Value Based Purchasing: Combining Cost and Quality

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Overview

- Value Based Purchasing
- Current CMS VBP implementation
- Outcome measures in use by CMS
- Review considerations in use of outcome measures in VBP
- CMS 30 day mortality measures
- CMS 30 day re-admission measures
- Moving forward

What VBP Means to CMS

- Transforming Medicare from a passive payer to an active purchaser of higher quality, more efficient health care
- Tools and initiatives for promoting better quality, while avoiding unnecessary costs
  - Tools: measurement, payment incentives, public reporting, conditions of participation, coverage policy, QIO program
  - Initiatives: pay for reporting, pay for performance, gainsharing, competitive bidding, coverage decisions, direct provider support
- Current program authority to pay differentially for better quality
  - ESRD VBP authorized in MIPAA

Support for VBP

- President's Budget
  - FYs 2006-09
- Congressional Interest in P4P and Other Value-Based Purchasing Tools
  - BIPA, MMA, DRA, TRHCA, MMSEA
- MedPAC Reports to Congress
  - P4P recommendations related to quality, efficiency, health information technology, and payment reform
- IOM Reports
  - P4P recommendations in To Err Is Human and Crossing the Quality Chasm Report, Rewarding Provider Performance: Aligning Incentives in Medicare
- Private Sector
  - Private health plans
  - Employer coalitions

VBP Demos and Pilots

- Premier Hospital Quality Incentive Demonstration
- Physician Group Practice Demonstration
- Medicare Care Management Performance Demonstration
- Nursing Home Value-Based Purchasing Demonstration
- Home Health Pay-for-Performance Demonstration
- ESRD Bundled Payment Demonstration
- ESRD Disease Management Demonstration
- Medicare Health Support Pilots
- Care Management for High-Cost Beneficiaries Demonstration
- Medicare Healthcare Quality Demonstration
- Gainsharing Demonstrations
- Electronic Health Records (EHR) Demonstration
- Medical Home Demonstration

VBP Initiatives

- Hospital Pay for Reporting: Inpatient & Outpatient
  - RHQDAPU & HOP QDRP
- Hospital VBP Plan & Report to Congress
- Hospital-Acquired Conditions & Present on Admission Indicator
- Physician Quality Reporting Initiative
- Physician Resource Use Confidential Reports
- Home Health Care Pay for Reporting
- Ambulatory Surgical Centers Pay for Reporting
- ESRD Pay for Performance

Measuring Value

- Combination of cost and quality
  - Potential measures of quality
    - Outcome
    - Process
    - Experience of care
  - Potential costs to consider
    - All costs
    - Costs associated with particular professional or provider evaluation/treatment choices

Measuring Value

- Levels of attribution
  - Individual or group for professionals
- Accountability
  - Facilities
  - Professionals
  - Allocation among facilities and professionals
- Time Periods
  - Relationship to healthcare event eg., hospitalization
  - Defined by “episode” of care

Considerations in Measuring Value

- Integration of Quality and Cost
  - Not resource use alone
  - Quality dimension
  - Never events and appropriateness criteria (cost not justified)
- Valid Cost Measurement and Analysis
  - Same population (eg., case or episode)
  - Scope of costs considered (setting vs system)
  - Perspective (patient / professional / provider / payer)
- No or Minimal Incentive to Provide Poor-Quality Care
  - Impact on patient
- Proper Attribution of the Measure
  - Provider setting – Hospital, SNF, Home Health Agency, Dialysis
  - Physician or other professional

Krumholtz, et., al., Standards for Measures Used for Public Reporting of Efficiency in Health Care. A Scientific Statement from the American Heart Association Interdisciplinary Council on Quality of Care and Outcomes Research and the American College of Cardiology Foundation Circulation published online Oct 6, 2008

Measures for VBP

- Various measure types used
- Various pros and cons to each
  - Process
    - Most available but may become “topped out”
    - Focus on specific but limited set of processes that impact outcomes
  - Outcome
    - Less available but broader in scope, less subject to become “topped out”
  - Experience of Care
    - May relate to processes or outcomes
  - Structural

Outcomes Measures in Use by CMS

- Measure Summary: 74 total current CMS outcome measures in use (approximately)
  - 28 Inpatient (including QIO)
  - 8 Physician
  - 12 Home Health
  - 14 Nursing Home
  - 4 ESRD
  - 8 Medicare Advantage

Hospital Inpatient Outcome Measures: Mortality, Complications, Readmissions (RHQDAPU & QIO)

Mortality (Medical Conditions)
- 30 day mortality AMI, HF, PNE, (CMS) *
- Selected Medical Conditions (AHRQ) *

Mortality (Surgical Conditions/Procedures)
- AAA, Hip Fractures (AHRQ) *
- Selected Surgical Conditions (AHRQ) *
- Death of surgical patients with treatable serious complications*
- Complication/patient safety for selected indicators *

Complications (Medical and Surgical)
- Post op wound dehiscence in abdominal-pelvic surgery *
- Accidental puncture or laceration *
- Iatrogenic pneumothorax *
- MRSA Infection Rate; Transmission Rate (CMS-QIO)
- Hospital Acquired Pressure Ulcers (CMS-QIO)

Readmission (Medical Conditions)
- AMI, HF, PNE (CMS) *
- All patient Readmission Rate (CMS-QIO)

Intermediate Outcome
- Cardiac Surgery Patient Controlled 6 AM Glucose

[* = RHQDAPU Hospital Pay for Reporting Program]

Premier Hospital Quality Incentive Demonstration (HQID)

- The Premier HQID recognizes and provides financial rewards to hospitals that demonstrate high quality performance in a number of areas of acute care.
- The demonstration rewards participating top performing hospitals by increasing their payment for Medicare patients.
- Clinical conditions and procedures
  - Heart attack
  - Heart failure
  - Pneumonia
  - Coronary artery bypass graft
  - Hip and knee replacements

Hospital Outcome Measures – Premier Demonstration

- Current
  - Inpatient Mortality Rate AMI, CABG, HF
  - Post-op Hemorrhage or Hematoma
    - Hip/Knee Replacement
  - Physiologic and Metabolic Derangement
    - Hip/Knee Replacement
- Expansion
  - test further outcome measures
    - AHRQ PSI's
    - AHRQ Inpatient Mortality (IQI)
    - CMS 30 day readmission and mortality measures AMI, HF, PNE

Outcome Measures – Hospital VPP Plan

- Report to Congress
- Included process, experience of care
- Method for including 30 day mortality measures in scoring developed subsequently

Hospital Acquired Conditions: Background

- The Deficit Reduction Act (DRA) of 2005 requires the Secretary to identify conditions that are:
  - (a) high cost or high volume or both
  - (b) result in the assignment of a case to a DRG that has a higher payment
  - when present as a secondary diagnosis, and
  - (c) could reasonably have been prevented through the application of evidence-based
  - guidelines
- Beginning October 1, 2008, Medicare no longer paid hospitals at a higher rate for the increased costs of care that result when a patient is harmed by one of the listed conditions if it was hospital-acquired.

