



MEDICINE 2040

Rewriting the future of healthcare

iRescu - DEVELOPING A POTENTIALLY LIFE SAVING TOOL FOR BRIDGING EXISTING GAPS IN THE CHAIN OF SURVIVAL IN OUT OF HOSPITAL CARDIAC ARREST

Nadine Levick¹, K Tharrington¹, J Kustanowitz², A Cooper³

¹*Research, EMS Safety Foundation, USA*

²*Research, Mountain Pass Tech, Israel*

³*Surgery, Columbia University, USA*

Heart disease in Israel is the second leading cause of death over age 45. Out of Hospital Cardiac Arrest (OHCA) mortality is ~92%, with a 10% decrease in survival each minute of delay in CPR/AED use. Ambulances often can't arrive in time. With lack of a comprehensive Public Access AED (PAD) location system, neither EMS dispatch nor bystanders are able to immediately locate PADs, a factor leading to 2% bystander AED use and high rates of preventable death. iRescu, is cloud-based PAD management platform that bridges enhanced community awareness of cardiac arrest first aid with augmenting PAD geolocation management. It captures existing PAD geolocation datasets and also includes crowd-sourced geolocation data input tools, with location and functionality validation and EMS dispatch linkage. iRescu's crowdsourcing tool is focused on lay, simple, rapid, streamlined data entry to upload minimal required AED geolocation data via 3 modes of input: web form, mobile app (android/iOS) and twitterbot. Data entry achieved with 40 secs of engagement/AED by lay testers. Preliminary data capture was via community outreach using social media tools, gamification, QR codes, and leveraging citizen science. The range of maximum PAD geolocations uploaded by an individual in initial 5 social media contests was 37- 103 respectively. iRescu is a multi-interface AED management platform with scope to augment existing limited community AED geolocation data by engaging community crowd-sourced support for PAD geolocations. iRescu's deployment may also expand public awareness and response to OHCA and enhance the scope for smart strategic placement of accessible AEDs.