



**State of the State:
Hospital Performance in Pennsylvania
November 2014**



Measuring Progress in PA Hospital Performance: Process Measures

PA Hospital Performance: Process Measures

- We examined the latest year-over-year (YOY) changes in the Center for Medicare and Medicaid Services (CMS) and Joint Commission (JC) process measures aggregated on the website www.pahealthcarequality.org.
- 19 process measures (17 CMS and 2 JC Measures) reported on the PHCQA website were examined from 2006 to 2013.
 - 3 Heart Attack Measures*
 - 2 Heart Failure Measures*
 - 4 Pneumonia Measures*
 - 8 Surgical Care Measures (reduced from 9 in 2012)*
 - 2 Prevention Measures*
- We used rates and averages to compare performance data.
 - The PA rate is calculated using a volume-based, weighted-average of hospitals in Pennsylvania.
 - The PA average is calculated using an institution-based, non-weighted average of hospitals in Pennsylvania.

* See glossary for detailed list

CMS Process Measures Data for PA Hospitals: Overall Findings

- Overall PA hospital performance improved from Q2 2012 - Q2 2013.
- PA rates exceeded national rates for 17 of the 19 process measures. Only PN-3a and SCIP-INF-10 have PA rates below the national rates.
- Improvements in PA hospital performance were consistent with national hospital performance improvements from July 2012 - June 2013.
- Hospitals in Pennsylvania tended to perform above average compared to other hospitals across the country. In Q2 2013, at least 10% of PA hospitals scored in the national top 10% for all measures, except SCIP-INF-4.

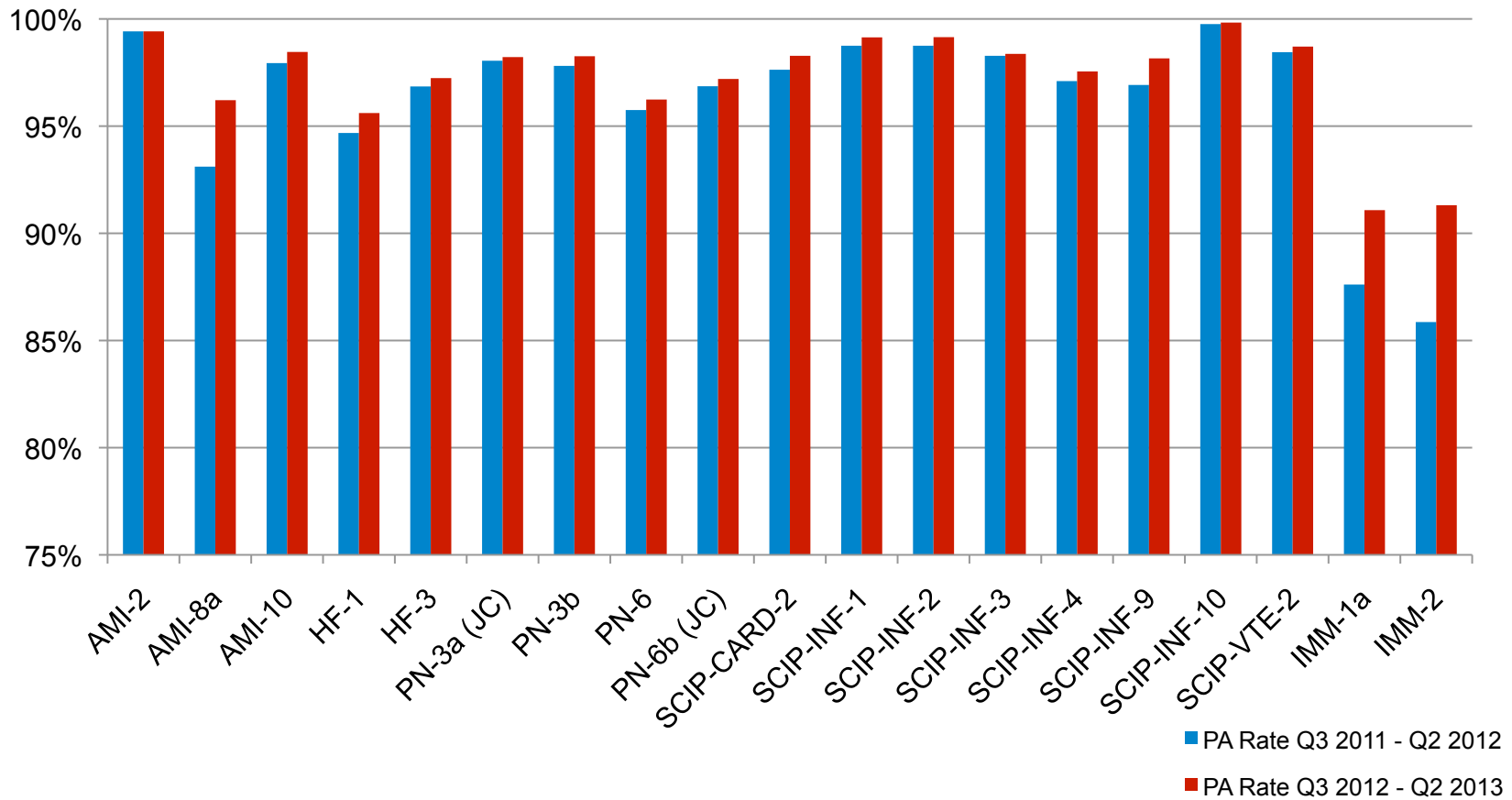
YOY Comparisons of the years ending June 2011 and June 2012

- Process measure scores for PA hospitals improved across the board.
 - PA rates increased or stayed the same for all 19 process measures – only AMI-2 stayed the same.
 - The standard deviations for PA hospitals decreased for 15 out of 19 process measures, indicating an overall improvement in consistency.
 - The median rates for PA hospitals increased for all 19 process measures.
- Improvements in PA hospital performance were consistent with hospital performance improvements nationwide.
 - National rates and top ten percentiles either increased or remained the same for the majority of process measures.



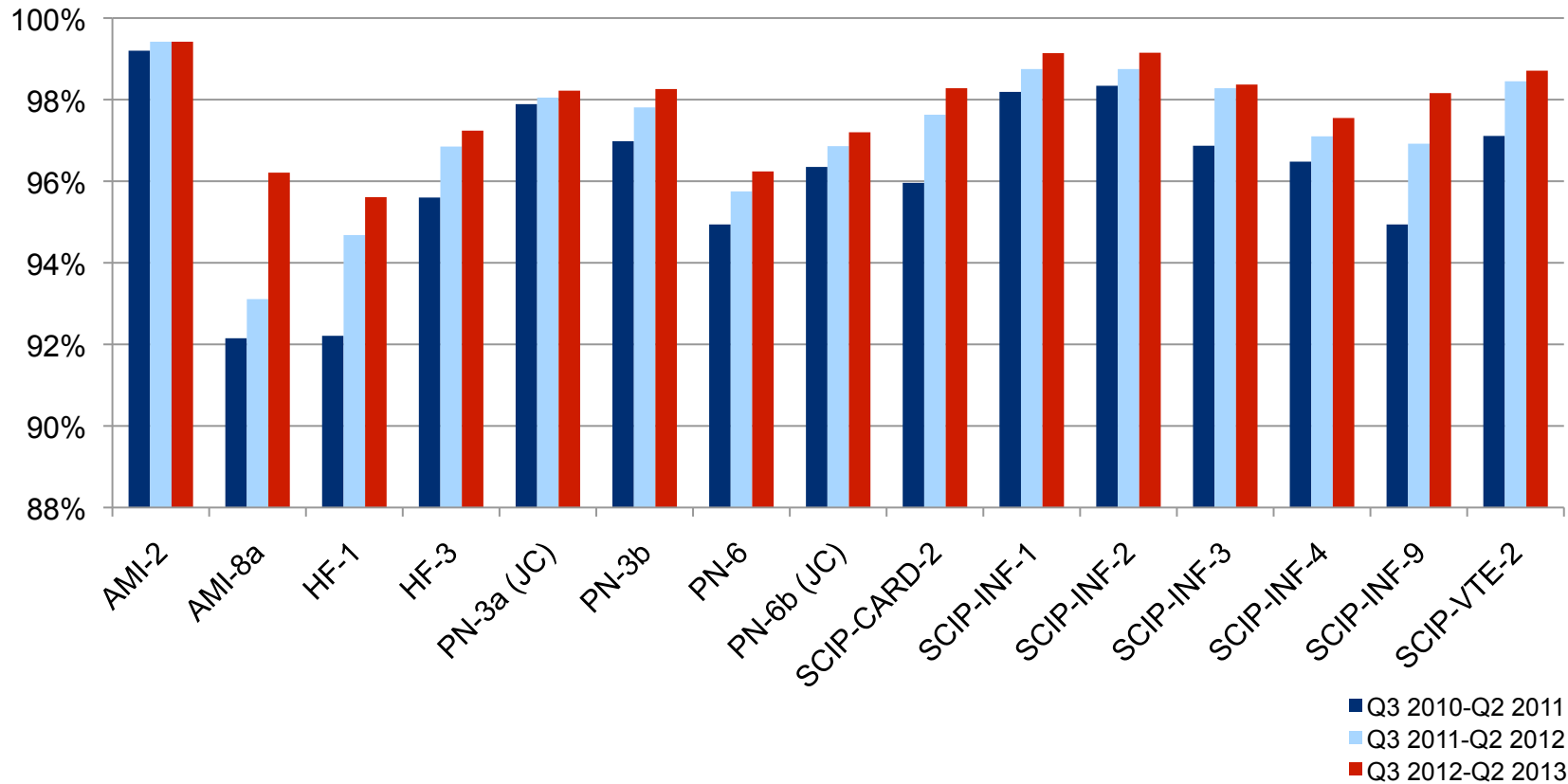
Process Measures in Charts and Graphs

YOY Comparison of PA Rates: Process Measures



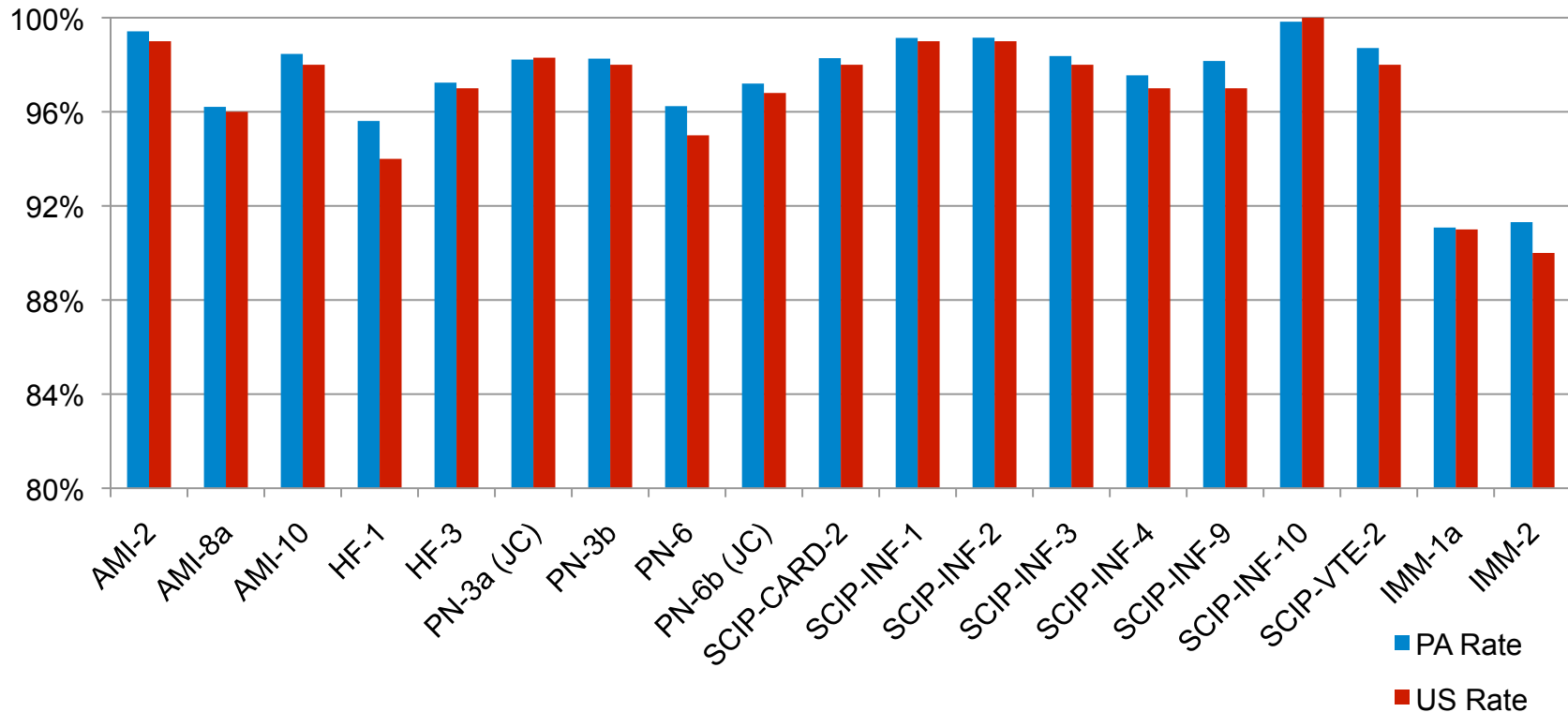
- PA hospitals improved their performance for all measures except AMI-2, which remained the same.

PA Rate 3-Year Trends: 2011 - 2013



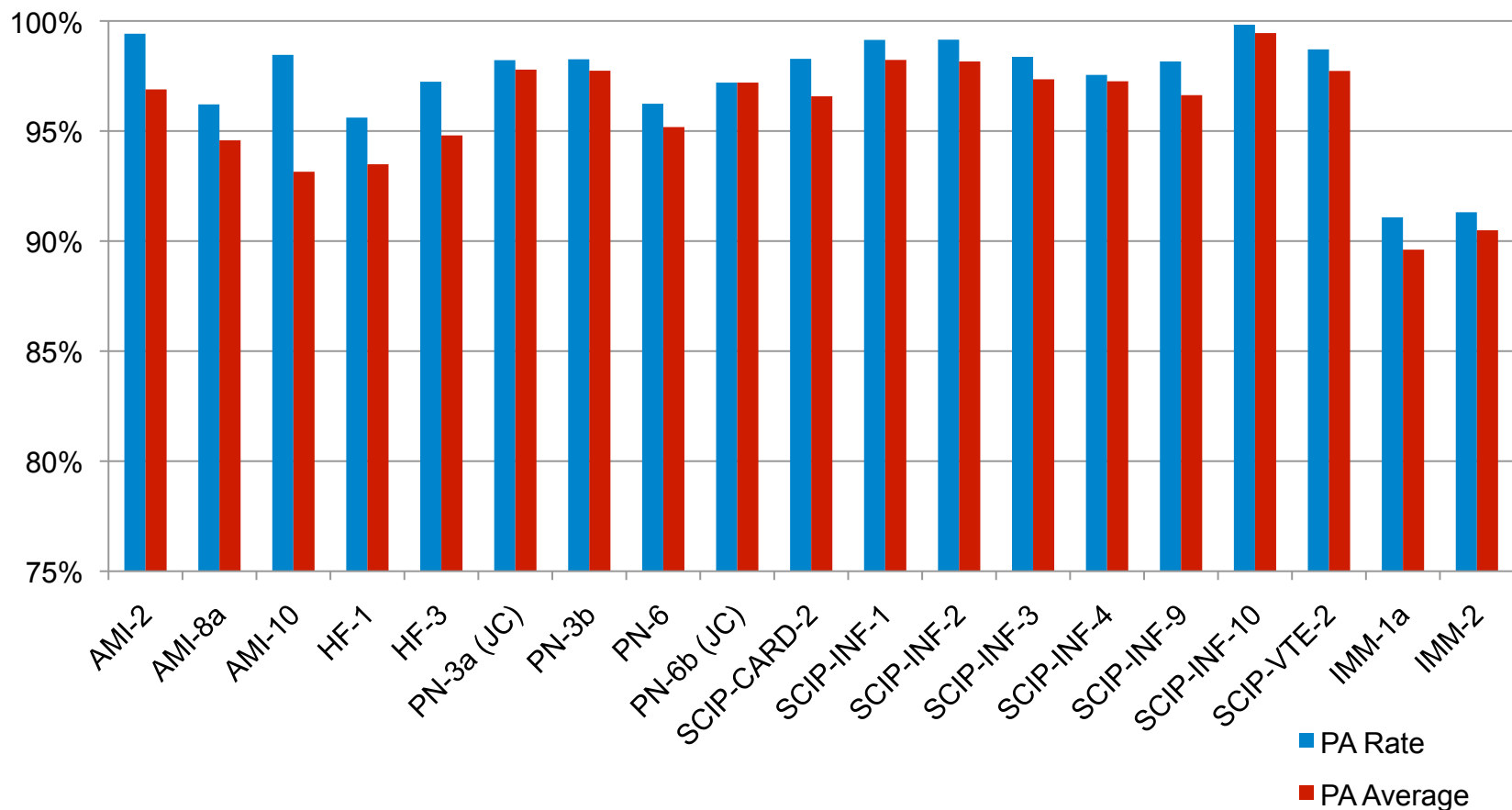
- Graph only includes measures with data for all three years.
- All measures have improved from Q3 2010 – Q2 2011.

