

## **Title 15: Mississippi State Department of Health**

### **Part 3: Bureau of Acute Care Systems**

#### **Subpart 3: Stroke System of Care**

##### **Chapter 1 Mississippi Stroke System of Care**

###### **Subchapter 1 General**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.1.1. Legal Authority: The Mississippi State Department of Health (Department) is assigned the responsibility for developing, implementing and managing the statewide Stroke System of Care (SOC). The Department shall be designated as the lead agency for Stroke SOC development, implementation and management. The Department shall develop and implement the Mississippi Stroke SOC Plan and Stroke SOC standards, which include but are not limited to those having to do with stroke center designation, field triage of stroke patients, drip and ship transfer of stroke patients, stroke care from initial medical contact through appropriate intervention, stroke data collection, stroke system evaluation and management of stroke funding. The Department shall further promulgate specific regulations regarding the methods and procedures by which Mississippi-licensed acute care facilities shall participate in the statewide Stroke SOC. These specific regulations shall include mechanisms for determining the appropriate level of participation for each facility or class of facilities. The Department shall cause the implementation of professional and lay stroke education programs including but not limited to stroke education, stroke prevention programs.

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.1.2. Mississippi Stroke SOC Advisory Committee: The Mississippi Stroke SOC Advisory Committee is created for the purpose of serving as an advisory body for statewide Stroke SOC development and shall provide support to the Department in all areas of Stroke SOC design, including the development and updating of SOC standards, SOC data collection and evaluation, SOC performance improvement, SOC funding, and evaluation of SOC programs.

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.1.3. Members of the Stroke Advisory committee will be appointed by the State Health Officer for a term of three years and shall include representatives from the following entities:

- a. Emergency Medicine Physician
- b. Emergency Nursing
- c. Hospital Administration

- d. Neurology
- e. Interventional Neurology/Radiology/Neurosurgery
- f. Stroke Program Coordinators
- g. Stroke Registry Personnel
- h. AHA Representative
- i. EMS Provider (ALS)
- j. EMS Administration

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.1.4. The Mississippi Stroke SOC Advisory Committee shall meet at least quarterly.

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.1.5. **Definitions:** For the purpose of clarity and usage in the Mississippi Stroke SOC, the following abbreviations, acronyms, and terms shall be defined as follows:

AHA/ASA – American Heart Association/American Stroke Association

ALS - Advanced life support, including techniques of resuscitation, such as, intravenous access, and cardiac monitoring

ASLS – Advanced stroke life support

BACS – Bureau of Acute Care Systems, Mississippi State Department of Health

BEMS – Bureau of Emergency Medical Services, Mississippi State Department of Health

BLS - Basic life support techniques of resuscitation, including simple airway maneuvers, administration of oxygen, and intravenous access

CAP – Corrective Action Plan

CCRN - Critical Care Registered Nurse

CEN - Certified Emergency Nurse

CPG – Clinical Practice Guidelines

Department - Mississippi State Department of Health

Designation - Formal recognition of hospitals by the Department as providers of specialized stroke services to meet the needs of patients suffering from an acute stroke

DNV – Det Norske Veritas Healthcare. CMS approved accreditation organization

Emergency Department (or Emergency Room) - The area of an acute care hospital that customarily receives patients in need of emergency medical evaluation and/or care

EMS - Emergency Medical Services

EMSAC – Emergency Medical Services Advisory Council

ENA - Emergency Nurses Association

Field Triage - Classification of patients according to medical need at the scene of an injury or onset of an illness

GWTG – Get with the Guidelines database

Inclusive Stroke System of Care - a Stroke care system that incorporates every health care facility willing to participate in the voluntary system in order to provide a continuum of services for all patients suffering from an acute Stroke; the patient's needs are matched to the appropriate hospital resources

Level 1 – Stroke Center defined in the Stroke System of Care Plan

Level 2 – Stroke Center defined in the Stroke System of Care Plan

Level 3 – Stroke Center defined in the Stroke System of Care Plan

Level 4 – Non-Stroke Hospital defined in the Stroke System of Care Plan

Medical Control - Physician direction over pre-hospital activities to ensure efficient field triage, transportation, and care of stroke patients

