



# NETEC



EMORY  
MEDICINE



UNMC  
Nebraska  
Medicine

NYC  
HEALTH+  
HOSPITALS

| Bellevue

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## Preparedness and Protection and Progress

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## 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

Please visit us at [www.netec.org](http://www.netec.org)  
or email us at [info@netec.org](mailto:info@netec.org)

## 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

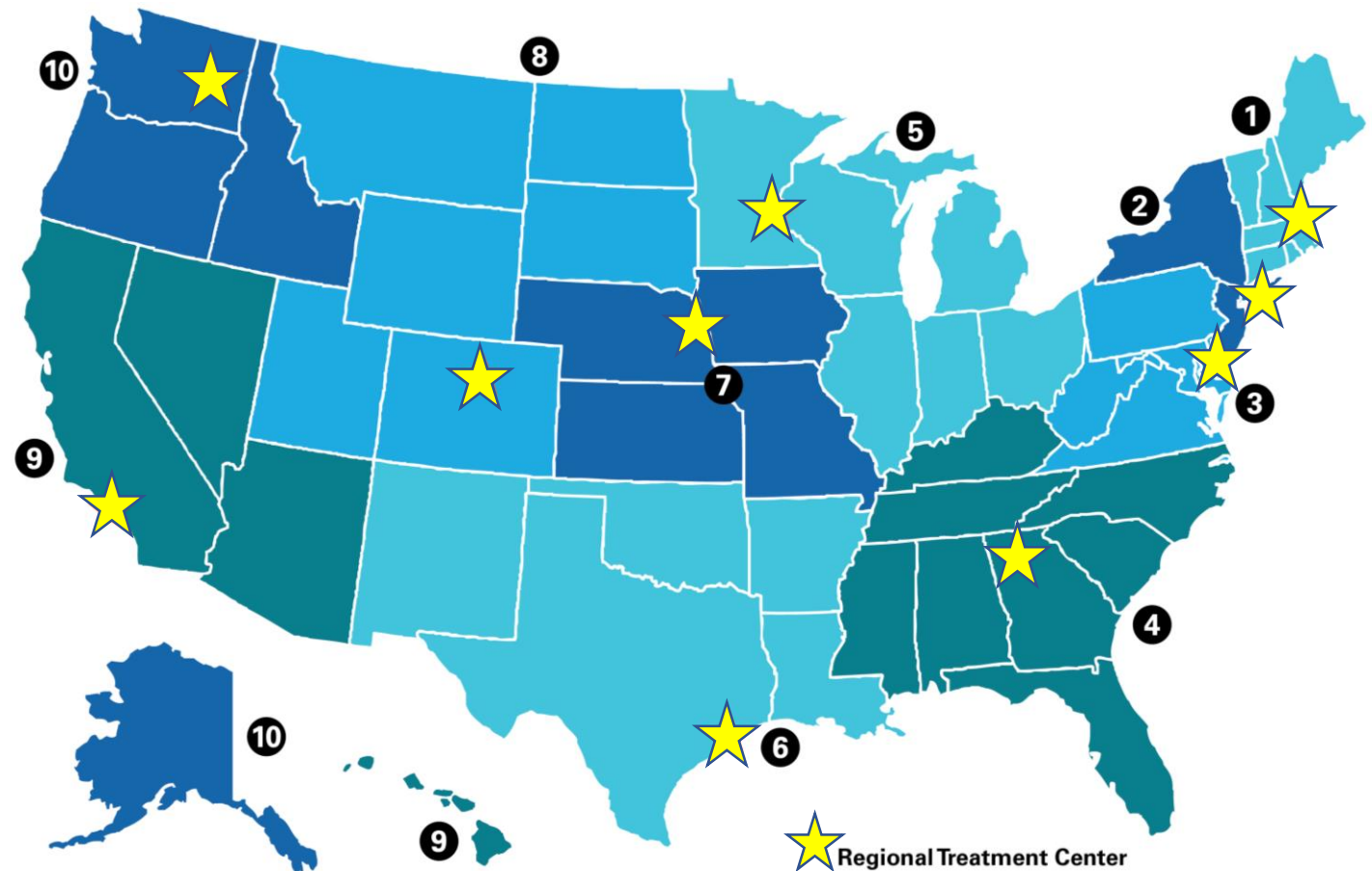
Create infrastructure for a  
**Specimen Biorepository**

