



Stroke Program Manager Manual

Table of Contents

Introduction

Welcome

Regional Advisory Council and Stroke Systems of Care History in STRAC

Stroke System of Care Legislation

Stroke Center Levels

Multiple Roles of the Stroke Program Manager

Stroke Program Manager Time Management Priorities

Quality Assurance (QA) and Performance Improvement (QAPI)

What is QAPI?

Data Collection

Tracking QAPI Activities

Action Plan Development

QAPI Meeting Structure

Event Resolution

QAPI Resources

Classes/Courses/Certifications

Preparing for Stroke Designation Site Visit

Overview

One year prior to visit

Six months prior

Three months prior

One month prior

One week prior

Day of visit

After visit

Appendix A

Regional Resources

Regional Stroke Alert Criteria

STRAC Regional Stroke System of Care Letter of Attestation (LOA)

[Regional Resources online](#)

MIST Form

STRAC Regional Transfer Packet

STRAC Regional Stroke Transfer Guide

STRAC Regional Neuro Assessment Tool for Interfacility Transfer

STRAC Performance Improvement Case Review Submission Form

STRAC Hospital Selection Guide

STRAC Hospital Executive Leadership Protocol (HELP)

Appendix B

QAPI Resources

PDCA Planning Form

PI Screening Events

Appendix C

Site Survey Resources

DSHS Approved Stroke Survey Organizations

DSHS Suggested Stroke Screening Events

Example Site Survey Assessment and Overview

Introduction

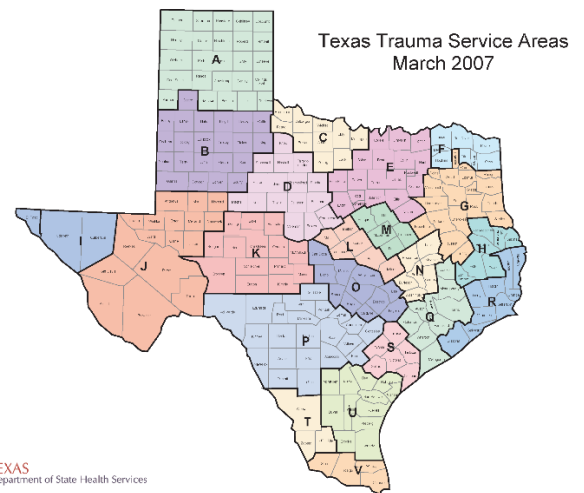
Welcome to the Southwest Texas Regional Stroke Committee and thank you for your interest in learning more about Stroke Systems of Care in Southwest Texas. You will find this manual beneficial as you embark upon this role, and we encourage you to retain a copy of this text as it may serve as reference material later in your career.

Stroke Care History in Texas

Stroke care has evolved into a specialty of many local and regional hospitals over recent decades. Stroke centers have established high quality, comprehensive medical services to patients. The public relies on stroke centers to provide emergency services in settings ranging from high density urban areas to distant rural critical access facilities. Regardless of where your program is located, it provides critical services in a timely manner to patients who often need lifesaving measures. As a Stroke Program Director, Manager or Coordinator, it is your primary responsibility to ensure patients are receiving the best care possible. This is often accomplished by compilation and analysis of data, policy review, and continuous performance improvement patient safety initiatives. The following chapters will provide an overview of many aspects of stroke care and acts as a guide to help you succeed in your new role.

Regional Advisory Council (RAC and Stroke System History

Regional Advisory Councils (RACs) are designated by the Texas Department of State Health Services as the administrative bodies to develop, implement and maintain the regional stroke and emergency healthcare system for the counties within their designated Stroke Service Areas (A - V). There are 22 RAC's in Texas. RACs work closely with their area Hospitals, EMS Agencies, and other organizations for improvement in healthcare and emergency preparedness.



Stroke System of Care Legislation

Stroke rules were legislated in 2005, when Senate Bill 330 was passed during the 79th Legislature. The purpose of the bill was to develop a state emergency stroke treatment system. This allows responders to identify and transport a person with acute stroke signs and symptoms to an appropriate designated facility. The hospital designation requirements were established to ensure prompt and appropriate treatment for possible stroke victims. During the initial rule-making sessions, Regional Advisory Councils (RACs) were tasked by DSHS to establish regional stroke systems, both to address Emergency Medical Service (EMS) triage and transport guidelines and assist with improving stroke centers in each region of Texas. The Southwest Texas Regional Advisory Council (STRAC) formed a Regional Stroke System Committee in September 2007.

The STRAC Regional Stroke System Committee has broad, inclusive membership from a wide group of stakeholders. This includes urban and rural hospitals, EMS leaders, neurologists, neurosurgeons, emergency physicians, stroke nurse champions, hospital administrators and interested citizens from the area.

The vital components of creating a coordinated system of stroke care are outlined by the American Stroke Association's (ASA) Task Force on the Development of Stroke Systems in the document entitled [AHA Recommendations for the Establishment of Stroke Systems of Care: a 2019 Update](#). The Committee recognizes that coordinating stroke systems should help patients access a full range of services such as stroke prevention, acute pre-hospital, and hospital treatment as well as rehabilitation.

The Texas Department of State Health Services determines requirements for the levels of stroke facility designation. Hospitals seeking stroke facility designation must demonstrate compliance to department-approved national stroke standards located on the DSHS EMS/Trauma Systems Stroke Designation Webpage: <https://www.dshs.texas.gov/dshs-ems-trauma-systems/stroke-system-development>. Hospitals must be in compliance with the requirements validated by a department-approved survey organization. Designation of a hospital as a stroke facility is valid for the length of the approved stroke survey organization's stroke certification.

Levels of Stroke Centers

Comprehensive (Level I) stroke designation. The hospital must meet the department-approved national stroke standards of care for a Comprehensive Stroke Center, participate in the hospital's Regional Advisory Council (RAC) and regional stroke plan, and submit data to the department as requested.

Advanced (Level II) stroke designation. The hospital must meet the department-approved national stroke standards of care for a non-Comprehensive Thrombectomy Stroke Center, participate in the hospital's RAC and regional stroke plan, and submit data to the department as requested.

Primary (Level III) stroke designation. The hospital must meet the department-approved national stroke standards of care for a Primary Stroke Center. The facility must sign the STRAC Regional Stroke System Letter of Attestation (LOA), participate in the Regional Stroke Committee, and submit data as requested.

Acute Stroke-Ready (Level IV) stroke designation. The hospital must meet the department-approved national stroke standards of care for a Stroke-Ready Stroke Center. The facility must sign the STRAC Regional Stroke System Letter of Attestation (LOA), participate in the Regional Stroke Committee, and submit data as requested.

Multiple Roles of the Stroke Program Manager

Time dedicated to the stroke program may be divided between employees. Staffing should be adequate for hospitals stroke patient volume. The program's responsibility lies with the program manager; however, tasks may be assigned to other team members. Oversight should remain with the program manager. If multiple roles are performed, you will need to be able to demonstrate how time is divided.

The Stroke Program Manager (SPM) and the Stroke Medical Director (SMD) share the responsibility for the success of their stroke team. Like all partnerships, the SPM / SMD must support each other, share a common vision, establish a pool of common values, and mutually respect each other and the members of their team.

They must be transparent in their pursuit of excellence, resilient in their discovery of failures and human behaviors, and fearless in their speaking of the truth. Even if reporting to a different hierarchy, both share the responsibility of pursuing optimal outcomes for the stroke patient.

The clear delineation of roles and responsibilities is crucial from the onset. Boundaries, timelines and working relationships need to be defined and discussed candidly. The logistics of accomplishing the work need to be honestly assessed and assigned. An important aspect of your relationship includes establishing the best means of communication (phone, email, in person meetings). Regardless of how you choose to communicate, transparency and confidentiality are key. The SMD should be an ally, not the enemy. Never surprise them or ambush them in a meeting. Have difficult conversations in private. The SMD has the difficult responsibility in holding the medical staff accountable for their performance as well as setting the tone for the stroke center.

Stroke Program Manager Time Management Priorities

- Performance Improvement program is near real time or concurrent.
- Critical discussion of the care provided by the facility and the documentation of such review is descriptive and thorough.
- Staying on top of stroke staff education expiration dates.

Quality Assurance and Performance Improvement (QAPI)

What is QAPI?

Quality Assurance and Performance Improvement (QAPI) is the coordinated application of two mutually reinforcing aspects of a quality management system: Quality Assurance (QA) and Performance Improvement (PI). It takes a systematic, comprehensive, and data-driven approach to maintaining and improving safety and quality in healthcare facilities while involving all healthcare team members in practical and creative problem solving.

Quality Assurance is the specification of standards for quality of service and outcomes, and a process throughout the organization for assuring that care is maintained at acceptable levels in relation to those standards. QA is on-going, both anticipatory and retrospective in its efforts to identify how the organization is performing, including where and why facility performance is at risk or has failed to meet standards.

Performance Improvement (also called Quality Improvement or QI) is the continuous study and improvement of processes with the intent to improve services or outcomes, and prevent or decrease the likelihood of problems, by identifying areas of opportunity and testing new approaches to fix underlying causes of persistent/systemic problems or barriers to improvement.

QAPI is not designed to be punitive but intended to improve patient care and outcomes while preventing repetitions of substandard care. Additionally, PI/QI is required by the individual certification or designation agency to be a verified/designated stroke center.

The QAPI program includes the confidential systematic review and discussion of the stroke patient's care with continuing monitoring of processes, systems, and the impact both have on outcomes. This is done through a multi-step quality/performance improvement process that includes (see Appendix B as an example):

- Issue identification
- Analysis
- Corrective actions to address issues
- Implementation
- Evaluation of effect
- Loop closure

Issues affecting the Regional Stroke System of Care should be presented at the STRAC Regional Stroke Performance Improvement Committee. The STRAC PI submission form can be found at www.strac.org/stroke.

Examples of QAPI issues for review:

- EMS documentation and medical record
- Compare care delivered to standards of care
- Did care adhere to or deviate from clinical practice guidelines (CPGs)
- Feedback from providers – email, verbal
- For admitted patients – daily rounds
- Feedback from stroke centers
- Can be used to determine if appropriate lifesaving interventions were provided
- Patient outcomes
- Transfer processes
- Documentation of care
- Regional data review

For additional screening events for PI see Appendix B.

Data Collection

Regionally, stroke patient data is collected from the EMS and facility chart through abstraction into either the American Heart Association's Get with The Guidelines—Stroke registry or the STRAC regional stroke registry via the Texas RAC Data Collaborative. Patients presenting with a diagnosis of ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, transient ischemic attack, or stroke not otherwise specified meet the inclusion criteria for the registries.

For missing EMS data or runsheets, you can be given access to the agencies' runsheets within the STRAC hosted EMS charting product. Send a request for access to support@strac.org Include your name, title, and hospital.

Tracking QAPI Activities

It is important to have a consistent way to track what you and your team are doing from time of issue identification to loop closure. This will also help you organize your QAPI materials to show reviewers during the site visit. Make note of every conversation and email sent related to a particular case. For example: "Sent case 12459 to Dr. Jones for review 09-10-2013".

Action Plan Development

Once an opportunity for improvement is identified through the QAPI process, an appropriate action must be created to prevent similar adverse events in the future. There may be times the action plan will require more than one corrective action. Each issue should have an action plan.

The action plan should include:

- Identify the cause and the actions taken in the affected area/process.
- Identify other areas/processes that have potential to be affected by the same issue.
- Identify process or system changes to be made to ensure issue does not recur (to include staff training plan as applicable).
- Identify the time frame for implementation of corrective measures including specific dates of corrections already implemented.
- Identify the name of person responsible for action plan implementation.
- Identify performance measures and/or other supporting evidence to be monitored to ensure the effectiveness of the correction.

Examples of action plan outcomes:

- Guideline/protocol development
- The action plan should be evidence-based with the goal to decrease variation in practice by establishing a standard of care for all providers; provide clinical direction.
- Tip: In the development of your CPG, do not re-invent the wheel. Chances are if your stroke center needs a CPG about a certain topic others have also. Use available resources to find what others have developed and use that as a starting point. CPGs should be applicable to your institution and/or region.
- CPGs need to be monitored for compliance and achievement of desired outcome.

The STRAC Regional PI committee should be used for system problems or issues that cannot be resolved between institutions.

QAPI Meeting Structure

The stroke program is required to have a forum in which all stroke deaths and other issues are reviewed and discussed. The actual structure of how this will be operationalized is left up to each stroke center.

One option is a physician peer review committee to review provider related issues. Corrective actions and judgments are referred to stroke program leadership and should be chaired by the stroke medical director. In centers where there is a separate physician PI meeting, there should also be a multi-disciplinary PI meeting to review all identified issues.

Stakeholders should include: (as applicable)

- Emergency department (physician and nursing) representatives
- Radiology representative
- Surgeons
- ICU representative
- Stroke registrar
- Stroke Medical Director/Program Manager
- Administration
- EMS
- Pediatrics
- Rehab specialists

- NP/PA's involved in stroke care
- Social services
- Educator

Meeting frequency should be at least quarterly. All information presented at Stroke PI meetings is confidential and protected by the Texas Peer Review Statute. Attendance should be recorded for each meeting reflecting all disciplines are involved. Minutes from the Stroke PI meetings should be written to include in-depth critical review.

Event Resolution

Event Resolution refers to the ability of your stroke program to show and identified issue has been resolved. Event refers to the cycle of monitoring, identifying, resolving, and monitoring again. Resolution should address the key aspects of the problem. In laymen's terms "We have solved the problem and here is the proof". Remember some events take a long time to resolve and some events may never be resolved.

QAPI Resources

Never hesitate to call and of the Stroke Program managers in the STRAC region. All are experienced in PI and the PI process and will be more than willing to help answer any question you may have. Additionally, feel free to call STRAC for help or direction as well.

State Resources

- Texas Department of State Health Services (DSHS) 512-834-6700
<https://www.dshs.texas.gov/dshs-ems-trauma-systems/stroke-system-development>
- Texas EMS Trauma and Acute Care Foundation (TETAF) <http://www.tetaf.org/>
- Governor's EMS and Trauma Advisory Council (GETAC) <https://www.dshs.texas.gov/dshs-ems-trauma-systems/governors-ems-trauma-advisory-council>

QAPI resources

- Check with your accrediting organization!
 - [American Heart Association/American Stroke Association](#)
 - [The Joint Commission](#)
 - [DNV](#)
- Institute for Healthcare Improvement ihi.org
- Agency for Healthcare Research and Quality ahrq.gov
- Centers for Disease Control and Prevention
(<https://www.cdc.gov/publichealthgateway/program/resources/performance.html>)
- The Joint Commission jointcommission.org
- American College of Cardiology Introduction to QI and the FOCUS-PDSA Model [FOCUS PDSA Model](#)

Classes/Courses/Certifications

SCRN—Stroke Certified Nurse (aann.org)

CPHQ—Certified Professional in Healthcare Quality (nahq.org)

ENLS—Emergency Neurological Life Support (enls.neurocriticalcare.org)

STRAC Emergency Healthcare Systems Conference – The first STRAC Emergency Healthcare Systems Conference was put on in May 2014 at the Alamo dome in San Antonio, TX. This conference hosts several keynote speakers on a variety of emergency healthcare system topics. Continuing Medical Education/Continuing Education (CME/CE) are provided.

