Testimony of

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Chairman Hoeven, Ranking Member Shaheen, and Members of the Subcommittee, thank you for the opportunity to testify before you today regarding the Office of Health Affairs (OHA) and how our Fiscal Year 2017 budget request will allow us to further our health and homeland security missions.

Major threats to our Nation's security, such as terrorist attacks, natural disasters, or pandemics, have profound impacts on public health. The Department of Homeland Security (DHS) Office of Health Affairs leads the Department's efforts to meet those health security threats our nation faces today and prepare for the threats that will emerge tomorrow.

To us, the protection of our population is core to our mission and central to everything we do. With in-house experts including physicians, nurses, scientists, toxicologists, veterinarians, intelligence and data analysts, emergency management planners, and first responders, OHA is uniquely positioned at the intersection of public health and national security to help DHS and government leaders prepare for, respond to, and recover from the public health consequences of terrorist threats and other hazards.

OHA experts identify health and medical risks and vulnerabilities, evaluate protective actions, and understand the decisions and resources needed to effectively respond to the health impacts of terrorist attacks, large-scale disasters, and chemical and biological incidents – whether natural or intentional. We share this expertise with federal agencies and state and local governments, to build tools, guidance, and relationships, which improve the ability of responders at all levels to coordinate and work together more effectively during a crisis.

OHA leveraged our vast expertise in support of the DHS mission to protect and secure the homeland during the 2014 Ebola outbreak. As part of the whole-of-government response, OHA led coordination of DHS's Ebola response activities, which included working closely with Departmental components, federal interagency partners, and various state and local stakeholders. These efforts were instrumental in protecting the DHS workforce, the traveling public, and our Nation from this terrible outbreak. Today, we continue to build upon lessons learned from the responses to Ebola and other biological threats as we tackle the emergence—or reemergence—of viruses like Zika or Lassa Fever.

OHA currently addresses the health impacts of these incidents and how they impact homeland security from an integrated perspective, using both technical expertise and workforce health knowledge. OHA does not, however, conduct research and development. OHA works with the DHS Science and Technology Directorate to identify priority capability gaps in the Department's health security and chemical and biological mission spaces, and provides feedback to jointly assess challenges and prioritize solutions to fill those gaps.

The President's budget request for FY 2017 will support continued and improved capabilities in these areas. In FY 2017, the OHA programs and contributions discussed below are proposed to be included in a new Chemical, Biological, Radiological, Nuclear and Explosives Office. The FY 2017 request will allow continued coordination and maintenance of DHS-wide chemical, biological, and emerging infectious disease-related strategy, policy, situational awareness, periodic threat and risk assessments, and contingency planning. The FY 2017 request also supports our workforce health protection and Component operational resilience efforts.

OHA brings a very particular, extremely important set of skills and knowledge to our Nation's health security framework. We provide crucial links between homeland security components, public health communities, and interagency partners. We help the Nation prepare for, respond to, and recover from health impacts of homeland security threats, and we develop expert guidance and policy for the spectrum of medical and public health security issues. This unique contribution makes OHA indispensable to our Nation's security. OHA's programs and budget cost drivers are discussed below.

Chemical Defense

The Chemical Defense Program (CDP) is comprised of experts in medical toxicology, emergency medicine, industrial hygiene and public health who advise DHS and government leaders about chemical threats and the potential policy and planning consequences. CDP develops guidance and tools to help communities and decision-makers prepare for, respond to, and recover from terrorist attacks and accidents involving chemical agents. CDP provides extensive support at an extreme value, leveraging partners and resources to improve capabilities.

In 2014, CDP, in partnership with the Department of Health and Human Services and at the direction of the White House, released a guidance document to assist emergency planners and public health officials assess the medical resources needed to respond to mass casualties from a catastrophic chemical incident.

The Program has also worked directly with localities to conduct demonstration projects aimed at developing best practices for responding to chemical incidents in specific venues, such as mass transit, ports, and stadiums. In FY 2014, CDP completed its first demonstration project and began development of exercises in four more venues and cities, which were all completed by the end of CY 2015. CDP is now developing a final report consolidating the identified lessons learned from the five venues and cities.

FY 2017 funding will allow CDP to continue working with communities to enhance their chemical defense capabilities by developing guidance tools and implementing the best practices and lessons learned from demonstration projects.

CDP experts will also continue to provide medical toxicology and chemical defense expertise to DHS and Component leadership and federal government partners.