Q3 2012 – Q2 2013 Process Measures PA Rate vs. National Rate



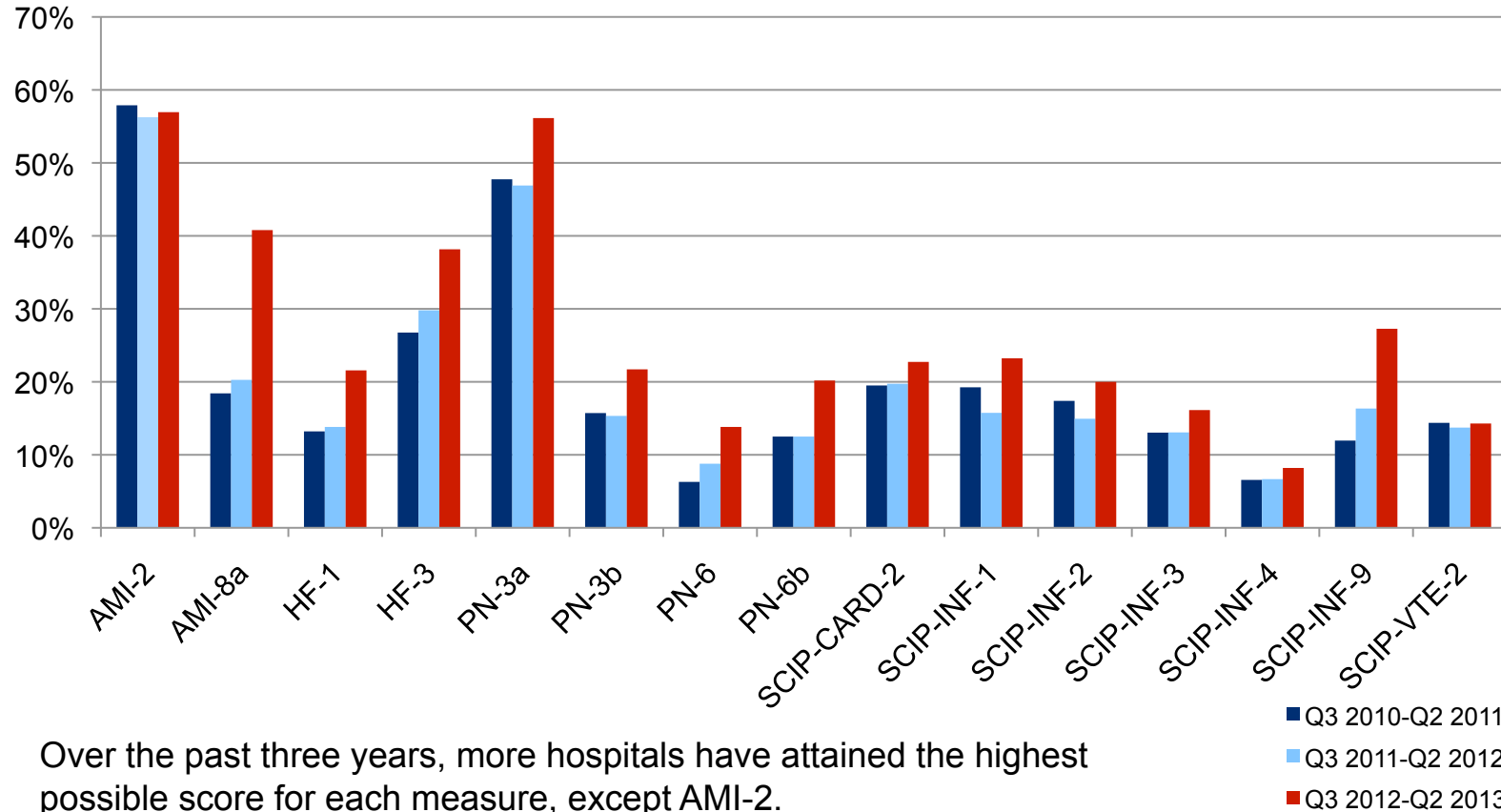
- As of June 2012, PA had rates greater than or equal to the national rates for 15 of 20 process measures. One year later, 17 of 19 PA rates exceeded national rates.
 - Since last year, SCIP-VTE-1 has been retired
- Pennsylvania hospitals performed worse than the national rate only for PN-3a and SCIP-INF-10.

2013 Process Measures: PA Averages vs. PA Rates



- All rates are larger than the corresponding averages, suggesting hospitals that see more patients are performing better than hospitals caring for fewer patients.

Percentage of PA Hospitals Achieving 100% Compliance



- Over the past three years, more hospitals have attained the highest possible score for each measure, except AMI-2.
- For all of these measures, hospitals must achieve 100% compliance in order to rank in the top 10% nationally.



CMS HCAHPS Measures

Measuring Progress in PA Hospital Performance: HCAHPS Measures

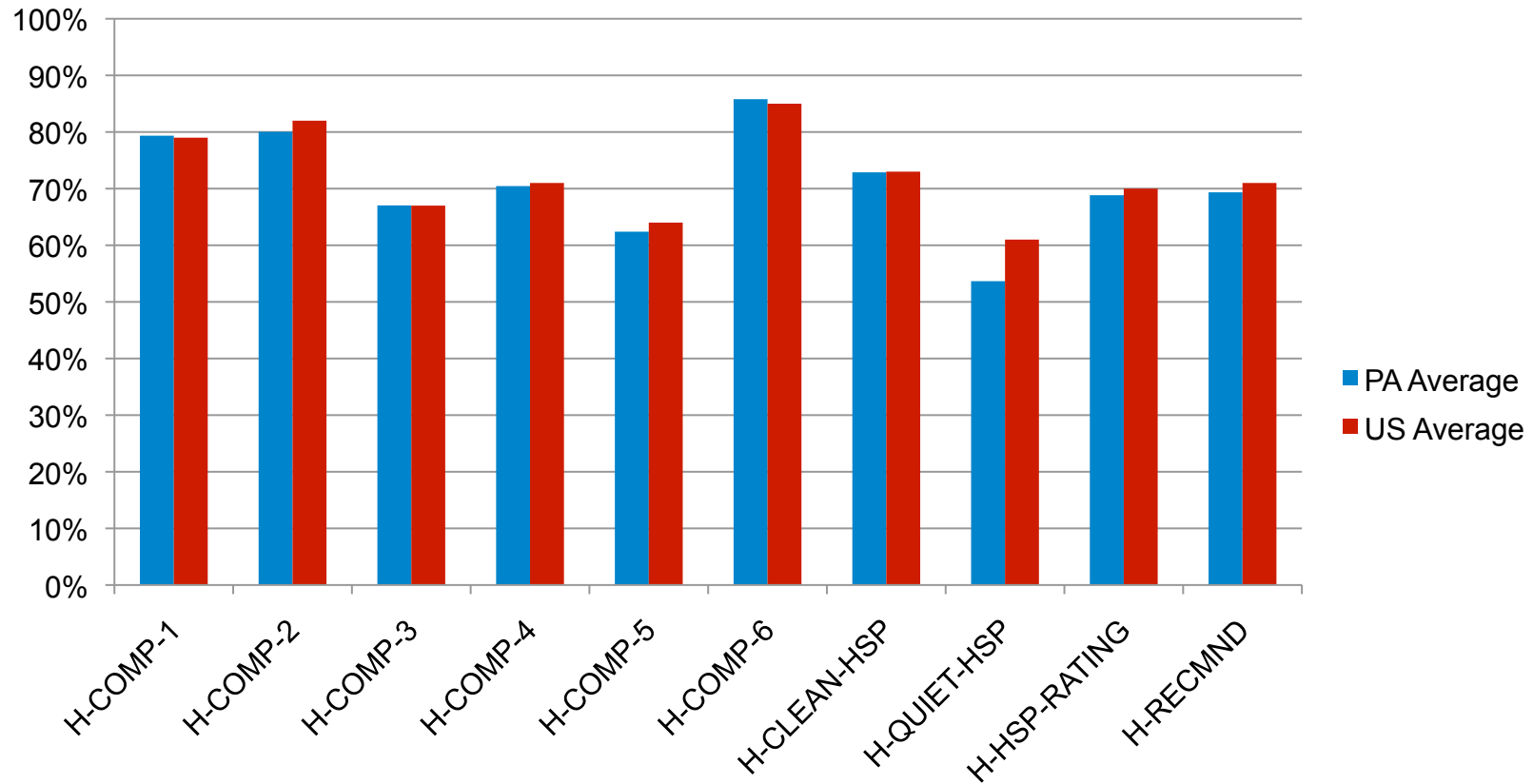
HCAHPS Patient Experience Analysis

- We reviewed the latest year-over-year (YOY) score changes in the 10 CMS HCAHPS Measures reported on the PHCQA website:
 - H-COMP-1: Nurse Communication
 - H-COMP-2: Doctor Communication
 - H-COMP-3: Responsiveness of Hospital Staff
 - H-COMP-4: Pain Well Controlled
 - H-COMP-5: Medicine Explained by Staff
 - H-COMP-6: Discharge Information
 - H-CLEAN-HSP: Room and Bathroom Kept Clean
 - H-QUIET-HSP: Room Quiet at Night
 - H-HSP-RATING: Hospital Rating
 - H-RECMND: Hospital Recommendation
- Only the scores of the top tier answer categories were evaluated.
- We also examined correlations among HCAHPS measure scores.

YOY Comparisons between Q3 2011 – Q2 2012 and Q3 2012 – Q2 2013 HCAHPS Measures

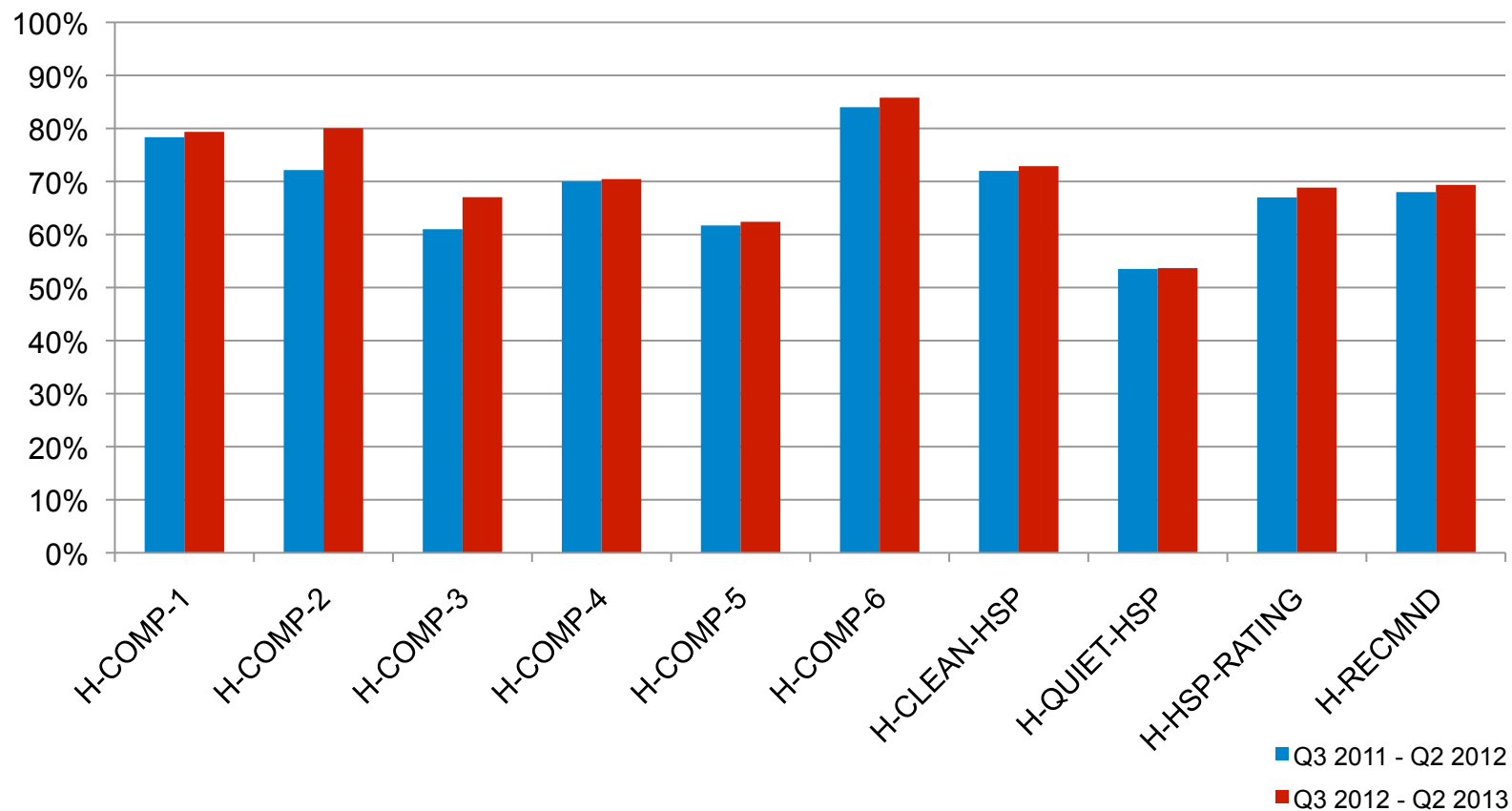
- PA hospital HCAHPS scores for the year running up to Q2 2013 tend to perform below average compared to hospitals nationwide.
 - Only the PA average for H-COMP-1 and H-COMP-6 exceeded the national average
- Overall, PA HCAHPS scores increased since the previously reported year for all measures.
 - In general, increases were modest. H-COMP-2, however, increased 7.89% from 72.15% to 80.04%.
- Changes in HCAHPS scores for hospitals nationwide were also modest.
 - US averages increased or stayed the same for all HCAHPS measures.
 - None of the US averages increased by more than 2 percentage points.

Q3 2012 – Q2 2013 HCAHPS PA Average vs. National Average



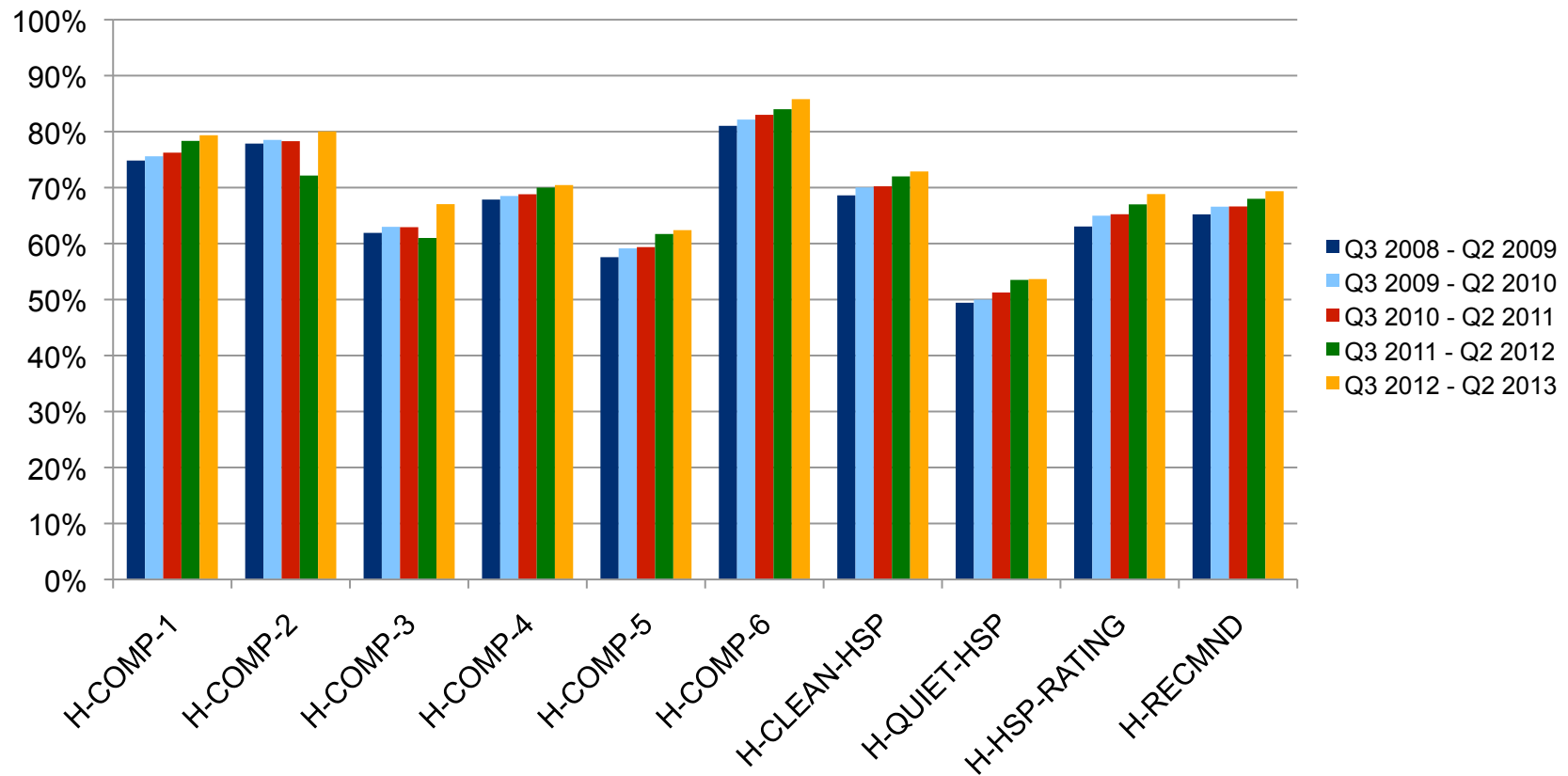
- PA averages for H-COMP-1 and H-COMP-6 exceeded the national average.
- In the previous reporting period, only H-COMP-1 exceeded the national average.