International Stroke Conference (<https://professional.heart.org/en/meetings/international-stroke-conference>)

American Association of Critical Care Nurses—National Teaching Institute (aacn.org)

American Association of Neuroscience Nurses Annual Conference (aann.org)

Preparing for Stroke Designation Site Visit

Overview

The stroke designation process is a quality program aimed at ensuring stroke patients receive the best care possible based on the resources available at a given hospital. This process requires the commitment and support of hospital administration, physicians, and allied health partners. For initial designations, allow at least one year to prepare for a site visit. Refer to your specific certification manual for specific requirements.

The site reviewers will compare the components of your stroke program with those required for your chosen level of stroke designation. Refer to DSHS essential criteria for minimum standards. Listed below are suggested steps involved in preparing for your hospital's site visit.

One Year Prior to the Site Visit

- Decide the level of designation for which your hospital will apply. The level of designation is determined by the hospital's resources and has no bearing on the quality of care given. Contact the State Hospital Designation Coordinator early in the process to discuss the site visit and the level your hospital should consider for designation.
- The facility seeking designation or renewal of designation is responsible for contacting an appropriate department-approved survey organization of their choice to schedule their survey. It is strongly recommended the facility contact the survey organization a minimum of 18 months before the desired survey date. The survey date needs to ensure receipt, review, and development of a plan of correction for identified opportunities may be accomplished for application submission. The facility must submit the entire application packet to the department within 90 days of the survey date and no less than 90 days before the expiration of the current designation. See Appendix C for a list of current department-approved survey organizations and their contact information.
- Ensure all members of the stroke team have the required stroke education and/or certifications.
- Begin entering patients into the stroke registry. Patients are to be entered within 60 days of discharge from your hospital. If needed, consider delegating stroke registry responsibilities to someone else.
- Initiate the QAPI program if not already in place.
- Begin reviewing with staff:

- Nurse Competencies
- NIHSS assessment
- Thrombolytic administration/management
- Blood Pressure Management
- Neuro assessment
- Modified NIH
- MENDS
- Clinical Practice Guidelines

Consider contacting an experienced Stroke Program Manager at a hospital within the region or affiliated with your hospital system as a mentor through this process.

Six Months Prior to the Site Visit

- Continue performance improvement activities
- Daily review of cases
- PI reviews at committee
- Getting to “Loop Closure” on identified issues
- Continue entering registry cases
- Continue completing education requirements

Three Months Prior to the Site Visit

- Work with state designation coordinator to correct any issues/gaps found in the application.
- Notify DSHS of scheduled survey. Follow up with hospital regulatory department as appropriate.
- Reserve a room large enough to accommodate your hospital administrator, stroke medical director, three site reviewers, nursing administrator, and any others who may attend the meeting.
- Block calendars for stroke program stakeholders. At a minimum your stroke medical director and hospital administrator need to be available for the site reviewers. The medical director should be available the entire day. The administrator during the exit interview at a minimum
- Ensure a room large enough to accommodate the chart review for two site reviewers. Ensure two people highly experienced in navigating the EMR are available (one for each reviewer).

One Month Prior to the Site Visit

- Request letter of RAC participation from STRAC. Contact info@strac.org.
- Notify state of accrediting visit—if applicable. This may require you to reach out to your Quality/Compliance department.
- Pull charts for the site reviewers, a minimum of ten charts will be reviewed during survey.

One Week Prior to the Site Visit

- Ensure all charts have been pulled and in order.
- Notify state of site visit—if applicable.
- Review each case. You will want to be familiar with them.

- Ensure one person who is experienced in navigating the EMR is available for each site reviewer the day of the review.
- Ensure no last-minute meetings have been put on the stroke medical director's or administrator's calendars.
- Schedule something special just for you.
- Schedule an after-site visit "debriefing" for your stroke team. (Restaurant, party, etc.)

Day of the Site Visit

Greet site reviewers and state hospital designation coordinator at a mutually agreed upon location. Remember, this is the time to **SHOW OFF YOUR PROGRAM!** You have just spent a year preparing for this day. Show off what you have done! Develop and prepare both an opening and data presentation highlighting your facility(s). The site reviewers will offer advice based on their experience as stroke providers. Listen to them. They really are there to help.

The tour of the hospital will follow the path of the patient. The reviewers will look at the ambulance bay, ED, lab, radiology, OR, ICU, helipad.

You will be asked questions about the patients and/or QAPI. Having the QAPI sheets with the records will make everyone's job easier. The hospital designation coordinator will go over your PI process. Be prepared to speak to how you review cases and bring things to loop closure. The site reviewers will take about 30 minutes after chart reviews to summarize their findings.

You will be given a time for the exit interview. During the exit interview expect to hear the strengths of your program and opportunities for improvement. Having administration present to hear about these opportunities directly from the site reviewers is powerful. Get them there!

After the Site Visit

- Attend your "debriefing" session.
- Take time off! Re-acquaint yourself with your family!
- Pat yourself on the back for a job well done.
- Update STRAC on your designation.

Appendix A

Regional Resources

Regional Stroke Alert Criteria

One or more findings on either the Cincinnati Pre-hospital OR BEFAST Stroke Assessment

Stroke:

Cincinnati Pre-Hospital

- Facial Droop
- Arm Drift--Assess for LVO
- Speech

OR

BEFAST Stroke Assessment

- Balance
- Eyes
- Facial Droop
- Arm Drift--Assess for LVO
- Speech

--AND--

Time--Last Known Well Time less than 6 hours.

--AND--

Blood Glucose: Between 60mg/dL – 600mg/dL.

** Per AHA Guidelines, for any STROKE criteria and transport time is less than 45 min, transport to nearest Stroke Center.

Large Vessel Occlusion (LVO):

If Unilateral Arm Weakness (Drift) from Stroke Assessment Plus Any One of the Following:

- Visual Disturbance
- Aphasia
- Neglect

--AND--

Last Known Well Time less than 24 hours.

--AND--

Blood Glucose: Between 60mg/dL – 600mg/dL.

**Per AHA Guidelines, for any Large Vessel Occlusion criteria and transport time is less than 45 min, transport to nearest Thrombectomy Ready or Comprehensive Stroke Center.

Southwest Texas Regional Advisory Council Regional Stroke System of Care Letter of Attestation

BACKGROUND

The Southwest Texas Regional Advisory Council (STRAC) formed a Regional Stroke System Committee in September 2007. The Regional Stroke System Committee's creation followed the 80th session of the Texas Legislature, where Stroke Systems were codified in statute based on HB 1 (General Appropriations Bill, Rider 80), which mandated the Texas Department of State Health Services (DSHS) develop and implement rules for designating Stroke Facilities for Texas.

During the initial rule-making sessions, Regional Advisory Councils (RACs) were tasked by DSHS to establish regional stroke systems, both to address Emergency Medical Service (EMS) triage and transport guidelines and assist with improving Stroke Facilities in each region of Texas.

The STRAC Regional Stroke System Committee has broad, inclusive membership from a wide group of stakeholders. This includes urban and rural hospitals, EMS leaders, neurologists, neurosurgeons, emergency physicians, stroke nurse champions, hospital administrators and interested citizens from the area.

The vital components of creating a coordinated system of stroke care are outlined by the American Stroke Association's (ASA) Task Force on the Development of Stroke Systems in the document entitled Recommendations for the Establishment of Stroke Systems of Care. The Committee recognizes that coordinating stroke systems should help patients access a full range of services such as stroke prevention, acute pre-hospital, and hospital treatment as well as rehabilitation.

The Committee has made great strides with the development and implementation of pre-hospital —Stroke Alert criteria. The Stroke Alert, similar to the Trauma Alert or Heart Alert, is the emergent process for recognition and treatment for acute stroke patients. This method of communicating priority patients is a critical stroke system function, requiring EMS personnel to not only identify those patients with stroke symptoms but to then label them as patients requiring the highest priority of care. Protocols and care guidelines are developed in cooperation with hospitals participating in the regional stroke system of care. Work continues to be done to establish methods and procedures to rapidly move patients from outlying facilities to Regional Stroke Facilities.

