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Possibilities for, and obstacles to, CPR training among cardiac care patients and their co-habitants☆

Ann-Britt Thorén*, Åsa B. Axelsson, Johan Herlitz

Division of Cardiology, Sahlgrenska University Hospital, Göteborg, Sweden

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Abstract

Aim : To investigate the level of cardiopulmonary resuscitation (CPR) training among cardiac patients and their co-habitants and to describe the possibilities for, and obstacles to, CPR training among this group.

Methods : All patients admitted to a coronary care unit during a four-month period were considered for participation in an interview study. Out of 401 patients, 268 were co-habiting. This study deals with these subjects.

Results : According to the answers given by the patients, 46% of the patients and 33% of the co-habitants had attended a CPR course at some time. Among those who had not previously attended a course, 58% were willing to attend, and 60% of the patients whose co-habitant had not received CPR education, wanted him or her to attend a course. The major obstacle to CPR training was the patient's own medical status. The major obstacle to the co-habitant's participation was the patient's doubts concerning their partner's physical ability or willingness to participate. Younger persons were more often willing to undergo training than older persons ($p < 0.0001$).

Of those patients who had previously attended a course or who were willing to undergo training, 72% were prepared to do so together with their co-habitant. A course specially designed for cardiac patients and their relatives was a possible alternative for 75% of those willing to participate together with their co-habitant.

Conclusions : Two-thirds of the patients did not believe that their co-habitant had taken part in CPR training. More than half of these would like their co-habitant to attend such a course. Seventy-two percent were willing to participate in CPR instruction together with their co-habitant. Major obstacles to CPR training were doubts concerning the co-habitant's willingness or physical ability and their own medical status.

Keywords: Bystander CPR; Cardiac arrest; Cardiopulmonary resuscitation; Education; Out-of-hospital CPR; Resuscitation

1. Introduction

Most cases of hospital cardiac arrest (CA) occur in the victims home [1–3], while the major proportion of rescue efforts take place on the street or in public places [1,2,4,5]. The location of the cardiac arrest, whether or not it occurs outside the victim's home, has been reported as an independent factor for survival [1,5,6]. Despite the efforts made to increase the proportion of trained lay rescuers the incidence of bystander cardiopulmonary resuscitation (CPR) still remains low [1–3,7]. Figures from the Swedish Cardiac Arrest Registry (SCAR) show that 36% of patients who suffered a CA received bystander CPR. However, only 23% received CPR when the CA occurred at home compared to 42 and 55% if the CA occurred in public places or other places, respectively [2]. One prerequisite for being prepared to intervene in a cardiac arrest is previous CPR instruction and training. Another prerequisite is for the rescuer to be in a suitable physical or psychological state that permits such an action. Swor et al. [3] found that patients who suffered a cardiac arrest at home and the bystanders involved were older compared to those who had a cardiac arrest in public places. The bystander was also less likely to be trained in

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* Corresponding author. Present address: Forskningscentrum för akut hjärtsjukvård, Röda Stråket 4, Sahlgrenska Universitetssjukhuset, SE-41345 Göteborg, Sweden. Tel.: +46 31 342 39 07; fax: +46 31 82 96 50.

E-mail address: ann-britt.thoren@vgregion.se (A.-B. Thorén).

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CPR or to have attended a course during the last five years and less likely to perform CPR, even if trained.

Ever since the first CPR training programme, families of cardiac patients have been a target group for CPR training [8,9]. In Sweden, the National Board of Health and Welfare recommended that hospitals and county councils should offer CPR education both to health care professionals, to patients with a high risk of a heart attack and their relatives [10]. However, there still is a discrepancy between those trained and those most likely to witness a cardiac arrest [11–15]. According to the result of a survey of 1012 persons recently trained in CPR, 16% of those aged 59 and over stated that their own cardiac disease or that of a relative or a friend was a reason for taking the CPR course. Nevertheless, those over 59 years old constituted only 3% of the respondents [15]. This result resembles that obtained by Brennan and Braslow [11], where only about 7% of CPR training participants were aged 50 or older and a minority (19%) lived together with someone at a high risk of a heart attack. Moreover, in one study in Wales, where basic life support mass training was advertised by a local newspaper campaign, 67% of the participants were related to someone with a heart problem [16]. The readership profile of the newspaper used in that study comprised of 62% non-manual workers and 47% aged 45 years or over. The strategy was to reach volunteers that matched the risk groups better.

In a study of the preparedness and willingness of cardiac patients family members to perform CPR, Platz et al. [17] found that 49% had received some CPR training (although only 14% within the previous year), most of whom were medical professionals. In addition, most had undergone training because of job or school requirements and only a few as a result of living with a person at high risk of CA.

Many authors stress the importance of identifying ways of increasing the number of family members of cardiac patients who are trained in CPR [3,6,11,12,17–21]. However, there are few studies, focusing on disincentives to bystander intervention or obstacles to CPR training among this group [12,17,20]. The present study, which focuses on patients living with a family member or other person, is part of a larger investigation, in which cardiac patients' attitudes towards CPR and CPR instruction were examined.

This study aimed to investigate the level of CPR training among cardiac patients and their co-habitants and to describe the possibilities for, and obstacles to, CPR training among this group.

2. Methods

2.1. Participants

All patients admitted to the coronary care unit of Sahlgrenska University Hospital during a four-month period (from September15, 2000 to December 14, 2000 and from January 15, 2001 to February 15, 2001) were considered for participation in this study. Inclusion criteria were patients living in the area, who were mentally lucid and admitted to the ward for some cardiac problem or suspected cardiac problem ($n = 654$). Due to a very brief duration of their hospital stay or because they were undergoing different medical examinations, 128 of the patients could not be reached. Fifty-three patients were excluded because of communication difficulties or the severity of their medical condition, where the nursing staff judged that the patient was too ill to take part in an interview. We invited 473 patients to participate, of which 72 declined. Of the 401 eligible patients, 268 (67%) were co-habiting. This article deals with these patients.

2.2. Data collection

The data collection procedure is described in detail in a previous paper [22]. The baseline data were collected from the patient's medical record and by an interview with the patient. The interview was held during the period of hospitalisation.

2.2.1. Questionnaire

The questionnaire, which was constructed by the investigators, included three sections. The first section contained questions concerning demographic data. The second section aimed at assessing the patient's knowledge and preferences regarding CPR and CPR courses (question numbers 8–26). Among these questions, which were described in detail in a previous paper, we now present the results from selected questions. These questions have kept their original numbers as in the previous paper [22].

The third section contained questions regarding previous CPR education, possibilities for, and obstacles to, such training for patients and their co-habitant (question numbers 27–33). This study mainly concerns the third section. Only the questions relevant to this paper are presented in Appendix A.

The questionnaire was tested in a pilot study consisting of interviews with a convenience sample of 10 patients. These data were, however, not included in the study. In spite of the pilot test, question number 33 was changed from "Do you see any advantage in attending a specially designed CPR course together with people with various heart conditions and their relatives?" to its final wording after 54 interviews. Thereafter, no additional changes were made.

2.2.2. Statistical analysis

The Chi-square test was used for comparisons between men and women and between age groups regarding willingness to attend CPR training. In the comparisons, the alternatives 'unsure' and 'no' were considered as one and the same ('no').

The study was approved by the Committee for Ethics in Medical Investigations, Göteborg University.