Welcome to Unit 7, entitled “Educational Strategies”. There are 7 parts to this unit. **NOTE:** The Educational Strategies Planning Document that you will be accessing and filling in, IS assignment #7. It is designed to be completed as you go through each of the parts of Unit 7, NOT at the end. Upon completion of the first unit, you should have filled in the answers to questions #1-5. This section contains the Introduction and Part 1.

As an Infection Preventionist Educator, you are responsible for providing ongoing educational programs in infection control to healthcare workers (HCWs). Your role includes the planning, implementation and evaluation of these programs which must meet the needs of workers from a variety of experiences, responsibilities and levels of education.

The educational process is more than just training someone on a task they do not currently know how to perform. As you can see from this list, the major goals of the educational process also include improvement on existing performance.

So what are the goals for the IP educator? These are listed on the next two slides. First, we need to recognize that learners have expertise and knowledge, and this is what we should build upon with our educational programs. The IP should facilitate sessions that provide self-direction and development of the learners.

A third goal for the IP educator is to group learner populations based on job needs and infection control program objectives. Much of infection control education is focused on improving job competencies for many different job categories of HCWs, a fourth goal. Finally, the IP educator should prepare learners to be able to deal with workplace changes or practice changes, always with the goal of preventing cross-infection between patients, employees, and visitors.
The short-term objective of this unit is to create a planning document to teach an educational session on an infection control/infectious disease-related topic. The long-term objective for this session is to prepare you to complete the objective on the course syllabus that states, “Evaluate infection control instructional methods and adult learning principles targeting health care workers as the intended audience”. This unit is divided into 7 parts. Each part is presented as a series of slides, with some interactive questions, and can be completed within 30-40 minutes. Since it is easiest to retain the information in this unit if you practice the new skills as you go along, throughout the 7 parts you will be given a series of questions to be answered. Read the question and write your response in the Educational Strategies Planning Form, Assignment #7, which is located in Canvas in the Assignment section. Additional instructions are available in Canvas in the same folder you used to access this presentation. Assignment #7 is worth 20 points and 5% of the course grade. When you have completed all the 7 parts in Unit 7, and submitted your form for Assignment #7, you will receive feedback to help you self-assess your performance. Please allow adequate time to complete Assignment #7 to avoid any points penalties for late submission.

Now it is time to start Part 1. This part will provide an introduction on human learning and learning theories.

Parts 2 through 5 will focus on the development of the educational program. Part 2 covers needs analysis. Part 3 outlines creating an educational plan and writing objectives. Part 4 covers Program Development & Educational Strategies. Part 5, Basic Principles of Effective Teaching, includes planning, teaching, & evaluation.

Parts 6 and 7 will cover Instructional Materials with an emphasis on readability testing and audiovisuals.
| Slide 10 | Question 1 | So, let’s begin with the planning document (for assignment #7). In the practice exercise for this session, you will take the role of an IP Educator. You have been asked to teach a 30-minute training session on a task or topic related to infection control/infectious disease to healthcare workers in a healthcare facility. The session will take place in a room which has tables and chairs and other audio-visual resources. The administrators have asked for a planning document which they must approve prior to the workshop. Therefore, your role is to answer a series of questions which will be used to create this planning document. Identify a potential problem related to Infection Control/infectious disease and healthcare workers. Based on this problem, identify a topic you will teach to the healthcare workers to address this problem. (We will be using the topic “when to wash your hands” throughout the units, so please do not choose that specific topic “when to wash your hands”.) Remember, you only have 30 minutes to teach this topic, so keep it simple. Once you have identified your problem and a topic, write your responses for Question 1 in the Educational Strategies Planning Form for Assignment #7 after you have downloaded it from Blackboard. See Assignment#7 for Unit 7 Educational Strategies folder to access this online form. | | Slide 11 | Human Learning | Before we go any further on the planning the document, it is important to review human learning and learning theories. | | Slide 12 | Why is Learning Necessary? | Let’s start with asking, why do we need to learn? At least one of these are reasons to learn: 1) Solve problems 2) Satisfy curiosity 3) Acquire new skills 4) Introduce improvements 5) Explore new ideas. | | Slide 13 | Human Learning Theory | In human learning theory, the adult learner processes the new information against what is already known. The process is easier if the learner accepts the new knowledge and is able to communicate that knowledge with others. Before learning can occur, the learner must make a decision to change. |
In the work environment, when an employee is not performing as expected, our first thought is that the employee does not have the knowledge to perform the task, and therefore needs training. That may be the case. But, what if the employee has gone through training? Reasons why people are not performing as expected may be due to other factors. The reasons why employees may not be performing as expected can be summarized into these three categories: lack of knowledge, lack of learning capability or an attitude which does not promote compliance. For our example, if a healthcare worker is not washing their hands when expected, we must identify if it is due to a lack of knowledge (e.g. they have never been told when to wash their hands); lack of learning capability (e.g. they do not have the ability to retain this knowledge); or an attitude/motivation problem (e.g. they do not want to wash their hands).