PURPOSE

This Letter of Attestation (LOA) serves, as an adjunct, along with certification from a certifying body (i.e., The Joint Commission or DNV) and designation by DSHS, as the process for recognition as a Regional Stroke Facility.

Additionally, this LOA establishes transport protocols, performance criteria, and time-sensitive goals for EMS to ensure quick identification of the stroke patient, initiation of appropriate care, and transportation to a certified Stroke Facility.

CRITERIA

Regional Stroke Facilities: All Regional Stroke Facilities must be designated by DSHS, be certified by an accrediting body recognized by DSHS, and must present validating documents to the STRAC Regional Stroke Systems Committee. Facilities seeking designation or an elevation of designation will maintain the capabilities for the intended level of designation listed in this document twenty-four hours a day, seven days a week. Regional EMS agencies will use this information and work with the Regional Stroke Systems Committee to determine destinations for Stroke Alert patients from the scene.

EMS Stroke Alert Agencies: To be recognized as a regional EMS Stroke alert Agency, EMS agencies agree to achieve the following criteria:

1. Utilize the Regional Stroke Alert Criteria.

2. On Scene Times for Stroke Alert patients should be minimized. Procedures should be developed for the rapid recognition of Stroke Alert patients including a target time of departing the scene in under 15 minutes.
3. Timely Notification by EMS agency transporting to a Stroke Facility with Stroke Alert declaration.
4. Participation in Regional Stroke PI Committee by the sharing of best practices learned in achieving improved on-scene times, patient outcomes, and regional initiatives.
5. Participate in Regional Stroke System Registry. The data should be in a format and contain all data elements as defined by the Regional Stroke Committee. At a minimum it will include all stroke patients, regardless of Stroke Alert designation. Additional cases may be included as the system matures.

DEFINITIONS:

Stroke Alert Patient – any patient meeting Stroke Alert Criteria. (See Appendix A)

Stroke Alert – This term will be used in communications between EMS agencies and hospitals and within hospitals to identify patients with signs and symptoms of stroke in which rapid intervention is critical. (Refer to Appendix A)

Stroke Alert Criteria – Refer to Appendix A for the current agreed upon guidelines.

EMS Agency - Transport providers and EMS Transport agencies, although in general, refers to the EMS agencies throughout the STRAC region.

Comprehensive (Level I) Stroke Facility—A hospital with a signed LOA meeting the DSHS-approved national stroke standards of care for a Comprehensive Stroke Center.

Advanced (Level II) Stroke Facility—A hospital meeting the DSHS-approved national stroke standards of care for a non-Comprehensive Thrombectomy Stroke Center.

Primary (Level III) Stroke Facility—A hospital meeting the DSHS-approved national stroke standards of care for a Primary Stroke Center.

Acute Stroke-Ready (Level IV) Stroke Facility—A hospital meeting the DSHS-approved national stroke standards of care for an Acute Stroke-Ready Center.

PARTICIPATION IN REGIONAL STROKE COMMITTEE:

For all Stroke Facilities, regardless of level of recognition, certification or accrediting body, participation in the Regional Stroke Systems Committee is required. This includes Physician attendance at all quarterly PI meetings, at least 50% committee attendance by the Stroke Service Line Representative and/or Physician, and data submission to the regional Stroke Registry monthly using an export file no later than one quarter behind in submission.

Participation/In Pursuit of Certification and Designation: Refer to Appendix C for the current guidelines for any hospital in the region that is in pursuit of Certification from Det Norske Veritas (DNV) or The Joint Commission and DSHS Designation.

TERM

This Letter of Attestation (LOA) is in effect on the date on which it is signed and remains in effect for a period of three (3) years. All parties reserve the right to terminate this LOA at any time, with or without cause. Upon expiration thereof, this agreement will continue in force until either party notifies the STRAC Regional Stroke Systems Committee in writing of its intent to terminate this agreement in which case it shall terminate thirty (30) days from the date of the notice.

Recognition by the Committee as a Stroke Facility requires a commitment from facility senior administration as well as physician leadership. This commitment is confirmed by signature on this LOA. Facilities signing this LOA are attesting their facility or facilities meet all criteria and will maintain the capabilities as specified in this LOA.

Designation (Choose Level): **Comprehensive** / **Advanced** / **Primary** / **Support Stroke Facility**

Stroke Facility Representative: _____

Stroke Facility Representative Contact Number: _____

Senior Administrative Representative: _____

Senior Administrative Representative Contact Number: _____

Stroke Facility Medical Director: _____

Stroke Facility Medical Director Contact Number: _____

Southwest Texas Regional Advisory Council	
By: _____ <i>Dr. Adam Blanchette, Stroke Committee Chair</i> _____ Date	By: _____ <i>Eric Epley, Executive Director</i> _____ Date
Healthcare System and/or Facility Name:	
By: _____ CEO _____ Print Name _____ Date	By: _____ _____ Print Name _____ Date

EMS AGENCY

Primary EMS Agency Representative: _____

Primary EMS Agency Representative Contact Number: _____

EMS Medical Director: _____

EMS Medical Director Contact Number: _____

<i>Southwest Texas Regional Advisory Council</i>	
By: _____ <i>Dr. Adam Blanchette, Stroke Committee Chair</i> _____ Date	By: _____ <i>Eric Epley, Executive Director</i> _____ Date
<i>Agency Name</i>	
By: _____ <i>EMS Agency Head</i> _____ Print Name _____ Date	By: _____ <i>EMS Medical Director</i> _____ Print Name _____ Date

APPENDIX A: STROKE ALERT CRITERIA

Regional Stroke Alert Criteria

One or more findings on either the Cincinnati Pre-hospital **OR** BEFAST Stroke Assessment

Stroke:

Cincinnati Pre-Hospital

- Facial Droop
- Arm Drift--Assess for LVO
- Speech

OR

BEFAST Stroke Assessment

- Balance
- Eyes
- Facial Droop
- Arm Drift--Assess for LVO
- Speech

--AND--

Time--Last Known Well Time less than 6 hours.

--AND--

Blood Glucose: Between 60mg/dL – 600mg/dL.

** Per AHA Guidelines, for any STROKE criteria and transport time is less than 45 min, transport to nearest Stroke Center.

Large Vessel Occlusion (LVO):

If Unilateral Arm Weakness (Drift) from Stroke Assessment Plus Any One of the Following:

- Visual Disturbance
- Aphasia
- Neglect

--AND--

Last Known Well Time less than 24 hours.

--AND--

Blood Glucose: Between 60mg/dL – 600mg/dL.

**Per AHA Guidelines, for any Large Vessel Occlusion criteria and transport time is less than 45 min, transport to nearest Advanced (Level II) or Comprehensive (Level I) Stroke Center.

APPENDIX B: DESIGNATION

STRAC Regional Stroke Systems Committee: Hospitals in Pursuit of Certification and Designation

Effective: September 01, 2014

The STRAC Regional Stroke Systems Committee has requested any hospital in the region in pursuit of Certification from DNV or Joint Commission and DSHS Designation to:

1. Attend the Regional Stroke Systems Committee to officially declare intentions.
2. Sign the Regional Stroke LOA.

Following the above steps, STRAC Leadership (Executive Director), EMS Committee and EMS Medical Director Committee Representatives will visit the hospital to have a meeting with hospital and program leadership.

APPENDIX C: REFERENCES

DNV Healthcare Comprehensive Stroke Center Certification Requirements; Revision 22-2, 01-01-2022; DNV Healthcare USA, Inc.

DNV Healthcare Primary Plus Stroke Center Program Certification Requirements Revision 22-0, 01-01-2022; DNV Healthcare USA, Inc.

