SENTARA®

Sentara Princess Anne Hospital

Highly Consequential Infectious Disease

Tabletop Exercise After-Action Report

Funded by an ASPR grant through

VIRGINIA HOSPITAL & HEALTHCARE ASSOCIATION
An alliance of hospitals and health delivery systems

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1. The title of this document is the *Sentara Princess Anne Hospital Highly Consequential Infectious Disease Tabletop Exercise After-Action Report (AAR).*

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3. This exercise was planned and organized in compliance with the Homeland Security Exercise and Evaluation Program (HSEEP).

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EXECUTIVE SUMMARY

This tabletop exercise focused on Sentara Princess Anne Hospital's role in the regional response to a person presenting with potential highly consequential infectious disease (HCID) symptoms, was made possible through funding provided by the Assistant Secretary for Preparedness and Response Bioterrorism Hospital Preparedness Program via VHHA, dedicated to the continued improvement of the overall capability of Hampton Roads' local, regional, and state agencies to prepare for, respond to, and recover from significant medical-centric events.

HCID is generally characterized by the following:

- acute infectious disease
- typically has a high case-fatality rate
- may not have effective prophylaxis or treatment
- often difficult to recognize and detect rapidly
- ability to spread in the community and within healthcare settings
- requires an enhanced individual, population, and system response to ensure it is managed effectively, efficiently, and safely

The recent challenges presented by COVID-19 continues to highlight the mantra of the 2011 National Preparedness Goal that preparing for the threats and hazards that pose a great risk to the United States is the shared responsibility of our whole community.

The National Preparedness Goal is achieved, in part by:

- Protecting our citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows our interests, aspirations, and way of life to thrive.
- Mitigating the loss of life and property by lessening the impact of future disasters.
- Responding quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.
- Recovering through a focus on the timely restoration, strengthening and revitalization of infrastructure, housing, and a sustainable economy, as well as the health, social, cultural, historic, and environmental fabric of communities affected by a catastrophic incident.

This tabletop exercise was conducted in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP).

A Planning Team was established to develop the exercise foundation Concepts and Objectives. These objectives guided the team in identifying additional agencies at a variety of private and governmental levels that were needed at the exercise to fully explore the challenges of receiving a possible highly consequential infectious disease patient. The planning team then continued to develop the exercise details and process based upon their consensus Objectives. To fully challenge SPAH's capabilities the elements of a different healthcare facility initially receiving the patient and the activation of a patient transport agency were added. In this way, ALL challenges to SPAH's HCID plans and protocols could be discussed. In addition, these discussions served to improve the plans and protocols of all associated agencies.

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SECTION 1: EXERCISE OVERVIEW

The table below lists the planning meetings associated with the Sentara Princess Anne Hospital Highly Consequential Infectious Disease Tabletop Exercise.

The Planning Team members should be commended for maintaining an extremely high level of professionalism and dedication to this project. The majority attended every meeting, contributing at the highest level. The time commitment required of each member was exceptionally demanding and fully appreciated by the exercise support team.

Planning Meeting	Dates
Concept & Objectives Meeting (Virtual)	April 1, 2022
Initial Planning Meeting (Virtual)	April 20, 2022
Final Planning Meeting (In Person)	May 3, 2022
Tabletop Exercise (In Person)	May 24, 2022
After Action Meeting (Virtual)	June 7, 2022

Exercise Details

Exercise Name
Sentara Princess Anne Hospital Highly Consequential Infectious Disease

Type of Exercise
TTX

Exercise Date
May 24, 2022

Exercise Location
Health & Education Center at Sentara Virginia Beach Hospital

Exercise Duration
3 hours

Sponsor
Virginia Hospital & Healthcare Association

Mission
Response

Capabilities
ASPR Capability 1. Foundation for Health Care and Medical Readiness

ASPR Capability 2. Health Care and Medical Response Coordination

Exercise Planning Team

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SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Scope

THE PURPOSE of the 2022 SPAH HCID TTX was to challenge and evaluate the policies and procedures of SPAH and other designated critical agencies in response to the reception of a patient exhibiting symptoms of the Ebola virus into the SPAH HCID unit.

SCOPE: The three-hour SPAH HCID TTX, held on May 24, 2022 from 1:30 to 4:30 PM, included critical members of SPAH directly responsible for the reception, treatment, and care of a suspected highly infectious disease patient as well as associated agencies, including Riverside Regional Medical Center and VDH, that would be required to actively interface with SPAH in response to a HCID patient event.

OVERVIEW OF THE EXERCISE SCOPE:

- Type of Emergency: Appropriate handling of a suspected Ebola patient to reduce contamination and exposure to emergency responders, health care workers, and civilians while providing appropriate care to the suspected Ebola-infected patient.
- Type of Exercise: Tabletop
- Mission Area: Response
- Exercise date: May 24, 2022
- Exercise Location: Health and Education Center at Sentara Virginia Beach Hospital
- Exercise Duration: 3 hours, to include introductions and post discussion hot wash.

