

# MBQIP Quality Measure Trends, 2011-2016

## Data Summary Report #20

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## ABOUT

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## THE MEDICARE RURAL HOSPITAL FLEXIBILITY PROGRAM

The Medicare Rural Hospital Flexibility Program (Flex Program) is a Federal initiative that provides funding to State Governments to strengthen rural health. It allows small hospitals the flexibility to be licensed as Critical Access Hospital (CAHs); offers cost-based reimbursement for Medicare acute inpatient and outpatient services; encourages the development of rural health networks; and offers grants to States to help implement a CAH program in the context of broader initiatives to strengthen the rural health care infrastructure.

The Flex Program was created by Congress in 1997. Participating states are required to develop a State rural health care plan that provides for the creation of one or more rural health networks; promotes regionalization of rural health services in the State; and improves access to hospital and other health services for rural residents of the State. Consistent with their rural health care plans, states may designate rural facilities as CAHs.

CAHs must be located in a rural area (or an area treated as rural); be more than 35 miles (or 15 miles in areas with mountainous terrain or only secondary roads available) from another hospital or be certified before January 1, 2006 by the State as being a necessary provider of health care services. CAHs are required to make available 24-hour emergency care services that a State determines are necessary. CAHs may have a maximum of 25 acute care and swing beds, and must maintain an annual average length of stay of 96 hours or less for their acute care patients. CAHs are reimbursed by Medicare on a cost basis, i.e., for the reasonable costs of providing inpatient, outpatient and swing bed services.

The legislative authority for the Flex Program and cost-based reimbursement for CAHs are described in the Social Security Act, Title XVIII, Sections 1814 and 1820, available at [http://www.ssa.gov/OP\\_Home/ssact/title18/1800.htm](http://www.ssa.gov/OP_Home/ssact/title18/1800.htm)

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## KEY FINDINGS

### *Patient Engagement Domain*

- Quarterly trends in CAH national performance showed significant improvement from Q1 2012 through Q4 2015 on nine of the original ten Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measures. The cleanliness of hospital environment measure did not show significant change over this time.
- The HCAHPS care transitions composite measure, added in Q2 2014, is a potential area for improvement. National CAH performance on this measure from Q2 2014 through Q4 2015 was lower than for the other HCAHPS measures and did not change significantly over time.
- Five of the ten HCAHPS measures had statistically significant improvement in the percent of CAHs performing at the benchmark level.

### *Care Transitions Domain*

- For all CAHs nationally, quarterly trends show significant improvement in performance on all seven Emergency Department Transfer Communication (EDTC) measures from Q4 2014 through Q2 2016.
- EDTC-6, Nurse-generated information, is the EDTC measure with the most room for improvement among CAHs nationally.
- Five of the seven EDTC measures had statistically significant improvement in the percent of CAHs performing at the benchmark level.

### *Outpatient Domain*

- Six AMI/chest pain outpatient measures (OP-1, OP-2, OP-3b, and OP-5) did not show significant change in quarterly performance for CAHs nationally or in the percent of CAHs performing at the benchmark rate from Q1 2012 to Q1 2016. OP-4, aspirin on arrival, showed small but statistically significant declines in performance and in the percent of CAHs performing at the benchmark rate.
- Quarterly trends in CAH national performance showed significant improvement in performance and the percent of CAHs performing at the benchmark rate for the two outpatient surgical improvement measures, OP-6 and OP-7, from Q1 2012 to Q3 2015. These measures have been retired by CMS and consequently from MBQIP.
- Quarterly trends in CAH national performance and in the percent of CAHs performing at the benchmark rate did not show any significant changes from Q1 2015 through Q1 2016 for the two Emergency Department throughput measures, OP-18 and OP-20, or for OP-21, pain management for long bone fractures.

### *Patient Safety Domain*

- CAH national performance on IMM-2, the influenza immunization measure, declined from 92.1% in Q1 2015 to 85.6% in Q4 2015, but then improved to 88.9% in Q1 2016.
- Only one quarter of MBQIP data is available for OP-27/IMM-3, the influenza vaccination coverage among health personnel measure.

### *Inpatient Domain*

- Quarterly trends showed significant improvement at the national level for the three inpatient heart failure process of care measures: HF-1 discharge instructions and HF-3 ACEI/ARB for LVS (both Q4 2011 to Q4 2014) and HF-2 evaluation of LVS function (Q4 2011 to Q3 2015). Two of the three heart failure measures had statistically significant improvement in the percent of CAHs performing at the benchmark level. All three measures have been retired by CMS and consequently from MBQIP.
- CAH quarterly performance on the two pneumonia process of care measures, PN-3b blood culture prior to antibiotic (Q4 2011 to Q4 2014) and PN-6 appropriate initial antibiotic (Q4 2011 to Q3 2015) did not show significant change at the national level. Both pneumonia measures had statistically significant improvement in the percent of CAHs performing at the benchmark level. The PN measures have been retired by CMS and consequently from MBQIP.

### *Conclusions*

- The number of CAHs reporting MBQIP measures increased significantly from 2011 to 2016. Therefore, the performance trends in this report may reflect both changes in which CAHs are reporting data and changes in performance for CAHs that previously reported the measures.
- Overall, CAH performance nationally has significantly improved on the HCAHPS and EDTC measures. Performance on the inpatient and outpatient measures was mixed. Outpatient surgical improvement and inpatient heart failure measures showed significant improvement, while other outpatient measures and inpatient pneumonia showed no significant changes.
- The percent of CAHs nationally performing at the benchmark rate varies considerably by measure.
- Regional trends in performance do not show a clear pattern. A region with the best performance on a measure may not show significant improvement because their performance is at a constant high level.

## INTRODUCTION

The Medicare Beneficiary Quality Improvement Project (MBQIP) began in 2011 with the primary goal of assisting Critical Access Hospitals (CAHs) with their quality improvement (QI) initiatives to improve patient care.<sup>1</sup> The voluntary reporting of rural-relevant quality measures had phased implementation stages during its first three years. Phase 1 of MBQIP (Sept. 2011-Aug. 2012) focused on reporting inpatient pneumonia and heart failure measures from the Centers for Medicare and Medicaid Services (CMS) Hospital Compare inpatient core.<sup>2</sup> Phase 2 (Sept. 2012-Aug. 2013) added CMS Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)<sup>3</sup> and outpatient Acute Myocardial Infarction (AMI)/chest pain and surgical care improvement measures.<sup>4</sup> Phase 3 (Sept. 2013-Aug. 2014) added measures focused on Emergency Department Transfer Communications (EDTC)<sup>5</sup> and pharmacist verification of medication orders. For FY 2015 (Sept. 2015-Aug. 2016) and FY 2016 (Sept. 2016-Aug. 2017), MBQIP reporting and quality improvement activities were grouped into four quality domains: outpatient care, patient safety, care transitions, and patient engagement.<sup>6</sup> New outpatient and patient safety measures were added to MBQIP, and inpatient and outpatient measures retired by CMS were also retired from MBQIP.

## PURPOSE

This purpose of this report is to examine the trends in MBQIP quality measures from 2011 through 2016. The analysis compares quarterly performance rates and trends in benchmark performance at the national and regional levels for 37 MBQIP quality measures.

## APPROACH

The MBQIP data used in this report were submitted by CAHs via a variety of methods, including: QualityNet through CART (the CMS Abstraction and Reporting Tool) or a vendor, QualityNet via secure login, the National Healthcare Safety Network, and State Flex Programs (for the EDTC measures). The data are provided to the Federal Office of Rural Health Policy (FORHP) through a contract with Telligen, the CMS Quality Improvement Organization data warehouse contractor.

Summary measures were calculated to compare trends in quarterly performance and reporting. Reporting trends are measured by the number of CAHs reporting at least one of the quality measures within the domain by quarter. Performance trends are calculated by quarter as a percentage rate, median time, or average rate depending on the measure specification and data provided.

Performance rates are calculated by summing the numerator count that meet the quality performance conditions for the measure and dividing by the total number that meet the denominator eligibility count at the national, regional, and state levels. For example from the care transitions domain, the performance rate is the sum of the number of ED discharges that completed the recommended communication divided by the total number of eligible ED discharges. Details

for numerator and denominator conditions are provided with the measure descriptions in each domain section.

Performance for eight outpatient quality measures that report time processes are calculated by arranging the times by quarter for all CAHs and selecting the median or 50th percentile value, based on the weighted number of patients, for CAHs within the state, region, or nation by quarter.

The MBQIP data available for patient safety measure OP-27 / IMM-3 (Influenza Vaccination Coverage among Health Personnel) are computed rates for each CAH. It is not possible to construct a national, regional, or state performance measure similar to the other rate variables because the numerator and denominator CAH-level data for the rate are not provided in the MBQIP data file. For this measure, the averages of the CAH performance rates are calculated for the state, regional, or national performance levels.

Zero values (or 0%) for the performance rate measures indicate that none of the denominator-eligible count received the recommended care or met the numerator condition of the quality measure. Zero values within the 8 outpatient median time measures are treated as missing data.

The national benchmark for each quality measure is defined as the performance level for the top 10% of all CAHs for each reporting quarter. For quality measures that are performance rates, the benchmark level is the 90<sup>th</sup> performance percentile. For the outpatient median time measures, the benchmark level is the 10<sup>th</sup> percentile because lower values indicate better performance.

The report groups CAHs within the 45 Flex Program states in the following HRSA geographical regions:

- Region A: Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Vermont, Virginia, West Virginia
- Region B: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee
- Region C: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Wisconsin
- Region D: Arizona, Arkansas, California, Hawaii, Louisiana, Nevada, New Mexico, Oklahoma, Texas
- Region E: Alaska, Colorado, Idaho, Montana, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming

The tables and figures are organized to allow in-depth comparisons of the national, regional, and state trends for each MBQIP measure. The report divides the measures into sections for their respective quality domain groups of patient experience (11 measures), care transitions (7 measures), outpatient (12 measures), patient safety (2 measures), and inpatient (5 measures). For each measure, the first set of figures present quarterly performance for the national rate, the top 10% of CAHs benchmark rate, and the regional rates. The second set of figures is the national and regional percentages of CAHs performing at or above the benchmark rate by quarter. The final table for each measure is a comparison of state performance trends.

For each measure, all quarters of reported performance are included. The trend line for each specific measure starts at the first quarter of CAH reporting and ends with the latest available or last quarter of CAH reporting in the data. Gaps in a trend line indicate that no CAH performance was reported for that quarter, with the exception of two quarters in the patient experience measures and the patient safety influenza immunization measure, IMM-2. No HCAHPS data are available for 4th Quarter, 2013 or 1st Quarter, 2014. All patient experience quality measures at the national, regional, and state levels have a gap for these two quarters. For IMM-2, quarterly data are not collected for 2nd and 3rd quarters during the year, and all state, regional, and national performance trends for this measure have gaps for these two quarters.

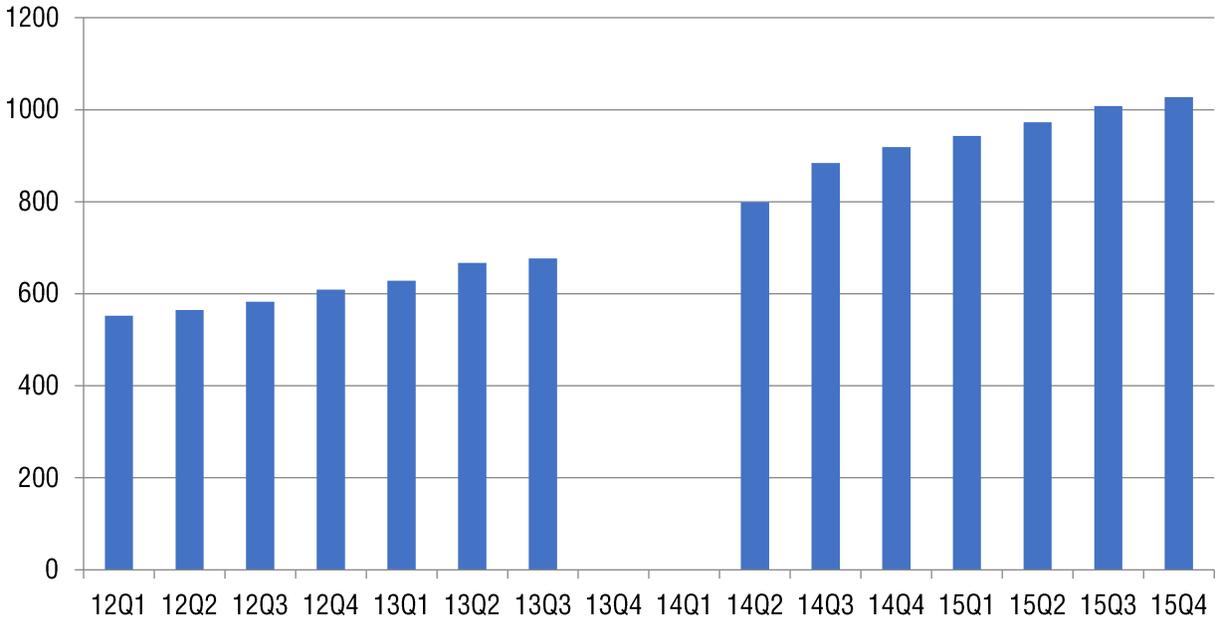
Quarterly HCAHPS data presented in the patient experience section are from surveys during the previous four quarters, which makes comparisons overtime an analysis of a “rolling four quarters” of data. The tables and figures list the ending quarter. For example, 4Q14 represents HCAHPS survey responses from quarters 1-4 or January through December, 2014, and 1Q15 represents HCAHPS survey responses from 2nd quarter, 2014 through 1st quarter, 2015 or April 2014 through March 2015. All other quality measures are for care provided during the reported quarter without any data overlap.

Performance rates on the regional and state trend tables for the first and last reporting quarters are provided as reference for scale as the trendline endpoints. The reporting quarters for the regional tables are the same for each region and identified in the table heading. For the state trends, however, the first and last reported quarter for the measure may differ by state for the measure depending on CAH reporting in the state. Quarter markers are delineated on the state trendline so it is possible to determine lead and lag in first and last reporting quarters by comparing states.

The Cochran-Armitage trend statistic was calculated to determine if quarterly performance was statistically significant ( $p < 0.05$ ) improvement, decline, or no trend across all quarters of reported data for each measure. For the 8 outpatient quality measures that report a median time for performance, the nonseasonal Mann-Kendall trend statistic was used to test if the quarterly performance trend was statistically significant ( $p < 0.05$ ) or not. The Cochran-Armitage and Mann-Kendall trend tests are descriptive statistics and do not determine the magnitude or distribution (e.g., linearity) of performance trend. For example, quarterly change from 70.1% to 70.2% would measure improvement from one quarter to the next, as does a change from 55% to 70%. The magnitude of change in these two examples is vastly different, but the trend statistic is comparing increases or decreases from one quarter to the next and not amount of change.

## Patient Engagement Quality: Q1 2012 - Q4 2015

### Number of CAHs Reporting At Least One HCAHPS Measure



### MBQIP HCAHPS Measures

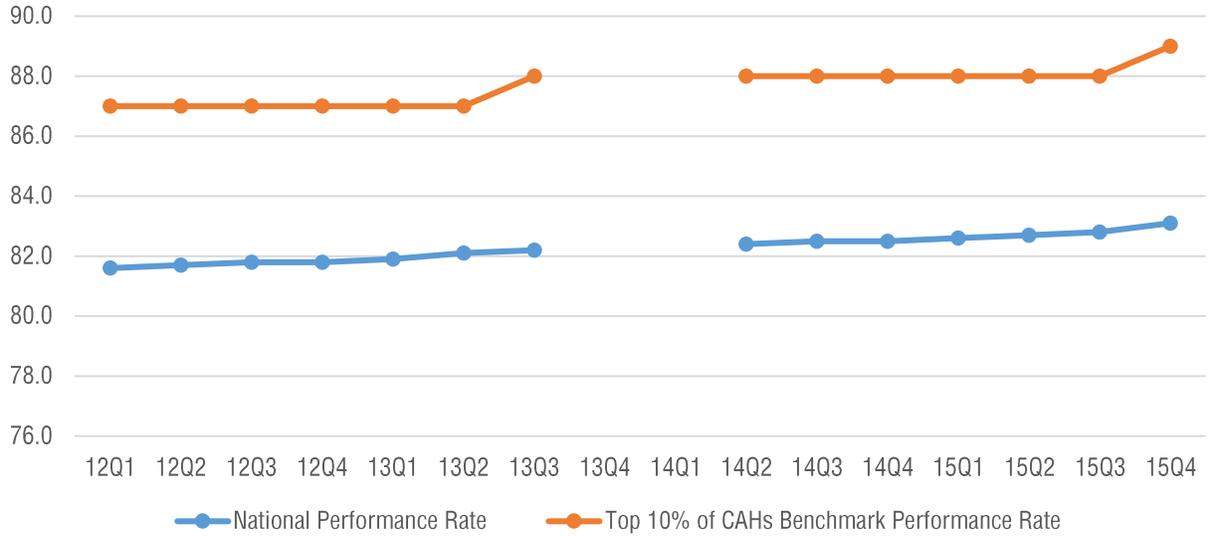
Patient engagement measures are constructed from responses to 21 HCAHPS items on patient experience of care provided during a recent hospitalization. Measure name, label, and description listed below are from the CMS HCAHPS online manual.<sup>3</sup>

- HCAHPS - Composite 1: Communication with Nurses – patients who reported that their nurses “Always” communicated well.
- HCAHPS - Composite 2: Communication with Doctors – patients who reported that their doctors “Always” communicated well.
- HCAHPS - Composite 3: Responsiveness of Hospital Staff – patients who reported that hospital staff “Always” responded to help requests when call button pressed or when needing bathroom assistance during hospital stay.
- HCAHPS - Composite 4: Pain Management – patients who reported that their pain was “Always” well controlled or hospital staff did everything to help with pain during hospital stay.
- HCAHPS - Composite 5: Communication about Medicines – patients who reported that staff “Always” explained about medication therapies before giving it to them.
- HCAHPS - Composite 6: Discharge Information – patients who reported “Yes” that they were given instructions on how to monitor their symptoms and health condition following their hospital stay.

- *HCAHPS - Composite 7: Care Transitions* – patients who “Strongly Agree” they understood their responsibility for taking medications and managing their health after hospital discharge.
- *HCAHPS - Question 8: Cleanliness of Hospital Environment* – patients who reported that their room and bathroom were “Always” clean.
- *HCAHPS - Question 9: Quietness of Hospital Environment* – patients who reported that the area around their room was “Always” quiet during the night.
- *HCAHPS - Question 21: Overall Rating of Hospital* – patients who gave their hospital a rating of 9 or 10 on a 10-point scale.
- *HCAHPS - Question 22: Willingness to Recommend* – patients who reported “Yes, Definitely” that they would recommend the hospital.

## HCAHPS - Composite 1: Communication with Nurses

### Performance Trend - National



- The quarterly trend in national performance shows statistically-significant improvement.

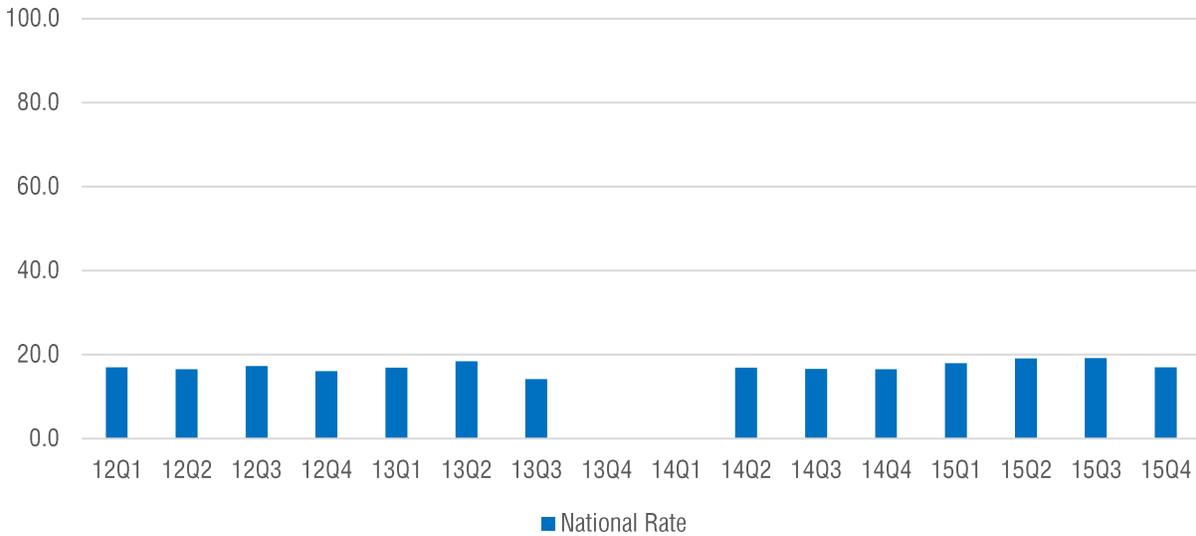
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	81.3	83.1	
Region B	82.8	84.0	
Region C	82.0	83.6	
Region D	81.2	82.7	
Region E	80.1	81.2	

- Trend line y-axis ranges from 79-95% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 1: Communication with Nurses (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate does not show statistically-significant change.

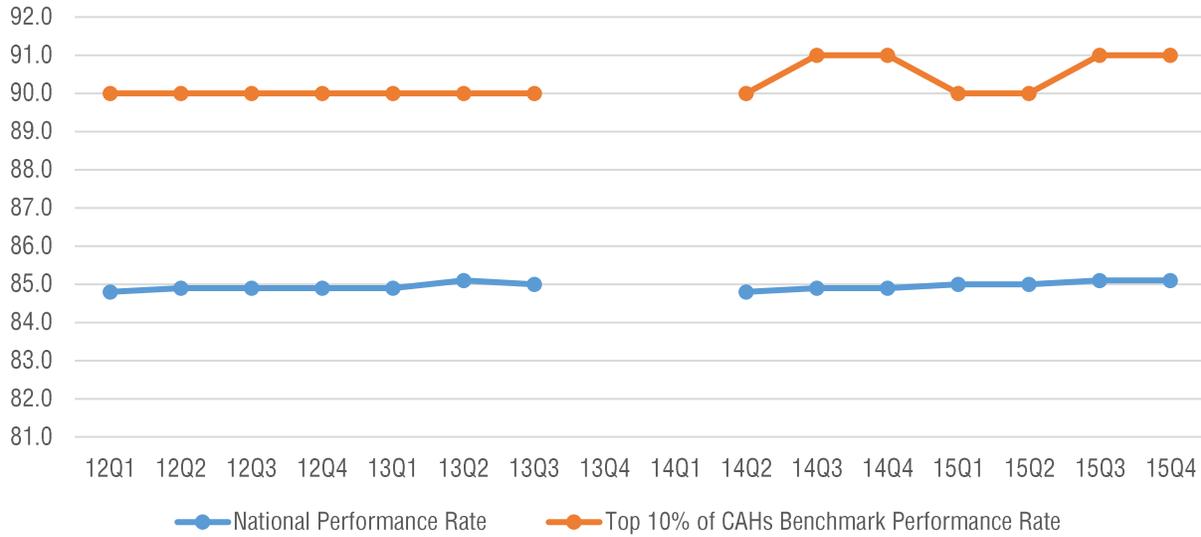
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	18.0	17.6	
Region B	30.0	24.0	
Region C	16.8	15.6	
Region D	25.4	20.5	
Region E	7.5	13.6	

- Trend line y-axis ranges from 7-32% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 2: Communication with Doctors

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

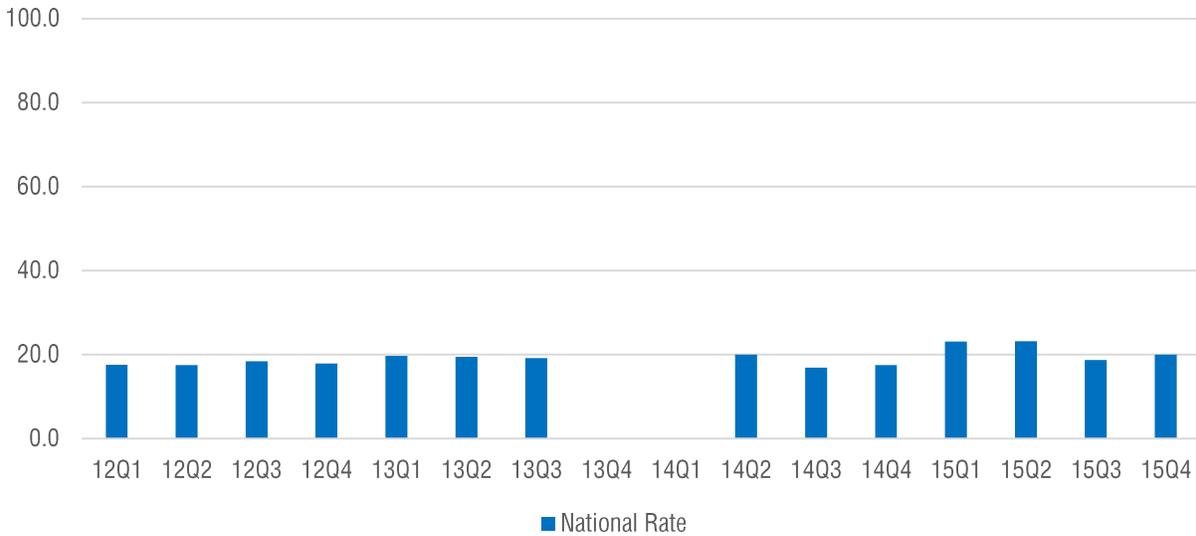
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	83.2	83.7	
Region B	86.4	87.1	
Region C	85.2	85.7	
Region D	85.0	84.9	
Region E	83.7	83.8	

