



Johns Hopkins Hospital
Medstar Washington Hospital Center
Children's National

National Special Pathogen System Overview

Virginia Medical Reserve Corps

February 26, 2026

Presented by: Lydian Green MS, NRP & Alexandra Johnson MPH, MSN, RN



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Objectives



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1. Define special pathogens and high consequence infectious diseases (HCID)
2. Describe the national strategy for HCID response, the National Special Pathogens System (NSPS)
3. Describe the HCID response framework of "Identify, Isolate, Inform"

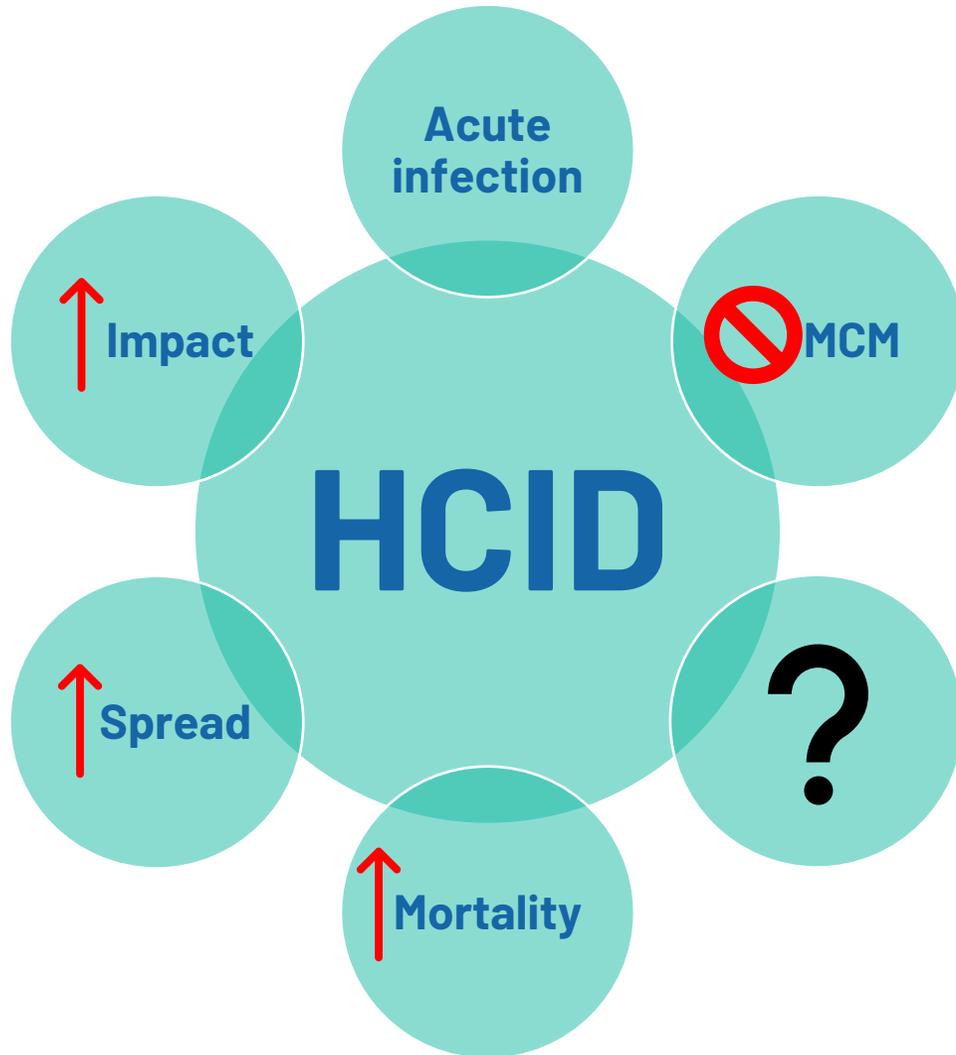
Acronyms & Abbreviations



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Definition	
AIIR	Airborne infection isolation room
ASPR	Administration for Strategic Preparedness and Response, HHS
BCU	Biocontainment Unit
BSL	Biosafety Level
CDC	Centers for Disease Control and Prevention
DON	Disease Outbreak News, WHO
DOT	Department of Transportation
HAN	Health Alert Network, CDC
HCID	High Consequence Infectious Disease
HCW	Healthcare Worker
HHS	US Department of Health and Human Services
HLIU	High Level Isolation Unit

