STANDARD OPERATING GUIDELINE

Number 125-01

Work Related Injury Reporting

EFFECTIVE DATE:	REVISION DATE:	APPROVED BY:	PAGE:
02/01/2002	12/01/2007	RONALD D. ROMBS	1 OF 2

PURPOSE: The intent of this policy is to provide proper documentation and notification of on the job injuries or illnesses.

SCOPE: This procedure applies to all LCEMS employees.

POLICY: Procedures established by the Worker's Compensation Act must be followed for an injury or illness to be considered compensable (covered). If an employee is injured or suffers from an on the job illness, the following procedure must be followed.

Employee Responsibilities:

Immediately report the incident to the on-duty Shift Supervisor.

If medical treatment is required, obtain a Medical Authorization Form from the on-duty Operations Supervisor and go promptly to the county contracted medical facility.

Employees shall not/should not receive any bills or have any out of pocket expenses. If any prescriptions are issued, inform the pharmacy to bill Lincoln County Government, 115 W. Main Street, Lincolnton, North Carolina, 28092. If the pharmacist has any questions for verification, have them contact the Personnel Department at 704-736-8493. DO NOT PAY FOR ANY PRESCRIPTIONS.

Do not provide the medical center with your personal health insurance information. ***DO NOT USE YOUR BLUE CROSS BLUE SHIELD CARD!*** This will only complicate the payment of medical bills.

Provide the on-duty Shift Supervisor with any information or documentation given to you by the doctor that may limit your performance of regular duties, restrict your activities, or require further medical treatment.

Promptly (optimally before the end of shift) complete and submit a Special Report stating the events surrounding the injury or illness.

Failure to follow these procedures in a timely manner could result in delay or denial of the Worker's Compensation claim or any compensation payments resulting from an injury or illness.

All employees filing a work related injury claim will be subjected to a urinalysis drug screen.

On-Duty Shift Supervisor Responsibilities:

Evaluate the injury or illness and send the employee to county contracted medical facility, if necessary.

Issue a Medical Authorization Form to the injured or ill employee.

If an injury or illness occurs after hours, submit the Medical Authorization Form to the Emergency Physician on duty.

Ensure urinalysis drug screen is completed.

Notify the Personnel Department via telephone (704) 736-8493 or fax (704) 736-8763 within 24 hours of the incident or knowledge of the incident.

All injuries are to be investigated by the on-duty Shift Supervisor and the Safety Officer using the Lincoln County Accident Investigation Report Form.

Accurately complete the Supervisor's Accident Report in StarLife database, print the completed document, obtain employees signatures, sign the document, fax a copy to the Personnel Department and submit the original documents o the Deputy Director prior to the end of shift.

If the physician places the injured employee on restrictive work duty, retrieve the physicians' paperwork from the employee and contact the Personnel Department for specifics on return to work instructions.

Exposure Control Plan

EFFECTIVE DATE:	REVISION DATE:	APPROVED BY:	PAGE:
04/01/2007	12/01/2007	RONALD D. ROMBS	1 OF 41

PURPOSE: The intent of the Lincoln County Emergency Medical Service Exposure Control Policy is to achieve the goal of providing a safe work environment for LCEMS employees, volunteers, students, trainees, observers and bystanders whose activities may involve contact with patients, clients, and/or their blood and bodily fluids while complying to the applicable sections of the Occupational Safety and Health Standards (OSHA) for General Industries (29CFR1910).

SCOPE: This procedure applies to all providers of the Lincoln County EMS System, students, trainees and observers.

OSHA CATEGORIES:

OSHA has developed three (3) categories to describe an employee's occupational exposure to communicable diseases.

Category 1 jobs that involve activities with direct contact with blood or other bodily fluids to which **Universal Precautions** apply

Category 2 jobs involve activities performed without blood exposure but exposure may occur in an emergency

Category 3 jobs involve activities which do not entail predictable or unpredictable exposure to blood

BLOODBORN PATHOGENS AND BODILY FLUIDS:

Bloodborn pathogens cause diseases such as the HBV and HIV and are found in blood, certain body fluids, as well as on materials, objects or surfaces that have come in contact with blood and/or bodily fluids. CDC considers the following bodily fluids to be potentially infectious for bloodborn pathogens.

- Semen
- Vaginal secretions
- Cerebrospinal fluid (fluid around the brain and spinal cord)
- Synovial fluid (fluid around joints)
- Pleural fluid (fluid around the lungs)
- Pericardial fluid (fluid around the heart)
- Peritoneal fluid (fluid in the abdomen)
- Amniotic fluid (fluid around an unborn baby)
- Saliva in dental procedures (if mixed with blood)

- Any other fluid, material, object, or surface that is visibly contaminated with these fluids is considered to be potentially infectious. When encountering fluids under circumstances where it is difficult to distinguish between body fluid types, a member shall treat all body fluids as potentially infectious materials.

The following body fluids are not considered at-risk of transmitting bloodborne diseases unless visibly contaminated with blood; however, they do transmit other diseases and infections and should therefore be avoided.

- Saliva
- Nasal secretions
- Urine
- Sweat
- Feces
- Tears
- Vomit

DEFINITIONS:

EXPOSURE: Coming into contact with, but not necessarily infected by a disease causing agent.

EXPOSURE INCIDENT: A specific eye, mouth, other mucus membrane, nonintact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties

POLICY: The designated Infectious Control Officer for Lincoln County Emergency Medical Service shall be the Operations Manager.

Each agency within the Lincoln County EMS System shall designate an Infectious Control Officer, and provide contact information for that person to the Lincoln County Emergency Medical Service Infectious Control Officer.

All personnel shall treat the blood and bodily fluids of all patients as potentially infected and universal precautions[1] shall be followed.

[1] See Appendix "A"

All LCEMS employees, observers, students and/or trainees shall immediately report any exposure and/or exposure incident to the on duty Operations Supervisor.

All members, employees, observers, students and/or trainees of First Response Agencies, Rescue Squads or Fire Departments shall immediately report any exposure and/or exposure incident to the Department Infection Control Officer.

Employees of LCEMS shall adhere to universal precautions. Failure to do so shall result in disciplinary action up to and including termination.

All members, employees, observers, students and or trainees of First Response Agencies, Rescue Squads or Fire Departments shall adhere to universal precautions. Failure to do so shall result in disciplinary action up to and including termination of privileges.

Observers, students and or trainees who fail to follow universal precautions shall be banned from riding on apparatus within the Lincoln County EMS System.

Each employee, volunteer, student, and observer shall have a basic knowledge of diseases that they may come in contact with during the course of their duties. These include but are not limited to

- Hepatitis
- Influenza
- HIV
- Tuberculosis
- Lice
- Scabies
- Rubella
- Meningitis
- Pertussis

BODY SUBSTANCE ISOLATION

Body Substance Isolation is an approach to infection control whereby all human blood and body fluids are considered potentially infectious; therefore precautions must be taken to avoid any contact with blood, body fluids, and all other potentially infectious materials.

Each employee, volunteer, student, and observer shall avoid contact with contaminated sharps (contaminated objects that can penetrate the skin).

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

Each employee, volunteer, student, and observer shall exercise care to minimize exposure to splashing, spraying, spattering, or generating droplets of blood or other body fluids.

Each employee, volunteer, student, and observer shall take precautions to prevent injuries by needles, scalpels, or other sharp instruments or devices. To prevent needlestick injuries, contaminated needles shall not be recapped, purposely bent or broken, removed from disposable syringes, or otherwise manipulated by hand. All needles, scalpels, and other disposable sharp instruments shall be discarded into a puncture resistant sharps container.

