



**State of the State:
Hospital Performance in Pennsylvania
August 2010**

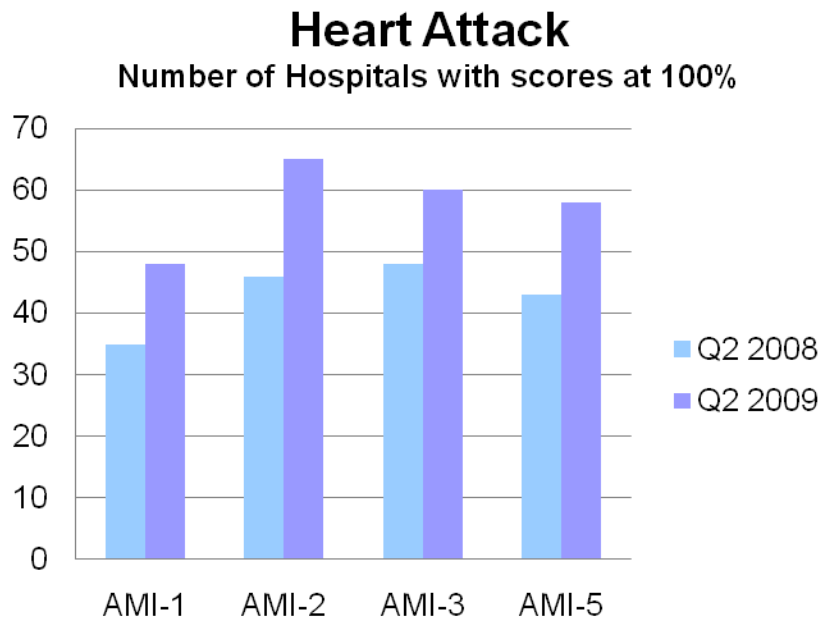
Measuring Progress in PA Hospital Performance: Process Measures

Quality Measures Analysis

- We reviewed the latest year-over-year changes in the Process Measures in our Progress and Performance Report measure set.
- 21 Process Measures (18 from CMS and 3 from Joint Commission) that are reported on the PHCQA website were examined for the Q307-Q208 and the Q308-Q209 time periods:
 - 5 Heart Attack Measures (AMI-1, AMI-2, AMI-3, AMI-5 and AMI-8a)
 - 2 Heart Failure Measures (HF-1 and HF-3)
 - 8 Pneumonia Measures (PN-2, PN-3a, PN-3b, PN-5c, PN-6, PN-6a, PN-6b and PN-7)
 - 5 SCIP Measures (SCIP-INF-1, SCIP-INF-2, SCIP-INF-3, SCIP-INF-4, SCIP-VTE-1, and SCIP-VTE-2)
 - SCIP-INF-4 data was only included in the Q308-Q209 time period analysis, but not in the historical trend analysis, given that CMS only started reporting data in Q108.
 - SCIP-CARD-2 was not included in the analysis given that CMS only started reporting data in Q109.
- CMS outcome measures (readmission and mortality rates) for two overlapping 3 year periods

Q308-Q209 CMS Process Measures Data for PA Hospitals: Overall Findings

- PA hospitals tend to perform above average compared with all US hospitals.
 - PA rates (weighted-averages based on volume) were higher than or equal to national rates for all 21 process measures.
 - The PA averages (non-weighted based on institution) were at or above the CMS national averages for all but two of the 17 CMS process measures.
- A large number of number of hospitals have achieved 100% compliance in most of the Heart Attack process measures.



YOY Comparisons between Q2 2008 and Q2 2009 CMS Process Measures Data for PA Hospitals

- Overall, process measure scores for PA hospitals improved across the board from the Q307-Q208 time period to the Q308-Q209 time period:
 - The PA Medians and Averages for all 20 process measures either increased or remained the same from Q307-Q208 to Q308-Q209.
 - PA Rates stayed the same or went up for all 20 measures. The PA Rate for AMI-8a (PCI within 90 minutes) went up nearly 7 percentage points.
 - The standard deviations for PA hospitals decreased for 16 of 20 process measures from Q307-Q208 to Q308-Q209 (two AMI, one HF, and one PN had larger SDs in the Q308-Q209 time period).
- Increases in performance in PA hospitals were consistent with performance of hospitals nationwide from the Q307-Q208 time period to the Q308-Q209 time.
 - The US Averages, US Rates and National Top Ten Percentiles either increased or remained the same for all 20 process measures.

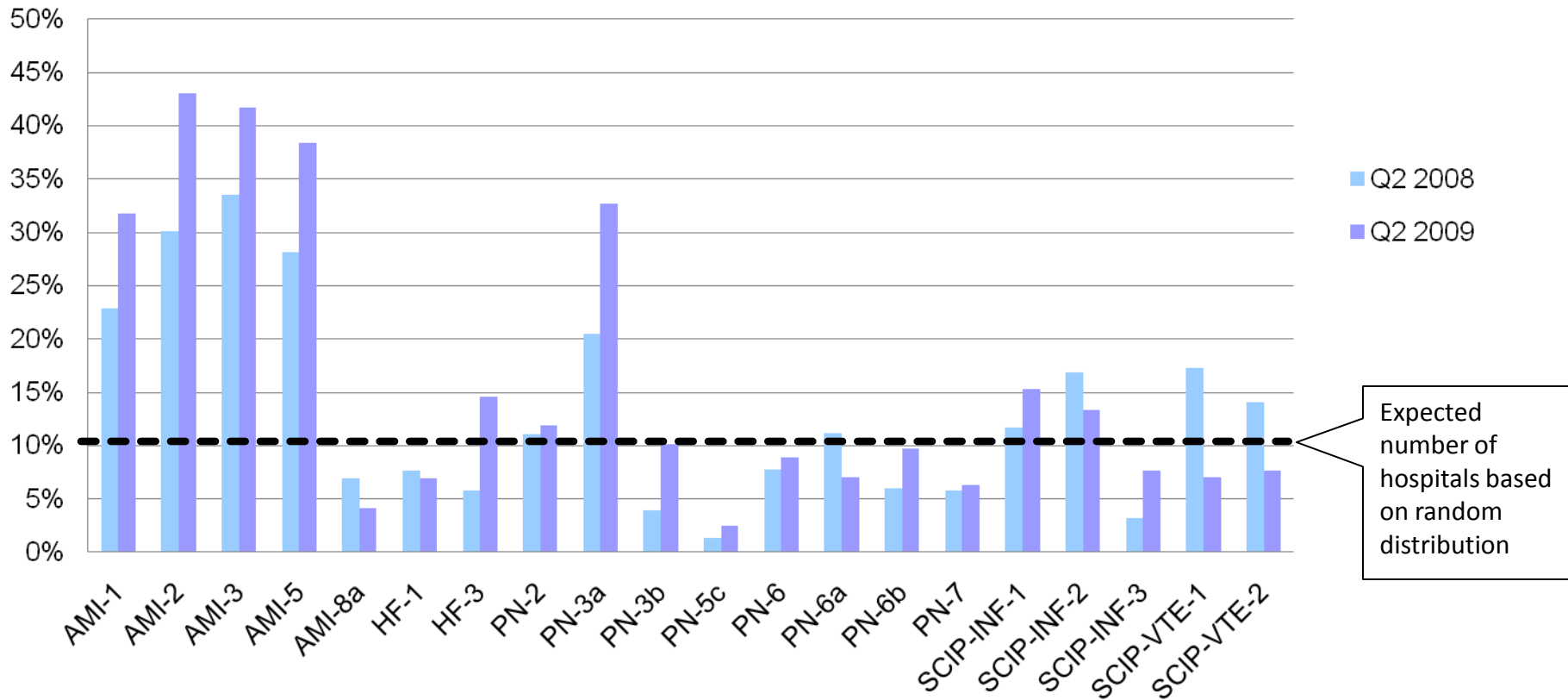
YOY Comparisons between Q2 2008 and Q2 2009 CMS Process Measures Data for PA Hospitals

- The PA score improvements in each of the 20 process measures were either comparable to or better than national score improvements over the same time frame.
 - In June 2008, PA average scores for 15 of 17 CMS process measures were higher or equal to US averages, while in June 2009, PA average scores for 16 of 17 CMS process measures at least as high as the US averages.
 - PA rates for all of the process measures were greater than or equal to US Rates in both Q208 and Q209.
- There were no instances in which PA averages or rates fell below national averages or rates if they exceeded them in the prior period.

YOY Comparisons between Q2 2008 and Q2 2009 CMS Process Measures Data for PA Hospitals

There was an increase in the percentage of PA hospitals in top tenth percentile nationwide from Q307-Q208 to Q308-Q209 for 13 process measures

% of PA Hospitals greater than or equal to US Top 10th Percentile



Measuring Progress in PA Hospital Performance: HCAHPS Measures

HCAHPS Patient Experience Analysis

- We reviewed the latest year-over-year changes in the CMS HCAHPS Measures in our Progress and Performance Report measure set.
- 10 CMS HCAHPS Measures that are reported on the PHCQA website were examined for the Q307-Q208 and the Q308-Q209 time periods:
 - 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 for the Q308-Q209 time period.