- Medicare continues to assign a discharge to a higher paying MS–DRG if the selected condition is present on admission (POA).

- The POA indicator reporting requirement and the HAC payment provision apply to IPPS hospitals only.

Hospital Acquired Conditions

- Foreign Object Retained After Surgery
- Air Embolism
- Blood Incompatibility
- Stage III and IV Pressure Ulcers
- Falls and Trauma
  - Fractures
  - Dislocations
  - Intracranial Injuries
  - Crushing Injuries
  - Burns
  - Electric Shock

Hospital Acquired Conditions

- Manifestations of Poor Glycemic Control
  - Diabetic Ketoacidosis
  - Nonketotic Hyperosmolar Coma
  - Hypoglycemic Coma
  - Secondary Diabetes with Ketoacidosis
  - Secondary Diabetes with Hyperosmolarity
- Catheter-Associated Urinary Tract Infection (UTI)
- Vascular Catheter-Associated Infection

Hospital Acquired Conditions

- Surgical Site Infection Following:
  - Coronary Artery Bypass Graft (CABG) - Mediastinitis
  - Bariatric Surgery
    - Laparoscopic Gastric Bypass
    - Gastroenterostomy
    - Laparoscopic Gastric Restrictive Surgery
  - Orthopedic Procedures
    - Spine
    - Neck
    - Shoulder
    - Elbow
- Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE)
  - Total Knee Replacement
  - Hip Replacement

Hospital Acquired Conditions: Projected Costs savings

- **Savings estimates for the next 5 fiscal years are shown below:**

Year	Savings (in millions)
FY 2009	$21
FY 2010	21
FY 2011	21
FY 2012	22
FY 2013	22

National Coverage Determination – Hospitals and Physicians

- No coverage for
  - Surgery on wrong body part
  - Surgery on wrong patient
  - Wrong surgery on a patient
- Not reasonable and necessary

Physician Outcome Measures (PQRI)

Intermediate Outcomes

- Diabetes: HbA1C, LDL, BP Control

Mortality

- None

- Complications
  - Medical Conditions
    - None
  - Surgical Conditions
    - CABG
      - Deep Sternal Wound Infection; Stroke/CVA; Post Op Renal Insufficiency; Prolonged Intubation; Surgical Re-exploration

Physician Outcome Measures

(Physician Group Practice Demonstration)

- Intermediate Outcome Measures
  - Diabetes HbA1c, Blood Pressure, and LDL control

Physician Outcome Measures
(Physician VBP Plan)

- Report to Congress required in MIPPA
- Due May, 2010
- Outcome measures under consideration

Home Health Outcome Measures

- Management of Care
  - Acute Care Hospitalization
  - Emergent Care (risk adjusted)
  - Discharge to Community
- Improvement in functional status
  - Ambulation /locomotion
  - Bathing
  - Bed transferring
  - Dyspnea
- Medication Management
  - Management of Oral Medication
- Pain
  - Improvement in pain interfering with activity
- Surgical Wounds
  - Improvement in status of surgical wounds
- Complications
  - Emergency Care for Wound Infections, Deteriorating Wound Status
- Incontinence
  - Improvement in Urinary Incontinence

Nursing Home Outcome Measures (Long Stay)

- Pressure Sores
  - High risk patients
  - Low risk patients
- Functional Status
  - Improvement in Daily Activities independence
  - Most of time in Bed or Chair
  - Ability to move about in and around Room worse
  - Weight loss
- Pain
  - Moderate to Severe Pain
- Incontinence
  - Catheter inserted and left in bladder
  - Loss of control of bowels or bladder

- Urinary Tract Infection
  - Percentage with UTI
- Mental Health
  - Percentage more anxious or depressed

Nursing Home (short stay)

- Percentage with Delirium
- Percentage with Moderate to Severe Pain
- Percentage with pressure sores

ESRD

- Patient Survival
- Hematocrit/Hemoglobin Control for ESA therapy
- Hematocrit below minimum level

Medicare Advantage

- Diabetes
  - Blood Pressure Control (2)
  - HbA1c Good Control; Poor Control
  - LDL Control
- Hypertension
  - Blood Pressure Control
- Improving Mental Health
- Improving Physical Health

Outcome Measure: Data Considerations

- Claims
  - Routinely collected secondary data source
  - CMS 30 day Mortality
  - CMS 30 Day Readmission
  - AHRQ measures
- Lab Data
  - Helpful for risk adjustment but not readily available for Medicare
- Chart Abstraction
  - Burdensome but benefit of primary source and complete data
- Registries
  - Data collection over time supports outcome measures
  - Can accommodate multiple data source types
- Electronic Health Record
  - Future financial incentives for both physicians and hospitals to use
  - Reporting clinical quality measures required element of “meaningful use”
  - Primary source data
  - Clinical data supports risk adjustment

CMS Hospital 30 day Mortality Measures

Claims-based

- Risk standardized 30-day all-cause mortality and readmission measures for AMI, HF and Pneumonia
- NQF endorsed and implemented for RHQDAPU program

CMS 30 day Mortality and Readmission

- Endorsed by National Quality Forum and adopted by Hospital Quality Alliance

- Complies with American Heart Association and American College of Cardiology standards for outcomes models
    - Well-defined patient cohort
    - Clinically coherent model risk-adjustment
    - Use of an appropriate outcome
    - Standardized period of follow-up : 30-day

