**Research Capability Areas**

**Prolonged Field Care**
Conduct a focused research program to address key gaps in prolonged field care. Monitor, coordinate and provide programmatic recommendations regarding prolonged field care efforts in other Capability Areas and the Joint Program.

**Endovascular Hemorrhage Control and Resuscitation**
Long-term development of capabilities for vascular access, endovascular hemostatic and resuscitative procedures and enable endovascular organ support with applications at all levels of care.

**Battlefield Pain Management**
Program to identify and develop battlefield pain management options for effective and safe pain management at all levels of care, by understanding and exploiting key physiologic mechanisms in acute and chronic pain that results from combat injury.

**Medical Effects of Directed Energy**
Conduct a research program to address key gaps in detecting injuries and developing countermeasures to directed energy exposure. Monitor, coordinate and provide programmatic recommendations regarding Directed Energy multi-organ injury prevention in other Capability Areas and the Joint Program.

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**Burn Center**

The USAISR Burn Center is responsible to provide definitive care for all US military personnel who sustain burns, inhalation or other soft tissue injury warranting burn center treatment. The center is staffed by an interdisciplinary team of approximately 300 medical professionals; capabilities verified by the American Burn Association and American College of Surgeons on Trauma. The Burn Center serves as a regional burn center for South Texas, providing care for civilian emergencies.

The Burn Center has resided at Fort Sam Houston, Texas, since 1949 and provides comprehensive multi-specialty care for critically ill and injured patients, as well as support for family members.

Since March 2003, almost 1,000 US military personnel were transported to the USAISR Burn Center by Burn Flight Teams for definitive care after sustaining severe burns and/or associated injuries during Overseas Contingency Operations in Iraq and Afghanistan.

The Burn Flight Teams are comprised of 15 specially trained personnel who work daily in the Burn Intensive Care Unit. Since 2003, the Burn Flight Teams has performed more than 100 overseas missions specifically related to ongoing military operations in Iraq and Afghanistan, as well as other overseas locations.

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**Optimize Combat Casualty Care**

**US Army Institute of Surgical Research**

“For Combat Wounded”

“Home of the World Renowned Army Burn Center & Burn Flight Team”

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USAISR

Mission:
Optimize Combat Casualty Care

Vision:
The World’s Premier Research Organization for Combat Wounded

The USAISR is one of six research laboratories within the US Army Medical Research and Materiel Command. The Institute is the Army’s lead research laboratory for improving the care of combat casualties. USAISR provides combat casualty care medical solutions and products for injured Warriors from self-aid through definitive care across the full spectrum of military operations; provides state-of-the-art trauma, burn and critical care to Department of Defense beneficiaries around the world and civilians in our trauma region; and provides Burn Flight Teams.

Research: Conduct a comprehensive and sustainable research and development program to deliver knowledge and material solutions to optimize survival and functional recovery in combat casualties and civilian patients with trauma and burns, while also providing expert analysis and input to shape future requirements and directions in combat casualty care.

Burn Center: Serves as the sole facility caring for combat burn casualties, beneficiaries and civilian emergencies within the Department of Defense. The Burn Center provides multidisciplinary care by a team of approximately 300 medical professionals providing cutting edge surgical services and promoting optimal recovery, restoration of function and community reintegration of our burn survivors.

USAISR Research

There are 12 research Capability Areas to conduct research for the combat wounded.

Damage Control Resuscitation
Develop methods and products to stop bleeding, replace lost blood volume and mitigate the pathophysiologic consequences of severe bleeding.

Coagulation and Blood
Improve the safety, efficacy and logistical supportability of blood products, identify mechanisms of coagulation dysfunction in trauma, diagnostics and therapeutics to restore normal function.

Extremity Trauma and Regenerative Medicine
Focused on infection control and healing in extremity trauma; reconstruction/regeneration of volumetric and segmental defects of muscle and bone; and rehabilitation following extremity trauma.

Multi-Organ Support Technology
Comprehensive research and development to develop and optimize methods to minimize damage and sustain vital organ function following severe trauma in a setting of delayed definitive care.

Tactical Combat Casualty Care
Integrative and translational research focused on patient care under the unique set of tactical, environmental and patient factors associated with point of injury care, including ground and air transport.

Combat Trauma and Burn Injury Research
Improve burn wound stabilization, repair, healing, scar minimization and functional recovery. Also includes study of the molecular mechanisms and improved treatments for battlefield pain control.

Medical Countermeasures for Sensory Trauma
Procedures and products to repair and restore the eye and vision following severe injury. Expanding into auditory trauma in the next two years.

Dental and Maxillofacial Trauma
Develop knowledge and materiel solutions to stabilize patients and improve healing, function and aesthetic outcomes after severe combat-related cranio-maxillofacial injury.