Village of Decatur Village Safety Committee Meeting Minutes

Wednesday, February 20, 2024, at 12:00 P.M Village Hall, 114 N. Phelps Street Decatur, MI 49045

I. Clerk/Treasurer Duncan called the meeting to order at 12:09 P.M.

II. Roll Call

Clerk/Treasurer, Megan Duncan provided roll call; Village Manager, Christopher Tapper (excused), Chief of Police Thomas VanDerWoude, Sgt. Ted Rigg, Officer Tom Dahlquist, Officer Zackary Frank, Officer Kenneth Dunkerley, DPW Foreman, James Ebeling, DPW Team Leader, Tim Shroyer, DPW crew member, Gordy Myers, DPW crew member Alex Boitnott, DPW crew member Joe Whipple, Deputy Clerk/Treasurer, Natalie Davis, Administrative assistant, Shantel Pentland. Village President Elwaer (excused), President Pro Tem Jackson (excused), and Trustee Mead Jr. (excused).

III. Approval of Agenda

a. DPW Foreman Ebeling made a motion with support from Chief VanDerWoude to approve the Safety meeting agenda for February 20, 2024, and Safety Meeting Minutes from January 24, 2024, motion carried 13-0.

IV. Department Safety Topics – Blood Borne Pathogens, Power Point presentation by Christina Benson.

a. Christina Benson presented a Blood Borne and Airborne Pathogens power point to the Safety Committee. The US Department of Labor's Occupational Safety and Health Administration (OSHA) issued regulations to reduce or eliminate employee exposure to blood borne and airborne pathogens. The safety committee learned the difference between blood borne and airborne pathogens, how they are spread, standard precautions, prevention and control, and post exposure treatment. *Attached power point slides to the minutes for public viewing. *

V. Safety Committee Comments

a. No safety committee comments given.

VII. Adjournment

a. DPW Team Leader Shroyer made a motion with the support from DPW Foreman Ebeling to adjourn the meeting at 12:59 P.M., motion carried 13-0. Minutes submitted by Megan Duncan, Village Clerk/Treasurer.



BLOOD BORNE AND AIRBORNE PATHOGENS

Emergency Care & Safety Institute

Why are We Here?



• In short....its the Law.

- US Department of Labor's Occupational Safety and Health Administration(OSHA) issued regulations to reduce or eliminate employee exposure to blood borne and airborne pathogens.
 - OSHA Blood borne Pathogens Standard (29 CFR 1910.1030)
 - OSHA Respiratory Protection Standard (29 CFR 1910.134)



What is a Pathogen?

- Any agent that produces diseases.
 - Viruses
 - Bacteria
 - Fungi
 - Protozoa
 - Prions
 - Parasitic Worms
 - Rickettsia

What is a Blood borne Pathogen?

- Disease causing microorganisms that are carried in the blood.
 - Viruses
 - Bacteria
 - Parasites

- Common Blood borne Pathogens
 - Hepatitis B (HBV)
 - Hepatitis C (HCV)
 - Human Immunodeficiency Virus (HIV)

- Transmitted through contact with contaminated body fluids.
 - Blood (any fluid contaminated with blood
 - Serum
 - Plasma
 - Uterine/vaginal secretions
 - Semen
 - Amniotic Fluid
 - Cerebral Spinal Fluid (CSF)
 - Pleural fluid
 - Synovial fluid
 - Pericardial fluid

What is an Airborne Pathogen?

- Any disease causing agents that spread infection through mechanisms such as droplets or dust.
 - Viruses
 - Bacteria

- Routes of transmission:
 - Cough
 - Sneeze
 - Talking
 - Aerosol-generating procedures

- Common airborne pathogens:
 - Common Cold
 - Influenza
 - Tuberculosis
 - COVID-19



Chances of Becoming Infected

• Becoming infected depends of several factors.

- Presence of the pathogen
- Type of pathogen present
- Type of injury of contact
- Level of the pathogen in the patient
- The host's current health
- Vaccination status

Routes of Transmission

• There are 5 main routes of transmission.

