Tools to Improve Special Pathogens Readiness

March 27, 2019

3:30-5:00 PM

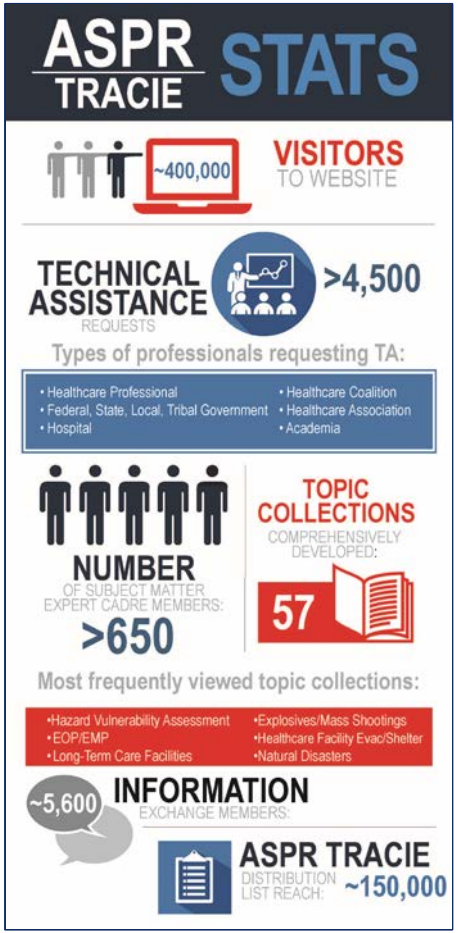
Speakers

- Shayne Brannman, MS, MA, ASPR TRACIE Program Director
- Syra Madad, DHSc, MSc, New York City Health + Hospitals
- Mary Ellen Bennett, MPH, RN, CIC, Minnesota Department of Health
- Shelly Schwedhelm, MSN, RN, NEA-BC, Nebraska Medicine

Why ASPR TRACIE?

ASPR TRACIE was developed as a healthcare emergency preparedness information gateway to address the need for:

- Enhanced technical assistance
- A comprehensive, one-stop, national knowledge center for healthcare system preparedness
- Multiple ways to efficiently share and receive information between various entities, including peer-to-peer
- A way to leverage and better integrate support (force multiplier)



ASPR TRACIE: Three Domains

- Self-service collection of audience-tailored materials
- Subject-specific, SME-reviewed “Topic Collections”
- Unpublished and SME peer-reviewed materials highlighting real-life tools and experiences

- Personalized support and responses to requests for information and technical assistance
- Accessible by toll-free number (1844-5-TRACIE), email (askasprtracie@hhs.gov), or web form (ASPRtracie.hhs.gov)

- Area for password-protected discussion among vetted users in near real-time
- Ability to support chats and the peer-to-peer exchange of user-developed templates, plans, and other materials

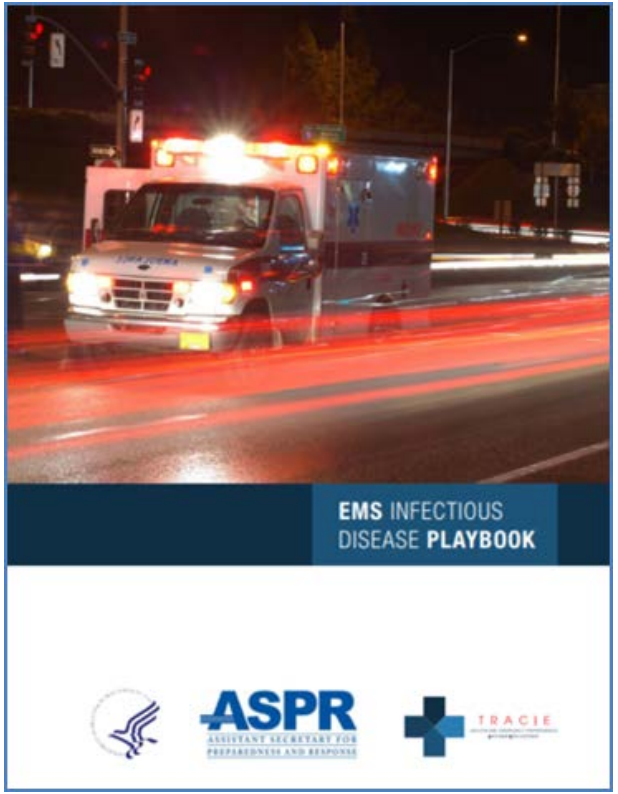
asprtracie.hhs.gov

1-844-5-TRACIE

askasprtracie@hhs.gov

Infectious Disease Resource Examples

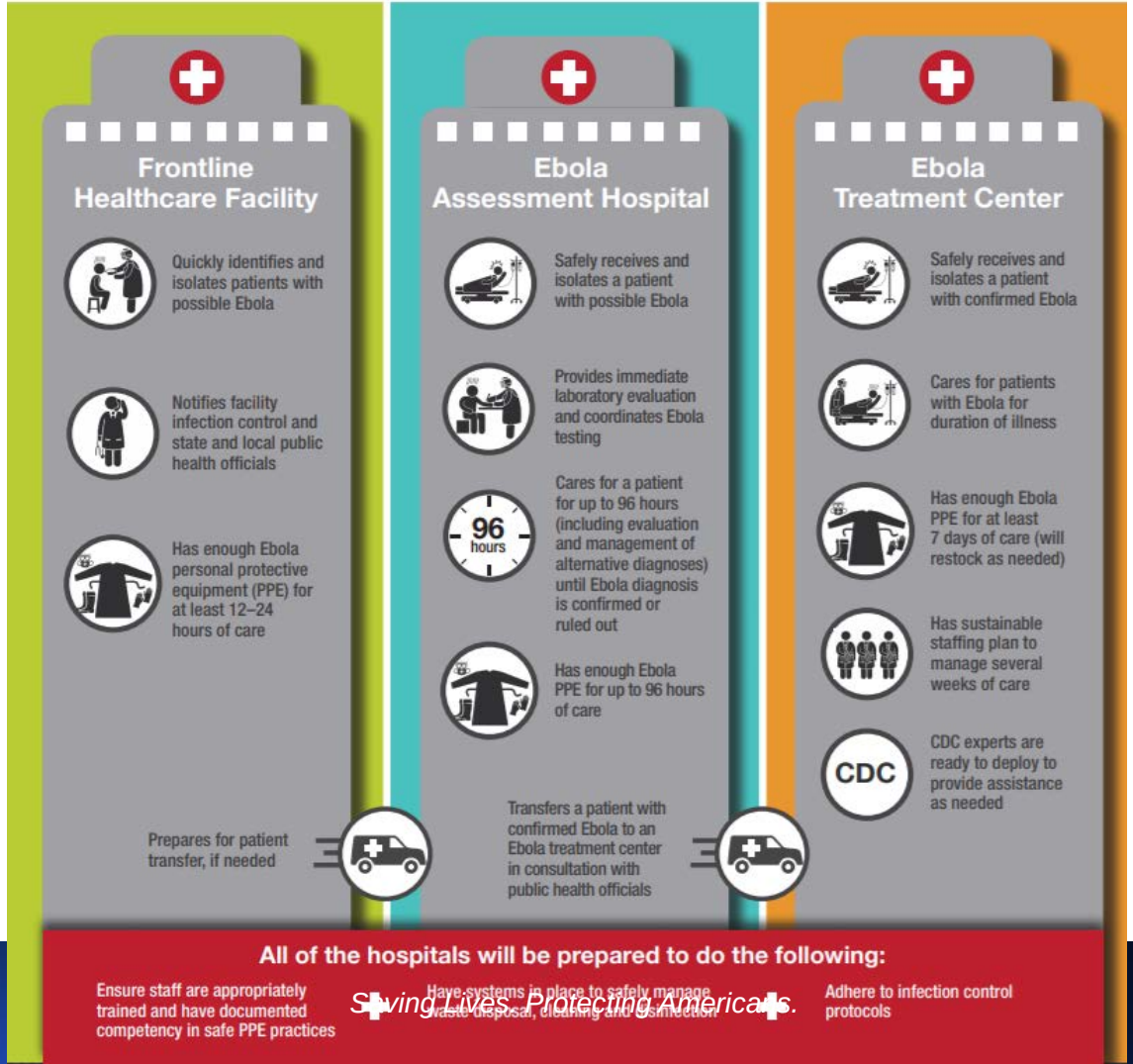
- Considerations for the Use of Temporary Care Locations for Managing Seasonal Patient Surge
- EMS Infectious Disease Playbook
- Hospital Personal Protective Equipment Planning Tool
- Joint Webinars with NETEC
- Resources at Your Fingertips:
  - Avian Influenza, Zika
- Topic Collections:
  - Bioterrorism & High Consequence Biological Threats, Epidemic/Pandemic Influenza, SARS/MERS, VHF/Ebola, Zika
- Select Infectious Disease Resources Page: https://asprtracie.hhs.gov/infectious-disease



Syra Madad, DHSc, MSc
Senior Director
System-wide Special Pathogens Program
New York City Health + Hospitals

Frontline Hospital Playbook: Special Pathogens

- Planning resource for multidisciplinary hospital team
- Focus is viral hemorrhagic fever (e.g., Ebola) and special respiratory pathogens (e.g., MERS, novel influenza)
- User-friendly format with “need to know” information and extensive hyperlinks to source documents for additional details


