

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.
- Compare Standard Precautions and Transmission-base Precautions.
- 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

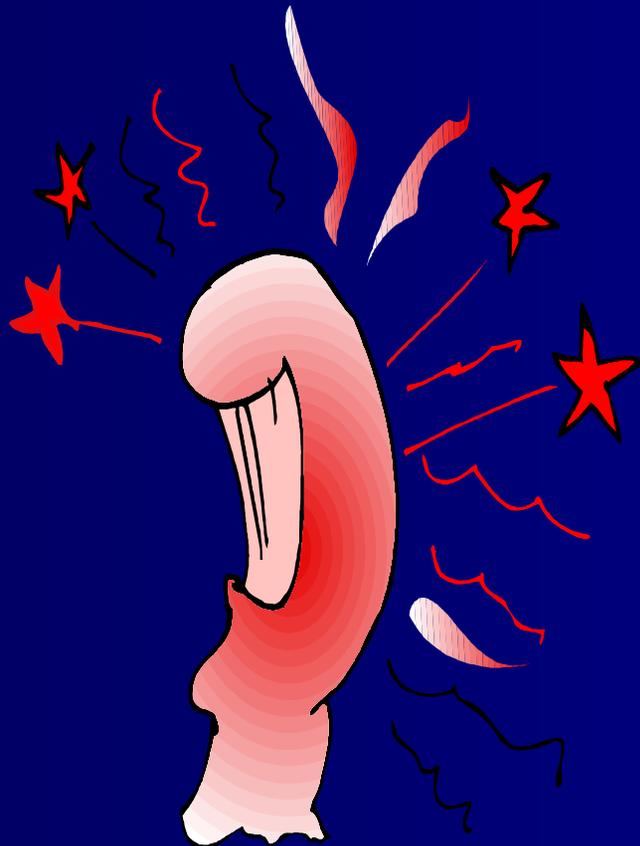
EXAMPLES

?

Two Types
1. Localized
2. Systemic

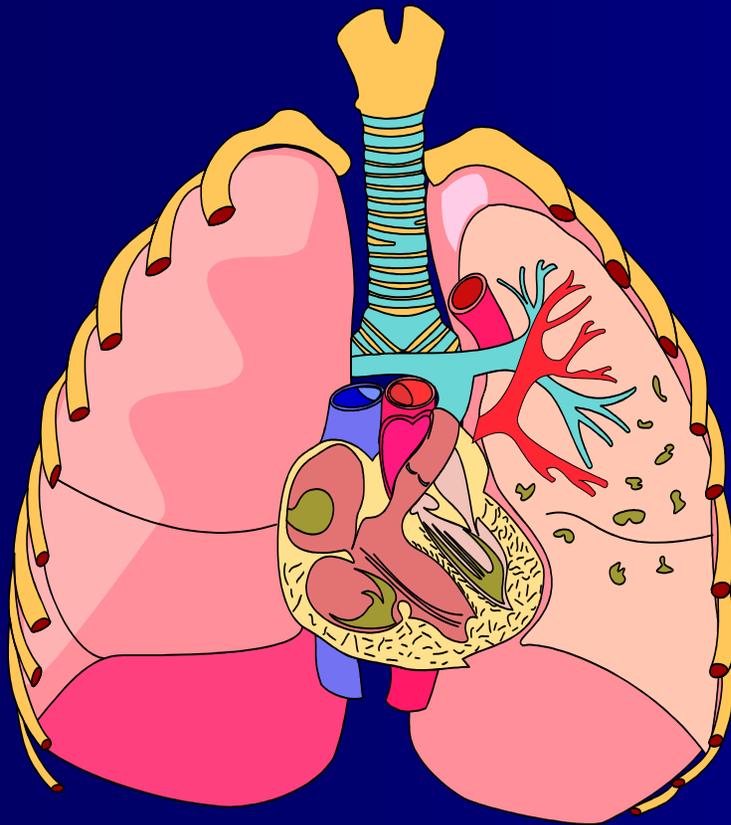


Localized Infection



- 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.....*



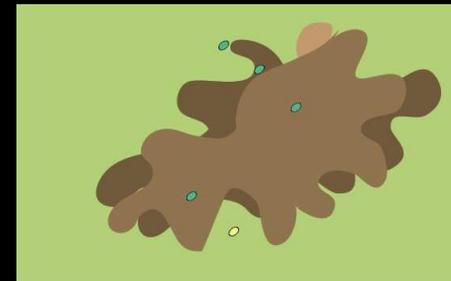


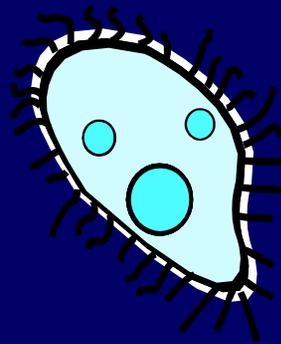
**Have you ever
had someone
vomit on you?**

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

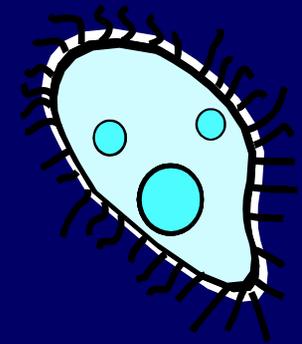
**How did you feel if you got the
vomited liquid on your hand?**

What did you do?

