

# River Falls EMS Exposure Control Plan



Group Training March 2008



# Agenda/Topics to Be Covered

- ◆ Definitions
- ◆ Program Administration
- ◆ Determination of Exposure
- ◆ Implementation of the Plan
- ◆ Hepatitis B Vaccine
- ◆ Post Exposure Evaluation & Follow up
- ◆ Evaluating the circumstances of the exposure
- ◆ Hazards and employee training
- ◆ Recordkeeping
- ◆ Influenza
- ◆ Norovirus
- ◆ Tuberculosis

# Definitions



- ◆ OPIM :
  - Other Potentially Infectious Materials
- ◆ Significant Exposure:
  - Any puncture of the skin by a needle or other sharp object that had previous contact with a patient's blood or OPIM
  - Blood or OPIM splattered in eyes or mucus membranes
  - Contamination of open skin with a patient's blood or OPIM
  - The transportation of a patient with a known airborne infectious disease
- ◆ Contaminated:
  - The presence of blood or other potentially infectious materials on an item or surface

# Definitions



- ◆ Exposure incident:
  - A specific part of the employees body that has had contact with blood or other potentially infectious materials
- ◆ Potential exposure:
  - When contact can reasonably be expected with blood or OPIM
- ◆ Regulated Waste:
  - Blood, OPIM, or contaminated items that would release blood or OPIM, or items caked with blood or OPIM and are capable of releasing these materials during handling.



# Program Administration

- ◆ Officers are responsible for implementation.
- ◆ Director is classified “INFECTIOUS CONTROL OFFICER.”
- ◆ RF EMS provides PPE and equipment as needed for employees.
- ◆ Officers required to:
  - Maintain Personnel medical records
  - Train employees on this plan annually
  - Revise the plan as needed
  - Show records to OSHA representatives

# Determination of Exposure

- ◆ Jobs within RF EMS that could have exposure:
  - EMT-Basics
  - EMT-Intermediate Tech's
  - EMT-Intermediates
  - EMT-Paramedics & RN's
  
- ◆ Jobs outside RF EMS that could have exposure:
  - River Falls First Responders
  - River Falls Fire Department Members
  - RFPD patrol officers
  - UWRF campus security
  - Any mutual aid pre-hospital or hospital personnel

# Implementations of the Policy

## ◆ Universal Precautions

- Gloves must be worn on every call
- Jumpsuits or uniforms must be worn on every call
- Crew members must wash their hands after each call
- CPR must be performed using appropriate PPE

## ◆ Exposure Control Plan

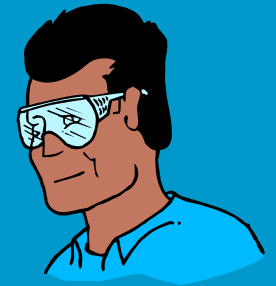
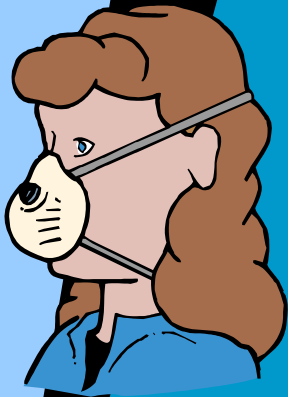
- Annual requirement for all members
- The plan is in all Operational Books & on our Website
- Officers need to do annual updates on:
  - Technology changes that reduce exposures
  - Assess new medical devices that may reduce exposures
  - Gain input from employees on selection of appropriate work practice controls.

# Implementations of the Policy

## ◆ Engineering Controls & Work Practices

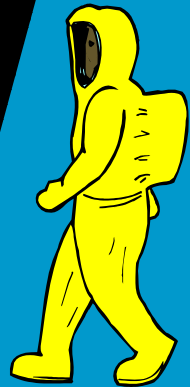
- Used to prevent or minimize exposures
  - Protect IV needles
  - Needle-Less IV systems
  - Needle Safe Syringes
  - Needle Safe Lancets
- Sharps containers inspected/replaced biweekly
- Controls and Practices are changed based on past medical records, interviews, and committee activities
- New products and procedures can be brought up and discussed at open monthly meetings by members
- All new products and practices are implemented by the service director or medical director.