TRAINING[2]

This policy shall be reviewed with all new employees, and annually with incumbent employees of LCEMS.

This policy shall be reviewed with all new members, employees, observers, students and or trainees of all agencies within the Lincoln County EMS System, and annually with incumbent members, employees, observers, students and or trainees of all agencies within the Lincoln County EMS System.

Observers, students and or trainees who while riding on vehicles within the Lincoln County EMS System may engage in activities with direct contact with blood or other bodily fluids to which Universal Precautions apply (Category 1 or Category 2) must complete exposure control training prior to their "ride time".

PHYSICAL EXAMINATIONS AND IMMUNIZATIONS

Physical examinations shall be required prior to employment with LCEMS or membership/employment with any first response agency, fire department, or rescue squad if the member's activities places him/her in Category 1 or 2.

[2] appendix B

All employees of LCEMS and employees/members of all First Response Agencies, Fire Departments, and Rescue Squads whose activities places them in Category 1 or 2 shall have an annual physical assessment performed.

Drug screening shall be carried out as per Department policy.

All perspective employees or members shall provide an immunization history to their provider prior to employment and or membership.

Proof of the following immunizations are required for all employees and or members prior to their employment and or membership:

- Documented immunization or titer for measles and rubella for anyone born after 1957

- Tetanus-diphtheria boosters every 10 years.

All employees of LCEMS and employees/members of all First Response Agencies, Fire Departments, and Rescue Squads whose activities places them in Category 1 or 2 shall have Hepatitis B vaccine offered free of charge. Employees/members choosing **NOT to receive** the vaccine shall read and sign the Hepatitis Waiver Form.[3]

"Because of their contact with patients or infective material from patients with infections, many health-care workers (including physicians, nurses, dental professionals, medical and nursing students, laboratory technicians, administrative staff, etc.) are at risk for exposure to and possible transmission of vaccine-preventable diseases. Maintenance of immunity is therefore an essential

part of prevention and infection control programs for health-care workers. Optimal use of immunizing agents will not only safeguard the health of workers but also protect patients from becoming infected. A consistent program of immunizations could eliminate the problem of having susceptible health-care workers in hospitals and health departments and the attendant risks to others workers and patients". [4]

[3] Appendix C

[4] "Immunization Recommendations for Health-Care Workers", Centers for Disease Control, Division of Immunization, National Center for Prevention Services, Division of Viral, Division of Bacterial Diseases, Hospital Infections Program, National Center for Infectious Diseases Publication date: 04/01/1989

With the above recommendation in mind, LCEMS will offer all CDC recommended vaccinations, free of charge, to all employees at their annual health assessment. Employees have the right to "opt out" of any vaccine by signing the attached waiver[5]. Employees who "opt out" of any recommended vaccine may revoke their refusal in writing to the Operations Manager and be provided the vaccine at no cost by them.

It is strongly recommended that all other agencies within the Lincoln County EMS System also offer CDC recommended vaccines to their members/employees free of charge.

It is recommended that all employees/members receive the annual flu vaccine.

Immunization status for all employees/members shall be evaluated during their annual physical exam/assessment.

A pre-employment/membership and annual Mantoux TB skin testing shall be performed on all employees/members with a history of a negative skin test.

A pre-employment/membership chest x-ray shall be performed on all employees/members who are considered converters or reactor if indicated by North Carolina TB policy.

Services available through the Lincoln County Health Department include:

- Tuberculin Skin Testing
- CXR for Converters or Reactors
- Immunizations
- Pulmonary Function Tests
- Physical Examinations
- Post Exposure Follow Up and Treatment

SAFETY EQUIPMENT AND SUPPLIES[6]

Effective January 1, 2007, Lincoln County Emergency Medical Services is "latex free". **All agencies within the Lincoln County EMS System shall be "latex free" by December 31, 2007.**

[5] Appendix D
[6] Appendix D

Gloves, barrier clothing, safety glasses, masks, puncture proof containers, and waterless hand cleaner shall be provided by the individual Agency for all employees, members, volunteers, students and observers who fall into Category 1 or 2.

All provided personal protective equipment shall be practical and suitable for the tasks performed, be of safe design and workmanship and be used and maintained in a sanitary and reliable condition whenever there is a potential for exposure.

Latex free gloves shall be available in a variety of sizes to assure proper fit and are intended for **single use only.** They shall not be washed and or disinfected or worn if punctured, torn, cracked or discolored.

Gloves shall be worn in the following situations

- If the emergency responder has cuts, non-intact skin, chapped hands, or dermatitis
- During examination of the mouth, nose, gastrointestinal tract and genitourinary tract
- When treating or examining patients with open wounds, non-intact skin or active bleeding
- During all invasive procedures.
- Cleaning blood and body fluids spills or decontaminating equipment.

Gloves shall be removed as soon as possible after patient contact. All personnel shall limit as much as possible contact with objects (door handles, stretcher releases/bars, steering wheel etc.) while wearing gloves that have come in contact with blood & bodily fluids.

The use of a fluid proof or fluid resistant garment that allows safe and uninhibited performance of tasks to be performed shall be worn whenever direct and or indirect splashes of bodily fluids are anticipated.

Mask and eye protection shall be worn whenever splashes, spray, spatter or aerosolization of blood and or bodily fluids may be reasonably anticipated.

N-95 respirators shall be worn whenever a patient with suspected and or known tuberculosis (TB) or other airborne diseases. These respirators may only be worn

by personnel who have been medically cleared, trained and have passed a fit test.

TAGS-HAZARD IDENTIFICATION

Areas where employees, volunteers, members, students, and observers may be exposed to hazardous and or potentially hazardous conditions, equipment or operations shall be identified by tags that shall contain a "signal word" such as BIOHAZARD and or the biological symbol. Tags shall remain in place until the identified hazard is eliminated or the operation is complete.

A facsimile of the Universal Biohazard symbol is found below:

HAND WASHING

Hand washing is an extremely effective measure in preventing the spread of all communicable diseases.

All agencies in the Lincoln County EMS System shall provide hand-washing facilities that are readily accessible to each employee, volunteer, member, student, and observer. Said facilities shall be located away from food preparation areas.

Each employee, volunteer, member, student, and observer shall wash their hands as soon as possible after the removal of gloves or other personal protective equipment.

Each employee, volunteer, member, student, and observer shall wash their hands and any other exposed skin with soap and water, or flush mucous membranes with water immediately or as soon as possible following contact of such body areas with blood or other potentially infectious materials.

Hands shall be washed with warm running water and soap. Work up a good lather and scrub hands vigorously for 15 seconds. Rinse well and dry thoroughly. Hands should preferably be dried with paper towels. Turn off the faucet with a

paper towel. Discard the used paper towels in a waste receptacle.

All agencies in the Lincoln County EMS System shall also provide waterless hand cleaner for use by employees, volunteers, members, students, and observers for occasions when hand washing facilities are unavailable.

Waterless hand cleaners have an alcohol base. Apply the cleaner according to the manufacturer's recommendation. Friction is required to kill surface organisms. This is not a substitute for washing hands with soap and water. At the earliest opportunity the hands should be washed thoroughly with soap and water.

HOUSEKEEPING

Floors, walls and surfaces at stations and all vehicles shall be cleaned daily and as soon as possible after any spill/soiling using any commercially available cleaner or disinfectant. Personnel performing cleaning shall wear non sterile gloves when performing cleaning in areas where blood and/or bodily fluids may be present. The entire patient compartment of all ambulances shall be thoroughly cleaned using one of the below products weekly.