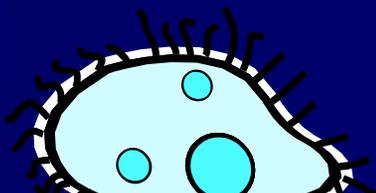
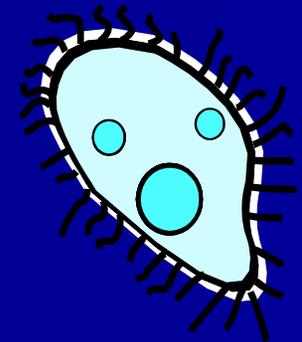
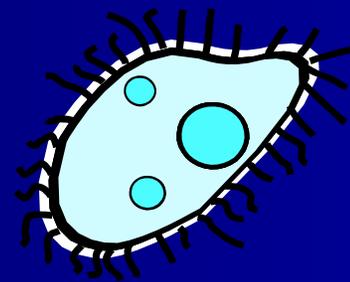
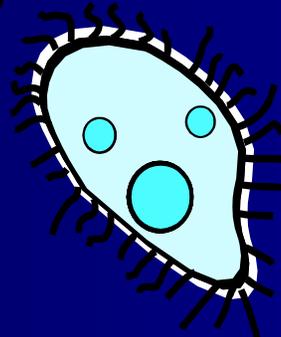
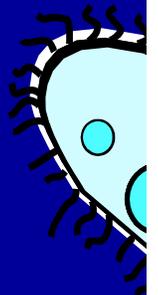
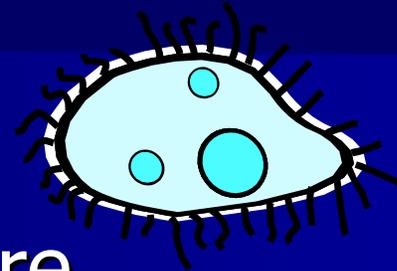




Microorganisms



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

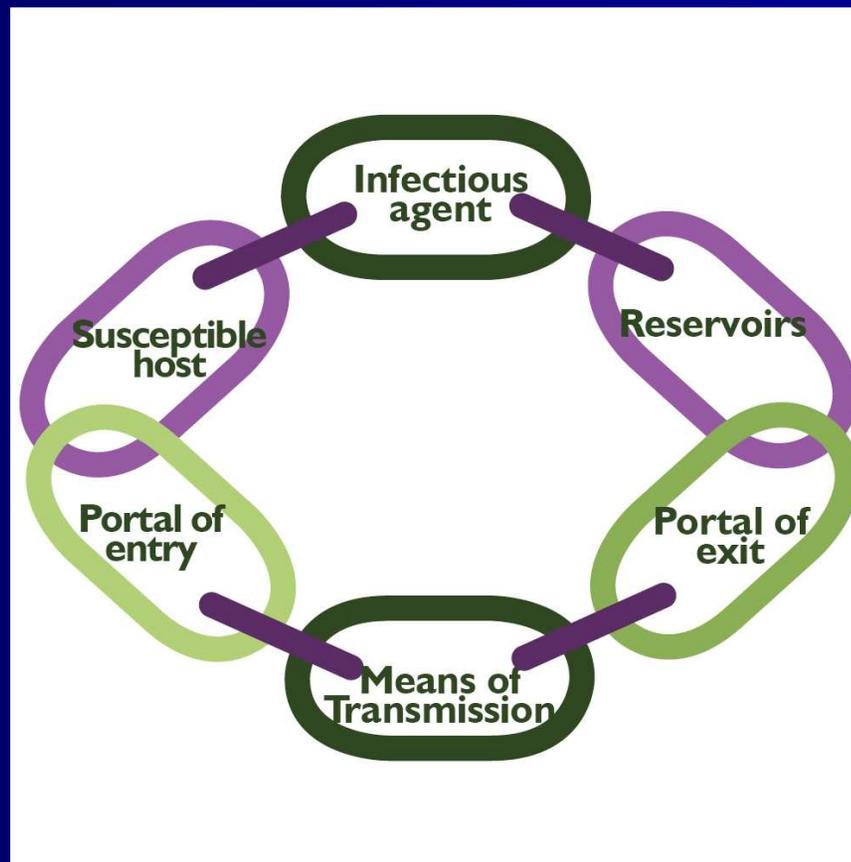


Medical Asepsis

- Also called clean technique
- Used to remove or destroy microorganisms and prevent spread

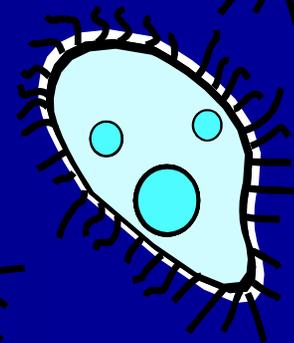
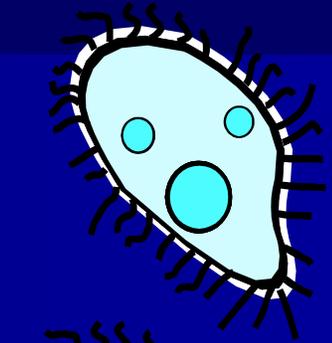
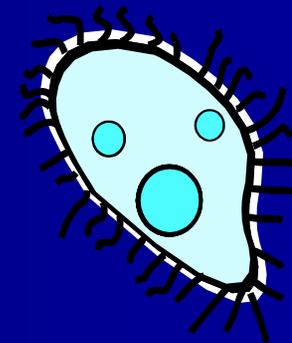
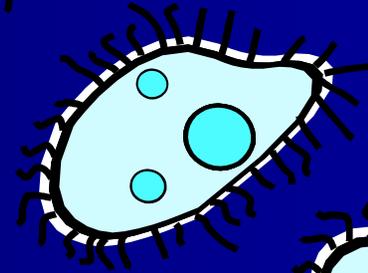
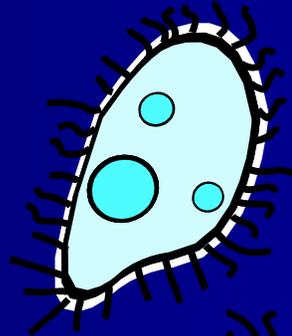
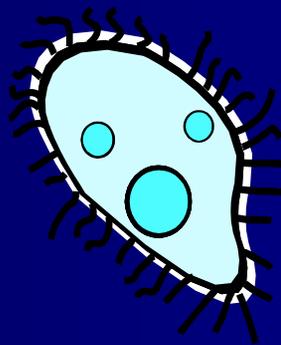
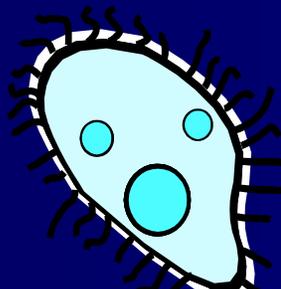
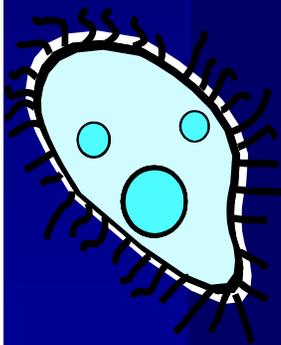
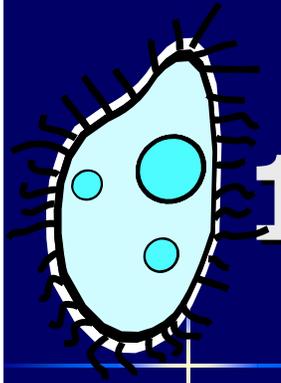


