I. POLICY

A. System EMS personnel shall take reasonable precautions to keep from being occupationally exposed to bloodborne pathogens and/or from acquiring infectious or communicable diseases from patients.

B. The System will consider, and, where appropriate, use effective engineering controls, including safer medical devices, in order to reduce the risk of injury from needlesticks and from other sharp medical instruments (OSHA compliance directive).

C. Patients shall be reasonably protected from acquiring nosocomial infections from the ambulance environment or equipment used on them in the course of prehospital emergency care.

D. The EMS System's Exposure Control Plan will be reviewed annually and whenever necessary by the System Advisory Board which includes non-managerial personnel responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls. This review shall reflect new or modified tasks and procedures which affect occupational exposure. The review and update shall also "(A) reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and (B) document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure." (OSHA BBP standard required under the Needlestick Safety and Prevention Act).

E. Supporting rationale

1. Patients who do not appear to be infected may contaminate the ambulance by droplets or by direct contact, even though no evidence of contamination is apparent. Examples include contamination with mites (scabies), lice, herpetic lesions or fungal infections of exposed skin and infections where surface contamination of the interior of the ambulance in the immediate vicinity of the patient may have occurred.

2. Other pathogens, such as HIV, Hepatitis B or C, may be transmitted by contact with the patients' blood and/or selected body secretions.

3. According to the Centers for Disease Control and Prevention (CDC), providers of prehospital care are at no greater risk of contracting HBV or AIDS than are emergency care providers who perform their work in a hospital environment, if appropriate precautions are taken.

F. EMS personnel are advised to treat all patients as potential carriers of infectious diseases and are instructed to observe Universal Blood and Body Secretion Precautions as outlined by the CDC on all patients.
G. Individual employer Engineering Control Practices that address exposure procedures unique to that agency should supplement this policy.

II. DEFINITIONS

A. **Appropriate safer medical device**: Devices whose use, based on reasonable judgment in individual cases, will not jeopardize patient or employee safety or be medically contraindicated.

B. **Blood**: Human blood, blood components and products made from human blood. Human blood components include plasma, platelets, and serosanguinous fluids such as exudates from wounds.

C. **Bloodborne pathogens**: While HIV and HBV are identified in the OSHA standards, the term includes any pathogenic microorganism that is present in human blood and can infect and cause disease in persons who are exposed to blood containing the pathogen.

D. **Engineering controls**: All control measures (e.g. sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove a bloodborne pathogens hazard from the workplace and reduce the risk of percutaneous exposure to bloodborne pathogens.

E. **Exposure incident**: Means a specific eye, mouth or other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of prehospital duties. Non-intact skin includes skin with dermatitis, hangnails, cuts, abrasions, chaffing, etc.

F. **Needleless system**: A device that does not use needles for: (A) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (B) the administration of medication or fluids; or (C) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

G. **Other Potentially Infectious Materials (OPIM)**: These include the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, peritoneal fluid, amniotic fluid, pleural fluid, saliva where there has been mouth trauma, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. Coverage of this definition also extends to blood and tissues of animals that are deliberately infected with HIV or HBV.

H. **Sharps with engineered sharps injury protections**: A non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

III. UNIVERSAL BLOOD AND BODY FLUID PRECAUTIONS

A. Use of **personal protective equipment (PPE)/body substance isolation (BSI)** reduces the healthcare worker's risk of exposure to potentially infective materials. They shall be chosen based on the anticipated exposure to blood or OPIM.

B. **RISKY BODY FLUIDS TO WHICH UNIVERSAL PRECAUTIONS APPLY**

1. Blood and other body fluids containing visible blood
2. Semen and vaginal secretions
3. Tissues and the following fluids: cerebral spinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid.
C. **Examples of PPE/BSI:** Single use disposable vinyl or latex-free gloves, utility gloves, fluid repellent gowns, surgical face masks, N-95 filtration masks, pocket masks, and protective eyewear with solid side shields.

