

Philips Lumify handheld ultrasound supports life-saving technology

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Physicians from the University of New Mexico (UNM) and local emergency responders recently treated a cardiac arrest patient with the first ever out-of-hospital portable life-support system available in the United States.

The machine performs a function called extracorporeal membrane oxygenation, or ECMO. ECMO machines mimic a functioning heart and lungs, circulating oxygenated blood for patients who have suffered a cardiac arrest.

Until now, ECMO machines have only been available at certain hospitals. But the UNM Department of Emergency Medicine, Divisions of Prehospital Care and Adult Critical Care, in partnership with Albuquerque Fire and Rescue (AFR), deployed the first mobile ECMO program in the U.S.

The machine, which is set up in the back of a specialized ambulance, allows physicians to perform an ECMO procedure in the field. Delivering this level of advanced care in a pre-hospital setting could improve chances of survival by up to 30 percent.

Philips Lumify ultrasound technology is an important component of the mobile ECMO unit. Members of the ECMO team use Lumify for real-time visual guidance when inserting tubes in veins and arteries in a process called ECMO cannulation.

“Lumify has excellent image quality and is easy to use – it was instrumental in our first pre-hospital ECMO cannulation,” said Dr. Darren Braude.

Braude, who is the EMS Division Chief and a Professor of Emergency Medicine and Anesthesiology at UNM Health Sciences Center, says that this new, portable ECMO technology offers life support during a crucial, 60-minute window following a heart attack.

The AFR-UNM Prehospital ECMO unit is one of many examples that show how point-of-care ultrasound is central to innovation in pre-hospital emergency medicine. While handheld ultrasound has become standard for emergency care within a hospital, moving the technology to a pre-hospital setting reduces the time required to diagnose patients and helps caregivers make crucial decisions about treatment.