



NETEC

NATIONAL EMERGING SPECIAL PATHOGENS
TRAINING AND EDUCATION CENTER



Annual Report **FY2020**

Funded by the U.S. Department of Health and Human Services Assistant Secretary for Preparedness and Response (ASPR) and the Centers for Disease Control and Prevention (CDC)

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Photos in this report were taken prior to March 2020.

INTRODUCTION

The National Emerging Special Pathogens Training and Education Center (NETEC), funded by the Assistant Secretary for Preparedness and Response and the Centers for Disease Control and Prevention, is a consortium of Emory University, the University of Nebraska Medical Center, and NYC Health + Hospitals/Bellevue. NETEC leverages the unique expertise, resources, and experience to assess healthcare facility readiness, train providers, provide technical assistance and build a rapid research infrastructure to combat emerging special pathogens in the U.S. Combined with strong

partnerships with federal agencies, NETEC ultimately strengthens national healthcare system response to COVID-19 and preparations for future emerging infectious disease threats. NETEC and the ten U.S. Regional Emerging Special Pathogen Treatment Centers (RESPTC) played pivotal roles in COVID-19 response through isolating the first patients with COVID-19, rapidly conducting clinical research of COVID-19 therapeutics, and translating emerging science for rapid optimization of patient care and healthcare worker safety strategies.

MISSION

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

CONSULTATION

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

Measure facility and health care worker readiness using **Metrics**

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

Provide **On-Site and Remote Guidance**

Provide **Emergency On-Call Mobilization**

EDUCATION

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

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

Compile an **Online Repository** of tools and resources

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

RESEARCH NETWORK

Build **Central IRB Process** 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** →

Continue to Develop Partnerships

Build and Expand Expertise and Program Infrastructure

FY 2020 NETEC BY THE NUMBERS

(approx. July 1, 2019 – June 30, 2020)

FY20 ACCOMPLISHMENTS

73 on-site readiness and response consultations (15 tiered facility readiness consultations, 56 LTC facilities, 2 EMS, & 2 exercise support visits)



44 states, the District of Columbia and two U.S. territories represented at in-person trainings



84 in-person training events

3,221 participants attended NETEC training

624,934
You Tube views

Most viewed: PPE videos

- » 496,758 views
- » 58,218 hours watched
- » 1016 new subscribers



+19,000

items downloaded from the NETEC Resource Repository

38,228

COVID-19 webinar participants



SPECIAL PATHOGENS RESEARCH NETWORK RAPID RESPONSE CLINICAL TRIALS

All **10** Regional Ebola and Other Special Pathogens Treatment Centers (RESPTCs)

enrolled in Remdesivir treatment trial for COVID-19



1.5

days to activate clinical trials at each site

29%

of all study participants were enrolled via the SPRN network



NETEC SUPPORT ACCESS

24 | 7 | 365

phone line established for emergency consultation with federal partners and healthcare facilities requiring assistance with patients suspected of or proven to have infections with special pathogens



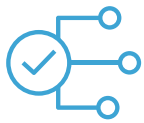
119

virtual consultations for COVID-19 response

FY20 READINESS AND COVID-19 RESPONSE CONSULTATION

NETEC provides Readiness Consultations for healthcare facilities and EMS agencies to advance preparedness for special pathogen response. Readiness consultations start with sites completing a self-assessment that is reviewed by NETEC subject matter experts prior to a comprehensive on-site visit to evaluate and advise on how protocols are operationalized to address unique aspects of special pathogen threats. Follow-up activities focus on identifying tailored technical assistance for continuous improvement (Figure 1).

FIGURE 1.
NETEC READINESS CONSULTATION FRAMEWORK



Pre-Consultation
Coordination and
Self-Assessment



On-Site
Consultation



Post-Consultation
Follow Up



Technical
Assistance as
Needed



“ [NETEC] provided valuable information to assist in the preparation of the biocontainment unit and other areas of the hospital.

– Assessment Hospital, HHS Region 1

FY20 READINESS AND COVID-19 RESPONSE CONSULTATION

“NETEC is the most important educational resource for emerging pathogens that exists in the U.S. Without it, many hospitals would be as we were in 2014, struggling to develop consistent protocols for our scared caregivers.”

– Assessment Hospital, HHS Region 8

FY20 Hospital Consultations

NETEC provided 23 hospital consultations including in-person assessment of 11 non-RESPTC hospitals and two RESPTCs prior to COVID-19 impacting the United States and conducted 10 virtual Readiness Consultations for 10 RESPTCs during COVID-19 response.

NETEC readiness consultation data represent hospital operational readiness to identify, isolate and manage patients suspected or confirmed to have a viral hemorrhagic fever (VHF) or other special pathogen infection.

Hospitals Consultation Findings

NETEC refined the hospital readiness consultation process to include expanded elements for respiratory special pathogen preparedness. The respiratory preparedness findings are distinct from VHF preparedness findings indicating differences exist in hospital VHF and respiratory preparedness (Figure 2).

Facilities were noted to have higher level of ATP readiness compared to VHF readiness in the following areas:

- Emergency Management
- Decedent Management

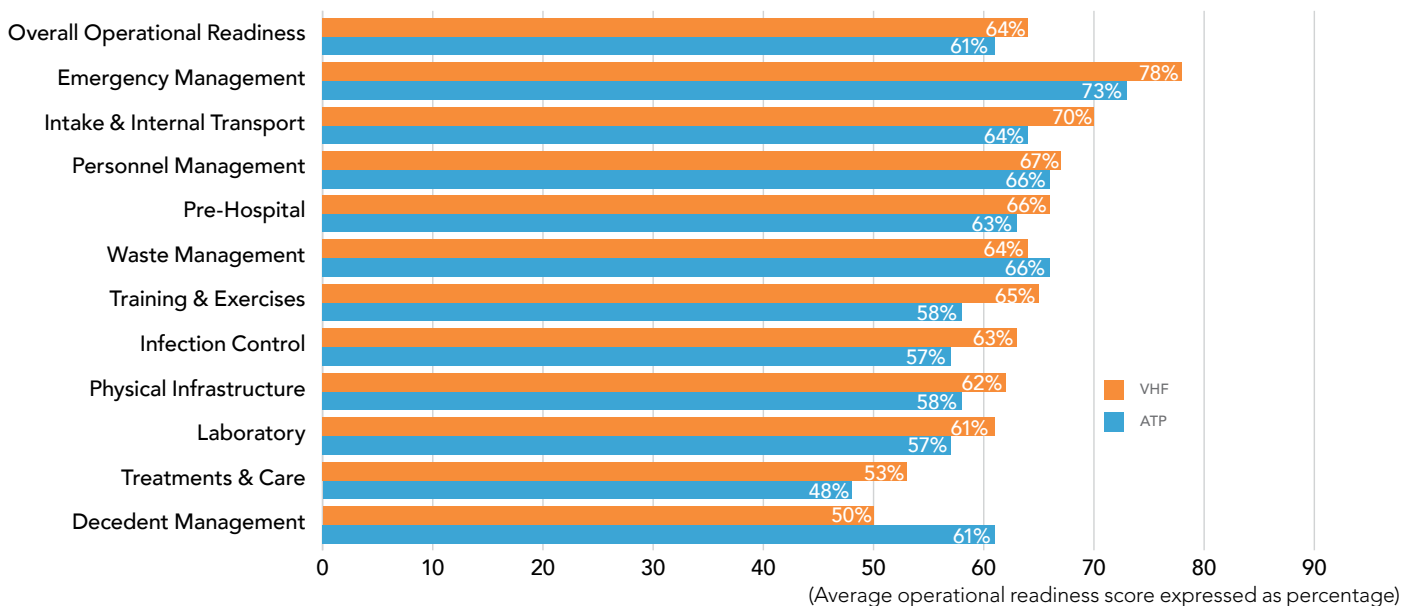
Opportunities for improvement:

Treatment and Care

- Most facilities face staffing issues particularly for care of special populations.
- Most facilities need to expand, maintain, and train their teams (specialty physicians) for adult and special populations to provide quality special pathogen care for the extended periods of time.

FIGURE 2.
FY20 OPERATIONAL READINESS FOR VIRAL HEMORRHAGIC FEVERS (VHF) & AIRBORNE TRANSMISSIBLE PATHOGENS (ATP) BY DOMAIN

State designated Ebola Treatment Center (2) + Assessment Hospitals (8) | n=10



Training and exercise

- Many facilities had not yet executed drills or exercises for pathogens other than Ebola Virus Disease

NETEC completed readiness consultations focusing on preparedness for Ebola and other special pathogens in 33 hospitals facilities between July 2017 and June 2020. Consultation findings from the last three years are summarized in Figure 3.

Emergency management demonstrated the highest level of readiness across 33 non-RESPTC hospitals. Key themes included:

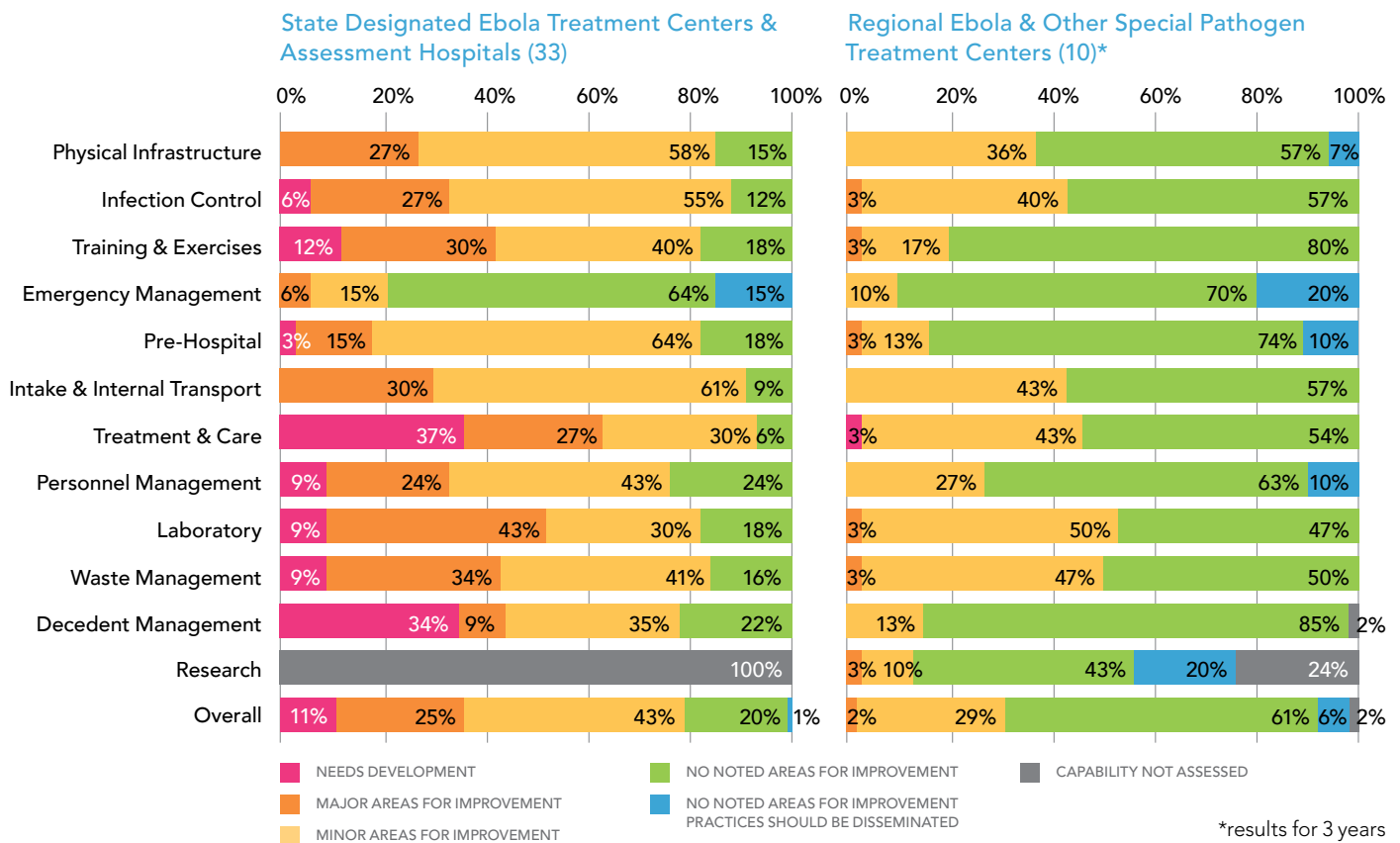
- Ebola and other special pathogen response procedures are incorporated into hospital incident command systems (HICS)
- Use and integration of different tools for notification and communication (EPIC, EverBridge, internal websites)
- Strong relationships with public health departments

The recognition of similar principles and the ability to leverage established emergency management programming has enabled state designated facilities to respond more effectively to special pathogen threats.

