

# Community CPR/AED Education and Policies to improve Survival in Sudden Cardiac Death



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# Korean Heart Rhythm Society COI Disclosure

*Adj. Asst. Prof. Ng Yih Yng*

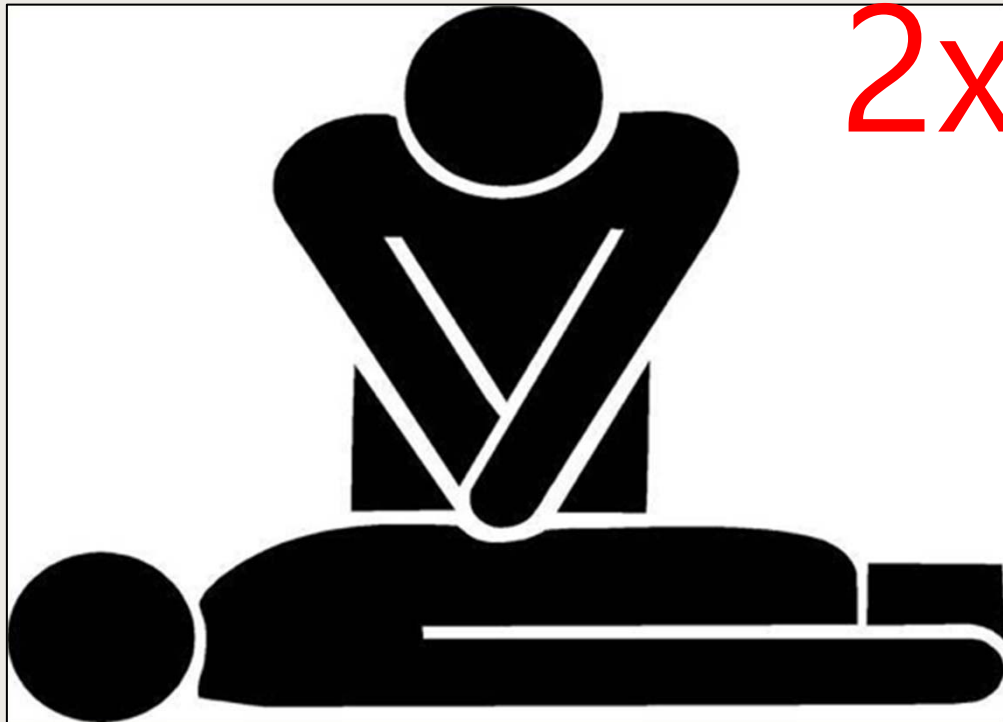
The author has no financial conflicts of interest  
to disclose concerning the presentation

