Learning to Care for Those in Harm's Way

Uniformed Services University
of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814-4799

Release No. 19-09-05
September 5, 2019
Contact: Sharon Holland, Office of External Affairs
Email: sharon.holland@usuhs.edu

DoD-funded study to develop algorithms to predict surgical complications for life-threatening illness and injury enrolls 1000th patient

Bethesda, Md. A DoD-funded study collecting clinical and biomarker data from critically ill patients enrolled at Walter Reed National Military Medical Center, Duke Medical Center, and Emory University/Grady Memorial Hospital, has just enrolled its 1,000th patient.

The Tissue Data Acquisition Protocol (TDAP), a clinical study overseen by the Uniformed Services University of the Health Sciences' Surgical Critical Care Initiative, or SC2i, is a standardized method of collecting clinical data and biological specimens from critically ill or injured patients, in support of acute and trauma care research initiatives.

Samples of blood, urine, cerebrospinal fluid, wound tissue and/or wound fluids, and other body fluids and tissues from people who have been seriously injured or ill are being collected under the TDAP. The associated clinical and biomarker information collected is helping researchers develop algorithms that will predict surgical complications for patients suffering from life-threatening illness or injury, for example, bacteremia, pneumonia, acute kidney injury, acute lung injury, acute respiratory distress syndrome, among others.

Three of these SC2i-developed clinical decision support (CDS) tools are now in use at the Walter Reed National Military Medical Center, Emory University, Grady Memorial Hospital, and the Duke University Medical Center; approximately ten more CDS tools are in various stages of deployment.

The researchers collect up to 11,000 data elements per study participant, which translates into nearly 11 million data points across the study. Combined with other SC2i studies, the initiative's Central Data Repository dataset aggregates greater than 40 million points of clinical and biological data.

"The critical care tissue acquisition protocol is the corner stone for the success of SC2i. Through the use of a standardized TDAP, the SC2i leverages resources in the most efficient use to maximize productivity for all critical care focus projects the program will model," said Navy Capt. (Dr.) Eric Elster, professor and chair of the Department of Surgery at the Uniformed Services of the Health Sciences and the Walter Reed National Military Medical Center. "This brings us one step closer to truly delivering 'precision medicine' for acute and trauma care."

# # #

About the Uniformed Services University of the Health Sciences: The Uniformed Services University of the Health Sciences (USU) is the nation's only Federal health sciences university. USU educates, trains and prepares uniformed services health professionals, officers and leaders to directly support the Military Health System, the National Security and National Defense Strategies of the United States and the readiness of our armed forces. For more information, visit: *www.usuhs.edu*.

About the SC2i: The Surgical Critical Care Initiative (SC2i), is an program of the Uniformed Services University of the Health Sciences (USU) that brings together clinicians and scientists to gather and analyze information ranging from simple observation to bio-banked tissue samples, and makes the resulting data available for use in computerized statistical models that, critically, produce decision guidance tools that can quickly be used to improve clinical practice and outcomes. Approaches developed by SC2i are expected to simultaneously improve the quality and reduce the cost of care in critically-ill patients, for the benefit of both military and civilian healthcare systems. SC2i partners include Emory University School of Medicine, Duke University School of Medicine, the Naval Medical Research Center, Walter Reed National Military Medical Center, Decision Q, and the Henry M. Jackson Foundation for the Advancement of Military Medicine.