



UNMC | NEBRASKA MEDICINE

**GLOBAL CENTER
FOR HEALTH SECURITY**

2025 ANNUAL REPORT







Explore the GCHS

A Message from Dr. John Lowe



Over the past year, the Global Center for Health Security has continued its evolution from an interdisciplinary team forged in crisis to a center defined by sustained capacity, readiness, and collaboration. In a dynamic and often uncertain health security landscape, our focus has remained clear: maintaining continuity, strengthening partnerships, and preparing for what comes next through rigorous research and operational readiness.

From supporting complex outbreak responses within the United States to advancing coordinated preparedness efforts across East Africa and the Indo-Pacific region, GCHS continues to demonstrate the value of integrated, evidence informed action. Looking ahead, we are strengthening our ability to translate research, training, and innovation into real world application. This ensures that our work directly informs

response capabilities, workforce readiness, and system resilience. Preparedness is not a static goal. It is an ongoing responsibility that requires sustained effort before the next emergency.

More than a decade after the Ebola response that helped shape our foundation, we remain guided by lessons learned through experience: the importance of multidisciplinary coordination, hands on training, and deliberately moving discoveries from the laboratory, classroom, and planning table into practice. In the coming years, GCHS will continue to focus on bridging research and response through biocontainment innovation, operational exercises, and policy relevant engagement.

Our partnerships, both international and domestic, will remain central to this work. Through continued collaboration with global partners and close coordination with local, state, and federal stakeholders, we are positioned to expand our impact and support readiness across systems and sectors.

This report reflects not only what we have accomplished, but how we are positioning GCHS for the future. I am deeply grateful to our team, partners, and supporters, and I remain confident in our collective ability to strengthen health security locally, nationally, and globally.

John J. Lowe, PhD
Director, Global Center for Health Security





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A GCHS History: Over Two Decades of Emergency Preparedness

In the aftermath of the September 11th attacks, the University of Nebraska Medical Center (UNMC) was among several institutions nationwide to receive federal funding to strengthen bioterrorism preparedness. In 2004, UNMC partnered with the Nebraska Department of Health and Human Services and Nebraska Medicine (NM) to plan the Nebraska Biocontainment Unit (NBU). When it opened in 2005, the NBU became the largest unit of its kind in the nation, designed to safely care for patients with highly contagious and life-threatening infectious diseases, including SARS, smallpox, plague, Ebola virus disease, and other viral hemorrhagic fevers.

High-profile events—such as the treatment of Ebola patients from Africa in 2014 and the quarantine and isolation of travelers at risk for COVID-19 in 2020—cemented UNMC and NM as national leaders in managing major healthcare emergencies. Behind these headline moments, however, is a sustained, year-round commitment by dedicated clinicians, researchers, and educators working to advance preparedness and response.

To meet the growing demand for health security expertise, UNMC established the Global Center for Health Security (GCHS) in 2017, built around four core domains: clinical operations, education and training, research, and international partnerships and innovation. Since its founding, GCHS has played a critical role in addressing local and global health threats—providing timely, accurate information, training frontline healthcare workers, and driving innovation in diagnostics, research infrastructure, and healthcare worker protection.



2014

U.S. Department of State asked the Nebraska Biocontainment Unit to care for deployed Americans with Ebola.

2015

NETEC was established by UNMC/Nebraska Medicine, Emory University, and Bellevue Hospital Center and is co-led by all three partners.

2018

UNMC/Nebraska Medicine was designated as one of two sites for RDHRS by ASPR.

2019

The Training, Simulation & Quarantine Center (TSQC) opened.

2023

UNMC received the Negatively Pressurized Conex (NPC) and the UN Board of Regents approved the Infectious Diseases Air Transport (IDAT) training facility.

2024

GCHS responded to Marburg virus, H5N1, and Lassa fever.

“Over the past year, I have had the privilege of engaging in several of the Global Center for Health Security’s international initiatives, including the East Africa Region Global Health Security Summit in Mombasa, Kenya. The summit marked a key milestone in advancing regional collaboration and pandemic preparedness across the 14-country East Africa region.”

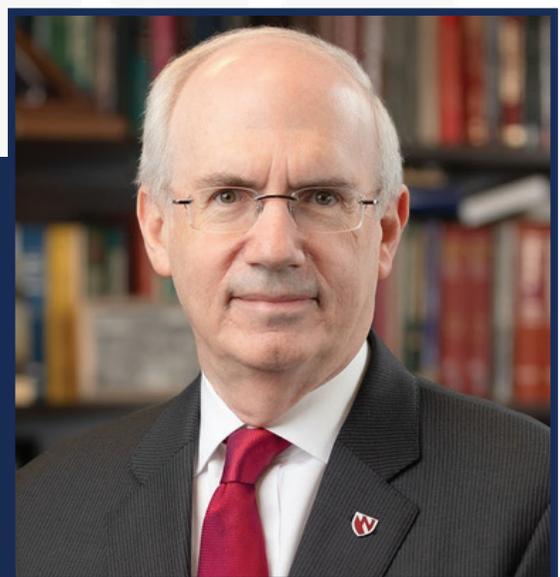
The GCHS remains steadfast in its commitment to these global partnerships, as demonstrated through recent delegation visits from Uganda and Kenya and the signing of a Memorandum of Understanding with the Japan Institute for Health Security. Collectively, these efforts strengthen our shared mission to build sustainable health systems, enhance response capacity, and advance global health security through research, education, and coordinated action.”

- H. Dele Davies, MD, interim UNMC Chancellor

The GCHS brings together a wide range of core programs and capabilities dedicated to advancing preparedness and response. Under its umbrella are specialized facilities, expert teams, and innovative programs that play vital roles in protecting public health and strengthening readiness for emerging infectious diseases.



| | |
|--|---|
| <p>2017</p> <p>UNMC/Nebraska Medicine established the Global Center for Health Security</p> | <p>2018</p> <p>US Air Force established the Center for Sustainment of Trauma and Readiness Skills (C-STARS) Omaha at UNMC.</p> |
| <p>2020</p> <p>The National Quarantine Unit and the Nebraska Biocontainment Unit were activated during the COVID-19 pandemic.</p> | <p>2022</p> <p>Nebraska was identified as a National Disaster Medical System (NDMS) pilot site.</p> |
| <p>2025</p> <p>GCHS deployable teams assisted with outbreak response in Uganda for Ebola Sudan virus.</p> | <p>2025</p> <p>GCHS co-convened the East Africa Region Global Health Security Summit.</p> |



"The Global Center for Health Security has continued to advance its mission of strengthening preparedness and response to infectious diseases and major health emergencies.

