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Next Generation NCLEX® (NGN):

What You Need to Know

KAPLAN NURSING

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CHAPTER 1

OVERVIEW OF THE CURRENT NCLEX EXAM

Overview of the Current NCLEX Exam

Before examining Next Generation NCLEX (NGN) content, it is important to understand the structure and goals of the current NCLEX exam. It is, among other things, an endurance test. The NCLEX exam is like a marathon—if you don't prepare properly or approach it with confidence and rigor, you'll quickly lose your composure.

Here is a sample test-like question:

> A client had a permanent pacemaker implanted one year ago. The client returns to the outpatient clinic for suspected pacemaker battery failure. It is **most** important for the nurse to assess for which of the following?
>
> 1. Abdominal pain, nausea, and vomiting.
> 2. Wheezing on exertion, cyanosis, and orthopnea.
> 3. Palpitations, shortness of breath, and dizziness.
> 4. Chest pain, headache, and diaphoresis.

As you can see, the style and content of the NCLEX exam is unique. It's not like any other exam, even those taken in nursing school. The content in this book was prepared by the experts on the Kaplan Nursing team, the world's largest provider of test prep courses for the NCLEX exam. By using Kaplan's proven methods and strategies, you will be able to take control of the exam, just as you have taken control of your nursing education and career preparation for this incredibly challenging and rewarding field.

The first step is to learn everything you can about the current exam.

What Is the NCLEX Exam?

NCLEX-RN stands for National Council Licensure Examination for Registered Nurses, and NCLEX-PN stands for National Council Licensure Examination for Practical/Vocational Nurses. The NCLEX exams are prepared and administered by the National Council of State Boards of Nursing (NCSBN), whose members include the boards of nursing in each of the 50 states in the United States, the District of Columbia, Canada, and the U.S. territories American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands. These boards have a mandate to protect the public from unsafe and ineffective nursing care, and each board has been given responsibility to regulate the practice of nursing in its respective state or territory. In fact, the NCLEX exam is often referred to as "The Boards" or "The State Boards."

The NCLEX exam has only one purpose: to determine if it is safe for you to begin practice as an entry-level nurse. It tests both your knowledge and your ability to make competent nursing judgments. To define *entry-level practice of nursing*, the National Council conducts a job analysis study every three years investigating what entry-level nurses do on the job. They examine the clinical settings where beginning nurses work, the types of care they provide, and their primary responsibilities. Based on the results, the National Council adjusts the content and difficulty level of the test to accurately reflect what is happening in the workplace.

In order to obtain a license to practice as a nurse, each state requires you to pass the NCLEX. The designation of registered nurse (RN) or licensed practical/licensed vocational nurse (LPN/LVN) indicates that you have proven to your state board of nursing or regulatory body that you can deliver safe and effective nursing care.

To clarify what the NCLEX exam is **not**:

- It is not a test of achievement or intelligence.
- It is not designed for nurses who have years of experience.
- It does not include questions that involve high-tech clinical nursing or equipment.
- It is not predictive of your eventual success in the career of nursing.
- It is not a test of everything you were taught in nursing school.

Application, Registration, and Scheduling

Because there are no established NCLEX test dates, completing the required paperwork and making your way through the application process can be tricky. This section will give you a general checklist to follow on your path to taking the exam, which you will individualize according to the requirements for the state or province in which you wish to become licensed. We will outline the questions you need to ask and the steps you need to take to complete the licensure process.

Application

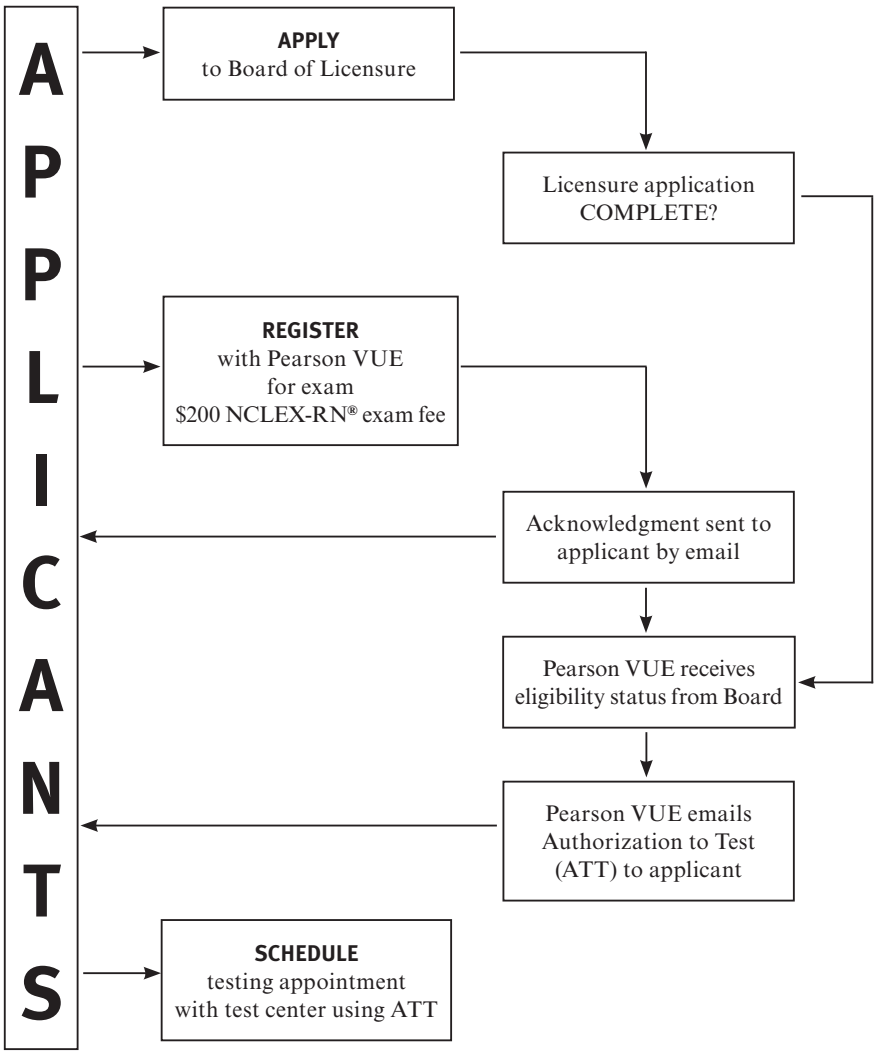
During your last semester of nursing school, you will be given the following:

- An application for licensure that goes to your state board of nursing/regulatory body
- An application for the NCLEX exam that goes to Pearson VUE

On a predetermined date, you will submit the completed forms and the required licensure fees to your nursing school.

As of the time of distribution, the NCLEX-RN and NCLEX-PN exam fee is $200 ($360 CAD). Additional licensure fees are determined by each state nursing board. Refer to your state board of nursing's website to determine your state's fee. You are responsible for submitting the completed test application and the $200 fee to Pearson VUE. All applications will be processed by phone or online.

The Registration Process



Registration

You can register for the NCLEX exam with Pearson VUE either online or by phone. You cannot register by mail.

- **Online**: Go to *pearsonvue.com/nclex* (the NCLEX candidate website). You can make payment by credit, debit, or prepaid card (using Visa, MasterCard, or American Express only).
- **By phone**: Call VUE NCLEX Candidate Services at 1-866-496-2539 (1-866-49-NCLEX). You can make payment by credit, debit, or prepaid card (using Visa, MasterCard, or American Express only).

Even if you register by phone, you must provide an email address to receive communications from Pearson VUE about your registration. Some states require you to send the testing application form and fee along with the licensure application and fee.

- For more information, visit *ncsbn.org* and download the *2021 NCLEX Examination Candidate Bulletin*.
- For questions regarding NCLEX exam registration, your Authorization to Test (ATT), a lost ATT, acceptable forms of identification, or comments about the test center, visit the NCLEX candidate website (*pearsonvue.com/nclex*) or contact NCLEX Candidate Services at 1-866-496-2539 (1-866-49-NCLEX) or online at *ncsbn.org/nclex.htm* by clicking on Exam Contacts in the left-hand menu.

Once your information has been received, you will receive an acknowledgment from your state board.

Some states require that your permanent transcript be mailed with your application. Here is a checklist to help avoid problems with your application:

- Have you met all requirements for graduation? Do you have any electives still outstanding? Some states require your nursing school to send a statement confirming that you have met all requirements for graduation.
- Has your nursing school received a permanent transcript for any credits that you transferred from another institution?
- Do you owe any fines or have any unpaid parking tickets? (This can delay the release of your permanent transcript. Check at your nursing school office, just to be sure.)
- Did you change your mind about the state in which you want to apply for licensure? If so, you must apply to a new state and forfeit the original application fee.

If you plan to apply for licensure in a different state from the one in which you are attending nursing school, contact the state board of nursing in the state where you wish to become licensed. Here's a checklist for obtaining a license in another state:

- Contact the state board of nursing of that state and find out their requirements for licensure and fees.
- Request a new candidate application for licensure. After you pass the NCLEX exam you will receive your nursing license from the state in which you applied for licensure, regardless of where you took your exam. For example, if you applied for licensure in Michigan, you can take the test in Florida if you wish. You would then receive a license to practice as an RN in Michigan because that is where you applied for licensure.

Scheduling

Pearson VUE will send you a document entitled Authorization to Test (ATT). The ATT will be sent to you via email at the email address you provided when you registered. You will be unable to schedule your test date until you receive this form. On the ATT is your assigned candidate number; you will need to refer to this when scheduling your exam. Your ATT is valid for a time determined by the individual state board of nursing/regulatory body, and you must test before your ATT expires. If you don't, you will need to reapply to take the exam and pay the testing fees again.

With your ATT, you will receive a list of test centers. You can schedule your NCLEX exam using the following procedures:

- Log on to the NCLEX candidate website at *pearsonvue.com/nclex*.
- Call NCLEX Candidate Services
  - United States and Canada: 1-866-496-2539 (1-866-49-NCLEX) (toll-free)
  - Asia Pacific Region: +852-3077-4923 (pay number)
  - Europe, Middle East, Africa: +44-161-855-7445 (pay number)
  - India: 91-120-439-7837 (pay number)
  - All other countries not listed above: 1-952-905-7403 (pay number)
  - Candidates with hearing impairments who use a Telecommunications Device for the Deaf (TDD) can call the U.S.A. Relay Service at 1-800-627-3529 (toll-free) or the Canada International Inbound relay service at 1-605-224-1837 (pay number).

The earliest date on which you can take the exam varies by state, but most students test approximately 45 days after the date of their graduation. Variables include timing of when you submit the application and fees, length of time the ATT is valid, personal factors (weddings, births, vacations), and job requirements. Each state determines the requirements for graduate nurses, licensure pending. If you are working as a graduate nurse you must be knowledgeable about the rules in your state.

- Those with special testing requests, such as persons with disabilities, must call the NCLEX Program Coordinator at NCLEX Candidate Services at one of the numbers listed above. If you require special accommodations you cannot schedule your exam through the NCLEX candidate website. There is a space on the ATT for you to record the date and time of your scheduled exam. You will also receive confirmation of your scheduled date and time.
- You must test prior to the expiration date of your ATT. If you miss your appointment, you forfeit your testing fees and must reapply to both the state board of nursing/regulatory body and Pearson VUE. If you wish to change your appointment, you must notify Pearson VUE during business hours, at least 24 hours prior to your scheduled appointment. Call one of the numbers listed above or go the NCLEX candidate website (*pearsonvue.com/nclex*). If your test date is on Saturday, Sunday, or Monday, make

sure to call on or before Friday. Do not call the test site directly or leave a message if you are unable to take your test on the scheduled date. You must follow the procedure outlined here.

The Day of the Exam

Arrive at the test center at least 30 minutes before your scheduled test time. Wear layered clothing; there is no way to know if the room will be cool or warm.

- The room may have 10–15 computers placed around the outside walls, each at its own desk and chair.
- Dividers separate the desks, but you will be able to see the person sitting next to you.
- There is a picture window from which the proctor will observe the test takers.
- There are also video cameras and sound sensors mounted on the walls to monitor each candidate.

Here is a checklist of things to bring with you. Do not bring any study materials.

- Your ATT (although it is no longer required for admission to your exam, you may wish to refer to it).
- One form of unexpired, government-issued, signed identification that includes a picture. If you have changed your hair color, lost weight, or grown a beard, have a new picture ID made before test day. The name on your ID must exactly match the name on your ATT. Acceptable forms of identification include driver's license, state/territorial/provincial identification, passport, and U.S. military ID.
- A snack and drink.

NCLEX exam check-in procedure:

- Present a valid, acceptable form of ID.
- Provide your digital signature, take a palm vein scan, and have your photograph taken. Agree to the Candidate Statement via digital signature.
- Seal all electronic devices in a plastic bag provided by the test center.
- Place all other personal belongings in secure storage outside the testing room. This includes watches, large jewelry, scarfs and hats, lip balm, food and drink, and medical devices.
- Earplugs are available on request. Request them in case you find yourself distracted by background noise.
- You will be provided an erasable note board for scratch work.

Receiving Your Results

Your test results are sent to you by your state board of nursing. Each state board determines when the NCLEX exam results are released.

In the following jurisdictions, you may access your "unofficial" results two business days after taking your examination via the NCLEX candidate website (for a small fee): Alaska, Arizona, Arkansas, Colorado, Connecticut, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Northern Mariana Islands, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, the U.S. Virgin Islands, Utah, Vermont, Washington, Wisconsin, Wyoming.

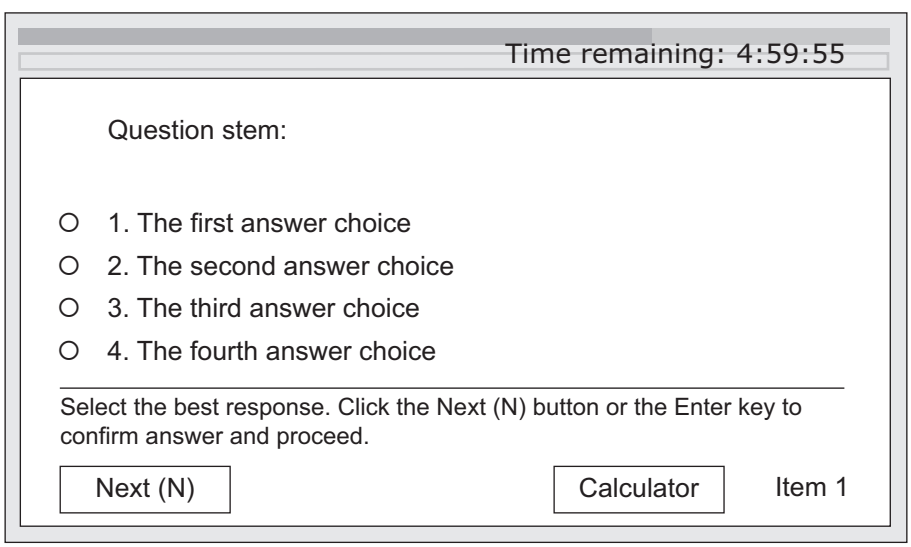
For most states, you will receive your official results approximately six weeks after your test date.

APPEARANCE OF THE EXAM QUESTIONS

Computer Screen

The number of the question you are answering is located in the lower-right corner of your computer screen. In the upper-right corner is a digital clock that counts down from 5:00, representing the five hours you have, including breaks, to take the exam.

