

## **Adams, *Pharmacology for Nurses: A Pathophysiologic Approach*, 4/E**

### **Chapter 2**

**Question:1**

**Type: MCSA**

The pharmaceutical representative comes to the physician's office and says his company's pharmaceutical laboratory is marketing a drug that does not need approval by the Food and Drug Administration (FDA). What is the best response by the nurse?

1. "Any pharmaceutical laboratory in America must have approval from the Food and Drug Administration (FDA) before marketing a drug."
2. "Is this an over-the-counter (OTC) drug? They do not need approval by the Food and Drug Administration (FDA)."
3. "Is your pharmaceutical laboratory private? Only public pharmaceutical laboratories need approval from the Food and Drug Administration (FDA)."
4. "Your pharmaceutical laboratory must be involved in academic research because they are exempt from approval by the Food and Drug Administration (FDA)."

**Correct Answer: 1**

**Rationale 1:** Any pharmaceutical laboratory must obtain approval from the Food and Drug Administration (FDA) before marketing a drug.

**Rationale 2:** Pharmaceutical laboratories that manufacture over-the-counter (OTC) drugs must obtain approval from the Food and Drug Administration (FDA) before marketing these drugs.

**Rationale 3:** Private pharmaceutical laboratories must obtain approval from the Food and Drug Administration (FDA) before marketing a drug.

**Rationale 4:** Pharmaceutical laboratories involved in academic research must obtain approval from the Food and Drug Administration (FDA) before marketing a drug.

**Global Rationale:** Any pharmaceutical laboratory, whether private, public, or academic, must obtain approval from the Food and Drug Administration (FDA) before marketing a drug. Private pharmaceutical laboratories must obtain approval from the Food and Drug Administration (FDA) before marketing a drug. Pharmaceutical laboratories involved in academic research must obtain approval from the Food and Drug Administration (FDA) before marketing a drug. Pharmaceutical laboratories that manufacture over-the-counter (OTC) drugs must obtain approval from the Food and Drug Administration (FDA) before marketing these drugs.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-2 Discuss the role of the U.S. Food and Drug Administration (FDA) in the drug approval process.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

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## **Question 2**

**Type:** MCSA

The nurse is employed by the Food and Drug Administration (FDA) and is involved in clinical investigation. What is the primary role of the nurse in this phase of the review and approval process by the FDA?

1. To perform tests on the population-at-large
2. To perform tests on various species of animals
3. To perform tests on human cells cultured in the laboratory
4. To perform tests on human clients

**Correct Answer:** 4

**Rationale 1:** Performing tests on the population-at-large is the stage of post-marketing surveillance.

**Rationale 2:** Performing tests on various species of animals is the preclinical investigation stage.

**Rationale 3:** Performing tests on human cells cultured in the laboratory is the preclinical investigation stage.

**Rationale 4:** Clinical investigation includes performing tests on healthy volunteers, and later, on selected clients with a particular disease.

**Global Rationale:** Clinical investigation includes performing tests on healthy volunteers, and later, on selected clients with a particular disease. Performing tests on human cells cultured in the laboratory is the preclinical investigation stage. Performing tests on the population-at-large is the stage of post-marketing surveillance. Performing tests on various species of animals is the preclinical investigation stage.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

## **Question 3**

**Type:** MCSA

The student nurse is taking a pharmacology course and studying about the Food and Drug Administration (FDA). What has the student learned about how the FDA has decreased the amount of time involved in bringing a new drug to the market?

1. The Food and Drug Administration (FDA) is not as strict as it once was with regard to drug approval.
2. Since consumers have demanded more drugs, the Food and Drug Administration (FDA) has streamlined the review/approval process.
3. Drug manufacturers are required to pay yearly user fees, which allow the Food and Drug Administration (FDA) to hire more employees to increase its efficiency.
4. Drug manufacturers are required by the Food and Drug Administration (FDA) to test more drugs on an annual basis.

**Correct Answer:** 3

**Rationale 1:** The Food and Drug Administration (FDA) is just as strict now as it always was with regard to drug approval.

**Rationale 2:** The Food and Drug Administration (FDA) has not streamlined the review/approval process.

**Rationale 3:** In 1992, the Prescription Drug User Fee Act was passed. This required drug manufacturers to provide yearly product user fees so the Food and Drug Administration (FDA) could restructure, hire more employees, and operate more efficiently.

**Rationale 4:** The Food and Drug Administration (FDA) does not require drug manufacturers to test more drugs on an annual basis.

**Global Rationale:** In 1992, the Prescription Drug User Fee Act was passed. This required drug manufacturers to provide yearly product user fees so the Food and Drug Administration (FDA) could restructure, hire more employees, and operate more efficiently. The Food and Drug Administration (FDA) is just as strict now as it always was with regard to drug approval. The Food and Drug Administration (FDA) has not streamlined the review/approval process. The Food and Drug Administration (FDA) does not require drug manufacturers to test more drugs on an annual basis.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-4 Discuss how the FDA has increased the speed with which new drugs reach consumers.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 15

**Question 4**

**Type:** MCSA

The client has skin lesions that have not responded to prescription drugs. He tells the nurse he has heard about some research going on with a new drug and questions why he can't take it. What is the best response by the nurse?

1. "I know it is frustrating, but the Food and Drug Administration (FDA) approval process is in place to ensure that drugs are safe."
2. "The Food and Drug Administration (FDA) has very strict rules about new drugs; it is important to be patient regarding the review/approval process."
3. "Your skin lesions really aren't that bad, but maybe the new drug will be available soon."
4. "Maybe you could contact the drug company about becoming involved in a clinical trial."

**Correct Answer:** 1

**Rationale 1:** Although the public is anxious to receive new drugs, the fundamental priority of the Food and Drug Administration (FDA) is to ensure that drugs are safe. Also, telling the client that the nurse knows he is frustrated is therapeutic because it communicates that the nurse recognizes what he is feeling.

**Rationale 2:** Telling the client to be patient is a condescending response; the client wants relief from the skin condition.

