

Resuscitation training for parents

– Training the Trainers

This article outlines the development of a 'Training the Trainers' scheme to train neonatal staff to deliver effective resuscitation training to parents at discharge from the neonatal intensive care unit (NICU). A typical teaching session with parents is described, including the techniques used to deliver this teaching effectively. Outcome data over a two year period, including parental feedback data is presented.

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This study was carried out at NICU
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Being discharged home from the neonatal unit with a vulnerable infant, sometimes after weeks or months of intensive care and monitoring, can be a difficult and frightening time for parents. Effective Basic Life Support (BLS) training has been shown to save lives¹⁻³, but, importantly, it can also improve parental confidence at discharge⁴. Consequently, many neonatal units around the UK offer resuscitation training to parents⁵. Sometimes the training is offered by junior doctors who have received no formal training in teaching; or resuscitation officers who may not be familiar to the parents, or their personal situation. The quality, quantity and effectiveness of the teaching can be very variable, and so steps were taken to improve the situation within the author's unit.

Objectives of the programme

The aim was to train a group of neonatal unit staff to be capable of delivering comprehensive, structured, consistent, effective, up-to-date and flexible training to parents at discharge from NICU. After a period of two years, it was planned to evaluate the success of this programme by auditing the uptake rate amongst parents at discharge, and assess parental satisfaction with the resuscitation training they received at discharge.

Methods

Salisbury District Hospital is a large district general hospital in Wiltshire. The NICU is a level 2 unit with two intensive care cots, two high dependency cots and 10 special care cots. In January 2007, a group of six neonatal unit staff (senior nurses and

midwives who were current Newborn Life Support⁵ (NLS) providers) were identified who expressed an interest in training parents. Approval was applied for, and received, from the Education Board and Resuscitation Department of the Trust. A series of training sessions (see **FIGURE 1**) was instituted to cover Advanced Paediatric Life Support (APLS) guidelines on infant basic life support; and teaching skills including techniques used by APLS/NLS instructors^{5,6}. This was followed by observed resuscitation training sessions with parents with feedback and assessment as an integral part of the course. By April 2007, all six candidates had successfully completed the course and were teaching parents independently on a regular basis.

The aim was to offer resuscitation training to parents of all babies on the neonatal unit at discharge, and those who received training were asked to fill in a feedback form about the training session. This feedback form asked parents to rate the training session from 1 (very poor) to 5 (excellent) in seven areas.

In May 2009, a random sample of 25 admissions over the prior two years was selected, and audited for the uptake rate amongst parents. In addition 125 parental feedback forms were randomly selected and the results collated.

A typical training session for parents

Each training session typically takes between 30 minutes and 1 hour to complete, and is usually led by one instructor, training both parents at once (although grandparents, family friends and carers have also been trained at parental

Keywords

resuscitation; training parents; discharge; neonates

Key points

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1. Resuscitation training for parents at discharge from NICU can save lives and can improve parental confidence at what is often a stressful time.
2. It is simple, and can be relatively low cost, to implement a scheme to improve the quality and effectiveness of resuscitation training.
3. This training is well received by parents, who feel they have acquired very useful skills and gained in confidence.

Session	Time	Description
Pre- course		Reading material – APLS chapter on Basic Life Support and Choking Teaching Skills Resources Assessment forms and logbook
1	30 min seminar	Update on APLS Guidelines for Paediatric Basic Life Support Management of a Choking Child
2	30 min seminar	Teaching Skills – How to structure a training session (Environment, Set, Dialogue, Closure) The four stage technique to teach practical skills
3	30-60 min	Observing the course instructor teaching skills to parents
4	60 min	Each candidate's first teaching session with parents observed by course instructor followed by evaluation and feedback six monthly review sessions set up

FIGURE 1 The 'Training the Trainers Course' structure.



FIGURE 2 Instructor-delivered training sessions with hands-on practice.

request). Where possible, training is delivered to both parents, not just the mother. The training session is organised with the parents in the days and weeks approaching discharge, and is an essential and integral part of the discharge planning process. Using a DVD or video to deliver the training was initially considered, but evidence clearly shows that resuscitation training is more effective when delivered by an instructor; and when the parents are allowed hands-on practice of resuscitation skills^{7,8}.

The resuscitation training session is planned and delivered using techniques taught on the Generic Instructor Course for the Advanced Life Support Group UK⁶ (FIGURE 1). This includes:

- planning the 'environment' – who is being taught, where the teaching will be held, what equipment will be needed
- 'set' – motivating the learners, creating a relaxed mood etc

- 'dialogue' – the four stage approach to teaching practical skills
- 'closure' – summarising the session and leaving the parents with the key take home message of the ABC approach.

