CHRISTIANA CARE HEALTH SERVICES POLICY

POLICY TITLE: Neurosurgical Consultation Guidelines
LAST REVISION/REVIEW DATE: January 5, 2015
DATE OF ORIGIN: June 25, 2010

POLICY:
Christiana Care is committed to optimizing neurosurgical resources while providing efficient, high quality care to patients with neurologic illness and injury.

PURPOSE:
To provide guidelines for neurosurgical consultation

SCOPE:
Christiana Care Health Services and the Medical-Dental Staff

DEFINITIONS:
For the purpose of the policy, the following abbreviations apply:

- DAI – Diffuse Axonal Injury
- EM – Emergency Medicine
- GCS – Glasgow Coma Score
- ICH - Intracranial Hemorrhage -
- IVH – Intraventricular Hemorrhage
- NCC – Neurocritical Care
- RRT – Rapid Response Team
- SAH – Subarachnoid Hemorrhage

PROCEDURES:
When deemed appropriate by the emergency physician or other physician responsible for the care of the patient, neurosurgical consultation should be considered and requested as follows:
I. URGENT CONSULTATION:
   A. TRAUMA: The trauma attending will notify the neurosurgery attending on call via an attending to attending telephone call for any of the following conditions:

   1. Lateralizing signs (pupil asymmetry or non-reactivity, hemiparesis) with positive head CT scan finding
   2. Depressed skull fracture (> width of table)
   3. CT scan of head with:
      a. Mass effect
      b. Compressed cisterns
      c. Massive edema
   4. GCS ≤8 and ANY positive head CT scan finding (may require ICP monitor)
   5. Complete or incomplete spinal cord injury

   B. TRAUMA: The provider on call for spine will be contacted via attending to attending telephone call:

   1. Unstable spine fracture (≥ 2 columns or 3 mm subluxation)

C. HEMORRHAGIC STROKE:

   1. For emergency department patients, the EM provider will notify the NCC Intensivist provider, who will evaluate the patient and notify the neurosurgery provider via a provider to provider phone call, if appropriate.
   2. For inpatients, the attending or RRT physician will notify the NCC Intensivist provider, who will notify the neurosurgery provider via a provider to provider phone call if appropriate.
   3. Refer to Stroke Admission (Intracranial Hemorrhage and Ischemic Stroke) policy. For any of the following conditions:
      Non-traumatic SAH (assumed to be a ruptured aneurysm until proven otherwise)
      b. IVH
      c. Non-traumatic ICH (except cerebral infarction with asymptomatic hemorrhagic transformation. (See section IIIB)

D. Other NON-TRAUMATIC NEUROSURGICAL CONDITIONS:

   1. For emergency department patients, the EM provider will notify the NCC Intensivist provider, who will evaluate the patient and notify the neurosurgery provider via a provider to provider phone call if appropriate.
   2. For inpatients, the attending or RRT physician will notify the NCC Intensivist provider, who will notify the neurosurgery provider via a provider to provider phone call if appropriate.
3. Refer to Stroke Admission (Intracranial Hemorrhage and Ischemic Stroke) policy. For any of the following conditions:
   a) Spinal conditions with NEW neurological deficit.
   b) Symptomatic cerebral mass
   c) Acute hydrocephalus

E. Other CRITICAL NEUROLOGICAL CONDITIONS:

   1. For emergency department patients: The EM provider will notify the NCC Intensivist provider, who will evaluate the patient and notify the neurosurgery provider via a provider to provider phone call if appropriate.
   2. For inpatients: The attending or RRT physician will notify the NCC Intensivist provider, who will notify the neurosurgery provider via a provider to provider phone call if appropriate.
   3. Refer to Stroke Admission (Intracranial Hemorrhage and Ischemic Stroke) policy. For any of the following conditions:
      a) Cerebral infarction with mass effect
      b) Acute cerebral infarction with symptomatic mass effect or malignant edema.

II. NON-URGENT CONSULTATION DUE TO:

A. TRAUMA: The trauma or ED provider will notify the neurosurgery provider on call via a provider to provider phone call for any of the following conditions:

   1. GCS < 15 and “non-urgent” CT scan of head findings including but not limited to:
      a. Small extra-axial hemorrhage and no mass effect
      b. Contusion(s) without mass effect
      c. Diffuse Axonal Injury (DAI)
      d. Non-depressed skull fracture
      e. Subarachnoid hemorrhage (SAH)
   2. Minimally depressed skull fracture (< width of table)
   3. Stable spine fracture (1 column and < 3 mm subluxation)
   4. Spinal conditions, other than fractures, without new neurological deficit after imaging studies completed
III. NO CONSULTATION NEEDED:
A. TRAUMA:

1. GCS =15 and “non-urgent” CT scan of head findings including but not limited to:
   a. Small extra-axial hemorrhage without mass effect
   b. Contusion(s) without mass effect
   c. Non depressed skull fracture without associated ICH
   d. Basilar skull fracture without associated ICH
2. Negative CT scan of head
3. Spinous or transverse process spinal fractures

B. NON-TRAUMATIC:
1. Cerebral infarction with asymptomatic hemorrhagic conversion

REFERENCES:

f. Morgenstern, L. B. et al. Guidelines for the Management of Spontaneous Intracerebral Hemorrhage. Stroke 2010; 41: 00-00