Contact
Droplet
Air
Food
Vector

Contact Transmission

- Most common
- Direct or Indirect
 - Direct- person to person. Direct contact from an infected person to broken skin of a non-infected person.
 - Indirect- contact with contaminated items such as used sharps, bed linens, soiled dressing

Droplet Transmission

• Next most common after contact transmission.

- Occurs when contaminated droplets are expelled through coughing, sneezing, talking, or aerosolgenerating procedures.
- Droplets can travel 3-6 feet from the infected person.
- Can also be transferred from objects to mucous membranes.



Airborne Transmission

• Transmission of micro droplets.

- Similar to droplet transmission.
- Micro droplets are expelled from an infected person via coughing, sneezing, talking.
- Enter the host via the respiratory tract, but does not always cause respiratory infections.



Vector Transmission

• Transmission from animals or insects to humans.

- Animals-Birds, rodents, bats, cows, etc.
- Insects- Flea, mosquitoes
- After infection from an animal or insect, some pathogens can be spread from human to human.

• Examples:

- Rabies
- Malaria
- West Nile Virus





Hierarchy of Prevention Controls

 OSHA and CDC have developed a hierarchy of controls to prevent exposure

- Administrative Controls
- Engineering Controls
- Work Practice Controls
- Personal Protective Equipment (PPE)

Administrative Controls



- Polices and programs that manage and support the infection prevention program.
- Examples:
 - Exclusion of ill employees
 - Infection prevention
 - Vaccination programs

Engineering Controls

- Effort to design safety into the tools and workspace organization.
 - Handwashing stations
 - Eye stations
 - Sharps containers
 - Biohazard labels





Contaminated Sharps

- Any contaminated object that can penetrate the skin.
 - Needles
 - Scalpels
 - Trauma shears
 - Broken glass



Stop the spread of germs that make you and others sick!



Cough or sneeze into your sleeve, not your hands



Cover your mouth and nose with a tissue and put your used tissue in the waste basket

Clean your hands after coughing or sneezing



Wash your hands with soap and warm water, for at least 20 seconds



Clean hands with alcohol-based hand rub or sanitizer

Work Practice Controls

- Behaviors necessary to use engineering controls effectively.
 - Using eye wash stations
 - Washing you hands
 - Cough etiquette
 - Respiratory hygiene
 - Cleaning work surfaces and equipment

Personal Protective Equipment (PPE)

- Specialized clothing and equipment worn or used for protection against pathogens or hazards.
- To be worn when exposure risk is present in spite of engineering and work practice controls.
- Must be supplied by employer.
- Protects against skin and mucous membrane exposure and puncture wounds.
- Prevents blood or OPIM's from contacting or passing through to work or street clothes, undergarments, skin, eyes, mouth or other mucous membranes.

- Gloves
- Mask
- Gown
- Face shield/goggles



Standard Precautions

- Aggressive, standardized approach to infection control.
- Used on ALL patients regardless of suspected or confirmed diagnosis or presumed infection status.
 - 1. Hand hygiene- Wash hands after every patient contact regardless of whether gloves are worn or not.
 - 2. Donning PPE including gloves, gown, surgical mask, respirators and eye/face protection depending on anticipated patient interaction.
 - 3. Ensure respiratory hygiene/cough etiquette
 - 4. Donning surgical mask, respirator, and/or eye protection to protect mucous membranes (eyes, nose, and mouth) during activities that may produce potentially infections splashes or sprays.
 - 5. Handling contaminated equipment in a way that prevents further contamination and transmission.
 - 6. Routinely cleaning and disinfecting equipment and surfaces.

Transmission-Based Precautions

In addition to standard precautions, transmission-based precautions provide and additional layer of protection.
 Used for patients with known or suspected infections.
 Three levels of transmission-based precautions

 Contact precautions
 Droplet precautions
 Airborne precautions

Contact Precautions

- Used for infections spread by skin-toskin contact or contact with possibly infected surfaces.
- 1. Put on PPE prior to approaching patient.
- 2. Wear gloves
- 3. Wear gown
- 4. Wash hands after contact even if gloves are worn.





