ENHANCING YOUR SKILLS IN STROKE QUALITY IMPROVEMENT & DATA ANALYSIS

Authors:
Patricia Horstman, MSN, RN, NEA-BC
Lynn Hundley, MSN, RN, APRN, CCRN, CNRN, CCNS
Jeanie Luciano, MSN, RN, CRNP, CNRN, SCRN, FAHA
Disclosures

Patricia Horstman has no actual or potential conflict of interest in relation to this presentation.

Lynn Hundley has no actual or potential conflict of interest in relation to this presentation.

Jeannie Luciano is a member of the Genentech Speakers Bureau.
WVU Healthcare, Morgantown, WV

WVUHC, a 531-bed university affiliated medical complex anchored by Ruby Memorial Hospital, was first designated as an American Nurses Credentialing Center (ANCC) Magnet® recognized organization in 2005. As the regional referral center for tertiary care in West Virginia (WV), WVUHC is the flagship member of West Virginia United Health System (WVUHS) and provides services to citizens primarily from WV, southwestern Pennsylvania and Maryland.

WVU Stroke Center, a Joint Commission designated Primary Stroke Center, was founded in 2000 and treats over 1200 stroke cases/year providing a full spectrum of services at the Comprehensive Stroke level.
Norton Healthcare, Louisville, KY

- Four adult facilities
- All JC Primary Stroke Centers
  - NH, NAH, NBH in 2010
  - NSMH in 2011
- Combined total of 1250 stroke discharges in 2012
- Comprehensive capabilities primarily at NBH, also available at NH

Norton Hospital - 642 Beds

Norton Audubon Hospital - 432 Beds

Norton Brownsboro Hospital - 127 Beds

Norton St. Matthews Hospital - 373 Beds
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 and/or demonstrate two new strategies for quality improvement and data analysis that will enhance your skills as a stroke coordinator.
IOM PERFORMANCE IMPROVEMENT DEFINITION

“The extent to which health services provided to individuals and patient populations improve desired health outcomes. The care should be based on the strongest clinical evidence and provided in a technically and culturally competent manner with good communication and shared decision making.”
All Assessment of Practice Improvement (PI) activities must follow four steps:

• **Measure**
  – The initial sample involves looking at ten or more patients with a specific condition or clinical situation.
  – Measurements can involve any core measure or patient demographic metric.

• **Compare**
  – There should be a clearly defined metric to monitor change in performance.
  – When national benchmarks are available, they should be used for comparisons to your data.
  – For measures for which there are no readily available benchmarks, the first measure set can be used as a baseline for future comparison.
PI PRIMER

• Improvement Intervention
  – Can be as simple as reporting results at a department meeting with suggestions for improvement, or as elaborate as a LEAN intervention, or the development of condition-specific treatment guidelines.
  – Individual or team chooses to amend a behavior to improve performance.

• Re-measure
  – The re-measure metric should be compared to the initial metric to determine the trajectory of performance.
  – Not every initiative will result in performance improvement, but the vast majority should improve patient care processes or outcomes.
## NHC PI Methodology Example: DMAIC

<table>
<thead>
<tr>
<th>Phase</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| Define | - Problem Defined  
- Key process metric(s) identified (id by customers) |
| Measure | - Understand Current Process  
- List of inputs that might be causing the problem  
- Accurate baseline data (KPMs) |
| Analyze | - Process waste identified  
- Prioritized list of critical barriers and root cause(s) |
| Improve | - New process identified  
- Actions needed to deploy new process + pilot |
| Control | - Hard-wired process w/ hand-off to business owner  
- Celebration! |
STROKE CARE

• How do we get a sense of the quality?

• What’s the best way to care for stroke patients?

• Are there guidelines for care of a stroke patients?
STROKE CARE

• Guidelines are the basis for protocols for treating the Acute Stroke Patient
  – e.g. BAC - www.stroke-site.org/guidelines/guidelines.html

• 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
DATA

• Quality measures or metrics apply to processes and aspects of care that are strongly supported by science.

