

A Crowdsourcing Innovation Challenge To Locate and Map Automated External Defibrillators

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Out-of-hospital cardiac arrest is a major public health problem that affects an estimated 300 000 people in the United States every year. The application of an automated external defibrillator (AED) to patients who have experienced cardiac arrest has saved many lives. AEDs coupled with cardiopulmonary resuscitation can significantly improve survival from cardiac arrest from <2% to >50%. AEDs can be used easily by untrained laypeople. When accessed and opened, most devices provide audible and visual instructions on use and how to perform cardiopulmonary resuscitation. However, AED effectiveness is extremely time dependent, and presently, in a crisis no comprehensive map of these devices exists to help bystanders find and use them. Previous work from a large database of out-of-hospital cardiac arrest in the United States suggests low (4%, 1166 of 31 689) use of AEDs by bystanders. An accurate, easily accessible map of AEDs could help people locate them in an emergency, either directly through smart phone applications (apps) or through communication with map-equipped 911 emergency responders.

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