Pharmacology for Nurses A Pathophysiologic Approach THIRD ROHTION Michael Fatrick ADAMS Listend Norman HOLLAND, IX Card Bitset Name Continues Card Bitset Name Continues Continues Name Continues

CHAPTER 2

2.1 The nursing instructor teaches the student nurses about the pharmacological classification of drugs. The instructor evaluates that learning has occurred when the students make which response?

1. "An anticoagulant influences blood clotting."

2. "A calcium channel blocker blocks heart calcium channels."

3. "An antianginal treats angina."

4. "An antihypertensive lowers blood pressure."

Answer: 2

Rationale: The pharmacological classification addresses a drug's mechanism of action, or how a drug produces its effect in the body. To say that a drug influences blood clotting addresses the therapeutic usefulness of the drug, not the pharmacological classification. To say that a drug treats angina addresses the therapeutic usefulness of the drug, not the pharmacological classification. To say that a drug lowers blood pressure addresses the therapeutic usefulness of the drug, not the pharmacological classification.

Physiological Integrity

Application Objective: 2-1

- 2.2 The nurse is providing medication education to a client with hypertension. The nurse teaches the client that the physician ordered a diuretic to decrease the amount of fluid in his body. Which statement best describes the nurse's instruction?
- 1. The nurse explained the consequences of not using the drug.
- 2. The nurse taught the client about a prototype drug.
- 3. The nurse provided appropriate medication education.
- 4. The nurse explained the drug's mechanism of action.

Rationale: A drug's mechanism of action explains how a drug produces its effect in the body. The nurse did not explain the consequences of not using the drug. The nurse is not teaching the client about a prototype drug. The education was most likely appropriate, but this response is too vague.

Evaluation

Physiological Integrity

Application Objective: 2-3

- 2.3 During pharmacology class, the student nurse asks the nursing instructor how students will ever learn about the individual antibiotic drugs since there are so many. What is the best response by the nursing instructor?
- 1. "You will learn how to categorize the individual drugs."
- 2. "You will learn a representative drug from each class."
 3. "You will learn a little trick called mnemonics."
- 4. "You will learn how to do a flow chart to enhance memory."

Rationale: A prototype, or representative, drug is the well-understood drug model from which other drugs in a pharmacological class are compared.

Categorizing individual drugs is not the best way to learn about drugs. Using mnemonics is not the best way to learn about drugs. Flow charts are not the best way to learn about drugs.

Implementation

Physiological Integrity

Application Objective: 2-2 2.4 The physician ordered a brand name drug for the client, paroxetine (Paxil). After taking this medication for a year, the client tells the nurse that it is no longer working. What is the best assessment of the nurse at this time?

1. "Are you taking Paxil or paroxetine?"

2. "It is time for us to do the Beck Depression assessment again."

3. "Let's look for interactions with other medications you are taking."
4. "This sounds like your medication needs changing."

Answer: 1

Rationale: The bioavailability of a generic drug may not be the same as the bioavailability of a brand name drug. Assessing for worsening of depression is appropriate, but the nurse should first assess if the patient has changed to a generic form of the drug. Assessing for interactions with other drugs is appropriate, but the nurse should first assess if the patient has changed to a generic form of the drug. Considering a change in medication is appropriate, but the nurse should first assess if the patient has changed to a generic form of the drug.

Assessment

Physiological Integrity

Application Objective: 2-4

- 2.5 The physician has prescribed a brand name drug for the client. The client tells the nurse that the medication is too expensive. What is the best plan by the nurse?
- 1. Help the client receive free medicine through a "patient assistance" program.

2. Ask the physician if a generic drug may be substituted.

- 3. Ask the physician if a cheaper brand name drug may be substituted.
- 4. Maintain the client on samples of the brand name drug from the physician's office. Answer: 2

Rationale: Generic drugs are much less costly than brand name drugs. A patient assistance program is a good idea, but since the client may not qualify for this it is not the best plan. Another brand name drug may not be what the client needs for the illness. Providing samples is an option, but the office may temporarily run out of samples and the client will not receive the medication.

Planning

Physiological Integrity

Application Objective: 2-5

- 2.6 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 response(s)? Select all that apply.
- 1. "The use of these medications is restricted because they have the potential for abuse."

 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 this is the current law."
- 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 so that the pharmacies can track the rate of drug abuse in our city."

Answer: 1, 3

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 are 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. **Evaluation**

Physiological Integrity Application Objective: 2-6

- 2.7 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. "You are not an addict, but the Drug Enforcement Administration (DEA) will monitor
- you for this."