• Each metric needs to be analyzed and evaluated:
  - Where does the information come from?
  - What is done with it?
  - Who is responsible for what?
  - How is it coordinated?
DATA CONSIDERATIONS

• Who? What? When? Why?
• Need a systematic data collection process
• 100% retrospective, random sampling, or concurrent abstraction
• Stroke Database or Registry (e.g. GWTG®, Coverdell)
• Validation process & reliability studies
• Specific metrics and targets reviewed on a regular basis
• Ability to externally benchmark
QUALITY MONITORING

• Collaborative discussions with physicians and other healthcare groups

• Standing Stroke Care Committee

• Loop closure

• Integration with Hospital PI process
SAMPLING METHODOLOGY

**Sampling** - a process of selecting a representative part of a population in order to estimate the organization’s performance, without collecting data for its entire population.

- Sampling is done by diagnosis and should be done using available databases that contain monthly patient discharge information, ICD-9/10-CM diagnosis codes, and other necessary administrative data (e.g., only patients 18 and older are included in the DSC stroke measures).

- The DSC-Stroke measure set sampling populations are:
  - Patients with ICD-9/10 -CM Codes for Ischemic Stroke
  - Patients with ICD-9/10 -CM Codes for Hemorrhagic Stroke
SAMPLING METHODOLOGY

Monthly Sample Size Based on Population Size

<table>
<thead>
<tr>
<th>Patient Volume</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9</td>
<td>100%</td>
</tr>
<tr>
<td>10-49</td>
<td>10</td>
</tr>
<tr>
<td>50-99</td>
<td>20%</td>
</tr>
<tr>
<td>&gt;100</td>
<td>20</td>
</tr>
</tbody>
</table>

Sample Size Examples

- A program has 8 discharges in the first reporting month. All 8 cases (100%) should be reviewed.
- A program has 47 discharges in the second reporting month. The sample size for this month would be 10 cases.
- A program has 95 discharges in the third reporting month. The sample size would be 20% of 95, or 19 cases.
- A program has 360 discharges in the fourth reporting month. The sample size would be 20 cases (maximum monthly sample size).
COMPLICATIONS & OUTCOMES

• COMPLICATIONS
  – HAUTI
  – Aspiration pneumonia rates
  – VTE

• OUTCOMES
  – LOS
  – Mortally rates
  – Readmission rates
  – Hemorrhagic Conversion Rates
  – Death within LOS
CORE MEASURES – WHAT ARE THEY?

• Evidence based care interventions shown to provide best outcomes.

• High volume; problem-prone; costly diagnosis

• Originally introduced by The Joint Commission and CMS in 1997. Data collection began in 2002 on standardized ‘core performance measures’.
STRATEGIES TO MEET CORE MEASURES

• Embed the measures in your documentation tools (e.g. teaching handouts)
• Incorporate into Order sets (e.g. EMR use of hard stops and drop down options)
• Core Measure checklists or concurrent chart review for validation prior to discharge
• Incorporate measures in staff/MD training
• Ongoing reporting through PI structure
INTERNAL AND EXTERNAL REPORTING

• Internal reporting
  – Stroke Care Committee
  – Hospital Performance Improvement Structure → BOD
  – Other Stroke care providers (e.g. Neuro unit bulletin boards)

• External reporting
  – The Joint Commission quarterly submissions
  – CMS quarterly submissions
THE JOINT COMMISSION (TJC) PRIMARY STROKE CENTER (PSC) STROKE CARE MEASURES
Description: Patients with an ischemic stroke or a hemorrhagic stroke who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.

