LPN Acute Care Pharmacology Exam Content Outline

Exam Objective: To measure the overall level of clinical knowledge in the area of LPN Acute Care Pharmacology.

Knowledge Domains - LPN Acute Care Pharmacology Exam

- Adverse Effects/Side Effects: 23%
- Contraindications/Interactions: 18%
- Dosage Calculations/Metric Conversions: 15%
- Expected Actions/Outcomes: 13%
- Patient Teaching: 33%

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Each question in this assessment is categorized by a cognitive level that the test taker would use to respond. These categories are:

**Recall:** The ability to recall or recognize specific information.

**Application:** The ability to comprehend, relate, or apply knowledge to new or changing situations.

**Analysis:** The ability to analyze and synthesize information, determine solutions, and/or evaluate the usefulness of a solution.

I. **Adverse Effects/Side Effects**
   A. Knowledge of a variety of medications, such as diuretics, insulin, anti-emetics, anti-hypertensives, antiretroviral, NSAIDs, etc. and their effects on patients.
   B. Knowledge of common side effects in a variety of medications as listed above.
   C. Knowledge of signs and symptoms of adverse reactions to a variety of medications as listed above, and how to treat accordingly if indicated.
   D. Knowledge of signs and symptoms of an infiltrated or infected I.V. site.

II. **Contraindications/Interactions**
   A. Knowledge of medication contraindications.
   B. Knowledge of medication administration related to procedures:
      1. Contrast dye studies
      2. Dialysis
   C. Knowledge of medication interactions with food and other medications.
   D. Knowledge of appropriate medication administration methods and route (e.g. Z-track method for IM).
E. Ability to identify and manage signs and symptoms of allergies and/or adverse reactions.

F. Knowledge of antidotes and/or reversal agents for common medications.

III. Dosage Calculations/Metric Conversions

A. Knowledge of how to perform dosage calculation:

<table>
<thead>
<tr>
<th>Dose Calculation Formula:</th>
</tr>
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<tbody>
<tr>
<td>$\text{dose ordered} \times \frac{\text{volume available}}{\text{dose available}} = \text{dose to administer}$</td>
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B. Knowledge of how to perform mathematical conversions:

<table>
<thead>
<tr>
<th>Conversion references:</th>
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<tbody>
<tr>
<td>$\text{lbs}/2.2 = \text{kilograms}$</td>
</tr>
<tr>
<td>$\text{kg} \times 2.2 = \text{pounds}$</td>
</tr>
<tr>
<td>$1 \text{ milligram} = 1,000 \text{ micrograms}$</td>
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IV. Expected Actions/Outcomes

A. Knowledge of medications and their effects on patients.

B. Knowledge of medical abbreviation (e.g. OS, OU, OD etc.)

C. Knowledge of monitoring normal and abnormal lab parameters associated with medication administration such as:
   1. Potassium level monitoring for patients on Furosemide
   2. Heart rate monitoring for patients on Digoxin
3. Blood sugar monitoring for patients on insulin regimen
4. APTT level monitoring for patients on Heparin therapy

D. Knowledge of medication attributes:
   1. Classification
   2. Indication
   3. Action

V. Patient Teaching
   A. Knowledge of providing patient teaching related to medication understanding including but not limited to:
      1. Dietary considerations
      2. Medication administration time
      3. Purpose of taking medication
      4. Side effects of medications