 2. "Are you concerned about becoming an addict? We can discuss this in more detail it

you would like to."
3. "Why do you ask about becoming an addict? Not many of our clients have asked this

question."
4. "You are not an addict; the Drug Enforcement Administration (DEA) restricts the use of drugs with a high potential for abuse."

Answer: 4

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.

Implementation Physiological Integrity Application Objective: 2-7

- 2.8 The client is receiving methadone (Dolophine), a Schedule II drug. The client says to the nurse, "A pharmacist told me his 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. "That's an interesting question. Are you worried about the Drug Enforcement Administration (DEA)?"
- 4. "No. I think our system should be more like Europe; they have fewer controlled drugs."

Answer: 2

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.

Implementation

Physiological Integrity

Application Objective: 2-8

- 2.9 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. "Do you really believe that everyone smokes marijuana to manage stress?"

2. "What other ways do you think you might use to help you to manage your stress?"

3. "How often do you smoke marijuana, and how much each time?"

4. "That is a Schedule I drug; aren't you afraid of going to jail for a long time?"

Answer: 3

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.

Assessment

Physiological Integrity

Application Objective: 2-9

2.10 A Canadian visitor is hospitalized in America. She tells the nurse that her doctor said her drug is a Schedule IV, and questions if it is for human use. What is the best response by the nurse?

- 1. "You are thinking about Part IV in Canada; our classification system is different."
 2. "Don't worry about that, as your Canadian classification system is probably different from ours.'
- 3. "You are thinking about the Canadian classification system; ours is really more advanced."
- 4. "You might be thinking about the Canadian classification system; I will have your doctor speak to you about this."

Answer: 1

Rationale: Restricted drugs not intended for human use are covered in Part IV, Schedule H of the Canadian Food and Drugs Act. In the United States classification system, a Schedule IV drug means that the drug requires a prescription but has a low to moderate abuse potential. While technically correct, telling a client not to worry is always non-therapeutic. Telling the client that the nurse's system is more advanced is a rude and nontherapeutic response. The nurse can answer a question about the Canadian classification system; it is not appropriate to refer it to the physician.

Implementation

Physiological Integrity

Application Objective: 2-10

2.11 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. "The medication can be addictive so your son needs a monthly medical evaluation."

3. "The law does not allow us to give you refills on this medication."

4. "We can't do that; maybe you can find another doctor's office that will do it."

Answer: 2

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.

Implementation

Physiological Integrity

Application Objective: 2-6

- 2.12 The client is receiving a very expensive medication. The client asks the nurse why the medicine is so expensive. What is the best response by the nurse?
- 1. "Drug companies are allowed to advertise medications and this adds to the cost."
- 2. "Drug companies must recoup the cost of developing and producing the drug."
- 3. "It is expensive, but your insurance covers it and you have a low co-pay."
- 4. "I think the drug companies should be more accountable for lowering costs."

Answer: 1

Rationale: Advertising by drug companies costs several billion dollars a year and this adds to the cost of the drug. Telling the client that drug companies must be allowed to recoup the cost implies that the nurse is defending the drug companies. Telling the client that his insurance covers the drug doesn't answer his question. It is non-therapeutic for the nurse to introduce her own beliefs, such as accountability of drug companies, into a conversation with the client.

Implementation

Physiological Integrity

Application Objective: 2-5

- 2.13 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. "This drug is addictive so I should only take it when my pain becomes severe."
- 2. "I need to call the office for a refill before my medication runs out."
- 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." Answer: 4

Rationale: Schedule II drugs cannot be refilled without the client seeing the physician. Not taking pain medication until the pain becomes severe is an inappropriate use of pain medication for a patient with terminal cancer. The client must see the physician for a refill. A Schedule IV drug may not effectively relieve the client's pain.

Implementation

Physiological Integrity

Application Objective: 2-9

- 2.14 The client is receiving a brand name drug and wants to change to the generic form because it is cheaper. What is the best outcome for this client?
- 1. Client will state two ways to obtain the medication at a reduced cost.
- 2. Client will take the brand name drug after speaking with the physician.
- 3. Client will state two ways a brand name drug differs from a generic name drug.
- 4. Client will ask the nurse why brand name drugs are better than generic drugs. Answer: 3

Rationale: The dosage of drugs may be the same with a brand name and generic drug, but the bioavailability may be affected by the inert ingredients and tablet compression. Knowing ways to obtain medication at a reduced cost is an appropriate outcome, but the client will not learn why a brand name drug may be preferable over a generic drug. Referring the client to the physician is inappropriate because the nurse can educate the client about the difference between generic and brand name drugs. The client asking the nurse a question is not an outcome.

