All Payer Hospital System Modernization

Performance Measurement Workgroup Meeting

Meeting Agenda

June 22, 2015
9:30 AM – 12:00 AM
Health Services Cost Review Commission
4160 Patterson Ave
Baltimore, MD 21215

9:30 AM  Update on current Performance Measurement work plan progress-
(Workgroup Members only)

A. Subgroup Updates

B. Potentially Avoidable Utilization and Reporting

10.00 AM Future Performance Measurement Strategic Planning Session
(Workgroup Members and Invited Experts)

10:00 AM Maryland All Payer Model System Transformation Activities
(HSCRC Staff)

10:20 AM Maryland All Payer Model System Transformation Activities
(HSCRC Staff)

10: 20 AM Centers for Medicare and Medicaid Services Measurement Strategy at Large
(Stephen Cha, MD, CMMI, Acting Director, State Innovations Group)

10:45 AM Comprehensive Performance Measurement Strategy
(Tom Valuck, MD, JD, Partner, Discern Health)

11:15 AM Future direction and next steps

Facilitated discussion questions:

- What activities should HSCRC, working with stakeholders, facilitate, conduct,
develop, build, plan, execute, etc. to achieve a performance measurement
strategy that drives toward our ideal design?
- Who are the key stakeholders for each of the activities?
- What are the barriers or constraints to undertaking the identified activities?
- What resources are needed to undertake the identified activities?

12:00 Noon  Adjourn
HSCRC Workgroups, Partnership Activities and Roadmap

Performance Measurement Workgroup
June 22, 2015
Organization of Current Activities

HSCRC
Commissioners & Staff

Advisory Council

HSCRC FUNCTIONS/ACTIVITIES
Payment Models
Performance Improvement Measurement

PARTNERSHIP ACTIVITIES
Multi-Agency and Stakeholder Groups
Care Coordination & Infrastructure
Consumer Engagement, & Outreach
Alignment Models
Medical Education
Developing a New Culture for Patient Care—Rapid Change Cycle

**Year 1 Focus**
- Shift to person-centric model
- Payment reform (Global budgets)
- Focus policies on potentially avoidable utilization
- Stakeholder engagement
- Regulatory infrastructure

**Year 2 Focus (Now)**
- Clinical improvement, care coordination, integration planning, and infrastructure development
- Partner across hospitals, physicians and other providers, post-acute and long-term care, and communities to develop person centered approaches

**Year 3 Focus**
- Implement changes, and improve care coordination and chronic care
- Work with people to keep them healthier, financially and clinically
- Engage patients, families, and communities
- Prepare for “Phase 2”, and focus on total cost of care and extending the model
Strategic Roadmap

State-Level Infrastructure (leverages many other large investments)

Create and use, meaningful, actionable data
Develop shared tools (Patient profiles, enhanced notifications, care needs, others)
Connect providers

Alignment

Medicare chronic care management Codes/Medical homes
Gain sharing & Pay for Performance
Integrated Care Networks & ACOs including Dual Eligibles
Accelerating all-payer opportunities moving away from volume

Care coordination & integration (locally-led)

Implement provider-driven regional & local organizations & resources (requires large investments & ongoing costs)
Support provider-driven regional/local planning
Technical assistance

Consumer Engagement

State & local outreach efforts
Develop shared tools for engaging consumers

Year 2 Implementation Focus

- Clinical Improvement Focus:
  - Chronic Care
  - Care Coordination
  - High Needs Patients
  - Alignment
HSCRC Administers Quality-Based Payment Initiatives for Hospitals

QBR (Quality Based Reimbursement)
- Clinical Process of Care Measures
- Patient Experience of Care (HCAHPS)
- Mortality

MHAC (Maryland Hospital-Acquired Conditions)
- 65 Potentially Preventable Complications

Readmission
- 30-day bundled episodes
- Shared Savings and Improvement programs
Guiding Principles For Performance-Based Programs

