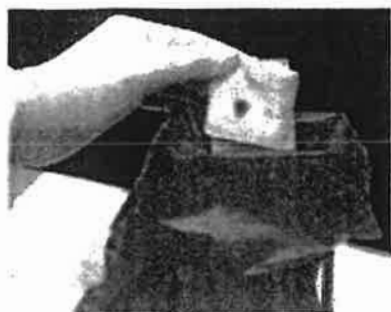

BLOODBORNE INFECTIOUS DISEASES: HIV/AIDS, HEPATITIS B, HEPATITIS C



Overview

Exposures to blood and other body fluids occur across a wide variety of occupations. Health care workers, emergency response and public safety personnel, and other workers can be exposed to blood through needle sticks and other sharps injuries, mucous membrane, and skin exposures. The pathogens of primary concern are the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Workers and employers are urged to take advantage of available engineering controls and work practices to prevent exposure to blood and other body fluids. The CDC estimates that about 1.1 million Americans are living with HIV, and that 21% of these persons do not know they are infected. The rate of occupational transmission from an HIV-positive source is believed to be 0.3% for a percutaneous exposure and 0.09% for a mucous membrane exposure.^[5, 6] The rate of transmission from a hepatitis B-positive source to a nonimmunized host is 6-24% and 1-10% for exposure to hepatitis C.

HIV (Human immunodeficiency virus)/AIDS (Acquired Immunodeficiency Syndrome):

HIV infection is a condition caused by the human immunodeficiency virus (HIV). The condition gradually destroys the immune system by effecting the CD4 cells and T- cells of your immune system, which makes it harder for the body to fight infections and diseases. Over time HIV can destroy most or all of the bodies CD4 cells which prevents the human body from fighting off all infections and diseases and when this occurs the virus can then advance to AIDS (acquired immuno deficiency syndrome). *Acquired Immunodeficiency Syndrome* is the final stage of HIV infection. People at this stage of HIV disease have badly damaged immune systems, which put them at risk for *opportunistic infections (OIs)*.

Causes

The human immunodeficiency virus (HIV) can be spread by the following:

- Through sexual contact -- including oral, vaginal, and anal sex
- Through blood -- through blood transfusions, accidental needle sticks, or needle sharing
- From mother to child -- a pregnant woman can transmit the virus to her fetus through their shared blood circulation, or a nursing mother can pass it to her baby in her breast milk

Rare ways the virus may be spread include:

- Accidental needle injury
- Artificial insemination with infected semen
- Organ transplantation with infected organs

HIV infection is NOT spread by:

- Casual contact such as hugging
- Mosquitoes
- Participation in sports
- Touching items that were touched by a person infected with the virus

People at highest risk for getting HIV include:

- Injection drug users who share needles
- Infants born to mothers with HIV who didn't receive HIV therapy during pregnancy
- People who have unprotected sex, especially with people who have other high-risk behaviors, are HIV-positive, or have AIDS
- People who received blood transfusions or clotting products between 1977 and 1985 (before screening for the virus became standard practice)
- Sexual partners of those who participate in high-risk activities (such as injection drug use or anal sex)
- Contact with blood or bodily fluids in an infected person
- Healthcare workers: accidental needle sticks or contact with blood and bodily fluids

Symptoms

People who become infected with HIV may not have any symptoms for up to 10 years, but they can still pass the infection to others. After you come in contact with the virus, it can take up to 3 months for a blood test to show that you have HIV.

Symptoms related to HIV are usually due to a different infection in the body. Some symptoms related to HIV infection include:

- Diarrhea
- Fatigue
- Fever
- Frequent vaginal yeast infections
- Headache
- Mouth sores, including yeast infection (thrush)
- Muscle stiffness or aching
- Rashes of different types, including seborrheic dermatitis and psoriasis
- Sore throat
- Swollen lymph glands

Note: Many people have no symptoms when they are diagnosed with HIV.

