

## Chapter 2: Optimizing Population Health

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. In 2011, the National Prevention Strategy released a plan to increase the number of Americans who are healthy at every stage of life. Which of the following is not one of the strategic directions included in the strategy?
1. Eliminating health disparities
  2. Building healthy and safe community efforts
  3. Increasing access to care
  4. Empowering people to make healthy choices
- \_\_\_\_\_ 2. PHNs in a county with an increase in measles during the 2018-2019 outbreak used the natural history of disease framework to develop a primary prevention program aimed at preventing measles. Their first step was to:
1. Conduct an outreach to all parents to have their children vaccinated.
  2. Educate health-care providers on the signs and symptoms of disease.
  3. Start a screening program to identify persons who may have measles.
  4. Provide an educational program for parents whose children have measles on the importance of keeping them home from school and away from public places.
- \_\_\_\_\_ 3. Based on recent studies on risk for disease, the nurse working in a primary care clinic in a poorer urban community decides to develop an educational program on the importance of including whole grains, fruits and vegetables in her patient's diets. To help guide the development of her program she first reviews the availability of fresh fruits and vegetables in the community. Her decision to gather information on these factors best reflects the \_\_\_\_\_?
1. Ecological determinants of health
  2. Social determinants of health
  3. Individual behavioral determinants of health
  4. Genetic determinants of health
- \_\_\_\_\_ 4. The school nurse in a school district in southwestern Texas is working with the school cafeteria to revise their healthy choices menus for the school year. They have used as their guide the 2012 national law that calls for school lunch programs to have larger portions of fruits and vegetables, less sodium, and no trans fats. To help increase the success of the program, the nurse conducted a survey of parents to learn more about the cultural aspects of food choices related to fruits and vegetables. Providing a culturally appropriate menu that meets federal guidelines for the school children represents:
1. An upstream approach
  2. A tertiary prevention approach
  3. A socioecological approach
  4. A and C
- \_\_\_\_\_ 5. A PHN notices the rising incidence of H1N1 (swine flu) in a geographic area. The nurse considers possible interventions, knowing that the preclinical phase of H1N1 lasts:
1. 1 to 2 days
  2. 2 to 4 days
  3. 3 to 4 days
  4. 5 to 7 days

- \_\_\_\_\_ 6. In the traditional public health prevention framework, the level of prevention that includes early detection and initiation of treatment for disease, or screening, is referred to as the:
1. Clinical level
  2. Primary level
  3. Tertiary level
  4. Secondary level
- \_\_\_\_\_ 7. Attributable risk is the proportion of cases or injuries that would be eliminated if a risk factor did not occur, but preventable fraction is:
1. The number of cases that actually occur in a given population at a specific point in time.
  2. What could be achieved with a program implemented in a community setting within the at-risk population when community members actually participate in the program.
  3. The number of cases that require intervention in a community setting within the at-risk population.
  4. An estimation of the number of cases with the high-risk factor(s) among the at-risk population when community members actually participate in the program.
- \_\_\_\_\_ 8. Population attributable risk (PAR) is based on the assumption that the risk factor is removed from the entire population being targeted. It also can be used to calculate the cost benefit and the \_\_\_\_\_ of a prevention program.
1. Cost effectiveness
  2. Necessity
  3. Population ecology
  4. Percent of repeat participants
- \_\_\_\_\_ 9. The PHNs within the public health department experiencing a measles outbreak decide to do Public Service Announcements (PSAs) on TV aimed at improving vaccination rates among the population, and letting parents know they can come to the PHD clinic to have their children vaccinated. The county their department serves has a large population of Mexican American families, so they work together with the Mexican American community to make sure the PSAs are culturally relevant. Which learning theory best matches their approach?
1. Constructivism
  2. Cognitivist
  3. Bandura's theory of social learning
  4. Behaviorism
- \_\_\_\_\_ 10. A patient diagnosed with diabetes buys books, reads articles, talks with knowledgeable people, informs himself about what he can do to improve his health, and takes action. The nurse recognizes that this method of adult learning is best described as:
1. Pedagogy
  2. Andragogy
  3. Constructivism
  4. Humanism
- \_\_\_\_\_ 11. A nurse working in a busy primary care clinic wonders why Mr. Smith, a 65-year old insulin dependent man recently diagnosed with type 2 diabetes, keeps coming back with elevated A1Cs. The nurse knows that he has given Mr. Smith the literature on how to manage type 2 diabetes and, as time allowed, reviewed it with him. He doesn't understand why Mr. Smith is still struggling with managing his disease. What should he check first before providing Mr. Smith with more information?
1. His level of health literacy
  2. Whether or not he can afford his medication
  3. His eating habits