Spills of blood or bodily fluids shall be cleaned as soon as possible after they occur using one of the following disinfectants:

- Chemical germicides approved for use as hospital disinfectants. These agents shall be tuberculocidal when used as indicated by the manufacture.
- Products designated by the Environmental Protection Agency (EPA) as effective against HIV. This information **MUST** be stated on the label.
- Solutions of 5.25% sodium hypochlorite (household bleach) and water. Dilutions from 1:10 to 1:100 are acceptable providing the mixture is prepared at time of use.

The procedure for cleaning a blood or bodily fluid spill:

- Disposable gloves **MUST** be worn, if splashing is anticipated, eye protection and a gown or fliud proof apron shall also be worn.
- Assemble cleaning supplies which include gloves, a trash bag, paper towels and disinfectant.
- Put on the gloves. Visible blood, tissue, body fluid or body waste should be wiped up with paper towels. Place the paper towels into the trash bag.
- Spray the contaminated area with the disinfectant. Surface should be

thoroughly wet and glisten. Let area air dry.

- Discard the gloves into the trash bag last. Knot the trash bag and place it into a trash receptacle. (This is considered pre-treated waste.)
- The employee should wash his or her hands thoroughly.

Reusable equipment shall be sterilized or disinfected per CDC Guidelines recommended for Hepatitis B, in a utility sink **AWAY FROM FOOD PREPARATION AND PERSONAL HYGENE AREAS.**

LINEN

Personnel handling used linen are not required to wear gloves unless linen is soiled with blood or body fluids. All linen shall be bagged as soon as possible in the area where it was used. Linen shall not be sorted or rinsed in patient care areas. Soiled linen shall be moved in leak proof bags.

UNIFORMS

The Infection Control Officer for each Department/Agency within the Lincoln County EMS System shall designate a facility/procedure for cleaning members grossly contaminated clothing.

Spot cleaning for all members of the Lincoln County EMS System shall be performed as noted above.

Employees, volunteers, trainees and observers with Lincoln County Emergency Medical services shall wash grossly contaminated uniforms in provided washing machines at each EMS Base. Spot cleaning may be performed as outlined above.

WASTE DISPOSAL

Regulated waste means liquid or semi-liquid blood or other potentially infectious materials, contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood and other potentially infectious materials. **Less than 20cc of blood (2/3 ounce) may be disposed of with normal trash so long as it is properly enclosed in plastic bags and will not leak.**

Containers for solid or liquid waste must be leak proof. They shall be made of a

material that can be easily cleaned. Containers with tight fitting lids are preferred. Regardless of the design the container must be maintained in a sanitary manner.

Full containers shall be disposed of in accordance with state law. Contracting this task to private industry is recommended.

Regulated waste can be disposed of in two ways. Such wastes shall either be pre-treated prior to routine disposal or placed in a leak proof container for disposal by a private firm.

Sharp instruments are to be disposed of in puncture resistant containers. Needles are **not** to be recapped, bent or broken by hand.

LCEMS shall provide approved self-sheathing needles, lancettes and catheters for use by their employees and students. These devices must also be disposed of in puncture resistant containers

Sharps containers shall be located in the work areas where needles and other sharps are generated and be replaced when more than ¾ full.

Puncture resistant containers must be designed to prevent accidental spilling of the contents.

Refuse, garbage and non-infectious solid and liquid wastes are to be disposed of daily or as needed to maintain a safe environment in the workplace.

RECOMMENDED WORK RESTRICTIONS

When employees, volunteers, students or trainees acquire a communicable disease their job activities may need to be restricted to prevent further spread of disease. The following chart provides of recommended work restrictions.

DISEASE/PROBLEM	RELIEVE FROM PATIENT CONTACT	PARTIAL WORK RESTRICTION	DURATION
Conjunctivitis, infectious	Yes		Until discharge ceases
Cytomegalovirus, infectious	No		
Diarrhea, convalescent	No	Personnel should not take care of high risk patients	Until stool is free of the infecting organism on 2 consecutive cultures not less than 24 hours apart
Other enteric pathogens	No		
Enteroviral	No	Personnel should not take care of infants and newborns	Until symptoms resolve
Group A streptococcal disease	Yes		Until 24 hours after treatment
Hepatitis A	Yes		Until 7 days after the onset of jaundice
Hepatitis B, acute and Hepatitis B carrier	No	Personnel should wear gloves for procedures that involve trauma to tissues or contact with mucous membranes or non-intact skin	Until antigenic resolves

DISEASE/PROBLEM	RELIEVE FROM PATIENT CONTACT	PARTIAL WORK RESTRICTION	DURATION
Hepatitis Non-A, Non-B (acute Hepatitis C)	No	Same as acute Hepatitis B	Period of infectivity has not been determined
Herpes simplex, genital	No		
Hepatic whitlow	Yes	It is not known whether gloves prevent contamination	Until lesions heal
HIV	No	Personnel should wear gloves for procedures that involve trauma to tissues or contact with mucous membranes or non-intact skin	As long as providing direct patient care
Immunosuppresed i.e. HIV, chemotherapy, renal failure, etc	Yes		Until cleared by Physician
Measles, active	Yes		Until 7 days after the rash disappears
Measles-Post exposure, susceptible personnel	Yes		From the 5th through the 21st day after exposure and/or 7 days after the rash appears
Mumps, active	Yes		Until 9 days after onset of parotitis
Mumps-Post exposure susceptible personnel	Yes		From the 12th day through the 26th day after exposure or until 9 days after onset of parotitis

DISEASE/PROBLEM	RELIEVE FROM PATIENT CONTACT	PARTIAL WORK RESTRICTION	DURATION
Pertussis, active	Yes		From the beginning of the catarrhal stage through the 3rd week after onset of paroxysms or until 7 days after start of effective therapy
Pertussis-Post exposure susceptible personnel	No		Same as active Pertussis if symptoms develop
Rubella, active	Yes		Until 5 days after the rash appears
Scabies, lice and body parasites	Yes		Until treated
Staphylococcus aureus, skin lesions	Yes		Until lesions have resolved
Tuberculosis	Yes	Yes	Until two weeks of treatment with TB medications and until symptoms subside.
Upper respiratory infections	Yes	Personnel with upper respiratory infections should not take care of high-risk patients	Until acute symptoms resolve
Zoster (Shingles)	No	Appropriate barrier desirable; personnel should not take care of high-risk patients	Until all lesions dry and crust
Varicella (Chickenpox) active	Yes		Until all lesions dry and crust
Varicella-Post exposure	Yes		From the 10th day through the 21st day after exposure or if varicella occurs until all lesions dry and crust

IF THE EMPLOYEE IS PHYSICALLY TOO ILL TO WORK, HE OR SHE SHOULD BE RELEASED FROM WORK. A PHYSICIAN'S ORDER FOR RETURN TO WORK MAY BE REQUIRED.

REPORTING EXPOSURES

The designated Infection Control Officer for Lincoln County Emergency Medical Service shall be the Operations Manager.

Each agency within the Lincoln County EMS System shall designate an Infection Control Officer, and provide contact information for that person to the Lincoln County Emergency Medical Service Infection Control Officer.

Employees, volunteers, observers, students or trainees of Lincoln County Emergency Medical Service who believe they have been exposed to a communicable disease shall report the incident as soon as possible to the On Duty Operations Supervisor by completing a Lincoln County "**Supervisor's Accident Investigation Report", LCEMS Exposure Form, *and* LCEMS Incident Report**.[7]

Employees, volunteers, observers, students or trainees of Fire Departments and or Rescue Squads within the Lincoln County Emergency Medical Service System who believe they have been exposed to a communicable disease shall report the incident as soon as possible to their designated Infection Control Officer via procedure enumerated by each individual Department.