If employees have been trained, what are the barriers to learning and compliance? One barrier is the concept of “knowing versus doing” where what a person knows does not always match with what they are able to do or how they will perform a task. For example, suppose a HCW was trained on correct hand hygiene practice and then is observed to be doing it incorrectly. Another barrier is “passive learner response” where for example, giving a lecture to a person may have little effect on what a learner may do in the work setting-and this may be because active learning has not occurred. Sometimes a learner may not be able to perform a new task or apply new knowledge because that person may be afraid of failure the first time.

These are some additional barriers. Some learners are intimidated by the classroom setting, thus limiting their ability to participate in the educational session. If an educational program is not designed to meet the learner’s personal educational needs, it wastes the time of the learner. This is also true of sessions that are too long.

The type of educational session you provide will be based on whether the problem is due to a lack of knowledge or an attitude/motivation problem. We have provided a link to a performance analysis decision making tool regarding this issue.
Scientists have been studying how humans learn for hundreds of years. The next two slides are a compilation of statements about the human learning theory. Pay particular attention to the words highlighted in red. A good summary statement is that human learning is an active transformation process involving conflict, resistance, and personal change for learning to occur.

Imagine the healthcare workers you are asked to teach as an IP educator. Is there a barrier or roadblock to their current performance of the topic you selected? If so, identify the roadblocks or barriers which you feel may be a problem. Record your response for question 2 on the Educational Strategies Planning Form.

When we think of learning, we typically focus on gaining "knowledge" through mental processes, which is called cognitive learning. However, there are actually three domains of learning: Cognitive, Psychomotor and Affective. The learning domain is defined by the performance expected by the learner after they have received instruction.

The cognitive domain addresses gains in knowledge. It may be as simple as the ability to recall information, or as difficult as creating a new theory. A general example of cognitive learning is the different behavioral theories. A second example is learning the concepts of geometry. For an infection control example, the topic of ‘when to wash your hands’ could address cognitive learning. If the objective of an educational program is the following: “After completing the training students should be able to list the times when to wash their hands, and given a situation, analyze if handwashing is required”, the cognitive domain would be targeted.

Psychomotor skills involve a physical component as well as information processing. Examples would be the steps in medical procedures such as inserting a urinary catheter, how to perform orthopedic surgery, giving an injection, learning how to use the computer mouse, or steps for performing proper hand-washing.
### Slide 23

**Affective Domain**
- Learning embraces new attitudes, values, beliefs, ways of feeling
- Self-esteem & desire to learn grows in caring, respectful attitudes
- Example: HIV, newer sharps devices

Affective learning requires a change in attitude, motivation or beliefs. It is more difficult to “teach” this type of learning, but it can be done. If someone believes that HIV disease carries a stigma and is due to a behavior flaw, it may be difficult to teach someone how to counsel a newly-HIV infected patient. That attitude would need to change before learning could be effective. If a new needle device came out and a HCW does not believe that it is safer, there may be difficulty teaching that HCW to learn how to use it until they believe it is designed for their safety.

### Slide 24

**Question 3**
- Using the topic you have selected, identify what you expect the student to be able to do after completing the session.
- Record your response for question 3 on the Educational Strategies Planning Form

Using the topic you have selected, identify what you expect the student to be able to do after completing the session, then identify the learning domain you wish to target in your planned educational session. Record your response in question 3 on the Educational Strategies Planning Document.

### Slide 25

**Stages of Learning Process**
1. Awareness: learner perceives a need to think, feel or act differently
2. Information gathering: learner is innately curious & seeks to understand & clarify new ways of behaving
3. Intellectual insight: learner weighs advantages & disadvantages; has mental trial runs (cognitive learning)

Whether it is a cognitive, psychomotor or affective skill, to adopt the new information or skill, the learner moves through five stages in the learning process. Here are the first 3 stages of the learning process. Let’s take the hand-washing task as an example. In the awareness stage the learner becomes aware that the task needs to be performed. In the information gathering stage they learn when and how to perform the task. In the intellectual insight stage the learner practices the task, (either mentally or physically.) This is where feedback becomes most important. The feedback is used to ensure that the task is performed correctly, and to motivate the learner to continue performing the task.

