



**City of Winchester  
Fire & Rescue Department  
STANDARD OPERATING PROCEDURE**



<b>Section:</b>	Infectious Disease Control	<b>SOP:</b>	4.4
<b>Subject:</b>	Engineering Controls and Work Practices	<b>Executed:</b>	June 5, 2015
		<b>Revised:</b>	
<b>Approved:</b>			
 Allen W. Baldwin, Fire Chief			

**PURPOSE**

Engineering controls address redesign of equipment to insure employee risk reduction, procedures which serve to reduce exposure such as cleaning equipment or areas which have been contaminated and the use of barrier techniques to reduce direct contact with blood and OPIM.

Employees of the City of Winchester will follow the enclosed protocols in the course of their daily work to assist with risk reduction. These protocols are in accordance with the published by the CDC, the National Fire Protection Association (NFPA) 1581 and the infection control recommendations and OSHA.

This Policy will address the following:

1. Hand washing
2. Other Potentially Infectious Materials
3. Personal Protective Equipment
4. Fire and Rescue specific PPE
5. Blood Spill Cleaning Procedure
6. Cleaning Definitions and Categories
7. Cleaning of Specific Contaminated Equipment
8. Post Transport Cleaning
9. Laundry and Linen

**HANDWASHING**

1. Hands must be washed before and after patient contact – This is the single most important means of preventing the spread of infection

2. Scrub for at least 15 seconds – Friction will assist in the removal of dirt as well as bacteria and other organisms
3. When running water is not available use a waterless hand wash solution – Waterless agents may be used - Not antibacterial soap – Not recommended
4. Waterless solutions should be placed in the palm of the hand and rub until all the solution has evaporated – This will kill viruses and surface organisms
5. Rinse Hands well under running water
6. Dry with a paper towel
7. Use paper towel to turn off water faucets – They are soiled by hands

### **OTHER POTENTIALLY INFECTIOUS MATERIALS**

All employees will adopt the practice of Standard Precaution to reduce the risk for exposure to blood and OPIM.

The term Standard Precaution is a concept which considers blood and all body fluids except sweat to be potentially infectious. Use of this concept does NOT require that there be good visibility and a controlled work environment. This can be followed in all work areas of employees.

### **Body Fluids which fall under – OPIM**

1. CEREBROSPINAL FLUID
2. SYNOVIAL FLUID
3. AMNIOTIC FLUID
4. PERICARDIAL FLUID
5. VAGINAL SECRETIONS
6. SEMEN
7. ANY BODY FLUIDS CONTAINING GROSS AMOUNTS OF BLOOD

### **Personal Protective Equipment**

On or before December 1999, appropriate personal protective equipment will be provided at no cost to the employees with occupational exposure. PPE will be issued on the needs of each particular work group and anticipated exposure.

PPE will include, but not limited to, disposable gloves, protective eyewear and a mask, cover gowns, waterless hand solution, and a biohazard bag. PPE is available in each vehicle. Extra supplies are located in the station.

By November 30, 2006 employees will be instructed concerning appropriate use of PPE followed compliance monitoring. **The following points will be made:**

1. In cases where an employee temporarily and briefly declines to use PPE in a particular situation the employee makes the “professional judgment” call that in the specific instance its use would have interfered with proper delivery of health care or public safety departments, or that it would pose a risk to personal safety. This decision will need to be investigated; the employee will need to justify the decision. Complete documentation will be necessary.
2. If clothing becomes contaminated with blood or OPIM than it shall be removed as soon as possible.
3. All PPE shall be removed prior to leaving the workplace, between calls, or if contaminated
4. When PPE is removed it shall be placed in an appropriate area and in a designated container for disposal, uniforms are to be placed in plastic bags for laundering by the city contract personnel. All cost is paid for by the city.
5. PPE will be issued in appropriate sizes and will be readily accessible at the worksite or will be issued directly to the employee. Non latex supplies are in place.

## **USE OF PERSONAL PROTECTIVE EQUIPMENT**

### **GLOVES**

Gloves shall be worn when it can be reasonably anticipated that an employee may have hand contact with blood or OPIM. Mucous membranes, and non-intact skin when performing patient care procedures or handling and touching contaminated items or surfaces.

In an effort to comply with the NIOSH Alert, the City of Winchester will move toward more use of vinyl/nitrile gloves and away from latex gloves as much as possible.