Through impactful work—from supporting the Lassa fever response in Iowa to deepening international partnerships in East Africa and Japan—the center demonstrates a sustained commitment to global and domestic readiness.

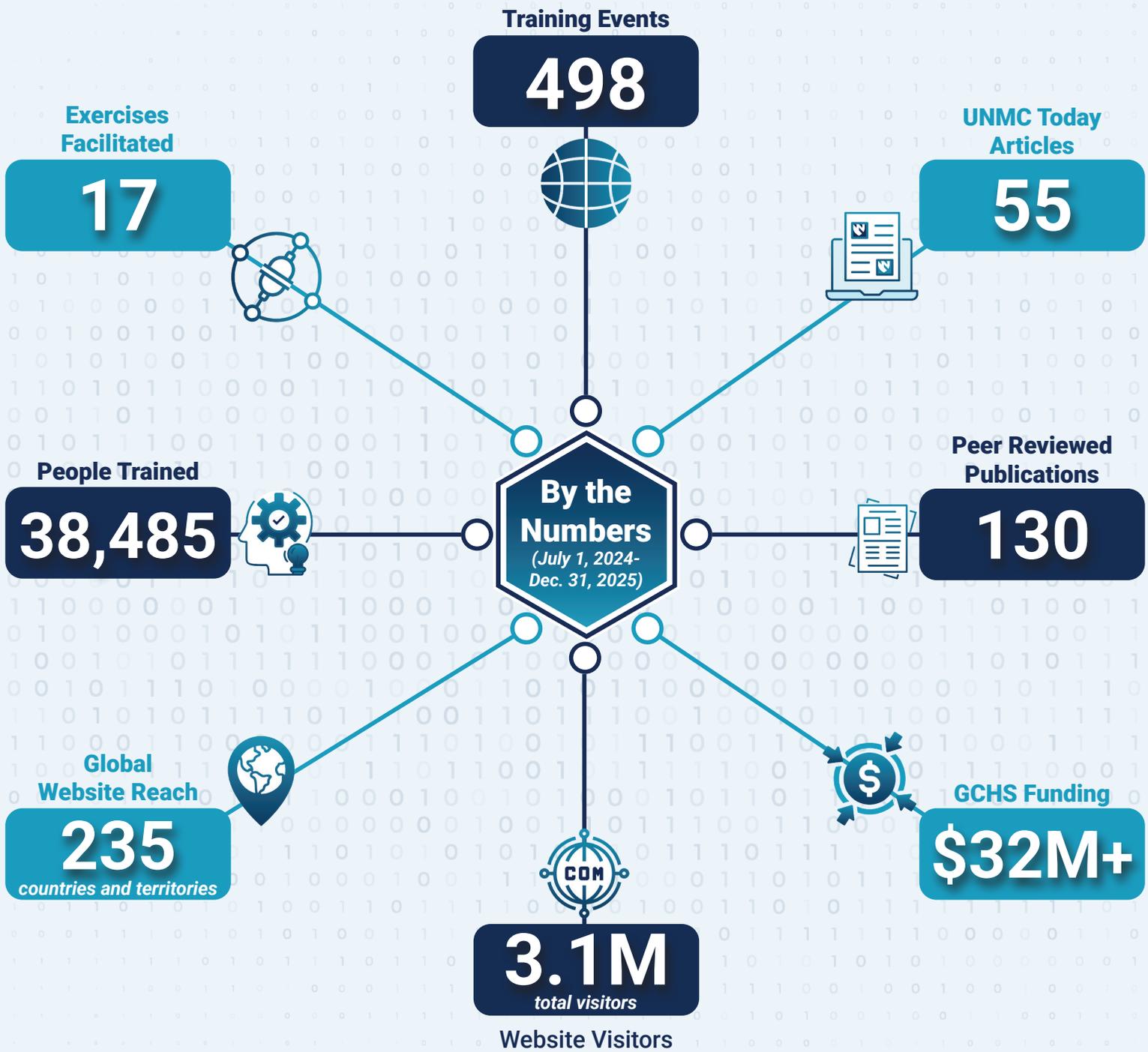
By fostering collaborative leadership through research, education, and hands on training, the Global Center is uniquely prepared to help ensure health systems are prepared to meet the challenges of the future."

- Jeffrey P. Gold, MD, President, University of Nebraska System



- Sept. 2024** The NBU hosted an event marking the 10th anniversary of its activation for Ebola in 2014
- Oct. 2024** GCHS and NBU team members were deployed to assist with a case of Lassa fever in Iowa.
- Oct. 2024** UNMC was named as one of ten regional centers for public health preparedness and response across the nation, called the Region 7 CDC Center.
- Jan. 2025** GCHS served as a co-convenor in the East Africa Region Global Health Security (EARGHS) Summit in Mombasa, Kenya.
- Jan. 2025** National Emerging Special Pathogens Training and Education Center (NETEC) and National Special Pathogen System (NSPS) hosted an exercise to prepare the U.S. for the 2026 World Cup.
- Mar. 2025** NETEC conducted an annual readiness assessment of the NBU's preparedness as the Region VII Special Pathogens Treatment Center (RESPTC).
- April 2025** GCHS welcomed the first HHS Administration for Strategic Preparedness and Response (ASPR) Portable Biocontainment Containerized Unit, only one of only two in the world.
- May 2025** GCHS hosted a visiting delegation from Kenya to continue a global collaboration on biosecurity issues.
- June 2025** UNMC and the Japan Institute for Health Security signed a memorandum of understanding, after a decade-long collaboration.
- June 2025** GCHS participated in the Tranquil Passport exercise, which evaluated existing plans, processes, procedures, authorities and capabilities of the Portable Biocontainment Unit while safely transporting patients with high consequence infectious diseases.
- June 2025** The NQU conducted a 3-day exercise to evaluate processes and plans to activate the NQU for the admission of 20 individuals simulated to have high risk exposure to a high consequence infectious disease.
- June 2025** UNMC and The Center for Sustainment of Trauma and Readiness Skills (C-STARS) program accepted delivery of another infectious disease military transport device, the Negatively Pressurized Conex Lite.
- Aug. 2025** GCHS hosted a delegation from Uganda to consult on collaborative partnerships in health security and biopreparedness.
- Sept. 2025** The Region VII RESPTC hosted the two-day Region 7 Special Pathogens Symposium, bringing together healthcare and public health professionals to share knowledge and strengthen special pathogen preparedness.





