CENTER FOR HEALTH INFORMATION AND ANALYSIS

RELATIVE PRICE

PROVIDER PRICE VARIATION IN THE MASSACHUSETTS COMMERCIAL MARKET

APRIL 2018

CHIA.

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About This Report

In 2016, the Center for Health Information and Analysis (CHIA) developed a new metric, statewide relative price (S-RP), to facilitate analysis of provider price variation across payers.

A hospital's S-RP is calculated using payer-specific inpatient payments per case mix adjusted discharge and payer-specific outpatient relative price (RP) values. For each hospital, CHIA converted these payer-specific values into cross-payer relativities and then blended these inpatient and outpatient values together to achieve a single S-RP value. When blending across payers and across inpatient and outpatient spending categories, CHIA weighted those elements according to the provider-specific share of payments.

A commercial S-RP for a given acute hospital of 1.20 indicates that the hospital is paid 20 percent higher than average S-RP among acute hospitals across commercial payers.

This publication includes analysis of acute hospital calendar year (CY) 2016 S-RPs within the commercial, Medicaid Managed Care Organization, and Medicare Advantage insurance categories. S-RP values are calculated for individual acute hospitals, and average S-RP values are calculated for multi-acute hospital systems and hospital cohorts. This report also includes information on payer-specific acute hospital and physician group RP.

For detailed data, please see the accompanying databook. For questions on statewide or payer-specific RP, please contact Erin Bonney, Manager of Payer-Provider Performance, at (617) 701-8235 or at erin.bonney@state.ma.us.

For additional information on the S-RP and payer-specific methodologies, see CHIA's Relative Price Methodology, available here.

Note: Physician payments include only payments made to physician groups that were included in the relative price calculation after payment thresholds were applied, accounting for 90% of total commercial payments to physician groups. An additional $0.60 billion was paid to individual physicians and groups for which relative prices were not computed.

Executive Summary

Pursuant to Massachusetts General Laws Chapter 12C, Section 10, CHIA reports annually on relative price to examine provider price variation in the Massachusetts commercial market. Relative Price (RP) standardizes the calculation of provider prices to account for differences in patient acuity, the types of services providers deliver to patients, and the different product types that payers offer to their members. CHIA calculates both payer-specific RP and cross-payers statewide relative price (S-RP).

In 2016, $9.5 billion was paid to acute care hospitals in Massachusetts for inpatient and outpatient services provided to patients with commercial insurance plans. Of those payments, 76.8% were to hospitals with above-average RPs, consistent with 2015.

Across the three reported insurance categories (Commercial, Medicaid MCOs, Medicare Advantage), the majority of payments went to acute hospitals with S-RPs within 20% of the average. However, the share of payments to hospitals with S-RPs greater than 20% above average was almost double for Commercial insurance (40%) than Medicaid MCOs (22%) or Medicare Advantage plans (19%).

Academic Medical Centers (AMCs) had the highest average commercial S-RP (1.17), while community-High Public Payer (HPP) hospitals had the lowest (0.93).

In 2015, the most recent data year available, $5.5 billion was paid to physician groups for services provided to patients with commercial insurance plans. Of that, 85% of payments went to physician groups with above-average RP values. The top 20 provider organizations represented 95% of total commercial payments to physicians in 2015.

ACUTE HOSPITALS

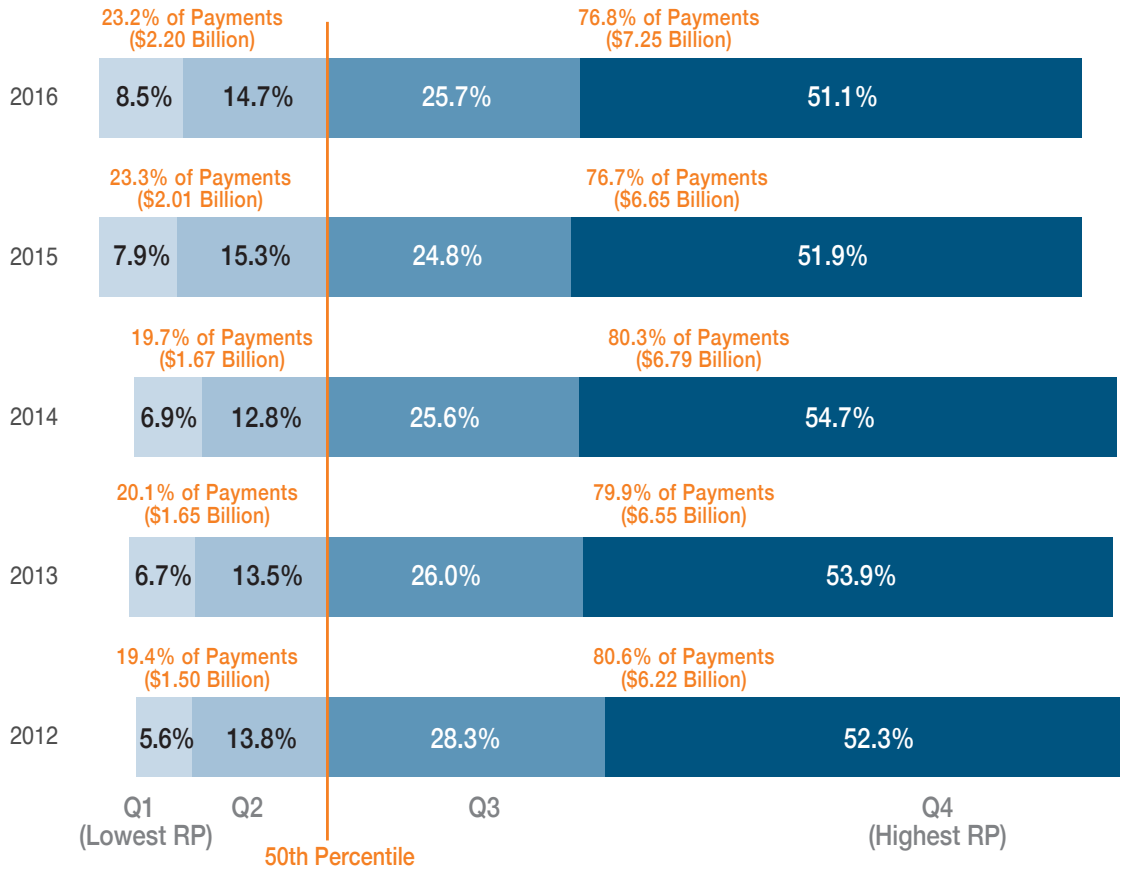
PAYER-SPECIFIC RP

Distribution of Acute Hospital Commercial Payments by RP Quartile, 2012-2016

In 2016, 51.1% of commercial payments to acute hospitals went to the highest-price hospitals (Q4). While this is the highest share among the quartiles, 2016 is the second year that payments to these hospitals declined, decreasing 0.8 percentage points from 2015.

The share of commercial payments to hospitals in Q3 increased slightly from 2015 to 2016, increasing 0.9 percentage points.

The share of commercial payments to the lowest-price hospitals (Q1) increased by 0.6 percentage points from 2015 to 2016. This is the fifth consecutive year that the share of commercial payments to these hospitals increased.



Source: Payer-reported data to CHIA.

Notes: Within each payer's network, hospitals are ordered by blended relative price, and grouped into quartiles such that each quartile contains an equal (or as close to equal as possible) number of providers. For each payer, the first quartile (Q1) contains hospitals with the lowest RP values while Q4 contains those with the highest RP values in the network. Payments to hospitals assigned to Q1 are then summed across all payers to calculate total Q1 payments. Note that a specific hospital may be assigned to different quartiles in different payer networks.

This figure includes only payments made to acute hospitals that were included in the relative price calculation after payment thresholds were applied, accounting for 99.1% of total commercial payments to acute hospitals. An additional $85 million was paid to hospitals for which relative prices were not computed in at least some payer networks.

Percentages may not sum to 100% due to rounding.