The details of the report(s) shall include the following:

- the suspected disease
- the date and time of the exposure
- type of exposure, i.e. blood, body fluid, secretion or airborne
- details of exposure to include the area of contact
- conditions of the exposure i.e. location, confined space, length of time of exposure
- the name of the source patient if known

[7] Appendix L

POST EXPOSURE FOLLOW-UP

Testing of source patient and exposed personnel of all agencies in the Lincoln County EMS System shall be conducted at the receiving hospital whenever possible.

Initial testing not conducted at the receiving hospital, follow-up testing and treatment shall be conducted through the Lincoln County Health Department.

All referrals for testing or follow up care to the Lincoln County Health Department shall be arranged by the Departments Infection Control Officer by contacting the LCHD Communicable Disease Nurse at 704 736 8630. Specific protocols, which indicate courses of treatment for different types of exposures, are listed in the following chart. Exposures to diseases not covered by these protocols will be treated as prescribed by the Lincoln County Health Department.

Employees will be offered testing in cases of exposure to Hepatitis B, C and HIV[8] [9]and other communicable diseases for which definitive testing exits. As definitive testing for other communicable diseases becomes available, they shall be added.

[8] Appendix F
[9] Appendix G

Recommendations for Hepatitis B Prophylaxis Following Percutaneous Exposure[10]

Treatment when source is found to be:

Exposed Person	HBsAg positive	HBsAg negative[1]	Unknown or not tested[1]
Unvaccinated	Administer HBIG x 1* and initiate hepatitis B vaccine+	Initiate hepatitis B vaccine+	Initiate hepatitis B vaccine+
Previously vaccinated Known responder	Test exposed person for anti-HBs. 1. If adequate, no treatment 2. If inadequate, hepatitis B vaccine booster dose	No treatment	No treatment
Known non-responder	HBIG x 2 or HBIG x 1, plus 1 dose of hepatitis B vaccine	No treatment	If known high-risk source, may treat as if source were HBsAg positive
Response unknown	Test exposed person for anti-HB++ 1. If inadequate HBIG x 1, plus hepatitis B vaccine booster dose 2. If adequate, no treatment	No treatment	Test exposed person for anti-HBs++ 1. If inadequate, hepatitis B vaccine booster dose 2. If adequate, no treatment

[1] Source increased liver enzymes and non-A non-B suspected Administer ISG 0.6 mL/kg.

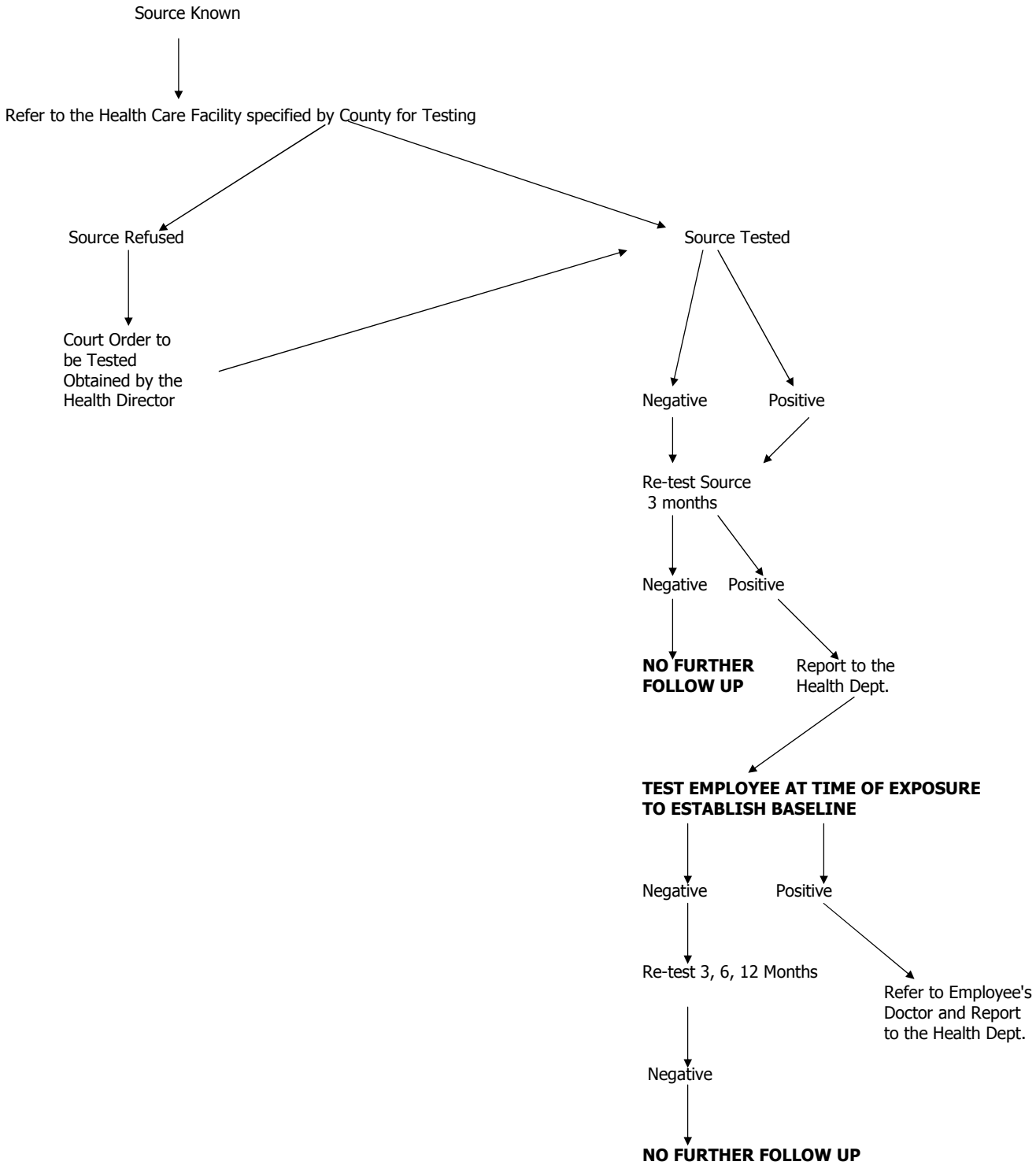
* Hepatitis B immune globulin (HBIG) dose 0.06 mL/kg intramuscularly.

\+ Hepatitis B vaccine dose.

++ Adequate anti-HBs is > 10 milli-international units.

