

Infection Prevention and Behavioral Interventions

Nov 11

Overview

Vicki

- Health Belief Model
- Social Cognitive Theory

Louise

- Transtheoretical or stage theory
- Positive deviance

Sterile Processing

Tanner

- Key terms
- Basic Principles, First steps in the cleaning process

Michelle

- The physical environment for sterile processing, Safety requirements for sterile processing staff
- Disinfecting sterile processing work areas, Cleaning used items

Misty

- Inspection of instruments or other items, High-level disinfection, Intermediate or low-level disinfection
- Preparation and packing, Sterilization

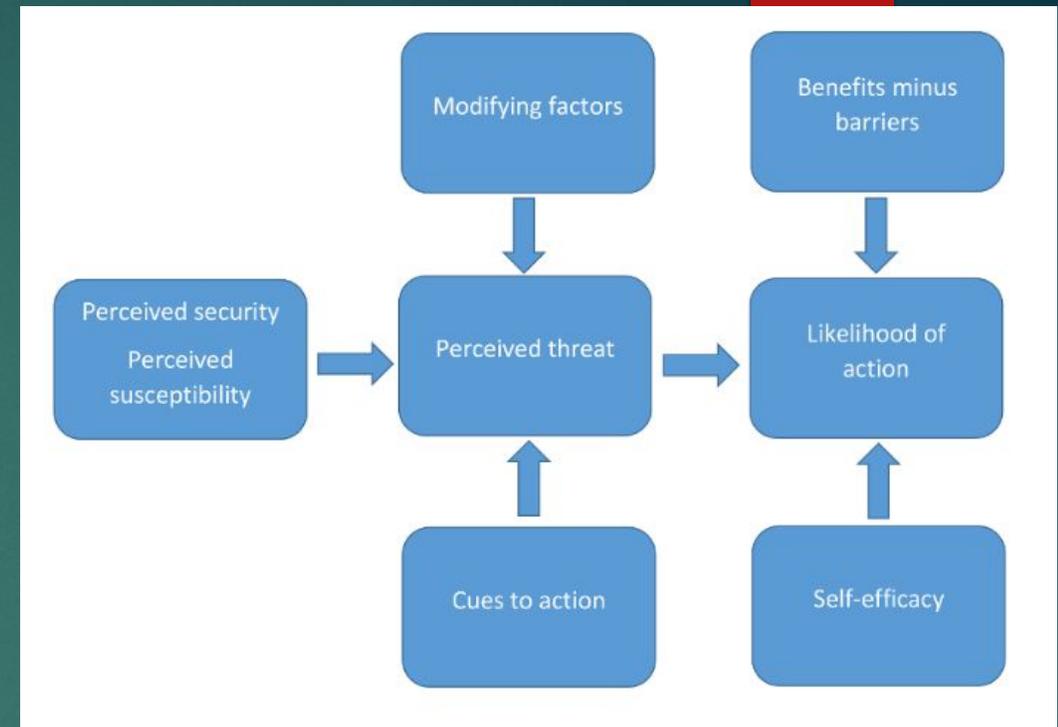
Health Belief Model

Choose all TRUE statements regarding the HBM (**Health Belief Model** – a Behavioral theory)

- A. It is the oldest theory specifically developed to understand and predict health-associated behavior.
- B. It was developed in response to the failure of a free tuberculosis (TB) health screening program in the 1950s.
- C. It predicts health-associated behaviors by focusing on the attitudes and beliefs of individuals.
- D. It adapted to explore a variety of long- and short-term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS.

Answer: a, b, c, d

The health belief model (HBM) is the oldest theory specifically developed to understand and predict health-associated behavior. This is done by focusing on the attitudes and beliefs of individuals. The model was developed in response to the failure of a free tuberculosis (TB) health screening program in the 1950s. Since then, the HBM has been adapted to explore a variety of long- and short-term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS.