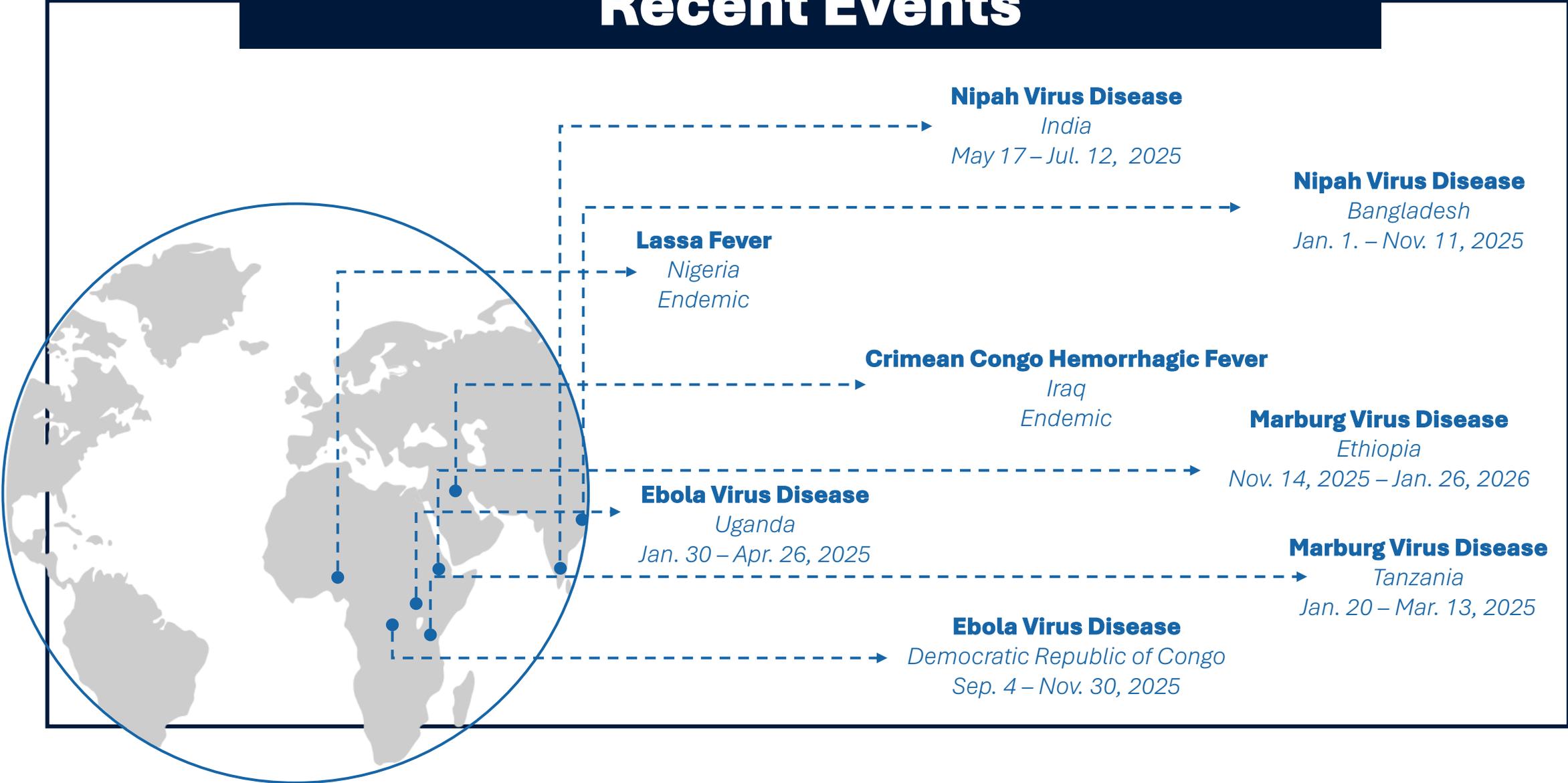
Definition	
ICS	Incident Command Structure
LRN	Laboratory Response Network
MCM	Medical Countermeasures
NETEC	National Emerging Special Pathogens Training and Education Center
NSPS	National Special Pathogen System
PHMSA	Pipeline Hazardous Materials Safety Administration, DOT
PPE	Personal Protective Equipment
PUI	Person Under Investigation
RESPTC	Regional Emerging Special Pathogen Treatment Center
SLTT	State Local Territorial Tribal
USDA	US Department of Agriculture
VHF	Viral Hemorrhagic Fever
WHO	World Health Organization

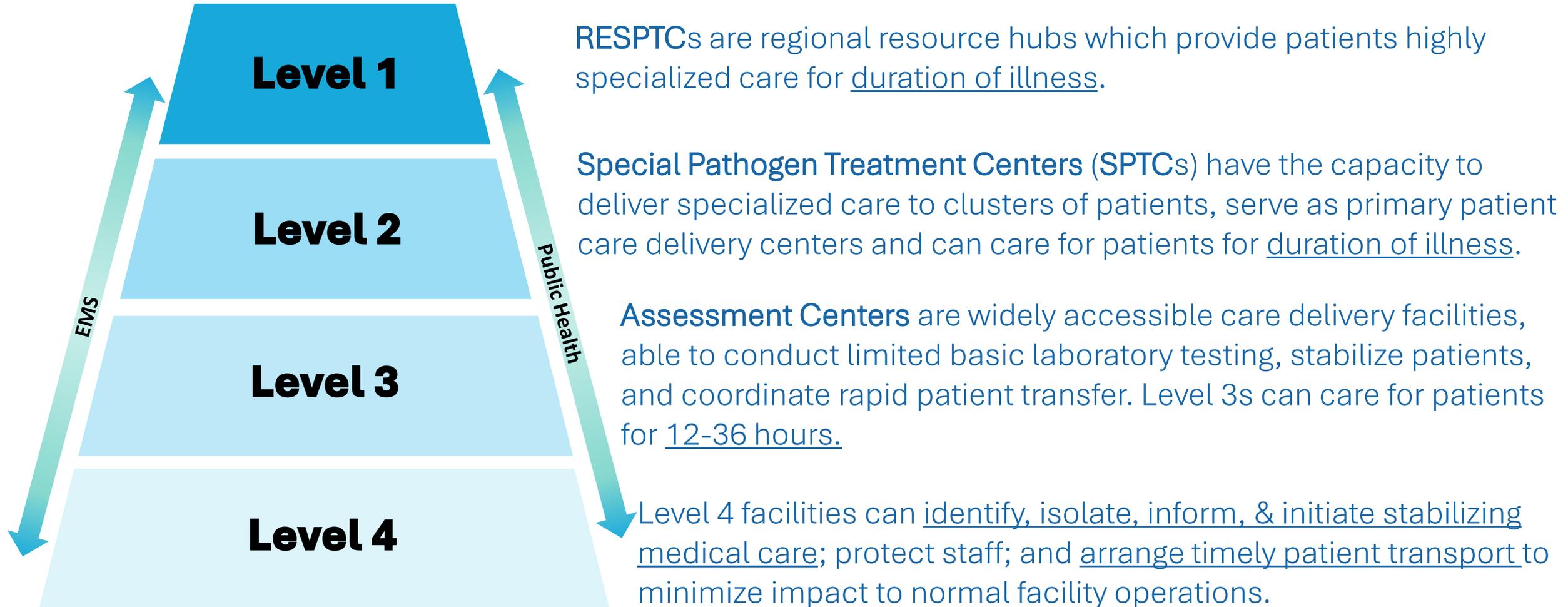


“acute human infectious diseases with high illness and case-fatality rates, few or no available effective treatment or prevention options, and the ability to spread in the community within healthcare settings”