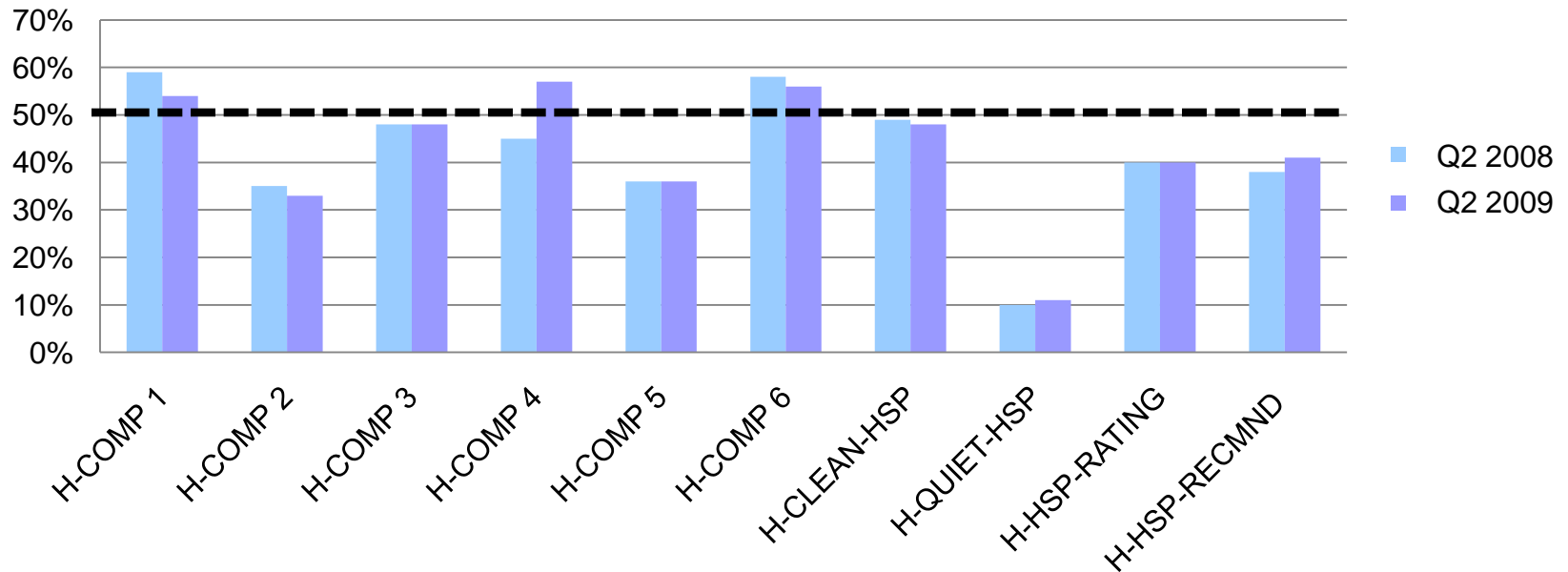
YOY Comparisons between Q2 2008 and Q2 2009 HCAHPS Measures Data for PA Hospitals

- PA hospitals' Q308-Q209 HCAHPS scores tend to perform below average compared with hospitals nationwide.
 - PA average scores never exceeded national score, but 3 measures were equal to the national score (H-COMP-1, H-COMP-4, and H-COMP-6).
 - Those same three measures were the only HCAHPS measures on which more than half of the hospitals in PA scored above the national average.
- Overall, PA hospitals appeared to exhibit small but steady increases on HCAHPS scores across the board from Q307-Q208 to Q308-Q209:
 - All PA medians and averages either increased or remained the same from Q307-Q208 to Q308-Q209
 - However, increases were modest; none of the PA medians or averages increased by more than two percentage points from Q307-Q208 to Q308-Q209.
- Changes in HCAHPS scores for hospitals nationwide were similar to changes in PA scores from Q307-Q208 to Q308-Q209.
 - The US averages increased for 6 HCAHPS measures, while U.S. averages for 4 HCAHPS measures remained the same.

YOY Comparisons between Q2 2008 and Q2 2009 HCAHPS Measures Data for PA Hospitals

H-COMP-1, H-COMP-4, and H-COMP-6 were the only three HCAHPS measures on which more than half of the hospitals in PA scored above the national average.

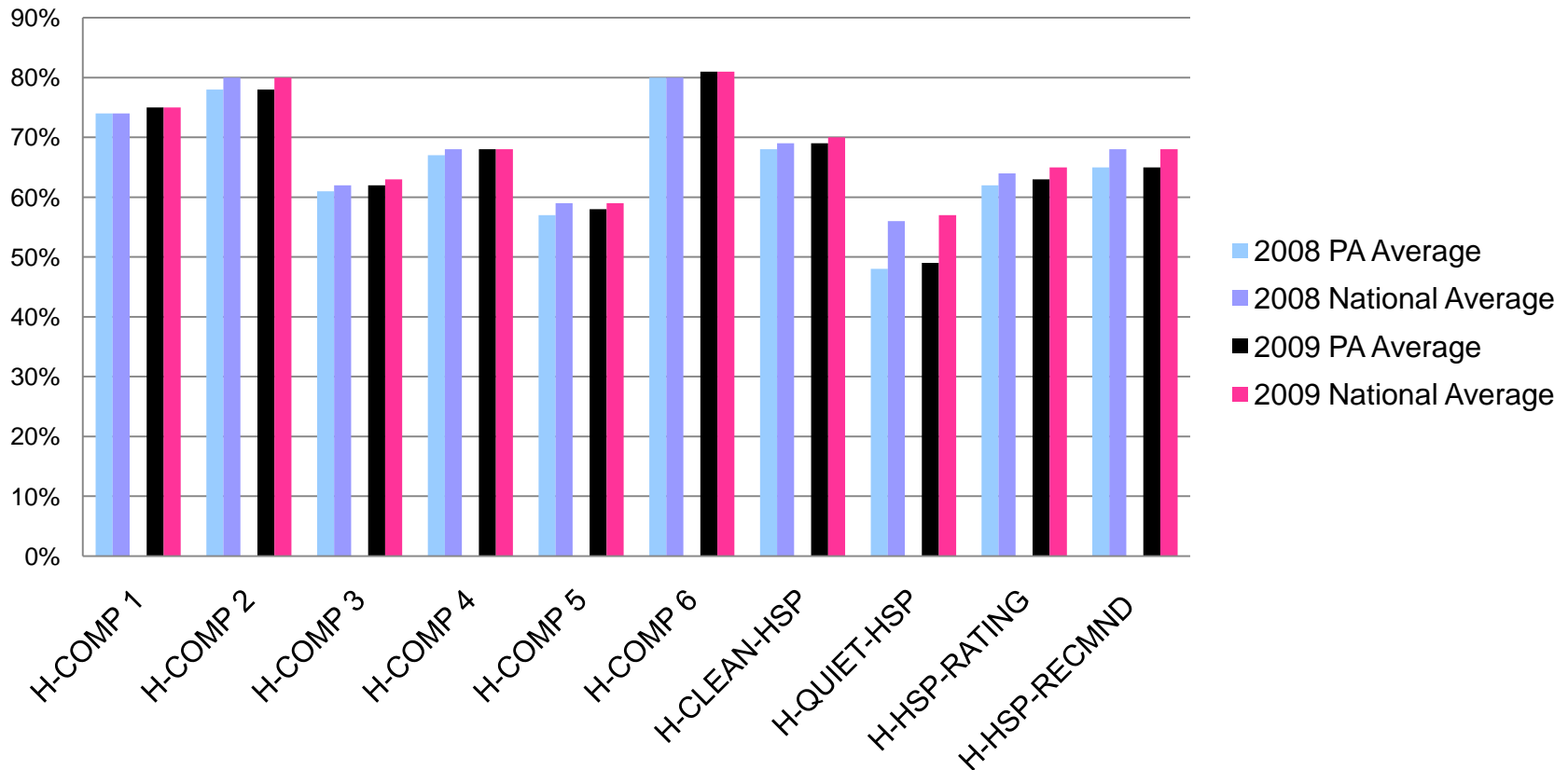
PA Hospitals Scoring Above National Average



YOY Comparisons between Q2 2008 and Q2 2009 HCAHPS Measures Data for PA Hospitals

The difference between PA Averages and US Averages is about the same for both the Q307-Q208 and Q308-Q209 time periods.