Reference APIC Text > Chapter Infection Prevention and Behavioral Interventions > Basic Principles > Review of Behavioral Theories > The Health Belief Model

<https://text.apic.org/toc/overview-of-infection-prevention-programs/infection-prevention-and-behavioral-interventions>

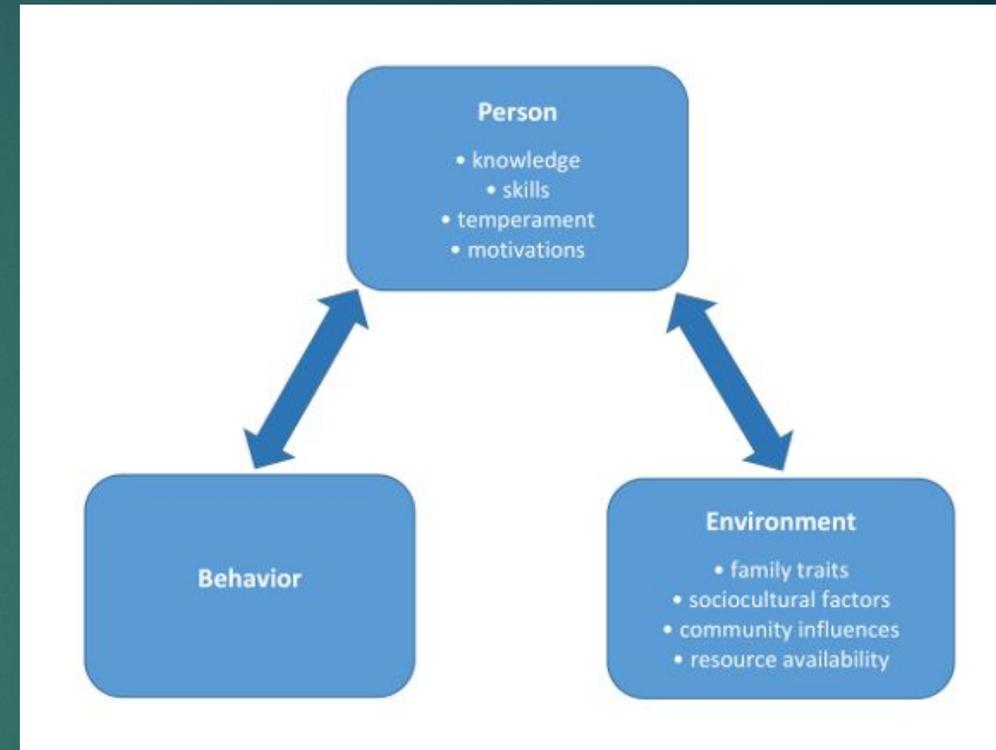
SCT (Social Cognitive theory – a Behavioral theory) is built around the interaction of (Select all that apply):

- A. The person
- B. Participation in social media activities
- C. Their behavior
- D. The environment

VS

Answer: a, c, d

Social cognitive theory (SCT) is built around the interaction of the person (their knowledge, temperament, internal motives, skills), their behavior, and the environment (physical, social, organizational). The interaction of the three components is called reciprocal determinism. It should be noted that the factors are linked, not in a one-way cycle, but in a way where each influences the other.

