Maryland Hospital Quality-Based Reimbursement Program: An All Payor Initiative

Presentation for the National Healthcare Incentives Institute

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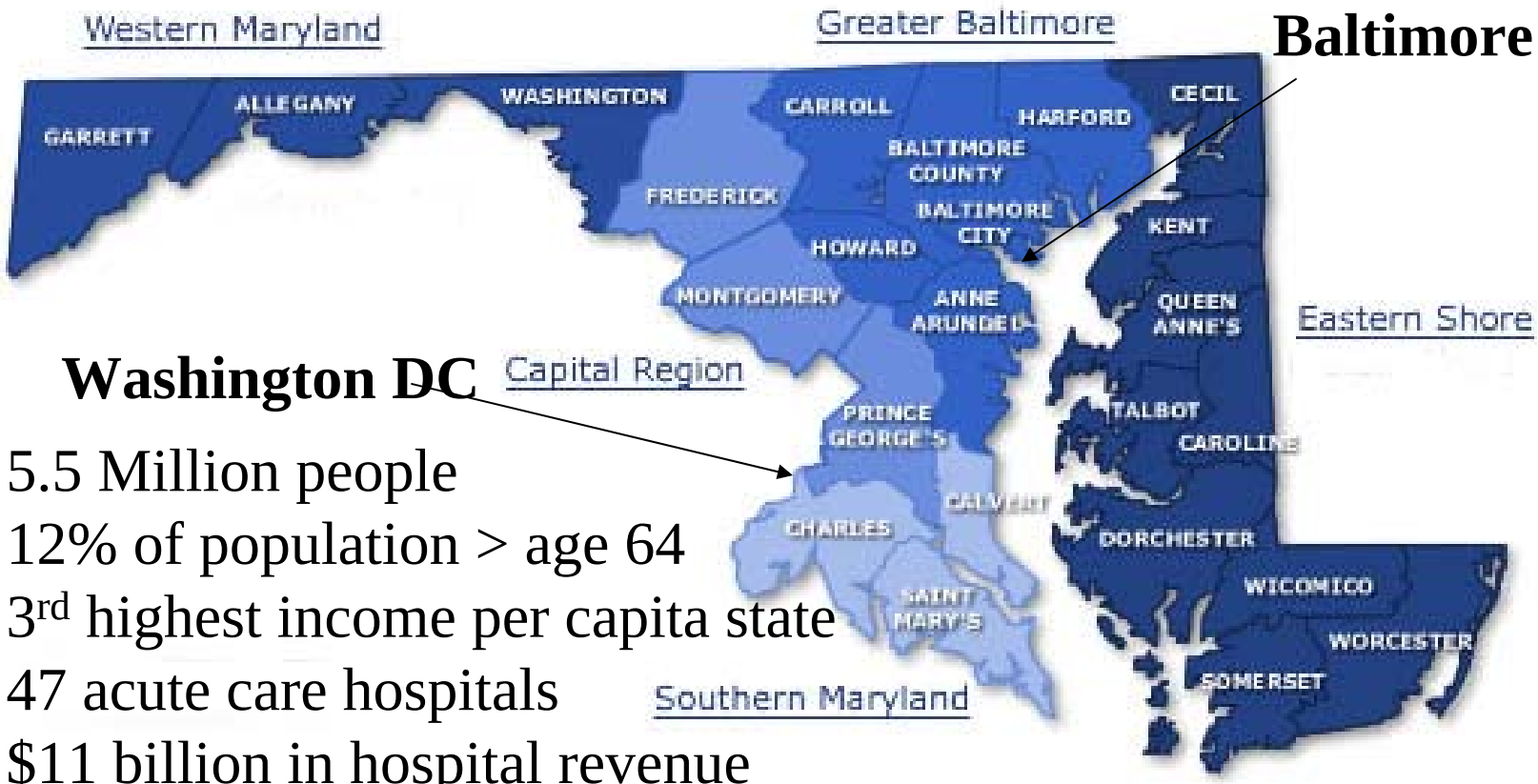
Maryland Health Services Cost Review Commission