The 33 readiness consultations identified persistent challenges in four key domains.

- **Treatment and Care:** Challenges in maintaining staffing ratios for critically ill adult patients
- **Decedent Management:** Challenges with the processing, packing and transport of human remains and barriers to collaboration with external decedent management stakeholders to refine plans
- **Laboratory Management:** Challenges with sustaining laboratory testing for VHF including packaging, transporting (internal and external) and tracking Category A infectious substances
- **Personnel Management**

FIGURE 3.
FY18 – FY20 OPERATIONAL READINESS FOR VIRAL HEMORRHAGIC FEVER BY DOMAIN



FY20 READINESS AND COVID-19 RESPONSE CONSULTATION



“ Our organization could not say enough about how much this helped. Hearing your experiences, best practices, areas for improvement, etc., helped us move our program forward. Although the pathogen and our team approach changed – training a lot more staff due to surge on several patient floors, the foundation of the program and practices shared were utilized to form best practices for COVID.

– Assessment Hospital, HHS Region 5

Hospital COVID-19 Survey

In August 2020 NETEC conducted a follow-up survey of all non-RESPTC hospitals that received readiness consultations between 2015 – 2020. This survey assessed 1) the impact that preparedness efforts for emerging special pathogen had on COVID-19 response; 2) how NETEC and RESPTC initiatives served hospital response activities and 3) challenges and successes experienced in the COVID-19 response.

The survey was distributed to 39 non-RESPTC hospitals and 19 facilities (49%) completed the survey. Key findings from said survey are as follows..

Non-RESPTC Testimonials

63% of facilities reported using NETEC training and educational resources to support facility response to COVID-19.

The resources cited most frequently were:



Webinars



Training Videos



Infographics

74% of facilities reported previous interactions with NETEC and the readiness consultation process helped facility with preparedness and/or response efforts to COVID-19.

CHALLENGES

Supply chain shortages for personal protective equipment and other essential supplies were reported by all facilities. The most commonly cited equipment were:



89% of facilities reported implementing reuse strategies for that equipment.

All facilities that had plans in place or implemented reuse strategies for N95 respirators reported using VHP and/or UVGI.*

UVGI	VHP	Both
37%	42%	11%

Patient census was high and exceeded conventional capacity for resources including staffing and supplies.

*VHP – Vaporized hydrogen peroxide
UVGI – Ultraviolet germicidal irradiation

SUCCESSES

58%

of facilities reported using the designated biocontainment unit space for initial or continued admissions of patients with COVID-19.



63% of facilities reported:

- » Just-in-time training program established for special pathogens was able to expand in scale to support the hospital/healthcare system COVID-19 training needs.
- » In response to the supply chain constraints hospitals repurposed and deployed personal protective equipment from the special pathogen unit to other inpatient areas (84%).

Facilities identified additional benefits of having a special pathogen preparedness program in the following ways:

- » Availability of designated space with engineering controls allowed the initial cases to be safely admitted.
- » The educational foundation required by having a biocontainment unit helped prepare staff for COVID-19.
- » Special pathogens teams set safety standards and supported education for other hospital staff.

FY20 READINESS AND COVID-19 RESPONSE CONSULTATION

“All of the Ebola preparations helped us be ready to face the pandemic, with a dedicated unit and staff to handle the initial influx while we trained up everybody else.

– Ebola Treatment Center, HHS Region 8



Readiness and COVID-19 Response Virtual Consultation

In May and June 2020 NETEC conducted virtual readiness consultations with all 10 RESPTCs. Virtual consultations assessed RESPTC capabilities for emerging special pathogens (VHF and respiratory) and focused on their hospital/health system-wide RESPTC response to COVID-19. Readiness consultation data for the RESPTC network consistently demonstrated advanced preparedness for all emerging special pathogens (VHF and respiratory). Key themes identified as a result of these virtual consultations include:

Physical Infrastructure/Patient Placement

RESPTCs experienced overwhelming demand for isolation beds and rapidly increased negative pressure ICU bed capacity using strategies and approaches from special pathogen units:

- Negative pressure
- Tents for surge capacity
- Telemedicine

Personnel Management: Staffing

RESPTCs experiences rapid increases in the volume of critically ill patients with COVID-19. All facilities reported challenges maintaining critical care nurse staffing levels to meet the increased demand and identified key strategies including implementation of specialized care teams, cohorting care teams and providing just-in-time training to advance provider skills to deliver higher level care. RESPTCs also reported dedicating special pathogen staff to monitor safety and infection control practices.

Special Pathogen Program Support for Hospital Response

Special Pathogens Unit staff acted as resources across entire hospital to form the initial core COVID-19 response team for their institutions, aid in expansion of ICUs and isolation, and RESPTC teams successfully cared for initial COVID-19 cases which provided confidence across the system.

Training and Exercises

RESPTCs used special pathogen personnel to meet unprecedented COVID-19 training needs and serve as safety monitors on COVID-19 units. The most common training topics were use of personal protective equipment as well as infection prevention and control practices. RESPTCs found that existing special pathogen training programs and program lessons learned aided rapid scale up of COVID-19 training capacity.

Innovations and Novel Approaches

The RESPTC network consistently demonstrated creative solutions to challenges faced in special pathogen preparedness. RESPTCs again excelled at innovative approaches to COVID-19: PPE decontamination and reuse strategies, development of new PPE resources, a centralized PAPR program, and novel PPE conservation strategies.

Response to Key Findings

Key COVID-19 challenges and innovations identified through the healthcare facility readiness consultation process were used by NETEC to disseminate mitigation and best practices strategies through training, technical assistance, and resources throughout FY20 and into FY21. NETEC continues to collaborate with the RESPTC network and federal partners to inform and address issues of national concern.

Long-Term Care & Assisted Living COVID-19 Technical Assistance

NETEC provided technical consultation to long-term care and assisted living centers to optimize COVID-19 strategies and protocols for resident and staff safety. Observations and findings from long-term care and assisted living activities are detailed in Figure 4.

