SDS Staff Training
Infection Control/Universal Precautions

Advocacy and Resource Center
Infection Control

- Is all the attempts to prevent the spread of infectious or contagious diseases.
- 3 main ways to control infection
  1. Handwashing
  2. Use of Protective Barriers
  3. Disinfecting
How is infection Spread?

• Direct contact with another person blood, body fluid, or non-intact skin.
• Objects that are contaminated.
• Cough or sneeze droplets.
• Contaminated food or water source.
Breaking the Chain of Infection

Figure 17.1
The Chain of Infection

Infectious Agents
bacteria, fungi,
virus, protozoa,
rickettsia

Hosts
immuno-
compromised,
age, chronic
and acute
conditions

Reservoirs
people,
equipment,
water,
food

Portals of
Entry
mucous
membrane,
respiratory,
GI, broken
skin

Portals of
Exit
excretions,
secretions,
blood

Modes of
Transmission
contact, airborne,
vehicle, vector
Universal Precautions

- Precautions taken at all times with the assumption that everyone is infections.

1. Care taken to prevent injury from sharp devices. Use sharps containers.
2. Practice good house keeping.
3. Cover all wounds, scrapes, and sores.
Universal Precautions-Cont.

4. Immediate cleansing.

5. Dispose of disposable items.

6. Gloves need to be changed and hands washed between each consumer.

7. Gloves need to be used for clean-up of all contaminated areas.
Universal Precautions-Cont.

8. 10. Gloves need to be used for all hands on care.

Using two fingers, peel the other glove off from the wrist.
Handwashing is considered the single most important thing you can do to control infection.

When should you wash your hands:
- after using disposable gloves
- before performing any treatment
- prior to administering medication
- after bathroom use
- after household cleaning/ disinfecting
- before preparing food
- before eating food
- before and after smoking
- after performing a personal care activity
- any time that potential for transmission of infection exists
Handwashing-Cont.

1. Wet hands
2. Soap (20 seconds)
3. Scrub backs of hands, wrists, between fingers, under fingernails.
4. Rinse
5. Towel dry
6. Turn off taps with towel
Alcohol base hand sanitizers are a great way to disinfect hands when a sink is not available. It should not replace hand washing though.

### Hand Hygiene with Alcohol-based Hand Sanitizer

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Remove jewelry. Apply enough product to open palms.**</td>
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<tr>
<td>2.</td>
<td>Rub hands together palms to palms</td>
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<tr>
<td>3.</td>
<td>Rub in between and around fingers</td>
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<tr>
<td>4.</td>
<td>Cover all surfaces of the hands and fingers</td>
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<tr>
<td>5.</td>
<td>Rub backs of hands and fingers. Rub each thumb.</td>
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<tr>
<td>6.</td>
<td>Rub fingertips of each hand in opposite palm</td>
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<tr>
<td>7.</td>
<td>Keep rubbing until hands are dry. **The volume required to be effective varies from product to product. Enough product to keep hands moist for 15 seconds should be applied. Do not use these products with water. Do not use paper towels to dry hands.</td>
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Note: Wash hands with soap and water if hands are visibly dirty or contaminated with blood or other body fluids. Certain manufacturers recommend washing hands with soap and water after 5-10 applications of gel.
Hepatitis

• Hepatitis is general is an inflammation of the liver.
• Causes
• Viral Hepatitis overview
Hepatitis B Virus

• How is Hepatitis B spread?
  - sexual contact
  - contaminated needles, syringes, sharps
  - instruments for tattooing, ear piercing, acupuncture
  - contact with a persons blood or body fluid that contains blood (feces, urine, etc..)
  - transmission has occurred through a deep human bite.
Hepatitis B-cont.

- Incubation period from time of exposure to onset of symptoms is approximately 6 weeks to 3 months.
- About 60% of people infected have mild symptoms or none at all. 30-40% will develop a serious condition lasting up to 6 months.
- Hepatitis B is an important risk factor for Liver Cancer.
Hepatitis B-cont.

- Symptoms

Risk factors:
- people who share needles
- health workers who are exposed to infected blood

Possible symptoms:
- pain in the upper right quadrant of abdomen
- nausea and vomiting
- loss of appetite
- jaundice
- fatigue
- itching
Hepatitis B Vaccine

- Became available in 1982.
- Genetically Engineered
- Not 100% effective
- Informed Consent for injections needed.
Hepatitis B-cont.