Chain of Infection



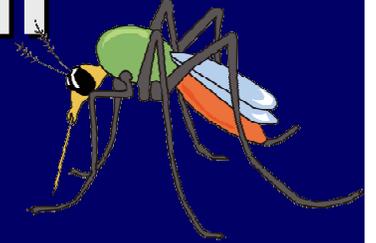
1st Link – Infectious Agent

- A harmful germ that causes an infection
- Can be bacteria, a virus, a fungus, or a parasite

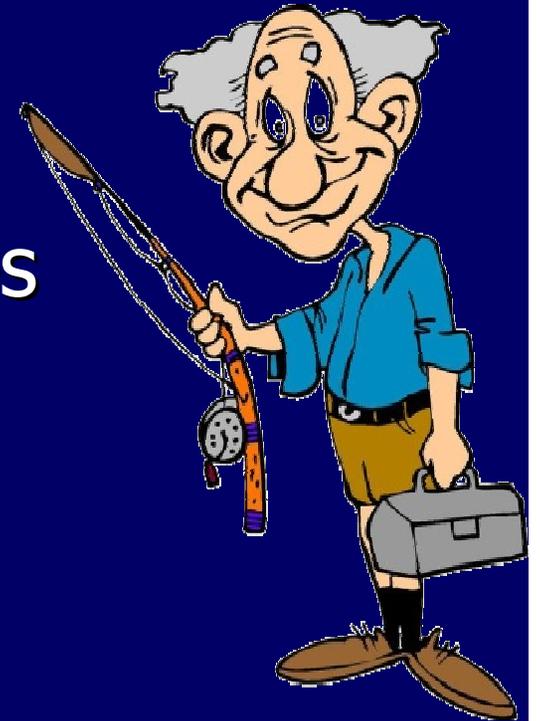




2nd Link - Reservoir



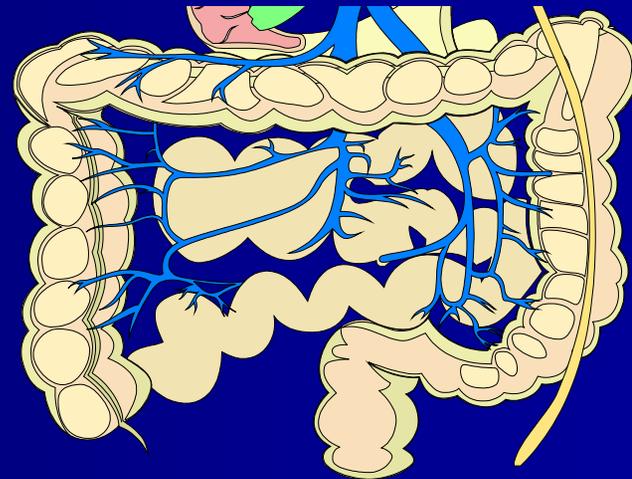
- Place where harmful germs live, grow, and increase in number
- Can be a person; an animal; or dirt, water, or other places in the environment



2nd Link - Reservoir

When reservoir is a person, some places where harmful germs may be living include:

- Blood
- The skin
- Digestive tract
- Respiratory tract



2nd Link - Reservoir

Can you look at a person and
ALWAYS tell if he has an
infection?

“NO, NOT ALWAYS!”

2nd Link - Reservoir

People as reservoirs for harmful germs

- 1st group – not infected
- 2nd group – infected and showing symptoms
- 3rd group – carriers; are not showing symptoms, but can still infect you

An iceberg floating in a blue ocean under a clear blue sky. The tip of the iceberg is above the water line, while the much larger, jagged base is submerged below. Sunlight rays are visible breaking through the water surface.