- Trend line y-axis ranges from 83-88% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 2: Communication with Doctors (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

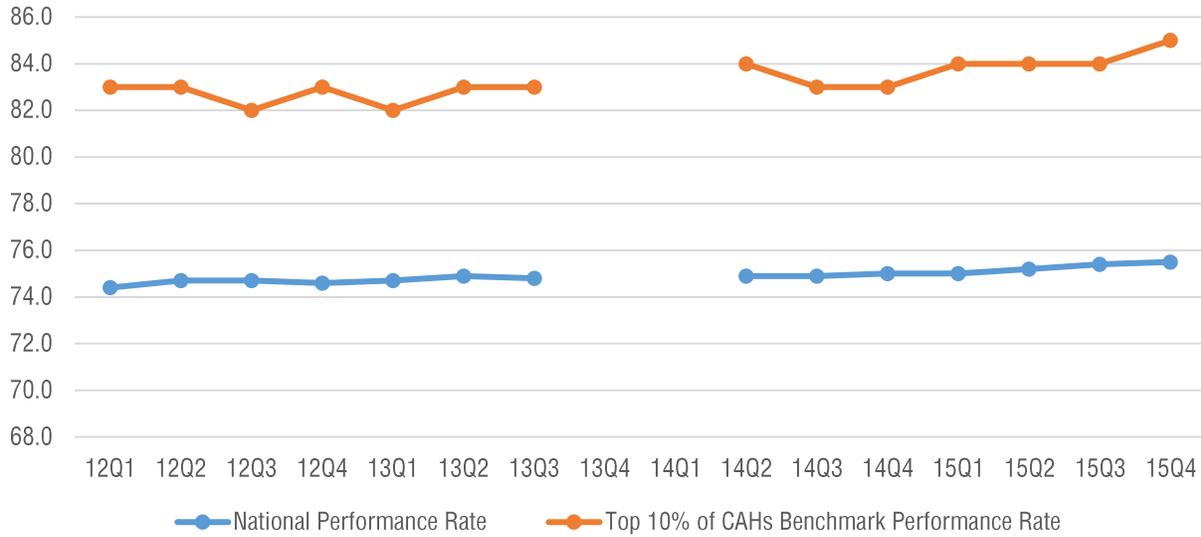
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	16.4	7.7	
Region B	37.5	33.9	
Region C	15.4	17.1	
Region D	30.5	30.8	
Region E	9.3	15.9	

- Trend line y-axis ranges from 6-44% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 3: Responsiveness of Hospital Staff

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

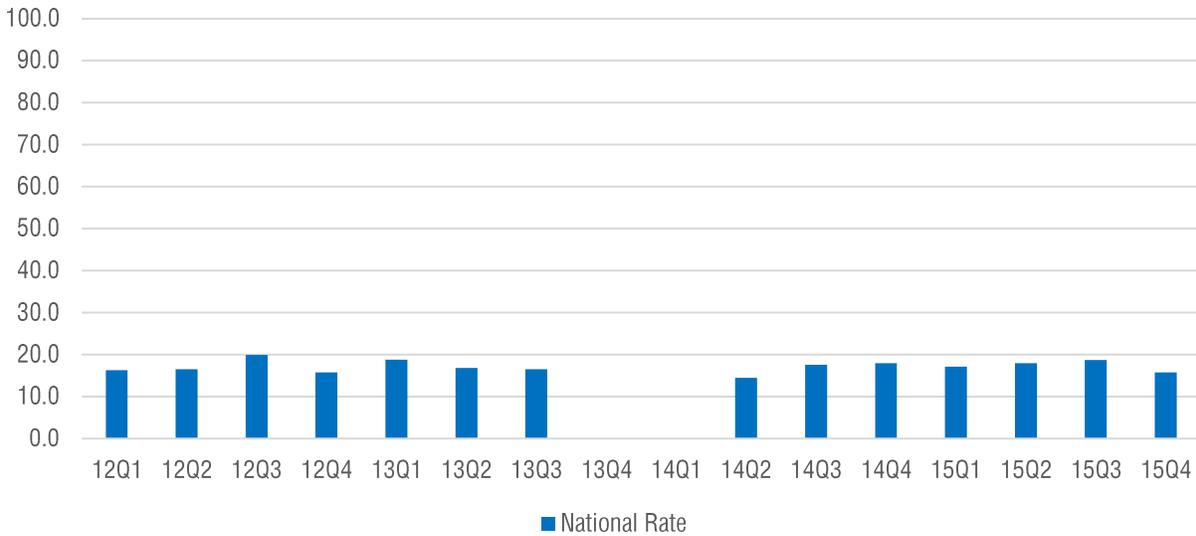
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	72.9	74.2	
Region B	75.4	74.4	
Region C	74.9	76.4	
Region D	72.7	74.6	
Region E	74.0	75.0	

- Trend line y-axis ranges from 72-77% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 3: Responsiveness of Hospital Staff (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate does not show statistically-significant change.

### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	9.8	12.1	
Region B	20.0	14.0	
Region C	17.2	15.6	
Region D	16.9	16.4	
Region E	15.9	18.2	

- Trend line y-axis ranges from 7-29% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 4: Pain Management

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

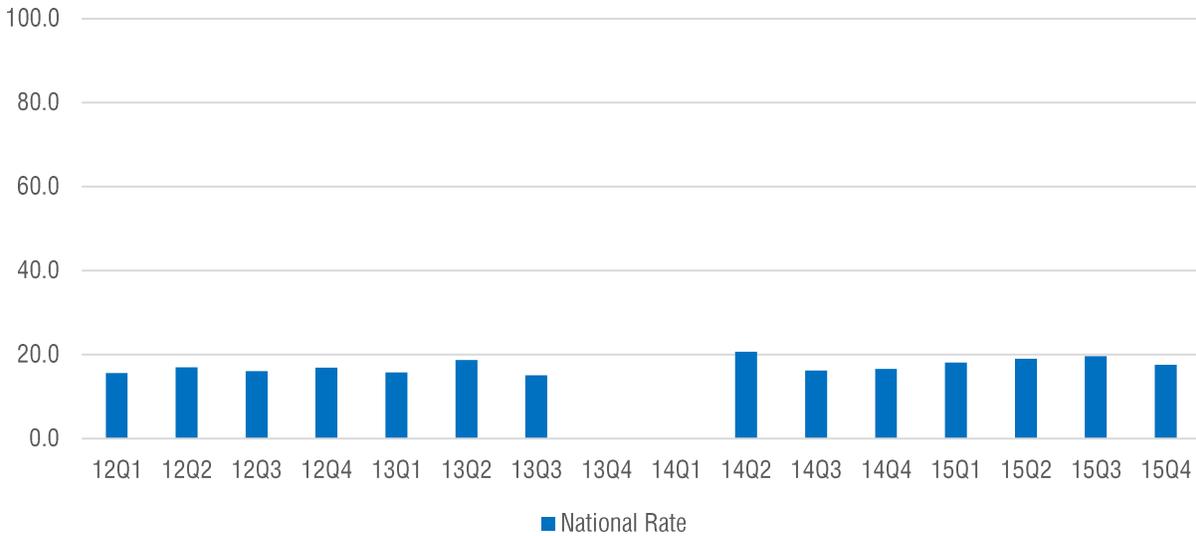
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	72.8	74.0	
Region B	74.3	75.5	
Region C	73.0	73.7	
Region D	72.7	74.5	
Region E	72.8	72.8	

- Trend line y-axis ranges from 71-77% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 4: Pain Management (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

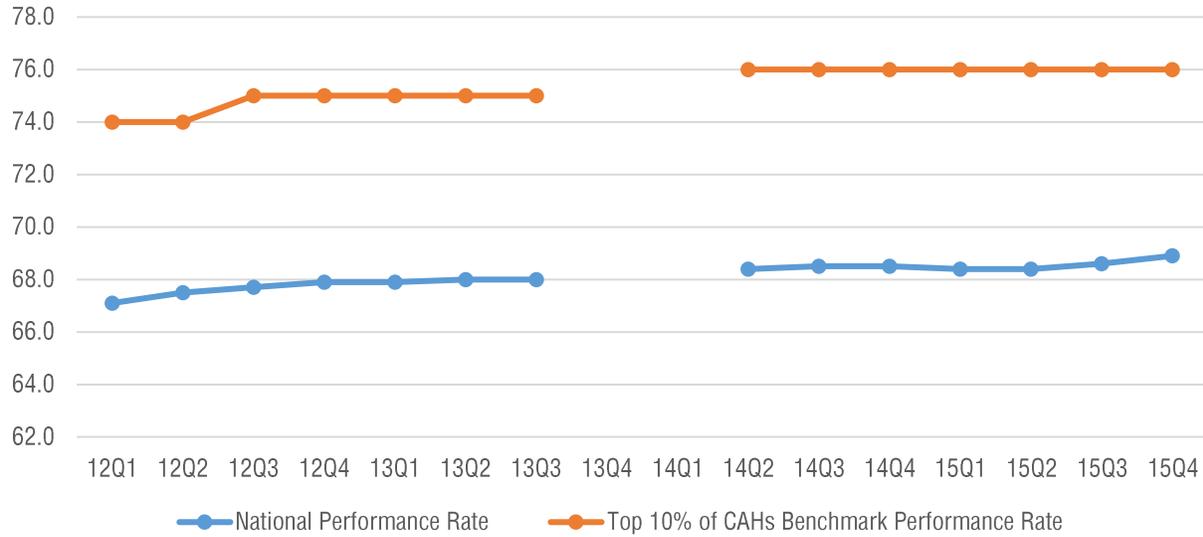
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	14.8	11.0	
Region B	27.5	24.8	
Region C	13.0	14.9	
Region D	32.2	26.0	
Region E	9.3	16.4	

- Trend line y-axis ranges from 4-34% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 5: Communication about Medicines

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

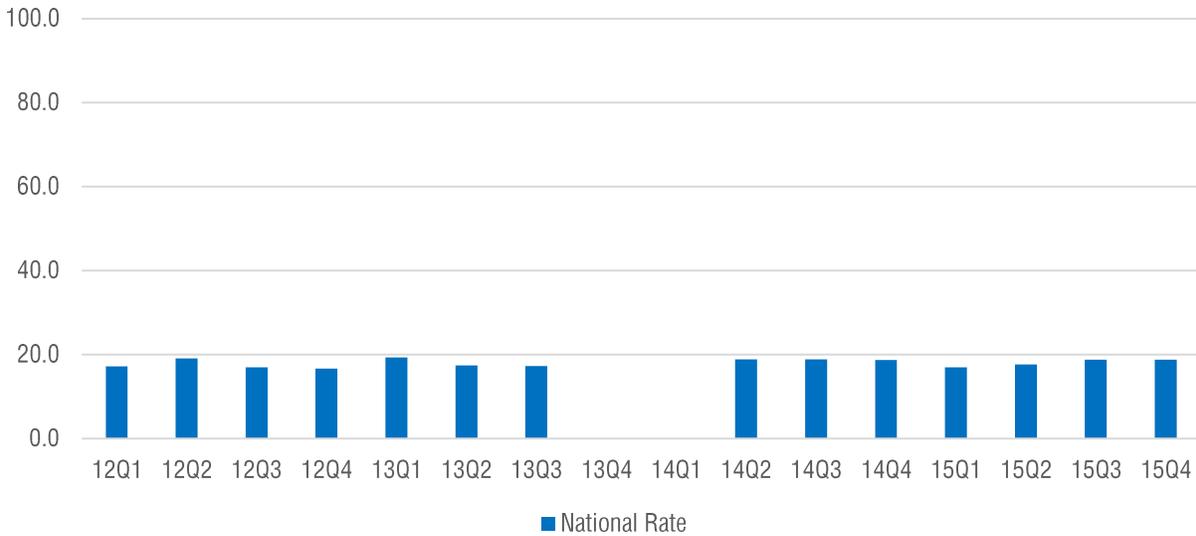
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	66.2	68.7	
Region B	69.2	69.0	
Region C	67.0	69.4	
Region D	67.5	69.4	
Region E	67.2	67.4	

- Trend line y-axis ranges from 66-71% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 5: Communication about Medicines (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate does not show statistically-significant change.

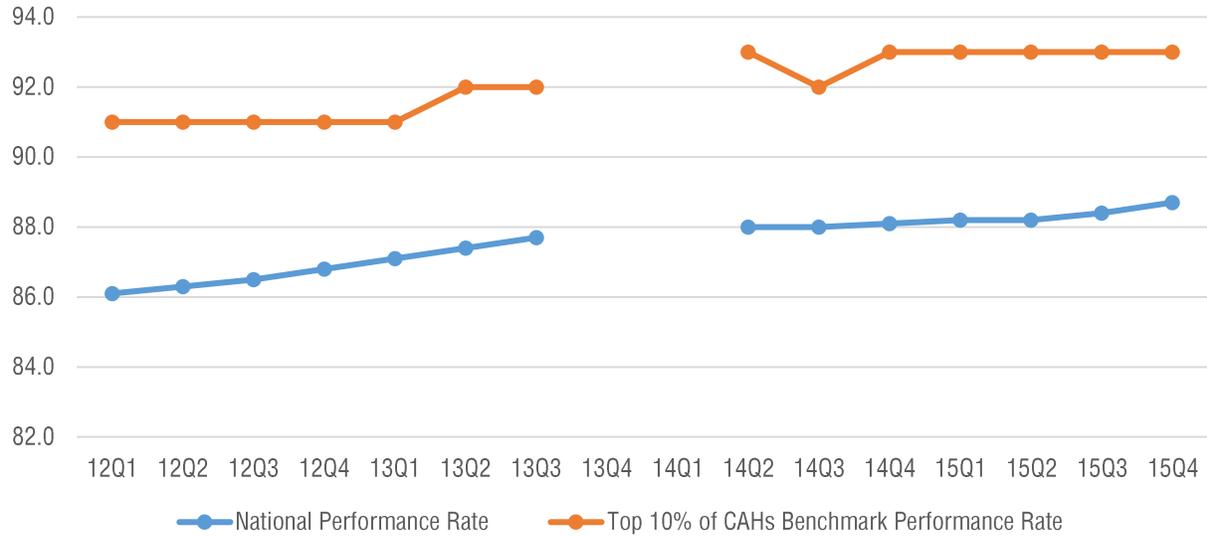
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	11.5	12.1	
Region B	37.5	24.0	
Region C	14.7	17.8	
Region D	25.4	21.9	
Region E	15.0	18.6	

- Trend line y-axis ranges from 11-38% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 6: Discharge Information

### Performance Trend – National



The quarterly trend in national performance shows statistically-significant improvement.

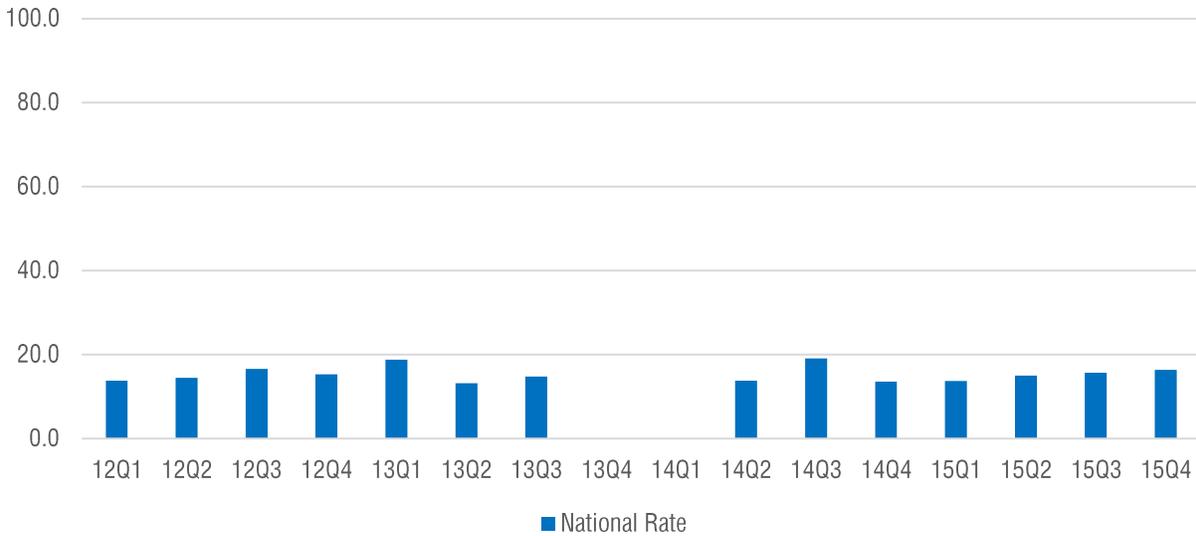
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	86.2	89.0	
Region B	84.6	87.3	
Region C	86.5	89.4	
Region D	83.7	86.2	
Region E	86.2	88.5	

- Trend line y-axis ranges from 84-90% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 6: Discharge Information (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate does not show statistically-significant change.

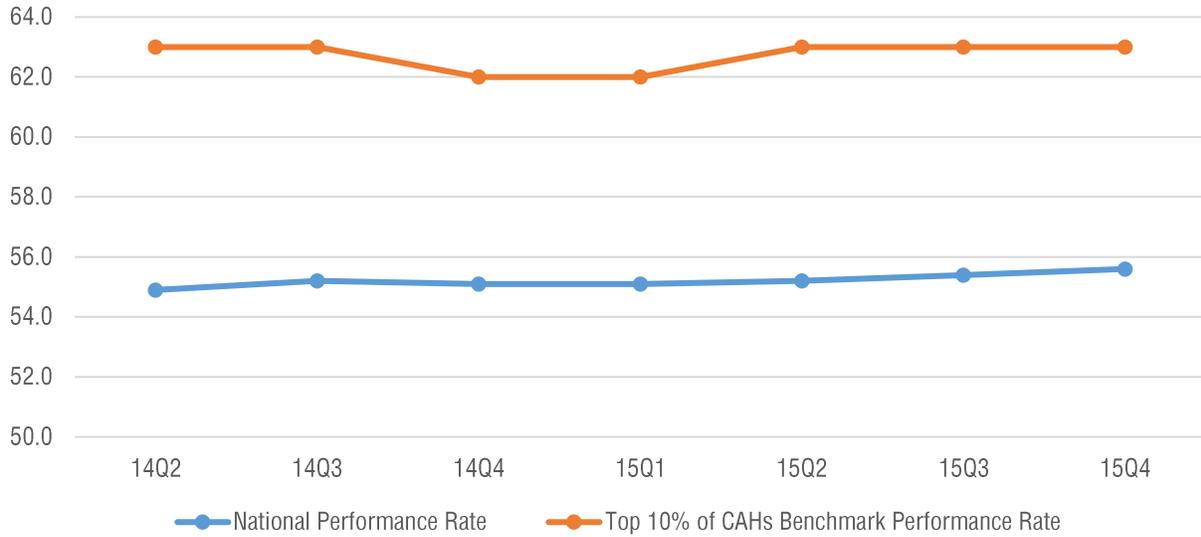
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	1.6	8.8	
Region B	15.0	12.4	
Region C	17.9	21.6	
Region D	3.4	10.3	
Region E	15.0	15.0	

- Trend line y-axis ranges from 1-25% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Composite 7: Care Transitions

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

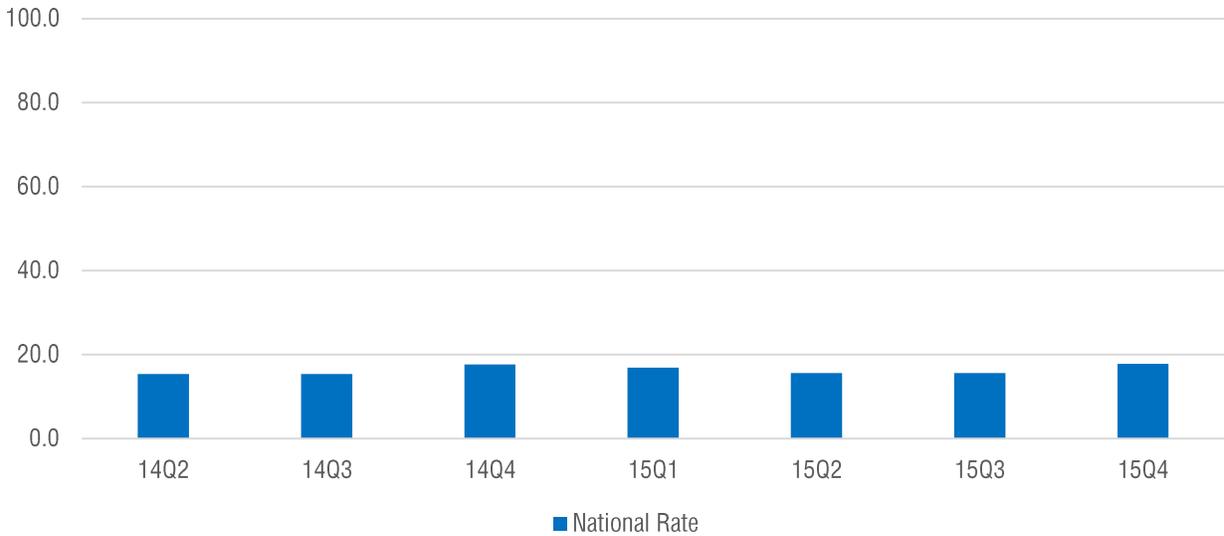
### Performance Trend – Regional

HRSA Region	14Q2	15Q4	Quarterly Trend
Region A	54.5	54.7	
Region B	55.6	55.0	
Region C	55.9	56.6	
Region D	52.4	53.4	
Region E	53.4	54.6	

- Trend line y-axis ranges from 52-57% and x-axis ranges from 14Q2-15Q4.

## HCAHPS - Composite 7: Care Transitions (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

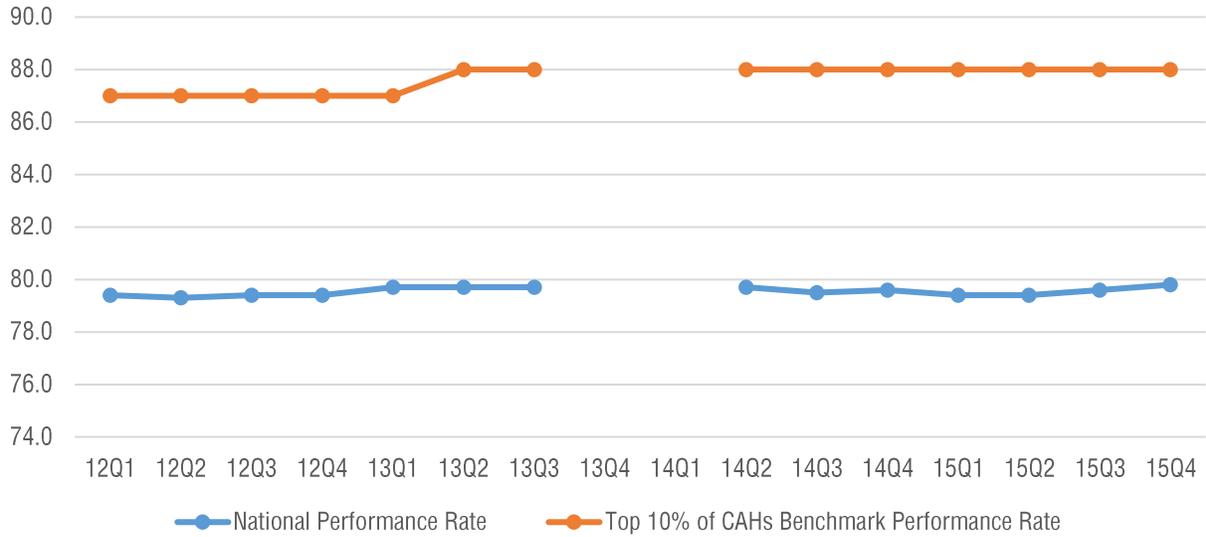
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q2	15Q4	Quarterly Trend
Region A	17.5	11.0	
Region B	14.3	14.0	
Region C	16.4	18.9	
Region D	14.7	17.1	
Region E	13.3	20.9	

- Trend line y-axis ranges from 9-21% and x-axis ranges from 14Q2-15Q4.

## HCAHPS - Question 8: Cleanliness of Hospital Environment

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

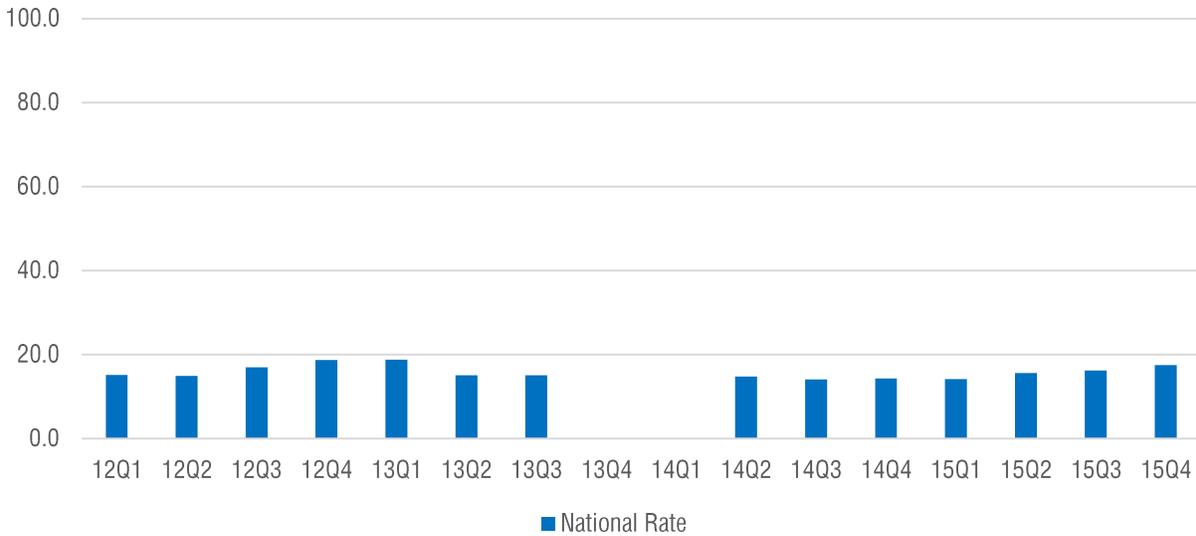
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	79.3	79.2	
Region B	78.1	77.6	
Region C	80.3	81.5	
Region D	77.4	78.7	
Region E	77.7	76.8	

- Trend line y-axis ranges from 76-82% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 8: Cleanliness of Hospital Environment (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate does not show statistically-significant change.