ACUTE HOSPITALS

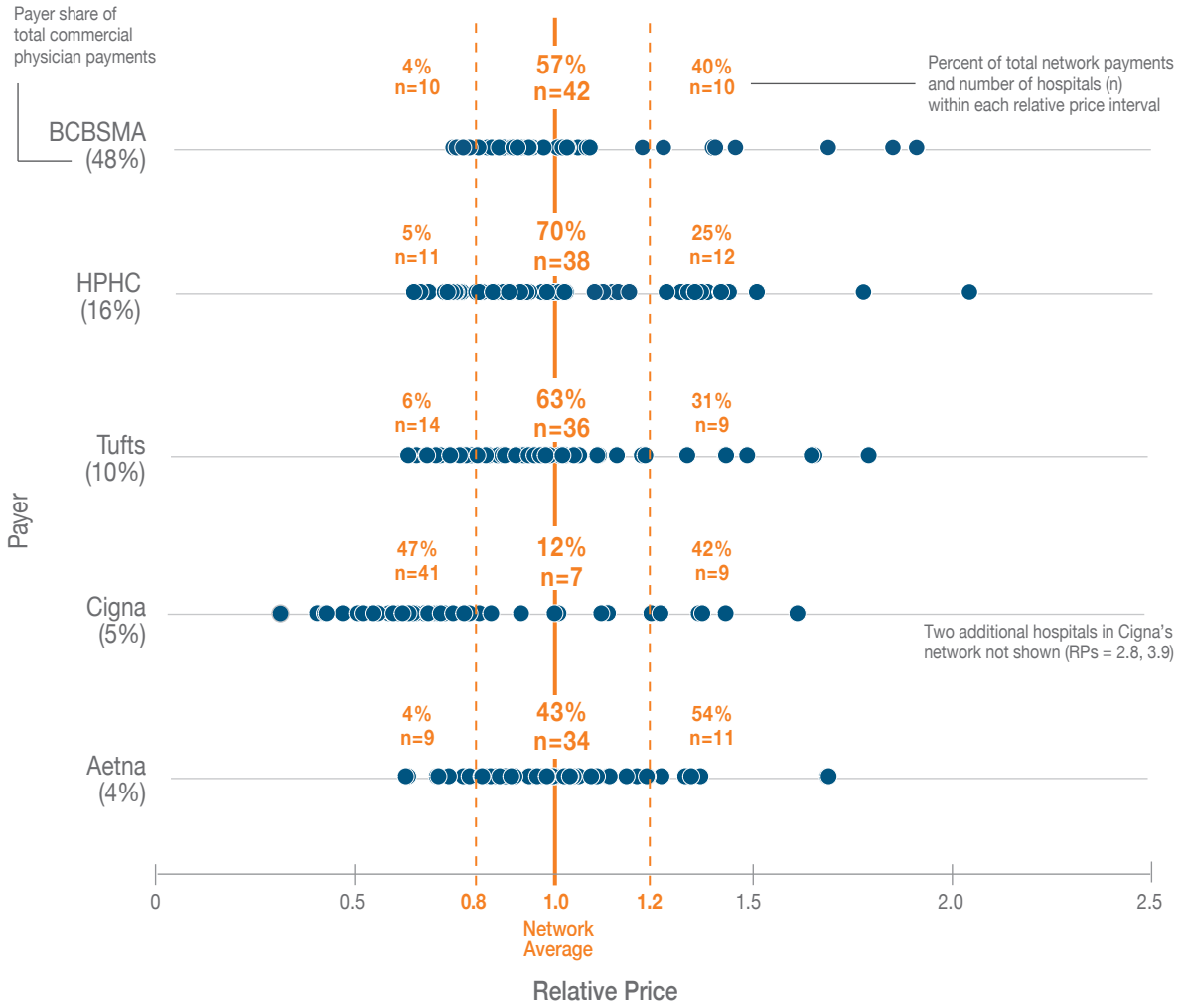
PAYER-SPECIFIC RP

Distribution of Acute Hospital Commercial Payments by Top Five Payers, 2016

Four of the top five commercial payers reported over 30% of total payments to hospitals with RP values at least 20% higher than the statewide average. For one payer (Aetna), this reflects more than half of their commercial payments (54%).

Blue Cross Blue Shield (BCBSMA), Harvard Pilgrim Health Care (HPHC), and Tufts reported the majority of total payments were to acute hospitals with RPs within 20% of the average. These three payers accounted for the majority (74%) of the commercial payments.

Cigna was the only payer to have the highest share of payments made to hospitals with RP values at least 20% below average (47%). For the other four payers, between 3% and 6% of payments were to hospitals with RP values at least 20% below average.



Source: Payer-reported data to CHIA.

Notes: Percentages may not sum to 100% due to rounding. Top payers were determined by the payer's share of total commercial payments to acute hospitals in 2016. This figure only includes payments and RP values that were included in the calculation after thresholds were applied.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

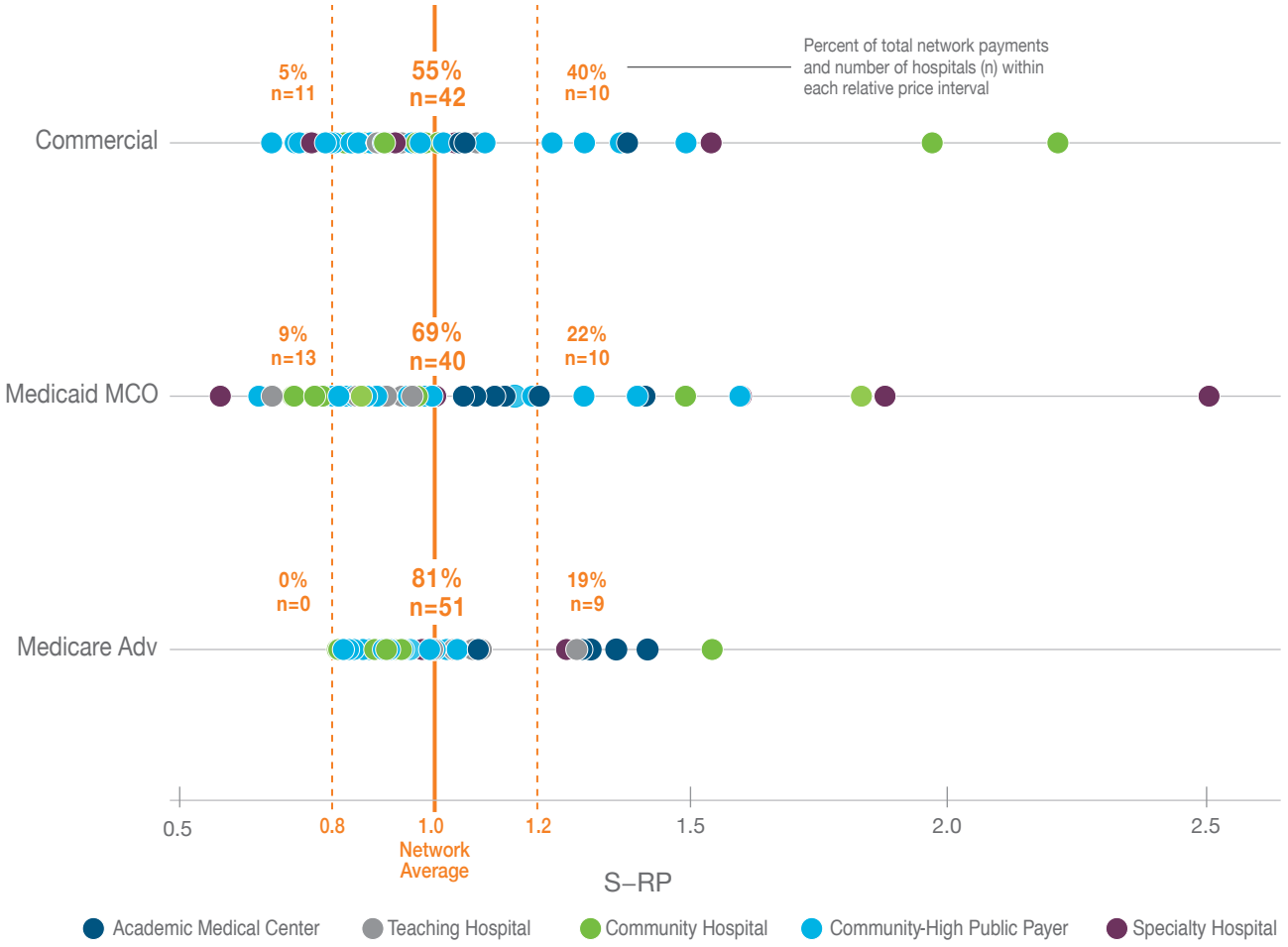
Distribution of Acute Hospital S-RP by Insurance Category, 2016

In 2016, the majority of payments went to acute hospitals with S-RP values within 20% of average across the three major insurance categories: Commercial (55%), Medicaid MCO (69%), and Medicare Advantage (81%).