- Program must improve care for all patients, regardless of payer (Stake holder buy-in)
- Program should prioritize high volume, high cost, opportunity for improvement and areas of national focus (Stake holder buy-in)
- Predetermined performance targets and financial impact (transparency, sustainability)
- Hospital ability to track progress (transparency, and infrastructure)
- Encourage cooperation and sharing of best practices
Maryland Hospital Acquired Conditions Overview

- Uses Potentially Preventable Complications (PPCs) tool developed by 3M.
- PPCs are defined as harmful events (accidental laceration during a procedure) or negative outcomes (hospital acquired pneumonia) that may result from the process of care and treatment rather than from a natural progression of underlying disease.
- Relies on Present on Admission (POA) Indicators
- Links hospital payment to hospital performance by comparing the observed number of PPCs to the expected number of PPCs.
MHAC Performance Metric

- Risk adjusted based on APR-DRG and Severity of Illness
- Hospital performance is measured using the Observed (O) / Expected (E) ratio for each PPC.
- Expected number of PPCs for each hospital are calculated using the base period statewide PPC rates by APR-DRG and severity of illness (SOI). i.e., how many PPCs a hospital would have had if they had state average PPC rate.
- Additional adjustments to improve measurement fairness and stability:
  - State: APR-DRG SOI cells with less than 2 cases, palliative care cases, cases with > 6 PPCs
  - Hospital: PPCs with < than 10 at-risk or < 1 expected.
Readmission Reduction Incentive (RRIP) Program Overview

- Incentive program designed to support the waiver goal of reducing Medicare readmissions, but applied to all-payers.

- **RY 2016:** Any hospital who meets or exceeds the 6.76% readmission reduction target, will be eligible for up to a 0.5% provided that the update factor is favorable.

- **RY 2017:** 9.3% cumulative target from CY 2013, scaled penalties up to 2% and rewards up to 1%.

- Readmission rates for each hospital are adjusted for planned admissions and patient severity.

- HSCRC will monitor observation stays within 30 days of hospitalization and potentially make adjustments if this increases at a greater rate than observation stays in general.
RRIP Performance Metric

- Risk-Adjusted Readmission Rate
  - 30-Day
  - All-Payer
  - All-Cause
  - All-Hospital (both intra and inter hospital)

- Exclusions:
  - Planned readmissions (CMS Planned Admission + all deliveries)
  - Deaths
  - Same-day transfers
  - Rehabilitation Hospitals
Quality Based Reimbursement (QBR) Program

- The QBR program, implemented in 2010, is analogous to the CMS Value Based Purchasing program (VBP), implemented in 2013.
- Maryland is required to seek exemption from the VBP program by demonstrating cost and quality outcomes equal to or better than the VBP program.
## Measure Domain Weighting for FY 2017

<table>
<thead>
<tr>
<th></th>
<th>Clinical</th>
<th>Patient Experience (HCAHPS)</th>
<th>Safety (CAUTI, CLAB SI, C.DIFF, SSI, PSI-90)</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CMS VBP</strong></td>
<td>• 25 percent</td>
<td>25%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>• 5 percent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Maryland QBR</strong></td>
<td>• 15 percent</td>
<td>45%</td>
<td>35%</td>
<td>Global Budget Revenue Adjustment (Outside QBR)</td>
</tr>
<tr>
<td></td>
<td>• 5 percent</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Shared Savings Adjustments

- CMS Readmission Reduction Program required a similar savings in Maryland
- Prospective revenue reductions in proportion to hospital readmission rates
  - Hospital A: 10% Readmission rate* - 7% savings = 0.7% revenue reduction
  - Hospital B: 20% readmission rate* - 7% savings = 1.4% revenue reduction
- Started with using same hospital readmission rates
**Financial Impact: Key Methodological Component Considerations of the Calculations**