Did You Know?

- 
 Since 2017, the GCHS has created more than **\$2 billion** in advertising value from global media relations, boosting Nebraska's profile worldwide.
- 
 The GCHS includes **21 scholars** and **10 affiliates** who are innovative experts driving progress and collaboration in global health security.
- 
 Launched in 2022, the GCHS Transmission newsletter delivers a curated weekly summary of global health security news and data to more than **4,160** subscribers worldwide.
- 
 Each quarter, 110 NBU staff members are trained in the quarterly NBU training and exercise to maintain readiness for future activation(s).



The GCHS works near and far to bring expertise and support for preparedness and response efforts. GCHS and NBU team members worked with colleagues from local, state, and federal levels following a Lassa fever case in Iowa to prevent and mitigate further spread. Additionally, deployable teams were also involved in response efforts in both Rwanda and Uganda. Preparation activities included a nationwide World Cup tabletop exercise as well as onsite annual exercises of the National Quarantine Unit and the Nebraska Biocontainment Unit.

In fall 2024, the NBU marked the ten-year anniversary of providing care to repatriated Ebola patients, an event that brought Nebraska Medicine and UNMC to the forefront of special pathogen care. The GCHS celebrates the contributions and legacy of two colleagues that were integral to the establishment and operations of the NBU, Dr. Phil Smith, an infectious disease pioneer, and Shelly Schwedhelm, a long-time preparedness and response champion.

A Decade Since Ebola:

Celebrating 10 Years of the Nebraska Biocontainment Unit's National Leadership in Biopreparedness

The Nebraska Biocontainment Unit commemorated the 10-year anniversary of the 2014 Ebola activation with a special event at UNMC on September 26th, 2024. The event was attended by past and present NBU team members, as well as multiple university and hospital leaders and local and state public health authorities. Distinguished guests included Dr. Richard Sacra, who was the first Ebola patient treated in the NBU, Dr. Tim Uyeki from the CDC, and Dr. Phil Smith, Medical Director Emeritus of the NBU. The event celebrated the accomplishments of the NBU team and acknowledged the support of both internal and external partners in the building and maintenance of biopreparedness programs at UNMC/Nebraska Medicine.



Rick Sacra, MD, returned to UNMC for the 10th anniversary of the Nebraska Biocontainment Unit's activation, a decade after being its first Ebola patient.

The NBU was founded in 2005 by Dr. Phil Smith, Chief of the UNMC Division of Infectious Diseases, who recognized the need to provide safe and effective care for patients with highly hazardous communicable diseases. NBU Ebola activation in 2014 resulted in national and international attention for the NBU and UNMC/Nebraska Medicine. This was followed by significant program-building, eventually culminating in the formation of the National Emerging Special Pathogens Training and Education Center with national biocontainment partners, designation as a Region 7 Special Pathogen Treatment Center, development and use of the National Quarantine Unit for the first COVID-19 cases, formation of the Global Center for Health Security and many other funded programs and initiatives.



Remembering Dr. Phil Smith

Dr. Phil Smith, MD, a long time faculty member in the UNMC Division of Infectious Diseases and founding medical director of the Nebraska Biocontainment Unit, passed away on July 22, 2025, at the age of 78.

Widely regarded as the father of biopreparedness in Nebraska and the state's first hospital epidemiologist, Dr. Smith's visionary leadership helped position UNMC and Nebraska Medicine as global leaders in the fight against high-consequence infectious diseases. His legacy lives on in the institutions he helped build, the lives he protected, and the future he envisioned.



Advancing Readiness Across the Region: Major Exercises and Outcomes

The GCHS and its partners conducted a series of multi-agency exercises to strengthen regional and national readiness for complex health and disaster emergencies. These included readiness assessments, burn and pediatric surge coordination drills, infectious disease activation exercises, and military casualty response simulations. These exercises collectively demonstrate strong collaboration, operational capability, and an enhanced all-hazards preparedness posture across Region VII and beyond.

November 2024

NDMS Omaha Pilot Exercise



NDMS Pilot Site team members participated in the Omaha Federal Coordinating Center (FCC) full-scale exercise at Offutt Air Force Base. This exercise aimed to test the capabilities of the Omaha FCC in the event Omaha would receive military casualties during a large-scale combat operation.

August 2024/March 2025

R7DHRE Burn Exercises



R7DHRE and the American Burn Association's Midwest region conducted two multi-agency tabletop exercises with over 200 participants from 12 states, testing the newly-developed 9-state Midwest Region Burn Disaster Plan. Results showed improved pre-hospital coordination, burn center surge capacity, and poison center roles, with feedback highlighting cross-state collaboration, resource awareness, and a 74% increase in readiness for large-scale burn events.

August 2025

R7DHRE Pediatric Surge Exercise



R7DHRE conducted the region's first pediatric surge tabletop exercise, engaging more than 180 participants from 80 organizations. Participants examined integration of non-pediatric hospitals into trauma response and the emerging role of the Region 7 Pediatric Medical Operations Coordination Center, initiated by R7DHRE in partnership with Children's Mercy Kansas City as a first-of-its-kind, multi-state capability. The exercise highlighted strengths and gaps to strengthen regional pediatric readiness.

March 2025

NBU Exercise



NETEC conducted an annual readiness assessment of the NBU's preparedness as the Region VII Special Pathogens Treatment Center, including a communication drill, patient transfer/clinical procedure exercise, and review of Emergency Department's Identity, Isolate, and Inform process. NETEC praised the NBU's strong cross-department collaboration and issued a report on the unit's strengths and opportunities.