Mid-level Providers/Practitioners – Physician Assistant (PA) and/or Nurse Practitioners (NP)

Mississippi Stroke System of Care Plan - A formally organized plan developed by the Department, which sets out a comprehensive system for the prevention and management of Stroke patients

Non-Designated Hospital - A licensed acute care hospital that has applied for designation as a stroke center, but has not been designated by the Department

Non-Participating Hospital – A licensed acute care hospital that has informed the Department that they do not desire to participate in the Stroke SOC

Performance Improvement (PI or Quality Improvement) - A method of evaluating and improving processes of patient care which emphasizes a multi-disciplinary

approach to problem solving, and focuses not on individuals, but systems of patient care which might cause variations in patient outcome

Research - Clinical or laboratory studies designed to produce new knowledge applicable to the care of stroke patients

Service Area (or "catchment area") - Geographic area defined by the local EMS agency as the area served by a designated stroke Center

SHO – State Health Officer

Stroke Centers – Stroke Center defined in the Stroke System of Care Plan

Stroke Ready Hospitals – Stroke Center defined in the Stroke System of Care Plan

Stroke Registry – centralized, statewide database program managed by the Department and used by hospitals to track stroke patients and the care of stroke patients

TJC – The Joint Commission accreditation organization

Triage - the process of sorting patients on the basis of the actual or perceived injury or illness and assigning them to the most effective and efficient stroke care resources, in order to insure optimal care and the best chance of survival

## **Subchapter 2 Designation of Stroke Centers**

*Source: Miss. Code Ann. § 41-3-15*

### **Rule 1.2.1. Application for Stroke Center Designation**

- a. Hospitals may participate in the Stroke SOC on a voluntary basis, but must meet the standards defined in Appendix A of the Stroke SOC. Each hospital would determine whether they are available to receive patients or on critical care diversion
- b. The decision to participate in the Stroke SOC is made jointly by the hospital administration and the medical staff
- c. A written commitment in the form of a resolution passed by the appropriate quorum of the governing authority of the hospital, and co-signed by the director of the medical staff, signifies the facility's desire to participate in the system
- d. Level 1 and Level 2 Stroke Centers must have a neurologist director responsible for oversight of the Stroke Program (developing and maintaining basic stroke care protocols and stroke component of hospital performance improvement)

- e. Level 3 Stroke Ready Hospitals must have a physician director for oversight of the Stroke Program (developing and maintaining basic stroke care protocols)
- f. Stroke Centers and Stroke Ready Hospitals must participate in the approved national registry platform.

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.2.2. Application Process for Initial Stroke Center Designation

- a. The participation of acute care facilities in the Stroke SOC is voluntary; however, participating hospitals must be appropriately designated according to ability to care for stroke patients – designation is a process of verifying that appropriate staff and resources are available
- b. To receive initial designation as a Stroke Center the applicant hospital shall submit a letter of application to the Department
  - a. If currently designated as a Stroke Center by The Joint Commission or another nationally accrediting organization, and standards meet or exceed the regulations of this chapter, reciprocity shall be granted
- c. Within 60 days of receipt of the letter of application, the Department shall:
  - a. acknowledge receipt of the letter application
  - b. provide the status of the application (accepted or rejected)
- d. If the application is accepted, the Department shall:
  - a. work with the hospital staff to schedule the date for the designation survey visit
  - b. provide materials to hospital staff for preparing for the designation survey visit
- e. If the application is rejected, the Department shall:
  - a. provide reasons for rejection
  - b. require documentation of corrective actions before accepting subsequent letters of application for designation from the applicant hospital
- f. The Department shall provide results of the designation survey and any proposed CAP to the Mississippi Stroke SOC Advisory Committee
- g. The Mississippi Stroke SOC Advisory Committee will make a recommendation for designation to the State Health Officer
- h. The Department shall inform the applicant hospital of the status of the application within 30 days of the Advisory Committee meeting

