

Infection Prevention

Why do We Exist?

Each year an estimate 100,000 die from healthcare acquired infections while being treated for another illness or injury...

That is about 273 people everyday

- Increases lengths of stay
- Increases morbidity and increases mortality
- Increases cost

WAYS TO PREVENT INFECTION

- Types of isolation precautions; Follow standard precautions
- Hand hygiene
- Do not come to work sick
- Practice respiratory etiquette
- Practice social distancing when others are ill
- Engineering controls
- Keep immunizations up to date, including seasonal flu shot
- Use Personal Protective Equipment (PPE) appropriately

ANTIMICROBIAL STEWARDSHIP PROGRAM

Goals

- Optimize clinical outcomes
- Improve cost-effectiveness
- Minimize unintended consequences
- Adverse events and toxicities
- Unintended consequences (C. Difficile Infection)
- Emergence of resistance

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Evaluates Inpatients Receiving IV Antibiotics

- Assist in selection, dosing and duration of therapy
- Reduce broad-spectrum antibiotics when appropriate
- Multidisciplinary Approach
- Antimicrobial Stewardship Team
- Infectious diseases physician
- Infectious diseases pharmacist
- Infectious diseases fellow
- Infection Prevention Coordinator

- Medical resident
- Inpatient medical/surgical team
- Microbiology

KNOW YOUR ISOLATION

Contact Precautions

- Gloves
- Gowns
- Hand hygiene when entering and exiting

Enhanced Contact Precautions

- Gloves
- Gown
- Soap and water only for hand washing

Droplet Precautions

- Surgical mask
- Hand hygiene when entering and exiting

Airborne Precautions

- N-95 Mask for staff
- Surgical Mask for the patient when they leave the room
- **KEEP door closed at all times**
- Hand hygiene when entering and exiting

CATEGORIES OF PRECAUTIONS

Standard Precautions

- Don't take the risk
- Treat all blood and body fluids as infectious
- What are blood borne pathogens?
 - Hepatitis B Virus (HBV)
 - Hepatitis C Virus (HCV)
 - Human Immunodeficiency Virus (HIV)

HANDWASHING

The use of soap and water are needed at these times:

- When arriving and before leaving for the day
- Before eating
- Before and after using the restroom
- When hands are visible soiled
- *See IP-005 for more information*

Wash/rub for minimum of 20 seconds using:

- Soap
- Running water
- Friction 20 seconds
- Spend 40-60 seconds for total procedure
- °° Wearing gloves does not eliminate the need for hand hygiene.

Alcohol-Based Hand Sanitizers

- Supplement hand washing.
- When sinks are not available.
- When hands feel filmy or visibly soiled wash hands with soap and water.
- Additional information refer to the VA NWIHCS Employee Handbook.
- Alcohol-Based Hand Sanitizer SHOULD NOT BE USED:
 - When hands are visibly soiled
 - In the presence of bacterial spores (e.g., Clostridium difficile, Bacillus anthracis) or Norovirus

Other Hand Hygiene Principals

- No artificial fingernails, gel, shellac, wraps or extenders allowed for personnel doing direct patient care
- Natural nails are maintained at ¼ inch or less
- Nail polish must not be chipped or peeling
- Hand jewelry should be kept minimal (e.g., wedding band)
- No artificial nail usage at all in operative and high-risk patient care areas.
- No personal hand lotions

DON'T COME TO WORK SICK!

When Should I Stay Home?

- Fever (temperature above 100° F)
- Vomiting or diarrhea
- Wound that leaks through dressings

WORK PRACTICE CONTROLS

- Utilize appropriate personal protective equipment
- Keep hair pulled back
- Wear close-toed shoes
- No recapping of needles
- Handwashing

In Patient Care Areas:

- No eating
- No drinking

- No applying cosmetics or lip balm
- No handling of contact lenses

FOOD AND DRINKS

Keep food and beverages out of areas where there are patients or patient specimens:

- **INCLUDES CARTS**
- Exam rooms
- Lab and collection areas
- Medication prep areas
- Patient check-in area
- Patient rooms and adjacent hallways
- Keep food entirely in the break rooms
- Do not mix personal food with patient food
- Wash hands before you eat

TUBERCULOSIS (TB)

What is Tuberculosis (TB)?

- Usually a respiratory illness that is contagious
 - May infect other body sites
- Signs and Symptoms
 - Persistent cough
 - Bloody sputum
 - Night sweats
 - Weight loss/anorexia
 - Fever

How Do I Get TB?

- Tuberculosis Incidence is low in Nebraska
- Inhale Mycobacterium Tuberculosis
- Travels to the lungs and then maybe to body
- 2-10 weeks: immune system limits spread but bacteria may remain latent
- 10% risk of developing TB disease, usually within 2 years
 - Prophylactic drug therapy may be used to decrease the risk of developing TB disease

Isolation Protocol

Isolation of TB Patient in Omaha Only:

- Negative air pressure room - Six or more air exchanges per hour
- No recirculation of air into general air handling unit unless filtered through a HEPA filter first
- **KEEP THE DOOR CLOSED AT ALL TIMES!**
- All procedures in room, if not possible - patient wears regular mask
- Restrict number of persons entering room

- N-95 respirators - Don mask before entering room
-Remove mask immediately after leaving room
- To remove patient from isolation
-Must be on effective therapy/improving clinically/3 negative sputum culture