Strategies:
• Ensure organizational policy for VTE includes stroke care.
• Align policy with meaningful use expectations.
• Align policy with quality measures and safety goals.
• Examine stroke admission order set and transfer order sets for inclusion of VTE prophylaxis.
• Embed the VTE protocol into the stroke admission order set.
• Develop system for training and education on VTE policy.
STK-1 VTE Prophylaxis

Documentation

Should include the date antithrombotic therapy was initiated:

• Day of or the day after hospital admission
• The type of VTE prophylaxis provided
• The reason(s) why antithrombotic therapy was not administered the day of or the day after hospital admission
• If the patient was ambulating, on the day of admission or the day after admission
**STK – 2 Discharged on Antithrombotic Therapy**

**Description:** Patients with an ischemic stroke prescribed antithrombotic therapy at discharge.

**Strategies:**
- A standardized procedure for patient education should include medications prescribed at discharge.
- Incorporate antithrombotic therapy was prescribed in the standardized discharge order set and contraindications as a prompt to document the reason(s) why not prescribed.
- Develop a list of antithrombotic medications within the EMR as a prompt.
STK – 3 Patients with Afib/Flutter Receiving Anticoagulation Therapy

Description: Patients with an ischemic stroke with afib/flutter discharged on anticoagulation therapy

Strategies:
• Standardized admission order set includes anticoagulation therapy for afib/flutter
• Admission assessment should include a question about the patient’s medical history of afib/flutter and medications prior to admission
• Documentation should include any history of afib/flutter or present afib/flutter
• Standardized discharge order set should include anticoagulation therapy for afib/flutter
• Incorporate anticoagulation therapy was prescribed in the standardized discharge order set and contraindications as a prompt to document the reason(s) why not prescribed.
• Develop a list of anticoagulation medications within the EMR as a prompt
STK - 4 Thrombolytic Therapy Administered

**Description:** Acute ischemic stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV tPA was initiated at this hospital within 180 minutes (3 hours) of time LKW

**Strategies:**
- Educational sessions could be developed that focus on the benefits of tPA
- Develop Stroke Team Alert Pathway that should include:
  - Pre-hospital information
  - Time to treatments
  - Tests and procedures
  - Nursing interventions
  - Physician Orders
  - Medications
KEY TIME INTERVAL GOALS

Door to treatment ≤60 min

- **0 min**: Suspected stroke patient arrives at ED
- **≤10 min**: Complete initial MD evaluation, including patient history and time last known well/symptom onset
- **≤15 min**: Notify stroke team (including neurologic expertise)
- **≤25 min**: Initiate CT scan
- **≤45 min**: Interpret CT scan and labs
- **≤60 min**: Give Activase bolus and initiate infusion in eligible patients
STK - 4 Thrombolytic Therapy Administered

Strategies (con’t):

• Standing orders for tPA that include: patient eligibility criteria; contraindications; medication administration; BP management; suspected ICH management, nursing interventions

• Risks and benefits of tPA should be explained to the patient and/or caregiver and documented

• Admission orders should address patients’ post-tPA

• Treat and Transfer protocols should be in place

• Establish a relationship with the receiving hospital and EMS
STK – 5 Antithrombotic Therapy by End of Hospital Day 2

**Description:** Patients with ischemic stroke who receive antithrombotic therapy by the end of hospital day two (day after patient arrival).

**Strategies:**
- Standardized admission order set that includes antithrombotic therapy for early secondary prevention
- Standing order should state when to initiate antithrombotic therapy (e.g. if given tPA should state not to begin antithrombotic therapy within 24 hours of tPA administration)
- If not initiated by the end of hospital day 2 the reason(s) should be documented in patient's medical record.
- Admission assessment should include a question about the patient's medical history of antithrombotic therapy prior to admission
STK – 6 Discharged on Statin Medication

Description: Ischemic stroke patients with LDL > 100 or LDL not measured, or, who were on cholesterol reducing therapy prior to hospitalization are discharged on statin medication.

Strategies:

• Standardized admission order set that includes information related to cholesterol levels and cholesterol medications (e.g. under Labs, include fasting lipid profile within 48 hours of admission)

• Admission assessment should include a question about the patient’s medical history of dyslipidemia and medications for dyslipidemia prior to admission

• Include Statins or other cholesterol medications in the stroke education patient procedure

• Standardized discharge order set for stroke includes under the medications sections, statins or other cholesterol medications prescribed and if not prescribed the reason(s) why not.

