Module A-3: Application of the Nursing Process in Caring for Adult Patients with Common Health Problems of the Neurological System

1. Statement of Purpose

Patients with neurological dysfunction represent a tremendous challenge to nursing care because of the complexity of their symptoms, frequent involvement of other systems, and their prolonged rehabilitative course. Nurses need to have a thorough knowledge of pathophysiology of conditions affecting the brain and spinal cord. It is also the nurse's responsibility to be supportive and encourage patients and their families to have positive attitudes toward improvement. This module emphasizes common health problems of the neurological system in the adult patient. Special consideration is given to nursing management including psychological and cultural aspects of care.

2. Terminology - RN

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<tr>
<th>Cerebral Vascular Accident (CVA)</th>
<th>Anosmia</th>
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<tr>
<td>Cerebral Vascular Disease</td>
<td>Aphasia</td>
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<td>Transient Ischemic Attacks (TIA)</td>
<td>Huntington's Chorea</td>
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<td>Epidural Hematoma</td>
<td>Myasthenia Gravis</td>
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<td>Stroke</td>
<td>Parkinson's Disease</td>
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<td>Subdural Hematoma</td>
<td>Multiple Sclerosis</td>
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<td>Extradural Hematoma</td>
<td>Amyotrophic Lateral Sclerosis</td>
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<td>Decorticate</td>
<td>Status Epilepticus</td>
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<td>Decerebrate</td>
<td>Myelin</td>
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<td>Flaccid</td>
<td>Axon</td>
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<td>Subluxation</td>
<td>Endarterectomy</td>
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<td>Jacksonian Seizure</td>
<td>&quot;Stroke in Evolution&quot;</td>
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<td>Spinal Shock</td>
<td>Contralateral</td>
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<td>Autonomic Dysreflexia (Hyperreflexia)</td>
<td>Dysphasia</td>
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<td>Stryker Frame</td>
<td>Aneurysm</td>
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<td>Circo-electric Bed</td>
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<td>Burr Holes</td>
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<td>Meniere's Disease</td>
<td>Brown Squeard's Syndrome</td>
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<td>Tic Douloureux (Trigeminal Neuralgia)</td>
<td>Nucleus Pulposus</td>
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<td>Bell's Palsy</td>
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<td>Poliomyelitis</td>
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Terminology - VN

Cerebral Vascular Accident (CVA) Parkinson's Disease
Cerebral Vascular Disease Multiple Sclerosis
Transient Ischemic Attacks Amyotrophic Lateral Sclerosis
(TIA) Status Epilepticus
Epidural Hematoma Dysphasia
Stroke Aneurysm
Subdural Hematoma Concussion
Extradural Hematoma Contusion
Flaccid Brown Squeard's Syndrome

Subluxation Sciatica
Stryker Frame Glioma
Circo-electric Bed Meningioma
Burr Holes Craniotomy
Meniere's Disease Craniectomy
Tic Douloureux Tetanus
(Trigeminal Neuralgia) Poliomyelitis
Bell's Palsy Rabies
Aphasia
Huntington’s Chorea
Myasthenia Gravis

3. Classroom Objectives
3.1
a. Identify the special nursing needs of patients with neurological conditions.
b. Discuss the psychological and emotional needs of patients with a neurological dysfunction; include the physiological and emotional needs of the family
c. Describe the early and late clinical manifestations of increased intracranial pressure.
d. Identify the multi-system needs of the unconscious patient.
e. Identify the risk factors of stroke and discuss health teaching needs for stroke prevention.
f. Describe possible infectious processes that result in neurological impairment.
g. Compare the various types of stroke, their causes, clinical manifestations, and nursing management.
h. Explain common pharmacological agents used in treating conditions of increased intracranial pressure.
i. Explain the types of, and the nursing management of, the aphasic
patient.
j. Discuss the rehabilitation process of stroke patients with emphasis on their cultural attitudes and beliefs.
k. Compare Parkinson's Disease and Multiple Sclerosis, their causes, clinical manifestations, drug therapy and nursing interventions.
l. Describe brain tumors, their classification, clinical manifestations, diagnosis, and treatments.
m. Describe the preventative aspect of nursing care for patients with spinal cord injury.
n. Discuss the physical, psychosocial and rehabilitative needs of the paraplegic patient.
o. Identify systemic alterations resulting from neurological dysfunction.

3.2 Learning Activities

a. Know terminology.
b. View audio-visual materials and review computer programs on neurological conditions and dysfunctions as assigned.
c. Read current articles as assigned by instructors.
d. Using the nursing process, develop a nursing care plan for a patient who has had a stroke.
e. Discuss, in class, the long term needs of the stroke patient and the impact of the condition on the family members.
f. Outline common safety measures that could prevent head and spinal cord injuries.
g. Discuss, in class, how cultural beliefs can effect rehabilitation and recovery of chronic or long term neurological conditions.
h. Identify common diagnostic procedures used in diagnosis of neurological disorders.

3.3 References

a. Linton, Medical-Surgical Nursing, 4th ed., Saunders
b. Altman, Fundamental & Advanced Nursing Skills, 2nd ed., Thompson, Delmar
c. Anatomy & Physiology text.

4. Clinical Objectives

a. Provide nursing care for patients with a variety of neurological conditions.
b. Prepare patients for diagnostic procedures, observe and assist when possible.
***c. Administer medications (oral and parenteral) to patients with neurological problems.
d. Provide emotional support and encouragement appropriately
to a stroke patient and his/her family.

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e. Prepare a teaching plan for a neurological patient and his/her family.
f. Assess assigned patients for risk factors related to stroke and identify preventative measures.
g. Observe treatment modalities in rehabilitation units of the hospital to assess the inter-disciplinary approach.
h. Provide nursing care to the adult patient undergoing a surgical procedure for a neurological condition. (Include pre and postoperative care.)

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i. Intravenous medications and teaching plans are not clinical assignments for the VN student.

5. **Skills Laboratory Requirements**

   a. Continue with Neurological Assessment.
   b. Demonstration of the functions of a Stryker frame and Circo-electric bed.

**References**

Delmar's Nursing Skills, Chapter 1