Boot Camp for Primary Stroke Certification

Sharon Eberlein RN MBA BSN NE-BC
Sharon Eberlein RN
Neuroscience Program Director
Texas Stroke Institute
Plaza Medical Center of Fort Worth
Fort Worth Texas

No disclosures
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TJC Primary Stroke Certification Overview

- [http://jointcommission.org](http://jointcommission.org)
- Must be a JC accredited hospital
- Must have served minimum of 10 patients by time of review
- Must use a standardized process based on Current CPGs
- Minimum of 4 months of data

DSC Stroke Certification Manual
DSC Review Process Guide

DSC Stroke Certification Manual
DSC Review Process Guide
PSC Time Line

**Month 1**
- Develop Acute Stroke Process
- Implement Stroke Orders
- Satisfaction Survey Process
- Develop Stroke PI Process
- Plan Skills Competency
- Skills lab for staff
- Assign Education Courses
- Stroke Committee

**Month 2**
- Make-up Skills lab for staff
- Monitor education compliance
- Stroke PI plan of action
- Prospective & Retrospective Chart Reviews
- Stroke Committee

**Month 3**
- Communicate Stroke PI (Monthly)
- Chart Reviews
- Monitor Satisfaction Survey
- Stroke Committee

**Month 4**
- Submit PSC application
- Plan Mock Stroke Survey
- Stroke Committee
- Chart Reviews
- Monitor Staff Ed. Compliance

**Month 5**
- Prepare PSC Notebooks
- Create Power Point Presentation for Site Review
- Ensure Education Compliance
- Stroke Awareness Activities (Stroke Hero Awards)
- Stroke Committee
- Chart Reviews

**Month 6**
- Staff Preparedness
- Prepare PSC Required Forms
- Prepare for PSC Review
- Stroke Committee
- Chart Reviews
- Plan PSC Celebration

**Timeline for Primary Stroke Certification**

- 1st mo
- 2nd mo
- 3rd mo
- 4th mo
- 5th mo
- 6th mo
- PSC Survey
Planning the Stroke Program

• Prepare Gap Analysis
• Identified the Stroke Coordinator and Medical Director
• Collecting baseline stroke data elements
• Established Stroke Committee
• Create Code Stroke Response Team (24/7)
• Outline and identify the annual stroke educational for staff, EMS, and community
• Choose Stroke CPGs
## Gap Analysis

- **Responsible parties**
- **Standards description**
- **Met/Not Met Criteria**
- **Critical need**
- **Comments**
- **Time frame**

### Table: Critical need and ongoing standards

<table>
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<tr>
<th>Line #</th>
<th>RESPONSIBLE STANDARDS &amp; MET CRITERIA</th>
<th>PM</th>
<th>STANDARDS DESCRIPTION</th>
<th>RESPONSIBLE STAFF</th>
<th>PM/NG PROCESS REVIEW</th>
<th>COMMENTS / NOTES</th>
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<td>1</td>
<td>QM.1, P=Score, SD = CR.1c, P=Score, MD, SD</td>
<td>Leadership</td>
<td>The Comprehensive Stroke Center (CSC) shall establish, document, implement and maintain the CSC Program and continually improve its effectiveness in accordance with the requirements of this Certification Program</td>
<td>Senior Management is responsible for ensuring that: The CSC is in compliance with all applicable Federal and state laws regarding the health and safety of its patients. The CSC is licensed by the appropriate state or local authority responsible for licensing of CSC. Criteria include aspects of individual character competence training, experience and judgment are established for selection of individuals working in CSC, directly or under contract.</td>
<td>All staff assigned to work with Comp. Stroke patients must have training documented in all sites of training on care of CSC patients. Everyone must have eight hours of education.</td>
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<td>QM.1, P=Score, MD, SD = CR.1c, P=Score, MD, SD</td>
<td>Leadership</td>
<td>The CSC medical director shall be a Neurologist, Neurosurgeon, Neurointerventional Surgeon, or other medical professional with qualifications as defined for diagnosing and treating cerebrovascular disease.</td>
<td>The CSC ensures the availability of resources and information necessary to support the operation and monitoring of these processes.</td>
<td>No written process of ensuring availability. This will include the process for bed availability, Angio Suite availability, etc.</td>
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<td>The CSC determines the criteria and methods needed to ensure that both the operation and control of these processes are effective.</td>
<td>Need to have the p/p written</td>
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<td>The CSC shall monitor measure where applicable and analyze planned results and continual improvement of these processes.</td>
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<td>The CSC shall determine the processes needed for the CSC Program and the application throughout the CSC.</td>
<td>Need to have the p/p written</td>
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**Texas Stroke Institute**

