


Collection & Transport of Specimens Suspected to Contain High Consequence Pathogens in Nebraska

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OBJECTIVES:



Upon completion of this training, the participant will be able to:

1. Identify the difference in **roles of frontline**, assessment and treatment facilities.
2. Determine **safest method of specimen collection** on a patient under investigation for Ebola or other high consequence pathogen in your facility.
3. Describe why **government couriers** are exempt from DOT Division 6.2 regulations
4. **Demonstrate** how to prepare a package for transport by local ERC or State Patrol

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Emerging Pathogens

High Consequence

- Lassa Fever
- Marburg virus
- Monkey Pox
- Smallpox
- SARS
- Highly pathogenic influenza* **most likely**
- MERS ***most likely**

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Hospital Preparedness - Tiered Approach

UPDATED 01/06/2015
 Interim Guidance for Hospital Preparedness for Evaluation, Testing, and Management of Patients under Investigation or with Confirmed Ebola Virus Disease (EVD)

	Capabilities	PPE ¹ Needs
<p>Persons under active monitoring who develop signs or symptoms compatible with Ebola Virus Disease</p> <p>Contact relevant state or local public health authority</p> <p>Refer for evaluation and possible testing (based on the state's plan) to an Ebola Assessment Hospital or Ebola Treatment Center*</p>	<p>Ebola Treatment Centers</p> <ul style="list-style-type: none"> • Care for and manage patient throughout disease process 	<ul style="list-style-type: none"> • Maintain Ebola PPE¹ sufficient for at least 7 days of patient care
<p>Ebola Assessment Hospitals</p> <ul style="list-style-type: none"> • Evaluate and care for patient for up to 96 hours or until discharged or transferred • Initiate Ebola testing and transport patient to Ebola treatment center if lab-confirmed EVD • Staff trained and proficient in donning/doffing, proper waste management, infection control practices and specimen transport 	<ul style="list-style-type: none"> • The use of PPE¹ should be based on the patient's clinical status* • Maintain Ebola PPE¹ sufficient for 4-5 days of patient care 	
<p>Frontline Healthcare Facilities</p> <ul style="list-style-type: none"> • Identify patients with relevant exposure history² and Ebola-compatible symptoms • Isolate patients • Inform health department • Initiate testing if low risk; high risk should be transferred for evaluation and testing • Staff trained in specimen transport, waste management, Standard Precautions, proficient in donning/doffing 	<ul style="list-style-type: none"> • The use of PPE¹ should be based on the patient's clinical status* • PPE¹ for clinically stable patients³ should be sufficient for most patients • Maintain access to Ebola PPE¹ sufficient for 12-24 hours of patient care, to be used if needed 	


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Patients Under Investigation

- Must be prepared to promptly:
 - Identify – low vs high risk
 - Isolate
 - Inform infection control, local public health agency.
- May be asked to collect specimens for testing
- EMTALA - Ensure there is no delay in the care of these patients by being prepared to test, manage, and treat alternative etiologies of febrile illness (e.g., malaria in travelers) as clinically indicated.

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Responsibilities



- Frontline Facility:
 - Receives request from state to collect
 - Collect appropriate specimens
 - Complete packaging
 - Complete NPHL Test Order form Chain-of Custody
 - Supervise specimens at all times
 - Confirm government courier ID
 - Keep paperwork for 2 years
- Government courier:
 - Present ID
 - Transport, Supervise specimens at all times
 - Deliver to NPHL with chain of custody
- Nebraska Public Health Laboratory
 - Consult on type of specimens to collect
 - Arrange transport
 - Perform test and report

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Collection Methods

Frontline decides what collection method is optimal:

- Best Practice: Vacutainer system
- Needle and Syringe – Use Transfer Device
- IV Line (used in most EDs) – One time use?
- Port Line – Complicated
- Butterfly – Least Safe

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Preparation Prior to Collection

CHECK & ORGANIZE YOUR SUPPLIES!

Gather supplies to take into PUI isolation area (hot zone):

- Appropriate specimen container(s) as advised by the public health laboratory
- Appropriate collection supplies such as appropriate
 - vacutainer/adaptor system or needle & syringe with transfer device
 - alcohol pads, iodine preps, etc.
 - tourniquet
 - other specimen collection devices for respiratory collection, such as nasopharyngeal swab
- Disinfectant wipes
- Large adsorbent pads
- Medical waste container
- Multiple sizes of gloves
- Printed patient labels with 2 identifiers
- Permanent Blue or Black Ink Pen (NO Sharpie)
- Small bio-hazard bags with ABSORBENT MATERIAL (included in kit)
- Large bio-hazard bags (included in kit)
- Trained observer/Partner checklist (included in kit)
- **DO NOT TAKE TRANSPORT KIT INTO HOT ZONE**

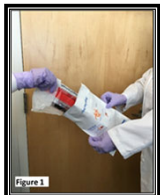
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Specimen Collection Basics

Frontline Hospital PPE - Follow facility protocol

- Trained Observer/Partner read out-loud the step-by-step checklist
- Work slowly and methodically, be aware of possible contamination.
- If breach is observed, STOP and critically think through the situation.
- Collect specimens
- **Multiple disinfection steps**
- **Multiple glove changes at each step**
- Hand to clean side



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Partner Assisted Collection

- Designed with staff's safety in mind
- Work with partner, read protocol to eliminate stress
- Staff with previous collection experience
- Use available PPE, multiple glove changes
- Incorporate into current hospital Ebola plan
- Practice, don't wait until real event!!

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Packaging & Transport

Packaging is dependent pathogen suspected and on final destination

- Frontline hospital to on-site laboratory
 - Lab directly across from isolation room?
 - Lab route requires walking thru units or public areas? TRIPLE PACKAGE
 - Unpack in BioSafety Cabinet
 - Test in BSL-2 using BSL-3 precautions

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Frontline hospital to Public Health Lab

Commercial Couriers

- Most ground couriers do NOT accept
 - Required to carry major liability insurance
 - Not really properly trained
 - Need better vetting of our couriers
- FedEx will accept specimens from PUI
 - Shipper MUST be Certified DOT Div 6.2
 - Use Certificated shipping systems (boxes)
 - Tedious Paperwork

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Frontline hospital to Public Health Lab

Shipping Exceptions to DOT Regulations

- **DURING PUBLIC HEALTH EMERGENCIES, LAW ENFORCEMENT AGENTS OR OTHER DESIGNATED STATE OFFICIALS WITH IDENTIFICATION MAY DELIVER SPECIMENS APPROVED BY THE DHHS AS FOUND IN THE 49CFR CODE 171.1 d(5-6):**
 - Transportation of a hazardous material by a Federal, state, or local government employee solely for **noncommercial** Federal, state, or local government purposes.
- **Under these circumstances, hospitals may be exempt from using the "official" shipping regulations, including training. Permission for exemption must be granted by state officials.**
- **Triple package required for safety reasons.**

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TRANSPORT KIT

Inside Contents:

- Category A system
- Biohazard bag/ adsorbent
- Frozen Gelpaks
- Secure Cable Ties

Folder:

- Procedure
- Contact Info
- Map & Directions
- Chain of Custody
- DOT Emergency Response Information



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Demonstration of Packaging by Facility



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Chain of Custody Documentation

- Initiated outside of collection site
- Each individual handling TRANSPORT KIT must complete
- Keep copy 2yrs
- Final signature at NPHL

Chain of Custody Form High Consequence Pathogen Transport to NPHL													
Shipper (Facility) Name: _____													
Responsible Person: _____													
24/7 Emergency Phone Number: _____													
SWINE PATIENT INFORMATION HERE													
<table border="1"> <tr> <td>Collector</td> <td>Collector</td> </tr> <tr> <td>Nebraska Public Health Laboratory</td> <td>Nebraska Public Health Laboratory</td> </tr> <tr> <td>2417 Sauer Road</td> <td>2417 Sauer Road</td> </tr> <tr> <td>500 S. 49th Street</td> <td>500 S. 49th Street</td> </tr> <tr> <td>500 S. 49th Street</td> <td>500 S. 49th Street</td> </tr> <tr> <td>Lincoln, NE 68508</td> <td>Lincoln, NE 68508</td> </tr> </table>		Collector	Collector	Nebraska Public Health Laboratory	Nebraska Public Health Laboratory	2417 Sauer Road	2417 Sauer Road	500 S. 49th Street	500 S. 49th Street	500 S. 49th Street	500 S. 49th Street	Lincoln, NE 68508	Lincoln, NE 68508
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Number of tubes collected: Purple, _____ Green Gray, _____ Red, _____ Other _____													
Secure Rod Cable Tie Number(s): _____													
Courier Identification:													
Collected By: (Print Name)	Date												
Witnessed By: (Print Name)	(Signature)												
Received By: (Print Name)	(Signature)												
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Government Courier for HHCD Transport

Notify (402)888-5588 of ETA, NPHL will meet up at Loading docks



Durham Research Center 2
Loading dock on west side
560 South 45th Street
Omaha NE

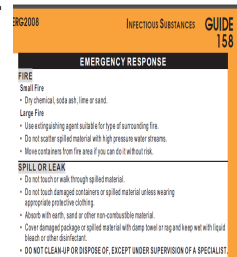
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Emergency Response Issues

- If involved in an accident, specifically report a **biological spill**:

1. Dial 911
2. Page NPHL at:
 - (402) 888-5588
 - available 24/7

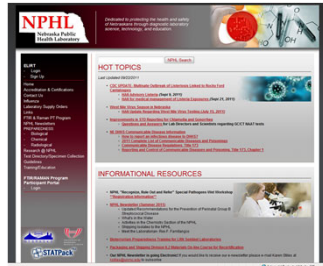


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Additional Resources

<http://www.nphl.org>



Contact
Information

24/7 Pager
(402) 888-5588

Email
kstiles@unmc.edu

Exercise PPE/Collection Yearly !

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Exercise PPE/Collection Yearly !

- Global news reports large outbreak of Marburg in Congo.
- Two new cases reported in New Jersey, traveled through Newark Airport
- Patient arrives in your ER with fever, cough, shortness of breath
- What does your facility do next?
 - What PPE is patient given?
 - When do you ask travel questions, at registration or after patient taken in for triage?
 - What if patient was in waiting room for awhile?

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Exercise PPE/Collection Yearly !

- Patient reports traveling through Newark Airport same timeframe as initial cases
- What does your facility do next?
 - Who makes the decision to isolate?
 - Who do you call?
 - When does your facility activate Incident Command?
 - Do you do your normal fever testing protocol?
 - Does your on-site lab have protocol to test in BSL-2 setting using BSL-3 practices?

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Exercise PPE/Collection Yearly !

- Your hospital has decided to testing on respiratory viral panel - results are negative
- What does your facility do next?
 - Send patient home?
 - What testing is on the viral panel?
 - How should this specimen be transported to the PHL?

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