D. **BSI (Body substance isolation):** Protective equipment shall be considered appropriate only if it does not permit blood or OPIM to pass through or reach the person's clothing, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time in which the protective equipment shall be used.

IV. **Indications for use of PPE/BSI**

A. **PPE** (Personal protective equipment) shall be carried on all ambulances and alternate response vehicles. The size, quantity, and type of equipment provided by the employer shall be sufficient to supply all employees expected to respond to an incident where BSI is indicated.

B. All EMS responders shall use appropriate PPE/BSI to prevent skin and mucous membrane exposure when contact with blood or other body secretions is anticipated. The only exception is if they temporarily and briefly decline to use PPE when, under rare and extraordinary circumstances, it was the person's professional judgment, that in the specific instance its use would have prevented the delivery of health care, public safety services or would have posed an increased hazard to the safety of the EMT or co-worker. When the EMS responder makes this judgment, the circumstances shall be reported according to the employer's guidelines. This particular clause should not be used to circumvent the guidelines on a routine or customary basis.

C. Universal precautions are intended to supplement rather than replace recommendations for routine infection control, such as hand washing and using gloves to prevent gross microbial contamination of the hands. Because it is impractical to specify the types of barriers needed for every possible clinical situation, common sense and prudent judgment must be exercised.

D. **Gloves**

1. Gloves shall be worn for touching blood and body fluids, mucous membranes or non-intact skin of all patients, for handling items or surfaces soiled with blood or body fluids, and for performing venipuncture and other invasive procedures, i.e., intubation, cricothyrotomy, pleural decompression, etc.

2. They are not necessary for all patient contacts. Gloves are not routinely indicated in the absence of blood or body fluids or on patients for whom invasive procedures are not performed.

3. Gloves must be changed after contact with each patient.

4. Remove gloves as soon as possible after caring for a patient. Medical gloves should not be worn in elevators or public hallways after a patient has been delivered to the ED or their destination.

5. Gloves should reduce the incidence of contamination of hands, but they cannot prevent penetrating injuries due to needles or other sharp implements.

E. **Masks and protective eyewear or face shields** shall be worn in the patient care compartment and when working within 6 feet of a patient who is suspected of having a disease transmitted by droplets. They shall also be worn during procedures that are likely to generate droplets or a spray of blood or release of other body fluids to prevent exposure of mucous membranes of the mouth, nose and eyes. N-95 face masks shall be worn whenever there is a possibility of TB, SARS or influenza-type illness exposure.
F. **Fluid repellent gowns or aprons** shall be worn during procedures that are likely to generate splashes of blood or other body fluids.

G. Scrupulous precautions are indicated for care of the debilitated patient who is unable to practice good hygiene, such as the patient with profuse diarrhea, fecal incontinence, vomiting, altered behavior which may occur secondary to central nervous system infections or those patients whose social habits place them in one of the high risk behavior groups, and it is foreseeable that they may be harboring an infection, i.e., intravenous drug users.

H. **Vaginal deliveries**: Gloves, gowns, masks and protective eyewear should be worn during the delivery and when handling the placenta or the infant until all blood and amniotic fluid have been removed or covered with fluid-repellent barriers.

V. **Hand washing**

A. Hands and other skin surfaces should be washed immediately and thoroughly with soap and water if visibly dirty, or contaminated with blood or other body fluids.

B. Decontaminate hands prior to inserting peripheral vascular catheters or other invasive devices that do not require a surgical procedure.

C. Disposable gloves are not completely impermeable. Hands must be thoroughly washed or decontaminated with an approved disinf ective product after gloves have been removed.

D. If hands are not visibly soiled and/or in the absence of soap and water, the CDC recommends an alcohol-based hand rub. Storage and dispenser placement of alcohol based hand rubs will be in compliance with regulations for Class I flammable agents, with NFPA 100 requirements and with all applicable codes. Use of these products should not be considered as a substitute for hand washing when available.