If the question is a traditional four-option, multiple-choice question, the question stem is located in the top half of the screen and the answer choices are located in the lower half of the screen, as seen here.



There are two buttons at the bottom of the computer screen. Click **Next (N)** to confirm your answer selection and move to the next question. Click **Calculator** to display a drop-down calculator that can be used to perform computations.

- If the question is a **select all that apply alternate format question** that may have more than one correct answer, you will see the phrase "Select all that apply" between the stem of the question and 5–6 answer choices. A small box is in front of each answer choice.
- If the question is a **hot spot alternate format question**, the screen will contain a graphic or a picture you will have to use your mouse to click.
- If the question is a **fill-in-the-blank alternate format question**, a text box will be under the question for you to fill in with your answer.
- If the question is a **drag-and-drop/ordered response alternate format question**, the unordered options will be under the question and to the left. The space for you to "drag-and-drop" the correctly ordered response will be to the right of the unordered options.
- If the question is a **chart/exhibit alternate format question**, it will include the following prompt after the question stem: "Click on the exhibit button below for additional client information." The Exhibit button is located in the bottom of the computer screen between the Next (N) button and the Calculator button. Click on the Exhibit button to display a pop-up box containing three tabs. Click on each of the tabs to display information needed to answer the question.
- If the question is an **audio alternate format question**, the question will contain an audio clip that you must listen to in order to answer the question. Click on the Play button (a right-pointing arrow) to listen to the clip. A slider bar allows you to adjust the volume of the clip. If you want to listen to the audio clip more than once, you can click on the Play button again.
- If the question is a **graphics alternate format question**, each of the four answer choices will be a graphic instead of text.

Calculator

Using the mouse, click on the Calculator button, and a drop-down calculator will appear on the screen. Use the mouse to click on the calculator keys. Remember, the diagonal or slash (/) key is used for division. When you are through with your calculations, click on the Calculator button again and the calculator will disappear.

Question Types

Note that for all question types, **once you click Next (N) or press Enter, you will not be able to change your answer.**

How Do I Select an Answer Choice for Traditional, Four-Option Multiple-Choice Questions?

- Use a two-step process. First, read the question and use the mouse to click on the radio button preceding the answer choice you'd like to select. Your answer is now highlighted. Second, when you are certain of your answer, click on Next (N) or press the Enter key to confirm. Your answer is now locked in and a new question will appear on the screen.
- After your answer is entered into the computer, the computer selects a new question for you based on the accuracy of your previous answer and the components of the NCLEX exam test plan. If you answer a question correctly, the next question selected by the computer is more difficult. If you answer a question incorrectly, the next question selected by the computer is easier.
- If you want to change the highlighted answer, click on a different answer choice. Your answer is not locked in until you click on Next (N) or press Enter.
- Even if you've never used a computer before, don't panic. The NCLEX Candidate Tutorial is provided online to help candidates become familiar with the Pearson VUE exam software (*ncsbn.org/nclex-tutorial.htm*). These questions allow you to practice using the mouse to select an answer.

How Do I Select an Answer Choice for Select All That Apply Questions?

- Read the question and click on the small box in front of the answer choice you want. A small check will appear in the box. Click on each answer choice that answers the question. If you change your mind and don't want an answer choice that you have selected, just click again on the small box in front of that answer choice and the check will disappear.
- When you are certain of your answer, click on Next (N) or press Enter to confirm. Your answer is now locked in and a new question appears on the screen.

How Do I Select an Answer Choice for Hot Spot Questions?

- Click on the area of the graphic or picture that answers the question.
- If you change your mind and want to select another area of the graphic or picture, just use your mouse to click on the area that you want and the original selection disappears.
- When you are certain of your answer, click on Next (N) or press Enter to confirm. Your answer is now locked in and a new question appears on the screen.

How Do I Enter an Answer Choice for Fill-in-the-Blank Questions?

- Use the keyboard to select the numbers or letters you want.
- If a unit of measurement already appears next to the answer box on the screen, be sure you enter numbers only into the answer box; adding a unit of measurement may cause your answer to be wrong.
- If you change your mind and want to enter another answer in the text box, just press backspace to delete the answer you entered and then use the keyboard to enter another answer.
- When you are certain of your answer, click on Next (N) or press Enter to confirm. Your answer is now locked in and a new question appears on the screen.

How Do I Select Options for Drag-and-Drop/Ordered Response Questions?

- To put the responses in the correct order, click on the option you think should come first, hold down the button on the mouse, and drag the option over to the box on the right side of the screen.
- You may also highlight the option in the box on the left side and then click the arrow key that points to the box on the right side to move the option. Do the same with each response in the proper order. If you change your mind and want to change the order of a response, click on it with the mouse and drag it back to the left side of the screen or use the arrow key as described above. To complete the question, you must move all options from the box on the left side of the screen to the box on the right side.
- When you are certain of your answer, click on Next (N) or press Enter to confirm. Your answer is now locked in and a new question appears on the screen.

How Do I Enter or Change an Answer Choice for Chart/Exhibit, Audio, and Graphics Alternate Format Questions?

- Enter or change your answer choices just as you would for traditional text-based multiple-choice questions. Chart/exhibit, audio, and graphics alternate format questions all use a four-option, multiple-choice format.

ON TEST DAY

Schedule and Breaks

Total testing time is 5 hours.

- You will receive optional, pre-programmed breaks after 2 hours of testing and after 3.5 hours of testing. Unless you're on a roll, it's best to take them.
- You are also free to take your own break at any point, but any time spent away from your computer is counted as a part of your total testing time.
  - Kaplan recommends that you take a short (2–5 minute) break if you are having trouble concentrating. Take time to go to the restroom, eat your snack, or get a drink. This will enable you to maintain or regain your concentration for the test. Remember, every question counts!
  - If you need to take a break, raise your hand to notify the test administrator. You must leave the testing room, and you will be required to take a palm vein scan before you are allowed to resume your test.

- When your test ends, a screen will appear on your computer that states, "Your test is concluded."
  - You will be required to answer several exit questions—a few multiple-choice questions about your impression of the examination experience. They do not count toward your results.
  - You may also see an introductory screen indicating the beginning of the Special Research Section. This section is optional, and it does not count toward your results. (The Special Research Section is intended to collect data on new item types that could be used in a future version of the test. If you choose to participate, it should take approximately 30 minutes to complete; however, you will be able to exit at any time.)
  - Questions in the Special Research Section will be numbered consecutively with the completed exam. (If your exam ended with question 100, the first question on the Special Research Section would be numbered 101.) Only those candidates with enough additional time remaining in their appointment will be offered this optional section. Your performance on the NCLEX is unrelated to whether you receive the Special Research Section.

What Behaviors Does the NCLEX Exam Test?

The NCLEX exam does not just test your nursing knowledge: It assumes that you have a body of knowledge and that you understand the material because you have graduated from nursing school. So what does the NCLEX exam test? Primarily, it tests your nursing judgment and discretion, and your ability to think critically and solve problems.

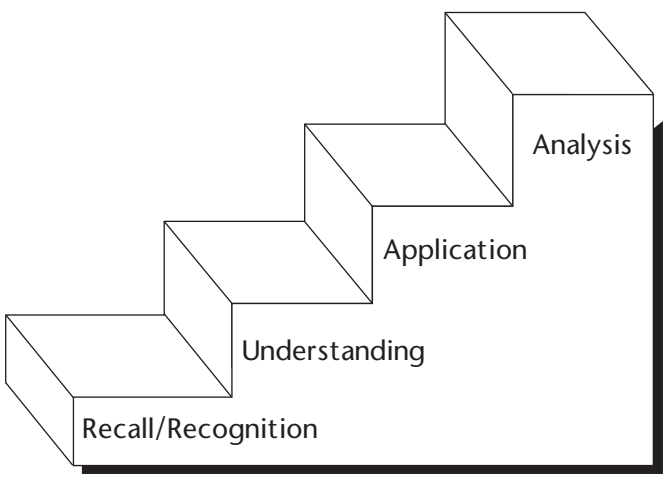
Critical Thinking

What does the term *critical thinking* mean? Critical thinking is problem solving that involves thinking creatively. It requires that the nurse do the following:

- Observe
- Decide what is important
- Look for patterns and relationships
- Identify the problem
- Transfer knowledge from one situation to another
- Apply knowledge
- Evaluate according to criteria established

You successfully solve problems every day in the clinical area. You are probably comfortable with this concept when actually caring for clients. Although you've had lots of practice critically thinking in the clinical area, you may have had less practice critically thinking your way through test questions. Why is that?

During nursing school, you take exams developed by nursing instructors to test a specific body of content. Many of these questions are at the knowledge level. This involves recognition and recall of ideas or material that you read in your nursing textbooks and discussed in class. This is the most basic level of testing. The figure below illustrates the different levels of questions on nursing exams.



Level of Questions in Nursing

The following is an example of a knowledge-based question you might have seen in nursing school.

Which of the following is a complication that occurs during the first 24 hours after a percutaneous liver biopsy?

1. Nausea and vomiting.
2. Constipation.
3. Hemorrhage.
4. Pain at the biopsy site.

The question restated is, "What is a common complication of a liver biopsy?" You may or may not remember the answer. So, as you look at the answer choices, you hope to see an item that looks familiar. You do see something that looks familiar: "Hemorrhage." You select the correct answer based on recall/recognition. The NCLEX exam does not ask passing questions at the recall/recognition level.

In nursing school, you are also given test questions written at the comprehension level. These questions require you to understand the meaning of the material. Let's look at this same question written at the comprehension, or understanding level.

The nurse understands that hemorrhage is a complication of a liver biopsy due to which of the following reasons?

1. There are several large blood vessels near the liver.
2. The liver cells are bathed with a mixture of venous and arterial blood.
3. The test is performed on clients with elevated enzymes.
4. The procedure requires a large piece of tissue to be removed.

The question restated is, "Why does hemorrhage occur after a liver biopsy?" In order to answer this question, the nurse must understand that the liver is a highly vascular organ. The portal vein and the hepatic artery join in the liver to form the sinusoids that bathe the liver in a mixture of venous and arterial blood.

The NCLEX exam asks no passing-level questions at the comprehension level. It assumes you know and understand the facts you learned in nursing school.

Minimum-competency NCLEX exam questions are written at the application and/or analysis level. Remember, the NCLEX exam tests your ability to make safe judgments about client care. Your ability to solve problems is not tested with questions at the recall/recognition or comprehension level.

Let's look at this same question written at the application level.

> Which of the following symptoms observed by the nurse during the first 24 hours after a percutaneous liver biopsy would indicate a complication from the procedure?
>
> 1. Anorexia, nausea, and vomiting.
> 2. Abdominal distention and discomfort.
> 3. Pulse 112 beats/minute and blood pressure 86/60 mm Hg.
> 4. Redness and pain at the biopsy site.

Can you select an answer based on recall or recognition? No. Let's analyze the question and answer choices.

The question is: What is a complication of a liver biopsy? To begin to analyze this question, you must know that hemorrhage is the major complication. However, it's not listed as an answer. Can you find hemorrhage in one of the answer choices?

Answer Explanation:

(1) "Anorexia, nausea, and vomiting." Does this indicate that the client is hemorrhaging? No, these are not symptoms of hemorrhage.

(2) "Abdominal distention and discomfort." Does this indicate that the client is hemorrhaging? Perhaps. Abdominal distention could indicate internal bleeding.

(3) "Pulse 112 beats/minute and blood pressure 86/60 mm Hg." Does this indicate that the client is hemorrhaging? Yes. An increased pulse and a decreased blood pressure indicate shock. Shock is a result of hemorrhage.

(4) "Redness and pain at the biopsy site." Does this indicate the client is hemorrhaging? No. Pain and some redness at the biopsy site may occur as a normal result of the procedure.

Ask yourself, "Which is the best indicator of hemorrhage?" Abdominal distention or a change in vital signs? Abdominal distention can be caused by liver disease. The correct answer is (3).

This question tests you at the application level. You were not able to answer the question by recalling or recognizing the word *hemorrhage*. You had to take information you learned (hemorrhage is the major complication of a liver biopsy) and select the answer that best indicates hemorrhage. Application involves taking the facts that you know and using them to make a nursing judgment. You must be able to answer questions at the application level in order to prove your competence on the NCLEX exam.

Let's look at a question that is written at the analysis level.

The nurse is caring for a client receiving haloperidol 2 mg PO twice per day. The nurse assists the client to choose which of the following menus?

1. 6 oz (168 g) roast beef, baked potato, salad with dressing, dill pickle, baked apple pie, and milk.
2. 3 oz (84 g) baked chicken, green beans, steamed rice, 1 slice of bread, banana, and milk.
3. 6 oz (168 g) burger on a bun, French fries, apple, chocolate chip cookie, and milk to drink 30 minutes after mealtime.
4. 3 oz (84 g) baked fish, slice of bread, broccoli, ice cream, and pineapple juice to drink 60 minutes after mealtime.

Many students panic when they read this question because they can't immediately recall any diet restriction required by a client taking haloperidol. Because students can't recall the information, they assume that they didn't learn enough information.

Analysis questions are often written so that a familiar piece of information is put in an unfamiliar setting. Let's think about this question.

What type of diet do you choose for a client receiving haloperidol? First recall that haloperidol is an antipsychotic medication used to treat psychotic disorders. There are no diet restrictions for clients taking haloperidol. Because there are no diet restrictions, you must problem-solve to determine what this question is really asking. Based on the answer choices, it is obviously a diet question. What kind of diet should you choose for this client? Because you have been given no other information, there is only one type of diet that can be considered: a regular balanced diet.

This is an example of taking the familiar (a regular balanced diet) and putting it into the unfamiliar (a client receiving haloperidol). The critical thinking is deciding what this question is really asking: **"Which is the most balanced regular diet?"**

Answer Explanation:

(1) "6 oz (168 g) roast beef, baked potato, salad with dressing, dill pickle, baked apple pie, and milk." Is this a balanced diet? Yes, it certainly has possibilities.

(2) "3 oz (84 g) baked chicken, green beans, steamed rice, 1 slice of bread, banana, and milk." Is this a balanced diet? Yes, this is also a good answer because it contains foods from each of the food groups.

(3) "6 oz (168 g) burger on a bun, French fries, chocolate chip cookie, apple, and milk to drink 30 minutes after mealtime." Is this a balanced diet? No. This diet is high in fat and does not contain all of the food groups. Eliminate this answer.

(4) "3 oz (84 g) baked fish, slice of bread, broccoli, ice cream, and pineapple juice to drink 60 minutes after mealtime" Does this sound like a balanced diet? The choice of foods isn't bad, but why would the intake of fluids be delayed? This sounds like a menu to prevent dumping syndrome. Eliminate this answer.

Which is the better answer choice, (1) or (2)? Dill pickles are high in sodium, so the correct answer is (2). Choosing the menu that best represents a balanced diet is not difficult. The challenge lies in determining that a balanced diet is the topic of the question.

Note that choices (1) and (2) are very similar. Because the NCLEX exam is testing your discretion, you will be making a decision between answer choices that are very close in meaning. Don't expect obvious answer choices.

These questions highlight the difference between the knowledge/comprehension-based questions that you may have seen in nursing school and the application/analysis-based questions that you will see on the NCLEX exam.

Strategies for the NCLEX Exam

Whether you realize it or not, you developed a set of strategies in nursing school to answer teacher-generated test questions that are written at the knowledge/comprehension level. These strategies include "cramming in" hundreds of facts about disease processes and nursing care; recognizing and recalling facts rather than understanding the pathophysiology and needs of a client with an illness; knowing who wrote the question and what is important to that instructor; predicting answers based on what you remember or who wrote the test question; selecting the response that is a different length compared to the other choices; selecting the answer choice that is grammatically correct; and choosing answer choice (3) every time you are in doubt.