People We Know Who Are Infected

**Carriers -
People Who
Are Infected
That We Do
Not Know
About**

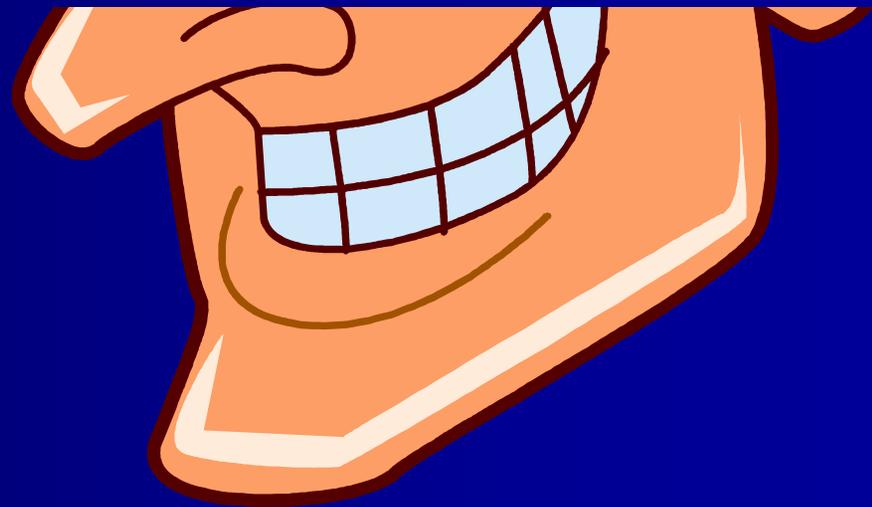
2nd Link - Reservoir

The  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

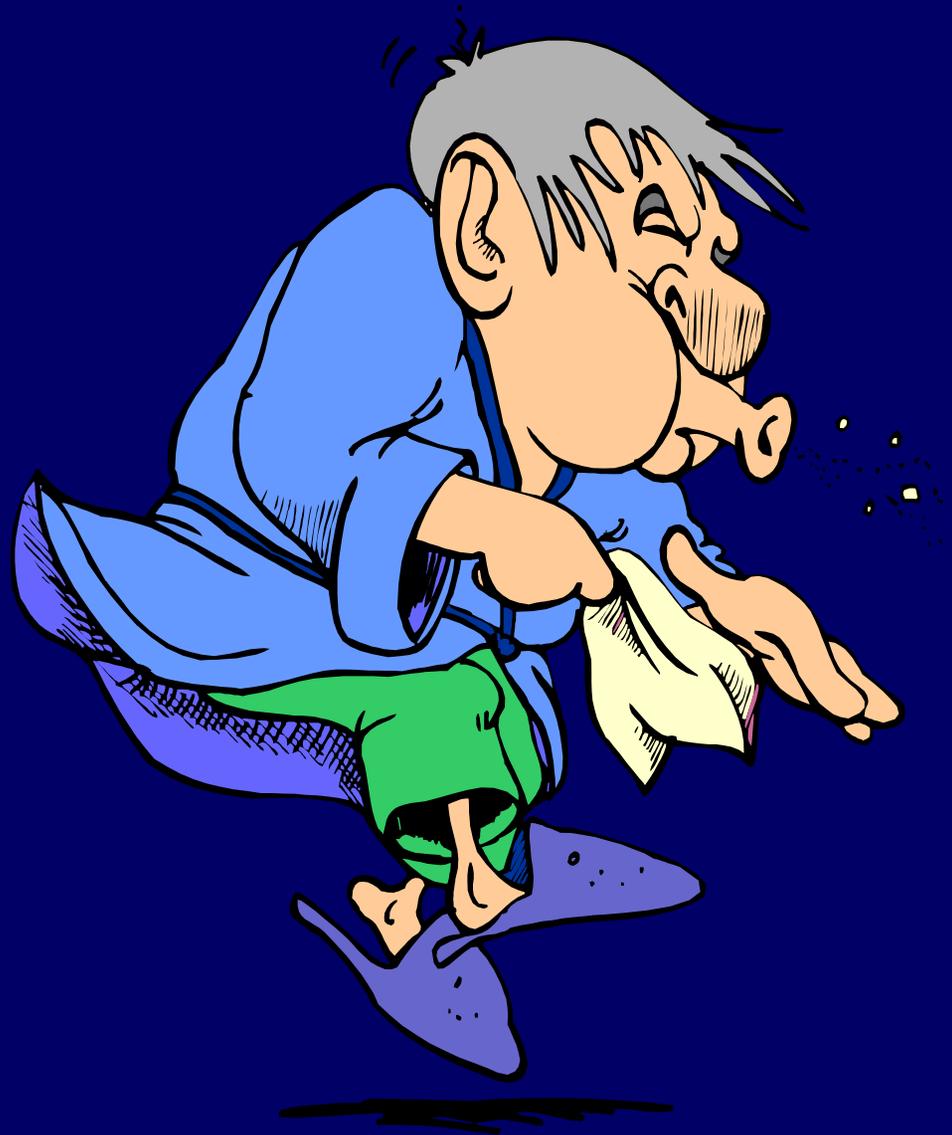
Examples of Direct Contact?

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?



DROPLETS

DROPLETS

DROPLETS

DROPLETS

DROPLETS

DROPLETS

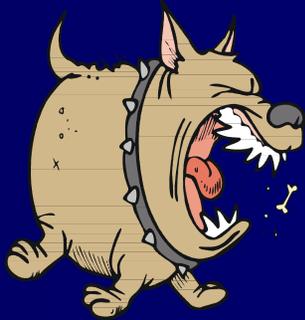
DROPLETS

The  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



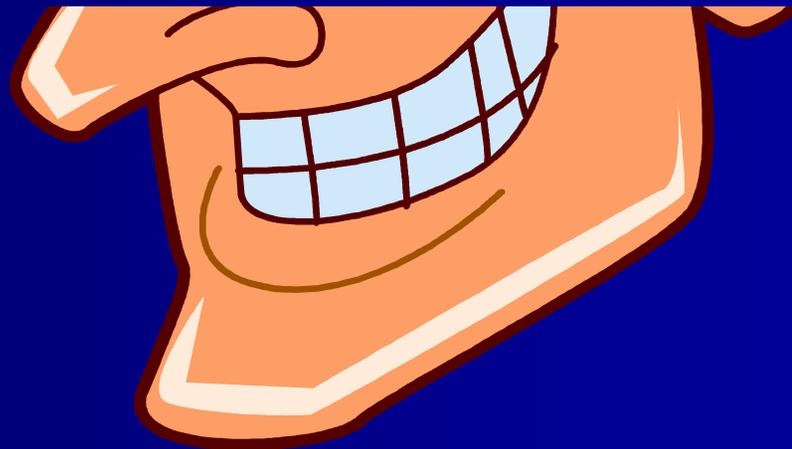
Other ways that germs travel or get around from place to place