- Currently publicly reported on Hospital Compare

- Developed by Yale/Harvard team of clinical and statistical experts

Standardized Period of follow-up

- All patients followed for 30 days from discharge
- 30-days Strikes a Balance
  - Allow enough time for hospitals to have impact on outcome
  - Take into account discharge practice variation
  - Consistent for mortality and readmission measures

Risk Adjustment

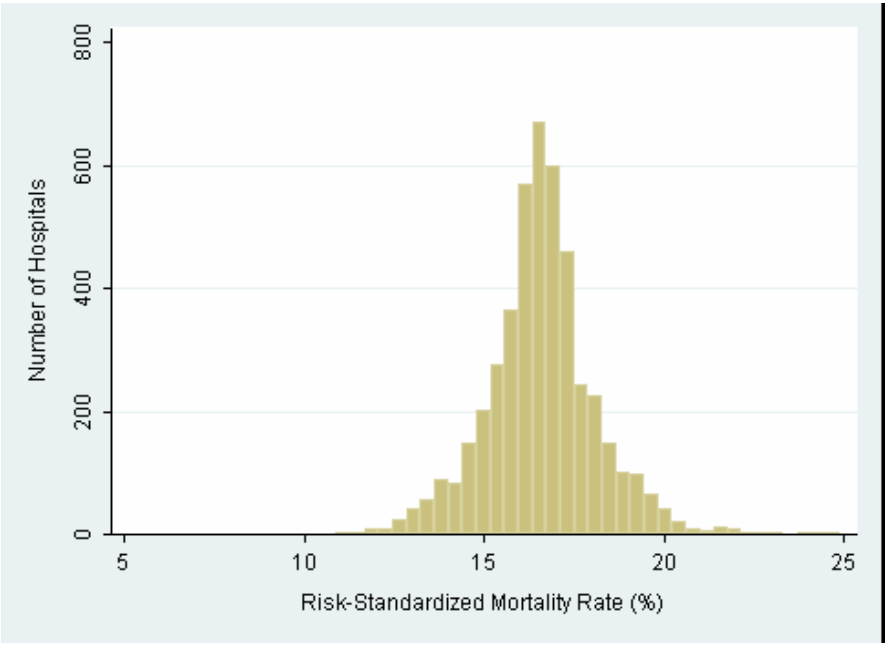
- Risk adjustment takes into account patient case mix and hospital-specific effect
- Hospital rates are calculated based on 3 years of hospitalizations
- Risk factors based on index admission and the prior year from inpatient, outpatient, and physician claims
- Models estimated on administrative data, validated by models based on chart data

Interval Estimates

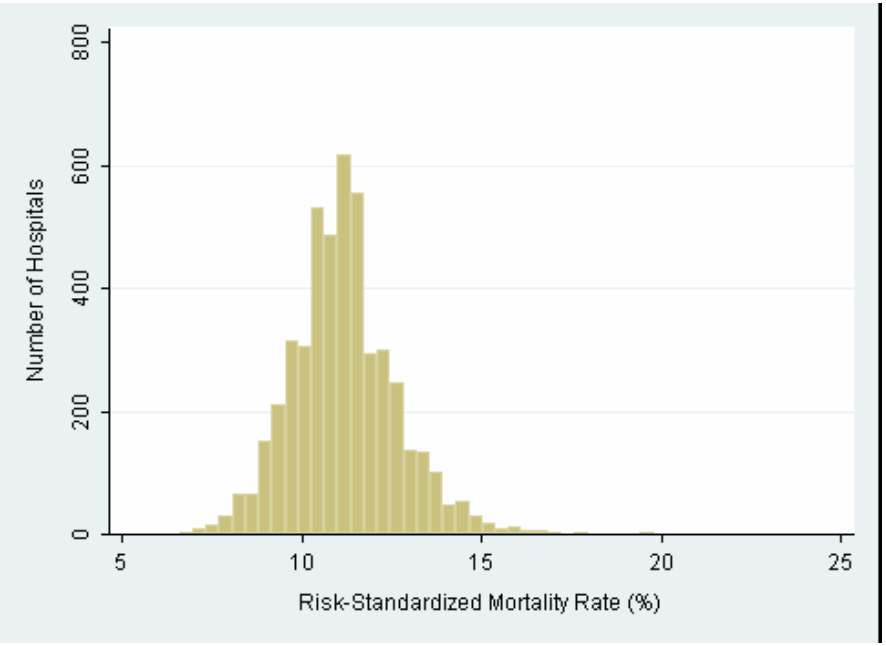
- Risk Standardized Rate – point estimate
- Interval estimates (IEs) are used to determine if mortality or readmission is different from national rate with high-degree of certainty
- 95% IEs is used to specify lower and upper IEs