These strategies will not work on the NCLEX exam. This is an exam that is testing your ability to make safe, competent decisions.

Become a Better Test Taker

The first step to becoming a better test taker is to assess and identify the **kind of learner you are**.

- **Successful NCLEX Exam test takers:**
  - Have a good understanding of nursing content
  - Have the ability to tackle each test question with a lot of confidence because they assume that they can figure out the right answer

- Do not give up if they are unsure of the answer—they are not afraid to think about the question and possible choices in order to select the correct answer
- Possess the know-how to correctly identify the question
- Stay focused on the question

- **Unsuccessful NCLEX Exam test takers:**
  - Assume they either know or don't know the answer to the question
  - Memorize facts to answer questions by recall or recognition
  - Read the question, read the answers, read the question again, and pick an answer
  - Choose answer choices based on a hunch or a feeling instead of thinking carefully
  - Answer questions based on personal experience rather than nursing theory
  - Give up too soon because they aren't willing to think hard about questions and answers
  - Do not stay focused on the question

If you are a successful test taker, congratulations! This book will reinforce your test taking skills. If you have many of the characteristics of an unsuccessful test taker, don't despair! You can change. If you follow the strategies in this book, you will become a successful test taker.

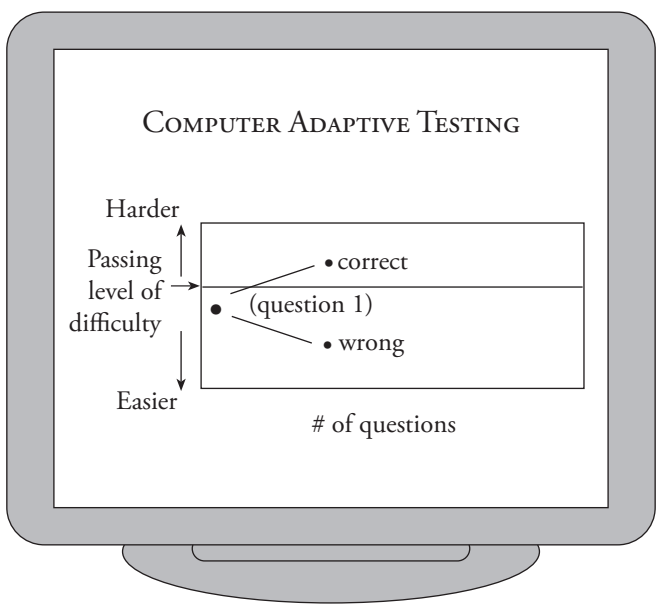
CHAPTER 2

UNDERSTANDING THE COMPUTER ADAPTIVE TEST (CAT) AND TEST BLUEPRINT

What Is a CAT?

With a Computer Adaptive Test (CAT), each test is assembled interactively based on the accuracy of the candidate's response to the questions. This ensures that the questions are not "too hard" or "too easy" for that person's skill level.

Your first question will be relatively easy; that is, below the level of minimum competency. If you answer that question correctly, the computer selects a slightly more difficult question. If you answer the first question incorrectly, the computer selects a slightly easier question. By continuing to do this as you answer questions, the computer is able to calculate your level of competence.



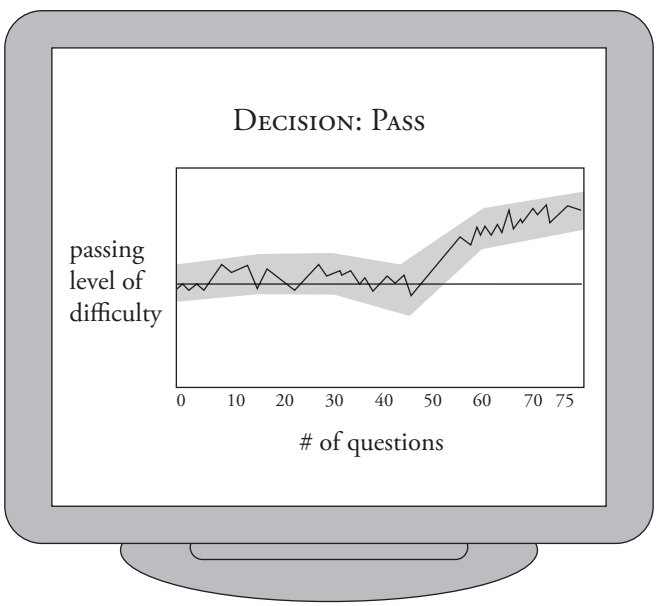
In a CAT, the questions are adapted to your ability level. The computer selects questions that represent all areas of nursing, as defined by the NCLEX detailed test plan and by the level of item difficulty. Each question is self-contained—all of the information you need to answer a question is presented on the computer screen.

Taking the Exam

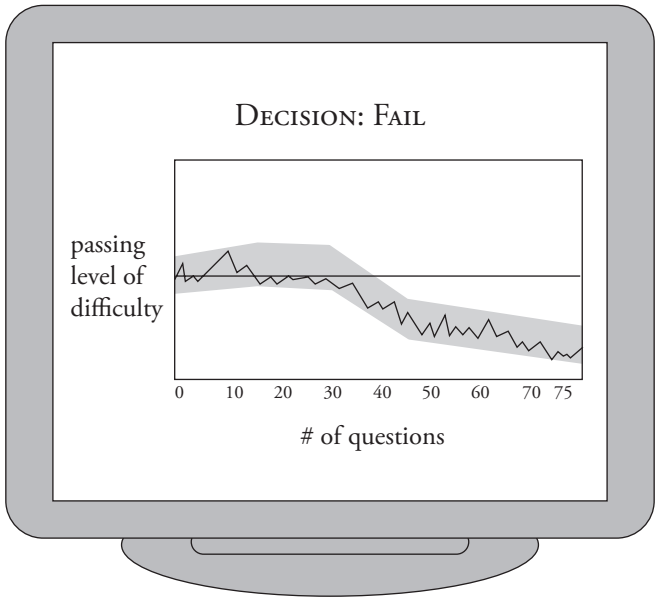
There is **no time limit for each individual question**. You have 5 hours to complete the exam, but that includes an optional 10-minute break after the first 2 hours of testing and an optional break after an additional 90 minutes of testing. To maximize testing time, the NCLEX Tutorial, which explains how to answer each of the alternate format items, has been removed from the NCLEX exam. However, the NCLEX Tutorial is available online at: *ncsbn.org/nclex-tutorial*.

All test takers answer a minimum of 75 questions to a maximum of 145 questions. Regardless of the number of questions you answer, you are given 15 questions that are experimental. These questions, which are indistinguishable from the other questions on the test, are being tested for future use in NCLEX exams, and **your answers do not count for or against you**. Your test ends when you have done one of the following:

- Demonstrated minimum competency and answered the minimum number of questions (75)



- Demonstrated a lack of minimum competency and answered the minimum number of questions (75)



- Answered the maximum number of questions (145)
- Used the maximum time allowed (5 hours)

Try not to be concerned with the length of your test. In fact, you should plan on testing for 5 hours and seeing 145 questions. You are still in the game as long as the computer continues to give you exam questions, so focus on answering them to the best of your ability.

Remember, every question counts. There is no warm-up time, so it is important to be ready to answer questions correctly from the very beginning. Concentration is also key. You need to give your best to each question because you do not know which one will put you over the top.

Evaluate Your CAT Experience

Some students attribute their failure to the CAT experience. Comments we have heard include:

- "I didn't like answering questions on the computer."
- "I found the background noise distracting."
- "I looked up every time the door opened."
- "I should have taken a snack. I got so hungry!"
- "After 2 and a half hours I didn't care what I answered. I just wanted the computer to shut off!"
- "I didn't expect to be there for 4 hours!"
- "I should have rescheduled my test, but I just wanted to get it over with!"

Do any of these comments sound familiar? It is important to take charge of your CAT experience. Here's how:

- Choose a familiar testing site.
- Select the time of day that you test your best. (Are you a morning or afternoon person?)
- Accept the earplugs when offered.
- Take a snack and a drink for your break.
- Take a break if you become distracted or fatigued during the test.
- Contact the proctors at the test site if something bothers you during the test.
- Plan on testing for 5 hours. If you get out early, it's a pleasant surprise.
- Say to yourself every day, "I will be successful."

Content of the NCLEX Exam

The exam tests integrated nursing content; it is not divided into separate content areas.

By contrast, many nursing programs are based on the medical model, where students take separate medical, surgical, pediatric, psychiatric, and obstetric classes. On the NCLEX exam, all content is integrated. Look at the following question.

A client with type 1 diabetes returns to the recovery room one hour after an uneventful delivery of a 9 lb, 8 oz (4,309 g), newborn. The nurse would expect the client's blood glucose level to change from which of the following?

1. 220 to 180 mg/dL (12.21 to 10 mmol/L).
2. 110 to 80 mg/dL (6.1. to 4.4 mmol/L).
3. 90 to 120 mg/dL (5 to 6.7 mmol/L).
4. 100 to 140 mg/dL (5.6 to 7.8 mmol/L).

Is this an obstetrical question or a medical/surgical question? To select the correct answer, (2), you must consider the pathophysiology of type 1 diabetes along with the principles of labor and delivery. This is an example of an integrated question.

Blueprint of the NCLEX-RN Exam

The NCLEX-RN exam is organized according to the framework "Client Needs." For the purposes of the exam, a client is identified as the individual, family, or group, which includes significant others and populations.

There are four major Client Needs categories; two of those are further divided, so there are eight subcategories in total. (This information is distributed by NCSBN, the developer of the NCLEX-RN exam.)

Client Need #1: Safe and Effective Care Environment

Subcategory 1 is **Management of Care** (20% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Advance directives/self-determination/life planning
- Advocacy
- Assignment, delegation, and supervision
- Case management
- Client rights
- Collaboration with interdisciplinary team
- Concepts of management
- Confidentiality/information security
- Consultation
- Continuity of care
- Establishing priorities
- Ethical practice
- Information technology
- Informed consent
- Legal rights and responsibilities
- Organ donation
- Performance improvement (quality improvement)
- Referrals
- Supervision

Example 1:

Which of the following assignments by the RN would be appropriate for an LPN/LVN?

1. A client with low back pain scheduled for a myelogram.
2. A client in traction for treatment of a fractured femur.
3. A client newly diagnosed with type 1 diabetes.
4. A client with emphysema scheduled for discharge.

The correct answer is (2). This client is in stable condition and can be cared for by an LPN/LVN with supervision of an RN.

Example 2:

After receiving a handoff of care report from the nurse on the prior shift, which of the following clients should the nurse see first?

1. A client refusing to take sucralfate before mealtime.
2. A client with left-sided weakness asking for assistance to the commode.
3. A client reporting chills who is scheduled for a cholecystectomy.
4. A client with a nasogastric tube who had a bowel resection yesterday.

The correct answer is (3). This is the least stable client.

Subcategory 2 is **Safety and Infection Control** (12% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Accident/injury prevention
- Emergency response plan
- Ergonomic principles
- Error prevention
- Handling hazardous and infectious materials
- Home safety
- Reporting of incident/event/irregular occurrence/variance
- Safe use of equipment
- Security plan
- Standard precautions/transmission-based precautions/surgical asepsis
- Use of restraints/safety devices

Example:

The primary health care provider prescribes tobramycin sulfate 3 mg/kg IV every 8 hours for a 3-year-old client. The nurse enters the client's room to administer the medication and discovers that the client does not have an identification bracelet. Which of the following actions should the nurse take?

1. Ask the parents to state their child's name.
2. Ask the child to say the first and last name.
3. Have a coworker identify the child before giving the medication.
4. Hold the medication until an identification bracelet can be obtained.

The correct answer is (1). This action will allow the nurse to correctly identify the child and enable the nurse to give the medication on time.

Client Need #2: Health Promotion and Maintenance

This client need accounts for 9% of questions on the exam. Nursing actions that are covered in this category include:

- Aging process
- Ante/intra/postpartum and newborn care
- Developmental stages and transitions
- Health promotion/disease prevention
- Health screening
- High-risk behaviors
- Lifestyle choices
- Self-care
- Techniques of physical assessment

Note that not everyone described in the questions will be sick or hospitalized. Some clients may be in a clinic or home-care setting, while others may not be sick at all. Wellness is an important concept on the NCLEX-RN exam. It is necessary for a safe and effective nurse to know how to promote health and prevent disease.

Example:

A client in active labor is admitted to the labor suite. An hour later, the client experiences spontaneous rupture of membranes. The nurse observes a glistening white umbilical cord protruding from the vagina. Which of the following actions should the nurse take first?

1. Return to the nurses' station and call the primary health care provider.
2. Administer oxygen by mask at 10 to 12 L/minute and assess vital signs.
3. Place a clean towel over the umbilical cord and wet it with sterile normal saline solution.
4. Apply manual pressure to the presenting part and have the client assume a knee-chest position.

The correct answer is (4). Umbilical cord prolapse is an emergency situation. The nurse must relieve pressure on the umbilical cord to prevent fetal anoxia.

Client Need #3: Psychosocial Integrity

This client need accounts for 9% of questions on the exam. Nursing actions that are covered in this category include:

- Abuse/neglect
- Behavioral interventions
- Chemical and other dependencies
- Coping mechanisms
- Crisis intervention
- Cultural diversity/cultural influences on health
- End-of-life care
- Family dynamics
- Grief and loss
- Mental health concepts
- Religious and spiritual influences on health
- Sensory/perceptual alterations
- Stress management
- Support systems
- Therapeutic communication
- Therapeutic environment

Example:

A client comes to the nurses' station and inquires about going to the cafeteria to get something to eat. The client becomes verbally abusive when told that personal privileges do not include going to the cafeteria. Which of the following approaches by the nurse would be **most** effective?

1. Tell the client to speak softly to avoid disturbing the other clients.
2. Ask what the client wants from the cafeteria and have it delivered to the client's room.
3. Calmly but firmly escort the client back to the client's room.
4. Assign the unlicensed assistive personnel (UAP) to accompany the client to the cafeteria.

The correct answer is (3). The nurse should not reinforce abusive behavior. Clients need consistent and clearly defined expectations and limits.

Client Need #4: Physiological Integrity

Subcategory 1 is **Basic Care and Comfort** (9% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Assistive devices
- Complementary therapies
- Elimination
- Mobility/immobility
- Non-pharmacological comfort interventions
- Nutrition and oral hydration
- Personal hygiene
- Rest and sleep

Example:

The primary health care provider applies a cast to an infant client for the treatment of talipes equinovarus. Which of the following instructions is **most** essential for the nurse to give to the client's parents regarding care?

1. Offer age-appropriate toys.
2. Visit clinic frequently for cast adjustments.
3. Give an analgesic as needed.
4. Check circulation in the casted extremity.

The correct answer is (4). Impaired circulation can result from cast application. All of these answer options might be included in parent teaching, but checking circulation in the casted extremity takes highest priority.

Subcategory 2 is **Pharmacological and Parenteral Therapies** (15% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Adverse effects/contraindications/side effects/interactions
- Blood and blood products
- Central venous access devices
- Dosage calculation
- Expected actions/outcomes
- Medication administration
- Medication handling and maintenance
- Parenteral/intravenous therapies
- Pharmacological pain management
- Total parenteral nutrition

Example:

The home health nurse prepares to insert an IV catheter for a client who is prescribed dextrose 5% in water (D5W). Which of the following venipuncture sites should the nurse use to insert the IV catheter?