The practical skills of airway management, breathing support and circulation assessment/support are taught using the four stage technique:

- a silent run through demonstration by the instructor (FIGURE 2)
- a clear breakdown and description of all the skills
- the chance for the parents to talk through all the skills with the instructor
- ample opportunity for the parents to practise the skills themselves on the manikin.

Teaching is based on a structured ABC approach to BLS, and a great deal of emphasis is placed on airway management and effective breathing support, ensuring good chest movement. Evidence shows that

infants and children are much more likely to have an airway/respiratory cause for their collapse/arrest, and these children have a much better outcome if they receive prompt and appropriate resuscitation⁹. Teaching is kept simple, and not too over-complicated, as it is felt this may help to improve both parental retention of skills, and their confidence to use them should the need arise. For example, parents learn how to check for signs of circulation (colour, warm/cool peripheries, feeling for the apex beat) but are not usually taught how to check a brachial pulse, as this could be a challenging skill for a layperson to perform, particularly in a stressful resuscitation situation.

Currently a 15:2 cardiac compression: breath ratio is taught, but with more emphasis on the quality of breaths and compressions rather than the precise number and ratio. There is very little evidence to support any particular ratio for paediatric arrests, although there is a case for teaching a ratio of 30:2 to avoid confusion with adult resuscitation¹⁰⁻¹². Parents are given handout sheets covering BLS and choking, and the resuscitation training session is clearly documented in the child's notes and in each instructor's logbook.

Results

Between April 2007, when the new training was introduced, and May 2009, the neonatal unit had 746 admissions. In a random selection of 25 sets of case notes, 100% of parents were offered resuscitation training at discharge, and this was documented clearly in their discharge paperwork. All parents accepted the offer of resuscitation training. This small sample reflects the general experience – the six neonatal staff who teach resuscitation skills are kept very busy!

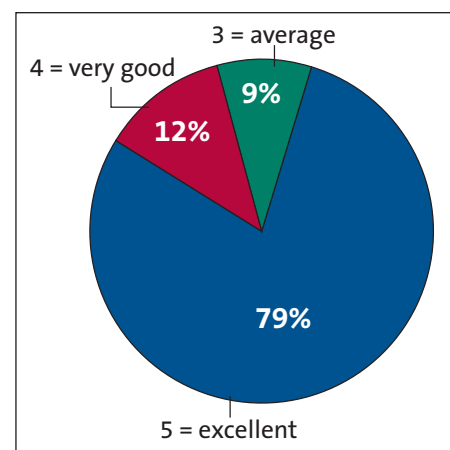


FIGURE 3 Parental overall rating (1-5) of resuscitation training session.

Assessment of the 125 parental feedback forms from April 2007 to May 2009 showed the feedback was overwhelmingly positive with 79% of parents rating the training session as 'excellent' in all areas (**FIGURE 3**). Ninety eight per cent of parents rated the communication skills of the trainer as 'excellent' and 98% of parents rated the overall quality of the training as 'excellent'. The area of feedback which was least positive was the 'room and space where training session held' which 84% of parents rated as 'excellent', 10% as 'good' but 6% as 'average' (**FIGURE 4**). The room used most frequently is the small parents' sitting room on the neonatal unit, which can sometimes feel cramped and particularly warm during summer months. Other more appropriate spaces are being explored in which to hold training sessions to address this problem. Some of the parents (68%) chose to add further free text comments on their feedback forms, and recurrent themes included 'improved confidence', 'should be offered to all parents', 'very informative and useful'.

Discussion

Paediatric cardio-respiratory arrest is, fortunately, a rare event¹. However, in 1999, one of the largest studies of out-of-hospital paediatric arrest demonstrated that in only 17% was resuscitation started by a lay bystander¹. Other studies^{2,3} have shown that early commencement of lay bystander CPR is associated with improved outcomes. Therefore it seems essential to find strategies to improve the general public's knowledge of, and willingness to use, BLS techniques. In this study, several parents commented that, although they had some prior knowledge of resuscitation, they would have been reluctant to attempt it in 'real life'. However, after their training session at discharge from NICU, many parents stated that they would now feel confident to attempt resuscitation should they be presented with a collapsed child. Thus this simple, low cost training scheme appears to offer a mechanism with which to increase the proportion of a population that can offer lay-bystander paediatric BLS.