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

AGE

**POOR
NUTRITION**

STRESS

**CHRONIC
ILLNESSES**

**Reasons Why a
Person's Body
Cannot Fight Off
Infection**

**NO
VACCINATIONS**

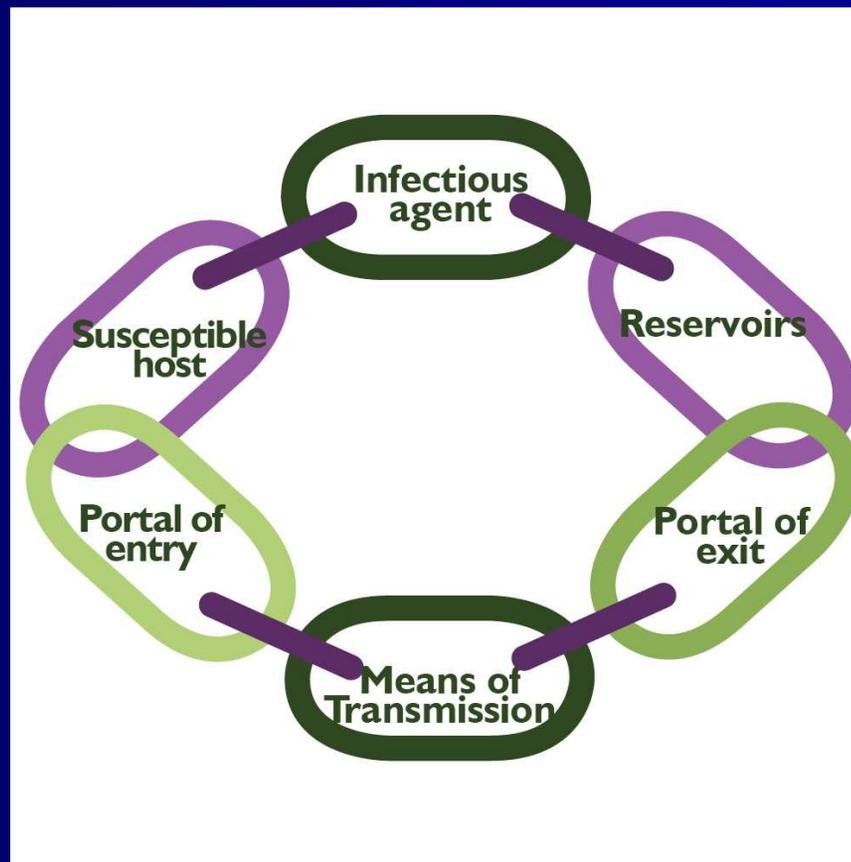
**OPEN
CUTS/SKIN
BREAKDOWN**

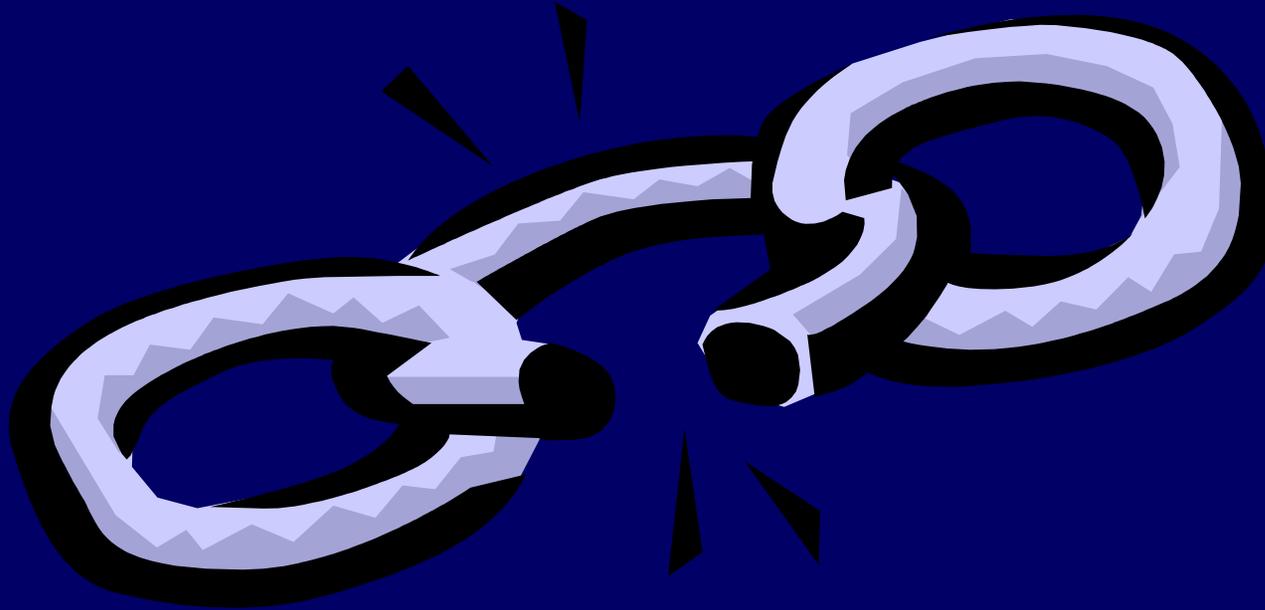
FATIGUE

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





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

