REGIONAL HIGHLY INFECTIOUS DISEASE FULL SCALE EXERCISE

Thomas E. Schwalenberg

Division Chief / Chief Medical Officer

Chesapeake Fire Department

EVHC
Eastern Virginia
Healthcare Coalition
Building Partnerships in Preparedness

Purpose and Scope

PURPOSE:

- The purpose of the EVHC-sponsored Highly Infectious Disease Full-Scale Exercise (EVHC HID FSE) is to challenge and evaluate the policies and procedures of local and regional healthcare agencies n response to the presentation of a patient exhibiting symptoms of the Ebola virus.

SCOPE:

- The Six-hour EVHC HID FSE will be conducted on October 9, 2018 and engage two hospitals, two transport agencies, regional healthcare coalitions, the Virginia Department of Health in the South Hampton Roads region of Virginia.

Participating Agencies / Partners

- Eastern Virginia Healthcare Coalition (EVHC)
- Tidewater EMS Council, Inc. (TEMS)
- Chesapeake Fire Department (CFD)
- Chesapeake Health Department
- Chesapeake Emergency Physicians
- Chesapeake Regional Healthcare
- Curtis Bay Medical Waste Services
- Emergency Physicians of Tidewater
- Medical Transport, Inc. (MTI)
- Sentara Healthcare
- Sentara Princess Anne Hospital (SPAH)
- Virginia Beach Health Department
- Virginia Department of Health
- VA Department of Environmental Quality (DEQ)
- Virginia Commonwealth University (VCU)
- Assistant Secretary for Preparedness and Response (ASPR)

Scene Setter

“On 1 August 2018, the Ministry of Health of the Democratic Republic of the Congo declared an outbreak of Ebola virus disease (EVD) in North Kivu. This is the tenth outbreak of EVD over the last four decades in the country, with the most recent one occurring in May 2018. Detailed and regularly updated information on this outbreak is available on the WHO Situation reports webpage.

The risk of a traveler becoming infected with Ebola virus during a visit to the affected areas and developing disease after returning is low, even if the visit included travel to areas where primary cases have been reported. Transmission requires direct contact with blood or fluids of infected persons or animals (alive or dead), all unlikely exposures for the average traveler.

There is however a risk for health care workers and volunteers, especially if involved in caring for EVD patients. The risk can be considered low, unless adequate infection prevention and control measures are not followed, including at medical services at ports, airports and ground crossings. As the incubation period for Ebola is between 2 to 21 days, travelers involved in caring for EVD patients or who suspect possible exposure to Ebola virus in the affected areas, should take the following precautions for 21 days after returning: Stay within reach of a good quality health care facility and seek immediate medical attention and mention their recent travel history if they develop EVD like symptoms.

Scene Setter

"You are an EMT who volunteered with the International Committee of the Red Cross (ICRC) in the Democratic Republic of Congo. You were in country from August 17 to September 29, 2018. You worked at the Beni's (North Kivu) Ebola treatment center where you assisted with screening incoming patients. You also worked at several of the vaccination belts in Beni, Tchomia, Komanda and Mabalako health zones, assisting with Ebola vaccine administration. You were planning on staying longer until three ICRC volunteers helping with the burial of an Ebola victim in eastern Congo were injured in an attack by villagers. The villagers also attacked the nearby health facility. This prompted the ICRC to suspend burials in the area. Once the violence erupted you decided to return to the US."

"Your symptoms are:

- Current fever of 101.8 F. Your fever last night was 100.6 F
- Severe headache
- Muscle pain and aches
- Weakness and Fatigue
- You feel like you have the flu and the symptoms are steadily worsening."