Exams and Tests

The HIV ELISA and HIV Western blot tests detect antibodies to the HIV virus in the blood. Both tests must be positive to confirm an HIV infection. If these tests are negative but the person has high risk factors for HIV infection, they should be retested in 3 months. If these tests are positive then there are other tests that can be done to determine the extent of the HIV.

- If the test is negative (no antibodies found) and you have risk factors for HIV infection, you should be retested in 3 months.
- If the HIV ELISA and HIV Western blot tests are positive, other blood tests can be done to determine how much HIV is in your bloods

A complete blood count (CBC) and white blood cell differential may also show abnormalities.

A lower-than-normal CD4 cell count may be a sign that the virus is damaging your immune system.

Treatment

Doctors usually recommend medicine for patients who are committed to taking all their medications and have a CD4 count below 500 cells/mm³ (some meds are: Combivir,

Emtriva, Epivir, Epzicom, Retrovir and Ziagen). Some people, including pregnant women and people with kidney or neurological problems related to HIV, may need treatment regardless of their CD4 count.

It is extremely important for people with HIV to take all doses of their medications, otherwise the virus may become resistant to the drugs. Therapy always involves a combination of antiviral drugs. Pregnant women with HIV infection are treated to reduce the chance of transmitting HIV to their babies.

Outlook (Prognosis)

HIV is a chronic medical condition that can be treated, but not yet cured. There are effective ways to prevent complications and delay, but not always prevent, progression to AIDS.

Almost all people infected with HIV will develop AIDS if not treated. However, there is a small group of people who develop AIDS very slowly, or never at all. These patients are called long-term nonprogressors.

Possible Complications

- Cancers
- Chronic wasting (weight loss) from HIV infection
- HIV dementia
- HIV lipodystrophy
- Opportunistic infections
 - Bacillary angiomatosis
 - Candidiasis
 - Cytomegalovirus infection
 - Cryptococcal infection
 - Cryptosporidium enterocolitis (or other protozoal infections)
 - *Mycobacterium avium* complex (MAC) infection
 - *Pneumocystis jiroveci* pneumonia (previously called *Pneumocystis carinii* pneumonia or PCP)
 - Salmonella infection in the bloodstream
 - Toxoplasmosis
 - Tuberculosis (in the lungs or spread throughout the body)
 - Viral infection of the brain (progressive multifocal leukoencephalopathy)

Prevention of Exposure to HIV/AIDS as a Healthcare Worker:

- Treat all patients as if they are infected: Use Standard Precautions always.
- Wear gloves and any additional protective equipment needed to provide the patient with the needed care. (goggles, face tent or gowns)
- Use all safety needles appropriately, according to the manufactures recommendations.
- **DON'T** attempt to inject an unruly or noncompliant patient with a needle without the appropriate amount of assistance to ensure your safety.
- Provide the patient with education regarding the disease and how it is transmitted to other people. Promote an ethical view when possible. Respect all patients as they have rights too, but always protect yourself.

NOTE: See attached Policy and Procedure for needle stick or bodily fluid exposure.

HEPATITIS B:

Hepatitis B is a virus that infects the liver. It is spread through contact with blood or bodily fluids of an infected person. Most adults who get hepatitis B have it for a short time and then get better. This is called acute hepatitis B.

You can have hepatitis B and not know it. You may not have symptoms. If you do, they can make you feel like you have the flu. But as long as you have the virus, you can spread it to others.

Sometimes the virus causes a long-term infection, called chronic hepatitis B. Over time, it can damage your liver. Babies and young children infected with the virus are more likely to get chronic hepatitis B.

How hepatitis B is spread

The hepatitis B virus (HBV) is very common worldwide, with more than 350 million people infected. Those with long term HBV are at high risk of developing liver cirrhosis or liver cancer.

Hepatitis B is most frequently passed on through the exchange of bodily fluids with an infected person. HBV is estimated to be 50 to 100 times more infectious than HIV.¹

HBV can be spread in the following ways:

- By unprotected (without a condom) sex with someone who is infectious.
- By sharing contaminated needles or other drug-injecting equipment.
- By using non-sterilized equipment for tattooing, acupuncture or body piercing.
- From an infected mother to her baby, most commonly during delivery.
Immunization of the baby at birth prevents the transmission of hepatitis B.
- Accidental needle sticks or contact with infectious bodily fluids in a healthcare setting.

