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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Law, Public Safety, Corrections, & Security |
| **Course Name** | Correctional Services |
| **Lesson/Unit Title** | Infection Control in Correctional Facilities |
| **TEKS Student Expectations** | **130.333. (c)Knowledge and Skills**(6) The student uses first aid, infection control, and cardiopulmonary resuscitation in a correctional facility.(B) The student is expected to comply with standard precautions as they relate to infection control |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | The student will be able to:* List infectious diseases and their symptoms
* Identify prevention, precautionary, and treatment methods for infectious diseases
* In a group competition, distinguish between the symptoms, prevention, precautionary, and treatment methods for each disease
* Examine, diagnose, and treat a correctional facility employee who has been exposed to an unknown infectious disease
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| **Rationale** | Correctional employees are vulnerable to contracting various diseases that run rampant in correctional facilities. It is important for the employees to know the precautions they need to take to prevent exposure to these diseases, and what to do if exposure does happen. |
| **Duration of Lesson** | 2-6 hours |
| **Word Wall/Key Vocabulary***(ELPS c1a, c, f; c2b; c3a, b, d; c4c; c5b) PDAS II (5)* | Refer the Direct Instruction section below. |
| **Materials/Specialized Equipment Needed** | * Infection Control computer-based presentation
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | Discuss the several types of health risks a guard might be exposed to in a correctional facility and methods a guard can use to limit their exposure. Use the Discussion Rubric for assessment.  |
| **Direct Instruction \*** | 1. Blood-Borne Pathogens
	1. Diseases which are spread by blood and other possibly infectious material, such as:
		1. Semen
		2. Vaginal secretions
		3. Amniotic (birth) fluid
		4. Other internal body fluids
	2. Caused by viruses
	3. Are not found in:
		1. Tears
		2. Sweat
		3. Urine
		4. Feces
		5. Nasal secretions
		6. Sputum
		7. Vomit
		8. Saliva
	4. Any unknown bodily fluids should be treated as infectious
	5. Human Immunodeficiency Virus (HIV)
		1. It attacks the immune system, weakening victims until they become unable to fight off even minor infections
		2. Once the immune system is severely weakened, the victim is said to have AIDS
		3. Death is usually caused by cancer, pneumonia, and other opportunistic infections
		4. The disease progresses very slowly, and the signs and symptoms of the initial stages of the infection are easily missed
		5. There is no cure
		6. Symptoms
			1. Early symptoms of HIV may not be noticed but can include flu-like symptoms, six weeks to three months after infection
			2. As the disease progresses, illnesses that don’t normally affect the general population will affect the person with HIV
			3. Later stages of HIV and AIDS may include:
				1. Chronic yeast infections or thrush (yeast infection of the mouth)
				2. Fever and/or night sweats
				3. Easy bruising
				4. Bouts of extreme exhaustion
				5. Unexplained body rashes
				6. Appearance of purplish lesions on the skin or inside the mouth
				7. Sudden unexplained weight loss
				8. Chronic diarrhea lasting for a month or more