- Acute infectious disease
- High case-fatality rate
- No effective prophylaxis or treatment
- Difficult to recognize and detect rapidly
- Ability to spread in community and within healthcare settings
- Requires enhanced individual, population, and system response to ensure effective, efficient, and safe management

Recent Events





Level 1 Facilities

Regional Emerging Special Pathogen Treatment Centers (RESPTCS)



13 Facilities
No current plan to expand

Level 1 Role

- Highly specialized care facilities
- Resource hubs for their Region
- Training & coordination leaders in their Region

Minimum Care Capabilities

- Care for HCIDs for the duration of illness
- Conducts training quarterly
- Isolation space for 2+ VHF patients; 10+ patients with airborne illness
- Provide care for adult, pediatric, OB, and neonatal patients
- *Have capacity to use the fastest, most accurate diagnostic and clinical laboratory testing available to support patient care and clinical operations.*



Funding & Status

Funded Annually

All 13 RESPTCs maintain capabilities and are currently federally funded through ASPR.

Level 1 Facilities: Regional Emerging Special Pathogen Treatment Centers (RESPTCs)



- 1 **CT, ME, MA, NH, RI, VT**
[Massachusetts General Hospital](#)
- 2 **NJ, NY, PR, VI**
[NYC Health + Hospitals / Bellevue](#)
- 3 **DC, DE, MD, PA, VA, WV**
[Johns Hopkins Hospital](#)
[MedStar Washington Hospital Center / Children's National](#)
- 4 **AL, FL, GA, KY, MS, NC, SC, TN**
[Emory University Hospital / Children's Healthcare of Atlanta](#)
[UNC Health](#)
- 5 **IL, IN, MI, MN, OH, WI**
[University of Minnesota Medical Center](#)
[CoreWell Health](#)
- 6 **AR, LA, NM, OK, TX**
[University of Texas Medical Branch](#)
- 7 **IA, KS, MO, NE**
[University of Nebraska Medical Center/Nebraska Medicine](#)
- 8 **CO, MT, ND, SD, UT, WY**
[Denver Health & Hospital Authority](#)
- 9 **AZ, CA, HI, NV, AS, MP, FM, GU, MH, PW**
[Cedars-Sinai Medical Center](#)
- 10 **AK, ID, OR, WA**
[Providence Sacred Heart Medical Center & Children's Hospital](#)

Level 2 Facilities

Special Pathogen Treatment Centers (SPTCs)



