CENTER FOR HEALTH
INFORMATION AND ANALYSIS

PERFORMANCE OF THE MASSACHUSETTS HEALTH CARE SYSTEM SERIES:

PROVIDER PRICE VARIATION IN THE MASSACHUSETTS HEALTH CARE MARKET (CY 2013 DATA)

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Introduction

Since 2011, the Center for Health Information and Analysis (CHIA) has reported on variation in provider prices in the Massachusetts health care market. This brief provides an updated summary of provider price variation in the commercial market.[1]

In recent years, rising provider prices have been a main driver of the growth in health care spending in Massachusetts.[2] Previous analysis indicates that as overall health care spending in Massachusetts increased between 2010 and 2012, the average health status of the insured population remained virtually unchanged, while utilization of health care services declined. This suggests that the growth was driven by higher service prices.[3]

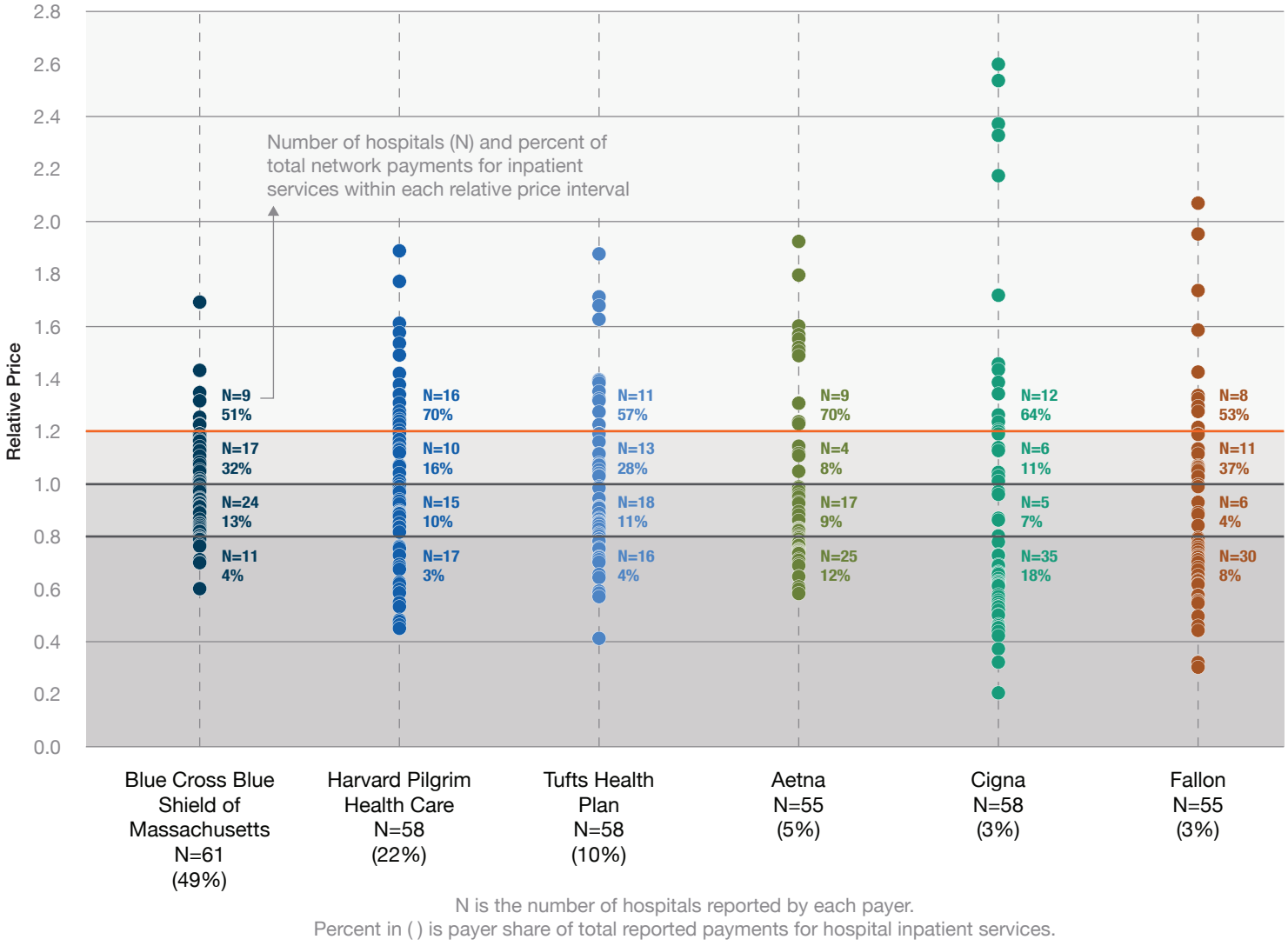
For the commercially insured population, prices are the result of private bilateral negotiations between providers and payers. This complex process has led to substantial variation in prices paid for the same service to different providers within a payer's network. As Massachusetts continues to pursue cost growth containment, and as consumers bear a larger share of health care costs, access to transparent price information is crucial for consumers, purchasers (e.g., employers), policymakers and other industry stakeholders.