PARTICIPATING EXERCISE AGENCIES:

- Sentara Princess Anne Hospital (SPAH)
  - Executive Staff - including Operations, Patient Care, Public/Personal Health Information (aka-Corporate Communications), Chief of Nursing, Human Resources and Finance
  - Emergency Management
  - Emergency Department
  - HCID Unit
  - Laboratory
  - Security
  - Infection Prevention and Control
  - Facilities
  - Environmental Services
  - Supply Chain
  - Respiratory Care
  - Environmental Health and Safety
- Curtis Bay Medical Waste Management, Inc.
- Virginia Department of Health (VDH)
  - Local

  - Regional
  - State
- Virginia Hospital and Healthcare Association (VHHA)
- Eastern Virginia Healthcare Coalition (EVHC)
- Riverside Regional Medical Center/Riverside Health Systems
  - Emergency Management
  - Emergency Department
- Peninsulas Emergency Medical Services Council

EXERCISE TABLE ORGANIZATION:

- Table 1: The focus of Table 1 was on a "higher-level" local/regional/state strategic discussion of relevant interfaces between non-operational entities.
  - Participants:
    - VDH
    - PEMS
    - TEMS/EVHC

- Table 2: The focus of Table 2 was to engage the more operational entities that would be partners in the packaging, care and inter-facility transfer of a suspected HCID patient.
  - Participants:
    - VDH
    - RRMC-ED Physician
    - Transport Agency (if known)
    - SPAH ED
    - EPT/SPAH ED Physician

- Table 3: The focus of Table 3 was on SPAH HCC strategic discussions of internal facility impacts as well as interfaces with regional and state entities.
  - Participants:
    - HCC Staff
    - VDH
    - Other SPAH team members who could become part of the HCC

- Table 4: The focus of Table 4 was on SPAH operational aspects of receiving and supporting the suspected HCID patient.
  - Participants:
    - SPAH ED physician and staff
    - HID Unit/Staff
    - Lab Unit/staff
    - Respiratory Unit/staff
    - Infection Prevention Unit/staff

- Table 5: The focus of Table 5 was on the SPAH support services engaged to receive and manage a suspected HCID patient.
  - Participants:
    - Curtis Bay Medical Waste Services
    - SPAH Security
    - SPAH Food Service
    - SPAH Facilities and Logistics
    - SPAH Supply Chain
    - SPAH Environmental Services Department
    - SPAH Emergency Management
    - EVHC Logistics

Exercise Objectives and Ties to ASPR Capabilities

1. To discuss the interface between the health care facility initially receiving a suspected Ebola virus patient and the subsequent transfer process to Sentara Princess Anne Hospital based upon the written emergency response plans of Riverside Regional Medical Center (RRMC), the HCID Transport agency, Sentara Princess Anne Hospital (SPAH) and the Virginia Department of Health (VDH).

2. To discuss and evaluate the plans for inter-facility communications between RRMC, VDH, EVHC and SPAH to appropriately initiate and coordinate an inter-facility transfer of a suspected Ebola virus patient.

3. To discuss and evaluate the VDH Regional patient transport plan as a suspected Ebola virus patient is transferred from RRMC to SPAH, including all procedures to prepare the transport vehicle and transport personnel as well as reception preparations at SPAH.

4. To discuss and evaluate the SPAH HCID policy and associated procedures in response to the acceptance of a suspected Ebola virus patient from RRMC.

5. To discuss and evaluate the internal HCID policies and procedures specific to HCID operations at SPAH to include, but not limited to, personnel assignments, PPE requirements, security, patient care, laboratory collection/packaging of required samples, collection and disposal of contaminated PPE and supplies, and patient-family concerns in response to the reception of a suspected Ebola virus patient.

6. To discuss and evaluate relevant aspects of activating the SPAH hospital command center (HCC) and relevant procedures and processes in response to the intake of a suspected Ebola virus patient.

7. To discuss and evaluate the roles and responsibilities of the relevant local, regional, and state entities and agencies to provide situational awareness and coordination to appropriate

healthcare and public safety agencies at all levels in response to the notification of a suspected Ebola virus patient.

Supporting ASPR Health Care Preparedness and Response Capabilities

(2017-2022 ed.) (Note: During research it appears ASPR has extended these Capabilities into 2023)

CAPABILITY 1. FOUNDATION FOR HEALTH CARE AND MEDICAL READINESS

Objective 4: Train and Prepare the Health Care and Medical Workforce

Activity 1: Promote Role-Appropriate National Incident Management System Implementation
Activity 2: Educate and Train on Identified Preparedness and Response Gaps
Activity 3: Plan and Conduct Coordinated Exercises with Health Care Coalition Members and Other Response Organizations
Activity 4 Align Exercises with Federal Standards and Facility Regulatory and Accreditation Requirements
Activity 5: Evaluate Exercises and Responses to Emergencies
Activity 6: Share Leading Practices and Lessons Learned

CAPABILITY 2. HEALTH CARE AND MEDICAL RESPONSE COORDINATION

Objective 2: Utilize Information Sharing Procedures and Platforms

Activity 3: Utilize Communications Systems and Platforms

Objective 3: Coordinate Response Strategy, Resources and Communications

Activity 1: Identify and Coordinate Resource Needs During an Emergency
Activity 2: Coordinate Incident Action Planning During an Emergency
Activity 3: Communicate with Health Care Providers, Non-Clinical Staff, Patients and Visitors During an Emergency
Activity 4: Communicate with the Public During an Emergency

Scenario Summary

PRELUDE

It was 10:00 a.m. on a Tuesday. A male person in their mid-forties self-presented at Riverside Regional Medical Center Emergency Department in Newport News, VA.

Riverside Health Systems personnel at the exercise shared with the exercise participants the process for patient reception at their ED.

A team of agency representatives presented their responses to this patient for the exercise players.

MODULE 1

MODULE 1 commenced with the notification to SPAH, the regional receiving hospital for suspected Ebola patients. Discussions engaged all agencies to determine responsibilities and actions required to manage the subsequent activities associated with the initial suspected diagnosis. This module also included discussions of activities leading up to the notification to SPAH to review alignment with protocols at internal and inter-agency levels.

MODULE 2

MODULE 2 commenced with the assumption that the patient had been properly packaged and had been received at SPAH ED. Discussions engaged all agencies at every table; evaluating and discussing previous, current, and future patient interactions, regional inter-agency communications, SPAH reception, intake, and maintenance procedures as well as organization strategic and operational considerations to manage the patient until future transfer is arranged.

