 (\$44,210), inpatient charges per prostate cancer case climbed 46.4%. The steepest year-over-year increase (26.7%) occurred from 2009 to 2010.
- Yet annual growth in inpatient charges for prostate cancer cases has tapered off since 2010. Subsequent rates of increase were 8.6% in 2011, 6.4% in 2012 and less than 1% in 2013.

INPATIENT CHARGES PER PROSTATE CANCER CASE, 2009-2013¹



Data source: IMS Health © 2015

Key Takeaway

The decline in per-case inpatient charges for a number of disease states could indicate that hospitals are succeeding at channeling more patients to other settings for treatment, when appropriate, in an effort to reduce the costs of care. However, inpatient charges per case often are influenced by the introduction of new procedures and can fluctuate significantly.

¹ Charge data are per case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.



CHRONIC DISEASE

Medicare Reimbursement Lags Charges for Some Diseases

- Average inpatient Medicare charges increased for all 11 profiled disease states in 2013; average Medicare reimbursement rose for seven. Reimbursement fell for asthma, hypertension, prostate cancer and rheumatoid arthritis.
- Despite the Medicare payment hikes for some disease states, the percentages of Medicare charges reimbursed fell for all but one (depression, which increased 1.0 percentage point) from 2012 to 2013.

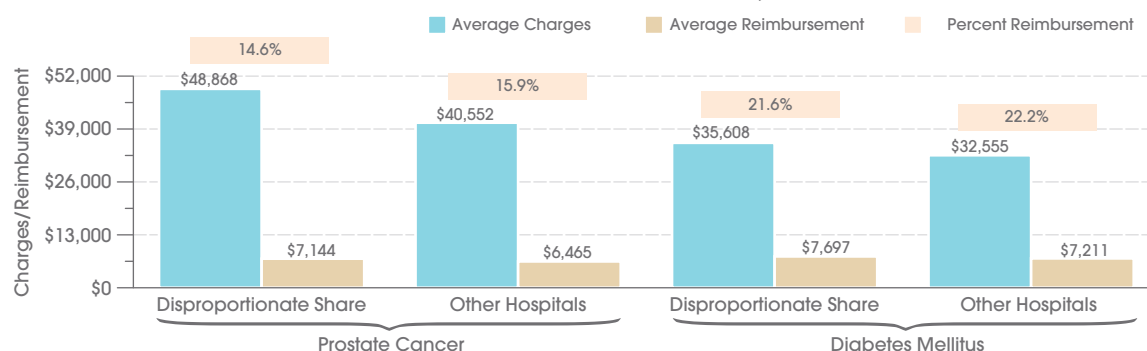
MEDICARE REIMBURSEMENT OF INPATIENT CHARGES¹

DISEASE STATE	Average Inpatient Medicare Charges		Average Inpatient Medicare Reimbursement		% of Inpatient Medicare Charges Reimbursed	
	2012	2013	2012	2013	2012	2013
Acute Coronary Syndromes (ACS)	\$20,007	\$26,551	\$3,626	\$4,074	18.1%	15.3%
Angina	18,912	22,539	3,343	3,441	17.7	15.3
Asthma	21,094	27,672	5,254	5,170	24.9	18.7
Breast Cancer	30,783	40,100	5,935	6,258	19.3	15.6
Depression	21,918	23,491	6,446	7,139	29.4	30.4
Diabetes Mellitus	25,960	35,003	7,052	7,600	27.2	21.7
Hypertension	16,165	21,898	3,509	3,496	21.7	16.0
Osteoarthritis	50,734	54,657	11,016	11,523	21.7	21.1
Prostate Cancer	38,197	47,297	7,057	7,016	18.5	14.8
Rheumatoid Arthritis	47,557	53,211	10,849	10,164	22.8	19.1
Stroke	27,137	35,038	6,995	7,257	25.8	20.7

Some Medicare Reimbursement Rates for DSHs Trail Those for Other Hospitals

- In 2013, the percentages of charges that were reimbursed by Medicare for prostate cancer and diabetes mellitus were less for disproportionate share hospitals (DSHs) than for other hospitals.
- The reimbursement rate for prostate cancer was 14.6% in DSHs versus 15.9% in other hospitals. For diabetes mellitus, the shares were 21.6% in DSHs and 22.2% for other hospitals.

MEDICARE REIMBURSEMENT OF INPATIENT PROSTATE CANCER AND DIABETES MELLITUS CHARGES, BY DISPROPORTIONATE SHARE STATUS, 2013¹



Data source: IMS Health © 2015

Key Takeaway

Cuts to Medicare DSH payments were included in the Affordable Care Act based on the assumption that millions of previously uninsured patients would obtain coverage through the law. Many are concerned about the cuts, however, given that 31 million people could remain uninsured as late as 2024. Hence, Congress delayed Medicaid DSH cuts in 2013, phasing them in from 2017 to 2024.²

¹ Charge data are per case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.

² Johnson, S. (2014). ACA Cuts to DSH Payments Could Prove to Be Hurdle for Providers. *Modern Healthcare*. Retrieved from <http://www.modernhealthcare.com/article/20140505/blog/305059996>



CHRONIC DISEASE

Facility Charges for Type 2 Diabetes Patients Rise Nationally

- From 2012 to 2013, average annual hospital outpatient facility charges for Type 2 diabetes patients rose 2.6% nationally, 6.4% in the West region and 5.4% in the South region.
- Meanwhile, facility charges for such patients treated in the inpatient setting increased in the West (6.3%), South (2.2%) and Northeast (1.5%), but decreased in the Midwest (3.3%).

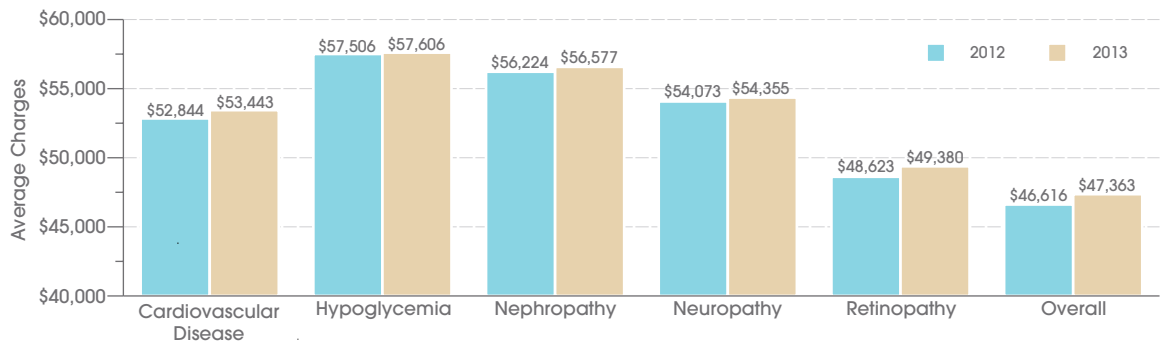
FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY REGION¹

REGION	Hospital Outpatient		Hospital Inpatient	
	2012	2013	2012	2013
West	\$12,229	\$13,008	\$44,767	\$47,607
Midwest	10,274	10,185	41,060	39,725
South	11,214	11,825	42,778	43,736
Northeast	15,426	14,688	66,586	67,614
NATION	\$11,969	\$12,278	\$46,616	\$47,363

IP Facility Charges Are Highest for Type 2 Diabetes Patients With Hypoglycemia

- In 2012 and 2013, average annual inpatient (IP) facility charges for Type 2 diabetes patients, by complication, were highest for hypoglycemia (\$57,506 and \$57,606, respectively).
- Between 2012 and 2013, annual IP facility charges for such patients grew 1.6% for retinopathy, 1.1% for cardiovascular disease and fractionally for the other profiled complications.

INPATIENT FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY TYPE OF COMPLICATION^{1,2}



Data source: IMS Health © 2015

Key Takeaway

Hospitals have higher costs than physician practices because, among other things, they provide 24-hour emergency care and safety-net services, treat more complicated cases and so have significantly more infrastructure to maintain.³ Hospitals attempt to cover these costs with facility fees, which can be charged only by hospitals or hospital-owned outpatient facilities. However, the fees—particularly those associated with outpatient facilities—have come under scrutiny recently, as lawmakers and health care stakeholders seek ways to reduce overall health care costs.

¹ Figures reflect the charges generated by the facilities that delivered care. The data also reflect the amounts charged, not the amounts paid.

² A complication is defined as a patient condition caused by the Type 2 diabetes of the patient. These conditions are a direct result of having Type 2 diabetes. Complications of Type 2 diabetes include, but are not limited to, cardiovascular disease, neuropathy, nephropathy and retinopathy.

³ Worth, T. (2014). Hospital Facility Fees: Why Cost May Give Independent Physicians an Edge. *Medical Economics*. Retrieved from <http://medicaleconomics.modernmedicine.com/medical-economics/content/tags/facility-fees/hospital-facility-fees-why-cost-may-give-independent-ph?page=full>

PHARMACY

Pharmacy Costs per Discharge and per Staffed Bed Are Rising

- In the two years from 2011 (\$1,304) to 2013 (\$1,406), pharmacy costs per discharge grew at all hospitals nationally by nearly 8%. Such costs per staffed bed rose by 10.6% during this time.
- Surgical volume clearly influenced pharmacy costs per staffed bed: hospitals with the highest surgery volumes (10,000 or more) recorded the greatest costs per staffed bed (\$75,964) in 2013.

HOSPITAL PHARMACY EXPENSES, BY SURGICAL VOLUME¹

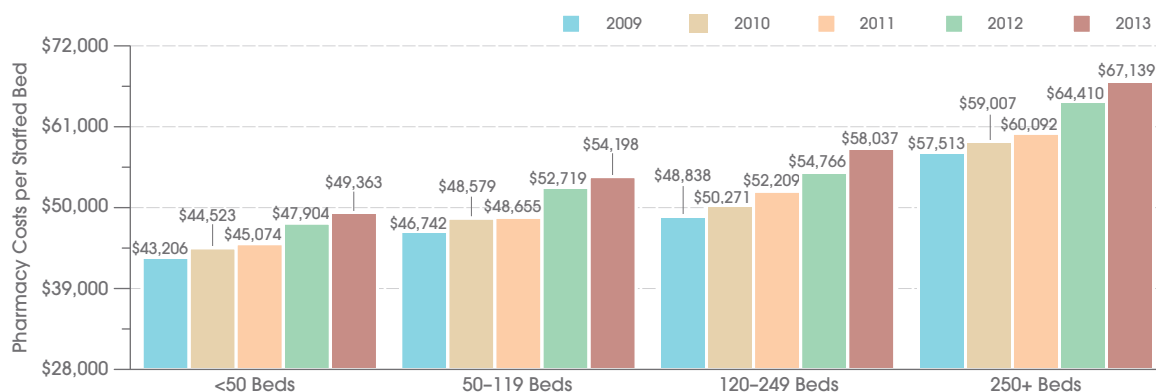
SURGICAL VOLUME	Pharmacy Costs per Discharge			Pharmacy Costs per Staffed Bed		
	2011	2012	2013	2011	2012	2013
No Surgeries	\$1,287	\$1,263	\$1,305	\$33,104	\$31,762	\$33,832
1-999 Surgeries	1,502	1,476	1,509	37,829	40,717	41,422
1,000-1,999 Surgeries	1,340	1,379	1,435	49,926	53,430	56,342
2,000-4,999 Surgeries	1,210	1,303	1,324	52,028	54,677	56,301
5,000-9,999 Surgeries	1,176	1,289	1,360	57,298	61,067	64,562
10,000+ Surgeries	1,331	1,415	1,492	68,609	72,013	75,964
OVERALL AVERAGE	\$1,304	\$1,355	\$1,406	\$50,434	\$53,650	\$55,789

 Hospitals of All Sizes See Double-Digit Growth in Rx Costs per Staffed Bed Over Five Years

LONG-TERM TREND

- From 2009 to 2013, pharmacy costs per staffed bed climbed by at least 14% for hospitals of all sizes, and were highest, by bed size, at hospitals with 250 or more beds in 2013, at \$67,139.
- Although the largest hospitals recorded the highest pharmacy costs per bed, hospitals with between 120 and 249 beds saw the sharpest rise in this cost ratio during these years, at 18.8%.

PHARMACY COSTS PER STAFFED BED, BY SIZE, 2009-2013¹



Data source: IMS Health © 2015

Key Takeaway

That the largest hospitals generated the highest pharmacy costs per staffed bed may be expected, as these facilities tend to attract patients with complex conditions who often require more expensive pharmaceutical therapies and medical interventions. However, these facilities may be able to leverage their size to reduce cost ratios on a per-discharge basis. Indeed, the smallest facilities (those with fewer than 50 beds) had the highest pharmacy costs per discharge in 2013 (data not shown).

¹ Expenses are calculated on a per-facility basis.



CHRONIC DISEASE

PPPY Retail Drug Spending Decreases in Most Classes

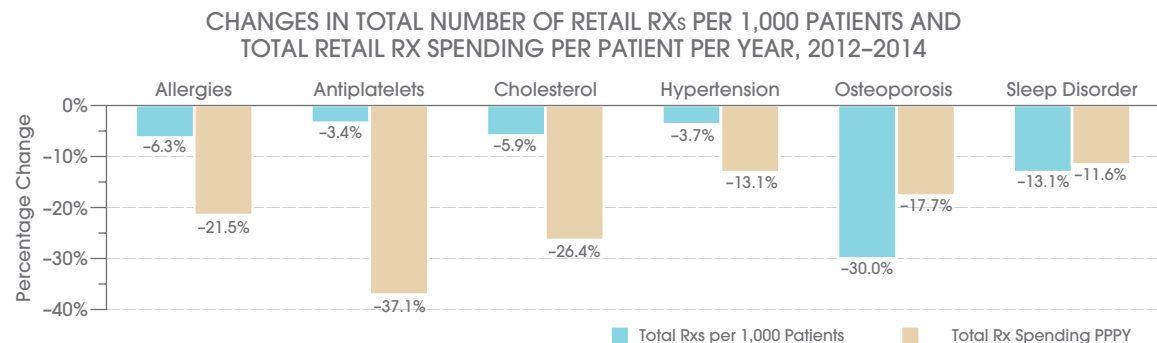
- From midyear 2012 to midyear 2014, per-patient-per-year (PPPY) retail drug spending fell for eight of 12 profiled drug classes (arthritis, diabetes, gastrointestinal and oncology drugs excluded).
- Over this same two-year period, the numbers of retail prescriptions filled per 1,000 patients declined in nine of the 12 drug classes. Asthma, depression and diabetes were the exceptions.

TOTAL NUMBER OF RETAIL RXs PER 1,000 PATIENTS AND TOTAL RETAIL RX SPENDING PER PATIENT PER YEAR¹

DRUG CLASS	Total Rxs per 1,000 Patients			Total Rx Spending per Patient per Year ²		
	2012	2013	2014	2012	2013	2014
Allergies	233.2	221.1	218.6	\$12.87	\$11.17	\$10.10
Antiplatelets	251.3	245.7	242.8	34.79	19.68	21.89
Arthritis	406.0	401.9	402.9	22.33	24.57	28.06
Asthma	549.8	559.3	552.9	74.21	68.20	68.30
Cholesterol	961.4	927.9	905.0	77.19	58.96	56.84
Depression	1,019.0	1,017.2	1,028.2	48.17	43.51	41.31
Diabetes	665.0	660.6	667.1	71.50	79.37	94.43
Gastrointestinal	70.6	67.4	69.2	9.14	9.93	12.15
Hypertension	2,616.7	2,553.9	2,518.9	69.99	66.47	60.84
Oncology	60.5	58.5	58.0	11.05	11.72	12.86
Osteoporosis	89.7	72.1	62.8	7.33	6.42	6.03
Sleep Disorder	243.4	227.5	211.6	9.29	8.57	8.21

Osteoporosis Drugs Record Notable Decline in Prescription Volume per 1,000 Patients

- Of the drug classes for which the number of prescriptions filled per 1,000 patients declined from 2012 to 2014, the largest percentage decrease was for osteoporosis drugs (-30%).
- The drug class that experienced the most significant decrease in total spending PPPY was antiplatelets (-37.1%), followed by cholesterol (-26.4%) and allergy drugs (-21.5%).



Data source: IMS Health © 2015

Key Takeaway

Many factors played a role in reducing drug fill rates by consumers over the last few years, including a rise in the number of uninsured during the recession³ and improved utilization management by hospitals. As more people gain insurance coverage through the Affordable Care Act or by returning to full employment, utilization management will be key to keeping drug fill rates at appropriate levels.

¹ Data are as of midyear 2014 and represent the number/percentages of prescriptions dispensed, by drug class, to all patients.

² The total full price the pharmacy charges the patient for the product, regardless of copayment situation.

³ White, C., and Reschovsky, J. (2012). Great Recession Accelerated Long-Term Decline of Employer Health Coverage. National Institute for Health Care Reform. Retrieved from http://www.nihcr.org/Employer_Coverage

HOSPITALS IN MULTIHOSPITAL SYSTEMS

Background

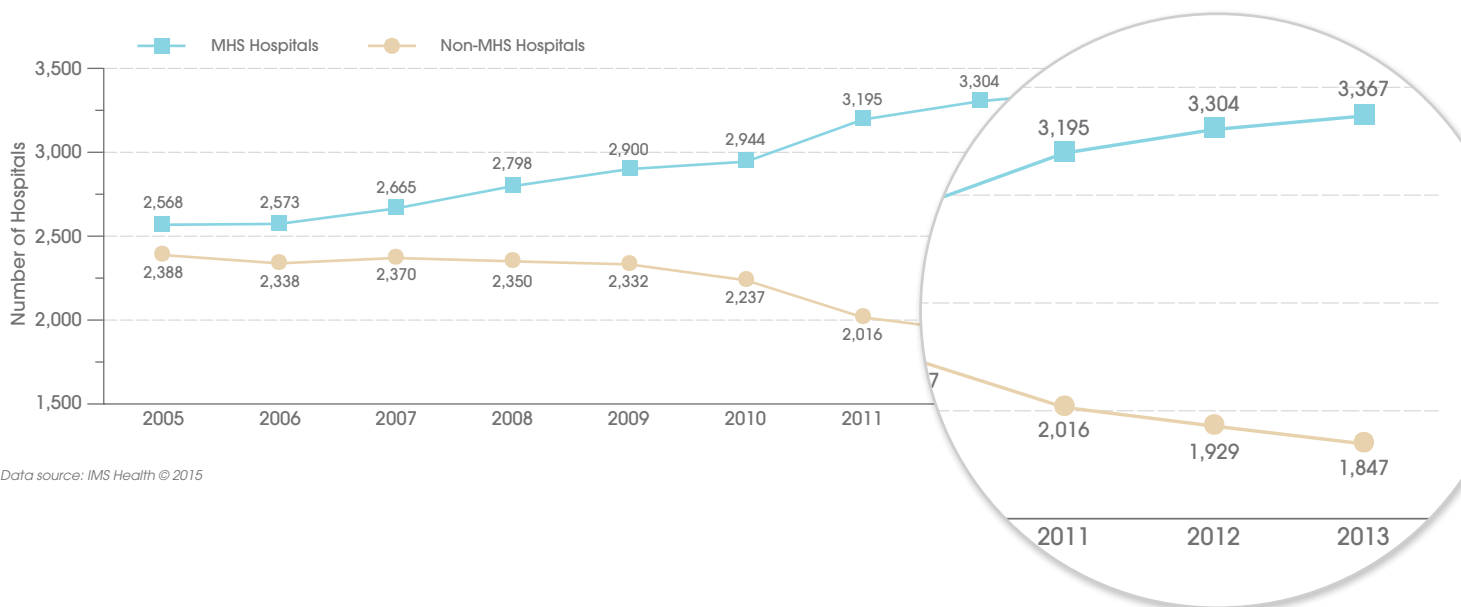
The number of hospitals in multihospital systems (MHSs)—for-profit, not-for-profit or government-owned chains that own two or more facilities—edged up by 1.9% in 2013, to 3,367 from 3,304 in 2012. The growth lifted the total share of MHS-owned hospitals to 64.6%. New Medicare payment methods in the Affordable Care Act, as well as earlier initiatives by commercial payers,

incentivized coordinated care and population health management. Single hospitals sometimes lack access to large enough populations and/or adequate resources to meet the demands of these initiatives, prompting many to merge with or acquire other facilities.¹ However, the 2012–2013 growth rate was the lowest since 2009–2010 (1.5%), when Congress was debating health care reform.



Number of U.S. Hospitals In and Out of MHSs, 2005–2013

LONG-TERM TREND



Data source: IMS Health © 2015

¹ Budryk, Z. (2014). Hospitals Must Consolidate, Merge to Manage Population Health. *FierceHealthFinance*. Retrieved from <http://www.fiercehealthfinance.com/story/hospitals-must-consolidate-merge-manage-population-health/2014-09-16>

DEMOGRAPHICS

Total Staffed Bed Count at Nation's Top 20 MHSs Increases

- From 2012 to 2013, the overall number of staffed beds at the nation's top 20 MHSs rose 4.9%, to 180,717 from 172,282; the number of FTEs per occupied bed grew to 10.3 from 10.0.
- Meanwhile, the number of hospitals owned by these MHSs increased to 982 in 2013, but apart from Community Health Systems, no top-20 system added more than four facilities.