1. Disposable gloves shall be replaced as soon as practical when they become contaminated, ripped, or torn
2. Disposable gloves shall not be washed for reuse
3. Following glove removal hands shall be washed.
4. Heavy duty utility gloves should be used when cleaning contaminated equipment, surfaces, are when disposable gloves are insufficient.
5. Heavy duty utility gloves can be washed and reused as long as they are not torn or cracked.
6. Leather Gloves are to be worn for extrication and search activities

## **MASKS**

Masks combination shall be worn when there is suspect that an individual may have an airborne transmissible disease. This style mask issued shall be the molded fit type

1. If the patient is SUSPECT for or DIAGNOSED with TB, a mask is required, place a surgical mask on the patient or a non-rebreather
2. Masks in conjunction with protective eyewear will be used when it is anticipated that there is an opportunity for gross splatter of blood or OPIM into the eye, nose or mouth

## **PROTECTIVE CLOTHING**

Appropriate protective clothing such as cover gowns or aprons or similar outerwear shall be worn in exposure situations. The type to be used will be based on the exposure anticipated. Turnout gear is considered protective clothing for fire fighters.

## **POCKET MASKS**

All personnel trained in the administration of CPR will be trained in the use of either a bag/mask or a packet mask. All personnel will be trained in the proper use of the pocket mask and the method for proper disposal or cleaning.

## **PERSONAL PROTECTIVE EQUIPMENT**

### **CLOTHING**

Uniforms ***will not be*** considered PPE for EMS. Uniforms are considered to be contaminated when covered with blood/OPIM and the area is too large to spot clean. Cover gowns will be available for situations which may require additional protection.

All clothing contaminated with Blood or other body fluids, including personal clothing, will be laundered by station personnel at the station and paid for by the City of Winchester.

Cleaning will be at NO cost to department personnel. Gloves will be worn when handling contaminated clothing prior to bagging. All contaminated clothing will be removed as soon as possible and washed in detergent and hot water. Reference policy/procedure in the section on workplace practices.

**\*\*SHOE COVERS AND HEAD COVERS ARE NOT NECESSARY FOR PPE IN EMS ACTIVITIES.**

### **PPE Update**

All City of Winchester Fire and Rescue career staff will place a tag on their contaminated uniforms, explaining the contamination and placed in a red bag. They will then place that red bag in the uniform company supplied red bag. This will be placed in the laundry to be picked up. The uniform company will clean the uniform at no cost to the employee.

### **Personal Protective Equipment – Fire/Rescue**

Each member of the department will be furnished with an accessible packaged infection control kit. This product contains all of the required personal protective equipment. The kit is purchased from Moore Medical Corporation

Microflex Free Form Nitrile Gloves are made available for all staff. This is in keeping with reducing the incidence of staff developing latex allergy or sensitivity. Purell waterless hand cleaner is readily available for hand washing in the field.

### **PROCEDURE FOR CLEANING A BLOOD SPILL**

1. Cover the spill with a paper towel – Prevent spill from expanding
2. Mix ¼ cup of bleach to 1 gallon of water – Effective solution
3. Mix is good for 24 hours
4. Put on washable utility gloves
5. Pour the disinfectant on the outer edges of the spill to prevent splash or splatter
6. Clean up spill and put towels in a red biohazard bag
7. Wash gloves and hang to dry
8. Wash your hands

**GUIDE FOR THE USE OF PERSONAL PROTECTIVE EQUIPMENT – FIRE AND RESCUE**

TASK	GLOVES	EYEWEAR/MASK	GOWN
AIRWAY	X	AVAILABLE	AVAILABLE
CPR	X	NONE	NONE
BLOOD DRAW	X	NONE	NONE
DECON EQUIPMENT	UTILITY	SPLASH OR SPLATTER ANTICIPATED	SPLASH OR SPLATTER ANTICIPATED
EXTRICATION	X	SPLASH OR SPLATTER ANTICIPATED	SPLASH OR SPLATTER ANTICIPATED
CHILD BIRTH	X	X	SPLASH OR SPLATTER ANTICIPATED
INJECTION	NONE	NONE	NONE
INTUBATION	X	X	AVAILABLE
IV START	X	SPLASH OR SPLATTER ANTICIPATED	AVAILABLE
MONITOR	NONE	NONE	NONE
OXYGEN	NONE	NONE	NONE
SUCTION	X	AVAILABLE	AVAILABLE
TRAUMA	X	X	X
VITAL SIGNS	NONE	NONE	NONE

