

Making sure CPR is done right

Pocket-size card tells those giving chest compressions if this is done correctly. *By Corinne Kerk*



◀ Associate Professor Marcus Ong (left) looks on as Mr Gan Kim Yong (right), Minister for Health, performs CPR with a CPRcard on a mannequin at a UPEC-People's Association community event last year.



▶ Teenager Muhammad Luqman Abdul Rahman (above) is a real-life hero, having responded to many emergencies by performing CPR, more recently with the CPRcard.

PEOPLE WHO SUFFER a cardiac arrest need immediate cardiopulmonary resuscitation (CPR), yet bystanders often lack the confidence to perform this life-saving act.

Help is now available: The CPRcard is a light and simple device similar in size to a credit card. It tells the responder immediately if the chest compressions he is giving are deep and fast enough to keep the victim's blood flowing. A green light shows on the CPRcard if the compressions are done correctly.

"In using the CPRcard, an ordinary bystander at the scene of a cardiac arrest will have more confidence in administering CPR," said Associate Professor Marcus Ong, Senior Consultant, Department of Emergency Medicine, Singapore General Hospital.

"By providing responders with real-time feedback to guide them in performing high-quality chest compressions, we can help save a patient's life even before they reach the hospital. This will redefine the way CPR is taught and practised," added Prof Ong, who is also Medical Director, Unit for Pre-Hospital Emergency Care (UPEC), Ministry of Health.

Since 2014, more than 26,000 people have been trained at community clubs and grassroots events to assist in cardiac emergencies.

When someone suffers a cardiac arrest, the first four minutes are crucial to the victim's survival. After calling for an ambulance, CPR should be performed immediately to ensure there is continuous blood flow to the brain and heart before paramedics arrive. However, bystanders often hesitate to perform CPR, with the current bystander CPR rate in Singapore at 40 per cent, compared to up to 80 per cent in some other countries.

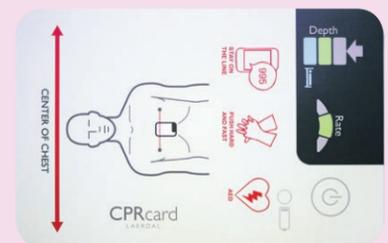
It is hoped that the CPRcard, developed by UPEC and Norwegian medical equipment maker Laerdal Medical, will improve the bystander CPR rate.

The card will be given to people who sign up for Dispatcher Assisted First Responder (or DARE) trainings conducted by UPEC. These people will also be enrolled in a community trial to evaluate if the device leads to greater confidence in people performing CPR, if they are performing good-quality CPR, and the number of lives saved using the

CPRcard. The project aims to give out 15,000 CPRcards by August 2018.

To find out or participate in the Community First Responder Programme, contact your Community Club or email pa_iknowmyneighbours@pa.gov.sg.

How the CPRcard works



Developed and patented by Norway's Laerdal Medical, in collaboration with UPEC, the CPRcard is intended for one-time use on anyone past the age of eight years suffering a cardiac arrest.

The CPRcard fits easily into a wallet, purse or pocket, making it portable.

Previous devices to gauge the quality of chest compressions were less user-friendly, coming in the form of an accessory to advanced Automated External Defibrillators, clunky equipment and phone apps.



To perform CPR with the aid of the card, the responder places it on the victim's chest using visual aids on the card, before putting his hands over the card to deliver compressions.

The card has two measuring meters. The first measures the depth of compressions, and will display a green light if the adequate depth of 4cm to 6cm is achieved.

The other meter tracks the rate of compression, and will also produce a green light if the desirable rate of 100 to 120 compressions a minute is reached.

The responder's goal is to sustain two green meter lights while performing CPR, until help arrives.

The responder is to pass his CPRcards to paramedics after using it on a victim. The card will be returned to UPEC for research purposes, and the responder will receive a new card.