Neonatal action research: a new intubation approach

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Project background

Intubation of the neonatal patient requires high levels of skill and teamwork from the staff involved for a successful outcome. A need for improvement in this area of practice within the special care baby unit (SCBU) at East Sussex Healthcare NHS Trust, in south-east England, was identified following observations in practice, feedback from neonatal retrieval services, recommendations from unit debriefs and discussion at perinatal mortality meetings. The project leader undertook a rapid review of the literature; no standardised validated tool was found for neonatal intubation within the acute care hospital setting. While local emergency paediatric services, retrieval teams and helicopter emergency medical services have algorithms and protocols in place, none is validated for in-hospital use. It therefore seemed appropriate to undertake a project to explore, develop and implement a bespoke intubation approach that reflected the needs of patients, parents and staff within this SCBU. NHS ethical approval was granted for this action research project.

Aims and objectives

The project aimed to explore ways for SCBU staff to develop a standardised team approach to emergency neonatal intubation. To achieve this, the objectives identified were to:

- Explore the intubation experience from the perspective of staff and parents
- Identify current staff understanding about their roles
- Explore how staff perceive their team performance
- Enable staff engagement in the development and trial of new methods and tools

Implications for practice

- Consultation with parents at the planning stage of projects can enable them to select their preferred method of engagement
- Enabling staff to explore their experiences is a useful way to identify areas for improvement and ways to address these, and encourages reflective practice
- Staff engagement in the development of new tools and methods is an important factor in their successful implementation
- While the outcomes from a project may not be easily transferable, other teams could use similar approaches to explore practice issues

This project was supported by the FoNS Practice Based Development and Research Programme in partnership with the General Nursing Council for England and Wales Trust

Online

Further information about the project can be accessed from: fons.org/library/report-details?nstid=71406

Key activities and outcomes

• Research workshops

Nursing and medical staff (n=20) participated in three workshops. Using creative approaches, staff were invited to explore their experiences of emergency neonatal intubations. Their views and perspectives were further considered using a claims, concerns and issues exercise. Overall, they were positive about staff support and preparation. Information for parents, support from senior staff, role clarity and delegation were highlighted as needing improvement. Another area of concern was the effect of high levels of workload on performance and communication.

• Interviews with staff

Semi-structured interviews (n=15) were conducted with nursing and medical staff to explore further the themes that emerged from the research workshops. The project leader undertook a thematic analysis. Key areas of concern related to clarity of roles and responsibilities, lack of confidence and exposure, failed intubation, and a lack of debriefing and opportunity for reflection.

• Parent questionnaires

During the planning phase, parents were consulted about how they would like to engage in the project. Parents wanted anonymity and an opportunity to contribute information at their own convenience. A questionnaire was therefore constructed and a comments box provided so parents could include additional information. A total of 22 questionnaires were completed. Overall, parents were positive about their experience of care, which was suggestive of a supportive and friendly unit culture. However, concerns were expressed relating to delays in receiving information about the status and progress of their baby, and receiving conflicting information from doctors.

• Observation in practice

An observation schedule was developed informed by key literature and consultation with staff. Nursing and medical staff (n=14) completed it after they had been involved in an emergency intubation process. Performance was good for equipment preparation, coordination of tasks, team cooperation, communication, successful exchange of information and success for intubation attempts. Performance was less good around clarification of roles, having a backup plan should intubation fail and debriefing afterwards.

• Ongoing staff engagement

Throughout the project, a number of approaches were used to enable staff engagement, to share findings and consider actions. These included debriefing workshops, teambuilding days, reflective feedback sessions about the project, and monthly multidisciplinary team simulations focusing on other clinical and non-clinical areas of neonatal care and teamwork.

• Outcomes

A number of new tools were developed and implemented as a result of this project. These included an intubation checklist, a difficult airway algorithm, emergency keycards and a debrief model. Their effectiveness will be subject to ongoing evaluation through audit and staff engagement in debriefing and review.