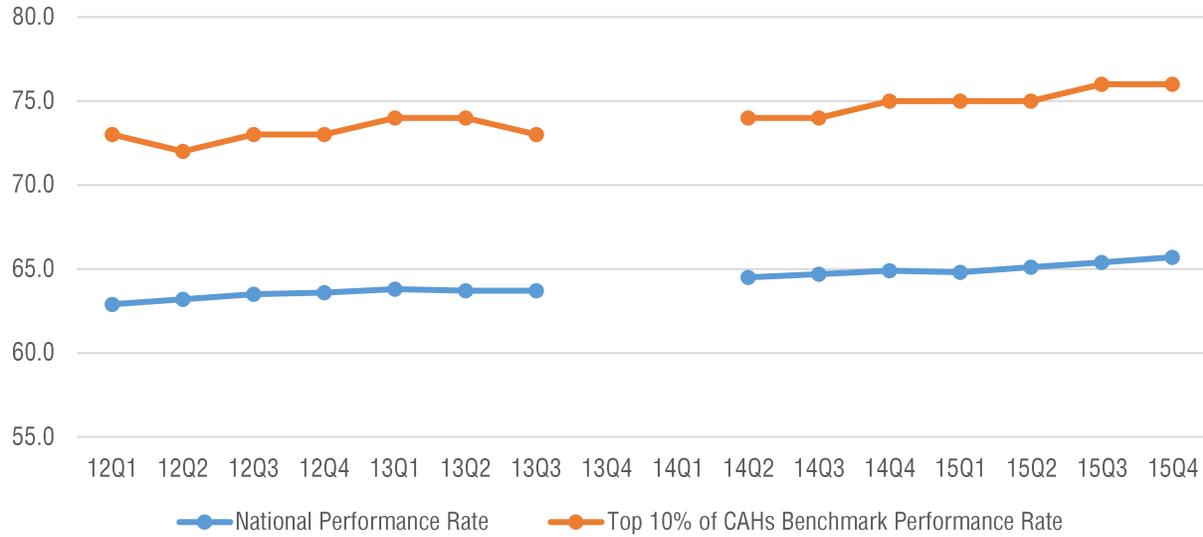
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	9.8	13.2	
Region B	20.0	14.0	
Region C	16.8	20.7	
Region D	16.9	16.4	
Region E	11.2	15.5	

- Trend line y-axis ranges from 6-23% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 9: Quietness of Hospital Environment

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

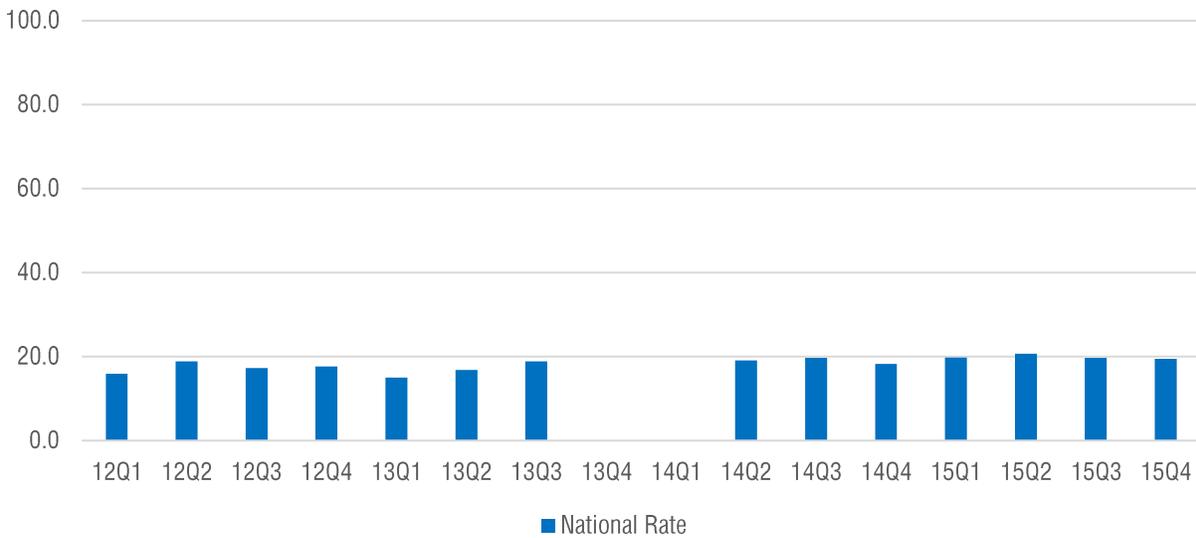
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	58.8	60.5	
Region B	66.3	70.3	
Region C	63.8	67.2	
Region D	62.3	65.6	
Region E	61.5	62.6	

- Trend line y-axis ranges from 57-71% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 9: Quietness of Hospital Environment (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

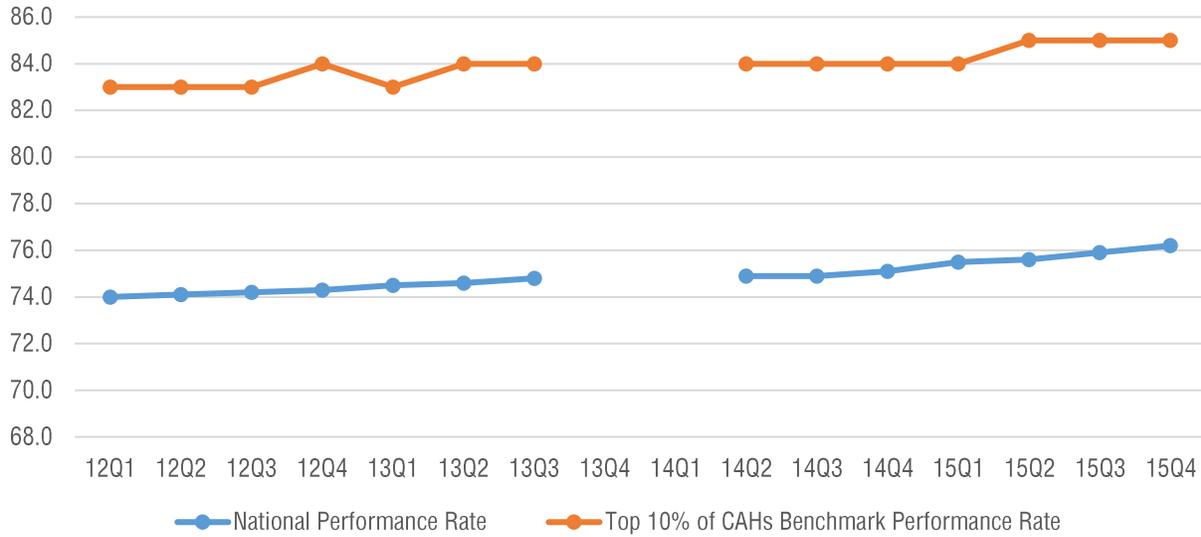
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	9.8	7.7	
Region B	35.0	30.6	
Region C	15.1	17.4	
Region D	23.7	26.0	
Region E	10.3	18.2	

- Trend line y-axis ranges from 1-41% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 21: Overall Rating of Hospital

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

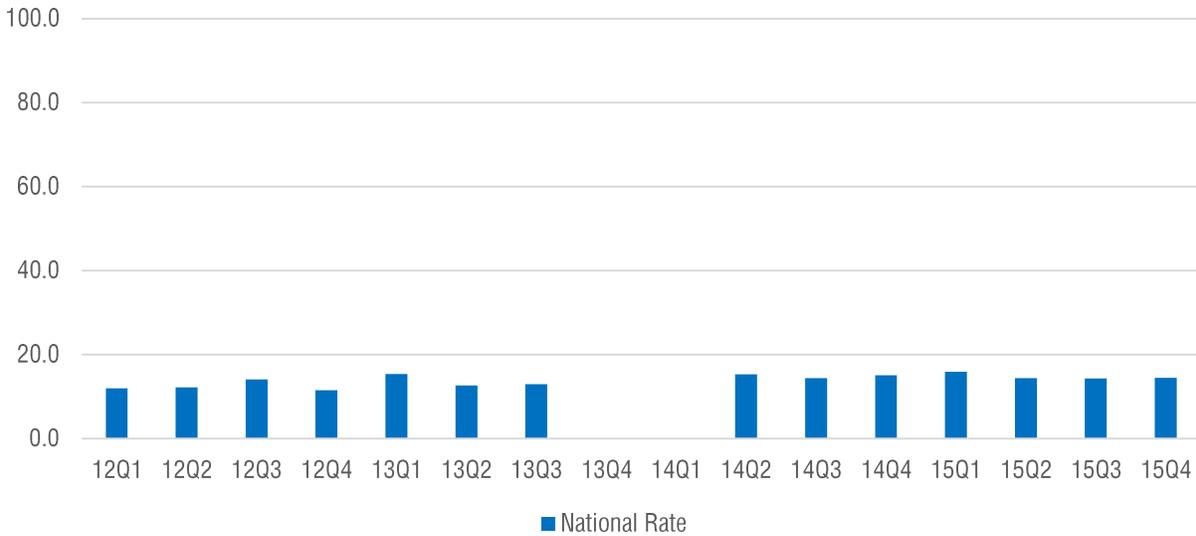
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	70.9	74.6	
Region B	74.5	74.9	
Region C	75.4	77.9	
Region D	73.1	75.1	
Region E	71.7	73.7	

- Trend line y-axis ranges from 71-78% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 21: Overall Rating of Hospital (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

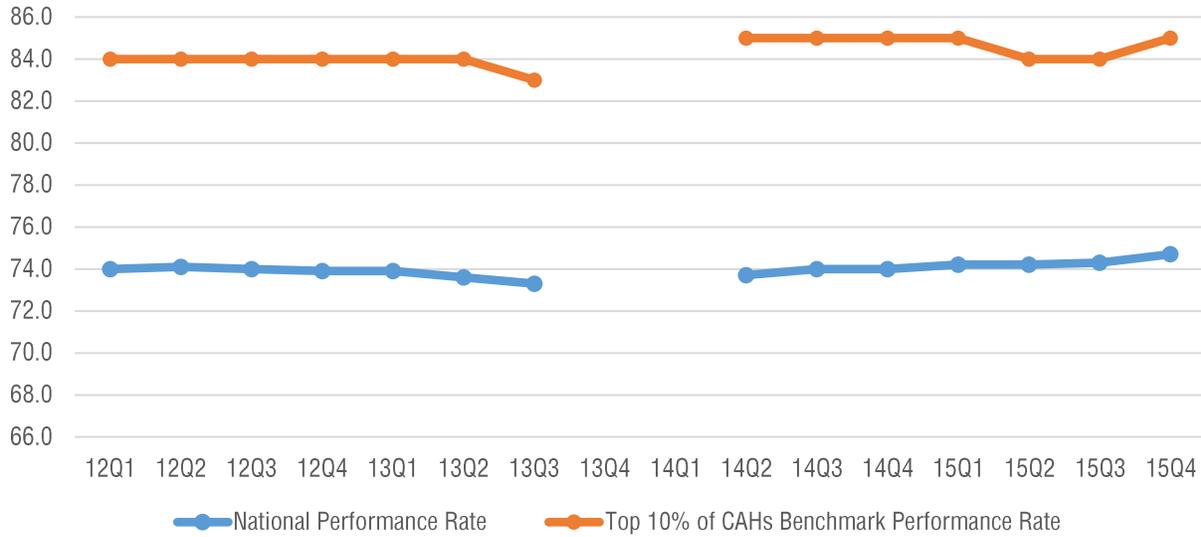
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	4.9	9.9	
Region B	10.0	12.4	
Region C	14.0	15.4	
Region D	16.9	16.4	
Region E	8.4	14.5	

- Trend line y-axis ranges from 3-22% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 22: Willingness to Recommend

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

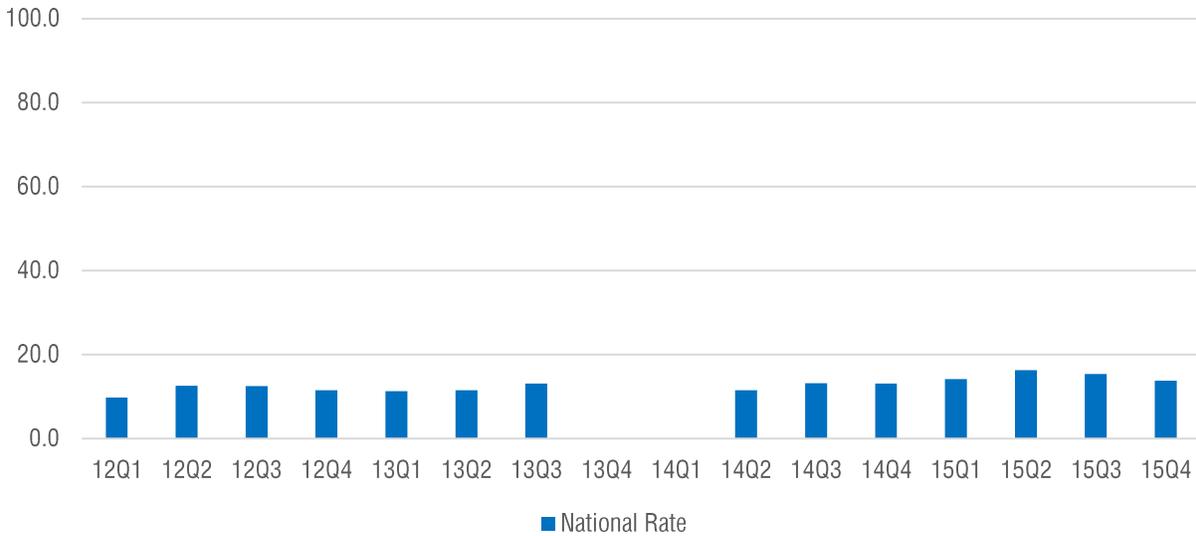
### Performance Trend – Regional

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	71.6	73.3	
Region B	74.8	73.1	
Region C	74.6	76.0	
Region D	73.2	73.2	
Region E	73.7	73.8	

- Trend line y-axis ranges from 71-76% and x-axis ranges from 12Q1-15Q4.

## HCAHPS - Question 22: Willingness to Recommend (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the benchmark rate shows statistically-significant improvement.

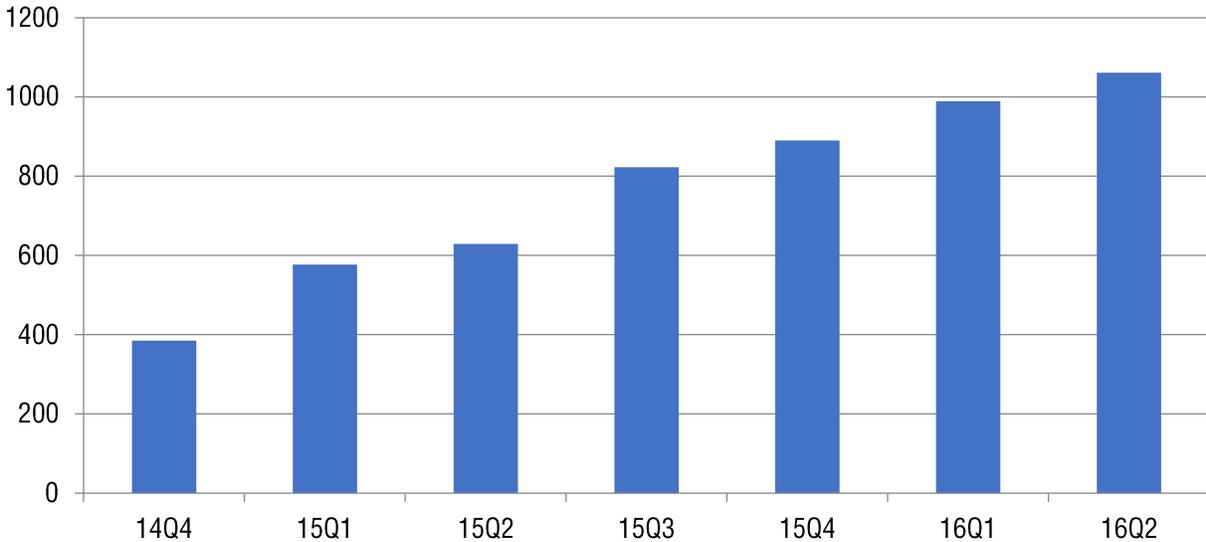
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	15Q4	Quarterly Trend
Region A	11.5	9.9	
Region B	10.0	9.1	
Region C	9.8	14.3	
Region D	15.3	12.3	
Region E	5.6	18.2	

- Trend line y-axis ranges from 6-21% and x-axis ranges from 12Q1-15Q4.

## Care Transitions Quality: Q4 2014 - Q2 2016

### CAHs Reporting At Least One EDTC Measure



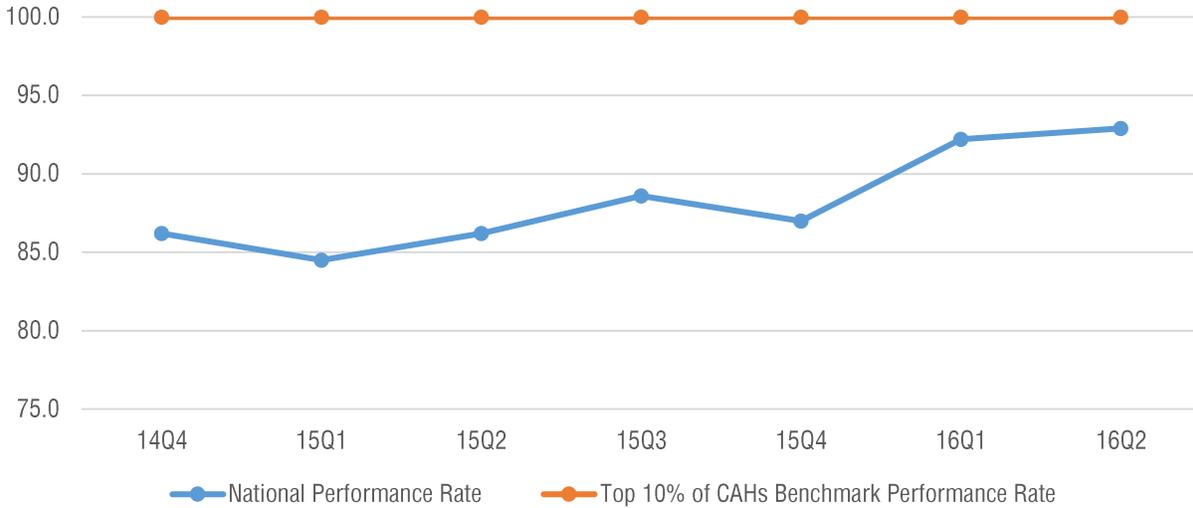
### MBQIP EDTC Measures

EDTC measures are seven composites constructed from 27 data elements collected from chart abstractions on information communicated during ED facility discharge to another health care facility. Measure definitions listed below are from StratisHealth EDTC Resources.<sup>5</sup>

- *EDTC-1: Administrative Communication* – physician to physician and nurse to nurse communication prior to discharge.
- *EDTC-2: Patient Information* – patient identification information sent to receiving facility within 60 minutes of ED discharge.
- *EDTC-3: Vital Signs* – communication with the receiving facility within 60 minutes of discharge for patient’s vital sign information.
- *EDTC-4: Medication Information* – communication with the receiving facility within 60 minutes of discharge for medication information.
- *EDTC-5: Physician or Practitioner Generated Information* – communication with the receiving facility within 60 minutes of discharge for history of physician orders and plan.
- *EDTC-6: Nurse Generated Information* – communication with the receiving facility within 60 minutes of discharge for key nurse documentation.
- *EDTC-7: Procedures and Tests* – communication with the receiving facility within 60 minutes of discharge of tests done and results sent.

## EDTC-1 Administrative Communication

### Performance Trend – National



- The quarterly trend in national EDTC-1 performance shows statistically-significant improvement.

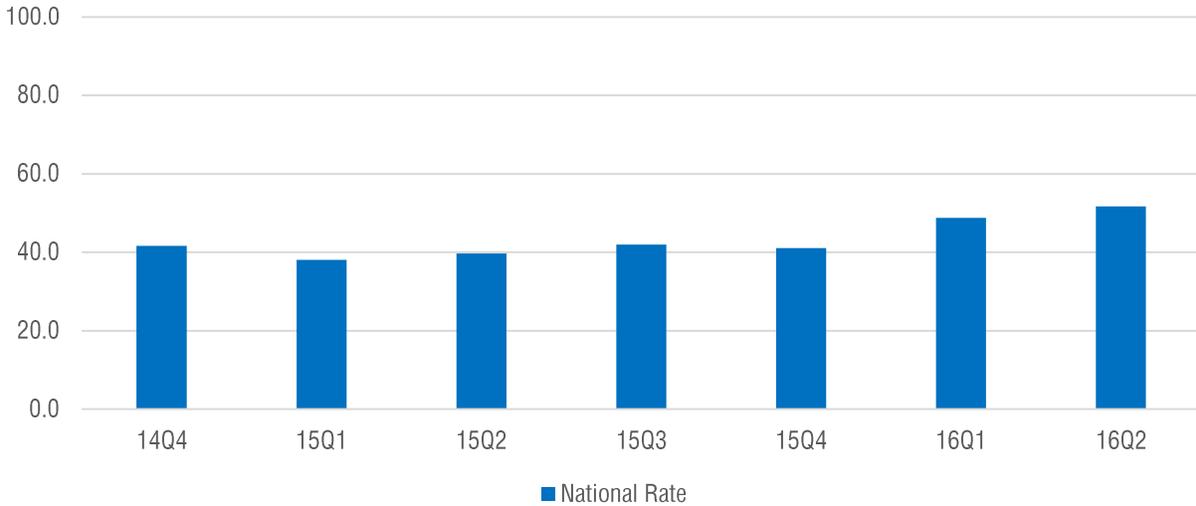
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	83.6	94.6	
Region B	93.9	95.7	
Region C	85.8	93.9	
Region D	89.2	92.2	
Region E	78.9	88.1	

- Trend line y-axis ranges from 78-97% and x-axis ranges from 14Q1-16Q2.

## EDTC-1 Administrative Communication (Continued)

### Percent of CAHs Performing At or Better Than the Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-1 benchmark rate shows statistically-significant improvement.

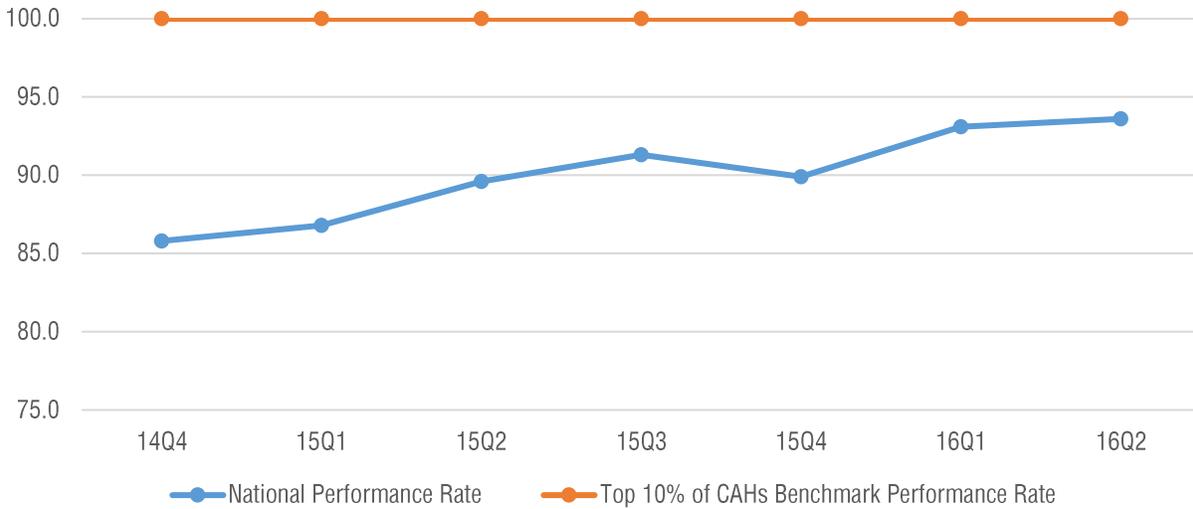
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	37.3	57.4	
Region B	62.7	69.8	
Region C	24.5	49.4	
Region D	55.4	58.0	
Region E	40.4	39.0	

- Trend line y-axis ranges from 25-72% and x-axis ranges from 14Q1-16Q2.

## EDTC-2 Patient Information

### Performance Trend – National



- The quarterly trend in national EDTC-2 performance shows statistically-significant improvement.