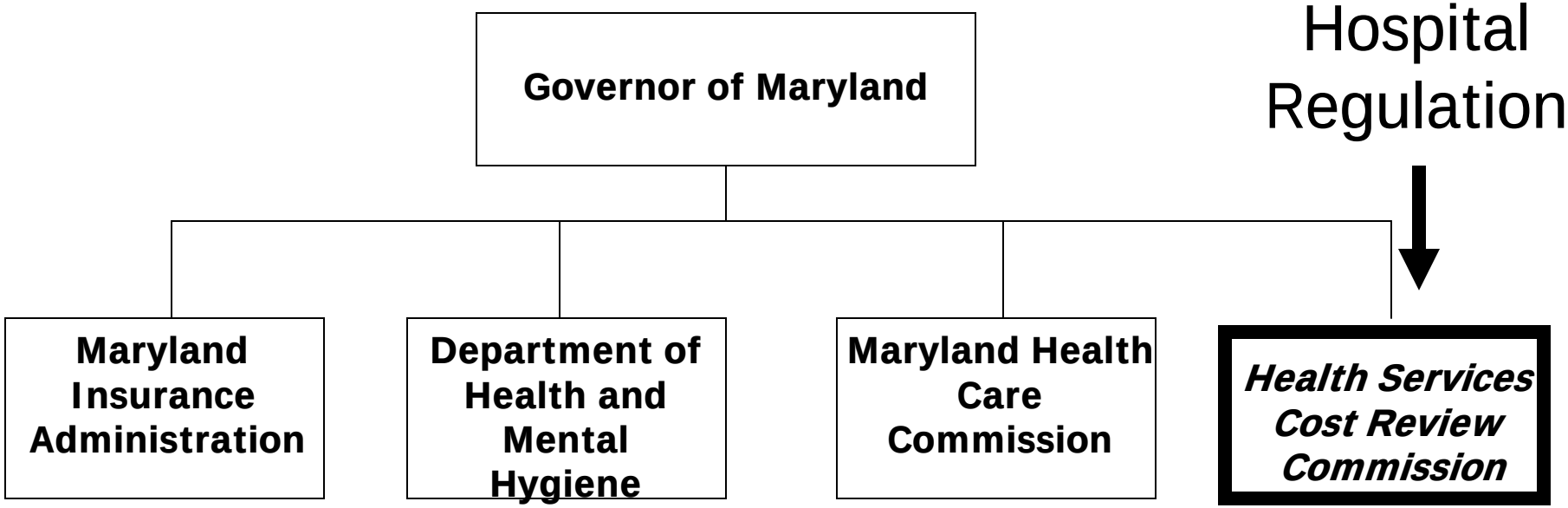
State of Maryland



- 5.5 Million people
- 12% of population > age 64
- 3rd highest income per capita state
- 47 acute care hospitals
- $11 billion in hospital revenue
- 700,000 discharges per year

Overview of Maryland Health Regulatory Agencies

HSCRC Hospital Regulation



Maryland Health Insurance Plan

Regulates Core Health Functions:
Medicaid Program
Public Health
Licensing/Certification

Regulates:
Cert. Of Need
Report Cards
Small Group Insurance

Regulates: Rates/Costs Of Acute care Hospitals

Background: HSCRC and the All Payer System

- Law enacted in 1971; First set rates in 1974
- Goals were to correct major problems
  - Control rapid cost growth
  - Improve access to care
  - Make the system equitable
  - Provide accountability and transparency
  - Ensure financial stability and predictability for hospitals and patients
- Key Components
  - All Payer System
  - Waiver Test
  - Funding for Hospital Uncompensated Care

Background: HSCRC and All Payer System

- Regulate the rates of 47 acute care hospitals (not physicians)
- Rates set prospectively
- Charge Per Case System with Annual Update Factor
- Promotes Efficiency and Effectiveness
- 7 member Commission- serve 4 year Standard Terms and include a variety of health care backgrounds – appointed to serve the "public interest"
- Professional Staff: 30 Full Time Employees-Economists, Statisticians; Accountants; Legal Staff; Clinician:
  - Rate Setting Division and Methodology Division
- Operating budget of $4.0 million per year
- Data collection is the key
- The system allows for P4P to be implemented more broadly than anywhere in the U.S.

