

**North Carolina Department of Labor
Occupational Safety and Health Division**

Raleigh, North Carolina

To: Memorandum to the OSH Division

From: Allen McNeely, OSH Director

Subject: *Ebola Procedures*

Date: *October 30, 2014*

PURPOSE

This memorandum provides guidance to the OSH Division in handling Ebola complaints, inspections and calls. It will be updated as necessary to ensure currency of applicable Agency guidance and information.

OSH DIVISION—EBOLA PROCEDURES

Standards Section (Calls/Emails)

Phone calls from employers and employees who want general information: Direct to the Ebola page on the NCDOL website (http://www.nclabor.com/osh/etta/A_to_Z_Topics/ebolavirus.htm) which will provide information on OSHA standards, operating documents, and publications as well as other agency resources such as NC DHHS - DPH website, federal OSHA website, and the Centers for Disease Control (CDC) website.

If the caller needs to speak to someone directly about Ebola symptoms and other guidelines, refer them to the **Ebola Public Information Hot Line at 1-800-222-1222**.

If any person has a concern that they may have Ebola, take down their name and telephone and contact NC DHHS - DPH with the information. Also encourage the person to contact NC DHHS - DPH (contact information below) or call 9-1-1.

NC DHHS—DPH* Primary Contacts

Penelope Slade-Sawyer

Phone: 919-707-5000

NC DHHS - Director, Division of Public Health

Megan Davies

Email: megan.davies@dhhs.nc.gov

Phone: 919-733-3421

NC DHHS - State Epidemiologist & Chief of
Epidemiology Section

Dr. Julie Casani

Email: julie.casani@dhhs.nc.gov

Phone: 919-715-6734

NC DHHS - Branch Chief, Public Health

Preparedness and Response

Ebola Incident Management Team Leader

Dr. Scott Zimmerman

Phone: 919-733-7834

NC DHHS – Director - State Laboratory of Public
Health

**State Public Health Officials to Notify in the Event of a Complaint, Referral or Media Involvement.*

Standards Section Primary Contacts for Ebola Questions

Susan Haritos

Health Standards Officer
susan.haritos@labor.nc.gov
919-807-2879

Ed Geddie

Health Standards Officer
ed.geddie@labor.nc.gov
919-807-2880

Complaint Desk

Anonymous complaint

If a complaint comes in, it will be entered following normal requirements found in Field Operations Manual ([FOM Chapter 9](#))—Complaints, Referrals and Accidents as to whether it is a valid complaint or not. If entered, complaints will be forwarded to the appropriate District Supervisor for review.

All valid complaints will require a response, either by letter, phone call or inspection.

- Send letter with general information. Reference Appendix A for example letter.
- Record in Ebola Bloodborne Pathogens (BBP) Activity Database. This information will be sent to federal OSHA every Tuesday before 1 pm.

Specific complaint

Questions to ask complainant/caller:

- Why do they think they are at risk for Ebola infection?
- What type of work do they do?
- How were they exposed or what is their potential exposure?
- What activities/tasks will they do that may cause exposure?
- Do they have symptoms?
- What training have they had?
- Are there bloodborne pathogens exposures?
- What personal protective equipment (PPE) do they have/wear?
- Are procedures and training in place for Ebola?
- Are there other hazards they are concerned about?

Where applicable, direct caller to the Ebola page on the NCDOL website, (http://www.nclabor.com/osha/etta/A_to_Z_Topics/ebolavirus.htm), which will provide information on OSHA standards, operating documents, and publications as well as other agency resources such as NC DHHS - DPH website, federal OSHA website, and the CDC website.

If the caller needs to speak to someone directly about Ebola symptoms and other guidelines, refer them to the *Ebola Public Information Hot Line at 1-800-222-1222*.

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Phone: 919-715-6734

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Phone: 919-733-7834

NC DHHS – Director - State Laboratory of Public Health

**State Public Health Officials to Notify in the Event of a Complaint, Referral or Media Involvement*

Complaint Desk Primary Contact for Ebola Questions

Ric Schumann

Complaint Desk Supervisor

ric.schumann@labor.nc.gov

919-779-8514

Compliance Inspection Activity

Prior to doing any site activity related to Ebola, NC DHHS—DPH will be contacted. Complaint/fatality information will be reviewed to determine if enough detail has been provided to conduct an inspection and assure health of compliance staff. All Ebola inspections will require review and prior approval by the OSH Director/Assistant OSH Director.

