Stroke Policies and Clinical Practice Guidelines

St. Dominic's

2024 GET WITH THE GUIDELINES. GOLD PLUS TARGET: STROKE HONOR ROLL ELITE STROKE

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

Stroke and Stroke Related Policies

Learning Objectives:

- Identify policies related to the care of stroke patients
- Retain basic understanding of stroke policies
- Demonstrate knowledge of accessing policy documents from Teamlink/Sharepoint

Overview

Stroke and Stroke Related Policies

Assessments and Reassessments	Documentation and auditing process for assessments and reassessments required for care of stroke patients
Code FAST	Process for rapid medical response for hospital patients displaying signs of acute stroke
Inbound Stroke Transfers	Provide a framework for the process of accepting acute stroke patients from other facilities
Stroke Alert Policy	Describes the procedure for activation and response to a person displaying new signs and symptoms of acute stroke.

Overview

Stroke and Stroke Related Policies

High-Risk Medications

-Identifies high alert medications for all healthcare providers involved in the prescribing, dispensing, and administration of medications

-Provides guidelines for the safe handling and administration of medications designated as high alert.

Informed Consent

Guidelines for verifying a patient/representative has given informed consent for any invasive procedure, designated special procedure, surgical procedure, anesthesia, blood transfusions and certain types of examinations.

Moderate Sedation

Describes administration medications for the intent of moderate sedation in hospital setting provided that LIP and RN support/monitoring equipment is available as indicated

Assessments and Reassessments Policy Specific to Stroke

Responsible Department: *Stroke Services/Neuroscience*	**Subject:** *Assessment and Reassessment Documentation Requirements Specific to Stroke Care*
Number of Pages: *2*	**Replaces Policy:** *Assessment and Reassessment Documentation Requirements Specific to Stroke Care, Inception Date 11/15/2019*
Effective Date: *03/29/2023*	**Date(s) Reviewed* or Revised:** 07/2021*, 07/2022*, 06/2023 (revised)
SCOPE: *St. Dominic's Hospital*	
PURPOSE: *To describe the documentation and auditing process for assessments and reassessments required for care of stroke patients*	

DEFINITIONS:

1. **Complex Stroke Patient**: a patient who has received IV Tenecteplase or alteplase or IA TPA, has undergone a mechanical endovascular reperfusion, carotid endarterectomy/stent, or has had a decompressive craniotomy
2. **Routine Stroke Patient:** a patient who presents with neurological signs and symptoms of an acute stroke and receives routine medical treatment
3. **Multi-Purpose Checklist (blue sheet)**: used to assess/reassess stroke patients and the nurse managers use the blue sheet as an audit tool

GUIDELINES:

1. Stroke assessment begins at the time of the Stroke Alert in accordance with Phase I order set-Stroke Evaluation with Advanced Imaging Orders.

2. Stroke reassessments continue in accordance with Phase II order sets (Neurology Ischemic Stroke with Thrombolytic Therapy, Neuro Stroke Non- Thrombolytic, NSR Intracranial Hemorrhage, Rad IR POST IA TPA MECH Thrombectomy, NSR subarachnoid hemorrhage).

3. Stroke assessments and reassessments are documented in Epic and on the Multi-Purpose Checklist called the blue sheet.

3.1. When patients transfer from the ED to ICU, the ED nurse will hand off to ICU nurse who will complete the assessments.
3.2. When patients transfer from IR to ICU, the IR nurse will place a patient label sticker on the blue sheet and hand off to the ICU nurse to complete the assessments. In the rare event the patient remains in the IR department within the first assessment interval times post procedure, the IR nurse will initiate the assessment and hand off to the ICU nurse to complete.
3.3. When patients transfer from PACU to ICU, the PACU nurse will start the assessment and hand off to the ICU nurse to complete.
3.4. When patients transfer from the ED to the floor, the ED nurse will hand off to the floor nurse who will complete the assessments.

4. After the 24-hour end time, the nurse director/manager conducts EMR reviews and provides timely feedback to the staff.
4.1. The nurse director/manager uses the blue sheet as an audit tool.
4.2. The nurse director/manager verifies compliance with applicable assessment/reassessment orders as supported by the documentation in EMR.

5. The nurse director/manager provides aggregated audit results to the Senior Director of Nursing and the Stroke Program Manager weekly.

RELATED DOCUMENTS:

1. Multi-Purpose Checklist Blue Sheet Stroke Audit-floor.xlsx (sharepoint.com)
2. Multi-Purpose Checklist Blue Sheet Stroke Audit-ED.xlsx
3. Multi-purpose Checklist Blue Sheet-Post Endovascular Procedure Charting Tool FINAL HC.pdf
4. Multi-purpose checklist BLUE SHEET Post Thrombolytic Charting Tool FINAL HC.pdf
5. Epic Stroke Order Sets, Stroke Services (sharepoint.com)

REFERENCES:

1. 2022 Guideline for the Management of Patients With Spontaneous Intracerebral Hemorrhage: A Guideline From the American Heart Association/American Stroke Association | Stroke (ahajournals.org)
2. 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 | Stroke (ahajournals.org)
3. Guidelines for the Management of Aneurysmal Subarachnoid Hemorrhage | Stroke (ahajournals.org)
4. Guideline for Reversal of Antithrombotics in Intracranial Hemorrhage: Executive Summary. A Statement for Healthcare Professionals From the Neurocritical Care Society and the Society of Critical Care Medicine - PubMed (nih.gov)

Last Updated: 03/2023

Code FAST Policy

Responsible Department: Stroke Services/Neuroscience	**Subject:** Code FAST-In Hospital Stroke Alerts
Number of Pages: 2	**Replaces Policy:** N/A
Effective Date: 6/01/2024	**Date(s) Reviewed* or Revised:** New
SCOPE: St. Dominic's Hospital-all patient care areas	
PURPOSE: To provide rapid medical response specifically for hospital patients displaying signs and symptoms of acute stroke as a means of preventing delays in care, optimizing outcomes, and targeting quality improvement for in hospital acute stroke occurrences.	

DEFINITIONS:

1. **Acute stroke:** current or recent (within hours) loss of perfusion to vascular territory of the brain. This includes ischemic stroke, subarachnoid hemorrhage, and intracerebral hemorrhage.
2. **Stroke Alert**: term used for urgent notification that a patient is confirmed to have signs and symptoms of an acute stroke.
3. **Code FAST Team**: team composed of Rapid Response nurse and neuro critical care trained nurse, responsible for assessing the hospital patients outside of critical care areas and initiating a stroke alert when warranted.
4. **Last Known Well (LKW)**: the time a person is last known to be without signs and symptoms of stoke, in his/her baseline, normal state of health
5. **PACE:** The "Patient Logistics Center" (bed placement/transfer center) that oversees the organization and facilitation of inpatient flow, encompassing bed placement, transport, and accommodation of individuals seeking medical treatment within the facility. Additionally, it manages the seamless transfer of patients both into and out of the hospital, ensuring continuity of care and efficient utilization of resources.

GUIDELINES: Procedure

I. **General Initiation and Process**

1. Code FAST is initiated when a hospital patient is found with signs and symptoms of acute stroke and the LKW time is ≤ 24 hours from the time of onset. The Code FAST-In Hospital Stroke Alert Criteria and Workflow document is used as a guideline.
2. The nurse dials extension 6999 and reports Code FAST and patient room number to operator. The operator will page Code FAST overhead and send an alert to the appropriate stroke care team members.