Payment Based on Quality Terminology

- Pay for Performance
- Value-based Purchasing
- Quality-based Reimbursement (QBR)

Differences in National vs. HSCRC Programs

HSCRC	Other Programs
Maryland focused	National/Generic
All payors	Single payer
All acute hospitals	Network hospitals
HSCRC mission	Contractually driven
APR DRGS	Limited or lack of risk adjustment
Leverages existing data collection	New data demands

QBR Initiative Development Chronology

- October 2003 – HSCRC adopts Steering Committee report to undertake effort.
- December 2004 – HSCRC approves conceptual design.
- June 2005 – HSCRC Initiation Work Group kicks off.
- Summer 2006 – HSCRC Initiation Work Group selects initial quality measures.
- Fall 2006 – HSCRC Initiation Work Group considers composite scoring methods.
- 2007 – Beta testing phase
- June 2008 – Commissions accepts and adopts Initiation Work Group final recommendations and Evaluation Work Group initially convened

Steering Committee Recommendations

- Adopt the AHRQ definition of quality
- Establish Mission, Vision and Goals
- Quality funding divided into rewards, incentives and financial supports
- Consider a broad set of measures
- Create work groups to initiate the program and grow the program over time
- Collect data directly if possible and limit data burden on hospitals to the extent practicable
- Initially use a composite scoring methodology for payment but make individual scores available
- Purview of the Commission to consider how program will be funded and magnitude of rewards and incentives

Initiation and Evaluation Work Groups

Comprised of Diverse Stakeholders:

- Hospital industry
- Academic/ Health policy experts
- Payers/Insurers
- Employers/Purchasers
- Consumers
- Various state health agencies
- National quality experts/researchers

Meetings bimonthly or monthly

- Open to the public
- Minutes recorded and posted

Categories of Measures Considered

- Structure—Infrastructure
- Process including prevention/screening
  Outcome including adverse events
- Productivity or Utilization
- Patient experience of care
- Patient Safety
- Safety Culture

National Quality Forum Criteria for Measure Selection

Importance or relevance, including:	Scientific acceptability/ soundness, including:	Usability, including:	Feasibility, including:
●Leverage point for improving quality ●Performance in the area is suboptimal ●Aspect of quality is under provider control ●Considerable variation in quality of care exists	●Well-defined and precisely specified ●Reliable ●Valid ("accurately representing the concept") ●Precise, adequate discrimination ●Adequate, specified risk-adjustment ●Evidence linking process measures to outcomes	●Can be used by at least one stakeholder audience for decision-making ●Performance differences are statistically meaningful ●Performance differences are clinically meaningful ●Aggregating methods defined	●Point of data collection tied to care delivery, when feasible ●Timing and frequency of measure collection are specified ●Benefit of measurement is evaluated against financial and administrative burden ●Auditing strategy is designed and can be implemented ●Confidentiality concerns can be addressed