- **Responsible parties**
- **Standards description**
- **Met/Not Met Criteria**
- **Critical need**
- **Comments**
- **Time frame**

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**Gap Analysis**

- **Responsible parties**
- **Standards description**
- **Met/Not Met Criteria**
- **Critical need**
- **Comments**
- **Time frame**
Define Stroke Core Team

• Stroke Coordinator
• Stroke Medical Director (preferred neurologist/neurosurgeon)
• Job Descriptions
• Clinical Competencies
• Education Requirements are 8 hours for core team members

2014 Standard/Process for Stroke Core Team per TJC is:
• 8 hours of CE as defined in DSDF.1
• Roles and Responsibilities are documented along with stroke team duties and assignments DSPR.1-4.a
Code Stroke Members

- Stroke Coordinator / Designee
- Neuroscience Nurse Practitioner
- ED Physician (ED only)
- ED Nurse
- Lab Tech
- CT Tech
- EKG Tech

Stroke Box

- tPA
- Dosing guide
- 60 ml syringe - 1
- Twinpak blunt needles - 10
- 3ml syringe – 3
- 5ml syringe – 3
- 10ml syringe -3
- Labeltalol/Cardene

- 20ml syringe -3
- Portless IV tubing
- Alcohol pads
- 50ml NS bag
- Label for tPA stating dose
- Charge sheet
- “ER assessment of stroke book”
## Code Stroke Activation

### Data Requirements

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<th>Procedure</th>
<th>Time Requirement</th>
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<td>ERMD assessment</td>
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<tr>
<td>Door to CT Interpreted</td>
<td>45 minutes</td>
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<tr>
<td>Door to CXR completed</td>
<td>45 minutes</td>
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<tr>
<td>Door to EKG completed</td>
<td>45 minutes</td>
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<tr>
<td>Door to Lab completed</td>
<td>45 minutes</td>
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<tr>
<td>2014 includes troponin, blood glucose on every patient presenting with stroke symptoms</td>
<td>45 minutes</td>
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<tr>
<td>Door to TPA</td>
<td>60 minutes</td>
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<tr>
<td>Neosurgery Availability</td>
<td>120 minutes</td>
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<tr>
<td>MRI/MRA/CTA interpreted</td>
<td>2 hours</td>
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</table>

- Door to TPA: Must document reason why patient did not receive TPA.
- 2015 IV TPA is given within 60 min at least 50% of the time.
- For post-acute stroke patients, brain MRI and vascular imaging a MRA or CTA are available when clinically indicated to determine or guide treatment choices.
Stroke Database

- Discharge diagnosis for stroke
- Minimum of 10 medical records and 4 months of data
- Action Plan for each standard (PDCA)
- Date of admission and discharge with name, age, gender, ethnicity, diagnosis, other essential data
- Maintain a stroke data base
Required and Recommended Data

- Stroke Performance Measures
  New in 2014 Dysphagia Screening
- Acute Response Times
- Action Plans
- Perception of Care
- Length of Stay
- Order Set Usage
- Aspiration Pneumonia
- Falls
- Patient Outcomes
- Transfers to CSC
Stroke Education
Requirements

• Stroke Core Team
• ED Practitioners
• Stroke Unit Nurses
• Therapy Services
• Radiology Department
• Laboratory Department
• Ancillary Staff
• EMS Education
• Pharmacy
• Case Management
• All physicians that provide stroke care

Time is Brain
Acute Stroke Processes

Texas Stroke Institute
Clinical Practice Guidelines

- Recommendations for the Establishment of Primary Stroke Centers
- Guidelines for Early Management of Patients with Acute Ischemic Stroke
- Guidelines for Prevention of Stroke in Patients with ischemic Stroke or TIA 2006 and Update 2008
- Comprehensive Overview of Nursing and Interdisciplinary Care of the Acute Ischemic Stroke Patient
- Implementation Strategies for EMS within Stroke Systems of Care
- Guidelines for the Management of Spontaneous Intracerebral Hemorrhage
- Expansion of the Time Window for Treatment of Acute Ischemic Stroke with IV tPA
- Recommendations for the Implementation of Telemedicine Within Stroke Systems of Care

