

Hartman's

In-Service Education SourceBook Series



# Infection Prevention Standard and Transmission-Based Precautions

Charles A. Illian, RN, BSN

SECOND EDITION



## **Standard and Transmission-Based Precautions**

# The New Infection Control System

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## NOTICE TO THE READER

Though the guidelines contained in this text are based on consultations with health care professionals, they should not be considered absolute recommendations. The instructor and readers should follow employer, local, state, and federal guidelines concerning health care practices. These guidelines change, and it is the reader's responsibility to be aware of these changes and of the policies and procedures of her or his health care facility/agency.

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This in-service introduces the new system of infection control developed by the Centers for Disease Control and Prevention (CDC), provides some background on the development of infection control, and defines the role of nursing assistants and home health aides in preventing the spread of infectious diseases.

The material in this book focuses on Standard Precautions and Transmission-Based Precautions. These CDC recommendations are based upon the latest epidemiologic information on the transmission of infection. While they are only recommendations at this time, they have become mandatory in some states, and many facilities and agencies have incorporated them into their policies on infection control. Because of the increased acuity of residents in long term care and clients in home care, these new guidelines are appropriate to adopt as policy and standards of care in all settings.

Standard Precautions were developed by the CDC to recognize the importance of all body fluids, secretions, and excretions in the transmission of nosocomial infections within the health care setting. Standard Precautions should be implemented for all clients or residents regardless of their diagnoses or presumed infection status. Along with these new guidelines, we also focus on additional precautions, called Transmission-Based Precautions, which are designed to help reduce the transmission of diseases through airborne, droplet, and contact routes. Transmission-Based Precautions are undertaken for persons with a known or suspected infection or colonization with an epidemiologically significant

pathogen that requires additional precautions beyond “Standard Precautions” for their care. These guidelines are designed to replace earlier systems of infection control.

This in-service can be broken into two separate courses: Part I covers learning objectives 1-3 and focuses on the chain of infection and Standard Precautions. Part II covers learning objectives 4-7 and focuses on Transmission-Based Precautions. There is also an optional handout at the end of this FYI section that briefly covers the evolution of infection control from the 1700's to the present time. This background information is not an essential part of the in-service, but it does provide some insights that you may find useful in teaching this course.

We have provided some excellent sources for more information at the end of this SourceBook. We recommend that you become familiar with both the CDC guidelines for infection control and your facility's or agency's policy on infection control.

Please note that limited permission is granted to photocopy the handouts for use at the site originally purchasing this in-service. Photocopying other parts of this in-service, including the lesson plan, is expressly prohibited.

To use the handouts, photocopy the number needed for your group. Consider using different colors of paper to organize the different handouts or to make some stand out.

Convert transparency masters to acetates for use with an overhead projector. If overhead projection is not convenient for

your presentation area, you may wish to copy the information from the transparency masters onto a chalk board or flip chart.

Note: In-services are required on tuberculosis and bloodborne pathogens for all healthcare workers who may be exposed during the course of their work. Hartman Publishing, Inc. offers two separate in-service programs specifically on tuberculosis and bloodborne pathogens. While these topics are briefly covered in this in-service, anyone who is interested in a more in-depth discussion of these topics might consider using those SourceBooks as well.

**Happy Teaching!**

# The Evolution of Infection Control

Infection control practices have undergone many changes since the 1700's when the first "fever hospitals" were opened. In these hospitals, all patients were kept together without regard to their illness. It was not until 1877 that hospitals began separating those people with communicable diseases from the general patient population, housing them in separate buildings called isolation huts. However, these infected patients were not separated from each other, so many diseases were passed back and forth among those people who were supposedly isolated.

Since that time, the practice of controlling the spread of disease has matured, with the implementation of rigorous handwashing and sterilization practices, and isolation of patients according to their disease. The 1950's saw the end of most specialized hospitals or sanitariums, like those for tuberculosis. The sick could now be taken care of in general hospitals, as long as extremely infectious diseases were kept in isolation. The key to isolating patients was knowing what made the person sick and whether the disease could be easily passed on to others. The only problem was that this technique required a diagnosis **before** any precautions could be taken.

## Universal Precautions

In 1985, the Centers for Disease Control and Prevention (CDC) first recommended a new strategy for infection control, called Universal Precautions (UP) in response to the growing number of HIV and AIDs cases in the United States. UP was designed to prevent the transmission

of Human Immunodeficiency Virus (HIV), Hepatitis-B (HBV), Hepatitis-C (HCV), and other diseases contracted from blood in the work setting. UP became mandatory for all health care facilities and agencies in 1992. These guidelines had the advantage of not relying on a diagnosis to determine what type of precautions should be taken. Under UP, certain body fluids and substances were considered to be potentially infectious and should be treated as such, regardless of whether or not the person was infected. The reason for this policy is simple: we cannot always tell by looking at someone whether he or she has an infectious disease. To protect ourselves and everyone in our care, we must treat body fluids and blood as though they **are** infectious. The following body fluids and substances are covered under UP:

- blood
- body fluids that contain visible blood
- detached non-preserved body tissues
- saliva in the dental setting
- semen
- vaginal secretions
- body fluids that line body organs
- amniotic fluid
- breast milk
- oral fluids
- concentrated HIV virus
- cultures containing HIV virus

## Body Substance Isolation

Two years after UP was published a more complete set of guidelines, called Body Substance Isolation (BSI), was developed at a hospital in Seattle. BSI includes all body fluids and substances covered under

Universal Precautions as well as feces, nasal secretions, sputum, sweat, tears, urine, and vomit. However, any body fluid that contains visible blood is considered a Universal Precautions body fluid and is not covered by BSI. As you can imagine, this leaves a lot of room for interpretation, not to mention confusion.

### **Standard Precautions**

To help simplify things, the CDC published a revised set of recommended guidelines in 1996 which are intended to replace both UP and BSI. These new guidelines are called Standard Precautions. They include all of the body fluids and substances covered by UP and BSI, except sweat. The list is much shorter and easier to remember:

- blood and blood products
- all body fluids, secretions, and excretions, except sweat (regardless of whether or not they contain visible blood)
- non-intact skin (including acne and open sores)
- mucous membranes

### **Transmission-Based Precautions**

While Standard Precautions work well in many cases, they do not take into account diseases that are transmitted through airborne, droplet, or contact routes. Many of these diseases are as common as colds, measles, and chicken pox. In 1996, the CDC published another set of guidelines called Transmission-Based Precautions, which is designed to prevent these routes of disease transmission.

Infection control practices used in health-care have changed over time as new information is learned about how diseases are spread. Methods have also changed as new and dangerous diseases are discovered among the population, or as old diseases like tuberculosis make a comeback.

Your job as a health care worker is to understand how to follow these precautions and use them every day in the course of your daily work.

# Standard and Transmission-Based Precautions: The New Infection Control System

## Learning Objectives

Upon completion of this in-service, you will be able to:

1. Describe the chain of infection and your role in stopping disease transmission.
2. Identify the body fluids and substances covered in Standard Precautions.
3. Demonstrate proper handwashing and the use of PPE for Standard Precautions.
4. Identify three types of Transmission-Based Precautions.
5. Describe Airborne Precautions and list some examples of diseases transmitted through airborne routes.
6. Describe Droplet Precautions and list some examples of diseases transmitted through droplet routes.
7. Describe Contact Precautions and list some examples of diseases transmitted through contact routes.