FIGURE 4.
LONG-TERM CARE FACILITIES WHO RECEIVED ONSITE TECHNICAL RESPONSE CONSULTATION

Demonstrated Strengths	Opportunities to Advance Preparedness & Response
<ul style="list-style-type: none"> • Implementing screening procedures for all staff entering the building • Restricting visitors and non-essential staff to reduce risk of transmission <ul style="list-style-type: none"> » Implementing strategies to accommodate visits remotely • Increased collaboration with local and state public health departments and federally funded programs to improve: <ul style="list-style-type: none"> » Access to PPE » Processes for infection control practices » Access to local resources » Coordination of testing 	<p>Staffing</p> <ul style="list-style-type: none"> • Staffing constraints across all departments • Facilities report increased absenteeism • High level of turnover at the leadership level within last six months
	<p>Infection Prevention and Control</p> <ul style="list-style-type: none"> • Limited availability of personal protective equipment: <ul style="list-style-type: none"> » More than 90% facilities were reusing eyewear, masks and gowns • Respiratory protection programs were inadequate for airborne precautions <ul style="list-style-type: none"> » Majority of facilities report N95 fit testing <ul style="list-style-type: none"> > Facilities also report intending to use N95 for to caring for positive residents » N95 variety of models/sizes negating ability to fit test to any specific respirators • Inconsistency with adherence to policies: <ul style="list-style-type: none"> » Staff ability to wear PPE effectively » PPE not stored in optimal manner • Hand hygiene <ul style="list-style-type: none"> » Limited access to alcohol-based hand rub » Sub-optimal frequency of handwashing/hand hygiene by frontline staff during routine care
	<p>Resident Placement</p> <ul style="list-style-type: none"> • Limited capability or capacity to create negative pressure for rooms or units • Maintaining isolation and quarantine zone separation is challenging due to: <ul style="list-style-type: none"> » Facility census » Staffing constraints » Facility layout » Resident needs including high fall risks, seizure risks, and advanced dementia » Residents requiring additional assistance with eating

TRAINING AND EDUCATION

NETEC Continues to Provide Education Through a Variety of Modalities

As FY20 began, NETEC focused on delivering training across the country to educate healthcare workers through in-person courses in every Health and Human Services (HHS) region before COVID-19 quickly became the top infectious disease priority for the U.S. health system. NETEC expanded in-depth content through the online learning management system (LMS) and Just-in-Time skills videos to provide critical training in the midst of the pandemic.