• Contraindications could be listed as a prompt for documentation.
STK – 8 Stroke Education

**Description:** Patients with ischemic or hemorrhagic stroke or their caregivers who were given educational materials during the hospital stay addressing all of the following: risk factors for stroke, warning signs for stroke, activation of EMS, the need for follow-up after discharge, and medications prescribed at discharge.

**Strategies:**
- Develop a stroke education policy, review and revise annual as necessary:
  - Who completes the education
  - When is education completed
  - How is it documented
- Include stroke education in the stroke order set and EMR
- Standardize education materials
STK – 10 Assessed for Rehabilitation

Description: Patients with an ischemic or hemorrhagic stroke who were assessed for rehabilitation services.

Strategies:
• Standardized admission order set that includes therapy consultations (PT, OT, SLP)
• Discharge order set should include documentation that the patient was assessed for rehabilitation; if patient was ineligible for rehabilitation and the reason(s) why.
• Develop a protocol for rehabilitation services
• Include a mechanism for follow-up after discharge
TARGET STROKE BEST PRACTICE STRATEGIES

To reduce DTN time for IV tPA in acute ischemic stroke:

• Advance hospital notification by EMS
• Rapid triage protocol and Stroke Team notification
• Single call activation system
• Stroke Tools: Stroke specific order sets, guidelines, algorithms, pathways, NIHSS, etc.
• Rapid acquisition and interpretation of brain imaging
• Rapid laboratory testing
REPORTING QUALITY METRICS
DATA VALIDATION

• Validations - Regular process of evaluating data abstraction to ensure registry entries are accurate

• Registry validations:
  
  HIM Registrar → RN Review/Validation → Final Report Card

• Intensive Chart Review: e.g. Carotid Stent – Stroke within LOS

  Decision Support data pull from coding → RN or MD Review/Validations → Final Report Card
DATA RELIABILITY (INTER-RATER RELIABILITY)

• Reliability Studies:
  – Both the original Abstractor and a second abstractor review the same charts
  – Compare findings to identify opportunities for improvement through education or further inclusion/exclusion criteria refinement

**The Joint Commission recommends 5 charts/quarter**
QUALITY REPORT CARD – KEY ELEMENTS

- Measures/Metrics:
  - Volume (e.g. # ischemic strokes)
  - Process (e.g. Door to Needle Time)
  - Outcome (e.g. Deaths within 24 hours of neuroangiography)