Exercise Schedule:

1:30 p.m.	**Greetings and Introductions** **Review of Exercise Conduct/Safety Issues** **Review of Exercise Purpose and Schedule**
1:45 p.m.	**Initiation of Module One**
2:30 p.m.	**Conclusion of Module 1 and brief report-out by each table.**
2:45 p.m.	**Break**
3:00 p.m.	**Initiation of Module 2**
4:00 p.m.	**Table Discussions concluded for Module 2** **Table report-outs** **Completion of Participant Feedback Forms** **Players dismissed** **Debrief for table facilitators and scribes**
4:30 p.m.	**Exercise conclusion**

SECTION 3: EXERCISE ANALYSIS

The SPAH HCID TTX analysis will be presented by associating noted strengths and identified opportunities for improvement to each exercise objective. The source of each comment will be identified only by table number. Opportunities for improvement will have suggested recommendations for further process improvement. Some redundancies will exist due to the overlap of mutual responsibilities and the overlapping of objectives that engage the same agencies and/or functional groups but from differing perspectives.

Each identified Strength and Opportunity for Improvement is linked to Module report-outs and scribe notes from one or more tables. The tables were organized with the following focuses (please see page 10 for a more complete description of table participating agencies):

- Table 1: The focus of Table 1 was on a "higher-level" local/regional/state strategic discussion of relevant interfaces between non-operational entities.
- Table 2: The focus of Table 2 was to engage the more operational entities that would be partners in the packaging, care and inter-facility transfer of a suspected HCID patient.
- Table 3: The focus of Table 3 was on SPAH HCC strategic discussions of internal facility impacts as well as interfaces with regional and state entities.
- Table 4: The focus of Table 4 was on SPAH operational aspects of receiving and supporting the suspected HID patient.
- Table 5: The focus of Table 5 was on the SPAH support services engaged to receive and manage a suspected HCID patient.

OBJECTIVE 1: To discuss the interface between the health care facility initially receiving a suspected Ebola virus patient and the subsequent transfer process to Sentara Princess Anne Hospital based upon the written emergency response plans of Riverside Regional Medical Center (RRMC), the HCID Transport agency, Sentara Princess Anne Hospital (SPAH), and the Virginia Department of Health (VDH).

a. STRENGTHS
   i. The participants felt the relationships between the hospitals were strong and facility to facility communication via phone would be conducted very early in the process. A note was made that the regional VDH HCID epidemiology line is available 24/7. T1
   ii. Each health care facility has written plans for a possible or confirmed HCID patient. T1

b. OPPORTUNITIES FOR IMPROVEMENT
   i. Potential exposure protection/precautions may not be in place at the time of patient reception. T1
   ii. Hospital lab engagement and the need for additional protection in handling the blood samples. Is the lab made aware of the possible exposure prior to handling

the specimens? T1

iii. Table 1 team expressed the concern that a VDH nurse should be a virtual participant for the initial clinical evaluation at each health care facility. VDH cannot support the physical presence of a VDH nurse 24/7 at Riverside. This suggestion ties into the need to readdress the "communications tree" below in item iv. T1

iv. A definitive "communications tree" does not seem to exist on a regional basis for external notification of a possible HCID patient. This issue came up at every table at the TTX. There clearly remain concerns with public communications for all engaged agencies. Each agency desired a degree of autonomy in terms of timing and content but without overarching management of communications some agencies will be unprepared to deal with information requests. ALL Tables

OBJECTIVE 2: To discuss and evaluate the plans for inter-facility communications between RRMS, VDH, EVHC, and SPAH to appropriately initiate and coordinate an inter-facility transfer of a suspected Ebola virus patient.

a. STRENGTHS

i. Both SPAH and Riverside use the travel screening tool in Epic. Epic is a CDC tool used across the country for patient screening. It is updated by CDC on a regular basis and provides consistency between agencies and facilities. T2

ii. Riverside provides a disposable radio to suspected HCID patients. T2

b. OPPPORTUNITIES FOR IMPROVEMENT

i. The development of communication plans with the patient and/or patient family is important for a variety of reasons. More information needs to be gathered to fully develop patient exposure; more information needs to be gathered to identify exposure risk/contact tracing to the family or other close contacts; determinations must be made on potential isolation of possible exposed persons. What agency takes the lead on developing this expanded plan to control further exposure? Note: Table 1 also made mention of VDEM resources regulating quarantine. T1

ii. Riverside representatives referred to a "Transfer Center" that would make many decisions regarding patient inter-facility transfer with SPAH. But who/what is the "Transfer Center" was not clear, nor what role/responsibilities this entity plays in the overall process. Each health system maintains their own transfer center. The table participants expressed a concern that the conversation between transfer centers could take up to an hour and may not be tied directly into the HCID patient transfer process. These concerns could also lead to a need for a more robust HCID transfer process within the region. T2 and T3

iii. There is confusion on who/what agency actually has the authority to activate the HCID transport process. This is both a legal and financial commitment and it should be clear who has the authority to approve the patient transfer. T1 and T2

OBJECTIVE 3: To discuss and evaluate the VDH Regional patient transport plan as a suspected Ebola virus patient is transferred from RRMC to SPAH, including all

procedures to prepare the transport vehicle and transport personnel as well as reception preparations at SPAH.