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.2.3. Term of Stroke Center Designations:

- a. The Department shall designate Stroke Centers for a period not to exceed three (3) years. Designations shall remain active for three years provided no substantive changes or variances have occurred. The Department may

perform periodic Stroke Center audits/reviews. The State Health Officer may extend Stroke Center designations for one (1) year. In cases of reciprocity the term of designation expires concurrently with the designation granted by the organization through which reciprocity was granted

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.2.4. Continuing Designation:

- a. Any Designated Stroke Center that loses, either permanently or temporarily, patient care specialties required by this regulation, shall report that loss to the Department
- b. If the loss will result in the hospital's inability to carry out the patient care activities associated with the current level of designation for a period longer than 30 days, the facility must submit a Corrective Action Plan that addresses how and when the facility will become compliant
- c. Subsequent designations for Stroke Centers designated based on reciprocity must be applied for through the same process followed for their initial designation and as prescribed in this document

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.2.5. Suspension of Stroke Center Designation: The State Health Officer may suspend the Stroke Center designation of any hospital for:

- a. Documented conditions of serious threat or jeopardy to patients' health or welfare
- b. Failure to comply with laws or regulations
- c. Failure to satisfactorily complete the minimum requirements as a Stroke Center as defined by the regulations for the designation level
- d. Failure to complete a Corrective Action Plan within the timeframe specified by the Department
- e. Hospitals having their Designation status suspended may reapply for designation after resolution of all issues related to the suspension, and completion and new application and designation survey visit

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.2.6. Change of Stroke Center Designation: Stroke Centers will be permitted to change their designation if the following conditions are met in their entirety:

- a. The Stroke Center has been appropriately surveyed and designated by an accredited organization and/or the Department, the designation is current, and the Stroke Center is in full compliance with Department, regulations, policies, procedures, and protocols
- b. The request to change designation has been approved by Mississippi Stroke Advisory Council
- c. The State Health Officer or designee issues the new designation

### **Subchapter 3 Financial Support for the Stroke SOC**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.3.1. The Mississippi State Department of Health is authorized to contract with the Mississippi Healthcare Alliance for services in the Stroke SOC. Services include but are not limited to stroke education and prevention initiatives, public awareness initiatives designed for the purpose of making the public aware of the public health concern associated with stroke training in use of the Stroke Registry, maintenance of the website providing lists and maps of currently designated Stroke Centers, education activities of stroke patient care providers, including EMS, ED and Stroke Center personnel, CPR training and the dissemination of literature for use by stroke providers. When funds are used in public awareness campaigns and stroke programs, it should be noted that the Mississippi State Department of Health is the state agency assigned the responsibility for developing, implementing and managing the Stroke System of Care.

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.3.2. Stroke Center Funding: There are no assigned annual fund distributions for Stroke Centers.

### **Subchapter 4 Mississippi State Stroke Registry**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.4.1. Stroke Data Collection and Use

- a. Participants in the statewide Stroke SOC will utilize a Department approved national registry platform to collect data on Stroke patients and identify system issues, such as over and under triage
- b. All designated Stroke Centers shall enter data on all stroke patients
- c. Data collection will begin with systems and field data and continue through patient discharge.

### **Subchapter 5 Stroke Center Standards**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.5.1. During the Initial Application for Designation Process – Level 1 Stroke Centers shall verify the following resources:

- a. Hospital Organization
  - i. Core team of personnel, infrastructure, and expertise to diagnose and treat stroke patients who require intensive medical,

surgical, and interventional vascular care. The team consists of a neurologist, neurosurgeon, and endovascular specialists

ii. Fully equipped Emergency Department (ED) for rapid diagnosis and treatment using standard CT imaging within 20 minutes and the ability to have results reported within 45 minutes of arrival

iii. Departments/Sections

1. Emergency Department
2. Interventional/Vascular Suite
3. Laboratory
4. Radiology
5. Stroke Unit or Designated Beds
6. Operating Room

iv. Stroke Treatment Protocols

1. Protocols and care plans are available in the Emergency Department, acute care areas and stroke units for the acute assessment and treatment of patients with ischemic or hemorrhagic stroke
2. Utilizes an evidenced based bedside dysphagia screen protocol approved by the organization
3. Protocol for IV thrombolytics
4. A single activation should alert the stroke team

b. Clinical Capabilities

i. Specialty availability (contact made with patient and care plan determined):

1. Door to Physician as defined in the AHA/ASA CPGs
2. At least one designated stroke team practitioner is able to respond to the bedside as defined in the AHA/ASA CPGs
3. NIHSS completed as defined in the AHA/ASA CPGs
4. Door to CT initiated as defined in the AHA/ASA CPGs

5. Door to CT interpreted as defined in the AHA/ASA CPGs
  6. Door to Lab completed as defined in the AHA/ASA CPGs
  7. Door to EKG completed as defined in the AHA/ASA CPGs
  8. Door to CXR completed as defined in the AHA/ASA CPGs
  9. Door to Needle as defined in the AHA/ASA CPGs
  10. Door to Groin as defined in the AHA/ASA CPGs
  11. Door to Revascularization as defined in the AHA/ASA CPGs
- c. Consultant availability (on-call in accordance with hospital Stroke Plan):
- i. Neurologist
  - ii. Neurosurgeon
  - iii. Endovascular Specialist
  - iv. Pulmonary/Critical Care
  - v. Internal Medicine/Hospital Care Services
- d. Facilities and Resources
- i. Emergency Department
    1. Personnel
      - a. Emergency Physicians privileged in the diagnosis and treatment of ischemic and hemorrhagic stroke
      - b. Nursing personnel with expertise in Alteplase administration and care of the acute stroke patient until admission to a hospital unit or transfer
    2. Equipment
      - a. Airway control and ventilation equipment  
Oxygen/Pulse oximetry
      - b. Suction devices
      - c. 12-lead ECG capability

- d. Intravenous fluid administration equipment
  - e. Approved thrombolytic medications for stroke treatment
  - f. Cardiac rhythm monitoring capability
  - g. Intubation/emergency airway management equipment
  - h. Two-way communication capability with EMS
- ii. Intensive Care Unit/Stroke Areas
- 1. Personnel
    - a. Designated Stroke Medical Director
  - 2. Equipment
    - a. Appropriate cardiac monitoring and respiratory support equipment
- iii. Interventional/Vascular Suite
- 1. Personnel
    - a. Radiologic staff with experience in interventional suite operations and all aspects of diagnostic and interventional stroke care
    - b. Nursing staff experienced in interventional suite operations, conscious sedation, cardiac monitoring, and cardiac and neurological emergencies
  - 2. Equipment
    - a. A variety of guiding, diagnostic, intermediate, aspiration and microcatheters
    - b. Cerebral guidewires and microwires
    - c. Stents, balloons and clot retrieval devices
    - d. Advanced hemodynamic and ECG monitoring
    - e. Intravenous antihypertensives, vasoactive/vasopressor medications
    - f. Thrombolytic and antiplatelet medications

- g. Distal protection devices
  - h. Intubation/emergency airway management equipment
- iv. Rehabilitation
- 1. Protocol for stroke patients
  - 2. Complete rehabilitation services including OT, PT, and SLP available for all stroke patients within 24-48 hours
- v. Laboratory Services
- 1. Glucose
  - 2. Blood cell count with platelet count
  - 3. Coagulation studies
  - 4. Blood chemistries
  - 5. Troponin
- vi. Continuing Education:
- 1. Core Stroke Team – At least 8 hours of stroke education annually
  - 2. Emergency Department Staff – Minimal of two educational activities per year or as defined by the nationally accrediting organization
  - 3. EMS Personnel – Stroke program will provide educational activities to EMS personnel
  - 4. Public Educational Activities – Stroke program will provide at least two public educational activities per year or as defined by the nationally accrediting organization