- Data trends over time

- Benchmark comparisons
# Sample Stroke Report Card

### Joint Commission (TJC) Stroke Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Q2 2012</th>
<th>Q4 2012</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intravenous Thrombolysis (IVT)</strong></td>
<td>98.4%</td>
<td>98.4%</td>
<td>100.0%</td>
<td>98.3%</td>
<td>98.7%</td>
<td>96.0%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>179/160</td>
<td>179/160</td>
<td>169/169</td>
<td>159/172</td>
<td>169/169</td>
<td>172/169</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>91.7%</td>
<td>91.7%</td>
<td>91.7%</td>
<td>91.7%</td>
<td>91.7%</td>
<td>91.7%</td>
</tr>
<tr>
<td><strong>Discharged on Antithrombotic</strong></td>
<td>100.0%</td>
<td>100.0%</td>
<td>99.8%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>140/140</td>
<td>140/140</td>
<td>129/129</td>
<td>111/111</td>
<td>111/111</td>
<td>111/111</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>99.0%</td>
<td>99.0%</td>
<td>99.0%</td>
<td>99.0%</td>
<td>99.0%</td>
<td>99.0%</td>
</tr>
<tr>
<td><strong>Pacients with Atrial Fibrillation Anticoagulation</strong></td>
<td>84.4%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>17/18</td>
<td>9/10</td>
<td>13/13</td>
<td>11/11</td>
<td>11/11</td>
<td>11/11</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>95.7%</td>
<td>95.7%</td>
<td>95.7%</td>
<td>95.7%</td>
<td>95.7%</td>
<td>95.7%</td>
</tr>
<tr>
<td><strong>Thrombolytic Agent Activator (I-PA) Administered</strong></td>
<td>65.7%</td>
<td>92.3%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>1/0/1</td>
<td>7/14/7</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>76.1%</td>
<td>76.1%</td>
<td>76.1%</td>
<td>76.1%</td>
<td>76.1%</td>
<td>76.1%</td>
</tr>
<tr>
<td><strong>Discharged on Anticoagulant Medication</strong></td>
<td>99.9%</td>
<td>99.9%</td>
<td>100.0%</td>
<td>99.9%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>112/113</td>
<td>102/103</td>
<td>113/113</td>
<td>92/93</td>
<td>113/113</td>
<td>93/93</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>97.5%</td>
<td>97.5%</td>
<td>97.5%</td>
<td>97.5%</td>
<td>97.5%</td>
<td>97.5%</td>
</tr>
<tr>
<td><strong>Discharged on Thrombolytic Medication</strong></td>
<td>89.4%</td>
<td>95.1%</td>
<td>95.1%</td>
<td>95.1%</td>
<td>95.1%</td>
<td>95.1%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>85/91</td>
<td>102/104</td>
<td>98/93</td>
<td>86/89</td>
<td>89/89</td>
<td>89/89</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.6%</td>
</tr>
<tr>
<td><strong>Screen for Dysphagia</strong></td>
<td>78.3%</td>
<td>78.3%</td>
<td>75.3%</td>
<td>72.4%</td>
<td>72.4%</td>
<td>72.4%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>144/184</td>
<td>163/194</td>
<td>131/174</td>
<td>123/170</td>
<td>123/170</td>
<td>123/170</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>93.1%</td>
<td>93.1%</td>
<td>93.1%</td>
<td>93.1%</td>
<td>93.1%</td>
<td>93.1%</td>
</tr>
<tr>
<td><strong>Stroke Education</strong></td>
<td>87.2%</td>
<td>92.3%</td>
<td>98.6%</td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.8%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>103/106</td>
<td>129/124</td>
<td>93/94</td>
<td>88/89</td>
<td>88/89</td>
<td>88/89</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>99.1%</td>
<td>99.1%</td>
<td>99.1%</td>
<td>99.1%</td>
<td>99.1%</td>
<td>99.1%</td>
</tr>
<tr>
<td><strong>Plan for Rehabilitation was Considered</strong></td>
<td>91.2%</td>
<td>93.2%</td>
<td>99.4%</td>
<td>95.1%</td>
<td>95.1%</td>
<td>95.1%</td>
</tr>
<tr>
<td><strong>Number of Cases</strong></td>
<td>177/179</td>
<td>109/109</td>
<td>156/156</td>
<td>156/156</td>
<td>156/156</td>
<td>156/156</td>
</tr>
<tr>
<td><strong>Joint Commission Benchmark</strong></td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.8%</td>
</tr>
</tbody>
</table>

### TTR Timed Aims for Stroke Patients

<table>
<thead>
<tr>
<th>Measure</th>
<th>Q2 2012</th>
<th>Q4 2012</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CT Scan Ordered to Image Time</strong></td>
<td>10.96</td>
<td>9.96</td>
<td>9.06</td>
<td>5.73</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>CT Scan to Image Time</strong></td>
<td>3.99</td>
<td>11.92</td>
<td>3.26</td>
<td>14.74</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Arrival to Image Time</strong></td>
<td>26.74</td>
<td>23.48</td>
<td>23.28</td>
<td>25.56</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Lab Times (Average Time in Minutes)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Q2 2012</th>
<th>Q4 2012</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ordered to Received in Lab</strong></td>
<td>7.77</td>
<td>8.18</td>
<td>9.00</td>
<td>13.13</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Received in Lab to CBC Time</strong></td>
<td>9.61</td>
<td>9.41</td>
<td>9.48</td>
<td>7.80</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Received in Lab to PT/PTT Time</strong></td>
<td>17.87</td>
<td>15.84</td>
<td>17.88</td>
<td>17.40</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
CMS Reporting

• Effective January 1, 2013 hospitals are required to report 8 stroke quality measures to CMS through their Inpatient Quality Reporting (IQR) process to avoid a 2.0% penalty in the update for Medicare reimbursement payments in the ensuing fiscal year.