E. **Hand hygiene technique**

1. When washing hands with soap and water, wet hands first with warm water, apply an amount of product recommended by the manufacturer to hands and rub together vigorously for at least 15 seconds, covering all surfaces and the hands and fingers. Rinse hands with water and dry thoroughly with a disposable towel. Use towel to turn off the faucet. Avoid using hot water, because repeated exposure to hot water may increase the risk of dermatitis.

2. When decontaminating hands with an alcohol-based hand rub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry. Follow the manufacturer’s recommendations regarding the volume of product to use.

3. EMS personnel having direct contact with patients should not wear artificial fingernails or extenders.

VI. **PRECAUTIONS TO PREVENT EXPOSURES AND/OR TRANSMISSION OF DISEASE**

A. All EMS personnel should take precautions to prevent exposure injuries caused by needles, scalpels, and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal; and when handling sharp instruments after procedures.

B. **Needles/sharps**

1. System members are encouraged to use **sharps with engineered sharps injury protection**, such as self-sheathing IV catheters, thereby reducing the incidence of accidental needle sticks.
2. To prevent needlestick injuries, needles should not be recapped, purposefully bent or broken, removed from disposable syringes or otherwise manipulated by hand.

3. **Contaminated sharps** (disposable syringes and needles, scalpel blades) are to be placed in containers which are closable, puncture resistant, leak proof on sides and bottom, easily accessible to personnel, maintained upright throughout use, labeled or color-coded properly. Puncture-resistant containers should be located as close as possible to the use area (point of use). **DO NOT stick used needles into mattresses or bench seats.** When moving sharps containers from the area of use, they shall be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling. All full sharps containers should be sealed and given to ED personnel for proper disposal.

4. **Broken glassware** which may be contaminated must not be picked up directly with the hands. It shall be cleaned up using mechanical means such as a brush and dust pan, tongs or forceps.

C. Disposable **bag-valve-masks** (BVMs) or non-disposable bags with disposable one-way valve inter-connects and disposable masks should be used on all patients.

D. **Handling and/or transportation of blood specimens:** Specimens shall be obtained in a manner which complies with system procedures for venipuncture and filling blood specimen containers. They must be labeled, placed in a container which prevents leakage and placed in a secondary puncture-resistant container if the primary container is contaminated or the specimen could puncture the primary container.

E. EMS responders who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient care equipment until the condition resolves.

F. Pregnant health care workers are not known to be at greater risk of contracting HIV infection than health care workers who are not pregnant; however, if a health care worker develops HIV infection during pregnancy, the infant is at risk of infection resulting from perinatal transmission. Because of this risk, pregnant health care workers should be especially familiar with and strictly adhere with precautions to minimize the risk of HIV transmission.

G. **Procedure for appropriately disposing of contaminated clothing, equipment and linen**

1. All **garments** that are penetrated by blood or OPIM shall be removed immediately or as soon thereafter as practical. Prehospital personnel shall continue treating the patient, if exposed while providing patient care. All PPE shall be removed prior to leaving the work area. System hospitals have agreed to provide "scrubs" or suitable clothing so contaminated uniforms need not be worn out of the hospital. Leak-proof bags shall be provided so a contaminated uniform may be safely returned to the ambulance station for proper laundering per the employer's engineering practices.

2. It may be possible for the work area to expand to the ambulance quarters. When this occurs, OSHA suggests that EMS personnel cover up with a non-absorbent barrier and ride in the patient compartment of the ambulance to protect against contaminating the cab of the vehicle. The contaminated responder and the ambulance will remain out of service until both have been decontaminated.
H. Potentially hazardous waste

1. Body excretions or secretions, i.e., suction aspirate, placentas, etc. must be identified and bagged in durable bags (see below) resistant to puncture and tears. Waste may be single bagged if it can be put in the bag without contaminating the outside. Otherwise, double bagging is required.

2. **Warning labels** shall be affixed to containers of regulated waste or OPIM such as sharps containers. **Red bags** may be substituted for labels. Biohazard labels are to be fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color.