CHIA examines provider price variation using a measure called Relative Price (RP). RP compares prices paid to different providers within a given payer's network, while accounting for differences across providers in patient acuity, the quantity and types of services delivered, and differences in the types of products offered by payers (e.g., HMO, PPO, etc.). By construction, each payer's network average RP equals 1.0. Providers with RPs above 1.0 are paid higher-than-average prices in a payer's network, and vice versa. It is important to note that RP is calculated within each payer's network; therefore, RP values are not directly comparable across payers.[4]

This policy brief focuses on price variation across acute hospitals and physician groups in the commercial market. Findings are based on data reported by 13 commercial payers operating in Massachusetts.[5] Acute hospital and physician group data correspond to calendar years (CYs) 2013 and 2012, respectively. More detailed findings—including results for non-acute hospitals and other, non-physician group providers—can be found in the accompanying Databook.

1 Distribution of 2013 Acute Hospital Inpatient Relative Prices by Payer

Within each of the six largest commercial payers' networks, more than half of the total payments to acute hospitals for inpatient services went to hospitals with relative prices that were at least 20% higher than the network average.



Source: CHIA (payer-reported data) | Note: The six largest commercial payers are shown here, which account for 92%of total commercial payments for hospital inpatient services. Six specialty hospitals were excluded from the figure due to the hospitals' unique patient populations and/or conditions treated. These specialty hospitals were not considered comparable with the other hospitals. Percentages across RP intervals may not sum to 100% because of rounding. Please see Databook for RP data for all 13 payers.