**Rationale 3:** Telling the client his skin lesions "aren't that bad" is a non-therapeutic response; the client's perception is his reality.

**Rationale 4:** The client could contact the drug company, but this response fosters false hope as he may not be a viable candidate for this drug.

**Global Rationale:** Although the public is anxious to receive new drugs, the fundamental priority of the Food and Drug Administration (FDA) is to ensure that drugs are safe. Also, telling the client that the nurse knows he is frustrated is therapeutic because it communicates that the nurse recognizes what he is feeling. The client could contact the drug company, but this response fosters false hope as he may not be a viable candidate for this drug. Telling the client his skin lesions "aren't that bad" is a non-therapeutic response; the client's perception is his reality. Telling the client to be patient is a condescending response; the client wants relief from the skin condition.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-2 Discuss the role of the U.S. Food and Drug Administration (FDA) in the drug approval process.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

### Question 5

Type: MCSA

What percentage of Americans takes at least one prescription drug per year?

1. 50%
2. 10%
3. 40%
4. 25%

**Correct Answer:** 1

**Rationale 1:** About half of Americans take prescription drugs while about 17% takes at least three prescription drugs.

**Rationale 2:** The percentage of Americans taking at least one prescription drug is higher.

**Rationale 3:** This is not the percentage of Americans taking at least one prescription drug.

**Rationale 4:** This is not the percentage of Americans taking at least one prescription drug.

**Global Rationale:** About half of Americans take prescription drugs while about 17% takes at least three prescription drugs.

**Cognitive Level:** Remembering

**Client Need:** Health Promotion and Maintenance

**Client Need Sub:**

**QSEN Competencies:** III.B.4 Read original research and evidence reports related to area of practice.

**AACN Essential Competencies:** III.1 Explain the interrelationships among theory, practice, and research.

**NLN Competencies:** Knowledge and Science: Relationships between knowledge/science and quality and safe patient care.

**Nursing/Integrated Concepts:** Nursing Process: Assessment

**Learning Outcome:** 2-1 Identify key U.S. drug regulations that have provided guidelines for the safe and effective use of drugs and drug therapy.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 11

### Question 6

Type: MCMA

The nurse is teaching a medication class for parents of children with attention-deficit hyperactivity disorder who are receiving stimulant medications. The nurse has reviewed reasons why the medications are restricted. The nurse determines that learning has occurred when the parents make which responses?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. "The use of these medications is restricted so that the pharmacies can track the rate of drug abuse in our city."

2. "The use of these medications is restricted because the physician needs to evaluate our child more often."
3. "The use of these medications is restricted because they have the potential for abuse."
4. "The use of these medications is restricted so that the drug companies can make a bigger profit."
5. "The use of these medications is restricted because this is the current law."

**Correct Answer:** 3,5

**Rationale 1:** Pharmacies do not track the rate of drug abuse in cities.

**Rationale 2:** More frequent evaluations is a good plan, but this is not the reason for restricted use of stimulant medications.

**Rationale 3:** Medications with abuse potential are restricted.

**Rationale 4:** Drug companies do not make a bigger profit when medications are listed as restricted.

**Rationale 5:** The Controlled Substance Act is the law under which medications with abuse potential are restricted. Stimulant medications are considered controlled substances.

**Global Rationale:** The Controlled Substance Act is the law under which medications with abuse potential are restricted. Stimulant medications are considered controlled substances. More frequent evaluations is a good plan, but this is not the reason for restricted use of stimulant medications. Drug companies do not make a bigger profit when medications are listed as restricted. Pharmacies do not track the rate of drug abuse in cities.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Evaluation

**Learning Outcome:** 2-7 Discuss why drugs are sometimes placed on a restrictive list, and the controversy surrounding this issue.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

## **Question 7**

**Type:** MCSA

The client says to the nurse, "My doctor said my drug is a controlled substance; am I considered an addict?" What is the best response by the nurse?

1. "Are you concerned about becoming an addict? We can discuss this in more detail if you would like to."
2. "You are not an addict; the Drug Enforcement Administration (DEA) restricts the use of drugs with a high potential for abuse."

3. "Why do you ask about becoming an addict? Not many of our clients have asked this question."
4. "You are not an addict, but the Drug Enforcement Administration (DEA) will monitor you for this."

**Correct Answer:** 2

**Rationale 1:** It is premature at this time to ask the client if he is concerned about addiction; there is no information to support an addiction.

**Rationale 2:** Drugs that have a high potential for addiction are considered controlled substances.

**Rationale 3:** "Why" questions are considered non-therapeutic because they put the client on the defensive.

**Rationale 4:** The Drug Enforcement Administration (DEA) does not monitor clients for addiction when they receive controlled substances.

**Global Rationale:** Drugs that have a high potential for addiction are considered controlled substances. The Drug Enforcement Administration (DEA) does not monitor clients for addiction when they receive controlled substances. It is premature at this time to ask the client if he is concerned about addiction; there is no information to support an addiction. "Why" questions are considered non-therapeutic because they put the client on the defensive.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-6 Explain the U.S. Controlled Substance Act of 1970 and the role of the U.S. Drug Enforcement Administration in controlling drug abuse and misuse.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

## Question 8

**Type:** MCSA

The client is receiving methadone (Dolophine), a Schedule II drug. The client says to the nurse, "A pharmacist told me the pharmacy must register with the Drug Enforcement Administration (DEA) to give me this drug; will DEA agents be snooping around my house?" What is the best response by the nurse?

1. "It is probably unlikely that Drug Enforcement Administration (DEA) agents will be bothering you."
2. "No, the Drug Enforcement Administration (DEA) restricts drugs that have a high potential for abuse."
3. "No. I think our system should be more like Europe; they have fewer controlled drugs."
4. "That's an interesting question. Are you worried about the Drug Enforcement Administration (DEA)?"

**Correct Answer:** 2

**Rationale 1:** Telling the client that Drug Enforcement Administration (DEA) agents will "probably" not bother him can lead the client to think DEA agents might bother him.