TOP 20 MULTIHOSPITAL SYSTEMS, RANKED BY NUMBER OF STAFFED BEDS

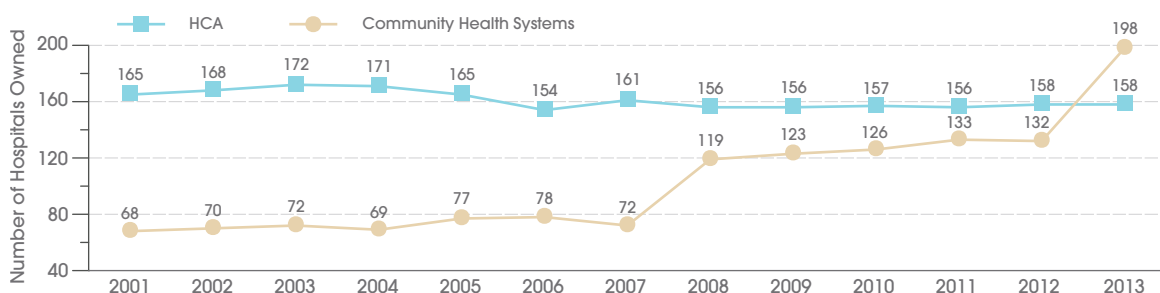
MHS NAME	Headquarters	Ownership Type	Number of Hospitals Owned		Number of Staffed Beds per System		Average FTEs per Occupied Bed	
			2012	2013	2012	2013	2012	2013
HCA	Nashville, TN	FP	158	158	32,905	33,523	7.0	7.3
Community Health Systems ¹	Franklin, TN	FP	132	198	17,446	25,449	9.5	9.9
Tenet Health System	Dallas, TX	FP	75	76	17,180	17,781	6.7	7.1
Ascension Health	St. Louis, MO	NFP	55	55	11,183	11,273	11.0	10.9
Dignity Health	San Francisco, CA	NFP	37	38	9,123	9,122	9.1	9.0
Kaiser Permanente	Oakland, CA	NFP	37	38	8,144	8,355	9.5	10.0
Catholic Health Initiatives	Englewood, CO	NFP	63	64	8,288	8,005	13.0	13.1
Trinity Health	Livonia, MI	NFP	39	42	7,313	7,482	12.9	14.0
Adventist Health System	Altamonte Springs, FL	NFP	38	38	6,372	6,382	10.2	11.7
North Shore–Long Island Jewish Health System	Great Neck, NY	NFP	13	13	5,849	5,544	6.8	7.0
LifePoint Hospitals, Inc.	Brentwood, TN	FP	54	55	5,225	5,411	10.5	10.3
Providence Health and Services	Renton, WA	NFP	25	25	5,588	5,390	12.3	13.1
Sutter Health	Sacramento, CA	NFP	29	28	5,177	5,037	12.4	13.5
Universal Health Services	King of Prussia, PA	FP	24	24	5,172	4,842	7.0	7.2
Mercy	Chesterfield, MO	NFP	27	29	4,542	4,796	12.8	13.4
New York City Health and Hospitals Corporation	New York, NY	GOVT	11	11	4,809	4,779	9.7	10.0
CHRISTUS Health	Irving, TX	NFP	23	22	4,961	4,495	9.5	9.7
UPMC	Pittsburgh, PA	NFP	16	16	4,574	4,495	10.5	10.2
Prime Healthcare Services	Victorville, CA	FP	25	25	4,368	4,391	8.0	8.3
Baylor Scott & White Health	Dallas, TX	NFP	23	27	4,063	4,165	10.7	10.6
TOTAL/AVERAGE			904	982	172,282	180,717	10.0	10.3

SYSTEM SPOTLIGHT

Community Health Systems Claims Top Spot in Hospital Ownership

- Community Health Systems' acquisition of Health Management Systems pushed the number of hospitals it owns to 198 in 2013 from 132 in 2012, 40 more than HCA's 158 facilities.
- However, HCA remained the MHS with the largest number of staffed beds, up to 33,523 in 2013 from 32,905 in 2012. Community Health Systems' total climbed to 25,449 from 17,446.

NUMBER OF HOSPITALS OWNED, HCA AND COMMUNITY HEALTH SYSTEMS, 2001–2013



Data source: IMS Health © 2015

¹ Community Health Systems acquired Health Management Associates.

DEMOGRAPHICS



CHRONIC DISEASE

MHS Outpatient Case Counts Grow for All Disease States

- The numbers of outpatient (OP) cases per hospital rose at MHS hospitals for all 11 disease states profiled, from 2011 to 2013, and likewise increased for eight of 11 at non-MHS facilities.
- Conversely, the numbers of inpatient (IP) cases per hospital fell for all 11 profiled disease states at MHS facilities and for 10 at non-MHS hospitals over this three-year period.

NUMBERS OF INPATIENT AND OUTPATIENT CASES PER HOSPITAL, BY MHS OWNERSHIP

DISEASE STATE	MHS Hospitals			Non-MHS Hospitals		
	2011	2012	2013	2011	2012	2013
Acute Coronary Syndromes (ACS)						
Inpatient Cases	111.8	101.7	91.5	41.6	37.1	35.3
Outpatient Cases	55.6	64.2	66.9	31.4	30.4	31.4
Angina						
Inpatient Cases	56.3	48.9	42.4	19.8	16.9	14.7
Outpatient Cases	166.6	189.4	191.0	69.1	77.6	80.3
Asthma						
Inpatient Cases	626.0	605.0	580.3	194.4	183.2	174.4
Outpatient Cases	2,405.0	2,706.0	2,948.2	884.0	987.5	1,043.4
Breast Cancer						
Inpatient Cases	53.5	52.6	49.8	19.7	19.1	17.9
Outpatient Cases	964.0	1,095.5	1,252.2	367.1	363.3	436.2
Depression						
Inpatient Cases	462.2	456.0	458.2	145.5	137.8	143.6
Outpatient Cases	856.8	992.3	968.6	337.7	388.7	374.8
Diabetes Mellitus						
Inpatient Cases	1,759.4	1,695.2	1,668.2	567.4	525.0	520.7
Outpatient Cases	6,748.3	7,318.0	8,131.4	3,021.3	3,223.3	3,521.7
Hypertension						
Inpatient Cases	2,775.9	2,628.5	2,472.9	884.5	813.4	780.7
Outpatient Cases	9,775.6	10,592.5	11,202.2	4,107.2	4,521.0	4,702.2
Hypercholesterolemia						
Inpatient Cases	364.5	319.3	293.2	122.5	122.5	97.8
Outpatient Cases	2,037.6	2,109.9	2,128.4	949.4	864.0	886.6
Osteoarthritis						
Inpatient Cases	221.3	219.1	221.2	82.2	81.6	86.6
Outpatient Cases	495.6	579.8	729.3	220.7	265.4	336.1
Prostate Cancer						
Inpatient Cases	60.7	53.8	51.5	19.6	16.7	16.9
Outpatient Cases	619.2	636.8	658.5	262.1	255.8	259.0
Stroke						
Inpatient Cases	249.4	241.9	243.8	68.1	64.8	65.5
Outpatient Cases	436.8	466.7	551.3	177.7	182.6	207.2

Data source: IMS Health © 2015

Key Takeaway

At MHS and non-MHS hospitals alike, inpatient case counts fell between 2011 and 2013 for nearly all 11 disease states profiled. Conversely, outpatient case counts rose for nearly all of these disease states, consistent with the efforts by stakeholders to shift care away from the costly inpatient setting to the outpatient setting, when appropriate. A continued focus on integrated care and advances in medical science and technology will likely assist in these trends in the coming years.

DEMOGRAPHICS

Staffing Ratios Grow Faster in MHS-Owned Hospitals in 2013

- From 2011 to 2013, staffing per occupied bed for five of 10 full-time-equivalent (FTE) positions increased more rapidly in MHS-owned hospitals than in their non-MHS-owned counterparts.
- For instance, the number of registered nurses per occupied bed rose 21.2% in MHS-owned facilities during that time, but only 9.5% in non-MHS-owned hospitals.

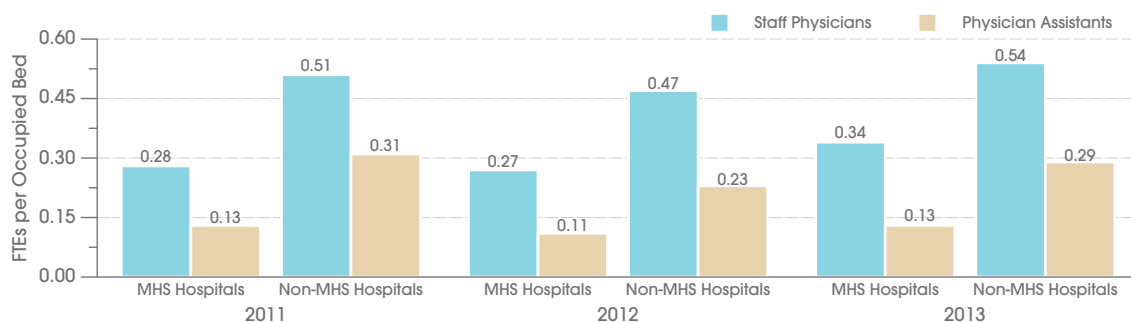
HOSPITAL STAFFING RATIOS¹

FTEs PER OCCUPIED BED	MHS Hospitals			Non-MHS Hospitals		
	2011	2012	2013	2011	2012	2013
Staff Physicians	0.28	0.27	0.34	0.51	0.47	0.54
Resident Physicians	0.36	0.35	0.38	0.30	0.29	0.29
Registered Nurses	2.45	2.49	2.97	3.28	3.07	3.59
Licensed Practical Nurses	0.45	0.43	0.47	0.97	0.88	0.93
Physician Assistants	0.13	0.11	0.13	0.31	0.23	0.29
Registered Pharmacists	0.11	0.12	0.14	0.19	0.20	0.20
Occupational Therapists	0.06	0.06	0.08	0.14	0.13	0.15
Inhalation Therapists	0.19	0.18	0.21	0.31	0.28	0.31
Physical Therapists	0.12	0.12	0.16	0.27	0.25	0.28
All Other Employees	5.96	5.88	6.00	8.91	8.76	8.99
TOTAL FTE STAFF²	10.13	10.02	9.42	15.20	14.57	13.97

Disparity in Physician Count Narrows Between MHS and Non-MHS Hospitals

- In 2011, the number of FTE staff physicians per occupied bed was 82.1% greater in non-MHS-owned hospitals than in MHS-owned facilities. By 2014, the difference had shrunk to 58.8%.
- From 2011 to 2013, the number of physician assistants per occupied bed in MHS-owned hospitals was unchanged (0.13). The number in non-MHS hospitals contracted to 0.29 from 0.31.

FTE STAFF PHYSICIANS AND PHYSICIAN ASSISTANTS PER OCCUPIED BED, BY MHS OWNERSHIP¹



Data source: IMS Health © 2015

Key Takeaway

New quality care measures and reimbursement methodologies arising from the Affordable Care Act and private-payer initiatives make coordinated care among providers across settings paramount. The more rapid growth in employment ratios at MHS hospitals for some clinical positions than those at non-MHS facilities might reflect efforts by the former to boost care coordination activities.

¹ Data are for all beds in nonfederal, short-term, acute-care hospitals only. Psychiatric, rehabilitation and children's hospitals are excluded.

² Column totals represent the average of each facility's total full-time equivalent employees. Therefore, the totals cannot be derived by adding the numbers in the columns.

UTILIZATION

Admissions and Occupancy Are Both Down at Largest MHSs

- From 2012 to 2013, the number of admissions per hospital fell at 15 of the top 20 MHSs (ranked by staffed beds). Catholic Health Initiatives had the largest annual decrease (14.5%).
- Overall average occupancy at these systems also declined, to 54.2% in 2013 from 55.9% in 2012, accompanied by a dip in average length of stay (ALOS), to 4.7 days from 4.8.

TOP 20 MULTIHOSPITAL SYSTEMS, RANKED BY NUMBER OF STAFFED BEDS

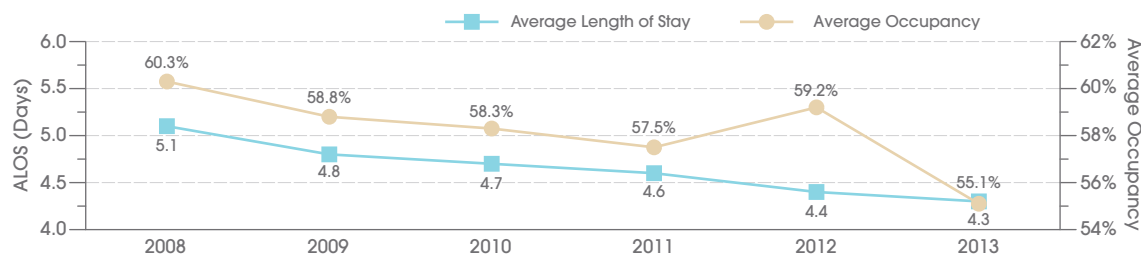
MHS NAME	Headquarters	Average Admissions per Hospital		Average Occupancy ¹		Average Length of Stay (Days) ¹	
		2012	2013	2012	2013	2012	2013
HCA	Nashville, TN	11,112	11,347	60.3%	57.8%	4.6	4.4
Community Health Systems	Franklin, TN	5,482	5,298	47.3	44.8	4.5	4.4
Tenet Health System	Dallas, TX	11,853	11,314	59.2	55.1	4.4	4.3
Ascension Health	St. Louis, MO	10,072	9,851	55.3	54.1	4.6	4.5
Dignity Health	San Francisco, CA	11,083	10,552	54.7	51.3	4.6	4.4
Kaiser Permanente	Oakland, CA	12,138	11,282	55.1	52.1	3.9	4.0
Catholic Health Initiatives	Englewood, CO	6,808	5,824	49.9	47.3	5.1	4.7
Trinity Health	Livonia, MI	9,886	8,728	48.7	46.4	4.7	5.1
Adventist Health System	Altamonte Springs, FL	10,591	10,306	55.0	51.2	4.6	4.4
North Shore–Long Island Jewish Health System	Great Neck, NY	27,292	27,104	78.1	81.6	6.3	6.4
LifePoint Hospitals, Inc.	Brentwood, TN	3,628	3,658	41.5	43.0	4.5	4.7
Providence Health and Services	Renton, WA	11,077	11,978	57.7	56.4	4.3	4.1
Sutter Health	Sacramento, CA	6,989	7,237	47.6	48.1	4.8	4.7
Universal Health Services	King of Prussia, PA	10,941	10,760	64.4	62.4	4.9	4.8
Mercy	Chesterfield, MO	7,650	7,199	45.7	42.6	4.8	5.0
New York City Health and Hospitals Corporation	New York, NY	19,177	19,722	79.6	77.6	6.7	6.2
CHRISTUS Health	Irving, TX	10,540	10,205	61.3	61.4	4.7	4.5
UPMC	Pittsburgh, PA	16,674	15,685	61.7	61.4	4.9	5.0
Prime Healthcare Services	Ontario, CA	6,710	6,577	44.7	42.5	4.4	4.5
Baylor Scott & White Health	Dallas, TX	7,888	7,569	49.2	47.0	4.8	4.8
OVERALL AVERAGE		10,880	10,610	55.9%	54.2%	4.8	4.7

SYSTEM SPOTLIGHT

Average Occupancy Resumes Downward Trend at Tenet Health Hospitals

- From 2011 to 2012, average occupancy at Tenet Health System increased to 59.2% from 57.5%, then decreased to 55.1% in 2013, the system's lowest rate in the six years shown.
- ALOS, meanwhile, maintained its steady decline at Tenet, reaching 4.3 days in 2013, 0.8 days less than the 5.1-day ALOS reported by the system in 2008.

ALOS AND OCCUPANCY, TENET HEALTH SYSTEM, 2008–2013¹



Data source: IMS Health © 2015

¹ Figures reflect average occupancy and average length of stay for all beds in the facilities.

Utilization Rates Are Low at MHS-Owned HMOs

- In 2013, MHS-owned HMOs overall had more members per hospital and per physician than non-MHS-owned HMOs, yet their utilization rates were lower for some measures.
- For instance, non-MHS-owned HMOs recorded an average number of hospital days per 1,000 members (432.5) in 2013 that was 7.4% greater than their MHS-owned counterparts (402.8).

HMO UTILIZATION AND MEMBERS PER PROVIDER

UTILIZATION MEASURE	MHS-Owned HMOs			Non-MHS-Owned HMOs			ALL HMOs		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Hospital Days per 1,000 Members	354.5	402.1	402.8	394.3	409.9	432.5	388.6	408.6	427.6
Hospital Admissions per 1,000 Members	80.3	92.7	91.1	91.9	97.5	97.8	90.3	96.8	96.7
Average Length of Stay (Days) per Hospital Admission	4.4	4.4	4.5	4.7	4.8	5.0	4.6	4.7	4.9
Average No. of Physician Encounters per HMO Member	4.7	5.1	4.9	5.0	5.1	5.2	5.0	5.1	5.1
Average No. of Ambulatory Visits per HMO Member ¹	2.0	2.2	2.5	2.2	2.5	2.8	2.2	2.4	2.7
PROVIDER MEASURE									
Average No. of HMO Members per Hospital	4,721	5,467	5,531	3,600	3,167	2,895	3,754	3,491	3,279
Average No. of HMO Members per Primary Care Physician	253	213	207	141	117	113	160	133	129

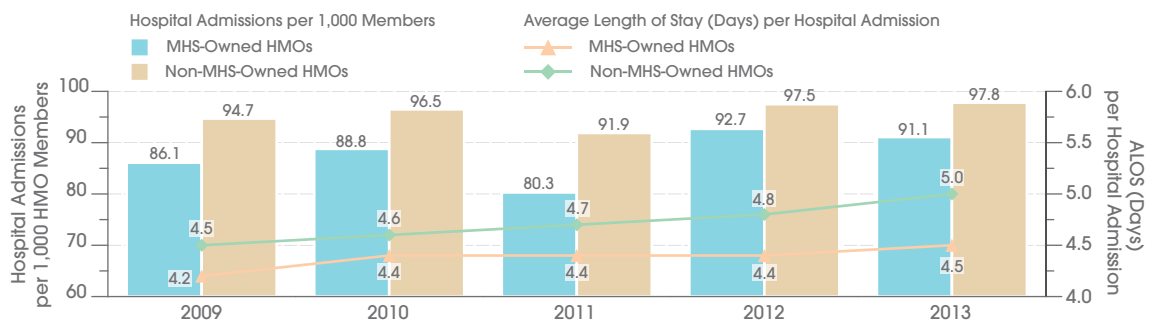


Hospital Admissions Counts Rise for MHS- and Non-MHS-Owned HMOs

LONG-TERM TREND

- From 2009 to 2013, hospital admissions per 1,000 members counts grew 5.8% (to 91.1 from 86.1) among MHS-owned HMOs and 3.3% (to 97.8 from 94.7) among non-MHS-owned HMOs.
- At the same time, average lengths of stay (ALOS) increased 7.1% (to 4.5 days from 4.2) among MHS-owned HMOs and 11.1% (to 5.0 from 4.5) among non-MHS-owned HMOs.

HMO UTILIZATION, BY MHS OWNERSHIP, 2009-2013



Data source: IMS Health © 2015

Key Takeaway

MHS-owned HMOs might be better positioned to manage utilization despite serving more members per hospital because they are able to take advantage of economies of scale and, perhaps, coordinate care more effectively than non-MHS-owned HMOs. However, rising admissions at the MHS-owned HMOs could suggest looming challenges in the future.

¹ Ambulatory visits differ from physician encounters. Ambulatory visits are visits by an HMO member to an HMO clinic or physician's office that do not require the services of a physician. Such visits are usually made for tests, prescription refills, immunizations, etc. The term "physician encounter" is self-explanatory.

UTILIZATION



CHRONIC DISEASE

ALOS Rises Slightly for Two Disease States in MHS Hospitals

- From 2012 to 2013, average length of stay (ALOS) per inpatient case increased in MHS hospitals for two profiled disease states: breast cancer and depression, both by 0.1 days.
- At the same time, in non-MHS hospitals, ALOS crept up for acute coronary syndromes, angina, breast cancer, diabetes mellitus and hypertension.

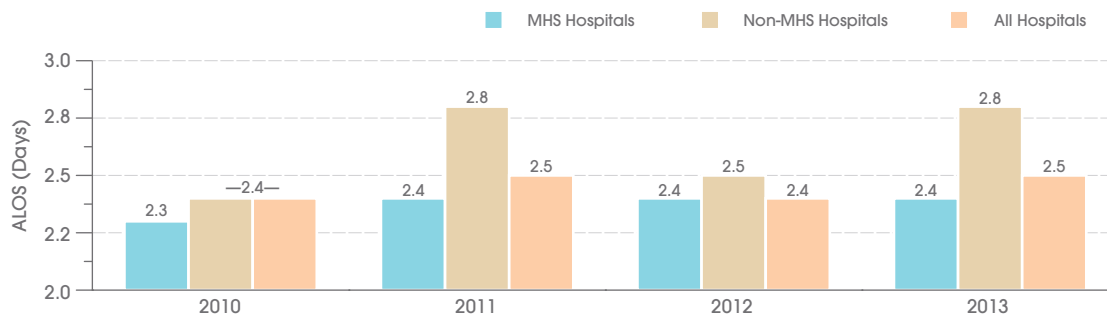
AVERAGE LENGTH OF STAY (DAYS) PER INPATIENT CASE, BY MHS OWNERSHIP

DISEASE STATE	MHS Hospitals		Non-MHS Hospitals		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013
Acute Coronary Syndromes (ACS)	2.0	2.0	1.9	2.0	2.0	2.0
Angina	2.0	1.9	2.1	2.6	2.0	2.1
Asthma	3.3	3.3	3.3	3.2	3.3	3.3
Breast Cancer	2.8	2.9	2.8	3.0	2.8	2.9
Depression	5.9	6.0	6.4	5.9	6.0	6.0
Diabetes Mellitus	4.3	4.3	3.9	4.1	4.2	4.2
Hypercholesterolemia	3.6	2.4	3.2	—	3.6	3.0
Hypertension	2.4	2.4	2.5	2.8	2.4	2.5
Osteoarthritis	3.3	3.1	3.4	3.4	3.4	3.2
Prostate Cancer	3.3	3.3	4.0	3.8	3.5	3.4
Rheumatoid Arthritis	3.6	3.5	3.6	3.7	3.8	3.6
Stroke	4.2	4.1	4.1	3.9	4.2	4.0

Length of Stay per Inpatient Hypertension Case Edges Up in MHS Facilities

- ALOS per inpatient hypertension case rose 4.3% (to 2.4 days from 2.3 days) in MHS hospitals from 2010 to 2013. However, the 2013 mean was lower than the all-hospital average of 2.5 days.
- In non-MHS facilities, ALOS for such patients climbed 16.7% during the same time period (to 2.8 days from 2.4 days). It exceeded the all-hospital average from 2011 to 2013.

