Standard of Care:
Traumatic Brain Injury

(To include: head trauma, i.e. injury to brain and intracranial preoperative and postoperative hematomas)

OBJECTIVES:
1. To provide physiological support of patient during acute phase in order to enhance neurological recovery.
2. To prevent potentially fatal increased intra-cranial pressure (ICP).
3. To provide emotional support as well as ongoing education to family and patient in order to enhance adaptive coping mechanisms.

PROCESS STANDARDS:
1. Patient airway and adequate ventilation will be established and maintained until no longer deemed necessary by physician.
2. Total patient assessment will be performed and documented every 4 hours, along with any change in patient's baseline.
3. Vital signs should be monitored every 15 minutes if condition is unstable and every hour if condition is stable. Vital signs to include: HR, respirations, BP and any invasive hemodynamic pressure monitoring and/or intracranial monitoring.
4. Neurological assessment utilizing the Glasgow Coma Scale will be done and documented every hour x 24 hours then every 1-4 hours until neurological status is stable.
5. The RN should be aware of precipitative signs of increased ICP, which may include:
   A. Cushing's response: increased BP, increased pulse pressure, and decreased pulse rate, irregular respiratory pattern.
   B. Altered LOC, agitation, or change in response to pain.
   C. C/O headache.
   D. Nausea and vomiting.
   E. MD will be notified of any changes indicative of increased ICP or declining neurological status immediately.
6. The following measures should be carried out to facilitate the prevention of increased ICP:
   A. Administration of medications as ordered by physician.
   B. Keep HOB 30-40 degrees to aid in cerebral venous return.
   C. Keep head in midline to prevent compression of internal jugular vein.
7. If ventricular drainage is being instituted by means of ventriculostomy bag it is to be cared for and manipulated by physician only. RN is, however, responsible for visual recording of drainage and documenting position of bag. The drainage bag should be maintained at level determined by physician.
8. Any signs of CSF, rhinorrhea or otorrhea should be documented and reported immediately to physician.
9. Instruct awake patient to avoid valsalva maneuvers and vigorous coughing or any activity that will increase intracranial pressure.
10. A quiet, peaceful environment should be provided for patient.
11. Monitor hourly intake and output, daily weights, electrolytes, and auscultate lungs carefully for rales. Avoid fluid volume excess or deficit. Urine output should not be <30 cc/hour and not >300 cc/hour or MD is notified.

12. Invasive intracranial pressure and CPP monitoring should be documented every hour. Adequate wound care should be provided as ordered by physician.

13. Any neurological changes should be reported to physician immediately after change noted. Physician response should be documented in nurse's notes.

14. Ongoing education should be provided to family and patient on daily basis and documented. Family should be allowed to visit per hospital policy unless otherwise indicated, i.e. procedures in progress, etc.

16. Na <130 and >145 are reported to MD.

17. Head dressing to be changed by physician unless ordered by physician and in such case precise orders should be written. Wound and dressing should be assessed and recorded each shift and PM.

18. Skin should be assessed every 4 hours and turned every 2 hours (unless contraindicated) and documented.

OUTCOME STANDARDS:
1. No complications are present relating to immobility and/or prolonged bed rest.
2. Optimal recovery from intracranial injury.
3. ICP WNL; 0-10 mm Hg.
4. The patient and or family verbalizes understanding of disease process, plan of care, and procedures.

Reference: