TRAINING AND TREATMENT FOR GLOBAL HEALTH SECURITY

OVERVIEW

COVID-19 has demonstrated the critical need for a more proactive and collaborative national approach to preparing for highly infectious diseases, unexpected pathogens, biological attacks, and public health threats. The University of Nebraska Medical Center (UNMC) is a national leader doing exceptional work training healthcare providers, preparing clinical resources, and developing strategies to fight emerging infectious disease threats and public health challenges. Over the past few years, UNMC has built a prominent reputation as a hub for our nation's public health preparedness to address global health security:

- People worldwide know of Nebraska's Biocontainment Unit team, which developed the **"Nebraska Method"** to safely treat highly infectious pathogens during the 2014 Ebola outbreak. With Emory University in Atlanta and New York City's Bellevue Hospital, UNMC founded the **National Emerging Special Pathogens Training and Education Center (NETEC)**, which now includes ten regional hospitals strategically located around the nation.
- **The Global Center for Health Security** at UNMC is home to the **National Training, Simulation, and Quarantine Center (TSQC)**, the nation's only federal quarantine unit and simulated biocontainment units for advanced experiential training. TSQC encompasses an entire floor of the new Dr. Edwin G. & Dorothy Balbach Davis Global Center at UNMC's Omaha campus. In 2016, TSQC was funded by a $20 million long-term contract by the U.S. Department of Health and Human Services.
- **Drug Development Pipeline**: In 2017, UNMC, UNL, and NSRI researchers launched a drug development pipeline program with the U.S. Armed Forces Radiobiological Research Institute to advance drug compounds with a national need to clinical trials, starting with a drug to mitigate severe radiation exposure.
- **Military training and transport**: In 2018, the Air Force established a C-STARS (Center for the Sustainment of Trauma and Readiness Skills) Infectious Disease program at UNMC, stationing active-duty Air Force personnel on campus to train and work with our experts.
- Since 2018, UNMC has contracted with the U.S. Department of Health and Human Services Assistant Secretary of Preparedness and Response (ASPR) to develop a **regional disaster health response system model**. Current hospital partners with UNMC have grown initially from Boston, Massachusetts, to include Denver, Colorado, and soon Atlanta, Georgia.

- With hard work from the Nebraska Congressional delegation, Section 740 in the FY2020 National Defense Authorization Act (NDAA) and Section 741 in the FY2021 NDAA authorized a new five-year **National Disaster Medical System (NDMS) surge pilot program** with five sites: Omaha, Denver, Sacramento, San Antonio, and Washington, DC. Deloitte and UNMC were awarded management of the surge pilot program in summer 2021. Program requirements are expected to be approved in early 2022.
- **Construction of a proposed new facility** for inpatient, training, research, and surge capacity needs of Nebraska Medicine/UNMC with federal partners like DoD, HHS, and Veterans Administration is envisioned in the years ahead with federal, state, local, and philanthropic support.
- In 2020-21 during COVID, UNMC **developed practical innovations to improve how day-to-day and medical surge care** is coordinated and provided in rural, remote, and low resource areas. As supply chain issues impacted the availability of protective masks, UNMC developed and distributed at no cost a method to decontaminate protective masks so they could be re-used. As hospitals ran out of beds, UNMC led the development of the Isolation System for Treatment and Agile Response for high-risk Infections (ISTARI), a disposable airborne isolation patient care system. The ISTARI Care Cube can be assembled in minutes for use in community or rural hospitals or clinics that do not have a negative pressure biocontainment space. These innovations and others can be further developed for national use through a dedicated contractual arrangement with HHS ASPR, which is under consideration.