3. All contaminated **disposable equipment** shall be properly discarded at the receiving hospital.

4. Nondisposable items that could release blood/OPIM in a liquid or semi-liquid state if compressed must be appropriately cleaned, disinfected, or discarded.
   a. Items that are caked with dried blood or OPIM and are capable of releasing these materials during handling must be appropriately cleaned.
   b. Non-disposable, non-consumable patient equipment that becomes contaminated by a patient's blood or body fluids and are left at the hospital due to the on-going needs of a patient, **must have gross contaminants removed and physical cleaning completed as outlined in system policy prior to their return to the EMS Agency**. Failure to clean this equipment creates a potential medium for transmission of disease and is not consistent with the intent or purpose of this policy.

I. Clean and decontaminate all ambulance equipment and environmental work surfaces after contact with blood or OPIM according to System and employer procedures.

1. Clean, decontaminate and disinfect ambulance work surfaces as soon as feasible when surfaces are overtly contaminated. All have the potential to transmit infectious diseases. When cleaning gross spills, wear gloves and use disposable toweling to remove the majority of the spill. Place all soiled components into a plastic bag that can be sealed/tied for disposal.

2. After gross spills are removed, clean (physical removal of soilage) with an effective and safe product. While hydrogen peroxide (0.3% solution) helps to loosen blood and tissue, it does not disinfect. Use a low-sudsing detergent with a neutral pH on washable surfaces, e.g., OMEGA by Airwick. Grocery store detergents do not have a neutral pH and should not be used. Disinfection or sterilization cannot take place unless the equipment is physically clean. Rinse with tap water.

3. Disinfectant formulations registered by the EPA can be used for disinfecting environmental surfaces after cleaning. The System prefers Cavi-cide Disinfectant Cleaner (Aseptic Control Products), or a freshly constituted (mixed the same day) 1:100 solution of bleach. Follow manufacturer's instructions.

J. Sterilization is reserved for critical items such as those that will enter sterile tissue or the vascular system. **High level disinfection** may be used for semi-critical items that will frequently contact intact mucous membranes, such as respiratory therapy equipment or laryngoscope blades. Instruments and non-disposable respiratory devices must be disassembled and soaked in, an **EPA and FDA approved solution**, for the prescribed times per System procedure. (e.g. Metri-cide OPA by Aseptic Control Products).
K. Contaminated linen

1. The risk of disease transmission from soiled linens is small. Handle soiled linens as little as possible with minimum agitation. Wear gloves when bagging contaminated clothing or linen. Wrap linens that are or might be contaminated in heavy, biodegradable plastic bags provided by the hospital. Label as "Contaminated" or "Infectious Waste". These bags must be constructed in a manner that would prevent leakage.

2. When contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry must be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

3. Do not sort or rinse contaminated laundry in the patient care area.

4. When universal precautions are used in the handling of all soiled laundry, alternative labeling or color coding is sufficient if it permits all personnel to recognize the containers as requiring compliance with universal precautions.

L. Transport potentially infectious patients using the minimum number of EMS personnel and without non-infected patients or passengers in the ambulance.

M. Notify receiving facilities of the impending arrival of a potentially infectious patient prior to transport to give them adequate time to initiate appropriate infection control procedures.

VII. IMMUNIZATIONS AND OTHER PREVENTIVE TESTING

EMS personnel are urged to have all appropriate immunizations or have evidence of immunity, when possible, against tetanus-diphtheria, pertussis, rubella, measles, mumps, polio, Hepatitis B and others, as effective immunizations become available. System employers shall maintain personnel records in accordance with OSHA Guidelines relative to HBV immunization and/or declination statements. Annual TB screening is strongly recommended.

VIII. PROCEDURE FOR A SUSPECTED EXPOSURE - EMS PERSONNEL

A. Even though all safety precautions are followed, a person may still have direct contact with a patient's blood and/or body secretions or be exposed to a communicable disease. Without appropriate documentation, the exposed health care worker may not be eligible for medical care reimbursement or other long-term benefits.

B. EMS Provider Agencies are required to develop internal Bloodborne Pathogens Exposure Control Plans regarding the use of PPE, vaccinations, and follow-up of personnel if exposed in compliance with Federal Law.