Bederson, J. B., Connolly, E., Batjer, H. H., Dacey, R. G., Dion, J. E., Diringer, M. N., Duldner, J., Harbaugh, R. E., Patel, A. B., & Rosenwasser, R. H. (2009). Guidelines for the Management of Aneurysmal Subarachnoid Hemorrhage. *Stroke*, 40(3), 994–1025. <https://doi.org/10.1161/strokeaha.108.191395>

Birnbaum, L. A., Wampler, D. A., Shadman, A., De Leonni Stanonik, M., Patterson, M., Kidd, E., Tovar, J., Garza, A., Blanchard, B., Slesnick, L., Blanchette, A., & Miramontes, D. A. (2020). Paramedic utilization of Vision, Aphasia, Neglect (VAN) stroke severity scale in the prehospital setting predicts emergent large vessel occlusion stroke. *Journal of NeuroInterventional Surgery*, 13(6), 505–508. <https://doi.org/10.1136/neurintsurg-2020-016054>

De La Ossa, N. P., Abilleira, S., Jovin, T. G., García-Tornel, Á., Jimenez, X. F., Urra, X., Cardona, P., Cocho, D., Purroy, F., Serena, J., Manzanera, L. S. R., Vivanco-Hidalgo, R. M., Salvat, M., Chamorro, Á., Gallofré, M., Molina, C. A., Cobo, E., Dávalos, A., & Ribó, M. (2022). Effect of Direct Transportation to Thrombectomy-Capable Center vs Local Stroke Center on Neurological Outcomes in Patients With Suspected Large-Vessel Occlusion Stroke in Nonurban Areas. *JAMA*, 327(18), 1782. <https://doi.org/10.1001/jama.2022.4404>

Jauch, E. C., Schwamm, L. H., Panagos, P. D., Barbazzeni, J., Dickson, R., Dunne, R., Foley, J., Fraser, J. F., Lassers, G., Martin-Gill, C., O'Brien, S., Pinchak, M., Prabhakaran, S., Richards, C. T., Taillac, P., Tsai, A. W., & Yallapragada, A. (2021). Recommendations for regional stroke destination plans in rural, suburban, and urban communities from the Prehospital Stroke System of Care Consensus Conference: A Consensus Statement from the American Academy of Neurology, American Heart Association/American Stroke Association, American Society of Neuroradiology, National Association of EMS Physicians, National Association of State EMS officials, Society of Neurointerventional Surgery, and society of vascular and Interventional Neurology: Endorsed by the Neurocritical Care Society. *Stroke*, 52(5). <https://doi.org/10.1161/strokeaha.120.033228>

LeCouffe, N. E., Kappelhof, M., Treurniet, K. M., Rinkel, L. A., Bruggeman, A. a. E., Berkhemer, O. A., Wolff, L., Van Voorst, H., Tolhuisen, M. L., Dippel, D. W., Van Der Lugt, A., Van Es, A. C., Boiten, J., Nijeholt, G. J. L. À., Keizer, K., Gons, R. A., Yo, L. S. F., Van Oostenbrugge, R. J., Van Zwam, W. H., . . . Roos, Y. B. (2021). A Randomized Trial of Intravenous Alteplase before Endovascular Treatment for Stroke. *New England Journal of Medicine*, 385(20), 1833–1844. <https://doi.org/10.1056/nejmoa2107727>

Molina, C. A., Chamorro, A., Rovira, A., de Miquel, A., Serena, J., Roman, L. S., Jovin, T. G., Dávalos, A., & Cobo, E. (2015) REVASCAT: a randomized trial of revascularization with SOLITAIRE FR device vs. best medical therapy in the treatment of acute stroke due to anterior circulation large vessel occlusion presenting within eight-hours of symptom onset. *International journal of stroke: official journal of the International Stroke Society*, 10(4), 619-626. <https://doi.org/10.1111/ijss.12157>

Nogueira, R. G., Jadhav, A. P., Haussen, D. C., Bonafe, A., Budzik, R. F., Bhuva, P., Yavagal, D. R., Ribó, M., Cognard, C., Hanel, R. A., Sila, C. A., Hassan, A. E., Millán, M., Levy, E. I., Mitchell, P., Chen, M. Z. Q., English, J., Shah, Q. A., Silver, F. L., . . . Jovin, T. G. (2018). Thrombectomy 6 to 24 Hours after Stroke with a Mismatch between Deficit and Infarct. *The New England Journal of Medicine*, 378(1), 11–21. <https://doi.org/10.1056/nejmoa1706442>

Powers, W.J., Rabinstein, A.A., Ackerson, T., Adeoye, O.M., Bambakidis, N.C., Becker, K., Biller, J., Brown, M., Demaeerschalk, B.M., Hoh, B., Jauch, E.C., Kidwell, C.S., Leslie-Mazwi, M., Ovbiagele, B., Scott, P.A., Sheth, K.N., Southerland, A.M., Summers, D.V. & Tirschwell, D.L. (2019). Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke: A guideline for healthcare professionals from the American Heart Association/American Stroke Association. *AHA Journal*, 50(12), e344-e418. <https://doi.org/10.1161/STR.0000000000000211>

Schwamm, L. H., Holloway, R. G., Amarenco, P., Audebert, H. J., Bakas, T., Chumbler, N. R., Handschu, R., Jauch, E. C., Knight, W. A., Levine, S. R., Mayberg, M. R., Meyer, B. C., Meyers, P. A., Skalabrin, E., & Wechsler, L. R. (2009). A review of the evidence for the use of telemedicine within stroke systems of care. *Stroke*, 40(7), 2616–2634. <https://doi.org/10.1161/strokeaha.109.192360>

Texas Administrative Code TITLE 25 HEALTH SERVICES
PART 1 DEPARTMENT OF STATE HEALTH SERVICES CHAPTER 157 EMERGENCY MEDICAL CARE
SUBCHAPTER G EMERGENCY MEDICAL SERVICES TRAUMA SYSTEMS
RULE §157.133 Requirements for Stroke Facility Designation.

Appendix B

Quality Assurance/Process Improvement Resources

Performance Improvement Program – Planning Form

Department/Unit:		Facility:	Start date:
Project Title:			
Submitted by:			

PLAN	<input type="checkbox"/> Find a Process to Improve PROBLEM STATEMENT GOAL(S): Organize a Team that Knows the Process Customers, Suppliers, Leadership Sponsor, etc. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Name / Title</th> <th>Name / Title</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <input type="checkbox"/> Clarify Current Knowledge of the Defined Process (can staff speak to it?) <input type="checkbox"/> Understand Causes of Process Variation (Collect Data, Analyze for Root Causes) <input type="checkbox"/> Select the Process to Improve (Develop an Action Plan)	Name / Title	Name / Title												
Name / Title	Name / Title														
DO	Test the Change: What small scale study will be completed? How did the Implementation Proceed?														
CHECK	Analyze results from test: What have you learned? <div style="margin-left: 20px;">•</div>														
ACT	What measures and procedures are in place to assure the solution remains effective?														