- **Multiple measures vs single measure**
  - Convert “rates” to scores
  - Weights of different measures/domains
- **Benchmarks – scores, penalty, rewards**
- **Measure reliability and validity**
  - Minimum number of cases required
  - Practice variation
  - Risk Adjustment
- **Attainment vs. Improvement**
- **Determine financial penalties and rewards**
  - Maximum at risk
  - State-wide total reduction or rewards
- **Determine system-wide impact**
  - Revenue neutral
  - Revenue Reduction
  - Positive Incentive
HSCRC progressively Increasing the revenue at risk

<table>
<thead>
<tr>
<th>State Fiscal Year</th>
<th>MHACs Maximum At Risk</th>
<th>QBR Maximum At Risk</th>
<th>Readmissions State-wide impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 11</td>
<td>0.50%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>FY 12</td>
<td>1%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>FY 13</td>
<td>2%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>FY 14</td>
<td>2%</td>
<td>0.5%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>FY 15</td>
<td>3%</td>
<td>0.5%</td>
<td>-0.7%</td>
</tr>
<tr>
<td>FY 16</td>
<td>4%</td>
<td>1.0%</td>
<td>-0.7%, +0.5%</td>
</tr>
<tr>
<td>FY 17</td>
<td>4%</td>
<td>2.0%</td>
<td>-2%, 1%</td>
</tr>
</tbody>
</table>
Maryland Versus Medicare Quality Programs’ Potential Revenue at Risk, 2014-2017

### Maryland - Potential Inpatient Revenue at Risk absolute values

<table>
<thead>
<tr>
<th>% Inpatient Revenue</th>
<th>SFY 2014</th>
<th>SFY 2015</th>
<th>SFY 2016</th>
<th>SFY 2017 (Proposed/estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHAC</td>
<td>2.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>RRIP</td>
<td></td>
<td></td>
<td>0.5%</td>
<td>2.0%</td>
</tr>
<tr>
<td><strong>QBR</strong></td>
<td><strong>0.50%</strong></td>
<td><strong>0.50%</strong></td>
<td><strong>1.00%</strong></td>
<td><strong>2.0%</strong></td>
</tr>
<tr>
<td>Shared Savings</td>
<td>0.41%</td>
<td>0.86%</td>
<td>0.86%</td>
<td>0.86%</td>
</tr>
<tr>
<td>Global Budget Revenue Potentially Avoidable Utilization:</td>
<td>0.50%</td>
<td>0.86%</td>
<td>0.86%</td>
<td>0.86%</td>
</tr>
<tr>
<td><strong>MD Aggregate Maximum At Risk</strong></td>
<td><strong>3.41%</strong></td>
<td><strong>5.22%</strong></td>
<td><strong>7.22%</strong></td>
<td><strong>8.72%</strong></td>
</tr>
</tbody>
</table>

*Blue are estimated numbers based on current policy.

### Medicare National - Potential IP revenue at risk absolute values

<table>
<thead>
<tr>
<th>% IP Rev</th>
<th>FFY 2014</th>
<th>FFY 2015</th>
<th>FFY 2016</th>
<th>FFY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAC</td>
<td>1.00%</td>
<td>1.00%</td>
<td>1.00%</td>
<td>1.00%</td>
</tr>
<tr>
<td>Readmits</td>
<td>2.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td><strong>VBP</strong></td>
<td><strong>1.25%</strong></td>
<td><strong>1.50%</strong></td>
<td><strong>1.75%</strong></td>
<td><strong>2.00%</strong></td>
</tr>
<tr>
<td><strong>Medicare Aggregate Maximum At Risk</strong></td>
<td><strong>3.25%</strong></td>
<td><strong>5.50%</strong></td>
<td><strong>5.75%</strong></td>
<td><strong>6.00%</strong></td>
</tr>
</tbody>
</table>

