The impact of ultra-brief chest compression-only CPR video training on responsiveness, compression rate, and hands-off time interval among bystanders in a shopping mall.

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Abstract

BACKGROUND: Recent studies have demonstrated higher-quality chest compressions (CCs) following a 60 s ultra-brief video (UBV) on compression-only CPR (CO-CPR). However, the effectiveness of UBV as a CPR-teaching tool for lay bystanders in public venues remains unknown.

OBJECTIVE: Determine whether an UBV is effective in teaching laypersons CO-CPR in a public setting and if viewing leads to superior responsiveness and CPR skills.

METHODS: Adult lay bystanders were enrolled in a public shopping mall and randomized to: (1) Control (CTR): sat idle for 60 s; (2) UBV: watched a 60 s UBV on CO-CPR. Subjects were read a scenario detailing a sudden collapse in the mall and asked to do what they "thought was best" on a mannequin. Performance measures were recorded for 2 min: responsiveness (time to call 911 and first CCs) and CPR quality [CC depth, rate, hands-off interval (time without CC after first CC)].

RESULTS: One hundred subjects were enrolled. Demographics were similar between groups. UBV subjects called 911 more frequently (percent difference: 31%) and initiated CCs sooner in the arrest scenario (median difference (MD): 5 s). UBV cohort had increased CC rate (MD: 19 cpm) and decreased hands-off interval (MD: 27 s). There was no difference in CC depth.

CONCLUSION: Bystanders with UBV training in a shopping mall had significantly improved responsiveness, CC rate, and decreased hands-off interval. Given the short length of training, UBV may have potential as a ubiquitous intervention for public venues to help improve bystander reaction to arrest and CO-CPR performance.

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KEYWORDS: CPR; CPR performance; CPR responsiveness; CPR teaching; Cardiac arrest; Lay bystander, Bystander CPR; Public; Shopping mall; Ultra-brief video

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