**Rationale 2:** The Controlled Substance Act of 1970 restricts the use of drugs that have a high potential for abuse. Hospitals and pharmacies must register with the Drug Enforcement Administration (DEA) to obtain a specific registration number that will enable them to purchase controlled drugs.

**Rationale 3:** By saying that our system should be more like Europe's, the nurse is introducing her beliefs and this is non-therapeutic; the client may not agree.

**Rationale 4:** Asking the client if he is worried about the Drug Enforcement Administration (DEA) puts him on the defensive and is non-therapeutic.

**Global Rationale:** The Controlled Substance Act of 1970 restricts the use of drugs that have a high potential for abuse. Hospitals and pharmacies must register with the Drug Enforcement Administration (DEA) to obtain a specific registration number that will enable them to purchase controlled drugs. Telling the client that Drug Enforcement Administration (DEA) agents will "probably" not bother him can lead the client to think DEA agents might bother him. Asking the client if he is worried about the Drug Enforcement Administration (DEA) puts him on the defensive and is non-therapeutic. By saying that our system should be more like Europe's, the nurse is introducing her beliefs and this is non-therapeutic; the client may not agree.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-6 Explain the U.S. Controlled Substance Act of 1970 and the role of the U.S. Drug Enforcement Administration in controlling drug abuse and misuse.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

## Question 9

**Type:** MCSA

During the admission assessment, the client tells the nurse "Sure I smoke a little weed (marijuana) to manage my stress. Doesn't everyone?" What is the best assessment question for the nurse to ask?

1. "What other ways do you think you might use to help you to manage your stress?"
2. "That is a Schedule I drug; aren't you afraid of going to jail for a long time?"
3. "Do you really believe that everyone smokes marijuana to manage stress?"
4. "How often do you smoke marijuana, and how much each time?"

**Correct Answer:** 4

**Rationale 1:** Stress management is not the main concern during the admission assessment.



**Rationale 2:** Asking the client if he is afraid of going to jail is not an assessment question and is not the issue during the admission assessment.

**Rationale 3:** Asking the client if he really believes something is not an assessment question and can lead to an argument with the client.

**Rationale 4:** The nurse must assess the amount and frequency of any drug the client uses, including illegal drugs.

**Global Rationale:** The nurse must assess the amount and frequency of any drug the client uses, including illegal drugs. Asking the client if he really believes something is not an assessment question and can lead to an argument with the client. Stress management is not the main concern during the admission assessment. Asking the client if he is afraid of going to jail is not an assessment question and is not the issue during the admission assessment.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-9 Identify the five drug schedules and give examples of drugs at each level.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

## **Question 10**

**Type:** MCSA

The mother of an adolescent receiving methylphenidate (Concerta) for attention-deficit hyperactivity disorder tells the nurse that her son is better and asks why she can't just get refills on the prescription. What is the best response by the nurse?

1. "Just drop by and I will get a prescription for you without seeing your son."
2. "We can't do that; maybe you can find another doctor's office that will do it."
3. "The law does not allow us to give you refills on this medication."
4. "The medication can be addictive so your son needs a monthly medical evaluation."

**Correct Answer:** 4

**Rationale 1:** Schedule II medications cannot be refilled without the client being seen by the physician.

**Rationale 2:** Referring the mother to another office is non-therapeutic and implies that other medical offices violate the law.

**Rationale 3:** Telling the mother about the law is accurate, but it is a non-therapeutic response; the mother needs an explanation.

**Rationale 4:** Telling the mother the reason for monthly evaluations is a therapeutic response that is correct and answers the mother's question.

**Global Rationale:** Telling the mother the reason for monthly evaluations is a therapeutic response that is correct and answers the mother's question. Schedule II medications cannot be refilled without the client being seen by the physician. Telling the mother about the law is accurate, but it is a non-therapeutic response; the mother needs an explanation. Referring the mother to another office is non-therapeutic and implies that other medical offices violate the law.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-7 Discuss why drugs are sometimes placed on a restrictive list, and the controversy surrounding this issue.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 18

## Question 11

**Type:** MCSA

A client who is terminally ill reports hearing about a drug that is in preclinical investigation. The client asks the nurse if the drug will be available to the public soon. What should the nurse consider when formulating an answer to this question?

1. After preclinical investigation the drug has one more step before being released for public use.
2. The average length of preclinical investigation is 18 months.
3. When the drug reaches the clinical investigation stage it is usually released within 2 years.
4. The drug will not be available until after the post-marketing studies are done.

**Correct Answer:** 2

**Rationale 1:** Preclinical investigation is the first of three stages the drug must go through before being released for use.

**Rationale 2:** Preclinical investigation may last 1 to 3 years with 18 months being the average.

**Rationale 3:** Clinical investigation may last 2 to 10 years with 5 years being the average.

**Rationale 4:** Post-marketing studies are started as soon as the NDA review is completed and may continue for years after drug release.

**Global Rationale:** Preclinical investigation is the first of three stages the drug must go through before being released for use. Preclinical investigation may last 1 to 3 years with 18 months being the average. Clinical investigation may last 2 to 10 years with 5 years being the average. Post-marketing studies are started as soon as the NDA review is completed and may continue for years after drug release.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-3 Explain the four phases of approval for therapeutic and biologic drugs.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 14

## Question 12

**Type:** MCSA

The nurse provides medication education to a client with terminal cancer. The physician has ordered morphine (MS Contin), a Schedule II drug, for the client. The nurse determines that learning has occurred when the client makes which statement?

1. "I need to call the office for a refill before my medication runs out."
2. "This drug is addictive so I should only take it when my pain becomes severe."
3. "Maybe my doctor could change me to a Schedule IV drug."
4. "I need to see my doctor before my prescription runs out so I can get a refill."

**Correct Answer:** 4

**Rationale 1:** Schedule II drugs cannot be refilled by phone order.

**Rationale 2:** Not taking pain medication until the pain becomes severe is an inappropriate use of pain medication for a client with terminal cancer.