Droplet Precautions







- Used in addition to contact precautions.
- For infections spread in large droplets by coughing, sneezing, talking, or aerosol-generating procedures.
- 1. Wear surgical mask.
- 2. Wear eye protection.
- 3. Wear face shield.
- 4. If tolerated, place surgical mask on patient











Airborne Precautions

- Used in addition with droplet precautions.
- For infections that spread via small particles.
 - Chicken Pox
 - TB
 - Measles
 - SARS
- 1. Instead of a surgical mask an N-95 respirator or higher is required.

N-95 (and higher) Respirators

- Many different styles.
- N-95 mask filters out 95% of airborne particles. (Based on particle size)
- The higher the N number the more effective.
- Must be fit tested annually.
- Fit test is specific to the mask that is tested. Change in mask brand needs a new fit test.



Blood borne Pathogens

- Disease-causing microorganisms, such as viruses, bacteria, or parasites, that are carried in blood and other body fluids.
- Common blood borne pathogens:
 - HIV (Human Immunodeficiency virus)
 - Hepatitis B
 - Hepatitis C





Transmission

- Direct or indirect contact with blood or other potentially infectious materials (OPIM's)
- Blood or OPIM's come into contact with mucous membranes or non-intact skin.
 - Cuts
 - Abrasions
 - Burns
 - Rashes
 - Acne
 - Paper-cuts
 - Hangnails
- Other Routes of Transmission:
 - Mother to Infant (through placenta, exposure during birth or breast milk)
 - Sexual contact with infected person (oral, vaginal, or anal)
 - Sharing contaminated needles, syringes or other IV drug equipment.
 - Needle sticks or penetrating injuries by other sharp objects.

Hepatitis Viruses

- Hepatitis means inflammation of the liver.
- Can be caused by drugs, poisons, toxins, or viral
- 5 different hepatitis viruses (A, B, C, D, & E)
 - Only 2 are blood borne pathogens (Hepatitis B & C)
- Leading cause of liver cancer and liver transplants in the U.S.

Hepatitis B (HBV)

- Clinical Presentation:
 - Incubation period of 45-160 days
 - Signs and symptoms:
 - Jaundice
 - Malaise
 - Loss of appetite
 - Nausea & Vomiting
 - Abdominal pain
 - Gray-colored stools
 - Joint Pain



Hepatitis B (cont.)

Treatment

- Addressed through supportive care
- Antivirals used only in some cases
- Liver transplant may be necessary
- $\,\circ\,$ No cure for HBV.
- Post exposure Treatment
 - Wash the affected area with warm water and soap.
 - Flush affected mucous membranes with copious amounts of water
 - Immunoglobulin may be given
 - Vaccination may be given (if not already had one)

- Prevention and Control
 - Standard precautions
 - Contact precautions
 - Vaccination is the best protection
- Vaccination
 - Vaccine has been available since 1982.
 - Does not contain live components.
 - Three shot series given over 6 months
 - 1st shot followed by 2nd shot 1 month later and 3rd shot is 5 months after the 2nd.
 - Immunity is 87% after dose 2 and 96% after dose 3.

Hepatitis C (HVC)

- \circ Most common chronic blood borne infection in the U.S.
- Used to be associated with blood transfusion, but that is rare now days.
- Most infections occur from IV drug use.
- Clinical Presentation
 - Incubation period of 14-180 days
 - Signs and symptoms:
 - Jaundice
 - Malaise
 - Loss of appetite
 - Nausea & Vomiting
 - Abdominal pain
 - Gray-colored stools
 - Joint Pain

Hepatitis C (cont.)

- Treatment
 - Addressed through supportive care
 - Antivirals used only in some cases
 - Liver transplant may be necessary
- Post exposure Treatment
 - Wash the affected area with warm water and soap.
 - Flush affected mucous membranes with copious amounts of water
 - No post exposure prophylaxis is recommended.
 - Periodic testing of liver function may be needed.

- Prevention and Control
 - Standard precautions
 - Contact precautions

- Vaccination
 - Currently no vaccination available for Hepatitis C.

Human Immunodeficiency Virus (HIV)

- HIV leads to AIDS(Acquired Immunodeficiency Syndrome)
- A condition in which the body in unable to fight off infection or destroy mutated cells.
- Leaves the infected person open to opportunistic infections.
- People who engage in risky behavior (unprotected sex, drug abuse) are at higher risk.
- Can be transmitted to infant from infected mother.
- AIDS diagnosis occurs after a positive HIV test and T-helper cell counts (CD4 cells) drop below 200.