C. General guidelines

1. All personnel who believe they have experienced an exposure event should first provide themselves with the appropriate first-aid treatment and decontamination as required. Once able, the personnel should contact their employer's Designated Infection Control Officer (DICO) or his/her designee as required by the Ryan White Act and NFPA 1581.

2. Once notified, the DICO shall evaluate the facts of the potential exposure and determine if there is a potential for occupational acquisition of an infectious disease, based on CDC guidelines for Risk of Occupational Exposure to HBV, HCV, and HIV and Recommendation for postexposure prophylaxis (MMWR June 29, 2001); Updated U.S. Public Health Service Guidelines for the Management of occupational Exposures to HIV and Recommendations for
Postexposure prophylaxis (MMWR, Sept. 30, 2005) or updated guidelines as they are published.

3. If the DICO determines that no exposure occurred, no further follow-up is required. The personnel should document any injury or first-aid required with their employer per employer policy. No NCH EMS Report Form needs to be generated.

4. If the DICO determines that an exposure has occurred, the DICO will follow agency policy as required by the Ryan White Act.

IX. RECOMMENDED PROCEDURES FOR FOLLOW-UP – HOSPITALS

A. Hospitals are asked to collaborate with the requests of DICO's in safeguarding the wellbeing of System members and/or other professionals covered under the Ryan White Act per procedure.

B. Hospitals are asked to ensure the timely completion of lab studies and reporting of results to the DICO in compliance with the Ryan White Act and/or other Federal and State statutes.

C. If the source patient tests NEGATIVE for the targeted organisms and has no other evidence of infection, no further follow-up is generally required.

D. If the source patient cannot be identified, decisions on the method of follow-up should be based on the type of exposure and the likelihood that the patient was infected. This decision should be made jointly by the DICO in consultation with an Infection Control Consultant.

E. If the source patient tests POSITIVE, hospitals may only release the test results to the DICO who requested the lab draw. The exposed individual must receive counseling, confidentially and in person, about the meaning of the test results, the availability of additional confirmatory testing, the possibility of infection, methods to prevent the spread of the infection, and services available for further information and counseling.

F. Follow-up care for exposure to a positive source should be initiated as soon as feasible to ensure timely post-exposure prophylaxis.

X. Notification requirements IN THE ABSENCE OF AN EXPOSURE INCIDENT – HOSPITALS

A. According to the Illinois Hospital Licensing Act (92-363, eff. 1-1-02), and the Ryan White HIV/AIDS Extension Act of 2009, each hospital is required to establish procedures for notifying EMS personnel who have provided or are about to provide, emergency care or life support services to a patient who has been diagnosed as having a dangerous communicable or infectious disease.

B. (210 ILCS 85/6.08) (from Ch. 111 1/2, par. 147.08) Sec. 6.08.

1. (a) Every hospital shall provide notification as required in this Section to police officers, firefighters, emergency medical technicians, and ambulance personnel who have provided or are about to provide emergency care or life support services to a patient who has been diagnosed as having a dangerous communicable or infectious disease. Such notification shall not include the name of the patient, and the emergency services provider agency and any person receiving such notification shall treat the information received as a confidential medical record.

2. (b) The Department shall establish by regulation a list of those communicable reportable diseases and conditions for which notification shall be provided.
Notification shall be required for the following diseases: AIDS, AIDS related complex (ARC), Anthrax, Chickenpox, Cholera, Diphtheria, Hepatitis B, Hepatitis C, Herpes Simplex, Human Immunodeficiency Virus (HIV), Invasive Meningococcal Infection (Meningitis or Meningococcemia), Measles, Mumps, Plague, Polio, Rabies (human Rabies), Rubella (including Congenital Rubella Syndrome), Smallpox, Tuberculosis, and Typhus (louse-borne). The EMS System also recommends notification for head and/or body lice. (Source: Amended at 15 Ill. Reg. 5328, effective May 1, 1991)

3. (c) The hospital shall send the letter of notification within 72 hours after a confirmed diagnosis of any of the communicable diseases listed by the Department pursuant to subsection (b), except confirmed diagnoses of Acquired Immunodeficiency Syndrome (AIDS). If there is a confirmed diagnosis of AIDS, the hospital shall send the letter of notification only if the police officers, firefighters, emergency medical technicians, or ambulance personnel have indicated on the ambulance run sheet that a reasonable possibility exists that they have had blood or body fluid contact with the patient, or if hospital personnel providing the notification have reason to know of a possible exposure.