Cross-Cutting, Supportive Activities

Through the 5 year project period and in collaboration with ASPR, CDC and other stakeholders, the NETEC will:

➔ Create readiness metrics

➔ Conduct peer review readiness consultations of regional and state ETCs as well as assessment centers as requested by facilities and state health departments



146 metrics in 11 domains, including Physical Infrastructure, Infection Control, Training and Exercises, Pre-hospital, Intake and Transport, Personnel Mgt, Treatment and Care

Regional treatment centers (RESPTC), state designated treatment centers and assessment facilities; consultative, non-punitive and non-regulatory



Respiratory Pathogens preparedness, surge capability;  
availability of AIIR at points of entry

Laboratory capabilities, in-house, ongoing treatment and  
the ability to transport (CDC)

Over 40% of facilities assessed need to develop plans to  
identify and treat 'special populations' – neonate, pediatric,  
obstetric, and geriatric



- ✚ PPE is not intuitive. We make dangerous errors every day
- ✚ PPE, at least for high-risk pathogens, is NOT something we do every day
- ✚ How we **behave** in PPE and how we **remove** PPE, is more important than what our chosen ensemble looks like

# Protection Questions



Surface Tension

PSI

Gowns

Coveralls

1670/1671

Tape

Re-aerosolization

N95

PAPR

Masks

Zippers

Cuffs

Seams

Doffing Order

ABHR



# Protection - ANSI/AAMI Standards



**Critical Zones**

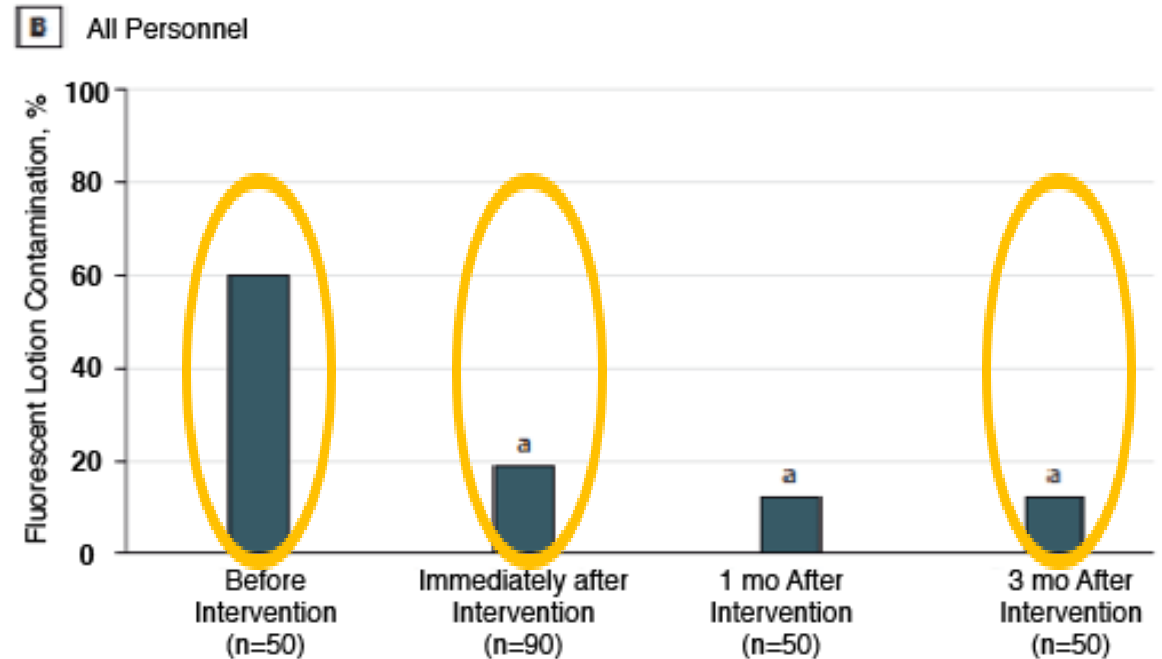
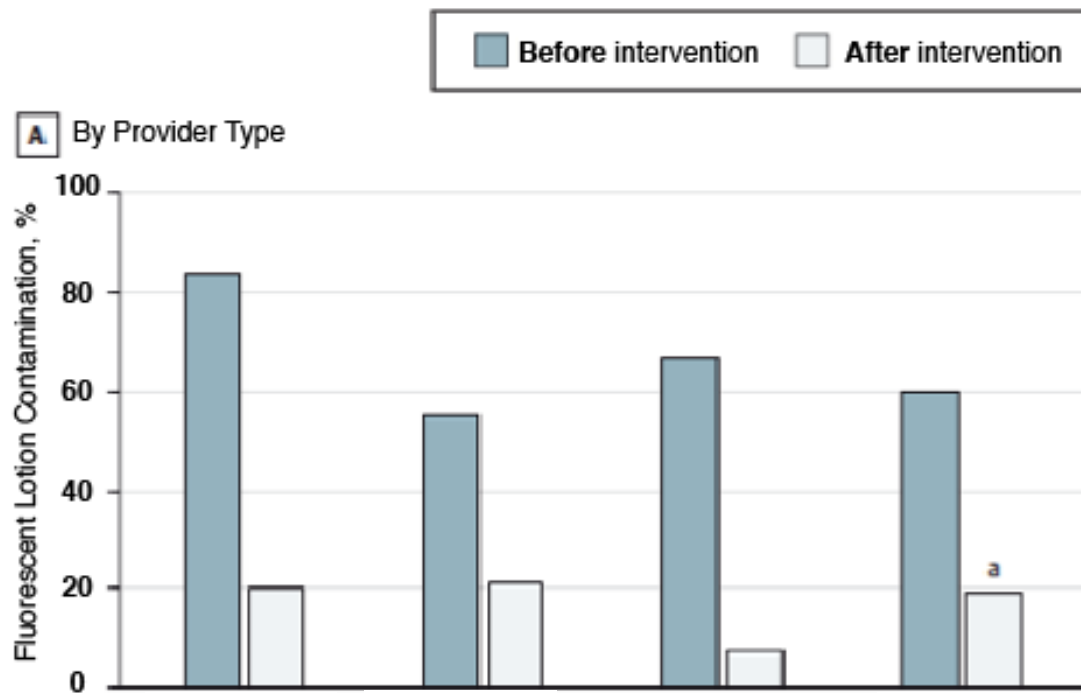
Level	Test Methods Used	Expected Barrier Effectiveness
1	Impact Penetration	Minimal water resistance
2	Impact Penetration & Hydrostatic Pressure	Low water resistance
3	Impact Penetration & Hydrostatic Pressure	Moderate water resistance
4	ASTM F1670 Synthetic Blood & ASTM F1671 Viral Penetration Test	Blood and viral penetration resistance

Training in PPE for many HCW's has consisted of donning and doffing only

Further PPE education, including clinical skills in PPE, remains a most requested educational topic (58%)

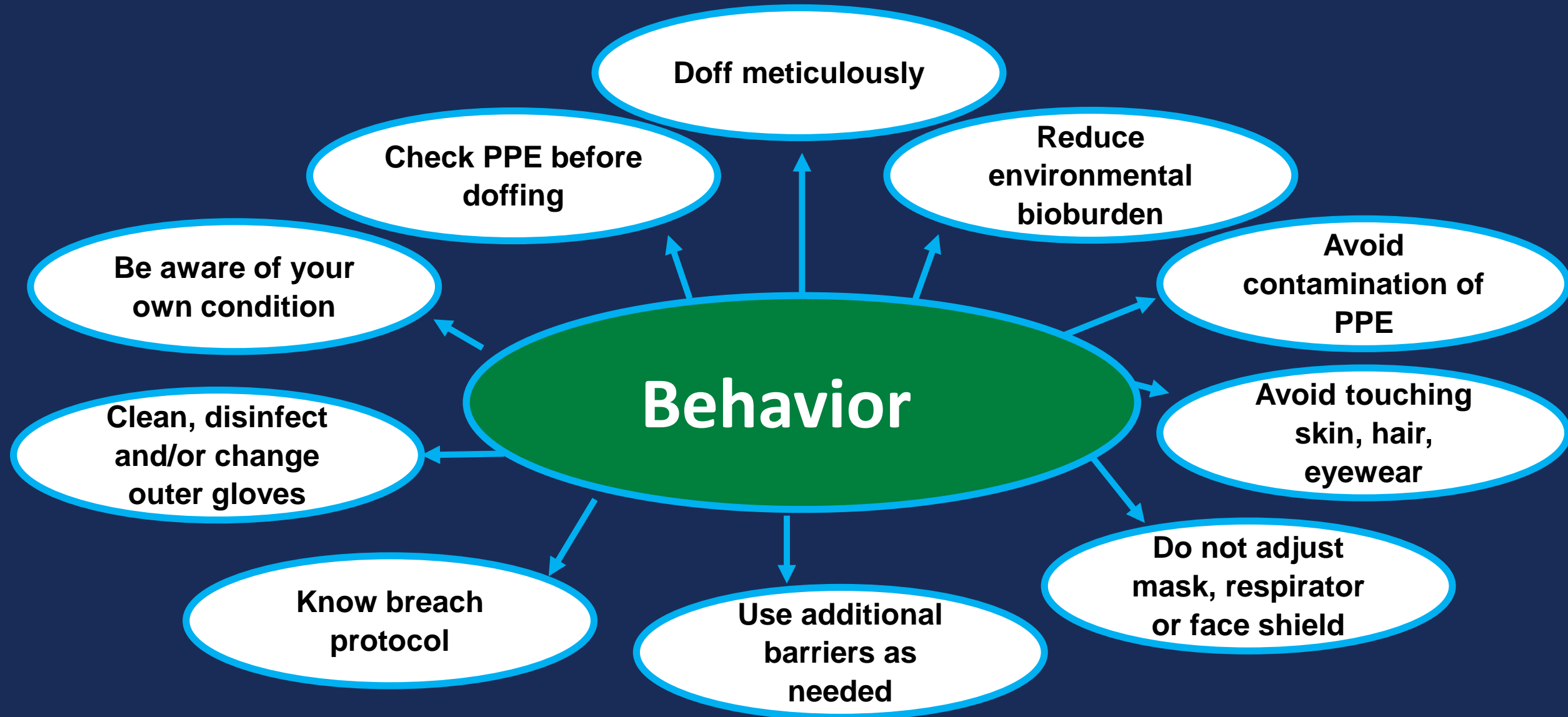
Participants cite lack of opportunity to practice and a need for further training (31-38%)

**Figure 3. Contamination of Personnel During Removal of Fluorescent Lotion-Contaminated Gloves Before and After an Intervention**



**Frequency of fluorescent lotion contamination before and immediately after an educational intervention and overall frequency of contamination for all personnel types before, immediately after, and 1 and 3 months after the intervention.**

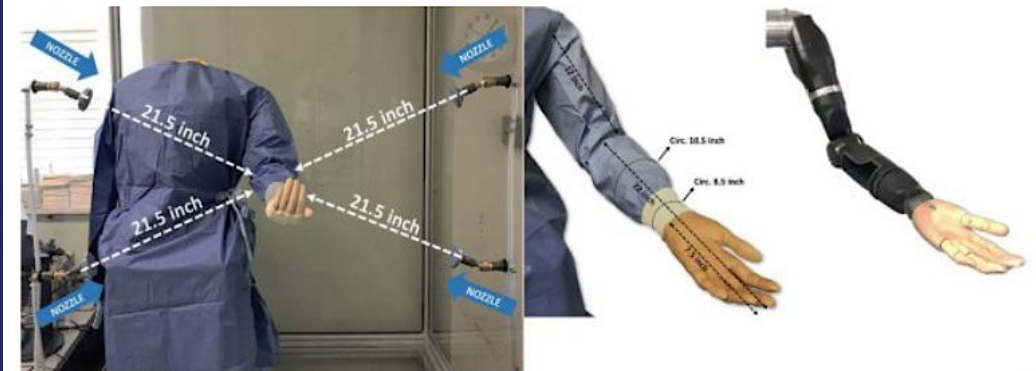
<sup>a</sup>  $P < .001$  compared with before the intervention



- 📌 Gown textiles, penetration of body fluid simulant
- 📌 Glove-Gown interface and the use of tape
- 📌 Re-aerosolization, contamination during doffing
- 📌 Human factors and the build environment
- 📌 PAPR use by HCW's
- 📌 Glove hygiene

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Inside NIOSH:  
Robotic Arm Tests Glove-Gown Protection in Healthcare



A new test method using a special chamber, left, and a robotic arm, right, could help PPE manufacturers test new products for leakages at the glove-gown interface. Photos by NIOSH.





- ✚ HCW monitoring
- ✚ Drills & Exercises, including Mystery Patient Drills
- ✚ Identify - Isolate – Inform
- ✚ Public Health, CDC, ASPR guidance on what preparedness looks like
- ✚ PPE training for