Criticisms

The outcome data presented here would be more robust and relevant if there were control data available with which to compare parental satisfaction scores. These could have been obtained by obtaining parental feedback prior to the introduction

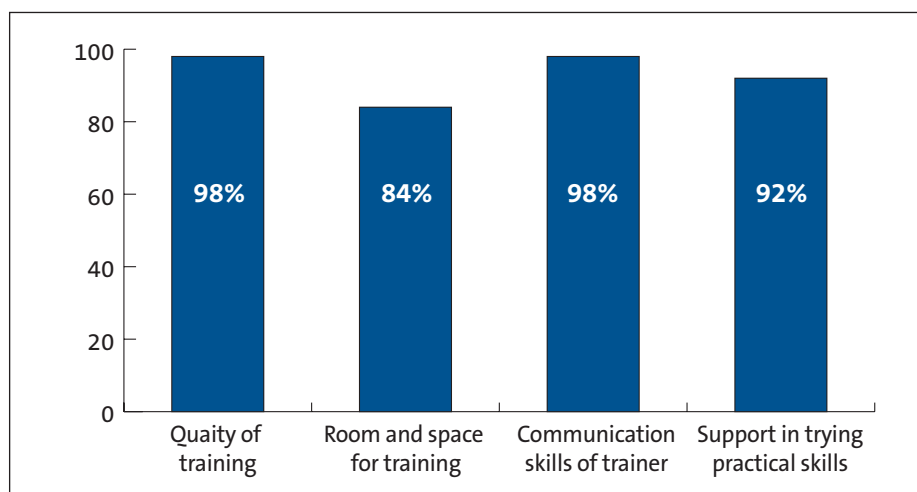


FIGURE 4 Parental feedback rating of "Excellent" for each area.



FIGURE 5 Delivering a 'Resuscitation Workshop' at a nearby military base.

of the new style training.

Similarly the parental satisfaction data could have been more robust and comparable if a recognised tool or questionnaire had been used to obtain feedback data. There is also a possibility that the data may have been biased, as the parental feedback questionnaires were not anonymised – the parents usually handed them to any member of staff prior to discharge and copies were filed in the baby's notes.

It would be interesting to assess the true efficacy of the training by assessing parental competence at performing the practical skills and also parental retention of the skills, for example by 'testing' them 3-6 months after discharge. To truly assess whether this training improves parental confidence, it would be necessary to use recognised tools to assess feelings of anxiety, control and burden⁴.

Further developments

One parent was so impressed with the

resuscitation training session, that she organised a 'Resuscitation Training Workshop' for parents at a community centre on a nearby military base. The author and two other trainers travelled out to the military base to deliver this workshop (**FIGURE 5**). In the past few months, neonatal staff have begun to respond to requests for training from parents of well babies on the postnatal ward. One trainer is investigating the feasibility of further 'Resuscitation Workshops' to meet this need for parents on the postnatal ward. The programme has also been extended to offer resuscitation training to parents in the Care Of the Next Infant after a previous infant death (CONI) scheme.

The author has set up a similar training scheme in a second hospital, and has expanded the training course to include general paediatric nurses and community nurses. This will enable the department to offer training to a wider variety of parents, such as those whose children have epilepsy,

airway problems, bronchiolitis, or those who have had an Acute Life Threatening Episode (ALTE).

Conclusion

A structured and comprehensive resuscitation training session enables parents to leave NICU with greater confidence, and can save lives. This study has shown that this package can be provided by appropriately-trained neonatal nurses. The original training scheme (delivered by the author) was simple and cheap to implement. The scheme was very well received by neonatal staff, who felt pleased to have the opportunity to deliver this training as part of a holistic discharge package of care. The results show overwhelmingly positive feedback, and free text comments reflect that the training sessions are helping parents to feel more confident as they prepare to take their baby home.

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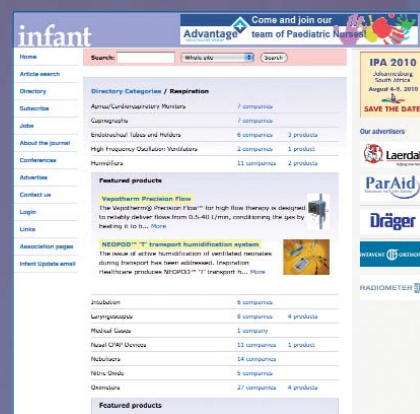
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