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A Prospective Study of Cardiopulmonary Resuscitation Training in 7th Grade Students Using Take Home Self-Instruction Cardiopulmonary Resuscitation Kit

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Study Objectives:

The American Heart Association (AHA) has recently started an initiative to double the number of Americans trained in cardiopulmonary resuscitation (CPR). One of the potential barriers to this goal is the four hour time commitment for a traditional CPR class. A potential solution to this problem is self training through a take home CPR kit. The objectives were to evaluate 7th grade students for adequacy of CPR after completing a take home CPR course and to examine the multiplier effect of the CPR instructional and its ability to create CPR competent family members.



This was a prospective cohort study of 7th grade students at two local schools. The study protocol was approved by our hospital institutional review board (IRB). Inclusion criteria included 7th grade students at selected schools, access to a home digital versatile disc (DVD) player, and the ability to read and speak English. All 7th grade students at the participating schools were given a kit regardless of willingness to participate in the study. A total of 158 students were given a take home CPR kit which included an inflatable CPR training manikin, CPR training booklet, 22-minute training DVD, and cleaning toilettes. Students were given an educational session on the use of the kit and the importance of CPR and were encouraged to take the kit home and practice CPR with their family members. We asked the students to return with their parent(s) two weeks after receiving the kit, at which time the participants were consented and then evaluated for adequacy of CPR. The follow-up time was selected during parent-teacher conferences where it was expected that the student and parent would be on campus. Participants were evaluated by certified CPR instructors. Student participants were asked to return at three months







for re-evaluation. Remediation of participants for inadequate skills was done in real time. All participants were asked to complete a survey after their initial evaluation. The nonparticipating families were also surveyed via mail.

Results:

A total of 20 participants were enrolled (11 students, 9 parents). All but one of the students and all parents who were evaluated were competent in their CPR skills. At the three month study follow-up, half of the 7th graders had lost critical skills in their CPR performance. On average, in addition to the student participant, two additional family members were trained using the kit. In response to the low number of participants, a survey was sent to nonparticipating parents in an attempt to identify the barriers to participation; eight surveys were returned. All respondents felt CPR was an important skill to learn.

Conclusions:

In this study, 7th grade students and their parents appear to be adequately trained in CPR using a take home CPR kit. Evaluation of this small group shows approximately three people will learn CPR for each kit utilized by a family. The main limitation to this study is the small sample size, leading to the potential for selection bias. Reasons for lack of participation, as described by nonparticipants, include; fear of testing, "didn't have enough time", and "not a priority."