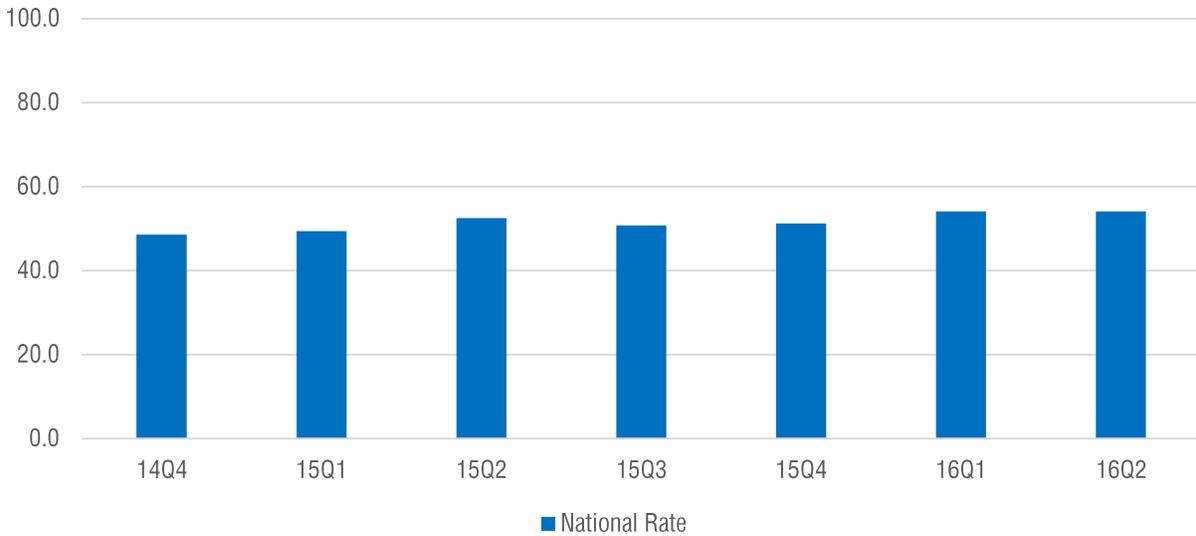
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	89.1	94.1	
Region B	96.3	96.7	
Region C	82.3	94.0	
Region D	89.0	94.6	
Region E	75.7	88.7	

- Trend line y-axis ranges from 76-98% and x-axis ranges from 14Q1-16Q2.

## EDTC-2 Patient Information (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-2 benchmark rate shows statistically-significant improvement.

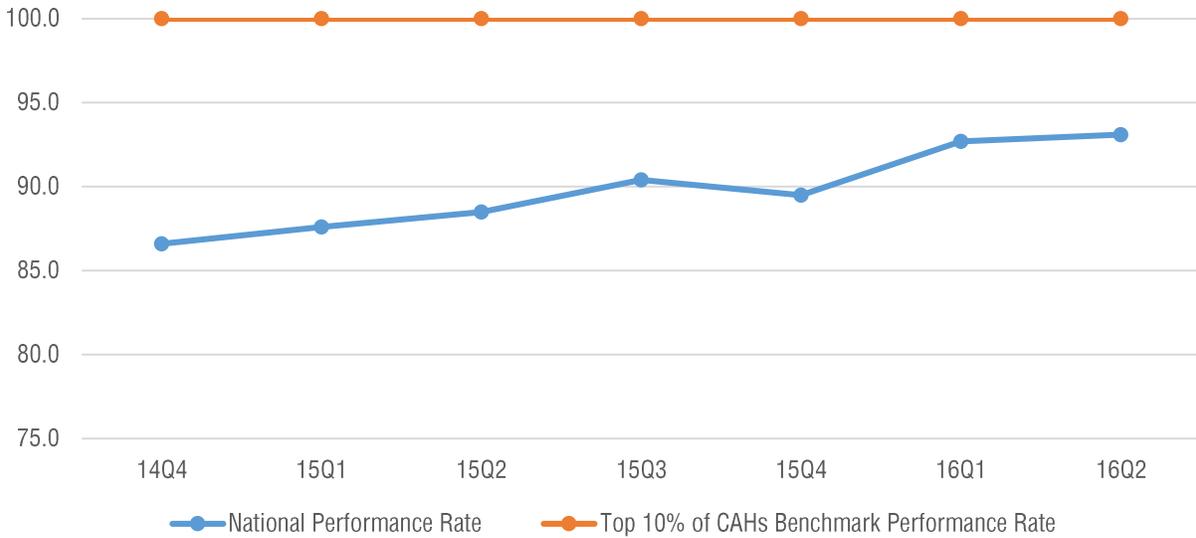
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	41.2	61.7	
Region B	78.0	72.9	
Region C	31.1	50.1	
Region D	64.6	58.6	
Region E	43.3	44.6	

- Trend line y-axis ranges from 31-78% and x-axis ranges from 14Q1-16Q2.

## EDTC-3 Vital Signs

### Performance Trend – National



- The quarterly trend in national EDTC-3 performance shows statistically-significant improvement.

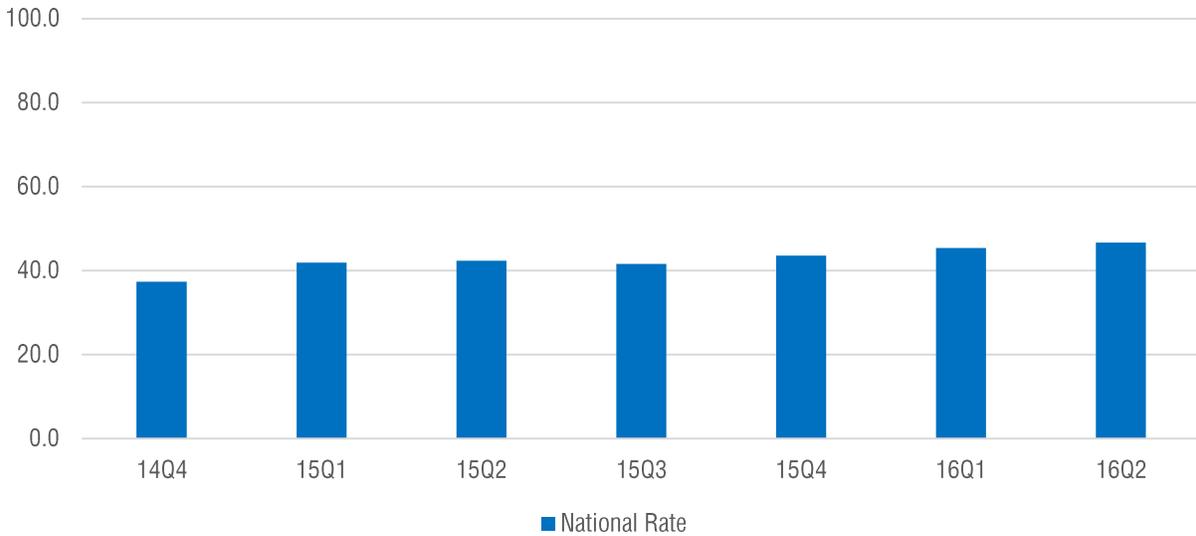
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	89.1	95.0	
Region B	94.5	96.5	
Region C	84.6	92.8	
Region D	89.6	92.3	
Region E	77.3	90.9	

- Trend line y-axis ranges from 78-97% and x-axis ranges from 14Q1-16Q2.

## EDTC-3 Vital Signs (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-3 benchmark rate shows statistically-significant improvement.

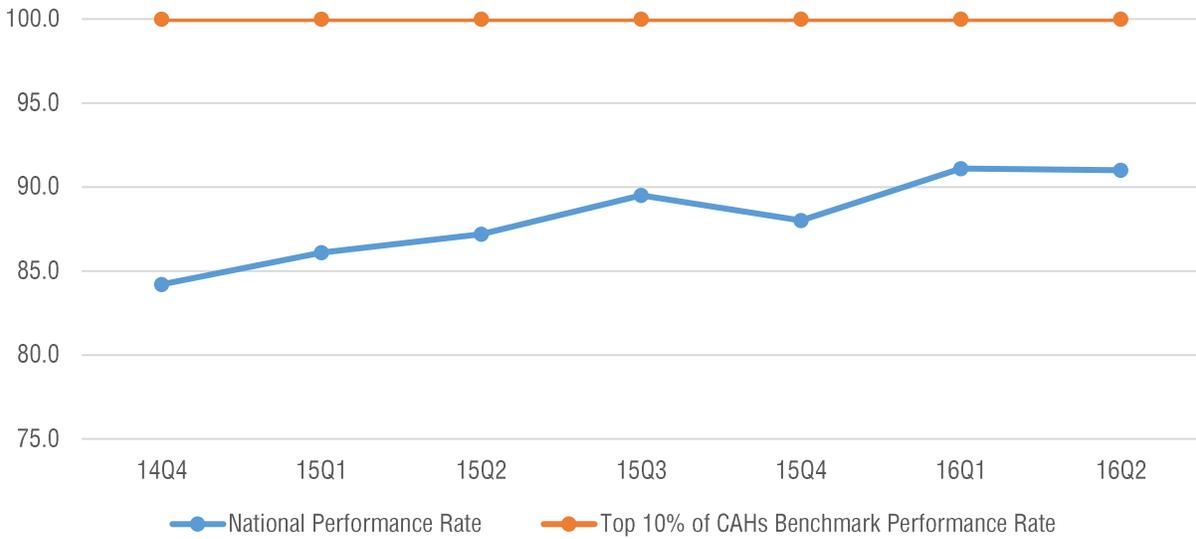
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	37.3	52.1	
Region B	54.2	59.7	
Region C	21.7	42.3	
Region D	52.3	54.0	
Region E	34.6	40.3	

- Trend line y-axis ranges from 21-66% and x-axis ranges from 14Q1-16Q2.

## EDTC-4 Medication Information

### Performance Trend – National



- The quarterly trend in national EDTC-4 performance shows statistically-significant improvement.

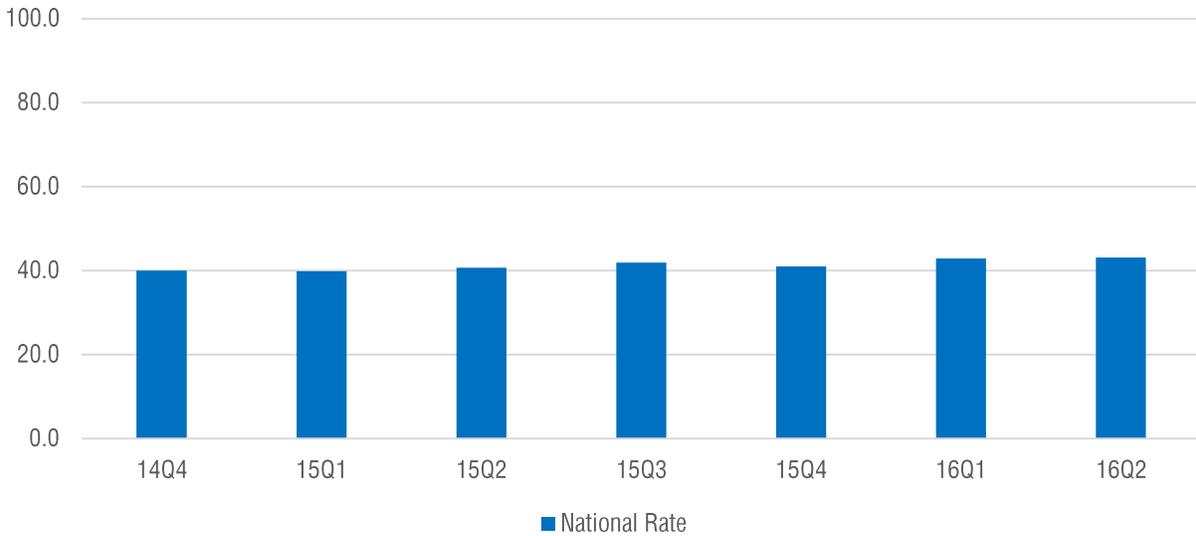
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	88.9	93.9	
Region B	88.7	94.3	
Region C	81.8	91.2	
Region D	88.2	89.8	
Region E	76.0	87.4	

- Trend line y-axis ranges from 76-96% and x-axis ranges from 14Q1-16Q2.

## EDTC-4 Medication Information (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-4 benchmark rate shows no statistically-significant change.

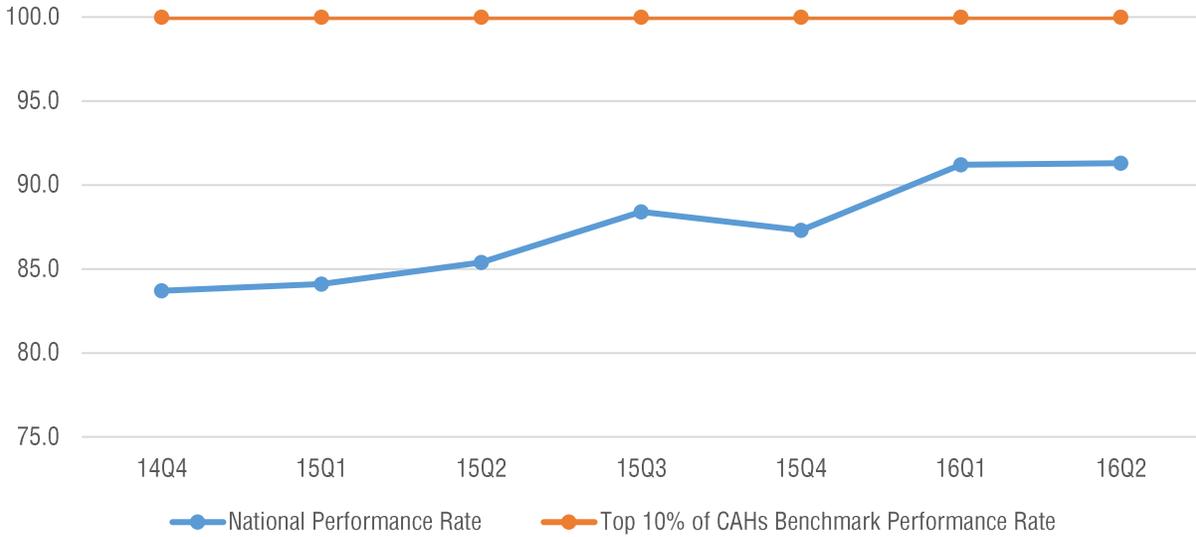
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	49.0	48.9	
Region B	50.8	58.1	
Region C	21.7	39.3	
Region D	56.9	46.6	
Region E	37.5	36.8	

- Trend line y-axis ranges from 21-70% and x-axis ranges from 14Q1-16Q2.

## EDTC-5 Physician or Practitioner Generated Information

### Performance Trend – National



- The quarterly trend in national EDTC-5 performance shows statistically-significant improvement.

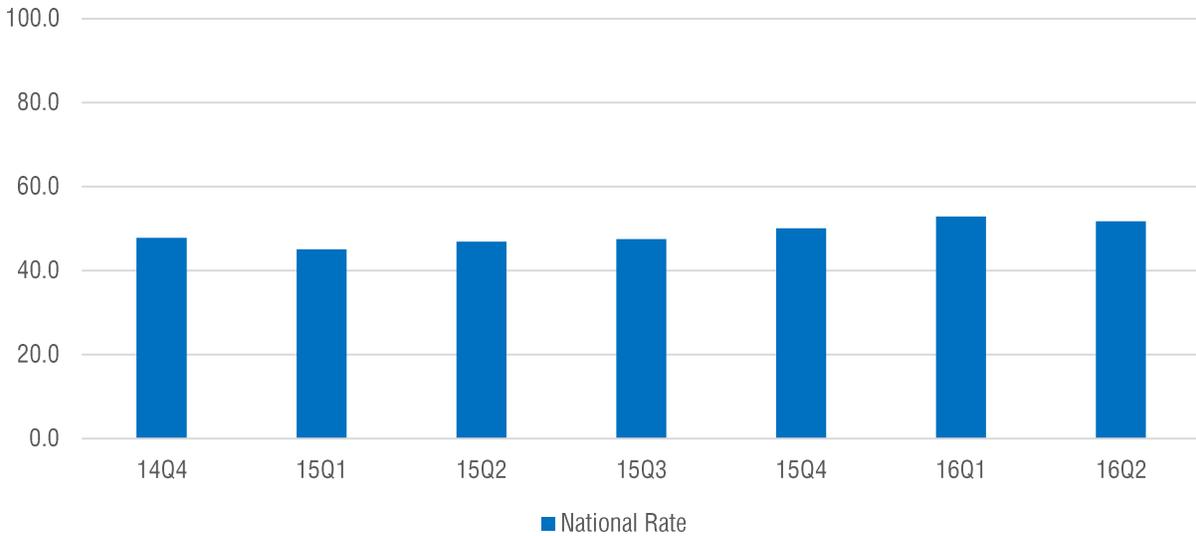
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	86.0	92.9	
Region B	97.0	97.0	
Region C	76.7	89.6	
Region D	89.6	93.6	
Region E	74.4	87.8	

- Trend line y-axis ranges from 74-98% and x-axis ranges from 14Q1-16Q2.

## EDTC-5 Physician or Practitioner Generated Information (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-5 benchmark rate shows statistically-significant improvement.

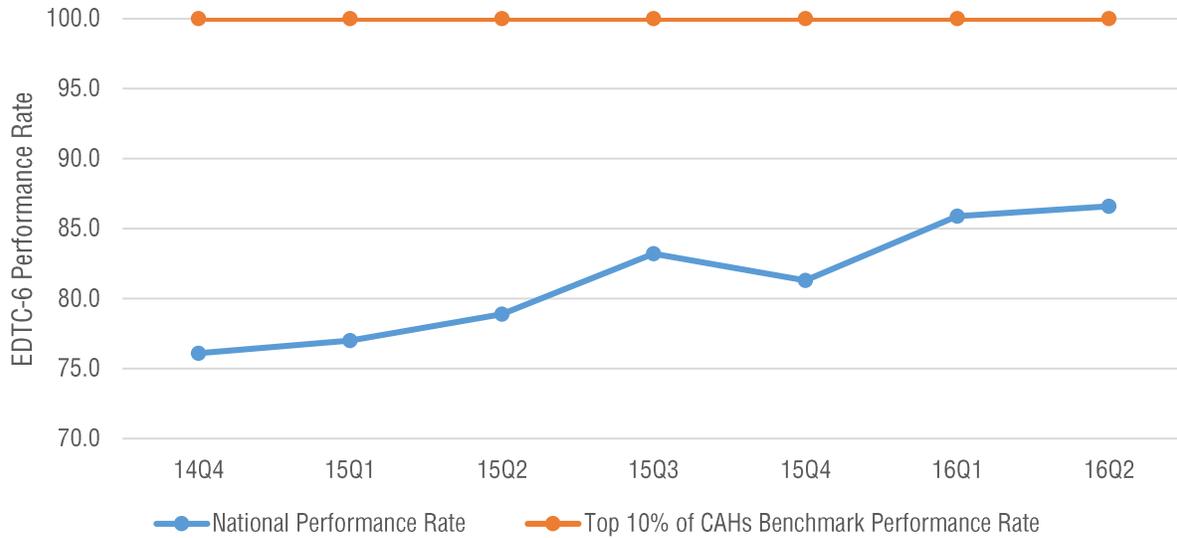
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	52.9	59.6	
Region B	74.6	73.6	
Region C	25.5	44.6	
Region D	66.2	62.6	
Region E	41.3	42.0	

- Trend line y-axis ranges from 25-81% and x-axis ranges from 14Q1-16Q2.

## EDTC-6 Nurse Generated Information

### Performance Trend – National



- The quarterly trend in national EDTC-6 performance shows statistically-significant improvement.

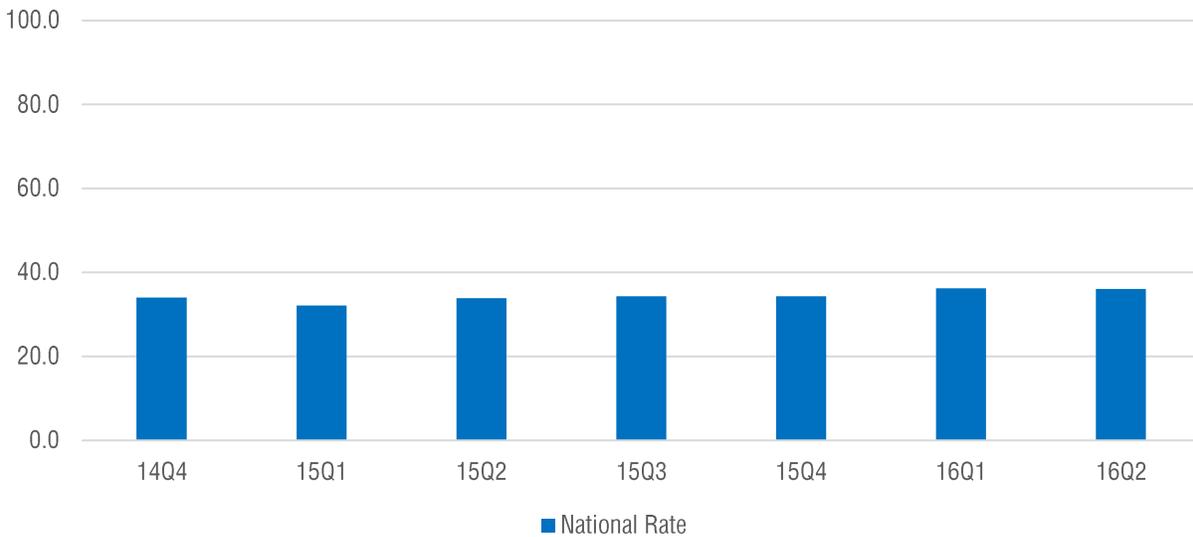
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	57.6	88.6	
Region B	86.3	90.4	
Region C	76.6	87.4	
Region D	84.1	84.0	
Region E	73.5	82.7	

- Trend line y-axis ranges from 57-91% and x-axis ranges from 14Q1-16Q2.

## EDTC-6 Nurse Generated Information (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



The quarterly trend in the percent of CAHs performing at the EDTC-6 benchmark rate shows no statistically-significant change.

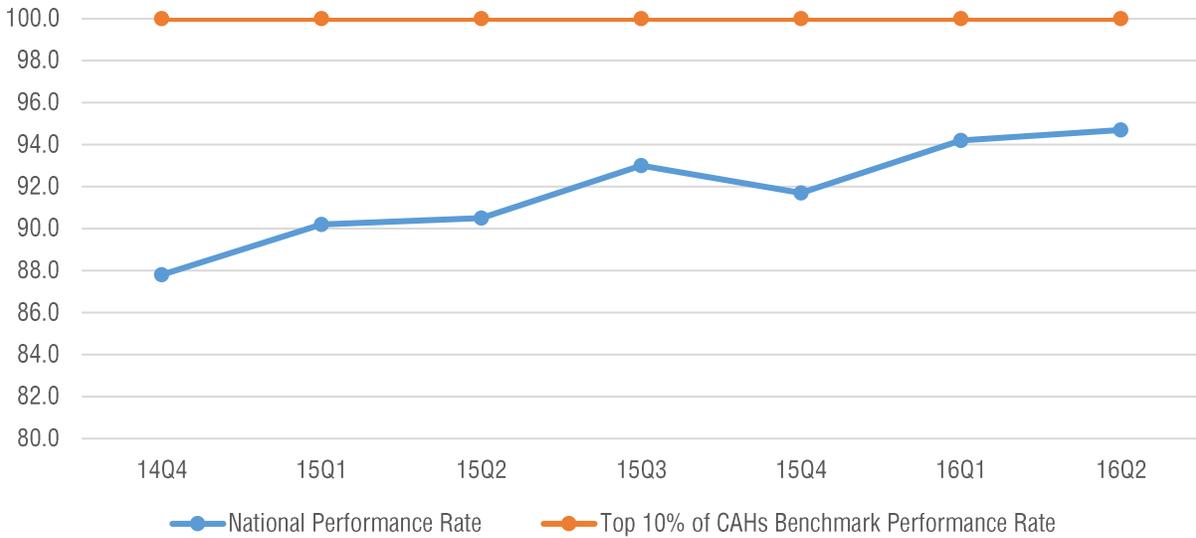
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	25.5	30.9	
Region B	54.2	52.7	
Region C	20.8	35.1	
Region D	49.2	40.2	
Region E	30.8	27.7	

- Trend line y-axis ranges from 20-56% and x-axis ranges from 14Q1-16Q2.

## EDTC-7 Procedures and Tests

### Performance Trend – National



- The quarterly trend in national EDTC-7 performance shows statistically-significant improvement.

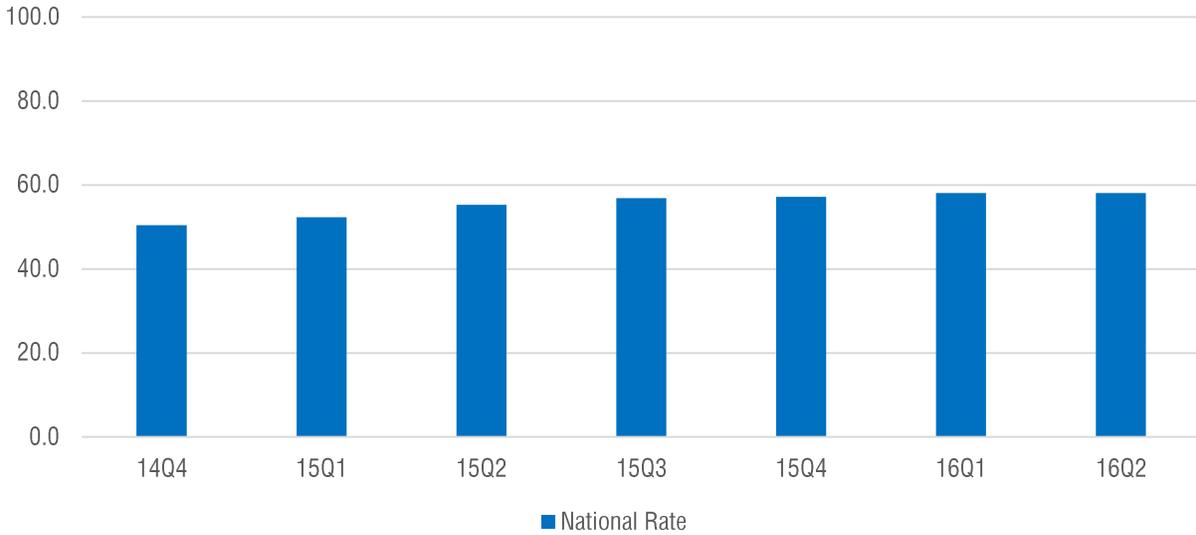
### Performance Trend – Regional

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	88.7	95.3	
Region B	96.0	97.1	
Region C	86.3	94.6	
Region D	90.4	94.2	
Region E	79.2	93.1	

- Trend line y-axis ranges from 79-98% and x-axis ranges from 14Q1-16Q2.