YOY Comparison of PA Averages: HCAHPS



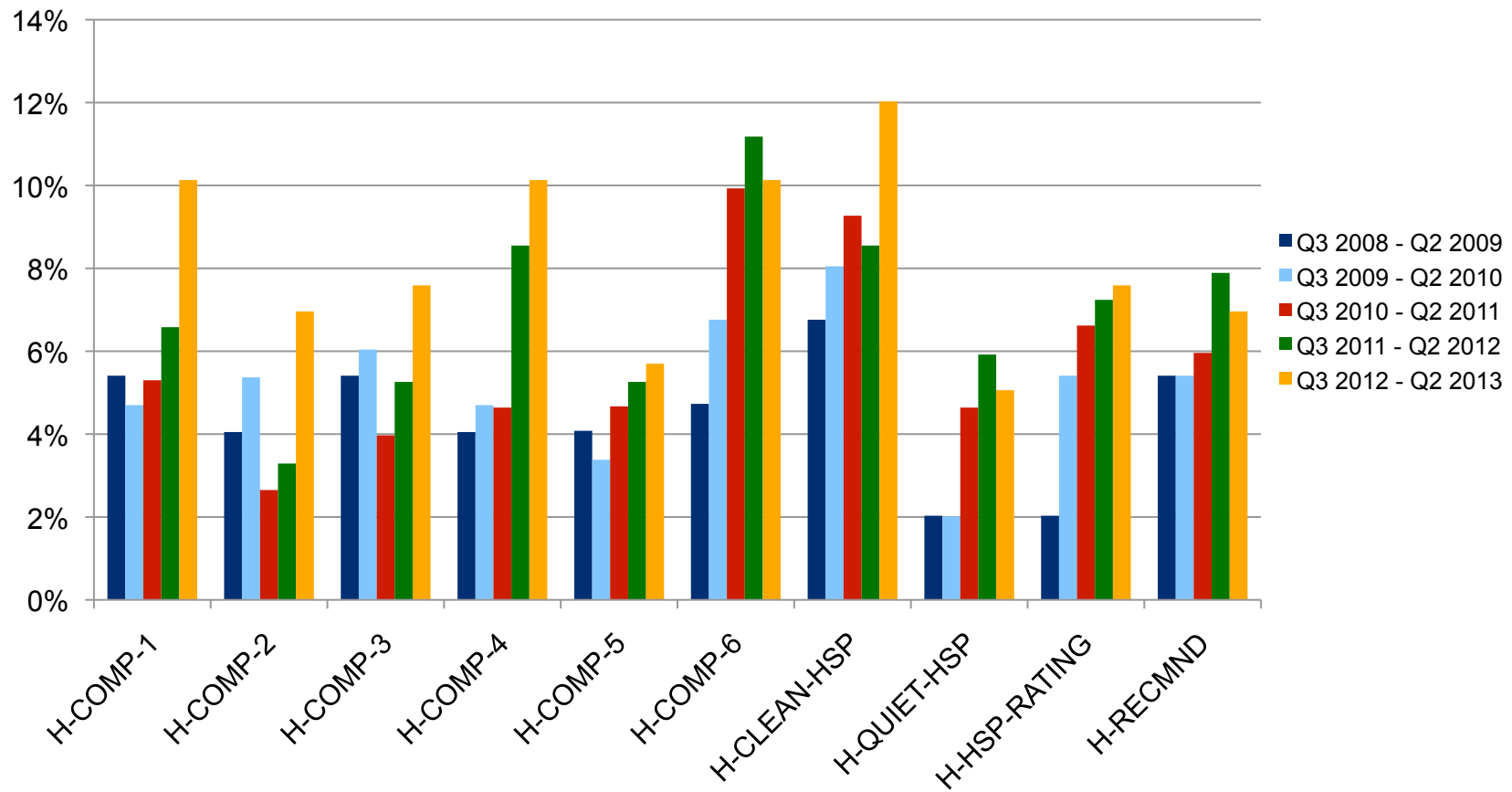
- All HCAHPS measures have improved since the previous year.

5-Year Comparison of PA HCAHPS Data



- Overall, HCAHPS ratings have slowly and steadily improved each year.
- H-COMP-2 and H-COMP-3 scores have improved the most. These measures assess doctor communication and whether patients received help as soon as they wanted.

Percentage of PA Hospitals in the Top Tenth Percentile Nationwide



- For Q3 2012 – Q2 2013, the percentage of PA hospitals in the top tenth percentile nationwide increased from the previous year for seven HCAHPS measures.
- At the end of June 2013, more than 10% of PA hospitals scored in the national top 10% for four measures (H-COMP-1, H-COMP-4, H-COMP-6, and H-CLEAN-HSP).

Q3 2012 – Q2 2013 HCAHPS Data Correlations

	H-COMP-1	H-COMP-2	H-COMP-3	H-COMP-4	H-COMP-5	H-COMP-6	H-CLEAN-HSP	H-QUIET-HSP	H-HSP-RATING	H-RECMND
H-COMP-1	1									
H-COMP-2	0.7400979	1								
H-COMP-3	0.8871835	0.703142	1							
H-COMP-4	0.8675143	0.7086375	0.8403132	1						
H-COMP-5	0.8114986	0.6951083	0.707609	0.7376536	1					
H-COMP-6	0.5488388	0.4043016	0.4259185	0.4824958	0.4497698	1				
H-CLEAN-HSP	0.6727665	0.5944646	0.7000152	0.6158835	0.6422617	0.324749	1			
H-QUIET-HSP	0.6547189	0.5845876	0.6669962	0.6299236	0.5809174	0.3582534	0.515940322	1		
H-HSP-RATING	0.8385971	0.6364122	0.7465055	0.7420637	0.742708	0.5351206	0.55347722	0.613182906	1	
H-RECMND	0.7356307	0.5156124	0.624389	0.6591831	0.6259335	0.5034338	0.373051633	0.512385193	0.93837946	1

Correlation Key

 = Perfect Correlation (1.0)

 = Very Strong Correlation (0.7-0.999)

 = Strong Correlation (0.5-0.699)

 = Medium Correlation (0.3-0.499)

- Hospital Ratings are very strongly correlated with
 - H-COMP-1: Nurse Communication (r = 0.839)
 - H-COMP-3: Receiving Prompt Help (r = 0.747)
 - H-COMP-4: Pain Well Controlled (r = 0.742)
 - H-COMP-5: Medicine Explained by Staff (r = 0.743)
- Recommendations are most strongly correlated with hospital ratings (r = .938) and nurse communication (r = 0.736).
- Nurse communication has a stronger impact on a patient's evaluation of hospital experience than doctor communication.

Average HCAHPS Scores Based on Location in Pennsylvania

	All	Large Urban (Phil & Pitt)	Urban	Rural	West	Central	Northeast	Southeast
# of Hospitals	158	64	51	43	60	32	29	37
H-COMP-1	79.35%	78.72%	79.43%	80.19%	79.22%	80.28%	79.55%	78.59%
H-COMP-2	80.04%	78.98%	80.53%	81.02%	80.87%	80.19%	80.59%	78.14%
H-COMP-3	67.04%	65.02%	67.73%	69.19%	67.12%	69.59%	67.03%	64.65%
H-COMP-4	70.45%	69.69%	70.23%	71.49%	70.02%	71.56%	71.48%	69.38%
H-COMP-5	62.40%	62.33%	61.96%	63.02%	62.17%	63.44%	61.76%	62.38%
H-COMP-6	85.80%	85.27%	86.43%	85.86%	86.08%	86.41%	86.03%	84.65%
H-CLEAN-HSP	72.88%	69.42%	73.92%	76.79%	72.40%	76.53%	73.86%	69.73%
H-QUIET-HSP	53.66%	53.80%	54.71%	52.21%	53.22%	53.53%	53.24%	54.81%
H-HSP-RATING	68.84%	68.53%	70.53%	67.30%	68.22%	70.53%	68.52%	68.65%
H-RECMND	69.35%	69.98%	71.84%	65.47%	67.60%	71.09%	69.66%	70.46%

- While rural hospitals tend to outperform large urban and urban hospitals, rural hospitals also receive the lowest rating and recommendation scores. Patients at urban hospitals are more likely to rate the hospital with a 9 or 10 and recommend the hospital to others.
- Hospitals located in Central Pennsylvania scored higher than other regions for 8 of 10 measures.

High Volume vs. Low Volume Hospitals

	All	Bottom Quartile (<2,500 Discharged Patients)	Top Quartile (>14,000 Discharged Patients)
# of Hospitals	158	38	39
H-COMP-1	79.35%	82.82%	77.67%
H-COMP-2	80.04%	84.16%	78.03%
H-COMP-3	67.04%	73.79%	63.08%
H-COMP-4	70.45%	73.89%	68.69%
H-COMP-5	62.40%	66.13%	60.92%
H-COMP-6	85.80%	87.37%	85.28%
H-CLEAN-HSP	72.88%	80.18%	66.79%
H-QUIET-HSP	53.66%	59.18%	49.21%
H-HSP-RATING	68.84%	73.68%	69.13%
H-RECMND	69.35%	73.03%	71.69%

- Low volume hospitals score higher than the PA average for every measure.
- High volume hospitals score lower than the PA average for 8 of 10 measures.
 - Patients at high volume hospitals give high ratings and are likely to recommend the hospitals because bigger hospitals generally have better reputations.

Teaching vs. Non-Teaching Hospitals

	All	Teaching	Non-Teaching
# of Hospitals	158	80	78
H-COMP-1	79.35%	77.20%	81.55%
H-COMP-2	80.04%	78.24%	81.88%
H-COMP-3	67.04%	62.88%	71.28%
H-COMP-4	70.45%	68.48%	72.47%
H-COMP-5	62.40%	60.56%	64.28%
H-COMP-6	85.80%	84.79%	86.85%
H-CLEAN-HSP	72.88%	68.51%	77.36%
H-QUIET-HSP	53.66%	50.84%	56.55%
H-HSP-RATING	68.84%	66.44%	71.31%
H-RECMND	69.35%	67.50%	71.26%

- Non-teaching hospitals scored higher than teaching hospitals for all HCAHPS measures.



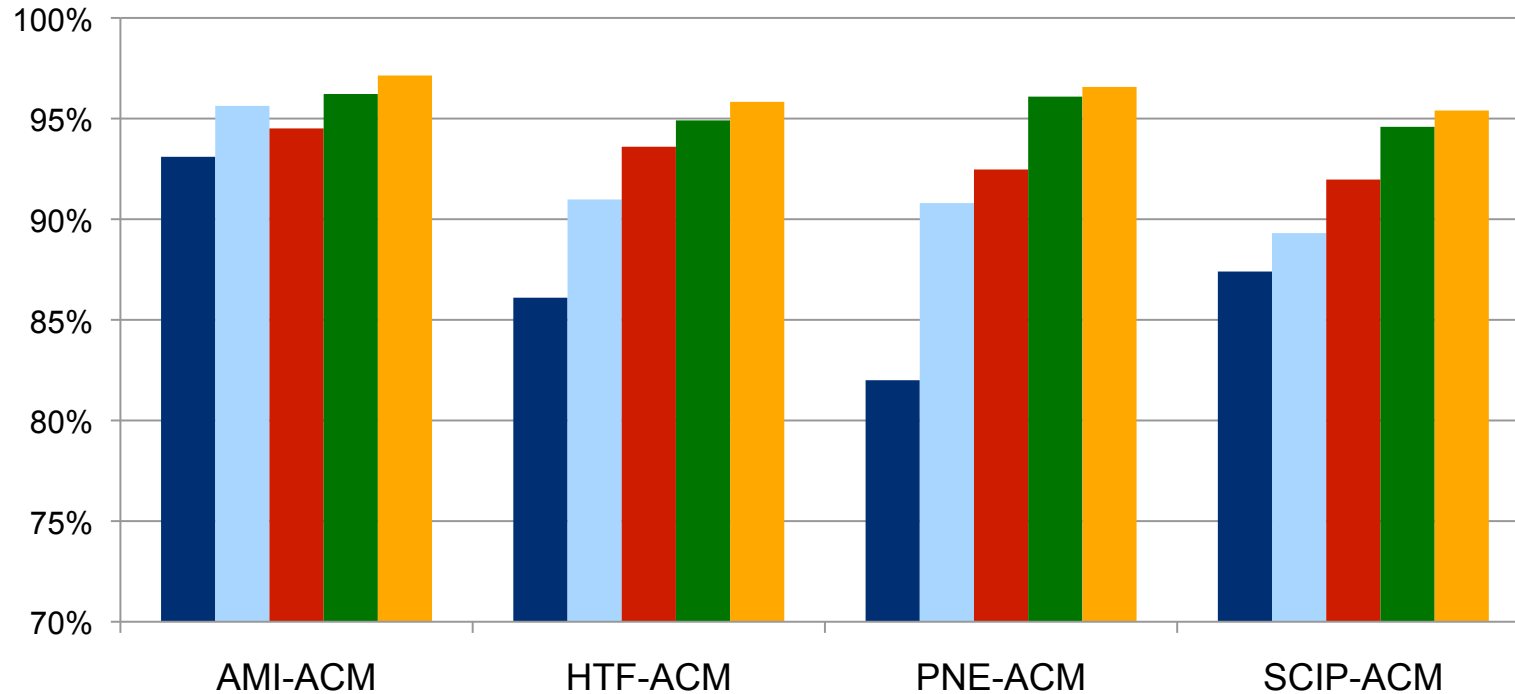
ACM 5-Year Trend Analysis

Trend Analysis: ACM Process Measures

5-Year Trend Analysis

- We compared changes in the CMS process measures over the past 5 years.
- All process measure rates in Pennsylvania have increased since 2009.
- All process measure standard deviations have decreased since 2009, except AMI-2.
 - A higher standard deviation indicates greater variation in the quality of care.
 - A lower standard deviation suggests more consistency.
- The heart attack indicator AMI-8a (PCI within 90 minutes) had the largest percentage point improvement over the measured 5-year period.

Composite Scores: Appropriate Care Measures

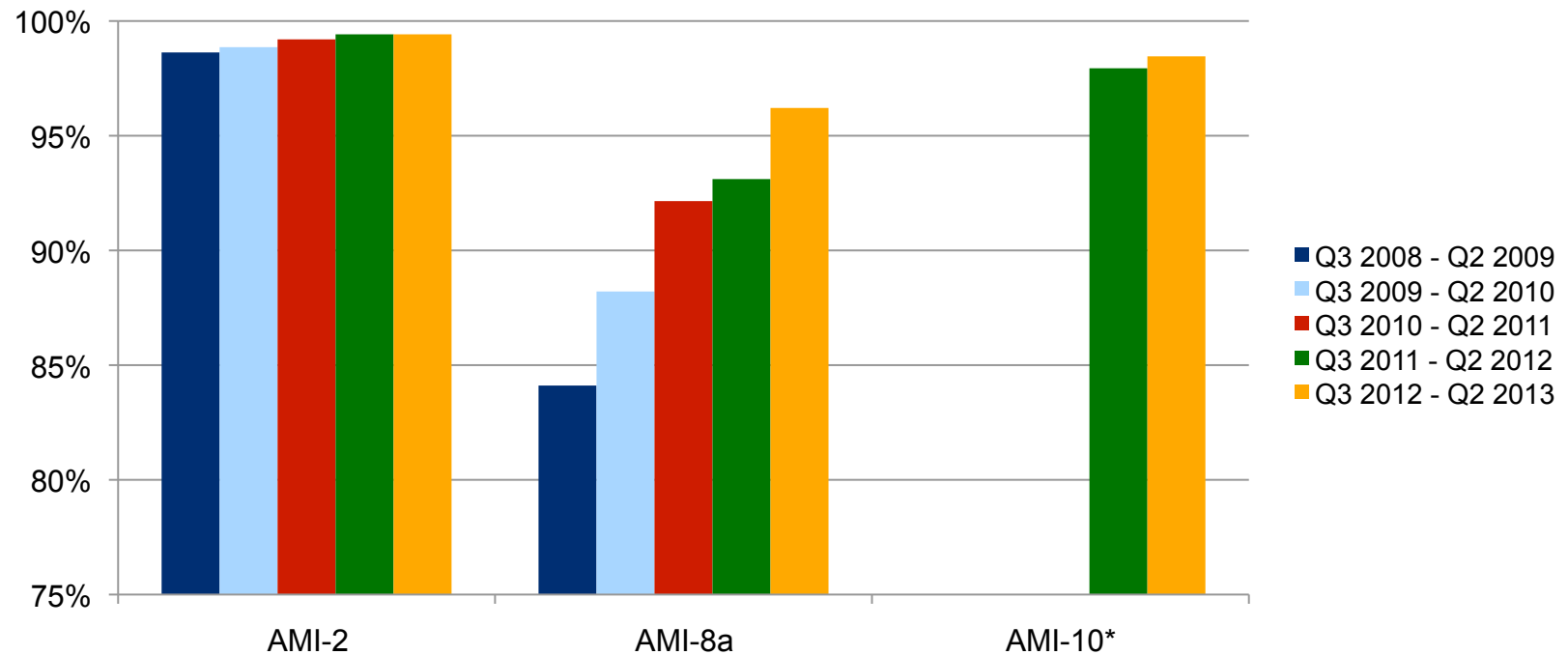


■ Q3 2008 - Q2 2009 ■ Q3 2009 - Q2 2010 ■ Q3 2010 - Q2 2011 ■ Q3 2011 - Q2 2012 ■ Q3 2012 - Q2 2013

- Since 2009, all ACM measures have steadily improved. All measures scored higher in Q2 2013 than in Q2 2012.
- The January 2013 addition of STK, VTE, and IMM measures to the Overall ACM does not make it comparable to previous years' results. Thus, Overall ACM has been excluded from this analysis.