4. His routine for checking his A1C
- \_\_\_\_\_ 12. Two nurses working in a head, nose, and throat oncology unit noticed that many of their patients not only smoked but used alcohol. They had been to a recent conference and learned about evidence-based screening tools for alcohol use that were different from the tool they were currently using. They approached the director of the unit and suggested that they use the newer screening tools. Screening for alcohol use is primarily done:
1. Only with persons whose clinical presentation appears to indicate heavy alcohol use.
  2. Only to detect those who are currently using alcohol to avoid an interaction with treatment modalities.
  3. Only to detect those who may have an alcohol use disorder
  4. To detect those at risk for disease or injury who do not yet meet the criteria for having an alcohol use disorder as well as those who may have an alcohol use disorder.
- \_\_\_\_\_ 13. A clinical group of nursing students was assigned, during their public health rotation, to the local public health department (LPHD). The LPHD was just beginning to start a “Breast is Best” campaign in the community. The students were asked to come up with ideas for the campaign. The LPHD had found that the lowest breastfeeding rates were in one of the ethnic communities. The students agreed to conduct a preliminary outreach program with pregnant women coming to the LPHD’s prenatal clinic that had the highest number of women in that ethnic group. This is an example of what level of intervention using the Substance Abuse and Mental Health Services Administration (SAMSHA) framework?
1. Universal
  2. Indicated
  3. Primary
  4. Selected

### Completion

*Complete each statement.*

14. If the total number of cases of a disease is 100, and the total number of persons in a population is 1,000, what would the prevalence be? Record answer as a decimal. \_\_\_\_\_
15. In a hypertensive study, nurses took the blood pressure readings of 250 participants. To determine the accuracy of their readings, they wanted to test the sensitivity of their instruments. If the number of true positives is 40, and the total number of participants with disease (true positives plus false negatives) is 55, the sensitivity of the instrument is \_\_\_\_\_. Record answer with one decimal place.

### Multiple Response

*Identify one or more choices that best complete the statement or answer the question.*

- \_\_\_\_\_ 16. A nurse working in the emergency department (ED) has noticed over the past year the increasing number of young patients being treated for conditions that could be handled in primary care. She overhears a colleague wondering why their parents don’t just go to the clinic. To help better understand the issue, the nurse tells her colleague that perhaps they should be looking at other determinants of health besides the parents’ behavior. She explains that the four broad levels of determinants of health included in the social ecological model would be a good start to help determine what factors might be driving the increased use of the ED for non-emergent pediatric care. Which of the following determinants of health are included in the model? (Select all that apply.)
1. Communication
  2. Relationship
  3. Policy

4. Genetics
5. Societal

- \_\_\_\_\_ 17. When screening for, monitoring, and diagnosing disease, a health-care provider always evaluates a measurement tool for which of the following attributes? (Select all that apply.)
1. Reliability
  2. Validity
  3. Functionality
  4. Sensitivity
  5. Specificity
- \_\_\_\_\_ 18. To assess the prevalence of a disease in a population, a public health nurse (PHN) can use the prevalence pot to help better understand the occurrence of disease in her or his community. The prevalence pot: (Select all that apply.)
1. Depicts the total number of current cases in the population.
  2. Takes into account duration and incidence of the disease.
  3. Includes assessing the total number of cases of a disease taking into account all of the stages of the disease.
  4. Is a method of calculating the potential number of new cases in a population.
  5. Determines the amount of primary medications used to treat diseases in a certain population.
- \_\_\_\_\_ 19. Based on the Social-Ecological model of health, which of the following are components of health? (Select all that apply.)
1. Physical environments
  2. Social environments
  3. Social relations
  4. Political systems
  5. Health-care systems