Protocols for emergent care of patients with ischemic and hemorrhagic strokes are reviewed for current evidence at least annually using an interdisciplinary approach.
First Month Planning

• Develop acute stroke process
• Implement stroke order sets
• Develop stroke PI process with Quality Department
• Plan stroke skills fair (stroke competencies)
• Plan stroke outreach/community events
• Stroke Committee monthly meeting
Acute Stroke Process

- Define acute stroke
- Process for stroke activation
- Stroke patient route
- Use of consents or not
- Mixing and administration of tPA
- Code stroke policy
- Training of nursing on tPA and post tPA patients
- Endovascular eligible patients
- Transfer to CSC
Acute Stroke Process

- CSC offers endovascular stroke rescue for AIS
- CSC offers emergent procedures for hemorrhagic strokes
Comprehensive Stroke Centers

• Have 24/7 Stroke Team
• Personnel with expertise – Interventional Neuroradiology
• Vascular Neurology, Neurosurgery, advanced practice nurses, rehabilitation specialists, critical care specialists
• Dedicated Neuro-Intensive Care Unit
• Advanced diagnostic imaging techniques (MRI, CTA, TEE, TCD)
• Capability to perform surgical and interventional therapies such as stenting and angioplasty of intracranial vessels, carotid endarterectomy, aneurysm clipping and coiling, endovascular ablation of AVM’s and intra-arterial reperfusion
• Educational and research programs
Stroke Order Sets

Patient Arrives in the ED with Stroke Symptoms
Activate Brain Attack Team

Lab Evaluation: Two 20-150 IV lines,
BMP, PT/INR, PTT, CBC, Urine B-HCG (Woman <50 years)

Sudden onset of any ONE of the following:
Centrinal Facial droop / paralysis
Unilateral Facial numbness
Vision loss / Visual field cut
Double vision and Vertigo
Slurred speech / Dysarthria
Language deficit / Aphasia
Unilateral arm / leg weakness
Loss of balance / Incoordination
Severe Headache (Suspect SAH)
Decreased level of consciousness

Emergent CT Imaging
STROKE 1. Non-contrast CT Brain/Head
(on all patients including transfers from referring facility)

No Bleed

Clinical Evaluation:
Time from Last Known Normal, NIHSS, See BP Management Protocol

< 4.5 hrs
See < 4.5 hrs Pathway Green Envelope

4.5-12 hrs
See 4.5-12 hrs Pathway Yellow Envelope

> 12 hrs
See > 12 hrs Pathway (includes all TIA’s and unknown last known normal) Blue Envelope

Bleed

See Non-traumatic Sub-archnoid Hemorrhage Pathway Red Envelope

See Non-traumatic Intracerebral Hemorrhage Pathway Purple Envelope

See Extradural, Subdural or Epidural and all Traumatic bleeds Grey Envelope

Possible Brain Attack Team Members:
ERMD, ER Nurse, Lab, CT Tech, ER Tech,
Hospital Supervisor, Red boards, ICU Charge nurse

tPA Orders
AIS Orders
SAH Orders
ICH Orders

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Stroke PI Process

- Use FOCUS-PDCA (Find-Organize-Clarify-Understand-Select-Plan-Do-Check-Act)
- Perform both concurrent and retrospective reviews
- Management Data Collection Tool (GWTG / Neurobase)
- Hospital Stroke Registry (home grown system, Excel)
- % Review for all stroke types
- Inter
- Data submission to the state (if required)
- Data reporting structure: Stroke Committee, Neuroscience Committee, PI Steering Council, Division Meetings, Medical Executive Committee and the Board of Trustees
Plan Skill Fairs & Community Activities

Skills Fairs
- Story Boards
- Return Demonstrations
- Mock Code Strokes
- Skills Competency Check Offs

Community Events
- S/S Stroke
- 911 Activation
- Risk Factors
- Stroke Treatment

Communicates to the participant the result of its family risk assessment (DSSE.3)

New in 2014
- Community Resources
- Palliative Care
- Respite Care
- Vocational Rehab
- Stroke Support Groups
- Hospice Care
- Rehabilitation Services
Second Month Planning

