

Wearables



VCU

Innovation Gateway

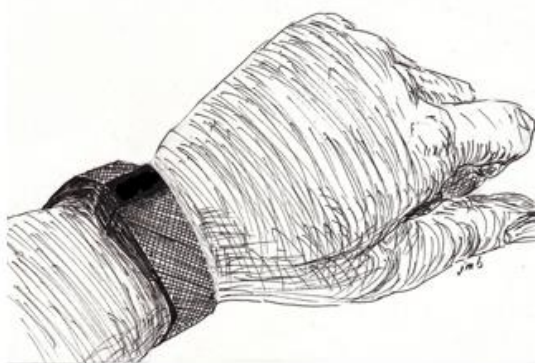
Wearable Cardiac Arrest Detection Device (WCADD)

A Faster way to save your life.

According to the American Heart Association, Cardiac disease is the most common cause of death globally. In the United States alone, 360,000 people annually experience sudden, unexpected out-of-hospital cardiac arrest (OHCA, stoppage of the heart's pumping function causing unconsciousness. With every passing minute, the risk of survival drops 10% until the heart can be restarted using CPR (cardiopulmonary resuscitation). Unfortunately, only about half the cases of cardiac arrest are witnessed. This makes the survival rate of cardiac arrest cases much lower than expected. There is a need for a device which individuals who are most prone to cardiac events are able to notify emergency responders remotely without any hassle.

The technology

Virginia Commonwealth University Researchers have designed and built a wearable monitoring device for patients who are prone to cardiac events. The device is a wrist wearable device that gathers physiological data of the user. The device is comprised of a system of sensors which continually measure physiological conditions. When the device detects cardiac arrest in the user, it subsequently alerts emergency services of the user's condition and location. The alert is transmitted from the monitoring device via a mobile device (i.e. Cellphone) to pre-determined emergency responders. The band is flexible and can be worn on a day to day basis without any obstruction/ change in quality of life akin to an Apple Watch or Fitbit. Since it is a wearable device, there are chances of the device to send a false alert. However, to overcome this the sensors on the device continue to monitor abnormal cardiac activity, if determined that is a real response an alert is immediately sent out. The benefits of the device include flexible, provides a rapid response to emergency services, alerts friends and family and continually monitors the patient during and after the cardiac arrest to gather physiological information.



Benefits

- »Rapid Response
- »Alerts EMS/ friends and family
- »Wearable
- »Affordable

Applications

- »Emergency Response to Cardiac Arrest

Patent status:

Patented: U.S. and foreign rights are available.

[20180310847](https://patents.google.com/patent/20180310847)

License status:

This technology is available for licensing to industry for further development and commercialization.

Category:

Biomedical

VCU Tech #:

17-029

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