# Implementations of the Policy



## ◆ Personal Protective Equipment

- Provided to all employees at no cost
- 2 types:
  - Non-Disposable: Jumpsuits, uniforms, jackets
  - Disposable: gloves, tyvek suits, booties, N95/99 masks, eye protection
- Non-Disposable PPE is issued to members after orientation but before operating in the ambulance
- Reduction in performance of non-disp PPE should be brought to the attention to an officer immediately
- Non-Disp PPE should remain in ambulance bay to reduce contamination of personal items.



# Implementations of the Policy

## ◆ Personal Protective Equipment

- Disposable PPE is located in ambulances and storage areas in the facility
- Employees are responsible to notify officers of any deficiency with disposable equipment or PPE
- Any gloves that are torn, punctured or contaminated should be removed and replaced immediately
- Wash hands after removing gloves after each call
- During flu season, wear a N95 mask and place one on the patient too

# Implementations of the Policy

## ◆ Handling used PPE is as follows:

### ■ Non-Disposable:

- Any contaminated clothing or garments should be removed immediately and placed into a biohazard bag
- The infectious control officer must be notified immediately
- Any other non-disposable PPE may be washed at the ambulance station or hospital

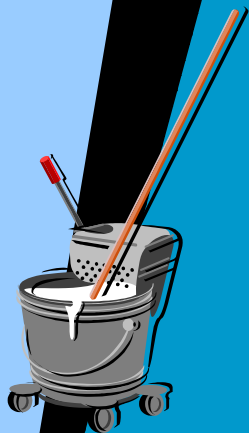
### ■ Disposable:

- All disposable PPE is discarded
- Non-contaminated PPE can be thrown in garbage
- All contaminated PPE must be thrown in biohazard bags in the ambulances or at the hospital

# Implementations of the Policy

## ◆ Housekeeping

- Regulated waste is placed in biohazard containers
  - Soiled trauma dressings
  - Suction canisters
  - Emesis basins
  - Soiled linen
- Sharps are placed immediately into sharps containers
- Sharps containers are located in each ambulance and in each medical kit/Thomas Pack
- Full sharps containers are placed in biohazard containers at RFAH
- Broken glassware should be swept into a dust pan and placed into a sharps container



# Implementations of the Policy

## ◆ Housekeeping

### ■ Ambulance Cleaning

- Adhere to universal precautions
- Wear heavy rubber gloves or double glove
- Soak up excess blood, etc with towels and dispose in bio bag
- For airborne diseases, spray Lysol disinfectant into the air
- Wash floor with 25% bleach or Cavicide solution
- Wash gurney and walls in ambulance as needed.
- Open ambulance door to ventilate