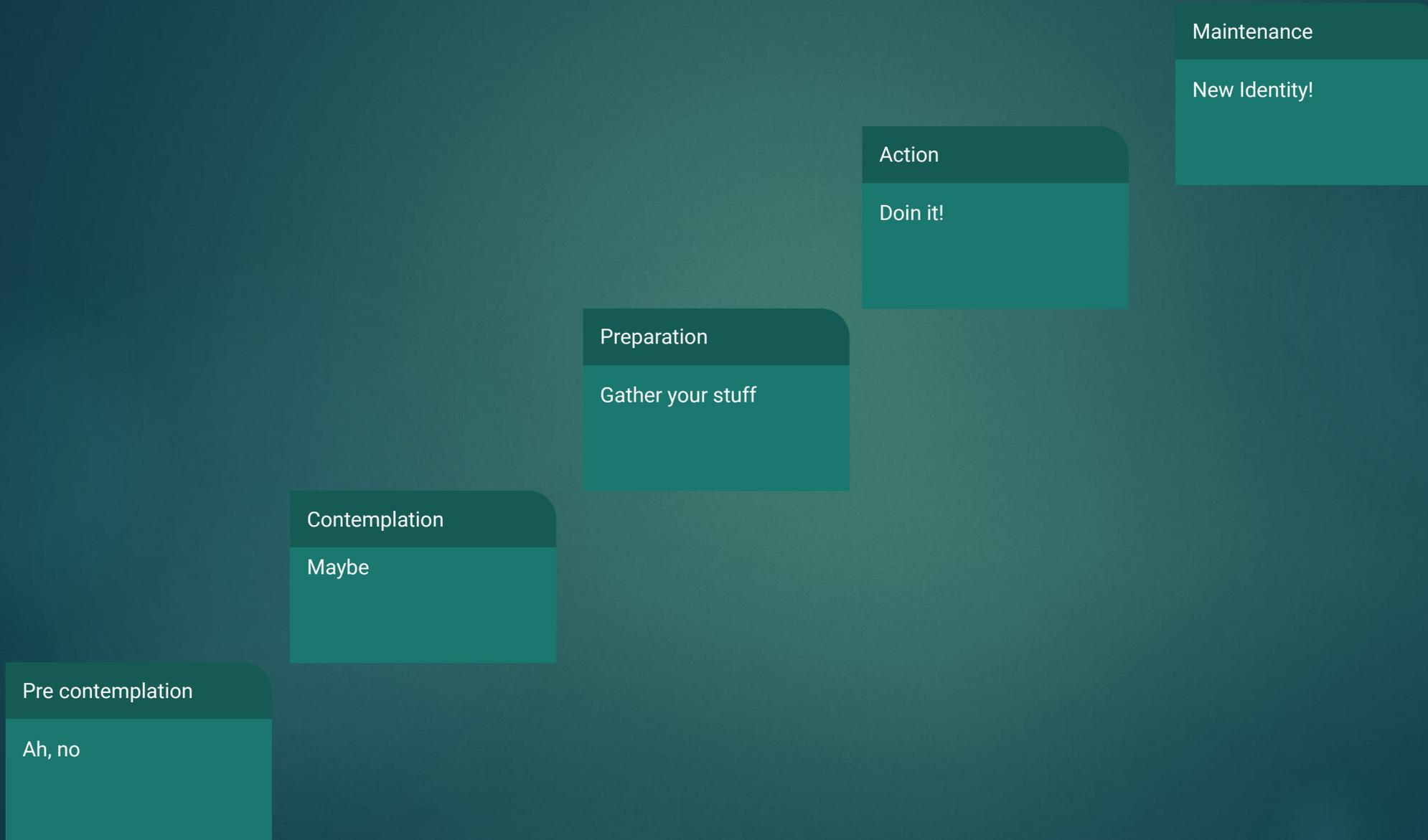


Reference APIC Text > Chapter Infection Prevention and Behavioral Interventions > Basic Principles > Review of Behavioral Theories > Social Cognitive Theory

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Transtheoretical Theory (stages theory)

LS



Transtheoretical Theory Q

The IP is asked to provide content for a hybrid education program. This model is most often based on :

- a. Self-assessment of learning needs that is used to develop an instructional plan
- b. Independent study with concurrent mentoring from a local expert
- c. Combination of online and independent study for a specific topic
- d. Attendance at a live event with assigned online follow-up activities

Answer

LS

Attendance at a live event with assigned online follow-up activities

RATIONALE:

Moving from precontemplation/contemplation with knowledge change to action

Positive Deviance

LS

People in a group whose uncommon behaviors enable them to find better solutions than their peers who have access to the same resources.

The outliers for the good!



<https://positivedeviance.org/guides>

Assess

Does Positive Deviance Approach fit this problem?
Suitable & feasible

Determine

Find the positive deviants. Who are the outliers for good?

Discover

What factors such as behaviors/attitudes are different? NOT limited resources

Design

How could this behavior be replicated and scaled up?

Monitor

Is the intervention effective and sustainable?

Positive Deviance Q

To meet the goal of improving infection prevention competency with hand hygiene among all staff at a healthcare facility, which of the education approaches should be a priority?

