The Future of Stroke: A Brief Overview of CMS, Affordable Care Act, Value Based Purchasing and Meaningful Use

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Disclosures:

Wendy J. Smith - I have no actual or potential conflict of interest in relation to this presentation.

Jeanie Luciano - Genentech Speaker Bureau
Cleveland Clinic Health System

- CCHS is an 11 hospital system (10 in Ohio, 1 in Weston, FL) with 1 Comprehensive Stroke Center, 9 PSCs and a stroke ready hospital. Main Campus in downtown Cleveland is the regional referral center for tertiary care for Northeastern Ohio, as well as a Telemedicine Network Hub with a network extending into Pennsylvania.
  - CCMC sees over 5.1 million patient visits per year with 157,474 admissions; 200,808 surgical cases from all 50 states and 132 countries.
  - 43,890 caregivers: 3,000 + physicians and scientists and 11,400 nurses.
    - 1,785 Residents and fellows in 67 accredited training programs.
  - Critical Care Transport: 4,500 transports a year including patients from 21 countries.
  - See over 120 Strokes per month with a Stroke team of 6 Vascular Neurologists, 3 Stroke Fellows, an Acute Stroke Nurse and Program Manager.
  - NICU staffed 24/7 by Neuro-intensivists.
Penn Medicine

- A 4 hospital system: Hospital of the University of Pennsylvania (HUP), Pennsylvania Hospital, Presbyterian University of Pennsylvania, and Chester County (Chester County new to the system in late 2013, not included in the statistics).

- Licensed Beds 1,632; HUP: 784
- HUP: 1.9 million sq. ft
- Physicians 2,593
- Adult Admissions 78,262
- Outpatient Visits 2,080,269
- Emergency Dept. Visits 136,374
STROKE CARE at Penn Medicine

• HUP is a Comprehensive Stroke Center-about 90 stroke patients per month. Tele-stroke HUB and Spoke Model.

• PAH, PPMC, and Chester County are Primary Stroke Centers.

• Good Shepherd-Penn Partners is a CARF- Stroke certified rehabilitation center.
Teamwork at Penn Med
Objective:

• To verbalize the impact of healthcare reform and the influence it will have on stroke data reporting and managing an effective stroke program.
Evolution and Timeline of Stroke Quality Measures

- 2008 National Quality Forum (NQF) endorses 8 stroke quality measures used by GWTG.
- 2009 CMS adds “Participation in a Stroke Registry” as a structural measure in the IQR program.
Evolution and Timeline of Stroke Quality Measures

- 2010 CMS adds stroke quality measures to the Electronic Health Records (EHR) Incentive Program.
- 2011 CMS adds stroke quality measures to the IQR program.
- 2014 and beyond- Stroke Quality Measures are published on the Hospital Compare website.
CMS Inpatient Quality Reporting (IQR) and Hospital Value-Based Purchasing (VBP) Programs

• Pay for Reporting: The IQR Program requires hospitals to report on designated quality measures to receive a higher annual update to their MS-DRG update rates. 1

• Pay for Performance (VBP)- CMS evaluates hospital’s performance on designated quality measures and translates achievement and improvement into incentive payments. 2

Overview- Hospital Value Based Purchasing (VBP) Program

- Hospital VBP was mandated by the Affordable Care Act to link payment to quality.
- Starting Fiscal Year (FY) 2013 payment (over $900 million total annual payment), 1% of IPPS base operating payment linked to performance on quality measures.
- Percentage increases by 0.25% annually until FY 2017 (2% starting in FY 2017).
- Current measures include MI, PN, CHF, SCIP, HAIs, 30 Day mortality measures, and patient experience of care.
- Stroke core measures are possibly going to be incorporated into VBP in the future.

NSA
Overview- Hospital Value Based Purchasing (VBP) Program

• FY 2015 program- newly added measures include Medicare Spending per Beneficiary and AHRQ Patient Safety Indicator (PSI-90) Composite.

• January 2013- CMS started paying hospitals for FY 2013 Hospital VBP performance, retroactive to October 1, 2012 claims.


• Shows a hospital’s value based incentive payment percentage for each FY 2014 patient discharge.
CMS Inpatient Quality Reporting Program (IQR)

- January 1, 2013 hospitals were required to report on the 8 Stroke Quality Measures.
  - IQR requires hospitals to report to CMS on the quality measures in order to receive higher annual updates to the Medicare MS-DRG update rates.
  - IQR then authorizes CMS to pay a higher annual percentage if hospital successfully reports on the 50+ designated quality measures.