a. OPPORTUNITIES FOR IMPROVEMENT *Special Note: This objective was developed at the onset of exercise planning and prior to the knowledge that the regional HCID transport responsibility had not been transferred or reassigned during a recent business transaction involving the previous designated transport agency. For this reason, there are limited discussions regarding packaging, transport, and delivery protocols of a possible HCID patient. It has been suggested that when a transport agency is identified a unique drill is conducted to evaluate this sole objective to familiarize impacted agencies with their roles and responsibilities.*

i. The location of critical patient isolation equipment is not common knowledge. This includes items such as the isopod. Riverside has one, SPAH has two. If more than one suspected patient had to be transferred from Riverside, arrangements would have to be made to access additional isopods. SPAH might not be the closest location, travel-time wise. T2

ii. Table 2 discussed the possibility of directly transferring the patient from RRMC to the VCU Treatment Center. However, the determination of a final treatment center (there are 3 in the Commonwealth of VA) for a HCID patient would be made by VDH. In addition, VDH would dispatch a specialized transport unit to facilitate the transfer to their designated treatment center. The discussion highlights the need for better understanding of the statewide response to the discovery of a potential HCID patient in any healthcare facility. T2

iii. Riverside representatives expressed a need for internal messaging to address potential staff exposures. T2

iv. Both SPAH and Riverside have tracing system for staff exposures. There needs to be protocols for information sharing between the two facilities. Would there be a difference in the level of communication if the communication was pre or post confirmation of an HCID? What role does VDH play in the protection of potential staff exposures? T2

v. Discussions occurred regarding the unique equipment disposition (such as the isopod). What happens to them? How do they get replaced? As a corollary discussion, are protocols in place to monitor equipment dedicated to this potential HCID patient---and across initial receiving, transport, and regional receiving facility (potentially a VDH "umbrella" responsibility)? T2

vi. Who monitors consistency of exposure information and protocols for staff with the three engaged agencies? Representatives at Table 2 tended to tie this back to VDH but with some expected communication between Riverside and SPAH. Riverside has a Central Exposure Team but felt the program might need updating. Riverside staff actually has the higher risk of exposure to staff as they deal with the patient prior to full disclosure of possible HCID. SPAH has the added value to knowing a suspected HCID patient is coming in this case. T2

vii. Both Riverside and SPAH exchanged ideas for isolating contaminated materials and PPE. There is a need for consistency in this area to reduce staff exposure

from contaminated materials. T2

viii. Table 2 representatives discussed the need for follow up communications post-transfer. Should someone/an agency be responsible for "closing the loop" for all impacted agencies regarding exposure and contamination issues? T2

ix. Table 4 notes indicated SPAH can only receive ONE HCID patient (T4 notes 3.3.1.1.1.1.6.1.4). This limitation should be verified and, if accurate, revisions to the regional plan should address the need to manage multiple HCID patients (consider families returning from a geographical location highly suspected of being a source of HCI Diseases). T4

OBJECTIVE 4: To discuss and evaluate the SPAH HCID policy and associated procedures in response to the acceptance of a suspected Ebola virus patient from RRMC.

Note: This objective became redundant with ongoing discussions and was sufficiently addressed by all tables. Please see all other objectives for further information.

a. STRENGTH: SPAH has a specific plan in place to accept the patient via a unique entrance isolated from their ED.

OBJECTIVE 5: To discuss and evaluate the internal HCID policies and procedures specific to HCID operations at SPAH to include, but not limited to, personnel assignments, PPE requirements, security, patient care, laboratory collection/packaging of required samples, collection and disposal of contaminated PPE and supplies, and patient-family concerns in response to the reception of a suspected Ebola virus patient.

a. STRENGTHS

i. SPAH has a written HCID plan that is reviewed yearly to assist with roles and responsibilities. They are prepared to meet the four-hour requirement, post-notification, to receive the possible HCID patient. T 4 and 5

ii. SPAH has a specific plan in place to accept the patient via a unique entrance isolated from their ED. T4 and T5

iii. SPAH has a dedicated operations team for an HCID patient with a clear path defining patient care. T4

iv. The SPAH plan includes setting up a "mini-hospital" to isolate the potential HCID patient and significantly reduce contamination of major functional units of the hospital. T4 and T5

v. The lab is prepared to set up a unique lab in Room 37. T5

vi. Facilities is prepared to evaluate air flow and assess negative pressure in the patient care room. A plan is in place to contact American Restoration in the event of a loss of negative pressure. They will also designate a waste holding area. T5

vii. Food Service would be prepared to support the HCID unit by providing meals for the patient and care staff in single-use manner. T5

viii. Curtis Bay Medical Waste Services is on contract to package, transport and properly dispose of all contaminated/potentially contaminated medical waste materials. A plan is in place to record all disposal activities for later

reimbursement. T5

ix. Environmental Services has researched and identified hydrogen peroxide is the most effective agent to clean the HCID unit. T5

b. OPPORTUNITIES FOR IMPROVEMENT
   i. The table members still expressed a concern to meet staffing and supply requirements. T5 and T4
   ii. There was uncertainty with the SPAH HICD team about notifications and timing to properly set up the HCID unit in time to receive the patient. T4
   iii. The HCID unit members questioned what physician would be responsible for the HCID patient. The initial communications between hospitals engages the ED doctors, however when the patient arrives at SPAH they do not go through the ED. This decision could impact the Infectious Disease team. T4
   iv. Functional departments report out to Mr. Reinhart. How does this tie to the HCC and reporting frequency? Who is responsible for planning needs for the next operational period as set by the HCC? T5
   v. Conduct exercises for staff and support teams to run through all aspects of patient care from time of reception to departure. T5
   vi. Lab representatives expressed there are opportunities to improve specimen labeling and packaging protocols. T4
   vii. Table members expressed the need to fully address employee health concerns during and after the event. This should include protocols for monitoring/duration, impacts on staff families (will they need to quarantine?) as well as behavioral health support. T4 and T5

OBJECTIVE 6: To discuss and evaluate relevant aspects of activating the SPAH hospital command center (HCC) and relevant procedures and processes in response to the intake of a suspected Ebola virus patient.

