Your Time on the Island

The Role of the Stroke Coordinator

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Presenter Disclosure Information

Andrea Jaeger, MHA, BSN, CNRN

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UNLABELED/UNAPPROVED USES DISCLOSURE: None
Objectives

• Assess the current state of stroke coordination

• Describe what is a stroke coordinator
  – Stroke expert
  – Direct patient care
  – Stroke program development

• Describe tips on retaining a stroke coordinator and preventing burnout
1. Stroke Coordination
2. Stroke Coordinator
3. Preventing Burnout
Stroke is

- Tragic and costly
- 800,000 new and recurrent strokes a year
- Leading cause of disability
- Nearly 2 million neurons lost every minute

- Stroke death rate has declined
  - From 3rd to 5th leading cause of death in last 3 years
  - WHY?
    - Could be the development of organized stroke centers
      » Better clinical outcomes and increased use of t-PA
Fact – *There will be patients*

Excellent care no matter the

- size of hospital
- time of day
- day of week
- which practitioner is on
- what other emergency situation has arisen
Stroke Coordination

• Brain Attack Coalition and American Heart Association recommend –
  – Acute stroke teams include a physician trained in diagnosing and treating cerebrovascular disorders and “1 other healthcare provider (i.e. nurse, PA, NP)”
  – Written care protocols
  – EMS collaboration
  – Stroke units
  – Formalized education programs with required hours
  – Outcomes and quality improvement programs with data collection
  – Pursuit of stroke center certification
Who better to own and coordinate all of these elements than a stroke coordinator?
Stroke Coordinator

• Essential to a successful stroke program

• More and more common, but with little standardization to the role

• Group of highly educated, experienced and multi-talented professionals
  – Self taught and forge ahead
Perform a Gap Analysis
Gap Analysis

• Stroke Patient Volume
  – Ischemic Stroke: ICD9 433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00
  – Hemorrhagic Stroke: ICD9 430, 431
  – TIA: 435.90
Gap Analysis

• Patient care elements
  – Acute stroke team
  – Written care protocols
  – EMS
  – ED
  – Stroke unit
  – Neurosurgical services
  – Imaging services
  – Laboratory
  – Rehabilitation
Gap Analysis

• Administrative/Support Elements
  – Institutional commitment & support
  – Medical director
  – Stroke registry
  – Educational programs
  – Support certification process
  – Participation in stroke system of care
<table>
<thead>
<tr>
<th>Element</th>
<th>Recommendation</th>
<th>Questions to ask</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stroke Volume</strong></td>
<td>Review based on type</td>
<td>• What is the current volume of stroke patients with the listed ICD9 diagnoses?</td>
</tr>
<tr>
<td></td>
<td>• Ischemic Stroke: International Classification of Diseases Ninth Revision (ICD9)</td>
<td></td>
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<tr>
<td></td>
<td>433.01, 433.10, 433.11, 433.21, 433.31, 433.81, 433.91, 434.00&lt;sup&gt;13&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hemorrhagic Stroke: ICD9</td>
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<td></td>
<td>430, 431</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• TIA: 435.90</td>
<td></td>
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<tr>
<td><strong>Patient Care Elements</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Acute stroke team</strong></td>
<td>Acute Stroke Team that responds to an acute stroke, initiates initial diagnostic tests and immediate care</td>
<td>• How are acute stroke patients currently being identified? Examples include activating a “Stroke Alert.”</td>
</tr>
<tr>
<td></td>
<td>• Includes personnel with experience and expertise in cerebrovascular disease</td>
<td>• Are there dedicated personnel currently responding to patients with a suspected acute stroke?</td>
</tr>
<tr>
<td></td>
<td>• Team should include at least 2 members (1 physician and 1 other healthcare provider)</td>
<td>• How is the team alerted (pager, cell phone, overhead announcement)?</td>
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<tr>
<td></td>
<td>• Team should respond within 15 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>Written care protocols</strong></td>
<td>Included in order sets</td>
<td>• What are the current stroke related protocols, guidelines, policies, and order sets?</td>
</tr>
<tr>
<td></td>
<td>• Available in every area caring for a stroke patient</td>
<td>• Where are they located and how do staff access them?</td>
</tr>
<tr>
<td></td>
<td>• Based on selected clinical practice guidelines</td>
<td>• Have clinical practice guidelines been selected?</td>
</tr>
<tr>
<td></td>
<td>• Should be reviewed annually</td>
<td>• What is the review process of these documents?</td>
</tr>
<tr>
<td><strong>Emergency medical services (EMS)</strong></td>
<td>EMS should be able to identify patients with an acute stroke, use a validated assessment tool, provide appropriate care during stabilization and</td>
<td>• How many patients with stroke-like symptoms arrive by EMS?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What assessment tool is used to identify stroke patients by EMS?</td>
</tr>
</tbody>
</table>
1. Stroke Coordination

