Evaluation of a Self-Instructional CPR Program for Parents with Children Enrolled in Community Swim Lessons

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Purpose: Drowning is the second leading cause of unintentional injury-related death in children 0-14 years (CDC, 2014). Only one-third to one-half of children who drown are provided with bystander cardiopulmonary resuscitation (CPR); lack of bystander CPR results in death and neurological deficits because of the prolonged no blood flow period to the brain (Akahane, 2013; Topjian & Berg, 2012). This project evaluated an evidence-based self-instructional program aimed at improving CPR knowledge and confidence in parents with children in swim lessons.

Review of Literature: The literature review identified video self-instruction (VSI) as a method of CPR instruction that teaches the basics of CPR while decreasing barriers. Six articles (including five randomized control trials) evaluated the effectiveness of VSI compared to traditional CPR education; all six articles agreed that VSI CPR education was as effective, if not more effective, at teaching knowledge and skill (Batcheller et al, 2000; Einspruch et al, 2007; Chung et al, 2013; Lynch et al, 2005; Pieck et al, 2012; Roppolo et al, 2007). The literature indicates that VSI CPR instruction during swim lessons is an effective way of increasing CPR knowledge and confidence while decreasing barriers; however, there is no published literature evaluating the use of the American Heart Association’s VSI program (CPR Anytime Child™) (Moran, Stanley, & Rutherford, 2012; Moran & Stanley, 2011; Wei, et al, 2013). This project adds to the body of literature by providing a program evaluation of the CPR Anytime Child™ program.

Methodology: A prospective, repeated measures design evaluated the CPR Anytime Child™ program. Twenty-nine parents completed pre, immediate, and one-month post questionnaires.

Results: Knowledge and confidence scores improved significantly over time. Compared to a baseline knowledge mean score of 47.3%, immediate-post was 93.5% (t=-12.176, p=0.00), and one-month was 80.9% (t=8.459, p=0.00). Confidence in determining CPR need increased from a baseline 2.52 to 3.18 immediate-post (t=-2.88, p=0.013) and 3.20 at one-month (t=4.759, p=0.00). Confidence in performing CPR increased from a baseline 2.14 to 3.18 immediate-post (t=4.759, p=0.00) and 2.73 at one-month (t=-2.88, p=0.013).

Implications for NPs: The CPR Anytime Child™ program had a significant sustained effect on improving knowledge and confidence in parents of children in swim lessons. With this knowledge, it appears that nurse practitioners can refer to this program in this setting when advocating for and assisting families in finding CPR education. Additionally, nurse practitioners can utilize this program in this setting to provide CPR education to their communities.

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EVALUATION OF A SELF-INSTRUCTIONAL CPR PROGRAM FOR PARENTS WITH CHILDREN ENROLLED IN COMMUNITY SWIM LESSONS

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BACKGROUND

- Drowning is 2nd leading cause of unintentional injury-related death in children
- Lack of bystander CPR leads to death and neurological deficits
- Faster CPR initiation = Better outcomes
- Drowning Prevention: “Layers of Protection”

PURPOSE

To evaluate an evidence-based self-instructional program (CPR Anytime Child) aimed at effectively teaching pediatric cardiopulmonary resuscitation (CPR) to parents with children enrolled in swim lessons.

SPECIFIC AIMS

1. To evaluate parental CPR knowledge at 3 time points in relation to the program: Pre, immediate-post, and one-month
2. To evaluate parental changes in confidence in both assessment and performance of child CPR

RESULTS

Significant improvements in knowledge & confidence immediately and at one month in this sample and setting.

Limitations
- Design
- Small sample despite attempts to encourage participation
- Convenience sample
- No CPR Skill Evaluation

IMPLICATIONS

- AAP: Pediatric Health Care providers should advocate for and assist families in finding and providing CPR education
- Assist families in finding and providing CPR education
- Highlighted need for those who have access to water
- CPR Anytime Child at swim centers
- Easily Replicable in this setting
- Simple to use/d'self-instruction
- Overall positive staff satisfaction
- Sustainable
- NPs can refer to this program and work to implement in this setting

REFERENCES

- Evaluation of a Self-Instructional CPR Program for Parents with Children Enrolled in Community Swim Lessons

MATERIALS AND METHODS

Design
Descriptive Repeated Measures Program Evaluation of AHA's CPR Anytime program

Setting
Community YMCA with a pool in South Hills of Pittsburgh; Summer 2015 swim lessons

Sample
Convenience sample of parents whose children attended swim lessons between June-August 2015; Exclusion Criteria: Having CPR training in the past 2 years, having a medical condition that was not conducive to performing child CPR

Intervention
CPR Anytime Child Program-Taught individuals the life-sustaining key skills of child CPR, Practiced on the manikins, based on AHA 2010 guidelines for CPR and Emergency Cardiovascular Care

Instrument
Written Questionnaire that measured parental CPR knowledge and also measured changes in confidence in assessing the need for child CPR and performing child CPR

Data Collection:
- Pre-program questionnaire
- Immediate post-program questionnaire
- One-month retention questionnaire

Data Management: Qualtrics, SPSS

Data Analysis: Descriptive Statistics, Paired t-test Statistical Analyses (Knowledge Change/Confidence Change)

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