The share of payments to acute hospitals with S-RPs greater than 20% above average varied across insurance categories; Commercial had the highest share of payments (40%), followed by Medicaid MCO (22%), and Medicare Advantage (19%).

Among commercial plans, the hospitals with the highest S-RPs were geographically isolated community hospitals. Among Medicaid MCO and Medicare Advantage plans, the hospitals with the highest S-RPs were specialty and community hospitals.

Among Medicare Advantage plans, nine acute hospitals had S-RP values more than 20% above average. Commercial and Medicaid MCOs each had ten hospitals with S-RPs more than 20% above average.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For hospital type definitions, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf.

Percentages may not sum to 100% due to rounding.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

Acute Hospital S-RP and Share of Payments by Hospital Type, 2016

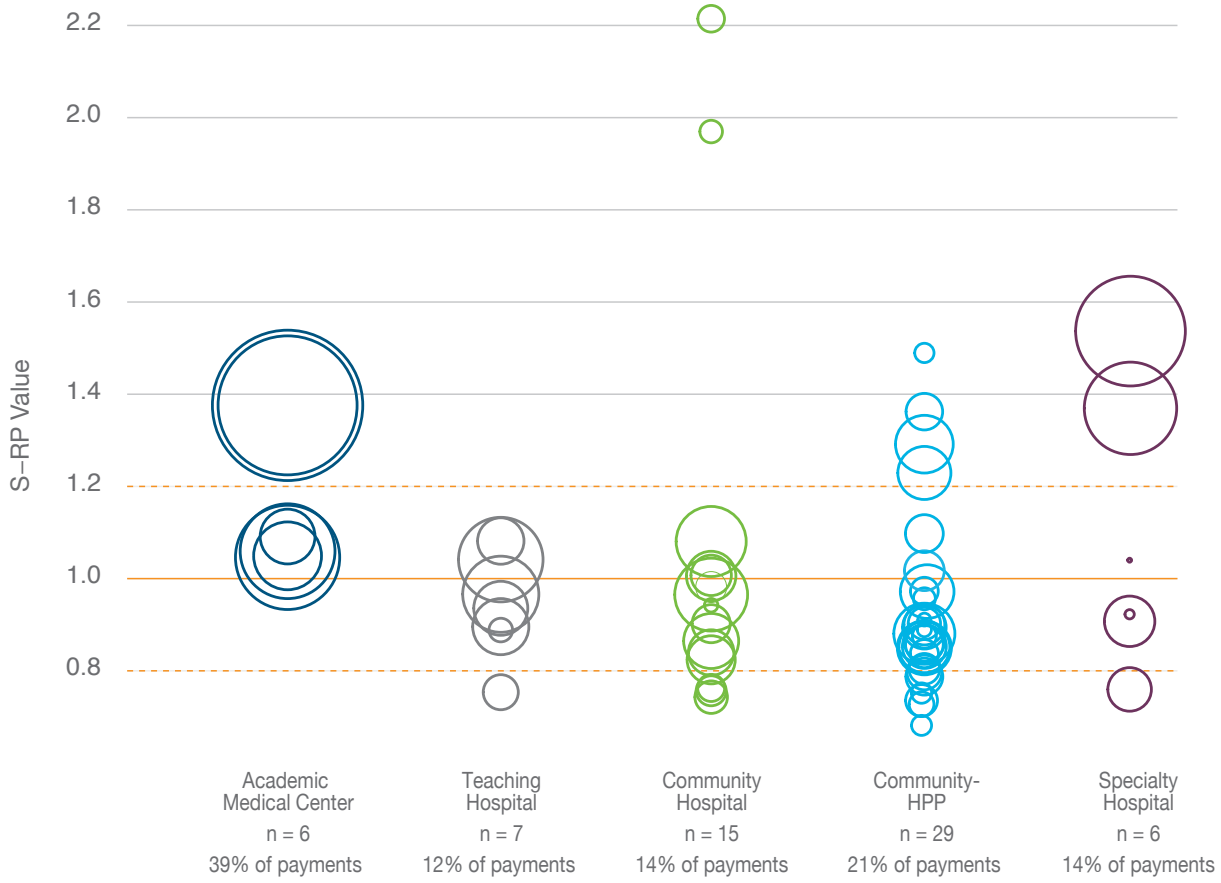
Acute hospitals are examined across distinct types: Academic Medical Centers (AMCs), teaching hospitals, community hospitals, and community-High Public Payer hospitals. These groupings represent cohorts of similar hospitals that can be compared within each group.

Specialty hospitals are displayed as they are included in statewide analyses, but are not considered a cohort of hospitals with similar characteristics.

AMCs had the highest average commercial S-RP (1.17), while community-High Public Payer hospitals had the lowest (0.93). All AMCs had S-RP values above the statewide average of 1.0.

Teaching and community hospitals had average commercial S-RP values of 0.94 and 1.06, respectively.

S-RP values for the six specialty hospitals ranged from 0.76 to 1.54.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices,* available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For hospital cohort definitions, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf.

Bubbles are sized according to providers' share of total hospital payments.

Specialty hospitals serve specific patient populations based on age or type of medical condition, and are not considered comparable to other hospital cohorts.

Percentages may not sum to 100% due to rounding.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

Acute Hospital S-RP and Share of Payments by Hospital System, 2016

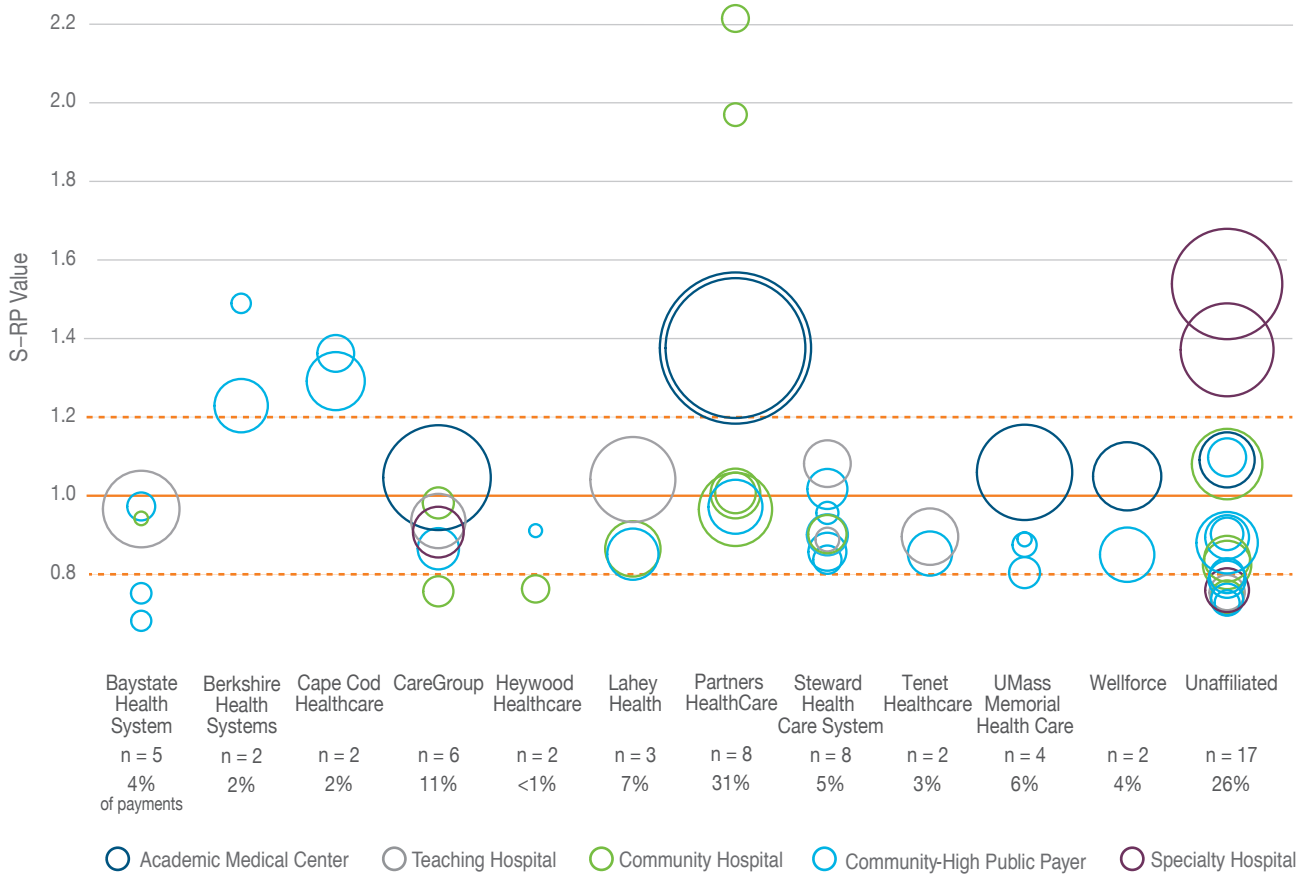
Three hospital systems had average S-RP values above the statewide average of 1.0: Berkshire Health Systems (n=2), Cape Cod Healthcare (n=2), and Partners HealthCare (n=8). Average S-RP values were below 1.0 for all other hospital systems.