# Community CPR and AED is key to survival

OHCA

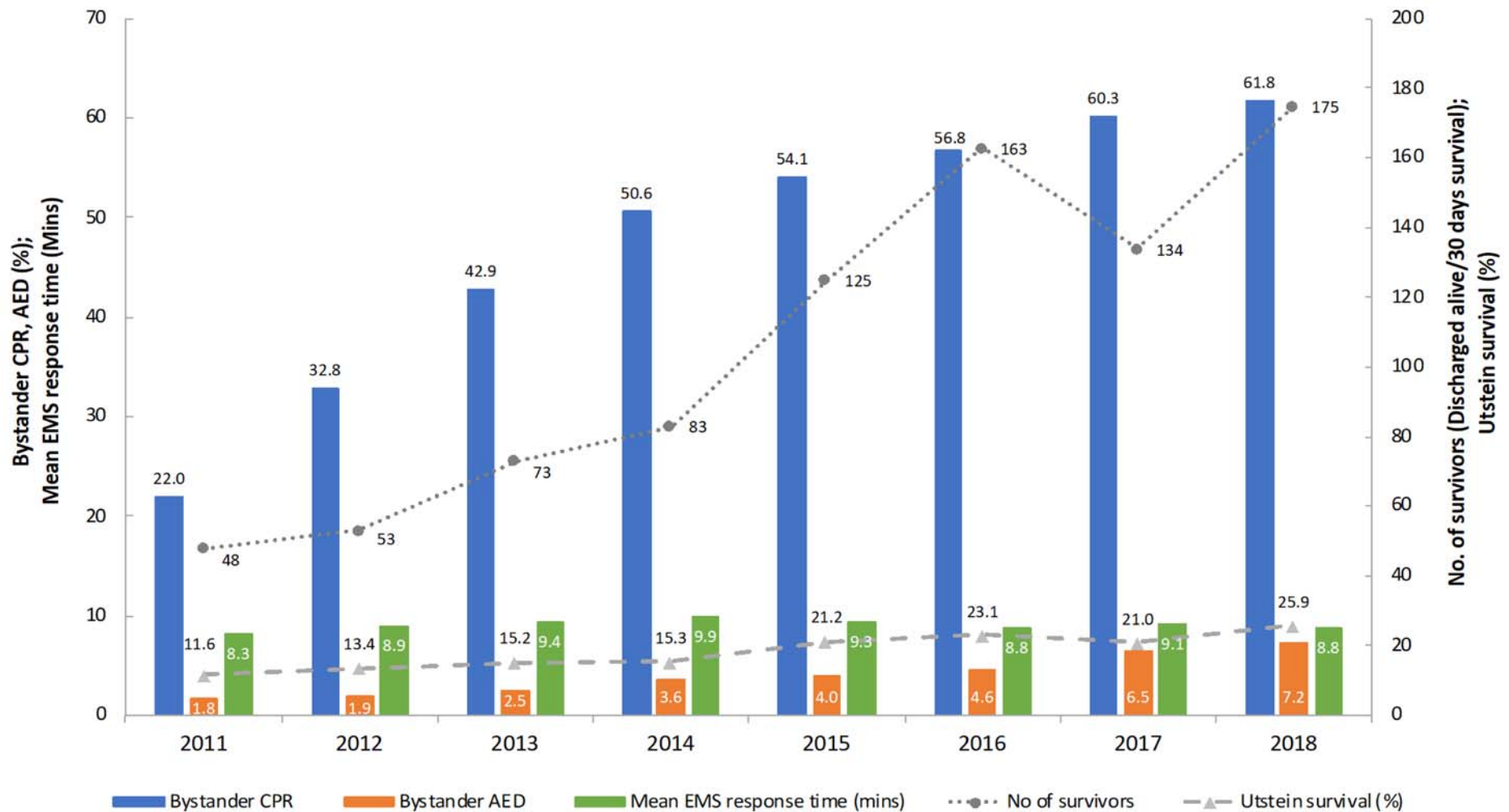


CPR and AEDs are the *only* proven ways to raise survival rates



# Singapore bystander CPR rates 2011-2018

## Overview



Good bystander CPR is the result of an ecosystem of operational, educational and policy measures



Dispatch CPR  
Bystander



Community Training  
Public

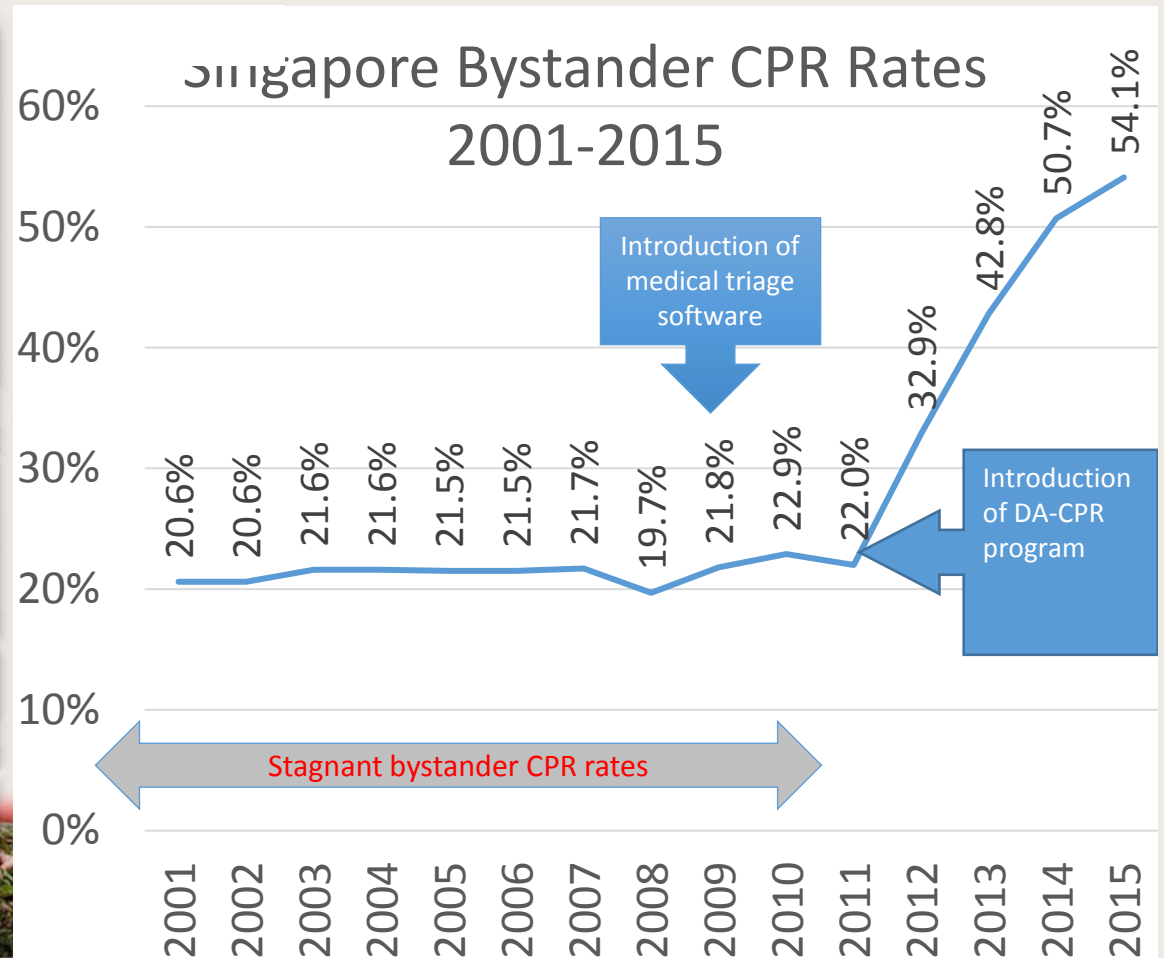
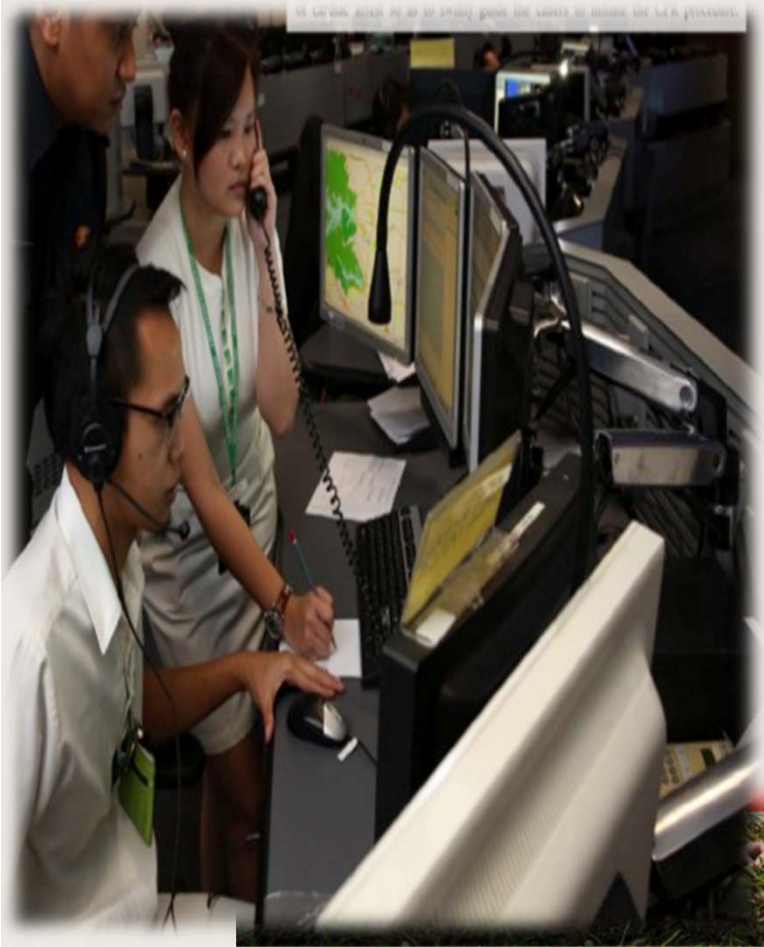