AVERAGE LENGTH OF STAY PER INPATIENT HYPERTENSION CASE, BY MHS OWNERSHIP, 2010-2013



Data source: IMS Health © 2015

Key Takeaway

Given the high cost of inpatient care, the Affordable Care Act and commercial payer initiatives have placed an emphasis on trying to manage unnecessary hospitalizations and, when possible, lengths of stay. In an effort to reduce their ALOS for various disease states, MHS hospitals often can resort to skilled nursing facilities, intermediate care facilities or other transitional care settings that non-MHS hospitals cannot.

NOTE: Some length of stay data were unavailable.

Total Revenue Edges Down Among MHS Hospitals With HMOs

- From 2012 to 2013, total revenue shrank 1.7% (to \$482.7 million from \$491.0 million) at hospitals in MHSs that owned HMOs and 0.2% (to \$464.9 million from \$465.8 million) in hospitals that did not own HMOs.
- At the same time, inpatient revenue slipped 2.3% (to \$270.2 million from \$276.6 million) in hospitals in MHSs that owned HMOs and 0.8% (to \$260.1 million from \$262.3 million) in those that did not own HMOs.

HOSPITAL UTILIZATION FINANCIAL STATISTICS

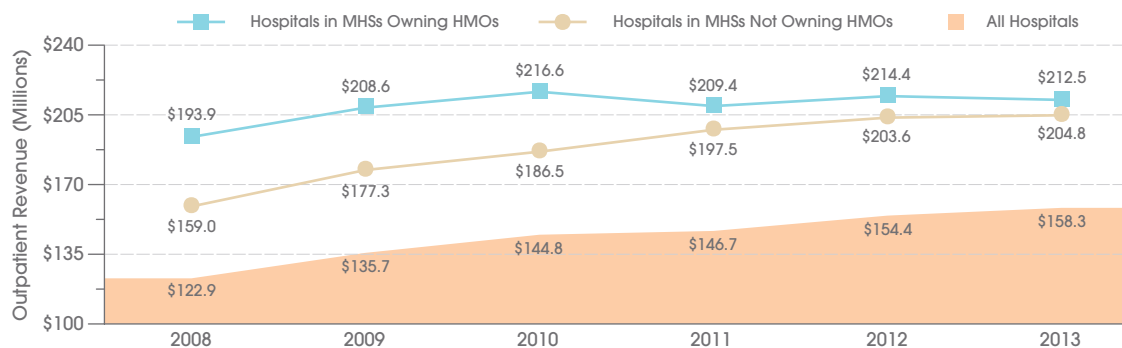
HOSPITAL TYPE	Average # of Discharges per Year		Total Revenue (Millions)		Inpatient Revenue (Millions)		Inpatient Revenue as % of Total Revenue		Outpatient Revenue (Millions)		Outpatient Revenue as % of Total Revenue	
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
Hospitals in MHSs Owning HMOs	9,928	9,783	\$491.0	\$482.7	\$276.6	\$270.2	56.3%	56.0%	\$214.4	\$212.5	43.7%	44.0%
Hospitals in MHSs Not Owning HMOs	9,785	9,695	465.8	464.9	262.3	260.1	56.3	55.9	203.6	204.8	43.7	44.1
ALL HOSPITALS	7,148	7,190	\$344.7	\$351.8	\$190.3	\$193.5	55.2%	55.0%	\$154.4	\$158.3	44.8%	45.0%



Outpatient Revenue Grows Faster in MHS Hospitals Without HMOs

- In 2008, average outpatient revenue in MHS hospitals with HMOs was 21.9% higher than that of MHS hospitals without HMOs. In 2013, this margin contracted to 3.8%.
- From 2008 to 2013, average outpatient revenue at hospitals in MHSs that did not own HMOs climbed 28.8% versus 9.6% at MHS hospitals that owned HMOs. The measure rose 28.8% overall.

AVERAGE OUTPATIENT REVENUE, 2008-2013



Data source: IMS Health © 2015

Key Takeaway

Many new payment models incentivize disease management and preventive, outpatient-focused care over more costly inpatient care. MHS hospitals that own plans could be leveraging their close relationships with them to facilitate appropriate use of outpatient facilities by members and primary care physicians. Their non-HMO-owning counterparts may be narrowing the outpatient revenue gap by adopting some of the same practices in response to new payment methodologies.

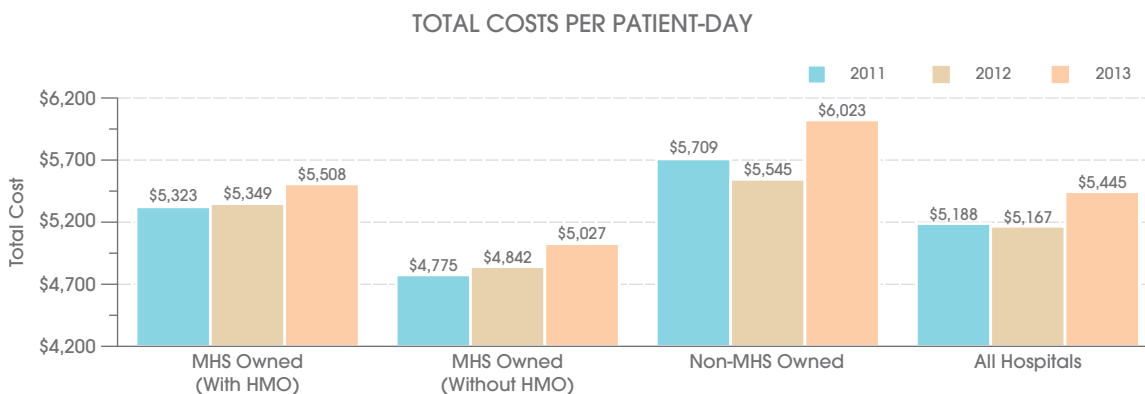
Some Hospital Cost Ratios Are Smaller in MHS-Owned Facilities

- In 2013, average total costs per hospital admission and total costs per patient-day, as well as labor costs per patient-day, were less in MHS-owned hospitals, regardless of whether they owned an HMO, than in non-MHS hospitals.
- Total costs per full-time-equivalent (FTE) staff member at MHS-owned hospitals with HMOs and those without them were 34.0% and 30.0% higher, respectively, in 2013 than such costs at non-MHS-owned hospitals.

HOSPITAL COST RATIOS, BY MHS OWNERSHIP								
COST MEASURE	MHS Owned (With HMO)		MHS Owned (Without HMO)		Non-MHS Owned		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013	2012	2013
Total Costs/Admission	\$22,069	\$22,855	\$21,105	\$21,477	\$23,926	\$24,820	\$22,286	\$22,836
Total Costs/Patient-Day	5,349	5,508	4,842	5,027	5,545	6,023	5,167	5,445
Labor Costs/Patient-Day	2,209	2,326	2,007	2,060	2,283	2,407	2,134	2,214
Salary Costs/FTE	63,619	65,669	60,580	60,639	51,764	52,481	57,424	58,206
Total Costs/FTE	171,351	174,743	168,070	169,104	128,667	130,414	152,715	155,137

Total Costs per Patient-Day Rise Among MHS-Owned and Non-MHS-Owned Hospitals

- From 2011 to 2013, total costs per patient-day increased 5.5% in non-MHS-owned hospitals, 5.3% in MHS-owned facilities without HMOs and 3.5% in MHS-owned hospitals with HMOs.
- These costs were lowest in each of the three profiled years in MHS-owned hospitals without HMOs and highest among non-MHS-owned hospitals.



Data source: IMS Health © 2015

Key Takeaway

Labor and staffing costs have posed significant challenges for hospitals of all sizes, regardless of whether or not they were part of MHSs, thanks in large part to the increasing labor costs associated with physician practice acquisition, as well as training costs related to the purchase or upgrade of health information technology infrastructure.¹ However, MHS-owned hospitals might be better able to take advantage of economies of scale than their non-MHS-owned counterparts.

¹ Herman, B. (2014). The State of Healthcare Finance: 9 Major Survey Findings from Hospital CFOs. *Becker's Hospital CFO*. Retrieved from <http://www.beckershospitalreview.com/finance/the-state-of-healthcare-finance-9-major-survey-findings-from-hospital-cfos.html>



CHRONIC DISEASE

Charges per Case Are on the Rise for MHS Hospitals

- For 11 of the 13 disease states shown, inpatient charges per case increased for MHS hospitals between 2012 and 2013, most notably for acute coronary syndromes (ACS; up 11.0%).
- Meanwhile, such charges also rose at non-MHS hospitals, but remained below MHS averages for all 13 diseases in 2013; this gap was most noticeable for hypercholesterolemia cases.

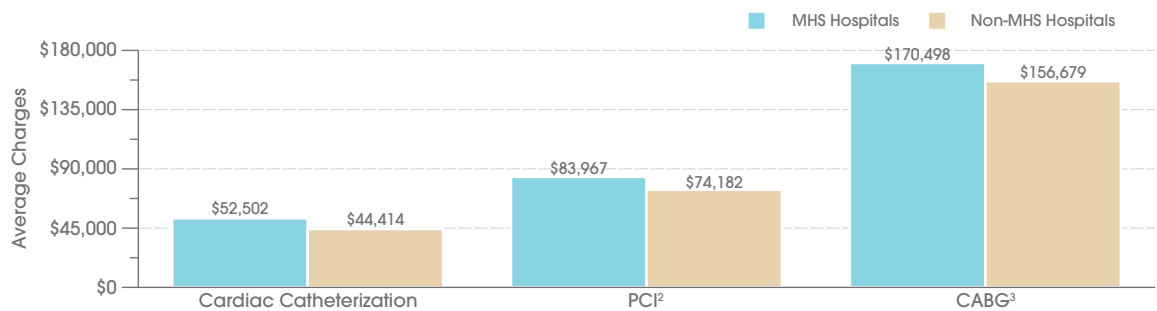
INPATIENT CHARGES PER CASE, BY MHS OWNERSHIP¹

DISEASE STATE	MHS Hospitals			Non-MHS Hospitals		
	2012	2013	% Change	2012	2013	% Change
Acute Coronary Syndromes (ACS)	\$27,899	\$30,967	11.0%	\$15,221	\$20,596	35.3%
Angina	25,246	26,378	4.5	16,485	19,867	20.5
Asthma	27,997	29,307	4.7	20,656	23,378	13.2
Breast Cancer	47,367	50,156	5.9	34,495	37,281	8.1
Depression	23,729	25,623	8.0	19,856	20,851	5.0
Diabetes Mellitus	40,660	43,208	6.3	28,180	29,456	4.5
Hypercholesterolemia	46,315	43,189	-6.7	19,206	17,054	-11.2
Hypertension	22,139	23,139	4.5	15,474	17,820	15.2
Hypoglycemia	29,346	25,988	-11.4	18,719	22,021	17.6
Osteoarthritis	53,501	55,606	3.9	46,637	48,634	4.3
Prostate Cancer	44,855	48,519	8.2	38,648	40,573	5.0
Rheumatoid Arthritis	41,687	44,504	6.8	35,578	37,469	5.3
Stroke	43,678	46,455	6.4	31,374	33,102	5.5

Cardiac Procedures Generate Higher Charges at MHS Facilities Versus Non-MHS

- For each of the three cardiac procedures shown, charges per inpatient case were higher for MHS hospitals than for non-MHS hospitals in 2013, especially for cardiac catheterization.
- Average charges for coronary artery bypass graft (CABG) cases at MHS hospitals were \$170,498 in 2013, 8.8% higher than the mean of \$156,679 at non-MHS hospitals that year.

INPATIENT CHARGES PER CASE, BY MHS OWNERSHIP, 2013¹



Data source: IMS Health © 2015

Key Takeaway

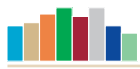
With inpatient charges rising notably for all hospitals, regardless of MHS ownership, it stands to reason that federal policy makers, private payers and the hospitals themselves are interested in methods that reduce utilization in the acute care setting, instead focusing on coordinated care models that encourage preventive medicine, medication adherence and readmission reduction.

¹ Charge data are per case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.

² Percutaneous coronary intervention

³ Coronary artery bypass graft

PHARMACY

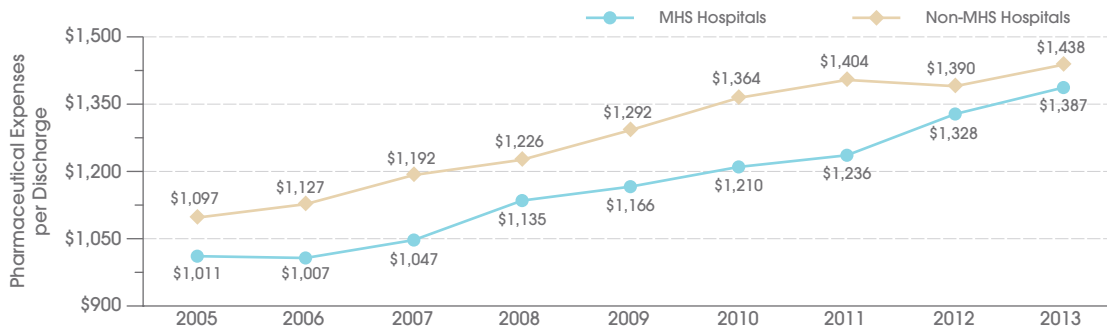


Rx Costs per Discharge Grow at MHS, Non-MHS Hospitals

LONG-TERM TREND

- For MHS- and non-MHS-owned hospitals alike, pharmaceutical expenses per discharge climbed by more than 30% from 2005 to 2013; this increase was higher for MHS hospitals.
- Although this ratio expanded faster at MHS facilities than at non-MHS facilities, the latter still recorded higher pharmacy expenses per discharge in 2013 (\$1,438 versus \$1,387).

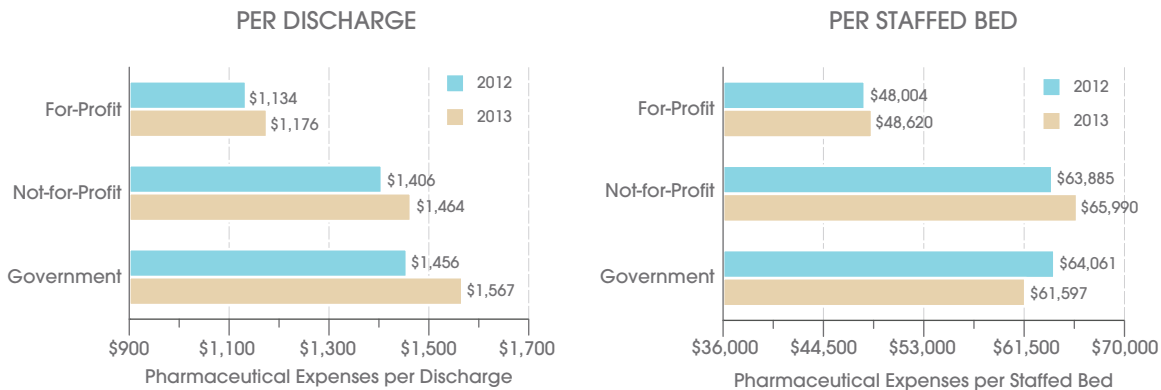
PHARMACEUTICAL EXPENSES PER DISCHARGE, BY MHS OWNERSHIP, 2005–2013¹



For-Profit MHSs Record Lower Rx Expenses per Discharge and per Staffed Bed

- Whether on a per-discharge or per-staffed-bed basis, pharmaceutical expense ratios were lowest, among hospitals belonging to MHSs, at for-profit systems in both 2012 and 2013.
- After a 3.3% rise from 2012 (\$63,885) to 2013 (\$65,990), pharmacy expenses per staffed bed were highest, by MHS ownership type, at not-for-profit systems in 2013.

MULTIHOSPITAL SYSTEM PHARMACEUTICAL EXPENSES, BY OWNERSHIP TYPE¹



Data source: IMS Health © 2015

Key Takeaway

Although they reported lower pharmacy expenses per discharge than their non-MHS-owned counterparts, MHS-owned hospitals observed notably higher pharmacy costs per staffed bed in 2013 (\$60,906 versus \$47,909; data not shown). This serves as another indication that MHS hospitals are able to leverage their generally higher volumes to achieve lower pharmacy costs for each discharge.

¹ Expenses are calculated on a per-facility basis.

Generic Portion of Non-MHS-Owned HMO Rxs Increases

- The generic share of prescription drugs dispensed to members of non-MHS-owned HMOs in 2013 (77.5%) grew nearly two percentage points from 2012, but it edged down 0.6 points among MHS-owned HMOs.
- Meanwhile, pharmacy expenditures as a percentage of total operating costs rose to 15.0% from 14.7% for non-MHS-owned HMOs and to 13.2% from 13.1% for MHS-owned HMOs. Overall, this portion grew to 14.7% from 14.5%.

PHARMACY UTILIZATION AND EXPENSES OF HMOs

PHARMACY MEASURE	MHS-Owned HMOs		Non-MHS-Owned HMOs		ALL HMOs	
	2012	2013	2012	2013	2012	2013
# of Prescriptions per Non-Medicare Member per Year	8.6	8.8	9.2	9.1	9.1	9.0
# of Prescriptions per Medicare Member per Year	26.2	27.2	30.1	30.0	29.3	29.4
# of Prescriptions per Medicaid Member per Year	9.6	9.6	9.5	9.6	9.5	9.6
% of Prescriptions Filled with Generic Drugs	72.8%	72.2%	75.7%	77.5%	75.2%	76.6%
% of Prescriptions Filled with Brand Name Drugs	27.2%	27.8%	24.3%	22.5%	24.8%	23.4%
Pharmacy Expenditures as % of Total Operating Expenses	13.1%	13.2%	14.7%	15.0%	14.5%	14.7%
Pharmacy Expenditures per Member per Year ¹	\$605.35	\$568.51	\$604.46	\$616.30	\$604.60	\$609.00
Ingredient Cost per Prescription ²	\$50.46	\$50.44	\$56.68	\$57.83	\$55.73	\$56.70
Individual Monthly Pharmacy Benefit Premium	\$36.89	\$34.99	\$40.98	\$42.12	\$40.21	\$40.71
Family Monthly Pharmacy Benefit Premium	\$98.77	\$87.55	\$102.41	\$106.56	\$101.80	\$103.04

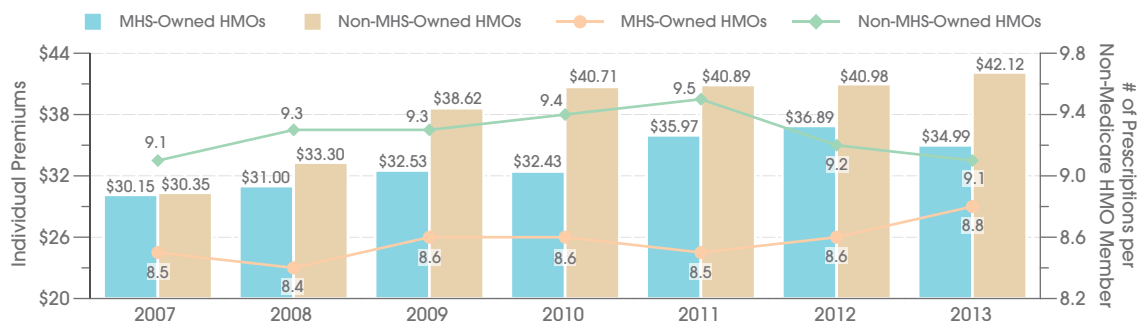


Number of Rxs Dispensed in Non-MHS HMOs in 2013 Is the Same as in 2007

LONG-TERM TREND

- From 2007 to 2013 individual pharmacy benefit premiums climbed 38.8% (to \$42.12 from \$30.35) in non-MHS-owned HMOs, versus 16.1% in MHS-owned HMOs (to \$34.99 from \$30.15).
- The average number of prescriptions filled per non-Medicare member of non-MHS-owned HMOs was the same in 2013 (9.1) as it was in 2007. In MHS-owned HMOs, it rose to 8.8 from 8.5.

PHARMACY UTILIZATION AND EXPENSES OF HMOs, 2007-2013



Data source: IMS Health © 2015

Key Takeaway

In 2013, MHS-owned HMOs dispensed fewer prescriptions per Medicare and non-Medicare member alike than their non-MHS-owned counterparts. Generic drugs also made up a smaller share of total drugs prescribed for the former than the latter. Yet MHS-owned HMOs had lower ingredient costs, expenditures per member per year and drug costs as a percentage of total operating costs, perhaps reflecting greater market leverage and/or less susceptibility to market fluctuations.

¹ Expenditures do not include administrative and copayment costs.

² This average is derived by dividing HMO pharmacy expenses by the total number of prescriptions dispensed. Expenses do not include administration and copayment costs.