3. After the stroke alert is initiated, the neurology Advanced Practice Provider (APP) and/or neurologist meet the patient and team member (s) in radiology and lead the next steps in the patient's stroke alert process. Code FAST team remains with the patient until imaging is complete and bed placement is determined and arranged with the PACE.
4. This is the process 24 hours a day, 7 days a week for hospital patients in critical care, non-critical care, and progressive care areas.

II. **Process Variations According to Patient Care Areas**

Critical Care Area Patients

1. The nurse initiates the stroke alert by activating code FAST order set and beginning transport to radiology.

Non-Critical Care Areas and Progressive Care Units

2. Code FAST is paged overhead. Code FAST team responds, quickly assesses the patient, and initiates the stroke alert by activating code FAST order set and beginning transport to CT.

RELATED DOCUMENTS:

1. Identifying Best Practices to Improve Evaluation and Management of In-Hospital Stroke: A Scientific Statement From the American Heart Association | Stroke (ahajournals.org)
2. Code FAST-In Hospital Stroke Alert Guideline and Workflow.docx (sharepoint.com)
3. Stroke Alert.docx (sharepoint.com)

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Inbound Stroke Transfers Policy

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Responsible Department: Stroke Services/Neuroscience	**Subject:** In-bound Stroke Patient Transfers
Number of Pages: *2*	**Replaces Policy:** *In-bound Stroke Patient Transfers, 07/2016*
Effective Date: *3/27/2024*	**Date(s) Reviewed* or Revised:** 07/2018*, 07/2021*, 6/2023, 3/2024
SCOPE: Transfer Center/PACE, Emergency Department	
PURPOSE: To provide a framework for the process of accepting acute stroke patients from other facilities	

DEFINITIONS:

I. **Acute Stroke:** current or recent (within hours) loss of perfusion to vascular territory of the brain. This includes ischemic stroke, subarachnoid hemorrhage, and intracerebral hemorrhage.

II. **Last Known Well (LKW):** the time a person is last known to be without signs and symptoms of stroke, at one's baseline, normal state of health

III. **PACE:** The "Patient Logistics Center" (bed placement/transfer center) that oversees the organization and facilitation of inpatient flow, encompassing bed placement, transport, and accommodation of individuals seeking medical treatment within the facility. Additionally, it manages the seamless transfer of patients both into and out of the hospital, ensuring continuity of care and efficient utilization of resources.

IV. **Outside facility:** may refer to another emergency department, a hospital, or any other healthcare facility

I. **GUIDELINES:** PACE receives a call or Pulsara alert from an outside facility requesting transfer to St. Dominic Hospital.

1. PACE gathers demographic and medical information including:
    1. Time Last Known Well
    2. National Institute of Health Stroke Scale (NIHSS)
    3. Previous level of function
    4. Age
2. PACE obtains pre-registration information and sends to ED.

II. PACE utilizes the External Patient Transfers guideline and communicates request to a physician for consultation with outside facility. Patients that are considered for potential stroke transfer include those with:

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1. Suspected acute ischemic stroke
2. Medical imaging showing acute subarachnoid hemorrhage
3. Medical imaging showing acute intracerebral hemorrhage

III. These transfers are EMERGENT.

1. Patients are accepted according to the standards of a Comprehensive Stroke Center as described in the Stroke System-of-Care Plan, http://msdh.ms.gov/msdhsite/_static/resources/6401.pdf?rss.

IV. For all in-bound stroke transfers, PACE notifies the Emergency Department and the on-call stroke nurse practitioner via Pulsara to initiate Stroke Alert.

V. **All in-bound stroke transfers arrive through the Emergency Department.**

1. Patients do not go directly to the unit as a Direct Admit.

RELATED DOCUMENTS:

1. Stroke Alert Procedure, St. Dominic Hospital Policy
2. Capacity Management.docx (sharepoint.com)
3. External Patient Transfers.docx (sharepoint.com)
4. Comprehensive Stroke Center Certification Standards, *Comprehensive Certification Manual for Disease-Specific Care Including Advanced Programs for Disease-Specific Care*
5. Stroke System-of-Care Plan, Mississippi State Department of Health, Bureau of Acute Care Systems, http://msdh.ms.gov/msdhsite/_static/resources/6401.pdf?rss
6. Temporary Capacity Plan, temporarycapacityplan20230519.ashx (fmolhs.org)

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Stroke Alert Policy

Responsible Department: Stroke Program/Neuroscience	**Subject:** Stroke Alert Procedure
Number of Pages: 2	**Replaces Policy:** Stroke Alert Procedure, Inception Date 08/2010
Effective Date: 05/01/2024	**Date(s) Reviewed* or Revised:** 12/2010, 09/2011, 02/2012, 06/2015, 06/2019, 07/2021, 03/2023, 3/2024
SCOPE: St. Dominic's Hospital- all patient care areas	
PURPOSE: To describe the procedure for activation and response to a person displaying new signs and symptoms of acute stroke.	

DEFINITIONS:

1. **Acute stroke:** current or recent (within hours) loss of perfusion to vascular territory of the brain. This includes ischemic stroke, subarachnoid hemorrhage, and intracerebral hemorrhage.
2. **Last Known Well (LKW):** the time a person is last known to be without signs and symptoms of stroke, at one's baseline, normal state of health
3. **Unknown LKW:** patient is "found down" (discovered unconscious) and suspicious of stroke as cause
4. **Wake-up Stroke:** patient has gone to sleep normal and awakens with acute stroke symptoms
5. **Pulsara app:** secure communication network mobile app used to streamline workflows across care teams, departments, and organizations.
6. **Code FAST Team:** team composed of Rapid Response nurse and neuro critical care trained nurse, responsible for assessing the hospital patients outside of critical care areas and initiating a stroke alert when warranted.

GUIDELINES:

1. **"Stroke Alert"** is initiated by using the Pulsara app when a patient is confirmed to have signs and symptoms of an acute stroke.

1.1. This serves as a real time alert system for the stroke care team.

Emergency Department "Stroke Alert"

Direct Patient Arrivals

2. A clinician initiates a Stroke Alert when last known well is ≤ 24 hours AND the patient has an NIHSS of 1 or greater.

2.1.1. Activate Stroke Eval with Advanced Imaging Order Set.

2.2. Upon arrival to the Emergency Department, a clinician initiates a Stroke Alert when the patient presents with symptoms of a Wake-Up Stroke or Unknown LKW.

2.2.1. Activate Stroke Eval with Advanced Imaging Order Set.

Patients Transferred from Outside Facility for Higher Level of Care

3. Transfer Center staff initiates a Stroke Alert using the Pulsara app for suspected stroke patients accepted according to our External Patient Transfers guideline. Those considered for potential transfer include but are not limited to post IV tenecteplase or alteplase administration, patients deemed interventional candidates, or patients with hemorrhagic stroke (including SAH and ICH).

Non-Emergency Department "Stroke Alert"

4. For patients admitted within the hospital, a nurse initiates a Code FAST, referring to the Code FAST In Hospital Stroke Alert Guideline and Workflow as well as Code FAST Policy for proper procedures.