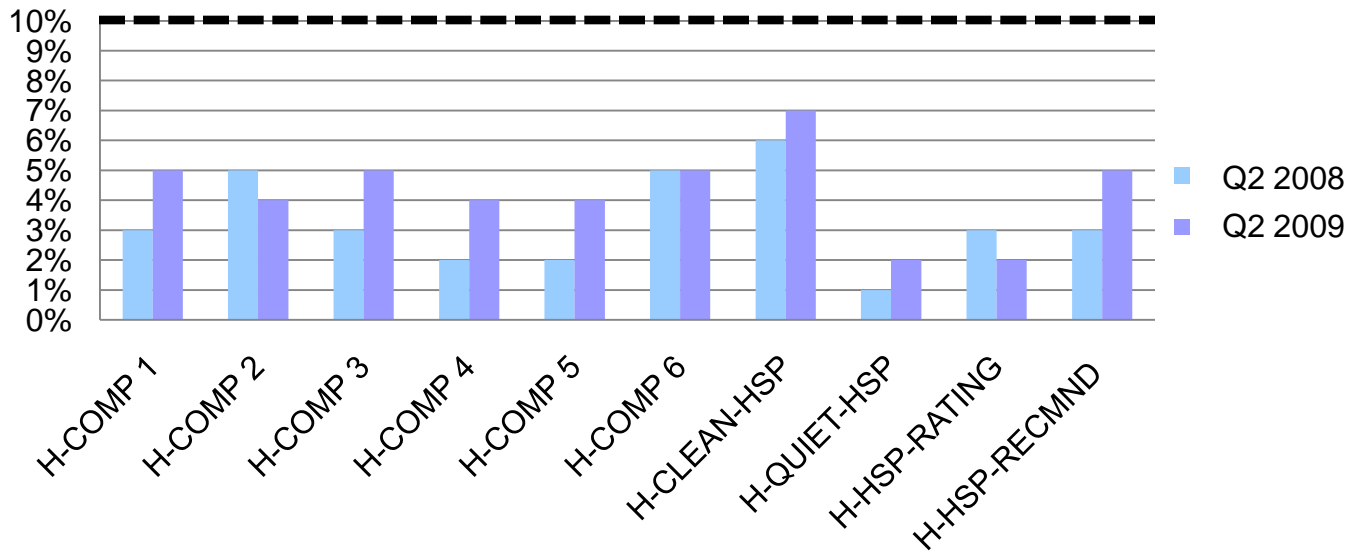
PA vs. National Averages



YOY Comparisons between Q2 2008 and Q2 2009 HCAHPS Measures Data for PA Hospitals

- The percentage of PA hospitals in top tenth percentile nationwide increased from Q307-Q208 to Q308-Q209 for seven HCAHPS measures.

PA Hospitals in the Top Tenth Percentile Nationwide



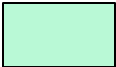
- PA has fewer top performing hospitals (top tenth percentile) than one would expect based on a random distribution.

Q308-Q209 CMS HCAHPS Measures Data for PA Hospitals: Correlations

Hospital ratings and recommendations were most strongly correlated with:

- Nurse Communication ($r = 0.794$ and 0.703 , respectively)
- Responsiveness of Hospital Staff ($r = 0.681$ and 0.576 , respectively)
- Medicine Explained by Staff ($r = 0.677$ and 0.564 , respectively)

	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_RECM_ND
H_COMP_1	1.00									
H_COMP_2	0.75	1.00								
H_COMP_3	0.87	0.74	1.00							
H_COMP_4	0.72	0.40	0.61	1.00						
H_COMP_5	0.81	0.65	0.69	0.75	1.00					
H_COMP_6	0.46	0.32	0.42	0.40	0.39	1.00				
H_CLEAN_HSP	0.58	0.35	0.66	0.52	0.51	0.32	1.00			
H_QUIET_HSP	0.35	0.18	0.37	0.48	0.51	0.22	0.42	1.00		
H_HSP_RATING	0.78	0.54	0.66	0.65	0.65	0.55	0.42	0.35	1.00	
H_RECM_ND	0.69	0.54	0.55	0.44	0.54	0.44	0.20	0.12	0.90	1.00

 = Strong correlation

HCAHPS Regional Analysis

- Rural hospitals scored better than or equivalent to the average scores of urban and large urban hospitals in 8 out of 10 HCAHPS Measures.
- Western PA Hospitals scores were greater than or equal to 8 out of 10 HCAHPS Measures.

HCAHPS Scores based on Region								
	All	Large Urban (Phil & Pitt)	Urban	Rural	West	Central	Northeast	Southeast
# of Hospitals	162	66	52	44	61	31	31	39
Average Survey Response Rate	34%	32%	36%	34%	36%	37%	32%	29%
Average H-COMP-1 Score	68%	69%	65%	69%	70%	68%	63%	67%
Average H-COMP-2 Score	71%	71%	65%	73%	74%	71%	66%	69%
Average H-COMP-3 Score	56%	54%	55%	60%	58%	58%	53%	53%
Average H-COMP-4 Score	62%	63%	59%	62%	64%	61%	57%	62%
Average H-COMP-5 Score	52%	52%	50%	53%	54%	52%	48%	51%
Average H-COMP-6 Score	73%	75%	71%	75%	76%	75%	68%	73%
Average H-CLEAN-HSP Score	62%	60%	61%	66%	64%	64%	60%	59%
Average H-QUIET-HSP Score	45%	45%	43%	46%	46%	44%	42%	45%
Average H-HSP-RATING Score	57%	57%	57%	57%	59%	58%	53%	56%
Average H-RECMND Score	59%	61%	59%	57%	61%	60%	55%	59%

HCAHPS by Patient Days

Hospitals with higher volumes tended to have higher average scores on HCAHPS Measures than those with lower volumes.

HCAHPS Scores based on Patient Days		
	Lower Volume Hospitals ≤18432 Days	Higher Volume Hospitals ≥55296 Days
# of Hospitals	66	50
Average Survey Response Rate	28%	38%
Average H-COMP-1 Score	58%	74%
Average H-COMP-2 Score	60%	77%
Average H-COMP-3 Score	50%	59%
Average H-COMP-4 Score	52%	67%
Average H-COMP-5 Score	44%	57%
Average H-COMP-6 Score	61%	81%
Average H-CLEAN-HSP Score	56%	65%
Average H-QUIET-HSP Score	41%	47%
Average H-HSP-RATING Score	49%	64%
Average H-RECMND Score	48%	69%

HCAHPS by Facility Size

Larger hospitals tended to have slightly higher average scores than smaller hospitals based on bed size.

HCAHPS SCORES BASED ON NUMBER OF BEDS							
	All	< 100	101-250	251-399	400+	Bottom Quartile Hospitals (<=79 Staffed Beds)	Top Quartile Hospitals (>238 Staffed Beds)
# of Hospitals	159	55	65	18	21	45	45
Average Survey Response Rate	34%	30%	36%	40%	36%	28%	36%
Average H-COMP-1 Score	69%	62%	73%	74%	74%	59%	71%
Average H-COMP-2 Score	72%	64%	76%	77%	76%	60%	73%
Average H-COMP-3 Score	57%	53%	59%	60%	58%	51%	56%
Average H-COMP-4 Score	63%	56%	66%	68%	67%	53%	64%
Average H-COMP-5 Score	53%	47%	55%	56%	57%	44%	54%
Average H-COMP-6 Score	75%	66%	79%	80%	81%	62%	77%
Average H-CLEAN-HSP Score	63%	59%	66%	65%	62%	57%	61%
Average H-QUIET-HSP Score	46%	43%	47%	46%	48%	41%	45%
Average H-HSP-RATING Score	58%	52%	60%	64%	64%	50%	61%
Average H-RECMND Score	60%	51%	62%	69%	70%	49%	66%

Teaching vs. Non-Teaching Hospital

Both types of teaching hospitals (Medical Colleges and Medical Affiliation Hospitals) scored better on average than non-teaching hospitals for all HCAHPS Measures.

HCAHPS Scores based on Teaching or Non-Teaching Hospital				
	All	Medical College	Medical Affiliation	Non-teaching
# of Hospitals	162	8	72	82
Average Survey Response Rate	34%	38%	36%	31%
Average H-COMP-1 Score	68%	74%	73%	62%
Average H-COMP-2 Score	71%	76%	77%	64%
Average H-COMP-3 Score	56%	59%	60%	53%
Average H-COMP-4 Score	62%	67%	67%	57%
Average H-COMP-5 Score	52%	56%	57%	47%
Average H-COMP-6 Score	73%	80%	80%	67%
Average H-CLEAN-HSP Score	62%	68%	65%	59%
Average H-QUIET-HSP Score	45%	47%	48%	42%
Average H-HSP-RATING Score	57%	64%	62%	52%
Average H-RECMND Score	59%	65%	65%	53%