### Annual MD-US Difference

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual MD-US Difference</td>
<td>0.16%</td>
<td>-0.28%</td>
<td>1.47%</td>
<td>2.72%</td>
</tr>
<tr>
<td><strong>Cumulative MD-US Difference</strong></td>
<td><strong>1.19%</strong></td>
<td><strong>4.19%</strong></td>
<td><strong>4.19%</strong></td>
<td><strong>4.19%</strong></td>
</tr>
</tbody>
</table>
Future Direction: Patient Centered Outcomes

- Measures specific to certain patients
  - Cancer, Orthopedic Surgery, Deliveries etc.
- Measures with different domains
  - Episode cost, quality outcomes, satisfaction, efficiency
- Population based
  - Population health, provider alignment, cost per capita
  - Electronic Medical Records- clinical outcomes (Diabetes, hypertension control, etc.)
- Increasing the financial impact of quality programs
  - Value-based vs. budgets
  - Moving from “at risk” to “realized”
Appendix: MHAC, RRIP and QBR
Recent Results
MHAC Results: Monthly Risk-Adjusted PPC Rates

Note: Based on final data for January 2013 - December 2014.
RRIP: Monthly Risk-Adjusted Readmission Rates

Note: Based on final data for January 2013 - December 2014, and preliminary data through January 2015.
RRIP: Change in All-Payer Risk-Adjusted Readmission Rates YTD by Hospital

Goal of 6.76% Reduction (15 hospitals are on track to meeting goal)

Notes:
QBR: Maryland Performance vs National Benchmarks

30-Day Mortality for Medicare Patients

- National Average
- National Top10%
- MD

Source: Whynoththebest.com

Data Period: Q3/09 - Q2/12

Heart Attack

Pneumonia
QBR: Maryland Performance vs. National Benchmarks

Patient Experience (HCAHPS)

Source: Whynoththebest.com
QBR: Maryland Performance vs. National Benchmarks

Clinical Process of Care Measures

- Overall Recommended Care
- Overall Heart Attack Care
- Overall Heart Failure Care
- Overall Pneumonia Care
- Overall Surgical Care

Source: Whynotthebest.com
Data Period: Q4/12-Q3/13
QBR: Maryland Performance vs National Benchmark

Safety Measures - Hospital Acquired Infections

- Central Line-Associated Bloodstream Infection
- Catheter Associated Urinary Tract Infection
- Surgical Site Infection from colon surgery
- Surgical Site Infection from abdominal hysterectomy
- Methicillin-resistant Staphylococcus aureus Infection
- Clostridium difficile (or C.diff.) Infection

Source: Whynothethebest.com
Data Period: Q4/12-Q3/13
The HSCRC has established workgroups to support the implementation of the new Population-Based and Patient-Centered Payment Systems Model that began in January 2014. The workgroups are designed to provide structured input to the HSCRC on key implementation activities, lending expertise on the state of the art and the feasibility of possible solutions. They build upon the work of the system modernization Advisory Council.

The HSCRC staff has developed a focused set of tasks, described below, for each of the workgroups. There is some overlap in the topics that the workgroups are address, necessitating coordination among the workgroups.

**HSCRC Workgroup Activities**

A. **Payment Models** - In general, this workgroup develops recommendations for the HSCRC on the structure of payment models and how to balance its approach to hospital payment updates. Topics include:
   1. Balanced Updates - What changes should be made from year to year regarding factors that establish hospital payment updates?
   2. Guardrails for Model Performance - What performance targets trigger policy or other corrections?
   3. Market Shift - How and when should market shift be incorporated into hospital payment adjustments?
   4. Initial and Future Models - How and when should Maryland evolve beyond hospital global payment models?