HOSPITALS IN INTEGRATED SYSTEMS

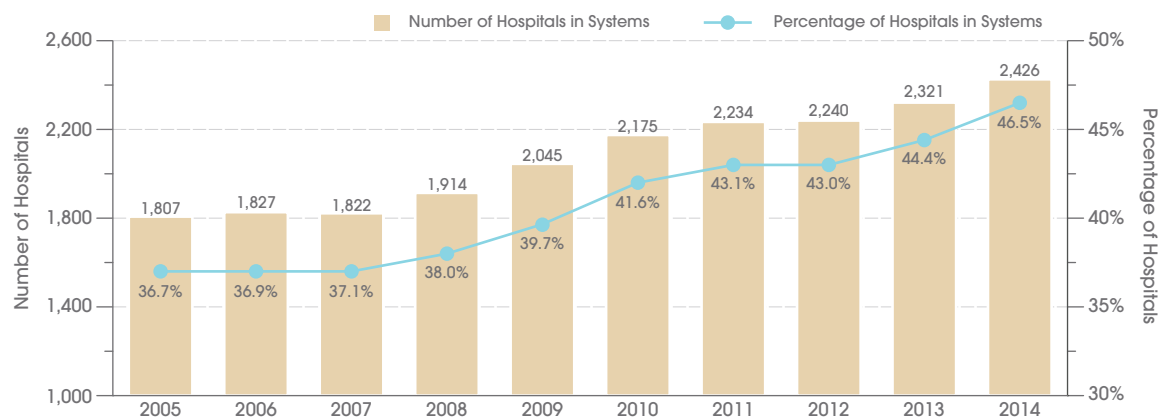
Background

Highly integrated health care systems own or contract with at least three health care delivery entities: one or more acute-care hospitals, at least one physician component and at least one other component of care. These systems must also have a systemwide contract with a payer, such as an HMO, traditional insurer or government entity. In 2014, the percentage of hospitals that were tied to highly integrated systems reached 46.5%, an

increase of nearly five percentage points from 41.6% in 2010. Meanwhile, the total number of such networks also expanded, to 342 from 335 (2.1%), an indication, perhaps, that these entities have gained more prominence in the era of health care reform and heightened care coordination. Yet, as more value-based purchasing initiatives roll out, it remains to be seen if the infrastructures these systems have established will help them thrive in coming years.

 **Number and Percentage of Hospitals in Highly Integrated Systems, 2005–2014**

LONG-TERM TREND



Data source: IMS Health © 2015

NOTE: The 2013 number of hospitals in highly integrated systems has been restated.

DEMOGRAPHICS

Count of Highly Integrated Systems With a National Focus Rises

- The number of highly integrated health systems (HIHSs) with a national delivery focus nearly doubled from 2013 (six) to 2014 (10). These systems still accounted for only 2.9% of all HIHSs.
- Meanwhile, the number of locally focused systems fell, to 80 from 83, statewide-focused systems rose, to 22 from 21, and regionally focused systems edged up, to 230 from 228.

NUMBER AND PERCENTAGE OF HIGHLY INTEGRATED HEALTH SYSTEMS

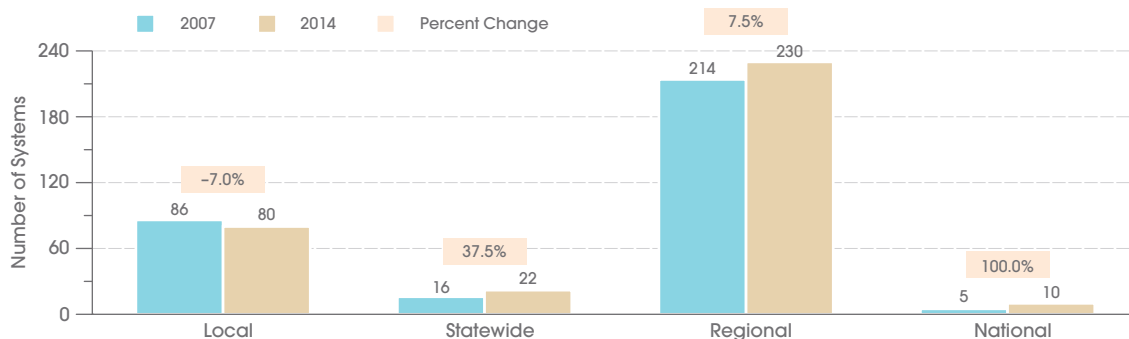
DELIVERY FOCUS ¹	2013		2014	
	Number	Percentage	Number	Percentage
Local	83	24.6%	80	23.4%
Statewide	21	6.2	22	6.4
Regional	228	67.5	230	67.3
National	6	1.8	10	2.9
INITIATORS				
Hospitals	244	72.2%	249	72.8%
Physicians	12	3.6	12	3.5
HMOs/PPOs	16	4.7	16	4.7
PHOs	2	0.6	2	0.6
Other ²	21	6.2	22	6.4
Combination	43	12.7	41	12.0
TOTAL	338	100.0%	342	100.0%

Regionally Focused Integrated Health Systems Drive Overall Growth

LONG-TERM TREND

- From 2007 (214) to 2014 (230), the number of HIHSs with a regional focus expanded by 7.5%, which drove a 6.5% growth in the overall number of HIHSs during this time.
- Although regionally focused systems accounted for the majority of HIHSs in both 2007 (66.7%) and 2014 (67.3%), statewide and national systems grew most rapidly during this time.

NUMBER OF AND PERCENTAGE CHANGE IN HIGHLY INTEGRATED HEALTH SYSTEMS, 2007 VERSUS 2014



Data source: IMS Health © 2015

Key Takeaway

Regional and national HIHSs have grown larger yet, in many cases to bolster their shares of local markets.³ These systems have advantages over statewide and locally focused systems, including larger patient bases and greater negotiating leverage with payers and medical equipment and supply companies. Although they accounted for the second-largest portion of all HIHSs in 2014, locally focused HIHSs could see their market share—and their overall numbers—shrink in coming years.

¹ Local systems serve a limited number of counties. Statewide systems serve an entire state. Regional systems serve areas of a state or several states.

² Includes systems initiated by universities, clinics, and local, state and federal governments.

³ Evans, M. (2014). Consolidation Creating Giant Hospital Systems. *Modern Healthcare*. Retrieved from <http://www.modernhealthcare.com/article/20140621/MAGAZINE/306219980>

DEMOGRAPHICS

HIHSs Unit Growth Is Highest for Mental Health Centers

- From 2013 to 2014, the number of hospitals owned by or contracted to highly integrated health systems (HIHSs) grew 5.8% (to 2,969); the affiliated mental health center count grew 7.0%.
- Of the facility types profiled, only HMOs/PPOs owned by HIHSs fell in number, to 100 in 2014 from 104 in 2013, and those contracted slipped to 32 from 33 in the same period.

OWNED AND CONTRACTED PROVIDER UNITS IN HIGHLY INTEGRATED HEALTH SYSTEMS

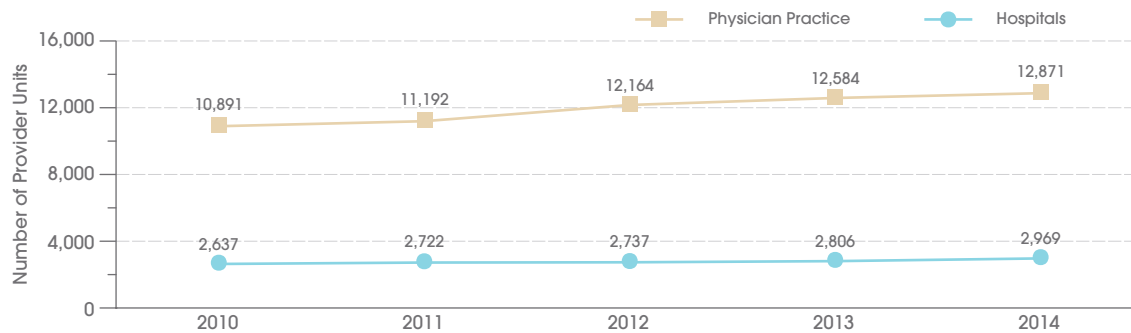
FACILITY TYPE	Contracted Units			Owned Units			All Units		
	2013	2014	% Change	2013	2014	% Change	2013	2014	% Change
Physician Practice ¹	3,782	4,018	6.2%	8,802	8,853	0.6%	12,584	12,871	2.3%
Hospital ²	704	724	2.8	2,102	2,245	6.8	2,806	2,969	5.8
Home Health Agency	198	206	4.0	422	433	2.6	620	639	3.1
Nursing Home	385	390	1.3	460	465	1.1	845	855	1.2
FOSC ³	191	190	-0.5	549	587	6.9	740	777	5.0
HMO/PPO	33	32	-3.0	104	100	-3.8	137	132	-3.6
Rehabilitation Center	180	193	7.2	336	329	-2.1	516	522	1.2
DIC ⁴	203	206	1.5	1,139	1,173	3.0	1,342	1,379	2.8
Hospice	45	46	2.2	90	93	3.3	135	139	3.0
Mental Health Center	57	69	21.1	114	114	0.0	171	183	7.0
Dialysis Center	90	91	1.1	103	102	-1.0	193	193	0.0
Cancer Center	130	125	-3.8	548	553	0.9	678	678	0.0
Other ⁵	2,394	2,465	3.0	3,236	3,332	3.0	5,630	5,797	3.0
TOTAL	8,392	8,755	4.3%	18,005	18,379	2.1%	26,397	27,134	2.8%



System-Affiliated MD Practice, Hospital Counts Continue to Climb

- From 2010 (10,891) to 2014 (12,871), the number of physician practices owned by or contracted to HIHSs climbed 18.2%.
- Meanwhile, the number of hospitals within these systems rose 12.6%, to 2,969 from 2,637 in 2010, or a notable 56.9% of the nation's 5,214 facilities.

NUMBERS OF PHYSICIAN PRACTICES AND HOSPITALS OWNED BY OR CONTRACTED TO HIGHLY INTEGRATED HEALTH SYSTEMS, 2010-2014



Data source: IMS Health © 2015

¹ "Physician practice" includes medical group practices, individual physician offices with fewer than three physicians, independent physician associations, physician practice management groups, physician hospital organizations and management service organizations.

² Hospital data are based on only short-term, acute-care, nonfederal hospitals.

³ Freestanding outpatient surgery center

⁴ Diagnostic imaging center

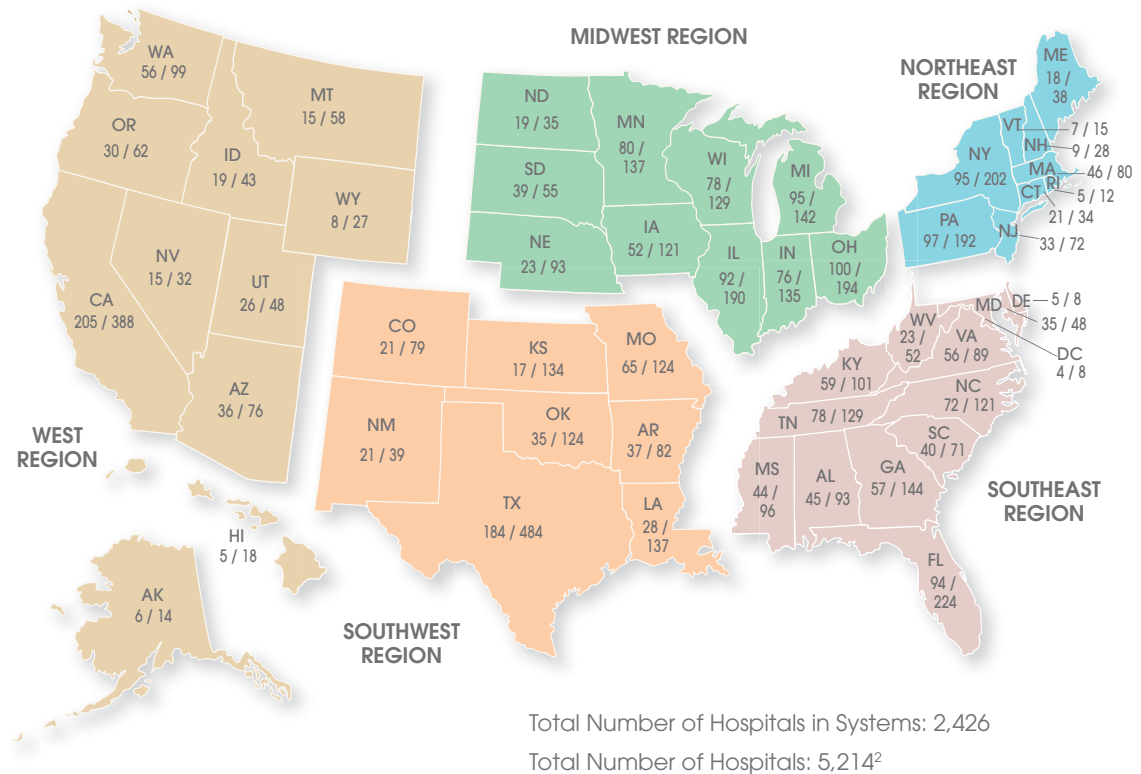
⁵ "Other" includes, but is not limited to, assisted living, board and care, corporate offices, labs and pharmacies.

DEMOGRAPHICS

Number of Hospitals in Integrated Systems Edges Up

- The number of hospitals owned by or contracted to highly integrated health systems increased in 28 states, and by 4.5% overall, to 2,426 nationwide in 2014 from 2,321 in 2013.
- Even as the percentage of system-integrated hospitals grew nationwide to 46.5% of all hospitals during this period, the total number of hospitals shrank, to 5,214 from 5,233.

HOSPITALS OWNED BY OR CONTRACTED TO HIGHLY INTEGRATED SYSTEMS, 2014¹



About This Map

This map provides a state-by-state breakout of the short-term, acute-care, nonfederal hospitals that were part of the 342 highly integrated health systems in 2014. The first figure is the number of hospitals in that state that were either owned by

or contracted to highly integrated systems. The second number represents the total number of hospitals in that state. For example, of 484 hospitals in the state of Texas, 184 were either owned by or contracted to highly integrated health systems.

Data source: IMS Health © 2015

Key Takeaway

The number of hospitals in highly integrated systems continues to increase, indicating that the economic and care-delivery considerations driving integration continue to be compelling. Nearly half (46.5%) of acute-care hospitals are now in such systems. As the emphasis on coordinated care and cost-containment seems certain to continue for the foreseeable future, hospitals likely will continue to join integrated arrangements insofar as they are able to find suitable partners.

¹ Data are based on short-term, acute-care, nonfederal hospitals.

² Includes 58 hospitals in Puerto Rico.

DEMOGRAPHICS

Growth in Hospital Acquisition Slows Among 20 Featured Systems

- The collective number of hospitals owned by the 20 profiled integrated health systems rose 2.3% from 2012 to 2013, less than half the 6.2% growth rate from 2011 to 2012 (data not shown).
- The total count of medical groups in the profiled integrated health systems (389) was unchanged from 2012 to 2013. From 2011 to 2012 (data not shown), the number grew 4.6%, to 389 from 372.

20 SELECTED INTEGRATED HEALTH SYSTEMS AND THEIR FACILITIES

INTEGRATED HEALTH SYSTEM	# of Licensed Hospitals		# of Medical Group Practices		# of DICs ¹ (Free-Standing)		# of FOSCs ²		# of Licensed HHAs ³	
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
Advocate Health Care	11	11	35	35	12	12	4	4	6	6
Allina Hospitals and Clinics	16	17	50	50	6	6	2	2	0	0
Banner Health	24	25	17	17	6	6	7	7	3	3
Baylor Scott & White Health	32	34	32	32	16	16	23	24	2	2
BJC HealthCare	14	14	5	5	1	1	3	3	4	4
Carle Foundation Hospital	1	1	15	15	0	0	4	4	1	1
Carolinas HealthCare System	27	28	46	46	10	10	15	15	7	7
Dept. of Health Services Los Angeles	4	4	39	39	1	1	1	1	0	0
Detroit Medical Center	7	7	1	1	1	1	3	3	0	0
Geisinger Health System	5	5	32	32	4	4	4	4	1	1
HCA Houston	17	17	0	0	0	0	2	2	0	0
Henry Ford Health System	6	6	20	20	0	1	1	2	2	2
Legacy Health System	5	6	5	5	2	2	0	0	0	0
Ministry Health Care	15	15	6	6	0	0	1	1	7	7
Presbyterian Healthcare Services	7	7	15	15	3	3	3	3	2	2
Sentara Healthcare	12	12	11	11	14	14	6	6	10	10
Sharp HealthCare	7	7	13	13	17	17	3	3	1	1
Sutter Health	33	33	46	46	20	20	11	11	15	15
Temple University Health System	3	3	1	1	0	0	2	2	1	1
Tenet South Florida Health System	11	11	0	0	3	3	2	2	0	0
TOTAL	257	263	389	389	116	117	97	99	62	62

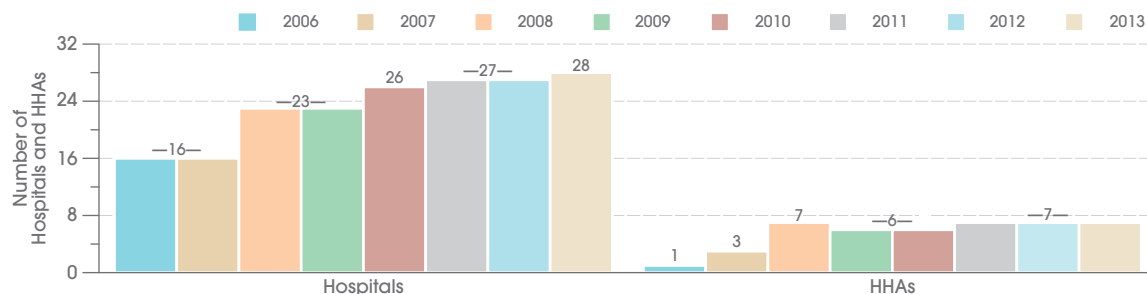


Number of Hospitals in Carolinas HealthCare Climbs Since 2006

LONG-TERM TREND

- The total hospital count in the Carolinas HealthCare System increased 75.0% from 2006 (16) to 2013 (28), with the majority of that growth occurring between 2007 and 2008.
- From 2006 to 2008, the number of home health agencies in the Carolinas HealthCare System jumped from one to seven. It shrank to six in 2009, but edged back up to seven in 2011.

NUMBER OF HOSPITALS AND HOME HEALTH AGENCIES, CAROLINAS HEALTHCARE SYSTEM, 2006-2013



Data source: IMS Health © 2015

¹ Diagnostic imaging center

² Freestanding outpatient surgery center

³ Home health agency

DEMOGRAPHICS

Half of Profiled Markets Record a Rise in System Hospitals

- From 2013 (data not shown) to 2014, the percentages of hospitals in integrated health systems increased in 10 of 20 selected metropolitan statistical areas (MSAs).
- Meanwhile, in 14 of the selected markets, the shares of system-affiliated medical group practices contracted. The portion of such groups was largest, by MSA, in Pittsburgh (41.3%).

FACILITIES WITHIN INTEGRATED HEALTH SYSTEMS IN SELECTED MSAs, 2014¹

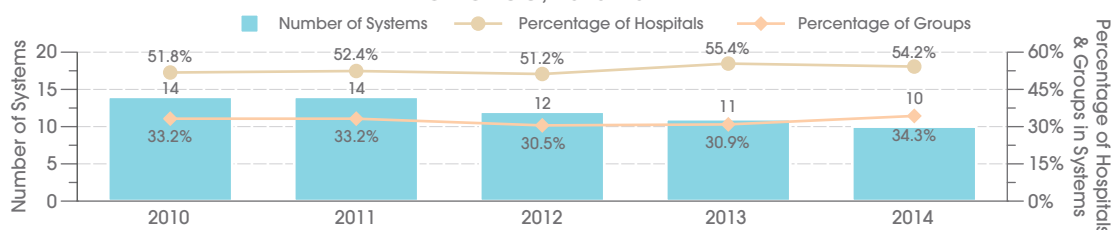
MSA	# of Systems	Hospitals ²	Medical Groups ³	HMOs/PPOs ⁴	Nursing Homes	Home Health Agencies	FOSCs ⁵	DICs ⁶
Atlanta, GA	5	73.2%	23.6%	0.0%	7.1%	2.1%	9.7%	41.0%
Baltimore, MD	7	87.0	14.6	0.0	3.7	11.4	3.9	14.7
Boston, MA-NH	4	56.8	19.8	5.3	17.0	5.5	6.7	19.4
Chicago, IL	10	54.2	34.3	0.0	4.4	2.7	17.4	17.3
Cleveland-Lorain-Elyria, OH	5	86.2	30.7	0.0	21.6	6.0	28.9	62.7
Dallas, TX	5	58.7	25.6	3.3	2.7	0.2	19.6	22.4
Detroit, MI	4	69.2	33.8	11.1	8.0	3.2	14.9	42.9
Houston, TX	3	34.6	14.9	15.4	0.8	1.0	19.5	17.3
Kansas City, MO-KS	2	37.1	31.3	0.0	1.7	4.7	12.3	7.5
Los Angeles-Long Beach, CA	5	38.5	23.9	6.3	2.2	1.8	1.2	9.6
Miami, FL	2	53.8	5.8	7.7	3.8	0.5	12.5	15.1
Minneapolis-St. Paul, MN-WI	5	70.6	32.4	15.4	8.0	3.1	9.8	18.2
New York, NY	11	63.8	15.4	5.9	6.4	2.8	0.0	5.2
Philadelphia, PA-NJ	8	60.6	23.4	7.1	4.3	6.1	11.0	23.5
Phoenix-Mesa, AZ	2	53.3	14.2	11.1	3.5	0.9	11.5	28.2
Pittsburgh, PA	4	66.7	41.3	16.7	6.0	3.3	15.6	27.9
San Diego, CA	4	73.9	35.8	50.0	4.5	11.4	8.5	43.8
San Francisco, CA	2	78.3	29.6	0.0	22.9	17.1	7.5	21.7
St. Louis, MO-IL	4	61.1	20.5	9.1	3.8	5.2	10.8	19.1
Washington, DC-MD-VA-WV	6	55.0	3.2	0.0	11.1	8.9	7.8	9.0

LOCAL SPOTLIGHT

Number of Integrated Systems in Chicago Falls, but Share of Hospitals Within Them Rises

- Between 2010 and 2014, the number of integrated health systems in Chicago decreased 28.6%, but the share of hospitals in such systems increased to 54.2% from 51.8%.
- At the same time, the percentage of medical group practices in Chicago that were part of integrated health systems edged up to 34.3% from 33.2%, despite falling to 30.5% in 2012.

NUMBER OF SYSTEMS AND PERCENTAGE OF HOSPITALS AND GROUPS IN SYSTEMS, CHICAGO, 2010-2014^{2,3}



Data source: IMS Health © 2015

¹ Systems included in this table were headquartered in the MSAs listed.

