Format: Abstract

Full text links

Wolters Kluwer

Crit Care Med. 2009 Feb;37(2):490-5. doi: 10.1097/CCM.0b013e31819573a5.

Interactive video instruction improves the quality of dispatcher-assisted chest compression-only cardiopulmonary resuscitation in simulated cardiac arrests.

Yang CW[1], Wang HC, Chiang WC, Hsu CW, Chang WT, Yen ZS, Ko PC, Ma MH, Chen SC, Chang SC.

Author information

Abstract

OBJECTIVE: Bystander cardiopulmonary resuscitation (CPR) significantly improves survival of cardiac arrest victims. Dispatch assistance increases bystander CPR, but the quality of dispatcher-assisted CPR remains unsatisfactory. This study was conducted to assess the effect of adding interactive video communication to dispatch instruction on the quality of bystander chest compressions in simulated cardiac arrests.

DESIGN: A randomized controlled study with a scenario developed to simulate cardiac arrest in a public place.

SETTING: The victim was simulated by a mannequin and the cell phone for dispatch assistance was a video cell phone with both voice and video modes. Chest compression-only CPR instruction was used in the dispatch protocol.

SUBJECTS: Ninety-six adults without CPR training within 5 years were recruited.

INTERVENTIONS: The subjects were randomized to receive dispatch assistance on chest compression with either voice instruction alone (voice group, n = 53) or interactive voice and video demonstration and feedback (video group, n = 43) via a video cell phone.

MEASUREMENTS AND MAIN RESULTS: Performance of chest compression-only CPR throughout the scenario was videotaped. The quality of CPR was evaluated by reviewing the videos and mannequin reports. Chest compressions among the video group were faster (median rate 95.5 vs. 63.0 min-1, $p < 0.01$), deeper (median depth 36.0 vs. 25.0 mm, $p < 0.01$), and of more appropriate depth (20.0% vs. 0%, $p < 0.01$). The video group had more "hands-off" time (5.0 vs. 0 second, $p < 0.01$), longer time to first chest compression (145.0 vs. 116.0 seconds, $p < 0.01$) and total instruction time (150.0 vs. 121.0 seconds, $p < 0.01$).

CONCLUSION: The addition of interactive video communication to dispatcher-assisted chest compression-only CPR initially delayed the commencement of chest compressions, but subsequently improved the depth and rate of compressions. The benefit was achieved mainly through real-time feedback.

Comment in

Video instruction for dispatch-assisted cardiopulmonary resuscitation: two steps forward and one step back! [Crit Care Med. 2009]

PMID: 19114904 DOI: 10.1097/CCM.0b013e31819573a5

[Indexed for MEDLINE]

Publication types, MeSH terms

LinkOut - more resources