Two hospital systems had S-RP values for all their hospitals above the commercial statewide average: Berkshire Health Systems (n=2) and Cape Cod Healthcare (n=2).

Three hospital systems had S-RP values for all their hospitals below the commercial statewide average: Baystate Health System (n=5), Heywood Healthcare (n=2), and Tenet Healthcare (n=2).

Partners HealthCare received the highest share of commercial payments, receiving 31% of statewide payments. CareGroup (11%) and UMass Memorial Health Care (6%) received the next highest shares.

Seventeen hospitals were unaffiliated with a larger hospital system, and accounted for 26% of total commercial payments in 2016.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

Shriners Hospitals for Children in Boston and Springfield are not displayed as they account for less than 0.1% of total commercial payments.

Bubbles are sized according to providers' share of total hospital payments.

Percentages may not sum to 100% due to rounding.

ACUTE HOSPITALS

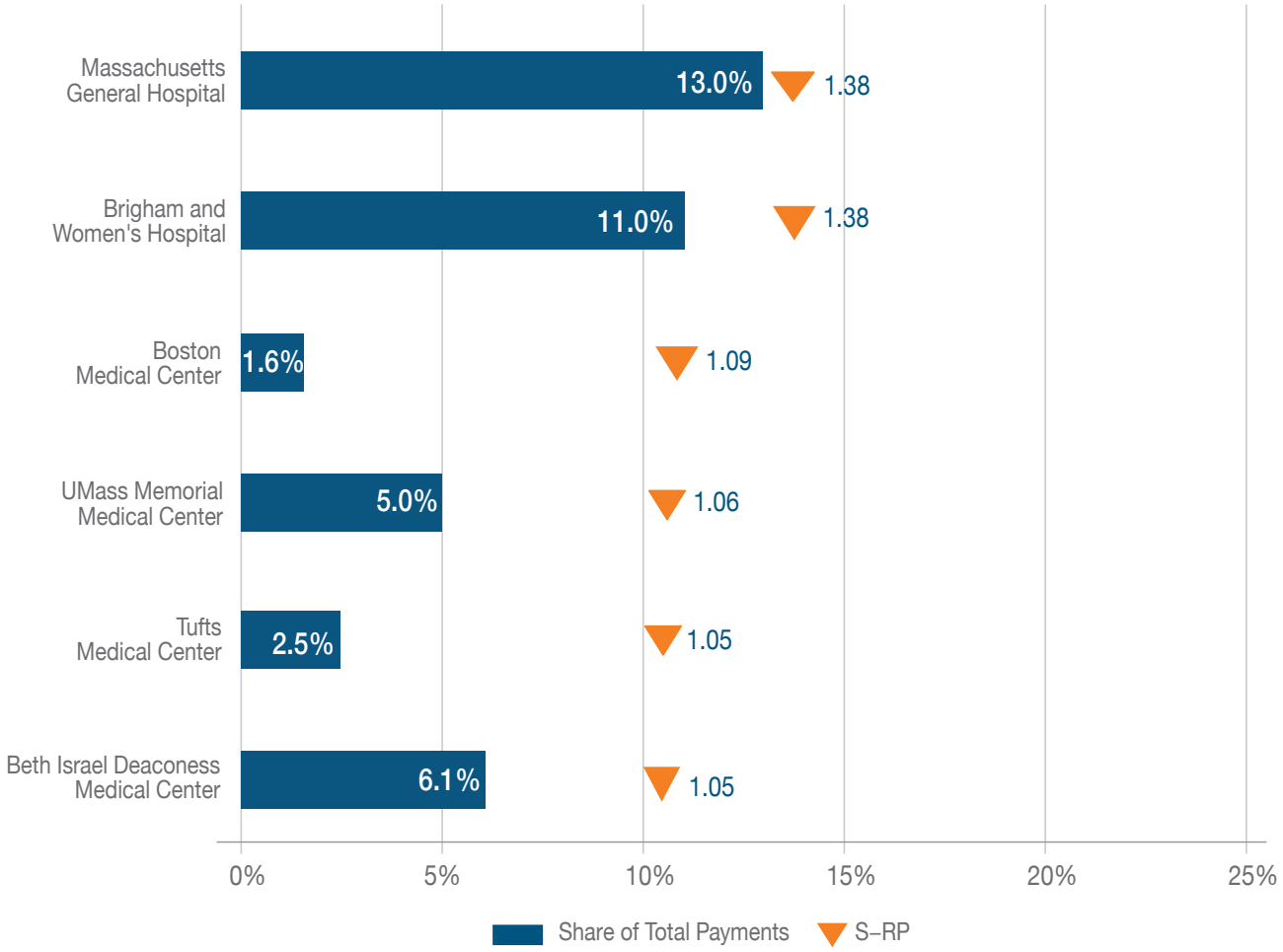
STATEWIDE (CROSS-PAYER) RP

Academic Medical Centers: Share of Commercial Payments and S-RP, 2016

In 2016, 39% of all commercial payments to acute hospitals in Massachusetts went to AMCs.

Two hospitals, Brigham and Women's Hospital and Massachusetts General Hospital, collectively received 24.0% of the commercial payments made to all acute hospitals. Both hospitals had S-RP values of 1.38, and are members of Partners HealthCare.

The other four AMCs, Boston Medical Center (BMC), UMass Memorial, Tufts Medical Center, and Beth Israel Deaconess (BIDMC), had tightly clustered S-RP values ranging from 1.05 to 1.09. Commercial payments were more varied, from 1.6% of total commercial payments at BMC to 6.1% at BIDMC.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For the definition of Academic Medical Centers, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf .

ACUTE HOSPITALS

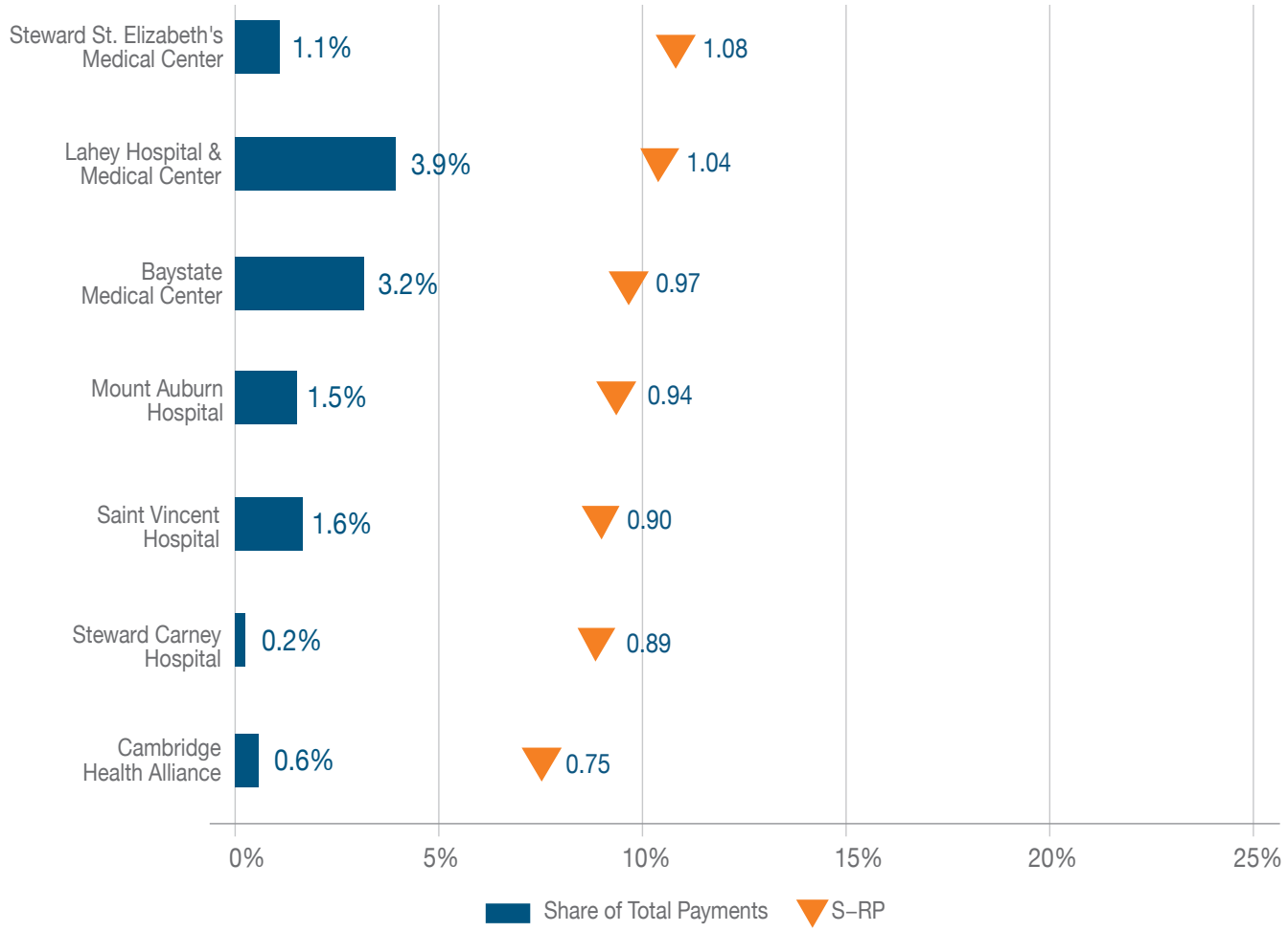
STATEWIDE (CROSS-PAYER) RP

Teaching Hospitals: Share of Commercial Payments and S-RP, 2016

In 2016, 12% of all commercial payments to acute hospitals in Massachusetts went to teaching hospitals, the smallest share among all the cohorts.

The average S-RP value for the teaching hospital cohort was 0.94, below the statewide average of 1.0. Additionally, five of the seven teaching hospitals had S-RP values below the statewide average.

Steward St. Elizabeth's Medical Center had the highest S-RP value of the teaching hospitals (1.08), and received 1.1% of total commercial payments. Lahey Hospital & Medical Center was the only other teaching hospital with an S-RP value above 1.0 (1.04), and received 3.9% of total commercial payments, the highest share among teaching hospitals.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For the definition of teaching hospitals, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

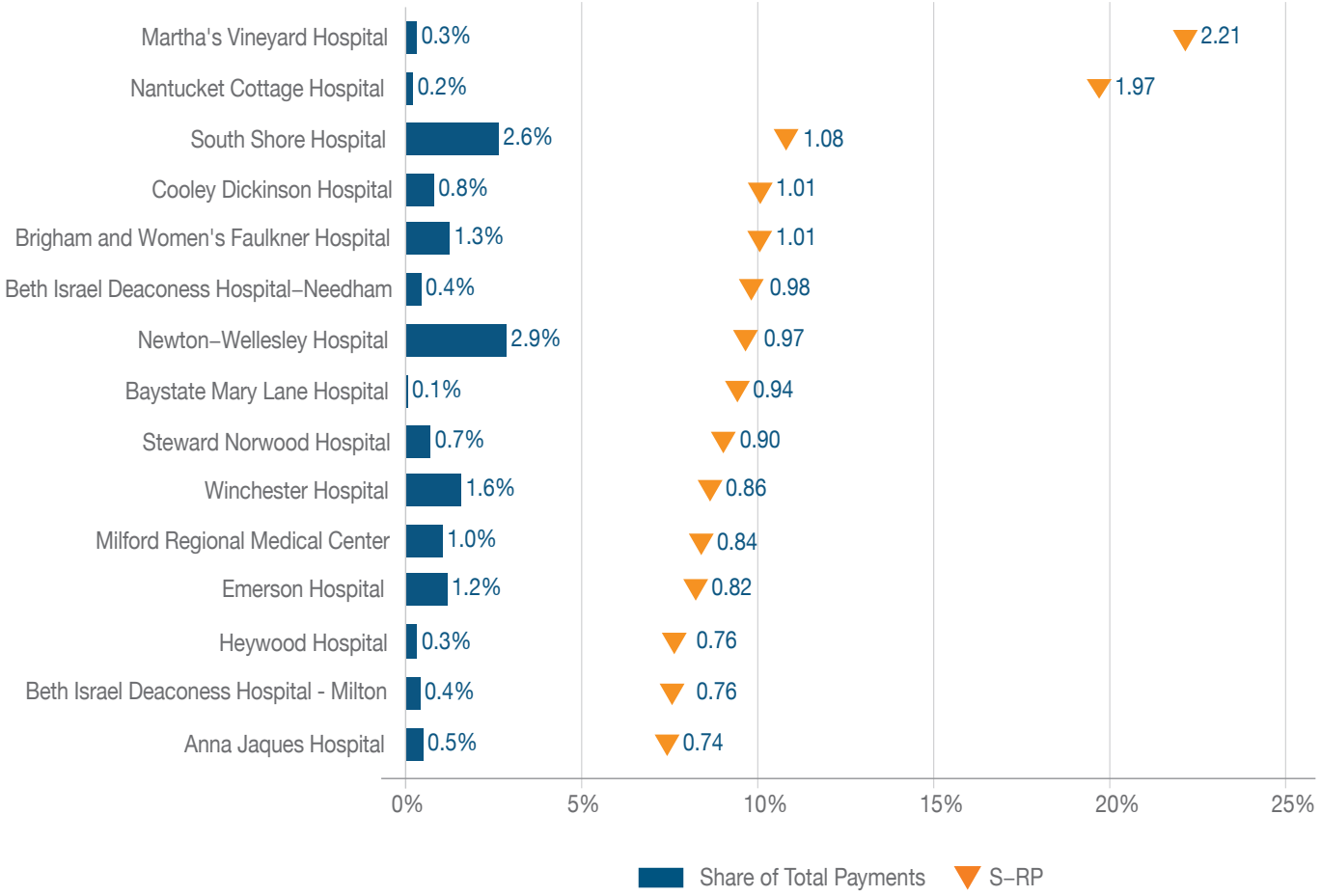
Community Hospitals: Share of Commercial Payments and S-RP, 2016

In 2016, 14% of all commercial payments to acute hospitals in Massachusetts went to community hospitals.

The average S-RP value for the community hospital cohort was 1.06, above the statewide average of 1.0. Ten of the 15 community hospitals, however, had S-RP values below the statewide average.

Four of the five community hospitals with S-RP values above average are members of Partners HealthCare.