Frontline Healthcare Facility
Quickly identifies and isolates patients with possible Ebola
Notifies facility infection control and state and local public health officials
Has enough Ebola personal protective equipment (PPE) for at least 12–24 hours of care
Prepares for patient transfer, if needed
Ebola Assessment Hospital
Safely receives and isolates a patient with possible Ebola
Provides immediate laboratory evaluation and coordinates Ebola testing
96 hours
Cares for a patient for up to 96 hours (including evaluation and management of alternative diagnoses) until Ebola diagnosis is confirmed or ruled out
Has enough Ebola PPE for up to 96 hours of care
Transfers a patient with confirmed Ebola to an Ebola treatment center in consultation with public health officials
Ebola Treatment Center
Safely receives and isolates a patient with confirmed Ebola
Cares for patients with Ebola for duration of illness
Has enough Ebola PPE for at least 7 days of care (will restock as needed)
Has sustainable staffing plan to manage several weeks of care
CDC
CDC experts are ready to deploy to provide assistance as needed
All of the hospitals will be prepared to do the following:
Ensure staff are appropriately trained and have documented competency in safe PPE practices
Have systems in place to safely manage waste disposal, cleaning and disinfection
Adhere to infection control protocols

Frontline Hospital Playbook: Organization

- Contents page
- Sections
- Interactive

Frontline Hospital Playbook: Interactive Features

- Navigable contents page
- Section tabs across the top of each page
- Back to contents button at the bottom of each page
- Active hyperlinks to external sources throughout

Planning Considerations and Assumptions

- Assumptions
- PPE assumptions
- Planning/policy/resources
- Safe systems of work

Figure 1. PPE Use When a Patient with Suspected Special Pathogen is Identified.

TRIAGE

Patient
- Ask to wear a simple mask (i.e., flexible surgical mask/facemask) and perform hand hygiene

Staff
- No physical contact with patient required: N95 respirator and gloves
- Contact required: Special Pathogen Basic PPE

Once a patient has been isolated, nursing and physician staff will confer and, depending on the suspected disease based on the travel/exposure history, will choose a PPE ensemble. This PPE should ideally be packaged in kits or on a cart well-labeled and ready for use.

Special Pathogen Basic PPE

Precautions are to be initiated and PPE donned as soon as a suspect case is recognized and sufficient for novel influenza, MERS, SARS, and similar suspected diseases as well as stable patients with suspect VHF.

Consists of[1]:
- Fit-tested N95 or equivalent/higher respirator[2]
- Fluid-resistant gown that extends to at least mid-calf (may substitute impermeable, though heavier, hotter, and costlier)
- Nitrile gloves with extended cuff - 2 pairs
- Face shield
- Consider booties and head cover (Note: not required by Centers for Disease Control and Prevention (CDC) but recommended by Occupational Safety and Health Administration (OSHA)

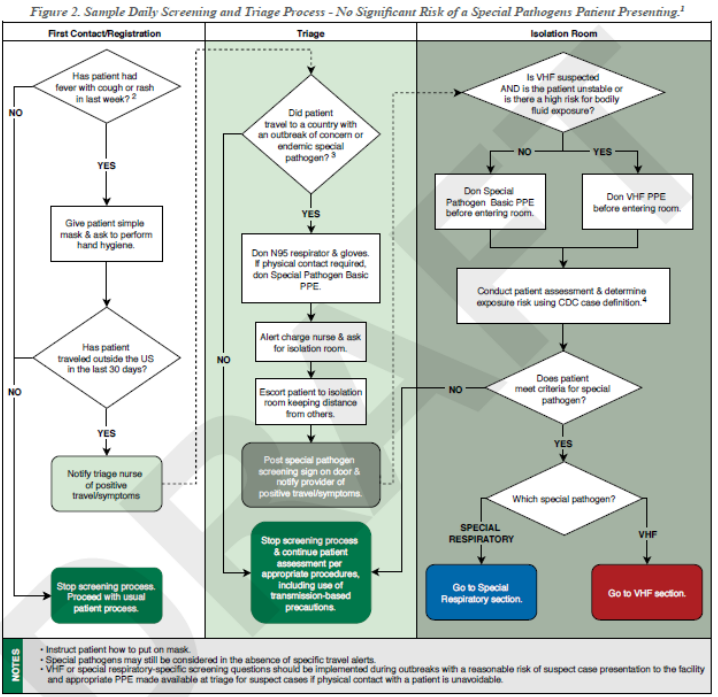
Note: The first four items should be available at triage and routinely applied for any patient requiring physical contact and during initial assessment. Just-in-time training should reinforce the specific hazards of VHF patients during outbreaks that may result in patients presenting to the facility.

VHF PPE

Precautions are to be initiated and PPE donned when suspicion for EVD or another VHF is high based on current outbreak epidemiology and the patient is either unstable, exhibits vomiting, diarrhea, or bleeding, or such conditions are judged reasonably likely. The facility should select its VHF PPE depending on what the providers are used to and have available. For the purposes of this document, we assume that gowns and N95 respirators are used since these are more routinely available, though the option for coveralls with overboots/shoes is appropriate and may offer additional protection from bodily fluid exposures and the use of PAPRs offers an additional level of respiratory protection. All skin should be covered.

Consists of:
- Fit-tested N95 or equivalent/higher respirator[2]
- Nitrile gloves with extended cuff - 2 pairs
- Impermeable gown that extends to at least mid-calf
- Knee high pull-on impermeable booties
- Surgical hood (full head coverage draping onto shoulders)
- Face shield
- Impermeable apron should be added for patients with significant body fluid losses/exposure risk

Guidance on doffing/donning and use of PAPRs is available from the CDC.

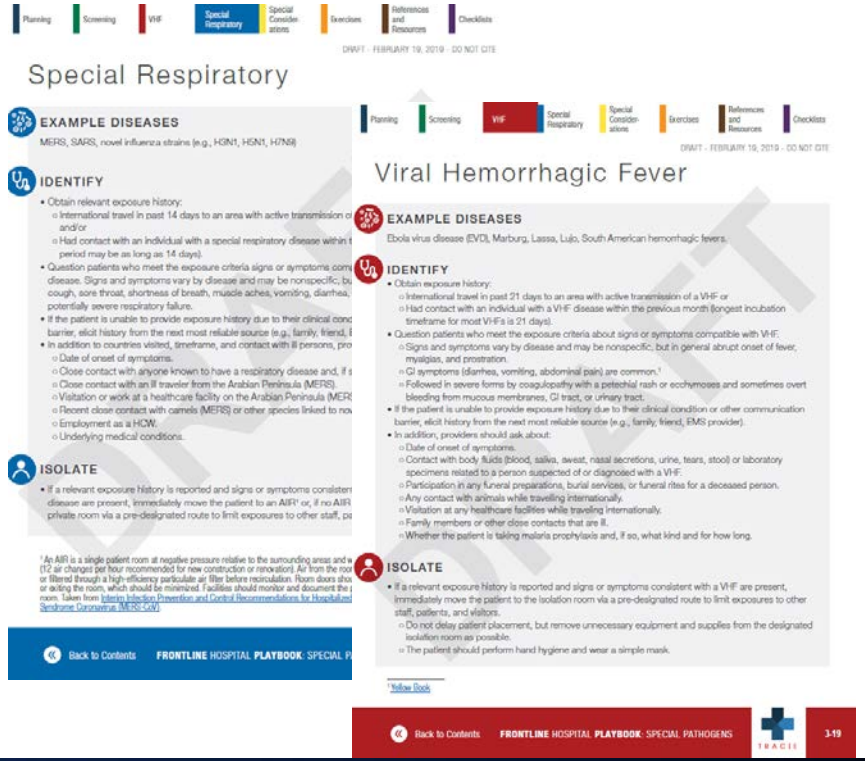


Screening & Electronic Health Record Considerations

- Baseline screening/no current outbreak
- Outbreak-specific changes to screening
- Algorithms
  - Daily screening & triage process
  - Screening & triage for VHF
  - Screening & triage for Special Respiratory

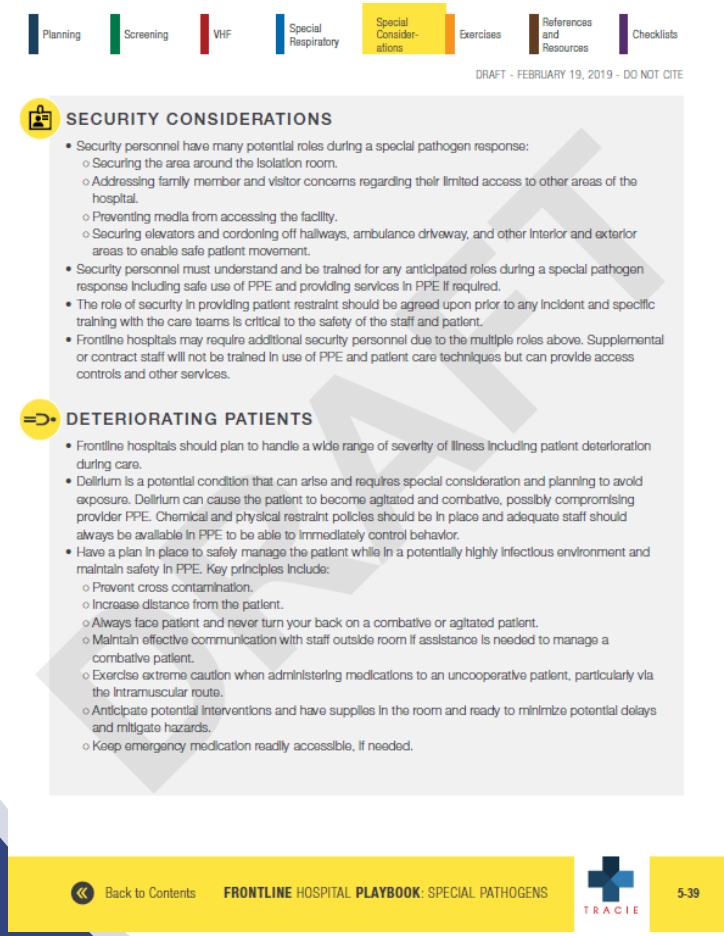
Special Pathogen Sections

- VHF and Special Respiratory
  - Example diseases
  - Identify, Isolate, Inform
  - PPE
  - Initial clinical care
  - Patient movement
  - Waste management