**Rationale 3:** A Schedule IV drug may not effectively relieve the client's pain.

**Rationale 4:** The client must see the physician for a refill.

**Global Rationale:** Schedule II drugs cannot be refilled by phone order. Not taking pain medication until the pain becomes severe is an inappropriate use of pain medication for a client with terminal cancer. The client must see the physician for a refill. A Schedule IV drug may not effectively relieve the client's pain.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-7 Discuss why drugs are sometimes placed on a restrictive list, and the controversy surrounding this issue.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 18

### Question 13

**Type:** MCSA

A drug manufacturer that is performing the effects of a drug on laboratory animals would be in which phase of the new drug development timeline?

1. Clinical Investigation
2. Preclinical Investigation
3. New Drug Application Review
4. Post-marketing Studies

**Correct Answer:** 2

**Rationale 1:** Clinical investigation involves testing the drug on human subjects.

**Rationale 2:** Preclinical investigation involves laboratory research on nonhuman subjects.

**Rationale 3:** New Drug Application review occurs during human clinical trials.

**Rationale 4:** Post-marketing Studies occur after the drug is being used by the general population.

**Global Rationale:** Clinical investigation involves testing the drug on human subjects. Preclinical investigation involves laboratory research on nonhuman subjects. New Drug Application review occurs during human clinical trials. Post-marketing Studies occur after the drug is being used by the general population.

**Cognitive Level:** Understanding

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-3 Explain the four phases of approval for therapeutic and biologic drugs.

**Question 14**

**Type:** MCMA

While reading a medication package insert, the nurse notes the information contained within the “black box.” What is the significance of this information to the nurse?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. The drug can cause “special problems.”
2. It identifies extreme adverse drug reactions.
3. It differentiates a prescribed medication from an over-the-counter medication.
4. It highlights the cost of the medication.
5. It signifies the medication is generic.

**Correct Answer:** 1,2

**Rationale 1:** The FDA created boxed warnings in order to regulate drugs with “special problems.”

**Rationale 2:** The black box warning is a primary alert for identifying extreme adverse drug reactions.

**Rationale 3:** Black box warnings are not a mechanism to differentiate a prescribed medication from an over-the-counter medication.

**Rationale 4:** It does not highlight the cost of the medication.

**Rationale 5:** It does not signify the medication as being generic.

**Global Rationale:** The FDA created boxed warnings in order to regulate drugs with “special problems.” The black box warning is a primary alert for identifying extreme adverse drug reactions. Black box warnings are not a mechanism to differentiate a prescribed medication from an over-the-counter medication, do not highlight the cost of the medication, and do not signify the medication as being generic.

**Cognitive Level:** Analyzing

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-1 Identify key U.S. drug regulations that have provided guidelines for the safe and effective use of drugs and drug therapy.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

### Question 15

**Type:** MCMA

The nurse is participating in the New Drug Review step for a new therapeutic agent. Which activities will the nurse most likely perform during this phase of the drug approval process?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. Attend meetings to finalize the brand name for the drug.
2. Check on the results of animal testing.
3. Survey for harmful effects in a larger population.
4. Evaluate the results of the drug on cultured cells.
5. Provide the medication to large groups of people with a particular disease.

**Correct Answer:** 1,2

**Rationale 1:** During the NDA or the third stage of the drug approval process, the drug's brand name is finalized.

**Rationale 2:** During the NDA stage of the drug approval process, animal testing may continue.

**Rationale 3:** Surveying for harmful effects in a larger population occurs during the post-marketing surveillance step of the drug approval process.

**Rationale 4:** Evaluation of the results of the drug on cultured cells occurs during the preclinical investigation step of the drug approval process.

**Rationale 5:** Providing the medication to large groups of people with a particular disease occurs during the clinical phase trials, which is in the second stage of the drug approval process.

**Global Rationale:** During the NDA or the third stage of the drug approval process, the drug's brand name is finalized. Animal testing may continue during this stage. Surveying for harmful effects in a larger population occurs during the post-marketing surveillance step of the drug approval process. Evaluation of the results of the drug on cultured cells occurs during the preclinical investigation step of the drug approval process. Providing the medication to large groups of people with a particular disease occurs during the clinical phase trials, which is in the second stage of the drug approval process.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-3 Explain the four phases of approval for therapeutic and biologic drugs.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 14

### Question 16

**Type:** MCMA

Which statements regarding the role of the U.S. Food and Drug Administration (FDA) are true?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. The FDA is responsible for improving the health of Americans.
2. The FDA publishes a summary of the standards of drug purity and strength.
3. The FDA ensures the availability of effective drugs.
4. The FDA takes action against any supplement that is deemed to be unsafe.
5. The FDA facilitates the availability of safe drugs.

**Correct Answer:** 1,3,4,5

**Rationale 1:** The FDA mission is to protect public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biologic products, medical devices, the nation's food supply, cosmetics, and products that emit radiation.

**Rationale 2:** It is the role of the U.S. Pharmacopeia (USP) to publish a summary of drug standards (purity and strength).

**Rationale 3:** Ensuring the availability of effective drugs is one of the FDA's roles.

**Rationale 4:** It is the FDA's role to take action against any supplement that is deemed to be unsafe.

**Rationale 5:** It is the role of the FDA to facilitate the availability of safe drugs.

**Global Rationale:** One of the missions of the CDER branch of the FDA is to improve the health of Americans. It is the role of the U.S. Pharmacopeia (USP) to publish a summary of drug standards (purity and strength). Ensuring the availability of effective drugs is one of the FDA's roles. It is the FDA's role to take action against any supplement that is deemed to be unsafe. It is the role of the FDA to facilitate the availability of safe drugs.