Distribution of Hospital Mortality

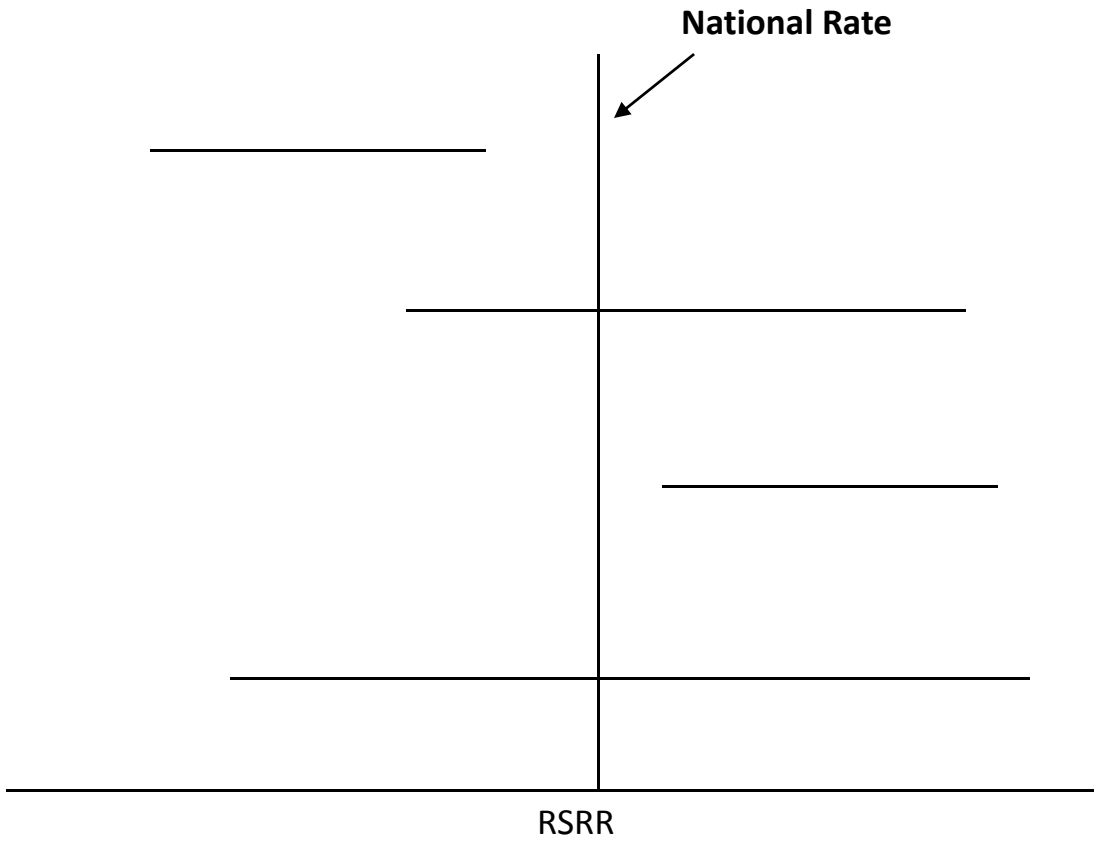
AMI



HF



Performance Categories



Hospital A
(200 cases)

Hospital B
(100 cases)

Hospital C
(150 cases)

Hospital D
(20 cases)

Category:

"Better"

"No different"

"Worse"

"Number cases too small (fewer than 25)"

Distribution of AMI Mortality by HRR

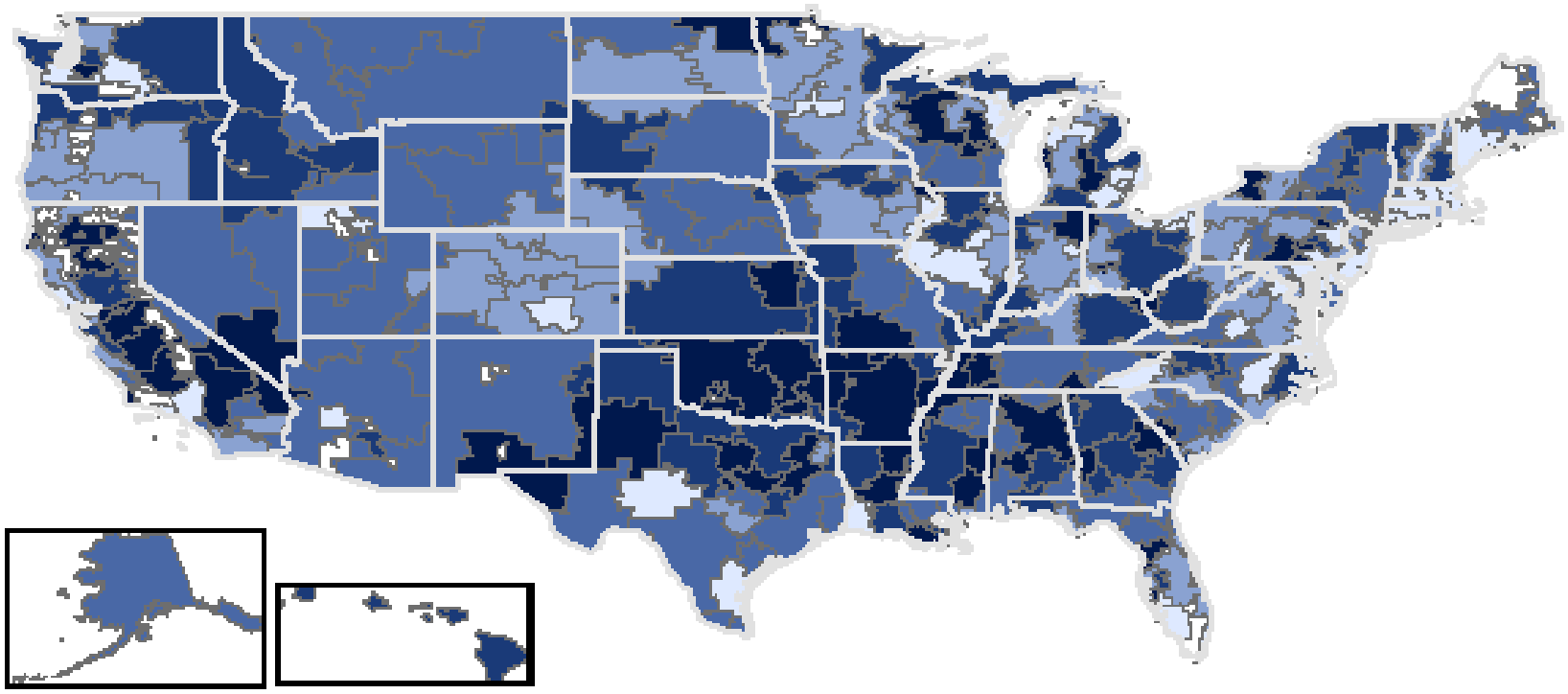


Figure 5a. Acute Myocardial Infarction 30-Day Risk-Standardized Mortality Rate (RSMR)
Weighted Average By Hospital Referral Region (HRR)

Not populated
1st Quintile (13.6 - 15.6)
2nd Quintile (15.7 - 16.1)
3rd Quintile (16.2 - 16.5)
4th Quintile (16.6 - 16.9)
5th Quintile (17.0 - 18.9)

