Background Today, most medical dispatchers are blind to what happens at the scene and have no objective data to use in rescuer coaching.

We wanted to develop a technical solution where CPR quality data and video is streamed to the dispatcher. The CPR and video allow for targeted coaching and teamwork with the rescuer, aiming to improve CPR quality.

Method We developed a single-use, accelerometer-based CPR feedback device with Bluetooth communication with a smartphone app. The credit card sized device is placed between the patient’s bare chest and the rescuers hands. It measures compression depth and rate and provides visual feedback to the rescuer. The card streams CPR data real-time to the app, which provides enhanced visual feedback on CPR performance. This app further streams the CPR data and video to a server on the internet. Real time CPR feedback and video are securely made available for the dispatcher on a web solution, to use when coaching the rescuer in CPR.

Results Results from 160 simulation runs with volunteers showed that the technical solution provides real time feedback to the rescuer while streaming real time CPR data and video to the dispatcher. The dispatcher used this CPR data and video to coach quality of CPR.

Conclusion The TCPR Link system can connect less experienced CPR volunteers with more experienced dispatchers to improve teamwork and CPR performance. The system is planned to be used in a clinical trial by first responders activated by the dispatch center, in a 5M city.

Conflict of interest Birkenes, Risanger, Sorati and Myklebust are employees of Laerdal Medical. Haukland and Harbo are consultants at Laerdal Medical.

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Cardiac arrest

CPR PERFORMANCE WITH USE OF A CPR FEEDBACK DEVICE

Background Quality cardiopulmonary resuscitation (CPR) correlates to out-of-hospital cardiac arrest (OHCA) survival. A real-time feedback device can guide rescuers towards delivering quality CPR. This study reports results of CPR quality during practice and during emergency use.

Method Rescuers in 17 OHCA cases used the CPRcard, a real-time feedback device, that they received/used during their CPR training. Corresponding weighted average of CPR quality measures (rate and depth) during training sessions were computed for comparison. Optimal CPR rate and depth in Singapore are 100–120cpm and 40–60mm, respectively. Paired t-tests were used for analysis.

Results There was no difference in average compression rate between practice (109.69) and emergency use (110.94;