The Meridian Health Stroke Committee would like to provide physicians with updates regarding all of the stroke core measures. Our standards of care for Stroke are the same across all campuses and are housed within our Soarian CPOE order sets. Standardized order sets guide the clinical practice with evidence and are a requirement for Joint Commission stroke certification (DSDF.2[1,4]). Research has shown that the use of standardized orders not only for stroke but among several common medical conditions have resulted in improved patient outcomes and improved utilization of many proven interventions. Costello (2008) showed that the use of standardized stroke orders resulted in improved quality, a team approach to management of the stroke patient, standardization of treatment and timeliness of care which in turn leads to increased quality of care and successful management.

These order sets can be found in Soarian using the ORDER SET Tab, type STROKE and hit SEARCH and you will have the option to pick:

- Acute Ischemic Stroke Telemetry
- Acute Ischemic Stroke ICU- No tPA.
- Acute Ischemic Stroke – tPA.
- Alteplase tPA Acute Stroke
- Intracerebral Hemorrhage
- Transient Ischemic Stroke
- ICU Post Endovascular Treatment

Stroke Performance Measure 1: VTE Prophylaxis (ischemic and hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.)

- Stroke patients are at increased risk of developing venous thrombosis embolus (VTE) due to paralysis of a lower extremity and/or decreased ambulation following a stroke. Recommended treatment is the use of low molecular weight heparin or unfractionated heparin for those stroke patients who are acutely ill or confined to bed. Non-pharmacological measures such as sequential compression devices (SCDs), or pharmacological measures can be used in other stroke patients. Antiplatelet therapy alone, such as aspirin is not recommended to prevent VTE.

Important Points to Remember:

- Day 1 is day of ARRIVAL. If the patient arrives at or before 23:59 this is considered day 1. VTE prophylaxis needs to be ordered AND initiated the following day BEFORE 23:59 for measure to be met.
- If patient is ambulatory, documentation should explicitly state that ambulation is the reason prophylaxis is not needed. Documentation that patient is ambulatory alone without mention of VTE prophylaxis is not sufficient to meet measure.
- Graduated compression stockings alone are not sufficient to meet this measure and require documentation for not administering another form of prophylaxis.
✓ Contraindication to therapy must be documented by a Physician/APN/PA or Pharmacist and the reason needs to include both pharmacological and non-pharmacological measures if neither is going to be ordered.

Stroke Performance Measure 2: Discharged on Anti-thrombotic Therapy (ischemic stroke patients prescribed anti-thrombotic therapy at hospital discharge)

- Guidelines recommend that anti-thrombotic therapy be prescribed at discharge following acute ischemic stroke to reduce stroke mortality and morbidity as long as there are no contraindications to such therapy. If the source of the stroke is due to a cardioembolic origin (e.g., atrial fibrillation, mechanical heart valve, etc) then anti-coagulation such as Warfarin (Coumadin) is recommended unless contraindications are present. Anti-coagulation therapy is generally not recommended for secondary prevention of strokes of non-cardioembolic sources.

Important Points to Remember:

✓ Reasons for not prescribing anti-thrombotic therapy needs to be explicitly documented by a Physician/APN/PA or Pharmacist in the medical record.
✓ An allergy to one anti-thrombotic agent would NOT be a reason for not administering all anti-thrombotics. Another medication can be ordered.
✓ Anti-coagulants at doses (low doses) designed to prevent VTE are insufficient as anti-thrombotic therapy to prevent recurrent ischemic stroke or TIA.
✓ Anti-coagulants at full dose are considered acceptable treatment options for both VTE and anti-thrombotic medication.

Stroke Performance Measure 3: Anti-coagulation Therapy for Atrial Fibrillation/Flutter (ischemic stroke patients with atrial fibrillation/flutter who are prescribed anti-coagulation therapy at discharge)

- Nonvalvular atrial fibrillation is a significant risk factor for ischemic stroke. Prior stroke or TIA is among a limited number of predictors for high stroke risk within the atrial fibrillation patient population. Several clinical trials have shown the initiation of anti-coagulation therapy to be an effective treatment in the prevention of recurrent stroke in the high risk atrial fibrillation patient population following acute stroke as long as there are no identified contraindication to such therapy.