Distribution of HF Mortality by HRR

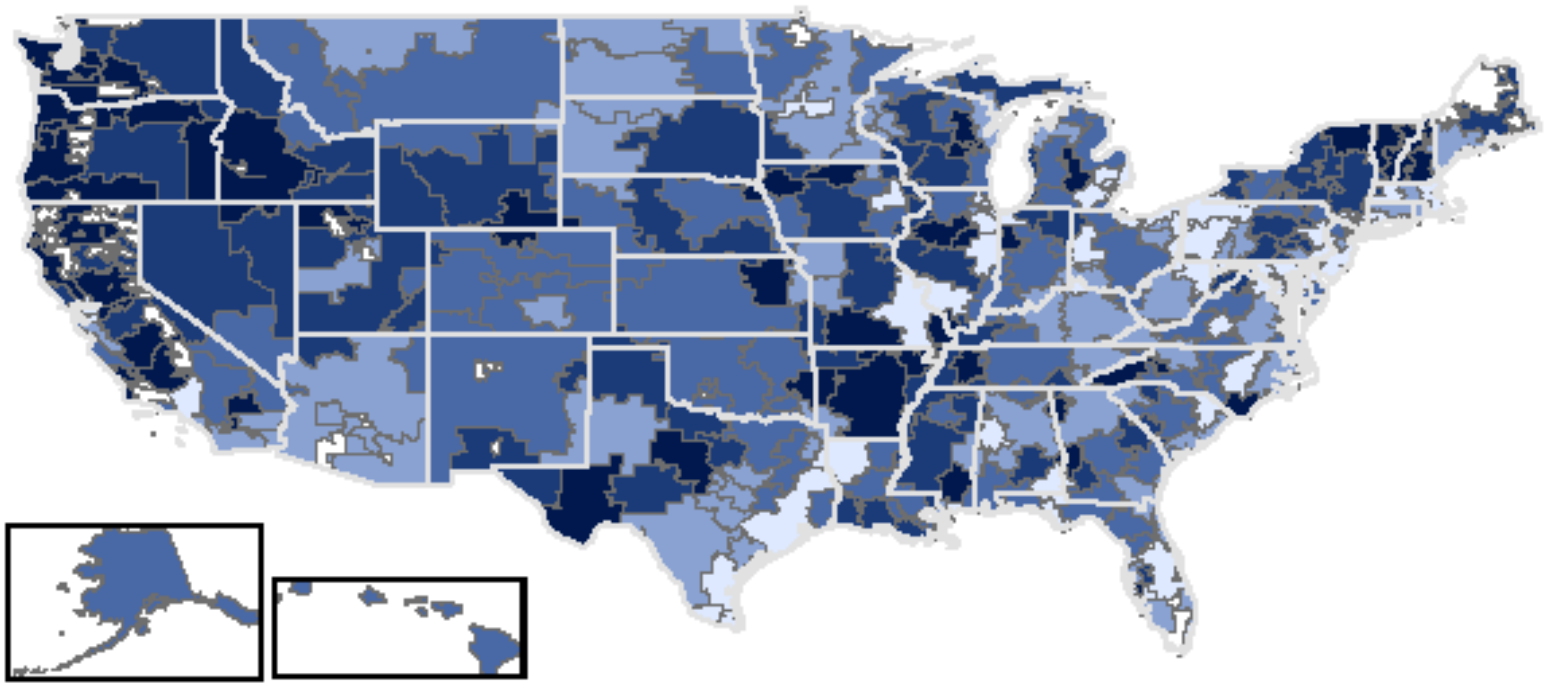
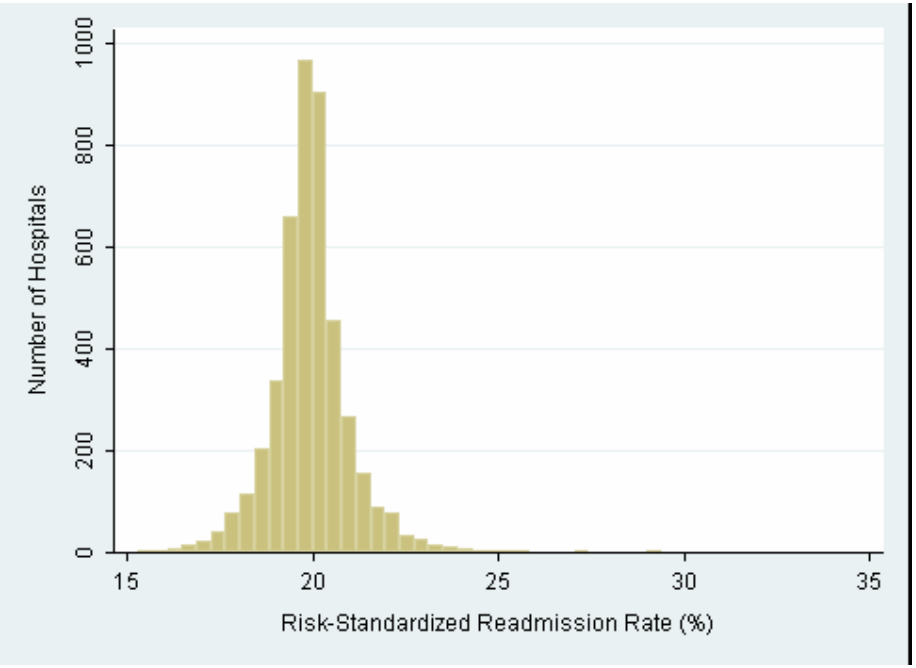


Figure 6a. Heart Failure 30-Day Risk-Standardized Mortality Rate (RSMR)
Weighted Average By Hospital Referral Region (HRR)

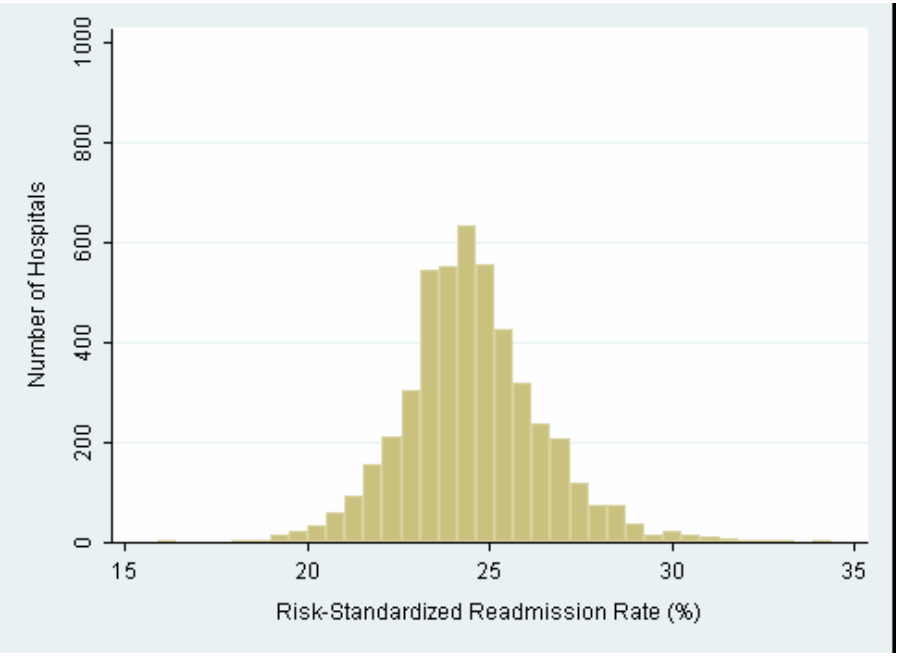
Not populated
1st Quintile (7.7 - 10.3)
2nd Quintile (10.4 - 10.8)
3rd Quintile (10.9 - 11.3)
4th Quintile (11.4 - 11.8)
5th Quintile (11.9 - 13.7)

