I. Approval of the minutes
Meeting called to order at 3:04 PM. The minutes of the 440th meeting of the Faculty Senate held on May 16, 2015 were approved.

II. Introduction of Senate members and reception for new and outgoing members. Dr. Crino began by explaining that due to a reviewing of the charter, it was noted that several departments needed to be represented with more senators. Additional senators were added to the following departments: Anesthesiology/ CCM, Neurology, Oncology, Ophthalmology, Otolaryngology, Pathology, Psychiatry/ Behavioral Sciences, and Radiology/ Radiological Sciences. Dr. Crino encouraged the group to go around and introduce themselves. He then thanked several faculty members for whom this meeting was their last.

III. Election of officers for 2015-2016. Dr. Crino described how the election process is outlined in the charter, in that anyone can be nominated and then votes will be cast by silent ballot. He also said that an officer’s term is limited to three years and that he and Dr. Chanmugam have served for two years and that Dr. Ishii has served for one year. A motion was made to nominate the current officers and then seconded by senators. Note cards were passed around and attendees cast votes.

IV. Darren Lacey, Chief Information Security Officer, gave an information security report to the senate. Mr. Lacey began by highlighting some recent national trends and events, including high-profile breaches, HIPAA class action settlements, and hacking of health care websites and medical records. In six years, the major health care breaches have totaled 100 million records and more than 1000 incidents. The breaches, which attract lawsuits, can be expensive and have put the information security department on alert. They have developed networking and system support tools, have a centralized IT service, and have been working the state actor (APT) problem for several years. Their future objectives include 24/7 monitoring of critical assets, routine internal and external pen testing, next-generation firewall deployment, end-to-end encryption for credit card processing, multi-layered detection, scanning for vulnerabilities, and registering, encryption, and linking of all connected devices to their respective user.

V. Joe Bezek, MBA, Senior Director Finance, gave an introduction to understanding the economics of Johns Hopkins Medicine. Mr. Bezek highlighted the complexity of the system due to aspects related to revenue stream, one which totals $3.7 billion (FY2014) with all the hospitals under the JHM entity. The state of Maryland is unique in its reimbursement system, due to the Health Services Cost Review Commission (HSCRC), which has created a payment model based on a 5-year pilot with a cap on total revenue. As a result, and with its aim at improving patient health and reducing cost, volume and revenue are being restricted and will require Maryland to limit its annual all-payer per capital total hospital cost growth to 3.58%. This model is estimated to save at least $330 million for Medicare over the next five years. However, out-of-state and international patients do not count towards that cap and more volume in these areas are good. Mr. Bezek went on to detail how faculty can make a difference, for example by considering the Clinical Communities/ Best Practices Clinical Protocols. Mr. Bezek then detailed the revenue stream at Johns Hopkins- School of Medicine, which totaled $2.0 billion (FY 2014) through a combination of grants, contracts & other sponsored programs, patient service revenue, reimbursement from affiliates, contribution, and other.

VI. Renee Demski, MBA, MSW, VP Quality Improvement, Richard Day, Director Quality Improvement, and Carol Ware, BSN, Quality Improvement Team Leader gave a presentation on the methodology and patient safety indicators that led to the U.S. News and World Report ranking of best hospitals. The score is based off four categories: outcomes (survival score), process (reputation), structure, and patient safety score.
The upcoming changes to the 2015 Best Hospital Rankings include an addition of a “Common Care Rating”, which will be the first set of ratings used to measure and publically report hospital performance of common procedures and diagnoses. By 2016, hospitals will be placed into tiers (high performing vs. average vs. below average) for 19 different procedures and diseases. Some of this data has already been released for diseases such as COPD and CHF and procedures such as hip and knee replacements. Twenty-one ratings for five Hopkins-affiliated hospitals were given, 4 of which were classified as “high performing”, 10 of which were “average”, and 7 of which were “below average”. The patient safety indicators (PSI), which contribute to 10% of the overall rating, were detailed and include death in low-mortality diagnosis-related groups, pressure ulcer, foreign body left in during procedure, postoperative sepsis, etc. Several methods for improving the ranking of Johns Hopkins were outlined, which included a need for physicians to respond to queries in a timely manner and hints for improved documentation. These suggestions for change will take time, likely several years, to make a difference in the USNWR rankings. Data and rankings will be out in July.