- 1st 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

NON-INTACT SKIN

MUCUS MEMBRANES

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

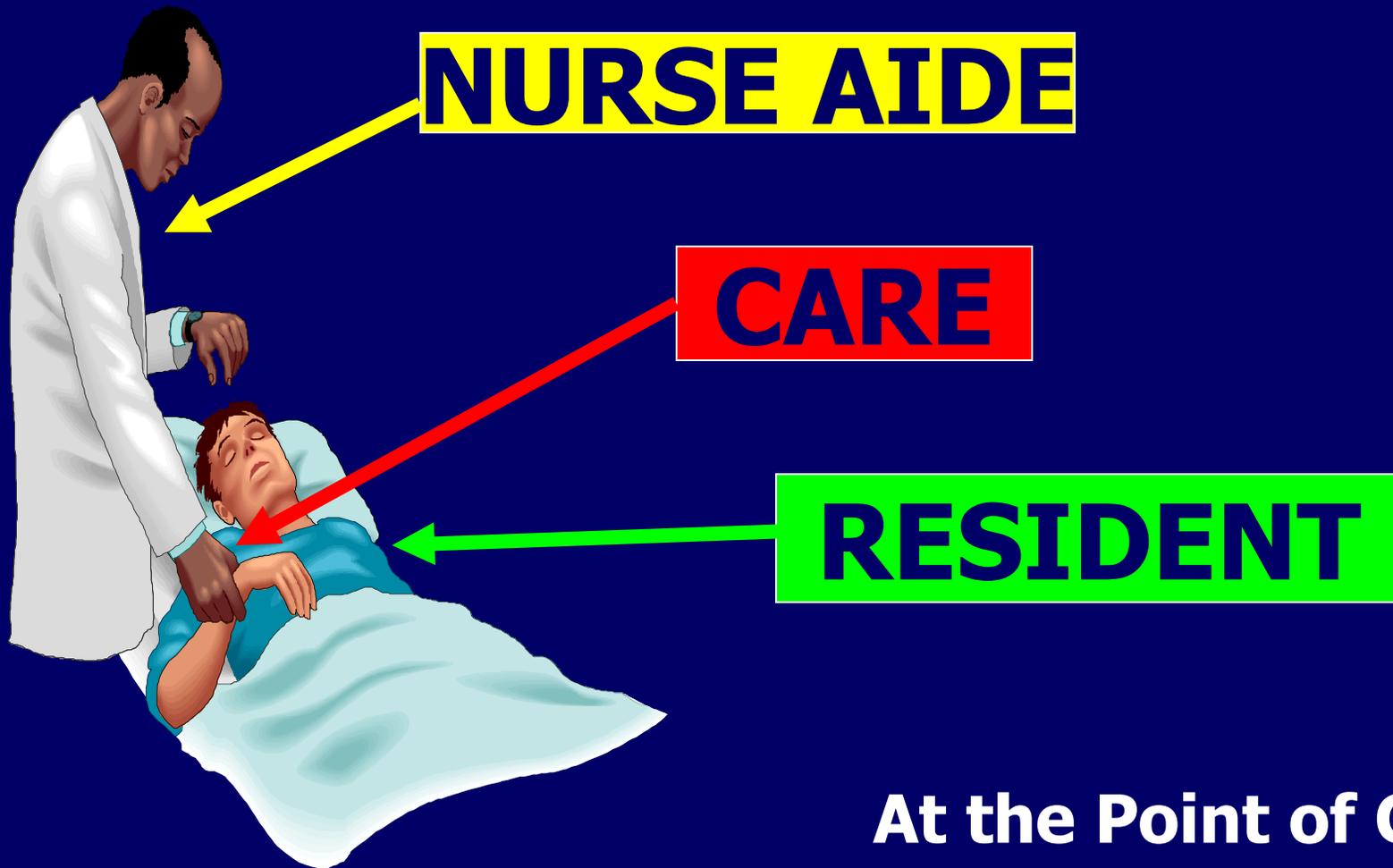


Performing Hand Hygiene



is the number 1 way to stop the transmission of infections!

Nurse Aide Should Perform Hand Hygiene.....

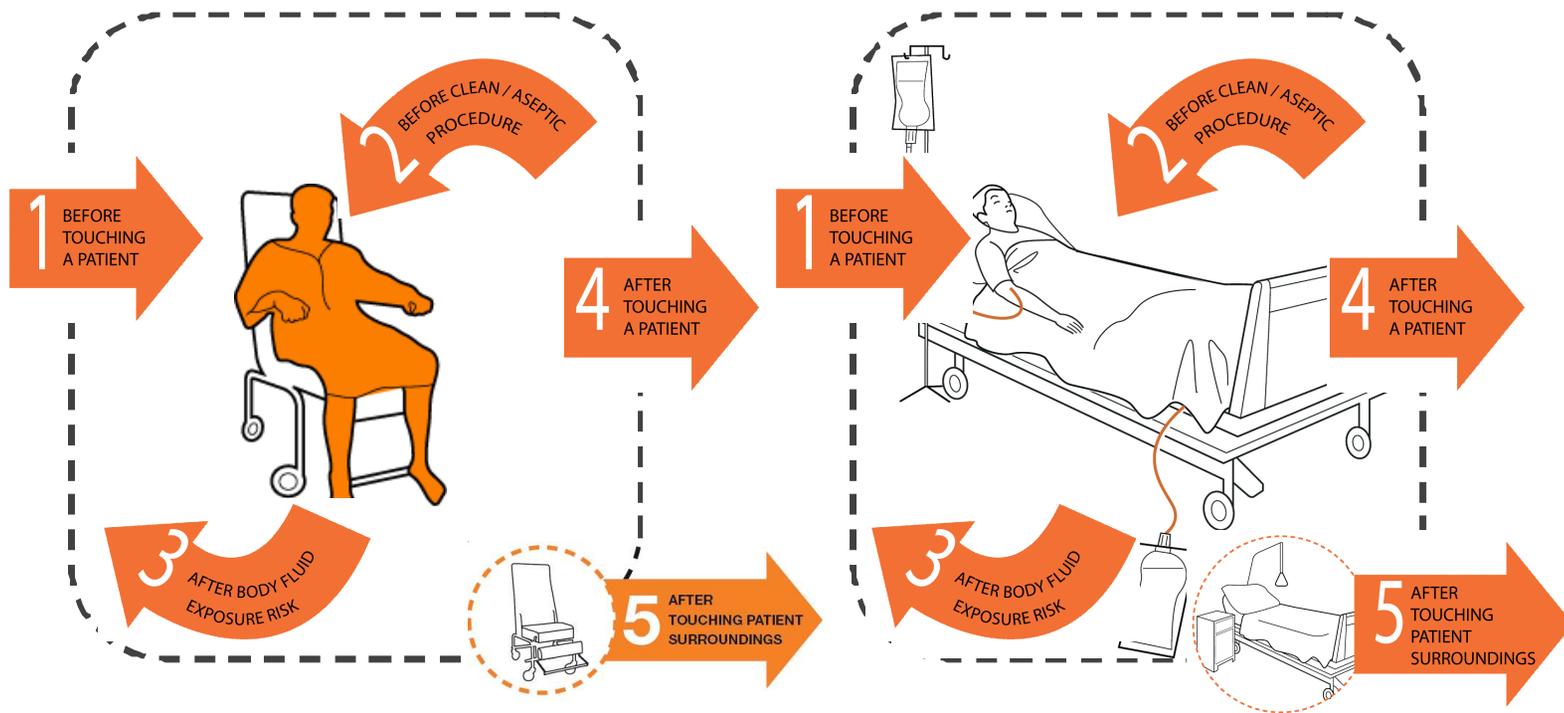


Your 5 Moments for Hand Hygiene [WHO]



