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| **3.01 ‐ Understand Infection Control, Within The Nurse Aide Range Of Function** |
| **Many facilities use the term “infection prevention” rather than “infection control.” The reason for the using the term “infection prevention” is that practices which allow infection to develop and spread in the first place need *prevented* from ever doing so.**  |
| **Nurse aides** have a responsibility to **understand** and **follow** the facility’s infection control policies and procedures |
| **GERMS** are called **MICROORGANISMS*** Can only be seen by using a microscope
* BAD Microorganisms may cause illness, infection, or disease

 **PATHOGENS are germs that start infection, illness, or disease in the body and make you sick** |
| **Infection****Infection*** invasion of the body by microorganisms
* invading microorganisms:
	+ use the host’s resources to multiply
	+ interfere with normal function
	+ 3rd leading cause of death in the U. S.
 |
| **Infection Types*** Local
* Systemic
* Endogenous
* Exogenous
 |
| **Local Infection** | * only a **specific *portion of the body*** is infected
	+ pain
	+ redness
	+ heat at the site
	+ swelling
	+ foul smelling drainage
 |
| **Systemic infection** | * **affects the entire body**
	+ fever
	+ aches
	+ chills
	+ nausea
	+ vomiting
	+ weakness
 |
| **Endogenous Infection** (endo‐ inside; genous‐ type or kind) | * type or kind of infection or disease that originates from within the body
 |
| **Exogenous Infection**(exo‐ outside; genous‐ type or kind) | * type or kind of infection or disease that originates outside the body
 |
| **Report/Record****REPORT ANY SIGNS OR SYMPTOMS OF INFECTION THAT YOUR RESIDENT MAY HAVE!****Care Point****Residents with systemic infection may become confused or exhibit behavioral changes.** |
|  |
| **MICROORGANISMS**Benefit us by maintaining a **balance** in our environment and in our body |
| **MICROORGANISMS:****Require Certain Elements To Survive** | * oxygen – aerobic
* no oxygen – anaerobic
* warm temperatures
* moisture
* dark area to grow
* food
* dead tissue – saprophytes
* living tissue – parasites
 |
| **Human Body Defenses against MICROORGANISMS** |
| **External Natural Defenses** | * skin as mechanical barrier
* mucous membrane
* cilia – fine microscopic hairs in nose
* coughing and sneezing
* hydrochloric acid in stomach

tears |
| **Internal Defenses** | * Phagocytes –
* Inflammation –
* Fever –
* Immune response ‐
 |
| **Chain of Infection** |
| **Causative Agent** | * Bacteria
* Viruses
* Fungi
* Protozoa
 |
| **Reservoir of the Causative Agent** | * Human with active cases of disease or those that carry disease without having symptoms
* Animals/insects
* Fomites
* Environment
 |
| **Causative Agent Portals of EXIT** | * Tears (slight risk)
* Saliva/respiratory tract secretions
* Urine
* Feces
* Wound drainage
* Reproductive tract secretions
 |
| **Causative Agent Portals of ENTRY** | * Cuts/break in skin
* Openings in the mucous membranes
* Respiratory system
* Gastrointestinal system
* Urinary system
* Reproductive system
* Mother to fetus
 |
| **Mode of Transmission** | * direct – person to person
* indirect – fomite to person
* droplet – common cold
* Common vehicle - such as Salomanella in food
 |
| **Vectorborne** | * mosquito harbors malaria parasite
 |
| **Host** | * Individual who harbors the infectious organisms
 |
| **Elderly Are At A Higher Risk For Infection!****The Elderly Have A Higher Risk For Infection Because Of:*** weakened immune systems
* decreased circulation
* slow wound healing
* malnutrition
* dehydration
* limited mobility
 |
| **Aseptic Control** |
| **Antisepsis** | * effective in preventing or inhibiting the growth of pathogenic organisms, but not spores or viruses
* safe to be used on skin
 |
| **Disinfection** | * destroys pathogenic organisms that are already present not effective against spores or viruses
* chemicals are used NOT used on skin
* Used on THINGS
 |
| **Sterilization** | * kills all microorganisms, including spores and viruses