The results of the election were announced. Dr. Crino, Dr. Chanmugam, and Dr. Ishii were re-elected unanimously. Finally, Dr. Crino encouraged everyone to check the website for two changed dates (September 2015 and May 2016). He then thanked everyone for coming and adjourned the meeting at 5:05 PM.

Respectfully submitted,
Masaru Ishii, MD, PhD
Recording Secretary
Information Security Report

Johns Hopkins Medicine
Faculty Senate
Darren Lacey (dll@jhu.edu)
June 17, 2015
National Trends and Events

• 2014 saw aggressive attacks, focused on known (and unknown) vulnerabilities (e.g. Heartbleed)
• High-profile breaches continued in finance and retail
• Continued rapid increase in the speed and danger of malware proliferation and changes in the hacker black market
• Increase in highly disruptive breaches (e.g. Sony)

• HIPAA class action settlements
  • Stanford: $4.1 million for 20K records posted on Web
  • AvMed: $3 million for 1 million records on lost laptop

• HIPAA federal settlement at Columbia/NYP for $4.3 million for 7K records posted on Web

• CHS notified 4.5 million from foreign hacker penetration and exfiltration

• Anthem Healthcare experienced hacking attack of potentially 80 million records in January 2015

• CareFirst website hack in April 2015
Timeline of Major Healthcare Breaches

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>Quantity</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>BCBS Tennessee</td>
<td>1.02M</td>
<td>Stolen Hard Drives</td>
</tr>
<tr>
<td>2010</td>
<td>TRICARE</td>
<td>4.9M</td>
<td>Lost Backups</td>
</tr>
<tr>
<td>2011</td>
<td>Advocate Medical</td>
<td>4.03M</td>
<td>Computer Theft</td>
</tr>
<tr>
<td>2012</td>
<td>Community Health</td>
<td>4.5M</td>
<td>Hacking</td>
</tr>
<tr>
<td>2013</td>
<td>Utah Dept. of Health</td>
<td>780K</td>
<td>Hacking</td>
</tr>
<tr>
<td>2014</td>
<td>Montana Public Health</td>
<td>1.3M</td>
<td>Hacking</td>
</tr>
</tbody>
</table>

Note the shift from physical loss to hacking

6 Yea Totals: >100M Records >1000 Incidents

Source: Privacy Rights Clearinghouse, https://www.privacyrights.org/
Healthcare Risk

• Breaches could be expensive
  • Medium-sized breaches (<10K records) typically attract lawsuits and/or enforcement actions in the $2-10 million range
  • CHS is one of the first health systems of this generation of large breaches; final costs not yet known (at $25/record it could exceed $100 million)
  • Anthem breach should help set the price
  • Impact on cyber-liability market not yet known

• HIPAA Cops -- Office of Civil Rights (OCR) audits becoming more frequent and more proactive

• State actors seem to be gathering PII for purposes other than cybercrime
## Different Security “Models”

<table>
<thead>
<tr>
<th>Regulated Entity (e.g. finance, government)</th>
<th>Us</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited # of critical assets &amp; PII</td>
<td>Ubiquitous PHI</td>
</tr>
<tr>
<td>Clinical segmented from academic</td>
<td>Flat network</td>
</tr>
<tr>
<td>Controlled Web presence</td>
<td>800 web servers, 1,700 domains</td>
</tr>
<tr>
<td>Managed devices are the rule</td>
<td>½ of our network devices are ‘unmanaged’</td>
</tr>
<tr>
<td>Directory is mainly professional staff</td>
<td>Directory includes 150K</td>
</tr>
<tr>
<td>Centralized analytics teams</td>
<td>Several dozen operational reporting teams</td>
</tr>
<tr>
<td>Few supervisory and control systems</td>
<td>~ 5000 medical devices</td>
</tr>
<tr>
<td>Technology Monoculture</td>
<td>Noah’s Ark</td>
</tr>
</tbody>
</table>
Some advantages over our peers