1. Ventral surface vein of the nondominant wrist.
2. Dorsal surface vein of the foot.
3. Dorsal surface vein of the nondominant forearm.
4. Ventral surface vein of the foot.

The correct answer is (3). A dorsal surface vein of the nondominant forearm provides the best venipuncture site for IV catheter insertion because it is easily accessible, away from an area of flexion, and promotes self-care.

Subcategory 3 is **Reduction of Risk Potential** (12% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Changes/abnormalities in vital signs
- Diagnostic tests
- Laboratory values
- Potential for alterations in body systems
- Potential for complications of diagnostic tests/treatments/procedures
- Potential for complications from surgical procedures and health alterations
- System specific assessments
- Therapeutic procedures

Example:

Parents bring a school-age client with a history of type 1 diabetes and several days of illness to the emergency department (ED). Which of the following laboratory test results would the nurse expect if the client is experiencing diabetic ketoacidosis?

1. Serum glucose 140 mg/dL (7.8 mmol/L).
2. Serum creatinine 5.2 mg/dL (460 mol/L).
3. Blood pH 7.28.
4. Hematocrit 38% (0.38).

The correct answer is (3). Normal blood pH ranges 7.35–7.45. A blood pH of 7.28 indicates diabetic ketoacidosis.

Subcategory 4 is **Physiological Adaptation** (14% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Alterations in body systems
- Fluid and electrolyte imbalances
- Hemodynamics
- Illness management
- Medical emergencies
- Pathophysiology
- Unexpected response to therapies

Example:

The nurse delivers external cardiac compressions to a client during cardiopulmonary resuscitation (CPR). Which of the following actions by the nurse is **best**?

1. Maintain a position close to the client's side with the nurse's knees apart.
2. Position hands on the lower half of the sternum during compressions.
3. Lean on chest between compressions to prevent full chest wall recoil.
4. Check for return of the client's pulse after every 8 breaths by the nurse.

The correct answer is (2). The nurse's hands should be positioned on the lower half of the client's sternum during compressions with elbows locked, arms straight, and shoulders positioned directly over the hands. The nurse should avoid leaning on the chest between compressions to allow for full chest wall recoil.

BLUEPRINT OF THE NCLEX-PN EXAM

The NCLEX-PN exam is organized according to the framework "Client Needs." For the purposes of the exam, a client is identified as the individual, family, or group, which includes significant others and populations.

There are four major Client Needs categories; two of those are further divided, so there are eight subcategories in total. (This information is distributed by NCSBN, the developer of the NCLEX-PN exam.)

Client Need #1: Safe and Effective Care Environment

Subcategory 1 is **Coordinates Care** (21% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Advance directives
- Advocacy
- Client care assignments
- Client rights
- Collaboration with interdisciplinary team
- Concepts of management and supervision
- Confidentiality/information security
- Continuity of care
- Establishing priorities

- Ethical practice
- Informed consent
- Information technology
- Legal responsibilities
- Performance improvement (quality improvement)
- Referral process
- Resource management

Example:

After receiving hand-off of care report from the RN, which of the following clients should the LPN/LVN see first?

1. A client refusing to take sucralfate before mealtime.
2. A client with left-sided weakness asking for assistance to the commode.
3. A client reporting chills who is scheduled for a cholecystectomy.
4. A client with a nasogastric tube who had a bowel resection yesterday.

The correct answer is (3). This is the least stable client.

Subcategory 2 is **Safety and Infection Control** (13% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Accident/error/injury prevention
- Emergency response plan
- Ergonomic principles
- Handling hazardous and infectious materials
- Home safety
- Reporting of incident/event/irregular occurrence/variance
- Restraints and safety devices
- Safe use of equipment
- Security plan
- Standard precautions/transmission-based precautions/surgical asepsis

Example:

The primary health care provider prescribes amoxicillin 150 mg PO in oral suspension every 8 hours for a 3-year-old client. The LPN/LVN enters the client's room to administer the medication and discovers that the client does not have an identification bracelet. Which of the following should the LPN/LVN take?

1. Ask the parents to state their child's name.
2. Ask the child to say the first and last name.
3. Have a coworker identify the child before giving the medication.
4. Hold the medication until an identification bracelet can be obtained.

The correct answer is (1). This action will allow the nurse to correctly identify the child and enable the nurse to give the medication on time.

Client Need #2: Health Promotion and Maintenance

This client need accounts for 9% of questions on the exam. Nursing actions that are covered in this category include:

- Aging process
- Ante/intra/postpartum and newborn care
- Data collection techniques
- Developmental stages and transitions
- Health promotion/disease prevention
- High-risk behaviors
- Lifestyle choices
- Self-care

Note that not everyone described in the questions will be sick or hospitalized. Some clients may be in a clinic or home-care setting, while others may not be sick at all. Wellness is an important concept on the NCLEX-PN exam. It is necessary for a safe and effective nurse to know how to promote health and prevent disease.

Example:

The LPN/LVN in the outpatient clinic notes that the blood pressure for a client is 190/100 mm Hg. The LPN/LVN should take which of the following actions?

1. Report the blood pressure reading to the RN.
2. Wait 20 minutes and retake the blood pressure.
3. Use a different cuff and retake the blood pressure.
4. Position the client supine with feet elevated.

The correct answer is (1). The LPN/LVN is responsible for data collection and should report findings that are abnormal to the supervising RN. Immediate action should be taken, so (2) is incorrect. It is unnecessary to recheck the blood pressure using other equipment (3) or to position the client supine with feet elevated (4).

Client Need #3: Psychosocial Integrity

This client need accounts for 12% of questions on the exam. Nursing actions that are covered in this category include:

- Abuse/neglect
- Behavioral management
- Chemical and other dependencies
- Coping mechanisms
- Crisis intervention
- Cultural awareness
- End-of-life concepts
- Grief and loss
- Mental health concepts
- Religious and spiritual influences on health
- Sensory/perceptual alterations
- Stress management
- Support systems
- Therapeutic communication
- Therapeutic environment

Example:

A client comes to the nurses' station and inquires about going to the cafeteria to get something to eat. The client becomes verbally abusive when told personal privileges do not include going to the cafeteria. Which of the following approaches by the LPN/LVN would be **most** effective?

1. Tell the client to speak softly to avoid disturbing the other clients.
2. Ask what the client wants from the cafeteria and have it delivered to the client's room.
3. Calmly but firmly escort the client back to the client's room.
4. Assign the unlicensed assistive personnel (UAP) to accompany the client to the cafeteria.

The correct answer is (3). The nurse should not reinforce abusive behavior. Clients need consistent and clearly defined expectations and limits.

Client Need #4: Physiological Integrity

Subcategory 1 is **Basic Care and Comfort** (10% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Assistive devices
- Elimination
- Mobility/immobility
- Non-pharmacological comfort interventions
- Nutrition and oral hydration
- Personal hygiene
- Rest and sleep

Example:

The primary health care provider is applying a cast to an infant for treatment of talipes equinovarus (clubfoot). Which of the following instructions is **most** essential for the LPN/LVN to give to the child's parents regarding care?

1. Offer age-appropriate toys.
2. Visit clinic frequently for cast adjustments.
3. Give an analgesic as needed.
4. Check circulation in the casted extremity.

The correct answer is (4). A possible complication that can occur after cast application is impaired circulation. All of these answer choices might be included in family teaching, but checking the child's circulation is the highest priority.

Subcategory 2 is **Pharmacological Therapies** (13% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Adverse effects/contraindications/side effects/interactions
- Dosage calculations
- Expected actions/outcomes
- Medication administration
- Pharmacological pain management

Example:

The LPN/LVN notes the client is allergic to a prescribed medication. Which of the following is the correct action by the LPN/LVN?

1. Administer the medication as the primary health care provider prescribed it.
2. Administer the medication and closely observe the client.
3. Call the pharmacist to verify potential allergic responses.
4. Call the primary health care provider and report the medication allergy.

The correct answer is (4). The LPN/LVN must notify the primary health care provider regarding the client's allergy to revise the medication prescription.

Subcategory 3 is **Reduction of Risk Potential** (12% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Changes/abnormalities in vital signs
- Diagnostic tests
- Laboratory values
- Potential for alterations in body systems
- Potential for complications of diagnostic tests/treatments/procedures
- Potential for complications from surgical procedures and health alterations
- Therapeutic procedures

Example:

Parents bring a school-age client with a history of type 1 diabetes and several days of illness to the emergency department (ED). Which of the following laboratory test results would the LPN/LVN expect if the client is experiencing diabetic ketoacidosis?

1. Serum glucose 140 mg/dL (7.8 mmol/L).
2. Serum creatinine 5.2 mg/dL (460 mmol/L).
3. Blood pH 7.28.
4. Hematocrit 38% (0.38).

The correct answer is (3). Normal blood pH ranges 7.35–7.45. A blood pH of 7.28 indicates diabetic ketoacidosis.

Subcategory 4 is **Physiological Adaptation** (10% of questions on the exam). Nursing actions that are covered in this subcategory include:

- Alterations in body systems
- Basic pathophysiology
- Fluid and electrolyte imbalances
- Medical emergencies
- Radiation therapy
- Unexpected response to therapies

Example:

The LPN/LVN is delivering external cardiac compressions to a client during cardiopulmonary resuscitation (CPR). Which of the following actions by the LPN/LVN is **best**?

1. Maintain a position close to the client's side with the nurse's knees apart.
2. Position hands on the lower half of the sternum during compressions.
3. Lean on chest between compressions to prevent full chest wall recoil.
4. Check for return of the client's pulse after every 8 breaths by the nurse.

The correct answer is (2). The nurse's hands should be positioned on the lower half of the client's sternum during compressions with elbows locked, arms straight, and shoulders positioned directly over the hands. The nurse should avoid leaning on the chest between compressions to allow for full chest wall recoil.

CHAPTER 3

THE NEXT GENERATION NCLEX PROJECT

Introduction to Next Generation NCLEX (NGN)

NCSBN is presently conducting research to determine the ability of current and potential innovative item types to assess clinical judgment skills in nursing. Support for this project stems from NCSBN research that shows the following:

- 50% of errors involved novice nurses
- 65% of errors were attributed to poor clinical decision-making
- Only 20% of employers are satisfied with the clinical decision-making skills of novice nurses

Item Types

In July 2017, NCSBN began collecting data from innovative item types as part of a Special Research Section on the NCLEX examination. Selected NCLEX-RN and NCLEX-PN test takers are asked to participate in the Special Research Section after their examination is complete. Question types that the applicant may see on the Special Research Section include, but are not limited to:

(1) **Highlighting items** in which the applicant reads a case study, vignette, or passage and then highlights findings that would require follow-up by the nurse or health care provider.

(2) **Extended Drag-and-Drop items** in which the applicant uses the "drag-and-drop" function to complete different scenarios. For example, the applicant may be given a list of potential steps that could be taken to treat a client's condition. The applicant then would place steps that are appropriate in the next column. Current drag-and-drop items on the NCLEX primarily ask the applicant to arrange steps in a sequential order (e.g., the correct sequence of steps when inserting a nasogastric tube). NGN drag-and-drop items may ask the applicant to "drag-and-drop" clients that require private rooms or to "drag-and-drop" words that appropriately complete a sentence.

(3) **Cloze items** in which the applicant completes sentences or information in a chart by choosing a word or words from a dropdown list.

(4) **Matrix items** in which the applicant reads a case study, vignette, or passage and assigns a value to a group of responses (e.g., whether the action is indicated or contraindicated).

(5) **Multiple Selection (Select All That Apply, or SATA) items** in which up to 10 options are available. Only 1 option may be correct, more than 1 option may be correct, or all options may be correct. Before answering the question, the exam candidate may have to read a passage first.

(6) **Bowtie items** in which all 6 steps of the Clinical Judgment Measurement Model (CJMM) are addressed. A Bowtie item is literally shaped like a bowtie (broad at left and right, narrow in the middle), and it asks the candidate to choose responses from 3 distinct yet intertwined categories. After reviewing a case study, the candidate is asked to select, for example, the condition the client is most likely experiencing, actions to take, and parameters to monitor.

(7) **Trend items** in which multiple steps of the CJMM are addressed. All Trend items involve a time evolution (e.g., vital signs or laboratory results over time) within the case study or scenario, requiring an interpretation of changes. Trend items can incorporate any item type into the case study or scenario (e.g., Cloze, Matrix, etc.).

Scoring Approaches

No partial credit is given on the current NCLEX. If the correct answers to a question are 1, 2, and 4, the candidate must select only those answers as being correct in order to receive credit for the question. Going forward, when NCSBN officially adopts NGN, scoring approaches will change. NCSBN explored over 20 different scoring rules and decided on 3 theory-driven, empirically tested rules that categorize the future NGN items:

- 0/1 Scoring Rule
- +/– Scoring Rule
- Rationale Scoring Rule

The following examples illustrate these 3 scoring approaches.

The **0/1 Scoring Rule** is the classic approach:

- Earn 1 point for correct response
- Earn 0 points for incorrect response

For a multi-point item, the sum of all correct responses is the total score. The illustration shows an example of how a multi-point Matrix item would be scored using the 0/1 Scoring Rule.

Action	Indicated	Contraindicated	
Ask client to rate pain using a numeric pain rating scale	●	○	☑ correct; 1 point
Obtain a baseline troponin level	○	●	☒ incorrect; 0 points
Administer metoprolol tartrate 5 mg IV	●	○	☒ incorrect; 0 points
Prepare the client for percutaneous coronary intervention (PCI) by adminstering alteplase, a thrombolytic medication	●	○	☒ incorrect; 0 points
Administer (4) 81-mg chewable aspirin tablets	●	○	☑ correct; 1 point
Start a continuous IV infusion of nitroglycerin at 10 mcg/min	●	○	☒ incorrect; 0 points
			2 total points

0/1 Scoring Rule Applied to a Matrix Item

The **+/– Scoring Rule** is derived from signal detection theory, a framework for understanding how people make perceptual decisions. This scoring approach awards higher scores when candidates identify and select more pertinent information.

- Earn 1 point for each correct selection
- Forfeit 1 point for each incorrect selection

While the +/– Scoring Rule subtracts points for incorrect answers, there are no negative scores. The minimum score per item is zero. The following illustration shows an example of how a multi-point item would be scored using the +/– Scoring Rule. In this example, the test taker has selected all 4 correct answer options, and has also selected 2 incorrect options.

The nurse provides care for a client who is diagnosed with a brain tumor.

Vital signs

Blood pressure	126/82 mm Hg
Heart rate	104 beats/minute
Respirations	17 breaths/minute
Oxygen saturation	96% on room air
Temperature	99.2 °F (37.3 °C)

Urine output 1800 mL over past 4 hours

Urine specific gravity 1.003

Serum sodium level 150 mEq/L (150 mmol/L)

Blood urea nitrogen (BUN) 37 mg/dL (13.2 mmol/L)

Hematocrit 56% (0.56)

Mucous membranes dry

Client reporting thirst

The health care provider diagnoses the client with central diabetes insipidus. Which action does the nurse take? **Select all that apply.**

- ☑ 1. Infuse dextrose 5% in water (D5W).
- ☒ 2. Prepare the client for dialysis.
- 3. Administer furosemide 20 mg IV.
- ☑ 4. Obtain serial urine specific gravity measurements.
- ☑ 5. Administer desmopressin 0.4 mL intranasally.
- 6. Initiate seizure precautions.
- ☑ 7. Assess the client´s level of consciousness frequently.
- ☒ 8. Provide client with PO fluids, including caffeinated beverages.

