

BATTLEFIELD ASSISTED TRAUMA DISTRIBUTED OBSERVATION KIT EMERGENCY MANAGEMENT SYSTEM (BATDOK™ EMS)

KEY BENEFITS

- Bridges the existing gap of patient monitoring between the time of injury/onset of disease to the hospital arrival.
- Earlier notification of changes in patient conditions and improved accuracy of Life Saving Interventions (LSIs).
- Portability and usability through cellular devices mitigate any physical hinderance for the user, patient, and receiving staff.

WHAT IS IT?

Battlefield Assisted Trauma Distributed Operation Kit (BATDOK™) is an application (app) that provides real time patient documentation of LSIs and synchronously streams patient vital signs. Data collection within the app is available on Android devices, and Department of Defense (DoD) engineers are developing an iOS version of BATDOK™ to ensure compatible data sharing across platforms, enabling seamless data exchange between all users, regardless of operating system.

BATDOK™ will be deployed on Maryland State Police (MSP) helicopters, streaming vitals with real time notification of LSIs, including intubation, drug administration, and blood transfusions, to the Trauma Resuscitation Unit (TRU) at the R Adams Cowley Shock Trauma Center in Baltimore, Maryland. This novel approach to seamless data collection and monitoring represents the world's first prehospital and in-hospital integrated monitoring system involving civilian, state, and federal entities.

HOW DOES IT WORK?

BATDOK™ utilizes secure local networks to connect the application's software with both patient monitoring systems and its end user, enabling both the receiving hospital and the operational team to share Health Insurance Portability and Accountability Act compliant patient data as close to the time of injury as possible.

Medics and medical staff providing life-saving measures at the time of injury can select from a catalog of interventions within the app. These selections are instantly time-stamped, transmitted, and received by the receiving trauma team. Upon arrival, the patient's chart will already be pre-populated by this app with accurate documentation of care and vital signs.

Capitalizing on the existing capability of current vital signs monitoring equipment to connect to local networks for test reporting, BATDOK™ conflates this capability with real-time Electronic Medical Record (EMR) reporting for both front-end and back-end care teams, significantly improving patient outcomes.

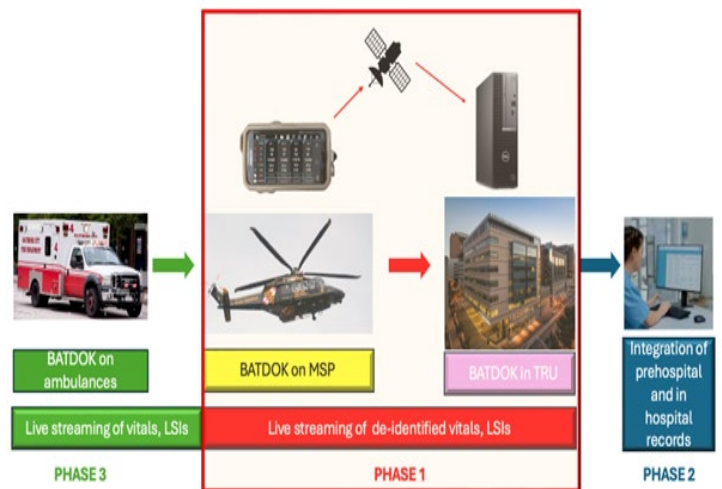


Image generated at the Advanced Resuscitation in Combat Casualty Care (ARC3) Laboratory. Image is property of the U.S. Air Force.

WHY IS IT IMPORTANT?

The “Golden Hour”, the critical first 60 minutes after a traumatic injury, is when rapid medical intervention is essential to significantly improve a patient’s chances of survival and recovery. Minimizing time lost between initial contact, transport, and arrival at a hospital is crucial in promoting patient outcome. BATDOK™’s integration with front-end and back-end care enables all parties involved in patient care access to this sought-after “Golden Hour.”

Synchronous vital signs monitoring, connecting on-scene and in-transit medical device data with the expertise of trauma staff prior to arrival, is a key advantage of this application. Clinicians at the receiving facility can proactively track vital sign changes and prepare treatment plans with incoming data. Additionally, with timestamped LSIs being instantly populated into the patient’s chart, this technology will revolutionize military and civilian EMR communication.

Portability and usability are essential in trauma care. The user-friendly interface within the BATDOK™ application reduces user error when documenting patient information. Synchronous data transfer ensures an accurate record of early resuscitation efforts, in turn improving patient outcomes. This technology will pave the way for future innovation and technological advancements in EMR in both civilian and military environments, as well as open the door for optimizing clinical decision-making and overall improving all aspects of emergency care.

ABOUT AFRL

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