- Make-up Skills lab for staff
- Monitor education compliance
- EMS Education
- Stroke PI plan of action
- Prospective & Retrospective Chart Reviews
- Stroke Committee monthly meeting

D2N Times

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<th>Labor/HR/Resident Nurse/PWI</th>
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<th>Safety/Infection Control</th>
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ED Practitioner Education

2014 TJC PSC ED Practitioner Education Compliance

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<th>Computer Based Learning (CBL)</th>
<th>2014 Stroke Competency</th>
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<td>Acute Stroke Process (100%)</td>
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<tr>
<td>ED Practitioners (MDs, Nurses, FAs)</td>
<td>Genentech Module 1: Stroke Basics (88%)</td>
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ED Practitioner New July 2014 (DSDF1)

Knowledge of the process used to activate brain attack team

100% Education Compliance

• tPA Administration (3 h)
• Acute Stroke Protocols/Orders
• Acute Stroke treatments < 4.5 h from LKN
• Indications for IV tPA
• Contraindications to IV tPA
• Education to be provided to patients and families regarding the risks and benefits of IV tPA
• Signs and symptoms of neurological deterioration post IV tPA
• Signs and symptoms of angioedema

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EMS Education & Follow Up

- Acute stroke process
- Stroke data to include D2N times
- Vital Signs/Neuro checks for D/S patients
- Transport of tPA patients to CSC
Chart Abstract
Concurrent / Retrospective Review

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Stroke Dashboards

- ED metrics
- PI metrics
- Volumes
- LOS
- tPA data
- Transfers
- Order set usage
- Other
PI Action Plans

- Focus Review
- Plan Do Check Act
- Graphs
- Grids
Stroke Committee

• Schedule monthly committee meetings
  Stroke Medical Director needs to sign the minutes
• Assign a note taker
• Ensure all departments are represented including EMS, Therapy, CM/SS, Dietitian, Pharmacy, etc.
• Have set agenda including PI data, education, department reports, upcoming events
• Make assignments with an end date
3rd and 4th Month
Planning

- Submit stroke application to TJC
- Continue stroke chart reviews and abstraction of data
- Communicate Stroke PI to stroke units and ancillary departments
- Monitor stroke patient satisfaction by surveys
- Plan mock stroke survey
- Monitor staff education compliance
- Report data through reporting structure for hospital PI stroke committee ➔ PI/ Quality ➔ MEC ➔ BoD
Application for Survey

• Submit application electronically to TJC
• Part 1 – Ownership, demographics, types and volumes of stroke patients

• Part 2 – Sent electronically by TJC (30 days to complete) PI measures, PI plan, preferred review dates, and current CPGs

* Remember to inform TJC of any changes in the program
Communicate Data to Stroke Units and Others

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**Performance Improvement**
- Must be continuous and ongoing throughout designation period
- Must be available for review on a rolling two year period
- Must be available for review at all times

Communicate stroke data throughout hospital
Stroke Perception of Care

- **Terms**
  
  HCAPHS (Hospital Care Quality Information for the Consumer Perspective)
  
  Gallop (founded by George Gallop in 1935 for opinion polls)
  
  Press-Ganey (playbook for winning on HCAHPS)

- **Stroke specific discharge survey**
  
  phone calls (may use sampling to meet standard DSPM.5EP.1)
  
  survey mail outs
  
  surveys at discharge
5th & 6th Month Planning

• Creating opening conference power point
• Follow up on mock survey
• Ensure education compliance
• Prepare stroke notebooks
  Education, community, PI data, stroke committee
  meetings, EMS communication & follow up
• Chart Reviews
  choose closed records for review (include tPA records)
• Create stroke pocket cards for staff
• Staff preparedness for survey readiness
• Identify staff that will speak with the surveyor
TJC Opening Conference
Power Point

- Hospital overview
- Program overview with mission, goals, objectives
- Program structure and integration with hospital structure
- Program leaders and stroke team members
- Target population and service area
- Clinical practice guidelines use in stroke management
- Program development and evaluation
- Community outreach
- EMS collaboration
- PI processes and evaluation of the program
Stroke Notebooks

