

# Life support courses for all

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## SUMMARY

Many courses teaching advanced life support skills are now available in this country. These 'provider' courses include those dealing with cardiac, trauma and paediatric resuscitation. The numbers of applicants for all these courses far exceed the places available. There is further demand for places from those who currently hold advanced life support provider certificates and who require re-evaluation to maintain their certification. For many, particularly non-medical staff, obtaining funding or study leave to attend such a course may also be a problem. All these factors lead to delays in providing the training in advanced life support skills that is clearly needed. We here report on the development and success of local 1-day resuscitation courses as a means of introducing all staff who may be expected to cope with an emergency situation to the current principles of resuscitation. We do not suggest that such abbreviated courses are in any way a substitute for the full advanced life support course, but that they can provide tuition that may otherwise be unavailable.

**Key words:** life support, resuscitation, training.

## INTRODUCTION

In recent years in the UK there has been a welcome increase in the number of courses designed to increase the theoretical knowledge and practical skills of health workers who may be required to manage immediately life-threatening conditions. These include the Advanced Cardiac Life Support (ACLS) course introduced in 1987 and the Advanced Trauma Life Support (ATLS) course introduced in 1988 (under licence from the American College of Surgeons). More recently, the UK has seen the development of Advanced Paediatric Life Support (APLS) and Paediatric Advanced Life Support (PALS) courses (1992). The U.K. Resuscitation Council commenced Advanced Life Support (ALS) courses in 1993. The ALS/ACLS

and paediatric courses use guidelines and protocols agreed on a European basis. All these courses highlight the importance of teamwork to achieve the best outcomes from resuscitation efforts, whether the patient has suffered a cardiac arrest or a major injury.

The number of courses nationwide has grown in recent years. Because of the need to regulate and maintain uniform standards, the numbers of instructor courses for both ATLS and ALS/ACLS have not increased at a rate sufficient to meet the demands for provider course places. The number of provider courses will plateau in the foreseeable future. There will also be an increasing demand, by those who have already completed provider courses, for re-evaluation in order to maintain their certification.

The Royal College of Surgeons of England is considering making ATLS certification compulsory for the new Fellowship examination. This will place further demands on the limited number of places on ATLS provider courses. Similar 'compulsory' needs for ATLS training already exist in the U.S.A., where a number of states have made possession of an ATLS certificate a legal requirement for the delivery of trauma care.<sup>1</sup>

There is a need for nurses and other paramedical staff to attend these courses, and opportunities for these groups are fewer than for doctors. Only medical staff can attend the ATLS course, although some observer places are usually available for nurses and paramedical staff. The Advanced Trauma Nursing Course (ATNC) is the nursing equivalent to the ATLS course, but in 1993 only 84 places were available on seven courses, compared with over 1500 ATLS provider places on 98 courses. ALS and ACLS courses are open to nurses and other paramedical staff and are more numerous. In 1993, there were 39 ALS provider courses, successfully training 942 participants, 390 of whom were nurses. A total of 330 ACLS providers were trained in the same year. The paediatric courses are less numerous; again, in 1993, there were 144 participants who successfully completed APLS

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provider courses and 252 participants who completed the PALS course.

Given the current restrictions on study leave budgets and time, it would be impossible for every member of hospital staff who may need to use advanced life support skills in an emergency situation to attend a full ATLS or ALS course. In view of this problem, the Accident and Emergency (A&E) Department at York District Hospital has developed a programme of 1-day courses based on the key principles and elements of the full ALS and ATLS courses. Plans are also being developed for a paediatric based course. These courses can be run at a fraction of the cost of the full courses, which typically cost from £250 upwards. They aim to provide participants with the basic tenets of the full course as a template on which to work when they are next faced as individuals or as part of a team with the care of a critically ill patient. The courses were initially aimed at nursing and paramedical staff, but with minor modifications have also been made available to medical staff of all grades. *They are not designed to be a substitute for attending the full course, but rather to encourage staff to apply for places on the full courses.*

## THE COURSES

The content of each course is based soundly on the principles of the respective ALS and ATLS courses. We have produced our own set of lecture slides for each course, in order to avoid copyright infringement. Those teaching on the course have all undergone either ALS or ATLS provider courses, and may be instructors on such courses. Each course consists of a number of lectures followed by practical demonstrations, with emphasis being placed on the team approach throughout. A personal account of the ATNC or ALS course from a member of the nursing staff serves to reinforce this. Sample programmes are shown in Tables 1 and 2.