**Cognitive Level:** Remembering

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-1 Identify key U.S. drug regulations that have provided guidelines for the safe and effective use of drugs and drug therapy.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

### Question 17

**Type:** MCMA

Which statements regarding the preclinical research stage of drug development are true?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. Most drugs do not proceed past the preclinical stage because they are found to be too toxic or just ineffective.
2. At the end of the preclinical research stage, client variability is determined and potential drug-to-drug interactions are examined.
3. The preclinical stage of research involves extensive testing on animals in the laboratory to determine if the drug will cause harm to humans.
4. Preclinical research results are always inconclusive.
5. The Food and Drug Administration (FDA) is responsible for extensive testing for safety before the pharmaceutical company can begin the preclinical research stage of development.

**Correct Answer:** 1,3,4

**Rationale 1:** Most drugs do not proceed past the preclinical research stage of development because they are found to be either too toxic or just ineffective.

**Rationale 2:** Client variability and potential drug-to-drug interactions are examined in Phase 3 of the clinical investigation process after Food and Drug Administration (FDA) approval.



**Rationale 3:** The preclinical stage involves extensive testing on human, microbial cells, and animals to determine drug action and to predict whether the drug will cause harm to humans.

**Rationale 4:** Because lab tests cannot accurately predict human response to a drug, these results are always inconclusive.

**Rationale 5:** This extensive testing is done by the pharmaceutical company in the preclinical research stage of drug development, not the FDA.

**Global Rationale:** Most drugs do not proceed past the preclinical research stage of development because they are found to be either too toxic or just ineffective. Client variability and potential drug-to-drug interactions are examined in Phase 3 of the clinical investigation process after Food and Drug Administration (FDA) approval. The preclinical stage involves extensive testing on human, microbial cells, and animals to determine drug action and to predict whether the drug will cause harm to humans. Because lab tests cannot accurately predict human response to a drug, these results are always inconclusive. This extensive testing is done by the pharmaceutical company in the preclinical research stage of drug development, not the FDA.

**Cognitive Level:** Remembering

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-3 Explain the four phases of approval for therapeutic and biologic drugs.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

## Question 18

**Type:** Sequencing

The nurse developing a time line of drug regulations and standards would list the following events in which chronological order?

1. Passage of the Sherley Amendment
2. Passage of the Childhood Vaccine Act
3. Development of the U.S. Pharmacopoeia
4. Passage of the Prescription Drug User Fee Act
5. Passage of the Biologics Control Act

**Answer:** 3, 5, 1, 2, 4

**Rationale:** The U.S. Pharmacopoeia was established in 1820 and served as the first comprehensive publication of drug standards. The Biologics Control Act was passed in 1902 and controlled the quality of serums and other blood-related products. Passed in 1912, the Sherley Amendment made medicines safer by prohibiting the sale of drugs labeled with false therapeutic claims. The Childhood Vaccine Act was passed in 1986 and allowed the FDA

to acquire information about clients taking vaccines, to recall biologics, and to recommend civil penalties if guidelines regarding biologic use were not followed. Lastly, in 1992 the Prescription Drug User Fee Act was passed requiring that nongeneric drug and biologic manufacturers pay fees to be used for improvements in the drug review process.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-1 Identify key U.S. drug regulations that have provided guidelines for the safe and effective use of drugs and drug therapy.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

### Question 19

**Type:** MCSA

Which drug has the highest dependency potential?

1. Acetaminophen
2. Codeine
3. Heroin
4. Diazepam

**Correct Answer:** 3

**Rationale 1:** Acetaminophen does not have a high abuse potential.

**Rationale 2:** Codeine is a Schedule III drug.

**Rationale 3:** Heroin is a Schedule I drug and has the highest potential for abuse, physical dependence, and psychological dependence of the drugs listed.

**Rationale 4:** Diazepam is a Schedule IV drug.

**Global Rationale:** Heroin is a Schedule I drug and has the highest potential for abuse, physical dependence, and psychological dependence of the drugs listed. Acetaminophen does not have a high abuse potential. Codeine is a Schedule III drug. Diazepam is a Schedule IV drug.

**Cognitive Level:** Remembering

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**Nursing/Integrated Concepts:** Nursing Process: Assessment

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Assessment

**Learning Outcome:** 29 Identify the five drug schedules and give examples of drugs at each level.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 17

## Question 20

**Type:** MCSA

A drug is withdrawn from a client who has been taking it routinely for many years. The client has developed muscle tremors. How would the nurse characterize this event?

1. As an adverse effect
2. As evidence that the client had psychological dependence on the drug
3. As an expected therapeutic effect of no longer taking the drug
4. As an assessment finding associated with physical dependence on a drug

**Correct Answer:** 4

**Rationale 1:** Adverse effects are seen while the drug is being taken, not after it is withdrawn.

**Rationale 2:** With psychological dependence, few physical signs are seen.

**Rationale 3:** Therapeutic effects are seen while drugs are being used, not after they have been removed.

**Rationale 4:** The presence of physical withdrawal symptoms (muscle tremors) is seen when a person is physically dependent on a drug and the drug is removed.

**Global Rationale:** The presence of physical withdrawal symptoms (muscle tremors) is seen when a person is physically dependent on a drug and the drug is removed. With psychological dependence, few physical signs are seen. Therapeutic effects are seen while drugs are being used, not after they have been removed. Adverse effects are the seen while the drug is being taken, not after it is withdrawn.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** I.B.5 Assess levels of physical and emotional comfort.

**AACN Essential Competencies:** IX.5 Deliver compassionate, patient-centered, evidence-based care that respects patient and family preference.

**NLN Competencies:** Context and Environment: Chronic disease management.

**Nursing/Integrated Concepts:** Nursing Process: Assessment

**Learning Outcome:** 2-8 Explain the meaning of a controlled substance and teratogenic risk in pregnancy.

**MNL Learning Outcome:** 1.1.4 Examine adverse effects of medication administration and risk reduction.

**Question 21**

**Type: MCSA**

The nurse reviewing prescription refill request messages would collaborate with the physician regarding a request for which drug?

