

LETTERS TO THE EDITOR

Advanced life support courses

EDITOR - We write in response to the paper by Hall *et al*¹ in which two lecture-based one day introductory courses on cardiac and trauma life support are described. One striking common feature in all the life support courses available in this country, whether developed by the American College of Surgeons, the UK Resuscitation Council, or the Advanced Life Support Group in Manchester, is the reduction in time spent gaining knowledge passively in lectures. Active learning of practical skills and the integration of all knowledge gained - with a real need to show that both the concept of advanced life support and the ability to lead a team has been acquired in simulated clinical scenarios - have been found to be much more useful than a series of lectures.

Since 1992, we have held a Resuscitation Training Day two weeks before each team of SHOs start work in the accident and emergency (A&E) department (programme

shown below). To date almost 100 doctors have attended and only one has missed the course, as he was working in Africa. The one day course can be run with four staff and we are fortunate to have medical student volunteers as the trauma moulage patients. There are virtually no expenses. The course covers adult advanced cardiac and trauma resuscitation in outline, but the emphasis is on skills training and active participation rather than lectures. The programme has been virtually unchanged over the past four years and the SHOs consistently score the day 10 out of 10 for both content and presentation. It allays their greatest fear of starting work in the A&E department, that of being involved in a major resuscitation; it is also a wonderful opportunity to meet the new team in a relaxed informal manner while the shop floor is managed by the experienced outgoing team.

We run this training day in addition to the national ALS, APLS, and ATLS courses, as clearly there is a need to meet the demand from prospective candidates for these excellent courses.

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- 1 Hall DJ, Williams MJ, Wass AR. 1995 Life Support Courses for all. *J Accid Emerg Med* 1995;12:111-4.

telephone is prone to errors, both in numerical accuracy and patient identity. Having recorded the results on paper, they may then not be entered into the patients' notes. Add to this the large and increasing number of patients who have blood tests within an accident and emergency (A&E) department and the need for an improved system is clear.

Printing the pathology reports in the A&E department as they become available overcomes many of these problems. At the Bristol Royal Infirmary a DEC LA 75 printer has been installed in the A&E department, linked to the pathology computer by an Ethernet network link. When the chemical pathology or haematology results are available they are put into a queue in patient order. Every five minutes this queue is printed, the reports being on 10 x 15 cm sticky labels which can then be secured directly and easily into the patient's notes (fig 1). This overcomes the problems listed above, saving considerable time (each computer enquiry takes at least 60 seconds), eliminates transcription errors, and ensures the results get into the notes, the patient's identity number and name being on each report.

At the Bristol Royal Infirmary approximately 15 000 blood tests per year (40 per day) are performed on patients within the A&E department. Since the introduction of this system there has been a significant reduction ($P < 0.001$) in the number of inquiries to the chemical pathology and haematology systems from the A&E department and a definite subjective impression by the laboratory staff of a reduction in telephone inquiries, which are now usually made when there has been an unusual delay in transport or an instrument malfunction. Figure 2 shows that at 60 minutes after receipt of the sample 78% of biochemistry results and 85% of haematology results have been printed. Connection of the A&E department to the pathology department, six floors above, by a pneumatic tube ensures rapid delivery of the samples 24 hours a day, such that over 95% of results are printed within 120 minutes of the phlebotomy. We would recommend this system as a simple and inexpensive way of

Course programme

RESUSCITATION TRAINING DAY FOR NEW TEAM OF SHOS IN A&E MEDICINE

0800-0815 Coffee and welcome

CARDIAC

0815-0845 Basic cardiac life support, demonstration and practicals

0845-0930 Advanced cardiac life support, lecture

0930-1130 Three practicals of 40 minutes each: practical skills training

(1) Arrhythmia recognition and defibrillation

(2) Bag-valve-mask ventilation and intubation

(3) Central venous cannulation, intraosseous infusion, long saphenous cutdowns

1130-1200 Cardiac arrest, demonstration

1200-1230 Lunch

TRAUMA

1230-1315 Initial management of trauma patient, lecture

1315-1400 Shock, lecture

1400-1430 Thoracic trauma, lecture

1430-1530 Two practicals of 30 min each: practical skills training

(1) Cervical spine x rays

(2) Head trauma

1530-1545 Tea

1545-1615 Multiple trauma resuscitation, demonstration

1615-1745 Three trauma scenario practicals of 30 minutes each, scenario practice

(1) Pedestrian RTA

(2) Fall from height

(3) Motorcycle RTA

1800 Close

Benefits of immediate printing of blood test results within an A&E department

EDITOR - Acquiring, accurately recording, and securing blood results in the patients' notes are not inconsiderable problems. Much time may be spent telephoning the laboratory (interrupting their work) or inquiring from the pathology computer system, only to find the results not yet available. Recording results from the computer screen or a

Name	Date of birth	Hospital No	
16-Jun-43	Male	B95014325	Chemical Pathology

Serum			
Glucose	- - - -	-	7.0 mmol/litre ()
Creatinine	- - - -	-	102 umol/litre (75 - 120)
Urea	- - - -	-	5.9 mmol/litre (3.0 - 7.0)
Sodium	- - - -	-	138 mmol/litre (133 - 143)
Potassium	- - - -	-	4.6 mmol/litre (3.7 - 5.2)
Lactate dehydrogenase	- - - -	-	295 IU/litre (< 450)
Creatine kinase	- - - -	-	82 units/litre (24 - 195)

Figure 1 Laboratory result printout