Each course is structured in a similar way. The cardiac and trauma courses commence with an overview of how and why the Advanced Life Support Courses have been developed, and expands on the *raison d'être* of the 1-day course. The cardiac course then has lectures on basic life support and defibrillation followed by a practical demonstration of the management of a cardiac arrest using advanced life support skills, emphasizing the team role. The afternoon session

**Table 1.** York Accident and Emergency Department: Introduction to Advanced Life Support Courses—Cardiac Life Support

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09.00	<i>Lecture:</i> Introduction to the concepts of Advanced Life Support Courses
09.30	<i>Lecture:</i> Basic Life Support
10.30	<i>Lecture:</i> Defibrillation
10.45	<i>Break</i>
11.00	<i>Discussion and Practical Demonstration:</i> The Team Approach to Cardiac Resuscitation
12.00	<i>Lunch</i>
13.30	<i>Lecture/Discussion:</i> Bereavement and Breaking Bad News
14.30	<i>Practical:</i> Supervised Practice and Assessment in Basic Life Support
16.00	<i>Questions and Close</i>

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**Table 2.** York Accident and Emergency Department: Introduction to Advanced Life Support Courses—Trauma Life Support

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09.00	<i>Lecture:</i> Introduction to the concepts of Advanced Life Support Courses
09.30	<i>Lecture:</i> The Language of Advanced Trauma Life Support
10.30	<i>Lecture:</i> ATLS Courses for Nurses – an Overview
10.45	<i>Break</i>
11.00	<i>Discussion and Practical Demonstration:</i> The Team Approach to Trauma Resuscitation
12.00	<i>Lunch</i>
13.30	<i>Lecture:</i> The Pitfalls — Cervical Spine and Chest
14.15	<i>Lecture:</i> The Pitfalls — Abdomen and Extremities
15.00	<i>Break</i>
15.15	<i>Lecture:</i> Communication, Documentation and Audit
16.00	<i>Questions and Close</i>

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of the cardiac course expands on the team role with a discussion and practical demonstration on bereavement counselling. The cardiac course concludes with a practical session using mannikins to give participants the opportunity to practise, under supervision, their Basic Life Support (BLS) skills and then undergo individual assessment and certification.

The trauma course follows a similar format, but concentrates on explaining the concepts of the ATLS approach, the primary and secondary surveys. It also offers a practical demonstration of the ATLS approach to the management of a simulated trauma patient. In addition, this session introduces the participants to the scenario form of teaching and assessment, which is largely unfamiliar to most of those attending the course. The afternoon session of the course focuses on various 'pitfalls' in trauma management, spends some time showing the benefits of using trauma charts, and explains the practical aspects of trauma scoring and audit.

## RESULTS

Participants on both types of course completed a short assessment questionnaire, and the format and contents of both 1-day courses were judged to be appropriate by all participants.

All of the participants on the ALS-based course passed the assessment of BLS skills, and all felt that their theoretical knowledge of cardiac arrest management had increased. The questionnaire for the trauma course showed that 97% of participants rated the course as being useful.

Recent local events have served to illustrate the need for this training. In September 1993, when a Major Accident (MAJAX) was declared at York District Hospital, the implementation of the MAJAX plan was judged to be a success. However, when hospital staff were later interviewed by means of a questionnaire, many expressed doubts as to their ability to manage a seriously ill casualty successfully, had there been less help available. All of the medical staff who were involved in the MAJAX who attended the 1-day course felt that it addressed key problems which they had faced, and 91% of participants felt encouraged to attend the full ATLS course.