Acute Hospitals

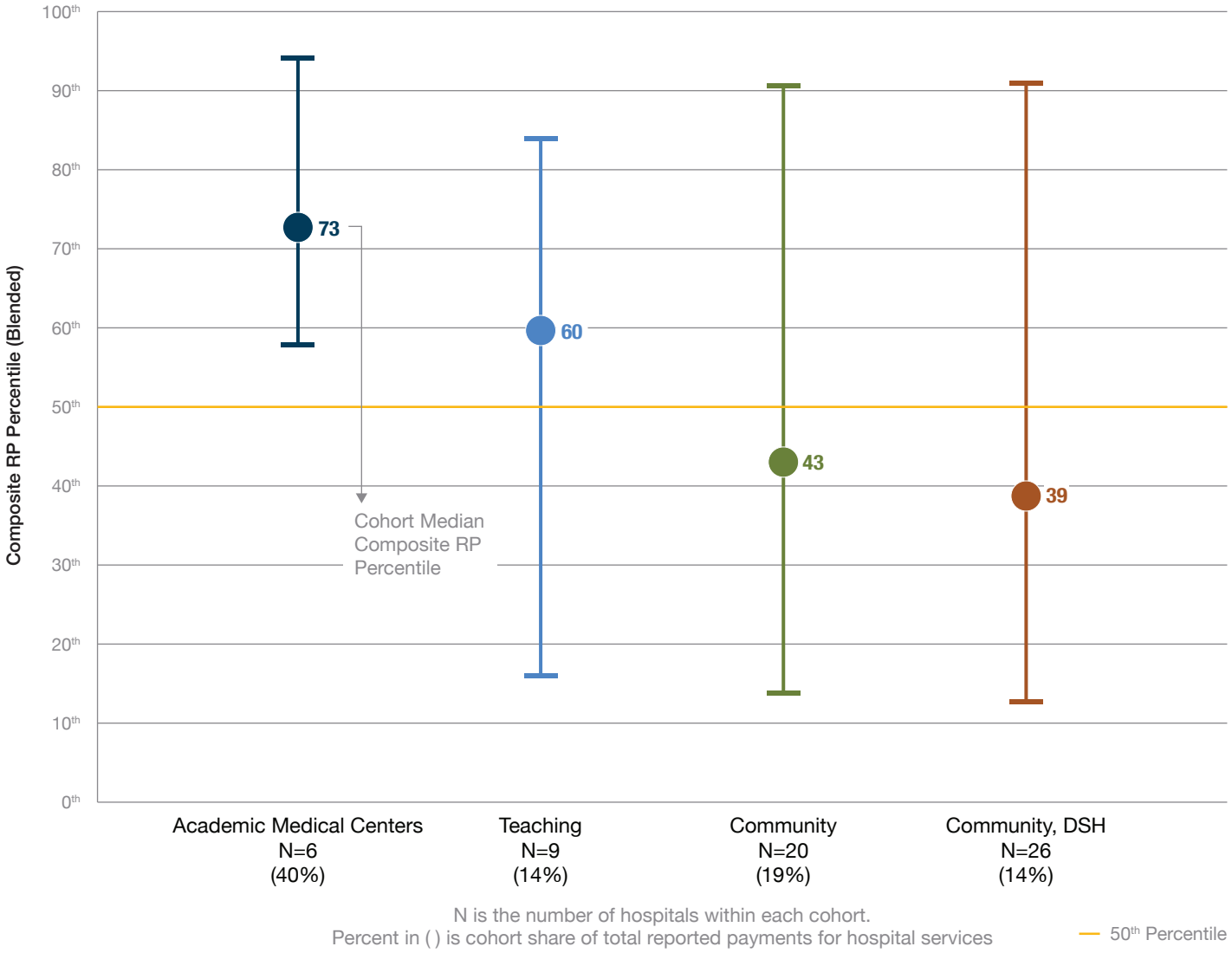
Hospital Payments Remain Concentrated among Higher-Priced Acute Hospitals

Acute hospital payments from commercial payers were concentrated among higher-priced hospitals in CY 2013. Across all payer networks, higher-priced acute hospitals—according to RP composite percentile rank[6]—received 86% of total payments for inpatient services and 73% of total payments for outpatient services in CY 2013 (see Chartbook Figures 1 and 2).[7] This level of concentration has remained virtually unchanged in the last three years as there has been no substantial shift in the distribution of payments between higher and lower-priced providers.[8]

Prices for acute hospital inpatient services varied substantially across acute hospitals within each payer's network (see Figure 1). Prices for both inpatient and outpatient services were somewhat more clustered near the network average for payers with the largest market shares, notably the three largest in the Commonwealth (Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan). This may be a reflection of their relative strength in negotiating power. Payers with smaller market shares exhibited wider variation in inpatient prices. Despite clustering in terms of number of providers, the majority of inpatient

2 Acute Hospital Composite RP Percentile (Blended), by Hospital Cohort, 2013

All academic medical centers and most teaching hospitals had prices that were higher than the network median price across all payers' networks.



Source: CHIA (payer-reported data) | Note: Percentages of total hospital payments do not sum to 100%; payments to six hospitals were excluded due to the hospitals' unique patient populations and/or conditions treated. These specialty hospitals were not considered comparable with other hospitals and were omitted from the analysis. They accounted for 12% of total reported hospital payments in CY 2013. "Blended" denotes that inpatient and outpatient RP results are combined. See Technical Appendix for definition of Cohort Median Composite RP Percentile.

payments went to the highest-priced providers (e.g., 59% of payments went to providers with RP values of more than 20% above the network average across 12 payer networks). A similar pattern emerged for outpatient prices (see Chartbook Figure 4).