The community hospital cohort had the largest spread of S-RP values among all the cohorts, ranging from a minimum value of 0.74 (Anna Jaques Hospital) to a maximum value of 2.21 (Martha's Vineyard Hospital).



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For the definition of community hospitals, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

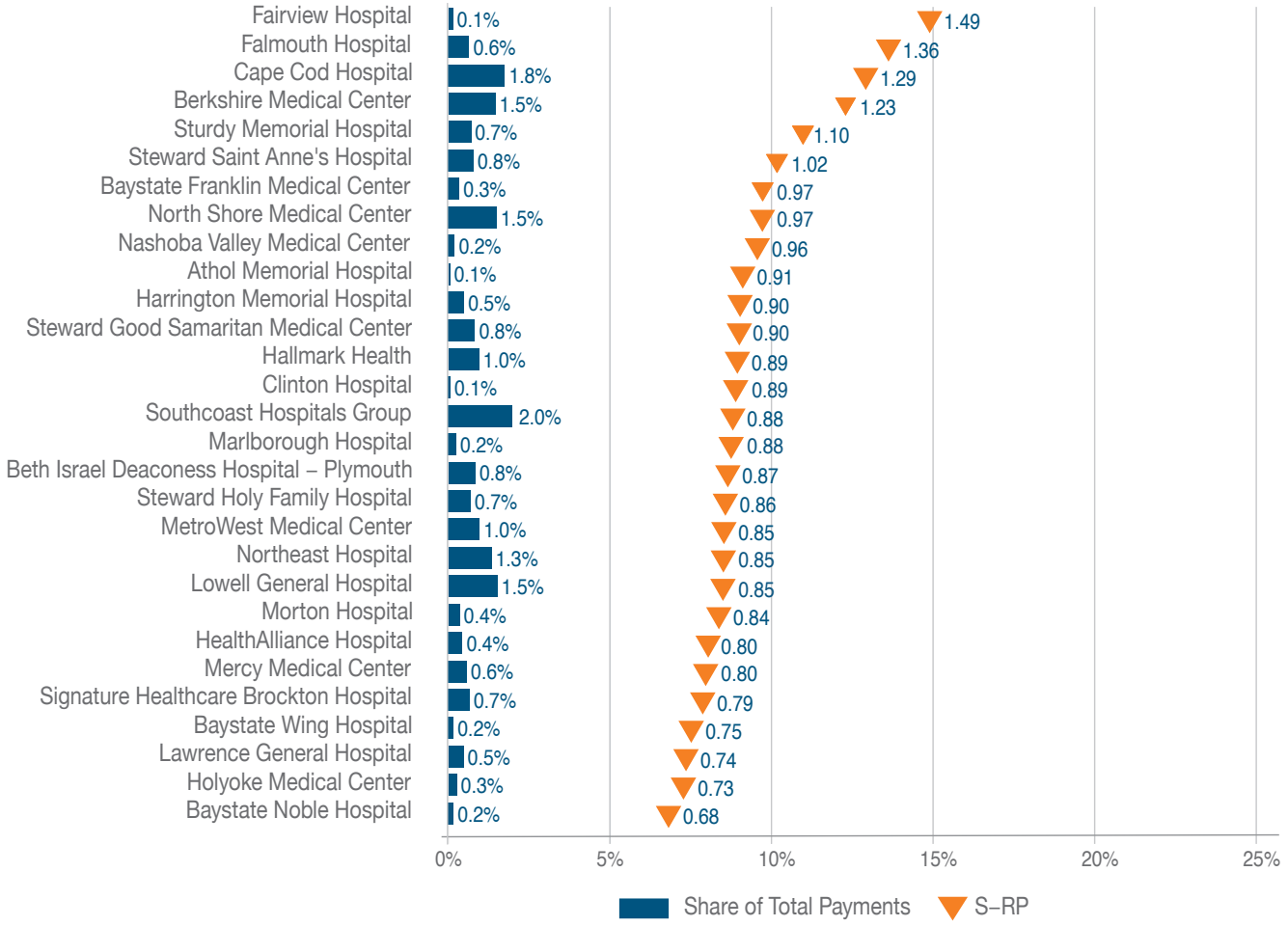
Community-High Public Payer Hospitals: Share of Commercial Payments and S-RP, 2016

The community-High Public Payer (HPP) cohort, the largest cohort of hospitals (n=29), accounted for 21% of all commercial payments to acute hospitals in 2016.

The average S-RP among community-HPP hospitals was 0.93, below the statewide average of 1.0. Twenty-three of the 29 community-HPP hospitals had S-RP values below the statewide average.

Six hospitals had commercial S-RP values greater than the statewide average. Fairview Hospital (1.49), Falmouth Hospital (1.36), and Cape Cod Hospital (1.29) had the highest S-RPs.

Southcoast Hospitals Group (S-RP of 0.88) received the highest share of total commercial payments; however, no hospital in the community-HPP cohort received more than two percent of total commercial payments.



Source: Payer-reported data to CHIA.

Notes: Statewide RP (S-RP) represents a cross-payer relativity within a given insurance category. For more information on how S-RP is computed, see *Methodology for the Calculation of Statewide Relative Prices*, available at http://www.chiamass.gov/assets/docs/g/S-RP-Methods-Memo-2017.pdf.

For the definition of community-High Public Payer hospitals, see http://www.chiamass.gov/assets/docs/r/hospital-profiles/2016/Introduction-to-Acute-Hospital-Cohort-Profile-Cohort.pdf.

ACUTE HOSPITALS

STATEWIDE (CROSS-PAYER) RP

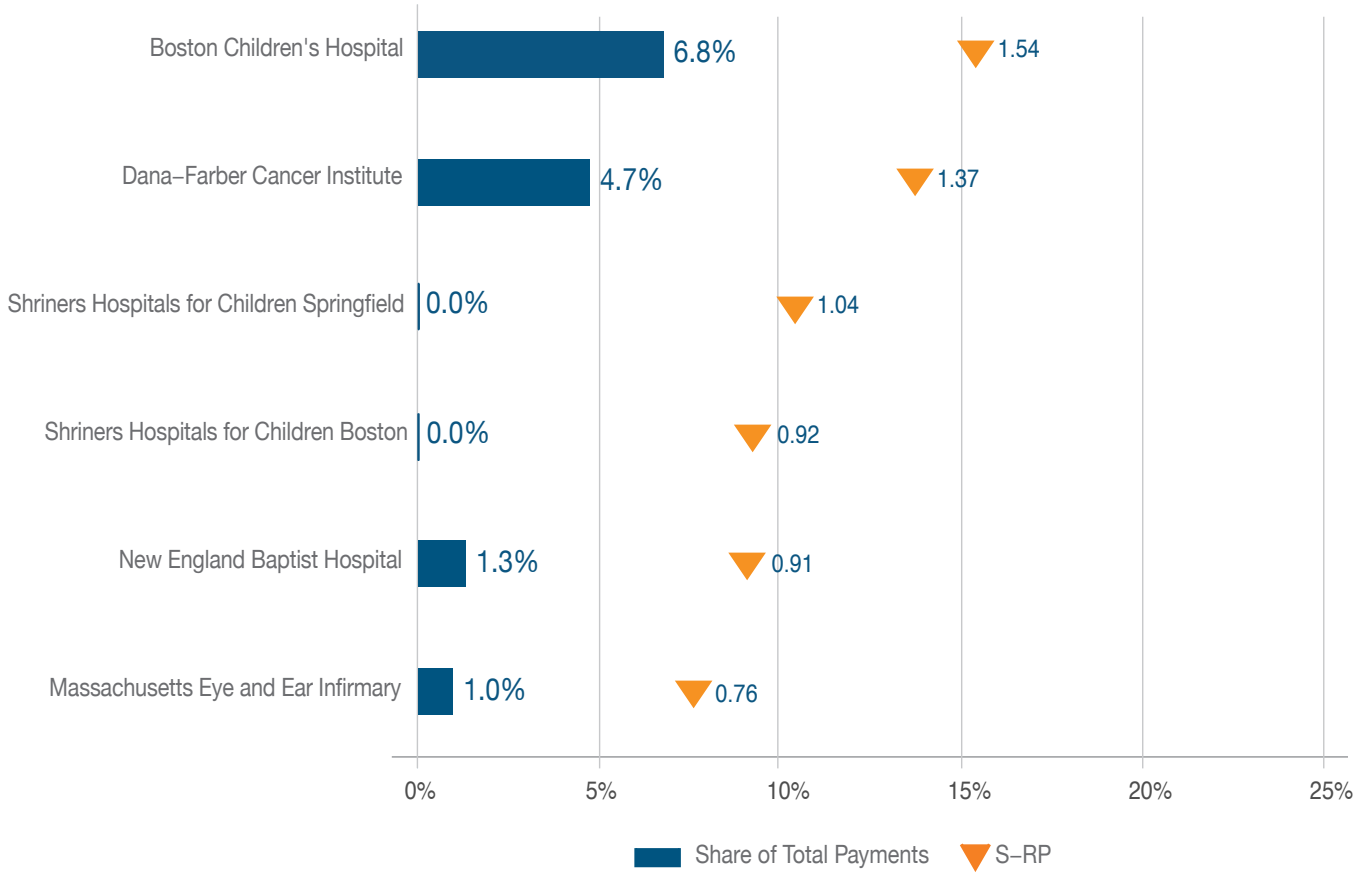
Specialty Hospitals: Share of Commercial Payments and S-RP, 2016