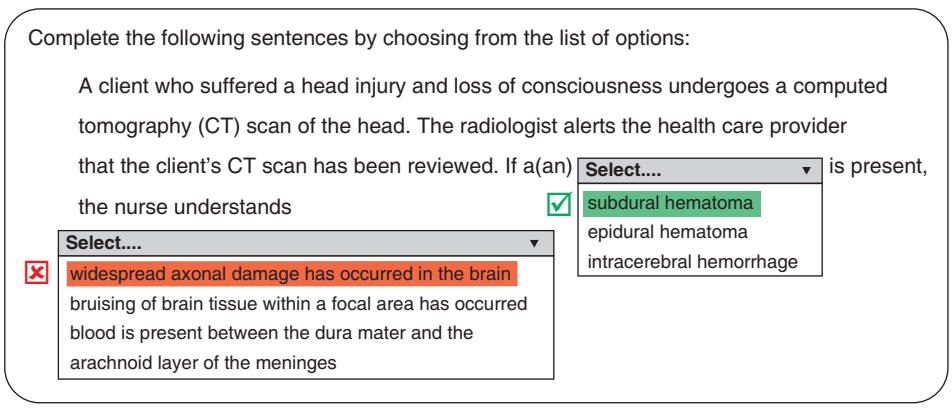
4 points correct responses
–2 points incorrect responses
2 total points
(No negative total points)

+/– Scoring Rule Applied to a SATA Item

Finally, the **Rationale Scoring Rule** awards points when both elements of a linked pair of concepts are correct. It tests concepts that require justification through a rationale—for example, a nurse must do X because of Y.

- Earn 1 point when both X and Y are correct
- Earn 0 points when any element of the answer selection is incorrect

The Rationale Scoring Rule requires a full understanding of paired information. The following illustration shows an example of how a Cloze item would be scored using the Rationale Scoring Rule. Though "subdural hematoma" is correctly selected in this example, 0 points are earned.



Rationale Scoring Rule Applied to a Cloze Item

If adopted, both the revised scoring methods and the new question types will appear on the NCLEX-RN and NCLEX-PN exams no sooner than **April 2023**. Regardless of the NGN adoption timeline, both the NCLEX-RN and NCLEX-PN exams are still expected to be CAT exams.

NCSBN's Clinical Judgment Measurement Model

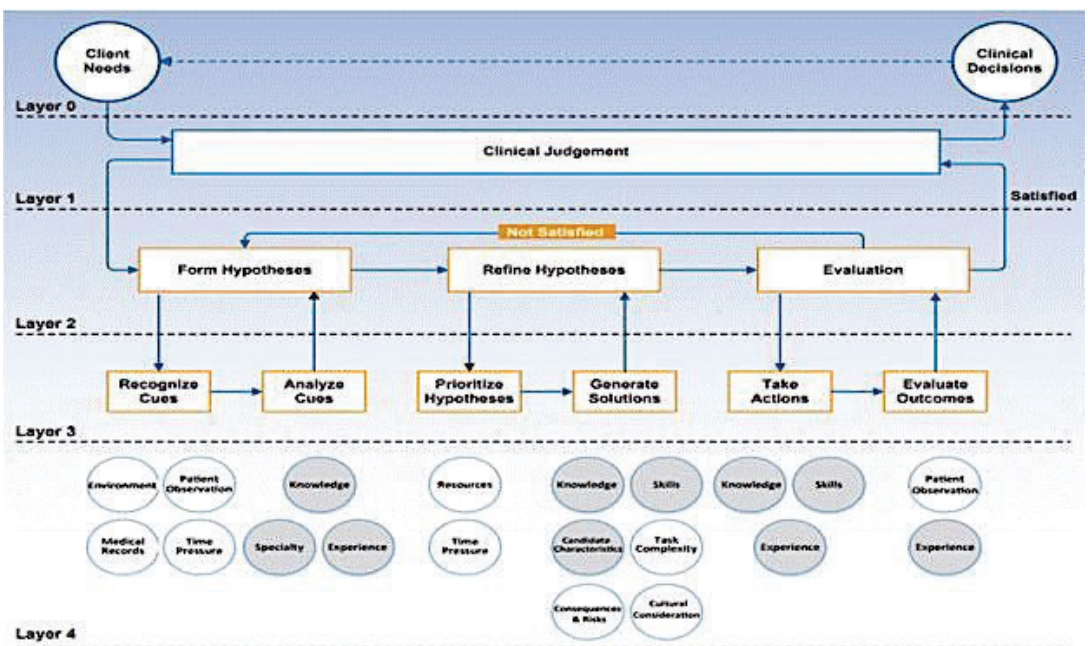
Clinical judgment is defined as "the observed outcome of critical thinking and decision-making." It is an iterative process that uses nursing knowledge to observe and assess the presenting situation, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care.

Clinical judgment is a necessary skill for novice nurses, and improved clinical judgment can result in improved client care and error reduction. One goal of the NCLEX exam is to assess clinical judgment; however, the current exam questions test this topic area indirectly.

NCSBN's Clinical Judgment Measurement Model (CJMM) is composed of four layers that constitute the clinical judgment skills necessary for a nurse to adequately meet clients' needs.

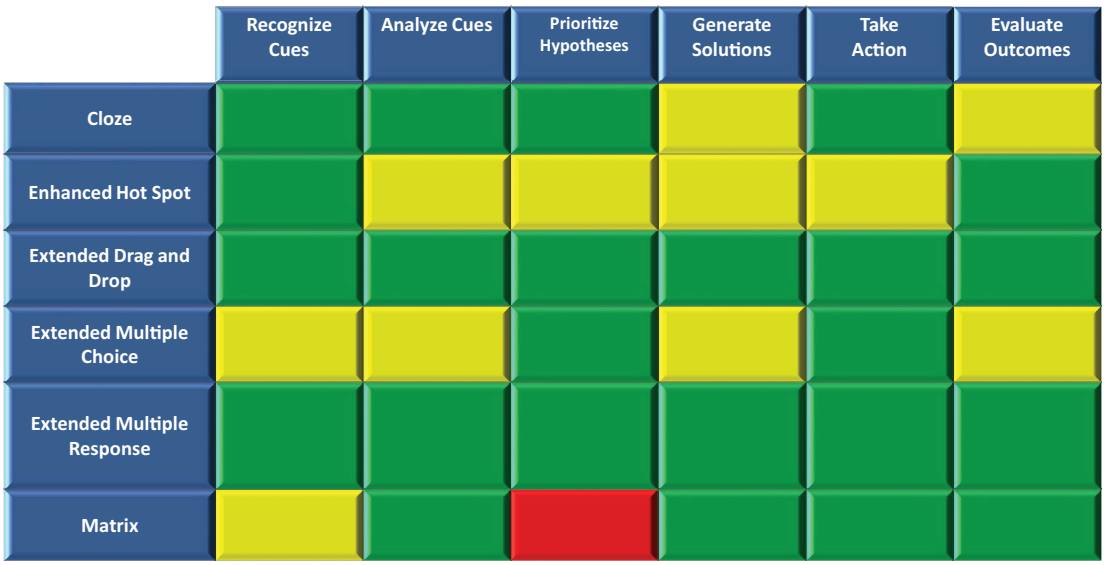
- **Layer 1** represents the complete entity of clinical judgment.
- **Layer 2** requires the nurse to form and refine hypotheses, then evaluate.
- **Layer 3** is more granular than Layer 2; it requires the nurse to recognize cues, analyze cues, prioritize hypotheses, generate solutions, take actions, and evaluate outcomes.
- **Layer 4** deals with individual factors (e.g., the nurse's knowledge level and prior experience) and environmental factors (e.g., time pressure and task complexity) that can impact a nurse's clinical judgment.

The following chart from NCSBN illustrates the relationship of these layers.



Clinical Judgment Measurement Model
NCSBN

The following table shows the NCSBN's progress in validating the CJMM for each NGN question type. Green indicates that the question type is successful in measuring clinical judgment in the domain being evaluated. Yellow indicates that the question type may or may not be effective in measuring clinical judgment in the domain. Red indicates that the question type does not measure clinical judgment in the domain.



NGN Item Types: CJMM Domain Distribution
NCSBN

NCSBN's Implementation Plans for NGN

In October 2019, NCSBN announced its plan for incorporating NGN items into the NCLEX-RN and NCLEX-PN examinations. In September 2020, NCSBN specified that the NCLEX-RN and NCLEX-PN exams will remain 75 to 145 questions until the launch of NGN (no sooner than April 2023).

At launch, both NCLEX exams (RN and PN) will contain a mix of NGN items and established question types that test takers see on the current exam (such as 4-option multiple choice, fill-in-the-blank, ordered response, etc.). NGN items will appear either as unfolding case studies with 6 items relating to the same patient vignette, or as standalone items.

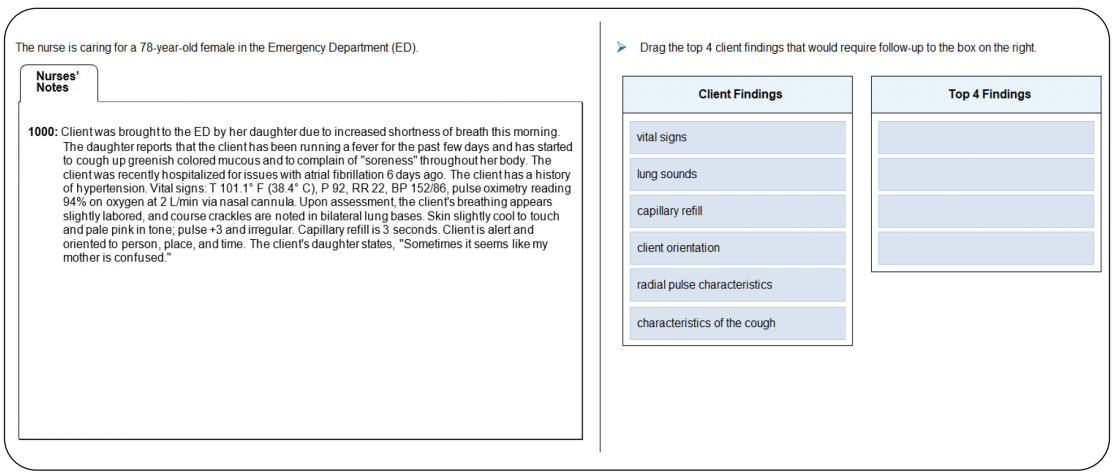
The following sections illustrate the appearance of these question types using NCSBN screenshots. Discussions later in this chapter will break down how these questions are structured and offer Kaplan's recommendations for how to tackle these question types.

Unfolding Case Studies

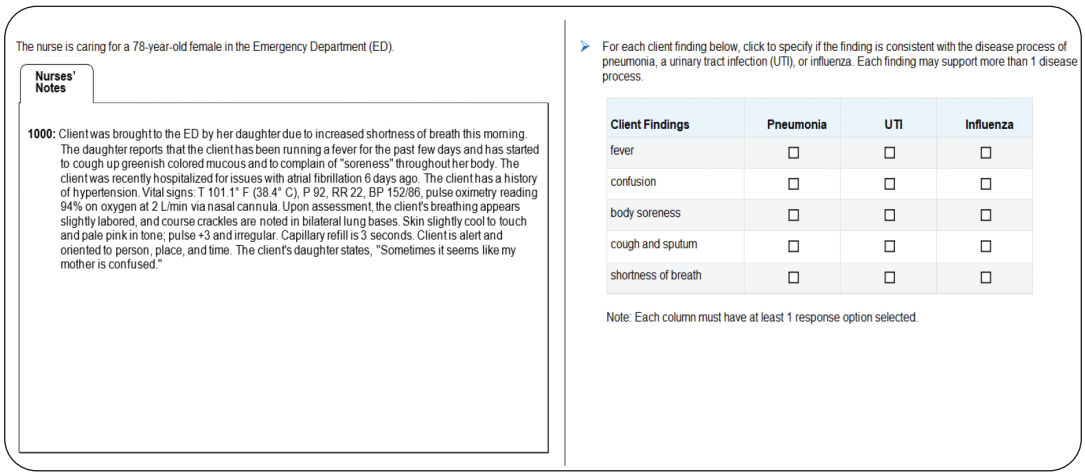
An unfolding case study is a set of 6 question items relating to the same patient vignette. Within each set of 6 NGN questions, the test taker may see a succession of different NGN item types; for instance, the first question in a set might be a Drag-and-Drop item, the second question a Matrix item, the third a Cloze item, and so on.

Navigation of these NGN question sets will take the form of a split screen. For each set, the stimulus will remain static on the left-hand side of the screen, while the right-hand side of the screen changes as the student answers the individual NGN questions. As in the current NCLEX, once the test taker clicks "Submit" for an item, the test taker cannot go back to alter the item.

Following is a series of screenshots from NCSBN illustrating how an unfolding case study will look for the test taker. Only 3 sample screens are shown in this example. Note that on the exam, NGN case study items will appear in sets of 6 questions.

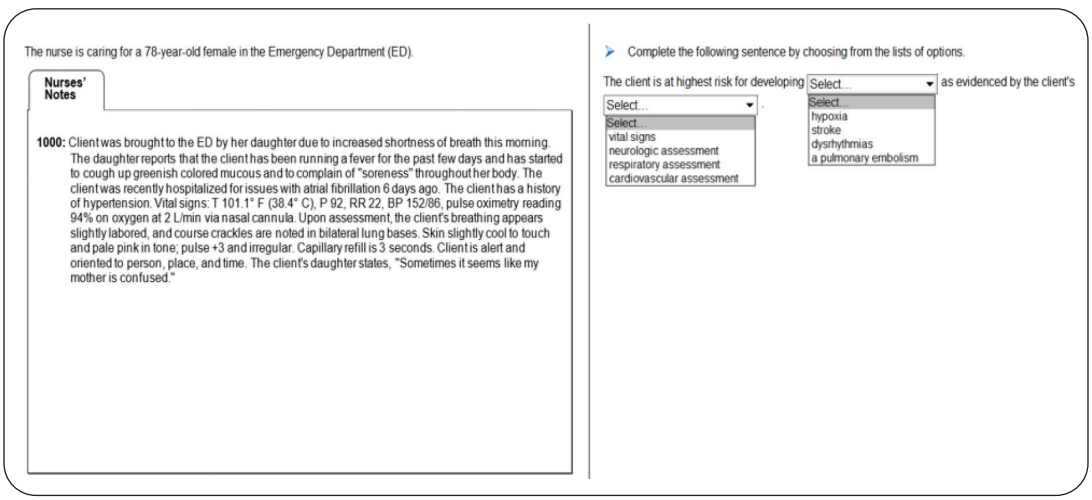


Case Study, Screen 1 of 6
NCSBN



Case Study, Screen 2 of 6

NCSBN



Case Study, Screen 3 of 6

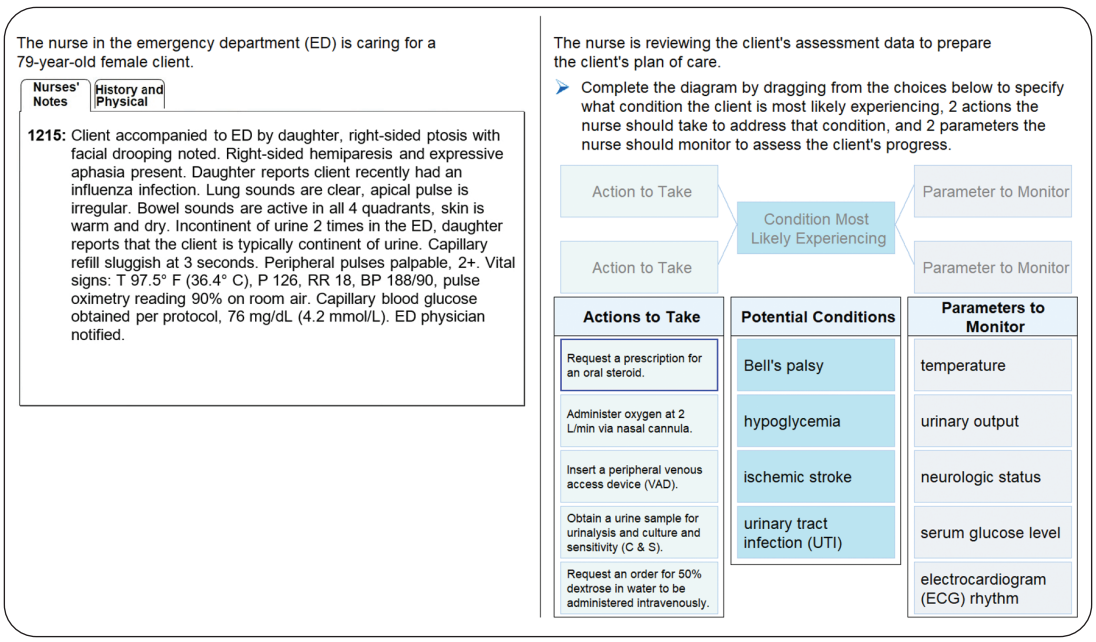
NCSBN

Standalone NGN Questions

In addition to the 6-question NGN sets, test takers may also encounter two standalone NGN question types: Bowtie and Trend. NCSBN announced these NGN question types in December 2020.

