N.C. Nurse Aide I Curriculum

MODULE B
Infection Prevention
Objectives

- Relate the chain of infection to the work of a nurse aide in long-term care facilities.
- Explain the concept of breaking the chain of infection and its importance to infection prevention.
- Discuss the use of Personal Protective Equipment by the nurse aide.
- Explain why residents in long-term care facilities are at risk for infection.
Infection Prevention

All of the things that people do to control and prevent the spread of infection
Infection

A disease or a condition when harmful germs get into the body and grow in numbers

**EXAMPLES**

Two Types
1. Localized
2. Systemic
Localized Infection

- One body part and symptoms limited
- Example – infected finger
- Symptoms – painful, red, hot, puffy, drainage
Systemic Infection

- Entire body part or system
- Symptoms are fever, chills, fatigue, nausea, vomiting, other specific symptoms
- Example?
How do you feel when someone coughs or sneezes on you?

How do you feel when someone hands you a moist, crumpled up, used tissue with yellow, thick, slimy globs of mucus on it to throw away?
What kind of symptoms do you think a female resident would have if she had a bladder infection?
Bladder Infection - Symptoms

- Fever and chills
- Pain when using bathroom
- Urine will smell bad and might look like it contains blood
- “My urine stinks and it hurts when I have to go to the bathroom”
A Person with a Stomach Infection will Probably
Have you ever had someone vomit on you?

Have you ever had to clean up after someone has vomited?

How did you feel if you got the vomited liquid on your hand?

What did you do?
Microorganisms

- Also called germs
- Live almost everywhere
- Some help people and others harmful
- Requirements to survive?
- Examples?
Medical Asepsis

- Also called clean technique
- Used to remove or destroy microorganisms and prevent spread
Chain of Infection
1st Link – Infectious Agent

- A harmful germ that causes an infection
- Can be bacteria, a virus, a fungus, or a parasite
2\textsuperscript{nd} Link - Reservoir

- Place where harmful germs live, grow, and increase in number
- Can be a person; an animal; or dirt, water, or other places in the environment
When reservoir is a person, some places where harmful germs may be living include:

- Blood
- The skin
- Digestive tract
- Respiratory tract
2\textsuperscript{nd} Link - Reservoir

Can you look at a person and \textbf{ALWAYS} tell if he has an infection?

“NO, NOT ALWAYS!”
People as reservoirs for harmful germs

- 1<sup>st</sup> group – not infected
- 2<sup>nd</sup> group – infected and showing symptoms
- 3<sup>rd</sup> group – carriers; are not showing symptoms, but can still infect you
People We Know Who Are Infected

Carriers - People Who Are Infected That We Do Not Know About
2nd Link - Reservoir

The key to prevent you, your co-workers, and your residents from getting infected is to treat everyone – **EVERYONE** – as possible reservoirs or hiding places for harmful germs.
3rd Link – Portal of Exit

Any way that harmful germs escape from the reservoir and include:

- The nose and mouth
- The GI tract
- The skin
4th Link – Mode of Transportation

How germs get around from place to place
THE NUMBER ONE WAY A HARMFUL GERM TRAVELS FROM PLACE TO PLACE IS BY OUR HANDS.
4th Link – Mode of Transportation

How do our hands provide transportation for germs?
4th Link – Mode of Transportation

Harmful Germs Travel by **Direct Contact** With Body Fluids Where Germs Live

- Blood
- Sputum
- Pus or wound fluid
- Saliva
- Stool
- Vomit

Examples of Direct Contact?
4th Link – Mode of Transportation

Harmful Germs Travel by Indirect Contact With Body Fluids Where Germs Live

**INDIRECT CONTACT** means that the harmful germs were spread by an object that had touched body fluids from an infected person

Examples of Indirect Contact?
The key to prevent you, your co-workers, and your residents from getting infected is to treat **ALL** body fluids as possible carriers of harmful germs.
4th Link – Mode of Transportation

Other ways that germs travel or get around from place to place
5th Link – Portal of Entry

Any body opening on a person that allows harmful germs to enter into the body. Examples include:

- The nose and mouth
- The GI tract
- The skin
6th Link – Susceptible Host

A person who does not have an infection now, but is at risk for becoming infected from harmful germs

What are some reasons why a person’s body cannot fight off an infection?
6th Link – Susceptible Host

Reasons Why a Person’s Body Cannot Fight Off Infection

- AGE
- POOR NUTRITION
- STRESS
- CHRONIC ILLNESSES
- NO VACCINATIONS
- OPEN CUTS/SKIN BREAKDOWN
- FATIGUE

DHSR/HCPR/CARE NAT I Curriculum - July 2013
RESIDENTS LIVING IN LONG-TERM CARE FACILITIES ARE MORE LIKELY TO GET AN INFECTION THAN OTHER PEOPLE WHO LIVE IN OUR COMMUNITY

Why?
Chain of Infection

- Infectious agent
- Reservoirs
- Portal of entry
- Portal of exit
- Means of Transmission
- Susceptible host
If **YOU** can break any link in the Chain of Infection, **YOU** can prevent the occurrence of a new infection.
Congratulations
Healthcare-associated Infection
Centers for Disease Control and Prevention

The CDC

- Agency of the federal government
- In charge of control/prevention of disease
- Two-tiered way to protect the public

Two tiers are Standard Precautions and Transmission-based Precautions
Standard Precautions

- 1\textsuperscript{st} level to prevent and control infection
- The basic tasks health care workers do when caring for EACH and EVERY RESIDENT in order to prevent and control the spread of infection
Review of Terms

**BODY FLUIDS**

**MUCUS MEMBRANES**

**Non-Intact Skin**

**ALL** body fluids, non-intact skin, and mucus membranes must be treated as if they were infected.
Why must Standard Precautions be used with EACH and EVERY RESIDENT?