• Unlike others, we have been working the state actor (APT) problem for several years
• We have a solid networking and system support tools and program in place
• We are more centralized in IT services than other research universities and even more than some academic medical centers
• Epic deployment has triggered strong institutional response to risk
  • Enterprise Risk Management Program
  • Data Privacy Protection Program (DP3)
  • Data Trust Initiative
• While our investment in security has been traditionally low, there has been a recent increase
• Network segmentation will use current technologies and is not hostage to arcane legacy tools
<table>
<thead>
<tr>
<th>Three Year Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>All connected devices are registered, encrypted, &amp; linked to user</td>
</tr>
<tr>
<td>Internet visible hosts are routinely scanned for vulnerabilities</td>
</tr>
<tr>
<td>Every PHI application is assessed for risk</td>
</tr>
<tr>
<td>Routine internal and external pen testing</td>
</tr>
<tr>
<td>Multi-layered detection</td>
</tr>
</tbody>
</table>
**Likely impact on the JHM community**

<table>
<thead>
<tr>
<th>Digital Cognoscenti</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and managing a website/application or mobile app will be harder</td>
<td>Multi-factor authentication will be ubiquitous and it will mature faster in some areas than others</td>
</tr>
<tr>
<td>More paperwork (e.g. risk assessments, remediation plans) for funded projects</td>
<td>Reliance on virtual desktops will increase</td>
</tr>
<tr>
<td>Ramped up logging and monitoring</td>
<td>BYOD agents</td>
</tr>
<tr>
<td>Routine vulnerability scanning will be required</td>
<td>Monitoring will likely generate odd requests from monitoring groups</td>
</tr>
<tr>
<td>Cloud options will require crypto</td>
<td>More restrictions on desktops</td>
</tr>
<tr>
<td>Systems will fail ‘closed’</td>
<td>IT support will become more complex</td>
</tr>
</tbody>
</table>
Plans for 2016-17

• Complete next-generation firewall deployment
• Deploy device security interrogation on wireless and VPN
• Consolidate host controls such as application whitelisting and memory corruption
• Begin implementation of host and/or network data leak prevention
• Build internal capabilities for penetration testing
• Submit a plan for 24/7 security operations center coverage
• Complete JHM application inventory and remediation plan for primary systems, and analytics engines
• Deploy end-to-end encryption for credit card processing
• Complete JHM desktop encryption project
• Publish tools for research support in de-identification
Johns Hopkins Medicine (JHM)

- A “virtual” entity with many member organizations
- Finances: High level of complexity primarily due to aspects related to the revenue stream
- Not uncommon to healthcare industry, unlike other industries
- Buying a book at Barnes & Nobel versus a hip replacement
  a) Select book and pay at the register
  b) Provide patient service, document (including use of Epic system and capturing quality metrics), select a CPT code, submit bill in a format as dictated by different Payers, bill again for patient portion (confused patients), follow-up on denials, receive different payment from different Payers for the same service
- To compound things, many changes are now taking place in the healthcare industry
JHM – High Level

- Johns Hopkins University – School of Medicine

- Johns Hopkins Health System Hospitals
  1. Johns Hopkins Hospital (Academic Division)
  2. Johns Hopkins Bayview Medical Center (Academic Division)
  3. Howard County Hospital (Community Division)
  4. Suburban General Hospital (Community Division)
  5. Sibley Memorial Hospital (Community Division)
  6. All Childrens Hospital (ACH)
  7. Johns Hopkins Community Physicians (JHCP)

- Johns Hopkins Health Care
  1. Priority Partners (Medicaid Managed Care Organization)
  2. Employee Health Program (Hopkins based health insurance plan)
  3. United States Federal Health Plan (Military & families insurance plan)

- Johns Hopkins International

September 18, 2015
Hospitals: $3.7 Billion

1. Reimbursement system is NOT like the rest of the US (excluding ACH)

2. State of Maryland, via the Health Services Cost Review Commission (HSCRC) (www.hscrc.state.md.us), has a unique payment model

3. Previously, methodology provided similar payments for similar services (included a waiver from the national Medicare hospital payment system), more volume was good

4. Currently, a new Global Budget Revenue (GBR) model based on a 5-year pilot with a cap on total revenue, resulting in volume / revenue being restricted
JHM Finances – Revenue Stream

**Johns Hopkins University – School of Medicine : $2.0 Billion**

- Revenue stream is similar to the rest of US and other Academic Medical Centers
- Patient Clinical Services
- Research / Sponsored Projects
- Education
- Internal funding sources (Joint Agreement & SOM)
- Fund raising
1. Maryland's All-Payer Model Agreement was approved by the Centers for Medicare & Medicaid Services (CMS) on January 10, 2014.