General Schedule Inspections

- Inspections will NOT be conducted in facilities with known active cases until it has been cleared by the CDC or NC DHHS - DPH.
- Inspections will NOT be conducted in facilities holding suspect cases until laboratory confirmed as negative by the CDC or NC DHHS - DPH.
- Inspections will NOT be conducted where known or suspect Ebola patients have lived or been housed until deemed safe by decontamination by the CDC or NC DHHS - DPH.

In the above cases, a letter may be sent to the employer with regard to CDC requirements especially if an employer of higher risk groups and deemed appropriate.

- Inspections can be conducted at any location where asymptomatic persons are under quarantine. The Compliance Officer will discuss on-site procedures to follow with the District Supervisor and/or Bureau Chief before conducting any on-site activity. Procedures that will be discussed shall include:
 - Conducting phone interviews with quarantined employees.
 - Appropriate PPE to be utilized.
 - On-site inspection procedures and precautions.
 - Contacting NC DHHS - DPH or CDC for additional information or guidance, if applicable.

- Contacting employer prior to inspection (only as necessary to ensure no exposure risk to Compliance Officer).
- Review federal OSHA and CDC guidance for Ebola based on the industry and applicable directives.
- Decontamination arrangements.

Complaint Inspections

If an inspection is required, the Compliance Officer will discuss on-site procedures to follow with the District Supervisor and Bureau Chief before conducting any on-site activity. Procedures that will be discussed shall include:

- Conducting phone interviews with quarantined employees.
- Appropriate PPE to be utilized.
- On-site inspection procedures and precautions.
- Contacting NC DHHS - DPH or CDC for additional information or guidance, if applicable.
- Contacting employer prior to inspection (only as necessary to ensure no exposure risk to Compliance Officer).
- Review federal OSHA and CDC guidance for Ebola based on the industry and applicable directives.
- Decontamination arrangements.

During the inspection, the compliance officer will review:

- BBP exposure control program; in particular, labeling, disinfecting procedures, laundry procedures, PPE use, and training.
- Use of [infection control guidelines and procedures](#).
- Use of standard precautions (defined below).
- Risk of exposure to infectious diseases.
- PPE training, hazard assessment and use of appropriate equipment.
- Adherence to applicable CDC guidelines, OSHA standards.
- Respiratory protection program, training and fit testing.
- Hazard communication program, training, and labeling.
- OSHA 300 logs (needle sticks, incidents involving privacy cases, lack of PPE).
- Reference [Other Agency Resources](#) on NCDOL A - Z Topics page for Ebola.

DEFINITIONS

[Standard Precautions](#) are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. These practices are designed to both protect healthcare personnel (HCP) and prevent HCP from spreading infections among patients. Standard Precautions include: 1) hand hygiene, 2) use of PPE e.g., gloves, gowns, masks), 3) safe injection practices, 4) safe handling of potentially contaminated equipment or surfaces in the patient environment, and 5) respiratory hygiene/cough etiquette.

[Case Definition for Ebola Virus, Persons under Investigation and Confirmed Case.](#)

ADDITIONAL INSPECTION INFORMATION

Guidelines

[Federal OSHA's Interim General Guidance For Workers.](#) The following are federal OSHA's requirements and recommendations for protecting workers whose work activities are conducted in an environment that is known or reasonably suspected to be contaminated with Ebola virus (e.g., due to contamination with blood or other potentially infectious material). These general guidelines are not intended to cover workers who have direct contact with individuals with EHF.