Biological Detection and Surveillance
Detection and defense against biological threats, be they acts of terrorism or naturally occurring, remain important mission areas for DHS. For large scale biological events, knowledge as early as possible allows informed decisions that can save American lives. To this end, the Department's operational biodetection and biosurveillance programs, the BioWatch Program and the National Biosurveillance Integration Center (NBIC), are critical to our Nation's biodefense. The capabilities are mutually reinforcing – one provides detection of selected threats at their onset in high risk areas while the other provides public health surveillance at a broader level at later stages. Each capability is supported by a biodefense R&D portfolio in the Science and Technology Directorate dedicated to creating technology options that address identified and validated capability gaps. R&D helps the Department maintains a longer-range view and ensures operational elements are not caught off guard by emerging or new trends and threats.

The BioWatch Program is the Nation's only civilian program that provides early warning in the event of an aerosolized biological attack. The program consists of planning, preparedness, exercising, training, and early detection capabilities. Deployed at more than 30 major metropolitan areas throughout the country, the system is a collaborative effort of health professionals at all levels of government. The program is operated by a team comprised of field operators, laboratory technicians, and public health officials from city, county, state, and federal organizations. Each hour gained through early detection and before the onset of medical symptoms, improves the chances that response efforts will be successful.

The BioWatch Program has succeeded in bringing together state and local public health, first responders, and law enforcement personnel, along with locally-deployed federal officials, resulting in communities that are better prepared not only for a biological attack, but also for an all-hazards response.

The current system has been, and will continue to be, extensively tested, and the program is advancing plans and building capabilities in early detection and situational awareness. BioWatch builds the collective capabilities across all levels of government to effectively and rapidly mobilize in response to an attack, mitigating the impacts of a catastrophic bioterrorism event. The BioWatch Program is a critical component of our Nation's response to minimize the impacts of a biological attack.

The relevant technical capabilities available to adversaries have only increased since the system's inception in 2003, as biotechnologies have continued their global development and dissemination. So the need for BioWatch persists. In the past two years, the capabilities of the system have been independently tested and validated. Four independent tests have been conducted over the last six years that have tested all components of the BioWatch system. This has included extensive testing of our identification assays (laboratory tests that detect selected biological agents), subsystem and system level testing in test chambers using actual threat agents, and open-air testing of simulated agents in as near an operational environment as

possible. In addition, the BioWatch Quality Assurance Program has analyzed over 30,400 samples to monitor operations against performance benchmarks and requirements. The results of these tests reinforce confidence in the system's ability to achieve its mission: detecting a large-scale aerosol release of specific threat agents in our Nation's most populated areas.

The system's capability to detect biological agents was further affirmed last year when BioWatch detected the subtype of Francisella tularensis that is pathogenic to humans during confirmed occurrences of that strain of Tularemia in Denver, Colorado. Though the agent was not disseminated by an adversary, these detections took place during a documented uptick in naturally occurring disease. By analyzing available medical surveillance data and discussing the BioWatch detections through the BioWatch National Conference Call, local, state, and federal officials were provided with additional data for decision support in responding to this occurrence of Tularemia. This shows that the BioWatch Program is able to detect an airborne biological agent in the environment.

The BioWatch Program is more than just an environmental detection system. BioWatch also helps strengthen jurisdictional preparedness in the event of a bioterrorism event through coordinating exercises and drills; providing training, guidance and assessments, and standardized methodologies for response; and by enabling a forum for all levels of government to share data and information. Over 500 state and local partners and stakeholders representing a broad cross section of government agencies have participated in BioWatch preparedness activities in the last year. BioWatch has also coordinated environmental assessment activities, including developing initial environmental sampling plans for jurisdictions to help characterize an attack. All of the program's key elements – including response – are supported by a number of federal departments and agencies, such as the Department of Health and Human Services (HHS) including the Centers for Disease Control and Prevention (CDC), Department of Defense (DOD), Environmental Protection Agency, and Federal Bureau of Investigation. BioWatch also supports major events such as Super Bowls and National Special Security Events (e.g., 2015 papal visit to three U.S. cities).

Since 2014, BioWatch has been working with DHS S&T, DOD, and other federal partners to identify technologies that would substantially improve BioWatch operations. These improvements are intended to advance the current "detect to treat" capability, which will enable us to deploy medical countermeasures before the affected population is symptomatic. Additionally, BioWatch and the National Biosurveillance Integration Center are working together to improve situational awareness at all levels of government in the event of a biological attack.

Given the evolving threats that our Nation faces, both manmade and natural, greater coordination among federal, state, local, tribal, and territorial partners is required. The National Biosurveillance Integration Center, or NBIC, is uniquely situated within DHS to provide a fusion of human health, animal health, and environmental data to develop a comprehensive understanding of the biological threat landscape and emerging incidents to ensure our Nation's decision-makers have timely, accurate, and actionable information.