2. “Aimed at improving patient health and reducing costs.”

3. This initiative will replace Maryland’s 36-year-old Medicare waiver to allow the state to adopt new policies that reduce per capita hospital expenditures and improve health outcomes as encouraged by the Affordable Care Act.

4. Under this model, Medicare is estimated to save at least $330 million over the next five years.

5. This model will require Maryland to limit its annual all-payer per capita total hospital cost growth to 3.58%.
Hospitals: $3.7 Billion (FY 2014)

- Global Budget Revenue (GBR) Agreements
  1. Each hospital has their own GBR that ties into the **overall 3.58% growth rate**
  2. Revenue / volume in excess of the GBR agreement is not good
  3. JHH and JHBMC has a GBR growth rate exceptions for **Out-Of-State and International patients**, more volume in these areas is good
JHM Finances – Revenue Stream

**Hospitals: $3.7 Billion**

- Opportunities – How you can make a difference
  1. Focus on cost reductions initiatives
  2. Supply Chain / Purchasing
  3. Gainsharing example from New Jersey (article)
  4. Clinical Communities / Best Practices Clinical Protocols (Lisa Ishii, MD) resulting in improvements in care
  5. Lower cost per unit (patient service) will improve profitability
  6. Quality measures: Readmission and Hospital Acquired Conditions can both decrease or increase the cost of care in addition to avoid or cause HSCRC penalties
JHM Finances – Revenue Stream

Hospitals: $3.7 Billion

Johns Hopkins Medicine - HOSPITALS FY2014 Revenue

<table>
<thead>
<tr>
<th>Source of Revenue</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>JHH</td>
<td>1,995,127,000</td>
</tr>
<tr>
<td>JHBMC</td>
<td>541,708,000</td>
</tr>
<tr>
<td>HCGH</td>
<td>238,789,000</td>
</tr>
<tr>
<td>SHI</td>
<td>264,643,000</td>
</tr>
<tr>
<td>SMH</td>
<td>274,612,000</td>
</tr>
<tr>
<td>ACH</td>
<td>424,864,000</td>
</tr>
</tbody>
</table>

September 18, 2015
Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

1. Grants, Contracts & Other Sponsored Programs @ $693 million (34%)
2. Patient Service Revenue @ $639 million (31%)
3. Reimbursement from Affiliates @ $409 million (20%)
4. Contributions @ $113 million (6%)
5. Other @ $188 million (9%)
JHM Finances – Revenue Stream

**Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)**

Grants, Contracts & Other Sponsored Programs @ $693 million (34%)

1. Significant part of the Hopkins Mission
2. Challenges:
   a) NIH budget reductions
   b) NIH salary cap @ $181,500
   c) reductions in indirect cost recoveries
3. Opportunities:
   a) Discovery / patents
   b) Diversification of research portfolio (industry, foundations, Biotech)
Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

Patient Service Revenue @ $639 million (31%)

1. Significant part of the Hopkins Mission
2. Represents major source of cross-subsidy for other SOM missions and programs, only service line that generates a profit (or loss)
3. **Payer Mix**
   a) 41% of payments are dictated (Medicare and Medicaid)
   b) 49% of payments negotiated (BlueShield / CareFirst, United Healthcare, Aetna, Cigna, etc.)
   c) 5% Self Pay
   d) 5% Other (including International)
JHM Finances – Revenue Stream

Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

Patient Service Revenue @ $639 million (31%)

Challenges

a) Medicare Fee-For-Service payment SGR formula has been eliminated, 0.5% annual increases through 2019 with future payments being influence by quality metrics
b) CPT code realignment (e.g., 2015 reductions in Ophthalmology and Radiology)
c) Medicaid payment reductions due to state budget issues (e.g., E&M codes from 100% of Medicare rates to 92%)
d) Bending the cost curve, Medicare Accountable Care Organizations based on “risk arrangements” resulting in overall payments being lower
e) ICD-10 implementation October 2015, Payer readiness
f) Epic Professional Fee billing system implementation December 2015, cash lag
g) Medicare payments tied to quality reporting and related scores
h) Non-governmental Payers following Medicare’s lead also, narrow networks
JHM Finances – Revenue Stream

**Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)**

**Patient Service Revenue @ $639 million (31%)**

Opportunities

a) Improve the patient experience
b) Reduce clinic cancellations
c) Increase patient access via Access Services scheduling (e.g., direct scheduling via Epic myChart)
d) Meaningful Use quality measures (e.g., After Visit Summary, etc.)
e) Productivity improvements
f) Close Epic encounters in a timely fashion so bills can be processed
g) Population Health via Accountable Care Organization (e.g., best practices / clinical protocols and cost efficiencies)
Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

Reimbursement from Affiliates @ $409 million (20%)

1. Primarily from JHH and JHBMC for services rendered
2. Challenge: Hospital will find it more difficult, but not impossible, to provide future funding due to the new HSCRC GBR constraints
3. Opportunity: Partner with Hospitals on initiatives noted above (e.g., International & Out-Of-State patients, Gainsharing / Cost reduction, etc.)
Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

Contributions @ $113 million (6%)

1. Hopkins has been very fortunate
2. Philanthropy subject to the economy
3. Endowment income subject to market
JHM Finances – Revenue Stream

Johns Hopkins University – School of Medicine: $2.0 Billion (FY2014)

Johns Hopkins Medicine - School of Medicine FY2014 Revenue

<table>
<thead>
<tr>
<th>Sources of Revenue</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants</td>
<td>$693,000,000</td>
</tr>
<tr>
<td>Patient Svcs</td>
<td>$639,000,000</td>
</tr>
<tr>
<td>Affiliates</td>
<td>$409,000,000</td>
</tr>
<tr>
<td>Contributions</td>
<td>$113,000,000</td>
</tr>
<tr>
<td>Other</td>
<td>$188,000,000</td>
</tr>
</tbody>
</table>
JHM Finances – Expense Summary

Johns Hopkins Medicine - HOSPITALS FY2014 Expense

- Salaries & FBs: $1,565,565,000
- Purchased Svcs: $1,006,814,000
- Supplies & other: $748,540,000
- Interest: $36,770,000
- Depreciation: $242,358,000

Johns Hopkins Medicine - School of Medicine FY2014 Expenses

- Salaries & FBs: $1,243,313,000
- Purchased Svcs: $225,596,000
- Supplies & other: $61,488,000
- Bad Debt: $58,876,000
- Depreciation: $22,358,000

September 18, 2015
Thank you

Questions
U.S. News & World Report

Renee Demski, VP Quality, JHHS, Armstrong Institute
Sean Evans, Director Marketing
Agenda

- 2014 Best Hospitals Methodology Review
- Proposed Changes to 2015 Best Hospitals
- An Introduction to Common Care Ratings
- Questions

JHM Marketing and Communications
2014 Best Hospitals Methodology
Best Hospitals Methodology

- Outcomes (Survival score) (32.5%)
- Process (Reputation) (27.5%)
- Structure (30%)
- Patient Safety Score (10%)
Best Hospitals Methodology

• Outcomes
  – Compares the number of Medicare inpatients who died within 30 days of admission with the number expected to die. Each specialty received a score of 1 (lowest) to 10 (highest).

• Process (Reputation)
  – Two samples of survey – AMA physician list (1,600 total) and Doximity (members: 50K; nonmembers: 2,400).

• Structure
  – These include hospital volume, nurse staffing, technology, and other resources that define the hospital environment.

• Patient Safety Score
  – Hospital-based score of 1 (lowest) to 5 (highest)
Upcoming Changes to the 2015 Best Hospital Rankings
2015 Best Hospital Changes

- USNWR uses MEDPAR administrative data
  - 3 prior Federal fiscal years (2011, 2012, and 2013)

- Doximity
  - Sole source of information for the physician survey
  - Surveying members and non-members
  - Why this matters and potential impact

- Other Changes
  - Revisiting PSI’s currently used
  - Use of the CDC’s National Healthcare Safety Network’s (NHSN) infection data
Common Care Ratings

- What is it?
- What’s included in the rating?
- What’s being rated / How did the JHHS Hospitals perform?
- How does the public view the rating?
- How does this compare to “Best Hospitals”? 
What is it?