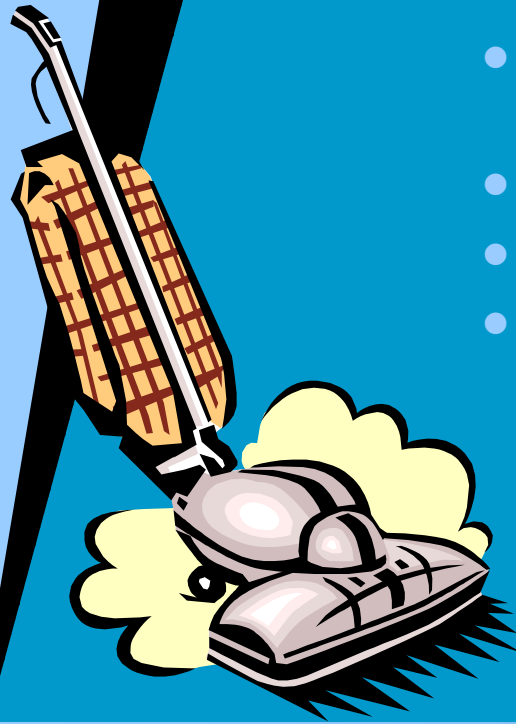


# Implementations of the Policy

## ◆ Housekeeping

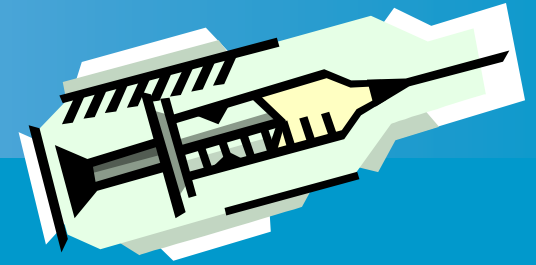
### ■ Equipment Cleaning

- Adhere to universal precautions
- Dispose of all single use equipment appropriately
- Wipe off excess fluids on non-disposable equipment with towels and dispose of in bio bags
- Wash all non-disposable equip with Cavicide solution
- Dispose of all fluids in the toilet at the hospital soiled room
- Ensure all sharps are disposed of appropriately





# Hepatitis B Vaccine



- ◆ Provided at no cost to ambulance employees unless already vaccinated
- ◆ Any person declining vaccination must sign waiver
- ◆ Vaccination done at RFAH/MC or Pierce Co. Health
- ◆ Antibody testing will be done 2 months after last shot
- ◆ Antibody testing will be done at RFMC

# Post Exposure Evaluation

- ◆ If an exposure occurs, notify the infectious control officer immediately (officer on call will work as well)
- ◆ An immediate and confidential medical evaluation will be done by the receiving hospital.
- ◆ The following will be performed:
  - Document exposure route and how it occurred
  - Identify and document source individual
  - Obtain consent and test source individual for HIV, HCV, HBV
  - Assure exposed employee obtains results of source individual (depending on certain disclosure laws)
  - Test exposed employee's blood for HIV, HCV, HBV
  - Document all results



# Administration of Post Exposure

- ◆ RF EMS needs to ensure all medical records are up to date and filed for each person
- ◆ Officers are responsible to provide the health care professional viewing the exposed employee with:
  - Employee's job description
  - Route of exposure
  - Circumstances of exposure
  - Source individual's test results
  - Affected employees medical records, including vaccinations
- ◆ RF EMS or the receiving hospital will provide the employee with a copy of the health care professional's opinion within 15 working days



# Evaluating the Circumstances

- ◆ RF EMS will review the following circumstances:
  - Engineering controls and devices used at the time
  - Work practices followed
  - Type of PPE used
  - Location of incident
  - Procedure being formed at the time
  - Employees current training level
- ◆ RF EMS will maintain a sharps injury log containing the following: (note: patient confidentiality plays a factor)
  - Type and brand of device used at the time
  - Area where exposure occurred (residence, ambulance, etc)
  - Explanation of how injury occurred



# Hazards and Employee training

- ◆ All employees who have potential exposure to bloodborne and/or airborne pathogens must receive this training annually.
- ◆ River Falls Ambulance may supply training to outside organizations, which have exposure to pathogens.
- ◆ All employees will be given an opportunity to review the services PPE, needles, biohazard labels and ask any questions.





# Recordkeeping



- ◆ Training records are kept for a minimum of 7 years
- ◆ Medical records are required by each employee under OSHA 29 CFR 1910.20 “Access to Employee Exposure and Medical Records”
- ◆ The medical records are kept confidential
- ◆ Medical records are kept the duration of employment, plus an additional 30 years
- ◆ OSHA records are maintained under 29 CFR 1904
  - Needlesticks, cuts, exposures to airborne or OPIM
  - Confidential cases are logged as “Privacy Cases”