Policy  
Schools & Workplaces



AEDs  
Public Access

# Dispatcher Assisted CPR in Singapore (22% to 54% in 4 years)



# Dispatcher Assisted first REsponse (DARE) program



**STAY ON  
THE LINE**



**AED**



**PUSH HARD  
AND FAST**

**D**  **RE**





# Simplified Workplace/Community CPR Training



# Making CPR accessible to everyone (240mins → 40mins)

Minister  
of God



ST PHOTO: DESMOND FO

HOME B8

## LEARN CPR? THEY'RE ALL EARS

You are never too young to learn how to save lives.

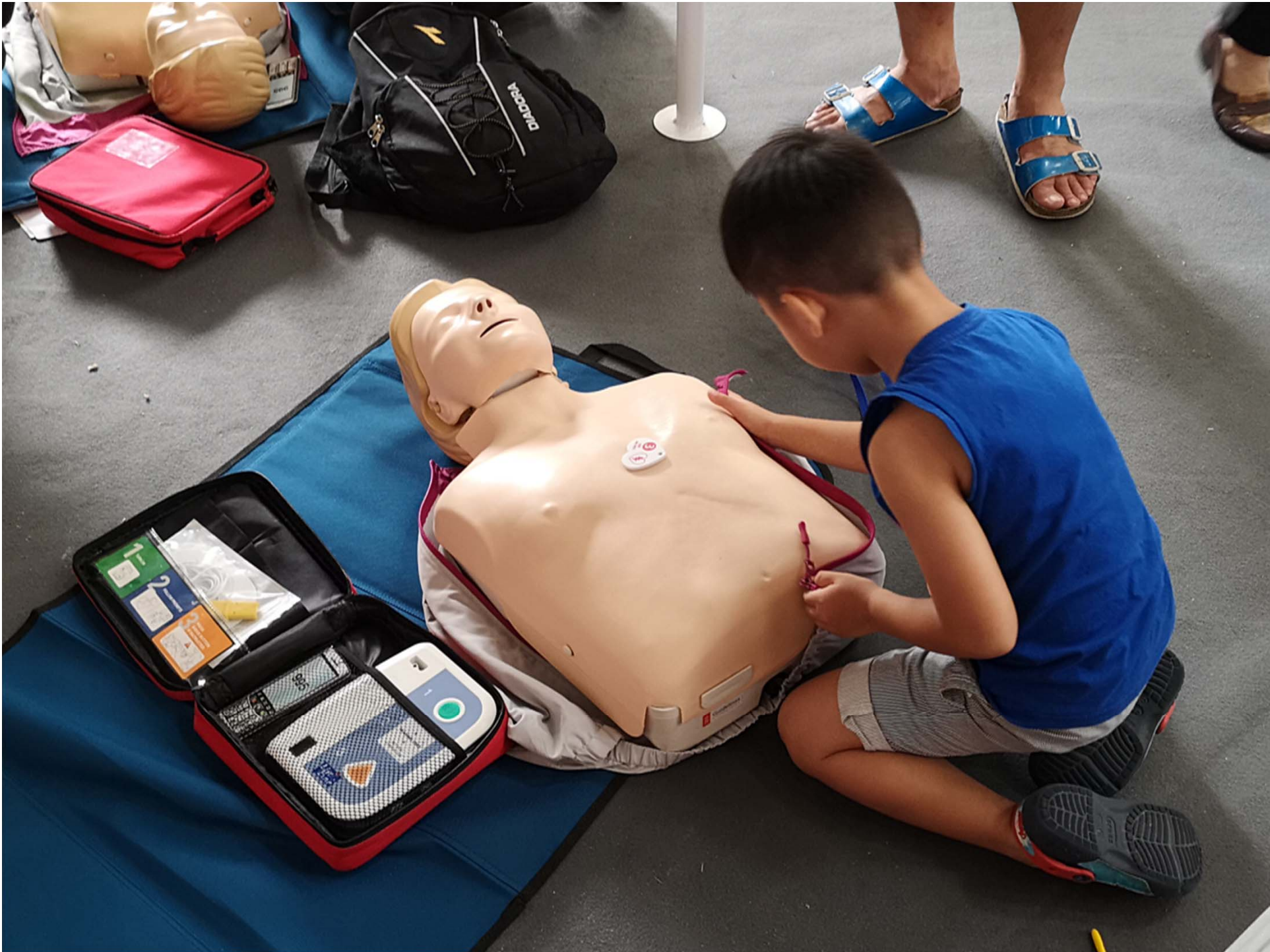
Pupils at St Anthony's Primary School proved just that yesterday when they learnt how to administer

cardiopulmonary resuscitation (CPR) and use an automated external defibrillator. About 2,300 students have attended this life-saving programme so far.