a. STRENGTHS
   i. The SPAH representatives felt they have a strong understanding of HICS basic concepts. T3
   ii. The Table team recognized the value of developing “SMART” objectives to help formulate plans for each operational period. T3
   iii. Sentara does have extensive policies and procedures to assist members with responses to a variety of events. They recognized critical logistic issues to manage the event. T3
   iv. SPAH has taken advantage of previous exercises regarding PPE management. T3
   v. SPAH has templates to assist with management of public information. The question might be to assure these templates align with other engaged agencies such as VDH. T3
   vi. The HCC team recognized that HCID protocols do exist for a variety of functional areas (such as the Lab). Review on a regular basis will beneficial.
   vii. There is logistics support on the G drive. The information is updated every quarter to maintain supply and PPE relevancy. T3

b. OPPORTUNITIES FOR IMPROVEMENT

i. The SPAH representatives may not have experience with setting up a flexible HCC scaled for differing levels of events. A note was made regarding a job aid for the incident commander to identify the initial command staff that would be necessary to begin engagement with the event. Also see item ii. T4

ii. The receiving of an HCID patient may alter the roles of some SPAH HCC members, such as the public information officer (aka, Corporate Comms). Templates can be developed within the HICS framework to better define known limitations to normally expected activities of the command staff with certain events. Consider the interfaces with other agencies such as VDH. T4

iii. The table representatives expressed a concern with putting the right people in the right "seats" at the command center. A real event should not be used as a training event. There was a question regarding recognizing the Sentara system SME's to better facilitate internal multi-facility engagement. This also included inter agency and interfacility transport SME connections. T3

iv. The need to identify post stratification of staff risk/exposure and manage appropriately was identified by the team. T3

v. The team recognized some critical logistics need such as food service, environmental services, waste management, security, lab supplies. HCC needs to be aware but not manage on an operational level. T3

vi. The team identified the need to manage social media. Uncertain how to manage family communications, staff communications, etc. Issue of managing social media but maintaining patient integrity. The team discussed a variety of ways to manage a variety of ways to control potential social media "leaks." This issue critically interfaces with the overall public information aspect of such an event and determination of who/what agency leads public information releases and timing. See Objectives 1 and 7. T3

vii. HCC members should be aware of the unique operational constraints of staff working with an HCID patient. This includes specialized PPE, time limitations for wearing CAPRs, health monitoring as well as medical clearance to wear specialized PPE, additional personnel to support those directly interacting with the patient. T3

viii. The team identified several agencies that should be engaged such as Det Norske Veritas, Centers for Medicare and Medicaid Services, and internal finance (to develop appropriate cost centers to capture relevant expenditures for reimbursement).

ix. The team recognized the need to support the HCC itself---including staff (rotations of personnel, feeding, etc.) and logistic support. T3

x. An HCID annex needs to be added to "MyEOP" (Sentara's system link). T3

xi. Improvements may need to be made on Wavenet to better facilitate responses and access documents and guides. T3

xii. Senior staff should consider the development of an internal comms/decision tree focusing on the reception of a possible HCID patient to better ensure a critical functional unit is not left out of the loop. T3 and T4

OBJECTIVE 7: To discuss and evaluate the roles and responsibilities of the relevant local, regional, and state entities and agencies to provide situational awareness and coordination to appropriate healthcare and public safety agencies at all levels in response to the notification of a suspected Ebola virus patient.

a. OPPORTUNITIES FOR IMPROVEMENT
   i. The roles of each agency/entity in the process of receiving, transporting, confirming and final disposition of a possible HCID patient are not clearly defined. This would also include clarification of who and when blood samples are taken, as well as which lab makes an initial and/or final determination of the specific virus suspected and how that determination is communicated. T1
   ii. A "decision tree" (aka Flow Chart) should be developed to assist with defining roles and responsibilities of the various agencies engaged in responding to the presentation of a possible HCID patient. This discussion was recognized as a critical Opportunity. Possibly led by VDH as they have the legal/financial responsibilities related to patient movement, care, and associated local reimbursements. This is not the same as a "communications tree." T1 and T2
   iii. Reporting regulations need more clarity. This ties directly into item ii. This should also include reporting to CDC (when and who is responsible for the task?). Also see 2.b.i. T1
   iv. The role of public information officers at all levels needs more definition to manage release of sensitive information at the right time and at the right level. T1
   v. A "Full Declaration" protocol should be developed. VDH responsibility. T1

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SECTION 4: CONCLUSION

The 2022 Sentara Princess Anne Hospital Highly Consequential Infectious Disease Tabletop Exercise was funded by the Virginia Hospital & Healthcare Association through an FY22 ASPR federal grant program. The planning, execution and reporting of the series followed the Homeland Security Exercise and Evaluation Program (HSEEP) throughout the process.

The exercise had a total of 44 participants and two exercise facilitators. The agencies represented spanned a wide variety of local, regional, and state entities that would engage at significant levels in the event of the presentation of a possible HCID patient.

The Exercise Director and Facilitators sincerely thank the participants for their active engagement during the exercise and their willingness to provide very detailed feedback to improve the collective ability to deal with an HCID patient. It did not go without notice that all our participants have been working under highly stressful conditions over the past few years dealing with COVID-19 and their enthusiastic response to participating in the exercise was appreciated. The suggested changes below would not have been so succinctly captured without their valuable, professional input.