Specialty hospitals serve unique patient populations or provide unique sets of services, and therefore are not comparable in the same way as other types of hospital cohorts.

In 2016, 14% of all commercial payments to acute hospitals went to specialty hospitals.

Boston Children's Hospital had the third highest commercial S-RP (1.54) value among all acute hospitals, and accounted for 6.8% of total commercial payments.

The Shriners Hospitals in Boston and Springfield had the two smallest shares of commercial payments among all acute hospitals in Massachusetts.



Source: Payer-reported data to CHIA.

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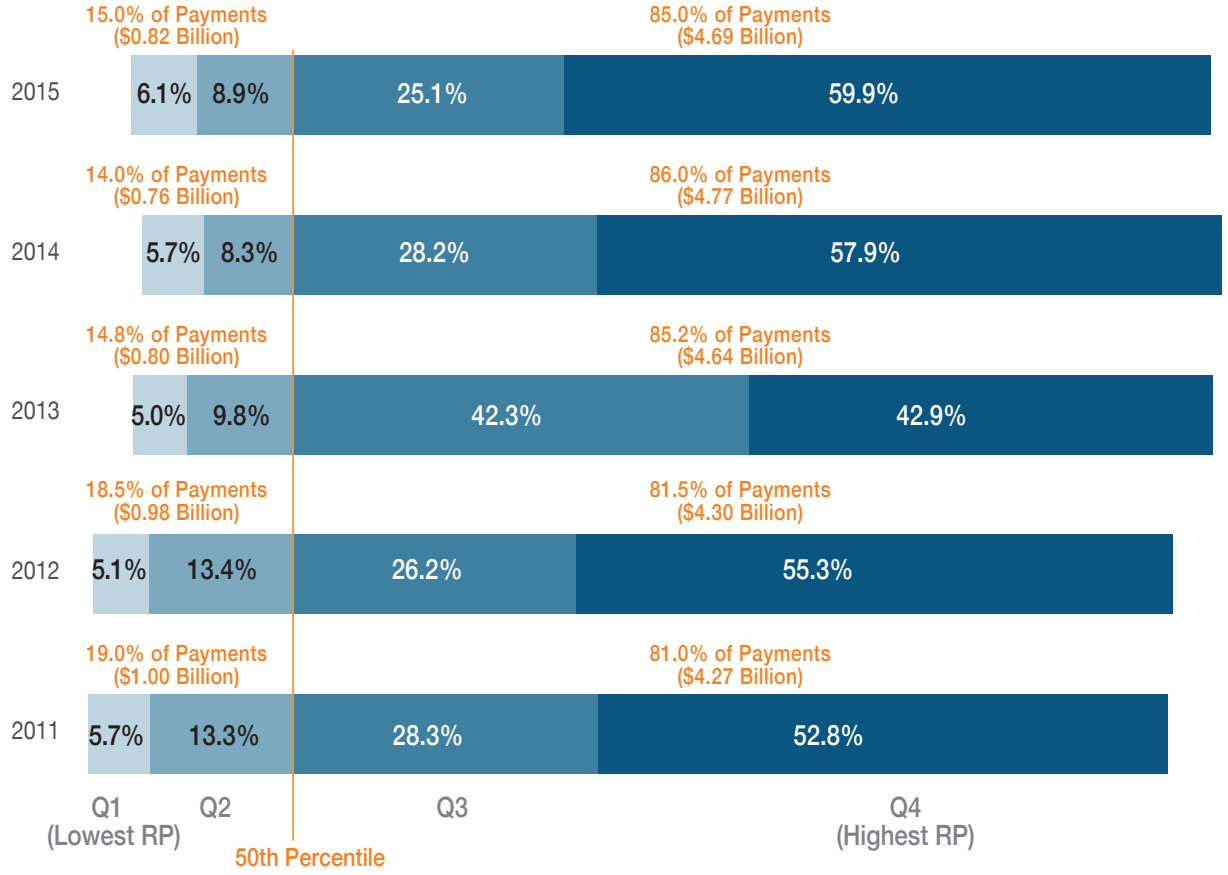
PHYSICIAN GROUPS

PAYER-SPECIFIC RP

Distribution of Physician Group Commercial Payments by RP Quartile, 2011-2015

In 2015, 60% of commercial payments to physician groups were concentrated among the highest-priced (Q4) physician organizations.

Physicians groups in quartile 3 (Q3) experienced a decrease in share of total payments from 2014 to 2015 of 3.1 percentage points. This contributed to the modest reduction in the share of commercial payments to higher-priced physicians groups overall (Q3 and Q4) from 86% in 2014 to 85% in 2015.



Data Source: Payer-reported data to CHIA.

Notes: Within each payer's network, physician groups are ordered by relative price and grouped into quartiles such that each quartile contains an equal (or as close to equal as possible) number of providers. For each payer, the first quartile (Q1) contains physician groups with the lowest RP values while Q4 contains those with the highest RP values in the network. Payments to physician groups assigned to Q1 are then summed across all payers to calculate total Q1 payments. Note that a specific provider may be assigned to different quartiles in different payer networks. This figure only includes payments made to physician groups that were included in the relative price calculation after payment thresholds were applied, accounting for 90.1% of commercial total payments to physician groups. An additional $604 million was paid to hospitals for which relative prices were not computed in at least some payer networks.

Percentages may not sum to 100% due to rounding.