2. Stroke Coordinator

3. Preventing Burnout
• Works with an interdisciplinary team to design and implement a program that delivers standardized care to stroke patients across the continuum of care
Nurses – RNs or APNs

<table>
<thead>
<tr>
<th>RNs</th>
<th>APNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic approach</td>
<td>Advanced education and training</td>
</tr>
<tr>
<td>Solid assessment skills</td>
<td>See a patient independently</td>
</tr>
<tr>
<td>Nursing documentation</td>
<td>Prescriptive authority</td>
</tr>
<tr>
<td>Neuro background (ED, ICU, floor)</td>
<td>Cover call</td>
</tr>
<tr>
<td></td>
<td>Provider documentation</td>
</tr>
</tbody>
</table>

- Decision based on current needs of program, existing resources, size of program, & whether program is just getting started or is established
- Stroke coordinator survey
  - 55% APNs (50% NP, 30% CNS)
Professional Requirements

• Bachelors in the Science of Nursing is required, with consideration of Master’s Degree in Nursing
• Minimum 2 years experience in neurologic acute care or the emergency care setting
• BLS, ACLS, NIHSS certifications
• Additional education, certifications:
  – Certified Stroke Registered Nurse (CSRN)
  – Association of Neurovascular Clinicians (NVRN)
  – Certified Neuroscience Registered Nurse (CNRN)
  – Advanced Stroke Life Support (ASLS) certification
  – Emergency Neurological Life Support (ENLS) certification
  – NetSMART (for APNs)
  – NetSMART JR (for RNs)
Personal Skills

LEADER

PARENT

INNOVATOR

CHEERLEADER

ENFORCER

PEACEKEEPER
What is the reporting structure?

• 41 (36%) are supervised by the Department of Nursing
• 28 (25%) are supervised by Quality Assurance Department
• 20 (18%) Department of Neurology

2011 poll
What are ideas for a structured orientation plan?

• Transition from bedside clinician to stroke coordinator is difficult and challenging!

Lack of support, unclear expectations, role isolation, and feelings of inadequacy in being a stroke expert
Orientation Plan