Important Points to Remember:

✓ Reasons for not administering anti-coagulation therapy needs to be documented by a Physician/APN/PA or Pharmacist. If reasons are not mentioned in the context of anti-coagulation therapy inferences cannot be made and measure is not met. Reasons needs to be explicitly documented in the medical record.
✓ An allergy or adverse reaction to one anti-coagulant therapy agent would NOT be a reason for not administering all anti-coagulants. Another medication can be ordered.
Stroke Performance Measure 4: Thrombolytic Therapy (Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV tPA was initiated at this hospital within 3 hours of time last known well)

- Several clinical trials have shown the use of the thrombolytic therapy within three hours to eligible patients to be beneficial. The major society guidelines in the United States all recommend the use of thrombolytic therapy for all eligible patients. It has also been shown to be beneficial for patients who arrive at the hospital at three hours and given up to four and a half hours. (ASA, 2009).

Important Points to Remember:

- Reasons for not initiating IV thrombolytic therapy needs to be documented by a Physician/APN/PA or Pharmacist with exceptions: patient/family refusal, and initiation of IV or IA thrombolytic therapy at a transferring hospital, these exceptions may be documented by a nurse. Reason documentation needs to refer to the timeframe for thrombolytic therapy.
- Contraindications and/or warnings needs to be mentioned in the context of IV thrombolytics. Abstractors cannot make inferences as to contraindications/warnings based upon the presence of certain patient clinical characteristics and conditions in the medical record, but will only abstract reasons specifically documented.
- It is okay to document reasons for non-treatment after the decision has occurred. This should be done only when documentation is written by an appropriate provider who was involved in the IV tPA decision but was unable to document at the time and should be done prior to discharge of the patient.

Stroke Performance Measure 5: Anti-thrombotic Therapy By End of Hospital Day 2 (ischemic stroke patients administered anti-thrombotic therapy by the end of hospital day 2)

- Several clinical trials have shown the effectiveness of anti-thrombotic therapy at reducing stroke mortality/morbidity and stroke recurrence rates following acute stroke. Current evidence recommends that anti-thrombotic therapy be administered within the first 2 days following acute ischemic stroke to reduce mortality and morbidity as long as no contraindications exist.

Important Points to Remember:

- To calculate end of Hospital Day 2, count the day of arrival at the hospital as day 1. If patient arrived at the hospital at or before 23:59 then this would be considered hospital day 1. Anti-thrombotic therapy needs to be ordered and given prior to 23:59 the following day for this measure to be met.
- Anti-thrombotic medication administered at home or prior to arrival cannot be counted towards this measure.
- Reasons for not administering anti-thrombotic therapy by end of hospital day 2 needs to be documented by a Physician/APN/PA or Pharmacist and in the context of anti-thrombotic therapy.
- Orders to hold anti-thrombotic therapy without a documented reason is NOT acceptable for the measure to be met. Exception to this would be holding anti-thrombotic therapy for 24 hours following the administration of thrombolytic therapy.
Stroke Performance Measure 6: Discharged on Statin Medication (ischemic stroke patients with LDL greater than or equal to 100mg/dL, or LDL not measured, or who were on lipid-lowering medication prior to arrival are prescribed medication at hospital discharge)

- Recent clinical trials and current guidelines have shown that patients with atherosclerotic stroke and an LDL >100 mg/dL who are prescribed statins following acute ischemic stroke have a significant reduction in recurrent stroke. As a result of this it is now recommended that lipid lowering therapy using statins should be prescribed at discharge for patients with stroke or TIA of atherosclerotic origin who have an LDL >100mg/dL (or with LDL<100mg/dL due to being on lipid lowering therapy prior to admission to the hospital)

Important Points to Remember:

✓ Reason for contraindication needs to be explicitly documented by a Physician/APN/PA or Pharmacist for not prescribing a statin medication in order for measure to be met
✓ Documentation of an allergy/sensitivity to one particular statin medication is acceptable to take as an allergy to the entire class of statin medications.
✓ If there is a delay in starting/restarting statin therapy, there needs to be a reason/problem underlying the delay documented in the medical record for the measure to be met.