Special Considerations

- Healthcare worker
- Pediatric
- Visitor/family
- Public relations/information
- Security
- Deteriorating patients
- Interfacility transfer



SECURITY CONSIDERATIONS

- Security personnel have many potential roles during a special pathogen response:
  - Securing the area around the isolation room.
  - Addressing family member and visitor concerns regarding their limited access to other areas of the hospital.
  - Preventing media from accessing the facility.
  - Securing elevators and cordoning off hallways, ambulance driveway, and other interior and exterior areas to enable safe patient movement.
- Security personnel must understand and be trained for any anticipated roles during a special pathogen response including safe use of PPE and providing services in PPE if required.
- The role of security in providing patient restraint should be agreed upon prior to any incident and specific training with the care teams is critical to the safety of the staff and patient.
- Frontline hospitals may require additional security personnel due to the multiple roles above. Supplemental or contract staff will not be trained in use of PPE and patient care techniques but can provide access controls and other services.

DETERIORATING PATIENTS

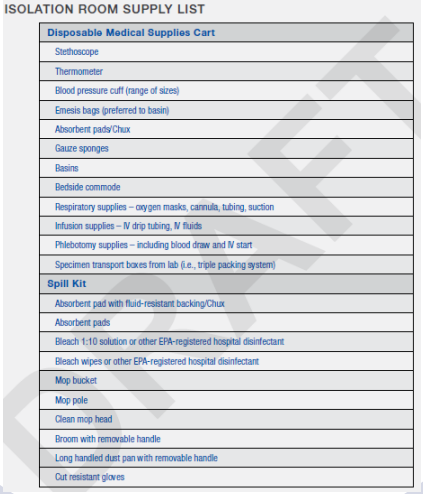
- Frontline hospitals should plan to handle a wide range of severity of illness including patient deterioration during care.
- Delirium is a potential condition that can arise and requires special consideration and planning to avoid exposure. Delirium can cause the patient to become agitated and combative, possibly compromising provider PPE. Chemical and physical restraint policies should be in place and adequate staff should always be available in PPE to be able to immediately control behavior.
- Have a plan in place to safely manage the patient while in a potentially highly infectious environment and maintain safety in PPE. Key principles include:
  - Prevent cross contamination.
  - Increase distance from the patient.
  - Always face patient and never turn your back on a combative or agitated patient.
  - Maintain effective communication with staff outside room if assistance is needed to manage a combative patient.
  - Exercise extreme caution when administering medications to an uncooperative patient, particularly via the intramuscular route.
  - Anticipate potential interventions and have supplies in the room and ready to minimize potential delays and mitigate hazards.
  - Keep emergency medication readily accessible, if needed.

Exercises and Maintaining Readiness

- Updated plans
- Training and education
- Drills and exercises
- Improvement planning
- Restocking

References and Resources

- Annotated references
- Index of abbreviations
- Sample electronic health record screening questions
- Isolation room supply list
- Signs
  - Universal screening
  - Isolation room door signs



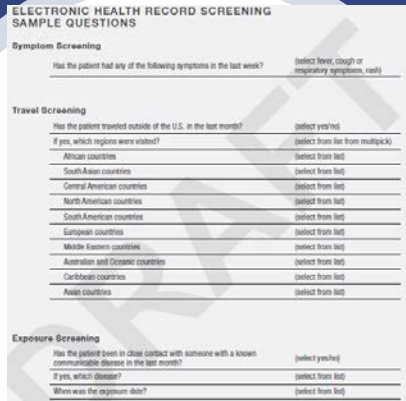
ISOLATION ROOM SUPPLY LIST

Disposable Medical Supplies Cart
Stethoscope
Thermometer
Blood pressure cuff (range of sizes)
Emesis bags (preferred to basin)
Absorbent pads/Chux
Gauze sponges
Basins
Bedside commode
Respiratory supplies – oxygen masks, cannula, tubing, suction
Infusion supplies – IV drip tubing, IV fluids
Phlebotomy supplies – including blood draw and IV start
Specimen transport boxes from lab (i.e., triple packing system)
Spill Kit
Absorbent pad with fluid-resistant backing/Chux
Absorbent pads
Bleach 1:10 solution or other EPA-registered hospital disinfectant
Bleach wipes or other EPA-registered hospital disinfectant
Mop bucket
Mop pole
Clean mop head
Broom with removable handle
Long handled dust pan with removable handle
Cut resistant gloves

UNIVERSAL SCREENING SIGN

STOP

PLEASE PUT ON A MASK



ELECTRONIC HEALTH RECORD SCREENING SAMPLE QUESTIONS

Symptom Screening

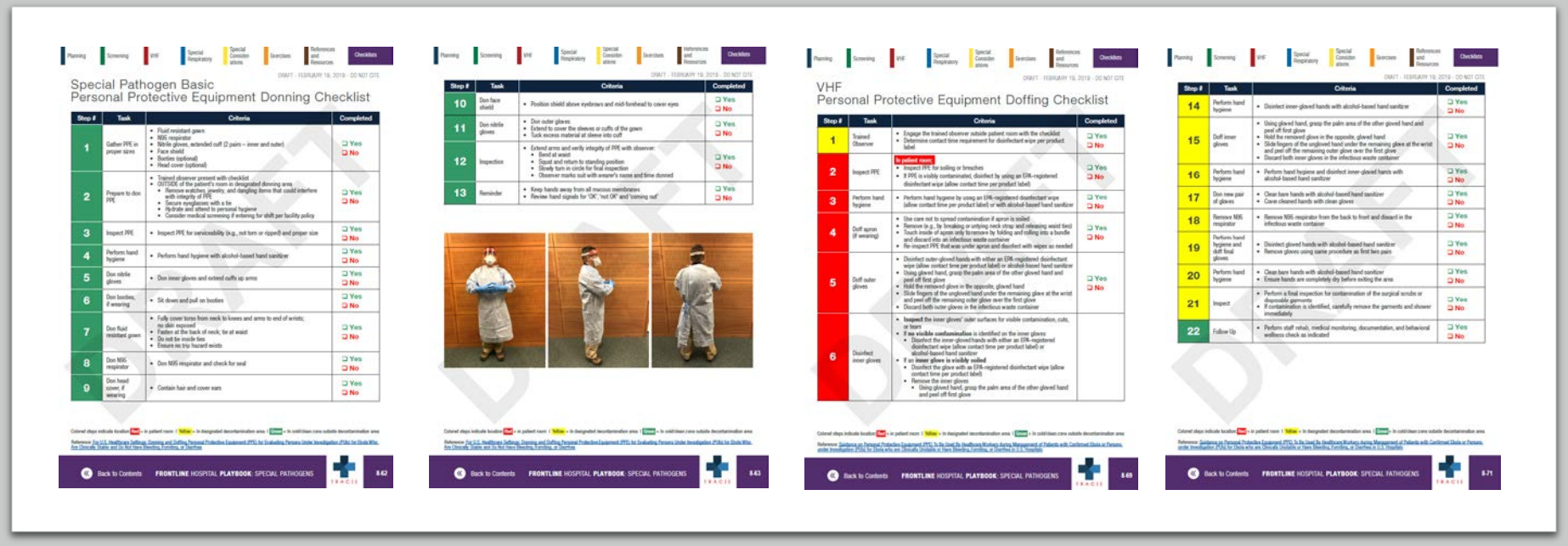
Has the patient had any of the following symptoms in the last week?	(select fever, cough or respiratory symptoms, rash)

Travel Screening

Has the patient traveled outside of the U.S. in the last month?	(select yes/no)
If yes, which regions were visited?	(select from list from multipick)
African countries	(select from list)
South Asian countries	(select from list)
Central American countries	(select from list)
North American countries	(select from list)
South American countries	(select from list)
European countries	(select from list)
Middle Eastern countries	(select from list)
Australian and Oceanic countries	(select from list)
Caribbean countries	(select from list)
Asian countries	(select from list)

Exposure Screening

Has the patient been in close contact with someone with a known communicable disease in the last month?	(select yes/no)
If yes, which disease?	(select from list)
When was the exposure date?	(select from list)