- Over 6,000 hospitals are included.
- Additional procedure and disease ratings will be released in 2016, for a total of 19.
- This does not replace Best Hospitals.
- Hospitals are not ranked, rather they are placed into tiers as “high-performing”, “average”, or “below average”.

JHM Marketing and Communications
What’s Included in the Rating?

- 2010, 2011, and 2012 IP Medicare Data
  - Mortality
  - Readmissions: Same-cause and all-cause
  - Event-free admissions
  - Volume
- 2013 HCAHPS
- 2013 AHA Survey
  - RN Staffing
  - Intensivist Staffing
- 2013 CMS Hospital Compare Data
  - HAIs
- Nurse Magnet
- Procedure / Disease Specific Datasets
  - e.g., STS Database for CABG
- Reputation data is **not** used

JHM Marketing and Communications
What’s Being Rated? / How did JHHS do?

<table>
<thead>
<tr>
<th>Hospital</th>
<th>CABG</th>
<th>Hip Replacement</th>
<th>Knee Replacement</th>
<th>COPD</th>
<th>CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johns Hopkins Hospital</td>
<td>Average</td>
<td>Average</td>
<td>Unrated (insufficient volume)</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>Johns Hopkins Bayview Medical Center</td>
<td>-</td>
<td>Average</td>
<td>High Performing</td>
<td>Below Average</td>
<td>Below Average</td>
</tr>
<tr>
<td>Howard County General Hospital</td>
<td>-</td>
<td>Average</td>
<td>Average</td>
<td>Below Average</td>
<td>Below Average</td>
</tr>
<tr>
<td>Sibley Memorial Hospital</td>
<td>-</td>
<td>High Performing</td>
<td>High Performing</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>Suburban Hospital</td>
<td>High Performing</td>
<td>Below Average</td>
<td>Average</td>
<td>Below Average</td>
<td>Below Average</td>
</tr>
</tbody>
</table>

Potential future disease/procedure ratings include: Pacemaker insertion, stroke, prostatectomy, spine fusion, mastectomy, hysterectomy
How Does the Public View this Information? / What Do They See?

- Ratings for the 5 previous conditions are publically available on the US News website. Below is an example of what a consumer can view.
How Does this Compare to “Best Hospitals”?  

• What’s similar
  – Inpatient only
  – Medicare only
  – AHA Survey
  – Hospitals are allowed to purchase US News badge to promote rating

• What’s different
  – No reputation included
  – No numerical ranking
  – HCAHPS and Hospital Compare used in Common Care
  – Each condition has its own components and weighting
USNWR PSI

Richard Day, Director Quality Improvement
Carol Ware, QI Team Leader, Special Projects
Agenda

- Define AHRQ PSIs
- Review USNWR Safety Methodology
- Discuss current performance results
- Describe “how you can help”
US News and World Reports (USNWR) Quality Indicators

- **Patient Safety: 10% of overall score**
  - Agency for Healthcare Research and Quality (AHRQ) 8 Patient Safety Indicators (PSI): 5 point scale
    1. *Death among surgical patients with serious treatable complications*
    2. *Iatrogenic pneumothorax*
    3. *Perioperative hemorrhage and hematoma*
    4. *Postoperative respiratory failure*
    5. *Postoperative wound dehiscence*
    6. *Accidental puncture or laceration*
    7. *Pressure ulcers (new)*
    8. *Postoperative hip fracture (new)*

- **Survival: 32.5% of overall score**
  - Mortality
    - Score from 1 to 10 (the highest survival rates receive a score of 10)

- Based on MEDPAR administrative data
- Includes data for federal fiscal years (10/1-9/30) 2010, 2011, 2012
What is AHRQ?