Hospital Characteristics, Market Share and System Affiliation are Key Factors Associated with Price Levels

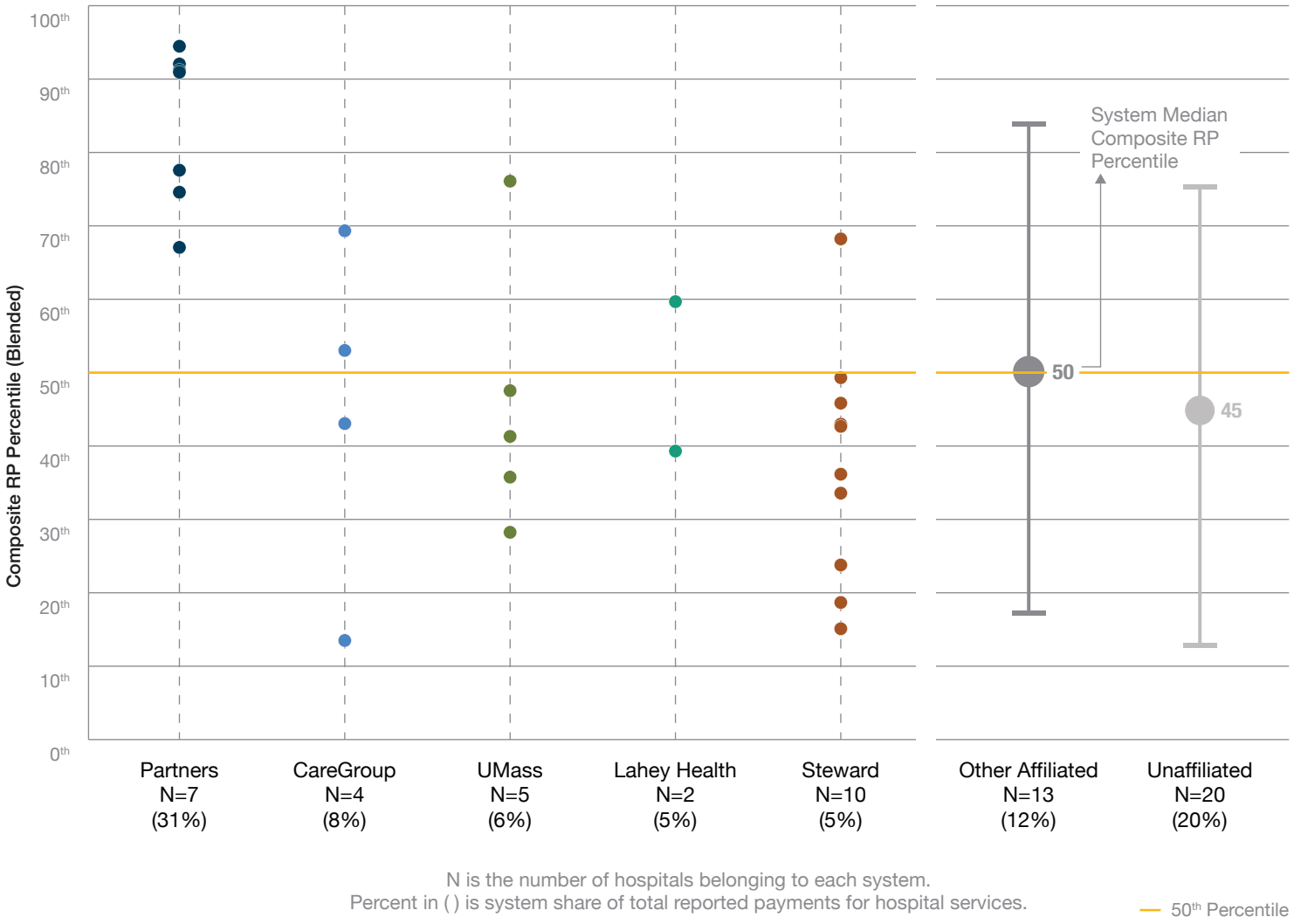
Since CHIA began collecting and reporting data on RP, findings have pointed to a common set of acute hospital characteristics associated with higher or lower prices. These factors, which continue to remain significant in CY 2013, are discussed below.