June 2025

NQU Exercise



The NQU conducted a 3-day exercise to test activation plans for admitting 20 simulated high-risk individuals, assessing coordination across transportation, diagnostics, monitoring, and public health. The exercise confirmed strong multi-agency collaboration, operational readiness, and enhanced staff proficiency.



NSPS Gears Up for 2026 World Cup



In summer 2026, the United States will co-host the FIFA World Cup, welcoming millions of fans to 16 host stadiums in North America, 11 of which will be in the U.S. Recognizing the health security threat, the National Special Pathogen System (NSPS) held a virtual tabletop in January 2025 to simulate the public health, healthcare, and emergency services response to a special pathogen outbreak.

An estimated 500 people from across the 10 HHS regions and the federal government participated in the exercise.



ASPR Tests Portable Biocontainment Unit in Full-Scale Exercise

In June 2025, the Administration for Strategic Preparedness and Response implemented a full-scale exercise to test a portable biocontainment unit with air and ground capabilities. A team from GCHS assisted in the evaluation of the multi-day exercise which simulated the movement of eight US citizens from Toronto, Canada to seven unique US biocontainment units.



The Tranquil Passport Exercise included more than 50 organizations including NETEC and GCHS.

CDC Selects UNMC and Iowa to Boost Region 7 Public Health Preparedness

UNMC, in partnership with the University of Iowa's College of Public Health, has been designated as one of ten CDC Regional Centers for Public Health Preparedness and Response (PHPR).

The Region 7 CDC Center will play a critical role over the next five years working with state, tribal, local, and territorial (STLT) partners to enhance the region's capacity to prepare for and respond to public health emergencies.



Learn more about the Region 7 CDC Center.



From Statewide to Regional: Enhancing Outbreak Preparedness

In January 2025, GCHS launched the Region 7 Infectious Disease Briefings in collaboration with the Region VII Disaster Health Response Ecosystem (R7DHRE), transitioning from its previous biweekly statewide briefings.

This strategic shift expanded engagement to healthcare and preparedness partners across HHS Region 7 (Iowa, Kansas, Missouri, and Nebraska) and beyond, strengthening regional coordination through timely outbreak intelligence and expert-driven insights.



Honoring Shelly Schwedhelm: Four Decades of Service, Leadership, and Dedication

After more than four decades of unwavering service, Shelly Schwedhelm—nurse, leader, mentor, and emergency preparedness trailblazer—stepped into retirement in early 2026. Her departure marks the end of an extraordinary era at Nebraska Medicine, UNMC, and the GCHS, where her presence has been nothing short of foundational.

Shelly's journey began in 1982, when she first walked through the doors of the emergency department as a young nurse, full of energy and purpose. From those early days, it was clear she was destined for more than just a job; she was building a calling. Over the next 43 years, Shelly wore many hats: flight nurse, OR and ER director, project executive director, and ultimately Associate Director for Clinical Operations and Emergency Management at the GCHS. But no matter the title, her mission remained the same: to lead with heart, act with courage, and serve with integrity.

Reflecting on Shelly's career, Angela Hewlett, MD, MS, medical director of the NBU said, "[Her] unwavering dedication and commitment to excellence have unequivocally elevated and advanced the NBU, NQU, UNMC/Nebraska Medicine, NETEC and the healthcare community as a whole."

Her career was defined by moments that demanded both grit and grace. In 2014, when the world watched the Ebola crisis unfold, Shelly was at the forefront, guiding care for repatriated Americans and helping shape the national response through education and training. Then came February 2020, when the COVID-19 pandemic reached U.S. shores. Shelly once again rose to the challenge, leading the quarantine and biocontainment efforts for 57 Americans returning from Wuhan. She later helped care for passengers from the Diamond Princess cruise ship, all within the newly opened National Quarantine Unit; a facility she helped bring to life.

In the final stretch of her career, Shelly continued to break new ground. She led the development of the National Special Pathogen System, served as principal investigator for the Region VII Disaster Health Response grant and the National Disaster Medical System Pilot Program, and remained a pillar of support for Nebraska Medicine's emergency management efforts. She also gave her time generously to the Omaha Metropolitan Healthcare Coalition and chaired the board of a local nonprofit.

"Her accomplishments are innumerable, and she inspires others through her actions, shaping the careers of many of us who have been fortunate enough to work with her over the years", said Hewlett. "She has truly been the epitome of a leader and will leave a lasting legacy."

Now, as she steps into retirement, Shelly isn't slowing down; she's just shifting gears. She's looking forward to more time with her husband of 46 years and their ten grandchildren, savoring slow mornings with a good cup of coffee, and embracing the quieter joys of life after a career spent in constant motion. Shelly's legacy isn't just in the programs she built or the crises she helped manage—it's in the lives she touched, the teams she inspired, and the example she set. Her story is one of resilience, compassion, and fearless leadership. And while her daily presence will be deeply missed, her influence will continue to shape the future of emergency preparedness for years to come.



From UNMC Today:
*'National treasure'
Shelly Schwedhelm
ready to step away*



Shelly and team members during a walkthrough of the surge tents set up outside the Emergency Services entrance at Nebraska Medical Center during the COVID-19 pandemic.



"Shelly Schwedhelm has provided a trifecta of leadership for the Global Center of Health Security. Throughout its early development and later growth she has been critically important to its successes, providing practical foundational expertise, operational skills, and innovative vision."

- Chris Kratochvil, MD, Vice Chancellor for External Relations, UNMC; Vice President for External Relations, University of Nebraska System



A Unified Response:

Managing a Lassa Fever Case Through Regional and National Coordination

Following the death of an individual diagnosed with Lassa fever, the GCHS and NBU assisted colleagues at the University of Iowa Healthcare Medical Center, other healthcare facilities and public health, and EMS agencies in post-case response efforts. Meanwhile, efforts in Omaha were being made to ready the NBU and NQU if an additional patient or cluster of patients required monitoring or specialized care.

Prior to diagnosis, over 100 healthcare and emergency personnel were exposed to the patient, prompting monitoring and preparation for potential additional Lassa fever cases. The GCHS and NBU team members deployed to Iowa and worked on the ground to build capacity and ensure readiness in Iowa City and surrounding communities.