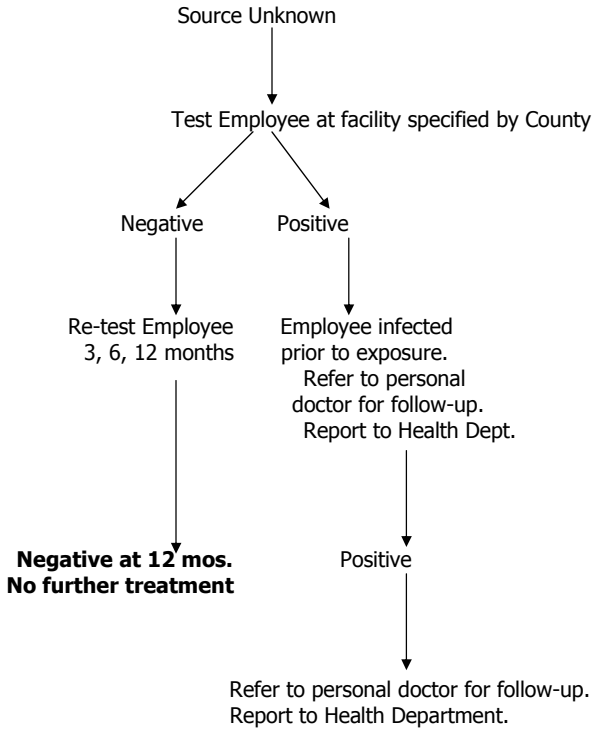
[10] : Morbidity and Mortality Weekly Report, Vol. 40, No. RR-13, November 22, 1991. Hepatitis B Virus: A comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination. Recommendations of the Immunization Practices Advisory Committee (ACIP) US Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Infectious Diseases, Atlanta, Georgia 30333

BLOOD/BODY FLUID EXPOSURE FOLLOW UP FOR HIV[11]



[11] chart courtesy Rowan County

BLOOD/BODY FLUID EXPOSURE FOLLOW-UP FOR HIV[12]



[12] chart courtesy Rowan County

AIRBORNE EXPOSURE TO TB FOLLOW-UP PROCEDURE[13]

PPD WITHIN 7 DAYS OF EXPOSURE AT Lincoln County Health Department

NEGATIVE PPD

↓

REPEAT PPD IN 12 WEEKS

↓

IF NEGATIVE NO FURTHER FOLLOW UP

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IF REACTION GREATER THAN 10MM+ REFER TO HEALTH DEPARTMENT FOR FOLLOW UP PER NC DEPARTMENT OF HEALTH TB POLICY.

POSITIVE PPD

↓

REFER EMPLOYEE TO HEALTH DEPARTMENT

[13] chart courtesy Rowan County

RECORD KEEPING

Each Department within the Lincoln County EMS System shall maintain records for all employees, volunteers, and members in a secure location for the duration of affiliation plus thirty years. These records shall be confidential and accessible **ONLY** by the Infection Control Officer and select administrative personnel as determined by the Chief/Director of the individual Department

These records shall contain a minimum of the following:

- Communicable disease histories
- Immunization records
- Exposure records including test results
- Follow up reports
- Waivers
- Results of pre-employment & annual physicals

LAY PUBLIC EXPOSURES TO BLOOD AND AIR BORN PATHOGENS

In the event that a bystander and or lay person renders aid at the scene of an emergency and is exposed to a potential blood, bodily fluid or air borne pathogen such as a needle stick or blood and/or secretion exposure to mucosal surface or open wound, the responding personnel shall document the person's name, contact information, and type of exposure on an LCEMS Incident Report or similar Department reporting document and forward to the LCEMS Infectious Control Officer within 24 hours of the exposure.

In addition, the bystander and or lay person shall be advised to be evaluated by their physician, public health department or the emergency department immediately. If possible, the bystander and or lay person should be evaluated in the same ED as the patient responsible for the exposure to allow for a better decision regarding the treatment required. This advice/offer should also be recorded on the above report documenting the incident.

APPENDIX "A"

UNIVERSAL PRECAUTIONS[14]

Universal precautions were developed by the Centers for Disease Control (CDC) to limit the transmission of HIV. The concept stresses that **ALL PATIENTS SHOULD BE ASSUMED TO BE INFECTIOUS FOR HIV AND OTHER BLOOD-BORNE PATHOGENS**. Universal precautions should be followed when personnel are exposed to blood, amniotic fluid, pericardial fluid, peritoneal fluid, synovial fluid, cerebrospinal fluid, semen, vaginal secretions, feces, urine, vomitus, sputum, saliva and any other body fluid visibly contaminated with blood.

Exposure means any contact with blood or body fluids (listed above) through percutaneous inoculation (needle stick injury or cut from contaminated material), contact with an open wound, non-intact skin or mucous membrane while on the job.

Guidelines of universal precautions:

1. Wash hands between patients. (Waterless hand cleaner is available in each work area where water for hand washing is not present.)
2. Wear gloves when coming into contact with blood or body fluids of any patient.
3. Wash hands immediately after removing gloves. (Waterless hand cleaner is available in the work area.)
4. Wash hands if they become contaminated with blood or other body fluids.
5. Do not recap, bend, cut or break needles, but place them into a puncture-proof container. Containers shall be labeled with a BIOHAZARD tag or symbol. Replace the container when it reaches the maximum fill level.
6. Wear gowns if soiling of your clothes with blood or body fluids is likely. Water-impermeable aprons are available when heavy soiling is anticipated.
7. Use other protective barriers (e.g., masks, goggles, glasses, bag valve masks, etc.) appropriate for the procedure being performed and the type of exposure anticipated.
8. Put damp or dry linen in regular linen bags. All potentially contaminated linen shall be double bagged in a plastic bags marked with the BIOHAZARD tag or symbol. Used linen should be bagged immediately in the area where it is generated. Handle soiled linen as little as possible. Then put the plastic bags into a regular linen bag and send it to the laundry.
9. Trash is to be bagged and discarded. Discard liquid waste at the hospital.
10. Report any exposure (i.e., needle stick, splash of fluid into mucous membrane, etc.) to your supervisor.
11. Personal protective equipment and resuscitation equipment will be available in all work areas where their use is anticipated.

[14] Adopted from Rowan County Exposure Control Policy

APPENDIX B

TRAINING OUTLINES

BLOODBORNE PATHOGENS

At the completion of the session or sessions the participant will have knowledge of:

1. The OSHA standard for blood borne pathogens.
2. Epidemiology and symptomatology of blood borne diseases.
3. Modes of transmission of blood borne diseases.
4. The Lincoln County EMS System Exposure Control Plan.
5. Which procedures might cause exposure to blood or body fluids?
6. Universal Precautions and control measures specific for their job.
7. Housekeeping practices and decontamination procedures.
8. Personal protective equipment and when to wear it.
9. Post exposure evaluation and follow up.
10. Hazard signs and symbols.
11. How to dispose of contaminated waste.
12. The Hepatitis vaccination program.

AIRBORNE DISEASES

1. The mode of transmission of airborne illnesses.
2. The signs and symptoms of Tuberculosis.
3. Personal protective devices and engineering controls available to prevent the transmission of TB.
4. Medical follow up after exposure to TB.
5. The purpose of the annual PPD test.

APPENDIX C

WAIVER FOR HEPATITIS B VACCINE

I understand that due to my occupational exposure to blood and other potentially infectious materials, I may be at risk of acquiring hepatitis-B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis-B vaccine, at no charge to myself. However, **I decline hepatitis-B vaccination at this time**. I understand that **by declining this vaccine, I continue to be at risk of acquiring hepatitis B**, a serious disease and if exposed may affect workers compensation benefits. In the future, if I continue to have occupational exposure to blood and other potentially infectious materials and I decide to be vaccinated with hepatitis-B vaccine, I can receive the vaccination series at no charge to me.[15] The Infection Control Officer has reviewed Appendix J, Important Information about Hepatitis B and Hepatitis B Vaccine, with me.

Signature of Employee PRINT NAME Date

Signature of Infection Control Officer PRINT NAME Date

[15] Bloodborn Pathogens 29 CFR 1030 Appendix A with Amendments as of September 1, 1994

APPENDIX D

WAIVER FOR CDC RECOMMENDED VACCINES

I understand that due to my occupational contact with patients or infective material from patients with infections I am at risk for exposure to and possible transmission of vaccine-preventable diseases. I have been given the opportunity to be vaccinated with all CDC recommended vaccines, at no charge to myself. However, **I decline the following vaccinations**

_____

_____

_____

at this time. I understand that **by declining these vaccines, I continue to be at risk for exposure to and** possible transmission of these vaccine-preventable diseases and if exposed may affect workers compensation benefits. In the future, if I continue to have occupational contact with patients or infective material from patients with infections and I decide to be vaccinated with any of these vaccines, I can receive the vaccination(s) at no charge to me.