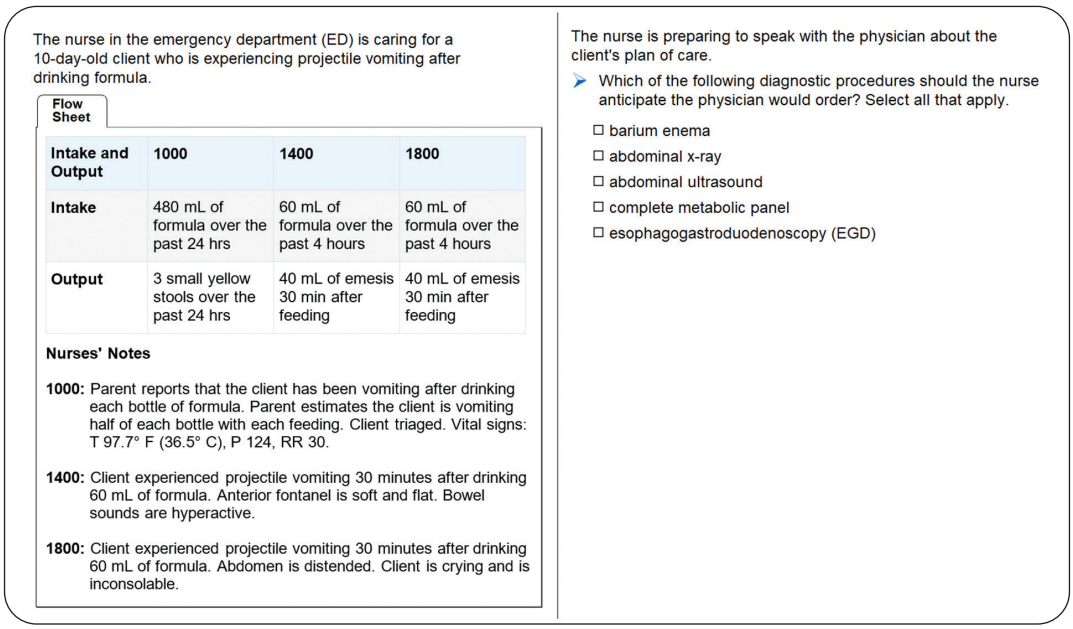
Like the unfolding case studies, **Bowtie** items are laid out in a split screen, with the stimulus on the left-hand side and the question on the right-hand side. However, each Bowtie item is a standalone question.

The question in a Bowtie item takes the form of an uneven table, with 5 options in the left column, 4 options in the middle column, and 5 options in the right column. This question type addresses all 6 steps of the CJMM in one standalone item.



Bowtie Standalone Item
NCSBN

Trend items are also similar in layout to the unfolding case studies, with the stimulus on the left-hand side and the question on the right; however, each trend item is a standalone question. Trend items address multiple steps of the CJMM by having the candidate review information over time.



The nurse in the emergency department (ED) is caring for a 10-day-old client who is experiencing projectile vomiting after drinking formula.

Flow Sheet

Intake and Output	1000	1400	1800
Intake	480 mL of formula over the past 24 hrs	60 mL of formula over the past 4 hours	60 mL of formula over the past 4 hours
Output	3 small yellow stools over the past 24 hrs	40 mL of emesis 30 min after feeding	40 mL of emesis 30 min after feeding

Nurses' Notes

1000: Parent reports that the client has been vomiting after drinking each bottle of formula. Parent estimates the client is vomiting half of each bottle with each feeding. Client triaged. Vital signs: T 97.7° F (36.5° C), P 124, RR 30.

1400: Client experienced projectile vomiting 30 minutes after drinking 60 mL of formula. Anterior fontanel is soft and flat. Bowel sounds are hyperactive.

1800: Client experienced projectile vomiting 30 minutes after drinking 60 mL of formula. Abdomen is distended. Client is crying and is inconsolable.

The nurse is preparing to speak with the physician about the client's plan of care.

Which of the following diagnostic procedures should the nurse anticipate the physician would order? Select all that apply.

- ☐ barium enema
- ☐ abdominal x-ray
- ☐ abdominal ultrasound
- ☐ complete metabolic panel
- ☐ esophagogastroduodenoscopy (EGD)

Trend Standalone Item
NCSBN

Kaplan's Decision Tree

Kaplan's Decision Tree (KDT), which is also an example of a clinical decision-making model, is utilized in the Kaplan Test Prep course that students can take in preparation for the NCLEX examination.

The steps of the KDT mirror the steps of NCSBN's CJMM and provide an algorithm for answering NCLEX-style test items:

- What is the topic of the test item? (**Recognizing Cues**)
- Does the nurse need more assessment information? (**Analyzing Cues**)
- Does the nurse need to implement an action? (**Taking Actions** and **Generating Solutions**)
- Does Maslow's Hierarchy of Needs apply to the answer, or are ABCs (airway, breathing, circulation) relevant? (**Prioritizing Hypotheses**)
- Do the outcomes make sense? (**Evaluating Outcomes**)

The following chart identifies the layers of NCSBN's CJMM and their corresponding steps in Kaplan's Decision Tree framework.

NCSBN Clinical Judgment Measurement Model					
Layer 0	**Client Needs** → **Clinical Decisions**				
Layer 1	**Clinical Judgment**				
Layer 2	**Form Hypotheses**		**Take Actions**		**Evaluate Outcomes**
Layer 3	Recognize cues	Analyze cues	Prioritize hypotheses	Generate solutions	Evaluate Outcome Satisfied/Not Satisfied
Layer 4 *Context Layer*	Identify cues based on environmental & individual factors	List probable client problems based on analysis and knowledge of the condition	Consider available resources and consequences of decision	Apply knowledge of treatment and intervention	Evaluate outcome based on observation and experience
Expected Response	Recognize abnormal findings and relevant historical data	Identify priority problems	Rate potential problems and select one with the highest priority	Rate potential actions and select one best suited for the specific case	Select next action based on nurse satisfaction, client response, desired outcome achieved
Kaplan's Decision Tree Framework					
Steps	**1**	**2**	**3**	**4**	**5**
Directions	Identify the topic of the question by interpreting the information in the stem and choices of the question using learned content knowledge.	Identify choices as assessments or implementations. Using the knowledge of the condition as described in the stem, identify the likely problems and then identify the priority problem.	*Does Maslow apply?* Rate the potential choices and select one with the highest priority.	*Are all the answers physical?* Apply knowledge of ABCs to evaluate hypotheses.	What is the outcome (client response) to the nurses' action? Has the desired outcome been achieved?

Historically, these test-taking skills have been taught to last-semester and graduate nursing students. With the increasing push to transform nursing education to close the education–practice gap, Kaplan Nursing is researching an instructional design approach that would bring the KDT into nursing programs earlier.

The question: Can nursing students increase test-taking skills with in-time micro-learning of the KDT during the first part of a nursing program? Partnership with a large Midwestern university enabled preliminary delivery to a large cohort all at once. Preliminary research focuses on steps 1 and 2 of the KDT.

Methods and Procedures

The original KDT is sound and time-tested. Its overall framework is unchanged in this study. The focus of the study is the delivery method and timing of the KDT. The rapid instructional design approach used was the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) Model. Using the rapid prototyping approach allows the combination of phases to produce a sample product that is a smaller working version of the entire product (Gutierrez, 2015).

In the beginning phase, the need and learners were thoroughly assessed: The need arises from many nursing partner school requests and surveys, and learners are pre-licensure nursing students enrolled in their first or second semester of nursing school. Sanders (2018) found that the most difficult step of the KDT is step 1, where the student identifies the topic of the question, which ultimately guides them to the safest answer choice.

In the development step, not only was the preliminary instruction created, but the pre- and post-test evaluations were also determined. The design used was a micro-learning approach of voiceover PowerPoints. Micro-learning is a trend in which the user interacts with a chosen device in bursts of concentration and multitasking (Cook & Sonnenberg, 2014). The pre- and post-tests were delivered via the partner school's learning management system, and the results were obtained by the partner school instructor via Qualtrics software.

Preliminary Results and Discussion

Evaluation of the pre- and post-test results were preliminarily determined by Excel spreadsheet calculations with data provided only by the university's partner instructor. For step 1 of the KDT, 508 students took the pre-test with a 53% ability to identify the topic correctly. After the learning session, 629 students took the post-test with a 72% ability to identify the topic correctly. These results show a 19% increase in students' ability to identify the topic of a test question after the micro-learning lesson.

Step 2 of the KDT is using the nursing process of assessment and implementation to help eliminate answer choices. In the pre- and post-tests, step 1 was also evaluated to determine whether students were able to retain the learning and apply it to another test. Repeat learning of step 1 was included in the step 2 learning session.

The evaluation of step 2 showed 413 students with a 57% ability to identify the topic correctly for the pre-test and 454 students with a 51% ability to identify the topic for the post-test. We believe that this 6% drop is due to question choice and not student error. Step 2 also recorded an 11% increase in students' ability to eliminate incorrect answer options based on the nursing process. The post-learning student surveys revealed that the majority of the respondents felt more comfortable with identification of topic and elimination of answers using the nursing process.

Kaplan's NGN-Style Questions

NGN questions often start by introducing a case study, passage, or vignette. Depending on the context, the student may be required to analyze normal versus abnormal laboratory results, diagnostic findings, vital signs, physical assessment findings, and/or health care provider prescriptions. Foundational nursing knowledge is a prerequisite for answering NGN questions, but sound clinical judgment is of equal importance.

Kaplan's NGN-style questions reproduce the content and presentation of NGN items that are known to date. The following test-like samples also recommend steps for tackling each NGN question type, illustrated by a critical thinking path.

Multiple Selection Item

Multiple Selection items (also referred to as Select All That Apply, or SATA items) may have up to 10 options. Only one answer choice may be correct, more than one answer choice may be correct, or all answer choices may be correct. Take a look at the following example.

The nurse provides care for a client who is diagnosed with a brain tumor.

Vital signs

Blood pressure	126/82 mm Hg
Heart rate	104 beats/minute
Respirations	17 breaths/minute
Oxygen saturation	96% on room air
Temperature	99.2 °F (37.3 °C)

Urine output 1800 mL over past 4 hours
Urine specific gravity 1.003
Serum sodium level 150 mEq/L (150 mmol/L)
Blood urea nitrogen (BUN) 37 mg/dL (13.2 mmol/L)
Hematocrit 56% (0.56)
Mucous membranes dry
Client reporting thirst

The health care provider diagnoses the client with central diabetes insipidus. Which action does the nurse take? **Select all that apply.**

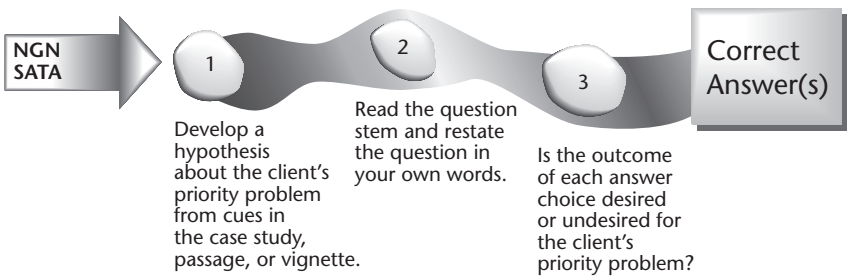
- [x] 1 Infuse dextrose 5% in water (D5W).
- [ ] 2 Prepare the client for dialysis.
- [ ] 3 Administer furosemide 20 mg IV.
- [x] 4 Obtain serial urine specific gravity measurements.
- [x] 5 Administer desmopressin 0.4 mL intranasally.
- [ ] 6 Initiate seizure precautions.
- [x] 7 Assess the client's level of consciousness frequently.
- [ ] 8 Provide client with PO fluids, including caffeinated beverages.

Step 1: Read only the client information (the case study or passage or vignette), and analyze the cues provided to develop a hypothesis about the client's priority problem. Do not look at the question stem or answer options yet.

This client's history (brain tumor diagnosis), laboratory results (hypernatremia, elevated BUN, elevated hematocrit, low urine specific gravity), and assessment findings (e.g., large amounts of urine output) are suggestive of diabetes insipidus.

Step 2: Read the question stem and reword the question in your own words: *Appropriate action(s), diabetes insipidus.*

Step 3: Read each answer choice. With your topic in mind, evaluate whether the outcome is desired. Are you looking for something correct or incorrect? True or false? Right or wrong? With Select All That Apply questions, remember that only one answer choice may be correct, more than one answer choice may be correct, or all of the answer choices may be correct.



Answer Explanation:

(1) **CORRECT:** An infusion of D5W may be prescribed and titrated to replace urine output. Because this solution contains dextrose, osmotic diuresis secondary to hyperglycemia is a risk; the nurse should frequently monitor the client's blood sugar.

(2) The client's BUN level is likely elevated due to dehydration, not because of permanent kidney damage. There are no indications that the client requires dialysis.

(3) Administering furosemide, a loop diuretic, would increase the client's fluid loss. The client already has high urine output. This outcome is not desired.

(4) **CORRECT:** Obtaining serial urine specific gravity measurements would provide information as to whether the client's hydration status is improving.

(5) **CORRECT:** Desmopressin is a synthetic vasopressin that is used in the treatment of central diabetes insipidus.

(6) Seizure precautions would be appropriate if the client were hyponatremic. Hyponatremia is a concern with syndrome of inappropriate antidiuretic hormone (SIADH). This client has hypernatremia.