Planning

Physiological Integrity

Application Objective: 2-3

2.15 The physician orders a brand name drug for the client. The hospital formulary substitutes the generic equivalent of the brand name drug, and the nurse administers the generic drug. Which statement(s) best represents the nurse's action? Select all that apply.

The nurse used good judgment in administering the drug.
 The nurse should have called the pharmacist to see if the drugs were bioequivalent.

3. The nurse should have contacted the physician prior to administering the drug.

4. The nurse was correct; hospital policies allow for this.

Answer: 1, 4

Rationale: The nurse used good judgment as hospital policies allow for generic substitution of certain drugs. If there is a concern, the pharmacist should contact the physician. It is not feasible for the nurse to contact the physician every time there is a generic substitution. Physicians are aware of the hospital formulary. Evaluation

Physiological Integrity

Application Objective: 2-5

- 2.16 Which type of classification system is being used when drugs are grouped together because they help treat a particular disease or condition?
 - 1. Pharmacological
 - 2. Mechanism of action
 - 3. Therapeutic
 - 4. Chemical

Answer: 3

Rationale: Therapeutic classification is based on the drug's usefulness in treating a particular disease. Pharmacological classification addresses a drug's mechanism of action.

Comprehension

Assessment

Health Promotion and Maintenance

Objective: 2-1

- 2.17 An overwhelmed nursing student asks the instructor whether there are any tips that will make learning pharmacology easier. The instructor gives an example of the anticoagulant Heparin. The instructor indicates that knowing Heparin and comparing other drugs to it will facilitate learning the many anticoagulants. Which approach is the instructor using?
 - 1. Generic name approach
 - 2. Trade name approach
 - 3. Mechanism of action approach
 - 4. Prototype drug approach

Answer: 4

Rationale: Heparin is the generic name, but comparing one well-understood drug with others in the same class is known as the prototype approach. (pp. 12–13)

Comprehension

Assessment

Safe, Effective Care Environment

Objective: 2-2

- 2.18 While discussing antihypertensives, the instructor states that a particular agent causes a reduction in blood pressure by blocking receptor sites. The instructor is describing which of the following?
 - 1. Mechanism of action
 - 2. Adverse effects
 - 3. Indication
 - 4. Drug–drug interaction

Answer: 1

Rationale: The instructor is describing how a drug produces an effect within the body, which is known as the mechanism of action. Adverse effects are what can result from drug use, not a description of how the drug works. Indications are the reasons the drug is being used, and drug—drug interactions refer to the effects of multiple drug use.

Comprehension

Evaluation

Health Promotion and Maintenance

Objective: 2-3

- 2.19 Advil, Motrin, and Nuprin are examples of:
 - 1. Chemical names.
 - 2. Generic names.
 - 3. Trade names.
 - 4. Combination names.

Answer: 3

Advil, Motrin, and Nuprin are trade names for ibuprofen.

Knowledge Assessment

Health Promotion and Maintenance

Objective: 2-5

- 2.20 Which drug has the highest dependency potential?
 - 1. Diazepam
 - 2. Heroin
 - 3. Codeine
 - 4. Acetaminophen

Answer: 2

Rationale: Heroin is a schedule I drug, and has the highest potential for abuse, physical dependence, and psychological dependence of the drugs listed. (p. 15)

Knowledge Assessment

Safe, Effective Care Environment

Objective: 2-9

- 2.21 The presence of muscle tremors following drug cessation would most accurately be associated with which of the following?
 - 1. Psychological dependence
 - 2. Physical dependence

- 3. Therapeutic effect
- 4. Adverse effect

Answer: 2

Rationale: The presence of physical withdrawal symptoms (muscle tremors) is seen when a person is physically dependant 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. (pp. 14–15)

Comprehension

Evaluation

Physiological Integrity

Objective: 2-7

- 2.22 A physician may telephone in an order for which of the following?
 - 1. Marijuana
 - 2. Cocaine
 - 3. Morphine
 - 4. Codeine

Answer: 4

Rationale: Schedule I and II drugs can not be ordered via the telephone. Marijuana is a schedule I drug, and cocaine and morphine are schedule II drugs, while codeine is a schedule III drug.

Comprehension

Planning

Safe, Effective Care Environment

Objective: 2-7 & 2-8