Hospital Characteristics

Consistent with previous CHIA analyses, higher or lower acute hospitals RPs (blended inpatient and outpatient) in CY 2013 were associated with certain hospital characteristics.[9] Academic medical centers (AMCs) had relative prices that exceeded the network median (50th percentile) across all payers (see Figure 2).[10] In contrast, community hospitals, particularly those that serve a high proportion of publicly funded patients (designated Disproportionate Share Hospitals, or DSH hospitals) had RPs that generally were below the network median across all payers.

3 Acute Hospital Composite RP Percentile (Blended) by System, 2013

Partners-affiliated hospitals consistently had higher prices than each payer's network median while most Steward-affiliated hospitals had lower prices than the network medians.



Source: CHIA (payer-reported data) | Note: "Other Affiliated" includes hospitals affiliated with the following systems: Baystate Health, Berkshire Health Systems, Cape Cod Health Care, Circle Health, and Vanguard Health Systems (now Tenet Healthcare, as of Nov. 2013). Percentages of total hospital payments do not sum to 100%; payments to six specialty hospitals were excluded due to the hospitals' unique patient populations and/or conditions treated. These specialty hospitals were not considered comparable with other hospitals and were omitted from the analysis. These hospitals accounted for 12% of total hospital payments in CY 2013. "Blended" denotes that inpatient and outpatient RP results are combined. See Technical Appendix for definition of System Median Composite RP Percentile.

Market share

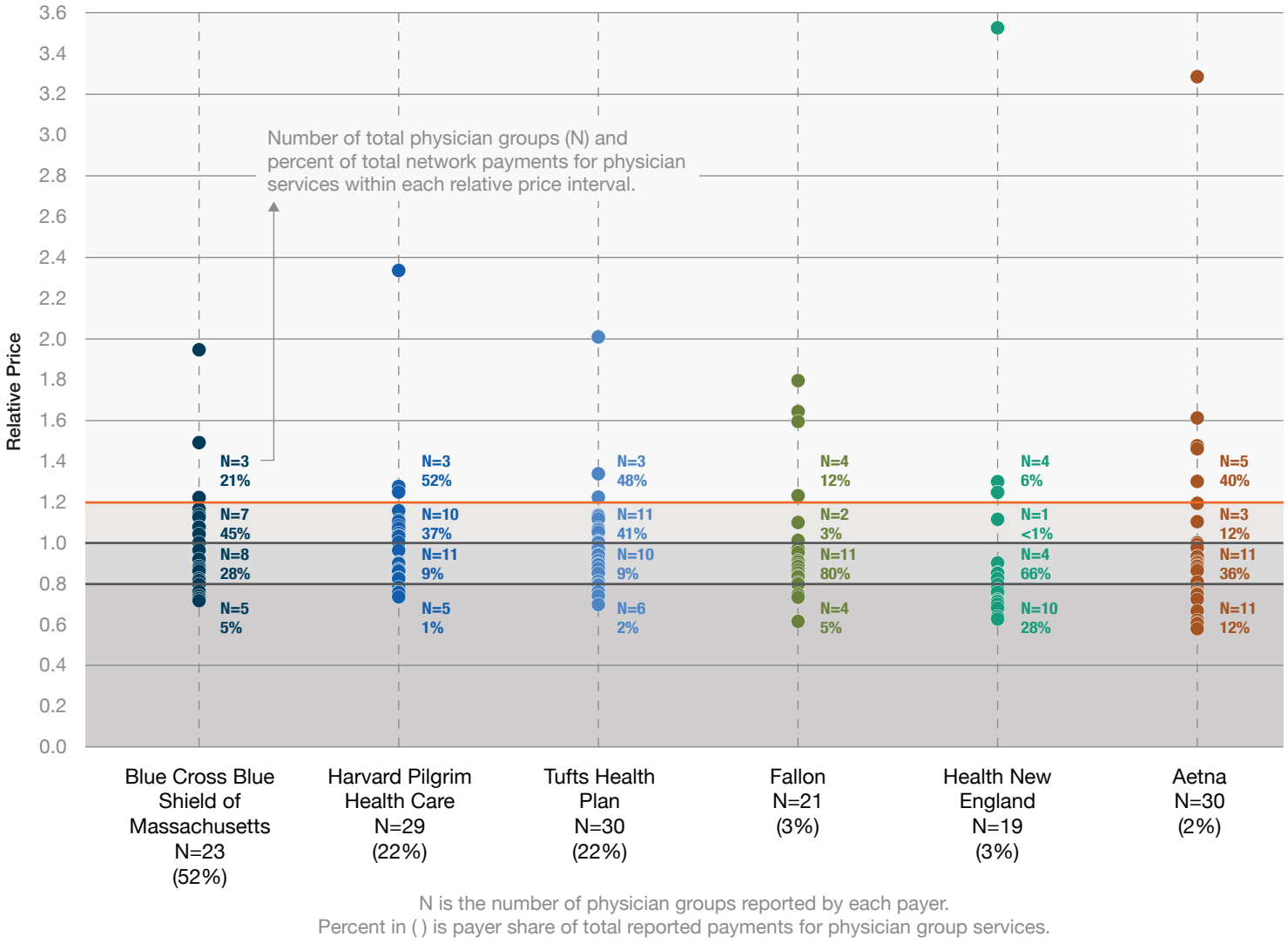
As in previous years, acute hospitals with larger market shares (as measured by total commercial payments) tended to have higher RPs. Hospitals with the largest shares, such as the major AMCs, had RPs that on average ranked in the top quartile across all payers' networks. Conversely, hospitals with the smallest commercial market shares, such as many of the DSH hospitals, generally had RPs that fell well below each payer's network median. (Also see Chartbook Figure 5 for a more detailed depiction of market shares.)