## EDTC-7 Procedures and Tests (Continued)

### Percent of CAHs Performing At or Better Than the Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the EDTC-7 benchmark rate shows statistically-significant improvement.

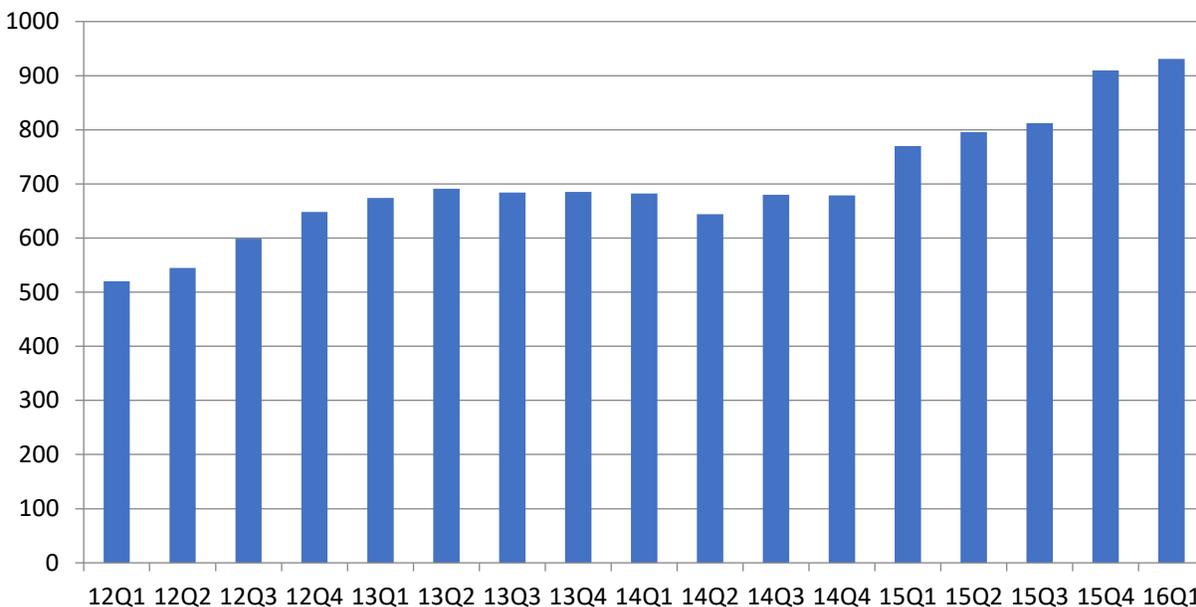
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	14Q4	16Q2	Quarterly Trend
Region A	52.9	59.6	
Region B	78.0	72.9	
Region C	32.1	54.5	
Region D	63.1	64.9	
Region E	44.2	50.6	

- Trend line y-axis ranges from 32-82% and x-axis ranges from 14Q1-16Q2.

## Outpatient Quality: Q1 2012 - Q1 2016

### CAHs Reporting Data for At Least One Outpatient Quality Measure



### MBQIP Outpatient Measures

Outpatient quality measure labels and definitions are from CMS Hospital Compare.<sup>4</sup>

#### *Outpatient Cardiac Care*

- *OP-1: Median Time to Fibrinolysis* - median time from arrival to fibrinolysis for patients that received fibrinolysis (a lower number is better).
- *OP-2: Fibrinolytic Therapy Received Within 30 Minutes* - Acute Myocardial Infarction (AMI) patients receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less (a higher rate indicates better performance).
- *OP-3b: Median Time to Transfer to Another Facility for Acute Coronary Intervention (patients without fibrinolytic contraindication)* - Median number of minutes before outpatients with heart attack who needed specialized care were transferred to another hospital (a lower number is better).
- *OP-4: Aspirin at Arrival* - AMI and chest pain patients without aspirin contraindications who received aspirin within 24 hours before or after hospital arrival (a higher rate indicates better performance).
- *OP-5: Median Time to ECG* - median number of minutes before outpatients with heart attack (or with chest pain that suggests a possible heart attack) got an ECG (a lower number is better).

### *Outpatient Surgical Care*

- *OP-6: Appropriately Timed Antibiotic Prophylaxis* –surgical patients who received prophylactic antibiotics within one hour prior to surgical incision (a higher rate indicates better performance).
- *OP-7: Prophylactic Antibiotic Selection for Surgical Patients in Surgery* – surgical patients who received the appropriate recommended antibiotics for their particular type of surgery (a higher rate indicates better performance).

### *Emergency Department Throughput*

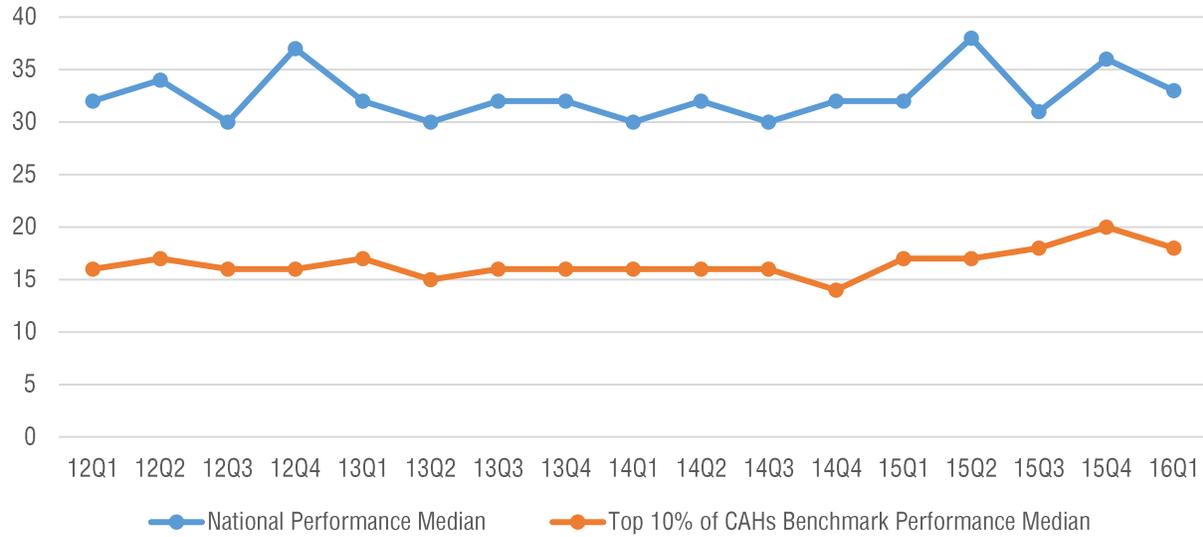
- *OP-18: Median Time from Arrival to Departure for Discharged ED Patients* – Median time from ED arrival to time of departure from the emergency room for patients discharged from the ED (a lower number is better).
- *OP-20: Median Time Door to Diagnostic Evaluation* – median time from ED arrival to provider contact for ED patients (a lower number is better).

### *Pain Management*

- *OP-21: Median Time to Pain Management for Long Bone Fracture* – median time from ED arrival to time of initial oral or parenteral pain medication administration for ED patients with a principal diagnosis of long bone fracture (a lower number is better).

## OP-1: Cardiac Care-Median Time to Fibrinolysis

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

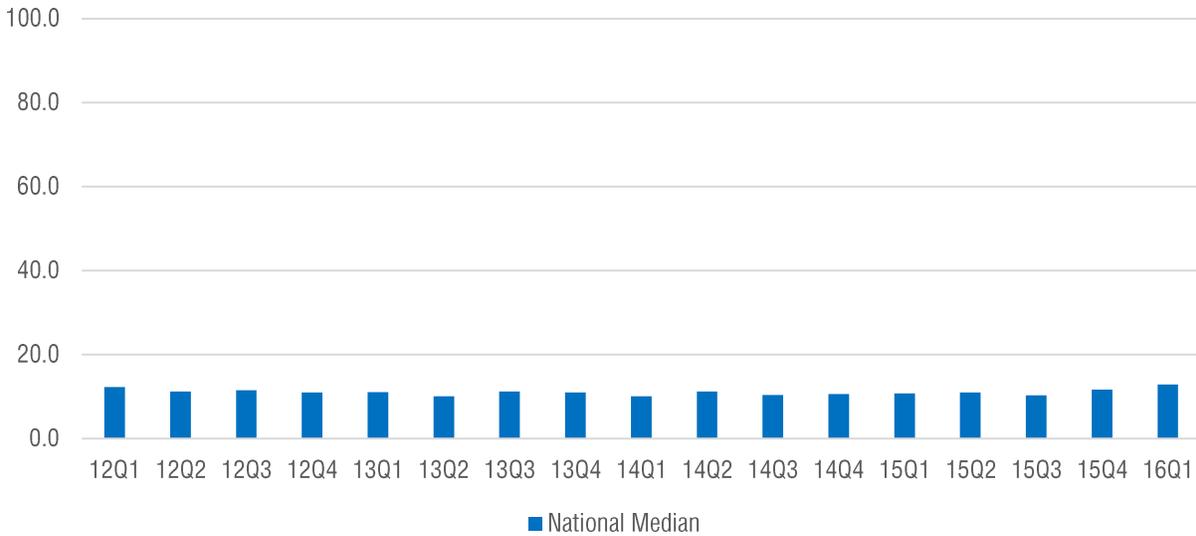
### Performance Trend – Regional

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	31.0	30.0	
Region B	30.0	30.0	
Region C	34.5	30.0	
Region D	32.0	44.0	
Region E	33.0	38.0	

- Trend line y-axis ranges from 21-45 minutes and x-axis ranges from 12Q1-16Q1.

## OP-1: Cardiac Care-Median Time to Fibrinolysis (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-1 benchmark rate does not show statistically-significant change.

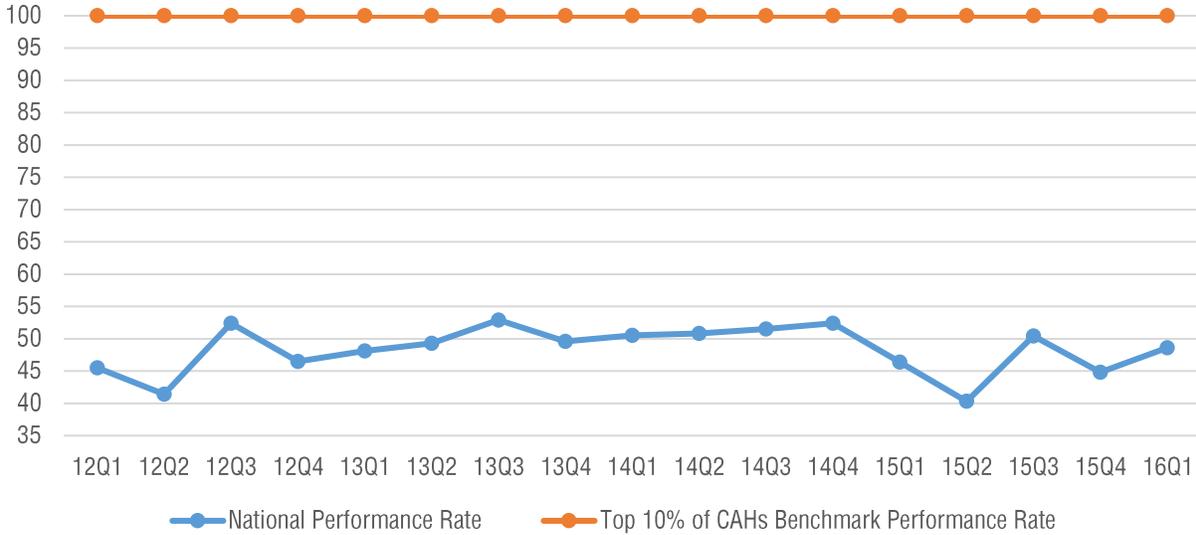
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	26.7	14.3	
Region B	23.1	17.4	
Region C	10.3	9.9	
Region D	13.0	3.0	
Region E	5.4	21.7	

- Trend line y-axis ranges from 0-30% and x-axis ranges from 12Q1-16Q1.

## OP-2: Cardiac Care-Fibrinolytic Therapy Received Within 30 Minutes

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

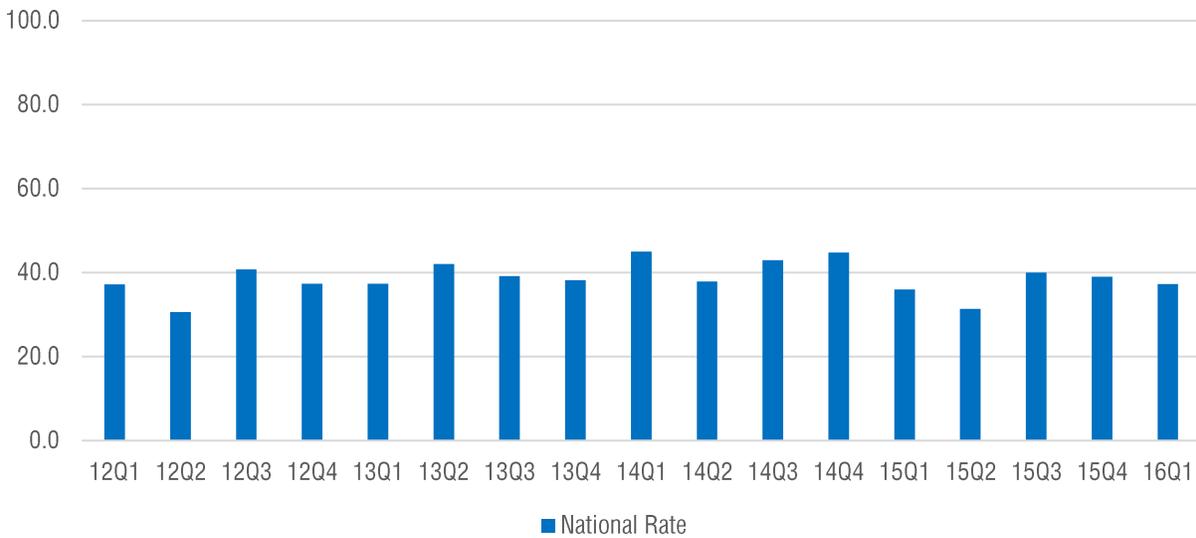
### Performance Trend – Regional

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	43.8	51.1	
Region B	50.0	56.8	
Region C	46.1	55.4	
Region D	48.6	28.3	
Region E	41.8	47.4	

- Trend line y-axis ranges from 24-79% and x-axis ranges from 12Q1-16Q1.

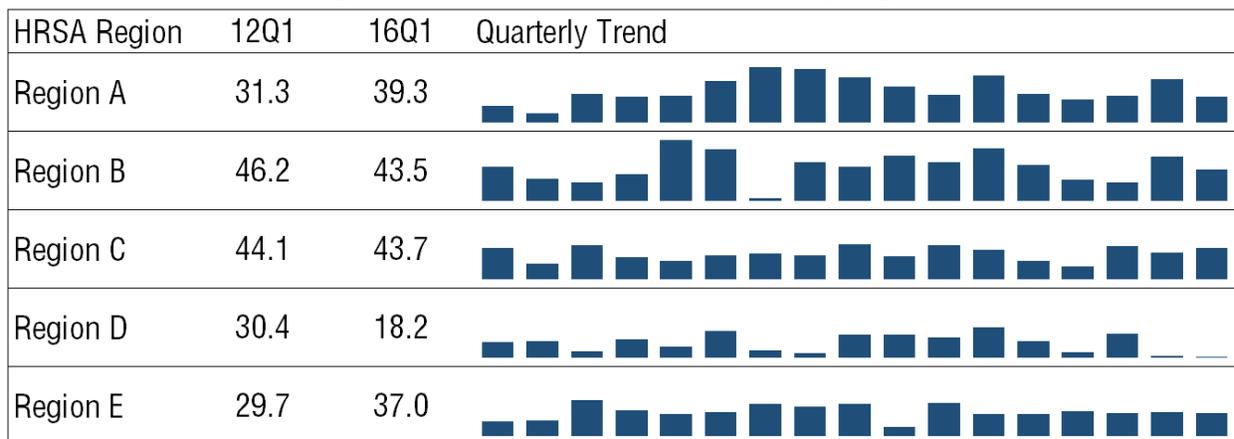
## OP-2: Cardiac Care-Fibrinolytic Therapy Received Within 30 Minutes (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-2 benchmark rate does not show statistically-significant change.

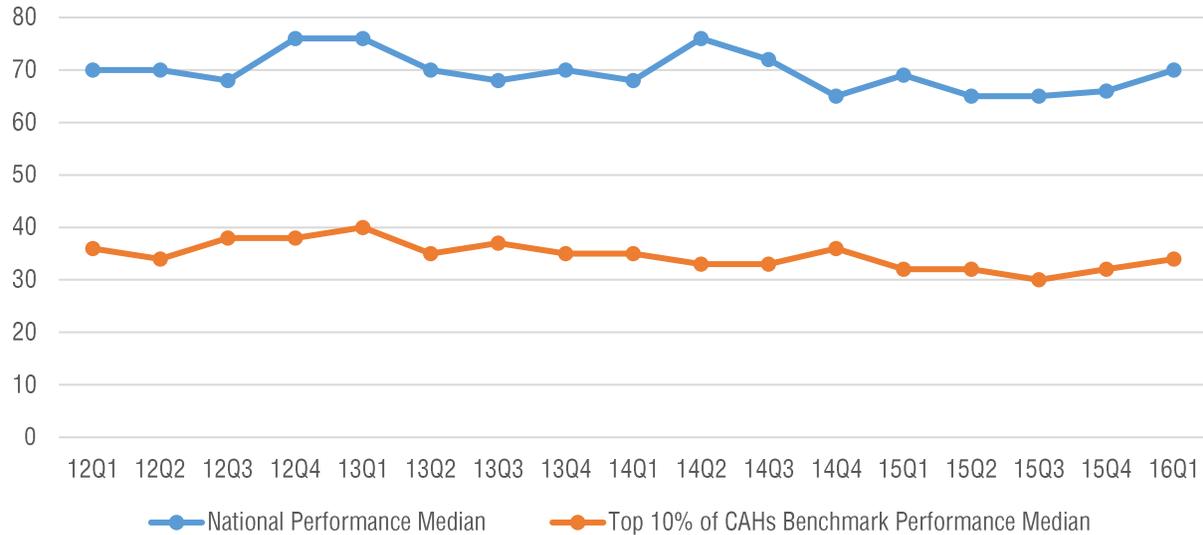
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region



- Trend line y-axis ranges from 18-68% and x-axis ranges from 12Q1-16Q1.

## OP-3b: Cardiac Care-Median Time to Transfer to Another Facility for Acute Coronary Intervention (patients without fibrinolytic contraindication)

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

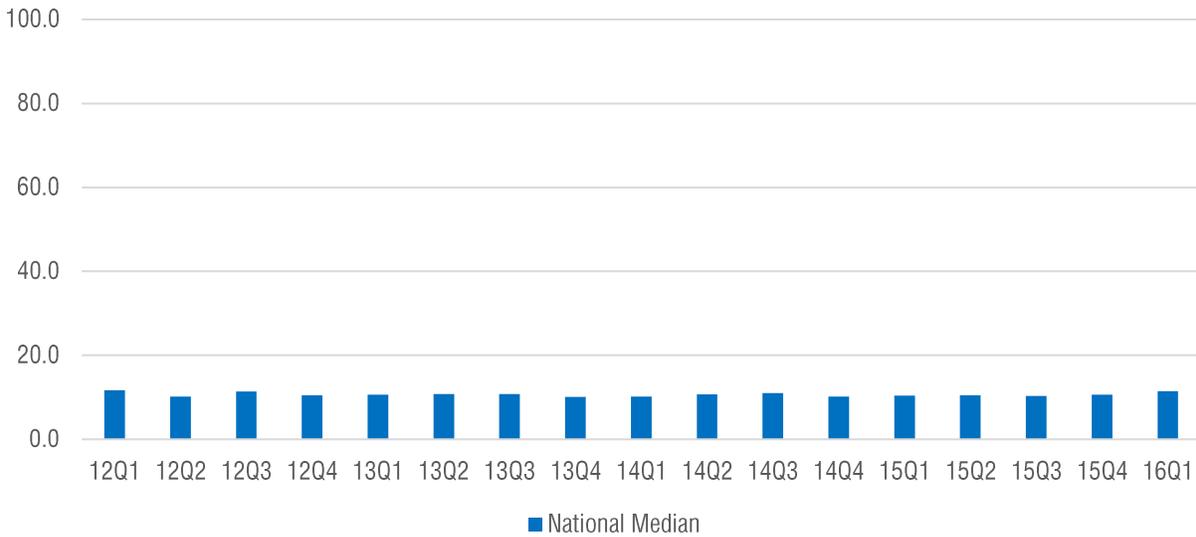
### Performance Trend – Regional

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	76.0	71.5	
Region B	70.0	72.0	
Region C	63.0	60.0	
Region D	156.0	89.0	
Region E	120.0	80.5	

- Trend line y-axis ranges from 55-157 minutes and x-axis ranges from 12Q1-16Q1.

## OP-3b: Cardiac Care-Median Time to Transfer to Another Facility for Acute Coronary Intervention (patients without fibrinolytic contraindication) (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-3b benchmark rate does not show statistically-significant change.

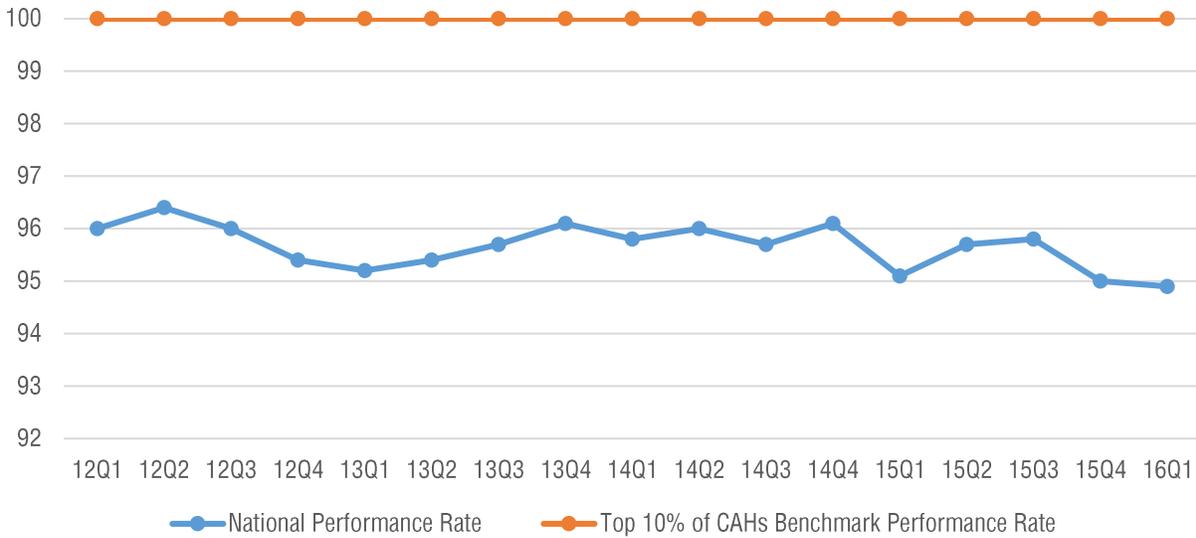
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	16.7	11.1	
Region B	9.5	17.2	
Region C	15.8	12.4	
Region D	0.0	7.7	
Region E	4.5	7.7	

- Trend line y-axis ranges from 0-19% and x-axis ranges from 12Q1-16Q1.

## OP-4: Cardiac Care-Aspirin at Arrival

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant decline.

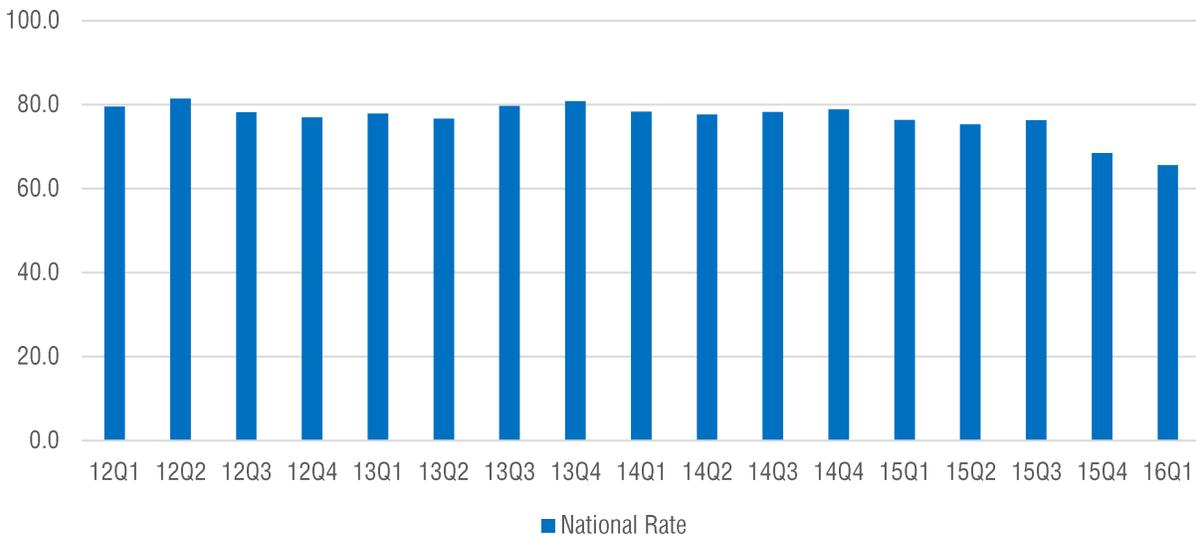
### Performance Trend – Regional

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	95.8	96.0	
Region B	96.4	94.9	
Region C	96.3	95.3	
Region D	92.2	93.5	
Region E	98.0	94.2	

- Trend line y-axis ranges from 92-98% and x-axis ranges from 12Q1-16Q1.