Distribution of Hospital Readmission

AMI



HF



Distribution of AMI Readmission by HRR

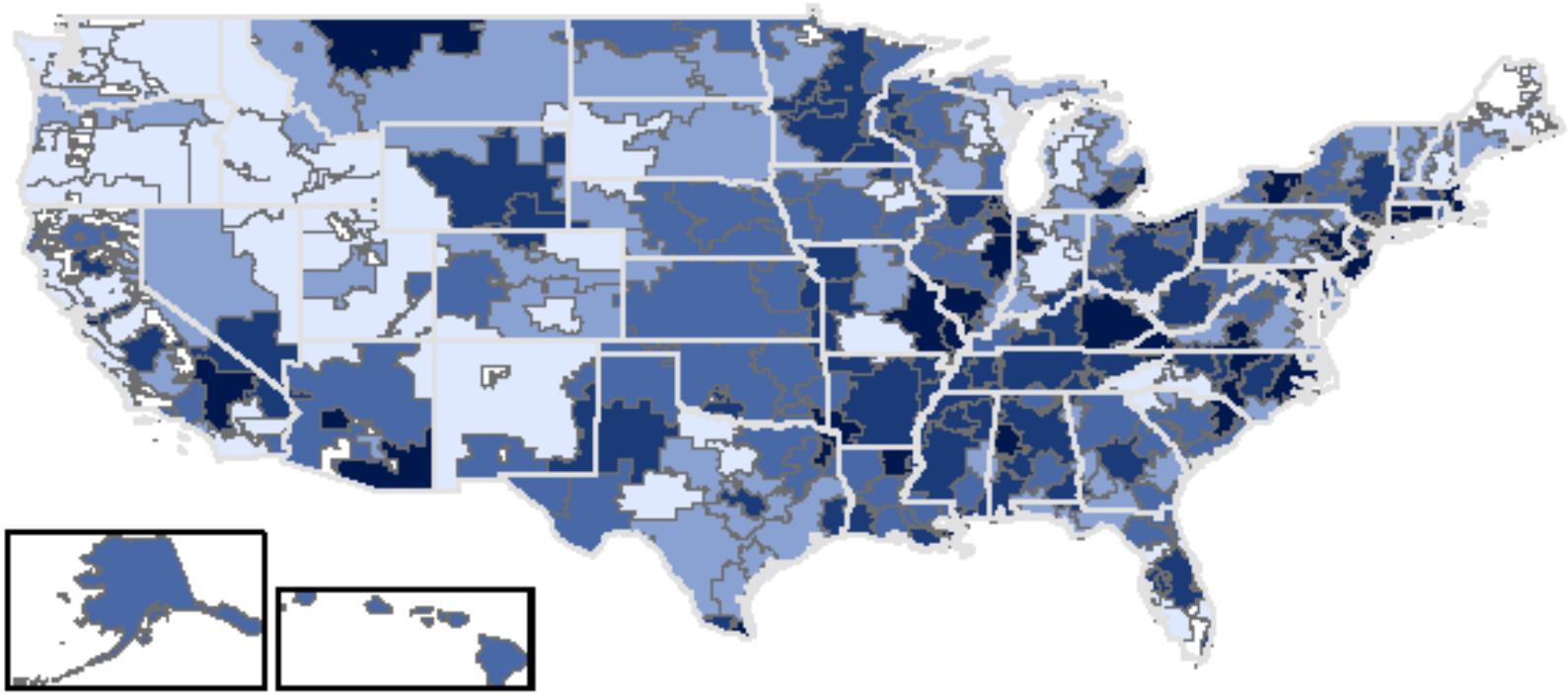


Figure 5b. Acute Myocardial Infarction 30-Day Risk-Standardized Readmission Rate (RSRR) Weighted Average by Hospital Referral Region (HRR)

Not populated
1st Quintile (16.7 - 19.3)
2nd Quintile (19.4 - 19.6)
3rd Quintile (19.7 - 19.9)
4th Quintile (20.0 - 20.2)
5th Quintile (20.3 - 22.1)