EXERCISE ANALYSIS

The Good, The Bad, and the Ugly

Local First Response

Initial Emergency Department

Transport Agency

Regional HID Receiving Facility

LOCAL FIRST RESPONSE

Local First Response

- **Identification and PPE by first responders**

Description	Strength/AO	Recommendation
• Initial contact, vitals, transport, radio communications	• Assess travel history • PPE	• Infectious disease training • Situational awareness • Call taker travel history questions based on symptomology

Local First Response

- **Notification of HID patient to first responder crew**

Description	Strength/AO	Recommendation
• ED nurse advised crew quickly when travel history was obtained • Crew notified EMS Supv. that was en route to a cardiac arrest call	• No policy in place for how to notify crews • Timeline concerns • Delay in immediate actions	• Update notification policy • Regional process to standardize process (as much as possible), de-conflict policies across the healthcare spectrum

Local First Response

- **Internal notification and internal initial actions**

Description	Strength/AO	Recommendation
• Notification was delayed which could have resulted in additional exposures • Discussion on next steps as outlined in DOPHT policy with EMS Supv and CFD Safety Officer	• Lack of knowledge of the DOPHT policy • Operational policy versus city-wide plan	• Policy Review • Develop quick reference sheet • Enhance CFD/City policies on exposed individuals, monitoring, counselling, etc.

Local First Response

- **Decontamination process and responsibilities**

Description	Strength/AO	Recommendation
• Current policy addresses use of agency HAZMAT team for vehicle decontamination • High level of uncertainty of correct decontamination process • Use of VDEM / DEQ expertise	• Need to fully understand the impact of a decontamination plan for units and equipment • One versus many	• Consider EBOLA annex to DOPHT plan • Is HAZMAT the proper application for decontamination and consequences for doing so • Develop a plan for Cat A medical waste • Develop vendor contract

INITIAL EMERGENCY DEPARTMENT

Initial Emergency Department

- **Identification of HID patient**

Description	Strength/AO	Recommendation
• Appropriate questioning, isolation, implemented HID protocol	• Laminated check sheet • Patient masked immediately	• Laminated check sheet needs to be kept up to date with CDC,VDH,OSHA, etc

Initial Emergency Department

- **Identification of materials that came in contact with HID patient**

Description	Strength/AO	Recommendation
• Linens discarded into normal linen waste prior to identification • Stretcher contamination • Contamination of the transport crew	• Linen was discarded but not recovered • Transport within the ED	• Add linen isolation into HID policy • More discussion needed on stretcher decon (ISO-Pod) • Transport Plan in isolation room and in the ED needs to be defined and incorporated regionally

Initial Emergency Department

- **VHASS Entry and other agency notifications**

Description	Strength/AO	Recommendation
• CRH entered PUI info into a VHASS event that was already open for a hurricane event	• Entry made • Health Department notified	• Should be treated as a new event • Develop a checklist of notifications with guidance on procedures

Initial Emergency Department

- **Internal Notifications of potential HID patient**

Description	Strength/AO	Recommendation
• ED has a laminated HID procedure sheet. CRH admin/executive staff notified	• Notifications were delayed.	• Add notification process to HID sheet to ensure they are made early in the event

Initial Emergency Department

- **ED Physician ordering lab work on the suspected HID patient**

Description	Strength/AO	Recommendation
• ED Physician order lab work • Hospital DICO countermanded the order	• If lab work had been drawn it would have shut down the lab and exposed many more staff members	• Add clear direction to procedure sheet that no labs are to be drawn until the patient gets to the regional HID receiving facility

Initial Emergency Department

- **Location for transport unit PPE donning.**

Description	Strength/AO	Recommendation
• MTI crew and CRH staff struggled finding a donning location	• Integrate and exercise a proper PPE donning space	• Review current policies for ED and transport agency PPE regarding HID patients and integrate a room of sufficient size for all personnel and "donning buddies" to work in preparation for patient handling/transport

Initial Emergency Department

- **Donning/Doffing PPE**

Description	Strength/AO	Recommendation
• Due to "time constraints" the ED crew did not don/doff PPE	• Actual donning and doffing of PPE properly is a perishable skill. • Time, attention to detail, health, training, support and disposal/decon issues need to be identified, exercised and validated	• Internal training and drills regarding don/doffing of HID PPE should be integrated into the ED training protocols

Initial Emergency Department

- **Communications between ED's**

Description	Strength/AO	Recommendation
• Communication between CRH and SPAH were done via speaker phone with good information relayed between the physicians	• Good communication between the facilities	• Build a simple checklists of critical information that needs to be transferred • Make this a regional document