HIV (cont.)

- Clinical Presentation
 - Incubation period of 1-15+ years to develop into AIDS.
 - Detectable antibodies after 1 month
 - Infected individuals my show no symptoms
 - Those that do show symptoms:
 - Flu-like
 - Night Sweats
 - Headache
 - Fever
 - Fatigue
 - Swollen lymph nodes
 - Muscle/Joint pain

- Treatment
 - May be given antiretroviral medications to slow the progress of the disease.
 - Supportive care for other health issues.
- Post exposure Treatment
 - Wash the affected area with warm water and soap.
 - Flush affected mucous membranes with copious amounts of water
 - No cure for HIV/AIDS
 - Post exposure prophylaxis is not currently recommended, but antivirals can be given. Must be started within 72 hours of exposure.

HIV (cont.)

- Prevention and Control
 - Standard precautions
 - Contact precautions

- \circ Vaccination
 - Currently no vaccination available for HIV/AIDS.

Exposure to Blood borne Pathogens

- If you are exposed to a blood borne pathogen, a confidential medical evaluation is to be made immediately available to you.
 - Medical evaluation should occur immediately as some prophylaxis treatments are time sensitive.
 - Medical evaluation MUST be confidential and protect the employee identification and test results.
- If exposure occurs:
 - The incident must be reported immediately.
 - Report must be filled out.
 - After an incident is reported, employer will need to identify and document the source individual and obtain consent and make arrangements to have that individual tested as soon as possible.
 - Your blood will be tested for HIV, HBV, and HCV with consent.



Airborne Pathogens

- Diseases that can be transmitted by droplet or airborne routes.
- Droplets are formed when people talk, cough, or sneeze, and during aerosolgenerating procedures
 - Aerosol-generating procedures include:
 - Endotracheal intubation
 - Supraglottic airway insertion
 - Aerosol medication delivery
 - Suctioning
 - Cardiopulmonary resuscitation

Also possible to become infected through a contact route when droplets land on surfaces and the surfaces are touched.

Influenza (Seasonal)

- \circ Viral Illness
- $\circ \ Flu$
- Easily spread from person to person
- Several types/strains exist
- Route of Transmission
 - Transmitted through droplets or dust
- Incubation Period
 - $\circ~$ 1 to 14 days

Influenza (cont.)

- Susceptibility
 - Infection rates are highest for children and adult 65+
 - Based on a number of factors
 - Vaccine
- Clinical Presentation
 - \circ Fever
 - Malaise
 - Muscle aches
 - Body aches
 - Sore throat
 - Runny nose
 - Cough
 - Diarrhea
 - Eye Infections
 - Pneumonia
 - Respiratory distress

- Post exposure Treatment
 - Proper handwashing; use hand sanitizer if running water is not available

- Prevention and Control
 - Standard Precautions
 - Contact Precautions
 - Droplet Precautions
 - Vaccine is available annually
 - Prescription antiviral drugs

Tuberculosis (TB)

- Caused by the bacteria Mycobacterium tuberculosis.
- 85% of infections happen in the lungs; 15% elsewhere (CNS, Kidneys, Lymph)
- Latent TB Infection-live inside a human host for years with no health effects
- Active TB- immune system can no longer stop the bacteria from multiplying
- Route of Transmission:
 - Person to person
 - Droplets/Airborne
- Incubation Period:
 - 2-10 weeks

TB (cont.)

- Susceptibility
 - Anyone is susceptible
 - Immunocompromised; person on longterm corticosteroids, or have HIV are at higher risk
- Clinical Presentation
 - Cough
 - Production of sputum
 - Weight loss
 - Weakness
 - Fever
 - Night sweats
 - Malaise
 - Chest pain
 - Coughing up blood (late sign)

- Post exposure Treatment
 - Daily dose of isoniazid will prevent the development of an active infection almost 100% of the time.
- Prevention and Control
 - Use of proper respiratory protection
 - Annual TB skin test
 - No vaccine for TB

Meningitis

- Inflammation of the protective membranes covering the brain and spinal cord
- Caused by
 - Virus most common
 - Bacteria highly contagious; exponentially more serious than viral
 - Fungus
 - Other organisms
- Route of Transmission
 - Direct contact
 - Airborne(droplet) route
- Incubation Period
 2-10 days





Meningitis (cont.)