Special Pathogen Basic
Personal Protective Equipment Donning Checklist

Step #	Task	Criteria	Completed
1	Gather PPE in proper sizes	• Fluid resistant gown • N95 respirator • Nitrile gloves, extended cuff (2 pairs – inner and outer) • Face shield • Booties (optional) • Head cover (optional)	❑ Yes ❑ No
2	Prepare to don PPE	• Trained observer present with checklist • OUTSIDE of the patient's room in designated donning area • Remove watches, jewelry, and dangling items that could interfere with integrity of PPE • Secure eyeglasses with a tie • Hydrate and attend to personal hygiene • Consider medical screening if entering for shift per facility policy	❑ Yes ❑ No
3	Inspect PPE	• Inspect PPE for serviceability (e.g., not torn or ripped) and proper size	❑ Yes ❑ No
4	Perform hand hygiene	• Perform hand hygiene with alcohol-based hand sanitizer	❑ Yes ❑ No
5	Don nitrile gloves	• Don inner gloves and extend cuffs up arms	❑ Yes ❑ No
6	Don booties, if wearing	• Sit down and pull on booties	❑ Yes ❑ No
7	Don fluid resistant gown	• Fully cover torso from neck to knees and arms to end of wrists; no skin exposed • Fasten at the back of neck; tie at waist • Do not tie inside ties • Ensure no trip hazard exists	❑ Yes ❑ No
8	Don N95 respirator	• Don N95 respirator and check for seal	❑ Yes ❑ No
9	Don head cover, if wearing	• Contain hair and cover ears	❑ Yes ❑ No

Step #	Task	Criteria	Completed
10	Don face shield	• Position shield above eyebrows and mid-forehead to cover eyes	❑ Yes ❑ No
11	Don nitrile gloves	• Don outer gloves • Extend to cover the sleeves or cuffs of the gown • Tuck excess material at sleeve into cuff	❑ Yes ❑ No
12	Inspection	• Extend arms and verify integrity of PPE with observer: • Bend at waist • Squat and return to standing position • Slowly turn in circle for final inspection • Observer marks suit with wearer's name and time donned	❑ Yes ❑ No
13	Reminder	• Keep hands away from all mucous membranes • Review hand signals for "OK," "not OK" and "coming out"	❑ Yes ❑ No

VHF
Personal Protective Equipment Doffing Checklist

Step #	Task	Criteria	Completed
1	Trained Observer	• Engage the trained observer outside patient room with the checklist • Determine contact time requirement for disinfectant wipe per product label	❑ Yes ❑ No
2	Inspect PPE	In patient room: • Inspect PPE for soiling or breaches • If PPE is visibly contaminated, disinfect by using an EPA-registered disinfectant wipe (allow contact time per product label)	❑ Yes ❑ No
3	Perform hand hygiene	• Perform hand hygiene by using an EPA-registered disinfectant wipe (allow contact time per product label) or with alcohol-based hand sanitizer	❑ Yes ❑ No
4	Doff apron (if wearing)	• Use care not to spread contamination if apron is soiled • Remove (e.g., by breaking or untying neck strap and releasing waist ties) • Touch inside of apron only to remove by folding and rolling into a bundle and discard into an infectious waste container • Re-inspect PPE that was under apron and disinfect with wipes as needed	❑ Yes ❑ No
5	Doff outer gloves	• Disinfect outer-gloved hands with either an EPA-registered disinfectant wipe (allow contact time per product label) or alcohol-based hand sanitizer • Using gloved hand, grasp the palm area of the other gloved hand and peel off first glove • Hold the removed glove in the opposite, gloved hand • Slide fingers of the ungloved hand under the remaining glove at the wrist and peel off the remaining outer glove over the first glove • Discard both outer gloves in the infectious waste container	❑ Yes ❑ No
6	Disinfect inner gloves	• Inspect the inner gloves' outer surfaces for visible contamination, cuts, or tears • If no visible contamination is identified on the inner gloves • Disinfect the inner-gloved hands with either an EPA-registered disinfectant wipe (allow contact time per product label) or alcohol-based hand sanitizer • If an inner glove is visibly soiled • Disinfect the glove with an EPA-registered disinfectant wipe (allow contact time per product label) • Remove the inner gloves • Using gloved hand, grasp the palm area of the other gloved hand and peel off first glove	

Step #	Task	Criteria	Completed
14	Perform hand hygiene	• Disinfect inner-gloved hands with alcohol-based hand sanitizer	❑ Yes ❑ No
15	Doff inner gloves	• Using gloved hand, grasp the palm area of the other gloved hand and peel off first glove • Hold the removed glove in the opposite, gloved hand • Slide fingers of the ungloved hand under the remaining glove at the wrist and peel off the remaining outer glove over the first glove • Discard both inner gloves in the infectious waste container	❑ Yes ❑ No
16	Perform hand hygiene	• Perform hand hygiene and disinfect inner-gloved hands with alcohol-based hand sanitizer	❑ Yes ❑ No
17	Don new pair of gloves	• Clean bare hands with alcohol-based hand sanitizer • Cover cleaned hands with clean gloves	❑ Yes ❑ No
18	Remove N95 respirator	• Remove N95 respirator from the back to front and discard in the infectious waste container	❑ Yes ❑ No
19	Perform hand hygiene and doff final gloves	• Disinfect gloved hands with alcohol-based hand sanitizer • Remove gloves using same procedure as first two pairs	❑ Yes ❑ No
20	Perform hand hygiene	• Clean bare hands with alcohol-based hand sanitizer • Ensure hands are completely dry before exiting the area	❑ Yes ❑ No
21	Inspect	• Perform a final inspection for contamination of the surgical scrubs or disposable garments • If contamination is identified, carefully remove the garments and shower immediately	❑ Yes ❑ No
22	Follow Up	• Perform staff rehab, medical monitoring, documentation, and behavioral wellness check as indicated	❑ Yes ❑ No

PPE Donning and Doffing Checklists

NYC HEALTH+ HOSPITALS | EMERGENCY MANAGEMENT

NYC HEALTH+ HOSPITALS | SPECIAL PATHOGENS PROGRAM

Frontline Facility Special Pathogens Training Course

- Identify/Isolate/Inform of suspected special pathogen disease cases
  - Viral Hemorrhagic Fevers (e.g., Ebola, Lassa Fever)
  - Severe Respiratory Special Pathogens (e.g., MERS-CoV, SARS-CoV)
- Live donning and doffing Special Pathogen Level 1 & Special Pathogen Level 2 VHF with considerations for airborne and non-airborne special pathogens
- Hands-on clinical simulations with focus on safety precautions while in PPE
- Special considerations for pediatric, geriatric, behavioral health

Attendance
The course is open to all frontline healthcare workers/covered personnel in frontline hospitals, ambulatory/outpatient care sites and long-term facilities in NY, NJ, PR, VI (Region 2)

Registration
There is **no cost** for this course. Please register for the course date that suits your schedule. Do not book travel until a registration confirmation email is received

Course Materials
All course materials will be provided on the day of the course

Course Type
Didactic, immersive simulation with equipment, live donning/doffing technique and exercise on patient transfer and transport scenarios

Course Location: TBD

Course Time: 8am - 4pm




***Note: Students will be in PPE for a minimum of 4 hours during the course.**

For more information, please contact Dr. Syra Madad, Director, System-wide Special Pathogens Program, NYC Health + Hospitals / Office: 212-323-2521 / Syra.Madad@nychhc.org

NYC HEALTH+ HOSPITALS | EMERGENCY MANAGEMENT

NYC HEALTH+ HOSPITALS | SPECIAL PATHOGENS PROGRAM

Course Agenda

Time	*Duration*	*Topic*
8:00 AM	0:10	Welcome and Introductions
8:10 - 9:10 AM	1:00	Module 1: Identify/Isolate/Inform & Infection Control 101
9:10 – 9:20 AM	0:10	Break
9:20 – 10:05 AM	0:45	Module 2: PPE Donning Technique for SP Level 1 PPE Ensemble
10:05 – 10:50 AM	0:45	Clinical Simulation 1: MERS Work Up
10:50 – 11:35 AM	0:45	Module 2: PPE Doffing Technique for SP Level 1 PPE Ensemble
11:35 – 12:20 PM	0:45	Lunch
12:20 – 1:20 PM	1:00	Module 3: PPE Donning Technique for SP Level 2 VHF PPE Ensemble
1:20 – 2:20 PM	1:00	Clinical Simulations 2 & 3: Spill Remediation, Patient Transfer
2:20 – 3:20 PM	1:00	Module 3: PPE Doffing Technique for SP Level 2 VHF PPE Ensemble
3:20 – 3:30 PM	0:10	Break
3:30 – 4:00 PM	0:30	Course Debrief and Evaluations

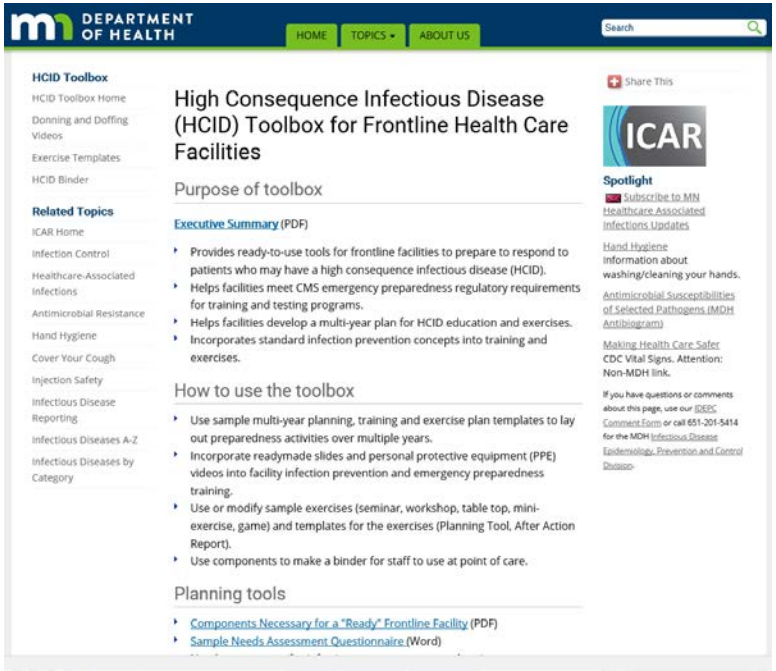
Course Description

The didactic portion of the course will be a guided discussion of best practices/core principles on identification, isolation, internal/external notification and preliminarily managing persons with suspected ebola or other special pathogens from initial presentation through patient transport to a specialty hospital for definitive treatment. Special considerations for behavioral support, pediatric and geriatric patients will be discussed. Live donning and doffing technique will be demonstrated with NYC Health + Hospitals Special Pathogens Level 1 PPE Ensemble and Special Pathogens Level 2 VHF PPE Ensemble. The immersive simulation will be with the use of a simulation mannequin on MERS laboratory specimen collection and immediate spill remediation. The exercise portion of this course will include a series of patient transfer scenarios using enhanced infection control precautions/procedures.