PHYSICIAN GROUPS

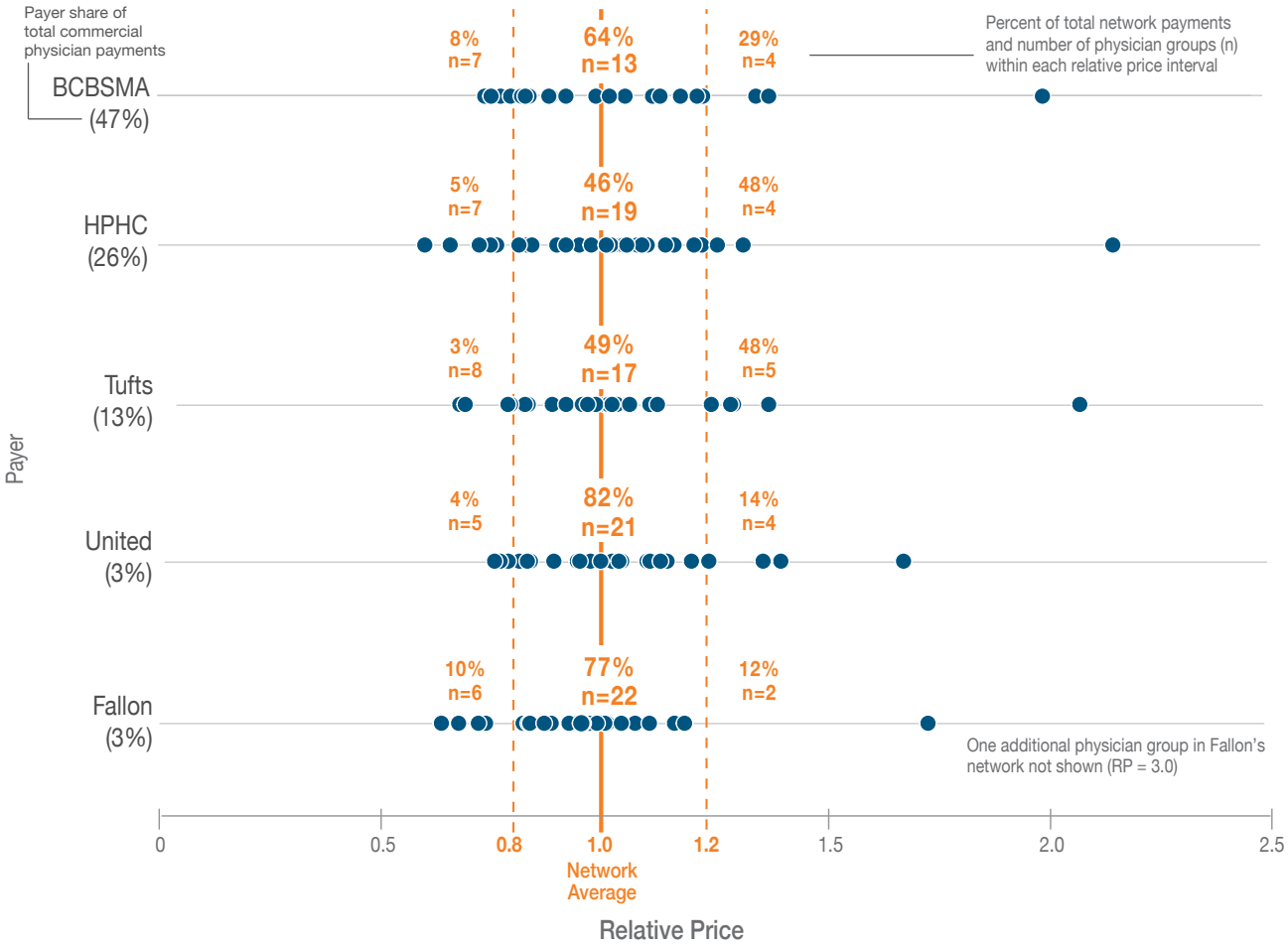
PAYER-SPECIFIC RP

In 2015, the top five payers accounted for 92% of total commercial payments made to physician groups.

Among the top five commercial payers, HPHC and Tufts paid the lowest proportion of payments to network physicians groups with RP values within 20% of the network average.

All five payers made a relatively small proportion of total commercial payments to physician groups with RPs at least 20% below average, ranging from 3% to 10% of total payments.

Distribution of Physician Group Commercial RP by Top Five Payers, 2015



Data Source: Payer reported data to CHIA.

Notes: Percentages may not sum to 100% due to rounding. Top payers were determined by the payer's share of total commercial payments to physician groups in 2015. This figure only includes payments and RP values that were included in the calculation after thresholds were applied.

PHYSICIAN GROUPS

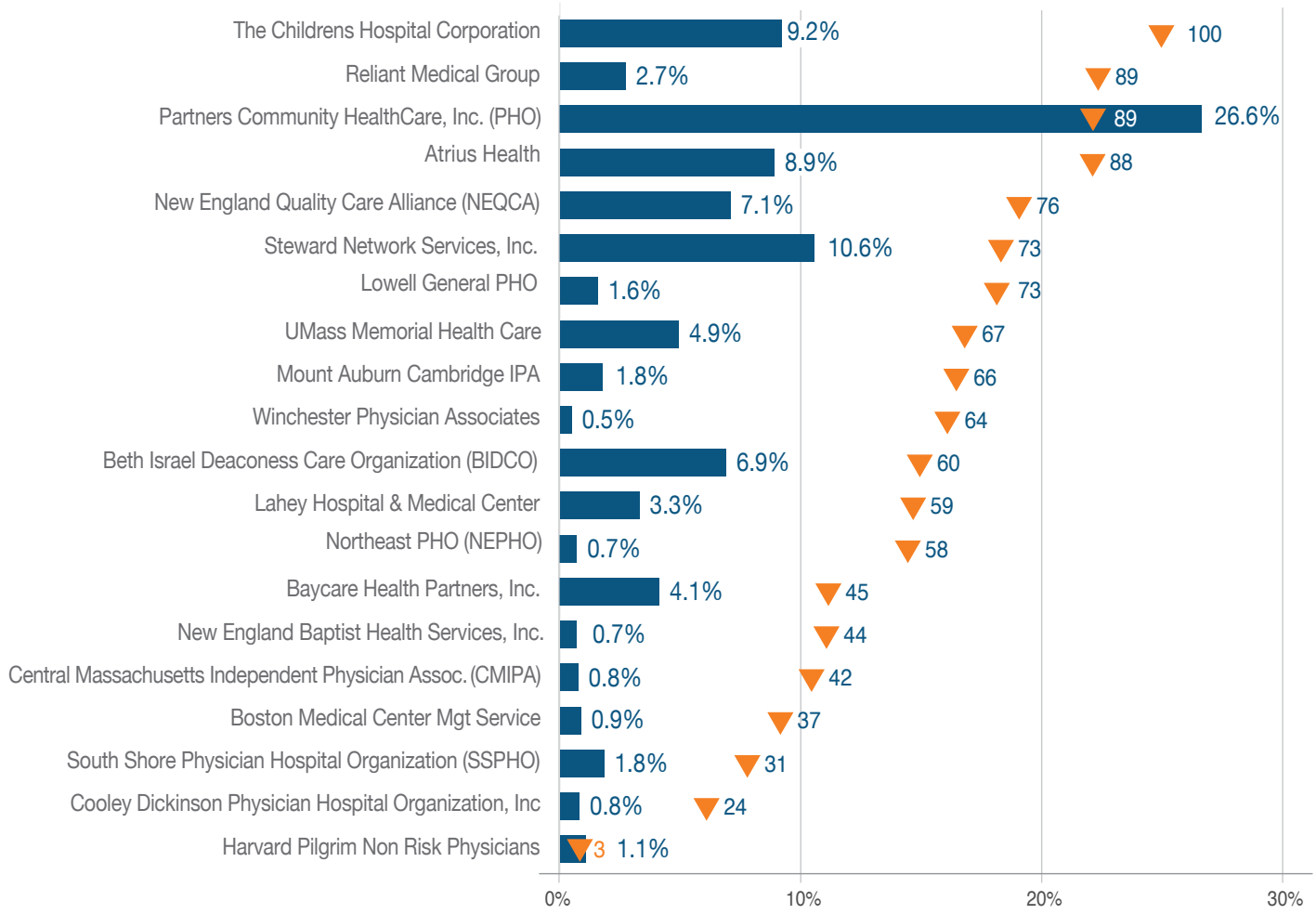
PAYER-SPECIFIC RP

Physician Group Share of Commercial Payments and Composite RP Percentile, 2015

In 2015, 20 physician organizations received 95% of total commercial payments to physician groups.

The physicians groups receiving the most commercial payments in 2015 were Partners Community HealthCare (26.6%), Steward Network Services (10.6%), and the Childrens Hospital Corporation (9.2%).

The physicians groups with the highest composite RP percentiles were the Children's Hospital Corporation (100th percentile), Reliant Medical Group (89th percentile), Partners Community HealthCare (89th percentile), and Atrius Health (88th percentile). These four physician groups accounted for nearly half of total commercial payments to physician groups in 2015.



Data Source: Payer-reported data to CHIA.

Notes: The top physician groups were identified by the share of total commercial payments in 2015. Because RPs are not comparable across payers, physician groups are examined cross-payer in this chart using a "composite RP percentile." To compute this value, each physician group is ranked within a payer's network. This percentile rank is then averaged across payers, weighted by the payer share of the providers' total payments, to achieve the composite RP percentile depicted here.

For more information, please contact:

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