Minister  
of Health

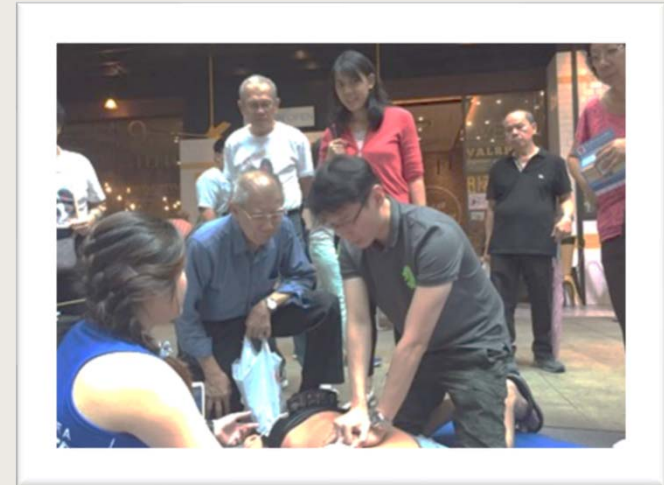
Health Minister Gan Kim Yong (left) and Reverend Derrick Lau at a simplified CPR training session at the Methodist Church of the Incarnation. The training is being extended to religious organisations and workplaces.





# Community Roadshows

- ♥ CPR Challenge
- ♥ myResponder booth
- ♥ Find the nearest AED lucky draw
- ♥ Kids' Activity Corner



**CPR  
Challenge**



**myResponder  
Booth**



**Kids Role  
Play**

# CPR Policies

## Medical Policies

- Resuscitation Guidelines

## Work Safety Policies

- Workplace Safety and Health Act
- Bizsafe Certification

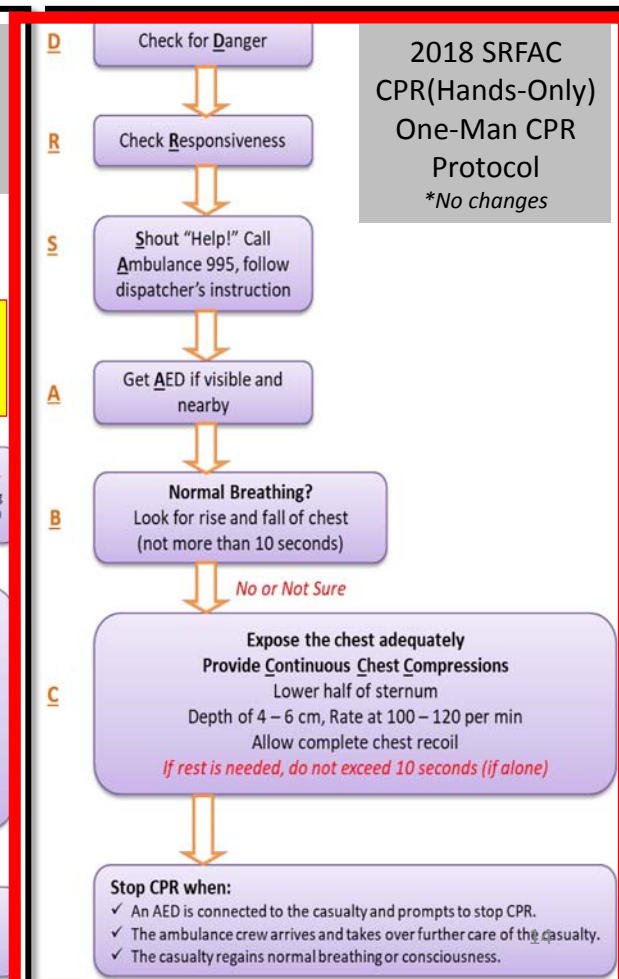
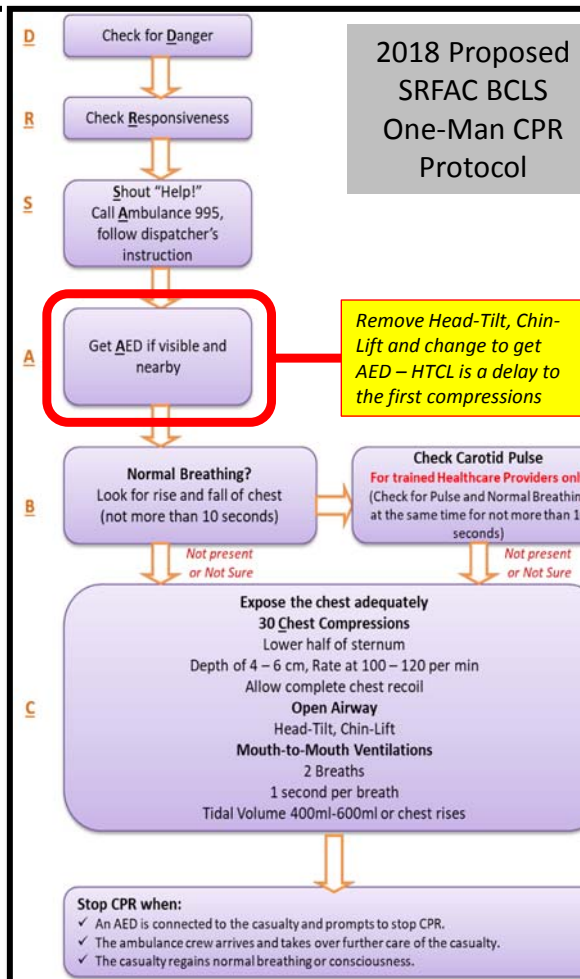
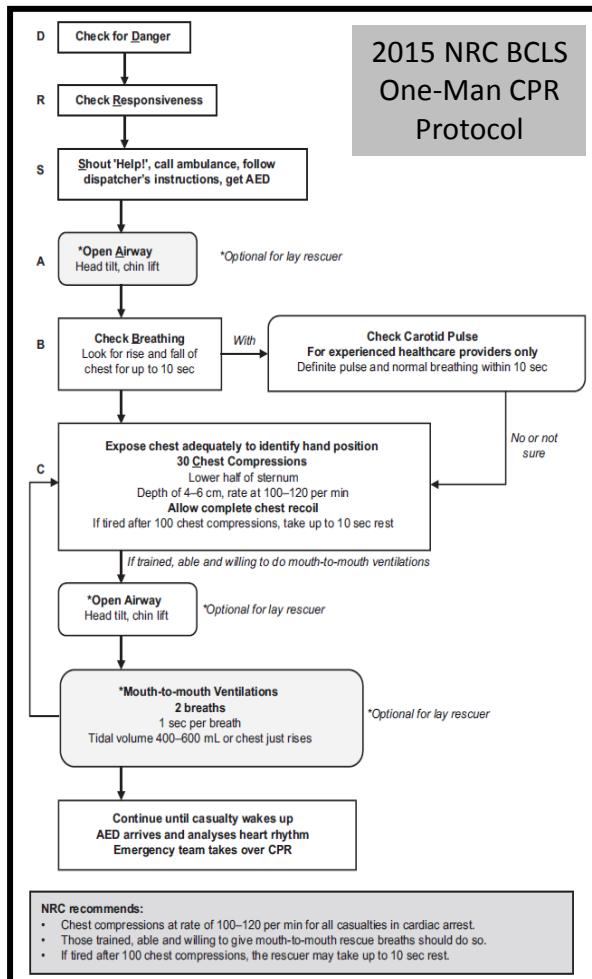
## Educational Policies

