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Singapore – The myResponder App

Crowdsourcing First Responders for CPR and AEDs in Singapore

BRIEF BACKGROUND

Even the fastest ambulance takes time to be dispatched from a station to the scene of a cardiac arrest. Bystanders with CPR/AED training can bridge that gap and help save more lives. But training an entire population is highly resource-intensive. Currently, one-third of the population in Singapore has CPR training; the national capacity for CPR/AED training is estimated to be able to reach just 3-5% of the population each year. To improve the rate and quality of bystander CPR, as well as increase bystander AED usage, the mobile app strategy was considered.

STEPS TAKEN

The Singapore Civil Defense Force's (SCDF) myResponder mobile app aimed to encourage bystander CPR by encouraging citizens to take an active role in making their own community safer and giving them the means to do so through their mobile phones. This idea was developed as part of the SCDF's strategy – A Nation of Lifesavers — aiming to get ordinary citizens to undergo basic knowledge and skills training in CPR, improvised first aid and basic firefighting. The mobile app alerts the user of a cardiac arrest occurring within 400 meters of their current location. Responders can locate the nearest AED via the app and bring it to the location before an ambulance arrives.

The app was designed from the ground up because of local cybersecurity considerations and the need to integrate into the national dispatch system. In 2015, it launched with 1,000 volunteers and has grown since to over 44,000 volunteers. SCDF dispatch sends out over 300 alerts, and 100+ are responded to each month. To date, fifteen people have survived as a direct result of resuscitation from a volunteer who responded to the mobile alert.

CHALLENGES

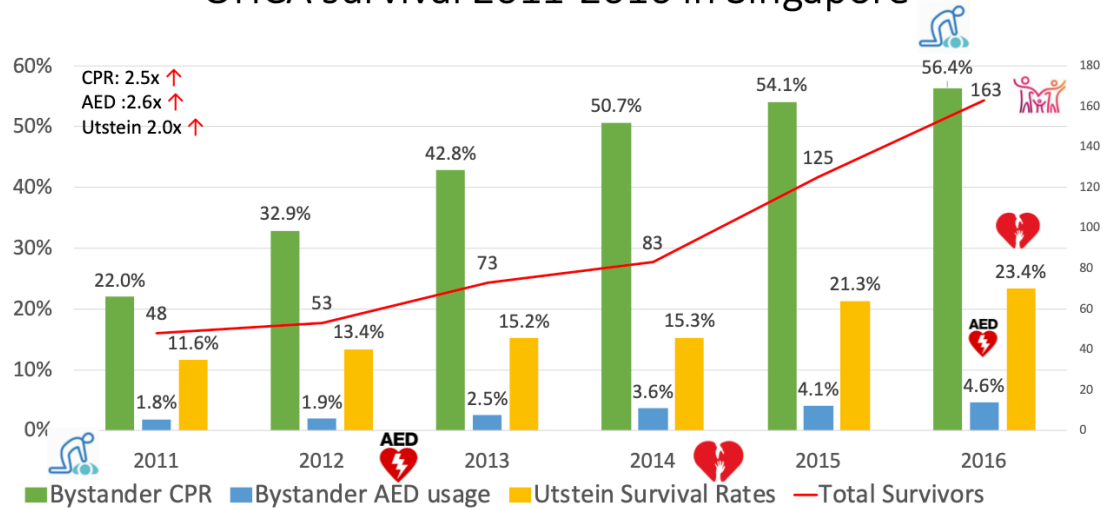
Gains are expected to be progressively harder to achieve and may eventually plateau. Also, as technologies continue to evolve and new methods for detecting OHCA are adopted, coordinating bystanders, training bystanders and operationalizing early CPR and defibrillation will be necessary to continue to raise survival rates.

RESULTS

Over the past four years, the following results have been achieved:

- 46,000 volunteers on the myResponder App
- 111,220 notifications deployed
- 5,167 cases accepted
- 2,449 responders arriving

Bystander CPR, AED usage rates and OHCA survival 2011-2016 in Singapore



Overall, Singapore has continued to experience a sustained increase in bystander CPR rates (22% to 56.4%), public access defibrillation (1.8% to 4.6%), Utstein survival rates (11.6% to 23.4%) and total number of survivors (48 to 163 yearly) from 2011-2016.

OUTLOOK

The SCDF continues to look at ways to improve the accuracy and responsiveness of the application. A Facebook myResponder community group is used to gather feedback on the app and its operations, as well as any personal challenges faced by responders. The group is also collaborating with taxi drivers locally via the “AED on Wheels” project to encourage mobile lifesavers with AEDs to respond to cases within a 1.5 km radius of their current location.

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