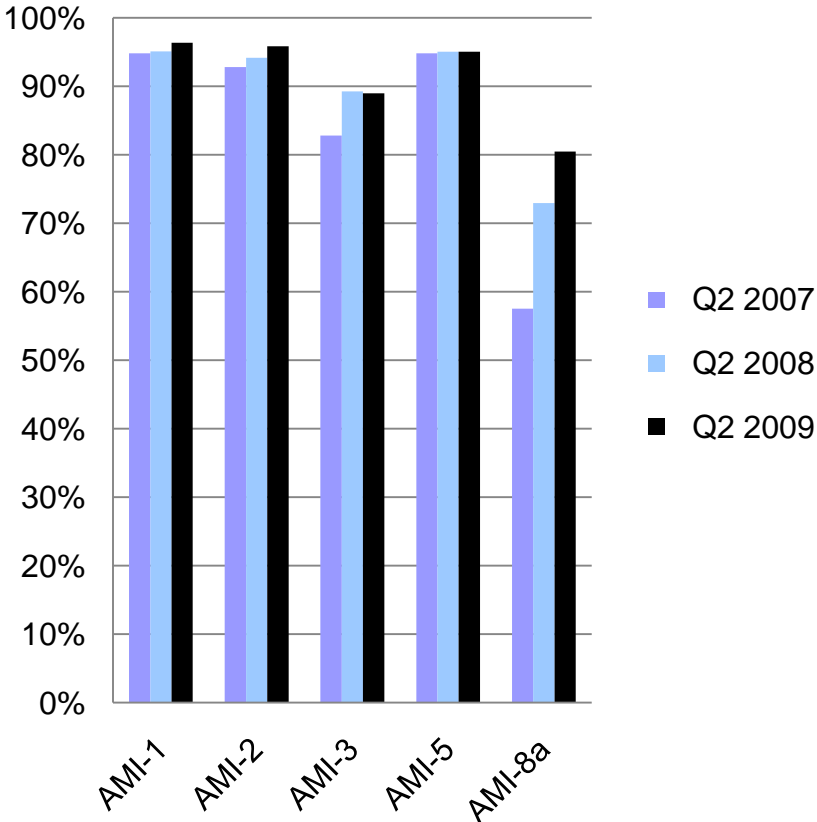
“Trend” Analysis: Process Measures

3 year “Trend” Analysis

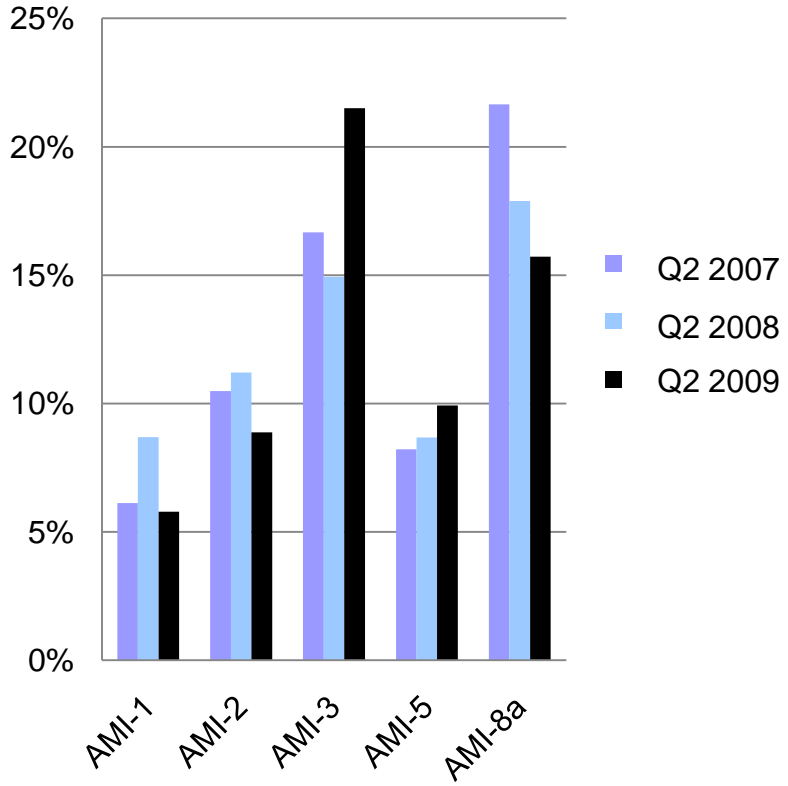
- We compared changes in the CMS and Joint Commission process measures in our Progress and Performance Report measure set over the past 3 years as well as appropriate care measure (composite scores) and the CMS outcome measures.
- All process measures showed improvement and nearly all measures showed a drop in score variation as indicated by lower standard deviations.
- The heart attack indicator AMI-8a (PCI within 90 minutes) had the largest percentage point improvement over the measured 3 year period.
- CMS outcome measures remained virtually unchanged between the two comparison periods.