Appendix C

Site Survey Resources

DEPARTMENT OF STATE HEALTH SERVICES

SURVEY ORGANIZATIONS BY DESIGNATION

Stroke

Det Norske Veritas Global Healthcare (DNV-GL)

- Website: dnvhealthcare.com
- Approved to Survey: Comprehensive (Level I), Primary (Level III), and Acute Stroke Ready (Level IV)

Texas EMS Trauma & Acute Care Foundation (TETAF)

- Website for General Stroke Survey Information:
[Stroke Survey Services - TETAF](#)
- Website to Request a Stroke Survey:
[Stroke Survey Request - TETAF](#)
- Contact Information:
 - TETAF Main Line – 512-524-2892
 - Extension 1 – Stroke Survey Scheduling (Aaron Rogers)
 - Extension 2 – Stroke Program Support, including clinical and criteria questions (Terri Rowden)
- Approved to Survey: Acute Stroke Ready (Level IV)

The Center for Improvement in Healthcare Quality (CIHQ)

- Website: [CIHQ-DSC: The Mark of Distinction](#)
- Contact Information:
 - Richard Curtis
President & CEO
Email: rcurtis@cihq.org
324-5080 Ext.306
(cell) 512-968-6177
 - Traci Curtis
Executive Director of Survey Operations
Email: tcurtis@cihq.org
324-5080 Ext. 304
(cell) 956-286-8705
- Approved to Survey: Comprehensive (Level I), Primary (Level III), and Acute Stroke Ready (Level IV)

The Joint Commission (TJC)

- Website: [Advanced Stroke | The Joint Commission](#)
- Contact Information:
 - Loren Salter
Director
Hospital Certification Business Development

Email: lsalter@jointcommission.org
Phone: 630-792-5143
- Approved to Survey: Comprehensive (Level I), Primary (Level III), and Acute Stroke Ready (Level IV)

Stroke Screening Events

Screening Events for PI	Level I	Level II	Level III	Level IV
All Levels				
Adherence to facility policies, procedures, and management guidelines	X	X	X	X
Multidisciplinary team with a peer review process that includes at least the Stroke Medical Director, Stroke Program Manager, and Quality/Performance Improvement personnel responsible for conducting stroke case reviews to identify variances in care and opportunities for improvement	X	X	X	X
Written stroke standards of care, and a written stroke Quality Assessment and Performance Improvement (QAPI) plan	X	X	X	X
Evaluate facility performance in comparison to national benchmarks and develop a plan of correction for identified improvement opportunities	X	X		
Prespecified committee to meet, review, and alter practice patterns at least two times per year	X	X	X	X
Minutes for stroke-related committee meetings	X	X	X	X
Two facility stroke benchmarks identified annually	X		X	
Tracking and monitoring of all benchmarks, indicators, evidence-based practices, and outcomes	X	X		
Acute stroke team responses within 15 minutes	X	X	X	X
Stroke protocols, revised annually	X	X	X	X
Initial use of neurological assessment tool/scale	X	X	X	X
Initiation of telemedicine within 20 minutes when deemed medically necessary	X	X	X	X
Door-to-needle time within 60 minutes	X	X	X	X
Door-to-Discharge for transfers. Patient leaves within 2 hours of arrival (or once medically stable)	X	X	X	X
Time from symptom onset to IV thrombolytics never more than 4.5 hours	X	X	X	X
Other acute therapies, such as coagulation reversal therapy (time of diagnosis of cerebral hemorrhage to beginning treatment)	X	X	X	X
Door-to-image time (CT completion and interpretation within 45 minutes of patient arrival)	X	X	X	X
Laboratory testing (results available within 45 min of ordering)	X	X	X	X
Use of the transfer and transportation protocols; and	X	X	X	X
Telemedicine utilization		X	X	X
VTE prophylaxis – antithrombotic within 48 hours of admission; and	X	X	X	X
Anticoagulants for patients with stroke for atrial fibrillation	X	X	X	X
Patient and family education	X	X	X	X

Screening Events for PI	Level I	Level II	Level III	Level IV
Reviewed for appropriate admission			X	X
Discharged on Antithrombotic Therapy	X	X	X	
Thrombolytic Therapy	X	X	X	
Antithrombotic Therapy by end of Hospital Day 2	X	X	X	
Discharged on statin medication	X	X	X	
Assessment for Rehabilitation	X	X	X	
National Institutes of Health Stroke Scale (NIHSS) performed for ischemic stroke patients	X	X		
Modified Rankin Score (mRS) at 90 days		X		
Overall rate of hemorrhagic transformation	X	X		
Thrombolysis in cerebral infarction scores	X	X		
Arrival Time to Skin Puncture for Transfers and direct arrivals	X	X		
Severity Measurement Performed for SAH and ICH Patients (Overall Rate)	X			
Procoagulant Reversal Agent Initiation for ICH	X			
Nimodipine Treatment Administered	X			
Modified Rankin Score (mRS) at 90 Days: Favorable Outcome	X			
Rate of Rapid Effective Reperfusion from Hospital Arrival	X			
Rate of Rapid Effective Reperfusion from Skin Puncture	X			

Stroke

Survey Walk-Through Assessment and Overview

Purpose: Assess the facility design, organization, and flow of care for the stroke patient. Assess staff's knowledge, training, and level of readiness to care for the stroke patient. Complete necessary interviews in the various departments providing care to the stroke patient.

The lead surveyor may divide surveyors into specific areas to make this process more time efficient. Determine ahead of time which departments will be visited and the required staff to be available to speak to surveyors. The facility may choose to have additional staff present in areas during the tour.

Direct questions to the staff and not to the Stroke Medical Director (SMD), Stroke Program Manager (SPM), or leadership. Surveyors may adapt the questions to the level of care provided. Surveyors may be asking questions to different staff members simultaneously.

Scenarios may be used at any point during the tour to elicit answers to the questions. A group discussion may be conducted to obtain required information from stroke team members who are unavailable during the tour.

A surveyor may choose to activate the stroke team to evaluate the facility's response.

Resuscitation Area/Emergency Department (ED)

Purpose

To review the ED's capabilities and capacity to care for the mild to critically ill or complex stroke patient; review the physical layout, services, and resources available for the stroke patient 24 hours per day; and review the stroke management guidelines for the Emergency Medical Services (EMS) and ED.

Surveyors

Physician and/or Registered Nurse

Facility Staff Present

SMD

SPM

ED Director/Manager

ED Nursing Staff

Emergency Medicine Director or Representative

Local EMS Medical Director or Representative

Respiratory Therapist

Surveyors are encouraged to engage any patient care staff or ancillary care staff present on the unit during the tour. Review any area (designated rooms) where the care of a stroke patient could take place. Look for adequate resuscitation equipment and stroke-specific care supplies.

Questions/Assessment

EMS Representative

1. How is the ED notified of the pre-arrival of a stroke patient?
2. Can EMS activate the stroke team?
3. Describe how the stroke team is activated for a patient arriving by EMS.
4. Where is the EMS arrival area, and what is the process of receiving a stroke patient arriving by EMS?
5. Discuss the hospital's history of diversion and its impact on patient destination and any significant hall-wait times.

ED Clinical Staff/Leadership

1. Where is the helipad located?
2. What is the process of receiving/transferring a stroke patient by helicopter?
3. What barriers have been identified in receiving stroke patients, and what plans are in place to address these barriers?
4. How is EMS timeout performed, and how is it documented?
5. How does the facility provide feedback to the EMS personnel regarding a patient transported to the facility?
6. Describe how the stroke team is activated for a patient presenting in triage.
7. Who can activate the stroke team?
8. Who are the members of the stroke team?
9. What is the role of non-clinical stroke team members, if applicable?
10. How are ED clinical and ancillary staff educated and trained on the stroke criteria, stroke team activation process, and roles and responsibilities?
11. How are the activation response times recorded and monitored?
12. Describe stroke care management guidelines in relation to the initial assessment and imaging of the patient.
13. Is there a designated area or room for the treatment of the stroke patient?
14. Who oversees the stroke resuscitation?
15. How are stroke team members educated on their roles and responsibilities?
16. Who is responsible for airway management?

Respiratory Therapy (RT)

1. Describe the role in intubation and vent management.
2. Is end-tidal CO₂ monitoring available in the resuscitation room?
3. If not, how is airway patency monitored?