5. For areas other than the Emergency Department and those admitted within the hospital, 911 is called.

6. This procedure is used 24 hours per, seven days a week.

7. In the event that multiple complex strokes occur concurrently, there is no deviation from this process.

8. For additional information regarding the Code FAST team, contact the Stroke Program Manager, the nurse director over Rapid Response team and/or neuro critical care nurse director.

RELATED DOCUMENTS:

1. In-bound Stroke Patient Transfers Policy
2. Stroke Eval with Advanced Imaging order set, stroke eval with advanced imaging.pdf
3. Code FAST-In Hospital Stroke Alerts Policy
4. CODE FAST GUIDELINE and WORKFLOW 2024.pdf
5. External Patient Transfers.docx (sharepoint.com)

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High Risk Medications Policy

Responsible Department: Pharmacy	**Subject:** High Alert Medications
Number of Pages: 4	**Replaces Policy:** N/A
Effective Date: 2/10/2017	**Date(s) Reviewed* or Revised:** 8/14/12, 11/6/13, 3/16/15, 5/10/16, 11/22/16, 4/17/17, 6/13/18, 7/28/2021*, 10/21/21, 3/7/2024

SCOPE: pharmacy, nursing, medical staff

PURPOSE: to identify high alert medications for all healthcare providers involved in the prescribing, dispensing, and administration of medications at St. Dominic Hospital and to provide guidelines for the safe handling and administration of medications designated as high alert.

DEFINITIONS:

1. High-alert medications – those medications that bear a heightened risk of causing significant patient harm and or/sentinel events when they are used in error and, as a result require special safeguards to reduce the risk of errors.

2. Independent double check – requires two people to separately check the targeted components of the work process, without knowing the results of their colleague.

POLICY:

1. Medications have been identified and added to the High Alert Medication list using various sources such as medication safety alerts from the Joint Commission, Institute of Safe Medication Practices (ISMP), and the FDA.
    a. Additional medications may be added to the current list based on these sources, review of medical literature, and internal risk management data.
    b. Proposed additions to the high alert medication list are reviewed and approved by the Pharmacy and Therapeutics Committee.

2. High Alert Medication List:
    a. Chemotherapy medications
    b. Neuromuscular blockers (paralyzing agents)
    c. Insulin
    d. Anticoagulants
    e. Concentrated electrolytes (potassium, magnesium, calcium, hypertonic saline)

GUIDELINES:

1. General guidelines to reduce error include strategies such as using computerized physician order entry; bar coding; infusion pumps with safety software; alert notes on automated dispensing cabinets; tallman lettering; standardizing the ordering, storage, preparation, and administration of high-risk medications; and independent double checks when necessary.

2. Chemotherapy Medications
    a. Physicians with oncology subspecialty credentials may initiate chemotherapy orders. Exceptions are granted to physicians who may prescribe chemotherapy medications for approved indications within their practice specialty.
    b. Physicians shall utilize hospital-approved order forms for chemotherapy or via computerized physician order entry.
    c. Telephone orders may not be accepted for chemotherapy orders.
    d. Specially trained nurses administer chemotherapy. A physician may administer chemotherapy for approved indications within their practice specialty when appropriate.
    e. Independent double checks of the chemotherapy dose and calculations are performed by nurses and pharmacists. Discrepancies are resolved between both disciplines. The prescribing physician is contacted for further clarification when necessary.
    f. Two pharmacists independently check the chemotherapy dose and calculations with the chemotherapy order. The chemotherapy medication used to prepare the chemotherapy is independently checked by two pharmacy personnel prior to compounding and a volume check is done immediately prior to adding a chemotherapy medication to a diluent.
    g. A chemotherapy nurse independently checks the pharmacist's drug dosing calculations. Once the medication preparation arrives in the patient care area, two nurses independently check the preparation with the physician orders for correct patient, drug, dose, route, rate and treatment cycle or day.
    h. The patient's armband and the bar code on the chemotherapy medication are scanned prior to administration of the chemotherapy. The nurse will contact a pharmacist if there are any questions prior to administration of the medication.

3. Neuromuscular blockers (paralyzing agents)
    a. Neuromuscular blockers should only be administered to patients who are mechanically ventilated or who are being prepared for intubation.
    b. Neuromuscular blockers are segregated into a separate refrigerator or stored in separate bins to prevent confusion with other medications.
    c. Manufacturer "paralyzing agent" caps and automated dispensing machines alerts identify neuromuscular blockers. Neuromuscular blockers stocked outside the surgery area in automated dispensing cabinets and sealed difficult intubation boxes have additional "Paralyzing Agent: Use with Caution" auxiliary labels.

4. Insulin
    a. The abbreviation "U" is an unapproved abbreviation. The word "units" must be spelled out.
    b. Standard order sets for insulin are developed. Standardized concentrations are used for insulin infusions.
    c. Insulin vials or pens dispensed for routine doses or correctional dosing are sent for individual patients. Insulin vials or pens are not shared between patients.
    d. Insulin vials shall have a 28-day expiration date affixed to the vial when removed from refrigeration.

e. Independent double checks will be required by a second nurse in the following situations:
   i. Insulin infusions
   ii. Intravenous bolus dose of insulin.
   iii. All insulin doses given to neonatal patients.

5. Anticoagulants
   a. The abbreviation "U" is an unapproved abbreviation. The word "units" must be spelled out.
   b. Standardized heparin order forms have been developed for cardiac, DVT/PE, and stroke patients. A standard concentration of heparin infusion is utilized for all heparin infusions.
   c. Heparin infusions require independent double checks.
   d. A pharmacist-managed anticoagulation service monitors all patients receiving warfarin therapy and makes dosing adjustments as appropriate.
   e. A standardized order form has been developed for argatroban. The pharmacist anticoagulation service monitors all argatroban patients.
   f. Low molecular weight heparin such as enoxaparin (Lovenox) dosing is based on renal function and weight. Pharmacists will renally adjust as appropriate for patient's renal function.
   g. Criteria have been developed for fondaparinux (Arixtra®). Dosing, renal function, and platelet count must meet criteria prior to initiation of therapy. Pharmacists will renally adjust as appropriate for patient's renal function.

6. Concentrated electrolytes (potassium, magnesium, calcium, hypertonic saline)
   a. Concentrated electrolyte vials are not dispensed to patient care nursing units.
      i. Hypertonic saline 23.4% used for imminent herniation is an exception to concentrated electrolyte storage on patient care nursing units.
         1. The 30 mL vial size is the only size allowed and will be stored with maximum par of one vial in the automated dispensing cabinet.
         2. Storage will be only in the neurocritical care nursing unit automated dispensing cabinet.
         3. Storage within the automated dispensing cabinet will be required to be in a locked, lidded space and will not be allowed to be removed on override.
         4. The medication will have auxiliary labeling placed on packaging alerting users to high-alert medication status and concentration.
         5. The medication will have additional warning alerts displayed in the automated dispensing cabinet at the time of removal.
   b. Standardized, premixed potassium containing IV solutions are utilized when possible.
   c. Bulk concentrated electrolyte vials are only stored in the pharmacy department.
   d. Intravenous Electrolyte Replacement orders have been developed.
   e. Potassium-containing infusions are limited to a maximum concentration of 80mEq/liter.
   f. The concentration of magnesium should not exceed 4 grams/100 ml.

   g. A standardized concentration of magnesium infusion is utilized in labor and delivery for treatment of pre-eclampsia and eclampsia.
   h. All sodium chloride 3% infusions and boluses are dispensed from the pharmacy.