methods* + - steam under pressure
		- gas
		- radiation
		- chemicals
* Not Used on Skin
 |
|  **MEDICAL ASEPSIS***The practice used to remove or destroy pathogens and to prevent their spread from one person or place to another person or place;* ***clean technique*****Care Point****ALWAYS CLEAN FROM THE LEAST SOILED TO THE MOST SOILED AREA WHEN CARING FOR RESIDENTS** |
| **MEDICAL ASEPSIS** | * Is accomplished by using **ASEPTIC TECHNIQUE**
 |
| **Aseptic Technique #1****Hand Hygiene****Hand Hygiene*** the single‐most effective way prevent the spread of infection
 |
| **Nurse Aide Nails** | * Short; ¼ inch
* Clean
* Smooth
* **No artificial nails (These harbor bacteria)**
* No extenders
* No overlays

.  |
| **When to Wash Hands****Anytime When The Hands Are Visibly Soiled!****When to Wash Hands*** Before and after contact with a resident and/or resident’s belongings
* Before and after eating
* After using the bathroom
* After handling any contaminated fluid or object
* After touching body fluids, even if wearing gloves
* Before and after wearing gloves
* Between tasks and procedures on the same resident to prevent cross‐contamination of different body sites

**Care Point****Wash the resident’s hands before meals** |
| **RUB HANDS FOR HAND HYGIENE!**1. Apply a palmful of the product in a cupped hand
2. Rub hands palm to palm
3. Right palm over left dorsum (back of hand) with interlaced fingers and vice versa
4. Palm to palm with fingers interlaced
5. Backs of fingers to opposing palms with fingers interlocked
6. Rotational rubbing of left thumb clasped in right palm and vice versa
7. Rotational rubbing, backwards and forwards with clasped finger of right hand if left palm and vice versa
8. Once dry, your hands are safe
 |
| **Aseptic Technique #2****Come To Work Clean, Neat, And Well.*** Bathe, wash hair and brush your teeth on a regular basis
* Wear clean uniform
* Stay well!

**Care Point****Adhere to facility policy regarding staying home when sick. If you are contagious, stay home.** |
| **Aseptic Technique #3****Proper Handling Of All Equipment And Supplies****MULTIPLE‐USE RESIDENT CARE EQUIPMENT*** Commonly used equipment or supplies (stethoscope, etc.) must be cleaned and disinfected after use or when soiled
* Single‐use equipment is preferred and must be discarded properly
 |
| Cleaning **non‐disposable equipment** | * Rinse in cold water to remove organic material
* Wash with soap and hot water
* Scrub with a brush if necessary
* Rinse and dry equipment
* Sterilize or disinfect equipment
 |
| **Care of supplies and equipment*** Direct cleaning away from your body and uniform
* Wash cooking and eating utensils with soap and water after each use.
* Do not transport equipment from one resident’s room to another without cleaning
* Avoid shaking linen
* Damp dust furniture
* **DO NOT REUSE DISPOSIBLE ITEMS!**
 |
| **Aseptic Technique #4****Use proper cleaning solutions*** When cleaning resident’s unit or cleaning reusable equipment after use
 |
| **Aseptic Technique #5****Sterile Procedure*** The Nurse Aid I does not perform sterile procedures but should be ab le to avoid contamination of a sterile field or procedure
 |
| **Aseptic Technique #6****Follow Standard and Transmission Based Precautions****Standard Precautions PLUS*** **CDC** procedures to control and prevent infections.
* Contains **two tiers** of precautions: Transmission Based & Standard