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.5.2. During the Initial Application for Designation Process – Level 2 Stroke Centers shall verify the following resources

- a. Hospital Organization
  - i. Core team of personnel, infrastructure, and expertise to diagnose and treat stroke patients who require intensive medical and

surgical care. The team consists of a diagnostic radiologist, neurologist, and neurosurgeon

ii. Fully equipped Emergency Department for rapid diagnosis and treatment using standard CT imaging as defined in the AHA/ASA CPGs

iii. Departments/Sections

1. Emergency Department
2. Laboratory
3. Radiology
4. Stroke unit or designated beds
5. Operating Room

iv. Stroke Treatment Protocols

1. Protocols and care plans are available in the Emergency Department, acute care areas and stroke units for the acute assessment and treatment of patients with ischemic or hemorrhagic stroke
2. Utilizes an evidenced based bedside dysphagia screen protocol approved by the organization.
3. Protocol for IV thrombolytics
4. A single activation should alert the stroke team
5. Evaluation protocol to assess for large vessel occlusion that may benefit from intervention
6. Transfer protocol to Level 1 Stroke Center for large vessel occlusion
  - b. Consider rapid transfer to Level 1 Stroke Center for the following:
    - i. Patients, who were previously functionally independent, with signs of large vessel occlusion (examples include aphasia, neglect, eye deviation, hemiplegia, intubated, NIHSS >6); consider transfer at the discretion of the accepting physician

- ii. Patients with large strokes with cerebral edema for consideration of surgical decompression

b. Clinical Capabilities

- i. Specialty availability (contact made with patient and care plan determined):

- 1. Door to Physician as defined in the AHA/ASA CPGs
- 2. At least one designated stroke team practitioner is able to respond to the bedside as defined in the AHA/ASA CPGs
- 3. NIHSS completed as defined in the AHA/ASA CPGs
- 4. Door to CT initiated as defined in the AHA/ASA CPGs
- 5. Door to CT interpreted as defined in the AHA/ASA CPGs
- 6. Door to Lab completed as defined in the AHA/ASA CPGs
- 7. Door to EKG completed as defined in the AHA/ASA CPGs
- 8. Door to CXR completed as defined in the AHA/ASA CPGs
- 9. Door to Needle as defined in the AHA/ASA CPGs

- c. Consultant availability (on-call in accordance with hospital Stroke Plan):

- i. Neurologist
- ii. Neurosurgeon
- iii. Pulmonary/Critical Care
- iv. Internal Medicine/Hospital Care Services

- d. Facilities and Resources

- i. Emergency Department

- 1. Personnel

- a. Emergency Physicians privileged in the diagnosis and treatment of ischemic and hemorrhagic stroke

- b. Nursing personnel with expertise in Alteplase administration and care of the acute stroke patient until admission to a hospital unit or transfer

2. Equipment

- a. Airway control and ventilation equipment  
Oxygen/Pulse oximetry
- b. Suction devices
- c. 12-lead ECG capability
- d. Intravenous fluid administration equipment
- e. Thrombolytic medications
- f. Cardiac rhythm monitoring capability
- g. Intubation/emergency airway management equipment
- h. Two-way communication capability with EMS

ii. Intensive Care Unit/Stroke Areas

1. Personnel

- a. Designated Stroke Medical Director

2. Equipment

- a. Appropriate cardiac monitoring and respiratory support equipment

iii. Rehabilitation

1. Protocol for stroke patients

- 2. Complete rehabilitation services including OT, PT, and SLP available for all stroke patients within 24-48 hours

iv. Laboratory Services

- 1. Glucose
- 2. Blood cell count with platelet count
- 3. Coagulation studies

4. Blood chemistries

5. Troponin

v. Continuing Education:

1. Core Stroke Team – At least 8 hours of stroke education annually

2. Emergency Department Staff – Minimal of two educational activities per year or as defined by the nationally accrediting organization