3 Year AMI Trend Analysis

Heart Attack Measures Yearly Averages

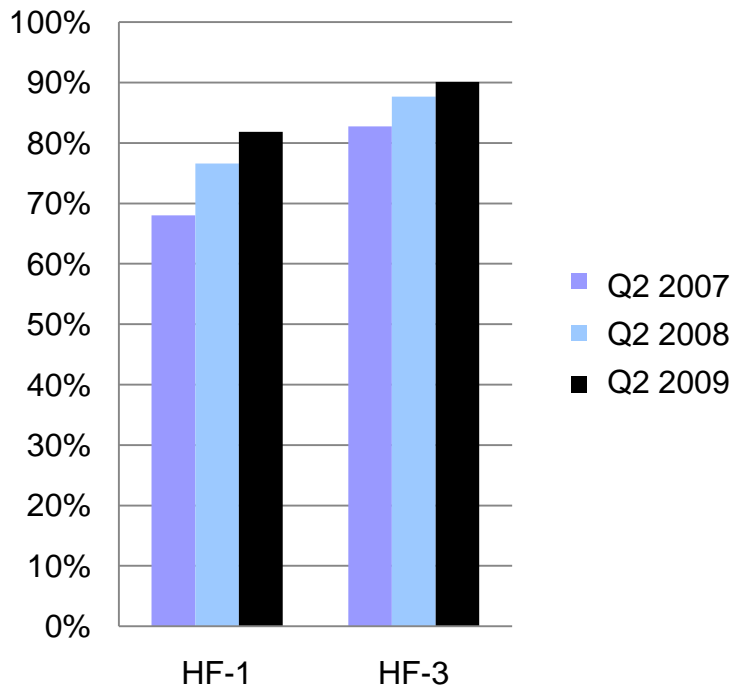


Heart Attack Measures Yearly Standard Deviation

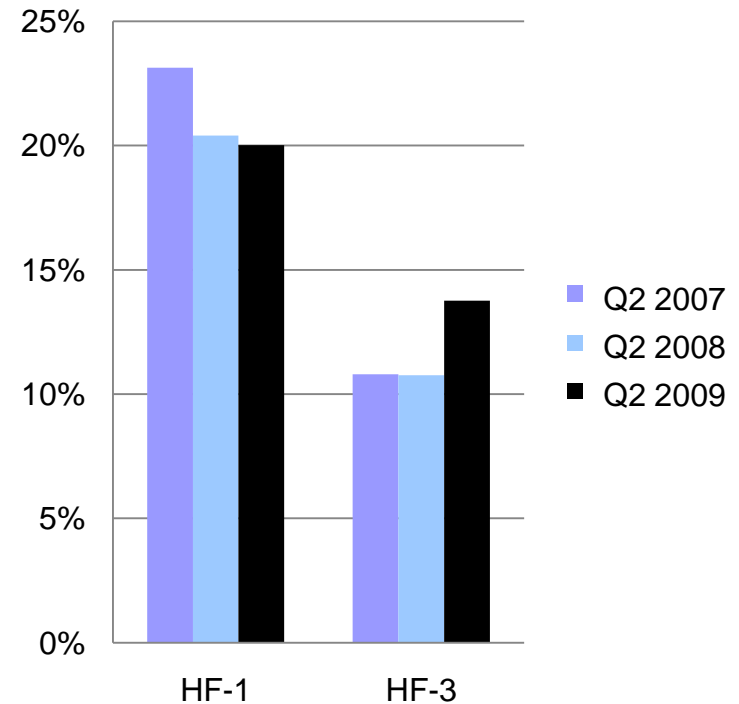


3 Year HF Trend Analysis

Heart Failure Measures Yearly Averages

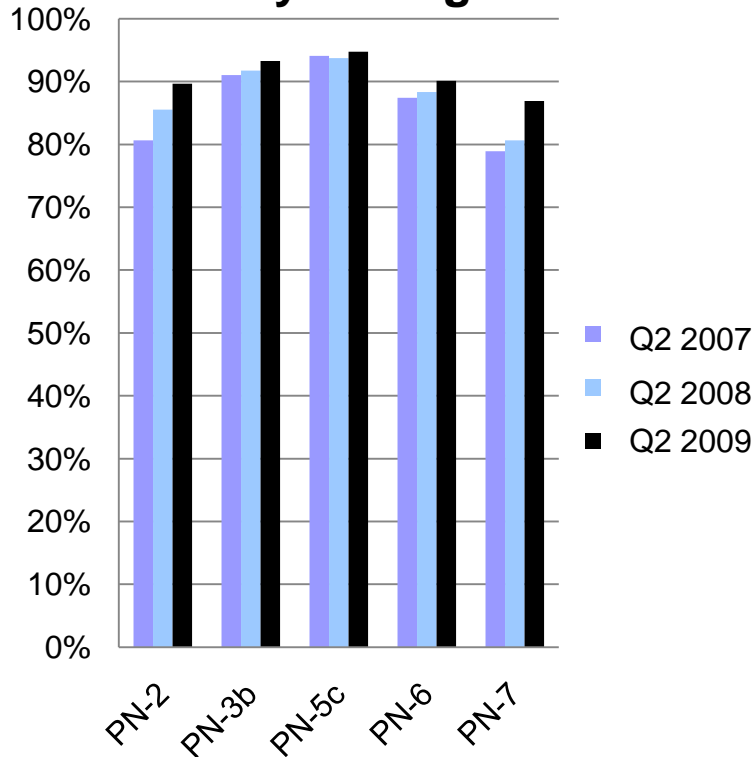


Heart Failure Measures Yearly Standard Deviation

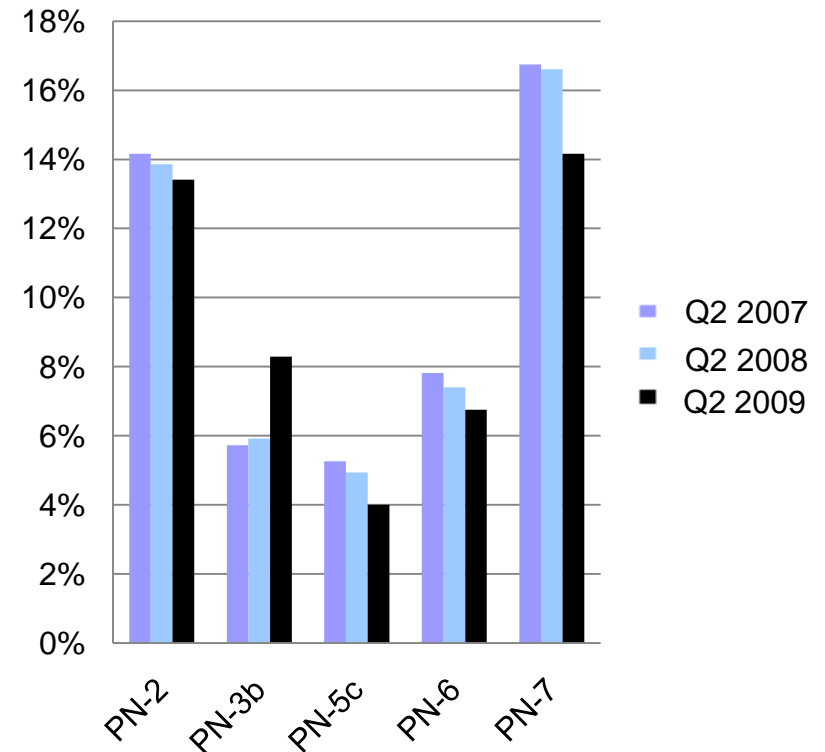


3 Year PN Trend Analysis

Pneumonia Measures Yearly Averages