B. **Performance Measurement** - In general, this workgroup develops recommendations for the HSCRC on measures that are reliable, informative, and practical for assessing a number of important issues. The payment models workgroup will design the overall structure through which the results of these measures are applied to hospital payment. Topics include (not mutually exclusive):
   1. Reducing potentially avoidable utilization to achieve the Three-Part Aim of better care, better health, and lower cost:
      a. Achieving statewide targets (reducing readmissions, potentially avoidable admissions, hospital complication rates; revenue "at risk" in performance measurement programs)
      b. Measuring potentially avoidable utilization.
   2. Defining and implementing value-based payment (integration of cost, quality, population health and outcomes in the measurement design scheme)
   3. Patient Experience and Patient-Centered Outcomes

**Partnership Activities /Multi-Agency and Stakeholder Groups**

C. **Alignment Models** - In general, this workgroup makes recommendations on how the new hospital payment models should align and engage with physicians and other health care providers in partnership with patients to achieve the goals of the new model. The Workgroup topics include:
   1. Alignment with emerging payment models
   2. Shared Savings - How can physicians, hospitals and other providers create aligned incentive models that address All-payers?
   3. Care Improvement, including:
      a. Care Coordination Opportunities
      b. Post-Acute and Long-Term Care inclusion
      c. Evidence-Based Care - accelerate introduction and adoption
HSCRC Workgroups and Partnership Activities Summary
6/22/15 Performance Measurement Workgroup Meeting

D. **Care Coordination**- The purpose of this Workgroup is to facilitate multi-stakeholder discussions regarding efficient and effective implementation of population-based and patient-centered Care Coordination to support the new Maryland All-Payer Model.

HSCRC views care coordination as a top priority, with emphasis on the important potential for shared infrastructure and common approaches. The final report of the initial phase of this workgroup containing recommendations may be found at:


E. **Consumer Outreach and Engagement**- There are two task forces working to help ensure that people using Maryland’s health system understand health system transformation and what it means to them, and have the information and resources to become more actively involved in their individual health and in improving the health of the community.

1. The Consumer Outreach Task Force is:
   a. Hosting forums around the state to educate communities about the new health system
   b. Finding creative ways to partner with hospitals to improve health across the state

2. The Consumer Engagement Task Force has 2 charges:
   a. Charge #1
      i. Recommend standards for making the health system more consumer-centered
      ii. Propose messages and strategies consumer involvement in system transformation
      iii. Propose education and communication strategies for various consumer segments
   b. Charge #2
      i. Advise decision-makers, regulators, etc. on the impact of system transformation
      ii. Provide guidance on appropriate and consumer-friendly communications process
      iii. Make recommendations for enhanced ways for consumers to provide feedback and for hospitals to act on that input

F. **Regional Partnership Planning Grant Awards**- The Maryland Department of Health and Mental Hygiene (DHMH) and HSCRC sought and received proposals for funding to support the planning and development of Regional Partnerships for Health System Transformation in support Maryland’s new All-Payer Model. In May 2015 a range of $200,000-$400,000 per award—totaling $2.5M—was provided to each of eight regional partnerships across the state to advance reforms to Maryland’s health care delivery system. Funding is allocated via HSCRC-approved rate increases for hospitals participating in partnerships that received the awards.

Transforming Maryland’s health care system to be highly reliable, highly efficient, and a point of pride in our communities will require increased collaboration between health systems, payers, community hospitals, ambulatory physician practices, long-term care, and other providers, as well as public health and community-based organizations. It will also require effective engagement of patients and consumers. In order to accelerate effective implementation, Maryland needs to develop regional partnerships that can collaborate on analytics, target services based on patient and population needs, and plan and develop care coordination and population health improvement approaches. The regional grants are supporting the development of partnerships capable of identifying and addressing their regional needs and priorities and shaping the future of health care in Maryland. The partnerships include developing care coordination and population health priorities, determining what resources are needed and available, and how resources and strategies should be deployed.
HSCRC Measure Gap Analysis and Measurement Strategy

Performance Measurement Workgroup

June 22, 2015

Tom Valuck, MD, JD
Overview

- Dimensions of the measurement strategy framework
- Compilation of measures that HSCRC currently uses
- Analysis of the adequacy of measures currently in use and identification of priority measure gaps
- Scan of available measures for gap-filling
- Recommendations of the best available measures to fill gaps
- Next steps
Dimensions of the Measurement Strategy Framework

