PROTECTING THOSE WHO SERVE USING SCIENCE-BASED SOLUTIONS
From infectious diseases to occupational and environmental exposures, threats to military health are challenging and complex. For decades, Battelle has developed and delivered solutions to help the Department of Defense (DoD), joint forces and Services to identify, understand, prepare for and mitigate the most challenging health threats to Servicemembers, units and missions. We help maintain force readiness through science-based policies, doctrine, procedures, programs and training, thereby driving improved individual health outcomes for military personnel and preserved combat power for commanders.

**OUR CAPABILITIES**

**Occupational and Environmental Health (OEH) Risk Management**

Whether in garrison at a well-established military installation or at a far-flung deployed site, Battelle adapts scientific principles to real-world OEH challenges. Our team collaborates with DoD OEH practitioners to design, conduct, manage and report on studies and projects that address traditional OEH rubrics (e.g., inhalational hazard assessment, ventilation system performance monitoring, health risk communication). We deliver advanced training and coaching in Defense Occupational and Environmental Health Readiness System (DOEHRS) to build the capacity of local OEH teams. Our unique “training while doing” model is tailored to local needs and designed for maximum retention and impact.

**Exposure Science**

At Battelle, we conduct groundbreaking research and develop novel technology solutions to solve military exposure challenges. Our capabilities include exclusive test and research facilities to study exposure risks—such as the Battelle Ambient Breeze Tunnel, where we investigate exposures to open-air burn pits. To evaluate the OEH hazards related to infrastructure (e.g., buildings and plumbing systems), we create computer models to predict and analyze health risks and communicate them to stakeholders. We can also research exposure biomarkers and genetic aspects of exposure (e.g., predisposition and expressions).

**Force Health Protection**

We identify and mitigate chemical, biological, radiological and nuclear (CBRN) and other risks to protect force health and maximize readiness. Our team conducts research and development, studies, assessments, data analyses, tests and validations of relevant scientific and technological tools, methods, processes, training platforms and programs aimed at optimizing force health protection systems. We help our military clients protect forces from hazards such as inhaled toxic chemicals, contaminated food and water, and absorbed ionizing radiation to maintain personal and unit preparedness.

**Emergency and Medical Readiness**

Battelle helps organizations prepare for public health emergencies and natural or man-made disasters. Our team helps military first responders, military public health officials and military treatment facilities plan for and respond to emergency situations through policy and doctrine improvements, program evaluation, situational analysis, course-of-action recommendations and training.

**OUR IMPACT**

**Optimizing the DoD Deployment Health Surveillance System**

U.S. Army Public Health Center (APHC) tasked Battelle to lead an ambitious three-phased effort for the Joint Environmental Surveillance Working Group to evaluate and improve the DoD deployment health surveillance system (DoDI 6490.03) and related combatant command and service policies. In Phase 1, we exhaustively organized and analyzed the current state of the system using comprehensive research, interview and survey techniques. This allowed us to understand how well actions executed by the preventive medicine professionals at deployed sites followed the intent declared in the policy. Insights gained through this research will inform the development of process-based solutions in Phase 2, which are currently in progress.

**Enhancing Biosurveillance**

The Navy and Marine Corps Public Health Center (NMCPHC) tasked Battelle to lead the analysis of emerging public health requirements for scientific and technical biosurveillance efforts. Battelle provides support through research, data analysis, evaluation and assessments. This includes OEH data analysis using data captured from deployment health and epidemiological databases. Our team uses the results of this work to recommend alternatives for and development of policy and programs designed to decrease vulnerability of military personnel, medical units and all DoD forces.
Building Industrial Hygiene Best Practices at Military Bases

The U.S. Air Force asked Battelle to evaluate their industrial hygiene (IH) practices and help them improve processes for assessing, controlling, managing, recording and communicating OEH exposures using DOEHRS. Since 2012, Battelle has delivered our Advanced DOEHRS Coaching program at dozens of Air Force bases across the world. A 2017 impact study examining IH practices and DOEHRS utilization data showed that participants in Battelle's Advanced DOEHRS Coaching program were still applying best practices in IH 2 to 4 years after learning them during the coaching events.

Enhancing Army Surety Medicine and Protecting Communities from Chemical Warfare Agents

Battelle is working with the APHC and the Chemical Materials Activity to combat threats to civilian and military personnel caused by weapons of mass destruction. As the U.S. works to dispose of chemical weapons stockpiles, Battelle supports the effort in a myriad of ways. We provide subject matter expertise in support of the Army's Chemical Stockpile Emergency Preparedness Program (CSEPP), including training courses and federal-level, full-scale emergency response exercises. Members of the Battelle Medical Team have served at U.S. Army health clinics or systems contractor clinics as medical response team members in direct support of the chemical stockpile mission. In addition, our team has conducted chemical exposure or potential exposure evaluations, provided accredited medical training (such as the Toxic Chemical Training Course) and treated actual chemical agent casualties.

Preparing Healthcare Facilities for Emergency/Disaster Response

We help military personnel and public health officials prepare for emergency situations through program reviews and evaluations, reach-back assessments, situational analyses, course-of-action recommendations and training. The Battelle Medical Team includes nationally recognized physicians, emergency and trauma nurses, quality improvement nurses, hazardous materials technicians, and paramedics who have extensive experience in emergency management. We support healthcare facilities in developing comprehensive emergency operations plans, and we deliver related training courses to enhance their response capabilities from an all-hazards perspective. One example is our Healthcare Facility Evacuation Course, developed for the Chemical Materials Activity, which builds staff competence for planning and response associated with a safe and effective healthcare facility evacuation and/or shelter-in-place effort.

Supporting Forward Deployable Preventive Medicine Units (FDPMU)

In 2002, the Chief of Naval Operations directed and funded the NMCPHC to develop, maintain and deploy FDPMUs to provide risk assessment and risk communication support for CBRN, weapons of mass destruction and toxic industrial materials. They also provide related operational preventive medicine support to deployed U.S. and allied forces for missions such as Operations Enduring Freedom and Iraqi Freedom as well as the Pacific tsunami, Pakistani earthquake and Hurricane Katrina relief efforts. Battelle supports the evolving FDPMU mission by sustaining relevant and modern capabilities to meet current and future mission requirements. We develop policy, programs, training and exercises to support the FDPMUs with rapid assessment and identification of human health hazards, and we enhance personal protection and control measures to reduce potential health threats to deployed personnel. Battelle's support helps ensure that FDPMUs can meet the new and evolving environments they face on the battlefield and in theaters of military operations.

Synchronizing Organizations for Incident Response Success

Using Battelle's Drill-Driven Integration™ (DDI) method, we synchronize incident response plans across functional teams and organizations and pinpoint the hidden gaps that could mean trouble in an emergency. The key to Battelle's DDI method is our system of “action packages.” They are very short, defined explanations of the critical actions each team/organization should be doing at a particular time, and they account for the unexpected. Each team/organization can check the matrix to see where action packages, for their own team as well as others, fall in the overall response. Our field-tested, all-in-one training and evaluation method identifies points of integration between teams or organizations, builds organizational consensus, mitigates potential risks and optimizes readiness for any kind of incident.
About Battelle
Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries. For more information, visit www.battelle.org.

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