REFERENCES:

1. Institute for Safe Medication Practices (ISMP) List of High-Alert Medications in Acute Care Settings

Informed Consent Policy

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Responsible Department: Organizational/Clinical	**Subject:** Informed Consent
Number of Pages: 5	**Replaces Policy:** N/A
Effective Date: 12/30/2016	**Date(s) Reviewed* or Revised:** 12/2004, 05/2009, 06/2010*, 09/2010, 10/2011, 04/2012, 11/2012, 12/2016, 10/2021, 1/23/2024

SCOPE: St. Dominic Hospital

PURPOSE: To provide guidelines for verifying that a patient or patient representative has given informed consent for any invasive procedure, designated special procedure, surgical procedure, anesthesia, blood transfusions and certain types of examinations.

DEFINITIONS:

- **Informed Consent:** Informed Consent includes the following discussion between the responsible physician or APP:
  - The name of the proposed procedure/surgery, treatment, or blood transfusion,
  - Material known risks, anticipated benefits, and side effects of the proposed procedure/surgery, treatment, or blood transfusion,
  - The likelihood of the patient achieving goals with proposed procedure/surgery, treatment, or blood transfusion,
  - Material known problems during recuperation after the proposed procedure/surgery, treatment, or blood transfusion,
  - Reasonable alternatives or therapies to the proposed procedure/surgery, treatment, or blood transfusion, and
  - Material known risks, benefits, and side effects of the alternatives.

- **Consent Form:** a form stating that informed consent was obtained by the physician or APP and that the patient/patient representative agrees to the procedure. The consent form should include the following: (i) the name of St. Dominic-Jackson Memorial Hospital as the location of where the procedure will take place, (ii) the name of the specific procedure, or other type of medical treatment for which consent is being given; (iii) name of the responsible Physician or APP who is performing the procedure or administering the medical treatment; (iv) statement that the procedure or treatment, including the anticipated benefits, material risks, and alternative therapies, was explained to the patient or the patient's representative, (v) signature of the patient or the patient's legal representative; (vi) date and time the informed consent form is signed by the patient or the patient's legal representative; and (vii) date, time, and signature of the person witnessing the patient or the patient's legal representative signing the consent form.

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- **Invasive/Surgical Procedure:** A procedure involving puncture or incision of the skin, or insertion of an instrument or foreign material into the body, including, but not limited to, central line insertion, percutaneous aspirations, biopsies, cardiac and vascular catheterizations, endoscopies, angioplasties, and implantations, bone marrow aspirations, but excluding venipuncture, intramuscular, subcutaneous and intradermal injections, intravenous therapy or contrast, simple incision and drainage, and simple sutures. Examinations or invasive procedures may include, but are not limited to, breast, pelvic, prostate, and rectal examinations, as well as others specified under state law.

- **Designated Special Procedure:** Non-invasive procedures requiring the administration of regional, moderate, deep, or general sedation/anesthesia; nonsurgical procedures performed in the Operating Room, Endoscopy Unit, or Radiology Department. Administration of any new intravenous chemotherapy/immunotherapy in inpatient/outpatient setting, or new acute dialysis treatments in the inpatient setting.

- **Anesthesia:** Consists of general anesthesia and spinal or major regional anesthesia, does not include local anesthesia. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable even by painful stimulation. Anesthesia consent form is separate from invasive/designated special/surgical procedure consent form.

- **Transfusions:** Blood components are consented by patients on a separate blood transfusion form. A blood transfusion consent is valid for each episode of care and is not required for each unit of blood component.

- **Patient:** An adult 18 years or older; for patients under 18 years old, refer to Patient's Representative: Guardian, Agent, Surrogate guideline for when a patient under 18 years old may consent for a particular procedure.

- **Patient representative:** an authorized decision-maker for when the patient lacks capacity to consent for themselves or a minor that does not have authority to consent for the procedure; for further clarity of who can be an authorized decision maker, refer to Patient's Representative: Guardian, Agent, Surrogate guideline for a full description.

- **Urgent/Emergent**: A situation wherein: (1) in the competent medical judgment of a provider, the proposed invasive procedure, designated special procedure, or surgical procedure is reasonably necessary; and (2) a person authorized to consent is not readily available, and (3) any delay in treatment could reasonably be expected to jeopardize the life or health of the person affected or could reasonably result in disfigurement or impaired faculties. For the purposes of this policy, and emergency is also defined as a situation wherein: (1) a person transported to St. Dominic's from a licensed health care facility is not in a condition to give consent; (2) a person authorized to give consent is not readily available; and (3) any delay would be injurious to the health and wellbeing of such person. Treatment should be limited to

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that required for the emergency only.

- **Physician:** For purpose of this policy only, the term physician shall include all members of the medical staff, including medical doctors, osteopaths, oral surgeons, dentists and podiatrists.

- **Advanced practice provider ("APP"):** Advance Practice Registered Nurses, Certified Registered Nurse Anesthetists, and Physician Assistants can obtain informed consent for those procedures they are privileged to perform.

- **Licensed health care professional:** a person who possesses a current license, certificate, registration, or other authority from a professional licensing board to provide health care services in this state.

Procedure:

A. A patient must provide proper informed consent for each invasive procedure, designated special procedure, surgical procedure, anesthesia, and blood transfusions prior to procedure.

B. It is the duty of the Physician/APP who is responsible for the invasive/surgical procedure, designated special procedure, anesthesia, or blood transfusion to obtain the informed consent of the patient.

C. If the patient/patient representative requires an interpreter for informed consent, then refer to the Foreign Language Interpreters or Services for the Deaf Guidelines. Interpreter information should be documented in the medical record.

D. The discussion and the decision made by the patient or patient's representative is noted in the patient's medical record as follows:
   a. Hospital consent form; or
   b. Physician/APP notates informed consent completed in medical record note.

E. If the Physician/APP is not available, a licensed healthcare professional can document affirmation of the informed consent obtained by the Physician/APP from the patient or patient representative agreeing to procedure by signing as a witness on the consent form.

F. In the event the staff member has some concerns about informed consent they can contact the department leader or house supervisor for clarification.

G. Informed consents for operative and other procedures are valid and continue to have force and effect for a reasonable period of time so long as (i) the patient's condition has not materially changed such that either the scope of the procedure or risks have changed, (ii) the state of the art of the specific medical procedure has not changed, and (iii) it is reasonable to expect the patient to remember the details of the consent conversation. Of course, the patient must also have not revoked the informed consent. These consents are not transferrable from hospital visits. Hospital consents for blood transfusion, dialysis, immunotherapy, and chemotherapy is durable for the

duration of the inpatient visit. Chemotherapy and Immunotherapy consent is durable for duration of series encounters in outpatient setting.