System Affiliation[11]

Relative Price levels also differed substantially when examined across hospitals' system affiliations. All seven acute hospitals affiliated with Partners HealthCare System (Partners)—the largest multi-hospital system in the Commonwealth—had relative prices well above the network median across all payers' networks in CY 2013 (see Figure 3). In contrast, nine out of ten hospitals affiliated with Steward Health Care (Steward) had lower-than-average relative price levels across all payers.

4 Distribution of 2012 Physician Group Relative Prices by Payer

Physician group prices were generally clustered near the network average price in most payers' networks. Within the HPHC and Tufts networks, nearly half of the total payments to physician groups were concentrated among the three highest priced physician groups.



Source: CHIA (payer-reported data) | Note: Percentages may not sum to 100% because of rounding.

Physician Groups

As with acute hospitals, there was large variation in physician group prices within payers' networks in CY 2012, though relative prices tended to cluster more tightly near each payer's network average compared with acute hospital relative prices (see Figure 4). Physician group prices varied less for payers with larger market shares.

Higher-priced physician groups—according to composite percentile rank—tended to represent a larger share of all payments to physicians (see Chartbook Figure 13). These physician groups received 77% of total payments for physician services in CY 2012 (see Chartbook Figure 9); this rate has declined from 83% of payments to higher-priced physician groups in CY 2010.[12]

Conclusion

The persistence of wide variation in relative prices suggests that there may be opportunities to lower health care spending by shifting utilization to lower-priced providers, or by payers and providers seeking greater value in their contractual price negotiations.

