Guidelines for Evaluation and Management of Neurosurgical/Spine Trauma Patients

1. All patients arriving at VUMC as a Level 1 trauma, including isolated gunshot wounds to the head will be evaluated by the Trauma Surgery Service. Any critically ill (intubated) and/or multi-trauma patient will be admitted by the Trauma Service. If after full work up in the ED by the Trauma Team, including the Trauma Attending, and 24 hours observation on the Trauma Service and for a hemodynamically stable patient where only an isolated Neurosurgical injury requiring operative intervention is found, Neurosurgery will agree to transfer the patient to the Neurosurgery Service.

2. If a patient is referred to VUMC through the Transfer Center and was involved in a MVC, fall from a significant height or sustained significant trauma which could involve more than one organ system, the Trauma Surgery Service will determine acceptance to Vanderbilt for evaluation and management. If after full work-up in a hemodynamically stable patient, an isolated Neurosurgical (head or spine) injury is found that requires Neurosurgical operative intervention, guideline number 1 will apply after Attending-to-Attending discussion.

3. All patients arriving at VUMC as a Level 2 trauma will be evaluated by the ED service. If after full work up and evaluation by the ED attending and Trauma Team, an isolated Neurosurgical injury requiring Neurosurgical operative intervention is found, that patient will be transferred to the Neurosurgical Service for further management and disposition, postoperatively. If indicated, non-operative isolated Neurosurgical injuries will be observed on the Trauma Service.

4. No patient may be accepted by one service and then admitted to the other service without consultation and mutual agreement between the attending on call of the Neurosurgical Service and/or Ortho Spine Service and the Trauma Service.

5. If operative intervention is necessary in an isolated neurosurgical injury, that patient will be managed on the Neurosurgical service and appropriate follow-up organized. Patients sustaining closed head injury not requiring Neurosurgical operative intervention will not be referred to the Neurosurgical clinic for further follow-up or rehabilitation. For multi-trauma patients going emergently to the OR from the ED, a conversation should take place prior to incision between Trauma and Neurosurgery to determine admission destination. In most instances, these patients should be admitted to the Trauma service and go to the Trauma ICU post operatively.

6. If operative intervention is necessary in an isolated spine injury, that patient will be managed on the corresponding spine service (Ortho spine or Neuro spine) and appropriate follow-up organized. Patients requiring MAP goals post operatively will go to the Neuro Care Unit if beds available and be placed on the Spine Service as Primary. If a bed is not available, the patient will be managed on the TICU with clear plans to transfer to Spine service once MAP goals complete. Patients sustaining isolated spine injuries not requiring operative intervention will not be referred to the spine clinic for further follow-up or

rehabilitation. Patients with operative spinal cord injuries that meet any of these High-Risk Definitions will be managed by the Trauma Service.

- **High Risk Definition**:

Cardiac Disease (MI within last 6 months, active myocardial ischemia, CHF)
COPD requiring home oxygen.
Significant Liver Disease (MELD >20)
ESRD on dialysis
Coagulopathy (including home anticoagulants, not ASA)

- **Clinical Decline Pathway**:

Any Spine patient originally admitted to the Trauma service that experiences clinical decline and requires transfer to higher level of care (ICU or stepdown unit), patient will be transferred back to the appropriate Trauma Service after discussion has occurred between appropriate Attendings for each service.

7. If a non-neurosurgical injury is found in a delayed fashion, either in-house or during clinic visits, the Trauma Surgery Service will agree to resume management of the patient expeditiously and organize appropriate workup and management with additional consultation and disposition as necessary.

8. If a referring physician wishes to discuss transfer of a patient with an isolated injury directly with a VUMC Neurosurgeon, that surgeon should not defer that decision to a Trauma attending.

9. Any patient transferring services must have a Transfer Summary in Estar.

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