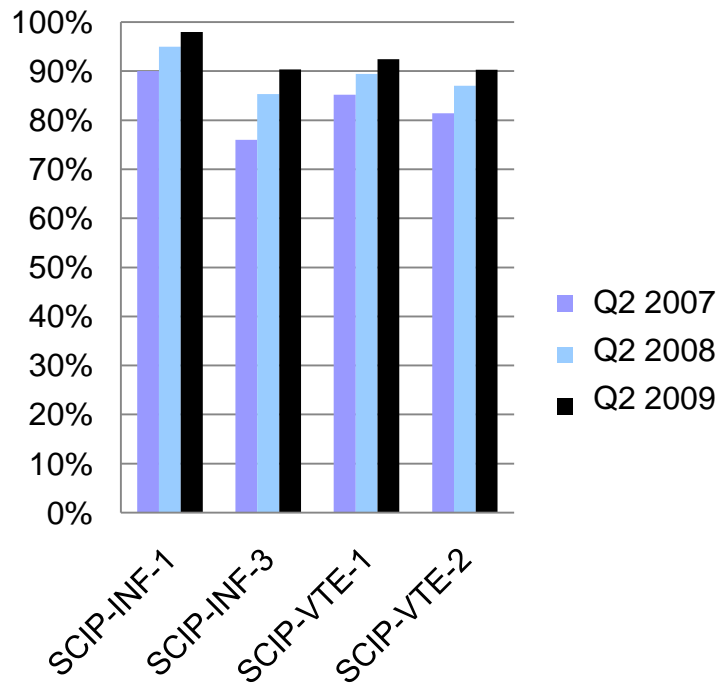


Pneumonia Measures Yearly Standard Deviation

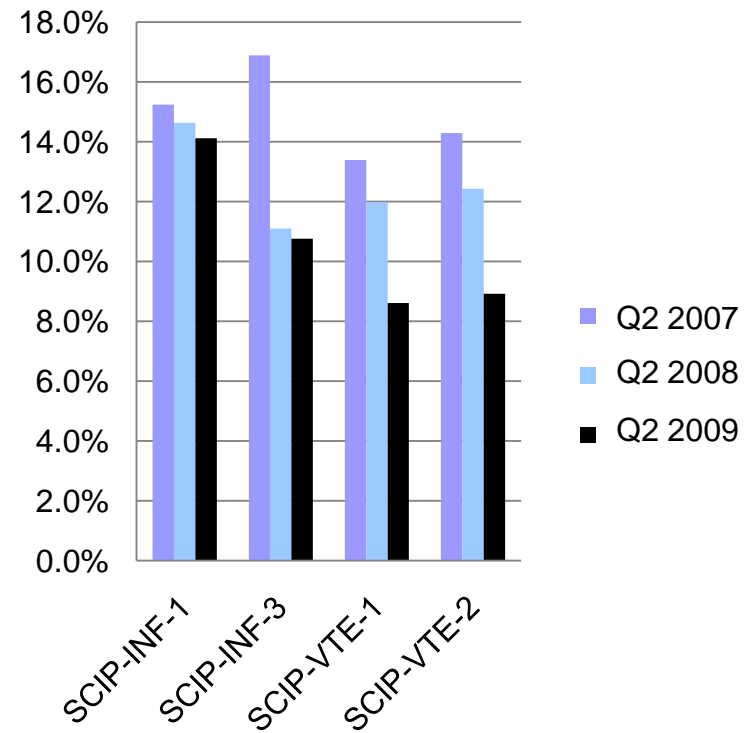


3 Year SCIP Trend Analysis

Surgical Care Yearly Averages



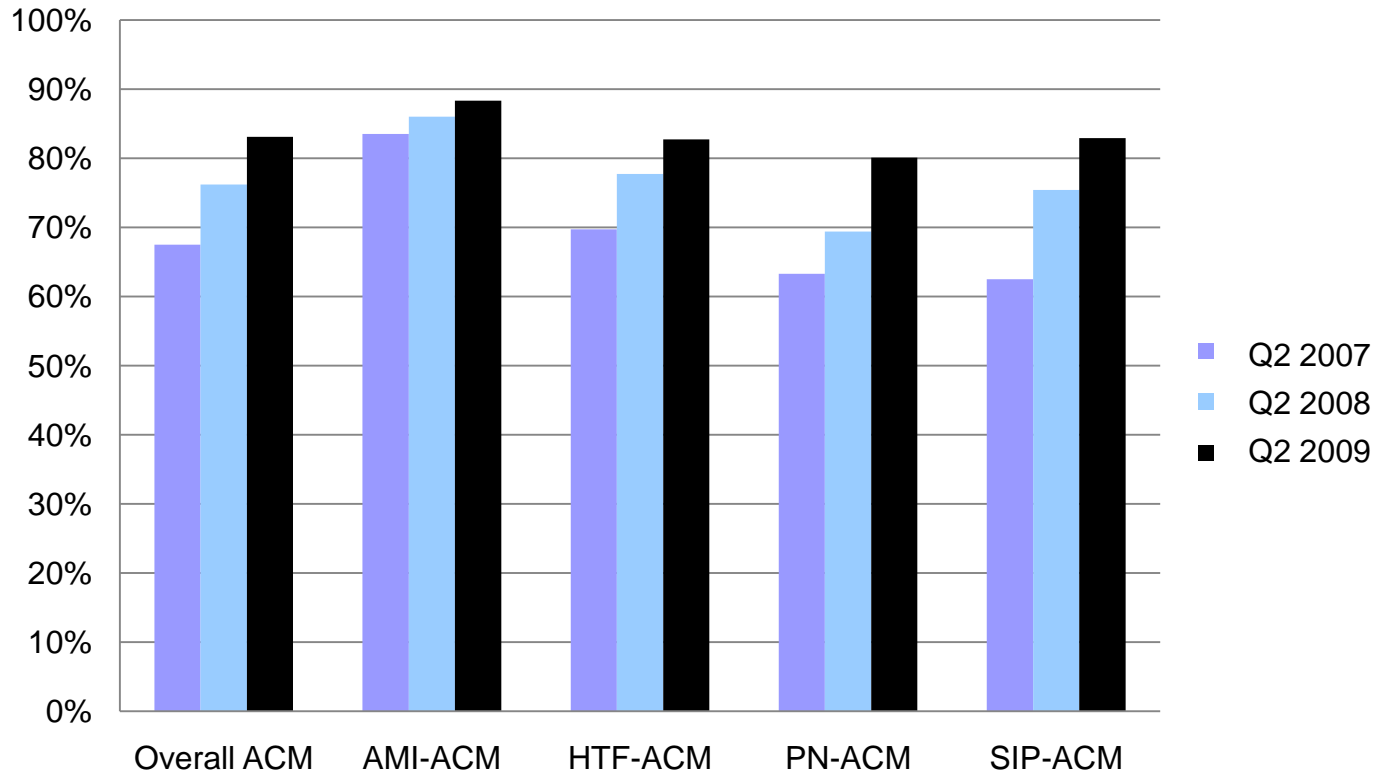
Surgical Care Yearly Standard Deviation



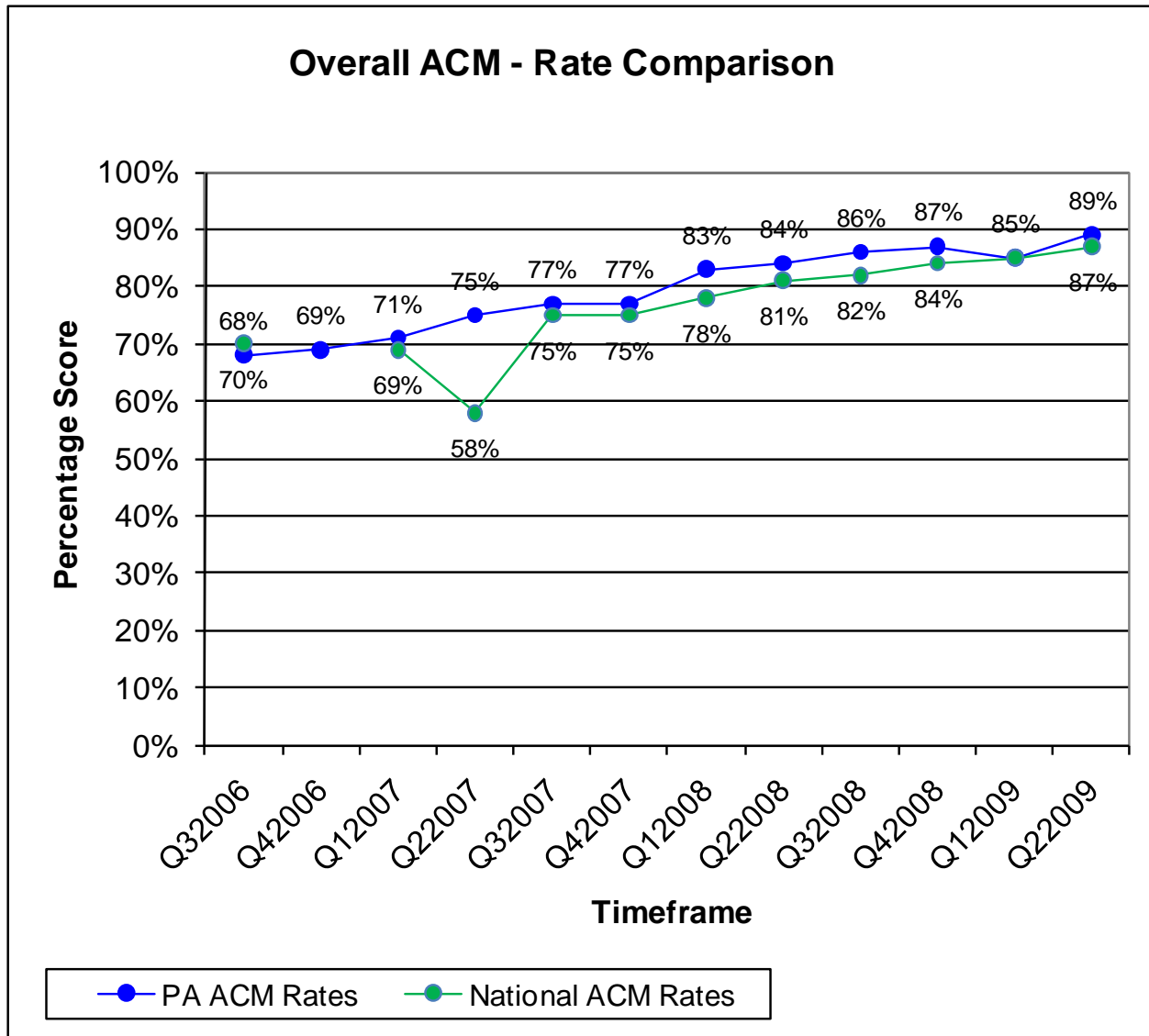
Composite Scores: Appropriate Care Measures

PA Hospitals improved their composite scores in across all clinical categories over the 3 year period.

