Noninvasive Monitoring Tools for Prolonged Field Care Goal Directed Therapy

AWARD AMOUNT: $3M

THE TEAM

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THE PROBLEM

Prolonged field care (PFC) for patients with multiple traumatic injuries represents an enormous challenge. However, there are currently no tools that help providers maximize supportive treatments for goal directed therapy (GDT).

- Limited access to therapeutic resuscitative resources
- Current tools require invasive techniques
- Current tools lack precision

THE TECHNOLOGY

Resonance Raman Spectroscopy (RRS) and Dynamic Respiratory Impedance Volume Evaluation (DRIVE) are two non-invasive hemodynamic monitoring technologies developed by MCIRCC that could allow for real-time GDT.

- Allows for targeted use of hypotensive resuscitation
- Provides information on tissue oxygenation and intravascular volume
- Helps maximize use of supportive treatments such as blood transfusions

THE SOLUTION

Non-invasive monitoring technologies to optimize the resuscitation and triage of casualties in the prolonged field care setting

Example RRS and DRIVE devices

RRS measures tissue oxygen levels in the lining of the mouth and lips.
DRIVE uses impedance to measure respiratory induced changes in central blood volume.

This study will compare methods for optimal GDT.