ED Clinical Staff/Leadership

1. Are the care management guidelines readily available for staff?
2. Does the program utilize stroke order sets?

3. What are the care management guidelines for the administration of thrombolytic therapy?
4. Where are the inclusion/exclusion criteria for thrombolytic therapy documented?
5. Who is responsible for performing and documenting the initial NIHSS?
6. Where is this documented?
7. What are the care management guidelines for the management of hypertension?
8. How are pediatric stroke resuscitations managed?
9. How are the stroke team members and ED staff educated and trained on the stroke care management guidelines?
10. How are the ED staff educated and trained to manage stroke patients?
11. What competencies and certifications are required for the ED staff?
12. Do the ED staff have access to continuing education and conference attendance?

Laboratory

1. Are Point-of-Care laboratory tests available in the resuscitation rooms?
2. If yes, which tests are available, and what is their turn-around time?
3. What diagnostic lab tests are ordered STAT?
4. What are the expected turnaround times, and how is this monitored?

Radiology

1. What are the expected turnaround times of Computed Tomography (CT) or Computed Tomography Angiography (CTA) head imaging?
2. If radiology/CT staff is on-call, what is the expected response time, and how is this monitored?
3. Describe the process of admitting a patient to:
 - a. Operating Room (OR)
 - b. Interventional Radiology (IR)
 - c. Neuro Intensive Care Unit/Intensive Care Unit
 - d. Stroke/Medical-Surgical Unit
4. Describe the nurse-to-nurse patient handoff.

Transfers

1. Describe how stroke transfers are initiated or accepted.
2. What is the process of providing feedback to the transferring facility?
3. How does the facility provide feedback to the EMS personnel regarding a patient transported to the facility?
4. How are images shared between transferring and receiving facilities?
5. What barriers have been identified in expediting the admission/transfer of the stroke patient from the ED?
6. What plans are in place to address these barriers?
7. Describe how family care is provided.

Spiritual Care

1. Is spiritual care available?
2. If yes, describe the consultation process for spiritual care.
3. Is this documented in the electronic medical record (EMR)?

Security

1. Is security available?
2. If yes, what is their role and responsibilities?
3. Do the disaster drills include the additional challenges of providing care to a stroke patient?
4. What was the scenario?
5. What lessons were learned?
6. Is there training on roles and responsibilities?
7. Do you practice disaster triage?
8. What lessons have you learned?
9. Does the ED provide data to the stroke QAPI?
10. How does ED participate in the QAPI process and the Stroke Committee?
11. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Telemedicine

Purpose

Review the process of providing or utilizing telemedicine, if applicable.

Surveyor

Physician(s) or RN

Facility Staff Present

SMD

SPM

ED Director/Manager

Emergency Medicine Director or Representative

ED RN(s)

Questions/Assessment

Facilities Providing Telemedicine

1. Describe the process of receiving consults and providing recommendations.
2. Is there a contract for providing telemedicine services?
3. Does this contract define the expectations for:
 - a. Participation in the performance improvement reviews and committee, and
 - b. Participation, documentation, and credentialing of providers?
4. How is telemedicine incorporated into the stroke QAPI process?

Facilities utilizing Telemedicine

1. Describe the process of requesting consults and receiving recommendations.
2. Is there a contract for utilizing telemedicine services?
3. Does this contract define the expectations for:
 - a. Participation in the performance improvement reviews and committee, and
 - b. Participation, documentation, and credentialing of providers?
4. How is telemedicine incorporated into the stroke QAPI process?

Radiology

Purpose

To review the physical layout, services, and resources available for the stroke patient 24 hours per day.

Surveyors

Physician(s) or RN

Facility Staff Present

SMD

SPM

Radiologist

Radiology Director/Manager

Radiology Technicians and/or Technician/RNs

Questions/Assessment

1. Describe how call-back times are monitored and reported.
2. What are the turn-around times for radiologist imaging interpretations, and how is this monitored?
3. Is this data presented to the Stroke Committee?
4. Is radiology notified when the stroke team is activated?
5. If so, how?
6. Does a staff member respond?
7. What are the expected response times, and how is this monitored?
8. If a radiology overread identifies deviation from the original read, how is this managed and monitored?
9. Is this data presented to the Stroke Committee?

CT/CTA

1. Evaluate CT/CTA capabilities and capacity.
2. Describe the transport process of a stroke patient to CT/CTA scan.
3. Who monitors the patient while in CT/CTA scan?
4. Is there equipment for emergent resuscitation?
5. What is the process for prioritizing imaging when multiple patients are in line for CT/CTA scan?
6. What are the expected turnaround times of CT/CTA head imaging?
7. Who does the initial reading of the CT/CTA head images?
8. If radiology/CT staff is on-call, what are the expected response times, and how is this monitored?
9. Is this data presented to the Stroke Committee?

Interventional Radiology (IR)

1. Evaluate IR capabilities and capacity.
2. What is the process for requesting a STAT IR procedure?
3. Describe the transport process of a stroke patient to IR.
4. Who monitors the patient while in IR?
5. Is there equipment for emergent resuscitation?
6. If IR staff is on-call, what is the expected response time, and how is this monitored?

7. Is this data presented to the Stroke Committee?
8. Does Radiology provide data to the stroke QAPI?
9. How does Radiology participate in the QAPI process and the Stroke Committee?
10. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Laboratory

Purpose

Review the process for performing and reporting STAT testing for stroke activation patients.

Surveyors

Physician(s) or RN

Facility Staff Present

SMD

SPM

Laboratory Director/Manager

Laboratory Staff

Questions/Assessment

1. Is the laboratory notified of a stroke alert/activation?
2. If so, how?
3. Does a staff member respond to the alert/activation?
4. What diagnostic lab tests are ordered STAT?
5. What are the expected turnaround times for results, and how is this monitored?
6. Is this data presented to the Stroke Committee?
7. Does the Laboratory provide data to the stroke QAPI?
8. How does the Laboratory participate in the QAPI process and the Stroke Committee?
9. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Respiratory Therapy

Respiratory Therapy questions are directed to the therapist in the resuscitation and ICU areas.

Surgical Services/Operating Suite

Purpose

To review the operative suite hours of availability, staffing models, and access to a STAT room for critical stroke patients; review the process for monitoring timeout and managing the surgical trays and supplies; and define anesthesia capabilities and capacity for off hours.

Surveyor

Physician(s) or RN

Facility Staff Present

SMD

SPM

Anesthesiologist

Neurosurgeon

Surgery Director/Manager

Surgical RN(s)

Questions/Assessment

1. Is there a dedicated neurosurgical Operating Room (OR)?
2. If so, describe the equipment dedicated to that room.
3. Is there a dedicated radiology technician for the OR?
4. Is there a C-arm available?
5. Is there equipment for emergent resuscitation?
6. What is the process for prioritizing multiple patients needing an operating room?
7. Explain the process of opening an operating room for a STAT critical stroke patient during regular business hours.
8. How does the process change for a case at night or on a weekend?
9. How is the on-call schedule for neurosurgery monitored?
10. Where is the schedule located?
11. What are the expected response times, and how is this monitored?
12. Is this data presented to the Stroke Committee?
13. Is there a backup schedule for neurosurgery in the event the on-call neurosurgeon is already in a case?
14. How is the on-call schedule for anesthesia monitored?
15. Where is the schedule located?
16. What are the expected anesthesia response times, and how are these monitored?
17. Is this data presented to the Stroke Committee?
18. Is there a backup schedule for anesthesia in the event the on-call anesthesiologist is already in a case?
19. Are Certified Registered Nurse Anesthetists (CRNAs) utilized for coverage?
20. If yes, describe this process and their supervision requirements.
21. Who are the members of the OR team that provide care to critical stroke patients?
22. How are the operating room staff educated and trained to manage stroke operative interventions?
23. What competencies and certifications are required for the OR staff?
24. Do the OR staff have access to continuing education and conference attendance?
25. How is the on-call schedule for the OR team monitored?
26. What are the expected OR staff response times, and how are these monitored?
27. Is this data presented to the Stroke Committee?
28. Is there a policy in place that defines criteria for patient placement post-procedure?
29. Does the OR staff participate in disaster planning and preparedness?
30. Describe what happens if the hospital is in a mass casualty situation and a stroke patient presents to the facility.
31. What is the hospital's surge capacity preparedness?