**CLEANING SCHEDULE**

OSHA 1910.1030

**Contaminated areas of the vehicle will be cleaned after each run. This task should be completed as soon as possible**

**All primary cleaning will be done at the hospital using decon supplies made available by the hospital.**

There will be a posted cleaning schedule which outlines daily, weekly, monthly and annual cleaning of the EMS vehicles. Cleaning will be done in the designated area. This will allow for adequate ventilation and rinsing of equipment. Documentation of the cleaning will be noted on the cleaning record form. Variance from the standard will be set by the supervisor and based upon patient call volume. Any equipment used and taken to the medical facility will be cleaned by the medical facility prior to return to the department.

## **AMBULANCE CARE AND CLEANING**

Equipment Categories – three types

1. **Non-critical Equipment** – Such as stethoscopes and BP cuffs. This level requires “cleaning”
2. **Semi-critical Equipment** – Such as stretchers, Vehicle Walls and floors and communication headsets. This level requires “disinfection”
3. **Critical Equipment** – Such as resuscitation or intubation equipment. This needs sterilization or a high level disinfection.

## **DEFINITIONS**

**Cleaning** – Cleaning is the physical removal of dirt and debris. Members should use soap and water with a scrubbing action. The scrubbing action is the key to rendering all items safe for patient use. All equipment requires a minimum of cleaning. This should take place first.

**Disinfection** – Disinfection is reducing the number of disease producing organisms by physical or chemical means. Members should clean the item with soap and water and then apply a disinfection solution. Solutions such as bleach and water at 1:100 should be acceptable. Do not use bleach in the cleaning of electronic equipment Refer to the MSDS for each disinfectant solution to decide what PPE may be needed. Disinfectants can be toxic or caustic and they should have an EPA registry number.

High Level Disinfection – This is the use of chemical liquids for sterilization, Members should clean items then place them in special solutions for a prescribed time. Items need to be removed through a sterile process for a prescribed time. Items should be rinsed with sterile water and stored in sterile dressing. Refer to MSDS sheets to confirm PPE for each PPE.

**GUIDE TO THE CARE OF SPECIFIC CONTAMINATED EQUIPMENT**

COLUMN 1 – DISPOSE  
 COLUMN 2 – CLEANING  
 COLUMN 3 – DISINFECTION  
 COLUMN 4 – HIGH LEVEL DISINFECTION  
 COLUMN 5 – LAUNDRY

ITEM	1	2	3	4	5
AIRWAY	X				
BACKBOARDS		X			
BITE STICKS	X				
BP CUFFS		X	X		X
BULB SYRINGE	X				
C-COLLAR	X	X			
DRESSINGS	X				
DRUG BOXES		X	X		
ELECTRONICS					
FIREFIGHTER PPE					X
KED			X		
LARYNGOSCOPE BLADES	X			X	
LINENS	X				X
MAST SUIT			X		
SYRINGES	X				
O2 CANNULAS, MASKS	X				
HUMIDIFIERS	X	X			
PENLIGHTS		X			
POCKET MASK	X		X		
RESTRAINTS		X			
BAG/MASK DEVICE	X			X	
SCISSORS		X	X		
SPLINTS		X			
STETHOSCOPE		X			
STRETCHER		X	X		
STYLETS	X			X	
SUCTION CATHETERS	X				
SUCTION JARS	X			X	
UNIFORMS					X

## **POST TRANSPORT CLEANING**

Following patient transport to the hospital, cleaning will be conducted at the hospital using solution supplied by the medical facility. Any medical equipment that must be left with the patient at the hospital should be cleaned by hospital staff before pick up by City of Winchester personnel. If not cleaned it should be properly bagged in accordance with OSHA 1910.1030 for transport to the station for cleaning.

## **CLEANING OF EQUIPMENT LEFT AT HOSPITAL WITH THE PATIENT**

The hospital must either clean the equipment of red-bag for department members to transport safely to be cleaned at the station – OSHA formal letter, QUIP, October 4, 2000

## **LINENS**

The City of Winchesters uses linens supplied by Winchester Medical Center. Linens are to be left there to be laundered and exchanged for new, clean linens to stock the ambulances.