Course in Action

Mary Ellen Bennett, MPH, RN, CIC
Nurse Specialist
Minnesota Department of Health

High Consequence Infectious Disease Toolbox for Frontline Health Care Facilities



- An additional program to help frontline facilities and can be complementary to the Playbook
- Grab and Go tools make it easy!
- Bolsters routine infection prevention
- Suggested standard for Minnesota hospitals

https://www.health.state.mn.us/diseases/hcid/index.html

Goal of the Toolbox

- To help hospitals prepare to Identify, Isolate, and Inform regarding a person with a High Consequence Infectious Disease (HCID).

- To incorporate basic infection prevention principles of standard precautions, transmission based isolation, respiratory etiquette, personal protective equipment, hand hygiene, and health care provider safety into the preparedness efforts.

High Consequence Infectious Diseases (HCIDs)

- Highly fatal
- Highly infectious
- May require activation of a biocontainment unit

High Consequence Infectious Diseases (HCIDs)

Defined by the Minnesota HCID Collaborative* as a disease for which:

1. All forms of medical waste are classified as Category A infectious substances (UN2814) by the U.S. Department of Transportation

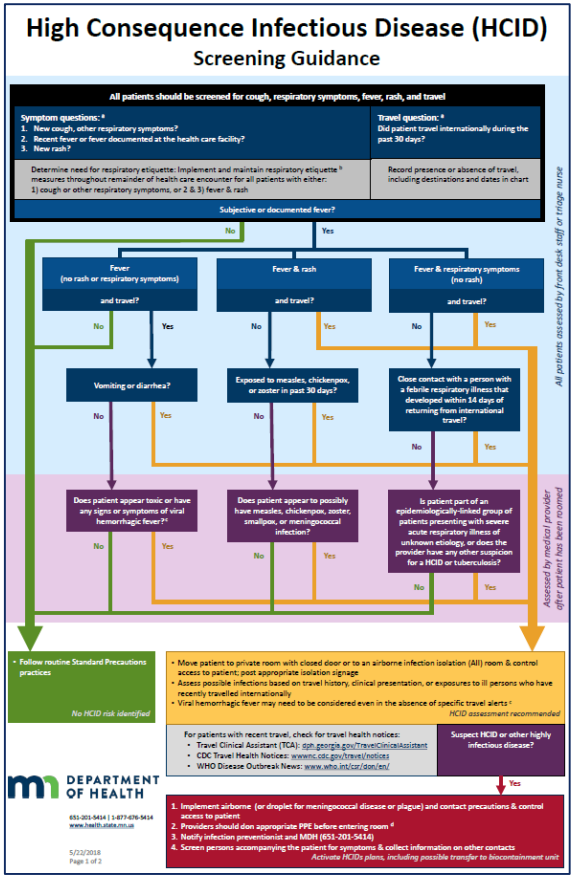
or a disease that:

2. Has potential to cause a high mortality among otherwise healthy people, and…
   - no routine vaccine exists, and…
     - ✓ some types of direct clinical specimens pose generalized risks to laboratory personnel
       or
     - ✓ risk of secondary airborne spread or unknown mode of transmission

** MN HCID Collaborative: MN Department of Health, Mayo Clinic, University of Minnesota Medical Center, Minnesota Hospital Association, Minnesota Healthcare Coalitions, Minnesota HCID-Ready EMS services*

HCID Screening Guidance

- Suggested framework to aid with the Identify, Isolate and Inform components of HCID preparedness
- Impact not limited to HCIDs; designed to prevent spread of both common and rare infections
- 4 short questions for all patients
  - ✓ Fever
  - ✓ Respiratory symptoms
  - ✓ Rash
  - ✓ Travel



Big Picture Concept

- Make HCID preparedness business as usual…
  - Applicable to mundane as well as the exotic infections
  - Integrated in routine workflows across the continuum of care
  - Incorporated into regular infection prevention training

- Cannot plan for every rare event, so focus on infection control principles.

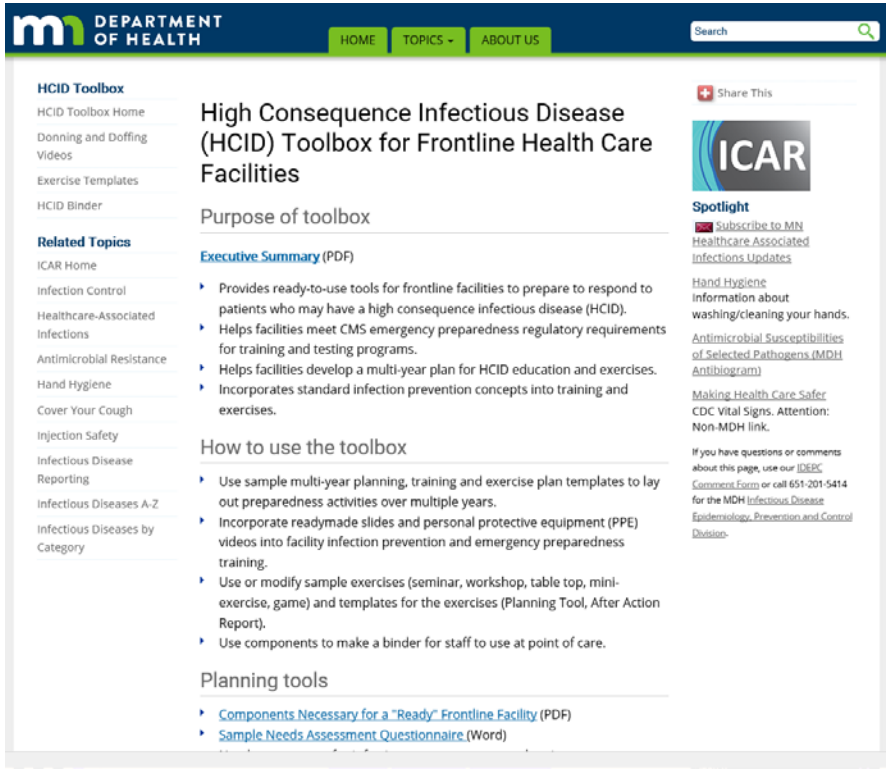
Pathogens That Meet MN HCID definition

Syndrome	HCID Pathogen Examples (viruses)
Unknown highly fatal disease with evidence of person-to-person spread	To be determined
Hemorrhagic fever	Ebola, Marburg, Lassa, Crimean-Congo, Guanarito, Machupo, Junin, Sabia, Lujo, Chapare, Kayasnur Forest Disease, Omsk Hemorrhagic Fever, Hantaviruses causing HFRS
Poxvirus diseases	Monkeypox, Smallpox
Febrile respiratory illness	MERS-CoV, SARS-CoV, Pandemic Influenza

Pathogens That are Everyday Threats

Syndrome	Fever	Respiratory Symptoms	Rash
Influenza	+	+	
Measles	+	+	+
Chickenpox	+		+
Tuberculosis	+	+	
Pertussis – whooping cough	+	+	
Meningitis	+		+

HCID Toolbox for Frontline Health Care Facilities



- All hospitals are unique, so implementation of the tools will vary
- Tools are editable and can be tailored to the hospital

Four Components of Toolbox

- Planning tools
- Training tools
- Exercise tools
- Readiness binder

Start with the PLANNING Tools
Sample Needs Assessment Questionnaire

- Sample intended to stimulate some assessment ideas
- Answering “no” to any of these questions could indicate an area in your plan that needs to be exercised

Needs Assessment Questionnaire

SAMPLE

(Sample only intended to stimulate some assessment ideas.)

Yes/No	Sample Questions
	Is the emergency operations plan (EOP) up-to-date and includes section on infectious agent emergencies?
	Has the section of the EOP for infectious agents been executed in the past year? (either in an actual occurrence or an exercise)
	Are all policies and guidelines for response to an infectious emergency been spelled out clearly in the EOP? (e.g., mutual aid agreements, etc.)
	Has the Hospital ICS (HICS) been activated in the past year for an infectious situation?
	Has infectious agent screening at point of entry to the facility been tested in the past year? (either in an actual occurrence or an exercise)
	Are all appropriate personnel (including new staff, leadership, etc.) familiar with the EOP (and the defined authorities) for responding to an infectious emergency?
	Are identified personnel familiar with their role in infectious agent emergency operations? Do employees know where to get current information?
	Do current personnel possess the knowledge and skills necessary to respond as indicated for an infectious agent emergency in the EOP?

Planning Tool - Training and Exercise Plan

- Create multiyear training and exercise plan
- Incorporate into hospital's emergency plan

SAMPLE

Training and Exercise Schedule 2019											
Quarter 1			Quarter 2			Quarter 3			Quarter 4		
J	F	M	A	M	J	J	A	S	O	N	D
Annual Required Training in LMS re: HCID		HCID pre-sents to the ED		Donning & Doffing PPE – All patient care staff			ED Staff & MD Training HCID			EMS Education HCID	
		Lab HCID specimen manage-ment									

Training | Exercise

Be sure to insert any real life scenarios that will count as exercises or drills!