Signs and symptoms of hepatitis B

Many people who become infected with HBV experience mild symptoms or no symptoms at all, but they may still carry the infectious virus and pass it on to others. When symptoms do appear they may include:

- A short, mild, flu-like illness;
- nausea, vomiting and diarrhea;
- loss of appetite;
- weight loss;
- jaundice
- itchy skin.

Between 2% and 10% of individuals infected as adults will become chronic carriers, which means they will be infectious to others and can develop chronic liver damage. Infected children, especially newborn babies, are much more likely to become chronic carriers.

If a person lives with hepatitis B infection for a number of years then they may develop the following complications:

- chronic hepatitis
- liver cirrhosis
- liver cancer

Treatment for hepatitis B

Antiviral medication is given as treatment to those with chronic symptoms to help prevent further liver damage. These medications may be injected or given in pill form. Examples are Interferon Alpha, Lamivudine and Baraclude. Treatment usually lasts 6 months, during which time the patient will be carefully monitored.

Regardless of whether the infection is producing symptoms or not, the patient will be advised to avoid alcohol, get plenty of rest and maintain a healthy diet.

Hepatitis B immunization

Three immunization injections are given over a period of 3-6 months. A blood test (Hepatitis Titer) is taken once the course of injections is completed to assess the individual's immunity and response to the medication. At this time the titer reveals a low immunity the individual may need to have an additional hepatitis booster to increase their immune levels.

It is recommended that all healthcare workers and anyone that has a greater risk of exposure to Hepatitis B receive the 3 step immunization process.

HEPATITIS C:

Hepatitis C is a disease caused by a virus that infects the liver. Hepatitis C is also spread by coming in contact with the blood of an infected person. In time, it can lead to permanent liver damage as well as cirrhosis, liver cancer, and liver failure.

Many people don't know that they have hepatitis C until they already have some liver damage. This can take many years. Some people who get hepatitis C have it for a short time and then get better. This is called acute hepatitis C. But most people who are infected with the virus go on to develop long-term, or chronic, hepatitis C.

Although hepatitis C can be very serious, most people can manage the disease and lead active, full lives.

How hepatitis C is spread

The hepatitis C virus (HCV) can be spread in the following ways:

- By sharing drug-injecting equipment.
- Accidental needle sticks and exposure to infectious bodily fluids with the healthcare setting.
- By using non-sterilized equipment for tattooing, acupuncture or body piercing.
- Through exposure to blood during unprotected sex with an infected person. Sexual transmission is an uncommon way of becoming infected with hepatitis C.
- Rarely, from an infected mother to her baby during childbirth. The risk may be greater if the mother is also infected with HIV.

- Through blood transfusion. In many developing countries blood is not screened (tested) for the hepatitis C virus.

Hepatitis C cannot be passed on by hugging, sneezing, coughing, sharing food or water, sharing cutlery, or casual contact.

Signs and symptoms of hepatitis C

Many people do not have symptoms when they become infected with hepatitis C. Symptoms may emerge later, taking anywhere between 15 and 150 days to develop. Occasionally a person will not develop any symptoms and their immune system will successfully clear the virus without their knowledge. An infected person without symptoms can still act as a carrier and pass the virus on to others.

Symptoms may include:

- A short, mild, flu-like illness;
- nausea and vomiting;
- diarrhea;
- loss of appetite;
- weight loss;
- jaundice
- itchy skin.

About 20% of individuals who become infected with HCV will clear the virus from their body within 6 months, though this does not mean they are immune from future infection with HCV.

The other 80% of people will develop chronic hepatitis C infection, during which the virus may cause mild symptoms or no symptoms at all. These people will however carry the hepatitis C virus for the rest of their lives and will remain infectious to others.