Established in 2004 and transitioned to OHA in 2007, NBIC's mission is to enable early warning and shared situational awareness of acute biological events and support better decisions through rapid identification, characterization, localization, and tracking for biological events of national significance. To accomplish this, NBIC monitors thousands of data sources and leverages the expertise of fourteen federal departments and agencies, then integrates this array of information into reports on global and national biological incidents that could potentially cause economic damage, social disruption, or loss of life. Over 900 federal and 1,500 state, local, tribal, and territorial offices across this spectrum of human, animal, and environmental health and response have access to NBIC's reports and analysis.

We are cognizant that reports by the Government Accountability Office and the Blue Ribbon Panel on Biodefense have acknowledged the progress that NBIC has made delivering daily situational awareness to our partners, but have pointed out that we still have work to do to fully realize the vision of comprehensive biosurveillance integration. Towards this end, NBIC is working with the Department of Veterans Affairs on a data initiative that will help to create an aggregated national view of disease trends, while also facilitating understanding of those trends in our veteran population. Similarly, NBIC is working with DOD's Defense Threat Reduction Agency to deploy new collaboration and analytic tools that will enable biosurveillance analysts from across the government to collaboratively examine and report on emerging biological threats. NBIC's efforts are also focused on biosurveillance tools and reporting for local officials so that they can address the biological incidents emerging in their own communities, while strengthening national surveillance as a whole. NBIC will continue to advance its capacity to conduct biosurveillance reporting and analysis by developing new collaboration tools, pursuing innovative data sources and methods, and fostering greater stakeholder engagement.

Requested FY 2017 funding for the Department's biological detection and surveillance activities will enable OHA to continue biodetection operations and training in major metropolitan areas, pursue needed technological advances, and facilitate greater collaboration with federal partners to improve the quality of national biosurveillance analysis and reporting.

Health and Emerging Infectious Diseases

The Department's workforce health protection and emerging infectious disease programs build connections between current and emerging health and medical issues. Our highly skilled health and medical experts help improve DHS planning for CBRNE threats, as well as provide expertise on medical and health issues impacting the DHS workforce and those under DHS care and custody.

OHA emergency medical services (EMS) experts are focused on improving the Nation's ability to prepare for, respond to, and recover from a terrorist attack, natural disaster, or other catastrophic emergency. We achieve this by collaborating with national organizations and government entities to help identify EMS system needs and possible solutions, engaging stakeholders nationwide, and managing an EMS system for DHS.

As an example, in 2015, OHA led the development of federal guidance to help first responders save lives during an improvised explosive device or active shooter event. The guidance, *First Responder Guidance for Improving Survivability in Improvised Explosive Device and/or Active*

Shooter Incidents, translates evidence-based response strategies from the U.S. military's vast experience in responding to and managing casualties from IED and/or active shooter incidents into the civilian first responder environment.

Currently, OHA is working with the White House on Stop the Bleed, a campaign to educate Americans on how to control life-threatening bleeding before emergency medical care arrives. Stop the Bleed was born out of recommendations from the National Security Council's Bystander Working Group, and was launched on October 6, 2015, at a White House stakeholder event. The Bystander Working Group was composed of both public and private sector entities. DHS is coordinating external communications for the initiative and advising on training curriculum content for bystander courses under development by federal and nongovernmental organizations.

OHA will use FY 2017 resources to continue its support for state, local, and DHS EMS systems, complete the replacement of a new electronic patient care record system for DHS EMS providers, and support a voluntary first responder anthrax vaccine pilot initiative.

OHA's health security intelligence enterprise integrates public health with law enforcement and intelligence community partners, including at state and local fusion centers and by facilitating clearances for public health stakeholders. OHA recently launched a nationwide suspicious activity reporting training program for health professionals to assist in understanding the critical role they can play in identifying and reporting suspicious activities. With requested FY 2017 funding, we will continue to connect these worlds and strengthen the relationship between health and security to enhance preparedness efforts.

Finally, the DHS mission depends entirely on its greatest asset – the men and women of the Department who are responsible for keeping our Nation safe. OHA plays a key role in maintaining a healthy and resilient DHS workforce by anticipating occupational health threats and providing expert medical guidance to DHS and component leadership on medical and health issues impacting the DHS workforce. One aspect of this is the Department's Medical Countermeasures Program, which helps protect DHS workers from biological threats so that they can continue securing the homeland during a biological event. FY 2017 funding will allow current occupational health activities to continue, including peer-support and stress management programs to enhance employee resilience and suicide prevention.

Conclusion

In summary, requested FY 2017 funding will enable OHA to continue working to enhance the Homeland's health security capabilities by developing guidance tools and implementing best practices; strengthen the Nation's ability to anticipate, prevent, characterize, and respond to chemical or biological incidents; and continue providing the analyses, assessments, and surveillance data needed to inform and guide federal, state, and local decision-making regarding the health and medical consequences of homeland security incidents.