• Structured plan = key variable to successful integration
  – Spend structured time with multiple departments
    • Understand how each department functions in the continuum of caring for stroke patients
    • Opportunity to develop personal relationships
  – Introduced to upper-level administrators
  – Meet regulatory personnel
<table>
<thead>
<tr>
<th>Department</th>
<th>Personnel</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior administration</td>
<td>CEO</td>
<td>• Mission and vision of the hospital and stroke program</td>
</tr>
<tr>
<td></td>
<td>CNO</td>
<td>• Stroke program reporting structure</td>
</tr>
<tr>
<td></td>
<td>COO</td>
<td></td>
</tr>
<tr>
<td>ED, ICU, Neuroscience unit</td>
<td>Manager</td>
<td>• Knowledge of stroke care</td>
</tr>
<tr>
<td></td>
<td>Educator</td>
<td>• Unit culture</td>
</tr>
<tr>
<td></td>
<td>Staff nurses</td>
<td>• Shadow RNs</td>
</tr>
<tr>
<td></td>
<td>Charge nurses</td>
<td>• Stroke related resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Observe alerts</td>
</tr>
<tr>
<td>Neurology</td>
<td>Neurologists</td>
<td>• Who do MDs see?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stroke education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Peer review process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Order sets &amp; CPGs</td>
</tr>
<tr>
<td>Radiology department</td>
<td>Radiologist</td>
<td>• Basics about CT &amp; MRI interpretation</td>
</tr>
<tr>
<td></td>
<td>CT techs</td>
<td>• CT &amp; MRI tech roles and imaging protocols</td>
</tr>
<tr>
<td>Nursing education department</td>
<td>Hospital education director, manager, or RN</td>
<td>• Education offered hospital-wide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resources for disseminating education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hospital orientation</td>
</tr>
<tr>
<td>Quality department</td>
<td>Quality director</td>
<td>• Data currently collected for stroke</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Selected databases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Process for disseminating data</td>
</tr>
<tr>
<td>Regulatory department</td>
<td>Credentialing specialists</td>
<td>• Hospital certifications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resources available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Login and passwords for certification websites</td>
</tr>
</tbody>
</table>
What are the responsibilities?

- Highest quality care to stroke patients
- Largest stroke center in the region
- Educate nurses and physicians in training
- Involvement in cutting-edge research
Responsibilities: Stroke Expert

• Supporting hospital staff
  – Readily available to provide consult to physicians, nurses, therapists, and patients

• Pursue expertise in diagnosis and treatment of acute stroke and firm understanding of secondary stroke prevention

• Requires self-motivation, self-confidence
Responsibilities: Stroke Expert

• Daily rounds
• Responding Stroke Alerts (ED and Inpatient)
• Reviewing radiographic images with neurology and radiology
• Understanding basic localization strategies
• Enrolling into online based educational programs such as Net Smart (www.learnstroke.com)
• Taking ENLS course
• Taking ASA modules
• Reviewing clinical practice guidelines for stroke care
• Knowledge of certification standards (PSC & CSC designation)
Responsibilities: Direct Patient Care

• Different comfort levels with direct patient care
• Different coverage models
  – Clinical leads 24/7 that respond to stroke alerts
  – APNs managing care (rounding, consults, etc)
• Participation in care will help in the transition to “stroke expert”
• Opportunity learn from the neurologist while diagnosing and treating acute stroke and performing a detailed neurologic exam can be of great benefit as the coordinator is then able to pass on this knowledge to nursing colleagues
• Experience is essential if the coordinator is to be a clinical resource to physicians, nurses, allied health practitioners and EMS
Responsibilities: Direct Patient Care

• Participate in stroke alerts
• Attend and participate in neurology and neurosurgery rounds
• Assure appropriate tests and medication are ordered
• Assess complex stroke patients
• Order appropriate tests and medications (APNs)
• Call coverage with primary responsibility (APNs)
• Participate and/or lead multidisciplinary care coordination/discharge rounds
• Provide patient education
Responsibilities: Program Development

• Governance

• Scope of Service

• ED Algorithm
Governance

STROKE COUNCIL

– Stakeholder buy-in

• Address processes, performance, and quality improvement goals

• Assess and correct program issues

• Handle processes through monthly meetings
  – attendance, agendas and meeting minutes

• Continue to optimize patient care
Stroke Council multidisciplinary membership

- Stroke Program Medical Director
- Stroke Program Administrative Director
- Stroke Coordinator

Representatives from:
- Emergency department
- Rehabilitation services
- Diagnostic imaging services
- Laboratory
- Hospitalists
- Neurology
- Neurosurgery
- Interventional radiology
- EMS
- (Neuro) Intensivist, Neuro ICU
- Nursing
- Health information management
- Quality department
- Pharmacy
Running a Meeting