If a person lives with hepatitis C infection for a number of years then they may develop the following complications:

- chronic hepatitis
- liver cirrhosis
- liver cancer

The tests for hepatitis C

Tests for the hepatitis C virus have only been available since 1989. A doctor can diagnose hepatitis C by carrying out blood tests that detect HCV antibodies in the blood.

Treatment for hepatitis C

To determine the extent to which the liver has been affected by hepatitis C, other tests may be carried out. These include liver function tests, which measure substances (specific proteins and enzymes) in the patient's blood, showing how effectively the liver is working. A liver biopsy may also be carried out. The sample is then examined under a microscope to gauge the amount of liver damage (inflammation, scarring and cirrhosis).

Treatment combines the antiviral drugs interferon and ribavirin. Although treatment has improved in recent years, the success rates vary depending on which genotype the patient has and how long they have had hepatitis C. In 2011, the FDA approved a new drug called Victrelis (for the treatment of the genotype 1 strain of hepatitis C). When taken alongside existing drugs, Victrelis cured more than 60 percent of patients in clinical trials compared to between 20-40 percent of patients when existing drugs were taken alone.³ Unlike other drugs for hepatitis C, Victrelis is a protease inhibitor, similar to those used to treat HIV. Adherence to this drug is essential to prevent drug resistance.

The antiviral drugs may cause significant side effects that may be intolerable for some people. These include:

- headaches
- flu-like symptoms
- nausea
- tiredness
- body aches
- depression
- skin rashes

A patient will also require regular check-ups to monitor their progress. It is important to remember that if HCV treatment is effective and the infection is cleared, this does not mean the patient has future immunity to hepatitis.

Prevention

Currently, there is no vaccine for hepatitis C, but research is in progress in hopefully developing a vaccination soon. Like HIV, HCV can mutate easily, which makes vaccine development complicated. As no vaccine exists, all measures should be taken to prevent HCV transmission.

Injecting drug users should never share any needles, syringes or mixing spoons, as blood can be transferred between users.

Infection through penetrative sex does occur, although it is not common. If a person is infected with HCV, it is advisable for them to use a condom for penetrative sex to ensure they do not pass on the virus to their partners through any open genital cuts or sores.

People should avoid sharing toothbrushes, shaving equipment (especially razors), or anything else that may be contaminated with infected blood.

NOTE: Always ensure your safety and protection against all infectious disease by treating every patient as if they are infectious. Use standard precautions when providing you patients with the care they care. Wear gloves and all protective equipment provided by the organization to provide your patients and yourself with safe care. **REMEMBER** to **WASH** your hands before and after contact with all patients to decrease the risk of spreading infections/bacteria to your patients and equipment. **NEVER** attempt to inject a patient with a medication that is agitated or noncompliant without the proper amount of assistance in order to ensure your safety. **Always** use all safety needles and equipment appropriately (according to manufactures recommendations).

Infection Prevention and Control

Exposure to sick people (directly or indirectly through caregivers' hands, etc.) can lead to Hospital Associated Infections (HAIs) formerly known as nosocomial infections.

Surgical Site Infection (SSI)

- Clippers (not razor blades) for hair removal outside of the OR as close to the time of surgery as possible
- If it is an elective procedure, the patient will be instructed to bath with antibacterial soap and wash hair the evening prior to surgery and repeat the morning of surgery.
- Prophylaxis antibiotics within one hour of surgery cut time and document in patient record.

Catheter Associated Urinary Tract Infection (CAUTI)

- Only leave urinary catheters in place as long as necessary. Ask the doctor if the Foley can come out.
- Secure the catheter with a securement device to the upper leg to prevent loop or cause pressure or stress on the patient.
- Urinary bag must be kept below the bladder level. Bag must not touch the floor.
- Empty bag before it reaches 800 to 1,000cc.
- Keep perineal and meatal area clean (clean from front to back)
- Use forceps when using cotton balls for cleaning
- Do not blow up the balloon prior to insertion, it is pre-tested
- Hydrate the patient
- Do not collect specimen from bedpan or urinal

Central Line Associated Blood Stream Infection (CLABSI)

- Large drape for central line insertion
- Use hat, mask and sterile gown when inserting. Assistant must mask.
- ChloroPrep to prep site. Let completely dry.
- BioPatch- blue side up

Ventilator Associated Pneumonia (VAP)

- Head of the bed set at 30 degrees
- Oral care every four hours and PRN
- No routine lavage when suctioning
- Flush tube with sterile water only
- Peptic ulcer prophylaxis
- Sedation as ordered by physician.