Without using Standard Precautions, YOU CAN GET SICK AND PASS IT ALONG TO OTHERS!!!!!!!
Nurse Aides Must .............

Follow Standard Precaution Rules to Protect

- Self
- Co-workers
- Residents

FROM GETTING INFECTIONS
Hand Hygiene

The CDC defines hand hygiene as washing your hands with:

- Soap and water
- Alcohol-based hand rubs
Performing Hand Hygiene

is the number 1 way to stop the transmission of infections!
Nurse Aide Should Perform Hand Hygiene......

At the Point of Care
Your 5 Moments for Hand Hygiene [WHO]

1. Before touching a resident
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a resident
5. After touching resident surroundings
The 5 Moments apply to any setting where health care involving direct contact with patients takes place.

1. BEFORE TOUCHING A PATIENT
2. BEFORE CLEAN / ASEPTIC PROCEDURE
3. AFTER BODY FLUID EXPOSURE RISK
4. AFTER TOUCHING A PATIENT
5. AFTER TOUCHING PATIENT SURROUNDINGS
Perform Hand Hygiene

- Restroom
- Eating
- Gloving
- Clean Linen
Perform Hand Hygiene

- Arriving at work
- Handling trash
- Soiled hands
- Leaving work
- Touching objects/people
- Returning home
Perform Hand Hygiene

- BLOWING NOSE
- SNEEZING IN HAND
- TOUCHING HAIR
- TOUCHING OTHER BODY PARTS
WHEN DO YOU HAND WASH?
WHEN MAY YOU HAND RUB?
Personal Protective Equipment

A group of items used to block harmful germs from getting on skin and clothes

What nurse aides put on at work to keep blood, urine, stool, spit, and sputum off of the skin and clothes
Personal Protective Equipment

Protect skin on hands

Protect skin & clothes

Protect mouth & nose

Plus goggles that protect eyes and face shields that protect whole face
Personal Protective Equipment

How will I know which equipment I will need?
Gloves
Gown
Mask
**Sharps** - items that have corners, edges, or projections that can cut or pierce the skin

- Wear gloves and be careful
- Do not cut self or resident during shaves
- Do not jab self when using sharps
- NEVER, EVER re-cap a needle or other sharp object
- NEVER, EVER put anything sharp in a regular trashcan
SHARPS Container
SPILLS on the floor... What do I do now?

- Put on gloves
- Absorb spill and clean area
- Discard waste in appropriate container
- Apply disinfectant to area
- Place a warning cone or sign in area
Spill?

Why are spills on the floor involving body fluids especially dangerous in a long-term care facility?
Clean all Surfaces...

- Any time blood or body fluids get on any surface
- Use products available where you work
- Follow facility procedures and product instructions
- Examples?
Transmission-based Precautions

- 2\textsuperscript{nd} level to prevent and control infections
- Specific measures and tasks when caring for residents who are infected/may be infected with specific types of infections

3 Types

1. Contact Precautions
2. Droplet Precautions
3. Airborne Precautions
Contact Precautions

Purpose – prevent spread of harmful germs spread by direct contact

PPE = Standard Precautions + Gown + Gloves

Examples:

• MRSA
• Norovirus
**Droplet Precautions**

**Purpose** – prevent spread of harmful germs that travel by

Spread when an infected resident coughs, sings, sneezes, or laughs

**PPE?**

**Examples?**
Airborne Precautions

Purpose – prevent spread of harmful germs that travel in air at a distance

Harmful germs can float around for a while and can be carried by moisture, air currents, and dust

PPE = Standard Precautions + Respirator (depending on disease)

Examples?
“OUTBREAK!!!!!”
Influenza & Norovirus are dangerous for people aged 65 and older.
The Flu
Norovirus
Bloodborne Pathogens
Hepatitis B Virus (HBV)

- Causes Hepatitis B, a disease of the liver
- About 1/3 of persons infected with HBV do not show symptoms
- Can live outside body on equipment and on surfaces like table tops or blood glucose meters for seven days; can infect others during that time
- GREAT NEWS! Vaccine is available to prevent you from getting the disease
SEVEN DAYS
Nurse Aide Should:

- Always wear gloves when there is a chance of exposure to blood
- Handle used sharps carefully and discard appropriately
- Follow facility’s exposure plan if any part of body is exposed to blood or jabbed with contaminated sharp
WHAT IS WRONG WITH THIS PICTURE?
NEVER EVER DO THIS
NEVER EVER DO THIS
NEVER EVER DO THIS
NEVER EVER DO THIS
The End