² Hospital data are based on all short-term, acute-care, nonfederal hospitals.

³ IMS Health defines medical group practices as those with five or more FTE physicians whose primary business is seeing regularly scheduled patients for nonsurgical services other than imaging. Physicians must have a share in the practice and offer outpatient care, and the practice must be physically separate from a hospital. Anesthesiology and pathology groups are excluded.

⁴ HMO/PPO data are based on headquarters' locations, not service areas.

⁵ Freestanding outpatient surgery center

⁶ Diagnostic imaging center



CHRONIC DISEASE

Average OP Case Counts Climb Broadly for Hospitals

- Regardless of MHS ownership, average outpatient (OP) case counts at hospitals grew for 10 of 12 profiled disease states from 2012 to 2013, while inpatient cases shrank for eight.
- Most notable was the 27.3% increase in OP hypercholesterolemia case counts at nonsystem hospitals, accompanied by a corresponding 32.7% rise in inpatient cases.

NUMBERS OF INPATIENT AND OUTPATIENT CASES PER HOSPITAL, BY INTEGRATED SYSTEM AFFILIATION

DISEASE STATE	Hospitals in Systems			Hospitals Not in Systems		
	2012	2013	% Change	2012	2013	% Change
Acute Coronary Syndromes (ACS)						
Inpatient Cases	98.5	89.2	-9.4%	57.1	51.4	-10.0%
Outpatient Cases	60.6	63.2	4.3	39.7	41.2	3.8
Angina						
Inpatient Cases	47.9	41.4	-13.6%	25.3	21.7	-14.2%
Outpatient Cases	177.7	179.6	1.1	108.1	110.1	1.9
Asthma						
Inpatient Cases	581.5	555.8	-4.4%	286.4	272.6	-4.8%
Outpatient Cases	2,574.5	2,797.7	8.7	1,411.8	1,518.9	7.6
Breast Cancer						
Inpatient Cases	51.2	48.6	-5.1%	28.5	26.3	-7.7%
Outpatient Cases	993.7	1,108.5	11.6	592.4	743.0	25.4
Depression						
Inpatient Cases	433.7	437.4	0.9%	228.2	229.8	0.7%
Outpatient Cases	942.7	912.1	-3.2	540.8	533.1	-1.4
Diabetes Mellitus						
Inpatient Cases	1,620.3	1,600.9	-1.2%	806.0	779.4	-3.3%
Outpatient Cases	6,983.2	7,753.1	11.0	4,255.3	4,685.5	10.1
Hypercholesterolemia						
Inpatient Cases	319.3	288.1	-9.8%	107.2	142.3	32.7%
Outpatient Cases	2,109.9	2,017.2	-4.4	949.4	1,208.6	27.3
Hypertension						
Inpatient Cases	2,531.6	2,378.2	-6.1%	1,233.6	1,161.2	-5.9%
Outpatient Cases	10,135.4	10,641.6	5.0	6,003.8	6,365.4	6.0
Osteoarthritis						
Inpatient Cases	216.9	217.7	0.4%	112.5	117.4	4.4%
Outpatient Cases	561.6	686.8	22.3	334.9	447.1	33.5
Prostate Cancer						
Inpatient Cases	52.0	49.4	-5.0%	26.3	26.0	-1.1%
Outpatient Cases	582.1	585.5	0.6	377.9	408.1	8.0
Rheumatoid Arthritis						
Inpatient Cases	98.1	96.2	-2.0%	31.5	30.8	-2.1%
Outpatient Cases	458.1	512.7	11.9	209.9	233.6	11.3
Stroke						
Inpatient Cases	230.6	232.7	0.9%	107.8	106.6	-1.1%
Outpatient Cases	445.5	520.2	16.8	249.9	294.1	17.7

Data source: IMS Health © 2015

Key Takeaway

Hospitals, regardless of whether they were part of highly integrated systems, reported declines in average inpatient case counts for at least eight of the 12 disease states profiled, while outpatient case counts increased for at least 10 of these disease states. This is likely due to the efforts to shift care to less expensive settings, and is a pattern poised to continue as a result of enhanced care coordination and improved chronic disease management aimed at reducing case complexity.

DEMOGRAPHICS

Percentage of HMOs in Integrated Health Systems Edges Down

- In 2013, 16.7% (73) of all HMOs were part of highly integrated systems, a share that decreased 1.0 percentage point from 2012. Of those system-tied HMOs, 38.4% were for-profit.
- This decline in system-affiliated HMOs was led by those with between 50,000 and 99,999 members, which fell in number by 35.3% from 2012 (17) to 2013 (11).

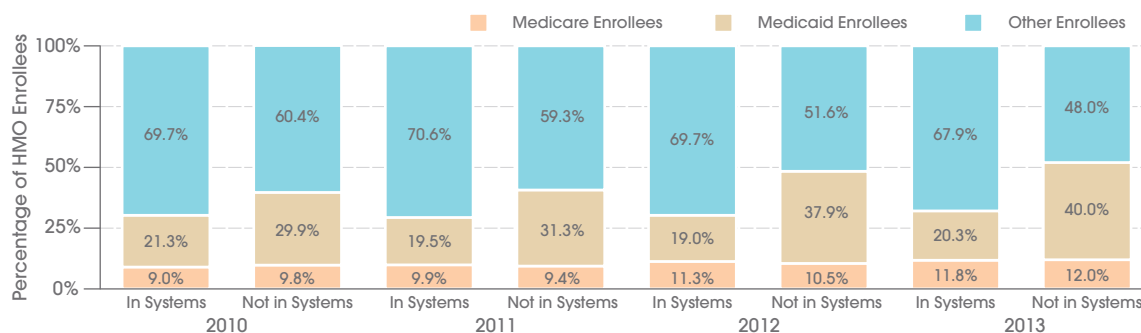
HMOs AFFILIATED WITH HIGHLY INTEGRATED SYSTEMS, 2013¹

HMO MODEL TYPE	HMOs in Systems		HMOs Not in Systems		ALL HMOs	
	Number	Percentage	Number	Percentage	Number	Percentage
IPA	25	34.2%	174	47.7%	199	45.4%
Network	24	32.9	160	43.8	184	42.0
Group	20	27.4	24	6.6	44	10.0
Staff	4	5.5	7	1.9	11	2.5
HMO MEMBERSHIP SIZE						
<15,000	6	8.2%	59	16.2%	65	14.8%
15,000–24,999	5	6.8	30	8.2	35	8.0
25,000–49,999	11	15.1	56	15.3	67	15.3
50,000–99,999	11	15.1	71	19.5	82	18.7
100,000–249,999	20	27.4	80	21.9	100	22.8
250,000+	20	27.4	69	18.9	89	20.3
HMO TAX STATUS						
Not-for-Profit	45	61.6%	105	28.8%	150	34.2%
For-Profit	28	38.4	260	71.2	288	65.8
TOTAL	73	100.0%	365	100.0%	438	100.0%

Medicaid Population Shrinks Among HMOs Affiliated With Integrated Systems

- Among HMOs affiliated with highly integrated health systems, Medicaid enrollees made up 20.3% of total membership in 2013, down from 21.3% in 2010. This share fluctuated yearly.
- At the same time, the Medicaid share of members in unaffiliated HMOs rose to 40.0% in 2013 from 29.9% in 2010. The Medicare shares increased in both types of HMOs.

HMO ENROLLMENT BREAKDOWN, BY PAYER TYPE, SYSTEM VS. NONSYSTEM HMOs, 2010–2013¹



Data source: IMS Health © 2015

Key Takeaway

A number of utilization measures among HMOs that are not affiliated with highly integrated systems were higher in 2013 than they were at system-affiliated HMOs (see page 47). As more states implement Medicaid quality improvement programs,² unaffiliated HMOs might increasingly pursue system affiliation to improve provider communication and better manage utilization.

¹ HMOs are considered to be in highly integrated health systems if they are part of a system by virtue of ownership or contractual arrangements. HMOs are not considered to be in integrated health systems if they hold only provider network contracts with systems. All data are as of calendar year 2013. Preoperational HMOs are excluded.

² U.S. Department of Health and Human Services. (2014). 2014 Annual Report on the Quality of Health Care for Adults Enrolled in Medicaid. Retrieved from <http://www.medicare.gov/medicaid-chip-program-information/by-topics/quality-of-care/downloads/2014-adult-sec-rept.pdf>

UTILIZATION

Utilization of System-Affiliated Hospitals Rises in 2013

- From 2012 to 2013, the system portions of all six profiled hospital utilization measures increased. For instance, the share of total surgical operations performed in these facilities rose, to 58.6% (16,271,426) from 55.8% (15,431,611).
- The total numbers of inpatient and outpatient surgeries alike fell in nonsystem hospitals from 2012 to 2013, as did their shares of the total number performed, to 40.2% from 43.1% and to 42.1% from 44.9%, respectively.

TOTAL HOSPITAL UTILIZATION, 2013¹

UTILIZATION MEASURE	Hospitals in Systems	% of Total	Hospitals Not in Systems ²	% of Total	ALL HOSPITALS
Total Facility Admissions	20,996,452	60.1%	13,910,626	39.9%	34,907,078
Total Facility Patient-Days	102,210,001	59.5	69,504,784	40.5	171,714,785
Total Outpatient Visits	257,879,228	55.6	205,823,655	44.4	463,702,883
Total Inpatient Surgeries	5,953,420	59.8	3,999,834	40.2	9,953,254
Total Outpatient Surgeries	10,318,006	57.9	7,509,195	42.1	17,827,201
Total Surgical Operations	16,271,426	58.6	11,509,029	41.4	27,780,455

Utilization per Short-Term Staffed Bed Declines in System Facilities

- Hospital utilization per short-term staffed bed decreased from 2012 to 2013 for all profiled measures in system-affiliated hospitals. The largest reductions were for emergency department visit (5.4%) and inpatient surgery (4.1%) ratios.
- Meanwhile, non-affiliated hospitals recorded increasing utilization rates per short-term staffed bed for all but one measure (admissions). Outpatient visits grew 4.8% from 2012 to 2013, and outpatient surgeries rose 4.7%.

HOSPITAL UTILIZATION PER SHORT-TERM STAFFED BED¹

UTILIZATION MEASURE	Hospitals in Systems		Hospitals Not in Systems ²		ALL HOSPITALS	
	2012	2013	2012	2013	2012	2013
Hospital Admissions/Short-Term Bed	51.8	50.4	42.7	42.2	46.6	46.0
Outpatient Visits/Short-Term Bed	1,088.5	1,078.8	1,077.5	1,129.3	1,082.2	1,105.9
Inpatient Surgeries/Short-Term Bed	14.8	14.2	13.2	13.4	13.9	13.8
Outpatient Surgeries/Short-Term Bed	39.9	38.5	40.3	42.2	40.1	40.4
Total Surgeries/Short-Term Bed	53.9	51.9	52.3	54.6	53.0	53.3
Emergency Dept. Visits/Short-Term Bed	291.5	275.8	251.5	255.7	269.0	265.3

Data source: IMS Health © 2015

Key Takeaway

Consolidation among hospitals could explain why system-affiliated facilities recorded increasing shares of total utilization for various measures: as the system-affiliated share of hospitals continues to rise, so does the market share captured by them. Despite this trend, the falling utilization rates per staffed bed at system-affiliated hospitals could indicate that they are more adept at adopting new delivery methods aimed at reducing utilization through improved patient management.

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals. All data are as of December 31, 2013.

² Includes system hospitals that were not part of highly integrated systems and hospitals that were not part of any system.

UTILIZATION

Occupancy Rates Decrease for Almost Half of Selected Hospitals

- From 2012 to 2013, average occupancy shrank at facilities in nine of 20 selected integrated systems. Tenet South Florida Health System noted the largest change (-8.7 percentage points).
- At the same time, Legacy Health System recorded the largest rise in occupancy rates (8.6 percentage points), followed by Geisinger Health System (7.8 percentage points).

AVERAGE OCCUPANCY FOR 20 SELECTED INTEGRATED SYSTEMS AND THEIR FACILITIES

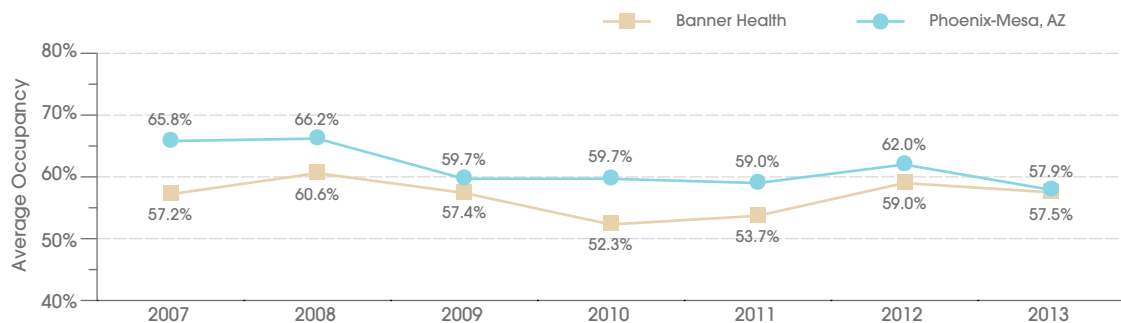
INTEGRATED HEALTH SYSTEM	Headquarters Location	Occupancy		Overall MSA	
		2012	2013	2012	2013
Advocate Health Care	Oak Brook, IL	62.3%	59.4%	61.9%	60.3%
Allina Hospitals and Clinics	Minneapolis, MN	44.5	45.7	53.0	49.6
Banner Health	Phoenix, AZ	59.0	57.5	62.0	57.9
Baylor Health Care System	Dallas, TX	47.1	47.8	47.7	46.6
BJC HealthCare	St. Louis, MO	65.7	64.5	57.5	53.2
Carle Foundation Hospital	Urbana, IL	73.0	76.4	60.0	62.4
Carolinas HealthCare System	Charlotte, NC	53.3	54.6	67.7	64.8
Department of Health Services	Los Angeles, CA	58.9	57.0	53.9	53.3
Detroit Medical Center	Detroit, MI	61.2	56.2	54.8	51.4
Geisinger Health System	Danville, PA	66.5	74.3	57.7	57.9
HCA Houston Division	Houston, TX	52.9	55.4	49.1	47.4
Henry Ford Health System	Detroit, MI	69.5	67.2	54.8	51.4
Legacy Health System	Portland, OR	58.6	67.2	55.7	58.4
Ministry Health Care	Milwaukee, WI	56.0	49.9	53.9	54.5
Presbyterian Healthcare Services	Albuquerque, NM	48.5	49.0	57.3	57.3
Sentara Healthcare	Norfolk, VA	64.7	71.9	70.0	72.5
Sharp HealthCare	San Diego, CA	62.0	60.7	65.5	61.9
Sutter Health	Sacramento, CA	47.6	48.7	60.2	57.1
Temple University Health System	Philadelphia, PA	73.3	80.3	60.4	59.5
Tenet South Florida Health System	Fort Lauderdale, FL	92.9	84.2	57.9	58.2

ACO SPOTLIGHT

Banner Health's Occupancy Rate Declines Following Pioneer ACO Designation

- Banner Health, named a Pioneer accountable care organization (ACO) in December 2011, reduced its occupancy rate by 1.5 percentage points between 2012 (59.0%) and 2013 (57.5%).
- During the same time, total facility occupancy for hospitals throughout the Phoenix metropolitan statistical area (MSA) declined by 4.1 percentage points, to 57.9% from 62.0%.

AVERAGE OCCUPANCY, BANNER HEALTH VERSUS PHOENIX-MESA, AZ, 2007-2013



Data source: IMS Health © 2015

System-Hospital ALOS Is Down or Flat in 15 of 20 Selected MSAs

- From 2012 to 2013, average lengths of stay (ALOS) at system-affiliated hospitals declined in 10 of 20 selected MSAs, while remaining unchanged in five others.
- Meanwhile, emergency department visits at hospitals in integrated systems increased in 17 of these 20 MSAs, but in just seven of the same 20 markets for nonsystem hospitals.

UTILIZATION MEASURES FOR HOSPITALS IN SELECTED MSAs, 2013¹

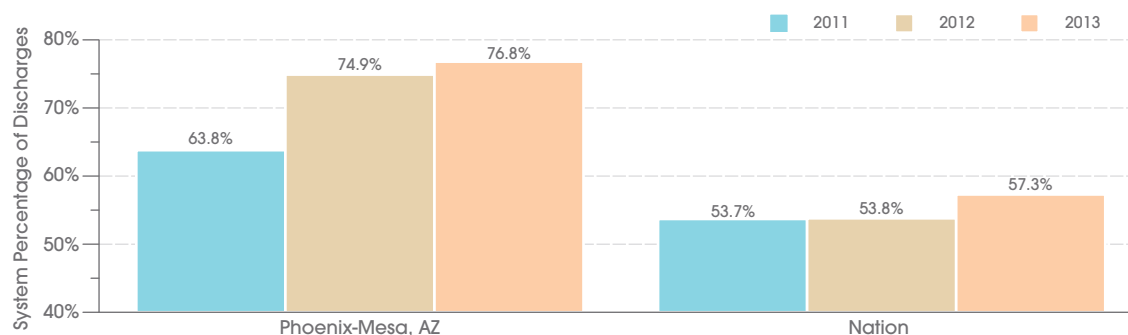
METROPOLITAN STATISTICAL AREA (MSA)	Number of Discharges		System % of Total Discharges	Number of Emergency Department Visits		ALOS ²	
	System	Nonsystem		System	Nonsystem	System	Nonsystem
Atlanta, GA	343,800	102,562	77.0%	1,558,890	560,679	4.6	4.0
Baltimore, MD	373,697	36,246	91.2	1,241,147	110,262	4.8	2.1
Boston, MA-NH	333,248	142,204	70.1	992,279	611,748	6.8	5.1
Chicago, IL	564,829	427,586	56.9	1,793,755	1,416,339	5.2	4.6
Cleveland-Lorain-Elyria, OH	270,943	38,257	87.6	884,423	149,815	4.2	4.1
Dallas, TX	291,848	120,973	70.7	1,165,244	560,117	4.2	3.2
Detroit, MI	448,039	87,767	83.6	1,438,812	414,478	4.3	4.4
Houston, TX	302,607	265,191	53.3	1,029,104	995,830	3.9	4.4
Kansas City, MO-KS	73,959	155,861	32.2	345,001	665,679	4.5	4.4
Los Angeles-Long Beach, CA	537,367	468,785	53.4	1,904,131	1,250,288	5.5	5.6
Miami, FL	205,273	131,247	61.0	778,170	396,424	3.3	5.3
Minneapolis-St. Paul, MN-WI	247,462	87,136	74.0	614,401	351,000	3.0	4.0
New York, NY	900,306	292,069	75.5	2,735,534	809,507	4.6	6.3
Philadelphia, PA-NJ	494,148	229,117	68.3	1,681,660	873,947	4.3	4.8
Phoenix-Mesa, AZ	369,720	111,735	76.8	987,979	366,774	3.8	3.8
Pittsburgh, PA	292,622	69,357	80.8	818,106	334,334	4.8	5.8
San Diego, CA	257,776	45,200	85.1	641,234	275,012	4.3	7.0
San Francisco, CA	129,489	25,296	83.7	406,400	141,914	4.5	5.1
St. Louis, MO-IL	275,138	105,805	72.2	890,057	356,699	4.7	4.8
Washington, DC-MD-VA-WV	358,010	183,702	66.1	1,293,526	910,651	4.3	4.1

LOCAL SPOTLIGHT

System Percentage of Total Discharges in Phoenix MSA Increases Markedly

- In the two years from 2011 (63.8%) to 2013 (76.8%), the percentage of total discharges accounted for by system-affiliated hospitals in Phoenix climbed by 13.0 percentage points.
- During the same period, the total percentage of discharges from system-affiliated hospitals nationally increased by just 3.6 percentage points, to 57.3% in 2013 from 53.7% in 2011.

SYSTEM SHARE OF TOTAL NUMBER OF DISCHARGES



Data source: IMS Health © 2015

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals. All data are effective as of December 31, 2013.

² ALOS represents only the acute-care portion of the hospitals' occupancy.

UTILIZATION

Surgery Volumes Are Higher in System Hospitals in Profiled Markets

- In 2013, system hospitals in all the selected metropolitan statistical areas (MSAs) recorded higher surgery volumes than nonsystem hospitals, except for Kansas City.
- At the same time, nonsystem hospitals in Atlanta (60.3%), San Diego (62.2%), San Francisco (48.9%) and Washington, D.C. (67.8%), had higher occupancy rates than system-affiliated facilities.