As Massachusetts continues to focus on containing cost growth while maintaining high quality in its delivery of health care services, transparent information about provider prices is crucial for consumers, purchasers (e.g., employers), providers, payers, policymakers and other stakeholders. To support these efforts, CHIA will continue to monitor RP, as well as further explore variation in utilization and prices of health care services using the Massachusetts All Payer Claims Database.[13]

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[1] CHIA is required by M.G.L. c. 12C to promulgate regulations for the uniform calculation and reporting by payers of provider relative prices and to publicly report that data. 957 CMR 2.00 governs the methodology and filing requirements for health care payers to calculate and report relative prices paid to every hospital, physician group, ambulatory surgical center, freestanding imaging center, mental health facility, rehabilitation facility, skilled nursing facility and home health provider in the payer's network, by type of provider, with hospital inpatient and outpatient prices listed separately, and product type.

[2] Division of Health Care Finance and Policy (2011). Recommendations of the Special Commission on Provider Price Reform. Available at: http://chiamass.gov/assets/docs/g/p-r/special-comm-ppr-report.pdf (Accessed February 11, 2015).

[3] Center for Health Information and Analysis and Health Policy Commission (2014). Massachusetts Commercial Medical Care Spending: Findings from the All-Payer Claims Database 2010-2012. Available at http://www.mass.gov/anf/docs/hpc/apcd-almanac-chartbook.pdf (Accessed February 11, 2015).

[4] For more detailed information on Relative Price methodology, please see this brief's Technical Appendix. See also Center for Health Information and Analysis (2013). Health Care Provider Price Variation in the Massachusetts Commercial Market: Technical Appendix. Available at: http://chiamass.gov/assets/docs/r/pubs/13/relative-price-variation-technical-appendix-2013-02-28.pdf. (Accessed February 11, 2015).

[5] CHIA received RP data from the following 13 payers: Aetna, Blue Cross Blue Shield of Massachusetts, BMC HealthNet, Celticare, Cigna, Fallon, Harvard Pilgrim Health Care, Health New England, Neighborhood Health Plan, Network Health, Tufts Health Plan, UniCare and United Healthcare. Only 12 payers were included in the commercial analysis of hospital prices (BMC HealthNet was excluded because it did not report any commercial business in CY 2013). Eleven payers were represented in the commercial physician group analysis (BMC HealthNet and Network Health did not report any commercial business in CY 2012).

[6] Because relative price can only be calculated within a given payer network, CHIA converts relative price values from ratios to percentiles in order to compare relative price values across payers. See Technical Appendix for more detailed information on the composite relative price percentile methodology.

[7] "Higher-priced" acute hospitals are defined in this paragraph as those hospitals with a composite relative price percentile above the 50th percentile. Please see the Technical Appendix for a more detailed methodology description.

[8] For trend analysis, CeltiCare, and United are excluded from CY 2012 and CY 2013, and Network Health is excluded from CY 2013, to align with CY 2011 data as reported. CeltiCare and United were excluded in CY 2011 because of data quality issues, and Network Health did not have any commercial business before CY 2013.

[9] CHIA assigns hospitals with similar characteristics to peer "cohorts." Please see the Technical Appendix (Footnote 14) for detailed assignment methodology.

[10] See Footnote 6.

[11] Hospital system affiliation is based on status for the majority of the data year (CY 2013).

[12] See Footnote 7. "Higher-priced" physician groups are defined analogously in this paragraph.

[13] For example, see: Center for Health Information and Analysis (2014). Policy Brief: Provider Price Variation for Mammography Services in the Commercial Market. Available at http://chiamass.gov/assets/docs/r/pubs/14/rp-mammography-policy-brief.pdf (Accessed February 11, 2015).

[14] Blended hospital inpatient and outpatient results are reported only for those hospitals with payments that exceeded both the inpatient and outpatient reporting thresholds. Detailed information on the methodologies can be found in CHIA's previous provider price variation report: http://chiamass.gov/assets/docs/r/pubs/13/relative-price-variation-technical-appendix-2013-02-28.pdf (Accessed February 11, 2015)

[15] CHIA assigns hospitals with similar characteristics to "cohorts" using the following quasi-hierarchical method: First, academic medical centers were identified. The remaining hospitals were then assigned to a cohort group in the order of teaching hospital, then disproportionate share hospital (DSH) status. The remaining unclassified hospitals were grouped as all other community hospitals. Six hospitals were assigned outside of this hierarchy because of their focus on delivering care to specific patient populations, based either on age or type of medical condition. These hospitals are designated as specialty hospitals. They are not considered comparable with the other cohorts, so they are omitted from the cohort analyses. Lastly, any hospital that is the sole acute hospital within a 20-mile radius was additionally labeled as "Geographically Isolated."