Distribution of HF Readmission by HRR

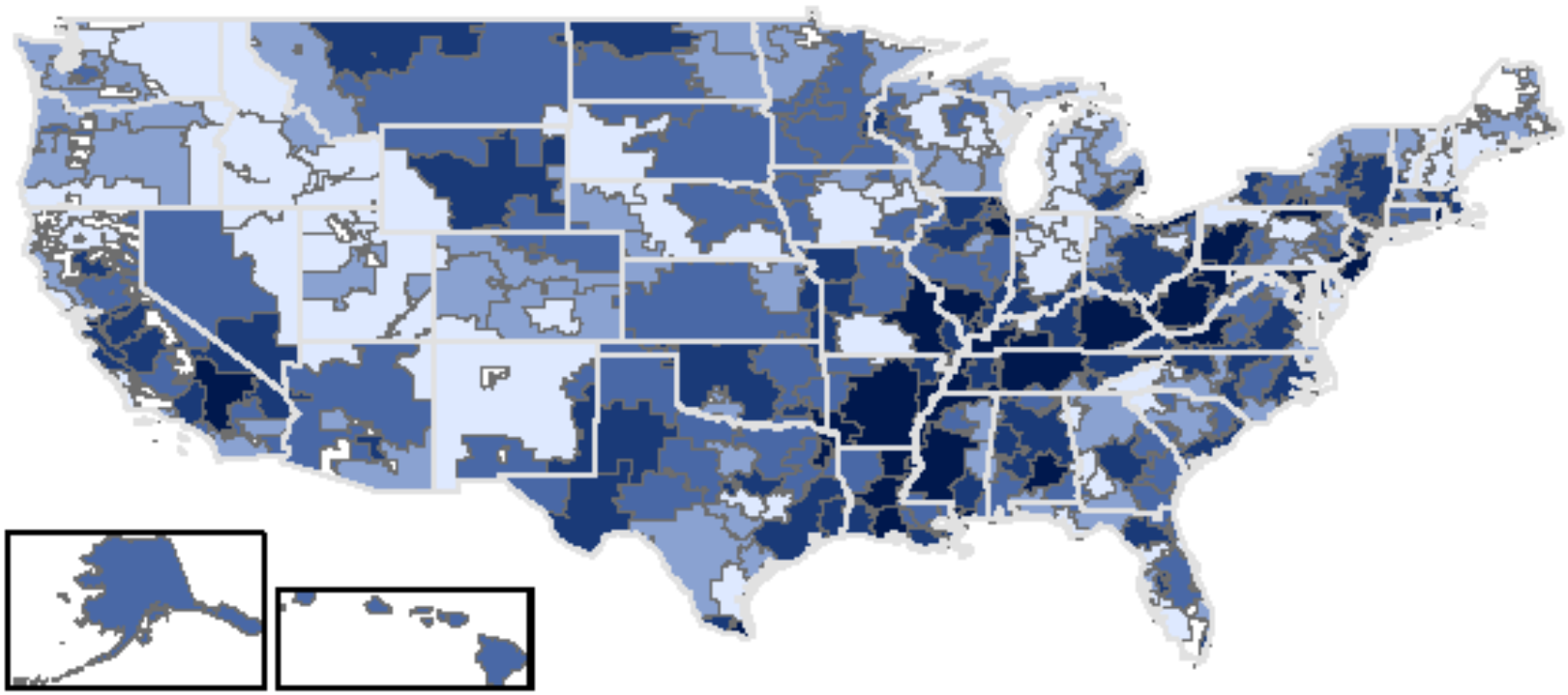


Figure 6b. Heart Failure 30-Day Risk-Standardized Readmission Rate (RSRR)
Weighted Average by Hospital Referral Region (HRR)

Not populated	2nd Quintile (23.3 - 23.8)	4th Quintile (24.5 - 25.1)
1st Quintile (20.8 - 23.2)	3rd Quintile (23.9 - 24.4)	5th Quintile (25.2 - 29.0)