Then Move to the TRAINING Tools

- HCID screening tool
- Slide sets readymade for facility training
  - Toolbox components
  - Disease specific slides
- Fun PPE video vignettes – for use in HCID training and general PPE training

CDC Developed 2 Levels of PPE for Ebola

Clinically stable with no bleeding, vomiting, diarrhea ("Dry" patient)

- *Fluid resistant gown (ANSI/AAMI level 3)*
- *2 pairs of gloves*
- *Full face shield*
- *Face mask*

Clinically unstable with bleeding, vomiting, diarrhea, or aerosol-generating procedures ("Wet" patient)

- *Impermeable gown (ANSI/AAMI level 4)*
- *2-3 pairs of gloves*
- *PAPR or N95*
- *Boot covers to mid-calf*
- *Cover all skin completely*

We Can Apply Ebola PPE Levels for other HCID

HCID Full Barrier Level 1:

for suspected viral respiratory pathogens and "dry" viral hemorrhagic fevers (VHF)

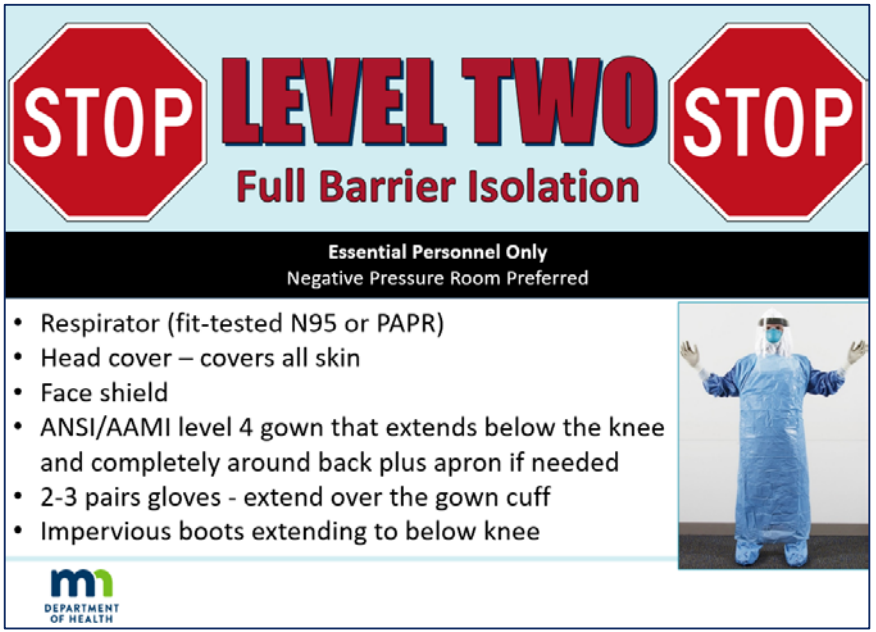
- *Fluid resistant gown (ANSI/AAMI level 3)*
- *2 pairs of gloves (for suspected VHF), 1 pair for viral respiratory pathogens*
- *Full face shield and head cover*
- *Booties*
- *N95 or PAPR preferred. Use regular face mask if no access to respirators*

HCID Full Barrier Level 2:

for "wet" VHF or pox virus

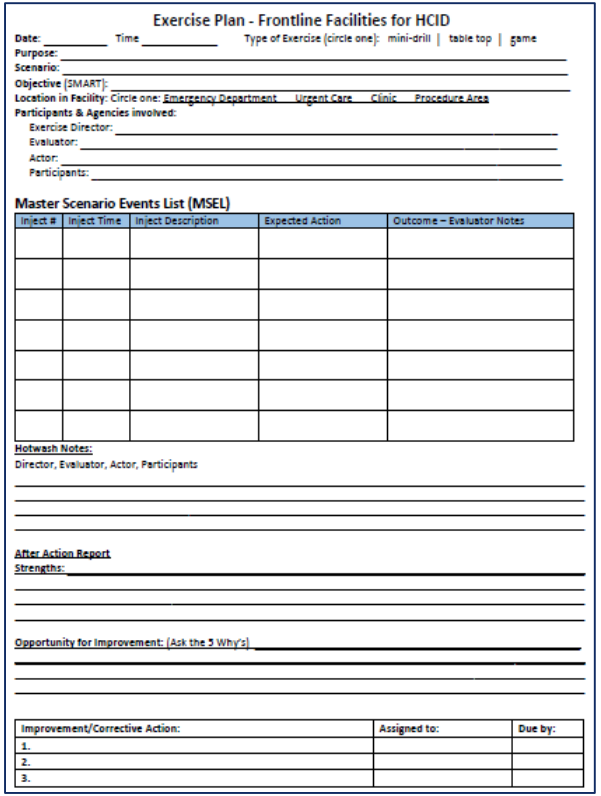
- *Impermeable gown (ANSI/AAMI level 4)*
- *2-3 pairs of gloves*
- *PAPR or N95*
- *Boot covers to mid-calf*
- *Cover all skin completely*

Level One & Level Two Full Barrier Isolation



Then Move to Exercise Tools - Use One Page Simple Form

- Use for mini-drill
- Use for real life occurrence – just fill in what happened
- Use prepared exercises provided online, modify the prepared exercises or make your own with the blank template



Exercise Plan - Frontline Facilities for HCID

Date: _____ Time _____ Type of Exercise (circle one): mini-drill | table top | game

Purpose: _____

Scenario: _____

Objective (SMART): _____

Location in Facility: Circle one: Emergency Department Urgent Care Clinic Procedure Area

Participants & Agencies involved:

Exercise Director: _____

Evaluator: _____

Actor: _____

Participants: _____

Master Scenario Events List (MSEL)

Inject #	Inject Time	Inject Description	Expected Action	Outcome – Evaluator Notes

Hotwash Notes:

Director, Evaluator, Actor, Participants

After Action Report

Strengths: _____

Opportunity for Improvement: (Ask the 5 Why's) _____

Improvement/Corrective Action:	Assigned to:	Due by:
1.		
2.		
3.		

High Consequence Infectious Disease Readiness Binder

- Binder should be kept on unit – assessible to staff at point of care
- Put the tools in plastic sleeves so can be taken out and used
- Regularly update binders with current versions of document from MDH website

www.health.state.mn.us/divs/idepc/dtopics/hcid/index.html

High Consequence Infectious Disease Isolation Grid

Intended for frontline hospitals, urgent care clinics, and outpatient clinics

	Standard Precautions	Droplet Isolation	Contact Isolation	Airborne Isolation	Airborne & Contact Isolation	Level 1 HCID PPE	Level 2 HCID PPE
Suspected infections	For all patients	e.g. Influenza, Pertussis, meningococcal meningitis	e.g. MRSA, CDI, MDRO, Lice, Scabies	Measles, Tuberculosis,	Chickenpox, disseminated zoster	Monkeypox, smallpox, Respiratory diseases (like MERS, SARS, pandemic influenza), dry viral hemorrhagic fevers (no vomiting, diarrhea, bleeding and clinically stable)	Wet viral hemorrhagic fevers (wet is defined as vomiting, diarrhea, bleeding, in need of intubation or suctioning, or otherwise clinically unstable)
PPE	Standard Precaution definition	Simple face mask	Gown and gloves	Respirator – fit-tested N95 or PAPR	Gown, gloves, respiratory (fit-tested N95 or PAPR)	Hair cover, face shield (or comparable eye protection), gloves, ANSI/AAMI level 3 gown that extends up over the gown cuff, respirator, (fit-tested N95 or PAPR), booties.	All skin covered. Head/neck/face cover, 2-3 sets of gloves that extends up over the gown cuff, respirator (fit-tested N95 or PAPR), ANSI/AAMI level 4 gown that extends all around the wearer and comes down below the knees, knee high boots.
Isolation Room Type	Regular room No special ventilation needed.	Regular room No special ventilation needed	Regular room No special ventilation needed	Prefer negative pressure room with exhaust to the outside	Prefer negative pressure room with exhaust to the outside	Prefer negative pressure room with exhaust to the outside	Prefer negative pressure room with exhaust to the outside

Checklist for Patient with a HCID

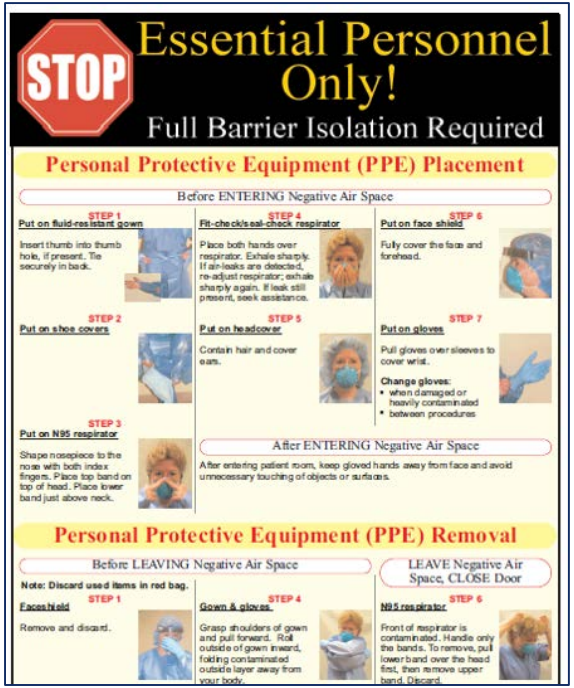
This is a sample list. Steps may vary for each facility.