Isolation of TB Patients in Outpatient Clinics and Community Living Center:

- Patient is placed in a private room with the door closed
- All persons entering the room are to wear an N-95 mask
- Patient needs to wear a surgical mask when transfers

COVER YOUR COUGH PROGRAM

- If patients or visitors have signs of a respiratory illness, offer them a mask, hand gel and tissues.
- Tissues, masks, alcohol hand gel and waste containers are available in waiting areas
- Educational material is posted instructing patients on respiratory etiquette
- Masks are to be worn by patients/employees who have a cough or are sneezing

STANDARD PRECAUTIONS IN THE ENVIRONMENT OF CARE

- Disinfect reusable equipment before use on other patients (Disinfectant Wipes)
- Know your contact wet times. Wear gloves!
- Do not re-use items meant for single patient use
- Soiled/contaminated linens go in linen hamper immediately

PREVENTION OF BLOOD BORNE PATHOGENS

- Do not recap needles!
- Place used needles or broken contaminated glass in sharps containers
- Blood tubes should be placed in sharps containers
- Discard sharps boxes when they are 3/4 full

Blood Borne Pathogen Exposure Program

1. Clean it
2. Report it (Contact your supervisor or preceptor.)
3. Go for help. (ER after hours.)
4. Get treated.
5. ID source patient
6. Get follow-up exam.

Protect yourself from needlestick injuries.

- Plan for safe handling and disposal before using needles.
- Dispose of used needles promptly in sharps disposal containers.
- Complete annual blood borne pathogens training.
- Get your hepatitis vaccines.
- Report all sharps – related injuries to your supervisor to ensure appropriate follow-up.
- *Contact Employee Health for more information.*

BIOHAZARDOUS WASTE

Biohazardous labels are fluorescent orange-red signs which indicate infectious materials to protect you from bloodborne hazards.

- These labels are affixed to containers used to store, transport or ship blood or other potentially infectious materials.
- Biohazardous waste is waste capable of causing infectious disease in humans
- Examples:
 - Blood and body fluids in pourable or dripping freely
 - Blood and body fluids that once dry, will flake off
 - Discarded sharps
 - Inoculated culture media, tissues and slides

Maintenance:

- Place in biohazard designated containers, not in regular trash
- Minimize amount of liquids thrown away to reduce leak potential
- Place in designated biohazard pick-up area
- Soiled linen/laundry at NWHCS is considered a biohazard, use proper PPE

PERSONAL PROTECTIVE EQUIPMENT

Use It Appropriately:

- Gloves, cap
- Lab coat
- Eye protection
- May include boots, hood, face shield, mask, gown, shoe covers, hoods in lab
- Respirator mask
- Make sure Personal Protective Equipment (PPE) is appropriate for the task
- Make sure PPE fits properly
- Know how to use PPE
- Know where PPE is located
- Inspect equipment for defects before use
- Change PPE as soon as practical when visibly contaminated or if integrity is compromised

Removing/Disposing of PPE

- Remove at point of use
- Remove away from your body
- Remove when leaving work area
- Wash hands with soap and water after removing PPE
- Isolation gowns should not be worn as warm-up jackets

HOUSEKEEPING

EVERYONE is responsible for good housekeeping.

- Clean all equipment and environmental surfaces as soon as possible after contact with potentially infectious materials.
- Surfaces are disinfected with approved low-level cleaners/disinfectants.
- Equipment with blood/body fluids in the machinery is labeled with a biohazard label and approximate area where fluid is located is identified.

Cleaning Blood Spills

Clean Spills Immediately

- Use a 1:10 solution of sodium hypochlorite 5.25% (household bleach) or a phenolic solution.
- Call Environmental Management Service (EMS) to clean up blood spills if appropriate *Prevention*

Contaminated Clothing

In the event of a blood spill on clothing:

- Remove contaminated clothing immediately
- As clothing is removed, place in a red plastic bag with biohazard label
- Wash area of body exposed to infectious substance
- Individuals who have contact with contaminated laundry shall wear gloves and handle laundry as little as possible
- Report incident to supervisor, Occupational Health or go to the Emergency Room if Occupational Health is closed

WHAT IS AN EXPOSURE?

- Blood or body fluid into eyes nose or mouth, open wounds or cracks on your hands
- Needle stick or cut with contaminated object
- Refer to Policy IP-008

WHAT IS INFLUENZA?

- Viral illness
- Respiratory infection
- Transmitted through droplets
- Incubation period is 1-5 days after exposure
- Infectious 2 days before symptoms and 3 days after symptoms start

Seasonal Influenza Prevention Program for VHA Employees, Contractors and Students

- [VHA Directive 1192](#)
- You must receive seasonal flu shot by November 30 or within 2 weeks of employment during Flu Season.
- Influenza season is Dec. 1 through March 31 (can vary)
- Vaccination at Occupational Health (free)

- Proof of vaccination is required if received outside the VA – Form VHA Directive 1192 Appendix B
- Be vaccinated or if declining vaccination must wear a surgical mask.

HEPATITIS B VACCINE

- Offered to “at-risk” employees, contractors and students (Categories 1 and 2)
- Series will be followed with titer
- Occupational Health
 - Provides vaccine
 - Maintains records
- Signed declination needed if refused

HEPATITIS C

- Currently, there is no vaccine available to prevent the transmission of Hepatitis C virus.
- Use Standard Precautions!