## OP-4: Cardiac Care-Aspirin at Arrival (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-4 benchmark rate shows statistically-significant decline.

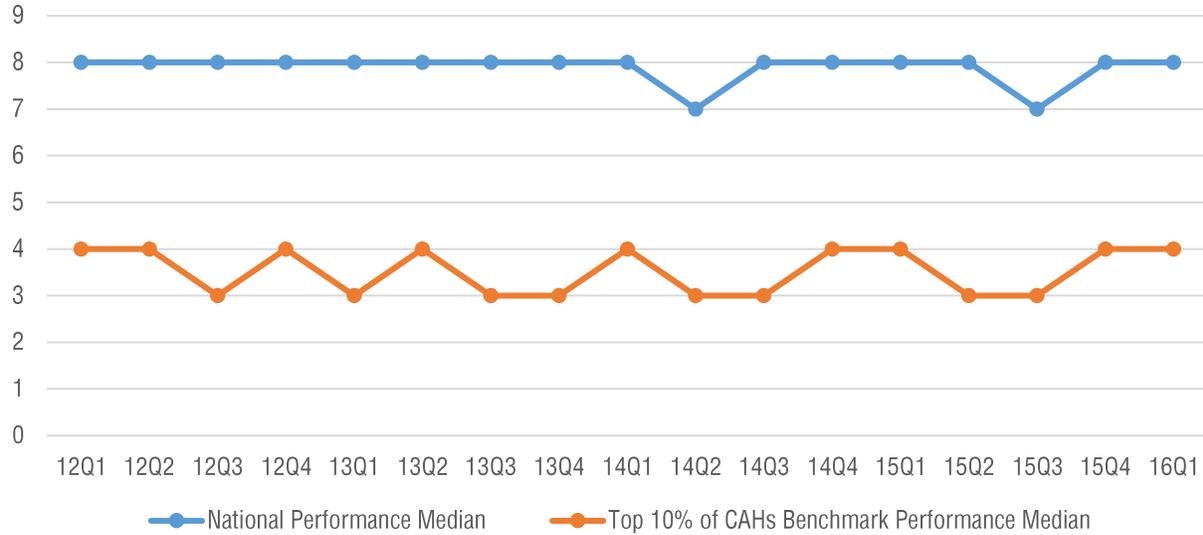
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	78.1	64.3	
Region B	74.1	50.5	
Region C	79.0	69.6	
Region D	70.8	61.3	
Region E	90.2	68.7	

- Trend line y-axis ranges from 51-91% and x-axis ranges from 12Q1-16Q1.

## OP-5: Cardiac Care-Median Time to ECG

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

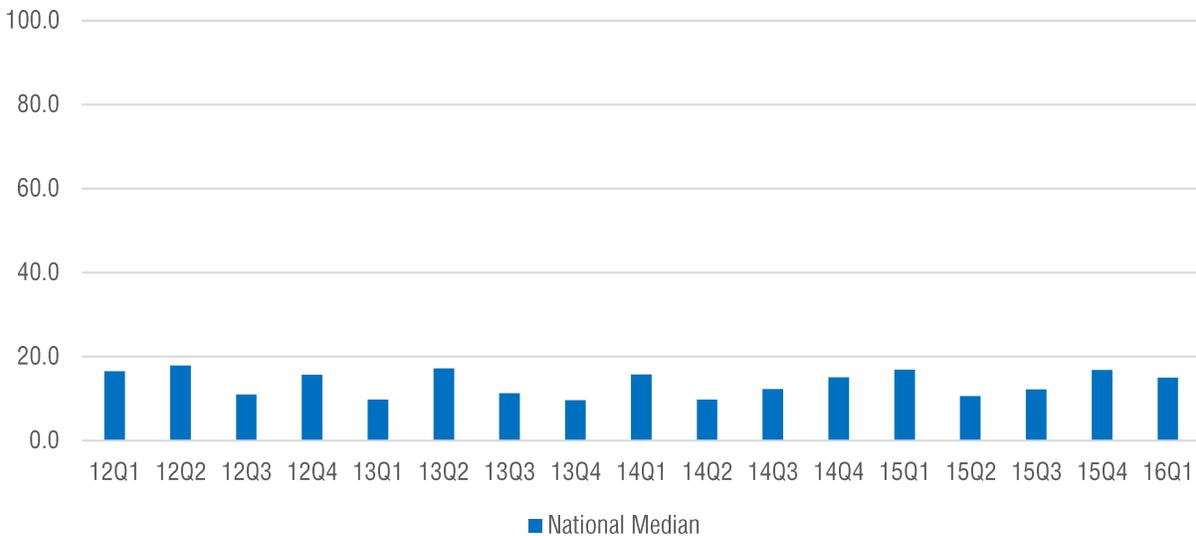
### Performance Trend – Regional

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	9.0	8.0	
Region B	10.0	8.0	
Region C	7.0	7.0	
Region D	9.0	9.0	
Region E	9.0	8.0	

- Trend line y-axis ranges from 6-12 minutes and x-axis ranges from 12Q1-16Q1.

## OP-5: Cardiac Care-Median Time to ECG (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-5 benchmark rate does not show statistically-significant change.

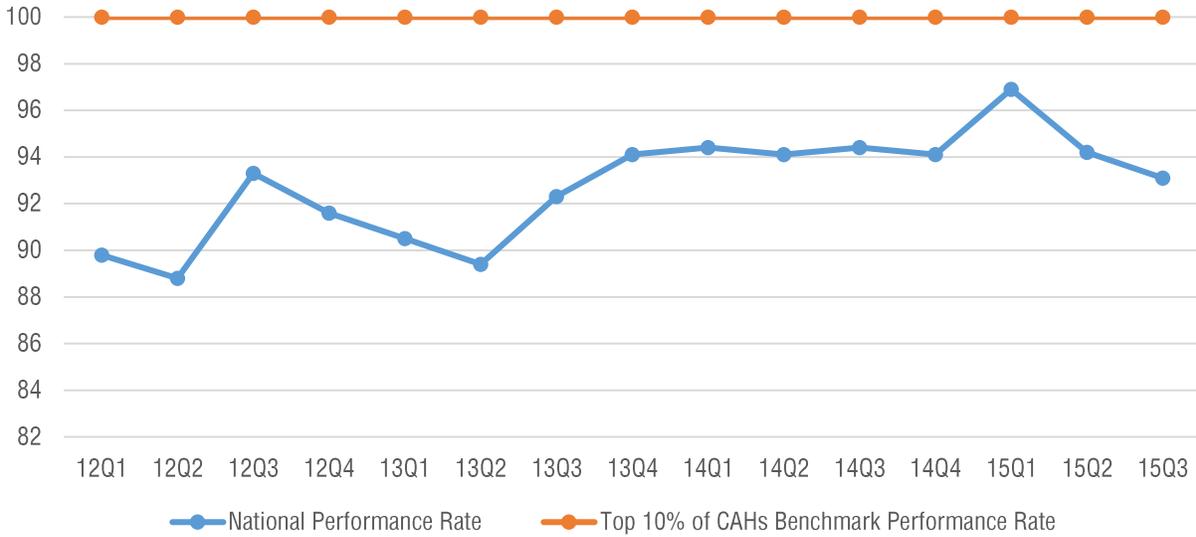
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	16Q1	Quarterly Trend
Region A	12.1	11.3	
Region B	12.1	8.3	
Region C	21.3	17.5	
Region D	15.2	13.6	
Region E	9.8	15.5	

- Trend line y-axis ranges from 3-24% and x-axis ranges from 12Q1-16Q1.

## OP-6: Surgical Care-Appropriately Timed Antibiotic Prophylaxis

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

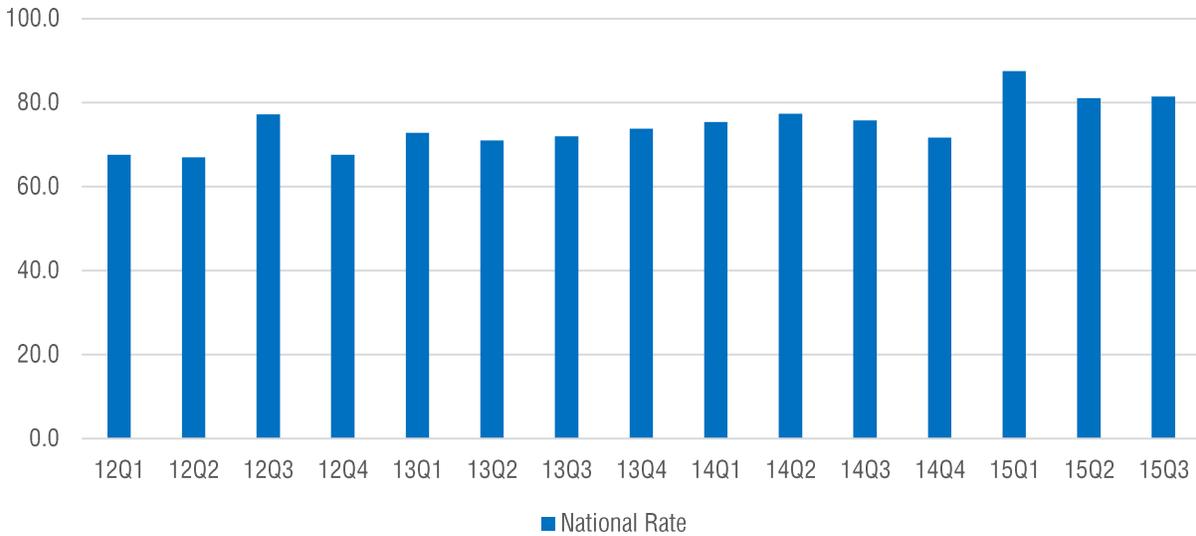
### Performance Trend – Regional

HRSA Region	12Q1	Last Q	Quarterly Trend
Region A	89.1	90.0	
Region B	97.5	95.5	
Region C	89.5	89.7	
Region D	85.7	90.0	
Region E	89.4	97.7	

- Trend line y-axis ranges from 84-100% and x-axis ranges from 12Q1-15Q3.

## OP-6: Surgical Care-Appropriately Timed Antibiotic Prophylaxis (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-6 benchmark rate shows statistically-significant improvement.

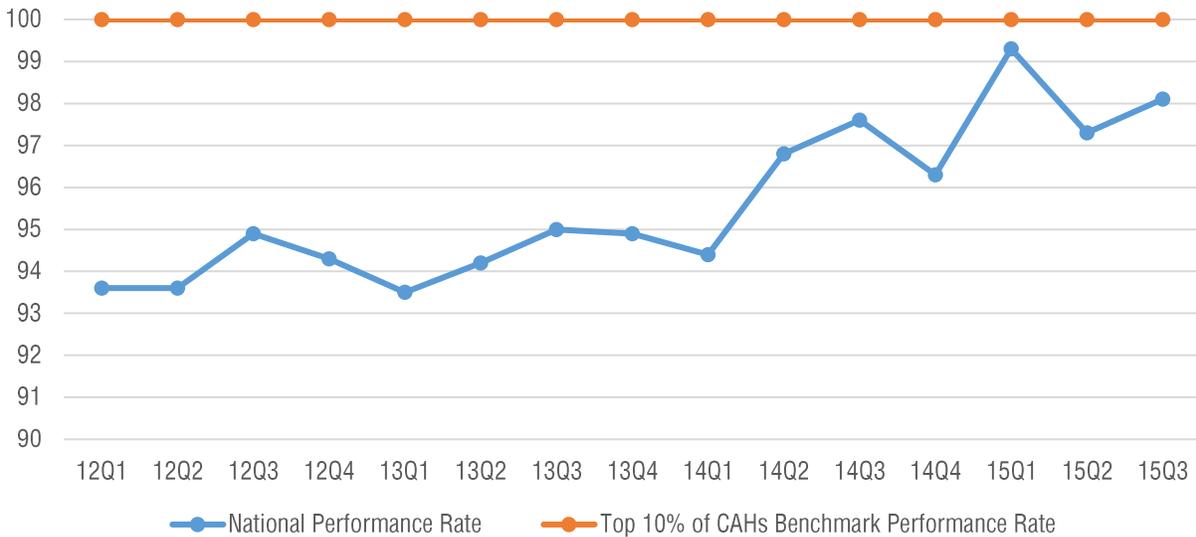
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	12Q1	Last Q	Quarterly Trend
Region A	52.9	50.0	
Region B	83.3	82.4	
Region C	65.7	86.7	
Region D	70.0	50.0	
Region E	73.7	87.5	

- Trend line y-axis ranges from 47-100% and x-axis ranges from 12Q1-15Q3.

## OP-7: Surgical Care-Prophylactic Antibiotic Selection for Surgical Patients in Surgery

### Performance Trend – National



- The quarterly trend in national performance shows statistically-significant improvement.

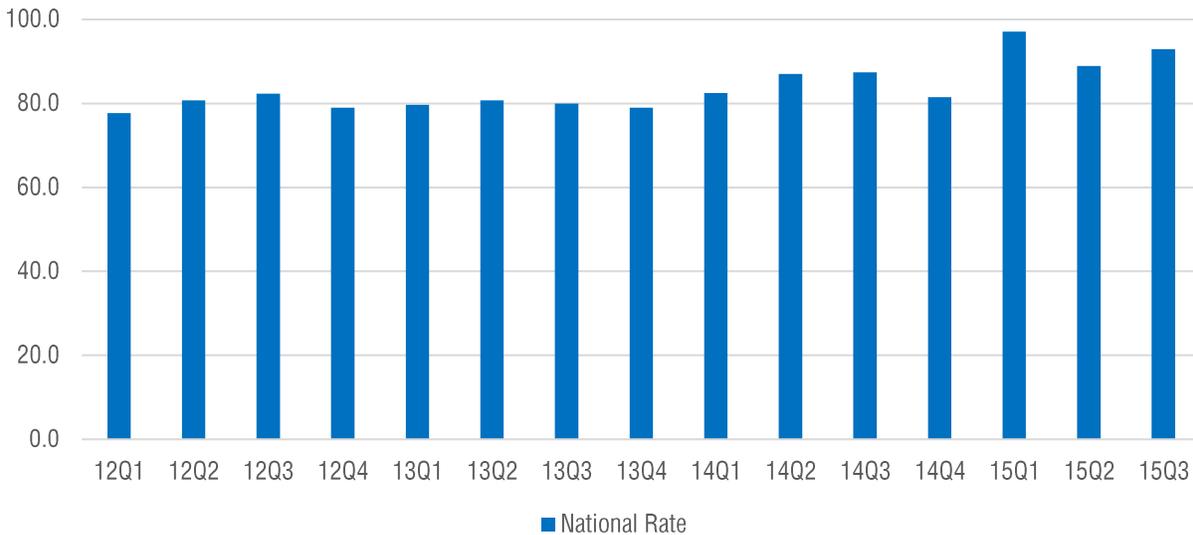
### Performance Trend – Regional

HRSA Region	12Q1	Last Q	Quarterly Trend
Region A	93.0	94.4	
Region B	97.9	96.4	
Region C	91.6	100.0	
Region D	100.0	100.0	
Region E	95.9	97.7	

- Trend line y-axis ranges from 75-100% and x-axis ranges from 12Q1-15Q3.

## OP-7: Surgical Care-Prophylactic Antibiotic Selection for Surgical Patients in Surgery (Continued)

**Percent of CAHs Performing At or Better Than Benchmark Rate**



- The quarterly trend in the percent of CAHs performing at the OP-7 benchmark rate shows statistically-significant improvement.

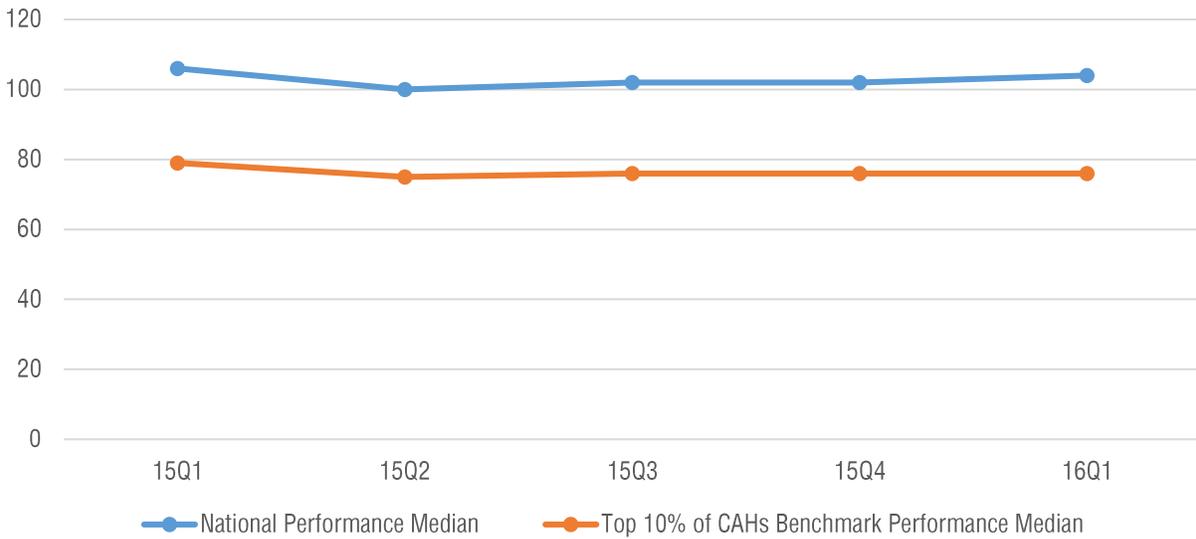
**Percent of CAHs Performing At or Better Than Benchmark Rate by Region**

HRSA Region	12Q1	Last Q	Quarterly Trend
Region A	68.8	50.0	
Region B	84.6	77.8	
Region C	72.6	100.0	
Region D	100.0	100.0	
Region E	86.8	87.5	

- Trend line y-axis ranges from 0-100% and x-axis ranges from 12Q1-15Q3.

## OP-18: ED Throughput-Median Time from Arrival to Departure for Discharged ED Patients

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

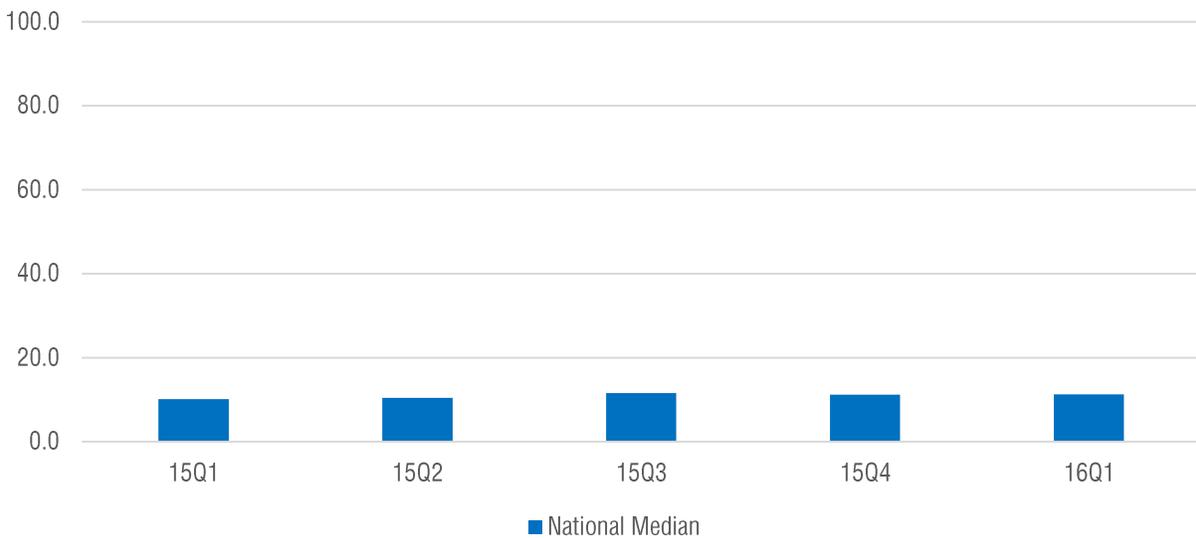
### Performance Trend – Regional

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	104.0	115.0	
Region B	103.0	104.0	
Region C	106.0	103.0	
Region D	103.0	103.0	
Region E	114.0	116.0	

- Trend line y-axis ranges from 97-122 minutes and x-axis ranges from 15Q1-16Q1.

## OP-18: ED Throughput-Median Tim from Arrival to Departure for Discharged ED Patients (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-18 benchmark rate does not show statistically-significant change.

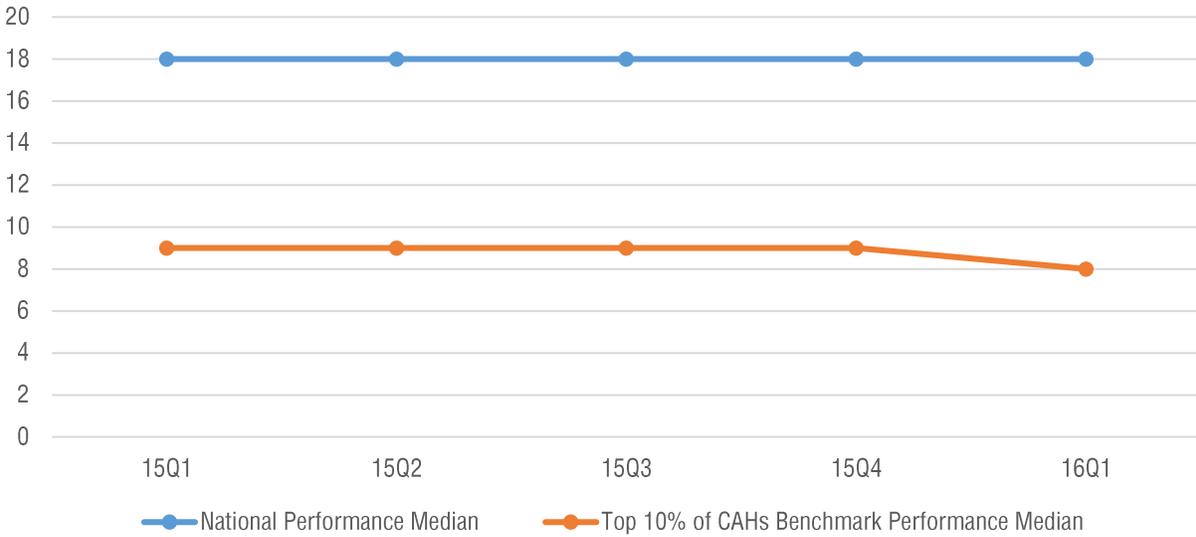
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	6.1	12.1	
Region B	9.7	9.8	
Region C	11.2	10.8	
Region D	15.8	10.7	
Region E	2.0	13.5	

- Trend line y-axis ranges from 2-17% and x-axis ranges from 15Q1-16Q1.

## OP-20: ED Throughput-Median Time Door to Diagnostic Evaluation

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

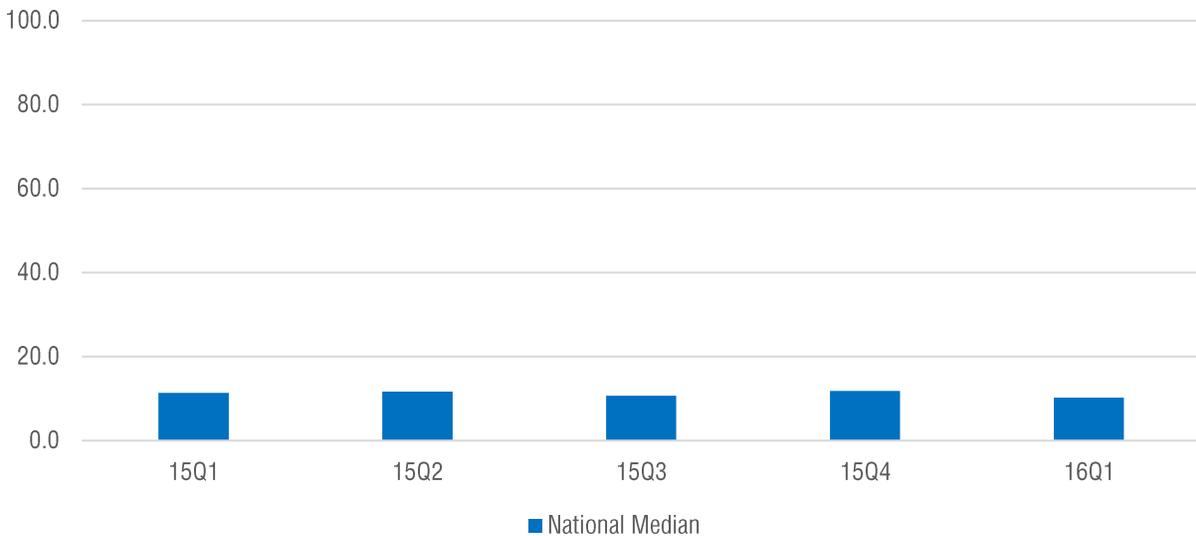
### Performance Trend – Regional

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	17.0	21.0	
Region B	26.0	23.0	
Region C	16.0	17.0	
Region D	18.0	19.0	
Region E	20.0	18.0	

- Trend line y-axis ranges from 13-26 minutes and x-axis ranges from 15Q1-16Q1.