32. Does Surgical Services provide data to the stroke QAPI?
33. How do Surgical Services participate in the QAPI process and the Stroke Committee?
34. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Post Anesthesia Care Unit (PACU)

Purpose

To review the PACU's capabilities and capacity to care for stroke patients.

Review the PACU hours of availability, staffing models, education, and training of staff.

Review care management guidelines for patient monitoring. Review the process of provider notification for changes in patient status. Review the process for patient transfer to admitted unit.

Surveyors

Physician and RN

Facility Staff Present

SMD

SPM

Medical Director of PACU

Neurosurgeon

PACU Director/Manager

PACU RN(s)

Questions/Assessment

1. What equipment is available in the PACU?
2. Is there equipment for emergent resuscitation?
3. What types of stroke patients are admitted to the PACU?
4. How are PACU nurses educated and trained to manage stroke patients?
5. What competencies and certifications are required for the PACU?
6. Do the PACU nurses have access to continuing education and conference attendance?
7. Explain the staffing pattern for the PACU.
8. Explain the process of preparing the PACU for a STAT critical stroke patient during regular business hours.
9. How does this process change at night or on the weekend?
10. How is the call-back schedule managed?
11. What are the expected response times, and how is this monitored?
12. Is this data presented to the Stroke Committee?
13. What is the nurse-to-patient ratio in the PACU?
14. If a patient becomes compromised or has a clinical change in the PACU, who is notified?
15. What is the typical response time?
16. How is this monitored?
17. Is this data presented to the Stroke Committee?
18. Are criteria established for PACU discharge?
19. Describe the nurse-to-nurse patient handoff process.
20. Describe the role of the PACU and staff during a mass casualty event.

21. How does the PACU contribute to surge capacity?
22. Does PACU provide data to the stroke QAPI?
23. How does the PACU participate in the QAPI process and the Stroke Committee?
24. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Intensive Care Unit (ICU)/ Critical Care Unit (CCU)

Purpose

To review the ICU/CCU's capabilities and capacity to care for the stroke patient, the triage or admission process to the ICU/CCU, the resources available to the ICU/CCU, and the stroke care management guidelines for the ICU/CCU.

Surveyors

Physician(s) or RN

Facility Staff Present

SMD

SPM

ICU/CCU Surgical Medical Director or representative

ICU/CCU Director/Manager

Neurosurgery Liaison

RT

Nutritional Services

Pharmacy

Rehabilitation – PT, OT, Speech Therapy

Social Services/Case Management

Psychosocial Support

Questions/Assessment

1. Who evaluates the bed status and has the authority to open a bed for a stroke patient needing an ICU/CCU bed?
2. How long does this typically take?
3. What is the nurse-to-patient ratio?
4. Define the nursing education and credentialing expectations for the ICU/CCU nurse.
5. Do the ICU/CCU nurses have access to continuing education and conference attendance?
6. Conference attendance?
7. How is the ICU/CCU staff educated and trained on their role in the stroke care management guidelines?
8. If the stroke patient has a clinical change in condition, who is notified?
9. Who is notified at 3:00 am?
10. What is the expected response time?
11. How is this monitored?
12. Is this data presented to the Stroke Committee?
13. Is there a dedicated RT staff assigned to ICU/CCU?
14. If so, what is their staffing model?
15. Who manages the ventilator settings in the ICU/CCU?

16. Describe the multidisciplinary rounds:
 - a. Who leads the rounds?
 - b. Who attends?
 - c. What is the purpose of the rounds?
17. Describe the following roles in ICU/CCU:
 - a. Pharmacy
 - b. Nutritional services
 - c. Psychosocial services
18. When does the rehabilitation team consult on a stroke patient in the ICU/CCU?
19. Who is responsible for the mental health screening?
20. What resources are available for the patient with severe residual deficits?
21. How is the patient's family integrated into their care?
22. What resources are available for the family during this event?
23. How are staff educated and trained in stroke survivor care to address the emotional, psychological, and behavioral challenges of a stroke survivor?
24. How are the staff educated and trained on their role in the stroke care management guidelines?
25. Can you give an example of a care management guideline that is monitored for compliance?
26. Describe the guidelines and criteria for Intracerebral Pressure (ICP) monitoring.
27. How is this monitored?
28. Is this data presented to the Stroke Committee?
29. How are the patients moved and monitored for procedures outside the ICU/CCU?
30. What is the procedure for notifying the donor organization in your area?
31. Who is responsible for this notification?
32. Does the ICU/CCU participate in after-cardiac-death organ donation?
33. Are scene responses ever direct admit to the ICU/CCU? If yes, please define the process.
34. Describe the process if a stroke transfer is a direct admit to the ICU/CCU.
35. Who is present to evaluate that patient on their arrival?
36. Is the stroke team activated?
37. Does the ICU/CCU staff participate in disaster planning and preparedness?
38. How does the ICU/CCU address surge capacity and capabilities?
39. Describe what happens if the hospital is in a mass casualty situation and a stroke patient presents to the facility.
40. What is the plan to increase surge capacity and capabilities?
41. Does ICU/CCU provide data to the stroke QAPI?
42. How does ICU/CCU participate in the QAPI process and the Stroke Committee?
43. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?
44. If there is a stroke patient in the ICU, the surgeon surveyor or the stroke program manager surveyor may interview that patient's care team.

Stroke Unit

Purpose

To review the stroke unit's role in stroke management, resources available, education and credentials, and access to rehabilitation services.

Surveyors

Physician(s) and/or RN

Facility Staff Present

SMD

SPM

Physicians

Advanced Practice Providers (APP)

Stroke Unit Director/Manager

Stroke Unit Staff

Rehabilitation – PT, OT, Speech Therapy

Spiritual Care

Psychosocial Support

Social Services/Case Management

Questions/Assessment

1. Describe the types of stroke patients cared for on the unit.
2. Describe an example of a stroke care management guideline.
3. How is compliance with the guideline monitored?
4. Is this data presented to the Stroke Committee?
5. How are staff members educated and trained on their role in the stroke care management guidelines?
6. How are staff educated and trained to manage stroke patients?
7. What competencies and certifications are required for the staff?
8. Does the stroke unit staff have access to continuing education and conference attendance?
9. Does the unit have defined expectations for stroke patient documentation?
10. Describe an instance when a stroke patient on this unit had a change in clinical condition and required to be transferred to the ICU/CCU.
11. What resources are available to respond to this type of situation?
12. If this occurred, would this event be reviewed through the stroke QAPI process?
13. Explain the relationship with PT, OT, and Speech Therapy on the unit.
14. Who coordinates the discharge planning?
15. Who performs a residence evaluation prior to discharging a patient home?
16. How are staff educated and trained in stroke survivor care to address the emotional, psychological, and behavioral challenges of a stroke survivor?
17. What resources are available on the unit for psychosocial support?
18. Are survivor groups, peer visitation, or Pet therapy available?
19. Does the stroke unit staff participate in disaster planning and preparedness?

20. How does the stroke unit address surge capacity and capabilities?
21. Describe what happens if the hospital is in a mass casualty situation and a stroke patient presents to the facility.
22. What is the plan to increase surge capacity and capabilities?
23. Does the stroke unit provide data to the stroke QAPI?
24. How does the stroke unit participate in the QAPI process and the Stroke Committee?
25. Are there currently any performance improvement initiatives being worked on in collaboration with stroke services?

Surveyor Expectations

The surveyors will return to the medical record review room within 45 to 60 minutes and be prepared to share a summary of their findings with the lead surveyor. The lead surveyor will define any outstanding issues or additional survey actions needed.