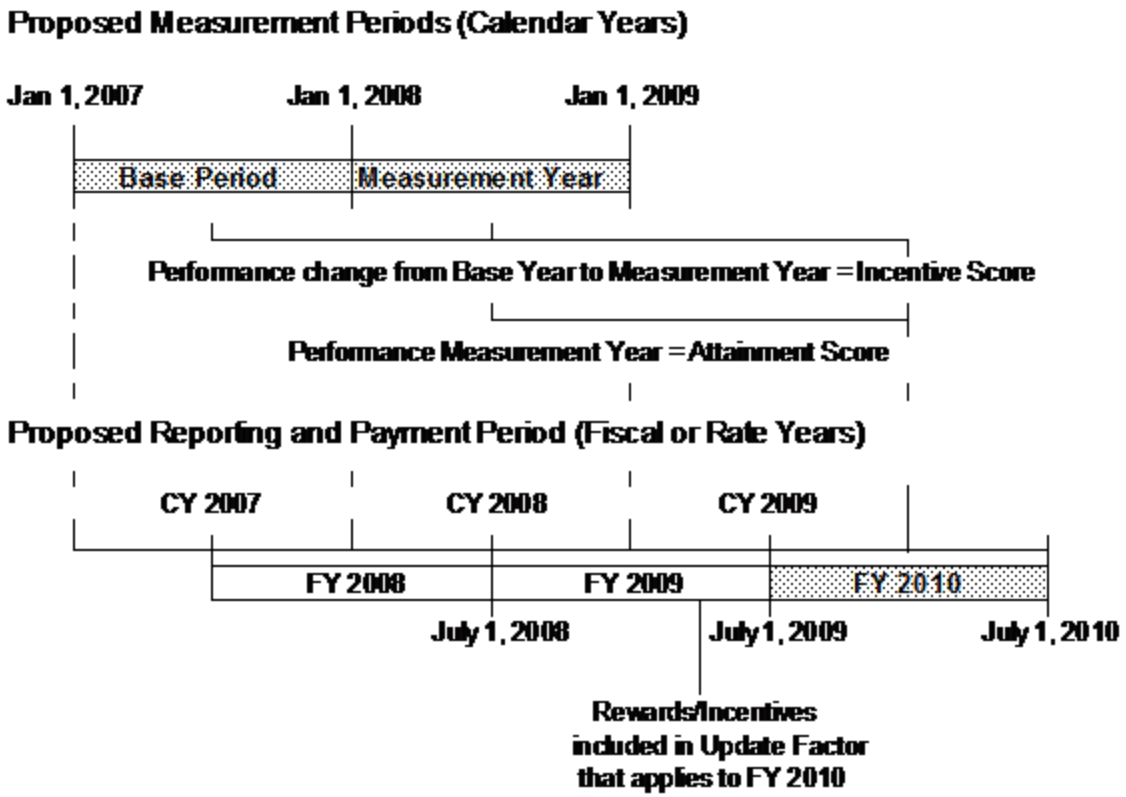
Measures Tested and Recommended for Year 1 Maryland QBR Initiative

Measure Name	Maryland QBR	CMS VBP
AMI-1- Aspirin at arrival	X	X
AMI-2- Aspirin prescribed at discharge	X	X
AMI-3- ACE inhibitor (ACE-I) or Angiotensin receptor blocker (ARB) for left ventricular systolic dysfunction	X	X
AMI-4- Adult smoking cessation advice/counseling	X	X
AMI-5- Beta blocker prescribed at discharge	X	X
AMI-6- Beta blocker at arrival	X	
AMI-7a- Fibrinolytic agent received within 30 minutes of hospital arrival		X
AMI-8a- Primary percutaneous coronary intervention (PCI) received within 120 minutes of hospital arrival		X
Pneumonia-2- Pneumococcal vaccination	X	X
Pneumonia- 3a- Blood cultures performed within 24 hrs prior or 24 hrs after hospital arrival for patients admitted to ICU	X	
Pneumonia-3b- Blood cultures performed before first antibiotic	X	X