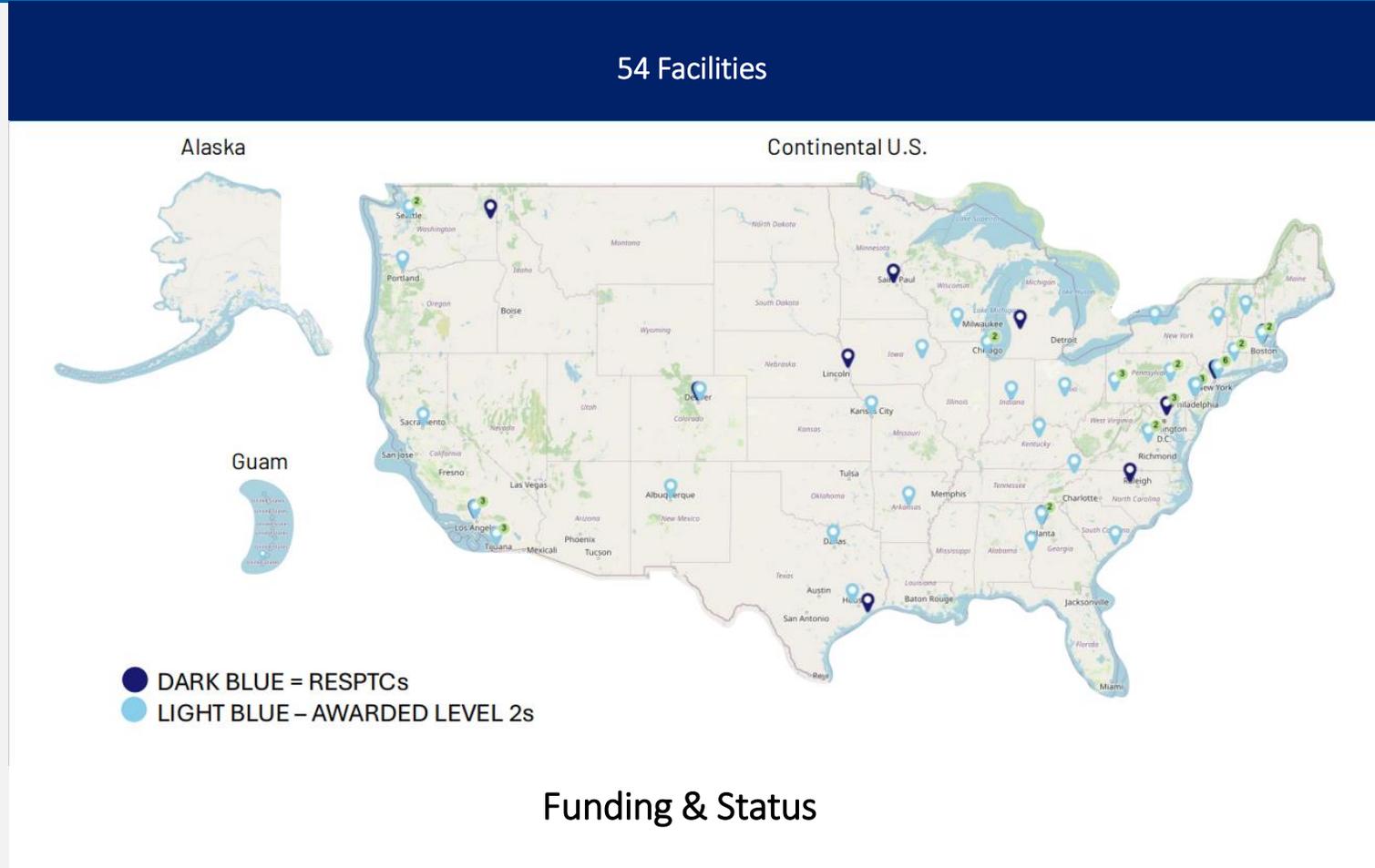
Level 2 Role

- Specialized care facilities
- Primary patient care delivery centers
- Essential for building the care capacity of the NSPS

Minimum Care Capabilities

- Care for HCIDs for the duration of illness
- Conducts training twice annual on donning/doffing; annually on skills
- Isolation space for 1-2 VHF patients; 4+ patients with airborne illness
- Provide care for either adult, pediatric, or both

For more details on the specific capabilities, please see the appendix



Funding & Status

Mixed-Method Funding

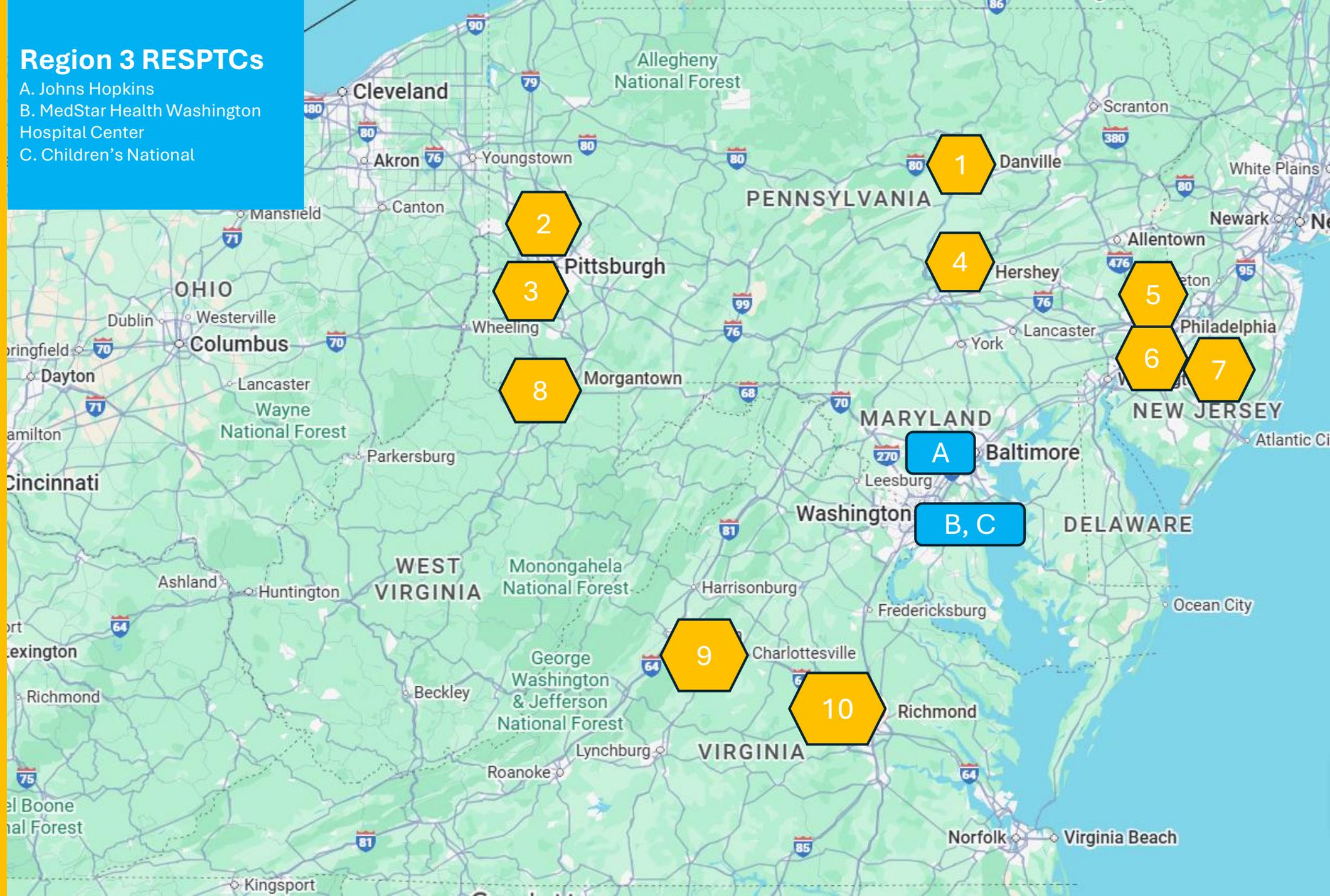
Of the 54 SPTCs who maintain capabilities, they are funded in a variety of ways, including federal grants (STAND award), state funding, HPP partial funding, and self-funding, among others.