Examples of the GCHS's activities included facilitating just-in-time trainings and reviewing special pathogen best practice protocols in addition to reviewing procedures for ambulance infectious disease preparation. The GCHS stayed informed of contact tracing and other preparedness efforts through daily coordinated calls with Iowa Public Health. As a convener, the GCHS served as a communication channel for all response agencies to provide real time updates with federal public health partners.

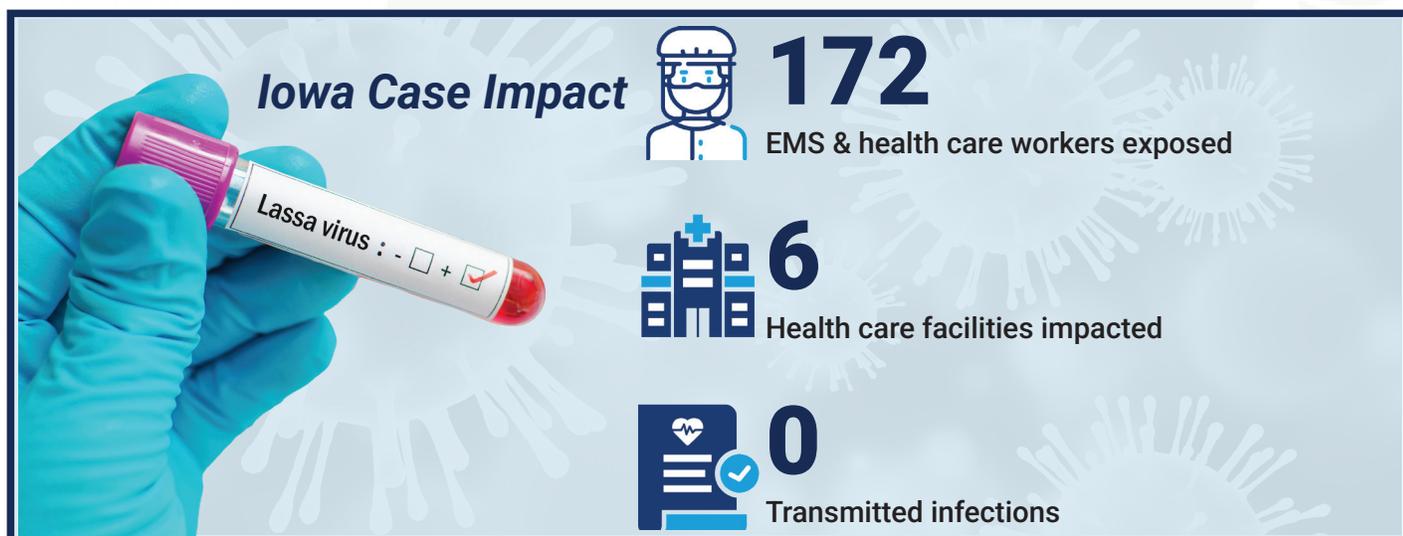
Although the situation ultimately didn't require the activation of the NBU or NQU, the team was prepared to do so. Specifically, plans were made for admitting a pregnant patient and pediatric patients which required the activation of specialized care teams. The NBU also prepared their laboratory for activation and for the use of investigational therapeutics.

The Lassa fever case demonstrated that a special pathogen outbreak can happen anywhere, at any time, and that training and infrastructure are critical to response and the prevention of further transmission.

Additionally, the collaboration with public health, first responders, and healthcare workers highlighted the extensive work and trust building the GCHS has done in building relationships with Region 7 peers.



Region 7 RESPTC provided just-in-time training to West Des Moines EMS on transport considerations during the Lassa fever outbreak response.



"It's truly amazing, the technology and, in the space of infectious disease, the thought that's gone into decreasing the likelihood of transmission to the responder and caretakers."
- John Knox, principal deputy assistant secretary for preparedness and response, HHS Administration for Strategic Preparedness and Response.



Global Response in Action: Supporting Outbreak Control and Health Security in East Africa

A deployable team from GCHS was on the ground in Rwanda to assist the country's response to a Marburg disease outbreak in fall of 2024. The deployment followed long term engagements with the Rwanda Biomedical Center, the University of Rwanda, and the University of Global Health Equity. The team served in Rwanda's national response team infection prevention and control pillar, assisting the development of training and procedures as well as providing specific technical advice on IPC innovation and other aspects of the response.

It also served as an opportunity to discuss implications of the emergency on longer term health security initiatives such as Rwanda's development of a durable high consequence infectious diseases case management capability, which would allow them to join GCHS' growing international network of treatment centers.

Following the East Africa Regional Health Security Summit in January 2025, members from the GCHS traveled to Uganda to provide assistance in the response to the outbreak of Sudan (Ebola) virus disease. During their time in Uganda, the team provided input on training and laboratory support operations in Kampala and Mbale, the two epicenters of the outbreak.



UNMC clinical microbiologist and GCHS scholar Jana Broadhurst, MD, PhD in Rwanda in support of Marburg outbreak response in November 2024.



Regional Support for Emergency Response



Supply Shortages

After Hurricane Helene disrupted 60% of the nation's IV fluid supply in September 2024, the Region 7 Disaster Health Response Ecosystem (R7DHRE) brought together over 70 healthcare and pharmacy leaders from across the region to develop strategies for mitigating the impact. This coordinated effort provided partner organizations with real-time situational awareness, expanded advocacy opportunities, and served as an information hub to support healthcare facilities in managing, conserving, and sharing best practices and supplies during the shortage.



Blood Culture Bottle Shortage

In July 2024, a materials shortage disrupted the supply of blood culture bottles. In response, R7DHRE convened hospital association leaders and lab professionals to identify best practices, alternative testing methods, and mitigation strategies. This collaboration led to the development of validation protocols for using alternate bottles—helping facilities manage the shortage and prepare for future disruptions.



Measles

In response to the measles outbreak in 2025, the R7DHRE established a dedicated page within their Alert Center. This resource includes national communication, data, guidance, state public health pages for Region 7, and weekly case updates.



H5N1

GCHS programs developed educational materials and exercises in anticipation of a potential H5N1 outbreak. Region 7 RESPTC created an EMS flyer on identify-isolate-inform protocols, supported a September 2025 tabletop exercise, and provided situation reports to regional workgroups. NETEC also hosted a global rounds on H5N1 in May 2024, drawing over 100 participants from 12 countries.