Measures :Year 1 Maryland QBR Initiative

Measure Name	Maryland QBR	CMS VBP
Pneumonia-4- Adult smoking cessation/advice	X	X
Pneumonia -5b- Patients receive their first dose of antibiotics within 4 hours after arrival to the hospital	X	
Pneumonia 6- Appropriate antibiotic selection		X
Pneumonia-7- Influenza vaccination	X	X
HF-1- Discharge instructions	X	X
HF-2- Left ventricular systolic function assessment	X	
HF-3- ACE inhibitor (ACE-I) or Angiotensin receptor blocker (ARB) for left ventricular systolic dysfunction	X	X
HF-4- Adult smoking cessation advice /counseling	X	X
SIP-1- Prophylactic antibiotic received within 1 hour prior to incision	X	X
SCIP-2- Prophylactic antibiotic selection for surgical patients	X	
SCIP-3- Prophylactic antibiotic discontinued within 24 hrs post surgery (48 hours for CABG procedures)	X	X
AMI- 30-day mortality measures (Medicare only)		X
HF- 30-day mortality measures (Medicare only)		X
Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)		X

Timing of Year 1 Implementation



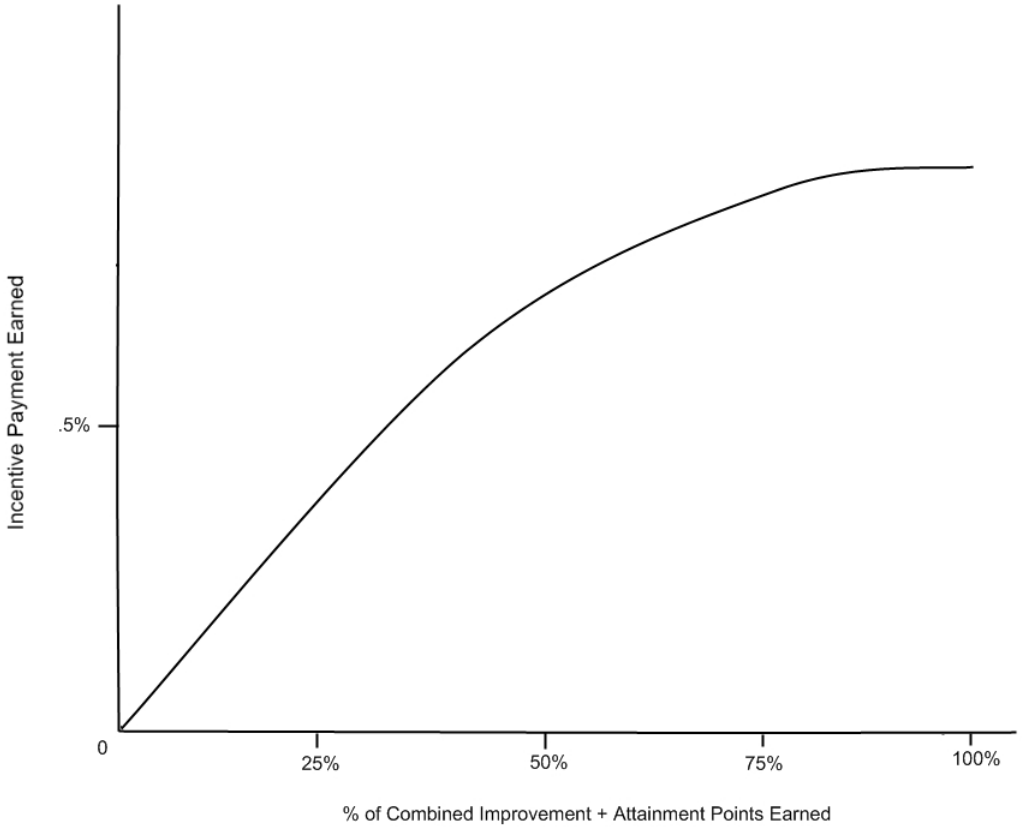
Year 1 – Funding Recommendations

- In FY 2010 funding is revenue neutral to overall system
- Amount “at-risk” will be discussed during payment deliberations – modeled .5% (approximately $60 million) for FY 2010
- Exclude hospital reporting on less than 5 measures
- Use cube-root function to translate scoring into payment

Year 1 –Hospital Assessment and Scoring Model

- Opportunity Model – possible score of 10x number of measures reporting
- Score is sum of all attainment and improvement points divided by available points
- Thresholds and benchmarks established in previous year
- Threshold – where points begin to accrue
  - 50th percentile for attainment
  - 1st year score for improvement
- Benchmark – 95th percentile for attainment and improvement
- Points align equally between threshold and benchmark