Presented below is a compilation of the major recommendations collectively identified by the exercise participants:

1. Review and clarify the relationship(s) between VDH (both state and local levels) and local health systems/hospitals in these areas:
    a. Dissemination of information to both (unique) internal healthcare staff(s) and the general public:
        i. Define responsibilities (this will be different depending upon scope/audience)
        ii. Define timing
        iii. Define general content
        iv. Create a concise communications tree for easy access to information flow and associated agencies/functional units
        v. Develop plans for informing and protecting the immediate family of the patient as well as potentially exposed members of the general public
        vi. Develop consistent information to staff (and consequently their families) regarding levels of exposure and appropriate responses to those levels of exposure. Include during treatment and post treatment. Include both physical and mental health management
    b. Refine the overarching plans for handling of an HCID patient from initial reception to intermediate receiving facility to final transfer to a designated state treatment facility:
        i. Define all responsibilities for all agencies
        ii. Define relevant statutory responsibilities and financial processes
        iii. Establish clear protocols for medical treatment and transport
        iv. Establish consistent, general guidelines for medical care providers for personal protective equipment and exposure prevention
    c. Review and Ongoing Training of HCID Plans:

i. Each healthcare agency should review/revise and train on their HCID plans on a regular basis to adjust for changes in personnel and updates to medical advisories
ii. Develop "Decision Trees" (aka Flow Charts) that quickly identify actions to be taken and notifications to be made with a potential HCID patient. Refer to positions and not individual names as people transition into and out of positions on a regular basis.
iii. Include exercises for all levels on potentially engaged personnel dealing with a potential HCID patient. This should include functional operational unit, support/facilities unit members, and HCC members.
iv. Regional entities, such as PEMS, TEMS, EVHC should engage their membership in ongoing review and maintenance of HCID plans to keep all potential agencies engaged, aware on updated protocols and aware of changes between agencies/entities that might impact a holistic response to a potential HCID patient

APPENDIX A: PARTICIPANT FEEDBACK SUMMARY

Exercise Name: Sentara Princess Anne Hospital Highly Consequential Infection Disease Tabletop Exercise

Date: May 24, 2022

Total Respondents: 36 out of 44 participants. (82%)

Part I—Recommendations and Action Steps

1. Based on the discussions today, list the top three strengths and three area that you feel need improvement.

   STRENGTHS:

   - Relationships in Place (4)
   - Good working through problems
   - Good inter-agency communications and involvement/collaboration (9)
   - Right agency representatives at table from a Public Health perspective
   - We have some very well-trained people (2)
   - SPAH ED Team Ongoing Preparations (2)
   - SPAH Lab Team Ongoing Preparations (2)
   - System Support (2)
   - Incident Command Structure (SPAH) (2)
   - Subject matter expertise (2)
   - Emergency Management Good Foundation (2)
   - Pre-established Communications Plan (2)
   - HCID Knowledge (2)
   - Base processes already defined
   - Significant planning and infrastructure exist for the management of HCID (2)
   - Most policies/procedures are extremely detailed and are solidly anchored in CDC standards (2)
   - SPAH IP Relationship with VDH Staff
   - PPE Readiness
   - Equipment Readiness
   - Team interactions (2)
   - Clearly written protocols (3)
   - Who to notify/talk to is clear
   - Dedicated Operations team (2)
   - Clear plan for patient care
   - Clear procedures for donning, doffing, and labs
   - Supply Chain at SPAH
   - Patient Safety (2)
   - Levels of organization

- Knowledge of available resources and how they will be used
- Recent relationships developed with Covid improved discussion/communications
- Riverside's policies and procedures for Ebola; very knowledgeable on their process (3)
- Seeing all the pieces that fall into place when the situation arises
- Exercise identified deficits
- Exercise well organized (3)
- Thought provoking questions brought up during exercise helped a lot
- Great discussions (2)
- Great information sharing and collaboration (6)
- Learned a lot
- Very positive
- Excellent review for AOCs
- Great group demonstration, truly opened up some great questions and solutions
- Great to see the Isopod – very interesting
- Several ideas shared to increase awareness or solve problems
- Additional departments would have been relevant to be present (2)

NEED IMPROVEMENT:

- Identification of Transport group (2)
- Improvement of/Update Plans – SPAH and Riverside (4)
- Improvement of Communications Plan formalizing flow and requirements (SPAH) (5)
- Communication gaps internal and between agencies (7)
- Coordination of policies (2)
- Policies and procedures need to be more robust
- Standardization of risk levels among agencies
- Update SPAH and Riverside Plans to reflect current transfer/transportation issues (4)
- Improvement of Checklists (2)
- Process Improvement
- Notification process better identified (2)
- SPAH HID Documents too old (2)
- SPAH HID Documents not accessible (4)
- Staff (SPAH) competencies outside ED or Lab, i.e., ICU, Respiratory, many members of the team have left.
- What our role is (2)
- Difficult to hear
- Update and maintain protocols (2)
- Inclusion of SPAH Infection Preventionist in SPAH monthly HCID meetings
- Work with VDH to streamline their communication process with hospitals

- Universal access to EM Ebola documents
- Plans for providers after patient care exposures, where they stay for infection period, pay for missed work, etc. (4)
- Unclear phone tree to activate the unit
- Unclear what MD is responsible for patient
- Regulatory oversite – who has control
- Need an on-site demo to see the process; plan to have a meeting in June with Joel and the SPAH Process Team
- Public Information (2)
- Need for planning element when patient is so sick they do not go to assessment center
- Test ordering/labeling
- VDH – concern about the need to communicate to multiple players
- Support from VDH
- Improve communications via transfer centers
- Continued training for Emergency Department and SPAH teams (2)
- Ensure equipment used correctly
- 7 days of supplies need to be identified
- No one was sure if patient was absolutely positive
- Need a hand-on walk through exercise
- Integration of local, regional, and State emergency management groups

2. Identify specific actions that should be taken to address the issues identified above. For each action, indicate if it is a high, medium, or low priority.