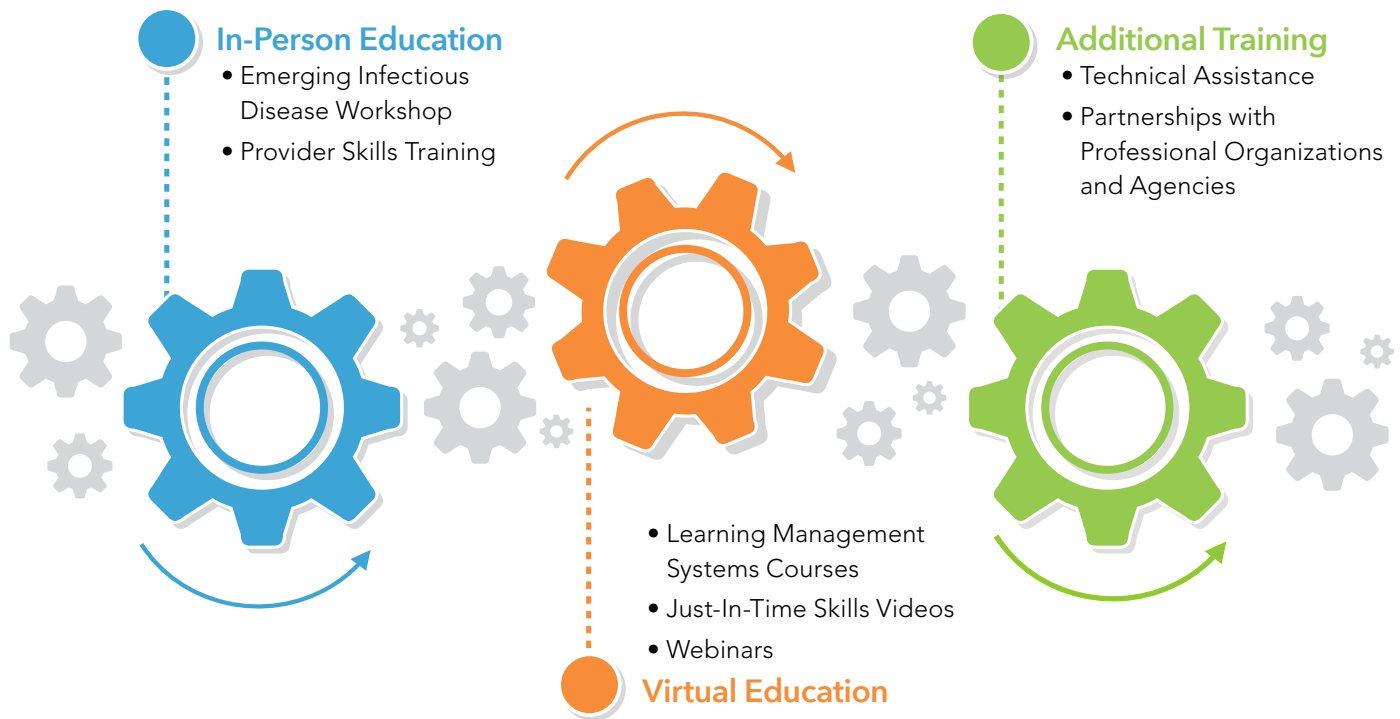


FIGURE 5. SUMMARY OF IN-PERSON EDUCATIONAL ACTIVITIES

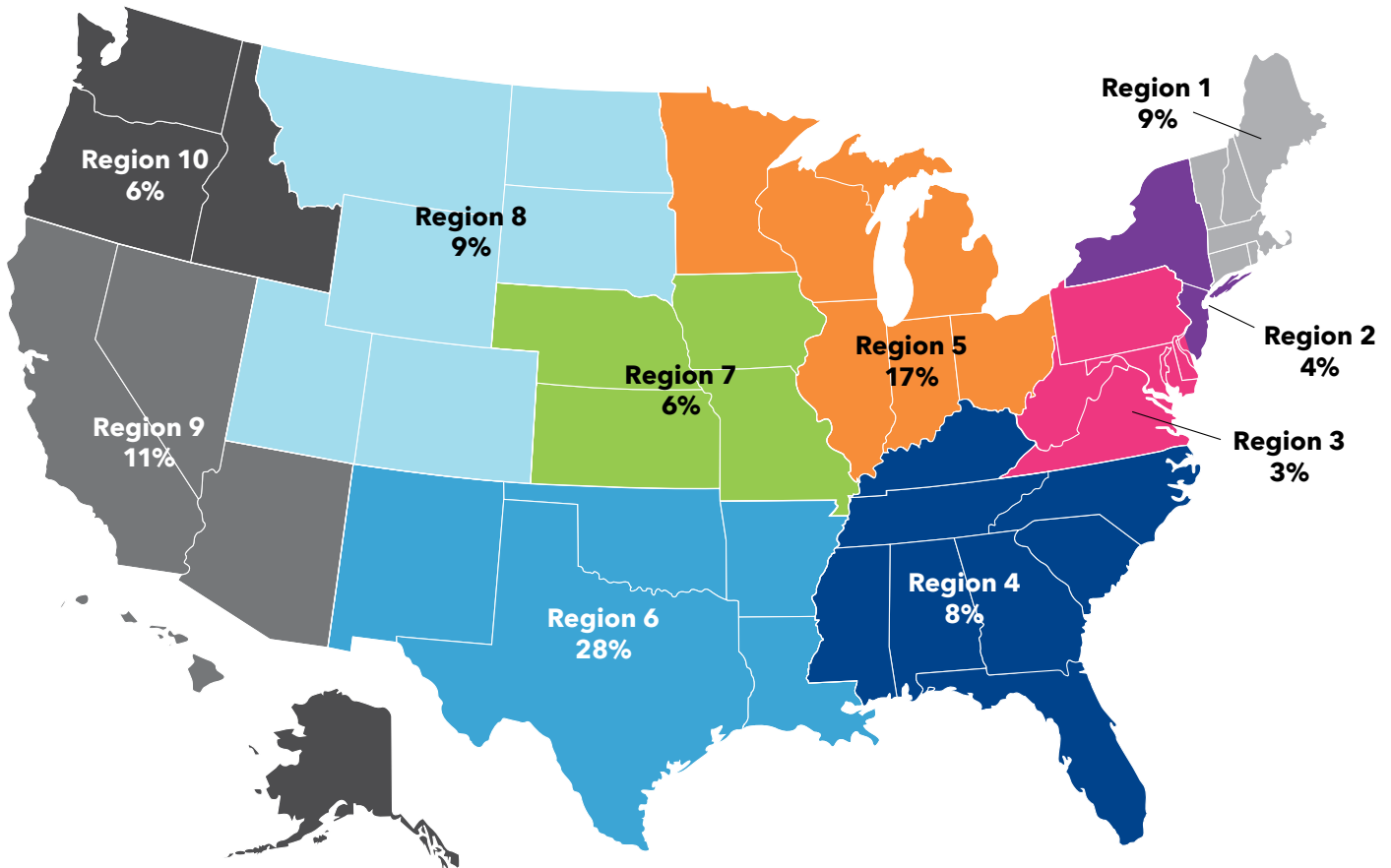
Type of Education	Number Held	Participants Reached
In-Person Emerging Infectious Disease Preparedness Workshops	4	406
Frontline Hospital Training	10	746
EMS Course	7	123
In-Person Technical Assistance	21	1,841
TOTAL	42	3,116



Pre-COVID-19 Live Training

NETEC offered three types of in-person training during FY20, including Emerging Infectious Diseases Workshops, Provider Skills Training, and a Frontline Hospital training and expanded synchronous virtual education. NETEC collaborated with many of the RESPTCs and traveled across the country to provide in-person educational offerings. Personnel from each HHS region and many disciplines participated in trainings. Forty-two percent of in-person course participants were nurses. Other attendees included emergency medical services providers, physicians, public health and laboratory personnel. Other roles include infection prevention, emergency management, and management/administration.

IN-PERSON TRAINING PARTICIPANTS BY HHS REGION



TRAINING AND EDUCATION

Online Learning Management System

NETEC continues to offer online courses, with eight courses currently available and 13 additional courses under development. In FY20, NETEC saw 6,150 course enrollments in the LMS from previous years.

NETEC partnered with the TrainingFinder Real-time Affiliate Integrated Network (TRAIN) to integrate NETEC's online educational offerings into the national TRAIN LMS.

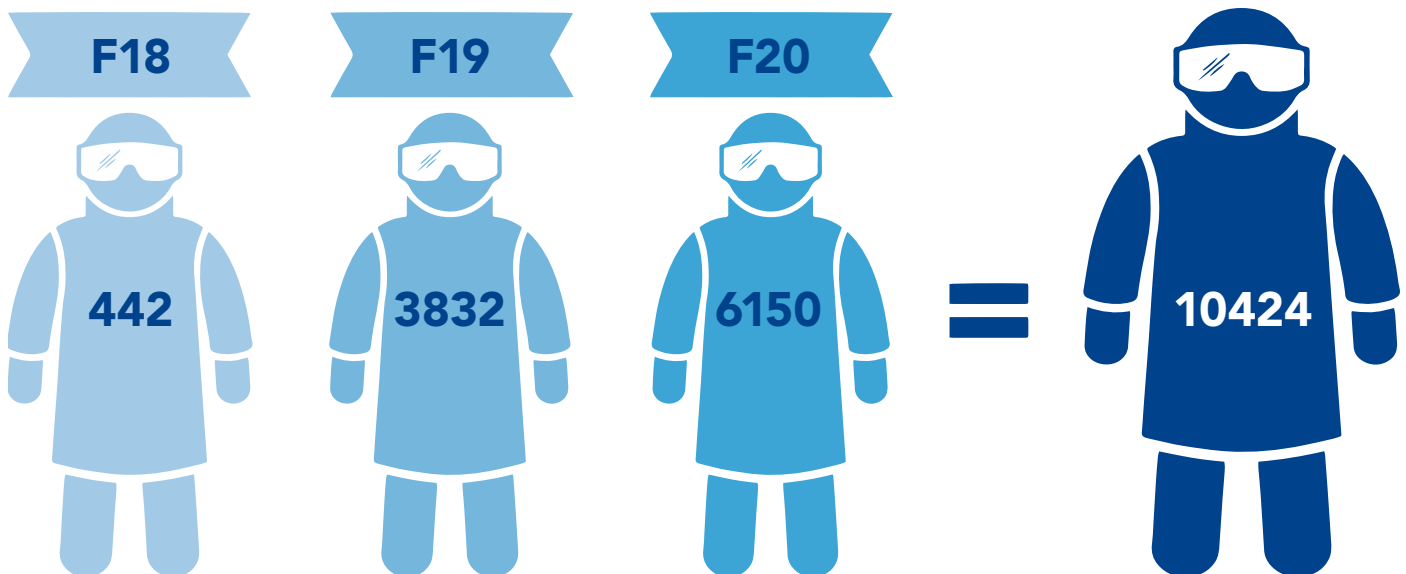
The TRAIN Learning Network is a national network that provides thousands of quality training opportunities to more than two million public health, health care, behavioral health, preparedness and other health professionals. Powered by the Public Health Foundation (PHF), the TRAIN Learning Network brings together agencies and organizations in the public health, health care and preparedness sectors to disseminate, track and share trainings for the health workforce on a centralized training platform. NETEC has partnered with TRAIN to provide access to NETEC's library of online courses. Learners can now search the TRAIN database for training opportunities, locate NETEC courses, and enroll directly in the NETEC eLearning Center via links at www.train.org. TRAIN learners come from all U.S. states and territories, as well as 177 countries throughout the world. Anyone can register as a learner on TRAIN at no cost and access thousands of openly available course offerings.