Region 3 SPTCs

1. Geisinger Clinic Medical Center (Danville, Pennsylvania)
2. Allegheny General Hospital (Pittsburgh, Pennsylvania)
3. UPMC Presbyterian Shadyside (Pittsburgh, Pennsylvania)
4. Penn State Hershey Medical Center (Hershey, Pennsylvania)
5. Children's Hospital of Philadelphia (Philadelphia, PA)
6. Hospital of the University of Pennsylvania (Philadelphia, Pennsylvania)
7. Thomas Jefferson University Hospital (Philadelphia, Pennsylvania)
8. West Virginia University Hospitals (Morgantown, West Virginia)
9. UVA Health Medical Center (Charlottesville, Virginia)
10. Virginia Commonwealth University Health Systems (Richmond, Virginia)

Region 3 RESPTCs

- A. Johns Hopkins
- B. MedStar Health Washington Hospital Center
- C. Children's National



Level 3 Facilities

Assessment Centers



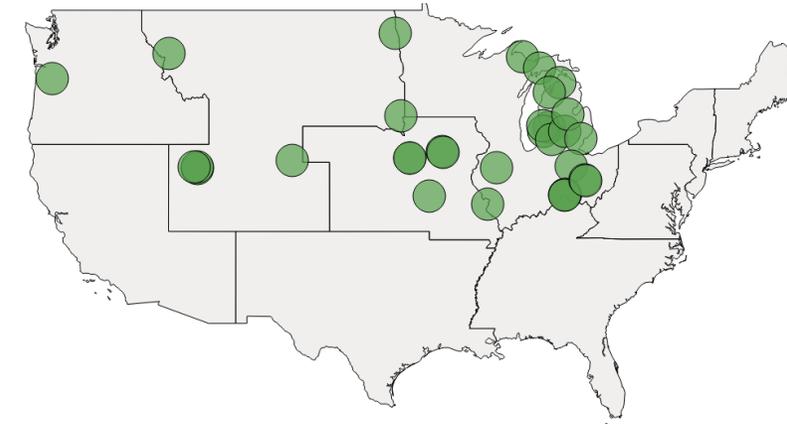
~30 Facilities
Goal for 200+

Level 3 Role

- Widely accessible care delivery centers
- Conducts limited basic laboratory testing and clinical stabilization
- Coordinates rapid patient transfer

Minimum Care Capabilities*

- Care for HCIDs for 12-36 hours
- Conducts training annual on donning/doffing; just-in-time training at time of activation
- Has appropriate isolation space in ED or other accessible space (at least a single isolation space/neg pressure room)
- Can safely identify, isolate, initiate stabilizing medical care



Funding & Status

Mixed-Method Funding

Of the ~35 Assessment Centers who maintain capabilities, they may be funded in a variety of ways, though funding is generally limited.

For more details on the specific capabilities, please see the appendix

**Please note that facility mapping is ongoing and not all regions are fully visualized*

Virginia SPTCs (Level 2s)

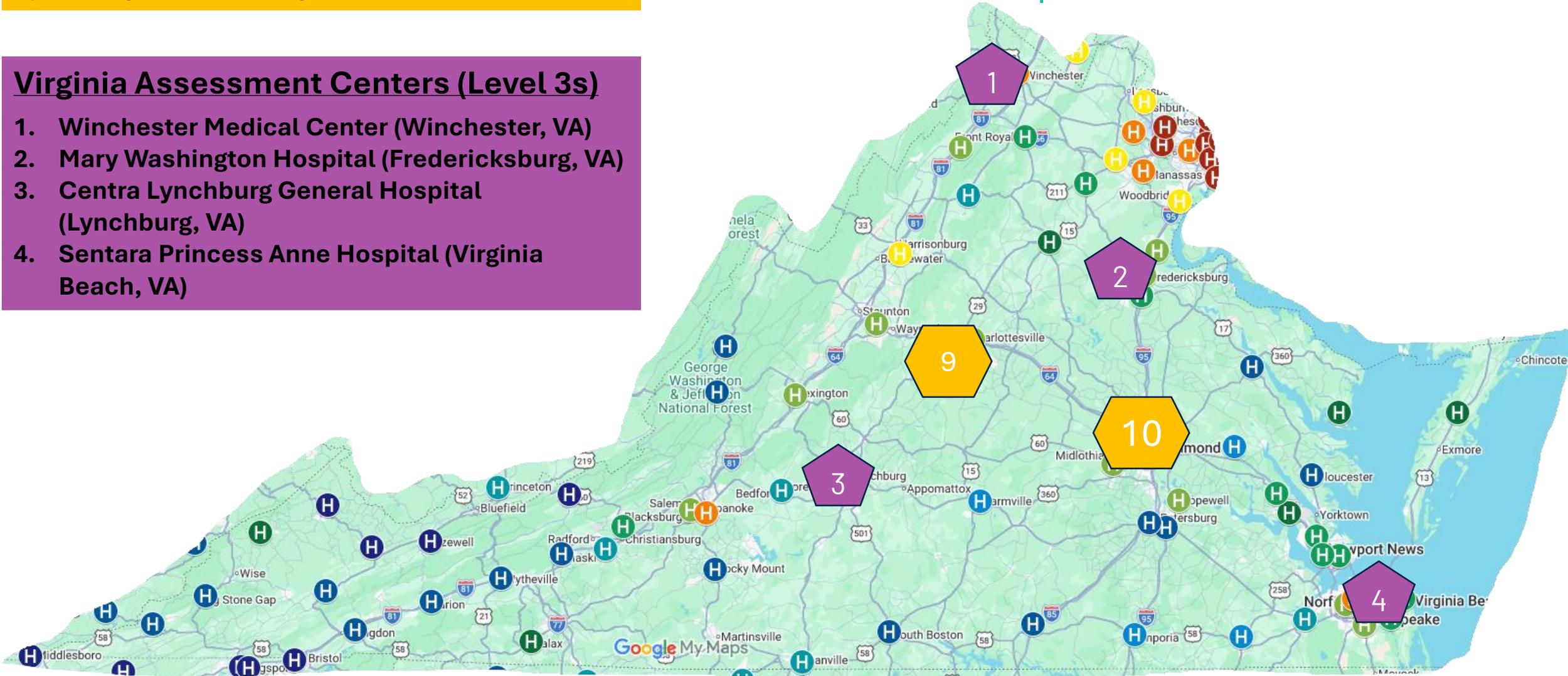
- 9. UVA Health Medical Center (Charlottesville, VA)
- 10. Virginia Commonwealth University Health Systems (Richmond, VA)