5-Year AMI Trend Analysis

Heart Attack Measures Yearly Rates

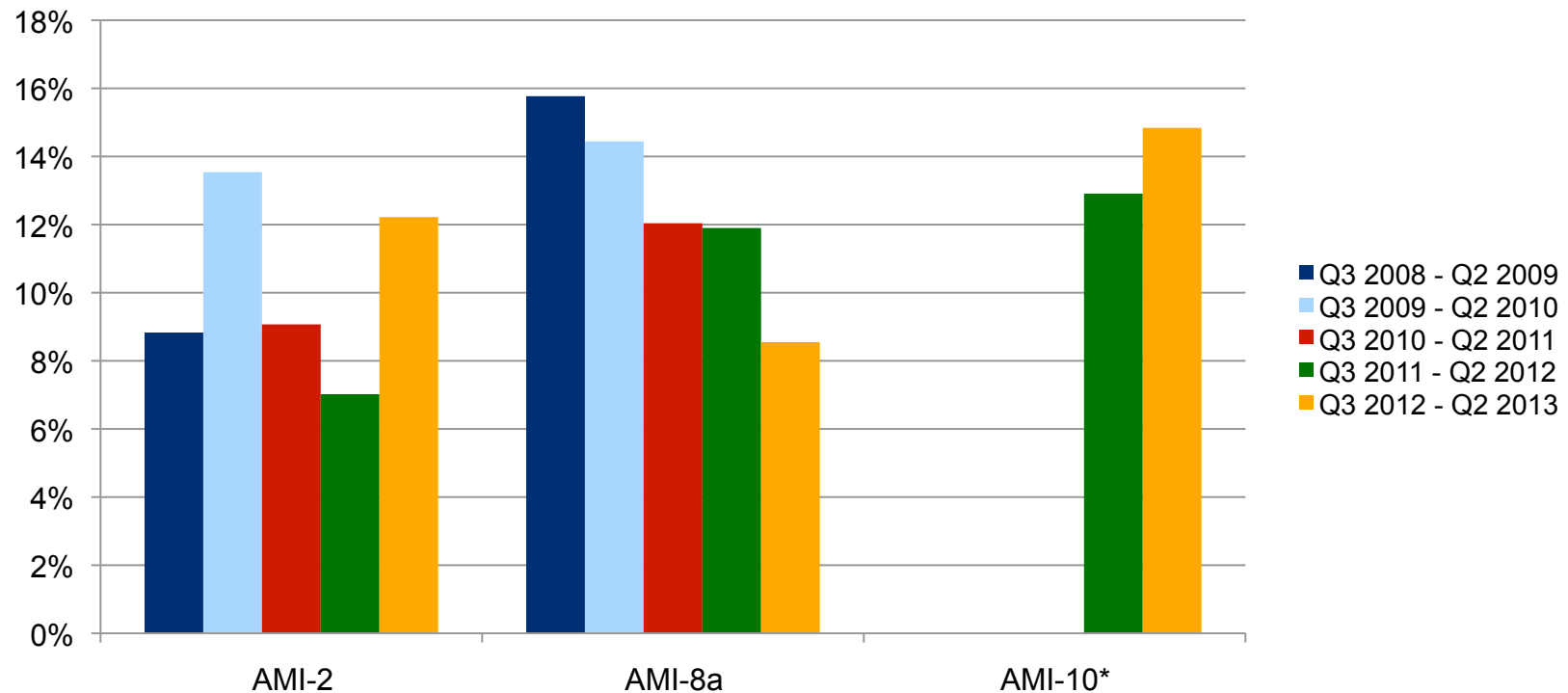


- Pennsylvania hospitals are steadily improving their delivery of heart attack care.

* No data available for AMI-10 prior to January 2011.

5-Year AMI Trend Analysis

Heart Attack Measures Standard Deviations

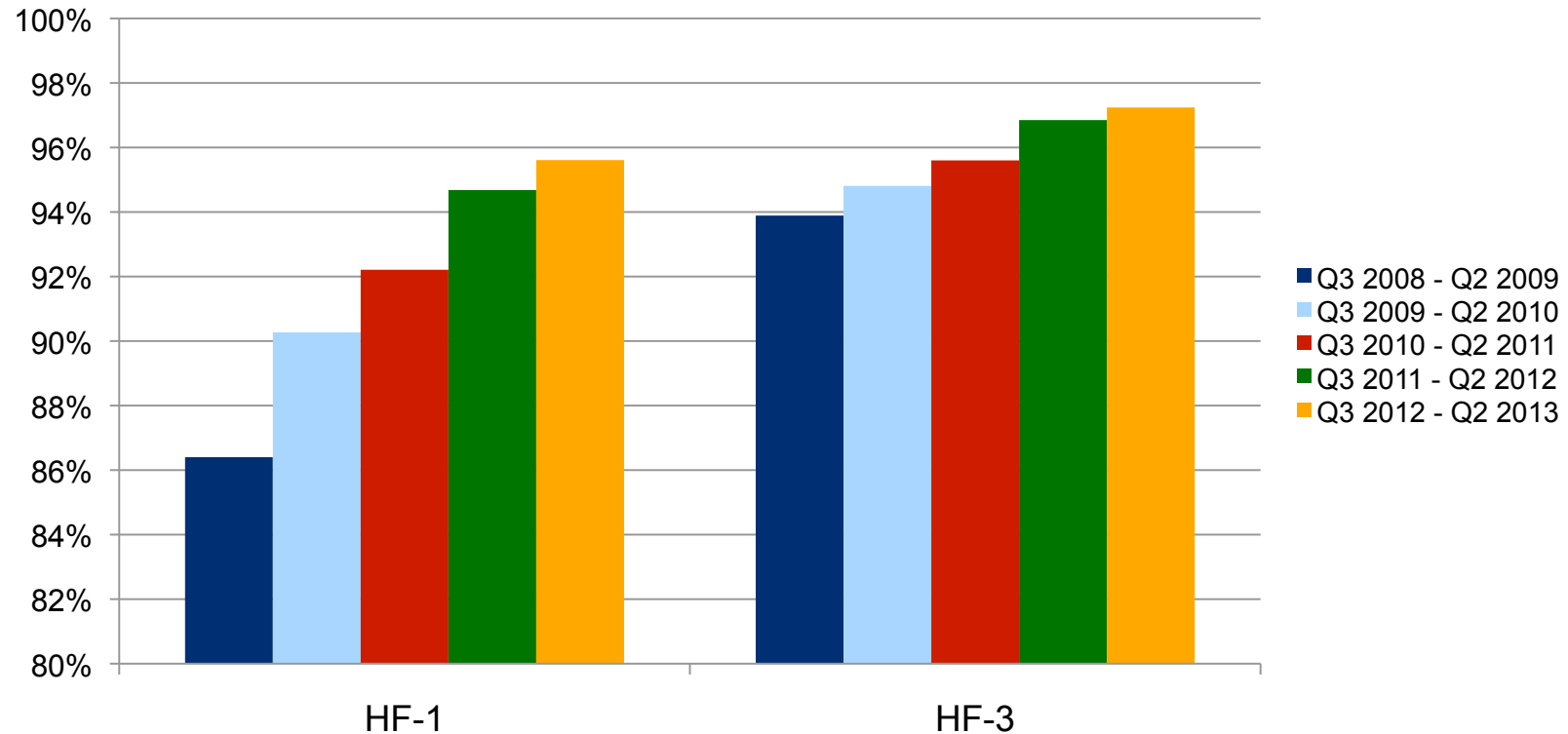


- As indicated by the steady drop in standard deviation, patients are receiving PCI within 90 minutes of arrival (AMI-8a) with less variation across hospitals.

* No data available for AMI-10 prior to January 2011.

5-Year HF Trend Analysis

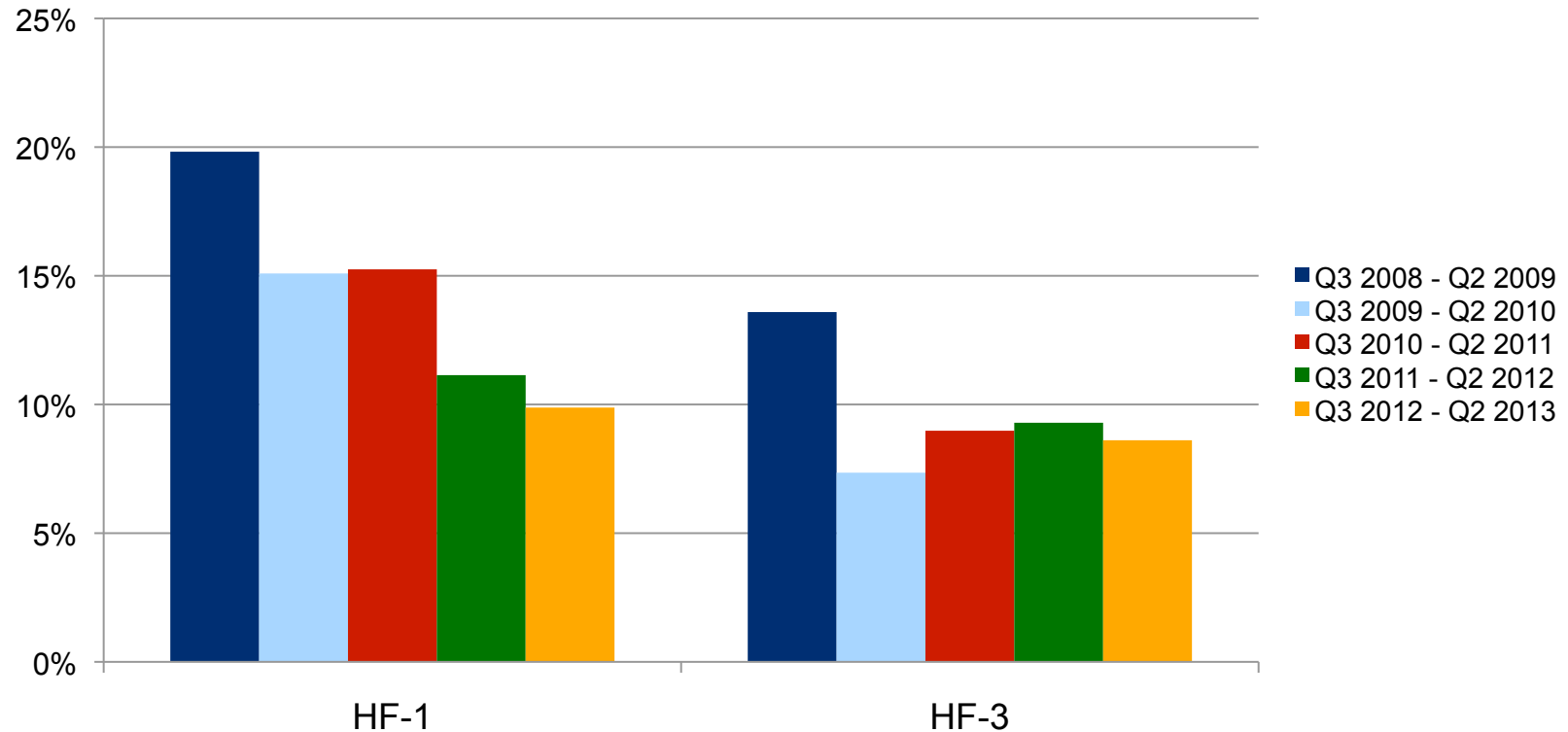
Heart Failure Measures Yearly Rates



- Over the past five years, all heart failure measures have steadily improved.

5-Year HF Trend Analysis

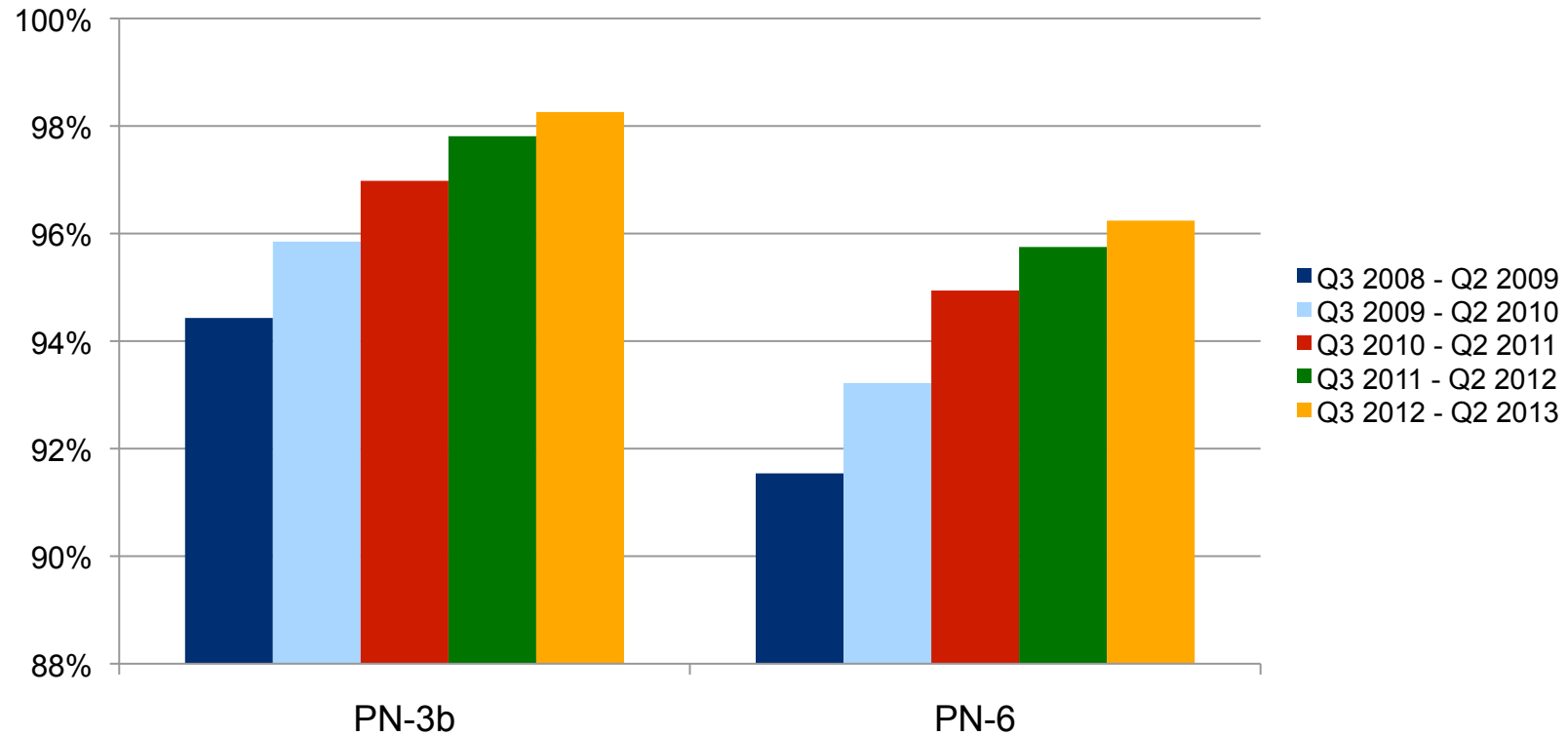
Heart Failure Measures Standard Deviations



- Variation in quality of care for heart failure has decreased since 2009.