- Susceptibility
 - Anyone
 - Infants and toddlers at highest risk for bacterial
 - Pre-teens and adolescents
 - People living in close quarters w/others
- Clinical Presentation
 - Fever
 - Nausea and Vomiting
 - Petechial rash
 - Stiff neck
 - Photophobia
 - Headache
 - Altered Mental Status

- Post exposure Treatment
 - Modalities are dependent on the type
 - Treatment is mostly symptomatic
 - May include the early use of antibiotics
 - Vaccination following exposure may provide some protection.
- Prevention and Control
 - Airborne precaution should be taken, unless known to be bacterial, then standard and droplet precautions are sufficient
 - Vaccination is available for some forms.

Severe Acute Respiratory Syndrome (SARS)

- First appeared in southern China in November of 2002.
- Viral respiratory disease
- Route of Transmission
 - Suspected to be transmitted via all routes, including airborne
- Incubation period
 - 3-10 days
- Susceptibility
 - Anyone is susceptible

Severe Acute Respiratory Syndrome (SARS)(cont.)

- Clinical Presentation
 - Fever (temp over 100.4)
 - Headache
 - Body aches
 - Cough; may develop 2-7 days after exposure
 - Diarrhea 20% of patients
 - Shortness of breath
 - Severe pneumonia

- Post exposure Treatment
 - Exposed persons should watch for development of fever and/or respiratory symptoms for 10 days after exposure.
- Prevention and Control
 - Standard precautions
 - Contact precautions
 - Airborne precautions (N-95)
 - All equipment, vehicles and surfaces should be cleaned and disinfected.
 - No vaccine is available

Varicella (Chickenpox)

- Highly contagious
- Caused by varicella-zoster virus
- Commonly seen in spring
- Route of Transmission
 - Direct contact
 - Exposure to airborne droplets
 - Indirect contact
- Incubation Period
 - 10-21 days





 Can be transmitted up to 5 days before the appearance of the rash and will remain transmittable until the lesions have crusted over.

Varicella (cont.)

- Susceptibility
 - Children younger than 15 yrs
 - Anyone not vaccinated or who has never had the disease
- Clinical Presentation
 - Fever
 - Malaise
 - Itchy rash of blister-like sores; first appears on trunk and face.

- Post exposure Treatment
 - If person is vaccinated or has had the disease
 - Report the incident
 - Watch for signs and symptoms for 21 days
 - If the person has not been vaccinated or has not had the disease
 - perform serological testing
 - Offer the vaccine within 3-5 days
- Prevention and Control
 - Vaccine is available
 - Standard precautions
 - Contact precautions
 - Airborne precautions

Measles

- Viral disease
- Highly contagious- 90% chance of contracting if exposed and not immune.
- \circ Can live on surfaces for up to 2 hours
- Route of Transmission
 - Airborne
 - Aerosol droplets
- Incubation Period
 - 7-21 days; Average is 14 days





Measles (cont.)

- Susceptibility
 - Immunocompromised individuals
 - Non-immunized individuals
- Clinical Presentation
 - Fever
 - Runny nose
 - Rash(3-5 days after respiratory symptoms and fever start)
 - Cough
 - Red, watery eyes
 - General malaise
 - White spots with blue centers inside mouth
 - Ear infection
 - Pneumonia
 - Encephalitis

- Post exposure Treatment
 - Vaccination within 72 hours
 - Immunoglobulin within 6 days of exposure

- Prevention and Control
 - Vaccination is available
 - Standard precautions
 - Contact precautions
 - Droplet precautions

Mumps

- Viral disease
- Vaccine preventable
- Route of Transmission
 - Airborne
 - Contact with saliva or respiratory droplets
- Incubation Period
 - 14-25 days
- Susceptibility
 - Immunocompromised people
 - Non-immunized people



Mumps (cont.)

