Module A-2: Application of the Nursing Process in Caring for Pediatric Patients with Common Health Problems of the Neurological System

1. **Statement of Purpose**

   Unlike the other body systems, which grow rapidly after birth, the nervous system grows proportionately before birth. This module gives special emphasis to the congenital anomalies that can occur in the central nervous system as well as those injuries, tumors or other conditions that occur as the child matures. Both medical and surgical treatments are addressed. The nurse not only needs skill in observing and assessing clinical evidence of pediatric neurological dysfunction, but he/she must also develop skill in maintaining effective interpersonal relationships with parents and family members of the child.

2. **Terminology**

<table>
<thead>
<tr>
<th>Condition</th>
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<tbody>
<tr>
<td>Hydrocephalus</td>
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<tr>
<td>Communicating</td>
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<tr>
<td>Non-communicating</td>
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<tr>
<td>Epilepsy</td>
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<tr>
<td>Spina Bifida Occulta</td>
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<tr>
<td>Meningocele</td>
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<tr>
<td>Myelomeningocele</td>
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<tr>
<td>Minimal Brain Dysfunction</td>
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<td>Down's Syndrome</td>
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<tr>
<td>Muscular Dystrophy</td>
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<tr>
<td>Reye Syndrome</td>
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<tr>
<td>Shunt</td>
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<tr>
<td>ICP (Intracranial Pressure)</td>
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<tr>
<td>Meningitis</td>
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<tr>
<td>Encephalitis</td>
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<tr>
<td>Guillain-Barre Syndrome</td>
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3. **Classroom Objectives**

   3.1 a. Identify common congenital conditions that result in neurological problems.
   
   b. Discuss medical and surgical modalities and nursing intervention for common neurological conditions.
   
   c. Specify common infectious processes that result in neurological dysfunction.
   
   d. Explain pre and postoperative care of children having surgery for:
      
      i) hydrocephalus
2) meningoccele

e. Differentiate mental retardation from minimal brain dysfunction including assessment, etiology, diagnosis, management, and common pharmacological agents used.

f. Discuss cultural beliefs which will impact on nursing care of infants and children with neurological conditions.

g. Describe the drug therapy, psychosocial and educational needs of a child with a seizure disorder.

h. Compare the different types of convulsive disorders and discuss the assessment and nursing care of the child having a seizure.

3.2 Learning Activities

a. Review LVN 120, Module G.

b. Know terminology.

c. View audio-visual materials on congenital anomalies of the neurological system, and other pediatric neurological system disorders or diseases.

d. Review computer programs and read current articles as assigned by instructors.

e. Develop a nursing care plan for a patient with a seizure disorder. Include drug therapy.

f. List the common neurological congenital anomalies, their diagnosis, methods, management and nursing interventions.

g. Discuss inflammatory disorders and the care of the child with meningitis.

3.3 References

a. Current assigned textbook

4. Clinical Objectives

a. Provide nursing care to an infant or child with a neurological problem.

b. Prepare a child and the family for a diagnostic procedure; observe when possible.

c. Provide pre and postoperative nursing care for a pediatric patient having surgery for a neurological disorder.

d. Assist physician with a lumbar puncture on a pediatric patient.

e. Complete a nursing care plan for a patient with a
neurological dysfunction.

*** f. Administer medications (oral and parenteral) to a pediatric patient.

*** g. Prepare a teaching plan for the family of a pediatric patient with minimal brain dysfunction.

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

5. **Skills Laboratory Requirements**

   a. Continue with neurological assessments concentrating on pediatric patients.
   
   b. Discuss how some of the neurological testing can be adapted to pediatric patients.
   
   c. State the nurse's role in "seizure precautions".
   
   d. Demonstrate understanding of the nursing care of a comatose adult and pediatric patient.
      1) Eye care
      2) Core temperature
      3) Oral hygiene
      4) Level of consciousness