- Employers should follow recognized and generally accepted good infection control practices, and must meet applicable requirements in the Personal Protective Equipment Standard—29 CFR 1910.132, general requirements and the Respiratory Protection standard—29 CFR 1910.134.
- Use proper PPE and good hand hygiene protocols to avoid exposure to infected blood and body fluids, contaminated objects, or other contaminated environmental surfaces.
- Wear gloves, wash hands with soap and water after removing gloves, and discard used gloves in properly labeled waste containers.
- Workers who may be splashed, sprayed, or spattered with blood or body fluids from environmental surfaces where Ebola virus contamination is possible must wear face and eye protection, such as a full-face shield or surgical masks with goggles. Aprons or other fluid-resistant protective clothing must also be worn in these situations to prevent the worker's clothes from being soiled with infectious material.
- Workers tasked with cleaning surfaces that may be contaminated with Ebola virus must be protected from exposure. Employers are responsible for ensuring that workers are protected from exposure to Ebola and that workers are not exposed to harmful levels of chemicals used for cleaning and disinfection. Federal OSHA's Cleaning and Decontamination of Ebola on Surfaces ([PDF](#)) [Fact Sheet](#) provides guidance on protecting workers in non-healthcare/non-laboratory settings from exposure to Ebola and cleaning and disinfection chemicals. [CDC](#) also offers specific guidance for workers cleaning and disinfecting surfaces that have been in contact with blood or body fluids from a traveler known to have or suspected of having EHF.
- Employers must train workers about the sources of Ebola exposure and appropriate precautions. Employers must train workers required to use PPE on what equipment is necessary, when and how they must use it, and how to dispose of the equipment. In addition where workers are exposed to blood or other potentially infectious materials, employers must provide the training required by the Bloodborne Pathogens Standard, including information about how to recognize tasks that may involve exposure and the methods to reduce exposure, including engineering controls, work practices, and PPE.

[Airline Employees.](#) These CDC interim guidelines provide information to airlines on stopping ill travelers from boarding, managing and reporting onboard sick travelers, protecting crew and passengers from infection, and cleaning the plane and disinfecting contaminated areas.

[Air Medical Transport Employees.](#) This CDC guidance applies to air medical transport flights of any duration and using any type of aircraft. The guidance does not apply to commercial passenger aircraft or other types of patient transport vehicles (for example, ground ambulances).

[EMS and Public Safety Employees.](#) This CDC guidance provided in this document reflects lessons learned from the recent experience caring for patients with Ebola in U.S. healthcare settings.

[Healthcare Workers](#). These CDC guidelines provide the healthcare infection and control measures for healthcare workers.

[Housekeeping Staff in Healthcare Settings](#). CDC interim guidance for housekeeping staff in healthcare workplaces.

[Interim Guidance for Specimen Collection, Transport, Testing, and Submission for Persons Under Investigation for Ebola Virus Disease in the United States for Laboratorians and other healthcare personnel handling specimens for Ebola testing](#) - This guidance should be used to explain exactly the biosafety requirements for how to collect and perform routine testing of specimens to staff working in laboratory and healthcare settings.

[Mortuaries and Death Care Workers](#). Special provisions are required for handling bodies of patients who have died from EHF. Contact with cadavers has been implicated as a source of transmission during Ebola outbreaks in the past. Only trained personnel, using the same infection control precautions for handling infected patients, should handle the deceased. Surgery or postmortem examinations are associated with increased risks of transmission and should only be done when absolutely necessary. Autopsies should be performed using VHF-Specific Barrier Precautions, N-95 respirators, and negative pressure rooms. Handling of the deceased should be minimal. The corpse should be wrapped in leakproof material, and cremated or buried promptly in a sealed casket. Specifically, no embalming should be done.

[PPE to be Used by Healthcare Workers During Management of Patients With Ebola](#). These CDC guidelines provide detailed guidance on the types of PPE to be used and on the processes for donning and doffing (i.e., putting on and removing) PPE for all healthcare workers entering the room of a patient hospitalized with Ebola. The guidance in this document reflects lessons learned from the recent experiences of U.S. hospitals caring for Ebola patients and emphasizes the importance of training, practice, competence, and observation of healthcare workers in correct donning and doffing of PPE selected by the facility.

[CDC Tightened Guidance for U.S. Healthcare Workers on Personal Protective Equipment for Ebola](#) - The CDC is tightening previous infection control guidance for healthcare workers caring for patients with Ebola, to ensure there is no ambiguity. The guidance focuses on specific personal protective equipment (PPE) healthcare workers should use and offers detailed step by step instructions for how to put the equipment on and take it off safely. Recent experience from safely treating patients with Ebola at Emory University Hospital, Nebraska Medical Center and National Institutes of Health Clinical Center are reflected in the guidance.

Applicable Standards

Bloodborne Pathogens Standard—29 CFR 1910.1030 covers exposure to Ebola virus. Ebola is among the subset of contact-transmissible diseases to which the Bloodborne Pathogens Standard applies, as it is transmitted by blood or other potentially infectious materials as defined in the standard.

In situations where workers may be exposed to bioaerosols containing Ebola virus, employers must also follow the Respiratory Protection Standard—29 CFR 1910.134.

Other elements of infection control for Ebola, including a number of precautions for contact-transmissible diseases, are covered under the Personal Protective Equipment Standard—29 CFR 1910.132 and the General Duty Clause which requires employers to keep their workplace free of recognized hazards that can cause death or serious harm to workers.

Employers may also be required to follow these and other standards to protect their workers from exposure to chemicals used for cleaning and disinfection. Depending on the specific chemicals used, different or additional PPE (e.g., elastomeric respirators with appropriate cartridges) may be required.

Depending on the specific work task, setting, and exposure to biological or chemical agents, additional OSHA standards, including the following, may also apply:

- 29 CFR 1910.133—Eye and Face Protection
- 29 CFR 1910.135—Head Protection
- 29 CFR 1910.136—Foot Protection
- 29 CFR 1910.138—Hand Protection
- 29 CFR 1910.141—Sanitation
- 29 CFR 1910.1200—Hazard Communication

Directives

- Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens, [CPL 02-02-069](#), (2001, November 27). Establishes policies and provides clarification to ensure uniform inspection procedures are followed when conducting inspections to enforce the Occupational Exposure to Bloodborne Pathogens Standard—29 CFR 1910.1030.
- Inspection procedures for the Respiratory Protection Standard. [CPL 02-00-158](#), (2014, June 26). Establishes agency interpretations and enforcement policies, and provides instructions to ensure uniform enforcement of the Respiratory Protection Standard—29 CFR 1910.134.
- [OSHA Technical Manual, Section VI, Chapter 1, Hospital Investigations Health Hazards.](#)

EBOLA BACKGROUND

Ebola Species

Infection with the Ebola virus can be deadly: Ebola Hemorrhagic Fever (EHF) has had a fatality rate up to 90 percent in some outbreaks. There are currently no licensed vaccines for any of the hemorrhagic fever viruses. People who recover from Ebola infection can no longer spread the infection and they develop antibodies that last for at least 10 years.

Individuals with EHF generally have symptoms typical of viral illnesses, including fever, fatigue, muscle pain, headache, and sore throat. The illness progression includes nausea, vomiting, diarrhea, and impaired organ function. In some cases, rash, internal and/or external bleeding, and death may occur.

EHF is not generally spread through casual contact. The risk of infection with Ebola virus is minimal if individuals have not been in close contact with the body fluids of someone sick with or recently deceased from EHF. When an infection does occur in humans, the virus can be spread in several ways to others. Ebola is spread through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with:

- Blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with Ebola.
- Objects (like needles and syringes) that have been contaminated with the virus.

- Infected fruit bats or primates (apes and monkeys).

Symptoms typically appear abruptly, within 2-21 days (8-10 days is most common) following exposure to the virus. Thus, individuals exposed while living, working or traveling in areas experiencing an ongoing outbreak or where EHF is endemic could develop symptoms up to three weeks after exposure. However, EHF is believed to be contagious only once an individual begins to show symptoms. Illness from Ebola runs its course within 14-21 days of symptom onset.

Ebola Surface Decontamination

The U.S. Environmental Protection Agency (EPA) has created a new [*List L: Disinfectants for use against Ebola Virus*](#). This list of registered disinfectants meets the Center for Disease Control's (CDC) criteria for use against the Ebola virus on hard, non-porous surfaces. It is necessary to follow the specific use instructions on the label for each disinfectant in order for the disinfectant to be effective. The product label will not specifically mention effectiveness against the Ebola virus. Instead, it will mention effectiveness against a different virus, such as norovirus, rotavirus, adenovirus, and/or poliovirus.). The CDC's guidance recommends:

1. The use of an EPA-registered hospital disinfectant with a label claim for use against a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus); and
2. The product label use directions for the non-enveloped virus or viruses should be followed when disinfecting against the Ebola virus.

Ebola Survival on Surfaces

Only one laboratory study, which was done under environmental conditions that favor virus persistence, has been reported. This study found that under these ideal conditions Ebola virus could remain active for up to six days.¹ In a follow up study, Ebola Virus was found, relative to other enveloped viruses, to be quite sensitive to inactivation by ultraviolet light and drying; yet sub-populations did persist in organic debris.²

In the only study to assess contamination of the patient care environment during an outbreak, conducted in an African hospital under "real world conditions", virus was not detected by either nucleic acid amplification or culture in any of 33 samples collected from sites that were not visibly bloody. Virus was detected on a blood-stained glove and bloody intravenous insertion site by nucleic acid amplification, which may detect non-viable virus, but not by culture for live, infectious virus.³ Based upon these data and what is known regarding the environmental infection control of other enveloped RNA viruses, the expectation is with consistent daily cleaning and disinfection practices in U.S. hospitals that the persistence of Ebola virus in the patient care environment would be short – with 24 hours³ considered a cautious upper limit.

At Risk Employees

Only persons having close contact with someone who is sick with EHF or with their body fluids are at significant risk for exposure.

Employment groups with greatest likelihood of direct work with Ebola patient or body fluids or contaminated waste:

- Healthcare and EMT/EMS
- Fire and Rescue/HAZMAT
- Mortuary/morgue/funeral director/crematorium

- Waste handlers/transportation/incinerators/autoclave
- Persons cleaning/decontaminating/housekeeping/laundry (medical and non-medical)

Employment groups with potential contact:

- Flight crews
- Law enforcement
- Sanitary sewer workers
- Any employer with employees/volunteers groups who work in countries with Ebola virus upon return to work in U.S. (monitored already by NC Department of Health and Human Services—Division of Public Health (NC DHHS—DPH))
- Military (no jurisdiction)

APPENDIX A—Example Letter

Date

Address

Re: Ebola
Complaint Number #

Dear Mr./Mrs.:

The North Carolina Department of Labor Occupational Safety and Health Division has received a complaint against your company concerning potential employee exposure to Ebola. We have not determined that the complaint item, as alleged, exists at your workplace, nor are we conducting an inspection at this time. However, since an allegation has been made we recommend for you to investigate the alleged conditions and make any necessary corrections or modifications. You are requested to post a copy of this letter to where it will be readily accessible for review by your employees.

The specific complaint is as follows:

1.

As reported by the Centers for Disease Control, the 2014 Ebola epidemic is the largest in history, affecting multiple countries in West Africa. Two locally acquired cases in healthcare workers has been reported in the United States which stemmed from an imported case from Liberia. Currently, there is no OSHA standard which specifically addresses Ebola. However, N.C. General Statute 95-129(1) (often referred to as the "general duty clause") does require that "Each employer shall furnish to each of his employees conditions of employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees".

In a workplace where the risk of being infected from Ebola and serious personal injury are significant enough to be "recognized hazards," the general duty clause would require the employer to take feasible steps to minimize those risks. Failure of an employer to implement feasible means of abatement of these hazards could result in the finding of a serious violation of this statute. Whether or not an employer would be cited for a violation of N.C. General Statute 95-129(1), is entirely dependent upon the specific facts that will be unique in each situation. Factors that would be considered include whether or not the hazard was recognizable, foreseeable and the feasibility of abating the critical factors involved.

One feasible step to prevent the hazard would be to develop and implement an Ebola awareness and prevention program. To assist your efforts, the OSH Division has developed reference material related to Ebola, which is located on the Ebola page on the NCDOL website:

(http://www.nclabor.com/osha/etta/A_to_Z_Topics/ebolavirus.htm). This page will provide information on OSHA standards, operating documents, and publications as well as other agency resources such as NC DHHS—DPH) website, federal OSHA website, and the Center for Disease Control (CDC) website.

Your interest in providing a safe and healthy workplace for your employees is appreciated. If you have any questions, please do not hesitate to contact me.

Sincerely,
District Supervisor