Stroke Data & Case Presentation

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No Disclosures
My Background

- Registered Nurse
- Quality Improvement Coordinator
- Stroke Program Coordinator
- Patient Education Coordinator
- QSI Director
Case Study

• “You work in a hospital that has decided to achieve a goal of becoming a stroke certified center. You have been appointed the role of stroke coordinator and tasked with meeting the requirements necessary for stroke certification.”

• What do you do?
1. Gather your resources

• Standards/Requirements
  – Manual, application, etc.
  – Perform a gap analysis

• Develop a network
  Both within and outside of your organization
  Share best practice/tools/protocols/policies

• Educate yourself
  Courses/reading materials/websites
Clinical Practice Guidelines

- Guidelines are the basis for protocols for treating the Acute Stroke Patient

- • Drive the quality care of stroke patients

- • GWTG-Stroke helps facilities ensure continuous improvement of stroke treatment by aligning clinical care with evidence-based guidelines
Clinical Practice Guidelines

Recommendations for the Management of Cerebral and Cerebellar Infarction With Swelling- Stroke Journal of the American Heart Association; Stroke 2014


Revised and Updated Recommendations for the Establishment of Primary Stroke Centers- Stroke Journal of the American Heart Association; Stroke 2011;42:2651-2665


Guidelines for Early Management of Patients with Acute Ischemic Stroke: Stroke Journal of the American Heart Association' Stroke 2013


Guidelines for the Management of Spontaneous Intracerebral Hemorrhage-Stroke Journal of the American Heart Association; Stroke 2010;41:2108-2129

AANN
American Association of Neuroscience Nurses

Guide to the Care of the Hospitalized Patient with Ischemic Stroke-2nd Edition  AANN Clinical Practice Guideline Series

Care of the Patient with Aneurysmal Subarachnoid Hemorrhage- AANN Clinical Practice Guideline Series

JAMA
The Journal of the American Medical Association

Recommendations for the Establishment of Primary Stroke Centers
Target Population

- What types of patients are you serving?
- Age?
- Cultural
- Language
- Know your population in order to build your program around meeting the needs of the patients you serve
Know Your Population
Know Your Population

Gender

Percent of Patients

Time Period

- Male
- Female
- Unknown

All WI Hospitals-2015
Know Your Population

Race

<table>
<thead>
<tr>
<th>Race Description</th>
<th>Percent of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>90</td>
</tr>
<tr>
<td>Black or African American</td>
<td>10</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>&lt;1</td>
</tr>
<tr>
<td>UH</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Hispanic Ethnicity Yel</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Time Period

All WI Hospitals—2015
Know Your Population

Medical History

Percent of Patients

Time Period

- None
- Atrial Fibrillation
- CAD/Phor Mi
- Carotid Stenosis
- Current Pregnancy (or up to 6 weeks post partum)
- Depression
- Diabetes Mellitus
- Drug/Alcohol Abuse
- Dyslipidemia
- Family History of Stroke
- HF
- HRT
- Hypertension
- Migraine
- Obesity/Overweight
- Previous Stroke
- Previous TIA
- Prosthetic Heart Valve
- PVOD
- Renal Insufficiency (chronic GFR<20)
- Sickle Cell
- Sleep Apnea
- Smoker

All WI Hospitals - 2015
Initial Exam Findings

- Weakness/Paresis
- Altered Level of Consciousness
- Aphasia/Language Disturbance
- Other neurological symptoms
- No neurological signs/symptoms
- ND
- None of the above

Percent of Patients

All WI Hospitals–2015
Know Your Population-Arrival Mode

Arrival Mode

Percent of Patients

<table>
<thead>
<tr>
<th>Arrival Mode</th>
<th>Percent of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS from home/scene</td>
<td>40</td>
</tr>
<tr>
<td>Private transport/other from home/scene</td>
<td>30</td>
</tr>
<tr>
<td>Transfer from other hospital</td>
<td>20</td>
</tr>
<tr>
<td>ND or Unknown</td>
<td>10</td>
</tr>
<tr>
<td>Blank (Missing Arrival Information)</td>
<td>0</td>
</tr>
</tbody>
</table>

Time Period

©2013, American Heart Association
Performance Improvement

• Measures
• Data
• Communicating the results
**Know the Measures**

<table>
<thead>
<tr>
<th>TJC/CMS Core Measures</th>
<th>GWTG Measures</th>
<th>Standards/Performance Measures for Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.qualitynet.org">www.qualitynet.org</a></td>
<td><a href="http://www.heart.org/quality">www.heart.org/quality</a></td>
<td><a href="http://www.jointcommission.org">www.jointcommission.org</a></td>
</tr>
<tr>
<td>STK-4 (chart abstracted)</td>
<td>GWTG-S Coding Instructions</td>
<td>Acute Stroke Ready</td>
</tr>
<tr>
<td>Electronic Clinical Quality Measures (STK-2, STK-3, STK-5, STK-10)</td>
<td>Measure Descriptions &amp; Rationale</td>
<td>Primary Stroke Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comprehensive Stroke Center</td>
</tr>
</tbody>
</table>
### STROKE (STK) NATIONAL HOSPITAL INPATIENT QUALITY MEASURES

