00184   Quality of Bystander CPR by Lay First Responders: Training Versus Real-world Use of a Novel CPR Feedback Device in Singapore

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Aims: To gain insight by comparing the quality of chest compression performances in real-life emergencies to training performances. Compression quality data were derived from the use of a novel CPR feedback device during training and then actual emergencies in Singapore.

Methodology: The credit-card sized CPRcardTM device provided visual indication of chest compression depth and rate in real-time, and stored the data. Median rate, depth; proportion within targets (100-120/minute; depth:4-6cm); and flow-time were used to determined compression quality. Bystanders' emergency performances were compared to their training performances.

Result: Median depth during emergencies vs. trainings was 39mm(95%CI: 30-49mm,p= 0.028) vs 55mm(95%CI: 50-57mm,p= 0.028); and median rates were 114cpm(95%CI: 109-120cpm, p=0.104) vs. 109cpm(95%CI: 105-112cpm, p=0.104). Of total emergency vs training delivered compressions, 6%(95%CI: 0-49%,p=0.008) vs 63%(95%CI: 56-90%,p=0.008) were within target depth; 54%(95%CI: 32-79%,p=0.028) vs 94%(95%CI: 81-97%,p=0.028) were within target rate. Of the lay bystanders' during emergencies vs trainings, 2(25%, p=0.072) vs 5(71%, p=0.072) met both compression and depth targets. Emergency vs training compression flow-time was 95%(95%CI: 85-99%,p=0.099) vs 100%(95%CI: 96-100%,p=0.099), respectively. Lay bystanders overall reported positive experience using the card but some expressed reluctance to compress deeply for fear of harming the victims.

Conclusion: Training compressions were of better quality. The results show the quality of chest compressions delivered by lay bystanders in actual cases, and highlights depth as an area   of   concern   that   could   improve   with   training   enhancement.