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Virginia Assessment Centers (Level 3s)

- 1. Winchester Medical Center (Winchester, VA)
- 2. Mary Washington Hospital (Fredericksburg, VA)
- 3. Centra Lynchburg General Hospital (Lynchburg, VA)
- 4. Sentara Princess Anne Hospital (Virginia Beach, VA)



Level 4 Facilities

All other healthcare facilities



All Other U.S. Healthcare Facilities

Level 4 Role

- Likely point of entry
- Arranges timely patient transfer

Minimum Care Capabilities*

- Can safely identify, isolate, initiate stabilizing medical care
- Protects facility staff
- Arranges timely patient transfer



Funding & Status

Not Applicable

Level 4 facilities encompass all other healthcare facilities across the U.S. and have the minimum new Joint Commission IPC required capabilities as appropriate.

For more details on the specific capabilities, please see the appendix

High-Level Minimum Capabilities Comparison



The table is intended to provide a high-level sample of quantifiable difference across levels and does not include all minimum capabilities.

Capabilities	Level 1	Level 2	Level 3
Care Duration	Duration of illness	Duration of illness	12-36 Hours
Capacity for VHF, airborne	2 VHFs 10 airborne	1-2 VHFs 4 airborne	1+ isolation space
PPE Supply	2 VHF cases for at least 7 days onsite (with plans to support 21 days of care)	1-2 VHF cases for at least 7 days onsite (with plans to support 21 days of care)	3 VHF cases for 12-36 hours (before resupply)
Exercises	Quarterly	At least twice annually	At least once annually for mystery patient exercise
PPE Training	Quarterly	At least 2x annually	At least 1x annually
Skills Training	Quarterly	At least annually	--
Lab Testing Ability	Clinical lab testing	Clinical lab testing	Point-of-care onsite clinical lab testing

TRENDING

[Ebola](#)[Marburg Virus Disease](#)[H5N1 Avian Influenza](#)[Lassa Fever](#)[The Joint Commission Standards](#)

National Emerging Special Pathogens Training and Education Center

Working together to increase the capability of the U.S. public health and health care systems to safely and effectively manage special pathogens.

→ [About NETEC](#)

What We Offer



Educational Materials, Courses & Training

We offer courses and training for nurses, physicians, emergency responders, and other health care professionals. Our resources provide facilities and individuals with preparedness best practices.



Consultations & Support Services

We can help health care facilities and EMS agencies prepare for special pathogen events with free virtual and onsite readiness consulting and assessments.



Research Policies & Procedures

Our network provides researchers with training, tools, and resources to quickly understand clinical syndromes and study effective treatments and clinical management strategies.



Ask Our Experts

Your organization can submit any question related to special pathogen response. Inquiries range from questions about PPE, to requests to review written protocols, to onsite visits for observing exercises and drills.

The Joint Commission



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Effective July 1, 2024

Infection Control Standard IC.07.01.01

The hospital implements processes to support preparedness for high-consequence infectious diseases or special pathogens

Protocols are readily available for use at the point of care and address the following:

- ✓ Identify: procedures for screening at the points of entry to the hospital for respiratory symptoms, fever, rash, and travel history to identify or initiate evaluation for HCID or special pathogens
- ✓ Isolate: procedures for transmission-based precautions
- ✓ Inform: procedures for informing public health authorities and key hospital staff
- ✓ Required PPE and proper donning and doffing techniques
- ✓ Infection control procedures to support continued and safe provision of care while patient is in isolation and to reduce exposure among staff, patients, and visitors using the hierarchy of controls
- ✓ Procedures for waste management and cleaning and disinfecting patient care spaces, surfaces, and equipment

The hospital develops and implements education and training and assess competencies for the staff who will implement protocols for HCID and special pathogens



Identify

Identify a patient with a special pathogen infection by recognizing clinical and epidemiologic risk factors.



Isolate

Isolate the patient and implement infection control measures to prevent transmission.



Inform

Notify the appropriate internal and external parties to activate the broader response system.

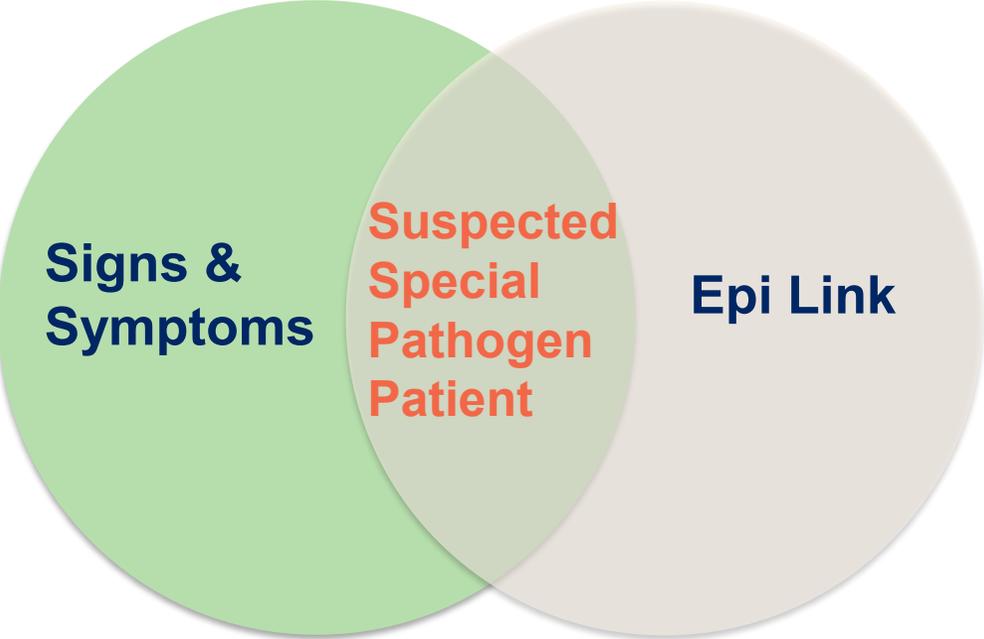


Initiate Recovery

Initiate recovery procedures to return the facility to a safe and operational state following a special pathogen event.