Year 1 – Translating Score to Payment



Specific Functions of the Evaluation Work Group Initially Convened in June 2008

- Examine quality research, measures and outcomes nationally and make recommendations to the Commission/Staff on changes and additions
- Continue to review data needs and make recommendations for future changes
- Evaluate whether the HSCRC Quality Initiative is meeting its goals in general and whether the measures are indicative of quality outcomes
- Make recommendations on the most appropriate way to audit quality data internally and externally
- Investigate the long-term feasibility of an interoperable data system that would allow for the horizontal and vertical assessment of patient outcomes across all modes of care

Evaluation Work Group Deliberating Complication and Readmission Outcomes

- 3M Potentially Preventable Complications (PPCs)
  - 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
- 3M Potentially Preventable Readmissions (PPRs)
  - Return hospitalizations that may result from deficiencies in the process of care and treatment (readmission for a surgical wound infection) or lack of post discharge follow-up (prescription not filled) rather than unrelated events that occur post discharge (broken leg due to trauma).

Evaluation Work Group Deliberating Complication Outcomes

Extreme Complications

- Extreme CNS Complications
- Acute Pulmonary Edema & Respiratory Failure w Ventilation
- Shock
- Ventricular Fibrillation, Cardiac Arrest
- Renal Failure with Dialysis
- **Post-Operative Respiratory Failure w Tracheostomy**

Cardiovascular-Respiratory Complications

- Stroke & Intracranial Hemorrhage
- Pneumonia, Lung Infection
- Aspiration Pneumonia
- Pulmonary Embolism
- Congestive Heart Failure
- Acute Myocardial Infarct
- Peripheral Vascular Complications Except VT
- Venous Thrombosis

Gastrointestinal Complications

- Major GI Complications w Transfusion or Signif Bleeding
- Major Liver Complications

Infectious Complications

- Clostridium Difficile Colitis
- Urinary Track Infection
- Septicemia & Severe Infection

Perioperative Complications

- **Post-Op Wound Infection & Deep Wound Disruption w Procedure**
- **Reopening of Surgical Site**
- **Post-Op Hemorrhage & Hematoma w Hemorrhage Control Proc or I&D Proc**
- **Accidental Puncture/Laceration During Invasive Procedure**
- **Post-Op Foreign Body**

***Bolded indicates close to 100% preventable if exclusion logic applied**

Evaluation Work Group Deliberating Complication Outcomes

Malfunctions, Reactions Etc.

- **Iatrogenic Pneumothrax**
- **Mechanical Complication of Device, Implant & Graft**
- **Inflammation, & Other Complications of Devices, Implants or Grafts Except Vascular Infection**
- **Infections due to Central Venous Catheters**

Obstetrical Complications

- Obstetrical Hemorrhage w Transfusion
- **Obstetrical Laceration & Other Trauma w/o Instrumentation**
- **Obstetrical Laceration & Other Trauma w Instrumentation**
- **Major Puerperal Infection and Other Major Obstetrical Complications**

Other Medical and Surgical Complications

- Post-Hemorrhagic & Other Acute Anemia w Transfusion
- Decubitus Ulcer
- Encephalopathy

***Bolded indicates close to 100% preventable if exclusion logic applied**

Maryland Data PPC Analysis & Impact

- 9 months of data – July 2007 – March 2008
- 50 hospitals
  - 2 rehab hospitals excluded
  - 6 hospitals excluded do to poor data reporting of POA indicator
- 42 hospitals used in PPC analysis data set with 500,771 discharges
- 91,284 (18%) excluded due to PPC global exclusion logic
- Remaining discharges at risk for one or more PPCs
  - 409,487 discharges
  - 0.96% died
  - 1.04 Case Mix Index
  - $10,423 average charge

