NCLEX-RN STUDY SHEET · PHYSIOLOGICAL INTEGRITY

Pharmacological and Parenteral Therapies

National Council Licensure Examination for Registered Nurses (NCLEX-RN)

13 to 19% of the exam · 17 activity statements · 2026 NCLEX-RN Test Plan

Pharmacological and Parenteral Therapies covers how the nurse checks, prepares, gives, calculates and evaluates medications, intravenous fluids, blood products and parenteral nutrition, and how medications are stored, counted and disposed of. NCLEX items test whether you catch an unsafe prescription before it reaches the client, review the right data before a dose, calculate accurately, recognize a dangerous response early and act on it in the right order.

You should be able to: After this guide you should be able to verify a prescription and the client data before a dose, calculate oral, weight-based and infusion doses, give high-alert drugs, blood and parenteral nutrition safely, recognize a dangerous response and take the **first** action, and store, count and dispose of medications correctly.

Every activity statement: the key point and the trap

1. Check that a medication order is correct and suitable for the client

A complete prescription names the client, the date and time, the drug, the dose, the route, the frequency (and duration where it applies) and carries the prescriber's signature or authentication.

Trap: Giving a dose as written because the prescriber is the expert, when the nurse is independently accountable for checking it.

2. Prepare and give medications following the rights of administration

The rights of medication administration: right client, drug, dose, route, time and documentation, plus right reason, right response and the client's right to refuse.

Trap: Accepting a client's answer to "Are you Mr. Lee?" or a room number as identification instead of two identifiers checked against the record.

3. Work out the dose calculations medications require

Dimensional analysis: set up the units so that everything you do not want cancels and the unit you want is left, for example mg ordered x (mL / mg available) = mL to give.

Trap: Using the weight in pounds in a per kg formula, which gives a dose 2.2 times too high.

4. Watch IV infusions and look after the site

Check the infusion against the prescription at the start of each shift and at every bag change: the solution, additives, rate, pump settings and the time it was hung.

Trap: Flushing a swollen, cool site to clear an occlusion alarm instead of stopping the infusion and removing the catheter.

5. Handle and give controlled substances as regulations require

Controlled substances are kept locked (automated dispensing cabinet or a double-locked area) and every dose removed is accounted for.

Trap: Co-signing a waste or a count after the fact to be helpful, which makes the witness responsible for a discrepancy they never saw.

6. Check relevant data, such as labs and allergies, before giving medication

Check allergies and the type of reaction before every first dose; a client allergic to one drug may react to a related one (for example a penicillin and some cephalosporins).

Trap: Giving digoxin after a radial pulse check, or giving a diuretic without checking the potassium first.

7. Adjust a medication dose using assessment findings and ordered limits

Titrate only within the parameters in the prescription or protocol: the starting dose, the size of each change, how often, the target and the maximum.

Trap: Making a larger or faster change than the protocol allows because the client still has symptoms.

8. Give blood products and monitor how the client reacts

Before the transfusion: confirm a signed consent, a current type and screen or crossmatch, a large enough catheter (commonly 20 gauge or larger in an adult) and baseline vital signs including temperature.

Trap: Slowing the transfusion or giving an antipyretic and continuing, instead of stopping it before anything else.

9. Use or look after central venous access devices

Confirm tip placement (usually by chest x-ray) before first use of a newly placed central line or PICC.

Trap: Raising the head of the bed for dyspnea when air embolism is suspected, instead of left side head down.

10. Teach the client about their medications

Teach the name and purpose, how and when to take it, what to expect, the common side effects, and the warning signs to report.

Trap: Telling a client on warfarin to avoid all green vegetables, rather than keeping vitamin K intake consistent.

11. Assess how the client responds to a medication

Know the expected effect and when it should appear (onset and peak), and reassess at that time: for example pain 15 to 30 minutes after an IV analgesic, 30 to 60 minutes after an oral one.

Trap: Reassessing pain at a time that does not match the drug's onset, or treating anaphylaxis with an antihistamine before epinephrine.

12. Give parenteral nutrition and monitor the client's response

Parenteral nutrition with a high dextrose concentration goes through a central line, on a pump, on a dedicated lumen; nothing else is added or infused through that lumen.

Trap: Stopping parenteral nutrition when the bag runs out, or speeding it up to catch up on the daily volume.

13. Give medications to manage pain

Assess pain with a valid scale for the client (numeric, faces, or a behavioral scale for a client who cannot report), and believe the client's report.

Trap: Letting a family member press the patient-controlled analgesia button, or giving the next opioid dose to a sleepy client because the pain score was high earlier.

14. Take part in reconciling the client's medications

Medication reconciliation compares the client's current medications with new prescriptions at every transition: admission, transfer between units and discharge.

Trap: Recording only the client's prescription drugs and missing over-the-counter and herbal products.

15. Store and keep medications safe and secure

Store medications as labeled: unopened insulin and many vaccines in the refrigerator; protect light-sensitive drugs; never store food with medications.

Trap: Giving a medication prepared by another nurse, or one whose label is missing, because a colleague says what it is.

16. Handle and give high-alert medications safely

High-alert medications (insulin, heparin and other anticoagulants, opioids, concentrated electrolytes such as potassium chloride, magnesium sulfate, chemotherapy) cause the most harm when given wrong.

Trap: Giving potassium chloride IV push or adding it to a hanging bag without mixing, instead of a premixed diluted infusion on a pump.

17. Get rid of medications safely

Sharps go **immediately** into a puncture-resistant sharps container at the point of use; never recap a used needle by hand.

Trap: Telling a client to throw unused opioids loose in the trash, or recapping a used needle before disposal.

Key terms

Rights of medication administration: Right client, drug, dose, route, time and documentation, with reason, response and the right to refuse.

Dimensional analysis: A calculation method that sets up units as fractions so unwanted units cancel and the wanted unit is left.

Drop factor: The number of drops per mL a gravity tubing delivers (for example 10, 15, 20 or 60 gtt/mL).

High-alert medication: A drug that carries a high risk of serious harm when given in error, such as insulin, heparin, opioids and potassium chloride.

Independent double check: Two nurses each verify a medication and calculation separately, then compare results.

Therapeutic range: The blood level of a drug that gives benefit without toxicity; narrow for drugs such as digoxin and lithium.

Trough level: The lowest blood level of a drug, drawn just before the next dose.

Infiltration: Leakage of a nonvesicant IV solution into the tissue around the catheter.

Extravasation: Leakage of a vesicant into the tissue, which can cause blistering and tissue death.

Acute hemolytic reaction: Destruction of transfused red cells, usually from ABO incompatibility, with fever, back pain, hypotension and dark urine.

Circulatory overload: Fluid overload from a transfusion or infusion, with dyspnea, crackles, high blood pressure and distended neck veins.

Air embolism: Air entering the venous system through a central line; treated with clamping, left side head down positioning and oxygen.

Refeeding syndrome: Dangerous falls in phosphate, potassium and magnesium when a malnourished client starts nutrition.

Medication reconciliation: Comparing all of a client's medications with new prescriptions at admission, transfer and discharge.

Reversal agent: A drug that counters another: naloxone for opioids, protamine sulfate for heparin, vitamin K for warfarin.

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