- Stroke Survey book
- Education book
- Community Events/Lectures
- Outreach calendar
- EMS Collaboration/Follow Ups
- EMS educational offerings
- PI dashboards

2014 PI Dashboards Processes

Comprehensive Stroke Certification
Survey Notebook 2013

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Survey Ready Employees and Inpatient Strokes

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Plaza Medical Center
Stroke Program
In-house Stroke Population

F = Family gave permission for Joint Commission to discuss stroke program

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Stroke Pocket Cards
Examples

**Acute Stroke: LKN<12 Hrs**
S/S: FAST: face, arms, speech, time/terrible HA

**Acute Stroke Process:**
- Activate Brain Attack team: lab, CT, MR, Radiology, ED Charge, ED MD, Stroke coord., ANP, TSI, Neuro IR (if min seen by ER md) (15 min call returned by TSI)
- Lab evaluation: two 18-20g IV lines; (POC): BMP, PT/INR, PTT, CBC, urine β-HCG (<50) [TAT 45 min]
- Emergent CT (non-contrast): EMS bay straight to CT [TAT 45 minutes to interpret]
- Other dx studies: EKG, chest x-ray (TAT 45 min)

**Determine appropriate pathway (See Below)**

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<td>Yellow: 4-12 hrs</td>
<td>Purple: ICH</td>
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<td>Blue: &gt;12 hrs/TIA/Unknown LKN</td>
<td>Grey: Extrudal, SOH, Epidural &amp; traumatic</td>
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**Treatment Options:**
- IV TPA: 0-4.5 hrs from LKN
- IA TPA: 0-6 hrs from LKN
- Clot retrieval up to 12 hrs from LKN
- Criteria: NIHSS ≥8 or if + aphasial hemis anosia
- CTA/MR shows large vessel blockage
- Brain attack MR show small ischemic core & large penumbra (>20% mismatch)

**TPA GUIDELINES: 0 ZN GOAL OF 60 MINUTES**
First: Determine Eligibility: LKN<4.5 hrs, no bleed on CT; inclusion/exclusion criteria reviewed
Prior:
- Weight
- BMI
- Thrombolytic info
- Stroke severity (NIHSS)
- Laboratory documentation
- Protocol followed
- CTPA (if available)

**NEED NURSE PACKET AND ORANGE TACKLE BOX**
Administration: 10% of dose given as bolus over 1-2 minutes; remaining 90% given as gtt over 1 hr following by 50cc NS given at same rate as gtt (designated IV site, PE lined tubing [nito tubing] or pump

**During:** VS: NIH (full or modified) done q15 min x2 hrs, q30 min x6hrs, q1hr x12 hrs
- FULL 30 min post (slot 2 on flow) if there is NOT a 4 Hirp Screen

**TPA INCLUSION Criteria:**
- Acute ischemic stroke (CVA) Measurable Neuro Deficit
- Onset < 3 hrs before Treatment
- < 18 years or older

**Exclusions criteria for < 3 hours from LKN:**

**SOLID ARE NOW RECOMMENDATIONS**
- Significant Head Trauma within last 30 days
- Prior Stroke/SAH
- Non Compresible Arterial Puncture within last 7 days
- Intracranal Neoplasm
- Intracranial Malformation
- Intracranial Aneurysm
- CT shows multicocular infarct with hypo Density > 1/3
- Suspected SAI
- Intracranial surgery < 1 mo.
- Intracranial Neoplasm
- Intracranial AVM
- Intracranial Malformation
- Intracranial Aneurysm
- Intracranial injury < 1 mo.
- PTP > 15 despite treatment
- Active Internal bleeding
- Acute bleeding diathesis
- Platelet count < 100,000/mm3
- Heparin within 48hrs
- Abnormal/elevated aPTT
- PT > 15/20/40
- On antiplatelet/antithrombotic
- PT > 15
- Glucose < 30 despite treatment
- PAs if direct Thrombolytic inhibitor or direct Factor Xa inhibitor

**Elevated aPTT**
**Elevated INR**
**Elevated Platelet Count**
**Elevated ECF**
**Elevated Factor Xa**
Congratulations!
TJC Certified Primary Stroke Center

• Maintain PI data, dashboards, database
• Continue abstracts and trends
• Build stroke volume
• Monitor TJC website for updates
• Submit monthly data to TJC
• Continue to educate staff, EMS, and community