5-Year PN Trend Analysis

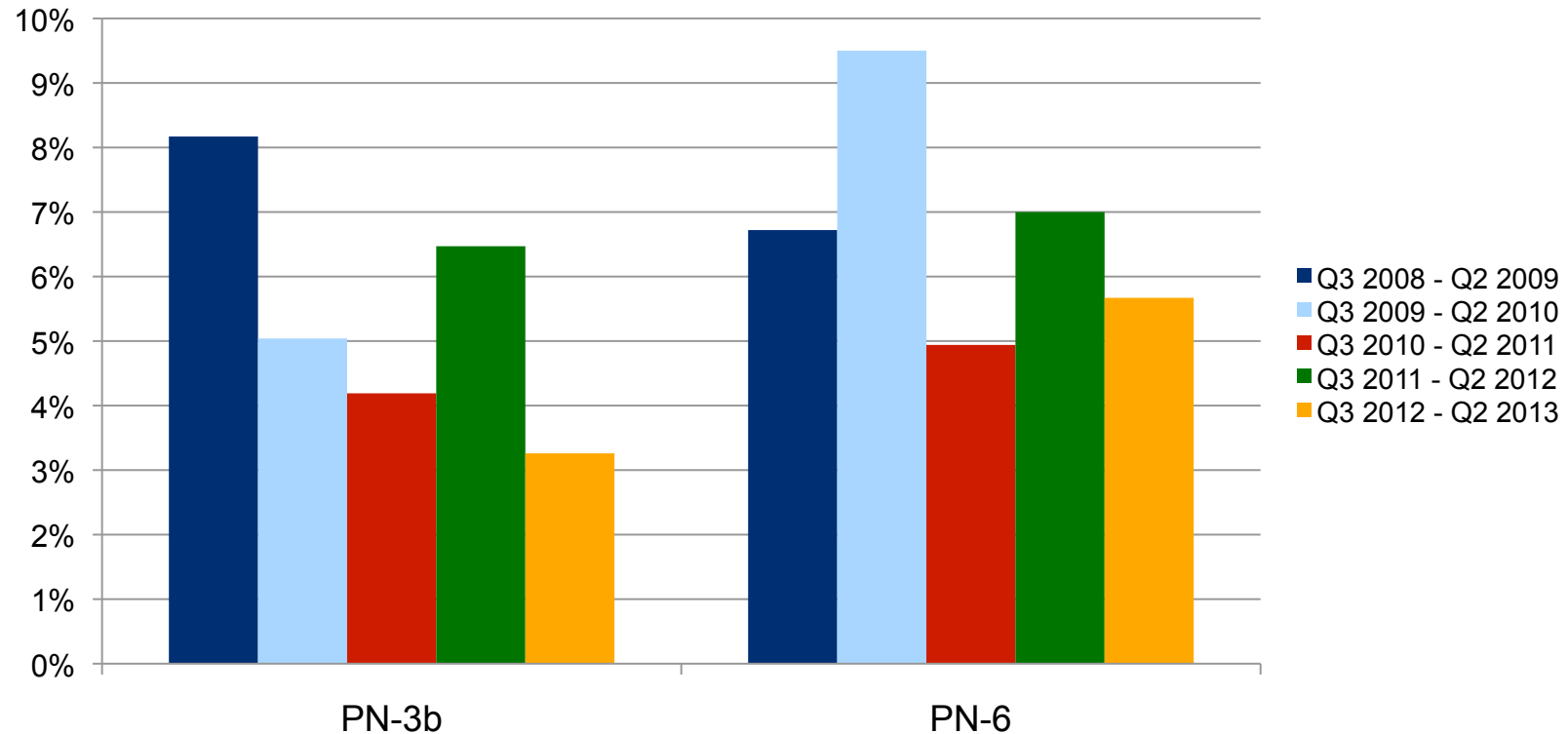
Pneumonia Measures Yearly Rates



- Over the past five years, all pneumonia measures have steadily improved.

5-Year PN Trend Analysis

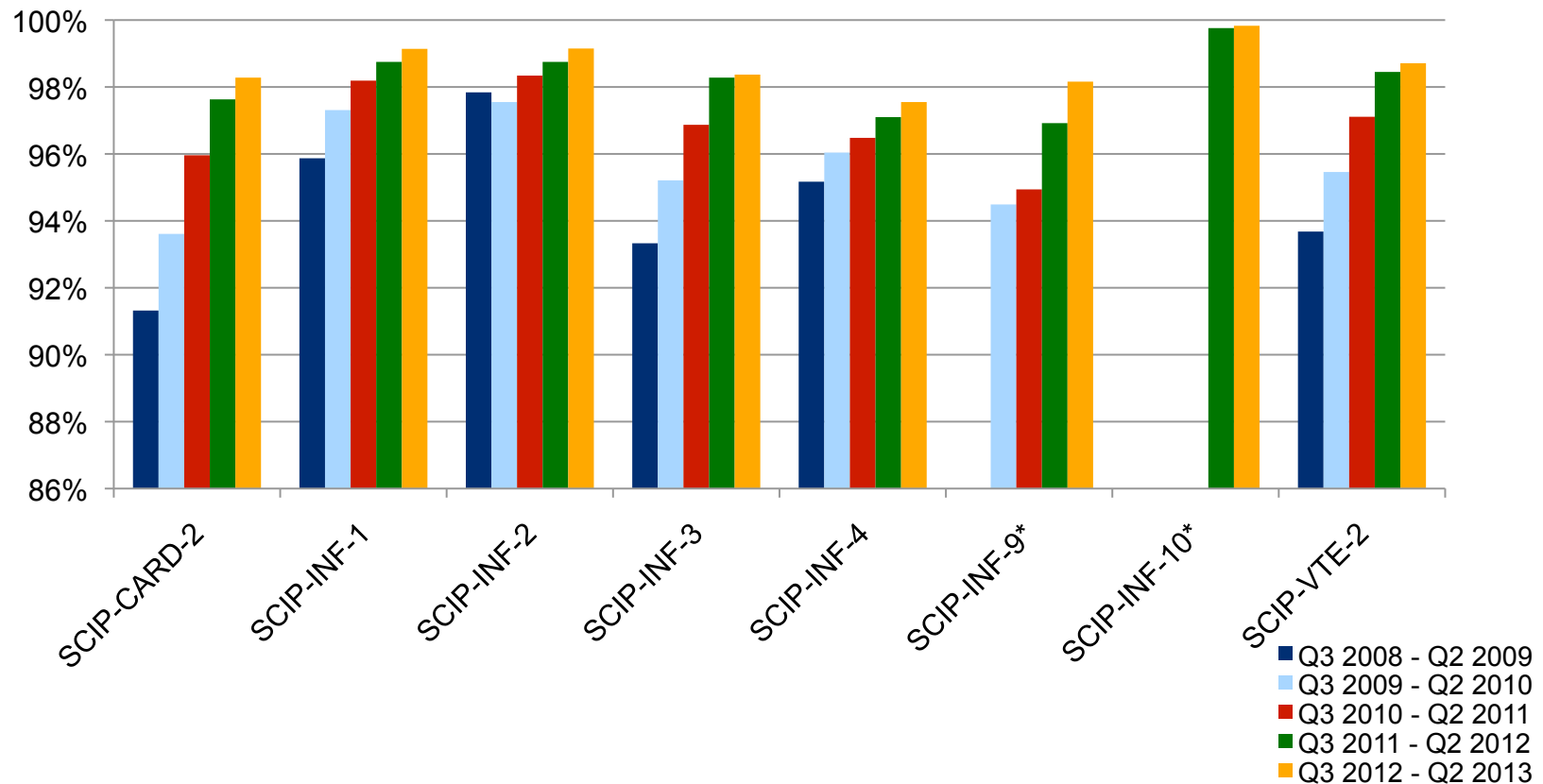
Pneumonia Measures Standard Deviations



- Although PN standard deviations have fluctuated over the past five years, standard deviations for both measures are less in 2013 than in 2009. As a result, the quality of pneumonia care is more consistent across all Pennsylvania hospitals.

5-Year SCIP Trend Analysis

Surgical Care Measures Yearly Rates

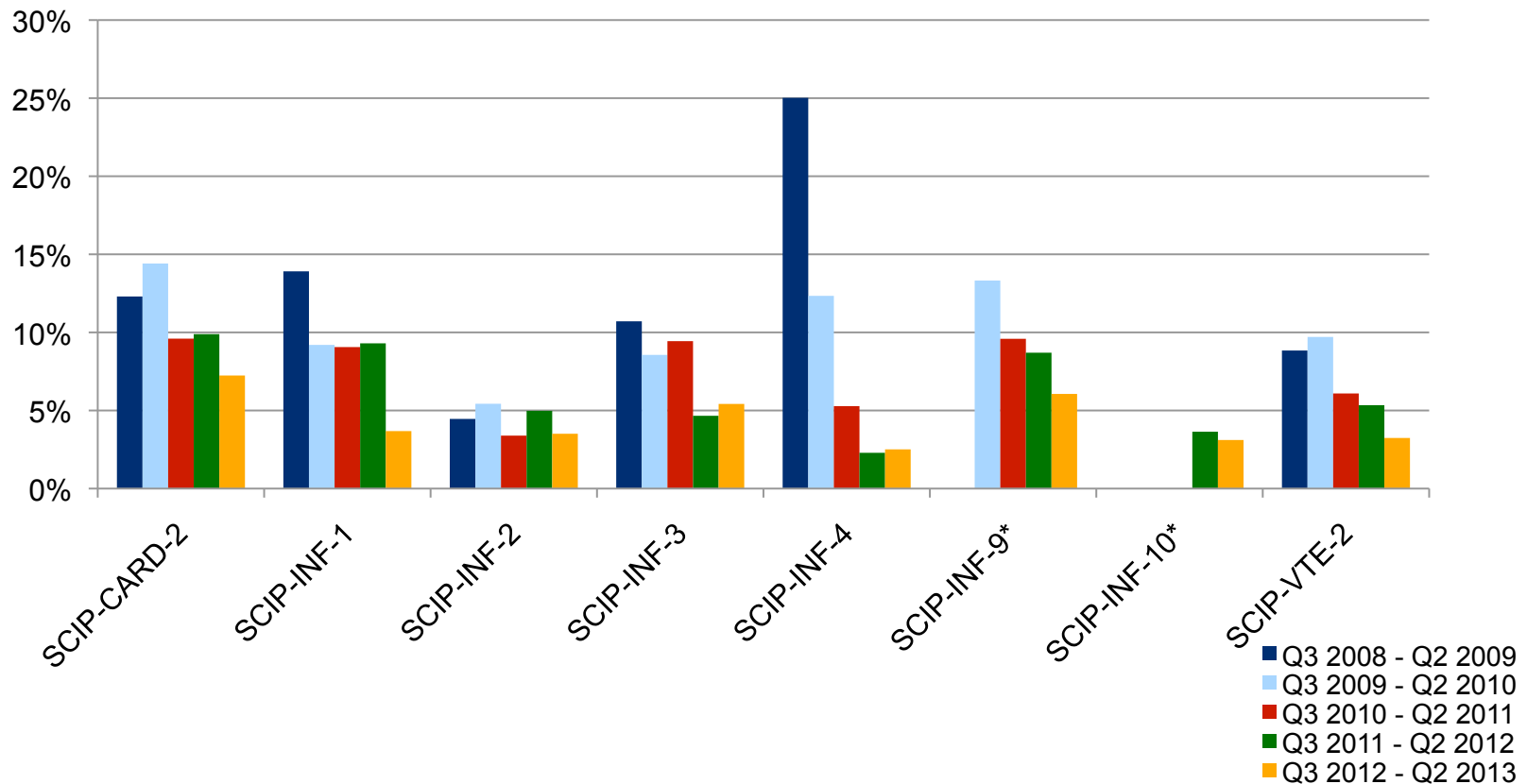


- Over the past five years, all SCIP measures have steadily improved.

* No data available for SCIP-INF-9 prior to 2010. No SCIP-INF-10 data prior to 2012.

5-Year SCIP Trend Analysis

Surgical Care Measures Standard Deviations



- Since 2009, standard deviations for all measures have dramatically dropped, indicating that the variation in surgical care across Pennsylvania hospitals has decreased.

* No data available for SCIP-INF-9 prior to 2010. No SCIP-INF-10 data prior to 2012.



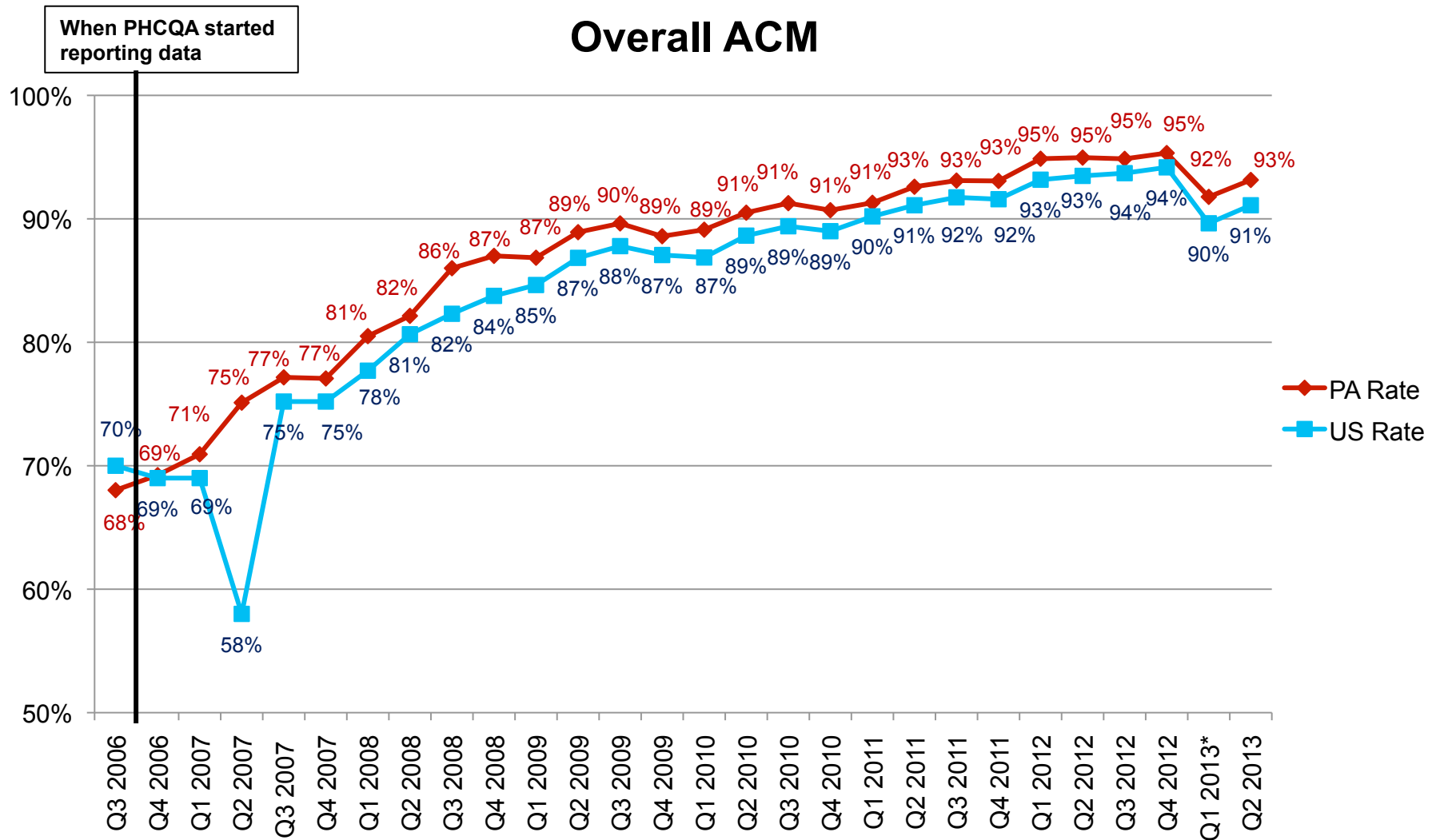
ACM 7-Year Trend Analysis

Trend Analysis: ACM Measures

7-Year Trend Analysis

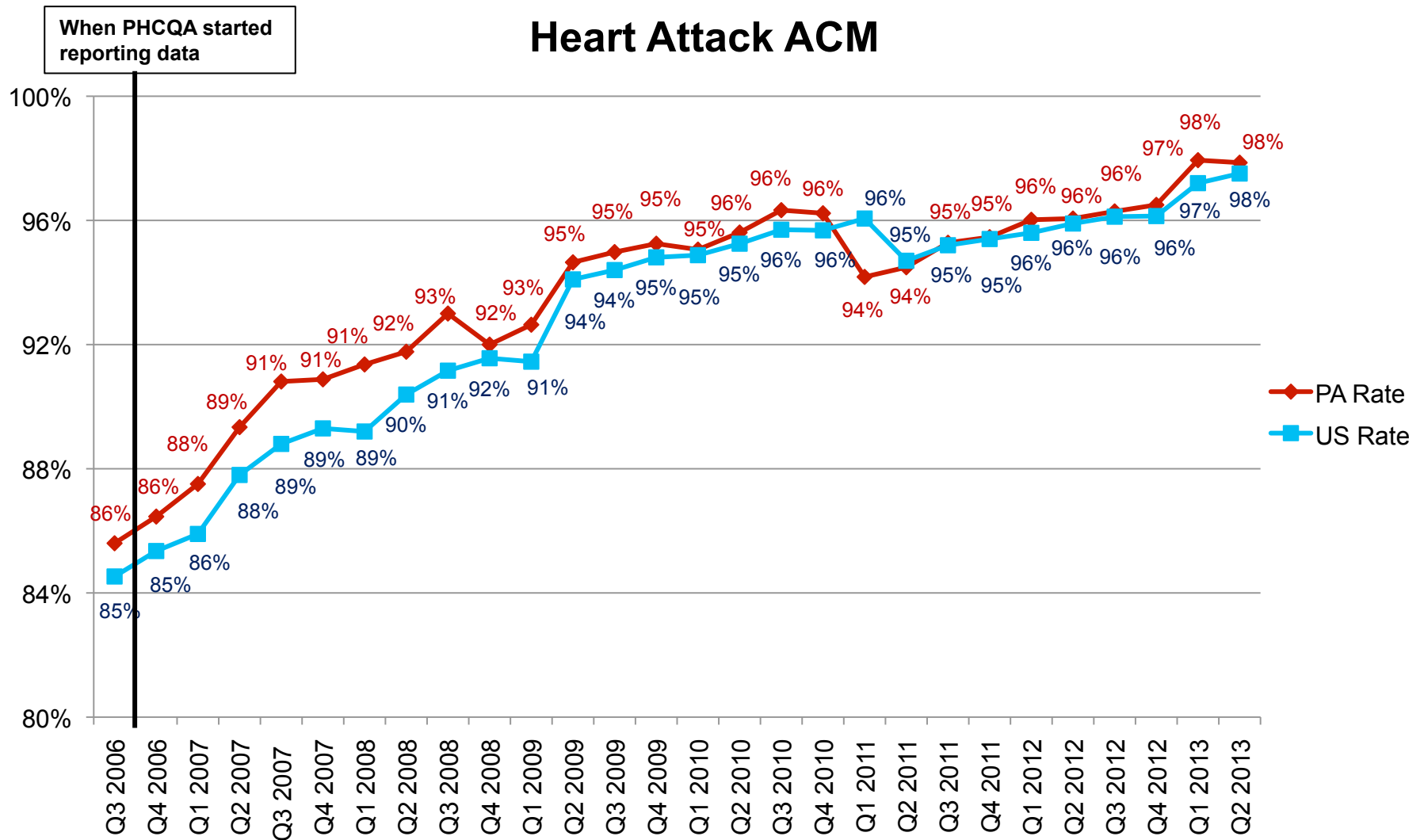
- We compared changes in ACM scores over the past 7 years.
- Rates for all ACM categories in Pennsylvania have increased since 2006.
- All Pennsylvania hospitals have consistently performed better than US hospitals for measures in all ACM categories.