# 2013 Stroke Measure Set for IQR

<table>
<thead>
<tr>
<th>Stroke (STK)</th>
<th>Submission Required Beginning With:</th>
<th>Collected For:</th>
<th>On Hospital Compare:</th>
<th>Included In VBP Beginning With:</th>
<th>NQF Endorsed</th>
</tr>
</thead>
<tbody>
<tr>
<td>STK 1: Venous Thromboembolism (VTE) Prophylaxis</td>
<td>1Q 2013</td>
<td>CMS/TJC</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 2: DC’d on Antithrombotic Therapy</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 3: Anticoag for A-Fib/Flutter</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 4: Thrombolytic Therapy</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 5: Antithrombotic by end of hospital day 2</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 6: DC’d on a Statin</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 8: Stroke Education</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>STK 10: Assessed for Rehab</td>
<td>1Q 2013</td>
<td>CMS/TJC/MU</td>
<td>Dec 2013</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Joint Commission Stroke Quality Measure Performance

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Improvement since inception in 2010 (percentage points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke care composite</td>
<td>92.7%</td>
<td>94.9%</td>
<td>96.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Anticoagulation therapy for atrial fibrillation/flutter</td>
<td>94.2%</td>
<td>94.9%</td>
<td>95.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Antithrombotic therapy by end of hospital day two</td>
<td>97.3%</td>
<td>97.8%</td>
<td>98.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Assessed for rehabilitation</td>
<td>97.0%</td>
<td>97.6%</td>
<td>98.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Discharged on antithrombotic therapy</td>
<td>98.7%</td>
<td>99.0%</td>
<td>99.1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Discharged on statin medication</td>
<td>92.8%</td>
<td>94.1%</td>
<td>95.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Stroke education</td>
<td>82.1%</td>
<td>88.2%</td>
<td>91.6%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Thrombolytic therapy</td>
<td>61.0%</td>
<td>68.3%</td>
<td>77.3%</td>
<td>16.3%</td>
</tr>
<tr>
<td>VTE medicine/treatment</td>
<td>88.1%</td>
<td>92.4%</td>
<td>94.2%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

Since implementation in 2010, the average number of hospitals reporting data was 133 and ranged from 105 to 151.

From: The Joint Commission’s Annual Report on Quality and Safety 2013
2014 Stroke Measure Introduction and Removal

• January 1, 2014 started the reporting on Stroke 30 day mortality rate and Stroke 30 day readmission rate. These measures will affect payment in FY 2016 (Oct 1, 2015- Sep 30, 2016).

• CMS is removing “participation in a clinical database registry” from the IQR program measure set in 2014.
  – This is due to STK measures being reported to CMS providing more meaningful and detailed information on stroke care.

Why Stroke Mortality and Readmissions?

• One of the leading causes of death in the U.S.- #4.
• Survivors frequently experience significant disability and increased dependency on the healthcare system.
• Variation across hospitals indicates room for improvement.
• These are not National Quality Forum (NQF) endorsed.
• Ischemic stroke only.
Stroke Mortality: Opportunity for Improvement

- National mortality rate: 15.6%
- Hospital risk standardized mortality rate (RSMR) range: 8.5%- 23.3%.
Stroke Readmission: Opportunity for Improvement

- National readmission rate: 13.8%
- Hospital risk standardized readmission rate (RSRR) range: 9.1%-20.6%
Design of Stroke Mortality and Readmission Measures

- Developed and calculated using administrative claims data.
- Includes Medicare Fee For Service (FFS) patients aged ≥ 65 admitted for acute ischemic stroke in 2009-2011.
- Includes non-federal acute care hospitals. Critical access hospitals are included.
- Reported as risk-standardized mortality (RSMR) and readmission (RSRR) rates
Exclusion Criteria for Mortality

Medicare FFS patients
≥65 years of age with ischemic stroke admission

- Transfers into the hospital
- Inconsistent or unknown mortality status
- Unreliable data
- In hospice within one year prior to or on the day of admission
- Discharges against medical advice

Initial Index Cohort

Randomly select one hospitalization per patient per year

Hospitalizations not selected

Final Index Cohort
Exclusion Criteria for Readmission

- Medicare FFS patients ≥ 65 years of age with ischemic stroke admission
  - Transfers out of the hospital
  - In-hospital deaths
  - Hospitalizations without at least 30 days post-discharge information
  - Admissions within 30 days of a prior index admission
  - Discharges against medical advice

Final Index Cohort
Risk Adjustment

• Accounts for differences in patient characteristics and comorbidities across hospitals.

• Includes:
  – Secondary diagnosis codes from index admission (except for potential complications of care).
  – All diagnosis codes from previous year.

• Mortality measure includes risk adjustment variable for Emergency Department transfer status
Mortality: Transferred Patients

- Measure assigns patient’s outcome to the hospital that initially admitted the patient → transfers do not count against the accepting facility.
Readmissions: Transferred patients

• Measure assigns patient’s outcome to hospital that ultimately discharged the patient to the non-acute setting.
Measure Outcomes

• Mortality Outcomes:
  – Death from any cause within 30 days of admission date for index hospitalization.

