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Structured training in assessment increases confidence amongst basic life support instructors☆

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ABSTRACT

Aim: Assessment skills are often neglected in resuscitation training and it has been shown that the ERC BLS/AED instructor course may be insufficient to prepare candidates for an assessment role. We have introduced an Assessment Training Programme (ATP) to improve assessors' decision making. In this article we present our ATP and an observational study of candidates' confidence levels upon completing both an ERC BLS/AED instructor course and our ATP.

Methods: Forty-seven candidates undertook the ERC instructor course and 20 qualified ERC BLS/AED instructors undertook the ATP. Pre- and post-course questionnaires were completed. Confidence was assessed on ten-point Visual Analogue Scales (VAS).

Results: Overall confidence on the ERC BLS/AED instructor course rose from 5.9 (SD 1.8) to 8.7 (SD 1.4) ($P < 0.001$). A more modest improvement was witnessed on the ATP, rising from 8.2 (SD 1.4) to 9.6 (SD 0.5) ($P < 0.001$). Upon completion of their respective courses, assessors (mean 9.6, SD 0.5) were significantly more confident at assessing than instructors (mean 8.7, SD 0.5) ($P < 0.001$). Confidence in assessing individual algorithm components was similar on both courses. On the post-course questionnaire those on the ATP remained significantly more confident at assessing borderline candidates compared to instructors ($P < 0.001$), with no difference for clear pass ($P = 0.067$) or clear fail ($P = 0.060$) candidates.

Conclusion: The ATP raises the confidence of assessing BLS/AED candidates to a level above that of the ERC instructor course alone. We advocate that resuscitation organisations consider integrating an ATP into their existing training structure.

1. Introduction

Prompt and effective delivery of cardiopulmonary resuscitation (CPR) combined with the other links in the 'Chain of Survival' significantly improves outcomes from sudden cardiac arrest (SCA).[1] Increasing the dissemination of CPR skills throughout the population has been shown to improve survival from SCA,[2] in-part due to an increased willingness of lay-persons to initiate CPR.[3] Consequently, widespread community based basic life support (BLS) tuition is strongly advocated by the European Resuscitation Council (ERC) in their most recent guidelines.[4] These guidelines also dictate the criteria for the training and assessment of BLS providers.[4] Current ERC BLS/AED provider accreditation procedures allow either continuous assessment or formative assessment at the end of their course. This is carried out by an ERC accredited instructor who has successfully passed an ERC instructor course. Formal training in BLS assessment currently constitutes only a small component of the ERC instructor course. Previous work by our group has demonstrated that this may be insufficient to prepare instructors for an assessment role and that there is scope for additional training focussing on assessment skills.[5]

There is ample evidence within the literature that conventional instructor courses still fail to achieve standardisation of assessment decisions in the practical assessment of life support.[6,7] For almost two decades, the Resuscitation for Medical Disciplines (RMD) group at the University of Birmingham has run a unique, peer-led basic life support course that has been described previously.[8] At

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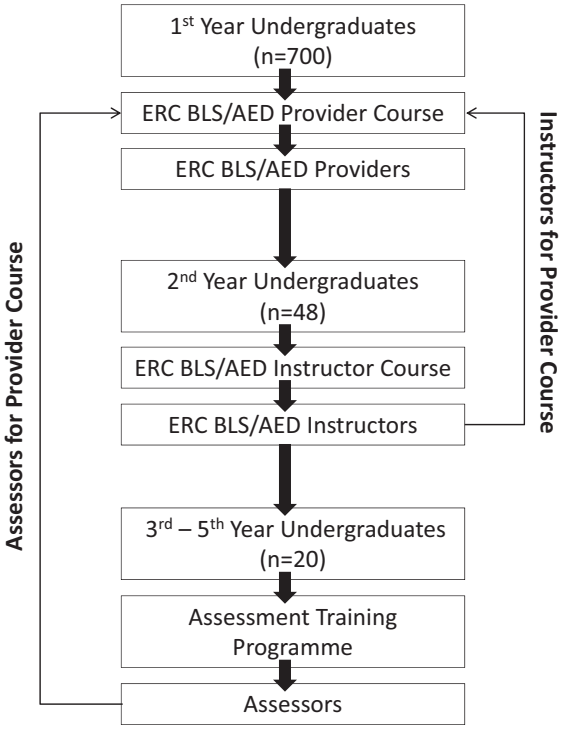

Fig. 1. Flow-chart illustrating candidate selection for the Assessment Training Programme.

the outset of each academic year a new cohort of 48 healthcare-student instructors undertake an ERC BLS/AED instructor course in order to gain formal ERC BLS/AED instructor accreditation status. In 2007, RMD Birmingham introduced an additional Assessment Training Programme (ATP) in an attempt to standardise the inherent subjective nature of BLS assessments.[5] The ATP runs in parallel with the ERC instructor course and trains a cohort of 20 student assessors annually, each of whom has previous experience as an ERC BLS/AED instructor (Fig. 1).