H. Informed Consent Documentation in medical record:

   a. **Hospital Consent form(s):** The approved hospital consent form(s) should be completed in entirety prior to any procedure as defined by this policy. The purpose of the Hospital Consent form is for the patient or patient's representative to affirm that the Physician/APP obtained informed consent from the patient or patient's representative for the particular procedure. The Hospital Consent Form should be scanned into EMR.

      i. A procedure consent form is required to affirm the patient or patient representative consent for procedures and surgery. A licensed healthcare professional can witness the affirmation of consent.

      ii. An anesthesia consent form is required to affirm the patient or patient's representative consent for anesthesia.

      iii. A blood transfusion consent or refusal form is required to affirm documentation of the patient or patient representative consent or refusal for blood and blood components.

   b. **Medical Record:** Physician/APP documents informed consent requirements in medical record and states patient/patient representative response.

   c. Abbreviations are not acceptable on consent forms.

   d. Should an amendment need to be made to the consent form after it has been signed the physician/APP making the amendment as well as the patient or patient representative must initial, date and time at the place of the amendment(s).

   e. If the patient is unable to read and/or write, the person responsible for obtaining the consent should read the consent form to the patient and the patient should verbalize back that he/she understands what is read. The patient is to place an "X" on the line for patient signature on the consent form. There should be two witnesses to the "X" made by the patient.

   f. If the patient/patient representative requires an interpreter for consent form, then the Foreign Language Interpreters or Services for the deaf policy should be followed. The interpreter information should be documented in the patient medical record.

   g. Telephone consents are acceptable if the patient representative is unable to be available in person. Informed consent should be obtained by the physician/APP who is to perform the invasive procedure, designated special procedure, or surgical procedure, anesthesia or blood transfusion and the consent form should be properly affirmed by two licensed health care professionals.

I. Who Can Give Consent

a. The consent form should be signed by the patient or patient representative.

b. If none of the persons listed as a patient representative are reasonably available to make decisions for non-emergent surgical or medical treatment or procedures, including but not limited to an autopsy, as well as for continued services needed by the patient including but not limited to placement or transfer of the patient to another facility, contact Ethics Committee for guidance on the provisions of state law.

J. Urgent and Emergent Situations

a. Per Mississippi law: Informed consent is implied in an emergency situation, and (i) there has been no protest or refusal of consent by the patient's representative or (ii) if so, there has been a subsequent change in the condition of the person affected that is material and morbid, and there is no one immediately available who is authorized, empowered, willing and capacitated to consent. The physician or APP performing an invasive procedure, designated special procedure, or surgical procedure on an emergency basis should document in the medical record the facts which render the situation an emergency.

REFERENCE:

1. Blood Transfusion Consent or Refusal, Form SD 10-369
2. Anesthesia Consent, Form PAGHIM P1990-01
3. Procedure Consent, Form SD 411-56A

RELATED DOCUMENTS:

1. Ethical and Religious Directives for Catholic Health Care Services, Sixth Edition, United States Conference of Catholic Bishops (ERD 25. patient's representative, ERD 26-27. informed consent, ERD 31. informed consent for experiments and studies)
2. Mississippi Board of Nursing, http://www.msbn.state.ms.us/
3. Mississippi Code § 41-41-7. Implied consent to medical treatment where emergency exists
4. The Joint Commission Rights and Responsibilities of the Individual Standard RI.01.03.01
5. *Mississippi Hospital Association Law Manual*, Consent Section, 2004 Edition
6. Patients' Rights and Responsibilities, St. Dominic Hospital guideline
7. Rules and Regulations of the Medical Staff

Format last updated: 08/2023

Moderate Sedation Policy

St. Dominic's

Responsible Department: Surgical Services	**Subject:** Moderate Sedation by a Non-Anesthesiologist
Number of Pages: 10	**Replaces Policy:** N/A
Effective Date: 2000	**Date(s) Reviewed* or Revised:** 04/2000, 07/2001, 03/2002, 07/2002*, 09/09/2004*, 01/2009, 07/2009, 10/2009, 05/2012, 04/2013*, 06/2015, 08/2016, 11/2021, 2/22/2024*

SCOPE: Clinical areas

PURPOSE: To describe the administration of approved medications for the intent of moderate sedation in any hospital setting provided that appropriate LIP and RN support and monitoring equipment is available as indicated herein

DEFINITIONS:

- **Exclusion:**

This guideline does not apply to use of moderate sedation medications during mechanical ventilation or therapeutic management of pain, seizures, anxiolysis, or sleep or for the intent of deep sedation or anesthesia.

- Licensed Independent practitioner **(LIP)**

1. General anesthesia: a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory support is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired. If the patient loses consciousness and the ability to respond purposefully, the anesthesia care is a general anesthetic, irrespective of whether airway instrumentation is required.

2. Regional anesthesia: anesthesia affecting only a part of the body, such as a limb. Regional anesthesia techniques can be divided into central and peripheral techniques. The central techniques include neuraxial blocks (epidurals and spinals). The peripheral techniques include plexus blocks and single nerve blocks.

3. Monitored anesthesia care (MAC): anesthesia care that includes the monitoring of the patient by a practitioner who is qualified to administer anesthesia; indications for MAC depend on the nature of the procedure, the patient's clinical condition, and/or the potential need to convert to a general or regional anesthetic. Deep sedation/analgesia is included in MAC.

4. Deep sedation/analgesia: a drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

5. Moderate sedation (conscious sedation): a drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained. The Centers for Medicare and Medicaid Services, consistent with American Society of Anesthesiologists (ASA) guidelines, does not define moderate or conscious sedation as anesthesia.

6. Minimal sedation: a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular function are unaffected. This is not anesthesia.

7. Topical or local anesthesia: the application or injection of a drug or combination of drugs to stop or prevent a painful sensation to a circumscribed area of the body where a painful procedure is to be performed. There are generally no systemic effects of these medications at usual doses, which also are not anesthesia, despite the name.

GUIDELINES:

1. A physician, dentist, nurse practitioner, or physician assistant ("privileged clinician") who is not an anesthesiologist and performs a procedure with moderate sedation must have appropriate clinical privileges.
    a. Appropriate clinical privileges for moderate sedation are defined in the guideline Medical Staff Privileges to Administer Moderate Sedation.

2. A registered nurse who has completed St. Dominic Hospital's competency requirements for administration of moderate sedation (in other words, a qualified RN) that is being supervised by a physician who is authorized to order and supervise moderate sedation will be present and available during the procedure.

3. The minimum number of staff present is two: the privileged physician, dentist, nurse practitioner, or physician assistant performing the procedure and a qualified RN.
    a. A qualified RN is not involved in the procedure and is responsible for:

i. assessing the patient prior to beginning moderate sedation,
ii. administering the medication as ordered during the procedure,
iii. continuously monitoring the patient, and
iv. recovering and transferring the patient to another level or care or home.

b. The qualified RN mentioned in 3.1 can serve no other role in the procedure.
c. If other RN duties are necessary, another RN or qualified staff member must be present.

Pre-Procedure

4. A privileged clinician is responsible for determining and documenting that a patient is an appropriate candidate for any invasive, therapeutic, diagnostic, manipulative, or constraining procedure using moderate sedation.
    a. A privileged clinician is responsible for determining the plan for anesthesia care.

5. Informed consent for the procedure and for the intended level of sedation is obtained and documented.

6. Education about the procedure and moderate sedation is provided to the patient.

7. A pre-sedation evaluation is performed by a person with appropriate clinical privileges to administer moderate sedation as stated in the Anesthesia Services guideline.
    a. The pre-sedation evaluation is performed within 48 hours prior to the procedure that includes:
        i. a review of the patient's medical history, including anesthesia history and drug allergy history,
        ii. current medications,
        iii. history of tobacco, alcohol, substance use or abuse, and
        iv. physical examination of the patient including vital signs, heart and lung sounds, airway assessment.
    b. An ASA Physical Status Classification is determined and documented.