Exposure Control Plan (ECP) is located in the Infection Control manual. The ECP identifies employees covered, specific measures CCH takes to minimize exposure to you and what to do if you are exposed.

Hepatitis B Vaccine

All employees are offered the Hepatitis B vaccine at no charge. The Hepatitis B vaccine is 95% effective in preventing infection from the Hepatitis B virus.

Hand Hygiene to Prevent the Spread of Infection

Hand washing is the number one way to prevent infection. Medicare makes payments based on quality. They no longer reimburse us for patients who acquire an infection during the hospital stay. Therefore, we need your help to prevent hospital associated infections.

- Wash your hands when visibly soiled or contaminated.
- Stand near wash basin, but avoid touching it with your hands.
- Thoroughly wet your hands with arm, running water.
- Lather up completely with liquid soap.
- Vigorously rub hands up to wrists for 15 seconds (the length of singing the Happy Birthday song).
- Rinse thoroughly with running water.
- Point hands and fingers downward during rinse.
- Pat hands completely dry with clean, disposable towel.
- Use dry towel to turn off the faucet.

Be sure to wash your hands with SOAP and WATER after all contact with positive *Clostridium difficile* patients.

Hand Decontamination with Alcohol Hand Rub

Alcohol hand rub is an acceptable means of hand hygiene if hands are not visibly contaminated with blood or body fluid. It IS NOT effective against C. difficile since it has spores.

- Apply product to one palm.
- Spread thoroughly over both hands.
- Include nails and under jewelry.
- Rub hands together vigorously.
- Continue rubbing until hands are dry.
- Use alcohol hand rub when entering a patient's room and when leaving a patient's room.
- Use alcohol hand rub when entering the Lab and when leaving the Lab.

When to wash your hands with soap and water:

- After using the alcohol hand rub six times
- When coming on duty
- Before applying and after removing gloves
- When hands are obviously soiled
- Between contact with patients
- Before contact about the face and mouth of patients
- Before and after personal use of the toilet
- After sneezing, coughing, blowing or wiping the nose or mouth
- Upon leaving an isolation area or after handling articles from an isolation area
- After handling used sputum containers, soiled urinals, catheters, bedpans, respiratory equipment, intravenous infusion tubing, etc.
- After touching the patient's bed, bedrails, bedside tables, etc.
- Before and after eating
- On completion of duty

Other Aspects of Hand Hygiene

Nails should not be longer than $\frac{1}{4}$ inch.

Do **NOT** wear artificial nails or extenders when having direct patient contact. This includes gel or acrylic overlays. Non hospital approved lotions should **not** be used because they may break down the latex gloves.

Infectious Medical Waste

- Blood and blood products: liquid or semi-liquid, saturated material containing blood, caked, dried blood.
- Containers such as suction canisters, chest tubes, IV tubing with blood
- Lab cultures and devices used in Microbiology
- All disposable isolation waste soaked with respiratory, oral or wound secretions, etc. for an isolation patient
- Sharps to include, but not limited to: needles, syringes, pipettes, scalpels, blood vials, glass slides, cover slides
- Surgery and autopsy waste that were in contact with infectious agents

Infectious Medical Waste must be placed in a red bag. Red bags must always be twisted and taped.

General waste should be placed in a clear bag. Clear bags are stored separately from red bags. Sharps should be placed in a sharps container.

