Interventions and diagnostics

289 EFFECTS OF INFORMATIVE VIDEOS TO EMPOWER PARENTS IN HANDLING ACUTELY ILL CHILDREN: A RANDOMIZED CONTROLLED TRIAL

[1,2]L Borch-Johnsen*, [1,2]C Gren, [1]S Lund, [2,3,4]F Folke, [5]M Schrøder, [6]MS Frederiksen, [3]M Baastrup, [2,3]F Lippert, [3,7]AK Ersbøll, [2]G Greisen, [1,2]D Cortes. [1]*Department of Paediatrics and Adolescent Medicine, Copenhagen University Hospital – Amager and Hvidovre, Copenhagen, Denmark*; [2]*Department of Clinical Medicine, University of Copenhagen, Denmark*; [3]*Copenhagen Emergency Medical Services, Copenhagen University Hospital, Copenhagen, Denmark*; [4]*Department of Cardiology, Copenhagen University Hospital—Herlev and Gentofte, Copenhagen, Denmark*; [5]*Department of Paediatrics and Adolescent Medicine, Copenhagen University Hospital—Herlev and Gentofte, Copenhagen, Denmark*; [6]*Department of Paediatrics and Adolescent Medicine, Copenhagen University Hospital—Rigshospitalet, Copenhagen, Denmark*; [7]*Department of Population Health and Morbidity, University of Southern Denmark, Denmark*

10.1136/bmjopen-2022-EMS.24

Background Copenhagen Emergency Medical Services (CEMS), Denmark, serves the Capital Region and receives about 200,000 out-of-hours calls/year regarding children. About 40% are referred for further assessment at hospital, but less than two thirds of these children need medical treatment. We studied if parents could be empowered in handling children with mild symptoms at home by informative videos, and thereby reduce hospital admissions.
Method A prospective randomized controlled trial was conducted from 13th October, 2020 – 2nd December, 2021. Parents who called CEMS with children aged 0.5–11.9 years were offered access to informative videos before reaching telephone triage. Parents who accepted were randomized to intervention (receiving videos only) or control (standard telephone triage). Parents could repeat call for triage. Both groups received an electronic survey including questions on self-efficacy the following day. Hospital charts were reviewed blinded to randomization for hospital referrals within 72 hours. Main outcomes were high self-efficacy score and delayed hospital admissions or deaths. Secondary outcomes were treatment, duration of hospitalization, and number of engaged users of the videos.
Results A total of 4687 children were included. Only data from preliminary analysis of the first 400 surveys is available now. The self-efficacy-score was high in 84.7% (149/176) of the intervention group and in 82.7% (167/202) of the control group (p=0.68). There were no delayed admissions or deaths caused by the videos.
Conclusion Preliminary results showed equally high score of self-efficacy of parents in both groups. The use of videos appeared to be safe.
Conflict of interest None.
Funding This project was funded by TrygFonden, Denmark, Copenhagen University Hospital—Amager and Hvidovre, Copenhagen, Denmark and the Capital Region, Denmark.

Cardiac arrest

293 TCPR LINK – STREAMING OF VIDEO AND CPR QUALITY FOR IMPROVED RESCUER-DISPATCHER TEAMWORK

[1]TS Birkenes*, [1]T Haukland, [1]M Harbo, [2]K Vold, [1]JS Risanger, [1]M Sorati, [1]H Myklebust. [1]*Strategic Research, Laerdal Medical, Stavanger, Norway*; [2]*Stavanger Acute Medicine Foundation for Education and Research (SAFER), Norway*

10.1136/bmjopen-2022-EMS.25

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.
Funding Laerdal Medical and the Norwegian Research Council.

Cardiac arrest

295 CPR PERFORMANCE WITH USE OF A CPR FEEDBACK DEVICE

[1]AE White*, [1]JS Poh, [1]N Lum, [1]A Jalil, [2]PHJ Kua, [3,4]MEH Ong. [1]*Unit for Prehospital Emergency Care, Singapore General Hospital, Singapore*; [2]*Department of Emergency Medicine, Woodlands Health Campus, Singapore*; [3]*Department of Emergency Medicine, Singapore General Hospital, Singapore*; [4]*Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore*

10.1136/bmjopen-2022-EMS.26

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;