Distribution of Pneumonia Readmission by HRR

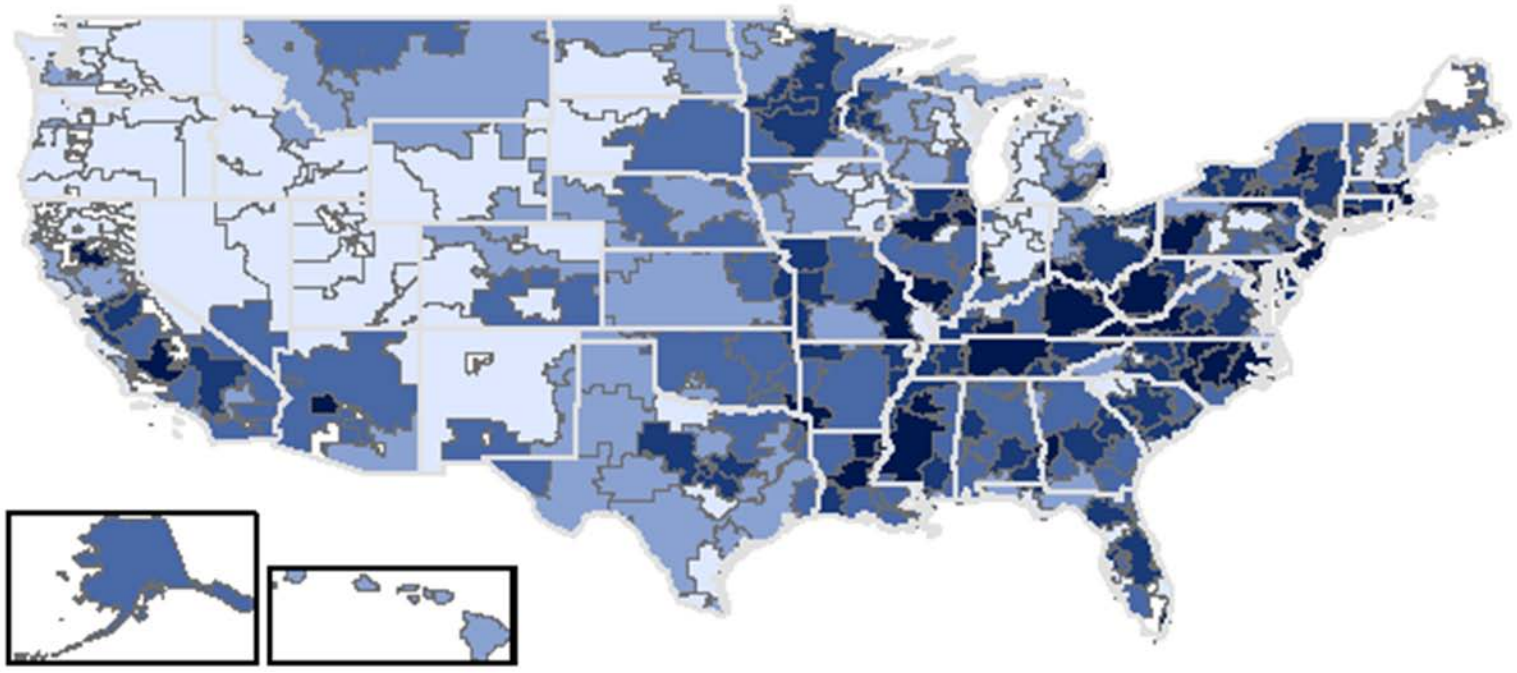


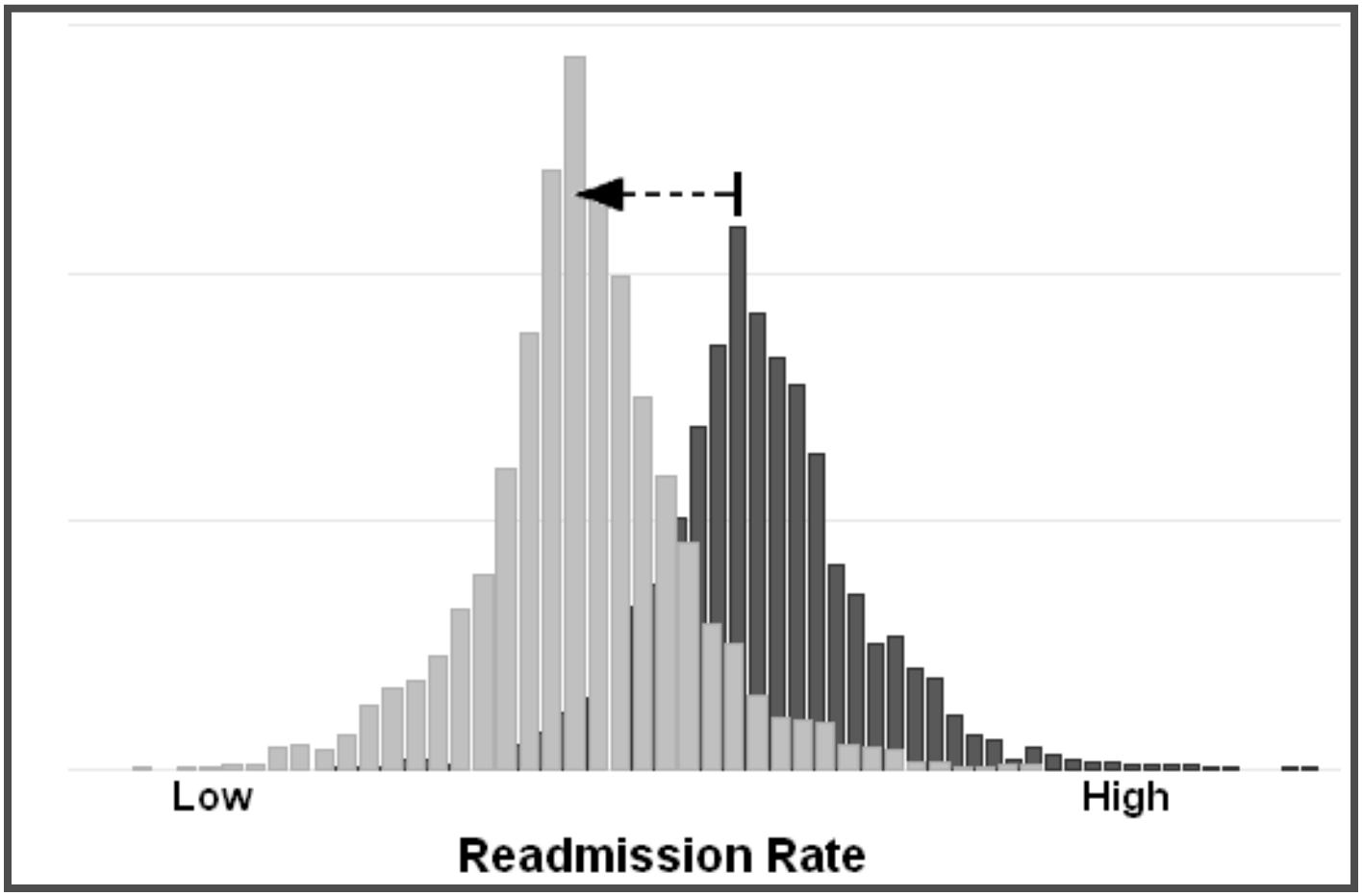
Figure 7b. Pneumonia 30-Day Risk-Standardized Readmission Rate (RSRR)
Weighted Average by Hospital Referral Region (HRR)

Not populated
1st Quintile (15.3 - 17.3)
2nd Quintile (17.4 - 17.7)
3rd Quintile (17.8 - 18.2)
4th Quintile (18.3 - 18.7)
5th Quintile (18.8 - 22.2)

2009 National Results (7/05-6/08 discharges): Readmission

- Average 30-day hospital readmission rates are high (AMI 19.9, HF 24.5, PN 18.2)
- There is significant variation
- The goal is not zero; all hospitals have room to improve

CMS' ultimate goal is to shift the curve



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Additional Hospital Level Measures

- Other hospital outcome and readmission measures
  - PCI 30-day all-cause risk standardized mortality for STEMI/shock and non-STEMI/non-shock patients
  - Risk standardized 30-Day All-Cause Mortality and/or Complications for Lower Extremity Bypass
  - NQF endorsed

Moving to episodes

- Post acute care hospitalization
  - Hospitalization the starting point
    - Acute events
    - Procedures
  - Hospitalization the end point
    - Ambulatory Sensitive Conditions – ARHQ measures
- Care not associated with hospitalization
  - Challenge of defining episode of care start/end
- Beneficiaries not receiving care
  - Low cost but not necessarily good outcomes

Post acute care hospitalization

- Hospitalization the starting point
  - Acute events
  - Procedures
- SNF, Home Health, Repeat Hospitalization, Physician Care
- PAC Demonstration Deficit Reduction Act
  - Compare costs across setting based on standardized assessment
  - CARE Instrument standardized instrument
- Various potential time periods, eg. 30, 120, 180 days
- Attribution of costs alternatives

Care Transitions QIO Theme

- 9th SOW QIO theme focused on re-hospitalizations as outcome
  - Conditions AMI, HF, PNE
  - Geographic Region
- Attribution to professional or provider based on portion of transitions of beneficiaries geographic setting in which they participate
- Promotes improved quality care within setting; improved coordination processes at each transition; community involvement

Conclusion

- Active work to develop VBP framework that include outcome measures
- Outcome measures
  - Broader reach than process measures
  - Meaningful to consumers
  - Present issues such as risk adjustment, sufficient numbers, attribution, and how best to incorporate into VBP scoring
  - level of attribution
- Greatest numbers of outcome measures in inpatient hospital and other provider settings
- Few physician level outcome measures
  - Challenge of small numbers
  - Consider group or other attribution level
- Costs present independent attribution issues