**Chapter 2: Optimizing Population Health**  
**Answer Section**

**MULTIPLE CHOICE**

1. ANS: 3

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Introduction

Integrated Processes: Nursing Process

Client Needs: Health Promotion and Maintenance

Concept: Promoting Health, Legal

Cognitive Level: Knowledge

Difficulty: Easy

	Feedback
1	Eliminating health disparities is one of the four fundamental strategies.
2	Building healthy and safe community efforts is one of the four fundamental strategies.
3	Although the National Prevention Strategy was authorized by the Affordable Care Act, the focus is to promote health and not increase access to care.
4	Empowering people to make healthy choices is one of the four fundamental strategies.

PTS: 1

REF: 25

CON: Promoting Health | Legal

2. ANS: 1

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Prevention Frameworks > Natural History of Disease

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Promoting Health | Health-Care System

Cognitive Level: Analysis

Difficulty: Moderate

	Feedback
1	Using the natural history of disease, the best approach for the primary prevention of measles is to vaccinate the population and would be the first step.
2	Educating health-care providers to recognize the disease might help identify patients earlier and would occur during the clinical phase of the natural history of disease. It might also help reduce other's exposure to the virus if parents were instructed to keep their children out of school and public places but would not be the first step in a primary prevention program.
3	Screening occurs during the subclinical phase of the natural history of disease to detect the disease and would not be the first step.
4	Educating parents on the importance of keeping their children who have the measles out of school and public places could result in reduced transmission of the measles virus but would not be the first step.

PTS: 1

REF: 28-30

CON: Promoting Health | Health-Care System

3. ANS: 2

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Population Health Promotion, Health Protection, and Risk Reduction > Health Promotion

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Nutrition | Promoting Health | Assessment

Cognitive Level: Application [Applying]

Difficulty: Moderate

	Feedback
1	Ecological determinants of health include "...potable water and sanitation, affordable and clean energy, climate action, life below water, and life on land". Resource availability is considered a social determinant of health.
2	Social determinants of health, according to the WHO "...are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels".
3	Behavioral determinants of health are at the individual level.
4	Genetic determinants of health are at the individual level.

PTS: 1

REF: 26

CON: Nutrition | Promoting Health | Nursing Roles

4. ANS: 4

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Population Health Promotion, Health Protection, and Risk Reduction > Health Promotion

Integrated Processes: Nursing Process, Culture and Spirituality

Client Need: Health Promotion and Maintenance

Concepts: Nutrition | Promoting Health | Legal

Cognitive Level: Application [Applying]

Difficulty: Easy

	Feedback
1	A healthy school menu is an example of an upstream approach and addresses the role healthy nutrition plays in improving health and preventing disease.
2	Addressing the upstream issue of adequate nutrition to improve health is a primary prevention approach, not tertiary.
3	A socioecological approach takes into account the role of culture on health.
4	Combining culturally relevant food choices and a healthy choices menu in a school setting is an example of using an upstream approach within the context of socioecological model.

PTS: 1

REF: 26

CON: Nutrition | Promoting Health | Legal

5. ANS: 1

Objective: 3. Apply public health prevention frameworks to specific diseases.