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



World Health
Organization

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES
Clean Your Hands

Perform Hand Hygiene



Perform Hand Hygiene

**SOILED
HANDS**

**HANDLING
TRASH**



**ARRIVAL AT
WORK**



**LEAVING
WORK**

**RETURNING
HOME**



**TOUCHING
OBJECTS/PEOPLE**

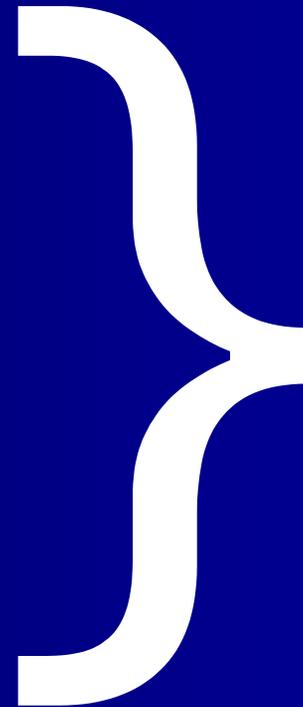
Perform Hand Hygiene

**BLOWING
NOSE**

**SNEEZING
IN HAND**

**TOUCHING
HAIR**

**TOUCHING OTHER
BODY PARTS**



W

H

E

N



**DO YOU
HAND WASH?**

W

H

E

N



**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

G O W N





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



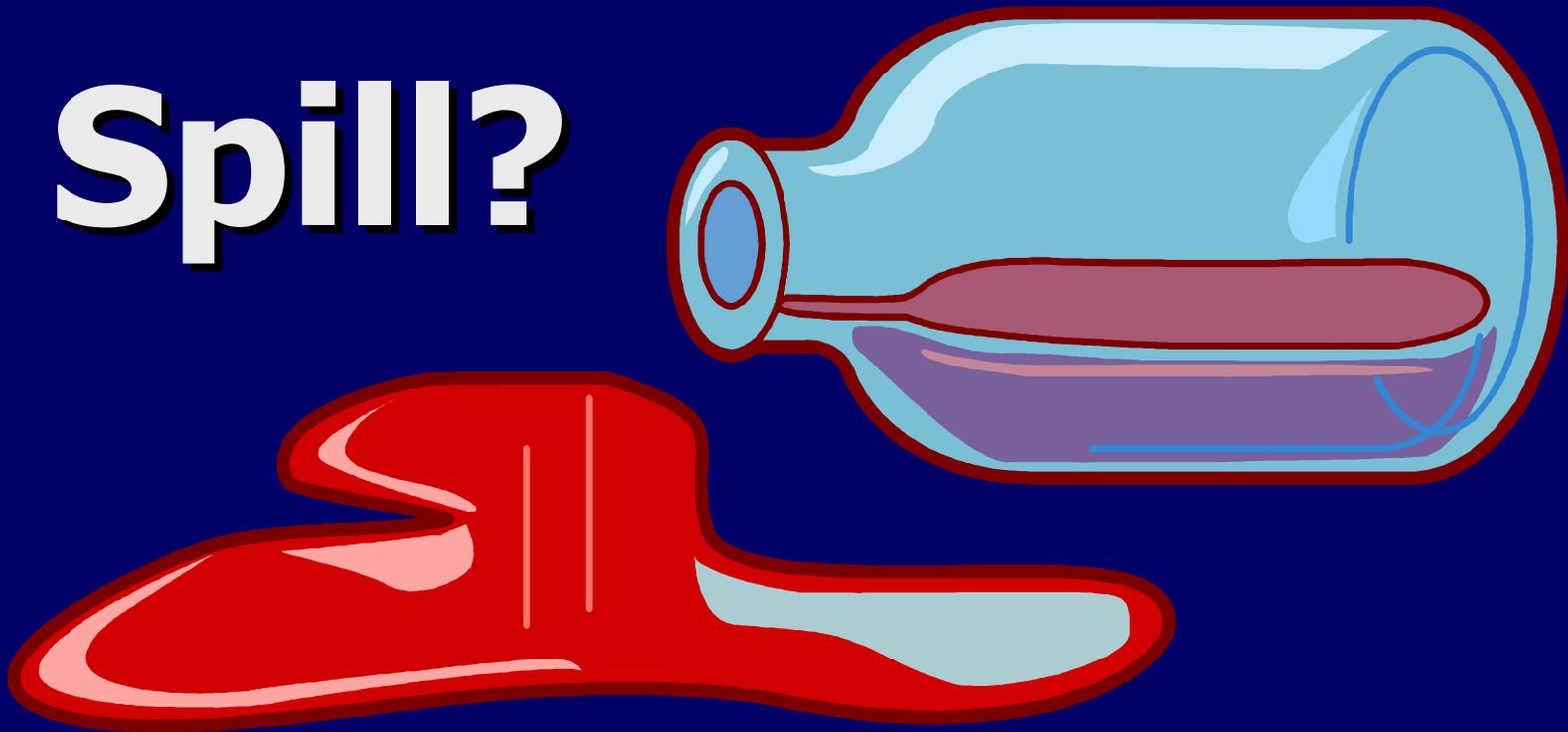
SPILLS on the floor...

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



- 2nd 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

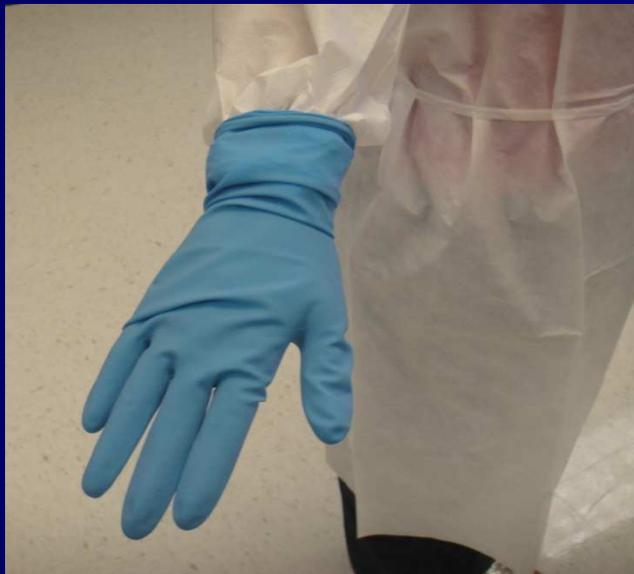
2. Droplet Precautions

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?

