

Cardiopulmonary resuscitation. Paper 2: a survey of basic life support training for medical students

C.A. GRAHAM, K.A. GUEST, D. SCOLLON

Faculty of Medicine, University of Glasgow, Glasgow

SUMMARY

This paper presents the results of a survey of Basic Life Support (BLS) training, based on experience gained by undergraduate medical students who had just completed their first clinical year (third year) at the University of Glasgow. Data were collected on the amount and quality of BLS training received, along with students' own perceptions of their confidence in providing BLS in a cardiac arrest resuscitation attempt. The results made interesting, but not surprising, reading with only 15% of students appearing to have been adequately taught BLS at any point during their third year. Students want more training and 98% see resuscitation as an important topic in the curriculum. Self-perceived confidence in performing BLS in an acute resuscitation situation is low. With no evidence to suggest that the situation is any different elsewhere in the UK, it is recommended that undergraduate resuscitation training is improved to reflect the importance that medical students attach to it.

Key words: BLS, medical students, resuscitation, training

INTRODUCTION

Basic Life Support is a method of maintaining cardiac output following cardiorespiratory arrest.¹ It maintains viability until full cardiopulmonary resuscitation (CPR) can be commenced. Recent reports on CPR have shown that both senior² and junior medical staff^{3–6} are lacking in essential BLS skills. Similarly, studies on medical students' ability to provide competent BLS have shown that both training and ability are severely deficient.^{7,8} Calls have been made to rectify this situation by improving undergraduate medical education in all aspects of resuscitation, as students must, in common with all hospital staff, be able to provide competent and effective BLS when required.^{9,10}

The objective of this study was to assess the standard of BLS training as perceived by students who have just completed the first clinical year of the MB, ChB course. Information was also sought on the students' exposure to cardiac arrests during the year and on the students' opinion on the importance and amount of resuscitation training.

METHODS

A questionnaire was distributed to all members of the fourth year of 1992–93 in the medical course at the University of Glasgow, with questions pertaining to life support training and experience gained in the previous year. Students who did not progress to fourth year (i.e. repeating third year or starting intercalated degrees) were excluded from the survey because of difficulties in contacting them.

RESULTS AND DISCUSSION

A total of 162 completed questionnaires were received from the target group of 202 giving a response rate of 80.2%. The results indicate that over one third of the students (35%; 56/162) received no BLS training during the course of the year. According to the students' responses, training sessions involved manikins in 92% and simulated arrest in 15%, yet guidelines recommend that CPR training should always involve practice with these essential teaching aids.¹¹ Simulated cardiac arrests have been shown to improve resuscitation skills.¹² Only 15% (25/162) of the study group have been fully trained in BLS techniques.

Of those who were not taught BLS, 91% stated that they would like to have been instructed. Hence 97% (157/162) of the study group were either taught or would like to have been taught basic resuscitation skills. This correlates well with the students' opinion, with 98% (158/162) regarding resuscitation as important. The Royal College of Physicians recom-

Correspondence:

C.A. Graham,
Medical Student,
Flat 6, 60 Lumsden
Street, Yorkhill,
Glasgow G3 8RH, UK

mends that students should attend arrests as part of their training,¹⁰ only 43% (69/162) of the study group attended an arrest during the year (Table 1). Of those who did, 28% (19/69) actively participated in the cardiac arrest procedure, but only seven of these students had been fully trained in BLS according to the above guidelines.

Less than half (62/162; 38%) of the study group claimed to be confident in dealing with the initial stages of an arrest without assistance. It is interesting to note that more than half (55/106; 58%) of those who had recently been trained in BLS lacked the confidence to deal with this situation. The study assessed students' perceived confidence in their resuscitation ability. Further studies are required to assess actual competence in this group, as it is well known that many people who are confident in their skills are not necessarily competent in their performance.¹¹

This study has shown that the majority (131/162; 81%) of the study group believe that there should be more resuscitation training. Training is most effective when repeated at intervals of not more than 6 months, as the ability to perform BLS falls to pre-training levels within 6–12 months of training.^{13,14} Only constant reinforcement of theoretical and practical knowledge will lead to improved standards of BLS and thus each patient's chance of survival.

It has been shown that BLS training is considered inadequate in the University of Glasgow and that the medical students want improved instruction. At the time of study, there was no evidence to suggest that BLS training is different elsewhere in the UK. This study has led to a major review of resuscitation training within this medical school; the main objective

Table 1. Action performed during arrests attended by a total of 69 respondents

Action taken	No. of students (%)
Observed only	51 (74)
Bag and mask ventilation	10 (14)
Airway control	4 (6)
External chest compressions	12 (17)
Basic life support (out of hospital)	2 (3)
Other	2 (3)
No response	1 (1)

Figures quoted are given as a percentage of those who had witnessed an arrest procedure rather than of the whole group. Percentages total to more than 100, because some students had been present at more than one arrest procedure.

is to provide a BLS training session to every medical student three times during their third year.

Many medical schools in the USA and Canada require the successful completion of life support courses prior to graduation.^{15,16} Serious consideration should now be given to improving undergraduate resuscitation training to reflect the importance that medical students attach to it.

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