- Agency for Healthcare Quality and Research (AHRQ)
- Agency within the US Department of Health and Human Services (DHHS)

**AHRQ Mission:**

To improve quality, safety, efficiency and effectiveness of healthcare for all Americans
AHRQ Quality Indicators

*Patient Safety Indicators
- Complications
- Unexpected Deaths

Pediatric Quality Indicators
- Neonatal

Prevention Quality Indicators
- Avoidable hospitalization
- Other avoidable conditions

Inpatient Quality Indicators
- Mortality
- Utilization
- Volume
Methodology: AHRQ Quality Indicators

- Measure definitions are based on several data elements
  - ICD9 Diagnosis and procedure codes
  - MSDRG, MDC, sex, age, procedure date, admit type, source, D/C disposition, point of origin, POA
  - Numerator= # of cases with outcome of interest (exp. Post-op sepsis)
  - Denominator= population at risk (pneumonia patients, elective surgery, population census)
Each year AHRQ updates the PSIs to reflect changes made to:

- ICD9
- Coding specifications
- Data elements in the Uniform Billing Form
- Other Technical Changes
AHRQ Patient Safety Indicators

- Death in low-mortality diagnosis-related groups
- Pressure ulcer
- Death among surgical inpatients with treatable serious complications
- Foreign body left in during procedure
- Iatrogenic pneumothorax
- Central venous catheter-related bloodstream infections
- Birth trauma—injury to neonate
- Obstetric trauma—vaginal delivery with instrument
- Obstetric trauma—vaginal delivery without instrument
- Postoperative hip fracture
- Postoperative hemorrhage or hematoma
- Postoperative physiologic and metabolic derangements
- Postoperative respiratory failure
- Postoperative pulmonary embolism or deep vein thrombosis
- Postoperative sepsis
- Postoperative wound dehiscence
- Accidental puncture or laceration
- Transfusion reaction
Maryland Quality Based Reimbursement
PSI90 Composite

- PSI #3 Pressure Ulcer Rate
- PSI #6 Iatrogenic Pneumothorax Rate
- PSI #7 Central Venous Catheter-Related Blood Stream Infection Rate
- PSI #8 Postoperative Hip Fracture Rate
- PSI #9 Perioperative Hemorrhage or Hematoma Rate
- PSI #10 Postoperative Physiologic and Metabolic Derangement Rate
- PSI #11 Postoperative Respiratory Failure Rate
- PSI #12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate
- PSI #13 Postoperative Sepsis Rate
- PSI #14 Postoperative Wound Dehiscence Rate
- PSI #15 Accidental Puncture or Laceration Rate
Performance Impact

1. Patient Care
   - *goal is to eliminate harm*

2. Reputation
   - *Impact on US News and World Report (USNWR) ranking*
   - *Included in USNWR routine care CY15*
   - *University Health Consortium Quality and Accountability Ranking*
   - *Consumer Reports*

3. Revenue
   - *Quality Based Reimbursement = 2% total revenue at risk*
     - Safety measure 35% FY17
   - *Value Based Purchasing*
     - Safety measure 20% FY17
What will it take to regain #1 ranking in USNWR safety indicators

- Current overall score = 1
- #1 overall score = 5

Based on Medicare cases only
# USNWR Hospital Ranking and PSI Scores

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Hospital</th>
<th>PSI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Mayo Clinic</td>
<td>5</td>
</tr>
<tr>
<td>#2</td>
<td>Massachusetts General</td>
<td>4</td>
</tr>
<tr>
<td>#3</td>
<td>The Johns Hopkins Hospital</td>
<td>1</td>
</tr>
<tr>
<td>#4</td>
<td>Cleveland Clinic</td>
<td>3</td>
</tr>
<tr>
<td>#5</td>
<td>UCLA Medical Center</td>
<td>4</td>
</tr>
<tr>
<td>#6</td>
<td>New York-Presbyterian University Hospital</td>
<td>5</td>
</tr>
<tr>
<td>#7</td>
<td>Hospitals of the University of Pennsylvania</td>
<td>5</td>
</tr>
<tr>
<td>#8</td>
<td>UCSF Medical Center</td>
<td>5</td>
</tr>
<tr>
<td>#9</td>
<td>Brigham and Women’s Hospital</td>
<td>4</td>
</tr>
<tr>
<td>#10</td>
<td>Northwestern Memorial Hospital</td>
<td>4</td>
</tr>
</tbody>
</table>
1. **Activate 100% Medicare PSI retrospective case review**
   - Rebilled overturned cases
   - Preliminary YTD FY 15 (10/14 - 3/13/15) overturned 25% of reviewed cases