#### STK Measure Set Table

<table>
<thead>
<tr>
<th>Set Measure ID #</th>
<th>Measure Short Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>STK-1</td>
<td>Venous Thromboembolism (VTE) Prophylaxis (removed starting with 1/1/2016 discharges)</td>
</tr>
<tr>
<td>STK-2</td>
<td>Discharged on Antithrombotic Therapy (removed starting with 1/1/2016 discharges)</td>
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<td>Thrombolytic Therapy</td>
</tr>
<tr>
<td>STK-5</td>
<td>Antithrombotic Therapy By End of Hospital Day 2 (removed starting with 1/1/2016 discharges)</td>
</tr>
<tr>
<td>STK-6</td>
<td>Discharged on Statin Medication (removed starting with 1/1/2016 discharges)</td>
</tr>
<tr>
<td>STK-8</td>
<td>Stroke Education (removed starting with 1/1/2016 discharges)</td>
</tr>
<tr>
<td>STK-10</td>
<td>Assessed for Rehabilitation (removed starting with 1/1/2016 discharges)</td>
</tr>
</tbody>
</table>
GWTG Measures-Achievement

- **IV rt-PA arrive by 2 hour, treat by 3 hour**: Percent of acute ischemic stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV t-PA was initiated at this hospital within 180 minutes (3 hours) of time last known well.

- **Early antithrombotics**: Percent of patients with ischemic stroke or TIA who receive antithrombotic therapy by the end of hospital day two.

- **VTE prophylaxis**: Percent of patients with ischemic stroke, hemorrhagic stroke, or stroke not otherwise specified who receive VTE prophylaxis the day of or the day after hospital admission.

- **Antithrombotics**: Percent of patients with an ischemic stroke or TIA prescribed antithrombotic therapy at discharge.
GWTG Measures-Achievement

- **Anticoag for AFib/Aflutter**: Percent of patients with an ischemic stroke or TIA with atrial fibrillation/flutter discharged on anticoagulation therapy.

- **Smoking cessation**: Percent of patients with ischemic or hemorrhagic stroke, or TIA with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay.

- **LDL 100 or ND - Statin**: Percent of ischemic stroke or TIA patients with LDL ≥ 100, or LDL not measured, or on cholesterol-reducer prior to admission who are discharged on statin medication.
GWTG Measures-Quality

- Dysphagia Screening
- Stroke Education
- Rehabilitation Considered
- Time to Intravenous Thrombolytic Therapy
- LDL Documented
- Intensive Statin Therapy
- IV rt-PA 3.5 Hour, Treat by 4.5 Hour
- NIHSS reported
GWTG-Target Stroke Phase 2.0

• **Target: Stroke Honor Roll**: Time to thrombolytic therapy within 60 minutes in 50 percent or more of acute ischemic stroke patients treated with IV tPA (current criteria and same volume thresholds).

• **Target: Stroke Honor Roll-Elite**: Time to thrombolytic therapy within 60 minutes in 75 percent or more of acute ischemic stroke patients treated with IV tPA (current criteria and same volume thresholds).

• **Target: Stroke Honor Roll-Elite Plus**: Time to thrombolytic therapy within 60 minutes in 75 percent or more of acute ischemic stroke patients treated with IV tPA AND door-to-needle time within 45 minutes in 50 percent of acute ischemic stroke patients treated with IV tPA (current criteria and same volume thresholds).
TJC ASRH Performance Measures

• Certified ASRH programs will be required to comply with Stage I requirements for performance measurement until standardized measures are developed

• Stage I will include submission of 4 performance measures

• Choices include:
  • Door to IV thrombolytic time
  • Head CT/Lab Times
  • Code Stroke Response Times
  • Complication rate s/p IV thrombolytic
  • Time to telemedicine initiation
## TJC PSC Performance Measures

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## TJC CSC Performance Measures

### Comprehensive Stroke (CSTK)

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<tbody>
<tr>
<td>CSTK-01</td>
<td>National Institutes of Health Stroke Scale (NIHSS Score Performed for Ischemic Stroke Patients)</td>
</tr>
<tr>
<td>CSTK-02</td>
<td>Modified Rankin Score (mRS at 90 Days)</td>
</tr>
<tr>
<td>CSTK-03</td>
<td>Severity Measurement Performed for SAH and ICH Patients (Overall Rate)</td>
</tr>
<tr>
<td>CSTK-04</td>
<td>Procoagulant Reversal Agent Initiation for Intracerebral Hemorrhage (ICH)</td>
</tr>
<tr>
<td>CSTK-05</td>
<td>Hemorrhagic Transformation (Overall Rate)</td>
</tr>
<tr>
<td>CSTK-06</td>
<td>Nimodipine Treatment Administered</td>
</tr>
<tr>
<td>CSTK-07</td>
<td>Median Time to Revascularization <strong>SUSPENDED Effective January 1, 2016</strong></td>
</tr>
<tr>
<td>CSTK-08</td>
<td>Thrombolysis in Cerebral Infarction (TICI Post-Treatment Reperfusion Grade)</td>
</tr>
</tbody>
</table>
Data to track regardless of certification level

- Neuro alert call & response time
- IV alteplase administration time
- Brain imaging time
- Lab results time
- Utilize time tracker
Process Improvement

- Committee meets to evaluate protocols and performance
- Maintains a stroke log
- Utilizes a stroke registry or similar data collection tool
- Identifies performance measures
- Communicate the results to front line staff
Education

- **Community**
  - Internal & external resources
  - FAST
  - Risk factor modification
  - Patient education

- **Staff**
  - Nursing competencies
  - Physician orientation
  - Education re: CPG’s, order sets, pathways, protocols, care plans
Pulling It All Together

- Continuously evaluate processes
- Celebrate successes
- Keep your focus on improving patient outcomes & experience
- Team approach
- Seek support/resources
- Share best practice
Benefits

- Sense of accomplishment
- Building a team culture
- Recognition/Certification
- Public/Community Perception
- Improved Patient Outcomes-reduced death & disability
Questions

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