- Alignment with important measurement domains
  - National Quality Strategy aims and priorities
  - Focus areas requested by HSCRC (i.e., end of life, outpatient)

- Levels of accountability
  - Reported by hospitals
  - Used internally by HSCRC
  - Reported to CMS

- Phasing
  - Stage I: 2014-2016 (current period)
  - Stage II: 2017-2018 (shorter-term implementation)
  - Stage III: 2019 and beyond (longer-term implementation)
Measurement Strategy Dimensions
Measure Compilation

- Spreadsheet workbook containing measures from all steps of the analysis

- Measures in use in current HSCRC programs
  - MHAC, PAU, QBR, Readmissions
  - Maryland SHIP
  - CMS hospital: IQR, OQR
  - AHRQ PQIs
  - HSCRC Dashboard
  - CMS contract

- Potential Measures for use in future HSCRC programs
  - CMS system-level: CMMI Core, MSSP ACO, MU
  - CMS setting-specific: LTAC, Psych, Rehab, ASC
  - AHRQ MONAHRQ Core
Gap Identification, Prioritization, and Filling Processes

- Assigned all measures currently in use to NQS domains and subdomains
- Counted and compared measures within domains and subdomains to determine relative adequacy
- For subdomains not adequately addressed, reviewed currently available measures to fill gaps
Measure Domain Assignment

- **Patient Safety** - Rates of adverse events or prevention of injury. Also avoidable medical care, readmissions.

- **Patient-Centered/Engagement** - Patient experience of care, patient-centered care planning, shared decision-making, communication with the patient and family.

- **Population Health/Prevention/Wellness** - Processes or outcomes related to promoting healthy behaviors, screenings, immunizations, or that measure at a geographic level.

- **Effectiveness** - Care processes or outcomes for specific clinical conditions or classes of conditions, or processes that occur within a single entity.

- **Lower Cost** - Use financial data, or address overuse of costly diagnostics or treatments.
# Measure Counts by Domain

<table>
<thead>
<tr>
<th>NQS Priorities</th>
<th>Primary Designation</th>
<th>Secondary Designation</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-Centered/Engagement</td>
<td>16</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>20</td>
<td>42</td>
<td>62</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>151</td>
<td>5</td>
<td>156</td>
</tr>
<tr>
<td>Population Health/Prevention/Wellness</td>
<td>38</td>
<td>0</td>
<td>38</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>31</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>Lower cost</td>
<td>27</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
## Adequacy Analysis: Patient-Centeredness/Engagement

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Current Pertinent Measures</th>
<th>Adequate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience of Care</td>
<td>CAHPS surveys (aspects of hospital, home health, and clinician/group CAHPS); ED left without being seen;</td>
<td>Yes</td>
</tr>
<tr>
<td>Health-Related Quality of Life</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Burden of Illness</td>
<td>CAHPS pain management; median time to pain management for long bone fracture</td>
<td>No</td>
</tr>
<tr>
<td>Shared Decision-Making</td>
<td>CAHPS doctor/nurse communication</td>
<td>No</td>
</tr>
<tr>
<td>Patient Navigation and Self-Management</td>
<td>CAHPS discharge information; CAHPS communication about medicines; CAHPS 3-item care transition; stroke education; ED and hospital admission and readmission rates</td>
<td>No</td>
</tr>
</tbody>
</table>
## Adequacy Analysis: Population Health/Prevention/Wellness