7-Year Appropriate Care Measures: Pennsylvania vs. National Rates

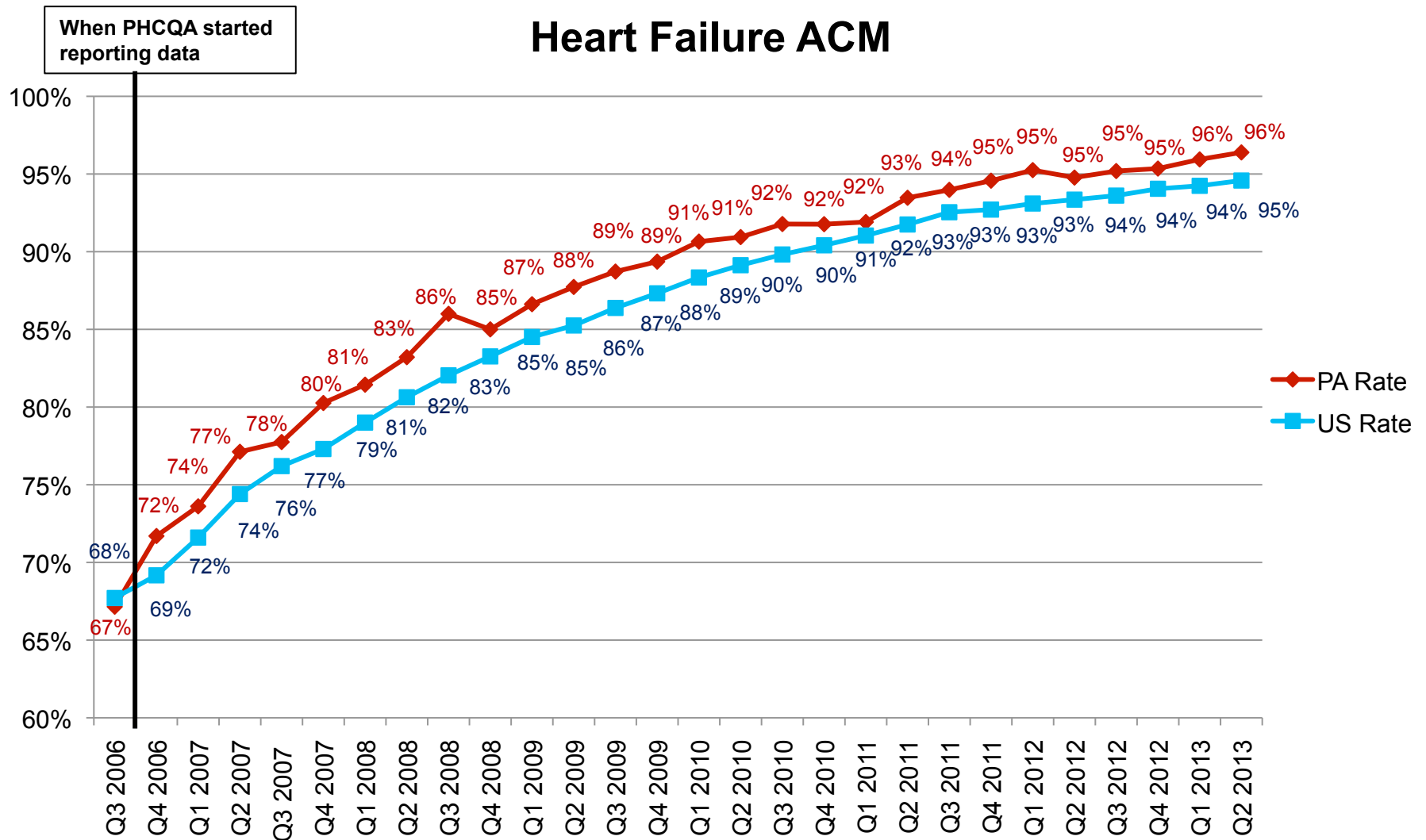


* After Q1 2013, Overall ACM methodology switched from 23 measures to 32.

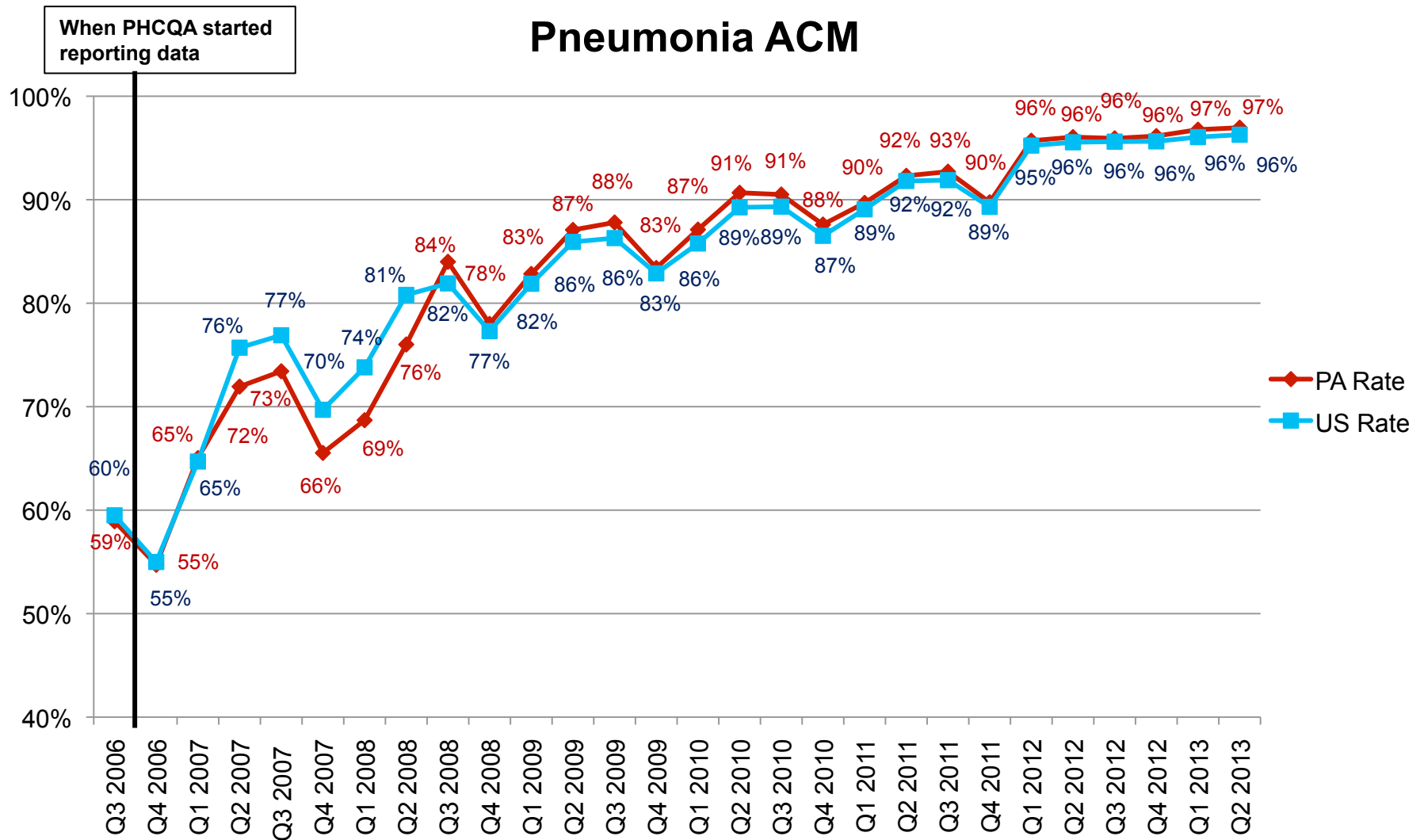
7-Year Appropriate Care Measures: Pennsylvania vs. National Rates



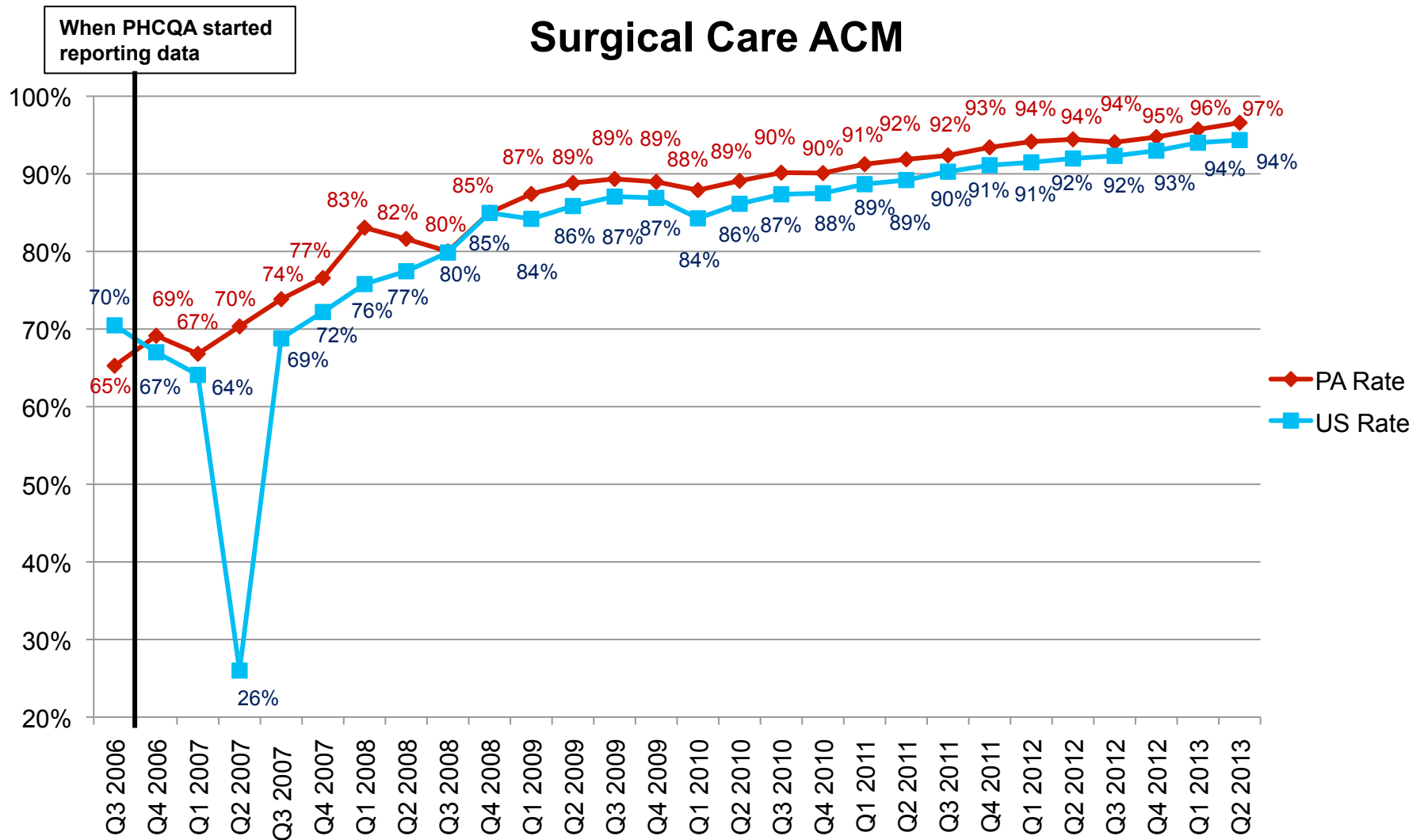
7-Year Appropriate Care Measures: Pennsylvania vs. National Rates



7-Year Appropriate Care Measures: Pennsylvania vs. National Rates



7-Year Appropriate Care Measures: Pennsylvania vs. National Rates





All Process Measures 7-Year Trend Analysis

7-Year Trend Analysis: PA Hospital Averages

Performance Measure	2007	2008	2009	2010	2011	2012*	2013*	Improvement from 2007 - 2013
Heart Attack Measures								
Heart Attack Patients Given Aspirin at Arrival (AMI-1)	94.8%	95.1%	96.4%	96.6%	97.3%	N/A	N/A	2.5%
Heart Attack Patients Given Aspirin at Discharge (AMI-2)	92.8%	94.2%	95.8%	95.2%	96.3%	97.2%	96.9%	4.1%
Heart Attack Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD) (AMI-3)	82.8%	89.3%	89.0%	90.4%	92.2%	N/A	N/A	9.4%
Heart Attack Patients Given Beta Blocker at Discharge (AMI-5)	94.8%	95.0%	95.1%	96.8%	95.9%	N/A	N/A	1.1%
Heart Attack Patients Given PCI Within 90 Minutes Of Arrival (AMI-8a)	57.5%	73.0%	80.5%	84.7%	89.4%	91.2%	94.6%	37.1%
Statin prescribed at discharge (AMI-10)	N/A	N/A	N/A	N/A	N/A	92.2%	93.2%	1.0%
Heart Failure Measures								
Heart Failure Patients Given Discharge Instructions (HF-1)	68.0%	76.6%	81.8%	87.5%	89.1%	91.8%	93.5%	25.5%
Heart Failure Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD) (HF-3)	82.8%	87.7%	90.1%	93.1%	93.2%	94.2%	94.8%	12.0%
Pneumonia Measures								
Pneumococcal Screen/Vaccination (PN-2)	80.6%	85.5%	89.7%	92.4%	94.2%	N/A	N/A	13.6%
Blood Culture Prior to First Antibiotic (PN-3b)	91.0%	91.7%	93.3%	96.3%	96.3%	96.5%	97.7%	6.7%
Initial Antibiotic within 6 Hours (PN-5c)	94.1%	93.7%	94.8%	95.4%	96.1%	N/A	N/A	2.0%
Initial Antibiotic Selection (PN-6)	87.4%	88.3%	90.1%	95.5%	93.9%	94.1%	95.2%	7.8%
Influenza Screen/Vaccination (PN-7)	78.9%	80.6%	86.9%	91.5%	92.0%	N/A	N/A	13.1%
Blood Culture within First 24 hours (ICU) (PN-3a (JC))	N/A	91.6%	95.3%	96.3%	97.3%	97.0%	97.8%	6.2%
Initial Antibiotic Selection for ICU Patients (PN-6a (JC))	N/A	64.1%	62.8%	72.4%	90.1%	N/A	N/A	26.0%
Initial Antibiotic Selection for Non-ICU Patients (PN-6b (JC))	N/A	92.4%	94.7%	95.1%	96.3%	96.4%	97.2%	4.8%

*N/A denotes measure has been discontinued.

7-Year Trend Analysis: PA Hospital Averages

Performance Measure	2007	2008	2009	2010	2011	2012	2013*	Improvement from 2007-2013
<i>Surgical Care Measures</i>								
Beta Blocker during the Perioperative Period (SCIP-CARD-2)	N/A	N/A	90.3%	89.8%	93.5%	95.2%	96.6%	6.3%
Prophylactic Antibiotic within 1 hour of incision (SCIP-INF-1)	82.9%	87.4%	91.7%	94.6%	96.3%	97.0%	98.2%	15.3%
Appropriate Antibiotic (SCIP-INF-2)	N/A	94.7%	96.8%	95.9%	97.6%	97.6%	98.2%	3.5%
Prophylactic Antibiotic Discontinued within 24 hours (SCIP-INF-3)	76.0%	85.3%	90.4%	92.5%	95.1%	96.9%	97.4%	21.4%
Cardiac Surgery Patients with Controlled 6 A.M. Postoperative Blood Glucose (SCIP-INF-4)	N/A	86.2%	88.3%	94.4%	95.5%	96.7%	97.3%	11.1%
Urinary Catheter Removal within Two Days of Surgery (SCIP-INF-9)	N/A	N/A	N/A	90.5%	92.9%	94.7%	96.6%	6.1%
Surgery Patients with Perioperative Temperature Management (SCIP-INF-10)	N/A	N/A	N/A	N/A	N/A	99.3%	99.5%	0.2%
VTE Ordered prior to Surgery (SCIP-VTE-1)	85.2%	89.4%	92.6%	93.4%	96.5%	97.4%	N/A	12.2%
VTE Received within 24 Hours of Surgery (SCIP-VTE-2)	89.3%	81.4%	90.4%	92.2%	95.4%	97.0%	97.7%	8.4%
<i>Appropriate Care Measures</i>								
Overall ACM	67.5%	76.2%	83.1%	86.8%	89.2%	91.2%	92.0%	24.5%
AMI-ACM	83.5%	86.0%	88.3%	92.6%	90.6%	90.2%	92.8%	9.3%
HTF-ACM	69.7%	77.7%	82.7%	87.4%	90.4%	92.0%	93.8%	24.1%
PN-ACM	63.3%	69.4%	80.1%	85.9%	88.1%	91.6%	95.6%	32.3%
SIP-ACM	62.5%	75.4%	82.9%	85.0%	88.1%	90.9%	92.6%	30.1%

*N/A denotes measure has been discontinued.