✓	Action	Comments
	1. Place mask on suspected HCID patient (with respiratory illness, travel, and/or rash).	
	2. Explain process to the patient.	
	3. Prepare room for patient if possible. Remove unnecessary equipment from room. If patient is clinically stable (no bleeding, diarrhea, vomiting), remove large objects. If patient is clinically unstable (bleeding, having diarrhea and vomiting), remove as much as possible.	
	4. Escort patient to the room as soon as possible. Negative pressure room is preferred.	
	5. Locate HCID Management Binder with reference materials.	
	6. Close door and hang appropriate signage visible to staff.	
	7. Hang the list to document persons entering the room who are potentially exposed.	
	8. Notify Charge Nurse.	
	9. Evaluate people arriving with patient for illness. Isolate or direct to another room to wait as indicated.	
	10. Dedicate a person to stay outside the door of the room to: • monitor personnel entering the room • help with donning and doffing PPE • communicate • obtain supplies needed in the room	

Tracking List for Those Potentially Exposed

Name	Role	Exposure Type	Significant (Yes/No)	Follow up Needed (Yes/No)	Notes

MDH Posters for Donning / Doffing Level 1 PPE



STOP

Essential Personnel Only!

Full Barrier Isolation Required

Personal Protective Equipment (PPE) Placement

Before ENTERING Negative Air Space

STEP 1
Put on fluid-resistant gown
Insert thumb into thumb hole, if present. Tie securely in back.

STEP 2
Put on shoe covers

STEP 3
Put on N95 respirator
Shape nosepiece to the nose with both index fingers. Place top band on top of head. Place lower band just above neck.

STEP 4
Fit-check/seal-check respirator
Place both hands over respirator. Exhale sharply. If air-leaks are detected, re-adjust respirator; exhale sharply again. If leak still present, seek assistance.

STEP 5
Put on headcover
Contain hair and cover ears.

STEP 6
Put on face shield
Fully cover the face and forehead.

STEP 7
Put on gloves
Pull gloves over sleeves to cover wrist.

Change gloves:
- when damaged or heavily contaminated
- between procedures

After ENTERING Negative Air Space

After entering patient room, keep gloved hands away from face and avoid unnecessary touching of objects or surfaces.

Personal Protective Equipment (PPE) Removal

Before LEAVING Negative Air Space

Note: Discard used items in red bag.

STEP 1
Face shield
Remove and discard.

STEP 4
Gown & gloves
Grasp shoulders of gown and pull forward. Roll outside of gown inward, folding contaminated outside layer away from your body.

LEAVE Negative Air Space, CLOSE Door

STEP 6
N95 respirator
Front of respirator is contaminated. Handle only the bands. To remove, pull lower band over the head first, then remove upper band. Discard.

Toolbox Roll Out

- State coalition meetings
- Conferences – speaking and posters
  - National Health Care Coalitions Conference – New Orleans
  - National Preparedness Conference (poster and panel)
  - USPHS Scientific & Training Symposium in May, 2019
  - APIC
  - Idaho – September
- Webinar for MN hospitals

Next Steps

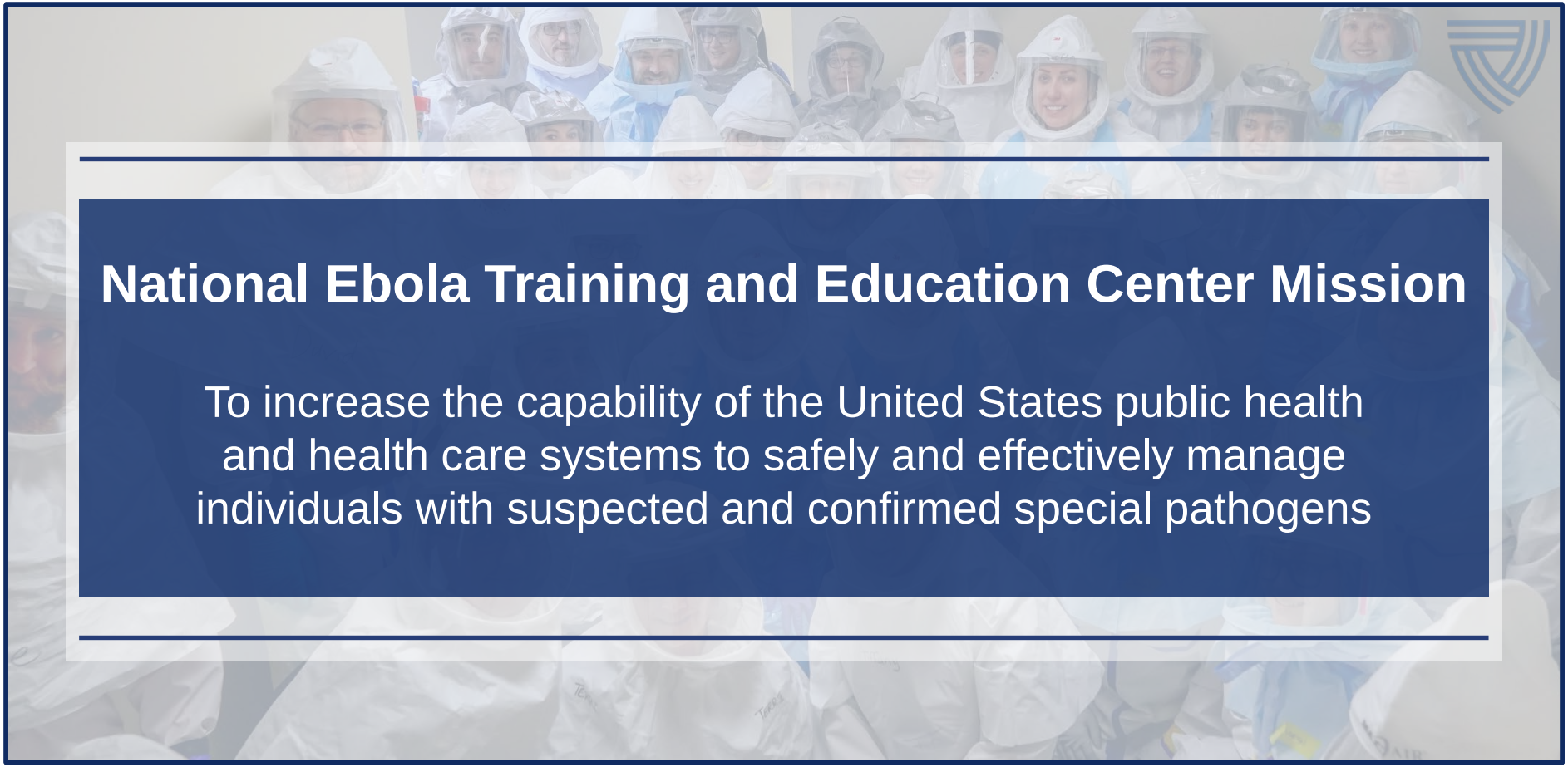
- Revise and enhance the toolbox by June 2019
  - New - more comprehensive self assessment
  - PPE donning and doffing

- Developing similar toolbox for EMS
  - Compendium list of ambulance services
  - Developing a general infection prevention assessment tool

Conclusion

- **Toolbox and Playbook can complement each other:**
  - Playbook has much detail for planning a program to identify and manage special pathogens. It also has terrific donning and doffing materials.
  - HCID Toolbox offers simple, adaptable tools to aid in preparedness and covers a broad array of high consequence respiratory, VHF, and pox diseases as well as everyday threats like measles.
- **Toolbox is a work in progress and feedback is welcomed!**

Shelly Schwedhelm, MSN, RN, NEA-BC
Executive Director, Emergency Management and Biopreparedness
Nebraska Medicine



National Ebola Training and Education Center Mission

To increase the capability of the United States public health and health care systems to safely and effectively manage individuals with suspected and confirmed special pathogens