## OP-20: ED Throughput-Median Time Door to Diagnostic Evaluation (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-20 benchmark rate does not show statistically-significant change.

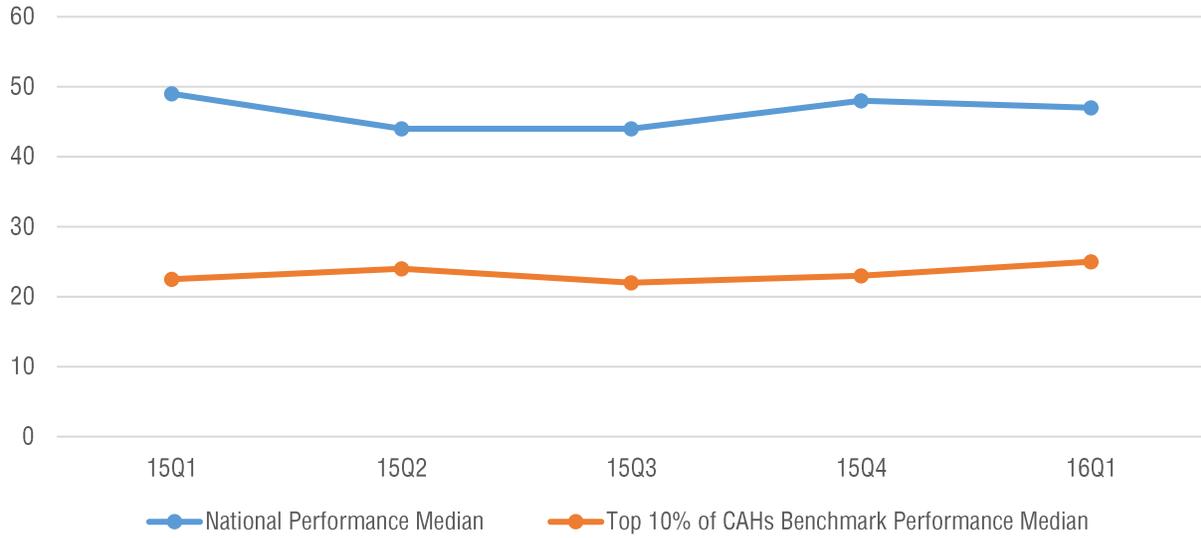
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	9.1	9.0	
Region B	8.1	7.5	
Region C	12.9	12.1	
Region D	8.6	10.8	
Region E	14.3	6.8	

- Trend line y-axis ranges from 5-16% and x-axis ranges from 15Q1-16Q1.

## OP-21: Pain Management-Median Time to Pain Management for Long Bone Fracture

### Performance Trend – National



- The quarterly trend in national performance does not show statistically-significant change.

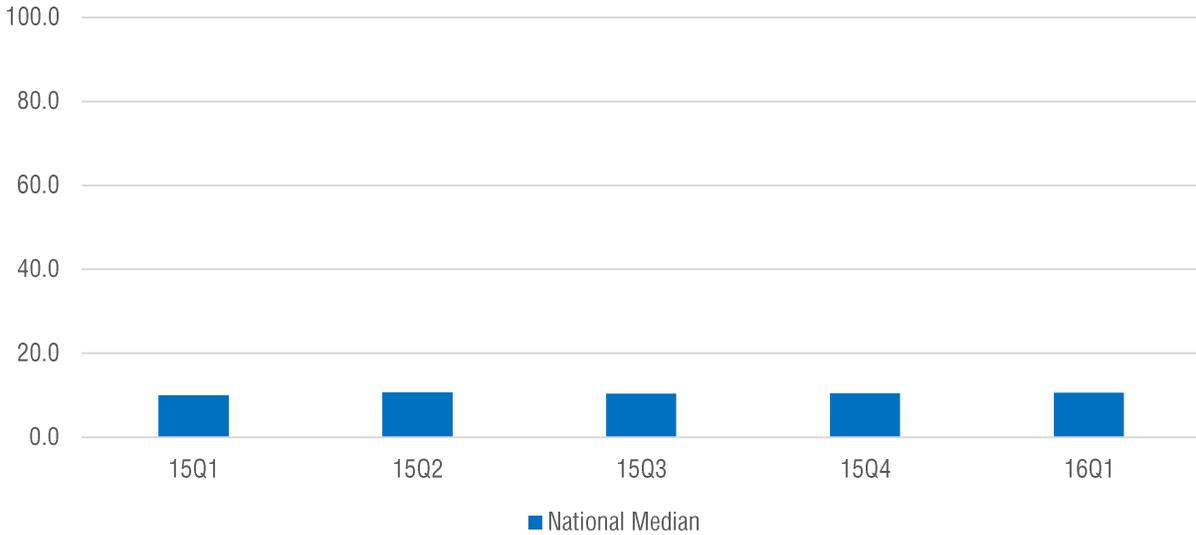
### Performance Trend – Regional

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	68.0	48.0	
Region B	52.0	58.0	
Region C	41.0	42.0	
Region D	61.0	56.0	
Region E	40.0	48.0	

- Trend line y-axis ranges from 39-68 minutes and x-axis ranges from 15Q1-16Q1.

## OP-21: Pain Management-Median Time to Pain Management for Long Bone Fracture (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the OP-21 benchmark rate does not show statistically-significant change.

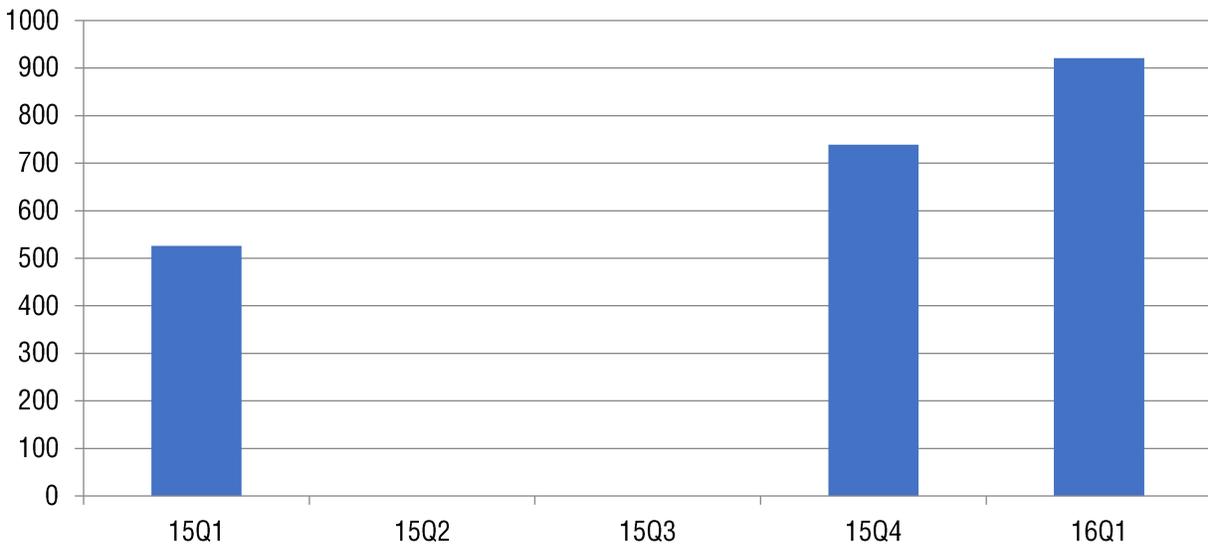
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	13.3	8.8	
Region B	5.1	7.1	
Region C	10.8	13.8	
Region D	7.5	7.6	
Region E	14.0	8.5	

- Trend line y-axis ranges from 4-18% and x-axis ranges from 15Q1-16Q1.

## Patient Safety Quality, Q1 2015 - Q1 2016

### CAHs Reporting Patient Safety Quality



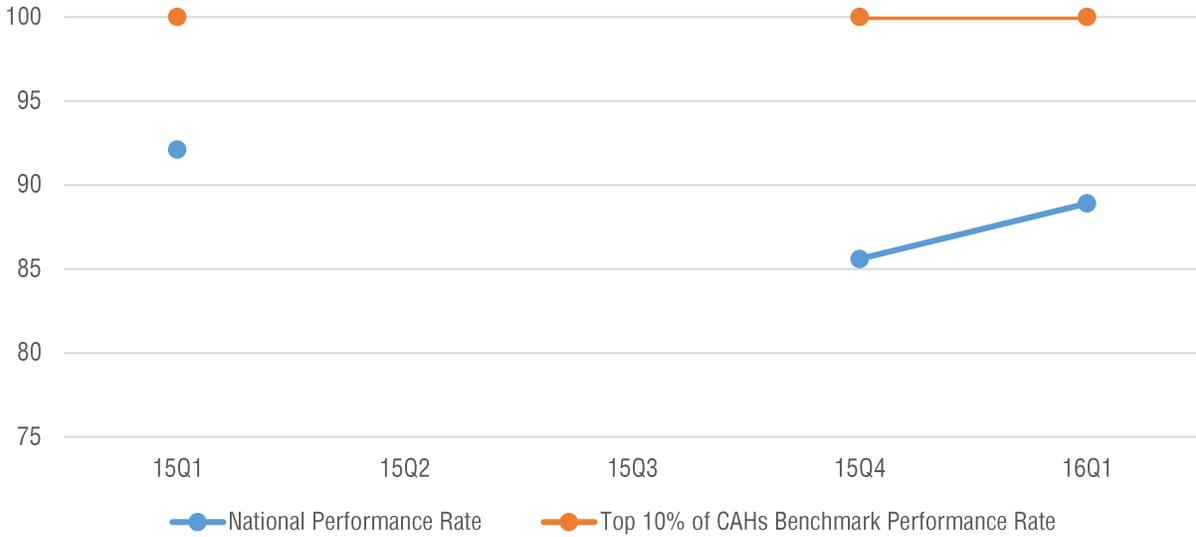
### MBQIP Patient Safety Quality Measures

Patient safety definitions listed below are from the National Rural Health Resource Center's FY 2016 MBQIP Measures Matrix.<sup>6</sup>

- *IMM-2: Immunization for Influenza* – This prevention measure addresses acute care hospitalized inpatients age 6 months and older who were screened for seasonal influenza immunization status and were vaccinated prior to discharge, if indicated. The numerator captures two activities: screening and the intervention of vaccine administration when indicated. As a result, patients who had documented contraindications to the vaccine, patients who were offered and declined the vaccine, and patients who received the vaccine during the current year's influenza season but prior to the current hospitalization are captured as numerator events.
- *OP-27: Influenza Vaccination Coverage among Health Personnel* – Facilities report a single rate for inpatient and outpatient settings. Facilities must report vaccination data for three categories of Health Care Personnel (HCP): employees on payroll; licensed independent practitioners (who are physicians, advance practice nurses, and physician assistants affiliated with the hospital and not on payroll); and students, trainees, and volunteers aged 18 or older. Only HCP physically working in the facility for at least one day or more between October 1 and March 31 should be counted. Data on vaccinations received at the facility, vaccinations received outside of the facility, medical contraindications, and declinations are reported for the three categories of HCP. OP-27 is collected annually.

## IMM-2: Immunization for Influenza

### Performance Trend – National



- The quarterly trend in national IMM-2 performance shows statistically-significant decline.

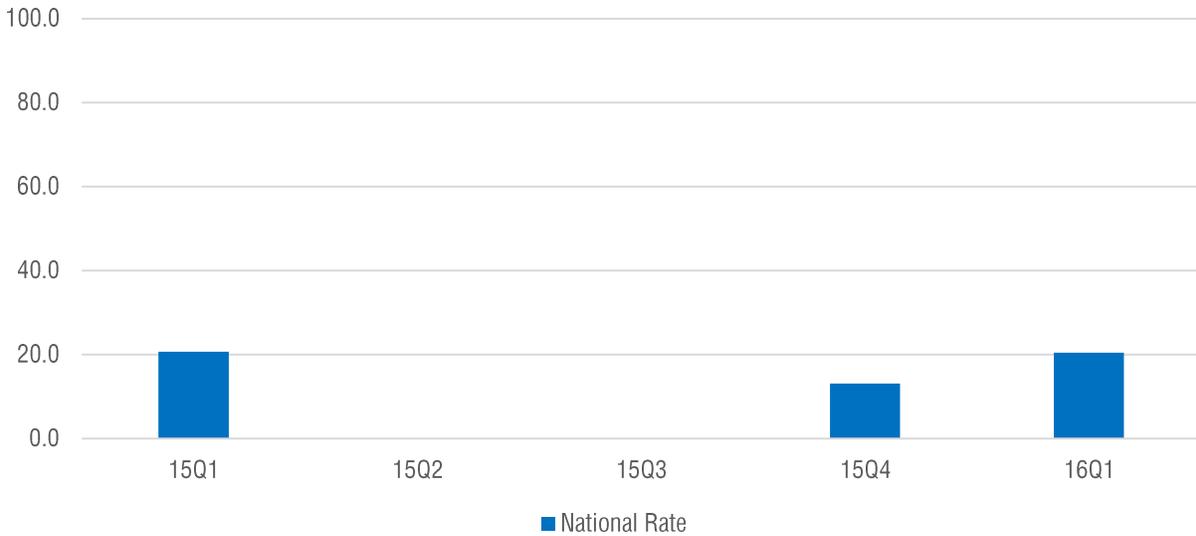
### Performance Trend – Regional

HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	96.0	93.6	↓
Region B	94.3	87.8	↓
Region C	91.8	91.4	↓
Region D	89.2	84.9	↓
Region E	90.6	82.2	↓

- Trend line y-axis ranges from 78-96% and x-axis ranges from 15Q1-16Q1.

## IMM-2: Immunization for Influenza (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



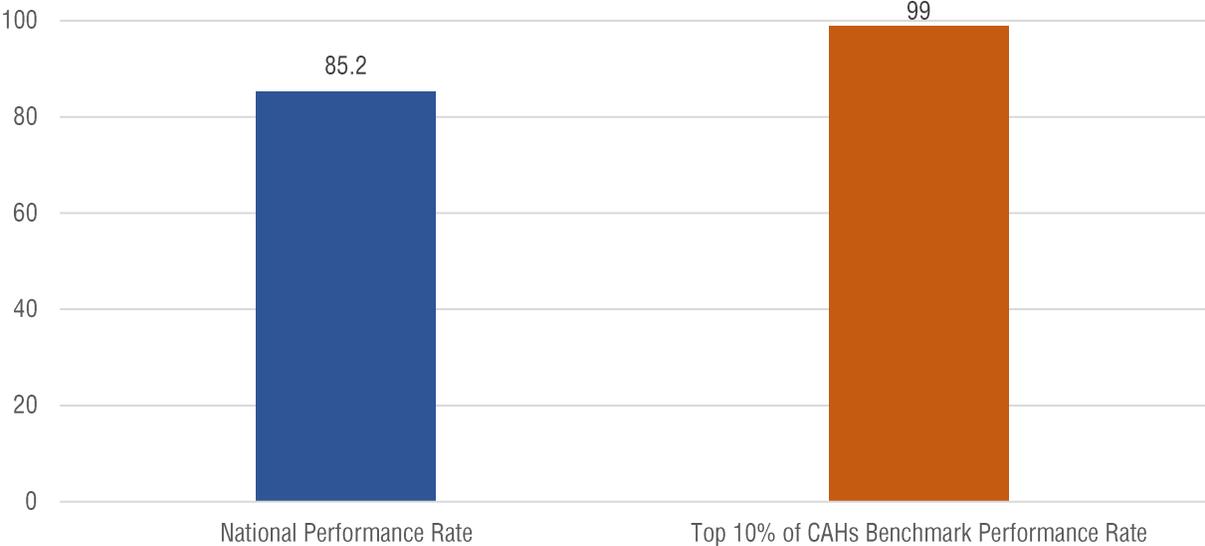
- The quarterly trend in the percent of CAHs performing at the IMM-2 benchmark rate does not show statistically-significant change.

### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

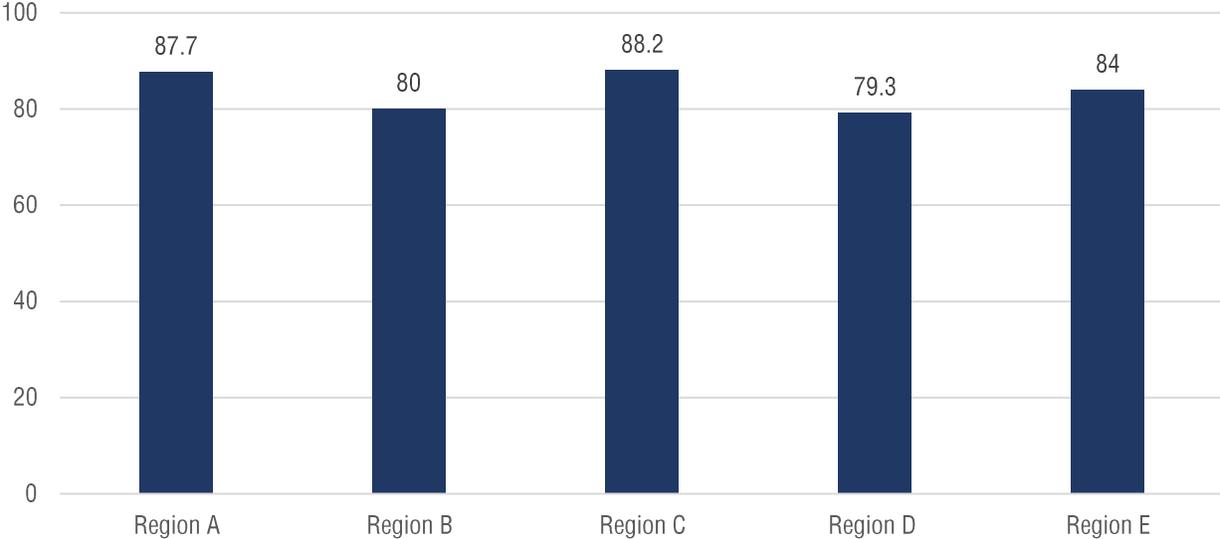
HRSA Region	15Q1	16Q1	Quarterly Trend
Region A	29.5	25.4	
Region B	35.0	22.1	
Region C	16.4	22.8	
Region D	21.6	19.2	
Region E	18.9	12.0	

- Trend line y-axis ranges from 5-35% and x-axis ranges from 15Q1-16Q1.

# OP-27: Influenza Vaccination Coverage among Health Personnel

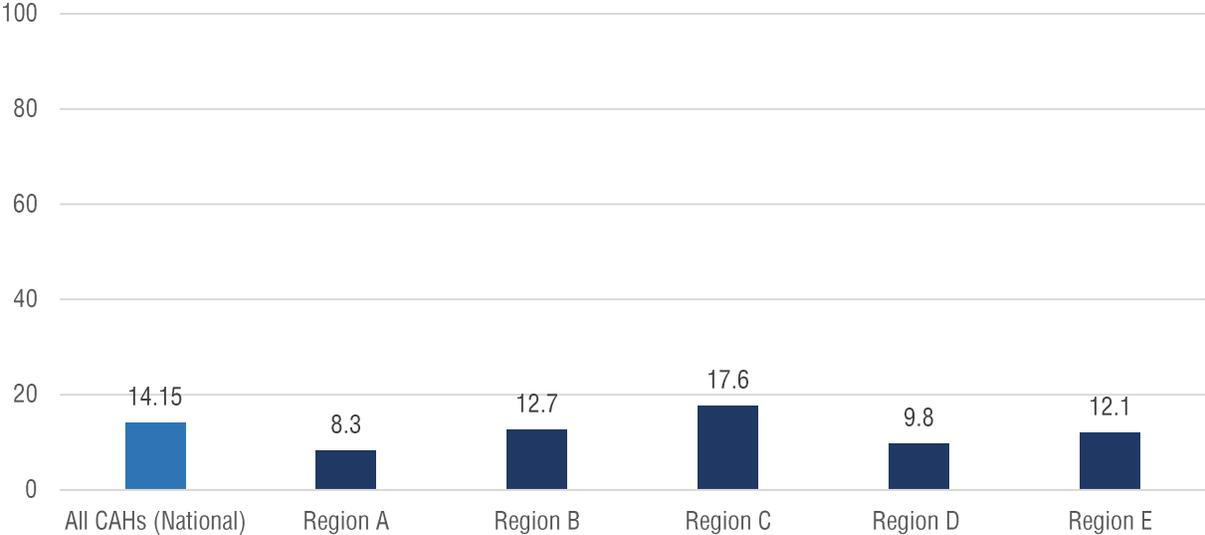


## 2015 Performance Rates– Regional



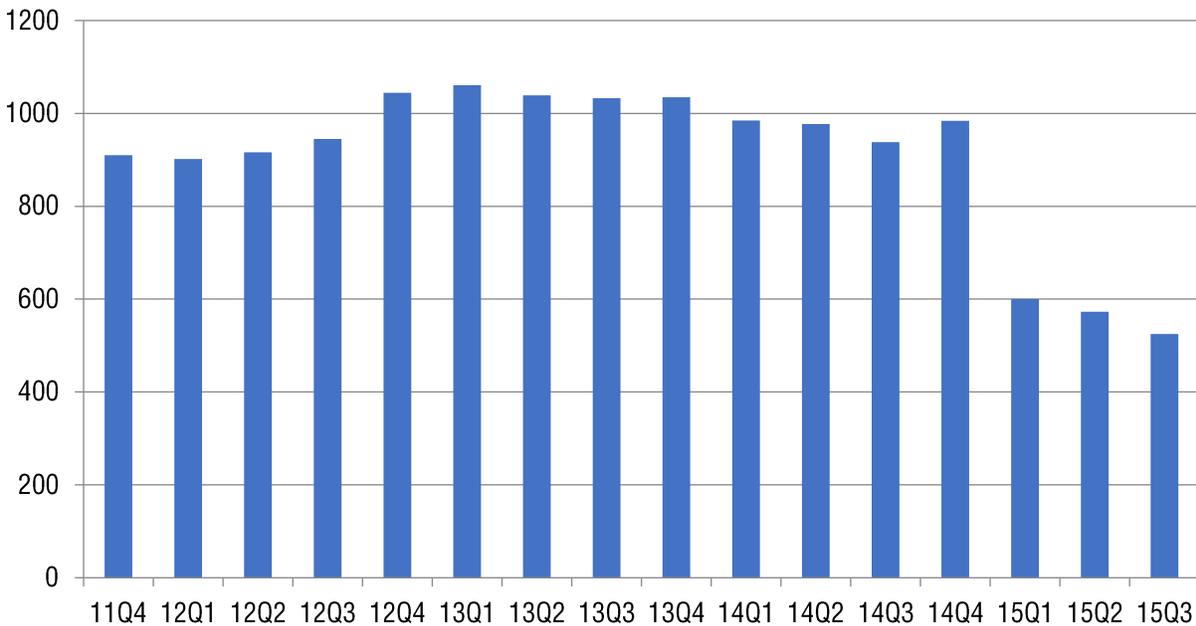
# OP-27: Influenza Vaccination Coverage among Health Personnel (Continued)

Percent of CAHs Performing At or Better Than Benchmark Rate, 2015



## Inpatient Quality, Q4 2011 - Q3 2015

### CAHs Reporting At Least One Inpatient Quality Measure, Q1 2011 – Q3 2015



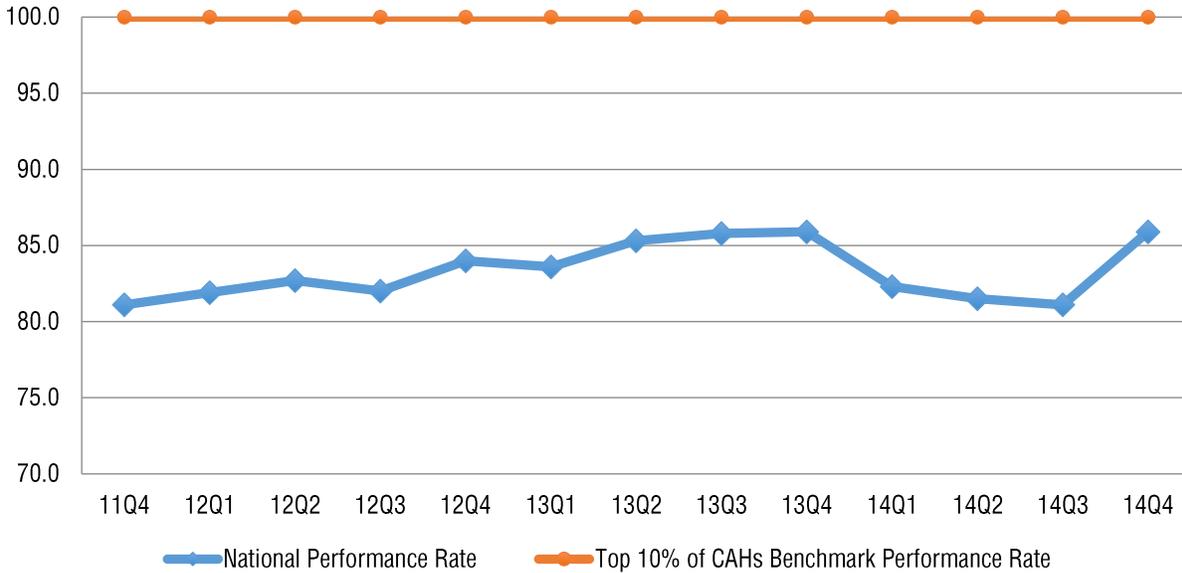
### MBQIP Inpatient Quality Measures

Inpatient quality measure labels and definitions are from the CMS Hospital Compare Inpatient core.<sup>2</sup>

- *HF-1: Discharge Instructions* - heart failure patients discharged home with written instructions or educational material given to patient or care giver at discharge or during the hospital stay addressing activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.
- *HF-2: Evaluation of LVS Function* - heart failure patients with documentation in the hospital record that an evaluation of the left ventricular systolic (LVS) function was performed before arrival, during hospitalization, or is planned for after discharge.
- *HF-3: ACE inhibitor/ARB for LVS* - heart failure patients with left ventricular systolic dysfunction (LVSD) and without angiotensin converting enzyme inhibitor (ACE inhibitor) contraindications or angiotensin receptor blocker (ARB) contraindications who are prescribed an ACE inhibitor or an ARB at hospital discharge.
- *PN-3b: Blood Culture prior to Antibiotic* - pneumonia patients whose initial emergency room blood culture was performed prior to the administration of the first hospital dose of antibiotics.
- *PN-6: Appropriate first Antibiotic* - immunocompetent patients with pneumonia who receive an initial antibiotic regimen that is consistent with current guidelines.