_____

Signature of Employee PRINT NAME Date

_____

Signature of LCHD Representative PRINT NAME Date

APPENDIX E

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT FOR WORKER PROTECTION AGAINST HIV AND HBV TRANSMISSION IN PRE-HOSPITAL SETTINGS[16]

TASK OR ACTIVITY	DISPOSABLE			PROTECTIVE EYE WEAR
	GLOVES	GOWN	MASK	
Bleeding control with spurting blood	Yes	Yes	Yes	Yes
Bleeding control with minimal bleeding	Yes	No	No	No
Emergency Childbirth	Yes	Yes	Yes[A]	Yes[A]
Blood Drawing	Yes[B]	No	No	No
Starting an IV Line	Yes	No	No	No
Placing an ET tube or EOA *	Yes	No	No[C]	No[C]
Suctioning or manually cleaning airway equipment	Yes	No	No[C]	No[C]
Handling/cleaning Equipment with Microbial Contamination	Yes	No[D]	No	No
Taking Blood Pressure	No	No	No	No
Taking a Temperature	No	No	No	No
Giving an Injection **	No	No	No	No

[A] if splashing is likely.

[B] gloves should be worn under the following conditions: if the health care worker has cuts, scratches or non-intact skin, if the patient is uncooperative, when performing finger or heel sticks on children, and during training.

[C] unless splashing is likely.

[D] unless soiling of clothing is likely during clean up.

* While HHS recommends that eye protection is not required unless splashing is likely, **LCEMS REQUIRES THE USE OF THIS ITEM FOR ALL INTUBATIONS AND EOA PLACEMENTS**

** While HHS recommends that disposable gloves are not required for "giving an injection" **LCEMS REQUIRES THE USE OF THIS ITEM FOR ALL INJECTIONS.**

[16] Guidelines for Prevention of HIV and HBV to Health Care and Public Safety Workers U. S. Department of Health and Human Services, February 1989.

APPENDIX F

WAIVER TO SUBMIT TO FOLLOW-UP PROCEDURES AFTER POSSIBLE EXPOSURE TO INFECTIOUS DISEASE

I, _____, have had explained to me the need for follow-up testing to evaluate my exposure

to _____. I understand that the testing is medically indicated.

I have had a chance to ask questions which were answered to my satisfaction and I believe that I understand the risks of my possible exposure and the benefits of follow-up testing.

I understand that no adverse action can be taken on the ground that I refused testing and follow-up since the procedures are designed for my benefit.

I understand that Workers' Compensation **may deny** claims for which initial testing and follow-up were refused.

I choose not to receive any testing or follow-up.

_____ _____

Signature of Employee Date Signature of Supervisor Date

Exposure Type: _____

Exposure Date: _____

_____

Signature of Infection Control Officer Date

APPENDIX G

INFORMED CONSENT TO PERFORM TESTS AND TO RECORD TEST RESULTS

I, _____, have had explained to me the procedures for performing the following tests:

_____ _____

_____ _____

_____ _____

I understand the need for these tests. I have had a chance to ask questions which were answered to my satisfaction.

I understand that the test result(s) will be part of my personnel medical record. I understand that my test results and my medical record are strictly confidential and will be shared only with health care providers, personnel managers and administration directly involved in my care and follow-up.

I understand the benefits and risks of the test(s). I agree to have the test(s) done and the results recorded in my record.

_____ _____

Signature of Employee Date Signature of Witness Date

_____

Signature of Infection Control Officer Date

APPENDIX H

GLOSSARY

acute (disease)	of short duration, usually with a sudden onset, and sometimes severe.
antibody	substance that a person's immune system develops to help fight infection.
antibody positive	the result of a test or series of tests to detect antibodies in the blood. A positive result means that antibodies are present.
antigen	substance that is foreign to the body. An antigen causes the immune system to form antibodies to fight the antigen.
asymptomatic	having a disease-causing agent in the body but showing no outward signs of disease.
asymptomatic HIV seropositive	the condition of testing positive for HIV antibody without showing any symptoms of disease. A person who is HIV- positive, even without symptoms is capable of transmitting the virus to others.
body fluids	fluids that have been listed by the CDC as linked to the transmission of HIV or HBV or to which universal precautions apply. A few examples of these fluids are semen, blood, vaginal secretions, and breast milk.
carrier	a person who apparently is healthy, but who is infected with some disease-causing organism (such as HIV or HBV) that can be transmitted to another person.
CDC	The Center for Disease Control is a federal health agency that is a branch of the US Department of Health and Human Services. The CDC provides national health and safety guidelines and statistical data on HIV and other diseases.
chronic (disease)	lasting a long time, or recurring often.
decontamination	removing disease-causing agents, thus making the immediate environment or objects safe to handle.
diagnosis	identifying a disease by its signs, symptoms, course and laboratory findings.
exposure	the act or condition of coming into contact with, but not necessarily being infected by, a disease-causing agent.
HB_sAb	Hepatitis B surface antibody. Also known as Anti-HB_s. Laboratory test verifying immunity after vaccination.
HB_sAg	Hepatitis B surface antigen. Laboratory test that, when positive, indicates the patient is infectious

GLOSSARY, CONTINUED

HBIG	Hepatitis B immune globulin, which is a preparation that provides some temporary protection following exposure to HBV if given within 7 days after exposure.
HBV	Hepatitis B, a viral infection that affects the liver. The effects of the disease on the liver can range from mild, even unapparent, to severe, to fatal.
health care worke	an employee including but not limited to nurses, physicians, optometrists, laboratory technicians, phlebotomists, paramedics, emergency medical technicians, medical examiners, housekeepers, laundry workers and others whose work may involve direct contact with body fluids from living or dead individuals.
HIV	Human immunodeficiency virus, the cause of AIDS (advanced HIV).
immune system	a body system that helps resist disease-causing germs, viruses or other infections
incubation period	the time period between infection and appearance of disease symptoms.
infection	a condition or state of the body in which a disease-causing agent has entered it.
ISG	immune serum globulin.
mucous membran	a moist layer of tissue that lines the mouth, eyes, nostrils, vagina, anus and urethra.
non-intact skin	skin that is chapped, abraded, lacerated, weeping or that has rashes or eruptions
pathogen	a disease-causing substance.
percutaneous	enters the body through the skin, for example, by needle-stick or on non-intact skin.
sharps	a term describing anything that can penetrate the skin such as needles, lancets, glass, pipettes, etc.
Tuberculosis (TB)	TB is an airborne communicable disease caused by mycobacterium tuberculosis o the tubercle bacillus. Transmission may occur from inhaling tiny airborne particle expelled by a person who has infectious TB.
vaccine	a substance that produces or increases immunity and protection against a particular disease.
virus	an organism that causes disease.

