Passive ultra-brief video training improves performance of compression-only cardiopulmonary resuscitation.

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Abstract

BACKGROUND: Bystander compression-only cardiopulmonary resuscitation (CPR) improves survival after out-of-hospital cardiac arrest. To broaden CPR training, 1-2 min ultra-brief videos have been disseminated via the Internet and television. Our objective was to determine whether participants passively exposed to a televised ultra-brief video perform CPR better than unexposed controls.

METHODS: This before-and-after study was conducted with non-patients in an urban Emergency Department waiting room. The intervention was an ultra-brief CPR training video displayed via closed-circuit television 3–6 times/hour. Participants were unaware of the study and not told to watch the video. Pre-intervention, no video was displayed. Participants were asked to demonstrate compression-only CPR on a manikin. Performance was scored based on critical actions: check for responsiveness, call for help, begin compressions immediately, and correct hand placement, compression rate and depth. The primary outcome was the proportion of participants who performed all actions correctly.

RESULTS: There were 50 control and 50 exposed participants. Mean age was 37, 51% were African-American, 52% were female, and 10% self-reported current CPR certification. There were no statistically significant differences in baseline characteristics between groups. The number of participants who performed all actions correctly was 0 (0%) control vs. 10 (20%) exposed (difference 20%, 95% confidence interval [CI] 8.9–31.1%, p<0.001). Correct compression rate and depth were 11 (22%) control vs. 22 (44%) exposed (22%, 95% CI 4.1–39.9%, p=0.019), and 5 (10%) control vs. 15 (30%) exposed (20%, 95% CI 4.8–35.2%, p=0.012), respectively.

CONCLUSION: Passive ultra-brief video training is associated with improved performance of compression-only CPR.

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KEYWORDS: Bystander CPR; Cardiopulmonary resuscitation (CPR); Compression-only CPR; Out-of-hospital cardiac arrest; Ultra-brief video training