00559 A Comparison of the Retention Rates of Two Cardiopulmonary Resuscitation Methods

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Aims: Improving bystander cardiopulmonary resuscitation (CPR) is key to improving out of-hospital cardiac arrest mortality. The aim of this study is to compare the retention rates of CPR steps involved in the chest compression only CPR (CCC) and conventional ventilation CPR (CVC) methods 2 months post-training and 6 months post-training.

Methodology: This is a retrospective quantitative study that consists of video observation of CPR by participants in two randomised controlled trials (RCTs). Both RCTs randomised participants into CCC and CVC groups. After the respective CPR trainings, they underwent a post-test. This was video-recorded and retrospectively analysed by 4 blinded investigators. They were analysed for the application of CPR and the accuracy and sequence of CPR steps.

Result: For RCT A, the CVC group had significantly less participants who performed the accurate steps sequence than the CCC group (2 (5.7%) vs 9 (23.1%), p=0.050). The CVC group had more participants who missed steps (29 (82.9%) vs 25 (64.1%), p=0.115). Specifically, the head-tilt chin-lift was the most statistically significant missed step, as compared to the CCC group (13 (37.1%) vs 4 (10.3%), p=0.011). For RCT B, the CVC group has less participants who performed the accurate steps sequence than the CCC group (1 (1.6%) vs 4 (4.7%), p=0.397). The CVC group had a larger proportion of participants who missed steps (61 (96.8%) vs 79 (91.9%), p=0.303). The most statistically significant step missed by the CCC group was the undressing of the manikin (CVC = 14 (22.2%) vs CCC = 33 (38.8%), p=0.034).

Conclusion: This study has shown that CCC contributes to better steps retention, although there was no statistically significant difference. However, this may be due to small sample size. The results of the post-test for both methods are still significantly bad. This study also identifies steps that need emphasizing. There is potential for further simplifying CPR.