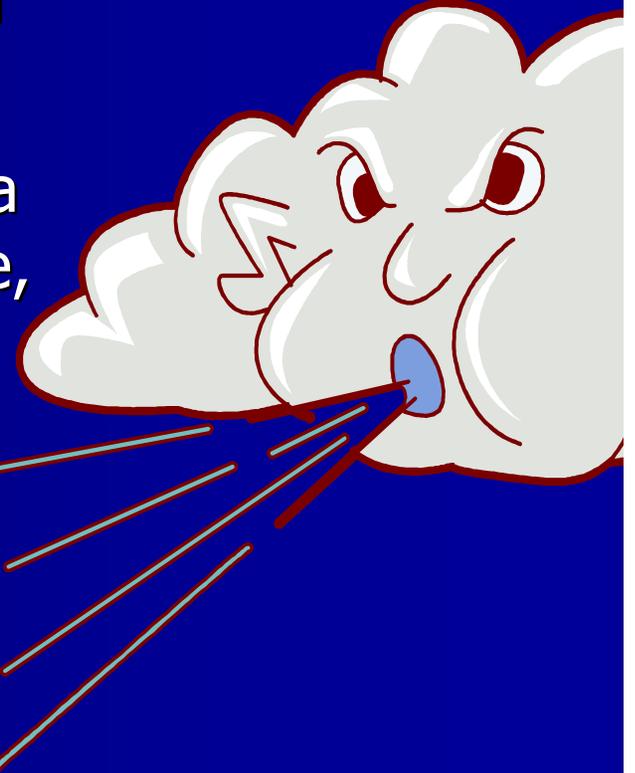
Airborne Precautions

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?

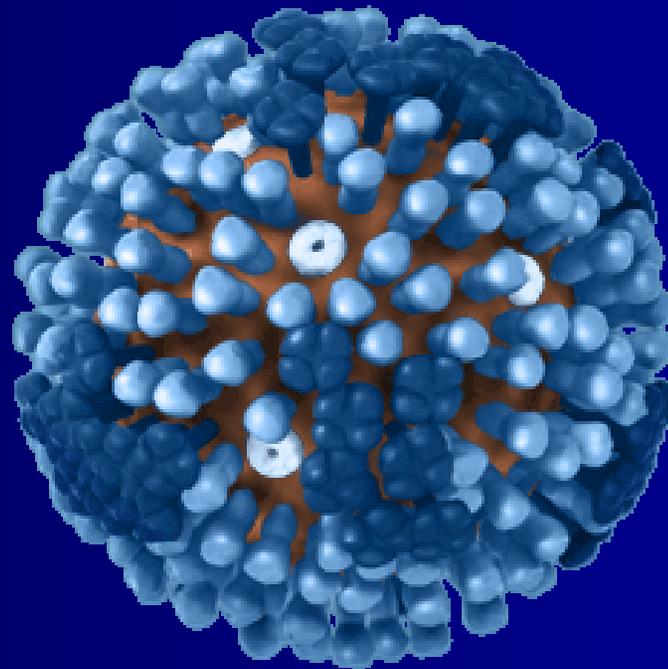


“OUTBREAK!!!!!!”

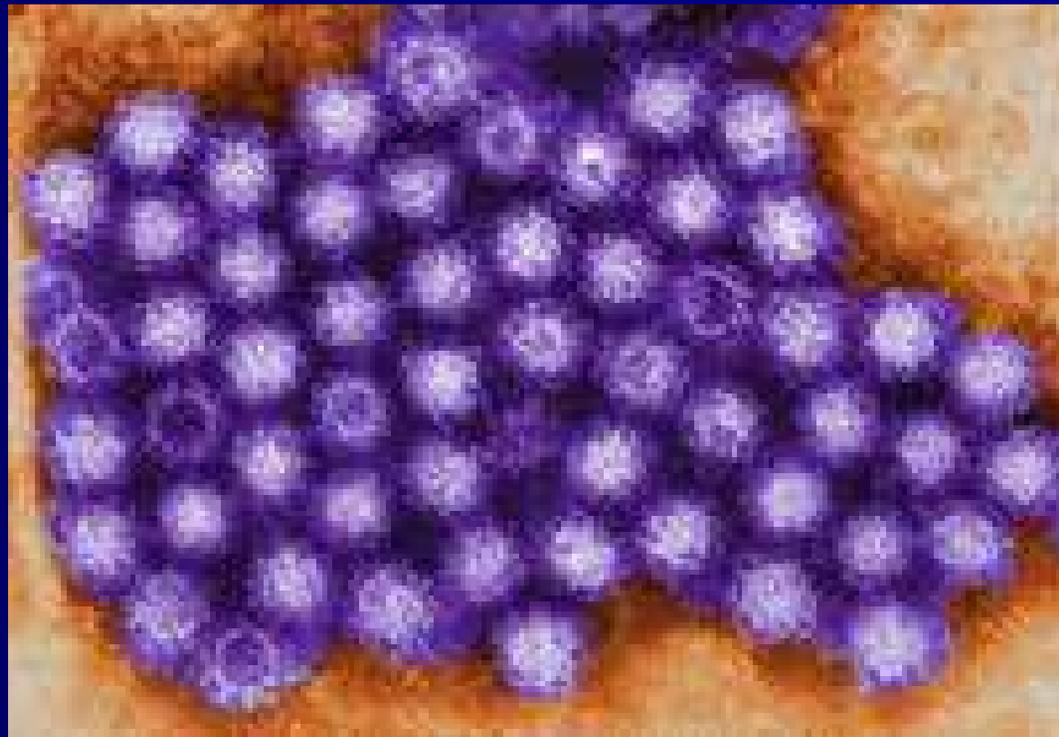


**Influenza &
Norovirus are
dangerous for
people aged 65
and older**

The Flu



Norovirus



The background of the slide is white, covered with numerous red splatters of varying sizes and shapes, resembling blood or virus particles. Some splatters are large and irregular, while others are small and circular. The overall effect is one of a messy, hazardous environment.

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

The background of the page is white with numerous red splatters of varying sizes and shapes scattered across it. The splatters are most concentrated in the center and bottom half of the page.

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**



A close-up photograph of a person's face and hand. The person is wearing a white t-shirt with a small logo on the chest. Their right hand is raised to their nose, and the white glove they are wearing is heavily stained with bright red blood. The background is slightly out of focus, showing what appears to be a door or wall with a sign.

**NEVER
EVER DO
THIS**

The End