- There is no cure for Hep B, once you have it, it is always in your blood.
- Medication is available to suppress the virus and reduce liver inflammation during illness.
- Always follow infection control/universal precaution practices.
- Never share any personal care items.
Hepatitis C

• How is it spread?
• Virus not identified until 1987.
• Acute phase of infection is usually missed due to mild clinical presentation.
• Decades (20-30 years) of silent infection during which transmission may occur.
Hepatitis C-continued

• 70-80% of those infected become chronic carriers.
• 20-30% develop liver cirrhosis after 20-30 years.
• 10-20% of chronically infected will have shortened life.
Hepatitis C-cont.

- No Vaccine.
- Rapid blood test for screening.
- Treatments.
Tuberculosis

- Airborne communicable and reportable disease caused by a bacteria called Mycobacterium Tuberculi. TB for short.
- Spread by tiny airborne particles expelled by a person with infectious TB.
- Active/infectious TB is when a person shows symptoms of the disease in there lungs.
- 85% TB cases are pulmonary (in the lungs) and the other 15 % effect other organs of the body (such as the kidneys, brain, and bone).
Spread of Tuberculosis

• Association between TB and HIV
• Immigration from countries in which TB is common
• Transmission of TB in Congregate settings.
• Deteriorating Health Care
• Drug Resistant Strains
Tuberculosis Symptoms

- Carriers have no symptoms
- Early Symptoms
  - Productive prolonged cough
  - fever
  - chills
  - night sweats
  - chest pain
  Shortness of breath
  fatigue
- Later Symptoms
  - loss of appetite
  - weight loss
  - coughing up blood
Testing for Tuberculosis

- Skin Test
  - Positive
  - Negative
- BCG vaccine
Treatment for Tuberculosis

- A person with ACTIVE TB must be treated with 2 or more antibiotics with different mechanisms of action.
- Surgical Intervention is sometimes required in extreme cases.
- All TB cases (suspected or confirmed) MUST be reported to the Health Department.
- A carrier can be treated with a medication called INH, which is taken daily for 6 to 9 months to kill the bacteria that is dormant.
HIV and AIDS

- HIV = Human Immunodeficiency Virus and is the causative factor in the development of AIDS.
- AIDS = Acquired Immune Deficiency Syndrome. It is the later stages of the HIV virus.
- Know that all people infected with AIDS are HIV positive, but not all HIV positive patients have AIDS.
- In most cases, an individual would develop a positive HIV antibody test with 6-8 weeks after exposure to the virus.
- Patients with AIDS suffer from secondary bacterial, viral, and fungal infections that would otherwise not occur in an individual with a healthy immune system.
Transmission of HIV

• It is not easily transmissible.
• It is spread by direct contact with infected blood or body fluids.
  - semen,
  - vaginal secretions
  - breast milk
* It is not transmitted through sneezing, coughing, eating, or drinking from common utensils or merely being around an infected person.
Preventing the Spread of HIV

• Education
• Strict Universal Precautions
• HIV testing for high risk individuals
• Seek medical intervention if accidental exposure occurs.
Early Symptoms of HIV

• Many have no symptoms at all.
• Some people may develop mild, temporary flu-like symptoms that disappear after a few days or weeks following the exposure.
• Some have persistent swollen lymph nodes.
Main symptoms of Acute HIV infection

Systemic:
- Fever
- Weight loss

Pharyngitis

Mouth:
- Sores
- Thrush

Esophagus:
- Sores

Muscles:
- Myalgia

Liver and spleen:
- Enlargement

Central:
- Malaise
- Headache
- Neuropathy

Skin:
- Rash

Lymph nodes:
- Lymphadenopathy

Gastric:
- Nausea
- Vomiting
Advanced Symptoms of HIV and AIDS

- Extreme tiredness, sometimes associated with headaches, dizziness, or lightheadedness.
- Swollen lymph nodes in the neck, groin, and armpits.
- Continued fever or night sweats.
- Weight loss of more than 10 lbs which is not due to dieting or increased physical exercise.
- Purple or discolored growths on the skin or the mucus membranes (inside the mouth, anus, or nasal passages).
- Heavy continual dry cough that is not from smoking or that has lasted too long to be a cold or flu.
- Progressive shortness of breath.
- Continuing bouts of diarrhea.
Symptoms-cont.

- Thrush—a thick white coating on the tongue or in the throat which may be accompanied by a sore throat.
- Unexplained bleeding from any body opening or from growths on the skin.
- Bruising more easily.
- Forgetfulness, confusion, disorientation, and other signs of mental deterioration.
New York State Confidentiality Law

• Counseling before and after testing.
• Written or Verbal consent needed
• Disclosure
• Penalties
• Testing
Additional Note HIV

• HIV and AIDS is no longer a death sentence, now treated as a chronic disease that can be medically managed.

• Early diagnosis and treatment prolongs lives, delays progression of AIDS, drug resistance, less infections, hospitalizations, and reduces the spread.