- Clinical Presentation
 - Unilateral or bilateral facial swelling
 - Muscle aches
 - General malaise
 - Headache
 - \circ Fever
 - Earache
 - Tenderness on palpation of facial area
 - Meningitis
 - Stiff neck
 - Encephalitis
 - Testicular inflammation
 - Ovarian inflammation
 - Pancreatitis
 - Myocarditis
 - Kidney inflammation
 - Deafness

- Post exposure Treatment
 - Based on prophylaxis
 - Vaccination recommended
- Prevention and Control
 - Vaccination is available
 - Standard precautions
 - Droplet precautions

Rubella

- Viral disease
- AKA- German Measles
- Harmful to pregnant women
- Can cause a variety of birth defects including deafness, mental retardation, internal organ damage, cataracts, and heart abnormalities
- Route of Transmission:
 - Airborne
 - Contact with droplets from respiratory secretions
 - Direct or indirect contact with contaminated surfaces
- Incubation Period
 - 12-23 days
 - Infectious from 7 days prior to rash and 7 days after onset



Rubella (cont.)

- Susceptibility
 - Immunocompromised people
 - Non-immunized people
- Clinical Presentation
 - Enlarged, tender lymph nodes
 - Muscle aches (especially joints)
 - General malaise
 - Headache
 - \circ Fever
 - Stuffy or runny nose
 - Inflamed, red eyes
 - Pink rash beginning on the face and spreading to trunk and extremities

- Post exposure Treatment
 - Supportive
 - Vaccination is recommended

- Prevention and Control
 - Vaccination is available
 - Standard precautions
 - Contact precautions
 - Airborne precautions

Hantavirus

- Viral disease
- No person-to-person transmission has occurred.
- Route of Transmission
 - Airborne from inhaling the virus from rodent urine and droppings that are contaminated
 - Contact with droppings, urine or nesting materials of rodents.
 - Bite from mouse or rat.
- Incubation Period
 - Few days to 6 weeks; average of 7-14 days
- Susceptibility
 - Anyone is susceptible

Hantavirus (cont.)

- Clinical Presentation
 - Fever
 - Muscle aches
 - Headache
 - Chills
 - Nonproductive cough
 - Nausea and vomiting
 - Diarrhea
 - Abdominal pain
 - Dizziness
 - Dyspnea
 - Tachypnea
 - Tachycardia

- Post exposure Treatment
 - No specific treatment
 - Treatment of symptoms
 - Medical surveillance
- Prevention and Control
 - Provide training concerning transmission
 - Wear gloves when cleaning up rodent droppings
 - Clean contaminated equipment or furniture outside



Exposure Control Plan

- Guidelines for employees to know what to do when an exposure occurs.
- Key provision of the OSHA Blood borne Pathogens Standard
- Required to be reviewed and updated at least annually
- Must include, at minimum:
 - 1. Determination of employee exposure. It will contain a list of all job classifications in which employees have potential for exposure.
 - 2. Hierarchy of control and/or prevention methods
 - 3. The schedule and method of implementation for each of the following:
 - Methods of compliance
 - HIV, HVB, HVC research labs and production facilities
 - Hep B vaccination
 - Post exposure management
 - Communication of hazards to employees
 - Record keeping
 - 4. Procedures for evaluation exposure incidents.

If you have an exposure:

- Clean the site immediately
 - If the site is percutaneous, clean the site immediately with warm water and soap.
 - DO NOT use bleach
 - DO NOT squeeze the wound site
 - For mucosal exposure, flush with copious amounts of water
- Report the incident to your supervisor as soon as possible
- Complete a post exposure risk assessment
 - Done by a medical professional
- Manage the disease
 - Look for signs and symptoms
 - Complete follow up testing and/or counseling

If you have an exposure (cont.)

- Fill out post exposure documentation. Should include:
 - Date and time of exposure
 - Exposure circumstance
 - Type of device involved (if applicable)
 - Route of exposure
 - Body substance involved
 - Volume and duration of the contact (estimated)
 - Source information
 - Exposed personnel information



Questions??

Comments?

Concerns??