- School Sports Education

## Sports Policies

- Sports Singapore
- National Sports Associations
- National Sports Safety Guidelines

# SHIFT from Mouth-to-Mouth to Hands Only CPR for laypersons (2018)





# Workplace Safety and Health Act

## Workplace Safety and Health (First-Aid) Regulations ✕

**Status:** Current version  
as at 20 Apr 2021

### Table of Contents

#### Workplace Safety and Health (First-Aid) Regulations

- 1 Citation
- 2 Definitions
- 3 Application
- 4 Provision of first-aid boxes
- 5 First-aiders
- 6 First-aid room
- 7 First-aid for exposure to toxic or corrosive substances
- 8 Offences

[Timeline](#) [Authorising Act](#)  [Amendment Annotation](#)

[Actions](#)

## WORKPLACE SAFETY AND HEALTH ACT (CHAPTER 354A, SECTION 65)

### WORKPLACE SAFETY AND HEALTH (FIRST-AID) REGULATIONS

Rg 4

G.N. No. S 137/2006

REVISED EDITION 2007

(1st October 2007)

[1st March 2006]

**Citation**

# Using existing mechanisms to promote CPR - BizSAFE (local certification for business safety)



# Schools Sports Educational Policy - CPR/AED at 11 and 13 years old and ALL schools have 3-5 AEDs

进行心肺复苏。患者的存活率就减少约10%。然而，目前只有少数国人拥有较全面的急救知识。为此，有公共医院领头推出速成急救培训课程计划，希望能在未来五年，让100万名不同年龄层的国人，具备基本的急救知识与技能。

新加坡中央医院院前护理急救单位推出一个名为DARE (Disaster Assisted first



尼小学的60名学生代表，如何为心脏骤停的病人进行急救。

【曾坤顺摄】

疗处长王英福副教授受访时告诉本报，医院希望能在未来五年，让100万名不同年龄层的国人接受这项速成课程的培训。除了学生外，课程接下来也会推广至社区与 workplace。王英福副教授也是中央医院紧急医学高级顾问医生。

“这主要是一个提高公众对CPR与AED的认知与了解的计划，我们相信有了这层接触后，大家在面对状况致电995求助时，可以更熟练地根据民防人员的指示即时抢救患者。”

柯碧辉补充，从小教导孩子如何进行CPR与使用AED，可提升他们的能力与自信心，同时也能向他们灌输，当别人面对危机时，应伸出援手，勇于助人的观念。

“大家不应该害怕弄巧反拙，重点是要敢去救人，你若不施救，患者可能连最后一线的存活机会都没有。”

参与培训课程的五年级学生黄欣月（11岁）受访时说：“我觉得，今天的培训很有趣也很有用，上课前我只知道有人晕倒不动时，我们应该立刻打995，但现在除了打电话外，我还学会如何按压他的胸口，为他进行急救。”



**DARE计划**  
请扫描QR码  
上zaobao.sg  
观看早报视频



(Clockwise from top) Students from St Anthony's Primary School undergoing DARE training in school; instructors demonstrating how to perform CPR on a mannequin; the pupils learnt how to pump on the chest of a mannequin and to use an AED during the class.



HOME BS

ST PHOTO: SEKHONG PEO

## LEARN CPR? THEY'RE ALL EARS

You are never too young to learn how to save lives.

Pupils at St Anthony's Primary School proved just that yesterday when they learnt how to administer

cardiopulmonary resuscitation (CPR) and use an automated external defibrillator. About 2,300 students have attended this life-saving programme so far.