HIGH:

- RHCC/VDH Checklist-RHCC can provide a "tiered" notification
- Refine Riverside – VDH Process
- Review policy and update if needed (5)
- Identify transport company timetable and lack of local capability, develop draft MOU/MOA (6)
- Remove "MTI" from policies, instead create standard transport protocols
- Increase written guidance: create division specific to do lists for the IC to follow
- Strengthen Communication plan: create step by step/flowsheets and checklists for every entity that needs to be communicated with; include message for staff/rumor control; identify key players on response teams to streamline communications; put communications tree in place when patient presents (11)
- Create an HID folder on "Compliance 360" (an electronic repository for policy and procedure storage) to house all HID related documents for the system (3)
- Identify repositories for all documents available to any and all staff, can't be site specific (3)
- Assess who from the current staff are training in HID outside ED and Lab
- Create refresher crisis communications training across the hospitals, regions, etc.

- Agreed shared procedures across different health systems and stakeholders
- Update Sentara Ebola Preparedness Protocol
- Need medical clearance for the high-level PPE
- Need surplus in Emergency Management warehouse
- Employee care during and after event; Hotel/food/clothes/supplies for staff after patient care to protect family/public (2)
- Strengthen Sentara Policy on exposure protocol; Proper follow through of patient's footprint and any and all who may have been exposed (2)
- Run hands on drill/exercise at SPAH for patient arrival to departure (2)
- Shut down social media leaks
- Finalize specimen labeling/ordering process
- Strengthen travel screening
- ESD policies plan
- ED procedures with ESD
- Engage local, regional, and state emergency managers in HCID training and exercising to improve inter-agency functions.

MEDIUM:

- Develop a notification tree if possible (2)
- Update contact list by facility/agency that must be involved in communications and response (Find a repository of this list/directory)
- Develop a single point of clinical contact (tied to first bullet), include a TEAMS call.
- Regulatory oversite – define responsibilities
- Coordination of policies within facilities
- Responsibilities of Employee Health need to be specified/differentiated from VDH (standardization of what constitutes low, medium, high risk) (2)
- Write employee post-unit plan
- Get transfer center onboard to conference call providers
- Consider the prospect that the patient is intentionally intending to infect as many health care providers as possible. Would that change the response?

LOW:

- Division of Consolidated Laboratory Services (DCLS) Courier Process
- More tabletops
- Ensure division leaders are familiar with the Sentara Media Page (I know all system leaders are!)

NO RANKING:

- How will we move barrels of waste that may be overweight?
- Will we need to provide waste removal for other sites that were involved?
- Clinical progression of disease/ required to bypass assessment center for treatment center needs to be identified
- Standardize reporting between facilities

3. Describe the corrective actions that related to your area of responsibility. Who should be assigned responsibility for each corrective action?
    - Riverside VDH HCID Notification: Cooke/Smith
    - Public Health Emergency Process not well understood
    - VDH: DCLS notification procedures to return results to hospital: Cooke
    - We already have a system in place and the PIOs meet quarterly and discuss such situations
    - Keep our VDH local and regional directory updated and develop a short role description so it is available to our stakeholders: Everyone/continuous
    - Will discuss all with our EM
    - What about code status of the patient? Is there a discussion with the patient considering the high fatality risk?
    - Update SPAH specific documents, Emerging Diseases Prep. Protocol: SPAH EM Committee
    - Work on system HID documents: System IP/EM (2)
    - Communications Plan: Fran and Eric
    - Ensure division leaders are familiar with the Sentara Media Page: Kelly Kennedy
    - Update Communications Checklist
    - Create Crisis Communications Teams folder
    - Is a VDH nurse on the Ebola team?
    - Need to have part of SPAH's senior leadership meeting devoted to Incident Command Training, perhaps 1x/yr: VP Ops SPAH (2)
    - Employee care and plan; HR policies (Staff for work related exposure): Employee Health
    - Team Notification: HCC
    - Ensure SOPs are up to date
    - Plan on meeting to work with the barrels to understand moving process
    - PEMS will assist in the development of an EMS Transport for HCID to be located in the Eastern Virginia region (2)
    - Complete Lab specific procedures: Lab Safety
    - Finalize notification process for lab team members: Lab Safety
    - Need Infection Prevention Coordinator involvement with team at SPAH; recommend having IPC part of training so that the individual is well versed on the policies and procedures.
    - Create an emergency backup plan in case of a negative pressure mechanical failure: Team Leader Facilities Services
    - Ensure required supplies are available: Supply Chain Manager
    - Intentional terrorist attack to infect healthcare agencies-this should be discussed by the EVHC Infectious Disease Working Group.

4. List the policies, plans, and procedures that should be reviewed, revised, or developed. Indicate the priority level for each review item.

    HIGH:
    - RHCC activated

- Ebola Response/Exposure Plan (3)
- SPAH specific plans
- Local districts epidemiology plans need review yearly. Unsure this type of response to a HCID situation is added to their annex.
- Review HID Policy; ED/Lab HID SOPs
- HCID Facility Plan
- HCID Communications Plan
- Transportation (3)
- Facility specific procedures – digital
- Employee care: Staff Boarding opportunities (food, clothes, hazard pay) (3)
- Any and all pertaining to HCID, respiratory, ED, facilities, HVAC controls, and negative pressure rooms
- The initial question base: who is involved and how the transport begins – review and develop more
- Lab Highly Infectious Disease Unit procedures
- Finding policies in various databases

MEDIUM:

- Lab Inventory Checklist
- Lab Specimen Tracking Form
- HCID Nursing Plan

LOW:

- Sentara Communications Crisis Plan – Communicable Disease Messaging (*last updated in 2020)

NO RANKING:

- Are there HID policies? I am sure there are; I am just not familiar.
- 2015/2018 Plan (questionable)
- All HID documents need to be reviewed
- Communication Flow
- Determine how/when government would lead communications
- Visitation protocols
- Supply chain
- Curtis Bay will be notified at this point; we will work together with the hospital to provide waste removal, transportation, and extra supplies and/or removal labor.
- Inter-facility transfer
- Employee Exposure management
- Transfer Center engagement
- Source patient testing – would initial facility be notified?
- CDC Guidelines for EMS/HCID
- Cleaning of EMS vehicles post HCID

Part II—Exercise Design and Conduct

1. What is your assessment of the exercise design and conduct?

   *Key: **1** indicates **strong disagreement** with the statement and **5** indicates **strong agreement**.*

   The numbers in parentheses indicate the number of responses for that rating.