				9. Kaposi's Sarcoma
				10. Pulmonary tuberculosis
				11. Candidiasis of the esophagus, trachea, bronchi or lungs
				12. Toxoplasmosis of the brain
				13. Severe bacterial infections
				14. Invasive cervical cancer
				15. Lymphoma
				16. Recurrent pneumonia
	6. Hepatitis B Virus (HBV)
		1. Attacks the liver of the victim, causing liver damage
		2. The liver is necessary for a person to live
		3. Victims recover 95% of the time with no permanent liver damage
		4. About 5% of HBV infections become chronic
		5. Symptoms may last for several months and may include:
			1. Fatigue
			2. Jaundice
			3. Enlarged Liver
	7. Hepatitis C Virus (HCV)
		1. Attacks the liver of the victim, causing liver damage
		2. About 80% of HCV infections become chronic
		3. Approximately 20% of HCV infections result in cirrhosis of the liver or liver cancer leading to liver failure
		4. A liver transplant or death are the only two results
	8. Route of Transmission
		1. Blood-borne pathogens cause infection by entering the bloodstream
		2. They are spread by contact with blood, other possible infectious material, broken skin, or the mucus membranes
		3. Mucus membranes are the lining areas of the body not covered by skin and include:
			1. The membrane inside the eyelid that surrounds the eye
			2. The inside of the nose or mouth c) The inside of the penis, vagina, or rectum
		4. Mucus membranes are very porous and allow the viruses to enter the body
		5. There is some risk created by the prolonged exposure of these fluids with unbroken skin
		6. Typical methods of infection are caused by direct exposure through:
			1. Unprotected sex
			2. Needle sticks
			3. Direct exposure of blood and other possibly infectious material to broken skin and mucus membranes by splashes or improper handling of infected body fluids
2. Prevention
	1. Personal protective equipment should be replaced when it is damaged, and cleaned and disinfected when it is dirty or contaminated
	2. Ensure that spills of blood or other personal infectious material are cleaned immediately when they occur
	3. Cover broken skin with bandages and other barriers to avoid inadvertent contact of these areas with contaminated fluids and items. Bandages should be part of your uniform; use them routinely for even the smallest cuts. Larger areas of broken skin should be covered with dressings. Even dry, cracked skin should be covered to prevent infections. Liquid bandages work well for larger areas of cracked skin or large abrasions.
	4. Don’t share needles of any kind. Needle sharing is, in fact, the number one method of HCV infection. Any item contaminated with blood or other possibly infectious material is a potential source of infection including:
		1. Razors
		2. Toothbrushes
		3. Other sharp items
	5. Avoid sexual exposure by not having sex with an infected person
	6. Avoid contact with possibly infectious body fluids through:
		1. Abstinence
		2. Monogamy
		3. Limiting the number of sexual partners
		4. Using barrier devices such as dental dams or condoms to prevent the direct contact of these fluids with the mucus membranes and skin
	7. Vaccinations
		1. BV vaccination will prevent HBV infection
		2. There is no vaccination for HCV or HIV
3. Precautions
	1. Assume that all persons are infected
	2. Use personal protective equipment when the potential for exposure to blood or other possibly infectious material exists. This equipment includes:
		1. Gloves
			1. Barriers for your hands
			2. Prevent blood from entering your body through breaks in your skin
			3. Care must be used when removing gloves so that the exterior of the glove does not come into contact with your skin
			4. After removing your gloves, you must always wash your hands
		2. Face Shields
			1. Face shields protect the mucus membranes of the face, and any broken skin on the face, from splashes
			2. They include visors, goggles, and glasses
		3. Face Masks
			1. Surgical-style prevents inhaling contaminants
				1. Most have a bendable nosepiece and an adjustable elastic strap
			2. A CPR mask is used to give breaths while doing CPR K.
4. Treatment
	1. Occupational Exposure – reasonable, anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties
		1. Parenteral – piercing mucous membranes or the skin through such events as needle sticks, human bites, cuts, and abrasions
	2. When occupational exposure occurs
		1. Remove the blood or possibly infectious material. Wash the affected area immediately. Flush the eyes, nose, or mouth with clean water
		2. Seek first aid or medical treatment, if necessary. Let the medical staff determine if you have been occupationally exposed. Time is of the essence. If preventive action for HIV is required, it is best to start within two hours of exposure
		3. Ensure the area is cleaned to prevent others from being exposed
		4. If a supervisor or coworker is available, let them see what happened, but don’t delay cleaning the area or seeking medical attention to let someone witness what happened
		5. Report the incident to your supervisor as soon as possible
		6. Get a baseline blood test done within ten days for any future workman’s compensation claims
5. Tuberculosis
	1. Tuberculosis (TB) is an infectious disease caused by bacteria. Unlike blood-borne pathogens, which are caused by viruses, TB is a potentially lethal infection of the lungs, although it infects other parts of the body on rare occasions
	2. Symptoms
		1. Common cough with a progressive increase in production of mucus
		2. Coughing up blood
		3. Fever
		4. Loss of appetite
		5. Weight loss
		6. Night sweats
		7. Sharp pain in the chest when breathing deeply or coughing
	3. Routes of Transmission
		1. TB is spread by inhaling particles containing the bacteria
		2. The particles are caused by coughing, sneezing, or speaking to someone in the infectious stage of the disease
	4. Prevention
		1. Do not inhale the bacteria
		2. Keep your immune system strong. Often the body can fight off TB exposures
	5. Precaution
		1. An officer should wear a surgical mask when in close contact with an infected person
		2. Infected persons must wear a mask when being transported outside of isolation, either in a hospital room or a secluded cell area
	6. Treatment is medication
6. Methicillin Resistant Stahpylococcus Aureus (MRSA)
	1. Common name for bacteria staph
	2. It refers to strains of this bacterium that have become resistant to the most common antibiotics used to treat them
	3. Potentially more dangerous and difficult to treat than a typical staph infection
	4. The strain of MRSA that is predominant in the Texas Department of Corrections still responds to several antibiotics
	5. Typically infects wounds, and is therefore most often seen in skin infections
	6. Can infect other parts of the body, including the blood, which can be fatal
	7. Symptoms
		1. Small red bumps that resemble pimples, boils, or spider bites
		2. Shortness of breath
		3. Fever
		4. Cough
		5. Chills
	8. Routes of Transmission
		1. Normally transmitted by wounds that allow the bacteria access to the body
		2. Generally transmitted by direct contact; the bacteria are not airborne
		3. Usually enters the body through the hands
		4. Sharp items can also be contaminated (the bacteria can enter the body when a person is cut by an infected item)
	9. Prevention – frequent hand washing helps
	10. Precautions
		1. Wear gloves whenever contact with another person’s wounds, sores, or wound dressings and bandages is possible
		2. Use a new pair of gloves for each offender to prevent the spread of bacteria from one offender to another
		3. Cover any wounds or breaks in your own skin with bandages to protect them from the bacteria
		4. Use antibiotic ointments to prevent infection in small wounds
		5. Remove possible sources of infection. Have all offenders dispose of soiled dressings and bandages properly. Ensure that disinfection procedures are strictly followed to prevent the spread of bacteria in:
			1. Barber shops
			2. Laundries
			3. Food services
			4. Housekeeping
	11. Treatment is medication
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| **Guided Practice \*** | **Disease Identification Group Activity** Divide the class into two teams. Each team will have a group representative. Say a symptom, prevention, precaution, or treatment of one of the diseases. The first group representative to raise his or her hand gets a chance to name the disease in question. Decide the number of questions each group representative must answer before rotating. Every student will act as a group representative, at least once. Decide a winning score and an award for the winning group. Use the Discussion Rubric for assessment.**Prison Clinic Activity**Each student will play the role of a prison doctor. Act as a corrections guard who is experiencing symptoms of one of the infectious diseases. The class will interview you as the patient. Be creative and describe a specific incident of exposure or be vague about the exposure and list the symptoms. The students will write their disease diagnosis, prescribe treatment, and include precautionary methods along with prevention tips. Use the Role Play Rubric for assessment. |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** |  |
| **Lesson Closure** |  |
| **Summative/End of Lesson Assessment \***  | * Infection Control Exam and Key
* Discussion Rubric
* Individual Work Rubric
* Role Play Rubric

**Accommodations for Learning Differences:** For reinforcement, students will keep a journal of vocabulary associated with this lesson and use their notes as a resource. Use the Individual Work Rubric for assessment. |
| **References/Resources/****Teacher Preparation** | Texas Department of Criminal Justice <http://www.tdcj.state.tx.us/> |
| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** |  |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** |  |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) | For enrichment, students will create a skit about a corrections clinic illustrating knowledge of infection control. Use the Individual Work Rubric for assessment. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSA |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)