# INFLUENZA



- ◆ **Respiratory Infection**
- ◆ **Spread through contact with an infected person during coughing and sneezing**
- ◆ **1 to 5 days from exposure to onset of symptoms**
- ◆ **Infectious up to 24 hours *before* symptoms appear**
- ◆ **Occurs October through April in North America**

# INFLUENZA

## Influenza IS...

- Fever
- Chills
- Body aches
- Sore throat
- Non-productive cough
- Runny nose
- Headache

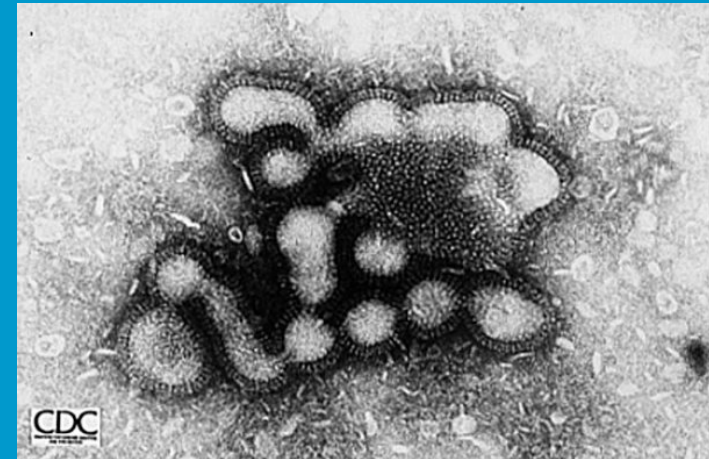
## Influenza IS NOT...

- “Stomach Flu”
- Cause of Diarrhea
- Treated with antibiotics
- Transmitted by ingestion of contaminated food



# INFLUENZA

- ◆ **Type A**
  - moderate to severe illness
  - animals and human
  - all age groups
- ◆ **Type B**
  - milder epidemic
  - humans only
  - primarily affects children
- ◆ **Type C**
  - no epidemics
  - rarely reported in humans



# INFLUENZA

- **36,000 deaths nationally every year**
  - ✓ 6<sup>th</sup> leading cause of death
  - ✓ #1 Vaccine preventable death
  - ✓ Kills as many or more than breast cancer and 3x as many as AIDS
- **Estimated 5-20% of the population gets the flu**
- **Vaccine available**
- **High risk:**
  - Very young
  - Very old
  - Fragile immune systems
  - Pregnant women

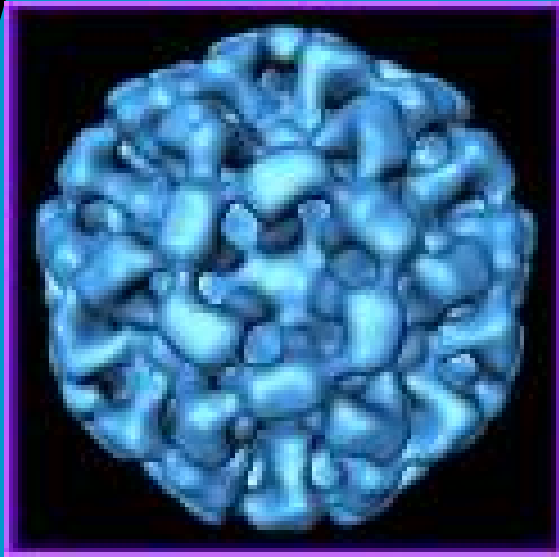


# INFLUENZA 5 Great Ways to FIGHT FLU



- 1. Get an influenza shot every year.**
  - The vaccine is **SAFE** and you **CANNOT** get influenza from the shot.
  - About two weeks after vaccination antibodies develop to protect you, our patients, and your family.
  - It is never too late-typically influenza peaks between late December and early March and can last as late as May.
- 2. Stay home if you're sick!**
- 3. Cover your coughs and sneezes.**
- 4. Keep your hands clean!**
- 5. Practice good health habits**
  - **Sleep, Get Active, Manage Stress, Drink Plenty of Fluids, and Eat Nutritious Food!**