• Readmission outcomes:
  – All cause unplanned re-admission
    • To any acute care hospital
    • Within 30 days of discharge
    • Multiple readmissions within 30 days of discharge only count as one outcome event.
    • Controls for planned readmissions (surgery: pacer, coil.....)
Risk Standardized Rates:

- Calculating risk standardized mortality rate (RSMR) and readmission rate (RSRR).

\[
\text{RSMR or RSRR} = \frac{\text{Predicted outcome}}{\text{Expected outcome}} \times \text{National outcome rate}
\]
Categorizing Hospital Performance

National Stroke Readmission Rate (13.8%)

Better than Stroke Readmission rate

Example Hospital 1
11.2% (9.4%, 13.4%)

No different than Stroke Readmission rate

Example Hospital 2
15.1% (12.9%, 17.0%)

Worse than Stroke Readmission Rate

Example Hospital 3
18.3% (16.5%, 20.0%)

Risk-Standardized Readmission Rate (RSRR)
CMS and Where Your Data is Reported:

• Consumers can look at data on your hospital reported through the IQR program on the Hospital Compare website:
  • www.hospitalcompare.hhs.gov
Hospital Participation in the IQR Program

- CMS collects quality data from acute care hospitals on a voluntary basis for the IQR program.
  - This applies only to acute-care hospitals paid under Medicare’s Hospital Inpatient Prospective Payment System (IPPS).
  - Critical Access hospitals- or rural hospitals that provide <25 inpatient beds for inpatient services- receive cost based reimbursement and do not participate in IQR.

# 2014 Required Reporting IQR Program Measures

<table>
<thead>
<tr>
<th>Acute MI (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHRQ Patient Safety Indicators (1)</td>
</tr>
<tr>
<td>AHRQ PSI and Nursing Sensitive Care (1)</td>
</tr>
<tr>
<td>Cost Efficiency (2)</td>
</tr>
<tr>
<td>ED Throughput (2)</td>
</tr>
<tr>
<td>Health care associated infections (6)</td>
</tr>
<tr>
<td>Heart Failure (1)</td>
</tr>
<tr>
<td>Mortality (Medicare patients) (5)- Includes Stroke 30 day Mortality Rate</td>
</tr>
<tr>
<td>Patients’ Experience of Care (1)</td>
</tr>
<tr>
<td>Perinatal Care (1)</td>
</tr>
<tr>
<td>Pneumonia (1)</td>
</tr>
<tr>
<td>Prevention: Global Immunization (1)</td>
</tr>
<tr>
<td>Readmission: Medicare Patients (7)- Includes Stroke 30 day readmission rate</td>
</tr>
<tr>
<td>Structural (4)</td>
</tr>
<tr>
<td>Surgical Improvement Project (7)</td>
</tr>
<tr>
<td>Surgical Complications (1)</td>
</tr>
<tr>
<td>Stroke (8)- Added in 2013</td>
</tr>
<tr>
<td>Venous Thromboembolism (6)</td>
</tr>
</tbody>
</table>
STK 1: VTE

- At this time, STK 1- VTE prophylaxis by hospital day 2 does not have to be electronically reported for Meaningful use.
- VTE falls under the VTE CMS eMeasure 108 and is measured as part of the overall hospital VTE.
  - Not separated out for stroke population.
Quarterly Data Reporting

• Stroke Measures will be reported to CMS on a quarterly basis via The JC ORYX vendor or through use of the CMS Abstraction and reporting tool (CART).

• If you do not report these quality measures, you will have your MS-DRG update payments DECREASED by 2%.

• Start Collecting and reporting quarterly: Jan 2013

• MS-DRG Update affected FY 2015: Oct 1, 2014 - Sep 30, 2015
How the 2% Reduction Works

• If a hospital does not report this quality data - the amount of re-imbursement update increase will be reduced by 2%

• MS-DRGs are used to reimburse hospitals for inpatient stays by CMS.
  – Inpatient stays are assigned to an MS-DRG based on Diagnosis, primary procedures and 2nd dx. Stroke (06_s).
  – Hospitals payments are updated based on specific rates assigned for the MS-DRGs.

• Each year the amount of re-imbursement is updated based on price increases for goods and services if a hospital reports the 57 measures they receive the full updated payment.
Questions???

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  Jeanie Luciano
  jeanie.luciano@uphs.upenn.edu
Sources:


• National Stroke Association Webinar: December 5, 2013: Understanding the Stroke Measure Set.
  – Jim Poyer
  – Candace Jackson

  – Patricia Lane

• Stroke Readmission and Mortality: Cleveland Clinic October 2013.
  – Jacqueline Matthews