- a. Implementation of a mentoring program based on peer-to-peer instruction and coaching
- b. Attending local/state health department education programs on hand hygiene
- c. Analysis of human factors that may present unrecognized obstacles for compliance
- d. Intensified disciplinary actions for employees who do not follow hand hygiene procedures

Answer & Rationale

Implementation of a mentoring program based on peer-to-peer instruction and coaching

Find the outliers and get them to peer mentor

Sterile Processing

Match the Key term to its definition.

- | | |
|--|---|
| A. Instructions for use (IFU) | 1. Sterilizers that use steam to displace residual air through a port or drain located near the bottom of the sterilizer chamber. |
| B. Hydrogen peroxide combined with ozone sterilization | 2. Low-temperature sterilization method used to process heat- or moisture-sensitive items with packaging restrictions and lumen limitations. |
| C. Ethylene oxide (EO) sterilizers | 3. A document written by the manufacturer that provides manufacturer-validated information to the end user about the correct and safe use of the product. |
| D. Gravity-displacement steam sterilizers | 4. Sterilizers that use gas, temperature, time, and relative humidity to sterilize heat- and moisture-sensitive medical devices. |

Sterile Processing

Key Term, Answer Key:

-
- A. Instructions for use (IFU)
- B. Hydrogen peroxide combined with ozone sterilization
- C. Ethylene oxide (EO) sterilizers
- D. Gravity-displacement steam sterilizers
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 3. A document written by the manufacturer that provides manufacturer-validated information to the end user about the correct and safe use of the product.
 4. Sterilizers that use gas, temperature, time, and relative humidity to sterilize heat- and moisture-sensitive medical devices.

Sterile Processing

Basic Principles:

Which of the following agencies have issued regulations regarding expected sterile processing practice?

- A. Association of periOperative Registered Nurses (AORN)
- B. Healthcare Infection Control Practices Advisory Committee (HICPAC)
- C. Occupational Safety and Health Administration (OSHA)
- D. American National Standards and Technical Information Reports (TIR)
- E. Environmental Protection Agency (EPA)
- F. Society of Gastroenterology Nurses and Associates
- G. Food Drug Administration (FDA)
- H. All of the above

Sterile Processing

Basic Principles, Answer Key:

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- H. All of the above

On this list, only OSHA, the EPA and the FDA are regulatory organizations.

The others all publish standards and guidelines that are part of the standards of practice in order for a facility to be accredited, but they do not issue regulations.

Sterile Processing

First Steps In the Cleaning Process:

Before contaminated Items are transported to sterile processing, they should be placed in containers. These containers should have which of the following characteristics?

- A. Leakproof
- B. Sealable
- C. Segregated into sharps and non-sharps containers if sharps are present
- D. Labeled visibly as biohazardous material
- E. All of the above

Sterile Processing

First Steps In the Cleaning Process, Answer Key:

Before contaminated Items are transported to sterile processing, they should be placed in containers. These containers should have which of the following characteristics?

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- C. Segregated into sharps and non-sharps containers if sharps are present
- D. Labeled visibly as biohazardous material
- E. **All of the above**

Examples of containers used for transportation include impermeable bags, rigid sterilization container systems, enclosed/covered carts, and lidded bins.

Sterile Processing

True or False?

Workers in sterile processing may wear a plain wedding band

Sterile Processing

Answer: False

Rationale:

In the sterile processing area, workers should never wear jewelry on their hands or wrists (e.g. rings, watches, bracelets).

Sterile Processing

All of the following are true about the physical environment of sterile processing except:

- A. Equipment and supplies for hand hygiene should be easily accessible to staff
- B. The floors and walls should consist of material that can withstand wet vacuuming and washing
- C. Air should only move from the clean side of the room to the decontamination side of the room
- D. Eyewash/shower equipment would be available within 20 seconds travel time

Sterile Processing

Answer:

D. Eyewash/shower equipment would be available within 20 seconds travel time

Rationale:

ANSI/AAMI ST79 states that

“eyewash/shower equipment should be available within **10 seconds**’ travel time, with unobstructed access, for immediate emergency use in all locations where potentially damaging chemicals (e.g. corrosive cleaning solutions) are used.”