Impact of Selected PPC Categories on Average Charges for GI Surgery

		Major GI Sugery		Other GI Sugery	
		Major PPC	No PPC	Major PPC	No PPC
SOI Level 1	No.	96	961	68	2,738
	Avg. Chrg	$25,911	$15,253	$19,214	$8,095
SOI Level 2	No.	244	1,370	154	2,859
	Avg. Chrg	$34,613	$18,537	$27,024	$10,498
SOI Level 3	No.	434	826	137	625
	Avg. Chrg	$55,760	$27,365	$41,602	$17,372
SOI Level 4	No.	115	115	27	54
	Avg. Chrg	$107,780	$62,003	$97,709	$28,430

Impact of Selected PPC Categories

Total At Risk for One or More PPCs	409,487		0.96	$10,423	1.04	$10,022
	Discharges	PPC Rate	% Died	Avg Chrg	CMI	CMI Adjusted Avg Chrg
Zero Selected PPCs	389,948	0.00	0.55	$9,729	0.97	$10,052
One Selected PPCs	15,175	3.71	5.48	$23,841	1.95	$12,243
Two Selected PPCs	2,692	0.66	16.05	$45,575	3.22	$14,172
Three or More Selected PPCs	1,672	0.41	32.83	$83,348	4.92	$16,943
One or More Selected PPCs	19,539	4.77	9.17	$31,928	2.38	$13,435

PPCs– Overall Maryland Impact

- Total Estimated Charges: $8,551,870,859
- Selected 14 PPCs: 1,875 cases with a charge impact of $16,878,601 (0.2%)
- Selected 35 PPCs: 9,503 cases with a charge impact of $116,915,331 (1.37%)
- All 64 PPCs:18,353 cases with a charge impact of $193,467,300 (2.26%)

PPRs– General Guidelines

	Readmission	
Initial Admission	Medical	Surgical
Medical	PPR except if clearly unrelated acute events	Not PPR unless initial medical diagnosis clearly should have resulted in surgery
Surgical	PPR except conditions clearly unrelated	PPR if related to complications of prior surgery

Maryland Rates of Potentially Preventable Readmission (PPRs)

		PPR Rate
15 Day Readmission Time Interval Across Hospital Readmissions	2006	6.74
	2007	6.74
30 Day Readmission Time Interval Across Hospital Readmissions	2006	9.89
	2007	9.81

- PPR rates consistent between two years

- 45% increase in PPR rate between a 15 day and 30 day readmission time interval

Maryland Hospital Rates of Potentially Preventable Readmission (PPRs)

PPR Rate	No. Hospitals
< 4	3
4-5.9	8
6 - 6.9	20
7 - 7.9	14
8+	4

-Best Practice PPR rates of 5.7 for top 16 hospitals and 25% of case volume

-33 hospitals with PPR rate higher than best practice PPR rate

Maryland PPR Impact in 2007

- 472,380 admissions were candidates for having a subsequent potentially preventable readmission
- 31,873 (4.2%) admissions were followed by one or more PPRs
- PPR rate is the percent of candidate admissions that were followed by one or more PPRs
  - PPR Rate 6.75 = 31,873 / 472,380

- 38,840 (5.12%) admissions were indentified as PPRs
- PPRs account for $430.4 million in charges and 199,582 hospital bed days

Lessons Learned/Implementation Considerations

- Include diverse stakeholders through the planning and implementation process; process, data and results must be transparent
- Provide data privately to providers before public release
- Select measures important for the state and your target populations
- Need to retire measures that are “topped off”
- Outcome measures must be risk adjusted
- Present on admission indicator is critical to calculating complication rates- consider incentives for full POA coding
- Move toward use of complete data and move away from sampling of cases for the measures- must be balanced with burden
- Carefully manage public release
- Investigate providing additional funding if hospitals can achieve certain benchmarks compared to the nation

More Information on the project:

www.hscrc.state.md.us

for Meeting Information, Minutes and Program Description or

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