1. Morphine
2. Cannabis
3. Meperidine
4. An anabolic steroid

**Correct Answer: 4**

**Rationale 1:** Morphine is a Schedule II drug. Telephone prescription requests are not allowed. The client must be examined by a physician prior to a new prescription being written.

**Rationale 2:** Cannabis is a Schedule I drug. Telephone prescriptions requests are not allowed.

**Rationale 3:** Meperidine is a Schedule II drug. Telephone prescription requests are not allowed.

**Rationale 4:** Anabolic steroids are Schedule III drugs. Telephone prescription refills are allowed.

**Global Rationale:** Schedule I and II drugs cannot be ordered via the telephone. The client must be examined by a physician prior to a new prescription being written. Morphine and meperidine are Schedule II drugs. Cannabis is a Schedule I drug. Anabolic steroids are Schedule III drugs. Telephone prescription refills are allowed.

**Cognitive Level:** Analyzing

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

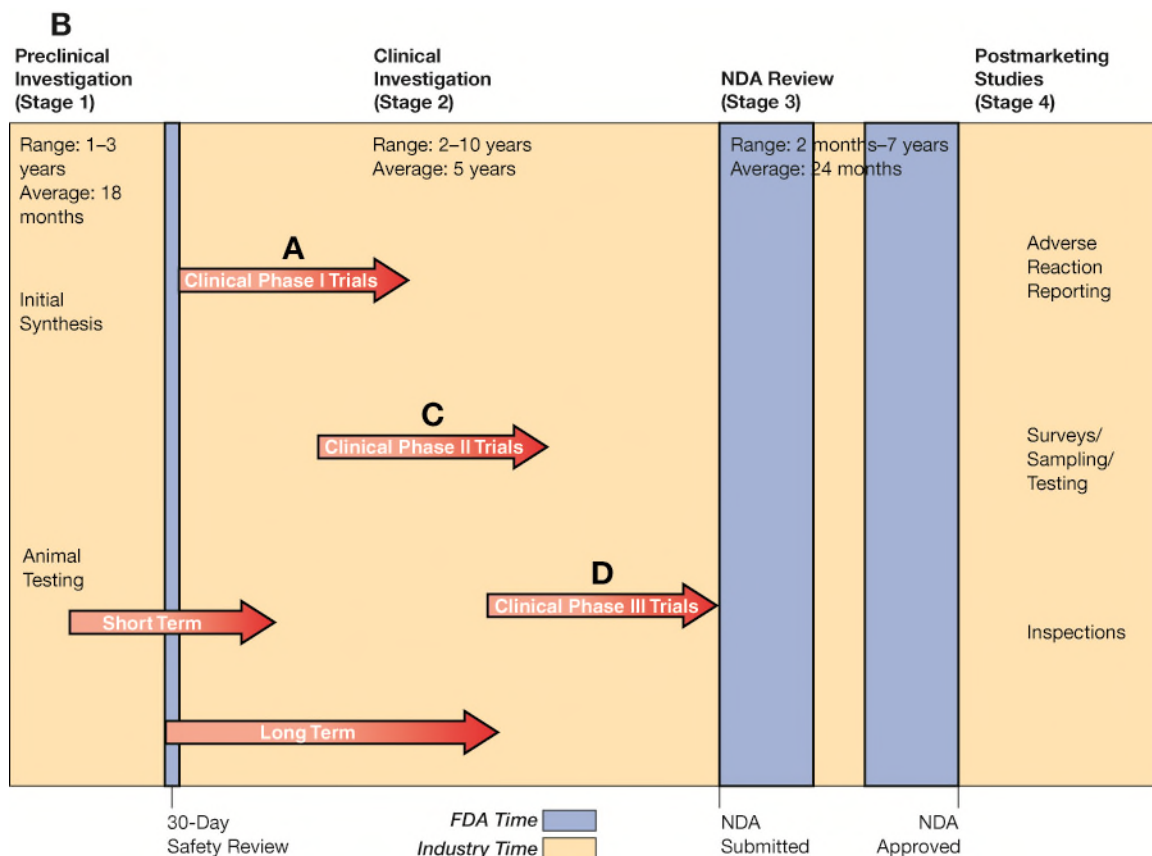
**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number: 17**

**Question 22**

**Type: Hot Spot**

A nurse is administering a medication to a group of volunteers and is assessing for the development of adverse effects. The nurse is working in which phase of the development of this drug?



1. A
2. B
3. C
4. D

**Answer: A**

**Rationale:** Investigation and development of drugs follows a predetermined and rigorous process. Clinical investigation is the second phase of this development and consists of clinical phase trials numbered I, II, and III. The Clinical Phase Trial I is when investigators first begin to administer the drug to volunteers to determine proper dosage and to assess for adverse effects. Preclinical investigation is done on human and microbial cells.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-3 Explain the four phases of approval for therapeutic and biologic drugs.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

**Question 23**

**Type:** MCMA

A client has been chosen to participate in the clinical trial of a medication to treat chemotherapy-induced nausea. When the nurse takes the informed consent form to the bedside the client says, “I am glad there is finally a medication to cure my cancer.” How should the nurse respond?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. “Who told you the medication would cure your cancer?”
2. “What questions do you have about this medication?”
3. “Let me explain how this medication works.”
4. “Has anyone explained the research trial to you?”
5. “So am I. This research has been intense.”

**Correct answer:** 2,4

**Rationale 1:** It is not important to discover who specifically gave the client this information.

**Rationale 2:** The nurse should be certain the client has no questions prior to having the consent signed.

**Rationale 3:** It is not the nurse’s responsibility to explain how the medication works. It is the responsibility of the researcher or health care provider. The nurse should refer questions to those individuals.

**Rationale 4:** It is the nurse’s responsibility to ensure that the client has been provided with facts about the medication and the clinical trial prior to having the consent signed.

**Rationale 5:** The nurse should identify that this client does not fully understand the purpose of this medication and should collaborate with the researcher or health care provider regarding this misunderstanding.