• If you are a Get With The Guidelines-Stroke™ participating hospital, you may choose to use Outcome (CMS approved vendor) to submit the stroke core measures (additional fees apply)
MULTIDISCIPLINARY STROKE COMMITTEE

• Responsible for providing vision and direction for stroke care

• May be coordinated by the Stroke Coordinator, QI staff, the Stroke Medical Director or another physician, or an administrator

• Representation from all professions that touch stroke patients
MULTIDISCIPLINARY STROKE COMMITTEE

• Meeting frequency and agendas:
  - At minimum quarterly; more frequently if newly established
  - Agendas can be prepared by the Coordinator
  - First focus on team responsibilities and program planning (identify strengths and gaps)
  - As the program matures, focus on PI
MULTIDISCIPLINARY STROKE COMMITTEE

- Identify strengths and gaps of the stroke program based on data review
- Review and research current guidelines and best practices and develop P & P
- Review stroke algorithms, pathways, order sets
- Develop a work plan to track activities, responsibilities and timelines
- Review Data on a regular basis, but start small and use the data to guide the process
- Report to the hospital BODs on a regular basis, at least annually
Case Study – HAUTI in Stroke

Strategies:

• Infection Control RNs review data and identify HAUTI (consistency, conformity to national definitions); Reported on Stroke Report Card and included in house wide PI reports

• “No Foley” in Stroke Campaign

• Guidelines & order set developed for foley use in INR

• Education for RNs and physicians

• Stroke Coordinator f/u individually with MDs who have ordered foleys & nurses who insert them

• Use of bladder scanners on inpatient units

• “No foley” Incorporated into Stroke order set
NHC: DTN Project Overview

• **Project Description:** In 2011, 24 ED Stroke Patients were treated with rt-PA out of a total ischemic stroke patient population of 558 patients (4.5%). Of the 24 patients, only 4 (16%) had a door-to-needle time of 60 min or less. Timely use of rt-PA benefits the patient in the following ways:
  – Drug Effectiveness: 33% probability of a higher-score recovery outcome vs. no treatment
  – Increased Benefit: Increased probability of favorable outcome at 3 months post-event as OTT (Last known well to rt-PA administration) decreased showing statistical significance (p=0.005<<0.05)

• **Project Scope:** All stroke patients eligible for rt-PA (LKW).
  – Start: Patient arrival at ED / End: Administration of rt-PA

• **Project Goal:** Achieve median DTN time of 60 min or less.
### DTN Scorecard for Date Range 1/2013 thru 12/2013

<table>
<thead>
<tr>
<th>rt-PA Tx Cases</th>
<th>Breakout Goal (minutes)</th>
<th>Tx Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Goal</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Within Goal</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>N (Reported)</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>% Within Goal</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Average Time</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Median Time</td>
<td>59</td>
<td></td>
</tr>
</tbody>
</table>

![DTN Time (All NHC) 1/2013 thru 12/2013](chart.png)
Celebrate Your Success!!

NHC Facility          DTN (mins)
• Norton Brownsboro   39
• Norton Audubon      37
• Norton St. Mattews  37
• **Norton Hospital** 21
Resources/Websites

- Brain Attack Coalition - www.stroke-site.org/guidelines/guidelines.html
- American Heart Association/American Stroke Association - www.americanheart.org
- Comprehensive Overview of Nursing and Interdisciplinary Rehabilitation Care of the Stroke Patient
- Guidelines for the Management of Spontaneous Intracerebral Hemorrhage
- NIHSS Certification - www.asatrainingcampus.org
- AHA/ASA Representative
- The Joint Commission - http://www.jointcommission.org/
- American Association of Neurological Nursing - www.AANN.org
- Get with the Guidelines® – www.americanheart.org/getwiththeguidelines
References

- https://qi.outcome.com/
- Activase.com
- https://www.cms.gov/EHRIncentivePrograms/Downloads/MUStage1ReqOverview.pdf
- http://thomsonreuters.com/content/healthcare/pdf/collateral/clin_performance_0211
QUESTIONS?