Stroke Performance Measure 8: Stroke Education (ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke)

- Providing education has shown to increase healthful behaviors, improved health status and/or decreased healthcare costs. Guidelines recommend patients and/or family receives education during hospitalization as well as information about resources and social support services. Stroke education needs to include information about the type of stroke the patient had, cause of the stroke, risk factors related to the stroke, the role of medications for secondary preventions and the importance of lifestyle modification to reduce recurrent stroke.

Important Points to Remember:

✓ All elements identified in the performance measure needs to be documented in the medical record for the measure to be met. It is an all or nothing measure. There is a stroke educational care plan in Soarian that has all elements included in it for nursing staff to document educational efforts.
✓ Meridian has educational books for Acute Ischemic Stroke and Hemorrhagic Stroke that is provided to patient and/or family during their hospital stay. These books include images of brain anatomy and circulation to help health providers explain stroke localization to the patient and family.
✓ If the patient is cognitively impaired and no family is available for education then this patient is considered excluded from the performance measure.
**2014 Stroke Core Measure Update**

**Meridian Neuroscience**

**Stroke Performance Measure 10: Assessed for Rehabilitation** (ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services)

- Approximately 795,000 people suffer a stroke each year. Forty percent of stroke patients are left with moderate functional impairments following their stroke and fifteen to thirty percent are significantly impaired. Therefore stroke is considered the leading cause of long term disability in the United States. Current evidence shows that patients have better clinical outcomes when there is a coordinated, multidisciplinary stroke related evaluation and therapy service program in place. The primary goal of rehabilitation is focused towards prevention of complications, minimization of impairments and the maximization of function for the stroke patient.

**Important Points to Remember:**

- If there is a reason for not completing a rehabilitation assessment there needs to be documentation related to this in the medical record for the measure to be met (for example: “Patient returned to prior level of function, rehabilitation not indicated at this time” OR “patient unable to tolerate rehabilitation therapeutic regimen”, etc)

**Quality Measures for Stroke**

Quality measures are stroke measures that are not reported to Joint Commission but are still American Stroke Association Guidelines and evidence based practice for stroke that is necessary for certification. Joint Commission will specifically look for compliance with these guidelines and evidence based practice protocols during review so it is important to show how we are doing on each of these.

**Quality Measure: Dysphagia Screening** (ischemic or hemorrhagic stroke patients who receive a standardized dysphagia screen prior to receiving any oral intake including food, fluid or medications)

- Dysphagia is defined as a swallowing problem which can be relatively common following acute stroke and a prevalence ranging from 25% to 50%. Frequency of dysphagia depends on the site of the lesion. Right hemispheric strokes have approximately a 13% risk of dysphagia. The greatest risk of dysphagia is in patients with bilateral brainstem infarctions. For patients with dysphagia 43% to 54% will go on aspirate and 37% will develop pneumonia. Therefore, all stroke patients are kept NPO until a formal dysphagia screen can be performed to ensure the patient can swallow safely.

**Important Points to Remember:**

- The dysphagia screen needs to be a “standardized method” for this measure to be met. Physician documentation that patient swallow assessed and patient okay to swallow is not acceptable.
Nurses are certified and have a standardized screen built into the Soarian Stroke chapter. All nurses working in the ED, CCU and stroke units can perform swallow screens. If you need a patient screened ask one of these nurses to perform this prior to giving the patient any oral intake or ordering a diet. This includes ANY medications or ice chips.

The dysphagia screen needs to be documented prior to a diet order or medication being given for the measure to be met.

If there is ANY suspicion that this patient may be a stroke perform a dysphagia screen needs to be completed first because this measure is not recoverable once the patient receives oral intake.

References:

3. Joint Commission (2013) Disease Specific Care Manual: Advanced Disease-Specific Care Certification Care Requirements for Primary Stroke Center