7-Year Trend Analysis: PA Hospital Rates

Performance Measure	2007	2008	2009	2010	2011	2012*	2013*	Improvement from 2007-2013
Heart Attack Measures								
Heart Attack Patients Given Aspirin at Arrival (AMI-1)	96.7%	97.4%	98.1%	98.6%	99.1%	N/A	N/A	2.4%
Heart Attack Patients Given Aspirin at Discharge (AMI-2)	97.5%	97.9%	98.6%	98.9%	99.2%	99.4%	99.4%	1.9%
Heart Attack Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD) (AMI-3)	87.7%	92.7%	94.5%	95.3%	96.4%	N/A	N/A	8.7%
Heart Attack Patients Given Beta Blocker at Discharge (AMI-5)	97.6%	98.2%	98.6%	98.7%	99.1%	N/A	N/A	1.5%
Heart Attack Patients Given PCI Within 90 Minutes Of Arrival (AMI-8a)	62.5%	76.9%	84.1%	88.2%	92.2%	93.1%	96.2%	33.7%
Statin prescribed at discharge (AMI-10)	N/A	N/A	N/A	N/A	N/A	97.9%	98.5%	0.6%
Heart Failure Measures								
Heart Failure Patients Given Discharge Instructions (HF-1)	73.6%	81.1%	86.4%	90.3%	92.2%	94.7%	95.6%	22.0%
Heart Failure Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD) (HF-3)	86.8%	91.8%	93.9%	94.8%	95.6%	96.9%	97.2%	10.4%
Pneumonia Measures								
Pneumococcal Screen/Vaccination (PN-2)	81.4%	87.3%	92.0%	94.7%	96.2%	N/A	N/A	14.8%
Blood Culture Prior to First Antibiotic (PN-3b)	91.1%	92.3%	94.4%	95.9%	97.0%	97.8%	98.3%	7.2%
Initial Antibiotic within 6 Hours (PN-5c)	94.0%	94.2%	94.9%	95.7%	96.4%	N/A	N/A	2.4%
Initial Antibiotic Selection (PN-6)	88.4%	89.8%	91.5%	93.2%	94.9%	95.8%	96.2%	7.8%
Influenza Screen/Vaccination (PN-7)	78.7%	82.8%	88.9%	92.5%	94.1%	N/A	N/A	15.4%
Blood Culture within First 24 hours (ICU) (PN-3a (JC))	N/A	93.2%	95.8%	97.0%	97.9%	98.0%	98.2%	5.0%
Initial Antibiotic Selection for ICU Patients (PN-6a (JC))	N/A	66.1%	65.7%	74.9%	91.5%	N/A	N/A	25.4%
Initial Antibiotic Selection for Non-ICU Patients (PN-6b (JC))	N/A	93.0%	94.8%	95.5%	96.4%	96.9%	97.2%	4.2%

*N/A denotes measure has been discontinued.

7-Year Trend Analysis: PA Hospital Rates

Performance Measure	2007	2008	2009	2010	2011	2012	2013*	Improvement from 2007-2013
<i>Surgical Care Measures</i>								
Beta Blocker during the Perioperative Period (SCIP-CARD-2)	N/A	N/A	91.3%	93.6%	96.0%	97.6%	98.3%	7.0%
Prophylactic Antibiotic within 1 hour of incision (SCIP-INF-1)	87.6%	91.8%	95.9%	97.3%	98.2%	98.7%	99.1%	11.5%
Appropriate Antibiotic (SCIP-INF-2)	N/A	96.1%	97.8%	97.6%	98.3%	98.7%	99.2%	3.1%
Prophylactic Antibiotic Discontinued within 24 hours (SCIP-INF-3)	80.1%	89.3%	93.3%	95.2%	96.9%	98.3%	98.4%	18.3%
Cardiac Surgery Patients with Controlled 6 A.M. Postoperative Blood Glucose (SCIP-INF-4)	N/A	93.3%	95.2%	96.0%	96.5%	97.1%	97.6%	4.3%
Urinary Catheter Removal within Two Days of Surgery (SCIP-INF-9)	N/A	N/A	N/A	94.5%	94.9%	96.9%	98.2%	3.7%
Surgery Patients with Perioperative Temperature Management (SCIP-INF-10)	N/A	N/A	N/A	N/A	N/A	99.8%	99.8%	0%
VTE Ordered prior to Surgery (SCIP-VTE-1)	88.3%	93.1%	95.6%	96.6%	98.0%	98.9%	N/A	10.6%
VTE Received within 24 Hours of Surgery (SCIP-VTE-2)	83.8%	90.7%	93.7%	95.5%	97.1%	98.4%	98.7%	14.9%
<i>Appropriate Care Measures</i>								
Overall ACM	72.0%	80.1%	86.9%	89.4%	91.5%	94.4%	93.2% ¹	21.2%
AMI-ACM	87.7%	91.3%	93.1%	95.2%	95.3%	95.7%	97.1%	9.4%
HTF-ACM	73.9%	81.5%	86.1%	89.9%	92.2%	94.7%	95.7%	21.8%
PN-ACM	63.8%	71.0%	82.0%	87.1%	90.0%	95.6%	96.5%	32.7%
SIP-ACM	68.8%	80.5%	87.4%	88.8%	90.8%	93.6%	95.3%	26.5%

*N/A denotes measure has been discontinued.

¹Overall ACM methodology switched from 23 measures to 32.

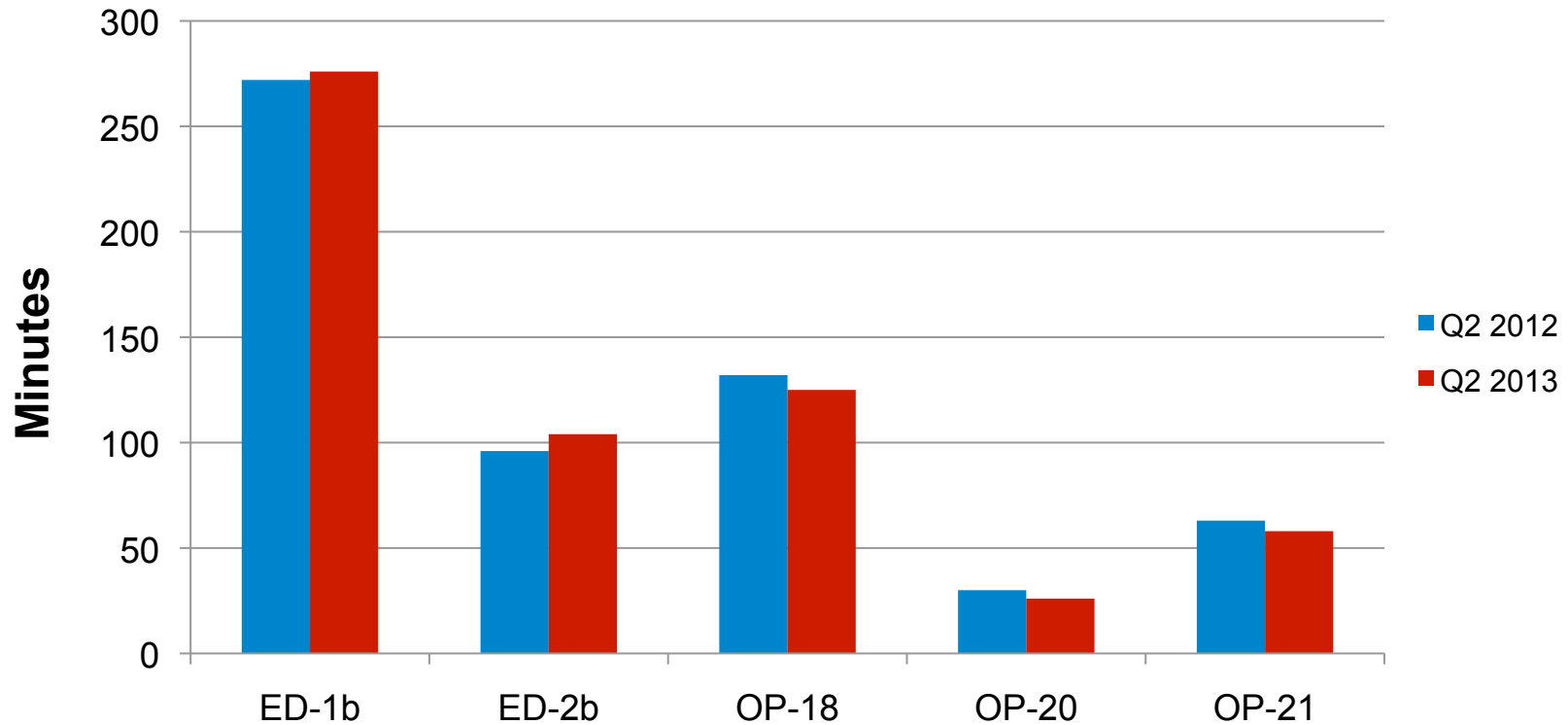


CMS Emergency Department Measures

Emergency Department Measures

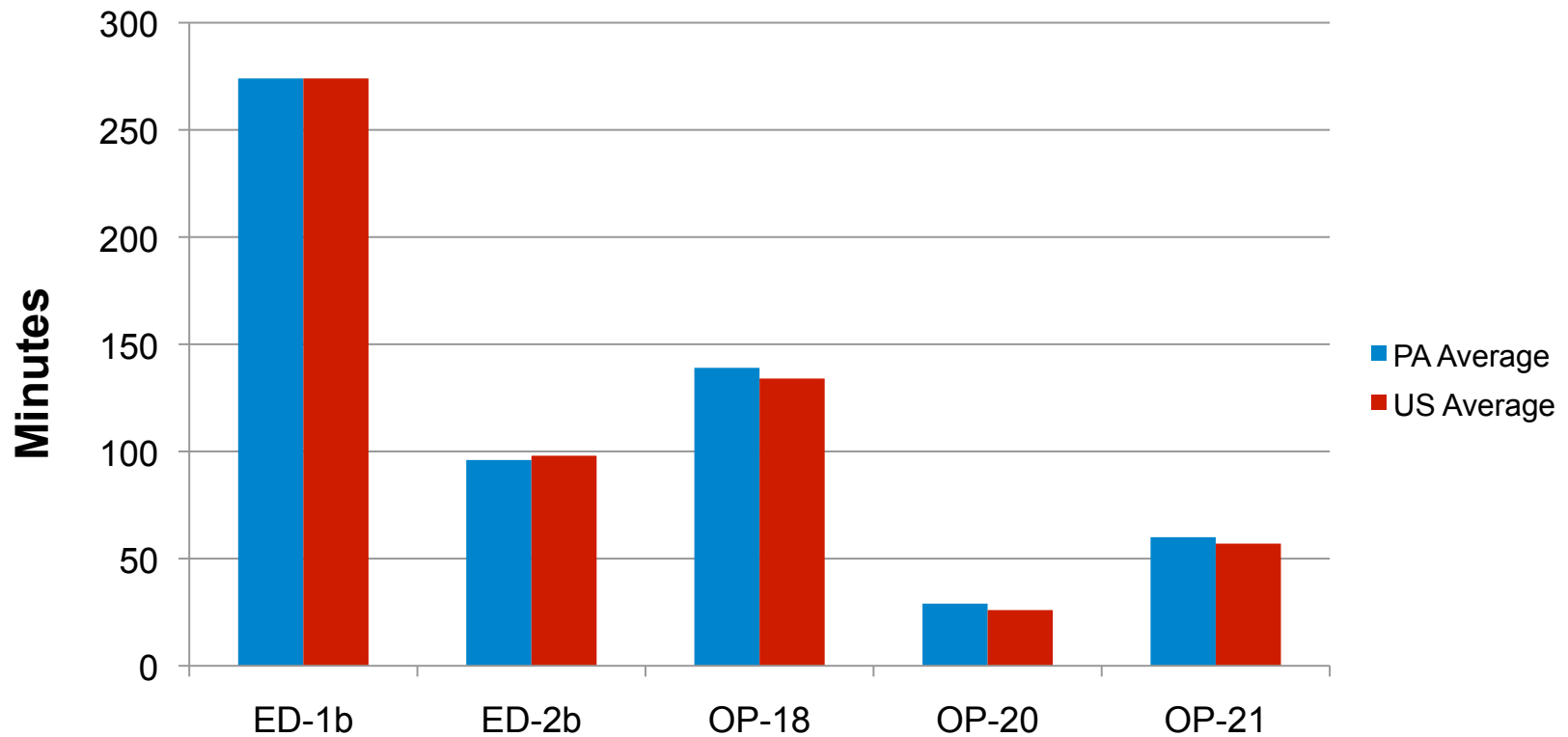
- Emergency Department (ED) measures display how timely and effective the care in a hospital's emergency department is delivered.
- Measures which show ED timeliness of care are displayed as an average in minutes, and thus may not reflect daily fluctuations of ED care.
- A lower score is better.
- ED measures are based on a limited sample each quarter and do not reflect the score of all ED patients.
- PHCQA began reporting these measures last year for Q2 2012.

YOY Comparison of PA Averages: ED Measures



- For these measures, a lower average is better.
- 3 of the 5 measures have improved since the previous year.

Q2 2013 ED Measures PA Average vs. US Average



- Pennsylvania performs better than the national average only for ED-2b.