**Transmission based precautions are built on the foundation of standard precautions** |
| **Standard Precautions Includes:*** Hand washing
* Personal Protective Equipment (PPE)
	+ Gloves
	+ Gowns
	+ Masks and eye protection
* Needle stick safety
* Sharps
* Spills and splashes
* Resuscitation devices
* Waste and linen disposal
* Injuries
 |
| **Standard Precautions** | **Personal Protective Equipment (PPE)*** **Gloves**
* **Gown**
* **Masks and eye protection**
 |
| **Gloves** | **Wear clean non-sterile gloves when:*** touching blood, body fluids, secretions, excretions, and contaminated items
* before touching mucous membranes and non‐intact skin
* Sterile gloves are more expensive and NOT needed for routine resident care.
 |
| **Gown** | **Wear a gown:*** during procedures and resident care activities that are likely to generate splashes of blood, body fluids, secretions or excretions
* remove soiled gown as soon as possible and wash hands
 |
| **Mask And Eye Protection** | **Wear a mask and eye protection or a face shield:*** to protect mucous membranes of the eyes, nose, and mouth
* during procedures and resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.
 |
| **Needlestick Safety Sharps****Care Point****Be very vigilant in watching for needles and other sharps in residents’ beds.****Discard these items a puncture‐resistant biohazard container.****Report/Record****Report to your supervisor if sharps are found in the resident's bed.** |
| **Spills and Splashes*** **When pouring contaminated liquids into sinks or toilets; do not splash.**
* Many facilities use special clean‐up kits for spills. Follow manufacture directions when using these kits.
 |
| **Guidelines: Cleaning Spills involving Blood, Body Fluids, or Glass*** Apply **gloves** before starting. In some cases, industrial‐strength gloves are best.
* First, absorb the spill with whatever product is used by the facility. It may be an absorbing powder.
* Scoop up the absorbed spill, and dispose of in a designated container.
* First, absorb the spill with whatever product is used by the facility. It may be an absorbing powder.
* Scoop up the absorbed spill, and dispose of in a designated container.
* Clean up spills immediately with the proper cleaning solution.
* Do not pick up any pieces of broken glass no matter how large, with your hands. Use a dustpan and broom or other tools.
* Waste containing broken glass, blood, or body fluids should be properly bagged. Waste containing blood or body fluids may need to be placed in a special biohazard container.
* Follow facility policy.
 |
| **Resuscitation device*** **MUST BE SINGLE USE**
 |
| **Waste and Disposal**DETERMINE IF CONTAMINATED WITH BLOOD OR BODY FLUIDS THAT CONTAIN BLOOD. IF SO, HANDLE AS BIOHAZARDOUS MATERIAL. |
| **LINEN*** Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretion:
* in a manner that prevents skin and mucous membrane exposures and contamination of clothing
* in a manner that prevents transfer of microorganisms to other residents and environments

**\*Care Point****Hold linens away from uniform.** |
| **RESIDENT PLACEMENT*** Place resident who contaminates environment or who does not, or cannot be expected to assist in maintaining appropriate hygiene or environmental control, in private room
* If a private room is not available, consult with infection control professionals regarding resident placement or other alternatives
 |
| **TRANSPORT OF INFECTED RESIDENTS*** Appropriate barriers (masks, impervious dressings) are worn
* Personnel in area to which resident is taken are notified of arrival and precautions to take
* Inform residents in ways they can assist in prevention of transmission
 |
| **INJURIES**1. Wash the area immediately
2. Complete a facility incident report
3. Follow procedures for testing and treatment
 |
| **BLOODBORNE PATHOGEN STANDARD*** Applies to all occupational exposure of blood or other potentially infectious material.
* Blood = human blood, blood components, blood products
* **Bloodborne pathogens** = disease causing organisms in blood (Hep. B, Hep. C, HIV)