(7) **CORRECT:** Frequently assessing the client's level of consciousness would give clues about the degree of dehydration. If the client's level of consciousness deteriorates, the nurse should suspect decreased cerebral perfusion and worsening hydration status. Likewise, the nurse should frequently monitor the client's BP and heart rate.

(8) Caffeine will promote diuresis, which is not desired for the client.

Reference Ranges:

Urine specific gravity	1.010–1.030
Serum sodium	135–145 mEq/L (135–145 mmol/L)
BUN	10–20 mg/dL (3.57–7.14 mmol/L)
Hematocrit	Male: 42–52% (0.42–0.52) Female: 35–47% (0.35–0.47)

Highlighting Item

Read the case study below, then refer to the case study to answer the question.

The nurse provides care for a client who is diagnosed with liver cirrhosis. The client's assessment findings are listed below.

	Current	12 hours ago	24 hours ago
Blood pressure	167/82 mm Hg	155/91 mm Hg	182/102 mm Hg
Pulse	88 beats/minute	77 beats/minute	92 beats/minute
Respiration	24 breaths/minute	23 breaths/minute	26 breaths/minute
Oral temperature	99 °F (37.2 °C)	98.8 °F (37.1 °C)	99.1 °F (37.3 °C)
White blood cell count	9000/mm^3 (9×10^9/L)	9600/mm^3 (9.6×10^9/L)	9100/mm^3 (9.1×10^9/L)
Red blood cell count	3.7 million/mm^3 (3.7×10^{12}/L)	3.8 million/mm^3 (3.8×10^{12}/L)	3.8 million/mm^3 (3.9×10^{12}/L)
Hemoglobin	6.8 g/dL (68 g/L)	6.9 g/dL (69 g/L)	6.9 g/dL (69 g/L)
Hematocrit	28% (0.28)	30% (0.30)	30% (0.30)
Platelets	98,000/mm^3 (98×10^9/L)	93,000/mm^3 (93×10^9/L)	96,000/mm^3 (96×10^9/L)
Sodium	135 mEq/L (135 mmol/L)	135 mEq/L (135 mmol/L)	135 mEq/L (135 mmol/L)
Potassium	3.2 mEq/L (3.2 mmol/L)	3.3 mEq/L (3.3 mmol/L)	3.1 mEq/L (3.1 mmol/L)
Albumin	3.1 g/dL (31 g/L)	3.2 g/dL (32 g/L)	3.1 g/dL (31 g/L)
Asterixis	present	absent	absent
Lung sounds	diminished	diminished	diminished
Glasgow Coma Scale	score: 12	score: 13	score: 14
Pupils	3 mm, round, reactive to light	2.5 mm, round, reactive to light	3 mm, round, reactive to light
Abdominal	right upper quadrant tenderness	right upper quadrant tenderness	right upper quadrant tenderness
Skin color	Jaundiced skin with spider angiomas	Jaundiced skin with spider angiomas	Jaundiced skin with spider angiomas

Which finding(s) require(s) follow-up by the nurse?

Click row(s) to highlight the current finding(s) that would be essential to follow-up on. Highlight only row(s) that require follow-up. To deselect a row, click the row again.

Step 1: Interpret/analyze the laboratory values and/or vital signs, paying close attention to patterns and trends.

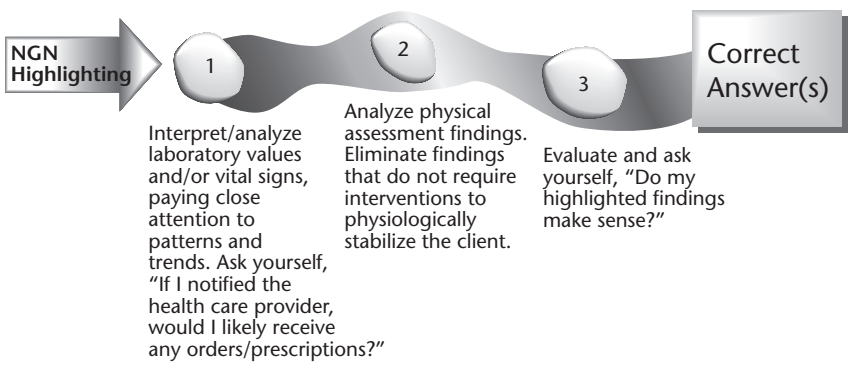
Are the client's values and assessment findings normal? Think like a nurse and consider the following: "If I reported the hemoglobin level, potassium level, and lung sounds to the health care provider, what would happen next? Might I receive a prescription for a blood transfusion, potassium replacement, and chest x-ray?"

Step 2: Analyze the physical assessment findings.

The client has a diagnosis of liver cirrhosis. Consider which physical assessment findings are expected. Then, eliminate expected findings that do not require interventions to physiologically stabilize the client's condition.

For instance, the client has jaundiced skin with spider angiomas. This finding is certainly not "normal," but it is expected in a client who has been diagnosed with liver cirrhosis. Your thinking process may go like this: "I would not expect to receive any additional prescriptions from the health care provider if I report this physical assessment finding. However, asterixis was absent on previous assessments, but it is now present. The presence of asterixis can indicate hepatic encephalopathy. Therefore, if I notify the health care provider of this abnormal assessment finding, I may be asked to perform more frequent neurological checks, draw an ammonia level, and administer lactulose."

Step 3: After highlighting your answers, step back, evaluate, and ask yourself, "Does this make sense? Have I selected all appropriate rows that would require follow up?"



Answer Explanation:

It is essential to follow up on findings that have physical implications, such as an elevated BP, elevated respiratory rate, low red blood cell count, low hemoglobin, low hematocrit, low platelet count, low potassium level, low albumin level, the presence of asterixis (an indicator of hepatic encephalopathy), and a low Glasgow Coma Scale score.

The client's pulse rate, white blood cell count, and sodium level are within normal range. The client is neither hypothermic nor hyperthermic, so the temperature reading of 99 °F (37.2 °C) does not require follow-up. The client's pupil assessment is normal. Because it is expected that a client diagnosed with liver cirrhosis will have right upper quadrant abdominal tenderness, this is not a finding that requires priority follow-up, either. Additionally, jaundiced skin is an expected finding in this client. Spider angiomas, which are small, dilated blood vessels with a bright red center point and spider-like branches, are also commonly seen in clients with liver cirrhosis.

Reference Ranges:

White blood cell count	4500 to 11,000/mm^3 (4.5 to 11 $\times$ 10^9/L)
Red blood cell count	Male: 4.6 to 6.2 million/mm^3 (4.6 to 6.2 $\times$ 10^{12}/L) Female: 4.2 to 5.4 million/mm^3 (4.2 to 5.4 $\times$ 10^{12}/L)
Hemoglobin	Male: 13 to 18 g/dL (130 to 180 g/L) Female: 12 to 16 g/dL (120 to 160 g/L)
Hematocrit	Male: 42 to 52% (0.42 to 0.52) Female: 35 to 47% (0.35 to 0.47)
Platelets	150,000 to 450,000/mm^3 (150 to 450 $\times$ 10^9/L)
Sodium	135 to 145 mEq/L (135 to 145 mmol/L)
Potassium	3.5 to 5 mEq/L (3.5 to 5 mmol/L)
Albumin	3.5 to 5.5 g/dL (35 to 55 g/L)

Cloze Item

Example 1

Complete the following sentences by choosing from the list of options:

A client who suffered a head injury and loss of consciousness undergoes a computed tomography (CT) scan of the head. The radiologist alerts the health care provider that the client's CT scan has been reviewed. If a(an) Select... is present, the nurse understands Select... .

Select... options: subdural hematoma; epidural hematoma; intracerebral hemorrhage

Select... options: widespread axonal damage has occurred in the brain; bruising of brain tissue within a focal area has occurred; blood is present between the dura mater and the arachnoid layer of the meninges

Step 1: Develop a hypothesis about the client's priority problem based on cues provided in the case study, passage, or vignette.

The completed sentences in this Cloze item indicate the priority problem: The client has a head injury. You are looking for consequences of a head injury that would be revealed by a CT scan.

Step 2: Eliminate answer choices using the priority problem you have identified.

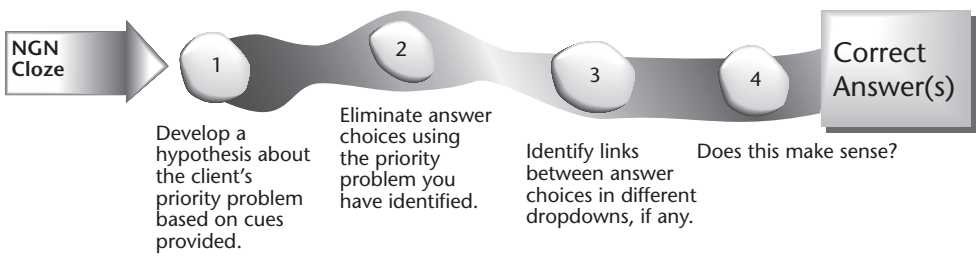
Consider each answer choice in the dropdown menu. Does it relate to the priority problem you have identified for this client? If not, eliminate the answer choice. If you cannot eliminate answer choices by reasoning through your foundational nursing knowledge, proceed to Step 3.

In this example, you should ask yourself, "Can a head injury result in a subdural hematoma? Can a head injury result in an epidural hematoma? Can a head injury result in an intracerebral hemorrhage?"

Step 3: Identify correlations or links between answer choices, if any.

Look at the dropdown menus provided. Are you able to form "links" between one answer choice, two answer choices, or all of the answer choices from another dropdown? In this example, the only answer options that correlate and make sense are "subdural hematoma" and "blood is present between the dura mater and the arachnoid layer of the meninges." If a link or correlation between only one set of answer choices makes sense, that is likely the credited answer.

Step 4: After choosing your answers from the dropdown menus, pause to consider each of your selections. Ask yourself, "Does this choice make sense? Have I selected answers based on my foundational nursing knowledge?" If you can answer "Yes," you have selected the best choice to answer the Cloze item.



Answer Explanation:

- "Widespread axonal damage" describes a diffuse axonal injury in which the white matter of the cerebral hemispheres, basal ganglia, thalamus, and brainstem are affected. This outcome is not given as an answer choice in the dropdown menu.
- "Bruising of brain tissue within a focal area" describes a concussion. This is not given as an answer choice in the dropdown menu.

- "Blood [that] is present between the dura mater and the arachnoid layer of the meninges" describes a subdural hematoma. Thus, the choice "subdural hematoma" and this answer choice are linked.
- Neither "epidural hematoma" nor "intracerebral hemorrhage" would result in blood being present between the dura mater and the arachnoid layer of the meninges. Rather, an epidural hematoma results in bleeding between the dura and inner surface of the skull, whereas intracerebral hemorrhage results in bleeding into the brain tissue and is usually within the frontal and temporal lobes. Neither of these outcomes is an answer choice given in the dropdown menu.

Example 2

The nurse provides care for a young adult client who reports polyuria, polydipsia, and nausea/vomiting. The client's blood glucose is 486 mg/dL (27 mmol/L) and BP is 88/50 mm Hg. Based on the client's condition, choose the most likely option for the missing information in the table below.

Health Care Provider's Prescription	Dose or Rate	Indication
Select... Regular insulin infusion	0.1 units/kg/hr	to lower blood sugar
1 liter of 0.9% sodium chloride	Select... over 1 hour	increase intravascular volume
Urinalysis	N/A	Select... verify ketonuria
Select... Ondansetron	4 mg IV	for nausea/vomiting
Select... Potassium	20 mEq IV over 2 hours	If level is less than 3.5 mEq/L (3.5 mmol/L)
IV fluids with dextrose	250 mL/hr	Select... once blood glucose drops to 250 mg/dL (13.9 mmol/L); once client develops signs of hypoglycemia; once blood pressure is within normal limits; once polyuria and polydipsia have resolved

Step 1: Develop a hypothesis about the client's priority problem based on cues provided in the case study, passage, or vignette. Looking at the case study in this example, you should suspect that this client is experiencing diabetic ketoacidosis (DKA).

Step 2: With the client's priority problem in mind (DKA), think about each answer option in the dropdown menus. What choices can you eliminate? For instance, the health care provider has prescribed a urinalysis. When choosing an option from the "Indication" column, don't lose your topic: suspected DKA. The only answer choice that helps validate the presence of DKA is ketonuria. Using your foundational nursing knowledge, you should recall that dehydration and DKA go hand in hand. In this scenario, the health care provider has prescribed 1 liter of 0.9% sodium chloride to treat the client's dehydration and hypotensive state. It makes sense that this client needs quick fluid volume replacement. Repeat this process with each dropdown: Does the answer choice relate to the priority problem you have identified for this client?

Step 3: Identify links between answer choices, if any. In this Cloze item, there is only one dropdown menu per row. The rest of the row gives information that you can use as cues. Since there are no pairs of dropdowns to consider together, you can proceed to the next step.

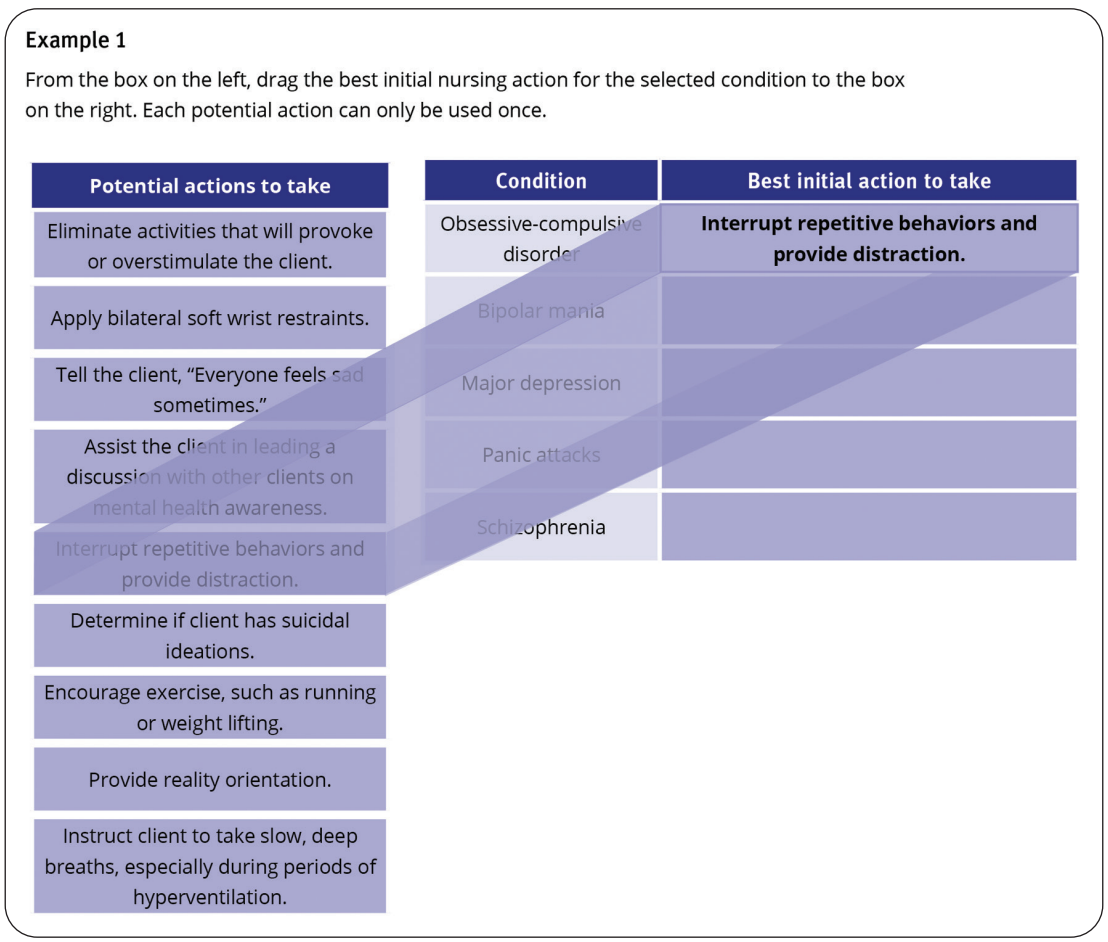
Step 4: Pause to consider each of your selections. Does this choice make sense based on foundational nursing knowledge? Is it safe and effective for the client? If you can answer "Yes," you have selected the best choice to answer the Cloze item.