8. The patient's vital signs, current condition including NPO status, and level of consciousness using the Aldrete Scale (Addendum A) are reevaluated and documented by a member of the procedural team immediately prior to the delivery of the first dose of medication(s).

Intra-Procedure

9. A privileged clinician or a qualified RN administers approved drugs and dosages for moderate sedation when the privileged clinician is present.
    a. Medications classified as anesthetic agents are not administered by the RN.
        i. Anesthetic agents may be administered by a physician supervised CRNA.

10. After each administration of moderate sedation, the following is documented every 5 minutes for the duration of the procedure with a minimum of 30 minutes elapsed time since the last dose was administered:
    a. Blood pressure
    b. Pulse
    c. Respiratory rate
    d. Cardiac monitoring
    e. Oxygen saturation
    f. Level of sedation using the Ramsay Sedation Scale (Addendum B).
11. End tidal CO2 is continuously monitored.

12. Medications listed on the Medications for Moderate Sedation list (Addendum C) are administered within the dose ranges delineated.
    a. The list of medications appropriate for use is maintained by Pharmacy Department.

13. The privileged clinician is present and readily available to respond immediately during the procedure.
    a. Presence is defined as either in the room or in the immediate unit, not otherwise involved in another procedure.

Post Procedure

14. Post procedure monitoring is continuous, and timing of post procedure monitoring begins when the procedure is complete.
    a. When a reversal agent is used, monitoring continues in the procedure area for at least 1.5 hours after the reversal agent is given.

15. Post procedure assessment and documentation occurs at least every 15 minutes for at least 30 minutes after the final dose of medication.
    a. Documentation may be continued on the same flow sheet used during the procedure.

16. A patient is considered recovered when blood pressure, pulse, respiratory rate, oxygen saturation, and level of consciousness using the Aldrete Scale reach pre-procedure levels, and the patient has not received any agent for moderate sedation for at least 30 minutes.

17. Patients are discharged from a recovery area or from the hospital by a person with appropriate clinical privileges to administer moderate sedation.
    a. Patients not meeting the discharge criteria after one hour post procedure are evaluated by a physician and documentation of the disposition is noted.
    b. Patients discharged home are released into the care of a responsible adult.

Safety Planning

18. Each department where moderate sedation is administered has the following minimal equipment and supplies immediately accessible.
    a. Oxygen
    b. Suction
    c. Emergency airway equipment
    d. Noninvasive BP monitor or manual BP cuff
    e. Cardiac monitor
    f. Defibrillator
    g. Pulse oximeter.
    h. Emergency medication cart
    i. End tidal CO2 monitor.

19. Patients receiving moderate sedation have a patent IV access, and IV fluids are readily available for administration or resuscitation.

20. A privileged clinician is present and readily available to respond immediately during the procedure.
    a. Presence is defined as either in the room or in the immediate unit, not otherwise involved in another procedure.

RELATED DOCUMENTS:

1. **AORN Guidelines Advisory Board and . July 15, 2021.**
2. American Society of Anesthesiologists, http://www.asahq.org/
3. Anesthesia Services, St. Dominic Hospital guideline
4. Medical Staff Privileges to Administer Moderate Sedation, St. Dominic Hospital guideline
5. ACR-SIR Practice Guideline for Sedation/Analgesia, National Guideline Clearinghouse, http://www.guideline.gov/
6. Anesthesia Evaluations: Pre- and Post-Procedural, St. Dominic Hospital guideline
7. Dawson, R., Von Fintel, N., and Nairn, S. Sedation assessment using the Ramsay scale, *Emergency Nurse*. 18, 3, 18-20. http://dx.doi.org/10.7748/en2010.06.18.3.18.c7825
8. Informed Consent, St. Dominic Hospital guideline
9. Mississippi Board of Nursing, Position Statement, Administration and Management of Intravenous (IV) Moderate Sedation, http://www.msbn.ms.gov/Documents/Sedation2009_1.pdf
10. Moderate Sedation Training Requirements for RNs, St. Dominic Hospital Education Department
11. Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists, *Anesthesiology*, V96, No4, Apr 2002, 1004-1017.
12. Sedation of Pediatric Patients in Diagnostic Imaging, St. Dominic Hospital guideline
13. *Statement on Granting Privileges for Administration of Moderate Sedation to Practitioners Who Are Not Anesthesia Professionals* (Approved by ASA House of Delegates on October 25, 2005, and amended on October 18, 2006)
14. Center for Medicare and Medicaid Services, http://www.cms.gov/
15. Recommended practices for managing the patient receiving moderate sedation/analgesia. (2014). In R. Conner, et al. (Eds.), *Perioperative standards and recommended practices 2014*. Denver, CO: AORN, Inc. (Level VII).

Last Updated: 08/2023

How do I locate stroke policies if I need to reference?

Teamlink→Regions→Jackson (scroll to bottom Medical Services)→**Stroke Services** (scroll to bottom)→ **Guidelines, Policies, and Care flows**

You may also follow this link directly to access/print:

Stroke and stroke related POLICIES 2024

Stroke Clinical Practice Guidelines

Overview

Clinical Practice Guidelines Adopted for Use at St. Dominic's to Guide Care for Our Stroke Patients:

1. **Ischemic Stroke:**

   Acute Ischemic Stroke- Guidelines for the Early Management of Patients with AIS 2019 Update.pdf

2. **Subarachnoid Hemorrhage:**

   SAH-2023 Guideline for the Management of Patients With Aneurysmal Subarachnoid Hemorrhage A Guideline From the American Heart Association-American Stroke Association.pdf

3. **Intracranial Hemorrhage:**

   ICH-2022 Guideline for the Management of Patients With Spontaneous Intracerebral Hemorrhage-A Guideline From the American Heart Association-American Stroke Association.pdf

4. **Reversal of Antithrombotics in Intracranial Hemorrhage:**

   Reversal of Antithrombotics in ICH-Guideline for the Reversal of Antithrombotics in Intracranial Hemorrhage.pdf

*Links provided flow to pdf copies of full clinical practice guidelines publications posted in Teamlink (Jackson region stroke services page).

A **clinical practice guideline** for stroke provides evidence-based recommendations to guide healthcare professionals in delivering high-quality care to stroke patients.

These guidelines are developed by organizations like the **American Heart Association (AHA)**. They cover various aspects of stroke management, including prevention strategies, diagnostic workup, risk factor management, and treatment options.

The **goal is to improve patient outcomes** and ensure consistent, effective care for all stroke patients. You can find detailed guidelines from the AHA and other reputable sources to inform your practice.