2. **Implemented Medicare Bill Hold Process: will impact FY15 performance**
   - 7/14 designed and implemented Medicare Bill Hold process
   - 8/14 bill hold initiated for current 8 PSIs
   - 9/14 additional 8 PSIs added to bill hold
   - 10/14 installed AHRQ PSI filter that includes POA and exclusion criteria that will improve bill hold review efficiency

3. **Identified top volume and conducting drill down to identify root cause (FY14 and FY15)**
   - PSI09 Perioperative Hemorrhage and Hematoma
   - PSI15 Accidental Puncture or Laceration

4. **Implemented improvements to the DocuCheck provider query process – work is ongoing**

5. **Implemented Computer Assisted Coding (CAC) in quality improvement**

6. **Ultimate Best Practice – concurrent review and improve documentation while patient is still an inpatient**
Medicare Bill Hold Process

Key: QIS = Quality Improvement Specialist, ACE = coding validation contractor, PSI= Patient Safety Indicator, MHAC= Maryland Hospital Acquired Condition

<table>
<thead>
<tr>
<th>Phase</th>
<th>HIM/Finance</th>
<th>QIS</th>
<th>QIS</th>
<th>ACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coder codes the Medicare record</td>
<td>Did medicare case meet the bill hold based on AHRQ PSI inclusion criteria</td>
<td>Case automatically placed on Keane bill hold for 7 days from MR final coding approval date</td>
<td>QIS runs a daily AHRQ PSI report from CVIEW and sends to ACE for validation</td>
<td>Releases any case that does not appear on the Cview AHRQ PSI list</td>
</tr>
<tr>
<td>PSI case released for billing</td>
<td></td>
<td></td>
<td>QIS performs reconciliation between AHRQ PSI list and the Keane bill hold list</td>
<td></td>
</tr>
<tr>
<td>QIS sends the AHRQ PSI list daily to ACE</td>
<td>QIS reviews the cases received from the ACE reviewer and validates the PSI/MHAC assignment</td>
<td>QIS disagrees with the ACE PSI/MHAC assignment</td>
<td>QIS releases case for billing</td>
<td></td>
</tr>
<tr>
<td>QIS reviews KEANE bill holds daily</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ace performs validation review of PSIs and MHACs

Ace sends the reviewed list of PSIs and MHACs to QIS

Ace performs final validation of QIS request for review of PSIs and MHACs

QIS performs validation review of PSIs and MHACs

QIS releases case for billing

Yes

No

UHC JHH FFY Medicare PSI Performance

JHH 2010: 332
JHH 2011: 352
JHH 2012: 400
JHH 2013: 251
JHH 2014: 157
JHH 2015: 61

37.25% improvement
37.45% improvement
Preliminary 10/14-2/15
FFY 2014 Medicare PSI

- BAYVIEW: 53
- JHH: 157
- MASS GEN: 181
- CLEVELAND CLINIC: 237
- MAYO: 275
Preliminary FFY2015 PSI Comparison

- BAYVIEW: 23
- MASS GENERAL: 48
- JHH: 61
- CLEVELAND CLINIC: 72
- MAYO: 89
How can you help?

- Encourage department faculty meetings with CDE

- Message to faculty the following documentation improvement themes:
  - Document all present on admission conditions
  - Confirm all rule out, suspected or possible working diagnoses
  - Document diagnoses with specificity and accuracy

- Remind faculty to respond timely to queries

- Distribute Departmental MHAC and PSI reports
  - Reinforce importance in Faculty meetings
• With **Specificity** (right vs left, systolic vs diastolic, upper vs lower)

• With **Acuity** (acute, acute on chronic, decompensated, etc.)

• Specify if a condition, after study was **present on admission (POA)** or not

• Respond to all **queries** timely (both concurrent and retrospective)

• Apply standard diagnostic definitions (all diagnoses must be **clinically supported**)

*September 18, 2015*
Documentation Helpful Hints

- Document “cause and effect” due to, associated with

- Clarify if a complication occurred or if it was inherent to the procedure

- Ensure that all “rule out”, “possible”, “probable” diagnoses are confirmed or ruled out prior to Discharge

- Any pertinent information found in radiological reports, such as echos, ekg’s, path reports, must be documented into the legal record by a physician to be considered significant.
Questions