

The evolution of battlefield medicine is happening now

By Al Burzynski, APR

The ravages of the COVID-19 virus, lessons learned from previous conventional wars, terrorist attacks, and humanitarian missions have shown the need for our country and its Global Health Security Agenda (GHSA) allies to find a solution to the scarcity of medical beds, from the battlefield to civilian hospitals. The U.S. Combatant Commands require within the Force Protection & Medical category the need to provide “far-forward, remote/austere tactical combat casualty care/prolonged field care,” “to extend the golden hour,” and to provide “rapid response to pandemic influenza/infectious disease occurrence.”



MustER Medical Response System (MRS) meets this need with a rapidly deployable, self-contained expeditionary medical treatment center designed to incorporate healthcare delivery modernization into the DOD future power. The modular medical treatment facility, which can deploy with an airborne Forward Resuscitative Surgical Team (FRST) is optimized to extend the “Golden Hour” for battlefield medical treatment. MustER MRS also will serve as a support multiplier during humanitarian missions by providing a solution for areas of the globe that have enormous challenges accessing healthcare, particularly during pandemics and disasters.

It is important to realize whether fighting a conventional war in the Pacific Theater, Eastern Europe or other areas against a sophisticated, near-peer adversary would likely result in a higher number of injuries with the technological advancements in weaponry. Consequently, this event will most likely affect the "Golden Hour" by degrading the capacity to locate, treat, and evacuate patients.

MustER’s MRS design enhances flexibility and provides the requisite medical capabilities to support the Army’s goal of developing a versatile, agile, and expeditionary medical force capable of bringing life-saving capability directly to the warfighter or via telemedicine.

For example, telemedicine would enhance the capacity of point-of-injury medical personnel to execute certain forms of surgery, such as amputation, extremity fasciotomy, or wound debridement, if medical evacuation and other life-saving measures are not existing. The treatment of hefty wounds, intra-abdominal injuries, and mutilated extremities could then be included in succeeding extended field care given by medics and corpsmen.

Together with MustER MRS, transformative innovations will serve as a support multiplier as the armed forces transition from combat surgical hospitals (CSH) to a medical system emphasizing expeditionary health service support (HSS).

MustER MRS, which can be configured to establish a 480-bed hospital, is capable of integrating medical drones to supply battlefield medics with life-saving medical supplies or blood products who cannot immediately evacuate wounded due to inaccessible terrain or enemy as well as

providing humanitarian aid in support of the GHSA across the globe. Also, MustER MRS is designed to be used where there are no drainage lines or septic tank/sewage treatment system and is equipped with waterless toilets, which can burn waste instead of flushing it away, thereby reducing septic system contamination and outbreaks of disease.

MustER MRS also provides a cost-effective, mobile hospital designed with negative pressure ventilation and aggressive infection control measures to mitigate the spread of COVID-19 while providing a solution to the shortage of medical beds across the country. During the pandemic, the U.S. Army Corps of Engineers (USACE) has been tasked to retrofit convention centers, arenas, and hotels to create 1,155 COVID-19 Alternate Care Sites (ACS) creating 15,074 COVID-19 beds at an estimated cost of 1.8 billion dollars. According to news organizations, most of these beds may have gone [unused](#) due to concern about the extent of strict infection control measures. The reusable CDC compliant MustER MRS can be purchased or rented at a fraction of the cost of a USACE ACS. While built-on-demand facilities are useful for providing basic medical services, they often cannot provide the intensive care that COVID-19 or any other serious respiratory pathogen requires.

The MustER medical response system (MRS) is engineered to withstand extreme heat, cold, and other adverse weather conditions such as tropical cyclones in Africa. The next-generation mobile hospital can be rapidly deployed anywhere in the world and will not deteriorate. As a multiplier of medical resources, MustER MRS provides the capacity for CONUS and OCONUS military treatment facilities, VA, and civilian hospitals to continue to provide successful patient surge control and immediate availability of medical beds during crisis times.

Given these points, our military must find solutions to overcome the new challenges of rapid evacuations and geographical and logistical constraints to win future conventional wars against peer adversaries. MustER MRS delivers the military medical force with an adaptable, modular solution with enhanced treatment capabilities, and provides life-saving interventions that can extend the Golden Hour for our combatants on the battlefield.

In conclusion, the MustER MRS can protect and save the lives of those who answered America's call to duty, their families, and DOD contractors supporting warfighting, peacekeeping, and humanitarian missions at home and abroad.

MustER MRS looks forward to assisting our military in boosting morale and instilling confidence in the ranks by playing a critical role in ensuring that our warfighters receive top-notch care if wounded, resulting in key stakeholders' trust in an all-volunteer force that will empower military recruiting and lead to mission success.