Personal Protective Equipment (PPE)

- PPE is a barrier and is supplied by the hospital at no cost to you.
- Remove the most contaminated PPE first.
- Dispose of PPE saturated with blood in a red bag. Other PPE should go in a clear bag.
- PPE includes:
 - Gloves, gowns, caps, masks, face shields, shoe covers, aprons, resuscitation devices, N-95 respirators
- **PPE is NOT to be worn in the hallway since door knobs, floors, etc. may get contaminated.**

Standard Precautions

- Standard Precautions apply to all patients at all times.
- Wash your hands immediately if they become contaminated with blood or body fluids. Wash your hands before and after patient contact.
- Wear gloves for contact with blood, body fluids and mucous membranes.
- Change gloves during patient care if moving from a contaminated body site to a clean body site.
- Wear gowns, masks and eye protection if splashing is likely.
- Mouthpieces, resuscitation bags and other devices should always be used for mouth-to-mouth breathing.
- Specimens and contaminated waste must be properly bagged and labeled.
- **Never recap needles.**

Staying Safe Among Sharps*

What is transmitted?

More than 20 pathogens, including Hepatitis B, Hepatitis C, and HIV, may be transmitted occupationally via injuries from contaminated needles and other sharp devices.

Always remember

- Sharps should be placed in an appropriate sharps container.
- Sharps to include, but not limited to: needles, syringes, pipettes, scalpels, blood vials, glass slides, cover slides
- Do not bend, recap, shear or break used sharps
- Do not recap needles
- Dispose of used sharps immediately after use
- Safety sharps should always be used when available

Be Prepared

- Organize your work area with appropriate sharps disposal containers within reach
- Work in well-lit areas

- Before handling sharps, assess any hazards—get help if needed

Be Aware

- Keep the exposed sharp in view
- Be aware of people around you
- Stop if you feel rushed or distracted
- Focus on your task
- Avoid hand-passing sharps and use verbal alerts when moving sharps
- Watch for sharps in linen, beds, on the floor, or in waste containers

Dispose of Sharps with Care

- Be responsible for the device you use
- Activate safety features after use
- Dispose of devices in rigid sharps containers; do not overfill containers
- Keep fingers away from the opening of sharps containers

Sharps Disposal Containers

- Puncture resistant
- Display the biohazard symbol
- Replace when $\frac{3}{4}$ full

In the event of a needlestick or exposure:

- Immediately wash the affected body part with soap and water
- Immediately flush eyes or mucous membranes with water or saline for at least ten minutes
- Report the injury to your supervisor and immediately go to the Emergency Department. Fill out the First Report of Injury Form, OSHA 301 Form, Sharps Injury Log and/or Bloodborne Exposure Form

***Information from Stericycle and CDC**

Regulated Medical Waste*

These DO go in the RED bag:

Contaminated:

- Visibly Bloody Gloves
- Visibly Bloody Plastic Tubing
- Visibly Contaminated PPE
- Saturated Gauze
- Saturated Bandages
- Blood Saturated Items
- Closed Disposable Sharps Containers

These DO NOT go in the RED bag:

- Medication
- Garbage
- Loose Sharps
- Fluorescein
- Cauterizers
- Batteries of any type
- Hazardous and Chemical Waste
- Compressed Gas Cylinders
- Fixatives and Preservatives

- Radioactive Waste

It is important when cleaning up blood or body fluids that may contain blood that the appropriate PPE be worn. As much of the spill should be removed as possible with a disinfectant (such as bleach) used. Appropriate contact times should be used

***Information from Stericycle**

Transmission-Based Precautions

- Contact precautions are used in addition to Standard Precautions for patients that have a disease that can be transmitted via the hands or environmental surfaces.
- Wear gloves when entering the patient's room and remove gloves before leaving. Gloves should also be changed after contact with infected material.
- Wash your hands before leaving the room.
- A gown is required if contact with patient or with environmental surfaces is anticipated.

Organisms: MRSA, MDRO, ESBL, Scabies, RSV, Rotavirus

MultiDrug-Resistant Organism (MDRO)

An antibiotic-resistant organism is bacteria or a germ that is not killed by the usual medicines (antibiotics). If an infection results from such an organism, a stronger drug must be used to treat it.