**Global Rationale:** The nurse should be certain the client has no questions prior to having the consent signed. It is the nurse’s responsibility to ensure that the client has been provided with facts about the medication and the clinical trial prior to having the consent signed. The nurse should identify that this client does not fully understand the purpose of this medication and should collaborate with the researcher or health care provider regarding this misunderstanding. It is not the nurse’s responsibility to explain how the medication works. It is the responsibility of the researcher or health care provider. It is not important to discover who specifically gave the client this information.

**Cognitive Level:** Analyzing

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** I.B.12 Facilitate informed patient consent for care.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 15

#### **Question 24**

**Type:** FIB

While the nurse is completing a medication history the older adult client says, "My medication costs so much. I am in the doughnut hole right now. Can't the government do something to help?" The nurse replies, "I understand how difficult this can be. There are plans under way to close the doughnut hole completely by \_\_\_\_\_."

**Standard Text:** Record your answer rounding to the nearest whole number.

**Correct Answer:** 2020

**Rationale:** The U.S. Affordable Care Act of 2010 includes benefits to reduce this gap in coverage for seniors with the goal of closing it completely by 2020.

**Global Rationale:** The U.S. Affordable Care Act of 2010 includes benefits to reduce this gap in coverage for seniors with the goal of closing it completely by 2020.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

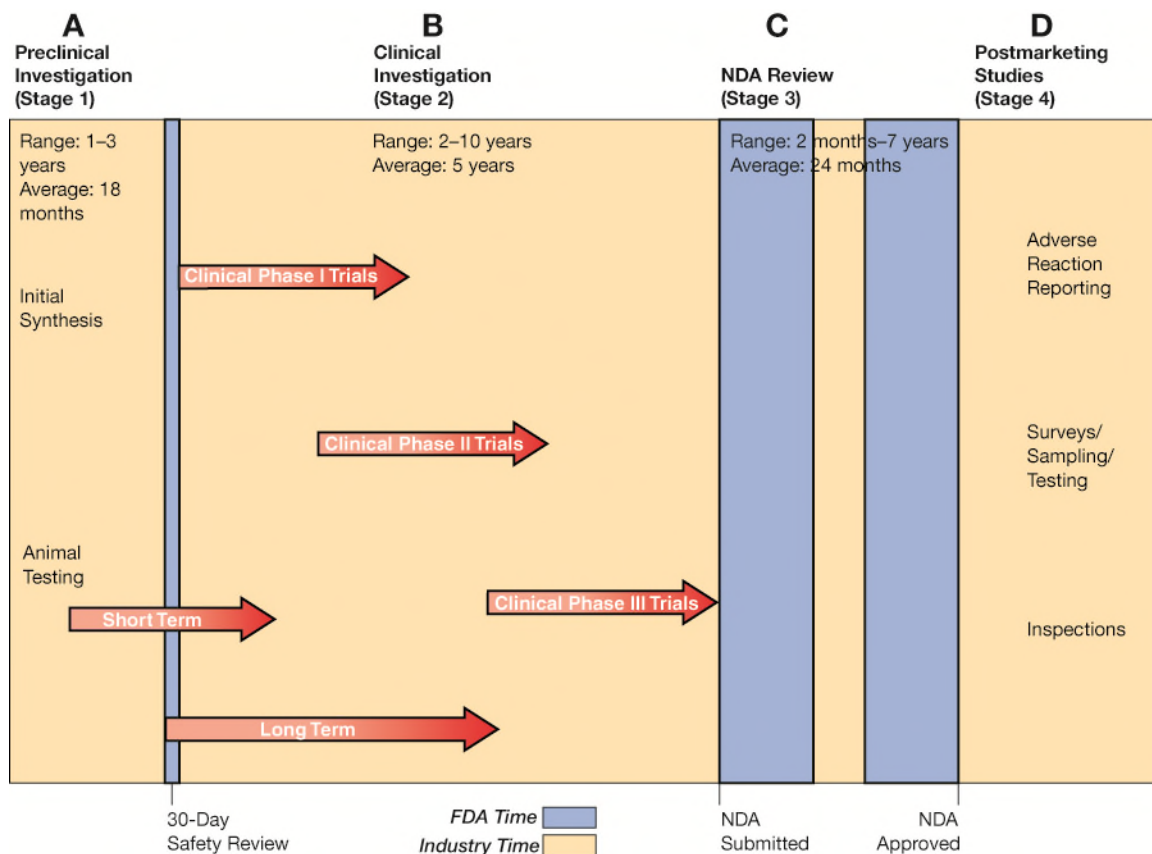
**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 16

#### **Question 25**

**Type:** Hot Spot

All nurses who administer medications participate in which portion of the drug development and approval timeline?



1. A
2. B
3. C
4. D

**Answer:** 4

**Rationale:** Post-marketing studies investigate the development of adverse effects. It may take months or years for such effects to be recognized. All nurses who administer medications should monitor for therapeutic effects and adverse reactions. Therefore, all nurses who administer medications are participating in Post-marketing Studies.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

**Question 26**

**Type:** FIB



A client says, “This morning’s nurse told me that my pain medication is a scheduled drug. Aren’t all drugs given on a schedule?” The nurse explains that in the United States controlled substances such as some common pain medications are classified into one of \_\_\_\_\_ categories or schedules.

**Standard Text:** Record your answer rounding to the nearest whole number.

**Correct Answer:** 5

**Rationale:** Drugs with a significant potential for abuse are classified into five schedules or categories. These drugs are called “scheduled drugs.”

**Global Rationale:** Drugs with a significant potential for abuse are classified into five schedules or categories. These drugs are called “scheduled drugs.”

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-9 Identify the five drug schedules and give examples of drugs at each level.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 16

### Question 27

**Type:** Hot Spot

A nurse teaches the client that the newly prescribed medication has a very high risk of causing fetal abnormalities and that reliable measures to prevent pregnancy are essential while taking the medication. The nurse has described a medication that falls into which category?