Assessment

Empower hospitals to gauge their readiness using **Self-Assessment**

Measure facility and healthcare worker readiness using **Metrics**

Provide direct feedback to hospitals via **On-Site Assessment**

Education

Provide self-paced education through **Online Trainings**

Deliver didactic and hands-on simulation training via **In-Person Courses**

Technical Assistance

Onsite & Remote Guidance

Compile **Online Repository** of tools and resources

Develop customizable **Exercise Templates** based on the HSEEP model

Provide **Emergency On-Call Mobilization**

Research Network

Online Repository
Built for rapid implementation of clinical research protocols

Develop Policies, Procedures and Data Capture Tools to facilitate research

Create infrastructure for a **Specimen Biorepository**

Cross-Cutting, Supportive Activities

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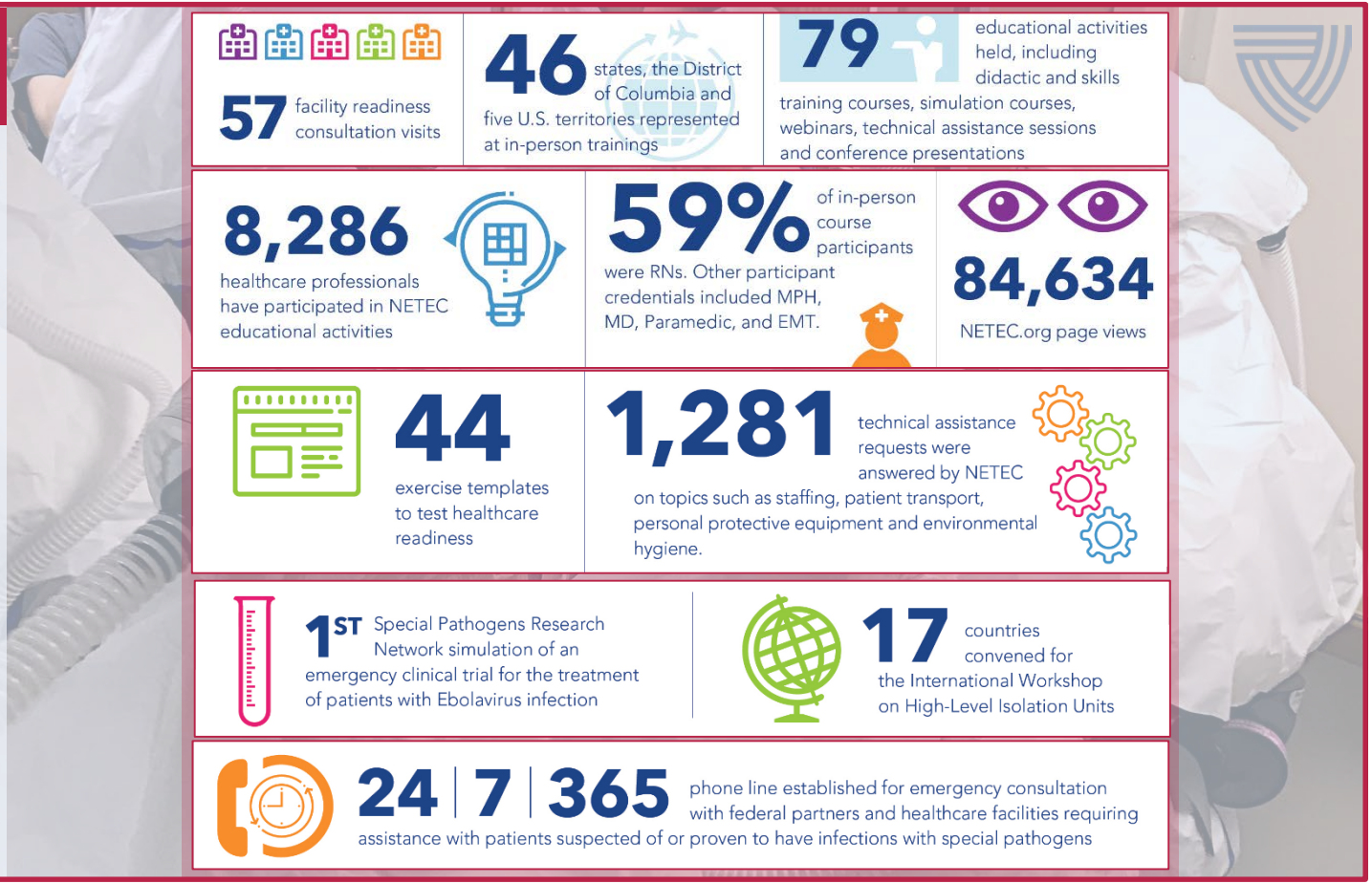

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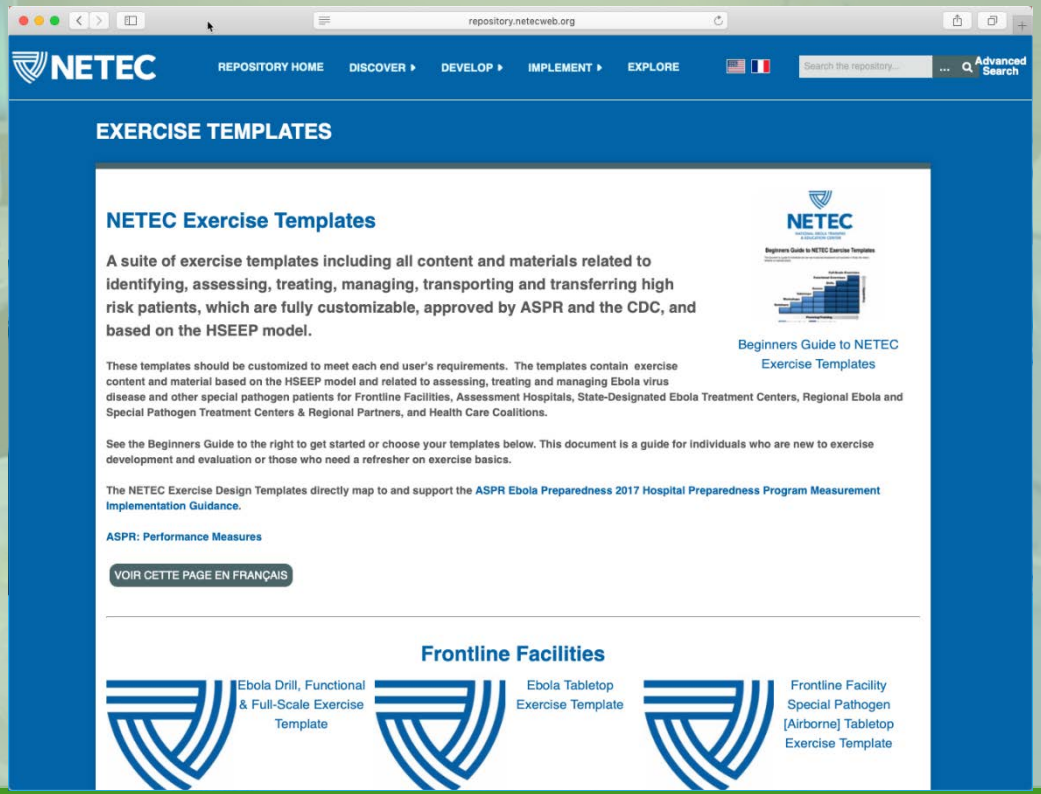

Access to all of our exercise templates

Technical Assistance

Onsite & Remote Guidance

Compile
Online Repository
of tools and resources

Develop customizable
Exercise Templates
based on the HSEEP model

Provide
Emergency On-Call Mobilization

Explore our repository for vital information

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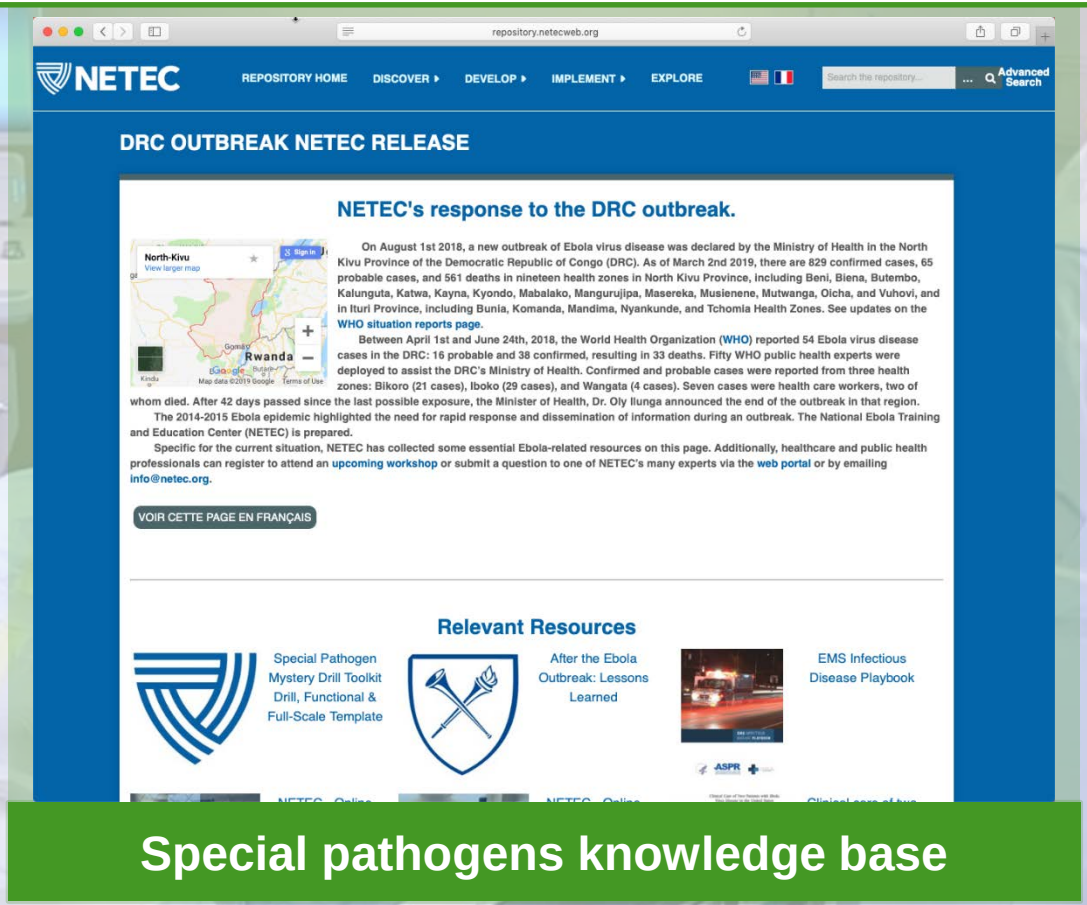

Special pathogens knowledge base

Research Network

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Develop Policies, Procedures and Data Capture Tools
to facilitate research

Create infrastructure for a **Specimen Biorepository**

Contact

https://netec.org

info@netec.org

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