Page:

Heading: Prevention Frameworks > Natural History of Disease

Integrated Processes: Nursing Process

Client Need: Safe and Effective Care Environment: Safety and Infection Control

Concepts: Infection | Critical Thinking

Cognitive Level: Application [Applying]  
 Difficulty: Difficult

	Feedback
1	The preclinical phase of H1N1 lasts 1 to 2 days, and people who are infected can infect others on the first day. Symptoms develop rapidly, and intervention cannot prevent progression to the clinical phase.
2	This is past the preclinical phase of H1N1. The preclinical phase lasts only 1 to 2 days.
3	This is past the preclinical phase of H1N1. The preclinical phase lasts only 1 to 2 days.
4	This is past the preclinical phase of H1N1. The preclinical phase lasts only 1 to 2 days.

PTS: 1                      REF: 29                      CON: Infection | Critical Thinking

6. ANS: 4

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Prevention Frameworks > Public Health Prevention Frameworks

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concepts: Promoting Health

Cognitive Level: Knowledge

Difficulty: Easy

	Feedback
1	The clinical level is not a level of prevention in the traditional public health framework.
2	The primary level of prevention includes interventions aimed at preventing disease in those who currently do not have the disease.
3	The tertiary level includes prevention of disability and premature death in those who are already diagnosed with the disease.
4	The secondary level includes screening to help detect disease among persons who are apparently well during the preclinical phase of the disease.

PTS: 1                      REF: 30                      CON: Promoting Health

7. ANS: 2

Objective: 4. Compare and contrast different levels of health promotion, protection, and risk reduction interventions.

Page:

Heading: Prevention Frameworks > Public Health Prevention Frameworks

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Evidence-Based Practice, Promoting Health

Cognitive Level: Comprehension

Difficulty: Moderate

	Feedback
1	Preventable fraction is not the number of cases that actually occur.
2	Preventable fraction includes the portion of the population at risk that actually participates in a program and the number of cases prevented.
3	The preventable fraction includes the number of cases that have been prevented from happening, not the cases that now require intervention.
4	The estimated number of cases with high-risk factors is included in attributable risk.

PTS: 1                      REF: 34                      CON: Evidence-Based Practice | Promoting Health

8. ANS: 1

Objective: 4. Compare and contrast different levels of health promotion, protection, and risk reduction interventions.

Page:

Heading: Prevention Frameworks > Public Health Prevention Frameworks

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Evidence-Based Practice, Promoting Health; Economics

Cognitive Level: Knowledge

Difficulty: Moderate

	Feedback
1	PAR can be used as a measurement of the cost benefit and cost effectiveness of a prevention program, which is based on the strength of the risk factor and the prevalence of the risk factor in a population.
2	PAR can be used to estimate the cost effectiveness of a prevention program. The estimation of the cost effectiveness of a program is a separate issue from whether a program is necessary or not.
3	PAR can be used to estimate the cost effectiveness of a prevention program. There is no measurement of the population ecology, only of the strength and prevalence of the risk factor.
4	PAR can be used to estimate the cost effectiveness of a prevention program. The percent of repeat participants is not a measure of the cost effectiveness of the program when the risk factor has been removed from the targeted population.

PTS: 1                      REF: 34                      CON: Promoting Health | Economics | Evidence-Based Practice

9. ANS: 3

Objective: 5. Identify health education strategies and chronic disease self-management within the context of prevention frameworks.

Page:

Heading: A Primary Prevention Approach: Health Education > Theories of Education

Integrated Processes: Teaching/Learning

Client Need: Health Promotion and Maintenance

Cognitive Level: Application [Applying]

Difficulty: Moderate

	Feedback
1	Constructivism is a learning theory that includes reflecting on our own experiences and knowledge.
2	Cognitivist focuses on inner mental activity and knowledge that has changed thought patterns through rationally responding to an external stimulus.
3	Bandura's theory of learning specifically connects understanding, behavior, and environment, and is the best match to their approach using PSAs. The use of PSAs is a good example of this theory because they portray an action and the audience, seeing it as desirable, is encouraged to model or imitate that behavior.
4	Behaviorism includes the theory of classical conditioning, which emphasizes that change comes with an environmental stimulus resulting in a response. Learning is based on reward and punishment by conditioning.