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Current Pertinent Measures</th>
<th>Adequate?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Health Outcomes</strong></td>
<td>Life expectancy; infant death rate; low birth weight; sudden unexpected infant death rate; suicide rate; ED visits (e.g., asthma, diabetes, hypertension, mental health, addictions, dental care); hospitalization for dementia; age-adjusted mortality rates from heart disease and cancer</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>Adolescent wellness check-up; children receiving dental care; persons with usual primary care provider; ED visits for uninsured</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Healthy Behaviors</strong></td>
<td>Substance abuse (e.g., drug-induced death rate, adults who smoke, youth using any kind of tobacco product); safer sexual activity (e.g., reduced new HIV infections, chlamydia infection rate); weight management (e.g., adults and children who are healthy weight or obese, increased physical activity)</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Prevention</strong></td>
<td>Vaccinations (e.g., childhood, influenza); early prenatal care; lead screening and levels; fall-related death rate</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Social Environment</strong></td>
<td>Teen birth rate; domestic violence, including child maltreatment rate; students entering kindergarten ready to learn; high school graduation rate</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Physical Environment</strong></td>
<td>Affordable housing; pedestrian injury rate on public roads</td>
<td>Yes</td>
</tr>
</tbody>
</table>
# Adequacy Analysis: Lower Cost

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Current Pertinent Measures</th>
<th>Adequate?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Cost</strong></td>
<td>Medicare spending per beneficiary; total revenue (e.g., inpatient, outpatient, resident, Medicare resident, per capita, per beneficiary); all-payer per capita tests; Medicare beneficiary total payments, shared savings amounts from Medicare programs; per capita hospital and health expenditure growth</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Condition Specific Resource Use</strong></td>
<td>AMI payment per episode of care (2016), HF payment (2017), PN payment (2017)</td>
<td>No</td>
</tr>
<tr>
<td><strong>Appropriate Use</strong></td>
<td>Imaging (e.g., MRI lumbar spine for low back pain, abdomen or thorax CT use of contrast, cardiac imaging for preoperative risk assessment, brain and Sinus CT, brain CT in the ED for atraumatic headache)</td>
<td>No</td>
</tr>
</tbody>
</table>
## Adequacy Analysis: Outpatient Care

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Current Pertinent Measures</th>
<th>Adequate?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency Room Care</strong></td>
<td>Median time to fibrinolysis; fibrinolytic therapy within 30 minutes; aspirin at arrival; median time to ECG; median time ED arrival to ED departure for discharged ED patients; door to diagnostic evaluation by a qualified medical professional; median time to pain management for bone fracture; ED patient left without being seen; ED-related IQR measures</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Outpatient Surgery</strong></td>
<td>Timing of antibiotic prophylaxis; prophylactic antibiotic selection; safe surgery checklist; volume data on selected procedures; cataract surgery visual function improvement within 90 days; surgery-related MHAC patient safety measures</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Diagnostic Services</strong></td>
<td>MRI lumbar spine for low back pain; mammography follow-up rates; abdomen and thorax CT-use of contrast; cardiac imaging for preoperative risk assessment for non-cardiac low risk surgery; simultaneous use of brain and sinus CT; brain CT in the ED for atraumatic headache; head CT or MRI for stroke who received interpretation within 45 minutes of arrival; appropriate follow-up interval for colonoscopy; appropriate colonoscopy interval for patients with history of adenomatous polyps</td>
<td>Yes for imaging and colonoscopy, but narrowly focused</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>Median time to transfer to another facility for acute coronary event; ability to receive lab data in EHR as discrete searchable data; tracking clinical results between visits; transition record with specified elements received by discharged patients</td>
<td>Yes, in combination with inpatient measures</td>
</tr>
</tbody>
</table>
Scan for Measures to Fill Gaps

For each subdomain determined to be inadequately addressed, searched for measures to fill gaps using two primary sources:

- List of Potential Measures from the Measure Compendium
- Measures from credible warehouses, specifically the NQF’s Quality Positioning System (QPS) and AHRQ’s National Quality Measures Clearinghouse (NQMC)

Developed a list of Candidate Measures for gap-filling
## Measure Scan Search Terms