4. (d) Notification letters shall be sent to the designated contact at the municipal or private provider agencies (DICO) listed on the ambulance run sheet. Except in municipalities with a population over 1,000,000, a list attached to the ambulance run sheet must contain all municipal and private provider agency personnel who have provided any pre-hospital care immediately prior to transport. In municipalities with a population over 1,000,000, the ambulance run sheet must contain the company number or unit designation number for any fire department personnel who have provided any pre-hospital care immediately prior to transport. The letter shall state the names of crew members listed on the attachment to the ambulance run sheet and the name of the communicable disease diagnosed, but shall not contain the patient's name. Upon receipt of such notification letter, the applicable private provider agency or the designated infectious disease control officer of a municipal fire department or fire protection district shall contact all personnel involved in the pre-hospital or inter-hospital care and transport of the patient. Such notification letter may, but is not required to, consist of the following form:

a. NOTIFICATION LETTER
b. (NAME OF HOSPITAL)
c. (ADDRESS)
d. TO:...... (Name of Organization)
e. FROM:...... (Infection Control Coordinator)
f. DATE
g. As required by Section 6.08 of the Illinois Hospital Licensing Act, (name of hospital) is hereby providing notification that the following crew members or agencies transported or provided pre-hospital care to a patient on ...... (date), and the transported patient was later diagnosed as having ...... (name of communicable disease): ...... (list of crew members).

h. The Hospital Licensing Act requires you to maintain this information as a confidential medical record. Disclosure of this information may therefore result in civil liability for the individual or company breaching the patient's confidentiality, or both.
i. If you have any questions regarding this patient, please contact me at .......(telephone number), between .......(hours). Questions regarding exposure or the financial aspects of obtaining medical care should be directed to your employer.

5. (e) Upon discharge of a patient with a communicable disease to emergency personnel, the hospital shall notify the emergency personnel of appropriate precautions against the communicable disease, but shall not identify the name of the disease in the following:
   a. Typhoid fever
   b. Giardiasis
   c. Amebiasis
   d. Hepatitis A
   e. Shigellosis
   f. Salmonellosis

6. (f) The hospital may, in its discretion, take any measures in addition to those required in this Section to notify police officers, firefighters, emergency medical technicians, and ambulance personnel of possible exposure to any communicable disease. However, in all cases this information shall be maintained as a confidential medical record and shall not conflict with Federal or state confidentiality statutes or with the provisions of Section 6.08 of the Hospital Licensing Act.

7. (g) Any person providing or failing to provide notification under the protocol required by this Section shall have immunity from any liability, either criminal or civil, that might result by reason of such action or inaction, unless such action or inaction is willful.

8. (h) Any person who willfully fails to provide any notification required pursuant to an applicable protocol which has been adopted and approved pursuant to this Section commits a petty offense, and shall be subject to a fine of $200 for the first offense, and $500 for a second or subsequent offense.

9. (i) Nothing in this Section shall preclude a civil action by a firefighter, emergency medical technician, or ambulance crew member against an emergency services provider agency, municipal fire department, or fire protection district that fails to inform the member in a timely fashion of the receipt of a notification letter.

(Source: P.A. 92-363, eff. 1-1-02.)

Contact references


CDC: NIOSH Bloodborne Pathogens Topic Page: www.cdc.gov/niOSH/topics/bbp
Protecting Healthcare workers from Bloodborne Pathogens: www.cdc.gov/nciddod/dhq/dhqpswrkprotect_bp.html