Assessment in medical education is a complex topic with numerous techniques described as effective.[9] Berden et al.[10] proposed a template for assessment of BLS during training which has been adopted by a number of courses; a modified version of which is used by our course during the formal assessment of BLS skills.[8] Training of assessors is an area of medical and resuscitation education which is often neglected and frequently experience alone is used as a tool to qualify an individual to assess students. The ATP seeks to teach relatively inexperienced assessors how to assess in the style of a more experienced assessor and elevate their decision making skills to a level above that of an ERC BLS/AED instructor. A previous study by the authors identified that the ATP significantly improved the decision making of ATP-trained assessors when compared to ERC instructors.[5] This article aims to ascertain the confidence of both ERC instructors and ATP-trained assessors in facilitating an ERC BLS/AED provider assessment. The authors also describe the ATP components in detail so that this model may be more widely disseminated.

2. Methods

We sought to compare instructors' confidence in making decisions in the context of assessing BLS competence. This was assessed before and after they had completed a standard ERC BLS/AED instructor course and before and after undertaking the ATP. Forty-seven candidates attending an ERC BLS/AED instructor course participated, in addition to 20 qualified ERC BLS/AED instructors

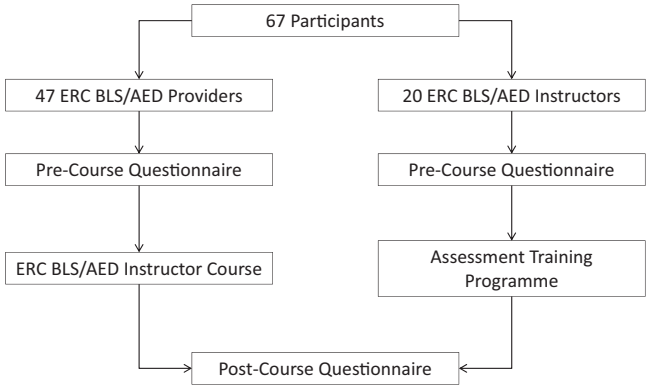

Fig. 2. Flow-chart illustrating data collection process for the observational study.

who undertook the ATP as additional training, in line with local requirements. All participants completed a questionnaire which sought to evaluate their confidence in assessment decision making on two occasions. The first was prior to undertaking assessment training and second was after they had undergone training (Fig. 2). Both questionnaires were identical and consisted of standardised questions with the same stem, for example: '*Please rate your confidence in facilitating a BLS/AED assessment of a borderline candidate*'. Confidence was assessed on a ten-point Visual Analogue Scales (VAS). Participants were also provided with space for free text answers in order to describe anything not captured by the more structured questions.

Data were analysed by SPSS version 22 (IBM, New York, USA). Differences between the instructor and assessor groups were analysed using independent *t*-tests. Differences between pre- and post-course responses from individuals were analysed by paired *t*-tests. *P*-values of <0.05 were considered statistically significant. All participants were provided with information relating to the study prior to providing their consent to participate, were free to withdraw from the study at any time and were free to choose not to participate without any impact on their progression on either the ERC instructor course or the ATP. Each participant signed an informed consent sheet and all participants' responses were kept anonymous from the outset. Ethical self-assessment was carried out as per institutional policy and formal ethical approval was not required for this study.

3. The Birmingham Assessment Training Programme

The ATP focuses upon the role of the assessor, with its primary intention being to standardise intra-assessor decision making. This transforms the decision making of more junior assessors to become more in-line with that of an experienced assessor. Whilst this is achieved in part through utilisation of a BLS algorithm checklist, the ATP especially focuses on decision making in equivocal situations.

The ATP is a five hour course (see Supplementary Material for timetable). As a pre-requisite, participants possess a minimum of 1 year's experience as a BLS/AED instructor. The course is facilitated by experienced BLS instructor trainers at a ratio of one instructor trainer to six trainee assessors. Whilst it has been shown that the ERC BLS/AED instructor course is enough to train inexperienced student assessors to examine their peers,[11] when carrying out internal audit of the assessors it was noted that the assessment decision making process and candidate outcomes are variable when compared with more experienced instructor trainers. Thus, the ATP has evolved to primarily focus on 'grey areas'; or areas of uncertainty that more junior assessors appeared to struggle with. Potential assessors are given training on scene setting and communication skills including 'how to break pass/fail decisions to a