Neurologic Assessment
HEAD INJURY PROTOCOL
Even though the brain is the most protected organ of the body, and it is completely encased in bone, a brain injury can occur with any significant blow to the head.

Brain injury can result from falls or accidents, being struck by an object or person, or can result from internal pathology, such as a stroke or ruptured aneurism.
So when do you need to do a Neurologic Assessment?

- Whenever a patient experiences a sudden change in mental status or level of consciousness
- Whenever a head injury is suspected (following a fall or blow to the head)
- Whenever a patient is found on the floor for an unknown reason and appears to be dazed, confused or unconscious
There are 3 spheres of assessment for signs and symptoms of a brain injury:

- Neurological/Physical
- Balance/Coordination
- Cognitive

SIGN & SYMPTOMS OF A BRAIN INJURY
Neurological/Physical Signs & Symptoms:

- Visual signs/symptoms

  - Blurred or altered vision
  - Unequal pupil size
  - Lack of pupil response to light
  - Nystagmus (“dancing eyes”)
  - Poor visual tracking
  - Decreased peripheral vision
Other Neurological/Physical Signs & Symptoms:

- Headache
- Dizziness
- Dazed Appearance
- Rhinorrhea (fluid from nose)
- Otorrhea (fluid from ears)
- Nausea/vomiting
- Raccoon eyes (discoloration around the eyes)
- Retrograde amnesia
- Slurred speech
Other Neurological/Physical Signs & Symptoms:

- Seizures
- Weakness or asymmetrical peripheral strength levels
Signs and Symptoms Related to Balance and Coordination Disturbance:

- Inability to touch finger to nose (with eyes open, then closed)
- Unsteady or staggering gait
- Inability to balance on one foot
Cognitive Signs & Symptoms of Head Injury:

- Disorientation to person, place or time
- Short term memory loss
- Confusion
- Inability to perform mental tasks
- Inability to process and comply with instructions
• Some brain injuries are acute in nature, progress rapidly, and are evident on assessment almost immediately.

• Some brain injuries can progress slowly, and signs and symptoms of increased intracranial pressure or brain injury might not be obvious for up to 72 hours after the initial trauma.
Nursing Policy #130.06
“Assessment of Possible head Injury – Neuro Checks”

- RN completes a neurological assessment immediately following discovery of a suspected brain injured patient, noting results of the assessment on the “Neurological Assessment Flow Sheet”
- RN or LPN completes a neurological assessment every ½ hour for 1 hour (total of 3 the first hour), then at least every 4 hours for the next 72 hours, more often if needed.
Start the flow sheet to document the initial neurologic assessment.

Indicate the date and time of the initial assessment at the top of the first column.

Indicate the number, letter or symbol that corresponds to the assessment findings in each of the first 7 rows of the column.

Indicate the pupil size noted in each eye using the pupil size chart as a reference.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
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**Eyes Open**
- 4 = Spontaneous
- 3 = To speech
- 2 = To Pain
- 1 = None
- 0 = Eyes closed by edema

**Best Verbal Response**
- 5 = Oriented & Alert
- 4 = Confused
- 3 = Inappropriate Words
- 2 = Incomprehensible Sounds
- 1 = None
- 0 = Usually confused/ non-verbal

**Best Motor Response**
- 6 = Obey Commands
- 5 = Localizes (Pain)
- 4 = Withdraws (Pain)
- 3 = Flexion (Pain)
- 2 = Extension (Pain)
- 1 = None

**Limb Movement - Arms**
- 6 = Usual Strength
- 5 = Mild Weakness
- 4 = Severe Weakness
- 3 = Abnormal Flexion
- 2 = Extension
- 1 = No response

**Limb Movement - Legs**
- 6 = Usual Strength
- 5 = Mild Weakness
- 4 = Severe Weakness
- 3 = Abnormal Flexion
- 2 = Extension
- 1 = No response

**Pupil Reactivity Right**
- + = Reacts to Light
- - = No Reaction
- 0 = Eyes Closed

**Pupil Reactivity Left**
- + = Reacts to Light
- - = No Reaction
- 0 = Eyes Closed

**Pupil Size Right**
- mm (see scale below)

**Pupil Size Left**
- mm (see scale below)

**Pulse**

**Respirations**

**Blood Pressure**

**Initials**
(Signature + Initials on back)

*Complete additional assessment on back.*
Document the remainder of the assessment on the back of the flow sheet.