TRANSPORT AGENCY

Transport

- **Notification and prep time needed to move a HID patient**

Description	Strength/AO	Recommendation
• 4 hour window	• Participants agreed this was a reasonable time • Not every aspect of all that needed to occur in that window has been tested	• Exercises should be as realistic and real time as possible • Break down processes into smaller segments and measure them

Transport

- **Donning and doffing of HID PPE by transport crew**

Description	Strength/AO	Recommendation
• MTI crew was very comfortable with the PPE and don/doff process • Crew was "adaptable" • Bloused vs Taped legs	• Donning process went well • Legs were bloused inside boots but not taped which with movement could lead to compromise	• Continue to train on PPE procedures • Keep policy updated • Verbalize any unique needs related to donning at pick up facility early

Transport

- **Doffing Policy on hoods**

Description	Strength/AO	Recommendation
• There was difficulty with the doffing procedure • Procedure for N95 versus PAPR is different	• Need a policy that meets the equipment you will be operating in	• Standardize equipment (if possible) across the region • Regional don/doff with buddy system

REGIONAL HID RECEIVING FACILITY

Regional HID Receiving Facility

- **Internal communications prior to arrival of HID patient**

Description	Strength/AO	Recommendation
• Physician relayed all critical information from CRH to the Clinical Manager	• Good communication flow. Procedures followed • Patient family?	• The lack of a definitive answer indicates this issue should receive further discussion and policy development

Regional HID Receiving Facility

- **Pre-Entry Medical Clearance**

Description	Strength/AO	Recommendation
• Providers going into PPE to care for the patient did not have a standard pre-entry medical clearance performed	• Suggestion was made to use OSHA form	• Facilities need to determine the legal implications of using the OSHA form • Integrate into HID policies • Consider regional standardization

Regional HID Receiving Facility

- **Movement of ISO-Pod**

Description	Strength/AO	Recommendation
• Once patient was removed, the ISO-Pod was removed from the contaminated area	• Removing the ISO-Pod from the room creates an additional hazard and will complicate the process if the patient has to be moved again	• Close the ISO-Pod after patient removal • Keep it in the anteroom with the patient in the containment area

Regional HID Receiving Facility

- **Patient left alone during staff change**

Description	Strength/AO	Recommendation
• Patient was left in the isolation room alone for a considerable amount of time while staff switched out	• Compassionate care for a person going through an extremely traumatic experience	• Keep a staff member with the patient especially during the early parts of the transfer, evaluation and treatment of the patient • Acuity will dictate

Regional HID Receiving Facility

- **Duration of bleach contact for infection protection**

Description	Strength/AO	Recommendation
• Much debate was conducted during the hot wash on the proper time that bleach has to be in contact with the HID to really be effective	• There were many different opinions • What about other agents besides bleach	• SME concurrence on best practices • Needs to be kept up to date • Needs to be adopted as a regional standard

Regional HID Receiving Facility

- **Opening of lab samples**

Description	Strength/AO	Recommendation
• The lab team had difficulty opening the Cat A sample transfer containers in the lab	• Sample containers are extremely difficult to open with gloves	• State Lab • Federal DOT • CDC • Local input

Regional HID Receiving Facility

- **Region-wide PIO collaboration during a HID event**

Description	Strength/AO	Recommendation
• Multiple agencies, jurisdictions and levels of government need to coordinate their messaging	• Willingness to collaborate • Very few policies in place for the collaboration needed or prescripted messaging for an HID event	• Policy development • Define lead PIO entities for different types of events • Need to exercise in real time

FUTURE EXERCISE SUGGESTIONS

Future Exercise Suggestions

- Development of HID exercises that require activation of hospital command centers
- Development of exercises that challenge the transfer of a HID patient to VCU
- Development of exercises that challenge the “recovery” phase of managing a HID patient, to include decontamination issues, disposal issues, personnel/staff health monitoring. VA DEQ has expressed a significant interest in furthering discussions and exercising in this regard
- Development of exercises that challenge the potential public information outfall of managing a HID patient in the region

Future Exercises Suggestions

Train as you fight.

QUESTIONS?

Thank You

tschwalenberg@cityofchesapeake.net

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