(Koenig . 2015)

Identify



Dry Symptoms

- fever • myalgia
- fatigue • headache

Wet Symptoms

- vomiting • diarrhea
- bleeding (late)



- S&S consistent with many illness
- Large portion of ED patients present with 1 or more of these symptoms



Travel in area of risk
or
contact with known sick person
(Travel screen)



- Identifying areas of concern/potential outbreaks

Identify

WHO Disease Outbreak News
 ProMED
 (DONs)
 Beacon
 CDC
 Hospital Travel Screen

EMS Clinician Update - December 2025

Marburg Virus EMS Health Alert

MedStar Washington Hospital Center | Children's National Hospital | Regional Emerging Special Pathogen Treatment Center

In December 2025, the CDC issued a **health alert** about an ongoing outbreak of Marburg, a rare but highly fatal viral hemorrhagic fever, in Ethiopia. EMS clinicians should be mindful of the potential for Marburg in patients who have recently traveled to Ethiopia or have had contact with someone known to have Marburg.

1. Identify: When to Suspect

Travel to Ethiopia, or contact with a known Marburg patient, within the last 21 days **and**

Symptoms:

- Fever
- Chills
- Headache
- Muscle aches
- Chest pain
- Rash with both flat and raised bumps, often on the torso
- Sore throat
- Nausea, vomiting, and diarrhea

2. Isolate: Protecting Personnel and the Public

Patient Isolation

- Place face mask on patient
- Wrap the patient using impervious suit/sheet

PPE for Suspected, DRY*, Stable Cases

- Impermeable gown / coverall
- Face shield + face mask
- Two pairs of gloves

PPE for Confirmed, WET, and/or Unstable Patients**

- Impermeable gown / coverall
- PAPR or N95 + hood + face shield
- Two pairs of gloves
- Boot covers
- Apron

* DRY = Not exhibiting obvious bleeding, vomiting, or diarrhea ** WET = Exhibiting obvious bleeding, vomiting, or diarrhea

3. Inform: Notify Receiving Facility

Prehospital clinicians should call or radio ahead to receiving facilities of their concerns for Marburg. They should also follow their agency's operational guidelines for reporting within their EMS agency.

4. Post-Transport Issues

Transport units and equipment should be cleaned and disinfected using an EPA-registered hospital-grade disinfectant while wearing PPE. Soiled laundry and trash should be handled following the agency's guidelines for special pathogens.

Contact: Lydian Green, MS, NRP, Region 3 Outreach Coordinator at Lydian.Green@medstar.net

Additional References: [CDC Health Notice](#) [NETEC](#)

MedStar Health

The travel screening is complete for this patient

View previous screenings:
 03/31/17 1837 New Screening

Communicable Disease Screening

Have you been in contact with someone who was sick?

Yes No / Unsure Unable to assess

Do you have any of the following symptoms?

Abdominal pain	Bruising or bleeding	Cough	Diarrhea	Fever
Joint pain	Muscle pain	Rash	Red eye	Severe headache
Vomiting	Weakness	None of these	Unable to assess	

Travel History

Have you traveled outside the U.S. in the last month?

Yes No Unable to assess

Enter a location [+ Add Travel](#)

Location	Start Date	End Date
Japan	02/28/2017	03/17/2017

No more travel to load

Marburg Risk: This patient meets travel and symptom criteria for Marburg Virus Disease, a viral hemorrhagic fever. Give the patient a mask and initiate appropriate isolation precautions (including eye protection for staff).

STOP!!! PLEASE COMPLETE THE FOLLOWING STEPS IMMEDIATELY:

1. Place surgical mask on patient
2. Employee dons surgical mask
3. Isolate patient in a single room with door closed
4. Provide patient with means of communication
5. Implement Contact and Droplet Precautions
6. IMMEDIATELY—Notify Provider, Infection Control and other appropriate staff

This patient has documented VHF risk factors.

- [Hopkins VHF guidelines](#)
- [CDC Marburg Guidance](#)
- [WHO Marburg Virus Outbreak Toolbox](#)

Acknowledge Reason

Isolate



Mask patient

- Patient should be masked, as soon as identified and always when out of the room



Private Room

- Negative Pressure
- Adjacent space for doffing
- Adequate space for waste



Signage & Barriers

- Ensure appropriate signage: isolation, do not enter
- Create barriers to separate from main space



Avoid entering patient care space

- Utilize existing capabilities to avoid entering the room when able: phones, telehealth