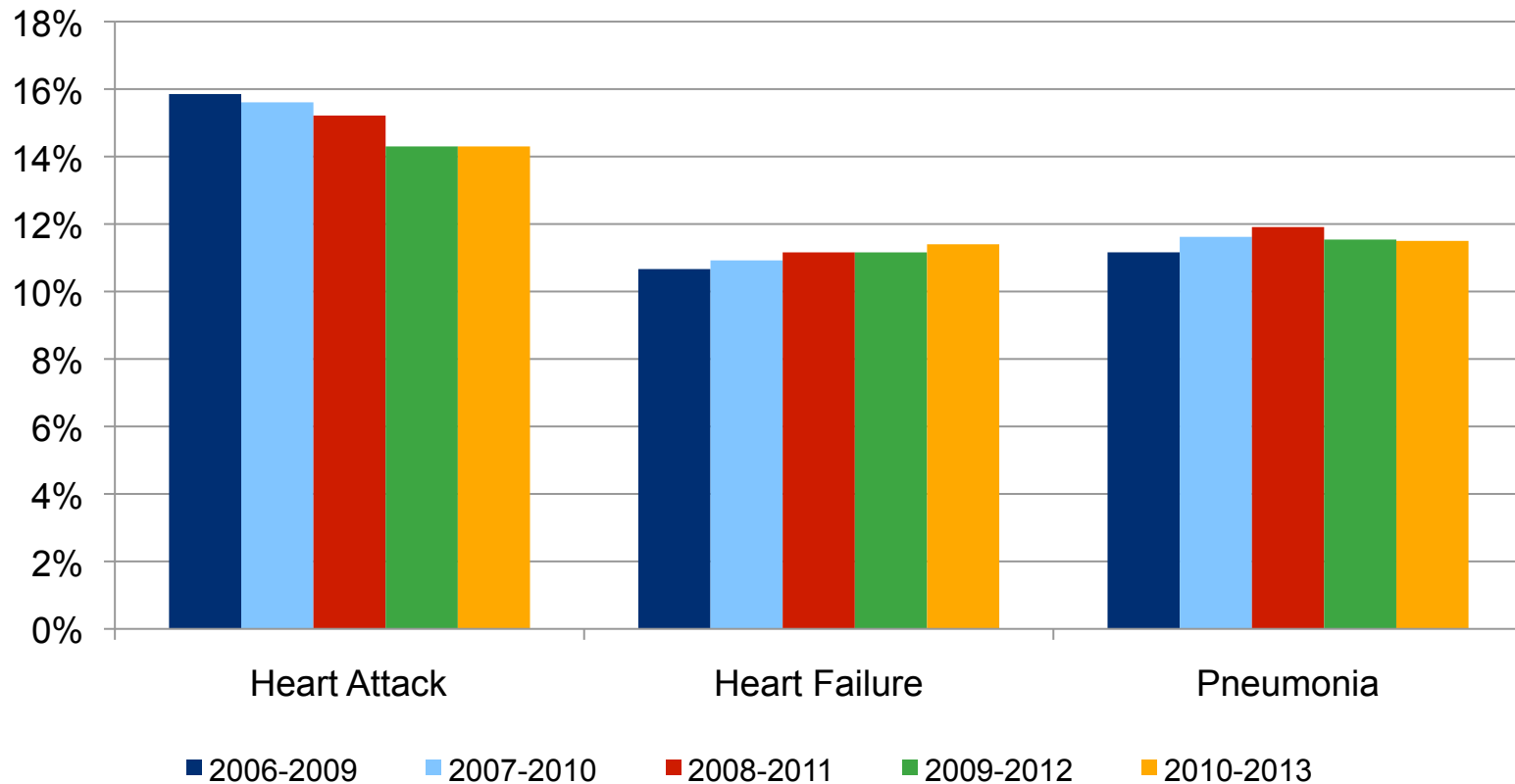


CMS Outcome Measures

Trend Analysis: CMS Outcome Measures

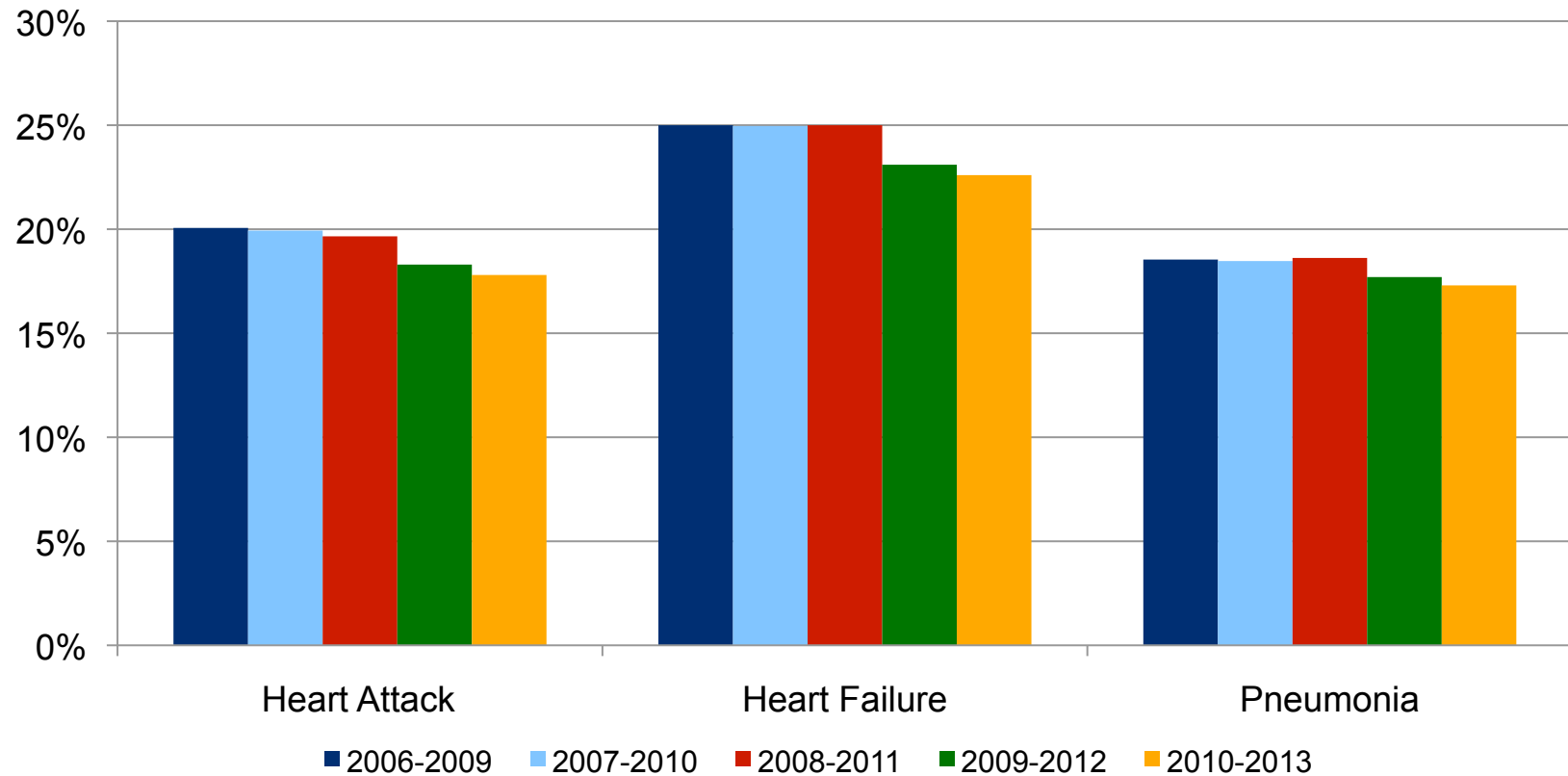
- We compared readmission and mortality performance over the past 7 years.
- Data for these measures cover a 3-year span.
- All mortality measure rates in Pennsylvania have remained relatively steady since the 2006-2009 reporting period.
- Pennsylvania hospitals performed better than US hospitals on average for all mortality measures.
- Pennsylvania readmission rates are almost identical to the national rates.
- The 30-day heart attack mortality measure is the only mortality measure that has improved over the measured 7-year period.

Pennsylvania Mortality Rates



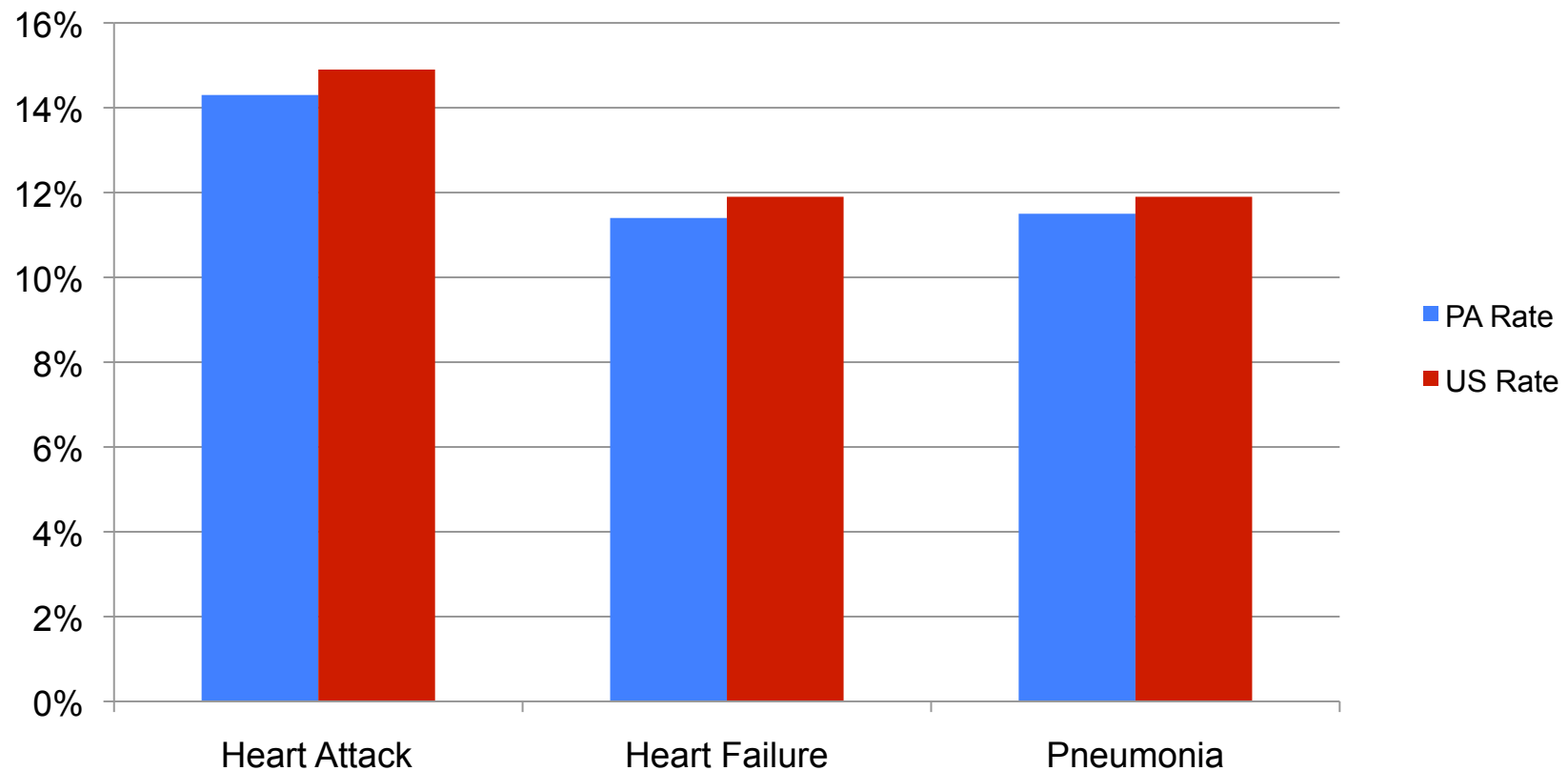
- Pennsylvania mortality rates have remained steady over the overlapping 5-year analysis periods.
- Heart Failure mortality performance has slightly worsened since the initial reporting period.

Pennsylvania Readmission Rates



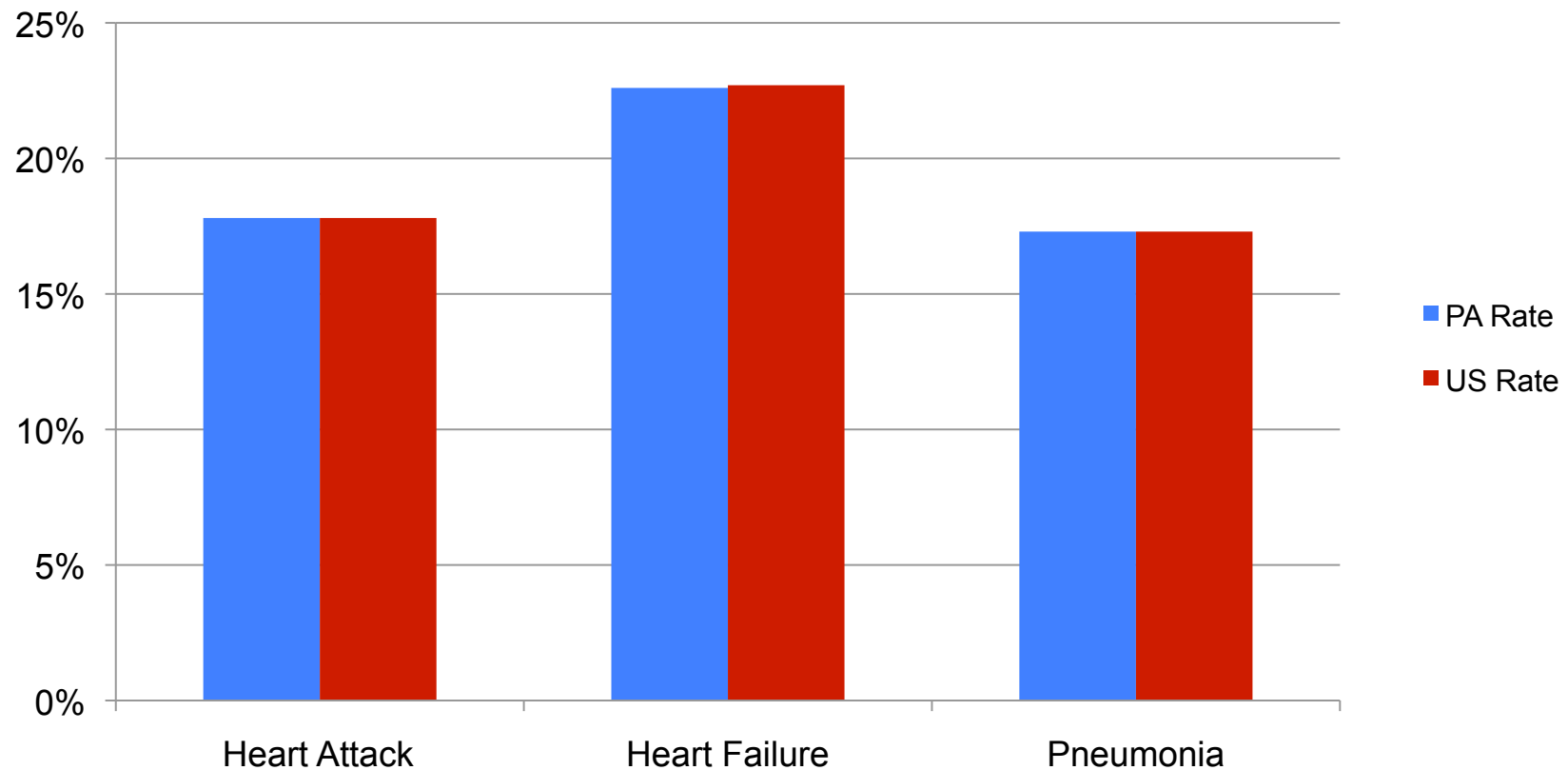
- Pennsylvania readmission rates have decreased for all measures during the overlapping 5-year analysis periods.

2010 – 2013 Mortality Rates: PA vs. US



- Pennsylvania mortality rates are slightly better than national mortality rates.

2010 – 2013 Readmission Rates: PA vs. US



- Pennsylvania readmission rates are almost identical to national readmission rates.

Pennsylvania Outcome Measures Trend Analysis

Performance Measure	2006-2009	2007-2010	2008-2011	2009-2012	2010-2013	Improvement from 2006-2013
<i>Readmission Measures</i>						
Heart Attack	20.1%	19.9%	19.7%	18.3%	17.8%	2.3%
Heart Failure	25.0%	25.0%	25.0%	23.1%	22.6%	2.4%
Pneumonia	18.5%	18.5%	18.6%	17.7%	17.3%	1.2%
<i>Mortality Measures</i>						
Heart Attack	15.9%	15.6%	15.2%	14.3%	14.3%	1.6%
Heart Failure	10.7%	10.9%	11.2%	11.2%	11.4%	-0.7%
Pneumonia	11.2%	11.6%	11.9%	11.5%	11.5%	-0.3%



Glossary of Measure Abbreviations

Glossary of Measure Abbreviations

Heart Attack Measures

- ¹ **AMI-1**: heart attack patients given aspirin at arrival
- **AMI-2**: heart attack patients given aspirin at discharge
- ¹ **AMI-3**: heart attack patients given ACE inhibitor or ARB for left ventricular systolic dysfunction (LVSD)
- ¹ **AMI-5**: heart attack patients given beta blocker at discharge
- **AMI-8a**: heart attack patients given PCI within 90 minutes of arrival
- ² **AMI-10**: Statin prescribed at discharge

Heart Failure Measures

- **HF-1**: heart failure patients given discharge instructions
- **HF-3**: heart failure patients given ACE inhibitor or ARB for left ventricular systolic dysfunction (LVSD)

Pneumonia Measures

- ¹ **PN-2**: pneumonia patients assessed and given pneumococcal vaccination
- **PN-3a** (JC): blood cultures for pneumonia patients in intensive care units
- **PN-3b**: pneumonia patients whose initial emergency room blood culture was performed prior to the administration of the first hospital dose of antibiotics
- ¹ **PN-5c**: pneumonia patients given initial antibiotic(s) within 6 hours after arrival
- **PN-6**: pneumonia patients given the most appropriate initial antibiotic(s)
- ¹ **PN-6a**: initial antibiotic selection for CAP in immunocompetent – ICU patient
- **PN-6b** (JC): initial antibiotic selection for CAP in immunocompetent – non ICU patient
- ¹ **PN-7**: pneumonia patients assessed and given influenza vaccination

Glossary of Measure Abbreviations

Surgical Care Measures

- **SCIP-CARD-2:** surgery patients who were taking heart drugs called beta blockers before coming to the hospital, who were kept on the beta blockers during the period just before and after their surgery
- **SCIP-INF-1:** surgery patients who were given an antibiotic at the right time (within one hour before surgery) to help prevent infection
- **SCIP-INF-2:** surgery patients who were given the right kind of antibiotic to help prevent infection
- **SCIP-INF-3:** surgery patients whose preventive antibiotics were stopped at the right time (within 24 hours after surgery)
- **SCIP-INF-4:** heart surgery patients whose blood sugar (blood glucose) is kept under good control in the days right after surgery
- **SCIP-INF-9:** surgery patients whose urinary catheters were removed on the first or second day after surgery
- ² **SCIP-INF-10:** surgery patients with perioperative temperature management
- ³ **SCIP-VTE-1:** surgery patients whose doctors ordered treatments to prevent blood clots after certain types of surgeries
- **SCIP-VTE-2:** patients who got treatment at the right time (within 24 hours before or after their surgery) to help prevent blood clots after certain types of surgery

² Added in 2013

³ Removed in 2014

Glossary of Measure Abbreviations

HCAHPS Measures

- **H-COMP-1:** nurses always communicated well
- **H-COMP-2:** doctors always communicated well
- **H-COMP-3:** patients always received help as soon as they wanted
- **H-COMP-4:** pain was always well controlled
- **H-COMP-5:** staff always explained medicines before giving them to patients
- **H-COMP-6:** patients were given information about what to do during their recovery at home
- **H-CLEAN-HSP:** rooms and bathrooms were always clean
- **H-QUIET-HSP:** rooms were always quiet at night
- **H-HSP-RATING:** patients who gave a rating of 9 or 10 overall out of 10
- **H-RECMND:** patients who would definitely recommend the hospital to family and friends

² Emergency Department Measures

- **ED-1b:** time from ED arrival to ED departure for admitted patients
- **ED-2b:** time from admit decision to departure time from the ED for admitted patients
- **OP-18:** median time from ED arrival to ED departure for discharged ED patients
- **OP-20:** door to diagnostic evaluation by a qualified medical professional
- **OP-21:** median time to pain management for long bone fracture

² Prevention Measures

- **IMM-1a:** percent of patients who are considered high risk for pneumococcal infection and were screened for vaccine or vaccinated prior to discharge
- **IMM-2:** percent of acute care hospitalized patients age 6 months and older screened for seasonal influenza immunization status or vaccinated prior to discharge