Answer Explanation:

- **[Regular insulin infusion]** 0.1 units/kg/hr to lower blood sugar. (The other answer options were: isophane insulin infusion, glargine insulin infusion, detemir insulin infusion.) Regular insulin, which is a short-acting insulin, has an onset of 30 to 60 minutes. Isophane insulin is an intermediate-acting insulin and has an onset of 1 to 2 hours. Glargine and detemir insulins are long-acting; glargine insulin has a 3 to 4 hour onset, and the onset of detemir insulin is unknown.
- 1 liter of 0.9% sodium chloride **[over 1 hour]** to increase intravascular volume. (The other answer options were: 4 hours, 8 hours, 12 hours.) The student should suspect that DKA is likely. Clients who are experiencing DKA are dehydrated (hyperglycemia leads to osmotic diuresis with dehydration and electrolyte loss). Therefore, the client will receive rapid fluid volume replacement. Note: The client should be assessed for a history of heart failure, and breath sounds should be frequently assessed.
- Urinalysis to **[verify ketonuria]**. **(**The other answer options were: verify hematuria, verify glycosuria, verify myoglobinuria.) Ketonuria supports a diagnosis of DKA. Because the client's blood sugar is so high, glycosuria is an expected finding. Hematuria and myoglobinuria (which is associated with muscle destruction) do not make sense in the given situation.
- **[Ondansetron]** 4 mg IV for nausea/vomiting. (The other answer options were: oxycodone, apremilast, and apixaban.) Ondansetron is an antiemetic medication that is used to treat nausea and vomiting. Oxycodone is an opioid analgesic that, as a side effect, may cause nausea and vomiting. Apremilast is an immunosuppressant that treats psoriasis and psoriatic arthritis. Apixaban is an anticoagulant that treats and prevents blood clots.
- **[Potassium]** 20 mEq IV over 2 hours if level is less than 3.5 mEq/L (3.5 mmol/L). (The other answer options were: magnesium, sodium, and calcium.) To answer this dropdown item correctly, the key is to look at the indication: "if level is less than 3.5 mEq/L (3.5 mmol/L)." Normal serum potassium level is 3.5 to 5 mEq/L (3.5 to 5 mmol/L). Normal magnesium level is 1.3 to 2.1 mEq/L (0.65 to 1.05 mmol/L). Normal sodium level is 135 to 145 mEq/L (135 to 145 mmol/L). Normal ionized calcium level is 4.6 to 5.1 mg/dL (1.15 to 1.27 mmol/L), and normal total calcium level is 8.2 to 10.2 mg/dL (3.33 to 6.11 mmol/L).

- IV fluids with dextrose at a rate of 250 mL/hr **[once blood glucose drops to 250 mg/dL (13.9 mmol/L)]**. Standard of care is to start an IV solution with dextrose once the client's blood glucose drops to 250 mg/dL (13.9 mmol/L) or 300 mg/dL (16.7 mmol/L). The goal of adding dextrose to the IV fluids is to prevent hypoglycemia and a sudden drop in glucose that can be associated with cerebral edema.

Drag-and-Drop



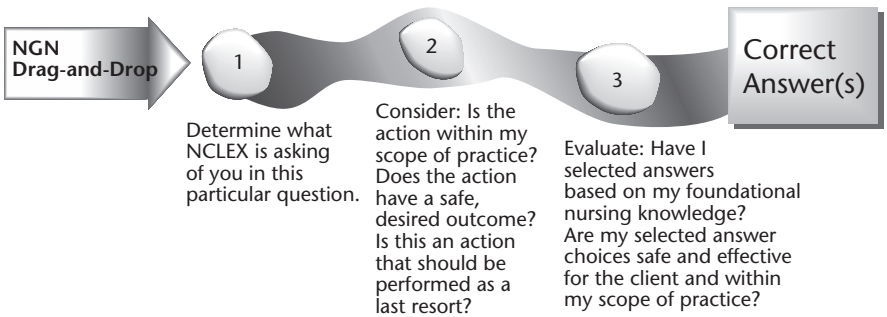
Step 1: Pay attention to headers (e.g., Best initial action to take). More than one action may be appropriate for the selected condition, but you are looking for the *initial* action.

Step 2: Review your potential actions and think about the outcome of each answer choice.

Consider the following: Is the action within my scope of practice (e.g., Provide reality orientation)? Does the action have a safe, desired outcome for the client (e.g., Eliminate activities that will provoke or overstimulate the client)? Is this an action that I could consider taking, but would only be chosen as a last resort (e.g., Apply bilateral soft wrist restraints)? With

each condition, what do you want to prevent? What do you want to promote? Immediately eliminate any actions that are outside your scope of practice and that have unsafe, undesired outcomes for the client.

Step 3: After choosing your answers, step back, evaluate, and ask yourself, "Does this make sense? Have I selected answers based on my foundational nursing knowledge? Are my selected answer choices safe and effective for the client and within my scope of practice?"



Potential actions to take
Eliminate activities that will provoke or overstimulate the client.
Apply bilateral soft wrist restraints.
Tell the client, "Everyone feels sad sometimes."
Assist the client in leading a discussion with other clients on mental health awareness.
Interrupt repetitive behaviors and provide distraction.
Determine if client has suicidal ideations.
Encourage exercise, such as running or weight lifting.
Provide reality orientation.
Instruct client to take slow, deep breaths, especially during periods of hyperventilation.

Condition	Best initial action to take
Obsessive-compulsive disorder	**Interrupt repetitive behaviors and provide distraction.**
Bipolar mania	**Eliminate activities that will provoke or overstimulate the client.**
Major depression	**Determine if client has suicidal ideations.**
Panic attacks	**Instruct client to take slow, deep breaths, especially during periods of hyperventilation.**
Schizophrenia	**Provide reality orientation.**

Answer Explanation:

Actions not chosen include the following:

- Restraints, both chemical and physical, are used as a last resort. Restraints should only be used to ensure client or staff safety.

- Platitudes, such as "Everyone gets down once in a while," should be avoided in communications with the client because they minimize the client's feelings.
- Assisting the client in leading a discussion with other clients on mental health awareness is an appropriate intervention after the client has received treatment. This is not appropriate as an *initial* intervention for any of the listed conditions.
- Encouraging exercise, such as running or weight lifting, is an appropriate nursing action for a client diagnosed with depression. However, this is not a best *initial* action.

Example 2

The nurse is preparing to make room assignments for the 8 clients below. Drag each client profile from the left-hand column to an appropriate room and bed on the right. A maximum of two clients may occupy each room. Certain clients may require a private room.

Clients	Rooms and Beds	
50-year-old client diagnosed with *Pneumocystis jiroveci* pneumonia	100	**18-year-old client diagnosed with measles (rubeola)**
34-year-old client diagnosed with hepatitis C complications	101-1	
18-year-old client diagnosed with measles (rubeola)	101-2	
40-year-old client diagnosed with varicella zoster (chickenpox)	102-1	
8-year-old client diagnosed with Lyme disease	102-2	
60-year-old client diagnosed with *Clostridioides difficile*	103	
35-year-old client diagnosed with *Mycobacterium tuberculosis*	104	
10-year-old client diagnosed with infectious mononucleosis	105	

Step 1: Determine what NCLEX is asking of you in this particular situation. In this situation, you are being asked to identify appropriate room assignments.

Step 2: Does this action have a safe, desired outcome?

Is it safe for a client who has an airborne illness (e.g., *Mycobacterium tuberculosis*) to be placed in a private, negative-pressure room to avoid infecting other clients? Likewise, is it safe for a client who has infectious diarrhea (e.g., *Clostridioides difficile*) to also receive a private room?

Step 3: Evaluate: Have I selected answers based on my foundational nursing knowledge with consideration to infection control and growth and development? Are the selected room assignments safe and effective for the client?

Though care for four of the clients (two adults, two minors) requires only standard precautions, from a growth and development perspective, is it most appropriate that the two minors (8 and 10 years of age) are placed in the same room?

Clients	Rooms and Beds	
50-year-old client diagnosed with *Pneumocystis jiroveci* pneumonia	100	**18-year-old client diagnosed with measles (rubeola)**
34-year-old client diagnosed with hepatitis C complications	101-1	**50-year-old client diagnosed with *Pneumocystis jiroveci* pneumonia**
18-year-old client diagnosed with measles (rubeola)	101-2	**34-year-old client diagnosed with hepatitis C complications**
40-year-old client diagnosed with varicella zoster (chickenpox)	102-1	**8-year-old client diagnosed with Lyme disease**
8-year-old client diagnosed with Lyme disease	102-2	**10-year-old client diagnosed with infectious mononucleosis**
60-year-old client diagnosed with *Clostridioides difficile*	103	**40-year-old client diagnosed with varicella zoster (chickenpox)**
35-year-old client diagnosed with *Mycobacterium tuberculosis*	104	**60-year-old client diagnosed with *Clostridioides difficile***
10-year-old client diagnosed with infectious mononucleosis	105	**35-year-old client diagnosed with *Mycobacterium tuberculosis***

Answer Explanation:

Clients diagnosed with measles (rubeola) and tuberculosis require airborne precautions and should be placed in private rooms. Though both clients require the same level of isolation, they should not be placed in the same room because the client with *Mycobacterium tuberculosis* may become infected with measles, and the client with measles may become infected with *Mycobacterium tuberculosis*.

A client diagnosed with *Mycobacterium tuberculosis*, for instance, should only receive a roommate who has the same diagnosis. A client diagnosed with varicella zoster (chickenpox) requires airborne and contact precautions; contact precautions are required until the lesions have crusted. A client diagnosed with *Clostridioides difficile* requires contact precautions. Therefore, these two clients should be placed in private rooms. When providing care to clients diagnosed with *Pneumocystis jiroveci* pneumonia, hepatitis C, Lyme disease, and infectious mononucleosis, standard precautions are the only required methods of protection. From a growth and development perspective, however, the two school-aged clients should be cohorted together.

Matrix Item

Read the following case study, then refer to the case study to answer the questions.

The nurse provides care for a client who is diagnosed with an acute myocardial infarction. The client's progress notes are listed below.

Progress Notes

18:15 Client presents to the emergency department with a report of chest pain and nausea/vomiting. The client reports taking three sublingual nitroglycerin tablets without relief.

18:19 Electrocardiogram obtained that reveals ST-segment elevation in leads II, III, and aVF. Client's BP is 88/50 mm Hg, pulse 114 beats/minute, respirations 18 breaths/minute, T 99.2 °F (37.3 °C), SpO_2 97%. Health care provider notified.

Which actions should the nurse prepare to take?

For each action below, click to specify whether the action would be:

Indicated: an action that the nurse should take to resolve the problem

Contraindicated: an action that could harm the client and should not be taken

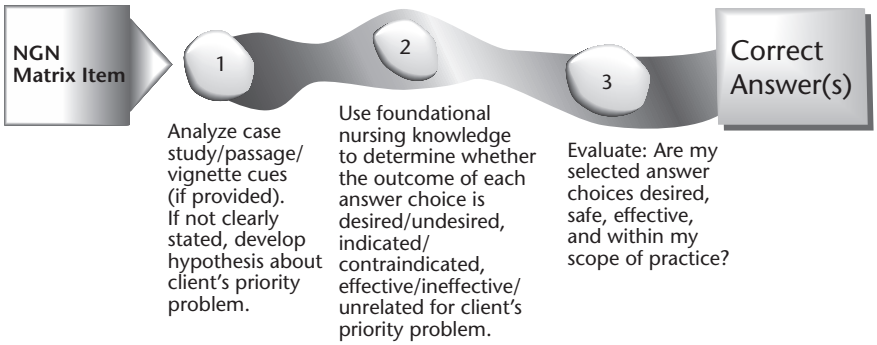
Action	Indicated	Contraindicated
Ask client to rate pain using a numeric pain rating scale	●	○
Obtain a baseline troponin level	●	○
Administer metoprolol tartrate 5 mg IV	○	●
Prepare the client for percutaneous coronary intervention (PCI) by administering alteplase, a thrombolytic medication	○	●
Administer (4) 81-mg chewable aspirin tablets	●	○
Start a continuous IV infusion of nitroglycerin at 10 mcg/min	○	●

Step 1: Analyze case study/passage cues and develop a hypothesis about the client's priority problem(s).

This client is hypotensive (BP 88/50 mm Hg), vomiting, and experiencing an inferior myocardial infarction as evidenced by ST-segment elevation in leads II, III, and aVF. Picture yourself at the client's bedside. Consider how you should prioritize if you only have time to ask a limited number of questions and perform a limited number of actions.

Step 2: In this question, you are being asked to make decisions about actions and determine whether each answer choice has a safe, effective outcome (indicated) or unsafe, ineffective outcome (contraindicated).

Step 3: Evaluate: Did I select answers with the client's priority problems in mind? The client is hypotensive, vomiting, and experiencing a myocardial infarction. Do my selected answers make sense? Are my selected answer choices desired, safe, effective, and within my scope of practice?



Answer Explanation:

Indicated actions

- It is essential to determine the client's baseline level of pain, using the PQRST (palliative/provocative factors, quality, region/radiation, severity, timing) mnemonic. If the client's blood pressure improves, a pain medication may be prescribed to treat the client's pain. Morphine sulfate, for instance, will decrease pain, anxiety, preload, and afterload. It is important to establish a baseline pain level rating and regularly reassess the client's pain level after administering pain medications.
- Troponin, a protein, is released into the bloodstream once myocardial damage has occurred. Troponin is a blood test that helps evaluate myocardial muscle damage. A baseline, along with serial troponin measurements, is necessary.
- Aspirin is an antiplatelet medication that is a first-line treatment for a client experiencing a myocardial infarction.

Contraindicated actions

- Administration of metoprolol, a beta blocker, is contraindicated because the client is hypotensive (BP 88/50 mm Hg).
- The client does require preparation for PCI (e.g., informed consent, clipping of hair at access site), but preparation does not include administration of a thrombolytic medication. A thrombolytic medication is only considered if access to a hospital with PCI capability is not readily available.
- Like metoprolol, nitroglycerin is currently contraindicated because the client is hypotensive.

NGN Resources from Kaplan Nursing

Kaplan is developing resources for NCLEX exam candidates preparing for NGN, including a set of test-like, interactive NGN practice questions. For more information, log on to: *kaptest.com/nclex*.

In addition, Kaplan is maintaining a dedicated location on its website highlighting key NGN updates from NCSBN and related faculty workshops from Kaplan Nursing. To take advantage of this free resource, log on to: *kaptest.com/nursing-educators/next-generation-nclex*.