# NOROVIRUS



- ◆ **Approximately 23 million cases annually**
- ◆ **At least 50% of foodborne outbreaks**

# NOROVIRUS



## Symptoms

- ◆ Vomiting
- ◆ Watery, non-bloody diarrhea
- ◆ Abdominal cramps
- ◆ Nausea
- ◆ Headache
- ◆ Low grade fever
- ◆ Dehydration

## Characteristic

- ◆ Incubation: 24-48 hours
- ◆ Lasts: 24-60 hours
- ◆ Diagnosed by stool specimen (best 48-72 hours after onset)
- ◆ Contagious: Symptom onset up to 48 hours after

# Why is Norovirus an Issue?

## Highly Contagious!

- Fecal–Oral (water/food), environmental, direct
- Small number of particles may result in infection
- Easily passed from person to person
- Good evidence exists for aerosolization of vomitus (droplet)
- Viral shedding can occur for up to 2 weeks

# Why is Norovirus an Issue?

## Immunity

- Mechanism of immunity unclear
- Strain-specific
- Only lasts several months
- Some studies show O blood group being at largest risk

# Why is Norovirus an Issue?

## Environmentally Tough

- Survive freezing and heating to 140 degrees
- Stable in 10 parts per million (ppm) chlorine-  
> chlorine used in public water systems
- Persist for weeks on surfaces and in contaminated water
- Remain viable up to 12 days in carpeting-  
steam clean vs. vacuuming in an outbreak situation
- Resistant to most common cleaning solutions
- Cruise ship phenomena

# Management of Norovirus

- **Contact Precautions**
- **Mask & Eye protection if actively vomiting or explosive incontinent diarrhea**
- **Wash uniforms after contact with known infected person**
- **Disinfect high touch surfaces THOROUGHLY**

# TB Policy



- ◆ TB is carried through the air in a droplet about 1-5 microns in size.
- ◆ The droplets are generated when a person with TB coughs, speaks, breathes, or spits.
- ◆ Signs & Symptoms include:
  - Productive cough that lasts more than 2 weeks
  - Coughing up blood
  - Weak/lethargic
  - Loss of appetite
  - Night sweats or high fever



# TB Policy

- ◆ Workplaces with high incidents of TB:
  - Health care settings
  - Correctional institutions
  - Homeless shelters
  - Long-term facilities for the elderly
  - Drug treatment center
  
- ◆ Universal precautions:
  - All attendants should wear a TB (N95 or N99) mask
  - Place a mask on the patient
  - Place all fluids in a biohazard container



# TB Policy

- ◆ Report any exposure to known TB to Infectious Control Officer immediately.
  
- ◆ Medical Surveillance:
  - Initial baseline screening at start of employment
  - Annual screening
  - Retesting every six months for employees that were exposed to TB in the work setting

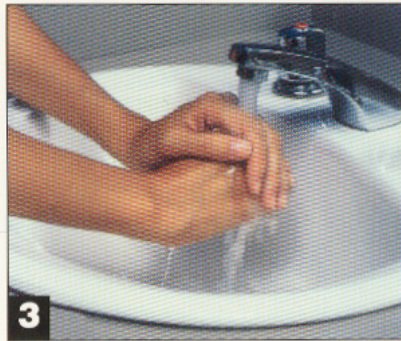
# The General Rule!!

- ◆ “Hand Washing is the single most important means of preventing the spread of infection”  
- CDC



## 5 basic steps to handwashing

1. Wet hands with water then add soap.
2. Use friction to generate lather and wash hands for at least 10 seconds.
3. Rinse well under a stream of water.
4. Dry hands thoroughly.
5. Turn off faucet with paper towel.



## When to Wash Your Hands:

- Before and after patient contact
- Beginning and end of the work day
- Before and after using gloves
- Before eating, smoking, or handling medications
- After using the toilet
- After wiping the nose or touching the face
- After touching contaminated surfaces





# Questions??