

## On the Battlefield with the MobiUS™ System

### Background

A Medical Emergency physician was deployed as a member of a medical unit operating in a remote area. The imaging assets available included an X-Ray and two ultrasound devices – a MobiUS SP1 smartphone ultrasound system and another.



### Use Cases

The predominant pathology encountered requiring ultrasound was a spectrum of penetrating, blast, and blunt trauma. Over one-hundred US and NATO forces, military and police, and civilian casualties were treated. The physician was often mobile and triaging and treating patients on the ground or on the back of vehicles as they were transported to the Aid Station and Surgical Team. Given the limited resources, the ultrasound system was incredibly valuable in expeditiously risk-stratifying patients to determine both the need for and priority of patients for surgical intervention and/or evacuation and for identifying specific pathology, such as pneumothorax.

### Results

The MobiUS system was valued for its portability, durability, user-friendliness and image quality, which was comparable or better than other systems. In the case of inbound casualties the MobiUS system was placed in the physician's cargo pocket or a pouch on his body armor. He ran with it, sat on it, dropped it in the dirt, mud and dust, and utilized it under all manner of conditions and it proved consistently reliable. The physician had initially thought that the relatively small screen size might make image interpretation difficult but this did not prove to be the case.

### Case Study

The MobiUS system identified free fluid in Morrison's pouch on a FAST exam. The particular patient presented with a small penetrating wound to his right lumbar area as part of a mass casualty event following a suicide-vest explosion. Failure to identify free fluid would have delayed surgical intervention, given the broader triage scenario and potentially altered his clinical outcome. He was found to have significant retroperitoneal hemorrhage secondary of the renal vasculature with associated bleeding into the peritoneal space and was quickly triaged to surgery.

*"Given the clinical environment that we were operating in, i.e., high trauma volume in an austere, resource-limited setting, the MobiUS ultrasound system was a critical asset – the portability, durability, image quality, and ease of use proved to be an ideal tool."*