- Facilitate team meetings, develop agendas, and assign follow-up items

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>A clear purpose for the meeting is clear to all participants.</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Desired outcomes of the meeting are known and achieved.</td>
</tr>
<tr>
<td>Agenda</td>
<td>The agenda is clear, reflects the desired outcome, and helps achieve them.</td>
</tr>
<tr>
<td>Roles</td>
<td>Facilitator controls the meeting and manages problems (i.e., sidebar conversations, staying on time, conflict, etc)</td>
</tr>
<tr>
<td>Ground Rules</td>
<td>Participants understand the “rules” and how to engage with each other.</td>
</tr>
<tr>
<td>Next Steps</td>
<td>Action items, by whom, with a deadline are articulated to all participants.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Facilitator seeks input on how to improve for the next meeting.</td>
</tr>
</tbody>
</table>
Scope of Service

• Mission and the vision of the stroke program
• Roles and responsibilities of the stroke program leadership
• Roles and responsibilities of other stroke program personnel
• Capabilities of the program and the services/hours provided
• Stroke specific policies, protocols, and guidelines
## Order sets, Policies, Protocols and Guidelines

<table>
<thead>
<tr>
<th>Order sets</th>
<th>Policy, Protocols and Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Department:</td>
<td>Stroke program scope of service</td>
</tr>
<tr>
<td>• Acute stroke</td>
<td>• Stroke alert policy</td>
</tr>
<tr>
<td>• tPA for Acute Ischemic Stroke</td>
<td>• Stroke Performance Improvement Policy</td>
</tr>
<tr>
<td>Intensive Care</td>
<td>• Stroke Imaging Guidelines</td>
</tr>
<tr>
<td>• Ischemic Stroke</td>
<td>• Transfer Protocols</td>
</tr>
<tr>
<td>• Ischemic Stroke sp tPA</td>
<td>• EMS Guidelines and routing plans</td>
</tr>
<tr>
<td>• Intracerebral Hemorrhage</td>
<td>• Stroke Plan of Care</td>
</tr>
<tr>
<td>• Subarachnoid Hemorrhage</td>
<td></td>
</tr>
<tr>
<td>Neuroscience Floor</td>
<td></td>
</tr>
<tr>
<td>• Ischemic Stroke</td>
<td></td>
</tr>
<tr>
<td>• ICU transfer orders</td>
<td></td>
</tr>
<tr>
<td>Discharge Orders</td>
<td></td>
</tr>
<tr>
<td>• Stroke (Include patient specific risk factors, specific goals, education elements and follow up appointments)</td>
<td></td>
</tr>
</tbody>
</table>
ED Algorithm
ED Algorithm

Stroke Alert

• GOALS
• CRITERIA
• ACTIVATION
• DIAGNOSTIC TESTS
• ROLES & RESPONSIBILITIES
Responsibilities: Education

Staff – Patients – Families – Community

This is a lot of education!

1. Educate hospital staff and providers
2. Develop a plan for educating hospitalized patients
3. Outreach to community and collaboration with EMS
Educate Hospital Staff and Providers

• **All staff** – (once Stroke Alert criteria & algorithm are developed/approved)
  – S & S of a stroke, how to call an alert & where stroke resources are located
  TIPS – include in orientation, short and direct, broad audience, giveaways

• **ED, Neuro ICU, Stroke Unit, IR**
  – *Require expertise*
    • *Stroke recognition*
    • *Neuro assessment (NIHSS)*
    • *Treatment*
    • *Recovery*
Patients and Family Members

• At minimum 5 specific topics
  – S &S of stroke
  – Personalized risk factors
  – How to activate EMS
  – Knowledge of new medications
  – Need for f/u after discharge

• Challenge: ensure daily process, tracking education and patient response, different modes of delivery
Community Involvement

- Collaboration with AHA and NSA
- Collaboration with other local stroke centers
- Community health fairs, events
- Stroke support groups
- Offer educational events at facility
Collaboration with EMS

- Visit EMS facilities
- Present at EMS education events
- Feedback to EMS on all suspected stroke transports
- Annual review of protocols
- EMS representation on stroke council
Responsibilities: Data