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Search Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health-Related Quality of Life</td>
<td>quality of life; functional status; whole person; well-being</td>
</tr>
<tr>
<td>Burden of Illness</td>
<td>burden; pain; nausea; vomiting; nutrition; numbness; dyspnea; fatigue</td>
</tr>
<tr>
<td>Shared Decision-Making</td>
<td>shared decision-making; care planning; engagement; communication; cultural competency; end of life; palliative; hospice</td>
</tr>
<tr>
<td>Patient Navigation and Self-Management</td>
<td>education; literacy; navigation; self-management; caregiver; activation</td>
</tr>
<tr>
<td>Condition-Specific Resource Use</td>
<td>resource use; cost</td>
</tr>
<tr>
<td>Appropriate Use</td>
<td>appropriate; overuse; underuse</td>
</tr>
</tbody>
</table>
Selection of Recommended Measures

- Each recommended measure was evaluated against three primary attributes:
  - **Importance** - To what extent does the measure address a priority quality gap in hospital care?
  - **Feasibility** - What are the technical considerations that determine data availability and the ease of implementation for the measure?
  - **Use and Alignment** - Is the measure in use by other programs or complementary to other related measures already in use by HSCRC or other programs?

- Also considered: NQF-endorsement status, measure type, level of analysis, and parsimony in measurement
Summary of Recommended Measures

- 13 measures for Stage II
  - 2017-2018
  - Easier to implement

- 7 measures for Stage III
  - 2019 and beyond
  - Harder to implement
## Summary of Recommended Measures by Subdomain

<table>
<thead>
<tr>
<th>Subdomain</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient-Centeredness/Engagement</strong></td>
<td></td>
</tr>
<tr>
<td>Health-Related Quality of Life</td>
<td>• Migraine: Improvement in Functional Status</td>
</tr>
<tr>
<td></td>
<td>• Low Back Pain: Functional Status Assessment</td>
</tr>
<tr>
<td>Burden of Illness</td>
<td>• Cancer: Burden of Illness Measure Cluster</td>
</tr>
<tr>
<td>Shared Decision-Making</td>
<td>• Total Knee Replacement: Shared Decision-Making</td>
</tr>
<tr>
<td></td>
<td>• Cultural Competency Implementation</td>
</tr>
<tr>
<td>Shared Decision-Making/End of Life</td>
<td>• Advance Care Plan</td>
</tr>
<tr>
<td></td>
<td>• Palliative Care Measure Cluster</td>
</tr>
<tr>
<td>Patient Navigation and Self-Management</td>
<td>• Patient-Centered Communication Measure Cluster</td>
</tr>
<tr>
<td><strong>Lower Cost</strong></td>
<td></td>
</tr>
<tr>
<td>Condition-Specific Resource Use</td>
<td>• Hip/Knee Replacement Episode Resource Use</td>
</tr>
<tr>
<td>Appropriate Use</td>
<td>• Cesarean Section</td>
</tr>
<tr>
<td></td>
<td>• Antipsychotic Use in Dementia</td>
</tr>
</tbody>
</table>
## Summary of Recommended Measures by Stage

### Stage II
- Cancer: Burden of Illness Measure Cluster
- Total Knee Replacement: Shared Decision-Making
- Advance Care Plan
- Palliative Care Measure Cluster
- Hip/Knee Replacement Episode Resource Use
- Cesarean Section

### Stage III
- Migraine: Improvement in Functional Status
- Low Back Pain: Functional Status Assessment
- Cultural Competency Implementation
- Patient-Centered Communication Measure Cluster
- Antipsychotic Use in Dementia
Next Steps

- Using Measures for Increased Accountability
  - Need a phasing strategy for transitioning some measures from monitoring to payment
  - For example, using SHIP population health measures for payment incentives

- Measure Removal
  - When topped-out, changed evidence, better measure endorsed
  - Most measures required under contract with CMS

- Measure Development
  - Electronic data sources
  - Patient-reported information

- Measure Piloting
  - Adding clinical data
  - Testing new measures