PTS: 1                      REF: 37  
CON: Evidence-Based Practice | Promoting Health | Nursing Roles



10. ANS: 4

Objective: 5. Identify health education strategies and chronic disease self-management within the context of prevention frameworks.

Page:

Heading: A Primary Prevention Approach: Health Education > Theories of Education

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Cognitive Level: Application [Applying]

Difficulty: Easy

	Feedback
1	Pedagogy is the correct use of teaching strategies to provide the best learning.
2	Andragogy is the art and science of helping adults learn.
3	Constructivism is a learning theory that includes reflecting on our own experiences and knowledge.
4	Humanism is defined as self-directed learning through examining personal motivation and goals. It also includes the development of personal actions to fulfill one's personal motivation and goals.

PTS: 1

REF: 37

CON: Evidence-Based Practice | Promoting Health

11. ANS: 1

Objective: 5. Identify health education strategies and chronic disease self-management within the context of prevention frameworks.

Page:

Heading: A Primary Prevention Approach: Health Education > Health Literacy

Integrated Processes: Teaching/Learning

Client Need: Physiological Integrity; Reduction of Risk Potential

Cognitive Level: Application [Applying]

Difficulty: Moderate

	Feedback
1	Because health literacy is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions”, the first step before providing Mr. Smith with more information is to check his level of health literacy.
2	Lack of ability to pay for insulin is a real problem and should be included in the nurse's assessment of Mr. Smith. However, establishing his level of health literacy is the first step because he might not fully understand the need for self-managing his disease with medication.
3	Establishing Mr. Smith's level of health literacy is the first step because he might not fully understand the need for self-managing his disease with diet.
4	Establishing Mr. Smith's level of health literacy is the first step because he might not fully understand the need for self-managing his disease through routine monitoring of his A1C.

PTS: 1

REF: 38

CON: Promoting Health | Nursing Roles | Evidence-Based Practice

12. ANS: 4

Objective: 6. Describe components of screening from a population and individual perspective.

Page:

Heading: A Secondary Prevention Approach: Screening and Early Identification

Integrated Processes: Nursing Process

Client Need: Physiological Integrity; Reduction of Risk Potential

Cognitive Level: Application

Difficulty: Moderate

	Feedback
1	At-risk alcohol use cannot always be detected based on clinical presentation.
2	Although interaction with treatment modalities is important, it is not the primary reason for screening, which is to detect and provide early interventions for persons engaged in at-risk alcohol use.
3	Alcohol screening is done not only to detect those who meet the criteria for an alcohol use disorder but also to identify those who may be engaged in at-risk drinking.
4	Alcohol screening is done not only to detect those who meet the criteria for an alcohol use disorder but also to identify those who may be engaged in at-risk drinking.

PTS: 1

REF: 42 | 43

CON: Assessment | Promoting Health | Quality Improvement

13. ANS: 2

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Prevention Frameworks > Universal, Selected, and Indicated Prevention Models

Integrated Processes: Teaching/Learning

Client Need: Health Promotion and Maintenance

Cognitive Level: Application [Applying]

Difficulty: Moderate

	Feedback
1	A universal prevention intervention is one that is applicable to the whole population and is not based on individual risk. The proposed intervention is aimed at a subset of the population at increased risk for deciding not to breastfeed.
2	Indicated prevention interventions are provided to populations with a high probability of developing disease. The proposed intervention is aimed at a subset of the population with an increased risk for deciding not to breastfeed.
3	Primary prevention is not part of the SAMSHA framework.
4	Selective prevention interventions are aimed at a subset of the population that has an increased level of risk for developing disease.

PTS: 1

REF: 33

CON: Diversity | Family | Promoting Health

## COMPLETION

14. ANS:

0.1

Feedback: The prevalence of a disease is calculated by dividing the total number of disease cases (100) by the total number of persons in a population (1,000) to equal the total number of cases of disease in a population.