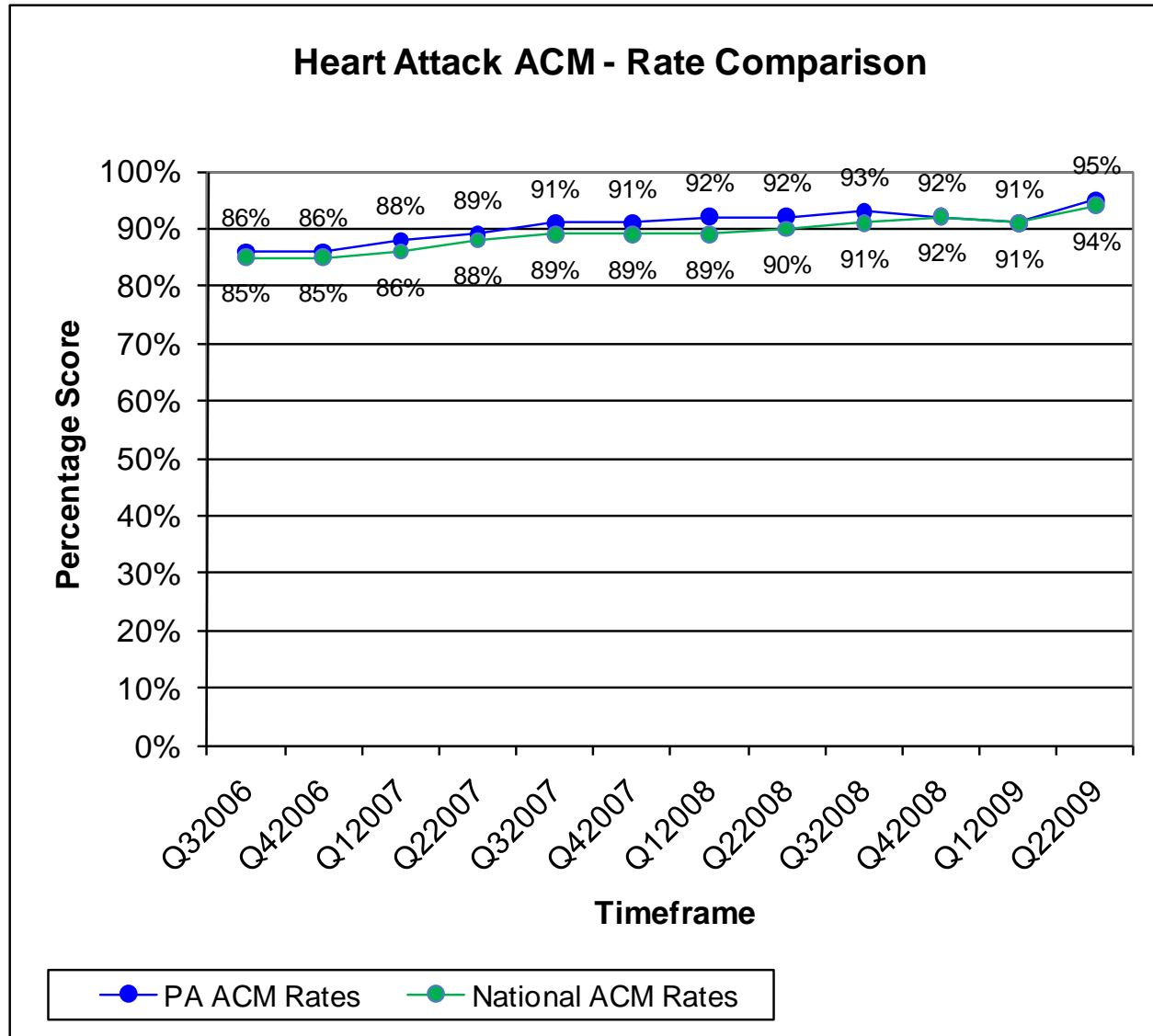
Appropriate Care Measures



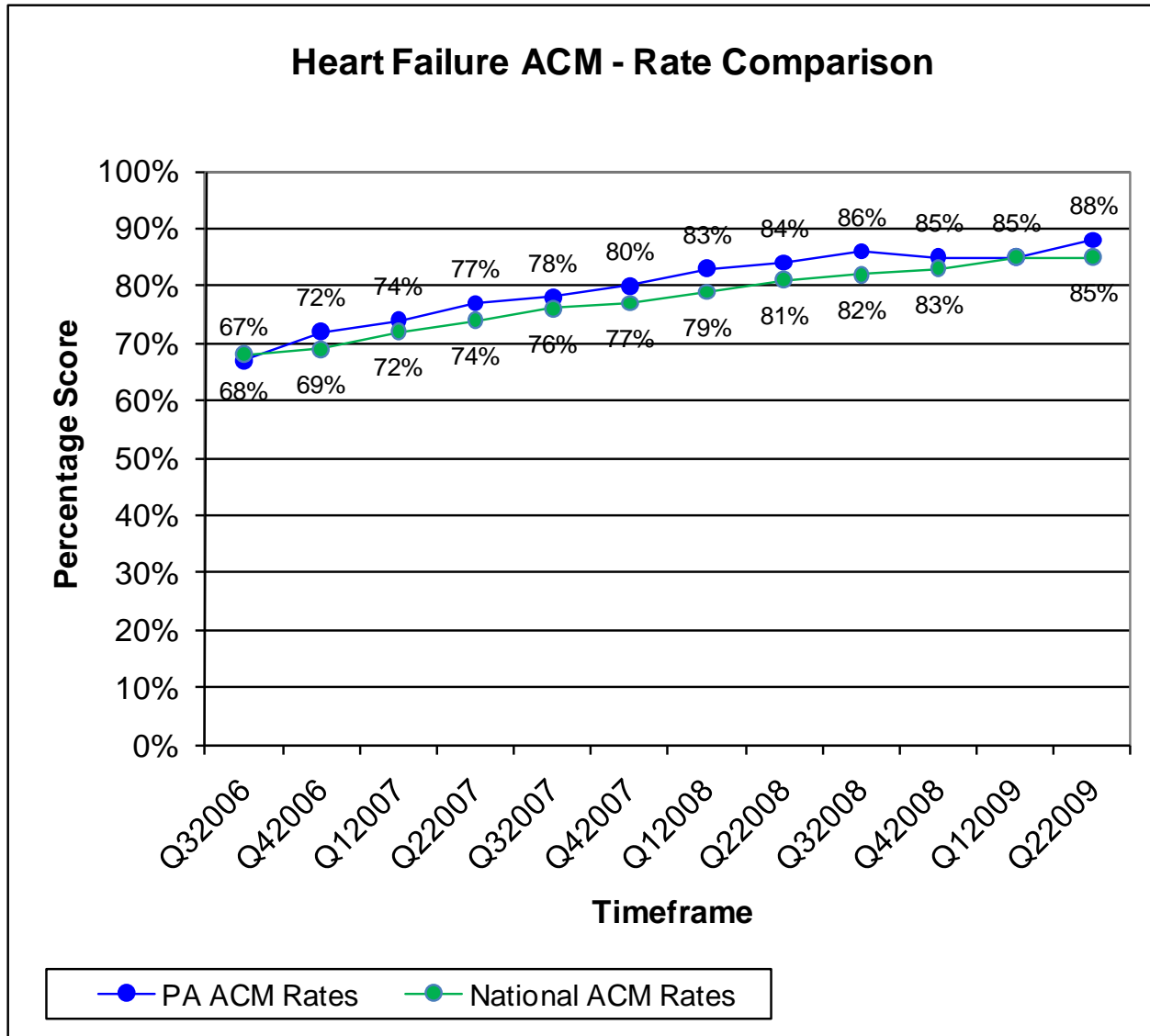
3 Year Appropriate Care Measures: Pennsylvania vs. National Rates



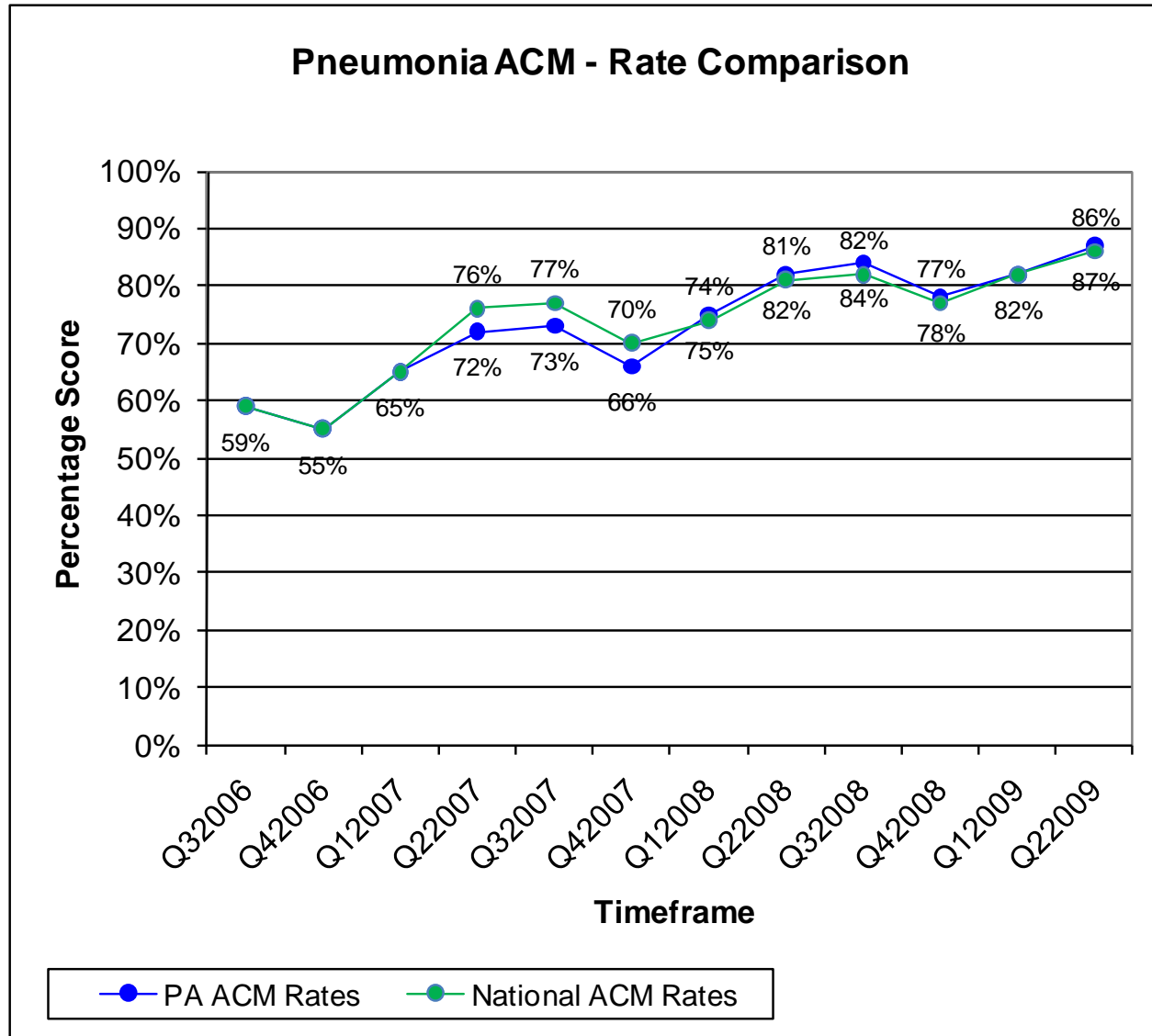
3 Year Appropriate Care Measures: Pennsylvania vs. National Rates