UTILIZATION MEASURES FOR HOSPITALS IN SELECTED MSAs, 2013¹

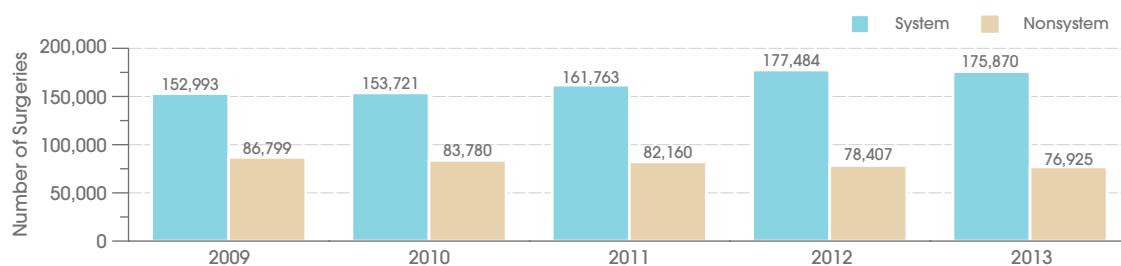
METROPOLITAN STATISTICAL AREA (MSA)	Inpatient Surgery Volume		Outpatient Surgery Volume ²		Average Occupancy ³	
	System	Nonsystem	System	Nonsystem	System	Nonsystem
Atlanta, GA	102,868	68,083	162,362	120,469	59.5%	60.3%
Baltimore, MD	120,619	10,681	185,449	32,581	70.4	60.8
Boston, MA-NH	86,950	36,720	195,088	124,928	75.1	63.3
Chicago, IL	139,471	84,377	209,425	139,091	63.1	57.4
Cleveland-Lorain-Elyria, OH	86,862	9,855	210,764	19,522	58.3	50.2
Dallas, TX	76,618	51,816	131,481	79,738	47.2	45.2
Detroit, MI	112,552	26,479	145,874	36,975	57.1	38.9
Houston, TX	92,954	91,872	133,240	128,164	53.9	43.2
Kansas City, MO-KS	20,210	46,800	38,511	87,210	54.7	49.6
Los Angeles-Long Beach, CA	139,361	112,644	159,136	129,331	56.3	49.0
Miami, FL	40,657	31,049	47,679	41,189	54.8	53.8
Minneapolis-St. Paul, MN-WI	71,755	34,342	138,542	56,314	51.8	45.5
New York, NY	175,870	76,925	389,226	173,813	78.6	70.3
Philadelphia, PA-NJ	175,638	101,313	414,789	142,100	63.8	55.8
Phoenix-Mesa, AZ	109,162	37,468	89,171	29,022	65.8	48.1
Pittsburgh, PA	116,753	28,749	183,784	70,378	59.1	54.4
San Diego, CA	69,089	13,822	81,002	23,003	56.6	62.2
San Francisco, CA	44,055	8,392	65,970	11,102	40.4	48.9
St. Louis, MO-IL	75,539	26,598	118,618	49,698	59.5	47.1
Washington, DC-MD-VA-WV	90,292	48,551	167,422	116,642	65.3	67.8

LOCAL SPOTLIGHT

Percentage of Inpatient Surgeries at System-Affiliated Hospitals in NYC Steadily Increases

- In 2009, 152,993 (63.8%) of 239,792 inpatient (IP) surgeries in New York City were performed in system-affiliated hospitals. In 2013, the system count grew to 175,870 out of 252,795, or 69.6%.
- IP surgical volume in nonsystem hospitals in New York City declined to 76,925 in 2013 from 86,799 in 2009 (-11.4%), resulting in a 128.6% gap in volume between the two hospital types.

TOTAL NUMBER OF INPATIENT SURGERIES, BY SYSTEM AFFILIATION, NEW YORK CITY, 2009-2013



Data source: IMS Health © 2015

¹ Hospital data are based on all short-term, acute-care, nonfederal hospitals. All data are as of December 31, 2013.

² Outpatient surgery volume includes hospital-based surgeries only.

³ Average occupancy represents only the acute-care portion of the hospitals' occupancy.

NOTE: In 2013, nonsystem hospitals accounted for less than 20% of all discharges in the Cleveland-Lorain-Elyria, OH MSA (see page 45), hence the comparably low number of nonsystem inpatient and outpatient surgery volumes.

UTILIZATION

Per-Plan Enrollee Count Rises Among System-Tied HMOs

- The average number of enrollees per plan increased 4.2% from 2012 to 2013 for HMOs in highly integrated systems. Enrollees per plan in HMOs not in such systems decreased 3.8%.
- Despite having an average of 57.8% more enrollees per plan in 2013, HMOs in highly integrated systems had lower utilization rates than non-system HMOs for all profiled measures.

ANNUAL UTILIZATION RATES OF HMOs¹

UTILIZATION MEASURE	HMOs in Systems		HMOs Not in Systems		ALL HMOs	
	2012	2013	2012	2013	2012	2013
Number of HMO Enrollees per Plan	252,507	263,043	173,318	166,723	187,314	182,776
Hosp. Days per 1,000 Non-Medicare Members	222.1	219.6	243.9	254.0	239.1	246.9
Hosp. Days per 1,000 Medicare Members	1,600.0	1,618.6	1,602.9	1,749.1	1,602.4	1,727.1
Hosp. Admissions per 1,000 Non-Medicare Members	56.2	55.3	59.1	58.7	58.4	58.0
Hosp. Admissions per 1,000 Medicare Members	268.4	272.0	265.3	276.3	265.8	275.6
Physician Encounters per Non-Medicare Member	4.2	4.2	4.8	4.9	4.7	4.7
Physician Encounters per Medicare Member	9.7	10.1	9.9	10.5	9.9	10.4
Ambulatory Visits per Non-Medicare Member ²	1.6	1.7	1.8	1.9	1.7	1.9
Ambulatory Visits per Medicare Member ²	4.7	4.1	4.3	4.6	4.4	4.5
ALOS per Non-Medicare Hospital Admission	4.0	4.0	4.2	4.3	4.2	4.3
ALOS per Medicare Hospital Admission	5.9	5.9	6.1	6.4	6.1	6.3

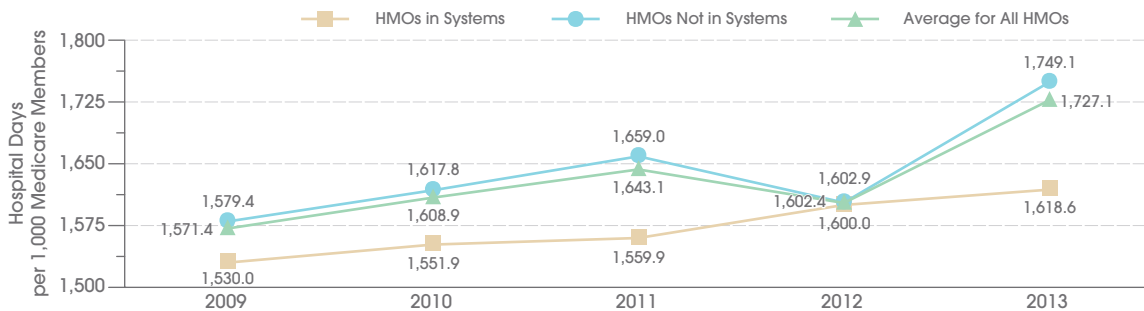


Hospital Days Ratio for Medicare Members Rises Faster at Nonsystem HMOs

LONG-TERM TREND

- From 2009 (1,579.4) to 2013 (1,749.1), the average number of hospital days per 1,000 Medicare members in HMOs not affiliated with highly integrated systems grew 10.7%.
- At the same time, the average number of hospital days per 1,000 Medicare members in HMOs that were part of highly integrated systems increased 5.8%, to 1,618.6 from 1,530.0.

HOSPITAL DAYS PER 1,000 MEDICARE MEMBERS, 2009–2013¹



Data source: IMS Health © 2015

Key Takeaway

By forming networks of physician offices and hospitals, HMOs in highly integrated health systems might be better positioned than their nonsystem-affiliated counterparts to manage the complex demands of coordinated care, such as physician communication and transition of patients across multiple settings. Direct access to physicians by HMOs in such systems might also bolster HMOs' efforts to better manage the costs of care through payment incentives and utilization management.

¹ HMOs are considered to be in highly integrated health systems if they are part of a system by virtue of ownership or contractual arrangements. HMOs are not considered to be in integrated health systems if they hold only provider network contracts with systems. All data are as of December 31, 2013. Preoperational HMOs are excluded.

² Ambulatory visits differ from physician encounters. Ambulatory visits are visits by an HMO member to an HMO clinic or physician's office that do not require the services of a physician. Such visits are usually made for tests, prescription refills, immunizations, etc. The term "physician encounter" is self-explanatory.

PMPY Pharmacy Expenses Are Lower in System-Affiliated HMOs

- In system-affiliated HMOs, average pharmacy expenditures per member per year (PMPY) declined to \$578.27 in 2013 from \$599.46 in 2012. In HMOs that were not affiliated with systems, PMPY expenditures rose to \$615.22 from \$605.81.
- In 2013, individual monthly pharmacy benefit premiums were 29.1% lower in system-affiliated HMOs than in unaffiliated HMOs (\$33.21 versus \$42.86). Family premiums were 28.7% lower (\$83.88 versus \$107.95).

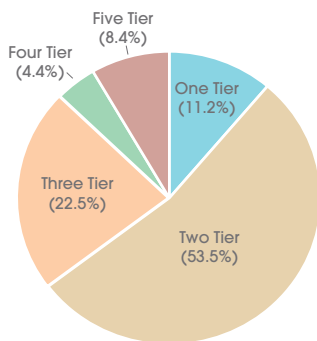
PHARMACY UTILIZATION AND EXPENSES OF HMOs¹

PHARMACY MEASURE	HMOs in Systems		HMOs Not in Systems		ALL HMOs	
	2012	2013	2012	2013	2012	2013
# of Prescriptions per Non-Medicare HMO Member	8.6	8.7	9.3	9.1	9.1	9.0
# of Prescriptions per Medicare HMO Member	27.3	28.2	29.9	29.8	29.3	29.4
% of Prescriptions Filled with Generic Drugs	71.9%	72.2%	76.1%	77.7%	75.2%	76.6%
% of Prescriptions Filled with Brand Name Drugs	28.1%	27.7%	23.9%	22.3%	24.8%	23.4%
Pharmacy Expenditures as % of Total Operating Costs	13.3%	13.6%	14.7%	14.9%	14.5%	14.7%
Pharmacy Expenditures per Member per Year	\$599.46	\$578.27	\$605.81	\$615.22	\$604.60	\$608.97
Ingredient Cost per Prescription	\$48.28	\$48.76	\$57.60	\$58.59	\$55.73	\$56.70
Individual Monthly Pharmacy Benefit Premium	\$34.49	\$33.21	\$41.90	\$42.86	\$40.21	\$40.71
Family Monthly Pharmacy Benefit Premium	\$89.86	\$83.88	\$105.01	\$107.95	\$101.80	\$103.04

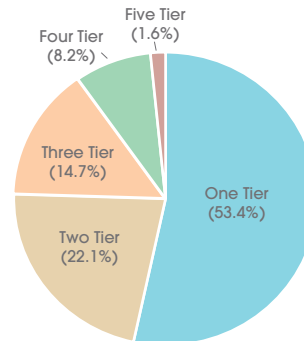
System Affiliation Affects Growth in Shares of HMO Members With Two-Tier Formulary Plans

- From 2012 (data not shown) to 2013, the percentages of HMO members with closed drug formularies that had two-tier copay designs rose at HMOs affiliated with highly integrated health systems, but fell among unaffiliated HMOs.
- Specifically, 53.5% of such members were subject to two-tier copay designs in system-affiliated HMOs in 2013, versus 50.8% in 2012. Among members in non-affiliated HMOs, the share was 22.1% in 2013 down from 23.6%.

HMOs IN SYSTEMS, PERCENTAGE OF MEMBERS USING CLOSED FORMULARIES, BY COPAY TIER DESIGN, 2013^{1,2,3,4}



HMOs NOT IN SYSTEMS, PERCENTAGE OF MEMBERS USING CLOSED FORMULARIES, BY COPAY TIER DESIGN, 2013^{1,2,3,4}



Data source: IMS Health © 2015

Key Takeaway

Owing to their higher enrollee count (see page 47), system-affiliated HMOs possess more leverage in drug cost negotiations than unaffiliated HMOs. This advantage might also result in lower drug costs, which could influence formulary designs and pharmacy benefit premiums for their members.

¹ HMOs are considered to be in highly integrated systems if they are part of a system by virtue of ownership or contractual arrangements. HMOs are not considered to be in integrated systems if they hold only provider network contracts with systems. All data are as of December 31, 2013. Preoperational HMOs are excluded.

² Copayments can be a flat dollar amount or a percent copay (coinsurance), which requires the HMO member to pay a fixed percentage of the cost of the drug.

³ In a closed formulary, a drug not on formulary is generally not covered, unless it goes through a prior authorization process. In an open formulary, a drug is usually covered by the HMO, even if it is not listed on formulary.

⁴ The percentages represent the share of all HMO members subject to a closed formulary, by copay tier system.

HOSPITALS/SYSTEMS WITH MEDICAL GROUP PRACTICES

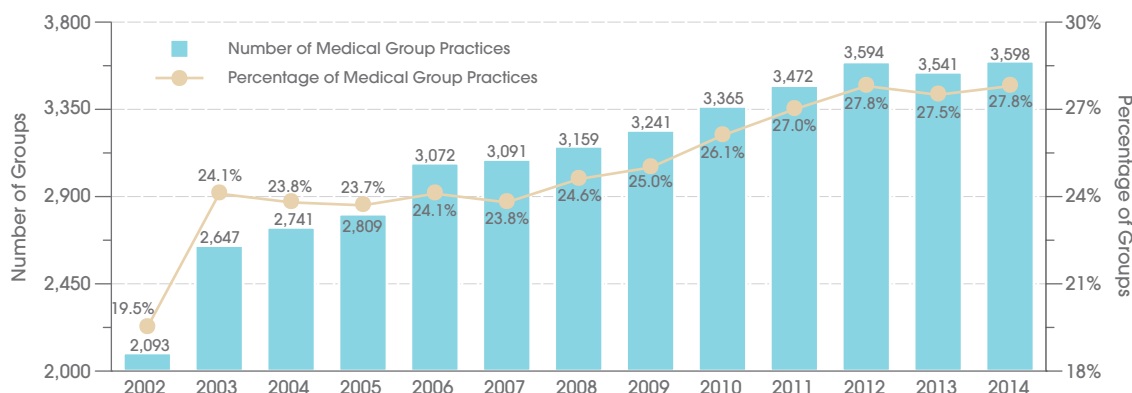
Background

After a slight interruption in 2013 (when it dipped to 3,541), the number of medical group practices with at least five physicians that were affiliated with integrated systems once again rose in 2014. Although this number increased by just 1.6% from 2013 to 2014 (3,598), it still managed to account for 27.8% of all medical groups in this size category, regaining the portion it had lost the year before. Ideally, system integration offers the medical group better access to capital, enabling the group to invest in health information technology

that is increasingly a prerequisite for participation in emerging pay-for-performance models. The system, meanwhile, gains access to—and possibly better control over—the patients treated by the medical group. Yet such partnerships are not always so simple; integration models legitimized by the Affordable Care Act, such as the accountable care organization, are already facing challenges that may necessitate overhauls. One thing seems certain: provider-system integration will be a consideration for both parties in the years to come.

Number/Percentage of Medical Groups in Integrated Systems, 2002–2014¹

LONG-TERM TREND



Data source: IMS Health © 2015

¹ A medical group practice must have five or more licensed physicians whose primary focus of business is seeing regularly scheduled patients for nonsurgical services other than imaging. The physicians must have a share in the physical setting and office management of the practice, which must offer outpatient care and be physically separate from a hospital. Data are effective as of midyear 2014.

DEMOGRAPHICS

ACO Shared Savings Program Experiences Rapid Growth

- In the 34 months from April 2012 to January 2015, the number of ACOs in the Medicare Shared Savings Program (SSP) increased 14-fold; the beneficiary count increased by a factor of 20.
- The SSP launched in April 2012 with 27 participating ACOs managing care for 345,000 beneficiaries; as of January 2015, 405 ACOs will provide service for 7.2 million beneficiaries.

ACOs IN THE MEDICARE SHARED SAVINGS PROGRAM¹

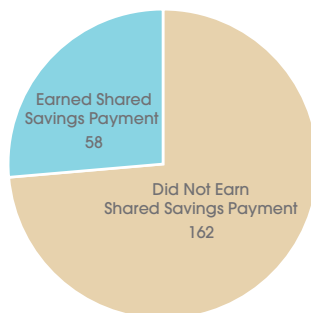
YEAR	Number of ACOs	Number of Beneficiaries	Beneficiaries per ACO
April 2012	27	345,000	12,777.8
July 2012	114	1,600,000	14,035.1
January 2013	220	3,600,000	16,363.6
January 2014	343	5,100,000	14,868.8
January 2015	405	7,200,000	17,777.8

Just Over a Quarter of SSP ACOs Earn Shared Savings Payments in Performance Year One

- In Performance Year One of the SSP, 58 (26.4%) of the 220 reporting ACOs realized savings and reported all 33 quality measures, thereby qualifying for a shared savings payment.
- These 58 organizations collectively received \$315.9 million in shared savings payments from Medicare, with the largest portion going to ACOs with 10,000 to 19,999 beneficiaries.

MEDICARE SHARED SAVINGS PROGRAM, PERFORMANCE YEAR ONE RESULTS^{2,3}

NUMBER OF ACOs THAT RECEIVED PAYMENT



AVERAGE AND TOTAL SHARED SAVINGS PAYMENT, BY ACO SIZE

SIZE (# OF BENEFICIARIES)	Number of ACOs	Avg. Earned Shared Savings Payment	Sum of Earned Shared Savings Payments
0-9,999	25	\$2,837,229	\$70,930,717
10,000-19,999	17	5,102,099	86,735,685
20,000-29,999	7	6,021,833	42,152,831
30,000-39,999	5	15,822,040	79,110,202
40,000-49,999	4	9,244,835	36,979,338
50,000+	0	0	0
OVERALL	58	\$5,446,703	\$315,908,773

Data source: Centers for Medicare & Medicaid Services © 2015

Key Takeaway

Even as the number of ACOs participating in the Medicare SSP expanded dramatically in recent years, the program is already proposing new tracks that delay penalties to further encourage providers to undertake the risk inherent to participation.⁴ This may be in response to attrition already experienced in the Pioneer ACO program (which saw its participant count drop to 19 from 32) and a survey indicating that a good portion of SSP ACOs may drop out rather than renew contracts.⁵

¹ CMS. (2015). Program News and Announcements. Retrieved from <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/News.html>

² CMS. (2014). Medicare Shared Savings Program Accountable Care Organizations Performance Year 1 Results. Retrieved from <https://data.cms.gov/ACO/Medicare-Shared-Savings-Program-Accountable-Care-O/yuq5-65xt>

³ Performance Year One is a 21- or 18-month period for ACOs with 2012 start dates, and a 12 month period for ACOs with 2013 start dates. ACOs that generated savings earned a performance payment if they met the quality standard.

⁴ Rau, J. (2014). CMS Proposes Rule Changes for Accountable Care Organizations, Delays Penalties Another 3 Years. *Healthcare Finance*. Retrieved from <http://www.healthcarefinancenews.com/news/cms-proposes-rule-changes-accountable-care-organizations-delays-penalties-another-3-years>

⁵ National Association of ACOs. (2014). ACO Survey Findings and Comments on Quality Benchmark Rule. *PR Newswire*. Retrieved from <http://www.prnewswire.com/news-releases/aco-survey-findings-and-comments-on-quality-benchmark-rule-282143911.html>

DEMOGRAPHICS

National Number of Medical Groups Inches Up in 2014

- The total number of medical groups with at least five physicians expanded from 2013 (12,889) to 2014 (12,923). Growth was faster among corporate-owned medical groups (0.4%).
- Meanwhile, the percentage of medical groups with five to six physicians increased slightly, to 44.6% from 44.4%. This size segment was the only one to grow at all during this time period.

MEDICAL GROUP PRACTICES WITH FIVE OR MORE FTE PHYSICIANS¹

SIZE (# of FTE Physicians)	Number of Medical Group Practices		Number of Physicians in Medical Group Practices		Percentage of Medical Group Practices ²	
	2013	2014	2013	2014	2013	2014
5-6	5,729	5,769	30,883	31,083	44.4%	44.6%
7-9	3,266	3,262	25,306	25,274	25.3	25.2
10-14	1,786	1,785	20,229	20,216	13.9	13.8
15-19	630	630	10,240	10,242	4.9	4.9
20 or More	1,478	1,477	81,574	81,614	11.5	11.4
AFFILIATION						
Corporate	5,510	5,530	88,987	89,191	42.7%	42.8%
Independent	7,379	7,393	79,245	79,238	57.3	57.2
SPECIALTY COMPOSITION						
Single Specialty	7,161	7,189	65,620	65,740	55.6%	55.6%
Multispecialty	5,728	5,734	102,612	102,689	44.4	44.4
TOTAL	12,889	12,923	168,232	168,429	100.0%	100.0%

System-Affiliated Share of Medical Group Practices Expands Incrementally

- The overall percentage of medical groups affiliated with integrated health systems inflated fractionally from 2013 (27.5%) to 2014 (27.8%), but still represented a minority of all groups.
- Over 38% of all system-tied medical groups had five or six physicians, the largest portion, by size, in 2014. Yet the share of groups in systems was highest for practices with 20 or more physicians.

MEDICAL GROUP PRACTICES IN INTEGRATED HEALTH SYSTEMS

SIZE (# of FTE Physicians)	Medical Group Practices in Systems				Medical Group Practices Not in Systems			
	Number of Groups		Percentage of Groups		Number of Groups		Percentage of Groups	
	2013	2014	2013	2014	2013	2014	2013	2014
5-6	1,344	1,372	23.5%	23.8%	4,385	4,397	76.5%	76.2%
7-9	814	825	24.9	25.3	2,452	2,437	75.1	74.7
10-14	513	522	28.7	29.2	1,273	1,263	71.3	70.8
15-19	230	232	36.5	36.8	400	398	63.5	63.2
20 or More	640	647	43.3	43.8	838	830	56.7	56.2
AFFILIATION								
Corporate	3,017	3,069	54.8%	55.5%	2,493	2,461	45.2%	44.5%
Independent	524	529	7.1	7.2	6,855	6,864	92.9	92.8
SPECIALTY COMPOSITION								
Single Specialty	1,607	1,636	22.4%	22.8%	5,554	5,553	77.6%	77.2%
Multispecialty	1,934	1,962	33.8	34.2	3,794	3,772	66.2	65.8
TOTAL/AVERAGE	3,541	3,598	27.5%	27.8%	9,348	9,325	72.5%	72.2%

Data source: IMS Health © 2015

Key Takeaway

Even as the overall health care market itself seems to encourage physicians and systems to integrate, the system-affiliated percentage of medical groups expanded rather slowly from 2013 to 2014. It may be that both parties are carefully weighing the pros and cons of partnering, or are finding more informal—though still effective—means of collaboration.