APPENDIX I

TYPES OF EXPOSURES
Event or Job-Related Task

Possible Blood or Body Fluid Exposure

1. Cuts from falls
2. Cuts from machinery
3. Emptying trash - possible exposure to bloody articles
4. Paper cuts
5. Cleaning bathrooms - possible exposure to urine, body fluids
6. Picking up litter - possible exposure to blood or body fluids
7. Handling objects contaminated with blood or body fluids. Examples: swabs for Pap smears
8. Cleaning up urine, feces or vomitus
9. Drawing blood samples
10. Carrying tubes of blood
11. Starting IVs at the scene of an accident or in an ambulance
12. Performing hemorrhage control
13. CPR on trauma patients
14. Childbirth
15. Administering SQ injections
16. Performing Dextrostix
17. Cleaning equipment contaminated with blood or body fluids
18. Disposing of contaminated needles
19. Sustaining cuts at wreck scenes where surfaces could be contaminated with other people's blood
20. Handling dirty linen
21. Needle stick injuries
22. Touching diaphoretic patients
23. Dealing with combative patients who would intentionally throw urine or feces at employee
24. Being attacked by patient and scratched, cut or spat on
25. Working with equipment that was not cleaned properly by another crew
26. Transporting dirty linen from the hospital to the ambulance bases
27. Having to wear dirty uniforms until worker can change into a clean one
28. Accidental needle sticks sustained while treating a patient, i.e. an unseen needle in the patient's clothing or on the furniture or floor

Possible Blood or Body Fluid Exposure (continued)

29. Transfer of dirty uniforms to the residence for cleaning
30. Employee failure to wear appropriate PPE
31. Tears in gloves
32. Poor hand washing techniques
33. Lax hand washing, i.e. not washing hands after every patient contact
34. Employees working while sick with colds or other minor illnesses
35. Failure to use protective equipment like a bag valve mask when resuscitating a patient
36. Unknowingly treating HIV or HBV infected patients being transferred from a nursing home or hospital to another facility
37. Providing first aid

Possible Indirect Transmission of Communicable Disease

1. Using the telephone
2. Handling objects touched by others
3. Handling money

Possible Exposure to Airborne Diseases

1. Being around sickly or recovering people
2. Exposure through droplet spread of infection
3. Working closely with others

APPENDIX J

IMPORTANT INFORMATION ABOUT HEPATITIS B AND HEPATITIS B VACCINE[17]

WHAT IS HEPATITIS B?

Hepatitis B is an infection of the liver caused by the hepatitis B virus (HBV). The term "viral hepatitis" is often used for and may include hepatitis B and other similar diseases which affect the liver but are caused by different viruses.

Acute hepatitis generally begins with mild symptoms that may or may not become severe. These symptoms may include loss of appetite, a vague feeling of oncoming illness, extreme tiredness, nausea, vomiting, stomach pain, dark urine, and jaundice (yellow eyes and skin). Skin rashes and joint pain can also occur.

In the United States about 300,000 persons, mostly young adults, catch Hepatitis B each year. About one-quarter will develop jaundice, and more than 10,000 will need to be hospitalized. About 350-400 people die each year from severe acute hepatitis B. Between 6 and 10 of every 100 young adults who catch hepatitis B become chronic carriers (have HBV in their blood for 6 or more months) and may be able to spread the infection to others for a long period of time. Infants who catch hepatitis B are more likely to become carriers than adults. About one-fourth of these carriers go on to develop a disease called "chronic active hepatitis," Chronic active hepatitis often causes cirrhosis of the liver (liver destruction) and death due to liver failure. In addition, HBV carriers are much more likely than others to get cancer of the liver. An estimated 4,000 persons die from hepatitis B-related cirrhosis each year in the United States and more than 1,000 die from hepatitis b-related liver cancer.

The risk of catching hepatitis is higher in certain groups of people because of their occupation, lifestyle, or environment. Because of the risks of serious problems associated with hepatitis B infection, vaccination to help prevent infections is recommended for these groups.

HEPATITIS B VACCINE:

Hepatitis B vaccine is made two ways. Plasma-derived vaccine is made from portions of HBV particles that have been purified from the blood of carriers. The method used to prepare the plasma-derived hepatitis vaccine kills all types of viruses found in human blood, including the virus that causes Acquired Immunodeficiency Syndrome (AIDS). The recombinant vaccine is made from common baker's yeast cells through genetic engineering. The yeast-derived vaccine does not contain human blood products. The vaccine is given by injection on three

[17] Department of Human Resources Immunization Program CDC Reprint - Hepatitis B

IMPORTANT INFORMATION ABOUTHEPATITIS B AND HEPATITIS B VACCINE (Continued)

separate dates. The first two doses should be given one month apart, and the third dose, 5 months after the second. After three doses, the

hepatitis B vaccine is 85%-95% effective in preventing hepatitis B infection in those who received vaccine. The protection for normal adults and children given vaccine properly lasts at least 5 years. Booster doses of vaccine are not routinely recommended at the present time.

WHO SHOULD GET HEPATITIS B VACCINE?

The vaccine is recommended for persons at high risk of catching HBV infection who are or may be unprotected. These groups include:

1. Health care workers. Health care workers who are exposed to blood or blood products or who may get accidental needle sticks should be vaccinated.
2. Clients and staff of institutions for the mentally retarded. The special behavioral and medical problems of the retarded make this a high-risk setting. The risk in these institutions is related to contact with blood and also with bites and contact with skin lesions and other body fluids that contain HBV. Clients and staff of group and foster homes where a carrier is known to be a parent should also be vaccinated.
3. Other contacts of HBV carriers. Vaccine use should be considered in classroom and other day settings where de-institutionalized mentally retarded HBV carriers behave aggressively or have special medical problems that may expose contacts to their blood and body secretions. Teachers and aides have been shown to be at significant risk in these settings. Other persons who have casual contact with carriers at schools and offices are at little risk of catching HBV infection and vaccine is not recommended for them.
4. Hemodialysis patients. Although the hepatitis B vaccine is less effective in these patients, it should still be offered to all hemodialysis patients.
5. Homosexually active men.
6. Users of unlawful injectable drugs. Sharing needles is an extremely high-risk activity for transmitting hepatitis B.
7. Recipients of certain blood products. Persons such as hemophiliacs who receive certain products to help their blood clot are at high risk of infection.
8. Household and sexual contacts of HBV carriers. When HBV carriers are identified, household and sexual contacts should be offered vaccine.
9. Special populations from areas with high rates of hepatitis B. These groups include Alaskan natives, native Pacific islanders, and immigrants and refugees from eastern Asia and sub-Saharan Africa.

IMPORTANT INFORMATION ABOUTHEPATITIS B AND HEPATITIS B VACCINE (Continued)

VACCINE ALSO SHOULD BE CONSIDERED FOR:

1. Long term inmates of prisons. The risks of prisoners catching HBV infection may be due to use of unlawful injectable drugs.
2. Heterosexuals who come in for treatment of sexually transmitted diseases and who have histories of sexual activity with multiple sexual partners.
3. Persons who plan to travel to areas outside the United States that have high rates of hepatitis B infection, stay in those areas for more than 6 months, and have close contact with the local population; and, persons traveling for shorter duration who may have sexual contact with local persons in areas where HBV infection is common. Persons traveling abroad who will perform medical procedures in areas where HBV infection is common are at very high risk.

ADDITIONAL VACCINES:

Hepatitis B vaccine is also recommended as part of the therapy used to prevent hepatitis B infection after exposure to HBV. Post exposure use of hepatitis B vaccine is recommended for the following persons: (1) infants born to mothers who have a positive blood test for hepatitis B surface antigen (HBsAg); and, (2) persons having accidents involving HBsAg-positive blood where there is entry through the skin or a mucous membrane. In addition, vaccination may be recommended for persons having sexual contact with someone who has a positive blood test for HBsAg. The hepatitis B vaccine series should be started at the same time as other therapy, primarily, treatment with hepatitis B immune globulin (HBIG).

POSSIBLE SIDE EFFECTS FROM THE VACCINE:

The most common side effect is soreness at the site of injection. Other illnesses, such as neurologic reactions, have been reported after vaccine is given but hepatitis B vaccine is not believed to be the cause of these illnesses. As with any drug or vaccine, there is a rare possibility that allergic or more serious reactions or even death could occur. No deaths, however, have been reported in persons who have received this vaccine. Giving hepatitis B vaccine to persons who are already immune or to carriers will not increase the risk of side effects.