## DISCUSSION

In 1988 a working party of the Royal College of Surgeons of England criticized the standard of care

given to patients with major trauma.<sup>3</sup> One of the recommendations of their report was that doctors involved in the care of patients with major trauma should attend an ATLS course. The course itself is a concise, intense programme designed for clinicians who do not deal with major trauma on a regular basis, and it aims to teach a systematic approach to diagnosis and treatment of the seriously injured patient so that resuscitation is commenced immediately, with life-threatening problems identified and treated early on and in order of priority. This approach has now become an international standard for trauma management,<sup>1</sup> although a degree of healthy debate continues regarding some aspects of the ATLS course.<sup>4,5</sup> Studies on trauma management since the introduction of ATLS have shown that patients with major trauma may still be managed inadequately, particularly in terms of fluid replacement.<sup>6,7</sup> Training based on ATLS principles is now included as part of the teaching programmes for A&E senior house officers in many departments.

The introduction of courses teaching cardiac resuscitation followed similar critical findings when the abilities of clinicians to deal with cardiac arrest were studied. In Cambridge in 1984 only 8% of junior doctors were judged to be able to manage a cardiac arrest adequately.<sup>8</sup> The following year a study at St Bartholomew's Hospital, London, found that although 55% of new house officers could carry out effective BLS, none would have passed the American ACLS course.<sup>9,10</sup>

In 1987 Skinner called for the introduction into this country of a standardized course in resuscitation skills for doctors and nurses alike, under the guidance of the Resuscitation Council.<sup>1</sup> At this time the first U.S.-style ACLS course was introduced at St Bartholomew's Hospital. This has now been joined by the Resuscitation Council's ALS course.

The 1985 study on resuscitation skills at St Bartholomew's Hospital was followed up in 1990, and did show some improvements. The preregistration house officers investigated showed a considerable increase in their theoretical knowledge; however, their practical skills were as disappointing as in 1985, with only 48% able to carry out effective ventilation and cardiac massage.<sup>12</sup> Despite the very well-publicized guidelines produced by the Resuscitation Council, a survey of MRCP candidates in 1993 revealed a poor knowledge of both ALS and BLS skills.<sup>13</sup>

It has been suggested that a possible

explanation for the low standards of BLS skills in doctors and nurses is that such skills are not acquired during initial training.<sup>14,15</sup> It has been proposed that proper training in both cardiac<sup>16</sup> and trauma<sup>17</sup> resuscitation should be included at the undergraduate level. Some medical schools are piloting a 1-day condensed course in trauma care for medical students.<sup>6</sup> It is not only doctors who need specific training in matters of resuscitation, particularly in the case of cardiac arrest, as it is often a member of the nursing staff who is first on the scene. If he or she is unable to perform effective BLS, then the patient's chances of survival are even further reduced. It has been shown that, without training, BLS may be inefficient if not completely ineffective.<sup>18</sup> Nurses' own perceived level of competence in assisting in ALS measures and performance of BLS is often considerably overestimated.<sup>19</sup> Training in BLS and the principles of Advanced Life Support should become an essential part of nurse training.

Another major problem for nursing staff is funding. With courses generally costing from £250 upwards, many find that funding is a major hurdle to their attending a course. Budgets for the post-registration training of nurses are often limited, and many have to attend courses in their own time and provide at least part of the funding for the course.

There is a need for specific training in the management of the seriously ill or injured patient for medical, nursing and paramedical staff. We believe that 1-day courses, such as those set up in York and at other centres around the country, offer an opportunity for those unable to attend the full course to update their basic life support skills and to be taught the principles of advanced life support. Such 1-day courses should not be regarded as a substitute for attending the full provider course, but may offer a solution to the current shortfall in the number of places available.

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