¹ Numbers and percentages reflect group practices located only in the 50 states and the District of Columbia. Data are effective as of midyear 2014.

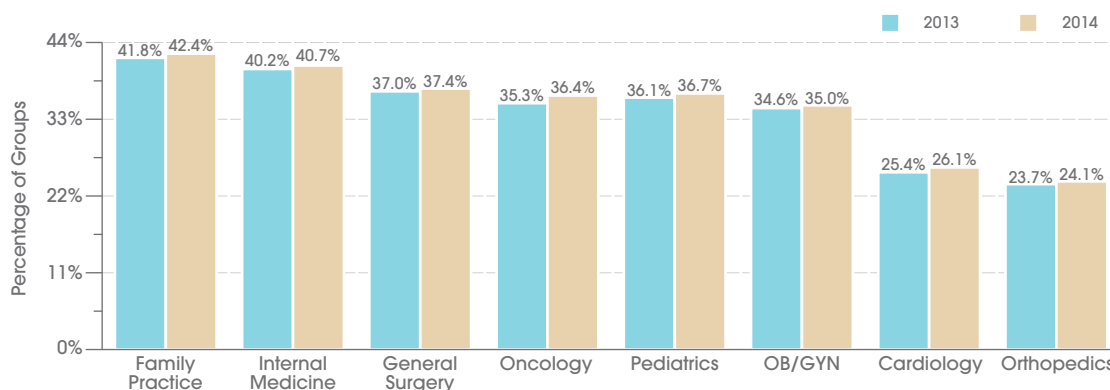
² Percentages may not sum to 100% due to rounding.

DEMOGRAPHICS

Shares of Specialty Group Practices Affiliated With Systems Rise

- The percentages of medical group practices that were affiliated with integrated health systems (IHSs) increased—albeit modestly—from 2013 to 2014 for all eight featured specialties.
- Orthopedic group practices (24.1%) were the least likely to be affiliated with integrated systems in 2014, while family practice groups (42.4%) had the highest rate of affiliation.

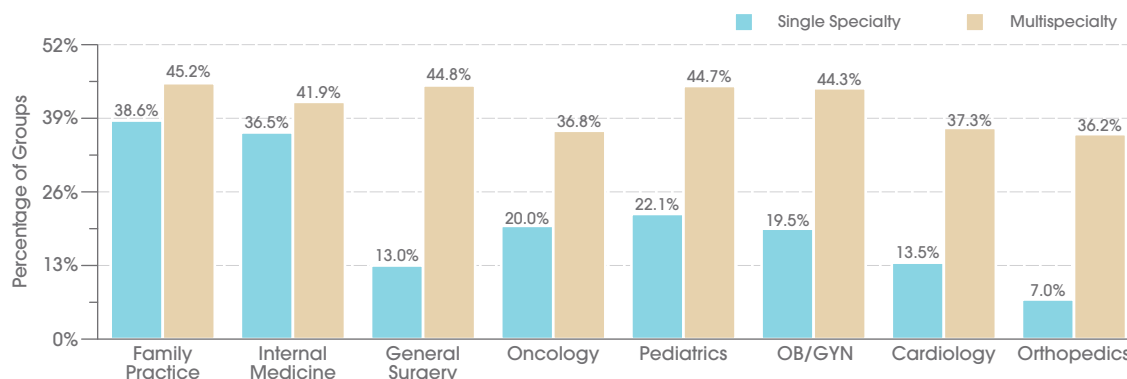
MEDICAL GROUP PRACTICES IN INTEGRATED HEALTH SYSTEMS, BY SPECIALTY



Percentages of Multispecialty Groups in Integrated Systems Inch Upward

- From 2013 to 2014, shares of IHS-affiliated multispecialty groups rose slightly for all profiled specialties. Oncology practices recorded the largest increase (1.1 percentage points).
- Shares of affiliated single-specialty groups grew in five of these eight specialties, with general surgery practices posting the largest gain (0.7 points), followed by pediatrics (0.6 points).

MEDICAL GROUP PRACTICES IN INTEGRATED HEALTH SYSTEMS, BY SPECIALTY COMPOSITION, 2014



Data source: IMS Health © 2015

Key Takeaway

Larger medical group practices, while fewer in number than small medical groups, employ increasing numbers of physicians, and are more likely to be part of integrated systems. These affiliated group practices gain access to the infrastructure and resources that can support greater risk-sharing arrangements and coordination of care. As these emerging care models proliferate, the number of large, vertically integrated medical groups can be expected to grow.

Number of MDs in Busiest Groups Tops That of Next Two Tiers

- In 2014, 21.1% of medical groups (accounting for 34,484 physicians) reported 750 or more visits per week. Physicians in groups with between 250 and 749 visits numbered 33,250.
- Groups with five or more FTE physicians with 750 or more visits each week accounted for 34.8% of all medical group practices with a known number of weekly visits, up from 34.3% in 2013.

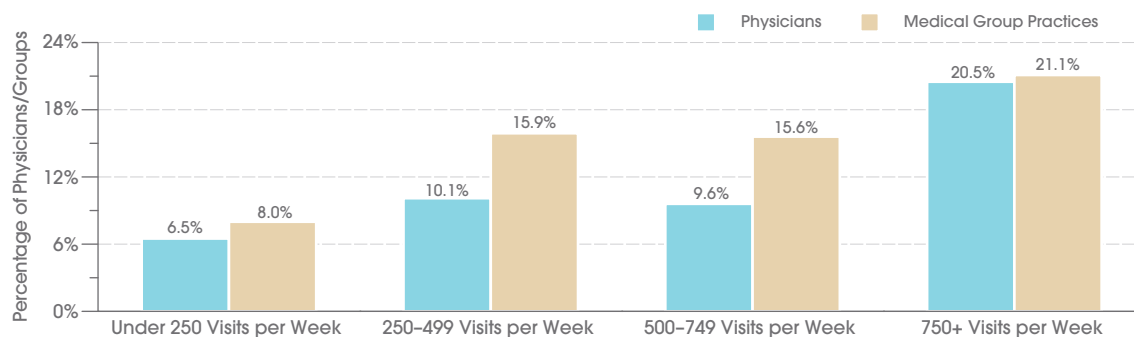
MEDICAL GROUP PRACTICES WITH FIVE OR MORE FTE PHYSICIANS¹

AVERAGE VISITS PER WEEK	Number of Medical Group Practices		Number of Physicians in Medical Group Practices		Percentage of Medical Group Practices ²	
	2013	2014	2013	2014	2013	2014
Under 250	1,029	1,029	10,975	10,975	8.1%	8.0%
250-499	2,052	2,050	17,078	17,062	16.1	15.9
500-749	2,022	2,022	16,188	16,188	15.8	15.6
750+	2,728	2,724	34,521	34,484	21.4	21.1
Unknown	4,932	5,098	88,560	89,720	38.6	39.4
TOTAL	12,889	12,923	168,232	168,429	100.0%	100.0%

Over 26% of Group Practice Physicians Are in Low-to-Middle Volume Groups

- In 2014, 26.3% (44,225) of physicians in medical group practices were in groups that saw fewer than 750 visits each week. More than 17,000 (10.1%) were in groups with 250-499 visits.
- Meanwhile, 20.5% of group practice physicians were in medical groups with 750 or more weekly visits. Such groups employed 43.8% of physicians in groups with known weekly visit counts.

PERCENTAGES OF PHYSICIANS AND MEDICAL GROUPS, BY NUMBER OF WEEKLY VISITS, 2014



Data source: IMS Health © 2015

Key Takeaway

The formation of larger, hospital-owned medical groups, which account for a growing number of physicians, is part of the consolidation occurring among care delivery organizations, and, ostensibly, is driven by the same focus on improved quality and lower costs. However, it is unclear whether these practices can help lower costs.³ In the short term, this may be less important than the integration of their patients into evolving delivery systems⁴ structured to coordinate providers and care.

¹ Numbers and percentages reflect group practices located only in the 50 states or District of Columbia. Data are effective as of midyear 2013 and midyear 2014.

² Percentages may not sum to 100% due to rounding.

³ Terhune, C. (2014). Study: Medical Costs Up to 20% Higher with Hospital-Owned Physician Groups. *Los Angeles Times*. Retrieved from <http://www.latimes.com/business/healthcare/la-fi-hospital-physician-costs-20141021-story.html>

⁴ Burns, L., et al. (2013). Horizontal and Vertical Integration of Physicians: A Tale of Two Tails. Annual Review of Health Care Management: Revisiting the Evolution of Health Systems Organization. *Advances in Health Care Management*. Volume 15, 39-117

UTILIZATION

Close to 75% of Family Practice Medical Groups Perform Surgery

- The percentage of family practice medical groups (74.7%) that perform surgery in 2014 was second only to general surgery practices (82.0%) among the eight profiled specialties.
- Orthopedic medical group practices were the most apt of the profiled specialties to provide imaging services in 2014 (83.3%), while pediatric groups were the least likely to do so (61.7%).

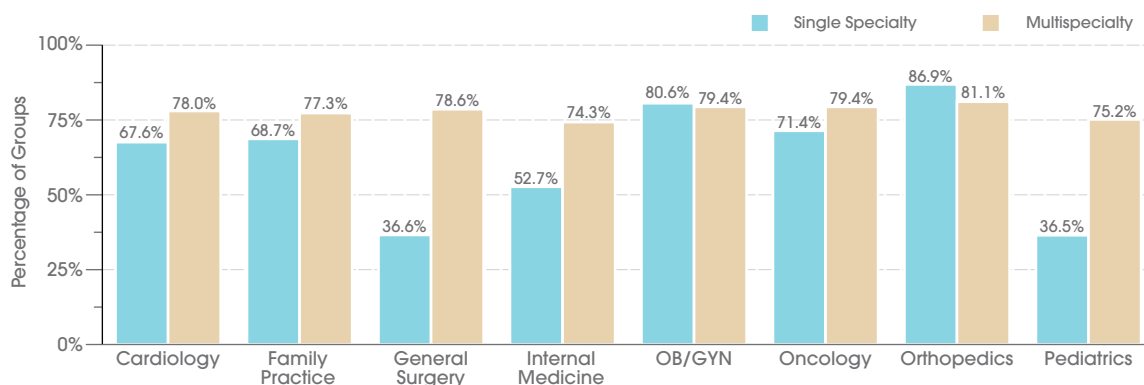
PERCENTAGE OF MEDICAL GROUP PRACTICES, BY TYPE OF SERVICE

SPECIALTY	Perform Surgery		Offer Clinical Labs		Provide Imaging	
	2013	2014	2013	2014	2013	2014
Cardiology	39.9%	39.9%	58.0%	57.8%	73.2%	73.2%
Family Practice	74.6	74.7	70.6	70.5	73.8	73.7
General Surgery	82.0	82.0	57.5	57.5	69.5	69.5
Internal Medicine	58.3	58.3	71.5	71.4	69.9	69.9
OB/GYN	70.1	70.1	62.7	62.7	79.8	79.8
Oncology	73.5	73.5	83.7	83.7	79.2	79.2
Orthopedics	52.0	52.1	42.9	42.9	83.3	83.3
Pediatrics	57.7	57.8	65.9	65.8	61.9	61.7
OVERALL AVERAGE	54.3%	54.4%	49.5%	49.5%	64.0%	63.9%

Most Single-Specialty OB/GYN and Orthopedic Practices Offer Imaging Services

- In 2014, 80.6% of single-specialty OB/GYN medical group practices and 86.9% of single-specialty orthopedic medical group practices provided imaging services.
- The percentages of multispecialty medical group practices that offered imaging services in 2014 surpassed those of single-specialty groups in all of the other profiled specialties.

PERCENTAGE OF MEDICAL GROUP PRACTICES THAT PROVIDE IMAGING SERVICES, 2014



Data source: IMS Health © 2015

Key Takeaway

The initial capital outlay for new imaging equipment can be significant (down payments are usually around 20%), and borrowing money for it can pinch lines of credit or lead to restrictions on future financial operations.¹ Combined with reimbursement cuts for imaging services the last several years, it might be that multispecialty groups, which typically have more physicians than single-specialty groups,² are able to generate the higher patient volumes to bear these financial risks.

¹ Harmonay, V. (2013). Should Your Business Lease or Buy Medical Imaging Equipment? *Atlantis Worldwide*. Retrieved from <http://info.atlantisworldwide.com/blog/bid/309211/Should-your-business-lease-or-buy-medical-imaging-equipment>

² Kane, C., and Emmons, D. (2013). New Data on Physician Practice Arrangements: Private Practice Remains Strong Despite Shifts Toward Hospital Employment. American Medical Association. Retrieved from http://www.nmms.org/sites/default/files/images/2013_9_23_ama_survey_prp-physician-practice-arrangements.pdf

UTILIZATION

X-Ray Services Top List of Modalities Offered by Profiled Specialties

- Across selected specialty medical group practices, X-ray services were the most commonly offered imaging modality in 2013 and 2014, with shares topping 90% in five specialties.
- Compared with the other modalities, MRI services were provided the least commonly for seven of the eight profiled specialties (orthopedics excepted) in 2013 and 2014.

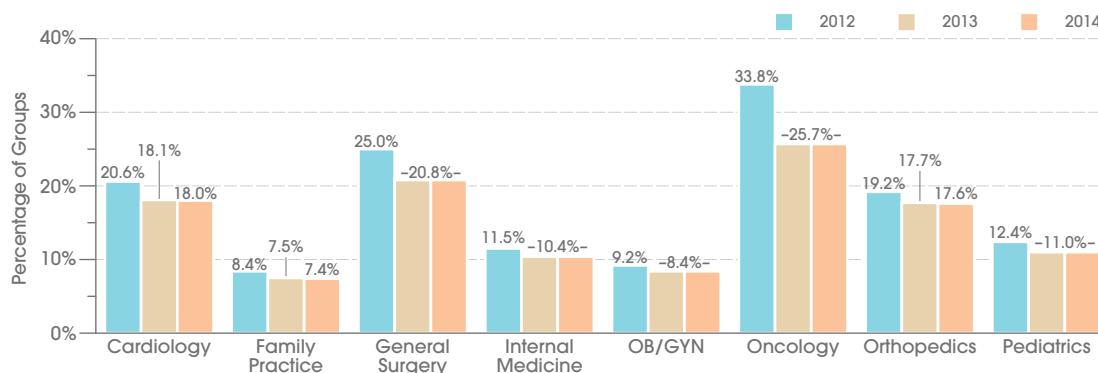
PERCENTAGE OF MEDICAL GROUP PRACTICES WITH IMAGING SERVICES, BY MODALITY

SPECIALTY	MRI		CT Scan		Ultrasound		Mammography		X-Ray	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Cardiology	18.1%	18.0%	23.3%	23.3%	63.0%	62.9%	34.7%	34.5%	77.6%	77.6%
Family Practice	7.5	7.4	9.6	9.6	34.0	33.9	25.9	25.8	95.2	95.2
General Surgery	20.8	20.8	23.3	23.3	66.2	66.2	44.6	44.6	85.5	85.5
Internal Medicine	10.4	10.4	13.6	13.6	42.6	42.6	32.6	32.6	92.9	92.9
OB/GYN	8.4	8.4	10.5	10.4	73.8	73.7	35.2	35.2	54.3	54.3
Oncology	25.7	25.7	32.5	32.5	74.3	74.3	59.0	59.0	94.0	94.0
Orthopedics	17.7	17.6	11.4	11.4	24.3	24.3	19.7	19.7	96.2	96.2
Pediatrics	11.0	11.0	13.8	13.8	39.6	39.5	32.7	32.6	94.7	94.7

Share of Groups Offering MRI Services Dips for Most Specialties Between 2012 and 2014

- Since 2012, the percentages of medical group practices that provided MRI services decreased for all featured specialties, most notably for oncology (8.1 percentage points).
- Despite the decline, the share of oncology medical group practices that offered this imaging service in 2014 (25.7%) surpassed those of all other profiled specialty practices.

PERCENTAGE OF MEDICAL GROUP PRACTICES OFFERING MRI SERVICES, BY SPECIALTY



Data source: IMS Health © 2015

Key Takeaway

Since 2006, Medicare and commercial payers have trimmed spending on various imaging services—a source of ancillary revenue for many group practices—based on the belief that some of the scans performed were unnecessary and raised the cost of care.¹ Additionally, as more medical groups have joined systems since then (see page 49), imaging services offered by the practices may seem increasingly redundant alongside those provided at associated hospitals. This may be prompting further reductions in the percentages of groups with imaging services.

¹ Howell, W. (2014). Imaging Utilization Trends and Reimbursement. *Diagnostic Imaging*. Retrieved from <http://www.diagnosticimaging.com/reimbursement/imaging-utilization-trends-and-reimbursement>

Group Practices in Systems Are More Apt to Provide Rx Services

- Among groups that offered any pharmacy services, those in systems were more likely overall (25.6%) to offer full pharmacy services in 2014 than their nonsystem counterparts (16.5%).
- The shares of practices that provided this service in 2014 were largest among those with 20 or more physicians—52.2% of system-affiliated groups and 49.3% of unaffiliated groups.

MEDICAL GROUP PRACTICES BY TYPE OF PHARMACY SERVICE

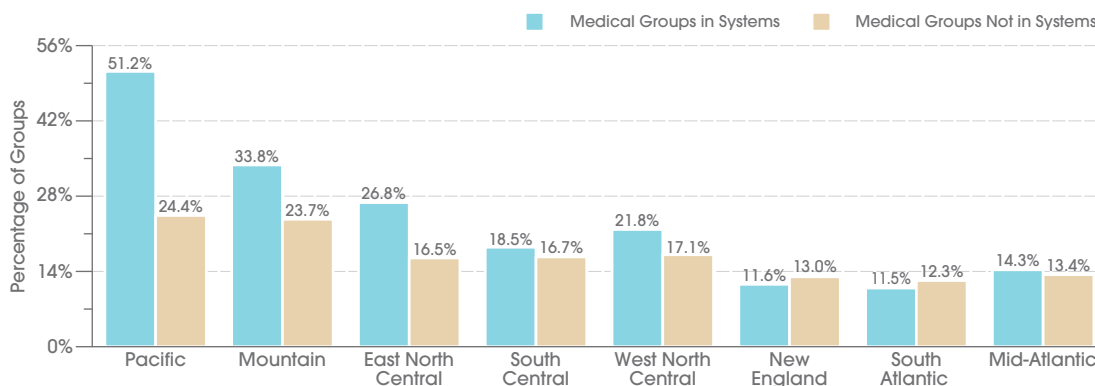
	Full Pharmacy				Limited Pharmacy				Samples			
	Average for Groups in Systems		Average for Groups Not in Systems		Average for Groups in Systems		Average for Groups Not in Systems		Average for Groups in Systems		Average for Groups Not in Systems	
SIZE (# of FTE Physicians)	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
5-6	12.7%	13.0%	8.5%	8.4%	6.8%	7.0%	11.3%	11.3%	84.4%	83.8%	82.4%	82.6%
7-9	15.9	15.6	12.6	12.6	6.1	6.7	10.5	10.4	80.6	80.6	80.0	80.0
10-14	26.3	26.6	18.2	18.0	7.7	8.5	12.7	12.4	68.6	67.8	71.6	71.9
15-19	37.8	39.5	32.1	31.7	3.7	3.7	14.4	14.3	64.6	63.0	58.3	58.7
20 or More	51.6	52.2	49.7	49.3	5.9	5.5	9.6	9.9	47.4	47.1	46.7	46.8
SPECIALTY COMPOSITION												
Single Specialty	12.0%	12.9%	8.3%	8.2%	5.9%	6.3%	10.3%	10.2%	83.9%	83.1%	83.5%	83.7%
Multispecialty	35.5	35.5	27.7	27.7	6.7	6.9	12.5	12.5	62.9	62.7	63.9	64.0
OVERALL AVERAGE	25.4%	25.6%	16.6%	16.5%	6.4%	6.6%	11.2%	11.2%	72.0%	71.6%	75.1%	75.3%

REGIONAL SPOTLIGHT

Pacific Region Is Home to the Highest Shares of Practices That Have Pharmacies

- In 2014, the percentages of medical group practices in systems (51.2%) and not in systems (24.4%) that offered full pharmacy services were highest in the Pacific region.
- The 2014 share of system-affiliated groups that offered this service in the Pacific region rose from 49.5% in 2013, while the unaffiliated share contracted from 25.5%.

MEDICAL GROUP PRACTICES OFFERING FULL PHARMACY SERVICES, BY SYSTEM AFFILIATION, 2014



Data source: IMS Health © 2015

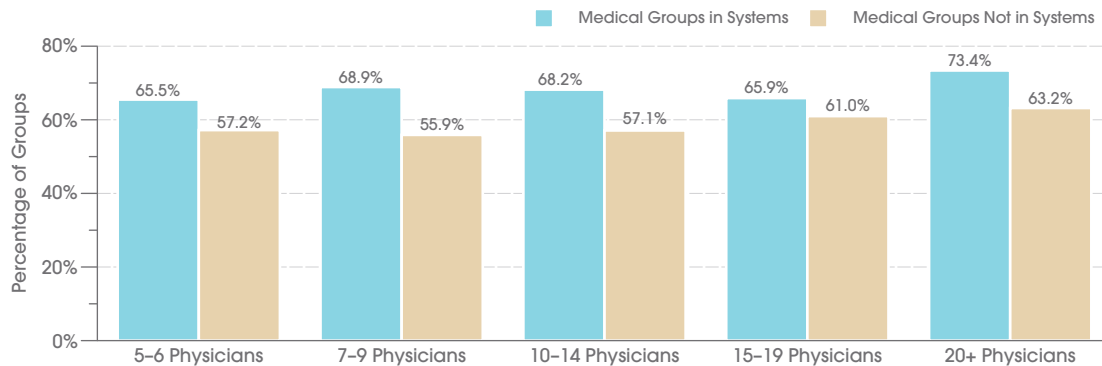
Key Takeaway

The drive to better coordinate care often includes medication reconciliation, where stakeholders track which drugs patients have been prescribed, across multiple settings, in an effort to prevent harmful drug interactions. Health system affiliation likely makes this task easier because it establishes clinical relationships between hospitals and pharmacists in group practices, which might explain why groups in systems are more likely than unaffiliated groups to offer full pharmacy services.

