

THE LINK

Issue 4 / June 2023

MEET THE LEAD FOR TRAINING AND IMPLEMENTATION WORKGROUP, DR BENJAMIN LEONG



As an emergency physician (EP), cardiac arrest is the most emergent of all emergencies. It is so urgent that by the time the patient reaches the hospital, the opportunity for the EP to make a difference is all but lost. Even for the paramedics who are the first to get to the patient's side, it is still

too late. The best chance to save the life begins immediately at the scene at the moment it occurs by rescuers trained in CPR. Singapore had a vision to have one person trained in CPR in each household. To achieve that, we organized several mass CPR training sessions, held during our National Life Saving Day.

It may not be well-known that Singapore once held the Guinness world record for the largest CPR and AED training sessions in 2011 and 2012 respectively. Despite those efforts, our bystander CPR rate and survival rates remained at 20% and 2% respectively.

Dispatcher-assisted CPR was a major paradigm change, when we started directing the first caller to perform CPR over the phone, regardless whether they had been CPR trained before. This major project saw the greatest gains in increasing bystander CPR rates with numbers exceeding 60%.

Using an app to send Community First Responders (CFR) to the scene, who could bring an AED before the paramedics was the next major step. Next, using a credit card sized feedback device would improve the quality of CPR delivered by the CFR.

With the TCPRLink project, we continue to build on our past effort by strengthening the CPR quality to the CFR, thereby further improving the chances of saving lives.

WORKGROUP UPDATES

Development of Technology (DoT)

- Data sharing agreement is currently pending MOH's submission to SCDF for review and approval.
- Working with recruitment and training the myResponders workgroup to finalize workflow for manual linkage to switch from myResponder to TCPRLink app during notification.

Training & Equipping myResponder (TEM)

- The purchase order for the CPRcards was out on 30th May and is pending delivery by Laerdal Medical Singapore.
- A Work Plan Workshop was conducted in May to work out the sequence of steps and issues regarding recruiting and preparing the myResponders for the clinical trial. Currently working on the delivery process and engaging SingPost for the all-in-one services.

Training & Implementation within SCDF (TI-SCDF)

- The TTT Workshop is scheduled for 18th to 22nd September.

Research, Protocols, Data & Analysis (RPDA)

- The trial protocol development is in progress.

WHAT'S NEW WITH THE DISPATCHER-ASSISTED FIRST RESPONDER (DARE) PROGRAMME

The DARE Programme was first introduced in 2014 with the aim to equip more people with basic lifesaving skills in CPR and AED. The first generation of CPRcard™ (Phase I research study) was also introduced to complement the program, where participants get to learn and use the device during training. Now that Phase I of the research study is at its analysis stage, the DARE programme is still on-going and has also added in other new pilot trainings such as the following:

1. Storytelling session for families
2. Piloting DARE+child and infant CPR
3. Trial on CPR training for Migrant Domestic Workers

UPCOMING MEETINGS

Monday, 3rd July

RPDA Workgroup
15:00 – 16:00 Hrs Singapore
Zoom

Friday, 7th July

Steering Committee (SC)
16:00 – 17:00 Hrs Singapore
Zoom

Wednesday, 12th July

TEM Workgroup
15:00 – 16:00 Hrs Singapore
Zoom

Monday, 17th July

TI-SCDF Workgroup
15:00 – 16:00 Hrs Singapore
Zoom

THE DEVELOPMENT AND EVOLUTION OF A CPRCARD™



Figure 1 A photo of Mr. John Sigve Risanger.

My name is John Sigve Risanger, and I have been involved in the development of the CPRcard since the very beginning in early 2008. I actually think I am qualified to get a CPRcard loyalty card soon. During these years I have been responsible for development, prototyping, supplier contact, manufacturing, troubleshooting and project management, but never alone – always with a highly competent team behind or I better say in front of me.

Those of you who already have had the first generation CPRcard in hand will instantly feel a difference when receiving the latest generation of the card as the encapsulation is made softer. A layer of foam material is added, which makes the card more comfortable to use, as well as having a positive impact on the card robustness. The new CPRcard is of same size as previous version but slightly thicker because of the new encapsulation. There are no changes in the operating principles of the CPRcard, the card still provides visual feedback to the user as a response to the movement the card is exposed to during chest compressions. The green light indicators

are still presented to tell you that you are doing good compression both in speed and depth. The card has, however, been equipped with Bluetooth technology for real-time streaming of the compression feedback, and thus facilitate the ability to communicate with a cell phone e.g., via TCPR-link app. If the phone then is connected to an Emergency Medical Communication Centre, the dispatcher can get live information directly from the scene, which again enables better guidance of the rescuer for optimal CPR to the patient. The inclusion of Bluetooth to the CPRcard is the most

diverse feature added to the new CPRcard. Not to mention that the new CPRcard also has patient tape integrated on the back of the card, which will help prevent the card from sliding on the patient's chest and thus also contribute to better performance of delivered CPR.

Furthermore, RFID functionality previously used for wireless download of the card locally stored compressions and lifetime data is now replaced by Bluetooth. This represents a great simplification in data management since there is no longer a need for the extra RFID desktop reader and accompanying software to access the data. Thus, anyone who has TCPR-link installed can download their CPR results (same format as for previous version) and share these for research purpose and debrief, for example. Likewise, a CPRcard issuer that receives used CPR cards can easily retrieve all data stored locally on the card. Finally, it is pleasant to inform that the battery life has been improved for the new version by using a higher quality battery. Anyhow, it is still the battery that is the lifetime limitation of the card since the battery is not replaceable nor rechargeable.

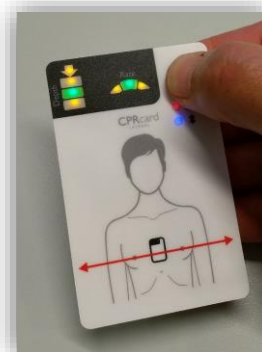


Figure 2 A CPRcard showing all lights on after being turned on.

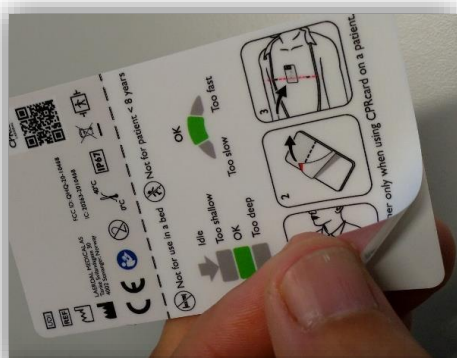


Figure 3 New physical features on the Bluetooth-enabled CPRcard with patient tape (top picture) and foam layer for softening the card surface (bottom picture).

**Keen to contribute content?
Contact Us!**

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