Assessment Factor	Rating of Satisfaction with Exercise				
	Strongly Disagree				Strongly Agree
The exercise was well structured and organized.	1 (0)	2 (0)	3 (0)	4 (8)	5 (27)
The exercise scenario was plausible, realistic, and provided an excellent basis for driving discussion of relevant topics.	1 (0)	2 (0)	3 (0)	4 (6)	5 (30)
The modules were organized in a manner that allowed participants sufficient time to fully focus on issues related to the operational periods being discussed.	1 (0)	2 (0)	3 (1)	4 (8)	5 (27)
The facilitator was knowledgeable about the material, kept the exercise on target, successfully engaged participants and was sensitive to group dynamics.	1 (0)	2 (0)	3 (0)	4 (5)	5 (31)
Participation in the exercise was appropriate for someone in my position.	1 (0)	2 (0)	3 (1)	4 (3)	5 (32)
This exercise helped me further consider and understand aspects of responding to and managing an HCID incident.	1 (0)	2 (0)	3 (0)	4 (6)	5 (30)
Participants included in the right agencies and people in terms of level and mix of disciplines.	1 (0)	2 (0)	3 (0)	4 (7)	5 (29)

Overall Score for the exercise: 4.813

Part III: Participant Feedback

Please provide any recommendations on how this exercise or future exercises could be improved or enhanced.

- Well done exercise. Feel the players are better prepared and have a plan in place.
- Enjoyable mix of people. May work better to have each table be a mix of different specialties to bring in different viewpoints.
- This was a general TTX, served as a great opportunity to "practice" coming out of Covid response. Would like to see one TTX exploring specific aspects in more depth, i.e., a series. Also, use other diseases of high consequence, i.e. measles, monkeypox, etc.

- Thank you for the snacks!
- Thank you!
- Great training! Thank you for including the corporate communications team! (2)
- Good interaction at leadership table
- Table 3 was very fortunate to have Patti Montes; all her guidance was very valuable!
- Great realistic Ebola preparedness scenario and very specific to SPAH
- This was fantastic. Well organized; it was good to get everyone together in one place – made it easier to identify gaps to work on in this format to increase efficiency moving forward.
- Thanks to the facilitators for a great experience!
- Possibly include representation from transport entities as part of the exercise
- Would be nice to talk about the process as a whole group prior to dividing into the tables. There were benefits to the divided tables, however, feel like it limited the perspective of individual participants.
- Excellent event
- Great job done by all the teams involved!
- I liked how the teams were divided and the levels for the departments were discussed.
- All in all, a great learning experience.
- We identified some agencies/people that would have been beneficial to have at the tables.
- Excellent exercise; well organized; participants engaged; weaknesses revealed.
- Well done exercise planning team
- Much need for a good update and retraining – great job
- The facilitator did a great job
- Great exercise and information

APPENDIX B: ACRONYMS

Acronym	Term
AAR	After-Action Report
AOC	Administrator on Call
ARC	American Red Cross
ASPR	Assistant Secretary for Preparedness and Response-DHHS
CISM	Critical Incident Stress Management
DCLS	Division of Consolidated Laboratory Services
DHHS	Department of Health and Human Services
DHS	US Department of Homeland Security
ED	Hospital Emergency Department
EEG	Exercise Evaluation Guide
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPT	Emergency Physicians of Tidewater
ESD	Environmental Services Department
EVHC	Eastern Virginia Healthcare Coalition
FEMA	Federal Emergency Management Agency
HCC	Hospital Command Center
HCID	Highly Consequential Infectious Disease
HICS	Hospital Incident Command System
HID	Highly Infectious Disease
HPP	Hospital Preparedness Program
HRMMRS	Hampton Roads Metropolitan Medical Response System
HSEEP	Homeland Security Exercise and Evaluation Program
IAP	Incident Action Plan
ICP	Incident Command Post
IPC	Infection Prevention Coordinator
JIC	Joint Information Center
JOC	Joint Operations Center
MCI	Mass Casualty Incident
MEO	Medical Examiner's Office
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Medical Reserve Corps
NGOs	Non-Governmental Organizations
NIMS	National Incident Management System

Acronym	Term
OCME	Office of the Chief Medical Examiner
OEM	Office of Emergency Management
PEMS	Peninsulas Emergency Medical Services Council, Inc.
PHEP	Public Health Preparedness
PIO	Public Information Officer
PPE	Personal Protective Equipment
RHCC	Regional Hospital Coordinating Center
RHS	Riverside Health System
ROC	Regional Operations Center
RRMC	Riverside Regional Medical Center
RTO	Regional Triage Officer-part of the regional hospital system during emergencies to support efficient alignment of patient care
SMART	Specific, Measurable, Actionable, Realistic and Time-Phased
SME	Subject Matter Expert
SNG	Sentara Norfolk General
SPAH	Sentara Princess Anne Hospital
TEMS	Tidewater Emergency Medical Services
TTX	Tabletop Exercise
VDEM	Virginia Department of Emergency Management
VEOC	Virginia Emergency Operations Center
VDH	Virginia Department of Health
VHHA	Virginia Hospital and Healthcare Association
VHASS	Virginia Healthcare Alerting and Status System: a web-based tool used by regional hospitals to share patient and situational data during an emergency
VSP	Virginia State Police
WebEOC	The name of the web-based incident management system used by local EOCs, the VEOC, hospitals and other critical agencies to share information and maintain situational awareness.