Sterile Processing

The effectiveness of the cleaning process depends on which of the following:

1. Using an appropriate detergent or enzymatic cleaner that is diluted properly with correct type of water and at the optimal temperature and time
2. An acceptable washing method (manual or mechanical cleaning, or both, may be required)
3. Proper rinsing (using the appropriate quality of water) and drying
4. Correct use of mechanical cleaning equipment, including the preparation and loading of devices to be cleaned, temperature settings, and duration of the cleaning
5. Operator performance

- A. 1, 4
- B. 1, 3, 4
- C. 1, 2, 3, 4
- D. 1, 2, 3, 4, 5

Sterile Processing

Answer:

D. 1, 2, 3, 4, 5

Rationale:

All are important for an effective cleaning process

Sterile Processing

Which of the following statements is TRUE regarding the storage of sterilized items in the Sterile Processing Department? (Select all that apply)

1. Sterilized items should be stored on a shelf with a solid bottom
2. Sterilized items should be stored in high traffic areas for easy access.
3. Sterilized items should be stored in a room with positive air pressure
4. Sterilized items should be stored 8 to 10 inches off the floor

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

Sterile Processing

Answer:

B. 1, 3, 4

Rationale: Physical storage restrictions are recommended to support an environment that is conducive to maintaining the sterility of reprocessed items. Sterilized items should be stored as follows:

- 18 inches from ceiling if there is a sprinkler system for fire code
- 8-10 inches off the floor
- 2 inches from an outside wall
- In areas of **limited** traffic
- Airflow must be positive pressure to surrounding areas with a min of 4 air exchanges per hour with controlled temp and humidity. 65-72 degrees and 35-75 % Humidity
- Open racks storage should have a solid bottom to prevent soiling or contamination from the floor.
- FIFO. First in first out. Items should be rotated placing newly sterilized items in the back part of the area stored so the oldest item is used first.
- Storage should be arranged in a manner that prevents packages from being crushed, bent, compressed, or punctured.
- Closed or covered cabinets are preferred.

Sterile Processing

Which of the following are used for sterilization of medical instruments

1. Gravity displacement steam sterilizer
2. Pasteurizer
3. Ethylene oxide sterilizer
4. Ultrasonic cleaner

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

Sterile Processing

Answer:

B. 1, 3

Rationale:

Sterilization of instruments results in the instruments being free of all microbes, including spores. This can be achieved using various types of steam sterilizers. You can also use gas sterilizers, including those that use ethylene oxide gas, ozone, and hydrogen peroxide gas or vapor and liquid immersion in chemical sterilant. You should not use ultrasonic cleaner or pasteurizers for instruments.

Sterile Processing

Which of the following indicators is most accurate for assessing whether surgical instruments have been processed correctly in a steam sterilization cycle?

- A. Autoclave Tape
- B. Chemical Indicator
- C. Biological Indicator
- D. The cycle indicator on the steam sterilizer

Sterile Processing

Answer:

C. Biological Indicator

Rationale:

A biological indicator is the only method of assuring that a steam sterilizer has reached the correct conditions to ensure sterility of products. Use of a biological indicator provides reliable qualitative evidence that all spore forming organisms have been inactivated during the sterilization process.

Sterile Processing

An OR team was using a unique surgical instrument on a patient and it was dropped on the floor. The team needs to reprocess it as quickly as possible to finish surgery and would like to use immediate use steam sterilization (IUSS). Which of the following is the best recommendation for this?

- A. The team must clean and inspect the instrument before proceeding with IUSS
- B. The team can proceed with IUSS without cleaning since it is the same patient
- C. There is no need to use IUSS as the team can soak the instrument in 10% bleach for 10 minutes
- D. IUSS is not appropriate in this situation

Sterile Processing

Answer:

- A. The team must clean and inspect the instrument before proceeding with IUSS

Rationale:

IUSS (formerly “flash sterilization”) allows for rapid reprocessing of an instrument if a replacement that underwent standard sterilization is not available. This method should not be used to cut down turnaround times in Sterile Processing or to replace the need for back up instruments. Instruments that will be processed by IUSS must be cleaned thoroughly and inspected as they would if they were undergoing standard processing.