### Slide 26

**Stages of Learning Process**
4. Emotional insight: learner practices new behavior in real situations
   - usually a time of conflict
   - trying to get the chance to “feel right” (affective learning)
5. New learned behavior:
   - New behavior becomes part of a learner’s new way of thinking, feeling & behaving (integrated behavior)

In the emotional insight stage, when posed with the real life situation which requires the task of hand washing to be performed, learners weigh decisions on whether or not to perform the task. They may even ask themselves, do I have the time? Is it really necessary? What happens if I don’t wash my hands? The last stage is adopting the new learned behavior. Without consciously thinking about it, they perform the task. To keep the learned behavior in this stage, the user needs to continue to practice the behavior, and will benefit by positive feedback on their performance.

### Slide 27

**Learning Theories/Theorists**
- Freud (psychoanalytic)
- Pavlov, Skinner (behavioral)
- Rogers (humanistic)
- Maslow (humanistic-existential)
- Knowles (andragogy vs. pedagogy)
- Houle (motivation for learner)

The stages of the learning process are based on learning theory. Next, let’s cover theories and theorists of human learning. Learning theories can be traced backed to the early 1800’s. The foundation of these theories stems from the study of psychology, and evolved over the years from different perspectives. Here is a list of a few of the theorists and their perspectives. We will go through each one in the next series of slides.
Psychoanalytical

Freud:
- Behavior is motivated by inner forces or urges
- Goal is to bring destructive or negative forces under control

The earliest learning theories can be traced back to Freud, who was the father of psychoanalysis, also known as "mental phenomena". Freud believed that behavior is motivated by inner forces or urges. He theorized that the goal is to bring destructive or negative forces under control.

Behavioral

Pavlov, Skinner:
- Learning is a conditioned response to environmental stimuli
- Desired response is reinforced in a controlled setting

B.F. Skinner and Pavlov held a "behaviorist perspective", which was developed as a reaction to the study of mental phenomena (Freud). Behaviorists believe that learning occurs when new behaviors or changes in behaviors are acquired (and become a conditioned response) as the result of an individual’s response to external stimuli, and require reinforcement.

Pavlov is best known for his study with salivating dogs. In a series of experiments, Pavlov tried to figure out what triggered the production of saliva in dogs. For example, he struck a bell when the dogs were fed. If the bell was sounded in close association with their meal, the dogs learned to associate the sound of the bell with food. After a while, at the mere sound of the bell, they responded by salivating. Take a minute to view the diagram which demonstrates the stages from unconditioned stimulus and response to conditioned stimulus and response.

While a graduate student at Harvard University, Skinner invented the operant conditioning chamber (aka “Skinner Box”) and cumulative recorder, developed the rate of response as a critical dependent variable in psychological research, and developed a powerful, inductive, data-driven method of experimental research. Skinner added to the behaviorist theory, the requirement of reinforcement, which is essential to continue a desired outcome or behavior. Two versions of the “Skinner Box” are illustrated on this slide.

In the mid-1900's the learning theories moved away from theories based on external stimuli into theories based on internal stimuli and information processing. Carl Rogers is known for the Humanist perspective. In his case, he believed that the learner must be regarded as a whole being, not a single behavior. He also believed that the stimulus for growth and learning comes from an internal desire.
### Slide 33

**Andragogy vs. Pedagogy**

**Malcolm Knowles**

- Distinguishes the adult learner from the child learner
- **Andragogy**: Art & science of helping adults to learn
- **Pedagogy**: Art & science of helping children to learn

Most of the learning theories were based on the study of how children learn (pedagogy). Malcolm Knowles was the person responsible for identifying differences in learning between adults and children. He is best known for coining the term ‘andragogy’ which is the study of adult learning.

### Slide 34

**Motivation for Learning**

**Cyril O. Houle**

- **Goal-oriented learners**: to achieve specific objectives
- **Activity-oriented learners**: seek educational experience to gain the social activity
- **Learning-oriented learners**: pursue learning for sake of learning; have desire to know

In the late 1900’s, Cyril Houle conducted studies to better understand what motivates adult learners to continue learning. His study identified three categorizes of motivational styles: 1) **Goal oriented learners**. These people continue to learn to accomplish a clear cut objective or task. An example would be a person who takes Certification Board in Infection Control exam to obtain infection control certification (CIC), 2) **Activity oriented learners** continue to learn for the social reasons. Examples would be learners who want to take a class in salsa dancing as a method to meet other people. They select an activity more because of the relationships with others than with the activity itself. 3) **Learning oriented persons** seek knowledge for its own sake. Examples would be taking a class on art history to enhance your existing knowledge; there is no specific need or requirement for this knowledge at this time.

### Slide 35

**Questions 4 & 5**

- **Question 4**: Match the name of the theorist with an example of his/her learning theory.
- **Question 5**: Identify which theories of learning will you use for your educational session, & why?

Next, answer questions 4 & 5 on your Educational Planning Document. By now, you should be up to and have completed questions #1-5 on this document. This completes the Introduction to Unit 7 and Part 1.