[16] Calendar year 2012 data is used for physician groups because payers require at least 12 months for claims run out for these providers. Additional time is needed to report non-claims payments, as these types of payments are reconciled at the end of the calendar year based on a provider's quality and financial performance measures used to determine the final settlement amount.

[17] As network average prices represent different dollar values across networks, it is important to note that a lower relative price in payer X's network (for example .90) could represent a higher actual price than a higher relative price in payer Y's network (for example 1.10).

Technical Appendix

Definitions

Relative Price: Relative price is a calculated measure that compares different provider prices within a payer's network for a standard mix of insurance products (e.g., HMO, PPO, and Indemnity) to the average of all providers' prices in that network. The relative price method standardizes the calculation of provider prices and neutralizes the effect of differences in the volume and types of services providers deliver to patients, and the different product types that payers offer to their members.

Network Average: The average of all prices for a particular provider type in a particular payer's network. Each payer's network average relative price is represented by a 1.0 value.

Blended Relative Price: A hospital's blended relative price is derived by weighting each hospital's inpatient and outpatient relative prices by the network distribution of all hospital's inpatient and outpatient payments within a given payer.[14]

Composite Relative Price Percentile: Derived by taking the simple average of each provider's relative price percentiles across all payers. The composite percentile gives a sense of the rank of a provider's relative price compared to its peers across all payers. The 50th percentile represents the median, with the 100th percentile indicating the highest-price provider.

System Median Composite Relative Price Percentile: In order to analyze relative prices across each multi-hospital system, a "system composite relative price percentile" was developed for each system by taking the simple average of each constituent hospital within the hospital system's relative price percentile.

Cohort Median Composite Relative Price Percentile: In order to examine relative price levels by hospital characteristics, each hospital was first assigned to a cohort.[15] Within a given payer's network, a "cohort average relative price percentile" was developed for each cohort by taking the simple average of the relative price percentile of each hospital within the cohort.

Market Share: For acute hospitals, market share is defined here as a hospital's total payments (inpatient and outpatient payments combined) from all reporting payers divided by the total commercial payments to acute hospitals in the Commonwealth. For physician groups, market share is defined as the amount of commercial payments a physician group receives divided by the amount of total commercial physician group payments by payers included in this report. For commercial payers, market share is defined as the payer's share of total hospital or physician group payment across all payers.

Data

This report examines price relativities of acute hospitals and physician groups for commercial insurance. CHIA collected and reported on data for CY 2013 for hospitals and other providers, and CY 2012 physician group[16] data from 13 commercial payers offering commercial health insurance as well as MassHealth Managed Care Organization, Commonwealth Care, and Medicare Advantage plans in Massachusetts.

Methods

Each payer's network average is represented by a 1.0 relative price value. Each provider within a payer's network is assigned a relative price that represents how much the provider's price deviates from that 1.0. Because each provider's relative price value is tied to the network average within a given network, it is not possible to directly compare a provider's relative price value across payer networks.[17]

In order to compare provider relative price levels across payers' networks, a relative price percentile was used in this report. Each provider's relative price in a given payer's network was first converted into a percentile. Then, a composite relative price percentile was derived by taking the simple average of each provider's relative price percentile across all payers. A higher percentile (e.g., the 80th percentile) indicates that a provider's relative price on average was higher than 80% of the providers across all payers; a lower average percentile (e.g., the 10th percentile) indicates that a provider's relative price was lower than 90% of the providers across all payers. The 50th percentile represents the network median relative price. As the percentile method used the same ordered scale for all payers, the relative position of the provider may be compared across all payers. The composite percentile gives a sense of the relative order of a provider's relative price compared to its peers in the commercial market.

Questions or Comments

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