Stroke Clinical Practice Guidelines

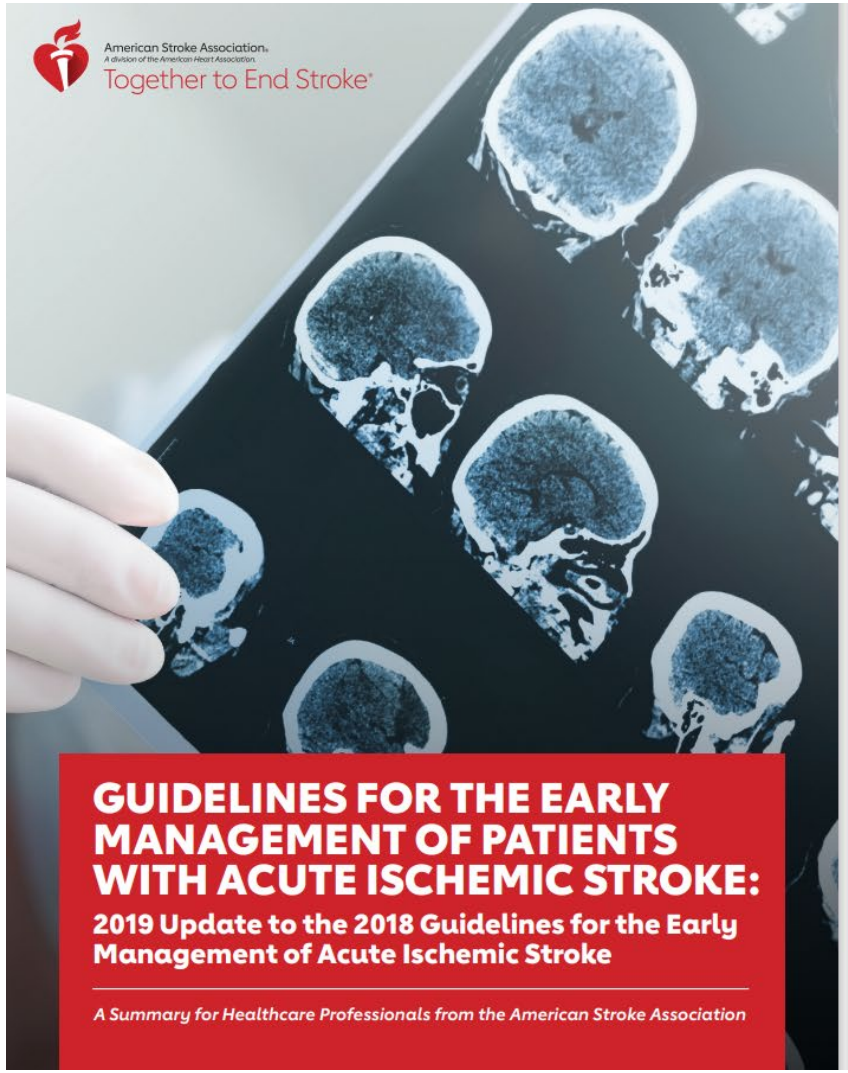
- AHA/ASA
  - Guidelines for the Early Management of Patients with Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke
  - 2022 Guideline for the Management of Patients with Spontaneous Intracerebral Hemorrhage: A Guideline from the American Heart Association/American Stroke Association
  - 2023 Guideline for the Management of Patients with Aneurysmal Subarachnoid Hemorrhage: A Guideline from the American Heart Association/American Stroke Association
- The Neurocritical Care Society
  - 2015 Guideline for Reversal of Antithrombotics in Intracranial Hemorrhage

AIS Guidelines

1.Audience: Intended for prehospital care providers, physicians, allied health professionals, and hospital administrators.

2.Key Areas Covered:

1. Prehospital care
2. Urgent and emergency evaluation
3. Treatment with intravenous (IV) and intra-arterial therapies
4. In-hospital management
5. Secondary prevention measures during initial hospitalization



KEY TAKEAWAYS

The 2019 guideline updates the 2018 acute ischemic stroke (AIS) guideline with content based on recent clinical trials and clarifies previous recommendations. The guideline is a comprehensive one, addressing AIS management from acute symptoms onset in the prehospital phase through two weeks post-acute stroke. It provides guidance on which patients are eligible to receive IV alteplase, mechanical thrombectomy and other care to reduce long-term morbidity. This summary focuses on recommendations related to the diagnosis of acute ischemic stroke and its treatment with IV alteplase and/or mechanical thrombectomy.

- IV alteplase within 4.5 hours of stroke onset remains the standard of care for most ischemic stroke patients, providing the opportunity for more favorable outcomes. Patients eligible for IV alteplase should receive it, even if mechanical thrombectomy is being considered.
- Mechanical thrombectomy evaluation and treatment should occur as rapidly as possible to ensure the treatment of as many eligible patients as possible.
- Mechanical thrombectomy is recommended within 16 hours and reasonable up to 24 hours in selected patients with AIS with large vessel occlusion in the anterior circulation greater than 6 hours from symptom onset who meet certain advanced imaging criteria.
- The benefits of both IV alteplase and mechanical thrombectomy are time dependent. The earlier the treatment within the time window, the greater the benefit to patients.

Regional systems of early stroke care should be developed that coordinate first-contact services with local and regional hospitals to achieve minimum delay time from symptom onset to definitive treatment.

- Recommend brain imaging studies, in most cases non-contrast computed tomography (CT), be performed as quickly as possible for patients who may be candidates for IV alteplase and/or mechanical thrombectomy.
- Time from symptom onset to IV alteplase should be as short as possible and never more than 4.5 hours.
- Time from first stroke symptom to mechanical thrombectomy should be as quickly as possible within up to 24 hours in select patients.
- To achieve expedited care, public awareness of the signs of stroke and importance of calling 9-1-1 immediately by the community is needed.[1]

The path to achieve these goals is represented in the flow chart on the next page

PLEASE REFER TO THE FULL GUIDELINES, AVAILABLE AT STROKE.ORG/AISTOOLKIT, FOR MORE DETAIL ON SPECIFIC RECOMMENDATIONS.
REFERENCES: 1. 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. 2. Modi_ed from Kothari RU, Pancioli A, Liu T, Brott T, Broderick J. Cincinnati Prehospital Stroke Scale: reproducibility and validity. Ann Emerg Med. 1999;33:373-378. With permission from Elsevier. http://www.strokeassociation.org/idc/groups/stroke-public/@private/@wcm/@hcm/@gwtg/documents/downloadable/ucm_428607.pdf 3. Summer D, Leonard A, Wentworth D, et al. Comprehensive Overview of Nursing and Interdisciplinary Care of the Acute Ischemic Stroke Patient. Stroke 2009;40;2911-2944.

Guidelines-for-Mangaging-Patients-with-AIS-2019-Update-to-2018-Guidelines.pdf (stroke.org)

ICH Guidelines

American Stroke Association®
A division of the American Heart Association.
Together to End Stroke®

Key Points

Health Care Systems Organization:

- Recognizing the importance of health care systems, the guideline recommends developing regional systems for initial intracerebral hemorrhage (ICH) care.
- These systems should facilitate rapid transfer to facilities with neurocritical care and neurosurgical capabilities.

Predicting Hematoma Expansion:

- Neuroimaging markers (such as noncontrast computed tomography) help predict hematoma expansion risk.
- Clinical markers (time since stroke onset, antithrombotic use) also play a role.

Identifying Vascular Pathologies:

- ICHs result from specific vascular pathologies.
- The guideline emphasizes identifying markers of both microvascular and macrovascular hemorrhage.

Blood Pressure Management:

- Smooth, sustained blood pressure control after mild to moderate ICH reduces hematoma expansion and improves functional outcomes.

Anticoagulation Reversal:

- Anticoagulated ICH has high mortality.
- Guidelines recommend specific agents (e.g., protein complex concentrate, idarucizumab, and andexanet alfa) for anticoagulation reversal.