The GCHS continues to fortify relationships with global health security experts while also welcoming new partnerships. From a summit with multi-sector representatives in East Africa to the signing of an MOU with the Japanese Institute of Health Security, the GCHS team’s efforts not only span the globe but also include diverse approaches to expanding its international impact and reach.

EARGHS Summit Sparks Regional Collaboration to Advance Health Security in East Africa

In January 2025, the GCHS helped convene over 300 participants in Mombasa, Kenya for the East Africa Region Global Health Security Summit. The event united professionals from public health, academia, government, and the private sector to strengthen relationships and explore innovative approaches to health security across East Africa. Focusing on a “whole of community” approach, attendees engaged in workshops, panels, and plenaries addressing resilient health systems, future threats, and infection prevention.

UNMC speakers included Drs. John Lowe, James Lawler, Nada Fadul and UNMC Interim Chancellor Dr. Dele Davies as well as multiple national ministers of health and former president of Kenya, Uhuru Kenyatta. The summit was co-convened by GCHS, Kenya Ministry of Health, Kenya Vision 2030 Delivery Board, Africa CDC Eastern Africa RCC, Amref International University, and Jumuiya Economic Development Secretariat.



James Lawler, MD, MPH, FIDSA, GCHS Associate Director of International Programs and Innovation; John Lowe, PhD, GCHS Director; Tim Theuri, MD, President and CEO, Kenya HealthCare Federation; H. Dele Davies, MD, Interim Chancellor, UNMC; Amit N. Thakker, MD, Executive Chairman, Africa Health Business.

GCHS team members played key roles in planning and execution. Participants came from 19 countries, with a strong online presence and notable attendees from the UN, Africa CDC, and WHO.

To conclude the summit, nine member states signed a communiqué committing to stronger preparedness and response systems. Post-summit, GCHS has continued partnering with regional organizations to launch the African Center for Global Health Security, which will lead efforts in training, IPC programs, and supply chain improvements. The summit also inspired a health security symposium at the Africa Health Business Summit in Nigeria.



UNMC Interim Chancellor H. Dele Davies, MD, attended the EARGHS Summit in January 2025.



“This summit [provided] a unique opportunity to engage with key stakeholders on the critical health security challenges facing East Africa while exploring sustainable solutions to strengthen regional health systems.”
- Office of the Former Kenya President Uhuru Kenyatta



GCHS Advances Partnerships at the African Health Business Symposium

In July 2025, the GCHS participated in the African Health Business symposium, focusing on government healthcare funding, regulatory harmonization, and private sector involvement. Discussions highlighted insights from the January 2025 East Africa Region Global Health Security Summit and the Africa Center for Global Health Security's role in pandemic preparedness.

A Decade of Collaboration: UNMC and Japan Institute for Health Security Sign MOU

UNMC has formalized its decade-long partnership with the Japan Institute for Health Security (JIHS) through a Memorandum of Understanding (MOU) signed in June 2025. This agreement strengthens a shared commitment to research, training, and operational coordination.

The collaboration began in 2016, when a Japanese delegation visited UNMC to study its response to the 2014 West Africa Ebola outbreak. Since then, the partners have engaged in international health forums, discussed clinical research networks, and participated in joint training exercises. JIHS has incorporated elements of UNMC's Nebraska Biocontainment Unit, recognized worldwide as a gold standard, into its own high-level isolation and infectious disease care systems.

The MOU signing visit also underscored UNMC's leadership through the GCHS and NETEC in advancing international training initiatives.



UNMC Interim Chancellor H. Dele Davies, MD, signed the Memorandum of Understanding with Norio Ohmagari, MD, PhD, of the Japan Institute for Health Security.

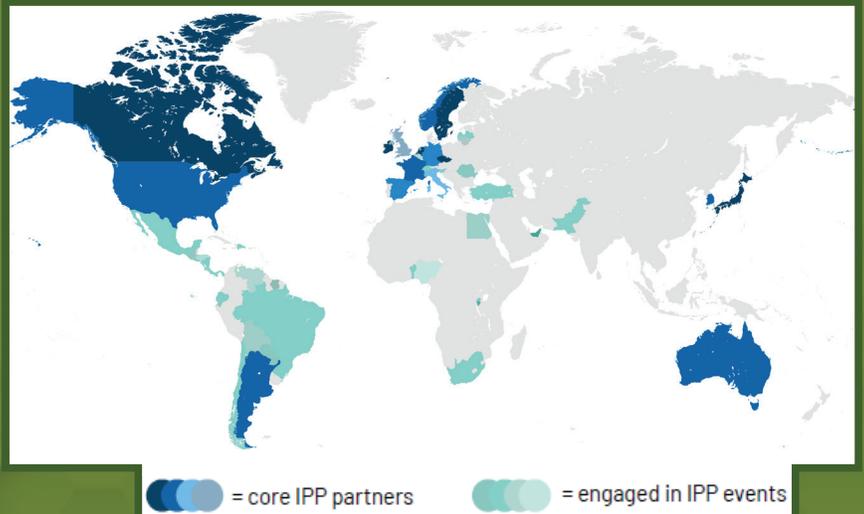


NETEC Strengthens Global Health Security Through Partnership and Preparedness

International Partnerships & Programs (IPP) works to expand global collaboration through technical and strategic initiatives, including expert forums, high-level international engagements, and targeted training and tabletop exercises. These efforts reinforce NETEC's global visibility and role as a trusted leader in special pathogens preparedness.

Connected Experts Through Global Rounds IPP hosted 6 Global Rounds virtual sessions which brought together 532 international experts specializing in high-consequence infectious diseases (HCIDs) and high-level isolation units (HLIUs) from 30 countries.

These sessions covered important topics such as HCID transportation, pediatric care in high-level isolation, and lessons learned from the Marburg outbreak in Rwanda.



NETEC's network includes 60+ countries, with core partners in blue and participating nations in green.

Strengthened Regional Capacity and Strategic Partnerships

In response to a request from the Pan American Health Organization (PAHO), NETEC supported an in-person HCID medical evacuation training workshop in Panama. This event trained Ministry of Health representatives from across Latin America and strengthened regional health security. NETEC also fostered peer-to-peer partnerships between HHS-designated Regional Emerging Special Pathogen Treatment Centers (RESPTCs) and HLIUs in Canada, South Korea, and Japan.

Provided Technical Assistance and Global Leadership

NETEC subject matter experts provided targeted technical assistance worldwide, responding to a range of support requests. NETEC experts participated in international conferences, summits, and exercises, further elevating NETEC's global visibility and reinforcing its role as a trusted leader in special pathogen preparedness and response.



Through strategic military and federal partnerships, GCHS advances readiness and innovation to address high-consequence infectious disease threats and strengthen national security. These efforts combine specialized training, cutting-edge research, technology development, and global engagement with military and civilian expertise to improve biocontainment care, aeromedical transport, diagnostic evaluation, and surge planning for complex crises. Together, these initiatives reflect a proactive, comprehensive approach to preparedness and resilience.



C-STARS Omaha at the Leading Edge of Biocontainment Care and Aeromedical Readiness

The Center for Sustainment of Trauma and Readiness Skills (C-STARS) Omaha is a medical training program offered through the U.S. Air Force School of Aerospace Medicine (USAFSAM) in partnership with the University of Nebraska Medical Center/Nebraska Medicine.

The C-STARS program was designed to prepare Air Force medical personnel to respond to highly hazardous communicable diseases, ensuring operational readiness and clinical excellence. C-STARS Omaha exemplifies military readiness, academic excellence, and, while pursuing public health integration, is the only military/civilian partnership site for biocontainment care training.

Expertise

The program is comprised of physicians with subject matter experience and knowledge in infectious diseases, adult and pediatric critical care, pulmonology, trauma surgery, anesthesia and flight medicine. Nurses, respiratory therapists and a flight paramedic bring experience in trauma and emergency medicine, infection prevention and critical care air transport. Rounding out the clinical component are technical experts in public health, biomedical equipment and administration.

These diverse backgrounds bolster the military and civilian partnership to advance readiness. The program expanded in 2025 with the addition of six new members, growing partnerships with the National Guard and Nebraska’s Children’s Hospital.

C-STARS Omaha Roles

- 6** Physicians
- 3** Nurses
- 1** Flight Medic
- 2** Administrators
- 1** Public Health Technician
- 2** Respiratory Care Practitioners
- 1** Biomedical Equipment Technician



Readiness through Training, Research, and Partnerships

The Principles of Biocontainment Care course, a cornerstone of C-STARS Omaha's training program, focuses on teaching enhanced infection prevention and control procedures for managing patients in biocontainment environments. 214 students have been trained in the course since its inception (89 students in the most recent year), which includes infectious disease physicians, air evacuation nurses, medical techs, infection preventionist nurses, critical care air transport team members, and multiple health care professionals.

Training

The Infectious Disease Air Transport (IDAT) course is currently in development to advance safe patient movement for high-consequence infectious diseases. A major milestone supporting this effort was acquiring the Negatively Pressurized Conex Lite (NPC-Lite), a compact biocontainment unit used during the COVID-19 pandemic.

Similar to the Negatively Pressurized Conex that arrived at UNMC in 2023, this version is more compact—30 feet long and 13,000 pounds compared to the original's 40 feet and 20,000 pounds—resulting in greater versatility.

Plans are underway for an IDAT Training Facility that will serve as the dedicated site for aeromedical transport of military personnel exposed to high-consequence infectious disease (HCID). It will also support future military patient-transport collaborations with other federal agencies, state-based Guard units and civilian partners.



C-STARS team members explore the NPC Lite upon arrival at UNMC. Scan the QR code for the full NPC Lite story.

Photo credit: Kiley Cruse, Chief Photographer, Strategic Communications, UNMC



Research

C-STARS Omaha, in partnership with the Air Force Research Lab and UNMC, is advancing research on Category A waste management and contamination-mitigation practices. Current projects include evaluating waste-compression techniques and identifying optimal viral-filter placement to reduce aerosolization in ventilated patients. The team is also pursuing broader innovation opportunities—ranging from biosensor integration to improved hydration and cooling in enhanced PPE, as well as remote monitoring capabilities outside the NPC/NPC-L during aeromedical transport.

Partnerships

The team supported 15 Department of Defense-sponsored activities and key federal exercises, including ASPR's Tranquil Passport and the NQU Activation. International engagements in Antigua, Canada, Tanzania, Germany, the Netherlands, and Lithuania reflect the global relevance of their mission.



C-STARS team members provide training in the Principle of Biocontainment Course.

Photo credit: Kiley Cruse, Chief Photographer, Strategic Communications, UNMC



U.S. Sen. Deb Fisher received a tour of the NPC and NPC-Lite in November 2025 by C-STARS Director Col Elizabeth Schnaubelt, MD.

Photo credit: Kiley Cruse, Chief Photographer, Strategic Communications, UNMC



"UNMC's Global Center for Health Security and Davis Global Center are amazing assets for the United States and the nation's military in preparing for the future emergence of highly contagious pathogens and diseases."
-U.S. Rep. Mariannette Miller-Meeks, MD, of Iowa



Meet the C-STARS Omaha team



National Strategic Research Institute: Advancing National Security through Science & Innovation

The University of Nebraska's University Affiliated Research Center - NSRI focuses on national security research in chemical, biological, radiological, and nuclear weapons detection and defense. Key programs include medical countermeasure development, biological threat characterization, disease surveillance, and infectious disease aeromedical transport. Sponsored by the U.S. Strategic Command, NSRI serves as a trusted agent to the federal government and leverages the expertise and capabilities of the four Nebraska University campuses.

National Disaster Medical System (NDMS) Omaha Pilot: Building Military/Civilian Readiness for Large-Scale Emergencies

The NDMS Omaha Pilot Sustainment focuses on strengthening military-civilian collaboration to enhance healthcare system readiness for large-scale combat operations. Current priorities include patient tracking analysis, Federal Coordinating Center (FCC) steering committee expansion, refinement of patient reception site operations at Offutt for incoming casualties and coordinated planning with the VA Office of Emergency Management to define roles, resource needs, and a three-year exercise plan.



Nebraska Medicine and UNMC team members work alongside the CERF-P Guard Team during a NDMS exercise in November 2024.