Methicillin-resistant *Staphylococcus aureus* (MRSA)

- *Staphylococcus aureus* is found on the skin and in the noses of even some healthy individuals. It is responsible for most human skin infections. In most cases, MRSA is spread by direct contact between healthcare workers and their patients
- The most common cause of healthcare associated infections is MRSA (Methicillin-resistant *Staphylococcus aureus*).

Vancomycin Resistant *Enterococcus* (VRE)

- VRE is a type of bacteria that is usually found in the intestines and the female genital tract.
- This bacterium has mutated to survive in the presence of many antibiotics, especially Vancomycin.
- VRE is hard to treat and can be passed to other people with weak immune systems.
- Risk Factors for VRE:
 - Severe illness
 - Surgery
 - Age
 - Treatment with Multiple Antibiotics
 - Invasive devices- ventilators, IV catheters and urinary catheters, etc.
 - ICU stay

Extended Spectrum *Beta-Lactamase* (ESBL)

- ESBLs are enzymes that are produced by some bacteria that may cause infections.
- Infections can occur in wounds, blood or the urinary tract.
- It can spread by touching people who have it or handling things that they have used.
- ESBLs are most commonly found:
 - *Klebsiella pneumonia*
 - *Klebsiella oxytoca*
 - *E. coli*
 - *Proteus mirabilis*
 - Other gram negative bacilli
- Risk factors for ESBL:

*Prior antibiotic

*Arterial catheter

*Central venous catheter

*Gastrostomy tube

*ICU stay

*High severity of illness

*Ventilatory assistance

*Nursing home patient

*Emergent abdominal surgery

*Urinary catheter

Acinetobacter

- Gram-negative coccobacilli in pairs
- Found in soil and water, including drinking and surface waters
- Rarely occurs outside of healthcare settings
- Can survive in the environment up to 30 days
- 25 different species world-wide
- Found on the skin of health people, especially HCW
- Incubation period two to ten days
- Found in irrigating solutions and intravenous solutions
- Other common sites of *Acinetobacter* infection:
 - Sputum or respiratory secretions
 - Wounds
 - Urine
 - Peritoneal fluid
 - Organ sites with high fluid contents

Frequency

- *Acinetobacter* is a common colonizer of patients in ICU.
- *Acinetobacter* colonization is particularly common in patients who are intubated and in those who have multiple intravenous lines or monitoring devices, surgical drains or indwelling urinary catheters.
- *Acinetobacter* infections are almost exclusively in hospitalized patients, although community-acquired infections have been reported.

Transmission of *Acinetobacter*:

- Direct contact with contaminated surfaces or environment
- Isolated from: tap water, sinks, bed rails, inside of ventilator cabinet, dry surfaces, bedding

Clostridium difficile

- Can cause diarrhea and other serious intestinal problems
- Is common in healthcare facilities
- Enters the environment in the feces of people infected or colonized with *C. diff*
- *C. diff* spores can survive for months on surfaces and materials
- Antibiotics suppress the gastrointestinal tract flora, allowing the less susceptible Clostridia to multiply
- Waterless hand soap is not effective against *C. diff*. Use SOAP and WATER when dealing with a *C. diff* patient.
- Clean *C. diff* rooms with BLEACH.

Strict Contact Precautions

- Everyone entering room must wear gown, gloves and mask.
- Remove above apparel and wash hands prior to leaving room.
- Bag all items from room (trash, linen, equipment, etc.).
- Housekeeping cleans all rooms daily and will terminally clean rooms upon patient discharge.

Steps to Stop the Spread of Multidrug-Resistant Organisms

- Hand Hygiene
- Screening and decolonization of patients
- Make sure the infection is documented
- See that other units and facilities are notified
- Wear Personal Protective Equipment
- Use good housekeeping

Droplet Precautions

Droplet Precautions are used in addition to Standard Precautions for patients that are suspected of having diseases that can be spread via sneezing or coughing. The infectious particles are larger in size and fall to the ground. Wear a surgical mask when within three feet of a patient.