PREGNANCY:

No information is available about the safety of the vaccine for unborn babies; however, because the vaccine contains only particles that do not cause hepatitis B infection, there

IMPORTANT INFORMATION ABOUT HEPATITIS B AND HEPATITIS B VACCINE (Continued)

should be no risk. In contrast, if a pregnant woman gets a hepatitis B infection, this may cause severe disease in the mother and chronic infection in the newborn baby. Therefore, pregnant women who are otherwise eligible can be given hepatitis B vaccine.

QUESTIONS:

If you have any questions about hepatitis B or hepatitis B vaccine, please ask us now or call your doctor or health department before you sign this form.

REACTIONS:

If the person who received the vaccine gets sick and visits a doctor, hospital, or clinic during the 4 weeks after receiving the vaccine, please report it to the healthcare provider administering the vaccine.

APPENDIX K

IMPORTANT INFORMATION ABOUT TUBERCULOSIS

EPIDEMIOLOGY

Tuberculosis continues to be a public health problem in the United States with over 20,000 cases reported annually. Since 1984, there have been substantial increases in tuberculosis illness in geographic areas with a high occurrence of Human Immunodeficiency Virus (HIV) infection. Since 1996 this increase has been reversed due to improved vigilance in treatment.

TUBERCULOSIS TRANSMISSION

Tuberculosis is an airborne disease that is spread through the air when a person with active pulmonary tuberculosis coughs and releases tuberculosis droplets into the air. Other persons in close proximity can then breathe in the droplets that have the tuberculosis bacteria. When unprotected persons breathe air that has been contaminated by an infectious person, they may become infected with the tuberculosis organism.

Casual exposure does not normally result in transmission of tuberculosis. The tuberculosis organism does not readily cause active disease in the majority of people who come into contact with it.

Most individuals who encounter the tuberculosis organism do not become infected, while others may become infected but are able to contain the infection. These persons with tuberculosis infection but no active disease are not infectious. They are not sick themselves and cannot make others sick.

While exposure under proper conditions can cause infection, it does not usually cause active disease. Less then 10% of the people infected with the tuberculosis bacteria actually become ill with the active disease. Only persons with active disease are infectious to others.

The tuberculosis bacteria cannot be transmitted by handling bed sheets, pillows, or patients' clothing.

PLACES WHERE THE TRANSMISSION OF TUBERCULOSIS MAY OCCUR

Tuberculosis is most easily transmitted in crowded, congested, and poorly ventilated areas.

Hospitals, prisons, and shelters have been the traditional settings where the transmission of tuberculosis occurs.

IMPORTANT INFORMATION ABOUT TUBERCULOSIS (Continued)

It is very difficult to acquire tuberculosis in locations such as restrooms, subways, and stores. In these settings, exposure time is short and ventilation is generally sufficient to disperse the moisture droplets, thereby preventing infection.

Government (federal, state, municipal) regulations require "isolation" signs on the doors of rooms which house patients with contagious tuberculosis. Members must be alert to the significance of these signs just as they are to "Hazardous Area" and "Radioactive Materials" signs.

OCCUPATIONAL EXPOSURE TO TUBERCULOSIS

In an occupational setting, persons with close, repeated, and prolonged contact with high risk groups as defined by the Centers for Disease Control, (see Section 6 below) or exposure to high hazard procedures are at increased risk and in need of protection.

According to the Centers for Disease Control, members of the following occupations have greater risk of exposure to tuberculosis since they work in an enclosed environment for extended periods of time with high risk groups.

1. Employees of correctional facilities.
2. Persons who work with substance abusers.
3. Healthcare providers.
4. Persons who work with the elderly or institutionalized.
5. Persons who work in homeless shelters.

PERSONS WITH A HIGH RISK OF DEVELOPING TUBERCULOSIS

Persons with a particularly high risk of developing active tuberculosis disease include the following:

1. Individuals with HIV infection.
2. Individuals in close frequent contact with known infectious tuberculosis cases, such as healthcare providers.
3. Foreign-born persons from regions with a high prevalence of tuberculosis, e.g., Asia, Africa, Latin America, Caribbean Islands.
4. Members of low income populations that are medically under-served and poorly nourished.
5. Alcoholics.
6. Intravenous drug users.

IMPORTANT INFORMATION ABOUT TUBERCULOSIS (Continued)

7. Inmates and staff of correctional facilities.
8. Residents and staff of long-term healthcare facilities, e.g., nursing homes.

Persons who are most likely to contract the active tuberculosis disease are those whose bodies are no longer able to fight off the disease because their immune system is compromised due to:

1. Bouts with chronic illness, such as HIV infection.
2. Certain steroid medications.
3. Chemotherapy treatment for cancer.
4. Old age.
5. Malnutrition.

Persons who are in generally good health and not suffering from conditions that would temporarily impede the immune system are not inclined to contract active tuberculosis disease.

MULTIPLE DRUG RESISTANT TUBERCULOSIS

The development of multiple drug resistant strains of tuberculosis (MDRTB) has increased the hazards associated with tuberculosis. Due to improved public health initiatives, exposure to these strains has decreased since 1996.

Although decreasing, MDRTB is still present in the population. Some strains can resist up to six of the standard antibiotics normally used to treat the disease. Drug resistance can be either primary or secondary.

Primary drug resistance occurs when a person acquires active tuberculosis from an individual with active drug resistant tuberculosis.

Secondary or acquired drug resistance occurs when a person with drug-sensitive active tuberculosis disease stops taking medication before a cure is achieved.

IMPORTANT INFORMATION ABOUT TUBERCULOSIS (Continued)

ACTIVE TUBERCULOSIS SYMPTOMS AND TREATMENT

Persons with active tuberculosis disease experience symptoms such as:

- Fatigue
- Loss of appetite
- Chronic cough
- **Persistent** Fevers
- **Persistent** Chills
- **Persistent** Night Sweats
- **Unexplained** Weight loss

Tuberculosis is a curable and treatable disease. Normally, most persons with tuberculosis receive drugs for a total period of six months or a longer period for those with HIV infection, and are cured of the disease with a 96% to 98% certainty. A person with active drug sensitive tuberculosis is normally rendered non-infectious within the first few weeks of therapy.

Medications can cure active tuberculosis effectively if taken as prescribed and for the period of time required. Effective anti-tuberculosis medications will, after a short period of time, render an individual's active disease non-infectious, usually in two weeks.

Persons with MDRTB remain infectious longer and require a longer period of treatment until cured.

Exposure Control Plan			
EFFECTIVE DATE: 04/01/2007	REVISION DATE: 12/01/2007	APPROVED BY: RONALD D. ROMBS	PAGE: 41 OF 41

APPENDIX L

REPORT OF EXPOSURE

Employee _____

Department _____

Date of Exposure _____ Time of Exposure _____am/pm

Type of exposure: Via what route? (blood, body fluid or secretion)

_____

_____

Describe how the incident occurred. (include activity taking place).

_____

_____

Conditions of exposure: (location, confined space)

_____

_____

_____

Name of the source patient_____

Address and telephone number of the patient_____

_____

Receiving hospital of the source patient_____

Preliminary instructions to the employee_____

_____

Follow up protocol followed_____

Names of other potentially exposed people involved in this incident.

Name_____ Home Tel. #_____ Agency _____

Name_____ Home Tel. #_____ Agency _____

Name_____ Home Tel. #_____ Agency _____

Name_____ Home Tel. #_____ Agency _____