Emerging Infectious Disease Preparedness Workshops

NETEC led four in-person two-day workshops in the first half of FY20 providing 406 participants from across the country with information, resources, networking opportunities, and hands-on practice. The workshops were held throughout the country, in California, Minnesota, New York and Texas. These workshops offered participants a combination of lecture, discussion-based learning, and hands-on skills to prepare participants to manage patients with emergency service providers (ESP). Topics covered included emerging special

LMS ENROLLMENT BY FISCAL YEAR



pathogens of concern, PPE, handling of persons under investigation, laboratory, clinical skills, leadership strategies, emergency management, transport and EMS, pediatrics and other special populations. Participants were provided with the opportunity to choose sessions specific to their roles.

Frontline Hospital Training Courses

NETEC led 10 in-person courses in FY20 providing 746 participants from frontline hospitals across the country with information, resources, networking opportunities, and hands-on practice. The workshops were held in ten states, reaching eight HHS regions throughout the country:

- Arizona
- Arkansas
- Florida
- Illinois
- Kansas
- Louisiana
- New Hampshire
- Texas
- Utah
- Washington

These courses offered participants a combination of lecture, discussion-based learning, and hands-on skills to prepare participants to manage patients with ESP. Topics covered included pathogens of concern, PPE, handling of persons under investigation, laboratory, clinical skills, leadership strategies, emergency management, transport and EMS, pediatrics and other special populations.

In-Person Training Outcomes

Six months following each in-person training held from FY17-FY20, NETEC sent a follow-up survey to course participants to assess training outcomes. About three-quarters of survey

responders reported making changes at their facility as a result of attending a NETEC training. The most commonly reported changes include adjustments related to:

- Infection control practices, particularly related to equipment and supplies
- Protocols and procedures related to patient treatment and care.
- Training and drills across the continuum of patient care.
- Physical infrastructure of the unit or facility.

Targeted Technical Assistance

NETEC faculty delivered 21 in-person sessions in 16 different states, impacting more than 1,841 people. These technical assistance sessions were tailored to the needs of states and individual facilities. Examples include exercise evaluation support in Colorado, Nebraska, and Vermont; presentations on Pathogens of Concern in Idaho, Maryland and Tennessee; and Leadership Strategies in New Jersey and Wisconsin; and hands-on personal protective equipment training in Hawaii, Kentucky and North Carolina.

In addition, NETEC provided 14 virtual technical assistance for locations including Alabama, Alaska, California, Colorado, Florida, Georgia, New Jersey, Michigan, Texas and Washington. Topics included review of standard operating procedures, personal protective equipment checklists, biocontainment unit design, pediatrics and leadership strategies.

WORKSHOP

“Thank you for a very helpful course. I feel that I have a better understanding of safety and what our institution can focus on to be more prepared.

– State Ebola Treatment Center Laboratorian, Minnesota

“The opportunity to interact with such educated and experienced clinicians who could share their real-world experiences and thoughtfully guide those of us that are continuing to develop programs was invaluable.

– Assesment Hospital Nurse, Texas

FRONTLINE COURSE

“Being a frontline hospital, identifying, isolating and informing partners while providing care for 24-48 hours will definitely be something we can attempt after this course.

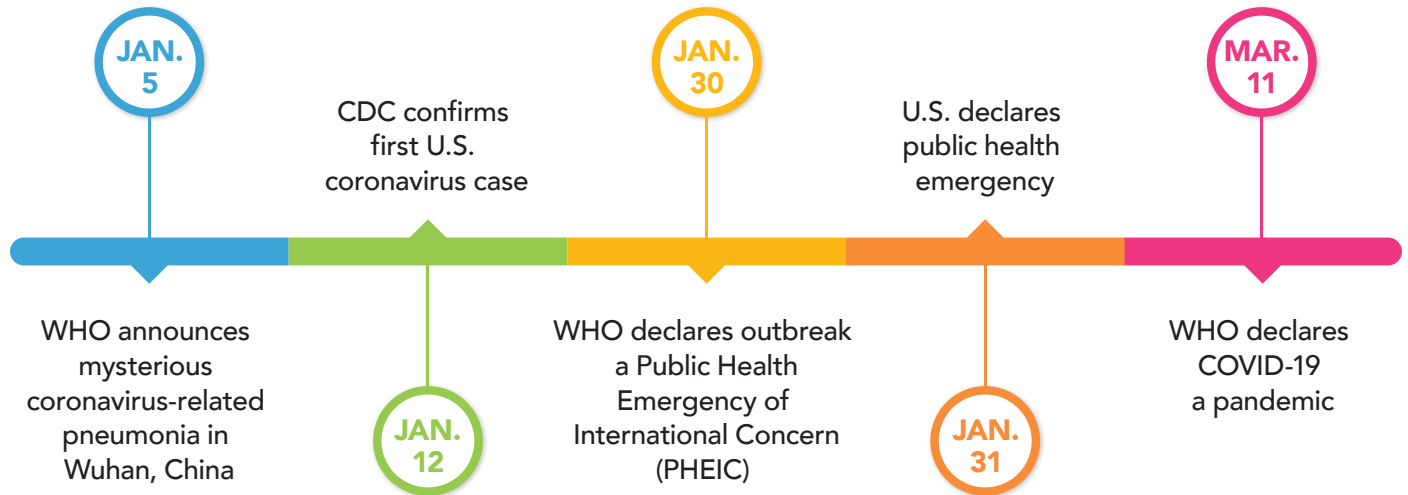
– Frontline Hospital MD, New Hampshire

“The extensive knowledge of the instructors allowed for great conversations about how we would handle situations in our own facilities.