Large Group Practices in Systems Are Likely to Offer Rx Services

- Medical group practices with 20 or more physicians, especially those with system affiliations, were more likely to offer pharmacy services than groups of any other size.
- Specifically, 73.4% of system-affiliated practices with 20 or more physicians offered pharmacy services, versus 63.2% of unaffiliated medical group practices.

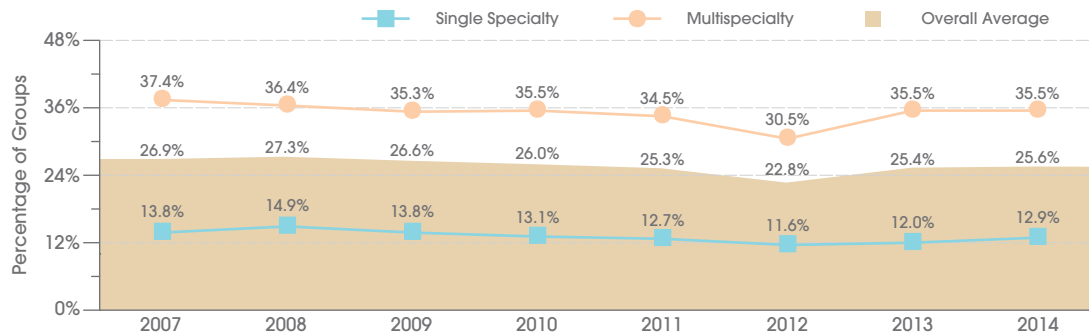
MEDICAL GROUP PRACTICES WITH PHARMACY SERVICES, BY SYSTEM AFFILIATION, 2014



Share of Multispecialty Group Practices With Full Rx Services Edges Down

- Between 2007 and 2014, the share of multispecialty medical group practices in systems that offered full pharmacy services contracted 1.9 percentage points.
- Nonetheless, such multispecialty group practices were nearly three times more likely to provide pharmacy services in each year shown than system-affiliated single-specialty groups.

MEDICAL GROUP PRACTICES IN SYSTEMS OFFERING FULL PHARMACY SERVICES, 2007-2014



Data source: IMS Health © 2015

Key Takeaway

Multispecialty medical group practices in health systems generally have more physicians than their single-specialty counterparts, also in systems (see page 51). This likely translates into higher patient volumes and, by virtue of being multispecialty practices, a patient base that requires treatment for a more expansive range of diseases and/or conditions. These factors could position multispecialty groups to receive a better return on investment for pharmacy services than single-specialty groups.

Penalties Might Be the Biggest Driver of Care Coordination

One objective of care coordination is to reduce the fragmented nature of health care delivery by prompting providers to share information, such as a patient's medical records, among multiple providers across multiple settings. This objective has contributed to the creation of new delivery models, including patient-centered medical homes (PCMHs), accountable care organizations (ACOs) and other innovations.

However, financial incentives might still be an effective means to improve care coordination. Consider that 1,700 hospitals earned higher payments as part of the government's Hospital Value-Based Purchasing Program, but fewer than 800 of them will receive bonuses because they face penalties for having high patient readmission and/or hospital-acquired condition rates.¹ In October of 2014, CMS announced that 2,610 hospitals would be subject to readmission penalties.²

Medicare and private payers also offer bonuses for care coordination activities among providers across various settings. However, threat of penalty seems to have best incentivized care coordination. The readmissions penalties alone have prompted many hospitals to alter their discharge procedures. Instead of the traditional approach of hospitals giving patients detailed care and medication instructions upon discharge, many are having physicians monitor patients in the days and weeks after they have been released from the facility.²

The march toward greater coordination has manifested itself most publicly in the formation of PCMHs and ACOs, which has precipitated a flurry of consolidation among medical practices, hospitals and health systems. Coordinated care might be equally as likely to arise, not from the proliferation of new delivery models, but out of the ratio of fines to bonuses at individual hospitals across the country.

Hospitals and Physicians Search for Optimal Integration Models

As the health care delivery system restructures in pursuit of reduced costs, improved outcomes and greater patient satisfaction, the relationship between hospitals and physicians has been evolving. Specifically, closer integration of hospitals and physician group practices through direct employment was expected to result in better care coordination and quality, improved efficiencies, more in-network referrals and ancillary revenue, including outpatient surgeries and imaging.³ Increased network size and market coverage were also expected to help manage the risk component of new reimbursement models.

As health care reform has progressed, however, some initial findings indicate that at least a subset of these basic assumptions may not yet be producing the desired results. For example, a University of California, Berkeley study found that hospital ownership of physician groups in

California led to 10% to 20% higher costs overall.⁴ A survey of physicians and executives from more than 20 hospitals in Kentucky found that 58% of respondents incurred losses of at least \$100,000 per hospital-employed physician per year.⁵ Several studies have found little correlation between quality improvement and the large practices typically associated with hospital ownership.³

The rationales behind consolidation in health care—economies of scale, operational efficiency, enhanced care coordination—have been compelling to many, and it may be that successful integration models for hospitals and medical group practices have not been widely applied. Physician leadership and shared cultures may not have had time to develop, and models other than direct employment may be more effective.⁵ Regardless, hospital integration of physician groups is a reform model likely poised for further refinement.

¹ Rau, J. (2015). Hospitals' Medicare Quality Bonuses Get Wiped Out by Penalties. *National Public Radio*. Retrieved from <http://www.npr.org/blogs/health/2015/01/22/378853630/hospitals-medicare-quality-bonuses-get-wiped-out-by-penalties>

² Rau, J. (2014). Medicare Fines 2,610 Hospitals In Third Round of Readmission Penalties. *Kaiser Health News*. Retrieved from <http://kaiserhealthnews.org/news/medicare-readmissions-penalties-2015/>

³ Burns, L., et al. (2013). Horizontal and Vertical Integration of Physicians: A Tale of Two Tails. *Annual Review of Health Care Management: Revisiting the Evolution of Health Systems Organization*. *Advances in Health Care Management*, Volume 15, 39-117

⁴ Terhune, C. (2014). Study: Medical Costs Up to 20% Higher with Hospital-Owned Physician Groups. *Los Angeles Times*. Retrieved from <http://www.latimes.com/business/healthcare/la-fi-hospital-physician-costs-20141021-story.html>

⁵ Rappleye, E. (2014). Three Challenges for Hospitals Integrating Physician Groups. *Becker's Hospital Review*. Retrieved from <http://www.beckershospitalreview.com/hospital-physician-relationships/3-challenges-for-hospitals-integrating-physician-groups.html>

LOOKING FORWARD

Changes May Come to ACO Model to Boost Participation

The accountable care organization (ACO) model, formalized by the Affordable Care Act (ACA) as a means to coordinate care for Medicare fee-for-service beneficiaries while reducing unnecessary costs, may see some changes if recent CMS proposals are ultimately adopted.

Although CMS has shared positive early results of the ACO initiative—\$380 million combined savings in 2012, for example¹—there are signs that the program may need adjustment. Of the 32 initial Pioneer ACOs selected, just 19 are still participating as of December 2014.² Some former Pioneer programs are now in the lower-risk Shared Savings Program; others quit the ACO initiative altogether. Performance Year One results from the Shared Savings Program (SSP) indicate that just 58 of the 220 reporting ACOs earned shared savings bonuses (see page 50). Additionally, according to one estimate, up to 80% of SSP participants lost money

due to the high cost of operations; and a survey by the National Association of ACOs (NAACO) found that two of three responding ACOs were highly or somewhat unlikely to remain in the program.³

Medicare has recently proposed changes to the program that would postpone penalties for three more years. Those who opt into this extension would receive a lesser reward: the maximum split in shared savings would be reduced to 40% from 50%. The proposed rule also creates a Track 3 variant of the ACO program, which would allow participating organizations to keep up to 75% of shared savings, in exchange for increasing their liability to 15% from 10%.⁴ Given the importance of the ACO initiative to the ACA as a whole, the question remains if CMS's proposition will be enough to maintain participation, or if further adjustments to risk sharing will need to be made in order to attract the providers upon whom the program relies.

Health Care Sector Prepares for the Transition to ICD-10

The U.S. health care sector—including providers, hospitals, payers, government agencies, software vendors, data clearinghouses and nearly all other health care entities—is now bracing for implementation of the ICD-10 coding system. A federal rule takes effect October 1, 2015, requiring all physician practices, hospitals and health plans to switch from the current ICD-9 system of classifying diagnoses and procedures to a dramatically different and expanded ICD-10 system. At that time, the number of codes will jump nearly ten-fold, to more than 171,000 codes from 17,849, allowing far more precision about disease conditions and the health care interventions provided to patients. Stakeholders largely agree that the 36-year-old ICD-9 system has limitations, and change is probably appropriate; but the logistics and widespread impact of such an overhaul to the coding system remains a concern for many. Regardless of size, hospitals

and providers have voiced concern about the costs and training involved in such a conversion. Moreover, some skepticism obtains as to whether the mandate will be enforced or postponed, as it has been a number of times previously.

Nevertheless, adoption of ICD-10 seems inevitable; the real question is when. There is little doubt that the implementation of the ICD-10 coding system is an opportunity for providers, hospitals and payers not just to expand the ways in which medical procedures are documented for billing purposes, but also to enhance the specificity at which patient-level data may be used to improve health outcomes, reduce medical errors, boost quality data reporting and increase accuracy of claims payments. ICD-10 will also enable health care providers to more effectively categorize diseases, document medical complications, and track health care outcomes.

¹ U.S. Department of Health and Human Services. (2014). Medicare's Delivery System Reform Initiatives Achieve Significant Savings and Quality Improvements—Off to a Strong Start. Retrieved from <http://www.hhs.gov/news/press/2014pres/01/20140130a.html>

² CMS. (2015). Pioneer ACO Model. Retrieved from <http://innovation.cms.gov/initiatives/Pioneer-ACO-Model/>

³ MacDonald, I. (2014). Paul Keckley: MSSP ACO Proposed Rule Changes Don't Go Far Enough. *FierceHealthcare*. Retrieved from <http://www.fiercehealthcare.com/story/paul-keckley-mssp-aco-proposed-rule-changes-dont-go-far-enough/2014-12-09>

⁴ Rau, J. (2014). CMS Proposes Rule Changes for Accountable Care Organizations, Delays Penalties Another 3 Years. *Healthcare Finance*. Retrieved from <http://www.healthcarefinancenews.com/news/cms-proposes-rule-changes-accountable-care-organizations-delays-penalties-another-3-years>

RESEARCH METHODOLOGY

Data for the *Hospitals/Systems Digest* were gathered by IMS Health, Parsippany, NJ, a leading provider of innovative health care data products and analytic services. The information was gathered from the following sources:

HMOs, Hospitals, Medical Group Practices

HMO and hospital utilization data, gathered from state health licensing agencies, federal government sources and telephone or email surveys, are effective as of December 31, 2013. Integrated systems, identified using local and national periodicals, trade publications and provider contacts, were contacted by phone to verify data. These data were gathered during 2014 and are effective as of July 2014.

IMS Health also provided national data about medical group practices with five or more full-time equivalent physicians, totaling around

13,000 medical group practices nationwide. Data are effective as of July 2014.

Some of the managed care content used for analysis is obtained from quarterly and annual financial statements submitted by insurance companies, as required, to a state's department of insurance. These statements have been collected and made available by the National Association of Insurance Commissioners (NAIC). Although the NAIC has permitted use, they do not endorse any analysis or conclusions based upon the use of its data.

Hospital Inpatient and Outpatient

The IMS Health Hospital Procedure/Diagnosis (HPD) database contains an extensive set of hospital inpatient and outpatient discharge records, including actual diagnoses and procedures data for about 75% of all discharges nationwide (including 100% of Medicare-reimbursed discharges). The HPD database reports the numbers of procedures performed on patients discharged from a hospital. Most states report at least nine

diagnostic and six procedure codes from each discharge record. IMS Health uses Medicare procedure counts and additional hospital-level information to estimate procedure counts for the remaining 25% of discharges—the non-Medicare hospital discharge information in nonreporting states. The hospital inpatient and outpatient data provided in this Digest are current as of calendar year 2013. See the table on page 61 for a list of common disease states tracked.

HOSPITAL REGIONS	STATES
Pacific	Alaska, California, Hawaii, Oregon, Washington
Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
South Central	Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Mid-Atlantic	New Jersey, New York, Pennsylvania
South Atlantic	Delaware, Florida, Georgia, Maryland, North Carolina, Puerto Rico, South Carolina, Virginia, Washington, DC, West Virginia

RESEARCH METHODOLOGY

Patient Claims

Patient-level, chronic disease-specific claims data derive from the **Managed Care Digest Series® Local Trends Summary™** database. These data come from health care professional and institutional insurance claims, including all physician specialties

and all hospital types. IMS Health gathers prescription activity from the National Council for Prescription Drug Programs (NCPDP). These data account for two billion prescription claims annually, or more than 50% of the prescription universe.

National Retail Pharmacy Data

The prescription metrics on page 22 derive from IMS Health's Vector One®: Payer (VOPA) platform. Through agreements with a variety of data providers, the IMS Health data warehouse receives billions of prescription claims per year.

VOPA is IMS Health's projected prescription and patient-centric database. The only database of its kind, it provides projected retail pharmacy prescription and longitudinal metrics at various levels of aggregation, including state, regional and national levels. IMS Health uses a unique and patented algorithm for de-identification of patients, ensuring compliance with HIPAA regulations.

IMS Health uses projection territories aligned to balance coverage proportional to prescribing

activity. These territories are stratified by payment type and the sample is expanded to the universe by strata, census division and class of trade. IMS Health reconciles the results to produce a single projection factor for each claim. This factor is used to project prescriptions and patients filling a prescription. Patient counts will be unique at the focus diagnosis level by gender, age and payer type (including Medicare Part D). These factors are used to project prescriptions and patients in each territory. Regional and national projections are created by rolling up from the prescriber to the geographic area of interest. These data are current as of midyear 2014, and are trended over three years.

DISEASE STATE	ICD-9 CODES
Acute Coronary Syndromes	411.1
Angina	413
Asthma	493
Breast Cancer	174.0, 174.1, 174.2, 174.3, 174.4, 174.5, 174.6, 174.8, 174.9, 238.3, 239.3
Depression	296
Diabetes Mellitus	250
Hypercholesterolemia	272.0
Hypertension	401.9
Osteoarthritis	715.16, 715.26, 715.36, 715.96
Prostate Cancer	185
Rheumatoid Arthritis	714.0
Stroke	433, 434

Download the complete methodology at www.managedcaredigest.com.

KEY TERMS

Unless otherwise noted, all definitions are provided by IMS Health. (2015). Parsippany, NJ.

Accountable Care Organization (ACO): An ACO is an associated network of primary care physicians, specialists and hospitals that actively coordinates the delivery of care to effect higher quality outcomes. ACOs report on quality measures, and the providers, who likewise are accountable for maintaining a high standard of individual performance, are rewarded for their participation.

Acute Care: Providing or concerned with short-term medical care, especially for serious acute disease or trauma.

Affordable Care Act (ACA): The ACA was signed into effect by President Obama in March 2010 as part of the administration's comprehensive health care reform legislation. The ACA is aimed primarily at decreasing the number of uninsured Americans, reducing the overall costs of health care and improving quality. In June 2012, the Supreme Court upheld the constitutionality of most of the ACA, and most reforms have already taken effect.

Average Length of Stay (ALOS): The total number of patient-days divided by the number of admissions and discharges during a specified period of time, which results in an average number of days in the hospital for each person admitted.

Cancer Center: A facility that offers an organized program for the effective administration of cancer treatment and related services. Outpatient medical oncology treatment is the focal point of care at the facility. This includes specialized modes of cancer treatment such as radiation oncology, chemotherapy/infusion therapy, or medical/surgical treatment.

Cardiac Care Unit (CCU): A cardiac care unit treats patients with serious heart conditions. Staff trained and certified in heart conditions and related cardiac procedures provide specialized care and extensive heart monitoring.

Case Mix Index (CMI): Severity is approximated by the case mix index (CMI), which is a statistical measure of the average amount of resources consumed per Medicare inpatient case at a hospital. Hospitals that tend to treat more resource-intensive (i.e., severe) cases will have a higher calculated CMI.

Concomitant Diagnosis: A secondary diagnosis, occurring simultaneously, that accompanies a diagnosis of the condition for which a patient is admitted to a hospital or treated on an outpatient

basis, that may or may not be interrelated or produced as a result of the primary diagnosis.

Congressional Budget Office (CBO): The CBO is a public sector think tank that produces policy analyses, cost estimates of legislation, and budget and economic projections that serve as a basis for Congress's decisions about spending and taxes. Every piece of legislation affecting the use of the nation's resources undergoes CBO's scrutiny.

Diagnostic Imaging Center (DIC): A facility that provides diagnostic imaging and is physically separate from a hospital or, if not physically separate, is operated as an independent business. In the case of multispecialty clinics, a significant portion of total business must be done in diagnostic imaging.

For-Profit Hospital: A hospital that is owned by an individual, a partnership or a corporation that splits profits among its shareholders.

Freestanding Outpatient Surgery Center (FOSC): An independent medical facility designed and equipped to handle surgery, pain management and certain diagnostic procedures that do not require overnight hospitalization.

Government Hospital: A hospital that is owned by the federal government (including military, Public Health Service and Department of Justice) or a state, city or county government.

Health Insurance Exchange: A key provision of the ACA is the creation of health insurance exchanges, or marketplaces, in each state in which individuals and small businesses can choose from a variety of qualified health insurance plans. If a state chooses not to establish its own exchange, the federal government will establish one for it. States may also elect to set up a partnership marketplace, in which the state and federal governments jointly run the exchange.

Highly Integrated Health Care Systems: Highly integrated health care systems either own or contract with at least three components of health care delivery, including at least one acute-care hospital, at least one physician component, and at least one other component of care. Highly integrated health care systems also have at least one systemwide contract with a payer, such as an HMO.

Integrated Health Care System: An organization that, through ownership or formal agreements, aligns health care facilities in order to deliver integrated health care services by improving quality and

KEY TERMS

reducing costs to a defined geographical area. These organizations are formed with the intent to market themselves as one unit to payers.

Intensive Care Unit (ICU): An intensive care unit is a specialized section of a hospital that treats seriously ill patients, who are under continuous observation by staff equipped to provide intensive care.

Medical Group Practice (MGP): A practice with five or more licensed physicians whose primary focus of business is seeing regularly scheduled patients for nonsurgical services other than imaging. The physicians must have a share in the physical setting and office management of the practice, which must offer outpatient care and be physically separate from a hospital.

MedPAC: The Medicare Payment Advisory Commission (MedPAC) is an independent Congressional agency established by the Balanced Budget Act of 1997 to advise the U.S. Congress on issues affecting the Medicare program.

Metropolitan Statistical Area (MSA): A Metropolitan Statistical Area has at least one urbanized area of 50,000 or more people, plus an adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

Multihospital System (MHS): A hospital chain that owns two or more institutions. The three major types of MHSs are not-for-profit systems, for-profit (investor-owned) systems and government-owned systems.

Not-for-Profit Hospital: A facility with a tax-exempt status due to its classification as a charitable organization (including church-operated and other charitable organizations).

Occupancy Rate: The percentage of all facility beds that are occupied at a given time.

Patient-Centered Medical Home (PCMH): A PCMH is a system of comprehensive coordinated primary care. A primary care physician leads a team of professionals dedicated to providing proactive, preventive and chronic disease management through all stages of life. These personal physicians are responsible for the patient's coordination of care across all health care systems facilitated by registries, information technology, health information exchanges and other means to ensure patients receive appropriate and timely care. Care teams utilize evidence-based medicine and clinical decision support tools that guide decision making, as well as ensure that patients and their families have the

education and support to actively participate in their own care.

Patient-Day: A unit in a system of accounting used by health care facilities and health care planners. Each day represents a unit of time during which the services of the institution or facility are used by a patient; thus 50 patients in a hospital for one day would represent 50 patient-days.

Pioneer ACO: The Pioneer ACO model is a pilot program launched by the CMS Innovation Center that is designed to (1) show how particular ACO payment arrangements can best improve care and generate savings for Medicare; and (2) test alternative program designs to inform future rulemaking for the Medicare Shared Savings Program.

Provider Units: Include such health care facilities as hospitals, HMOs, nursing homes, home health agencies, physician practices and medical groups, diagnostic imaging centers and freestanding outpatient surgery centers. Each highly integrated health care system either contracts with or owns at least three of these facility types. However, such a health care facility is not necessarily affiliated with only one integrated system; it may contract with or be owned in part by more than one integrated system. Each such relationship is counted as a "provider unit" of the system with which it is affiliated. In accordance, the total number of provider units is greater than the total number of health care facilities affiliated with highly integrated health care systems.

Retail Pharmacy: Retail pharmacy includes pharmacy services provided to patients themselves (rather than to health care providers) in community or outpatient (rather than hospital) settings.

Short-Term Bed: A bed assigned to patients who are admitted to the hospital for lengths of stay less than 30 days.

Definition sources:

ACO: <http://content.healthaffairs.org/cgi/content/full/26/1/w44>

ALOS: <http://medical-dictionary.thefreedictionary.com/average+length+of+stay>

Concomitant Diagnosis: <http://medical-dictionary.thefreedictionary.com/concomitant>

FOSC: <http://medical-dictionary.thefreedictionary.com/Ambulatory+surgery+center>

MSA: <http://www.census.gov/population/www/metroareas/metrodef.html>

PCMH: <http://www.aafp.org/practice-management/pcmh/overview.html>

Patient-Day: <http://medical-dictionary.thefreedictionary.com/patient+day>

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Looking Forward

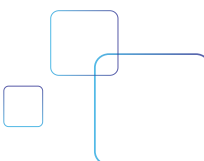
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