PPE

Suspected VHF – Dry Patient



Face mask



Face shield



Fluid resistant mid-calf gown



Fluid Resistant Coveralls



Exam gloves



Extended cuff gloves

Confirmed VHF + Wet or Unstable Patient



N95



Face shield



Surgical Hood



PAPR



Impermeable mid-calf gown



Impermeable Coveralls



Mid-calf boot covers



Exam gloves



Extended cuff gloves



apron



Inform



Initial Notification Process

e.g. RN → MD → ID

Internal system for contacting SMEs



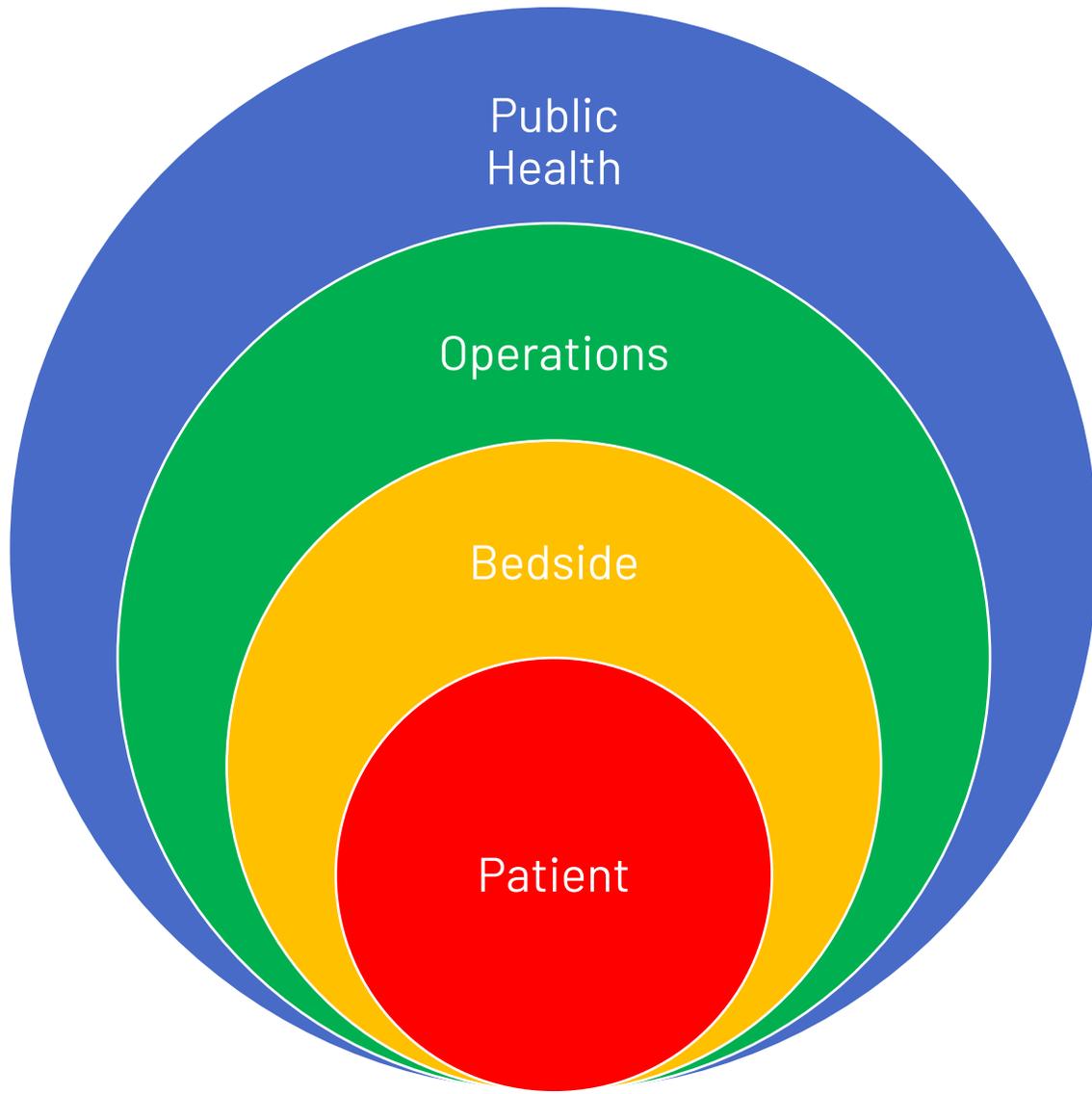
Internal Notification

Who else in your facility needs to be made aware (Administration, Public Relations, etc.)



Contact Local and State Public Health/Healthcare Coalition





- Clinical leadership
 - Medical
 - Nursing
 - Infection control
- ICS & emergency management
 - Executive
 - Facilities
 - Environmental services
- Public health and laboratory
 - Epidemiologist
 - State/LRN

Unique Risks of Region 3



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Additional References: [CDC Health Notice](#) [NETEC](#)





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Keep Calm & PPE Prepare Protect Educate



Questions?

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References



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If questions arise



1

Specimen Collection

Blood or other bodily fluids obtained in correct containers



3

Specimen Transport

A public health partner coordinates pickup and transport of the specimen to the designated laboratory(s) for testing.

LABORATORY TESTING PATHWAY



2

Specimen Packaging

Specimen is packaged according to category A waste regulations.



4

Specimen Testing

Specimens may be tested by a laboratory in the Laboratory Response Network (LRN) and the CDC, or just the CDC, depending on transport logistics and testing needs.

Laboratory	LRN	CDC
Location	Various locations throughout the U.S.	Atlanta, GA
Biosafety Level (BSL)	BSL-3 or BSL-4*	BSL-4
Test Performed	Polymerase Chain Reaction (PCR)	Culture
Time	Hours	Several days
Results	Presumptive	Confirmatory

*LRN laboratories range from BSL-1 to BSL-4; however, PCR testing for special pathogens must be conducted in at least a BSL-3 laboratory.



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Not Detected

Negative

Once results are **confirmed** negative:

- Stand down isolation precautions
- Return space and resources to normal use using standard decommissioning procedures
- Communicate results to all involved staff and vested parties



Detected

Positive

Once results are **confirmed** positive:

- Coordinate with public health partners or contracted company to perform decontamination of the space and equipment
- Coordinate with public health partners or contracted company to remove and dispose of waste per Category A regulations
- Coordinate with public health partners to conduct contact tracing of all exposed individuals
- Communicate results to all involved staff and vested parties