– Frontline Hospital Emergency Manager, Louisiana

TRAINING AND EDUCATION

TIMELINE OF COVID-19 DEVELOPMENTS IN 2020



COVID-19 Healthcare Readiness Training

As FY20 progressed into Jan. and Feb. 2020, NETEC quickly shifted training resources away from in-person training to virtual training platforms aimed at rapidly preparing and educating the U.S. healthcare system to provide safe respiratory pathogen care. NETEC was ultimately successful in rapidly establishing a virtual training platform that reach thousands of U.S. health care workers across the country. NETEC leveraged rapid access COVID-19 resource webpages, *YouTube*, quick resource guides and webinars to provide the latest information, guidance and evidence-based practices to enable U.S. healthcare systems and workers to maximize safety and improve care for patients with COVID-19.



Post-COVID-19 Virtual Education

Webinars

NETEC hosted 23 webinars in response to COVID-19 that were attended by 19,747 people. Webinars address a wide range of COVID-19 issues, strategies, policies and protocols.

With 2019 coming to a close, the NETEC partnered with APIC and all 10 RESPTCs to expand the frontline training course across the country. As 2020 began, plans were made to hold courses in all 50 states. On January 30, 2020 an in-person

train-the-trainer course was held in Atlanta. As the workshop came to a close, attendees watched live as the World Health Organization officially declared COVID-19 a public health emergency. NETEC quickly re-evaluated its plans and began building a virtual platform to disseminate education and training tools to healthcare workers across the nation.

FIGURE 6.
The majority of webinar attendees were from healthcare facilities

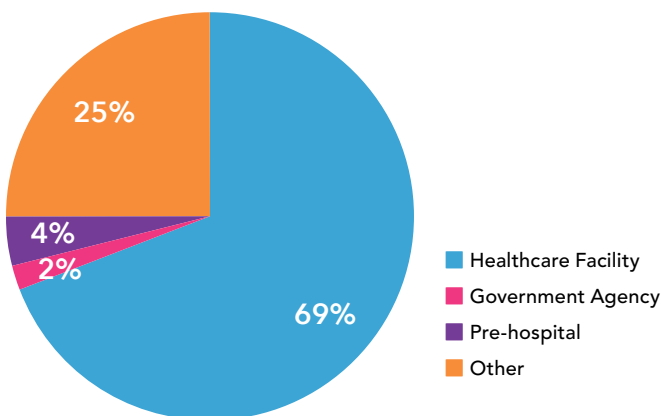


FIGURE 7.
WEBINAR ATTENDANCE BY HHS REGION

HHS REGION	%
Region 1 (ME, MA, NH, VT, CT, RI)	3%
Region 2 (NY, NJ, PR, VI)	8%
Region 3 (PA, DE, MD, DC, VA, WV)	10%
Region 4 (NC, SC, GA, FL, AL, MS, TN, KY)	18%
Region 5 (OH, MI, IN, WI, IL, MN)	10%
Region 6 (AR, LA, OK, TX, NM)	9%
Region 7 (IA, MO, NE, KS)	15%
Region 8 (ND, SD, MT, WY, CO, UT)	9%
Region 9 (NV, AZ, CA, HI, Guam, American Samoa)	9%
Region 10 (ID, WA, OR, AK)	4%
Other (Federal government or international)	4%

WEBINARS

This is one of the most informative webinars that I have attended throughout the COVID crisis. The panelists gave simple, easy to understand answers so that anyone listening could understand.

– PPE: You’ve Got Questions, We’ve Got Answers attendee

I found that everything discussed in this webinar to be pertinent as a frontline ICU RN. A small group of my colleagues and I were deployed to a surge ICU in our hospital creating enormous stressors, all of which were addressed today. I really appreciate the discussion on those topics.

– Resiliency. Riding the Wave of COVID-19 attendee

I absolutely loved the webinar — it very informative and showed the wide variety of masks used and their various purposes. I already shared its contents with my coworkers and recommended it to many others to watch.

– Health Care Workers and Masks attendee

ELECTRONIC RESOURCES



Skills Videos

NETEC deployed skills training videos in FY20 that allow participants to easily access and review content on demand. NETEC skills videos garnered hundreds of thousands of views and provided over 70,000 hours of training this year.

NETEC Youtube Channel FY20



624,934
Total Views



70,498.8
Hours Watched



1783
Subscribers

FIGURE 8.
TRAINING VIDEO VIEWS

NETEC YOUTUBE CHANNEL	VIEWS
PPE for COVID-19	553K
NP Swab	92K
N95 UVGI Process webinar	17K
Masks and HCW webinar	10K
L&D webinar	1K
Pediatric webinar	1.4K
Environmental IPC webinar	5K
Pathophysiology webinar	3.8K
Challenges & Lessons Learned webinar	1.5K
N95 Seal Check Animation	1.8K
Exhalation Valve Animation	2.7K

Please check out www.youtube.com/c/TheNETEC/videos

The NETEC Online Resource Library: An All-inclusive Resource

The NETEC online resource library provides a unique, searchable, single source for individuals from frontline facilities, emergency medical services (EMS), and regional treatment centers. With more than 1,000 expertly curated items, the resource library guides visitors through four key categories:



Our Response to the COVID-19 Pandemic

With a growing need for resources related to COVID-19, the NETEC took it a step further and developed a **COVID-19 resource page** to serve as a one-stop-shop of all NETEC-created materials and external expert resources for frontline workers. This all-inclusive landing page contains subject matter expert content developed through webinars, quick reference guides and includes guidance on PPE use and conservation. Quicklinks to the Johns Hopkins COVID-19 Dashboard is also showcased, allowing users to stay up-to-date on the novel coronavirus.

Resources to Meet All Visitors' Needs

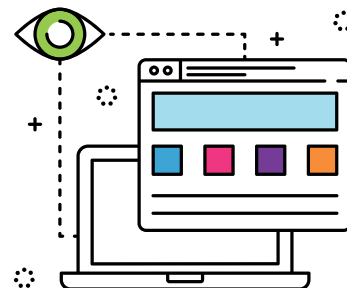
The NETEC resource library is adaptable to meet visitor needs with a robust variety of available materials. In response to the growing pandemic, visitors shifted their searches and downloads to COVID-19 resources and personal protective equipment (PPE) just-in-time training materials.