Again, indicate the date and time of the assessment.

Document assessment findings for the next 11 rows in the first column, indicating “Y” for yes or “N” for no. **Document in the progress notes in the patient record for any “yes” finding in your assessment.**

Sign your initials at the bottom of the column.
Place your signature and initials in one of the spaces provided on the form.

Note the date and time of the injury or when the possible brain injury was first detected.

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## Neurological Assessment Flow Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Headache (Y or N)</th>
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<tbody>
<tr>
<td>Nausea (Y or N)</td>
</tr>
<tr>
<td>Vomiting (Y or N)</td>
</tr>
<tr>
<td>Balance impairment (Y or N)</td>
</tr>
<tr>
<td>Sobriety (Y or N)</td>
</tr>
<tr>
<td>Unusual irritability (Y or N)</td>
</tr>
<tr>
<td>Memory Loss (Y or N)</td>
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<tr>
<td>Abnormal skin temp/color (Y or N)</td>
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<tr>
<td>Drainage from ears or nose (Y or N)</td>
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<tr>
<td>Head wounds or lacerations (Y or N)</td>
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<tr>
<td>Neck rigidity (Y or N)</td>
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</tbody>
</table>

**INITIALS** (signature + initials below)

If yes to any of the above, document in progress notes

<table>
<thead>
<tr>
<th>Signature</th>
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Date of Injury: _____________  Time of Injury: _____________

**Instructions:**

1. Head injury assessment protocol will be implemented on all patients who have sustained a blow to the head, or who are suspected of sustaining a possible head injury, including patients who have fallen or who have collapsed on the ground.
2. Initial assessment is to be completed by a Registered Nurse, and should occur immediately following the incident.
3. Subsequent reassessment may be completed by a RN or LPN, and should occur every 24 hours for the first hour following the incident, and then every 4 hours for the next 72 hours, or more often if indicated.
4. Report the initial assessment to the physician and to the nurse supervisor.
5. The RN will report any abnormal signs or symptoms, or any significant change in patient condition or vital signs immediately to the physician, and then to the nurse supervisor.
6. The RN will contact the physician 24 hours after the incident to report patient's assessment findings. The physician will determine if assessment may be continued for the full 72 hours, or if assessments are no longer necessary. The RN will document the conversation with the physician and assessment instructions in the patient record.
7. During the assessment period, the assessment form is to be kept with the shift report. When completed, the form is to be filed in the graphics section of the patient record.
• Contact the physician to notify of the suspected brain injury, and provide the results of your assessment to the physician, noting any areas of concern or abnormalities.
• Notify Nurse Supervisor of the assessment findings and the incident.
• Complete an incident report, if needed.
• Make sure when doing neurological assessments, you compare your assessment findings with the previous assessments.

• Note any trends in assessment findings, including subtle trends in vital signs changes.
Contact the physician following any neurological assessments that

- contain abnormal results as compared to the individual patient’s norms.
- indicate a significant change in the patient’s condition or vital signs.

Also contact the Nurse Supervisor with the above information.
• The RN is to contact the physician 24 hours after the incident to report on the patient’s condition and the assessment findings.

• The physician will decide whether to discontinue the assessments, or to continue the assessments for the full 72 hours.

• The RN will document the conversation with the physician in the patient record.

Contact the physician
Keep the form on the clipboard with the shift report until the assessments for the incident are discontinued.

When assessments are discontinued, file the form(s) in the graphics section of the patient record.

In addition to keeping blank forms on the unit, blank forms will also be kept in the emergency bags with the code blue forms.
You have completed the inservice on Neurological Assessments

Name: ____________________________

Date: ____________________________

Print, sign and date this page, and send to the Nursing Administration Office (Terry Slayback) to receive credit for this inservice.