Global Health Engagement Research Initiative: Innovating Safe Isolation & Transport Solutions

A one-year award under the Global Health Engagement Research Initiative is advancing safe and effective isolation care transport through refinement of the ISTARI Transport device. Building on prior prototypes and operational exercises that yielded rigorous assessment and input from first responders, ground and aeromedical transport, critical care, infectious diseases, and hospital services, the project supports continued refinement of the prototype and will advance manufacturing and regulatory work to bring the product into medevac practice for military and civilian use.

TARMAC Initiative: Global Partnerships in Pathogen Characterization & Countermeasure Readiness

The Targeted Acquisition of Reference Materials Augmenting Capabilities (TARMAC) Initiative is a Joint Program Executive Office (JPEO) funded program focused on characterizing pathogens of military interest to ensure existing medical countermeasures remain effective against current threats. When samples cannot be returned to U.S. labs, the team engages with local institutions to provide genomic sequencing support and training. These efforts support public health response during outbreaks and foster sustainable and mutually beneficial global relationships. Thus far, support has been provided to laboratories in the Democratic Republic of Congo, Ghana, Laos, Liberia, Malaysia, Rwanda, Senegal, and South Korea.

Independent Verification & Validation: Strengthening Defense Through Evaluation

Independent Verification and Validation efforts for Defense Advanced Research Projects Agency (DARPA) and Joint Program Executive Office (JPEO) through partnerships with NSRI have helped the government evaluate the efficacy of diagnostic platforms and develop new materials and prophylactic countermeasures to protect warfighters from chemical and biological exposures. A new partnership with DARPA, ASPR and USU supports a government effort to develop points of need for drug manufacturing and regulatory approval.

Building on the Fly by Design: Strengthening Military/Civilian Healthcare Preparedness

The GCHS, in partnership with the Uniformed Services University's National Institute for Defense Health Cooperation, is advancing military and civilian healthcare response capabilities for extreme crisis events. Building on the Fly by Design convenes key preparedness and response leaders from across sectors to develop a process and solutions for rapidly expanding national healthcare capacity during worst-than-worst case scenarios. Key findings from an initial planning meeting were used to design a workshop that tested this process and produced strategies to enhance the nation's healthcare response during war and other severe crises.



The Global Center for Health Security remains committed to advancing global preparedness and response. Through its core domains of research, education and training, clinical operations, and international partnerships and innovation, GCHS continues to strengthen health security systems at home and abroad—advancing initiatives that improve readiness for emerging threats.

Preparedness and Response

In the coming year, our core programs, including R7DHRE, the Region 7 CDC Center, and the Region 7 Emerging Special Pathogen Treatment Center, will continue to lead comprehensive training, exercises, and preparedness initiatives that strengthen health readiness and response. As the FIFA World Cup 2026 and 2028 Summer Olympic and Paralympic games approach, preparedness and response training will remain a priority.

These efforts are focused on equipping healthcare professionals and systems with the knowledge, skills, and operational experience needed to respond effectively to emerging infectious diseases, strengthen coordination and communication among regional and national partners, and advance innovative strategies that support resilient, adaptable healthcare systems.

International Engagement

The partnership with the Japan Institute of Health Security will continue to grow through joint health forums, clinical research, and collaborative training. GCHS is committed to deepening relationships with international development partners, academic and research institutions, philanthropic organizations, and private sector innovators.

Over the next two years, the GCHS International Engagement team will focus on institutionalizing the Africa Center for Global Health Security, expanding collaborations initiated through EARGHSS 2025, and driving measurable health security initiatives across East Africa. With Kenya as the regional hub and partnerships rapidly expanding, GCHS is entering a transformative phase in how East Africa prepares for and responds to emerging health threats. In parallel, NETEC's International Programs and Partnerships will continue advancing global engagement through international rounds and tabletop exercises with partners worldwide. Together, these initiatives reinforce GCHS's commitment to global collaboration, pandemic preparedness, and a unified network for health security.

Military Collaboration

In the year ahead, GCHS will continue its close partnership with C-STARS Omaha to further develop the IDAT program. Through this collaboration, medical center experts and C-STARS will design training frameworks, conduct exercises, and lead research to improve response capabilities for high-consequence infectious diseases in the field. Plans are also progressing for a purpose-built, advanced IDAT facility—an initiative that will significantly enhance the nation's capacity to safely transport patients with HCIDs to higher levels of care.



The RESPTC team leading a PPE training session at the Region 7 Special Pathogens Symposium.



Strengthening global health security through continued collaboration with international partners.



C-STARS Omaha continues to advance the Infectious Disease Air Transport (IDAT) program with enhanced training, research, and plans for a state-of-the-art facility.



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- Department of Emergency Medicine
- Department of Internal Medicine
- Department of Ophthalmology and Visual Sciences
- Department of Pathology, Microbiology and Immunology

College of Nursing

College of Public Health

- Department of Epidemiology
- Department of Environmental, Agricultural and Occupational Health
- Department of Health Promotion
- Department of Health Services Research and Administration

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Mountain Plains Regional Disaster Health Response System
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University of Nebraska Medical Center
University of Nebraska Medical Center, Water, Climate & Health Program
University of Texas Medical Branch
USU National Center for Disaster Medicine and Public Health
World Health Organization- Africa Region

Select Highlighted Publications

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Global Center for Health Security honored for Uganda collaboration

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Retired Air Force surgeon general gets tour of UNMC

UNMC hosts leadership from ASPR

Abigail Lowe, PhD, is inaugural Aita Professorship recipient

UNMC hosts ambassador, delegation from Uganda

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Omaha Major John Ewing, Jr., visits UNMC

Free course to examine FDA 'GCP' standards

New portable unit boosts UNMC's biocontainment response

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Simulation lab headed for Uganda has med center roots

U.S. Reps. Bacon and Miller-Meeks visit UNMC

Dr. ElRayes offers expertise for new health security plan for Africa

East African, UNMC leaders gather at health security summit

C-STARS Director Schnaubelt, MD, promoted to colonel

Annual report highlights Global Center for Health Security

Dr. Yeh honored with early career award

Med center hosts drill in preparation for 2026 World Cup
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UNMC achievements, Oct. 18, 2024

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