ICH-2022 Guideline for the Management of Patients With Spontaneous Intracerebral Hemorrhage-A Guideline From the American Heart Association-American Stroke Association.pdf

In-Hospital Therapies:

- Some historical ICH treatments offer no benefit or may harm patients.
- Prophylactic corticosteroids and platelet transfusions show limited benefit.

Minimally Invasive Approaches:

- Minimally invasive procedures reduce mortality in supratentorial ICH.
- Evidence for functional outcome improvement is neutral.

Life-Sustaining Treatment Decisions:

- Decisions about limiting life-sustaining treatments after ICH are complex.
- Assigning “do not attempt resuscitation” status is distinct from limiting other interventions.
- Baseline severity scales should not be the sole basis for treatment decisions.

Rehabilitation and Recovery:

- Rehabilitation and recovery significantly impact ICH outcomes and quality of life.
- Coordinated multidisciplinary inpatient team care is recommended.
- Early assessment of discharge planning and a goal of early supported discharge benefit mild to moderate ICH patients.
- Rehabilitation activities (e.g., stretching, functional task training) can be considered 24 to 48 hours after moderate ICH.
- However, early aggressive mobilization within the first 24 hours after ICH worsens 14-day mortality.
- Fluoxetine did not improve functional recovery after ICH in multiple randomized trials, although it reduced depression (but increased fracture incidence).

Home Caregiver Support:

- Home caregivers play a crucial role in the ICH care team.
- Guidelines recommend psychosocial education, practical support, and training for caregivers.
- The goal is to improve the patient’s balance, activity level, and overall quality of life.

SAH Guidelines

American Stroke Association®
A division of the American Heart Association.
Together to End Stroke®

Key Points

1. **Access to Specialized Centers**: Timely access to comprehensive stroke centers with dedicated neurocritical care units, experienced staff, and multidisciplinary teams improves patient outcomes.
2. **Acute Rebleeding**: Prompt evaluation and treatment of ruptured aneurysms within 24 hours are crucial to reduce mortality and improve outcomes.
3. **Balancing Risk and Intervention**: Specialists should consider patient and aneurysm characteristics when deciding on endovascular or surgical treatments. Grading scales aid in decision-making.
4. **Medical Complications**: Intensive care bundles, hemodynamic monitoring, and blood pressure management enhance overall outcomes. Routine antifibrinolytic therapy doesn't improve function.
5. **Seizure Management**: Treat new-onset seizures with antiseizure medication for 7 days. Avoid routine prophylactic use but consider it in high-risk patients.
6. **Delayed Cerebral Ischemia**: Monitor for deterioration, detect vasospasm using imaging, and consider continuous electroencephalography in high-grade aSAH.
7. **Nimodipine**: Early enteral nimodipine prevents delayed cerebral ischemia and improves functional outcomes.
8. **Blood Pressure and Euvolemia**: Elevate blood pressure and maintain euvolemia to reduce delayed cerebral ischemia progression.
9. **Imaging After Treatment**: Regular imaging helps plan for remnants, recurrence, or regrowth of treated aneurysms
10. **Identifying Rehabilitation and discharge needs**: Early screening and treatment for physical, behavioral, cognitive and any other deficits affecting QOL

[2023 Guideline for the Management of Patients With Aneurysmal Subarachnoid Hemorrhage: A Guideline From the American Heart Association/American Stroke Association (ahajournals.org)]

Guideline for Reversal of Antithrombotics in Intracranial Hemorrhage

NEUROCRITICAL CARE SOCIETY

Key Points

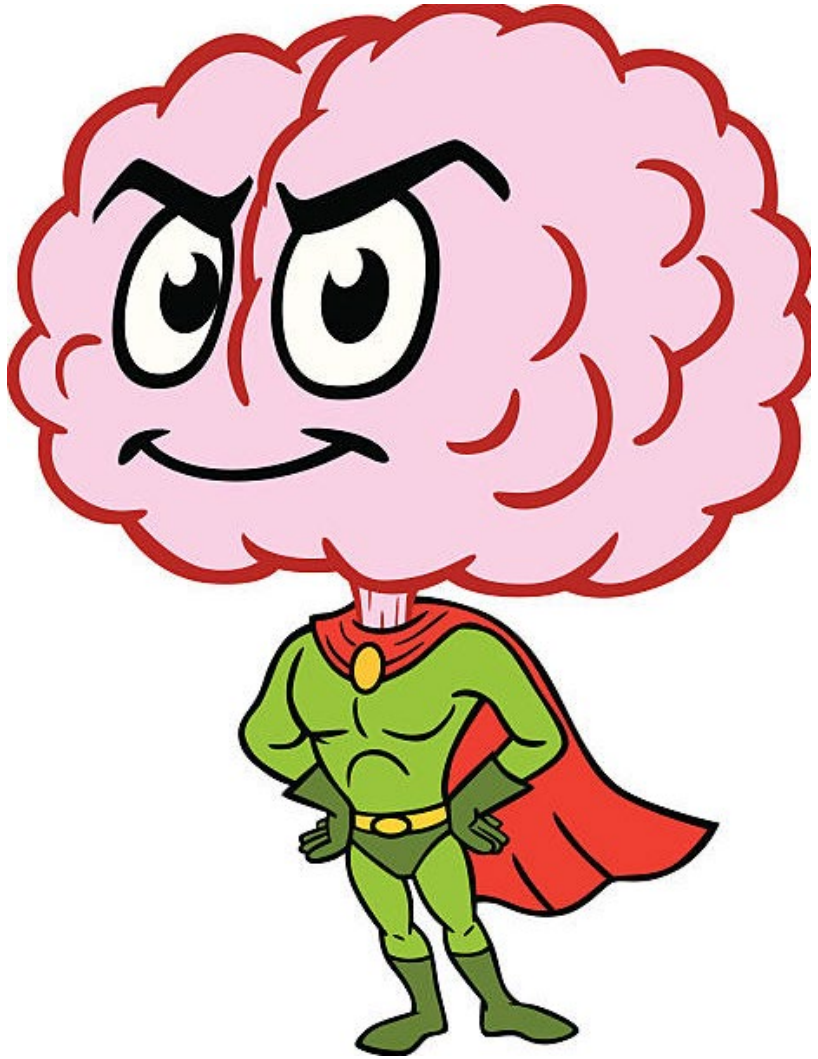
1. **Antithrombotic Agents**: These include anticoagulants, antiplatelet agents, and thrombolytics.
2. **Rapid Reversal Importance**: Although antithrombotic-associated intracranial hemorrhage can be devastating, prompt reversal of coagulopathy may limit hematoma expansion and improve outcomes.
3. **Recommendations**:
    1. Utilizing the GRADE methodology, the guideline committee developed specific recommendations for reversing various antithrombotic agents in the context of intracranial hemorrhage[1]. FINAL_COPY_COAG.pdf (neurocriticalcare.org)

How do I locate stroke CPGs if I need to reference?

- **Teamlink→Regions→Jackson** (scroll to bottom Medical Services)→**Stroke Services** (scroll to bottom)→ **CPGs Clinical Practice Guidelines STROKE 2024**

- You may also follow this link directly to access/print:

CPGs Clinical Practice Guidelines STROKE 2024



THANK YOU for helping us deliver EXCELLENCE in stroke care!