**Sport**  
SINGAPORE

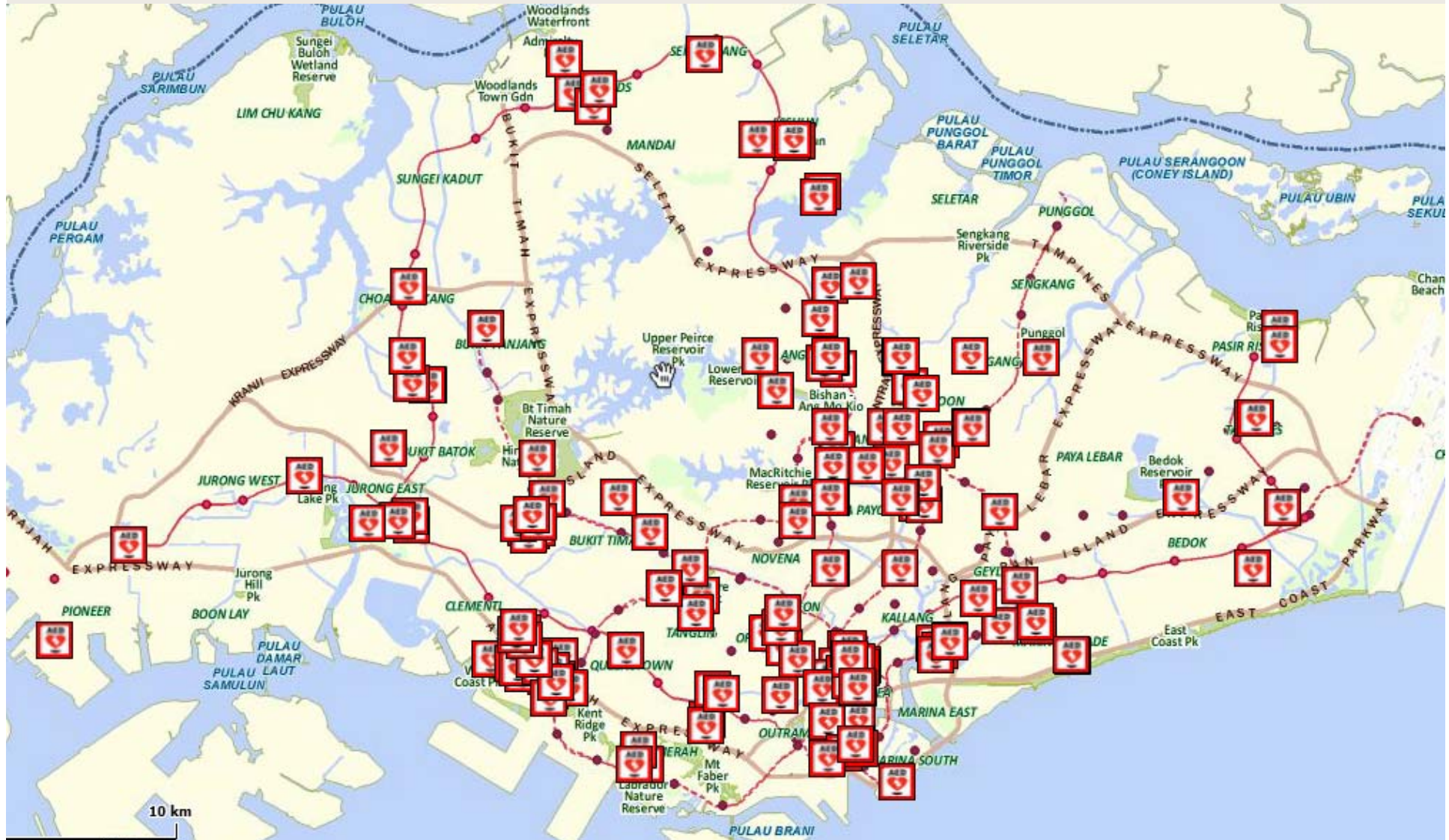
**SPORTS SAFETY  
COMMITTEE REPORT  
MARCH 2011**

Singapore Sports  
Safety Guidelines  
–  
multi-disciplinary  
involvement

AED policies



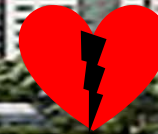
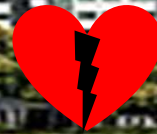
# Building a National Public Access Defibrillation Registry



70% of cardiac arrest cases occur in the 10,000 public housing estates!

*Artist's Impression*

Govt housing  
20 - 40  
Floors !







# Launch of the R-AEDi Registry in 2014

## Project Registry for AED Integration (R-AEDi) launched!

**By 2017, one would be able to easily locate Automated External Defibrillators (AEDs) for emergency use. With 1,700 Singaporeans suffering from cardiac arrests annually, AED usage can potentially improve survival rates by 11 times! The Registry for AED Integration (R-AEDi) project was officially launched on 25 March 2014 by Singapore Civil Defence Force and Singapore Heart Foundation.**

By Charissa Tan

Every year, some 1,700 persons suffer from cardiac arrest in Singapore, with a 2.4 per cent survival rate.

While Cardio Pulmonary Resuscitation (CPR) can potentially improve survival by 2.2 times and public Automated External Defibrillators (AEDs) by 11 times, only 20 per cent of bystanders perform CPR and less than 2 per cent of cardiac arrests are successfully intervened by a public AED.

An AED is a portable device that checks the heart rhythm.

It can also send an electric shock to the heart to try to restore a normal rhythm, in cases of cardiac arrests.

The Registry for AED Integration (R-AEDi) project aims to boost bystander CPR and public access AED usage.

On 25 March 2014 the Singapore Civil Defence Force (SCDF) and Singapore Heart Foundation (SHF) signed a Memorandum of Understanding (MOU) to launch the project.