**In an emergency when you cannot identify body fluids or tell whether they contain blood, treat all body fluids as potentially infectious** |
| **BLOODBORNE PATHOGENS:*** Human Immunodeficiency Virus (HIV)
* Hepatitis B Virus (HBV)
 |
| **Human Immunodeficiency Virus (HIV)*** Persons infected with HIV may carry virus without developing symptoms for several years
* HIV infected persons will eventually develop AIDS (Acquired Immune Deficiency Syndrome)
* Persons infected with HIV may develop AIDS‐related illnesses including neurological problems, cancer, and other opportunistic infections
* Persons infected with HIV may suffer flu‐like symptoms, fever, diarrhea, weight loss and fatigue
* Brain of persons infected with HIV may be affected, causing confusion, memory loss, depression or motor dysfunction
* Although drugs may delay symptoms, there is no known cure for AIDS
 |
| **Hepatitis B Virus (HBV)*** About one third of persons infected do not show symptoms
* Another one third have mild flu‐like symptoms which go away
* The last one third experience abdominal pain, nausea and fatigue; skin and eyes jaundiced and urine dark
* HBV preventable with use of HBV vaccine
* Six to ten percent of HBV infected persons become chronic carriers (may or may not have active infection, few or no symptoms, but can transmit disease)
 |
| **BLOODBORNE PATHOGEN MODE OF TRANSMISSION*** Sexual contact
* Sharing contaminated needles
* Receiving blood transfusions
* Pregnant mother to unborn baby
* Nursing mother to baby through breast milk (for HIV, not HBV)
* Puncture wounds from sharps
* Mucous membrane contact
* Contact of infectious substances (urine, feces, saliva) with non‐ intact skin
* Contaminated surfaces (for HBV, not HIV)
 |
| **BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN****(Nurse Aide Has Possible Exposure To Blood Or Fluids Containing BLOOD)** * Post‐exposure evaluation and follow‐up
	+ **Wash the area immediately**
	+ Complete a facility incident report
	+ Follow procedures for testing and treatment
* Copy must be available at workplace
* Mandated by OSHA
	+ Identifies employees at risk of exposure by tasks performed
* Specific measures to decrease risk to exposure
	+ Administrative controls
	+ Work practice controls
	+ Engineering controls
	+ Housekeeping
	+ HBV vaccine
 |
|  **Transmission Based Precautions** **AKA** **Standard Precautions PLUS** |
| **AIRBORNE PRECAUTIONS**In addition to Standard Precautions, use Airborne Precautions, or the equivalent, for resident known or suspected to be infected with microorganisms transmitted by airborne droplets that remain suspended in the air and can be widely dispersed by air currents.**RESIDENT PLACEMENT**: * **Private room**. **Negative air pressure** in relation to the surrounding areas. Keep doors closed at all times and resident in room.
* **GLOVES**: Same as Standard Precautions
* **GOWN OR APRON**: Same as Standard Precautions

**Mask and Eyewear*** For known or suspected **pulmonary tuberculosis**:
	+ Mask N‐95 (respirator) must be worn by all individuals prior to entering room
* For known or suspected **airborne viral disease (e.g., chickenpox, or measles)**
	+ Standard mask should be worn by any person entering the room unless the person is not susceptible to the disease
* When possible, persons who are susceptible should not enter room

**Handwashing*** Hands must be washed before gloving and after gloves are removed
* Skin surfaces must be washed immediately and thoroughly when contaminated with body fluids or blood

**Resident Transport*** Limit transport of the resident for essential purposes only
* Place a mask on the resident, if possible

**Resident Care Equipment*** When using equipment or items (stethoscope, thermometer), the equipment and items must be adequately cleaned and disinfected before use with another resident
 |
| **DROPLET PRECAUTIONS*** In addition to Standard Precautions, use Droplet Precautions, or the equivalent, for a resident known or suspected to be infected with microorganisms transmitted by droplets that can be generated by the resident during coughing, sneezing, talking, or the performance of procedures that induce coughing.
* Used when large‐particle droplets are expelled during coughing, sneezing, talking or laughing
* Specific PPEs‐ mask if working within 3 feet of patient

**RESIDENT PLACEMENT**:* Private room or with resident with same disease.

**GLOVES**:* Must be worn when in contact with blood and body fluids.

**GOWNS:*** Must be worn during procedures or situations where there will be exposure to body fluids, blood, draining wounds, or mucous membranes.

**MASKS AND EYEWEAR**:* In addition to Standard Precautions, wear mask when working within three feet of resident (or when entering resident’s room).

**HANDWASHING**:* Hands must be washed before gloving and after gloves are removed.

**TRANSPORTING**:* Limit the movement and transporting of the resident from the room for essential purposes only. If necessary to move the resident, minimize resident dispersal of droplets by masking the resident, if possible.

**RESIDENT‐CARE EQUIPMENT**: * When using common equipment or items, they must be adequately cleaned and disinfected.
 |
| **Quality Assurance and Infection Control*** **Purpose of Infection Control Programs**
	+ Prevent cross infection
	+ Prevent re‐infection
	+ Environmental control
* **Role of the Quality Assurance Committee**
	+ Reviews infections
	+ Recommends policies and procedures to prevent infections
	+ Made up of members from all disciplines
* **Role of the Quality Assurance Committee**
	+ Monitors infection control program
	+ All facilities required to have Infection Control Program as part of Quality Assurance Committee
 |