$100 \div 1,000 = 0.1$ .

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Integrated Processes: Nursing Process

Heading: Prevention Frameworks > Natural History of Disease

Client Need: n/a  
Cognitive Level: Application [Applying]  
Difficulty: Easy

PTS: 1                      REF: 28                      CON: Assessment

15. ANS:  
72.7%

Feedback: The number of true positives (40) is divided by the total number of people with the disease (true positives plus false negatives = 55) and multiplied by 100 to equal the sensitivity of the instrument.  $(40/55) \times 100 \approx 72.7\%$ .

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Screening and Early Identification > Sensitivity and Specificity

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concepts Assessment | Promoting Health

Cognitive Level: Application [Applying]

Difficulty: Easy

PTS: 1                      REF: 44-48                      CON: Assessment | Promoting Health

## MULTIPLE RESPONSE

16. ANS: 1, 2, 5

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Population Health Promotion, Health Protection, and Risk Reduction

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Promoting Health; Assessment; Health Systems

Cognitive Level: Application [Applying]

Difficulty: Moderate

	Feedback
1	Individual, Relationship, Communication, and Societal are the four concepts included in the model.
2	Individual, Relationship, Communication, and Societal are the four concepts included in the model.
3	Policy is not one of the four concepts in the model and would come under the concept of societal determinants.
4	Genetics is not one of the four concepts in the model and would come under the concept of the individual determinants.
5	Individual, Relationship, Communication, and Societal are the four concepts included in the model.

PTS: 1                      REF: 25                      CON: Promoting Health | Assessment

17. ANS: 1, 2, 4, 5

Objective: 6. Describe components of screening from a population and individual perspective.

Page:

Heading: Screening and Early Identification > Sensitivity and Specificity

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Concept: Assessment | Promoting Health

Cognitive Level: Application [Applying]

Difficulty: Easy

	Feedback
1	Reliability is the ability of the instrument to give consistent results on repeated trials.
2	Validity is the degree to which the instrument measures what it is supposed to measure.
3	Functionality is the quality of being suited to serve a purpose well. This is not one of the attributes by which a measurement tool is always evaluated.
4	Sensitivity is the ability of the screening test to give a positive finding when the person truly has the disease or is a true positive.
5	Specificity is the ability of the screening test to give a negative finding when the person does not have the disease or is a true negative.

PTS: 1

REF: 44

CON: Assessment | Promoting Health

18. ANS: 1, 2, 3

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Prevention Frameworks > Natural History of Disease

Integrated Processes: Nursing Process

Client Need: Health Promotion and Maintenance

Cognitive Level: Comprehension

Difficulty: Moderate

	Feedback
1	A prevalence pot includes the total number of current cases.
2	A prevalence pot takes into account duration and incidence of the disease.
3	A prevalence pot is a way of depicting the total number of cases of a disease in a population that takes into account issues related to duration of the disease and the incidence of the disease.
4	A prevalence pot does not specifically provide information on potential new cases.
5	A prevalence pot does not determine the amount of medication used.

PTS: 1

REF: 28 | 29

CON: Promoting Health

19. ANS: 1, 2, 3

Objective: 2. Describe current public health frameworks that guide prevention efforts from a local to a global perspective.

Page:

Heading: Population Health Promotion, Health Protection, and Risk Reduction

Integrated Processes: Nursing Process

Client Need: Psychosocial Integrity

Concepts: Assessment | Promoting Health | Evidence-Based Practice

Cognitive Level: comprehension

Difficulty: Easy

	Feedback
1	Physical environments contribute to the health of populations and individuals.
2	Social environments, along with physical environments, are key determinants of health for individuals and communities.
3	Social relations are one of the upstream determinants of health included in the model.
4	Political systems may support communities but are not specific to the model.
5	Health care systems may support communities but are not specific to the model.

PTS: 1

REF: 25

CON: Assessment | Promoting Health | Evidence-Based Practice