3. EMS Personnel – Stroke program will provide educational activities to EMS personnel

4. Public Educational Activities – Stroke program will provide at least two public educational activities per year or as defined by the nationally accrediting organization

Rule 1.5.3. During the Initial Application for Designation Process – Level 3 Stroke Ready Hospital shall verify the following resources

a. Hospital Organization

i. ED Physician, other qualified physician, or physician extender available 24/7 to diagnose and initiate appropriate treatment including patient transfer to a Level 1 or Level 2 facility

ii. Rapid diagnosis and treatment using standard CT imaging as defined in the AHA/ASA CPGs

iii. Departments/Sections

1. Emergency Department

2. Laboratory

3. Radiology

iv. Stroke Treatment Protocols

1. Protocols and care plans are available in the Emergency Department for the acute assessment and treatment of patients with ischemic or hemorrhagic stroke

2. Utilizes an evidenced based bedside dysphagia screen protocol approved by the organization

3. Protocol for IV thrombolytics

4. A single activation should alert the stroke team
5. Evaluation protocol to assess for large vessel occlusion that may benefit from intervention
6. Transfer protocol to Level 1 Stroke Center for large vessel occlusion
  - a. Consider rapid transfer to Level 1 Stroke Center for the following:
    - i. Patients, who were previously functionally independent, with signs of large vessel occlusion (examples include aphasia, neglect, eye deviation, hemiplegia, intubated, NIHSS >6); consider transfer at the discretion of the accepting physician
    - ii. Patients with large strokes with cerebral edema for consideration of surgical decompression
  - b. Clinical Capabilities
    - i. Specialty availability (contact made with patient and care plan determined):
      1. Door to Physician as defined in the AHA/ASA CPGs
      2. At least one designated stroke team practitioner is able to respond to the bedside as defined in the AHA/ASA CPGs
      3. NIHSS completed as defined in the AHA/ASA CPGs
      4. Door to CT initiated as defined in the AHA/ASA CPGs
      5. Door to CT interpreted as defined in the AHA/ASA CPGs
      6. Door to Lab completed as defined in the AHA/ASA CPGs
      7. Door to EKG completed as defined in the AHA/ASA CPGs
      8. Door to CXR completed as defined in the AHA/ASA CPGs
      9. Door to Needle as defined in the AHA/ASA CPGs
  - c. Consultant availability (on-call in accordance with hospital Stroke Plan):

- i. Neurologist (on-call, tele-medicine, or transfer agreement to Level 1 or 2 Stroke Center)
      - ii. Critical Care Specialist
      - iii. Internal Medicine/Hospital Care Services
  - d. Facilities and Resources
    - i. Emergency Department
      - 1. Personnel
        - a. Emergency Physicians, other qualified physicians or physician extender privileged in the diagnosis and treatment of ischemic and hemorrhagic stroke
        - b. Nursing personnel with expertise in Alteplase administration and care of the acute stroke patient until admission to a hospital unit or transfer
      - 2. Equipment
        - a. Airway control and ventilation equipment  
Oxygen/Pulse oximetry
        - b. Suction devices
        - c. 12-lead ECG capability
        - d. Intravenous fluid administration equipment
        - e. Thrombolytic medications
        - f. Cardiac rhythm monitoring capability
        - g. Intubation/emergency airway management equipment
        - h. Two-way communication capability with EMS
    - ii. Laboratory Services
      - 1. Glucose
      - 2. Blood cell count with platelet count
      - 3. Coagulation studies
      - 4. Blood chemistries

5. Troponin

iii. Continuing Education:

1. Core Stroke Team – At least 8 hours of stroke education annually
2. Emergency Department Staff – Minimal of two educational activities per year or as defined by the nationally accrediting organization

Rule 1.5.4. During the Initial Application for Designation Process – Level 4 Non Stroke Hospital shall verify the following resources

a. Hospital Organization

- i. Facility is able to access and evaluate for possible stroke, but lacks essential components to treat patients with IV thrombolytics
- ii. Transition plans must be established to facilitate rapid evaluation and transfer of patients to Level 1 or Level 2 Stroke Centers.
- iii. May be bypassed in accordance with this plan or an EMS Medical Control Plan.