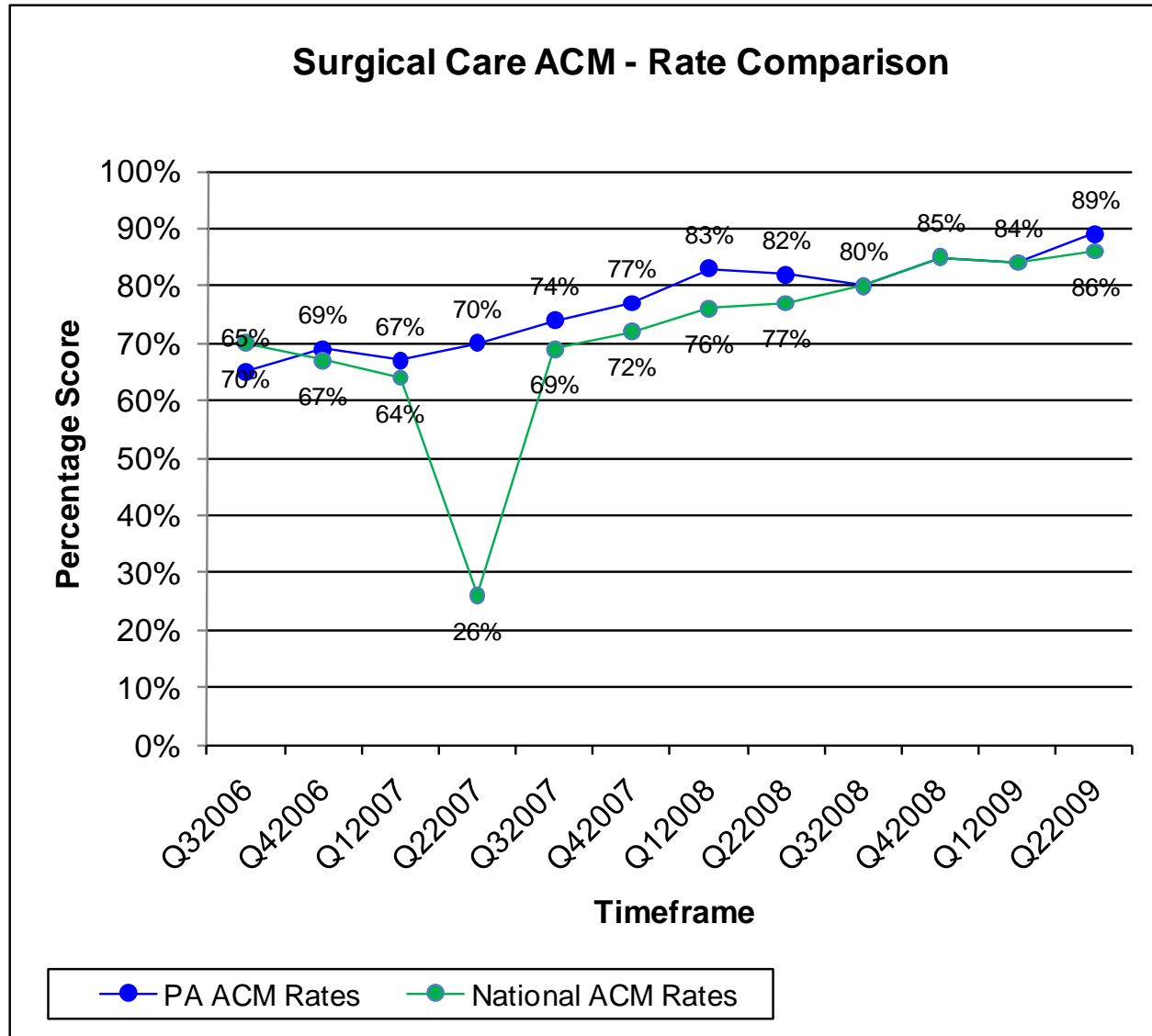
3 Year Appropriate Care Measures: Pennsylvania vs. National Rates



3 Year Appropriate Care Measures: Pennsylvania vs. National Rates



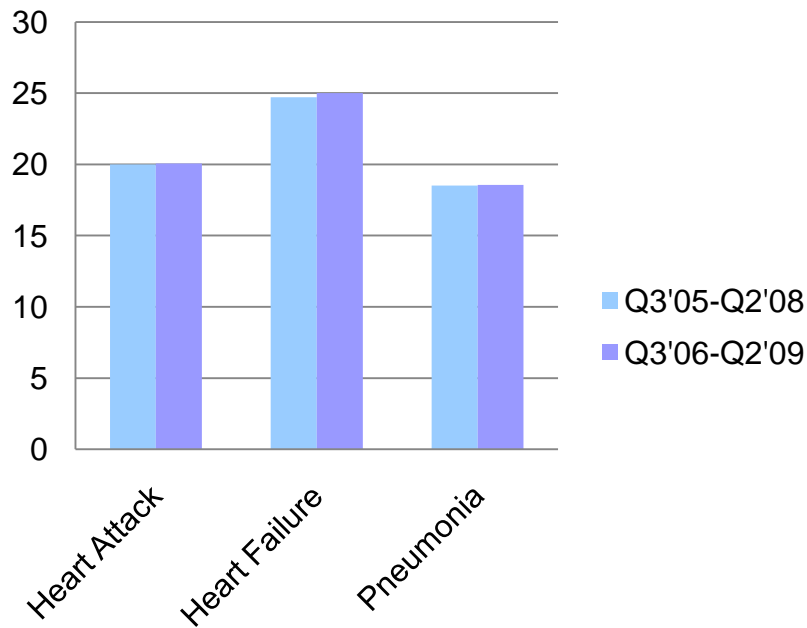
3 Year Appropriate Care Measures: Pennsylvania vs. National Rates



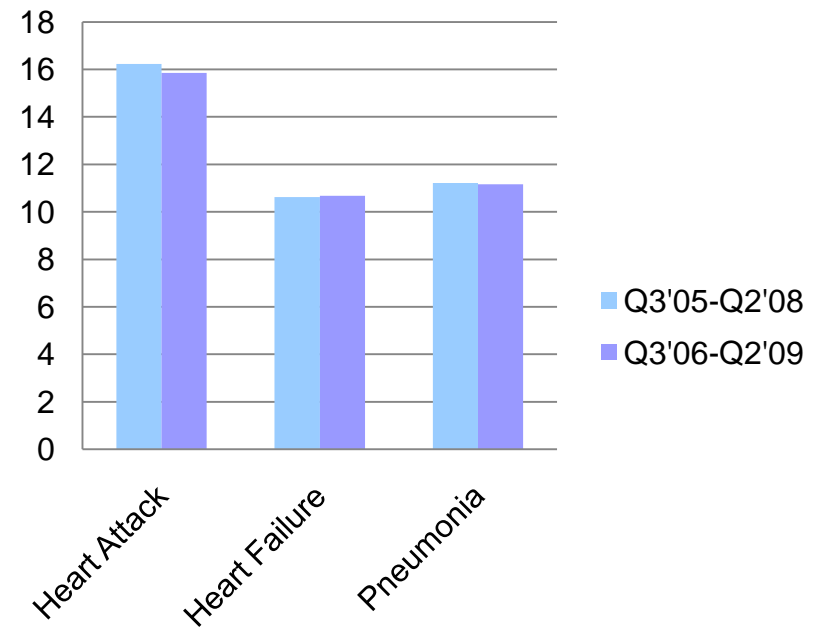
Outcome Measures Analysis

Despite significant improvement in the CMS process measures, the CMS outcome measures (based on Medicare FFS administrative data) showed no meaningful differences between the two overlapping 3-year analysis periods.

Readmission Rate Averages



Mortality Rate Averages



3 Year Trend Analysis – Average Scores

Pennsylvania Averages

Performance Measure	Q306- Q207	Q307- Q208	Q308- Q209	Improvement from '06-'09
<i>Heart Attack Measures</i>				
Heart Attack Patients Given Aspirin at Arrival	94.8%	95.1%	96.4%	1.5%
Heart Attack Patients Given Aspirin at Discharge	92.8%	94.2%	95.8%	3.0%
Heart Attack Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD)	82.8%	89.3%	89.0%	6.1%
Heart Attack Patients Given Beta Blocker at Discharge	94.8%	95.0%	95.1%	0.2%
Heart Attack Patients Given PCI Within 90 Minutes Of Arrival	57.5%	73.0%	80.5%	23.0%
<i>Heart Failure Measures</i>				
Heart Failure Patients Given Discharge Instructions	68.0%	76.6%	81.8%	13.8%
Heart Failure Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD)	82.8%	87.7%	90.1%	7.3%
<i>Pneumonia Measures</i>				
Pneumococcal Screen/Vaccination	80.6%	85.5%	89.7%	9.0%
Blood Culture prior to First Antibiotic	91.0%	91.7%	93.3%	2.3%
Initial Antibiotic within 6 Hours	94.1%	93.7%	94.8%	0.7%
Initial Antibiotic Selection	87.4%	88.3%	90.1%	2.7%
Influenza Screen/Vaccination	78.9%	80.6%	86.9%	8.0%
Blood Culture within First 24 hours (ICU)	N/A	91.6%	95.3%	3.6%
Initial Antibiotic Selection for ICU Patients	N/A	64.1%	62.8%	-1.3%
Initial Antibiotic Selection for Non-ICU Patients	N/A	92.4%	94.7%	2.3%

3 Year Trend Analysis – Average Scores

Pennsylvania Averages

Performance Measure	Q306- Q207	Q307- Q208	Q308- Q209	Improvement from '06-'09
<i>Surgical Care</i>				
Prophylactic Antibiotic within 1 hour of incision	82.9%	87.4%	91.6%	8.8%
Appropriate Antibiotic	N/A	94.7%	96.8%	2.1%
Cardiac Surgery Patients with Controlled 6 A.M. Postoperative Blood Glucose	N/A	86.2%	88.3%	2.1%
Prophylactic Antibiotic Discontinued within 24 hrs	76.0%	85.3%	90.3%	14.3%
VTE Ordered prior to Surgery	85.2%	89.4%	92.4%	7.2%
VTE Received within 24 Hours of Surgery	89.3%	81.4%	87.0%	-2.3%
<i>Appropriate Care Measures</i>				
Overall ACM	67.5%	76.2%	83.1%	15.5%
AMI-ACM	83.5%	86.0%	88.3%	4.8%
HTF-ACM	69.7%	77.7%	82.7%	13.0%
PN-ACM	63.3%	69.4%	80.1%	16.8%
SIP-ACM	62.5%	75.4%	82.9%	20.4%

Questions or Inquiries



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