Also, from July 1, 2019 to Jan. 19, 2020, the NETEC website (www.netec.org) experienced a 200% increase in traffic (26,208 to 78,528), with the resource library surpassing that at a 788% increase in unique page views (21,283 to 188,946).



Top Downloads July 2019 – June 2020

- Exercise templates
- Checklists (i.e., Special Pathogen Mystery Drill Toolkit)
- Frontline Facility Special Pathogen [Airborne] Tabletop Exercise Template
- Frontline Facility Ebola Drill, Functional & Full-Scale Exercise Template
- COVID-19 PPE Guidance flyer



NETEC.ORG Web Traffic

78,528
Post-COVID-19 views

26,208
Pre-COVID-19 views

Resource Library Web Traffic

188,946
Views Jan. 2020 – June 2020

21,946
Views July 2019 – Jan. 2020

SPECIAL PATHOGENS TREATMENT RESEARCH NETWORK



Background

The Special Pathogens Research Network (SPRN) was first established in November 2016 to develop national infrastructure to facilitate rapid, multi-site clinical research of emerging special pathogens. The SPRN is comprised by the ten Regional Emerging Special Pathogen Treatment Center (RESPTCs) and supported by several federal external partners with a collective mission to improve patient care and outcomes, support the development of medical countermeasures, reduce nosocomial transmission, and to further knowledge of existing and emerging special pathogens.

Over the last four years, SPRN has actively engaged with the 10 regional centers to develop and sustain a NETEC-wide research network. A robust engagement with external research partners such as the NIH/NIAID, CDC, USAMRIID, DARPA, ASPR, BARDA, DoD, and the NEIDL at Boston University to coordinate research initiatives for emerging special pathogens that result in critical illness. SPRN has conducted a multisite research functional exercise with Cedars Sinai, Emory, and the University of Nebraska, as well as multiple research-focused tabletop exercises to routinely assess network readiness. These exercises have allowed the network to assess readiness in advance of crises to improve processes and procedures in an efficient and effective manner.

In FY20 SPRN grew as a network and was a key driver for successful clinical and translational COVID-19 research across the nation. Prior to the SARS-CoV-2 pandemic SPRN

conducted exercises to test and refine the network's ability to activate multi-site clinical trials in less than 72 hours. In response to the SARS-CoV-2 pandemic, SPRN successfully initiated a network-wide clinical trial for the investigation of novel medical countermeasures for the treatment of SARS-CoV-2 infection in collaboration with the NIH (ACTT Trial). Through support of the University of Nebraska Medical Center Institutional Review Board, SPRN has developed and operationalized a central IRB for the national research network which had a tremendous impact to recruitment of subjects from the 10 regional sites during ACTT1, ACTT2 and ACTT3 protocols. In total, SPRN sites have been responsible for 716 of the 2511 (29%) ACTT protocol enrollments through the three ACTT arms (Figure 9).

In response to SARS-CoV-2, SPRN operationalized four network-wide research protocols. SPRN leadership has conducted research-specific sites visits to eight of the 10

RESPTCs to assess their research practices and capacity, emergency research response readiness, and, understand the clinical research paradigm at these sites. These visits have assisted SPRN leadership to bridge existing communication and operational gaps across the network and streamline implementation and operationalization of studies at SPRN sites.

During the COVID Pandemic, SPRN was able to successfully answer the national call and has made an exemplary contribution to the COVID-19 scientific research response. RESPTCs have learned by doing, potentially even beyond what they had envisioned previously in terms of rapid response and the outbreak has demonstrated that network research can expand beyond BCU, which opens up opportunities for other research collaboration opportunities. Readiness of the sites from the clinical trial network perspective and the central IRB was the critical piece of how SPRN was successfully able to call into action.

SPRN holds an annual investigators meeting with the clinical research team and SPRN members from regional treatment facilities and other partners to develop protocols and research resources. In addition, SPRN runs a medical countermeasure working group; which produces and regularly updates living documents that summarize the medical countermeasure landscape of several pathogens of importance. The SPRN has been responsible for the publication of four manuscripts, three abstracts, one oral presentation at the Military Health System Research Symposium, and hosted a symposium at the American Society of Tropical Medicine and Hygiene on implementing clinical research in bioemergencies.

FIGURE 9.
SPRN CLINICAL TRIAL ENROLLMENT

SPRN Site (HHS Region)	SPRN Site Enrollment			
	ACTT-1	ACTT-2	ACTT-3	Total ACTT
1	49	4	14	67
2	29	1	0	30
3	9	3	2	14
4	103	92	86	281
5	32	36	27	95
6	10	8	2	20
7	20	90	74	184
8	17	13	15	45
9	25	31	17	73
10	15	14	8	37
SPRN Total	309	29	245	846
ACTT Consortium Total	1,062	1,033	857	2,952
SPRN % of Total	29%	28%	29%	29%

SPRN has been responsible for the publication of



4 Manuscripts



3 Abstracts



1 Oral Presentation
at Military Health System
Research Symposium



Hosted Symposium
at American Society of Tropical Medicine
and Hygiene on implementing clinical
research in bioemergencies

FY21 VISION



NETEC continues to support COVID-19 response and strengthen the national system for emerging special pathogen management through technical consultation, education, research infrastructure and networking building. NETEC will facilitate development of a strategic plan to translate lessons learned from Ebola and COVID-19 to develop a robust National System of Care for Special Pathogens. This initiative will consist of a series of national stakeholder engagement events to explore the potential models of existing care networks aimed at improving patient outcomes, such as trauma, cardiac and stroke care systems, existing special pathogen networks and care centers, and other organizations that should inform or be leveraged in establishing a National Special Pathogens System of Care.

NETEC will also develop self-assessment tools and virtual consultation platforms to enable more U.S. healthcare sectors to review preparedness and access resources to increase emerging special pathogen capabilities. In-person and virtual educational offerings will be expanded to address the educational needs created by the COVID-19 pandemic. Educational priorities include offering synchronous virtual education, additional electronic training tools and resources, and prompt access to SMEs for Technical Assistance.

As the U.S. health system emerges from COVID-19 response, NETEC will continue to translate lessons and experiences into best practices that advance healthcare worker safety and improve outcomes for patients infected with special pathogens.

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The logo for NETEC features a stylized blue icon on the left, composed of several curved lines that form a semi-circular shape. To the right of this icon, the word "NETEC" is written in a bold, blue, sans-serif font.

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