AI-based health solutions for the modern Warfighter

We believe we owe it to our warfighters, veterans, and their future brothers and sisters in arms to develop and apply technology to preserve their lives, enhance their healing, and return the wounded to fully functioning lives.

What is MTEC?

The Medical Technology Enterprise Consortium (MTEC) is a tax-exempt, nonprofit corporation consisting of industry, academia and nonprofit organizations committed to realizing the vision of the U.S. Army Medical Research and Development Command (USAMRDC). MTEC's main focus is to develop medical tools that better manage, treat, and rehabilitate those suffering from traumatic injury on the battlefield. As of June 2021, MTEC has issued over $450 Million in federal funding resulting in over 120 awards. The MTEC Board of Directors is chaired by Major General Lester Martinez-Lopez, MD MPH (Ret.), and is comprised of academic leaders and corporate executives with deep experience in medical technology development. Membership includes the top biomedical R&D organizations from across the nation, and from international organizations.

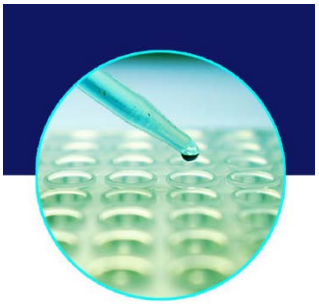
MTEC's Technology Focus Areas

- Prevention, diagnosis, and treatment of infectious diseases;
- Care of combat casualties;
- Support for military operational medicine;
- Support for clinical and rehabilitative medicine;
- Support for medical training and health information science; and

Future Conflict Scenario

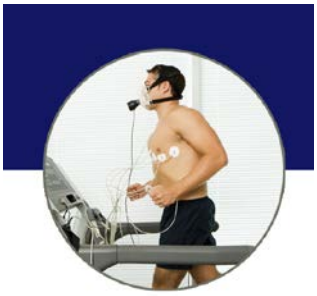
Conflict with peer or near-peer adversaries will likely result in the need for more distributed and mobile medical units and technologies that enable longer-term care of casualties in the far forward environment until they can be evacuated. One goal of the military's medical force is to "deliver the right resources to the right place at the right time." To accomplish this, we believe that Artificial Intelligence will be a key contributor to the development of new tools (hardware and software) that reduce the physical and cognitive burden on the medic so that the medic can care for multiple casualties at once and for longer periods of time until evacuation occurs.

Priority Areas where AI can be used to Support the Modern Warfighter



AI to support Military Infectious Diseases

- Rapid diagnostic and detection devices
- Wearable sensors for pre-symptomatic or asymptomatic populations
- Surveillance capabilities



AI to support Military Operational Medicine

- Advanced telehealth technologies
- Platform for the Early Identification and/or Management of PTSD
- Predicting injury patterns
- Readiness assessments
- Medical alerts for personnel based on patient medical data

AI to support Combat Casualty Care

- Resuscitation
- Stabilization
- Airway management
- Reduce major bleeding
- Help MEDICs in degraded environments, etc.
- Support autonomous care
- Decision support systems
- Intelligent Ultrasound
- Patient status & decompensation
- Identifying treatments and medications

AI to support Robotics

- Robotic-assisted diagnostics & interventions
- Vision-based standoff casualty detection, assessment (vital signs check), monitoring to plan for casualty extraction
- Sensors & algorithms for scene understanding
- Data capture and medical documentation
- Medic-robot teaming
- Unmanned Aerial System (UAS) supply of critical medical supplies to the tactical edge
- UAS to expedite casualty transport
- Robotics to do casualty extraction and transfer to a medic

More About MTEC

MTEC is goal-oriented. The focus is on building teams to solving problems and getting technologies to those in need. Research priorities are purposeful and outcomes-driven and will be applied across the entire medical infrastructure for the benefit of all citizens.

MTEC cuts through red tape. MTEC operates under an Other Transaction Agreement partnership model. This model relieves some of the contractual burdens typically associated with federally-funded research, which allows the government to acquire new technology and prototypes more quickly. Performers that deliver positive outcomes may be eligible to receive additional funding for work without the need to recompete.

MTEC's mission is to accelerate these life-saving and life-changing products into the clinic by serving as an engine for translation that provides funding for research, development, and clinical testing.

MTEC has a wide resource aperture. While the initial funds creating MTEC come from the Department of Defense, over the long term, all sources of government and private sector resources can be allocated to these research and technology initiatives. This will widen the scope and scale of solution providers involved in military and civilian trauma needs.

MTEC is open and comprehensive. MTEC boasts an internationally dispersed membershipfrom industry, academia and the nonprofit sector. Open membership policies and low barriers to entry enable MTEC to add new members. With broad insight into research activities, MTEC can foster integrated research partnerships and speed the availability of solutions to the military, veterans, and the civilian population.

MTEC
Medical Technology Enterprise Consortium

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