## HF-1: Heart Failure-Discharge Instructions

### Performance Trend – National



- The quarterly trend in national HF-1 performance shows statistically-significant improvement.

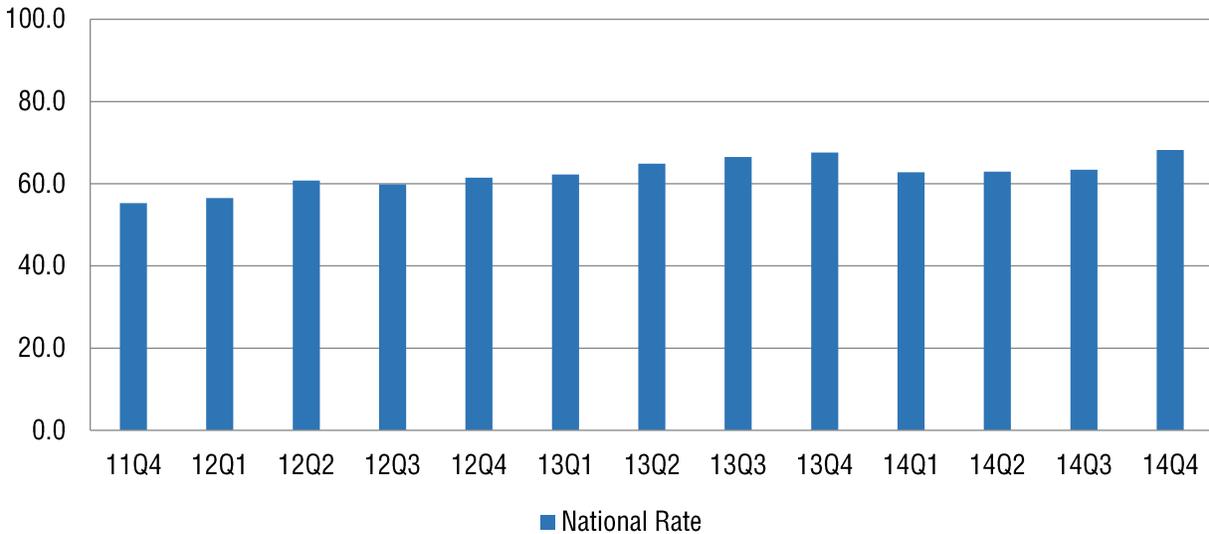
### Performance Trend – Regional

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	86.9	91.9	
Region B	81.8	83.8	
Region C	81.4	84.3	
Region D	80.7	88.4	
Region E	73.9	84.1	

- Trend line y-axis ranges from 73-95% and x-axis ranges from 11Q4-14Q4

## HF-1: Heart Failure-Discharge Instructions (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the HF-1 benchmark rate shows statistically-significant improvement.

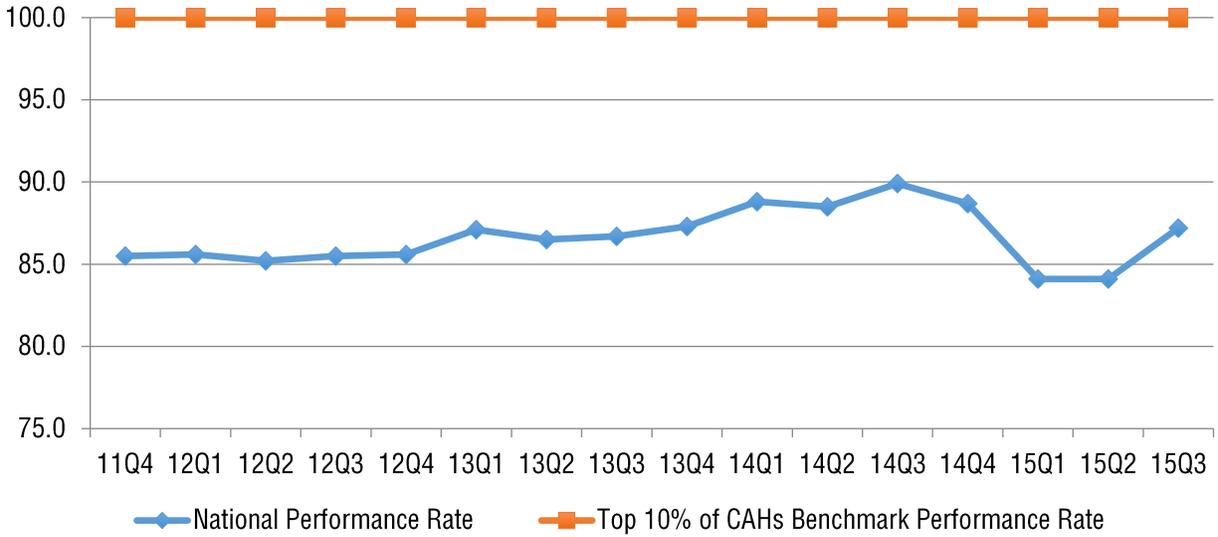
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	57.4	76.2	
Region B	51.1	66.7	
Region C	56.0	68.2	
Region D	60.0	67.6	
Region E	51.3	65.1	

- Trend line y-axis ranges from 48-87% and x-axis ranges from 11Q4-14Q4

## HF-2: Heart Failure-Evaluation of LVS Function

### Performance Trend – National



- The quarterly trend in national HF-2 performance shows statistically-significant improvement.

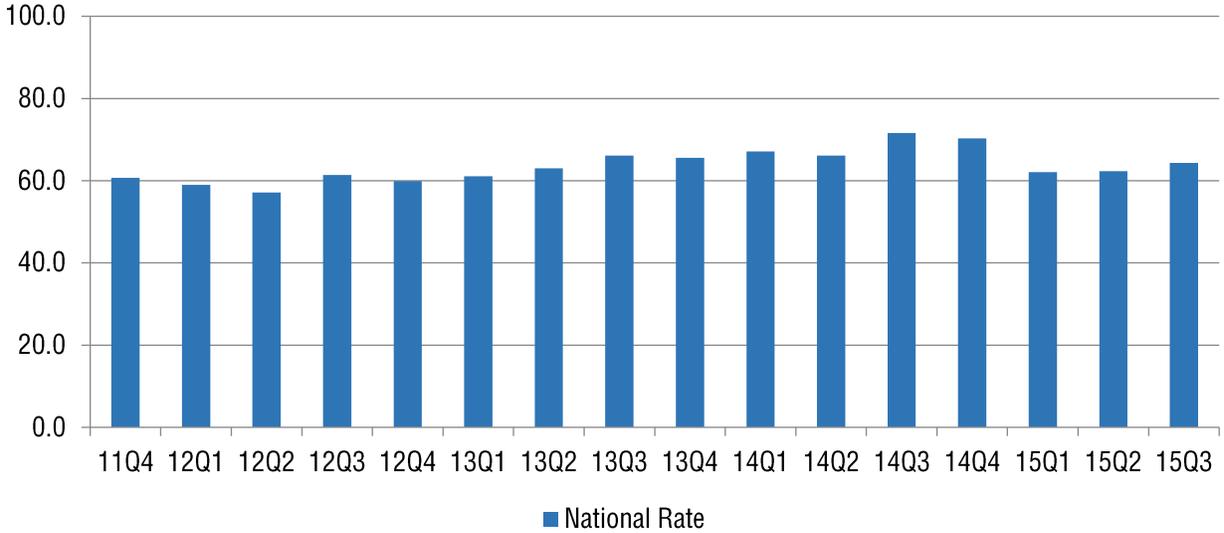
### Performance Trend – Regional

HRSA Region	11Q4	15Q3	Quarterly Trend
Region A	95.2	94.8	
Region B	79.1	85.9	
Region C	86.9	86.2	
Region D	81.5	85.8	
Region E	83.5	87.0	

- Trend line y-axis ranges from 77-98% and x-axis ranges from 11Q4-15Q3

## HF-2: Heart Failure-Evaluation of LVS Function (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the HF-2 benchmark rate shows statistically-significant improvement.

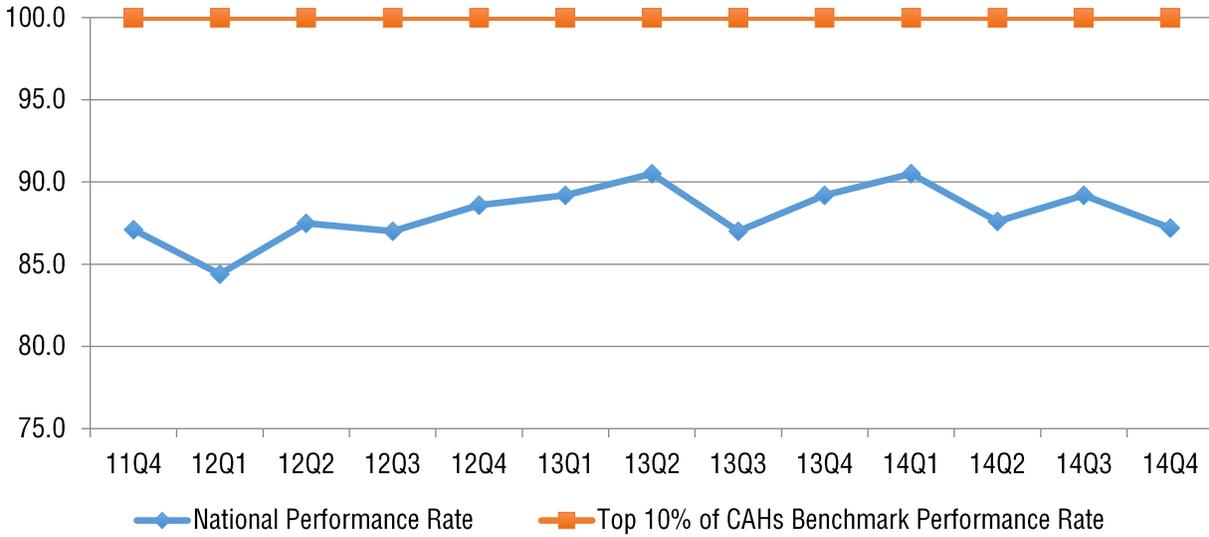
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	11Q4	15Q3	Quarterly Trend
Region A	82.8	80.6	
Region B	52.6	64.6	
Region C	61.5	61.7	
Region D	55.8	59.1	
Region E	56.9	66.7	

- Trend line y-axis ranges from 36-85% and x-axis ranges from 11Q4-15Q3

### HF-3: Heart Failure-ACE inhibitor/ARB for LVS

#### Performance Trend – National



- The quarterly trend in national HF-3 performance shows statistically-significant improvement.

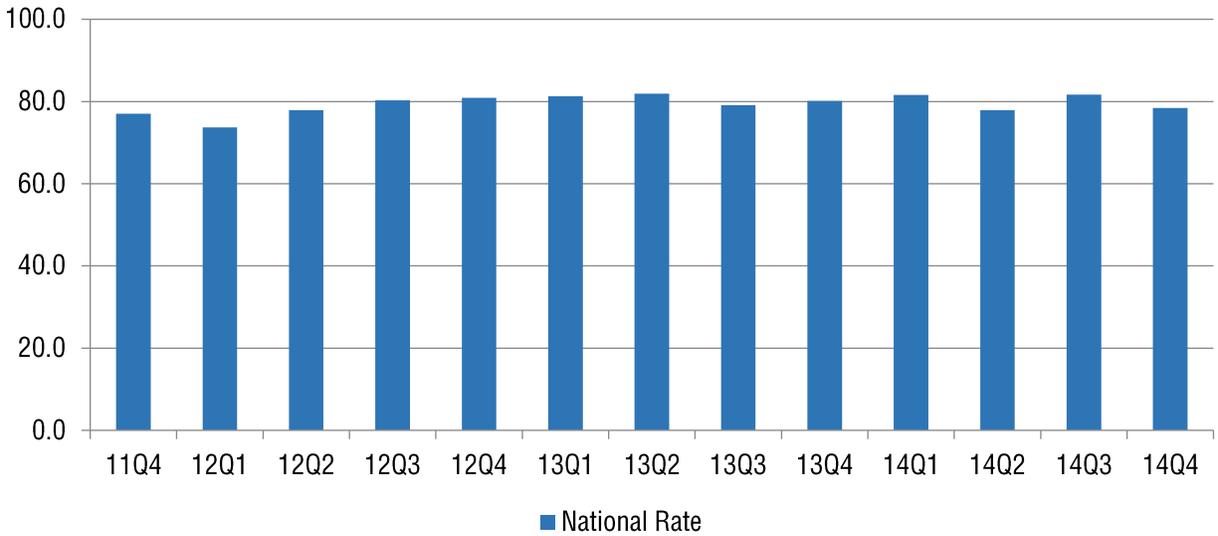
#### Performance Trend – Regional

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	88.1	92.2	
Region B	84.3	88.8	
Region C	86.5	86.6	
Region D	89.5	88.9	
Region E	89.9	81.9	

- Trend line y-axis ranges from 80-97% and x-axis ranges from 11Q4-14Q4.

### HF-3: Heart Failure-ACE inhibitor/ARB for LVS (Continued)

**Percent of CAHs Performing At or Better Than Benchmark Rate**



- The quarterly trend in the percent of CAHs performing at the HF-3 benchmark rate does not show statistically-significant change.

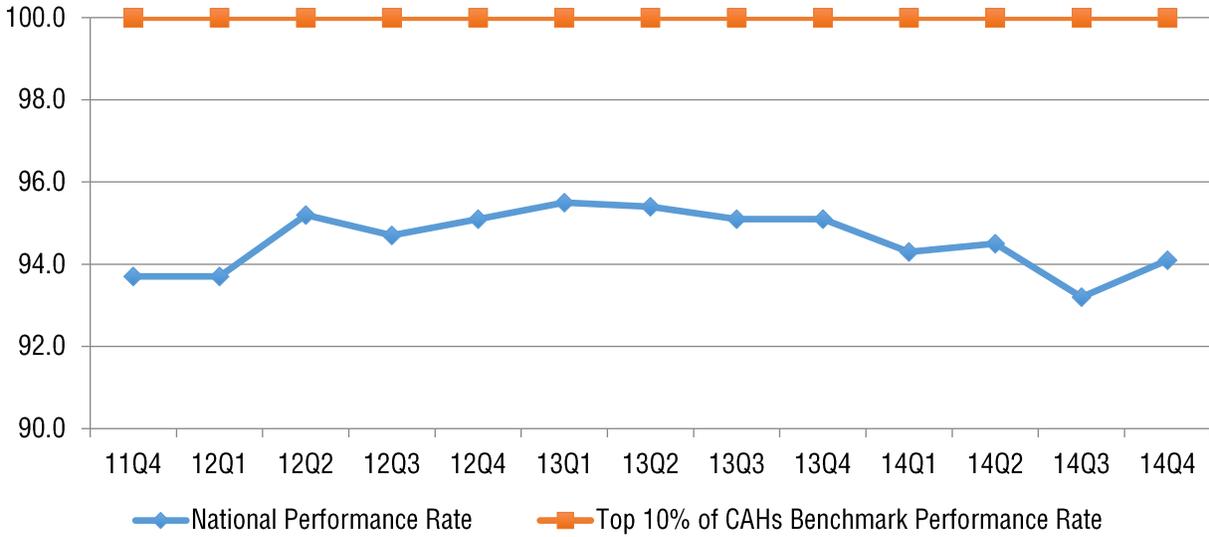
**Percent of CAHs Performing At or Better Than Benchmark Rate by Region**

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	76.1	86.5	
Region B	71.2	81.5	
Region C	76.2	78.0	
Region D	80.0	80.6	
Region E	84.1	68.9	

- Trend line y-axis ranges from 65-93% and x-axis ranges from 11Q4-14Q4.

## PN-3b: Pneumonia -Blood Culture prior to Antibiotic

### Performance Trend – National



- The quarterly trend in national PN-3b performance does not show statistically-significant change.

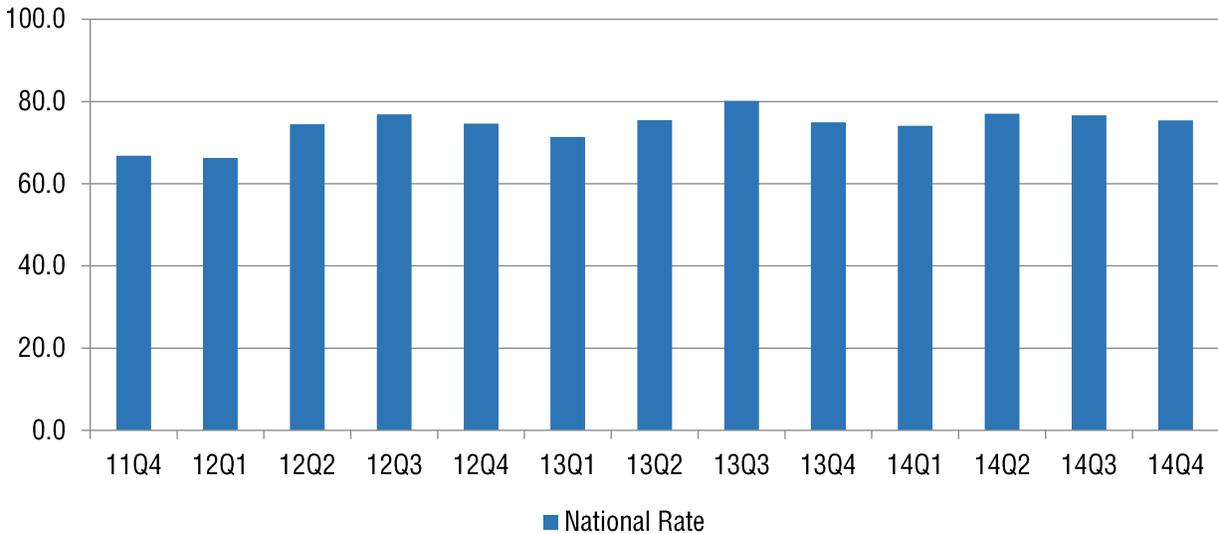
### Performance Trend – Regional

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	95.9	95.7	
Region B	92.1	89.4	
Region C	94.6	95.1	
Region D	92.2	94.7	
Region E	91.3	92.5	

- Trend line y-axis ranges from 86-98% and x-axis ranges from 11Q4-14Q4.

## PN-3b: Pneumonia -Blood Culture prior to Antibiotic (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the PN-3b benchmark rate shows statistically-significant improvement.

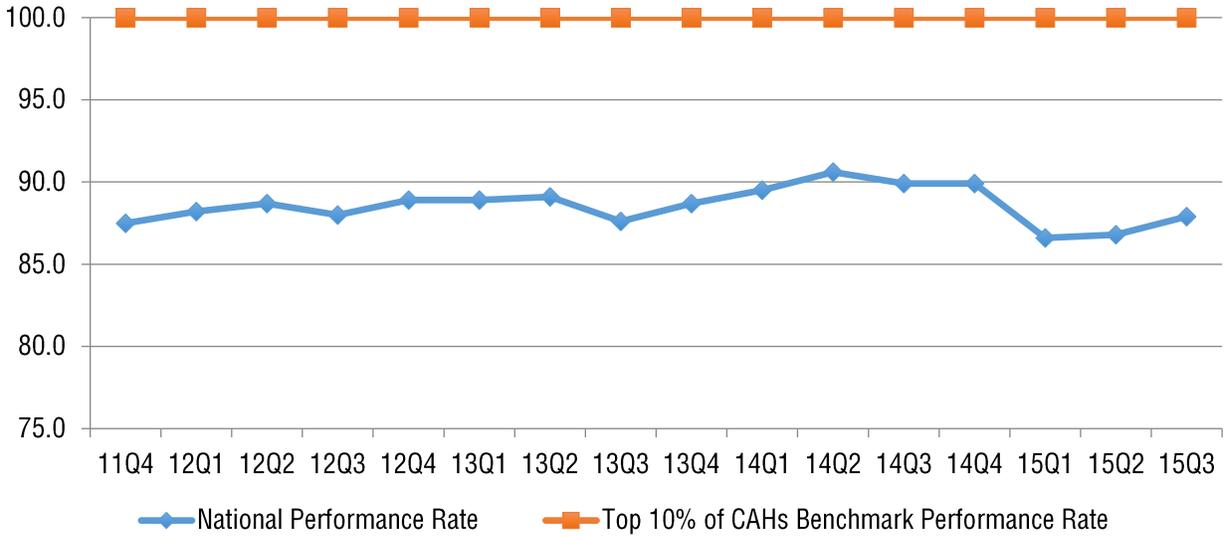
### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	11Q4	14Q4	Quarterly Trend
Region A	67.2	73.8	
Region B	53.8	57.1	
Region C	70.9	78.0	
Region D	62.9	73.7	
Region E	66.7	81.0	

- Trend line y-axis ranges from 53-86% and x-axis ranges from 11Q4-14Q4.

## PN-6: Pneumonia-Appropriate first Antibiotic

### Performance Trend – National



- The quarterly trend in national PN-6 performance does not show statistically-significant change.

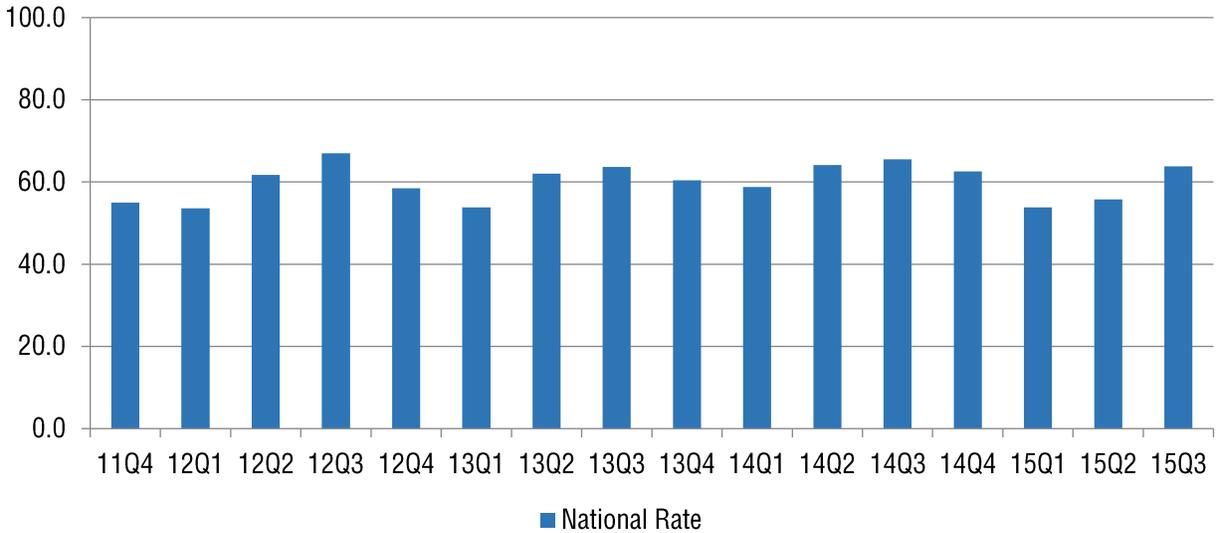
### Performance Trend – Regional

HRSA Region	11Q4	15Q3	Quarterly Trend
Region A	90.9	90.0	
Region B	80.8	85.5	
Region C	88.8	87.0	
Region D	89.9	89.2	
Region E	84.4	89.9	

- Trend line y-axis ranges from 80-96% and x-axis ranges from 11Q4-15Q3.

## PN-6: Pneumonia-Appropriate first Antibiotic (Continued)

### Percent of CAHs Performing At or Better Than Benchmark Rate



- The quarterly trend in the percent of CAHs performing at the PN-6 benchmark rate shows statistically-significant improvement.

### Percent of CAHs Performing At or Better Than Benchmark Rate by Region

HRSA Region	11Q4	15Q3	Quarterly Trend
Region A	61.8	69.2	
Region B	38.8	59.7	
Region C	57.1	62.1	
Region D	56.4	58.7	
Region E	55.7	72.6	

- Trend line y-axis ranges from 38-74% and x-axis ranges from 11Q4-15Q3

## ACRONYM LIST

ACE	Angiotensin Converting Enzyme
AMI	Acute myocardial infarction
ARB	Angiotensin II Receptor Blocker
CAH	Critical Access Hospital
CMS	Centers for Medicare & Medicaid Services
ECG	Electrocardiogram
ED	Emergency Department
EDTC	Emergency Department Transfer Communication
FORHP	Federal Office of Rural Health Policy
HCAHPS	Hospital Consumer Assessment of Healthcare Providers & Systems
HCP	Health Care Personnel
HF	Heart Failure
HRSA	Health Resources and Services Administration
IMM	Immunization
LVS	Left Ventricular Systolic
LVSD	Left Ventricular Systolic Dysfunction
MBQIP	Medicare Beneficiary Quality Improvement Project
OP	Outpatient
PN	Pneumonia
Q	Quarter
QI	Quality Improvement

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