**Subchapter 6 Pre-hospital Component and Field Triage**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.6.1. The Stroke triage and transfer guidelines are based on the concept of getting the right patient to the right hospital in the shortest period of time. In order to do this some hospitals may be completely bypassed, based on EMS guidelines or protocols, in favor of a more distant but more medically capable hospital.

**Subchapter 7 Inter-facility Transfers of Stroke Patients**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.7.1. Drip and Ship Transfer Protocol

1. Patients may be transferred from Level 2, 3, or 4 center to a Level 1 or 2 center provided that any such transfer is medically prudent, after implementation of time sensitive therapy, as determined by the transferring Stroke Center physician of record, and is conducted by the appropriate level of emergency medical service provider
2. Level 2, 3 and 4 centers shall develop written criteria for consultation and transfer of patients needing a higher/specialty level of care

3. Level 1 and 2 centers shall provide feedback as requested to the Level 2, 3 or 4 center and shall participate in the state performance improvement process

### **Subchapter 8 Performance Improvement and System Evaluation**

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.8.1. Performance Improvement shall be an essential part of the Stroke SOC. It shall be used to analyze proper functioning of the system and implement improvements in system operation. The PI program will be system-wide. Every designated Stroke Center is required to participate in the system PI process and input the required statewide minimal dataset. The appropriateness and quantity of all activities of the Stroke system must be continuously evaluated.

- a. The Stroke PI committee shall be a subcommittee of the Stroke Advisory Committee responsible for the PI oversight of the Stroke System. Members of the Stroke PI committee shall include:
  - i. Chairperson – Neurologist participating in the Stroke System
  - ii. Each Level 1 and 2 Stroke Center will be authorized an administrative and/or clinical representative
  - iii. Level 3 hospitals may participate. The number of representatives will be determined by the permanent members of the subcommittee
  - iv. Three EMS organizations – one from a hospital-based EMS provider, a private EMS provider, and a public/government EMS provider

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.8.2. Specific audit filters will be established by the Stroke PI committee

- a. In general, the following performance improvement processes should be performed by each Stroke Center. The results of these reviews shall be reported to the Stroke PI committee.
  - i. Each Stroke Center assigns a PI person to oversee the process
  - ii. Standards established
  - iii. Determine audit filters
  - iv. Collect data
  - v. Evaluate data

- vi. Determine PI issues present
  - vii. Develop corrective action plan
  - viii. Re-evaluate to document results/effectiveness of CAP
- b. The following performance elements should be considered by each pre-hospital entity:
- i. Quality measure regarding response times (time to dispatch, EMS response, on-scene time, and transport time) will be collected and analyzed
  - ii. Accuracy of patient assessment
  - iii. Transport protocol adherence
  - iv. Procedures initiated/completed
  - v. Medical control interaction
  - vi. Transport mode (air/ground)
  - vii. Record/documentation
  - viii. Inter-facility care/transport
- c. The following performance elements should be considered by each Stroke Center:
- i. Outcome review
  - ii. Complications
  - iii. Deaths
  - iv. Achievement of time sensitive goals (CT completed/reporting times and Door to Alteplase administration times)
  - v. Core stroke quality measures established for hospital stroke care will be entered into the approved national registry platform for blinded comparison between hospitals

*Source: Miss. Code Ann. § 41-3-15*

Rule 1.8.3. Data will be reviewed and analyzed at no less than two separate levels. Primary patient care data will be reviewed at each facility by its Multidisciplinary Committee. These committees will utilize nationally accepted patient review

criteria and will also review the pre-hospital care of stroke patients. The final level of data review will take place at the state level. Statewide data will be used for the review of statewide criteria and epidemiological purposes. The Statewide Education/Prevention program will be based on this data. Stroke registry personnel should be included on the PI Committee.