• **WHO**
  - Stroke coordinators data mining and analyzing
  - Collection with recent Medicare/Medicaid requirements
  - Is it best for the coordinator to collect data?
  - Data integrity/inter rater reliability

• **WHAT**
  - Stroke log (admit date, name, age, gender, MR #, diagnosis, location of patient, treatment)
  - Core measures
  - Time to tPA, *now time to endovascular*

• **WHEN**
  - Concurrently as well as Post-Discharge

• **HOW**
  - Paper tracker with rounds
  - Direct entry into registry
  - Spreadsheets
  - Registry
  - Accessibility!
  - Monthly dashboards
Responsibilities: Performance Improvement

1. What is the team trying to accomplish?
2. How will the team know that a change is an improvement?
3. What changes can the team make that will result in improvement?
Leading cause of DEATH in the U.S.

1. Heart disease
2. Cancer
3. Chronic lower respiratory disease
4. Accidents (unintentional injuries)
5. STROKE

6. PREVENTABLE MEDICAL ERRORS
Goals of QI

- Use **Data** and **Facts** to Create Solutions
- Create **Standardized** Work
- **Reduce** Variation
- **Reduce Defects** and **Rework**
- **Eliminate Waste** and Non-Value Add Activities
- **Sustain** the Gains
- **Optimize Revenue**
- Focus on **Metrics** and **Positive** Movement
- **Increase** Patient and Employee **Satisfaction**
Meet Dr. W. Edwards Deming

“Quality is everyone’s responsibility.”
Identifying QI Projects

- Data collection & analysis
- Dashboards: Ischemic and Hemorrhagic Stroke, Target Stroke
- Peer review
- Public Reporting
Target Stroke
National Door-to-Needle (IV tPA within 60 minutes)

2009: 27.4%
Goal: 50.0%
Research vs. Quality Improvement

**Research**
- Slow
- Blind
- Extensive data collection
- Seeks to create new knowledge

**QI**
- Fast
- Continuous feedback
- Targets information to answer utilitarian questions
- Seeks to change outcomes in a specific institution
This is **NOT** a PDSA Cycle!

- **Intervention**
- **Inscrutable Black Box**
- **Outcome**
This *IS* a PDSA Cycle!

**AIMS**
What are we trying to accomplish?

**MEASURES**
How will we know that change is an improvement?

**CHANGES**
What changes can we make that will result in improvement?
Quality Improvement = Continuous PDSA Cycles

Changes that result in improvement

Hunches, theories, and ideas
Responsibilities: Research

• Look for opportunities
  – Clinical trials and nursing led research
• Additional training
• Additional staff
1. Stroke Coordination
2. Stroke Coordinator
3. Preventing Burnout
Stroke Coordinators:
• Excellent clinicians with interpersonal and organizational skills
• Former bedside RNs or APNs
• Central in the stroke program, working closely with leaders in the organization

How to prevent burnout
5 Most Common Barriers to Success

- Too many job functions
- Time spent in data collection
- Lack of interdisciplinary adherence to evidence-based guidelines
- Lack of secretarial support
- Lack of researcher/statistician support

~Dr. Anne Alexandrov
Caution When Defining Responsibilities

- Risk for taking on too much!
- How does this fit in with the vision?

DATA
- On average 12 hours/week in data collection
- 67% desired to give this up

PATIENT CARE
- Only 32% have time for patient rounds
- Give up daily interaction with patients and other staff
Tips for Success

- Clearly define roles and responsibilities
- Define work hours and allow some flexibility
- Identify a mentor who has time and enthusiasm for the development of the stroke program
- Get involved in local, regional, and national organizations (examples: stroke coordinator groups, stroke list serves, membership chapters)
- Pursue advanced training and certification
- Attend local, national, and international conferences
- Publish an abstract, journal article, and/or book chapter
- Present a poster and/or lecture at a conference
- Take classes to develop advanced technical skills (excel, outlook, powerpoint, and statistical analysis)
THANK YOU!

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