Organisms: Whooping cough (Pertussis), Bacterial meningitis, Influenza, Mumps, Rubella

Influenza

Usually five percent to twenty percent of the U.S. population develops influenza each year, leading to more than 200,000 hospitalizations from related complications, according to the U.S. Centers for Disease Control and Prevention (CDC). Influenza-related deaths vary yearly, ranging from a low of about 3,000 to a high of 49,000 people.

Influenza Symptoms

Influenza is a contagious respiratory illness caused by flu viruses. It can cause mild to severe illness and at times can lead to death. The flu is different from a cold. The flu usually comes on suddenly. People who have the flu often feel some or all of the following symptoms:

- Fever or feeling feverish/chills*
- Cough/ Sore throat
- Runny or stuffy nose
- Muscle or body aches
- Headaches, Fatigue
- Some people may have vomiting and diarrhea, though this is more common in children than adults

* It is important to note that not everyone with flu will have a fever.

Influenza Complications

- Most people who get influenza will recover in a few days to less than two weeks, but some people will develop complications (such as pneumonia) as a result of the flu, some of which can be life-threatening and result in death.
- Pneumonia, bronchitis and sinus and ear infections are some examples of complications from flu. The flu can make chronic health problems worse. For example, people with asthma may experience asthma attacks while they have the flu, and people with chronic congestive heart failure may have worsening of this condition that is triggered by the flu.

Influenza Prevention

- CDC recommends that all healthcare workers be vaccinated annually.
- You are contagious with the influenza virus two days before you are sick.

Airborne Precautions

- Airborne precautions are used in addition to standard precautions for patients who have respiratory symptoms and are suspected of having diseases that can be spread by smaller particles that remain suspended in the air for sufficient time that individuals in the area can inhale them.
- Healthcare workers should wear N95 respirators when entering the room.
- Healthcare workers must be face-fitted to wear the N95 respirator.

- **Organisms:** TB (tuberculosis) or Rule-out TB, Chickenpox, Disseminated Shingles, Measles (Rubeola), H1N1, Type A Flu

Food and Drink

- Storage in designated areas is mandatory.
- Appropriate areas for consumption are designated lounges and cafeterias only.
- Eating or drinking at the nursing stations or other patient care locations is prohibited because of the possibility of contamination.

Hospital Quality Assurance

Occurrence Filing a Hospital Quality Assurance Occurrence:

This is done on ANY occurrence—It is completed on the computer

*****Do NOT document in the chart that an occurrence report has been filed*****

The Hospital Incident Report Form is used for:

1. Visitor occurrences
2. Medication errors patient falls or occurrences
3. ANY incidences occurring to patients caused in doing treatments, diagnostic or therapeutic procedures.

Employee injuries are reported to (Quality Assurance)- see below

Post Exposure Guidelines

Policy: Standard Precautions are to be followed when personnel are in direct contact with patients where exposure to blood and body fluids may occur. Unfortunately, incidences do occur where the healthcare worker becomes exposed. Transmission of bloodborne pathogens can occur through accidental punctures (a sharp, contaminated object punctures your skin), broken skin (infected blood or body fluids come into contact with your already broken or damaged skin), and body openings (infected material comes into contact with your eyes, nose, or mouth).When an employee becomes inoculated to blood or body fluids, the employee will be offered a confidential medical exam and follow-up evaluation.

Policy:

1. The employee will be seen in the Emergency Room per Crenshaw Community Hospital employee health protocol, as advised by the employee health nurse. Initial Hepatitis and HIV screen, recheck HIV in 3 months, 6 months, and 1 year.
2. The employee completes an incident report. The report should identify the patient's name and room number, if the patient is known. The incident report must be completed and turned into the Risk Manager (Nedra Dunn, RN) BEFORE the employee leaves that work shift.
3. The patient's, if known, physician will be contacted to notify the patient of the need for Hepatitis and HIV screen. Informed consent must be given prior to drawing the screens from the patient. The laboratory will be notified that no charge will be made to the patient because the test is incident related.
4. Employee Health nurse will then make the recommended follow up per Crenshaw Community Hospital.