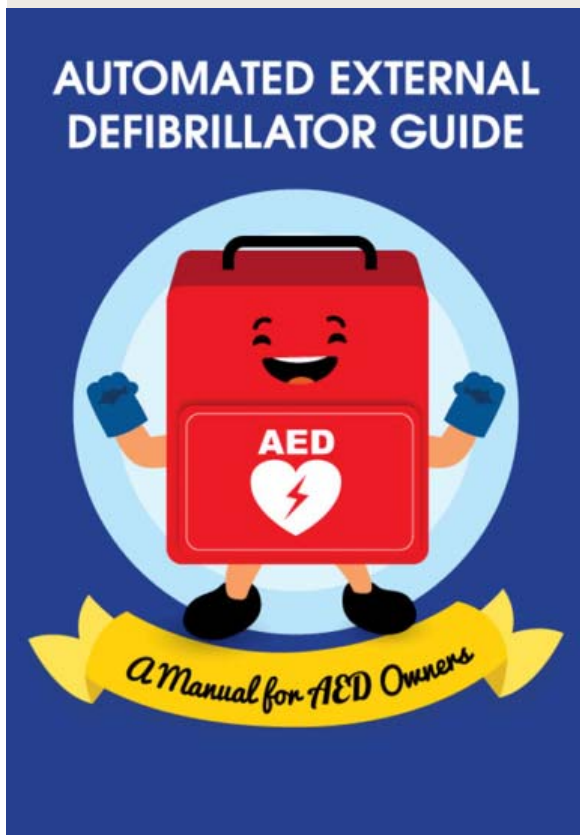


The Memorandum of Understanding, launching the R-AEDi project, was signed on the morning of 25 March 2014 by Commissioner SCDF, Commissioner Eric Yap (left) and Chief Executive Officer of SHF, Mr Vernon Kang (right). PHOTO: Singapore Civil Defence Force

# Registration Process

Provide an AED guidebook for AED owners

to address commonly asked questions about AEDs and related matters



**INTRODUCTION**

**WHO IS THIS GUIDE FOR?**  
This is a guide for anyone who is responsible for buying, installing and maintaining Automated External Defibrillators (AEDs) in a building or facility.

**IN SOME PLACES, THIS PERSON MIGHT BE KNOWN AS:**

- SECURITY & EMERGENCY PREPAREDNESS MANAGER
- BUILDING MANAGER
- ESTATES/FACILITIES MANAGER
- ENVIRONMENTAL HEALTH & SAFETY MANAGER
- OPERATIONS MANAGER

**CAN YOUR BUSINESS HANDLE A SUDDEN CARDIAC ARREST EMERGENCY?**  
Sudden Cardiac Arrest (SCA) happens when a person's heart suddenly stops beating. Blood cannot be pumped around the body, so other vital organs do not receive oxygen.  
SCA can happen to anyone at any time, regardless of age or fitness level.  
Even with fast ambulance services, the brain starts to die shortly after the heart has stopped pumping blood to it.  
Without bystander CPR and the use of an AED, survival rates will be low.

*In Singapore, the survival rate is only*  
**21.3%**  
(witnessed and shockable cardiac arrest cases only\*)

\* The overall survival rate is only 5.3% when non-shockable and unwitnessed cardiac arrest cases are taken into account.

Source: White AE, Wai WK, Ong MHY. 2011-2015 Singapore Out-of-Hospital Cardiac Arrest Registry Report. September 2017. Republic of Singapore. Unit for Perioperative Emergency Care, 2017.

© SINGAPORE HEART FOUNDATION 2018

# Registration Process

**Record AED location and details**  
(eg. brand, serial no., expiry dates of battery and AED pads, etc.)



**Display a decal on the AED cabinet** showing expiry dates of AED pads



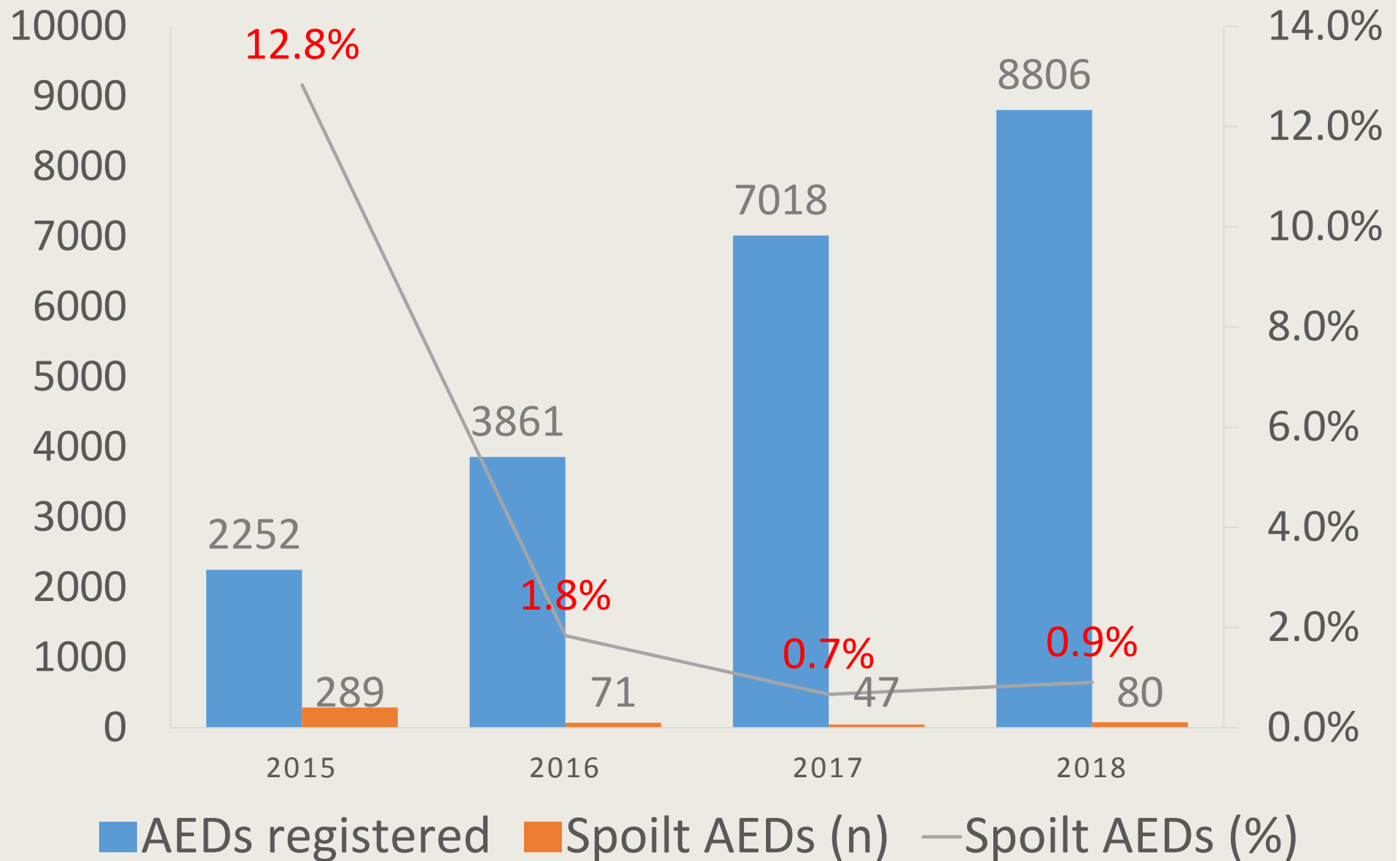
Educate AED Owners to register as first responders and download the SCDF **myResponder app**



