
Abstract

Neonatal care delivered by ST1 Paediatric trainees attached to 18 Local Neonatal Units and Special Care Baby Units.

**Problem**
Trainees did not feel adequately prepared or supported to perform essential duties of their role including attending deliveries and performing newborn examinations. Trainees highlighted the risks to patient safety and quality of care.

**Assessment of problem and analysis of its causes**
To quantify the problem and understand the root causes we interviewed and surveyed 48 Paediatric trainees after completing their first post with neonatal duties. 50% of trainees felt inadequately prepared to perform essential duties and 40% of trainees were unsatisfied with their supervision. We discussed our findings with trainees, the specialty training committee and local departments, and identified problems with induction and training as well as devising strategic interventions.

**Intervention**
Multiple interventions included 1. Neonatal Life Support (NLS) courses specifically for ST1 trainees before or during their first neonatal post and 2. Engaging with College Tutors to provide comprehensive recommendations for neonatal specific induction, adequate supervision attending deliveries and performing newborn checks, and formal assessment of competence before working unsupervised.

**Study design**
Trainees who had completed their first neonatal post were surveyed. We used multiple choice, Likert scale and free text answers to capture trainee’s experiences.

**Strategy for change**
We implemented changes to training over two years, starting with NLS training for new ST1s. Working with Training Program Directors and NLS course directors we offered places to all new ST1s at or near induction. With Local Education Providers and neonatologists, and guided by trainee feedback, we developed standards and recommendations for local ST1 induction. To aid dissemination, at all stages, we presented the work at regional and local meetings and directly communicated with the Specialty Training Committee, College Tutors, and trainees.

**Measurement of improvement**
We found that undertaking NLS training before starting their first post significantly increased trainees’ confidence in attending deliveries and resuscitating newborns. Trainees felt better prepared to perform their duties if they had a specific neonatal induction lasting at least two days (our recommendation). Trainees satisfaction with supervision at deliveries was significantly increased when they were accompanied to the first 4 or more deliveries (our recommendation). There was a trend towards increased satisfaction with supervision when trainees were observed for the first 3 or more newborn checks.

**Effects of changes**
Our work increased the proportion of ST1s a. adequately trained to resuscitate newborns before starting work, b. adequately supervised after induction, and c. having an assessment of competence before working alone utilising Supervised Learning Events. We decreased the number of inadequately trained staff who are responsible for neonatal care and improved supervision that ultimately increased patient safety. Our ongoing challenge is supporting local units to balance service provision with effective training and supervision.

Lessons learnt
We learnt that effective change relied upon good communication at all levels between lead providers, local units, and trainees. We focused on Paediatric trainees but other trainees perform the same duties in some units including GPVTS and FY2 trainees. It is important to understand their experience and support them in similar ways in order to protect patient safety.

**Message for others**
Safe neonatal care relies on adequately trained and supervised junior medical staff. Significant shortcomings were partly addressed using a collaborative approach including regional courses and support of local training. We believe that quality of care was improved by increasing the proportion of trained staff that are assessed before working independently.