CATEGORY A	<b>A</b>
CATEGORY B	<b>B</b>
CATEGORY C	
CATEGORY D	<b>C</b>
CATEGORY X	<b>D</b>

1. A
2. B
3. C
4. D

**Answer:** D

**Rationale:** Category X drugs have animal and human studies that show fetal abnormalities. The drug is contraindicated in women who are or may become pregnant. Reliable pregnancy prevention measures must be followed.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-10 Identify the five categories of teratogenic drug classification.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 18

### Question 28

**Type:** MCMA

The nurse is providing preconception teaching to a group of women who wish to become pregnant. The nurse informs the group that which classifications of medications have shown no confirmed risk for fetal abnormalities if taken while pregnant?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. Category A
2. Category B
3. Category C
4. Category D
5. Category X

**Correct Answer:** 1,2

**Rationale 1:** Category A drugs are those in which controlled studies have failed to show a risk to the fetus and the possibility of fetal harm appears unlikely.

**Rationale 2:** Category B drugs are those in which animal-reproduction studies have not shown a fetal risk or adverse effect. Risks have not been confirmed in controlled studies in women.

**Rationale 3:** Category C drugs are those in which either studies in animals have revealed adverse effects on the fetus and there are no controlled studies in women or studies in women and animals are not advisable.

**Rationale 4:** Category D drugs are those in which there is confirmation of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk (e.g., if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used).

**Rationale 5:** Category X drugs are those in which animal and human studies have shown fetal abnormalities. The drug is contraindicated in women who are or may become pregnant.

**Global Rationale:** Category A drugs are those in which controlled studies have failed to show a risk to the fetus and the possibility of fetal harm appears unlikely. Category B drugs are those in which animal-reproduction studies have not shown a fetal risk or adverse effect. Risks have not been confirmed in controlled studies in women. Category C drugs are those in which either studies in animals have revealed adverse effects on the fetus and there are no controlled studies in women or studies in women and animals are not advisable. Category D drugs are those in which there is confirmation of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk (e.g., if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used). Category X drugs are those in which animal and human studies have shown fetal abnormalities. The drug is contraindicated in women who are or may become pregnant.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-10 Identify the five categories of teratogenic drug classification.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

### Question 29

**Type:** MCMA

A client at 14-weeks gestation is seen in the clinic with a sprained ankle. The physician prescribes a mild analgesic, rest, compression, and application of an ice bag. The client is very concerned about taking the prescribed medication, telling the nurse, “I don’t want to hurt my baby.” How should the nurse respond?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. “The most dangerous time for birth defects is probably in the first semester and you are past that now.”
2. “You are wise to avoid all drugs. I would only use the rest, compression, and ice.”
3. “Let me check with the physician to see if he remembered you are pregnant.”
4. “This is a category A drug, so there is very little risk to your baby.”
5. “Don’t worry, it will all be okay. You need to take care of yourself first.”

**Correct Answer:** 1,4

**Rationale 1:** The time of highest risk of birth defects is probably in the first trimester, and this client is past that time. It is not possible to predict that there is no risk from drug consumption.

**Rationale 2:** While drug avoidance is preferred, in some cases it is necessary. If the nurse has concerns about the drug prescribed, collaboration with the prescriber is indicated.

**Rationale 3:** Without further information about which drug was prescribed, it is non-therapeutic to make the client doubt the prescriber's choice of therapy.

**Rationale 4:** With category A drugs, the risk of fetal harm is unlikely.

**Rationale 5:** This statement is non-therapeutic and dismisses the client's concern.

**Global Rationale:** The time of highest risk of birth defects is probably in the first trimester, and this client is past that time. It is not possible to predict that there is no risk from drug consumption. With category A drugs, the risk of fetal harm is unlikely. While drug avoidance is preferred, in some cases it is necessary. If the nurse has concerns about the drug prescribed, collaboration with the prescriber is indicated. The statement of "don't worry" is non-therapeutic and dismisses the client's concern.

**Cognitive Level:** Analyzing

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-8 Explain the meaning of a controlled substance and teratogenic risk in pregnancy.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 13

### Question 30

**Type:** MCMA

A nurse suspects a client has had an allergic reaction to a recently prescribed antibiotic. The nurse is responsible for providing emergency treatment and for reporting this suspected reaction to which persons?

*Note: Credit will be given only if all correct choices and no incorrect choices are selected.*

**Standard Text:** Select all that apply.

1. FDA
2. The prescriber
3. Hospital pharmacist
4. Medicare
5. Hospital risk management

**Correct Answer:** 2,3,5

**Rationale 1:** While it may be necessary to report this reaction to the FDA, it is not the bedside nurse's responsibility to do so.

**Rationale 2:** The prescriber should be notified as this is an unexpected event. A change in therapy is likely to be required.

**Rationale 3:** The hospital pharmacist should be advised of this possible reaction.

**Rationale 4:** There is no reason for the bedside nurse to notify Medicare.

**Rationale 5:** Hospital risk management should be notified of this event. A variance report may be required.

**Global Rationale:** While it may be necessary to report this reaction to the FDA, it is not the bedside nurse's responsibility to do so. The prescriber should be notified as this is an unexpected event. A change in therapy is likely to be required. The hospital pharmacist should be advised of this possible reaction. There is no reason for the bedside nurse to notify Medicare. Hospital risk management should be notified of this event. A variance report may be required.

**Cognitive Level:** Applying

**Client Need:** Physiological Integrity

**Client Need Sub:** Pharmacological and Parenteral Therapies

**QSEN Competencies:** V.B.1 Demonstrate effective use of technology and standardized practices that support safety and quality.

**AACN Essential Competencies:** V.4 Examine legislative and regulatory processes relevant to the provision of health care.

**NLN Competencies:** Quality and Safety: Policies and procedures.

**Nursing/Integrated Concepts:** Nursing Process: Implementation

**Learning Outcome:** 2-5 Identify the nurse's role in the drug approval process and in maintaining safety practices.

**MNL Learning Outcome:** 1.1.1 Apply basic concepts related to pharmacology.

**Page Number:** 16