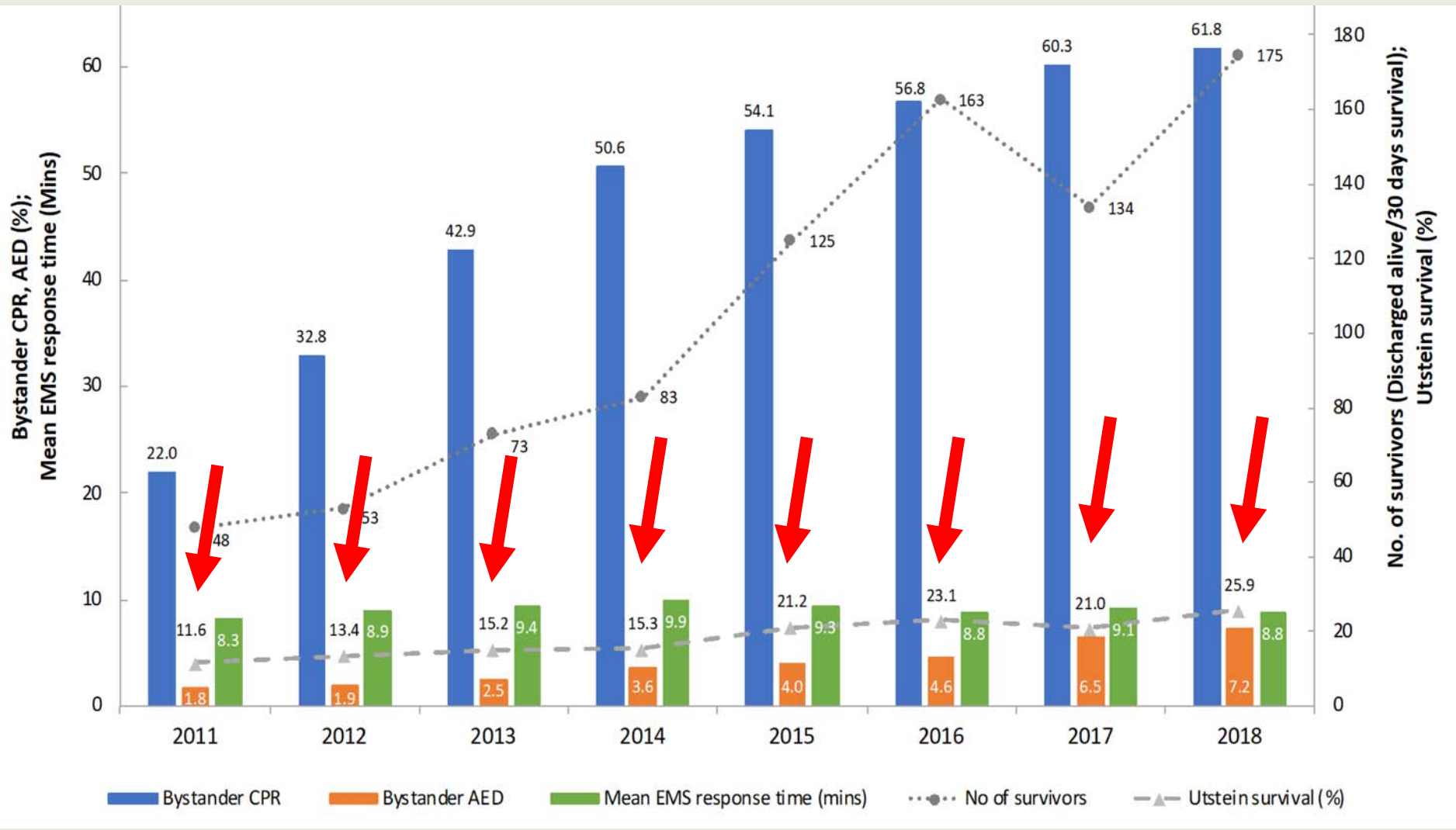
*Singapore Heart Foundation* staff checking AED maintenance and adding decals



# AED REGISTERED AND AED THAT NEED MAINTENANCE IN SINGAPORE 2015-2018



# Singapore Public Access AED Rates



# Conclusion

- It takes a system to save a life!
- Community CPR education needs to be simple, fast to learn and easy to operationalize
- Policy goes hand in hand to create a CPR/AED ecosystem