Multidisciplinary training initiative for postnatal clinical environments to increase staff's confidence in managing babies requiring neonatal transitional care

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SUMMARY

Implementation of a quarterly multidisciplinary neonatal transitional care (NTC) study day to ensure all staff working in postnatal clinical environments have specific NTC training that is jointly designed and delivered by the paediatric doctors, neonatal nurses, midwives and maternity support workers.

THE PROBLEM

Keeping babies with their mothers after birth is an undisputed national goal.[1] NTC is an increasingly important concept whereby babies with additional care requirements are supported to stay with their mothers as opposed to being admitted to a neonatal unit.[2] Successful implementation has the potential to prevent thousands of avoidable neonatal admissions and reduce length of stay and prevent readmissions through parental empowerment and proactive risk identification.[3] Essential to meeting this rising demand is effective collaboration between maternity, neonatal nursing and paediatrics, and equipping all frontline staff with the required knowledge and skills to keep these babies safe.

AIMS

The aim of this project was to design and deliver a multidisciplinary team-led NTC study day to address the identified training needs of staff working in postnatal clinical environments. Over a 13-month period, 10 multidisciplinary course instructors were trained and six NTC study days run with places initially offered locally, then nationally. Impact was measured by recording staff confidence in managing 12 NTC scenarios across multiple time points to enable comparisons between groups who had not yet received the intervention and assess for retention of benefit.

MAKING A CASE FOR CHANGE

We identified the learning needs of staff by listening to their self-reported training needs, recording all commonly seen NTC cases and reviewing all clinical adverse events that had occurred on the postnatal ward. We used these data to create a sustainable, multidisciplinary training programme to drive change. To secure support from the trust's management, staff's self-reported confidence in managing 12 NTC scenarios was assessed on a 5-point scale prior to intervention. 54 frontline staff from a central London National Health Service (NHS) trust took part with a mean overall confidence of 2.4. The results were presented to departmental leads of neonatology, nursing and midwifery and it was agreed study leave would be granted for all staff working in postnatal clinical areas to attend the NTC training day.

YOUR IMPROVEMENTS

For our first Plan, Do, Study, Act (PDSA) cycle, a three-stage approach was used to identify training needs. First, 40 members of staff representing every role on the

Table 1 NTC learning needs identified grouped into four common themes

NTC theme	Key topics
Emergencies	Sepsis, preventing postnatal collapse and first on scene to a sick neonate simulations.
Conditions requiring investigation	Paediatric problems on postnatal wards (including babies with heart problems, tachypnoea, head swellings, vomiting, bowels not opening, sticky eyes, congenital anomalies, abnormal movements) and jaundice recognition and management.
Feeding	Common feeding difficulties, feeding plans, hypoglycaemia and nasogastric tube insertion and troubleshooting.
Monitoring of babies	Preventing complications in late preterms, thermoregulation, observations and frequency in different scenarios, identifying the deteriorating neonate and Situation, Background, Assessment, Recommendation (SBAR) handovers.

NTC, neonatal transitional care.

postnatal ward were asked to select five topics they felt least confident in. Second, 2 months' worth of postnatal ward handover lists were reviewed, and diagnoses recorded. Lastly, all reported clinical incidents relevant to NTC from 2021 were analysed for learning opportunities. Analysis generated four main themes for the study day: (1) emergencies, (2) conditions requiring investigation, (3) feeding and (4) monitoring of babies (table 1).

Course material was created with input from 22 members of staff including allied healthcare professionals and all levels of neonatal, nursing and midwifery teams. To ensure content was memorable, multiple innovative, interactive tools were applied (table 2). A team of instructors were trained to deliver the course with each section taught jointly by both a neonatal and midwifery instructor. Instructors were chosen for their commitment to education and prior experience from attendance at a train-the-trainer or generic instructor course. The programme concluded with an expert panel session whereby midwifery and neonatology leads joined to hear frontline feedback, contribute to discussions and answer questions.

Two training dates were initially scheduled (January and February 2022) to create an early and delayed intervention group to assess confidence changes with and without intervention. Staff's self-reported confidence in managing 12 NTC scenarios was assessed using a 5-point scale. The early intervention group (n=32) increased their overall confidence by +1.9 points compared with the late intervention group (n=22) which had no change (+0.0) in the same time frame but a similar increase after intervention (+1.8).

Following these pilot courses at one London trust, feedback was gathered from attendees (figure 1). There was an overwhelming number of requests that this training be made mandatory for all staff in postnatal clinical environments. This was shared with seniors from both departments and a commitment was made to offer the training day quarterly with the aim that all staff would have the opportunity to attend. This would also create a regular space for seniors to hear feedback from frontline staff. Feedback also suggested opening the training to other trusts so we could learn from each other and share best practices.

As part of our second PDSA cycle, to meet the rising demand and ensure sustainability, a train-the-trainer package was developed, with three more midwives, a nursery nurse and two more doctors trained as instructors. Four further course dates were added with any spare spaces opened up to other trusts nationally. To ensure content was kept relevant, new clinical incidents were reviewed and learnings added prior to every course.

A total of 295 healthcare professionals have now been trained from 19 NHS trusts through six NTC

Table 2 Learning tools used to deliver NTC training

Learning tool	Targeted outcome
Q&A-based topic teaching	To stimulate two-way learning and check understanding.
Simplified explanations	Created in partnership with our staff, patient's families and the public as examples of how to explain such issues to new parents.
'What would you do next?' video content	Of first on scene simulations and skill demonstrations with multiple break points to encourage discussion.
'Spot the mistake' quizzes	Including pictures, for example, of incorrectly placed NG tubes and incorrectly plotted bilirubin charts to develop staff's critical thinking skills around ability to recognise and manage mistakes.
Video link interactive questions	Requiring thumbs up/down or show how many fingers answers (eg, to transcutaneous bilirubinometer (TCB) or not to TCB, how many hours until the next observations) to create interaction and encourage participation.
Voice recording prioritisation exercises	Using voice recordings of patient handovers which participants have to prioritise to learn about the importance of the story and effective Situation, Background, Assessment, Recommendation (SBAR) handovers.
Case-based topic tests	Developed from recent clinical incidents to ensure lessons learnt are shared.
Topic summary slides	Reiterating the key take-home messages.

NG, nasogastric; NTC, neonatal transitional care.

Figure 1 Selection of feedback from the first two study days.

study days between January 2022 and February 2023. The mixed site groups (n=241) reported an overall increase in confidence by +1.8 points, replicating our results locally. From surveys completed in full (n=198), the scenarios with the greatest increase in confidence included managing neonatal sepsis (+2.2), being first to a sick neonate (+1.8), preventing postnatal collapse (+1.8), managing babies with nasogastric tubes (+1.8), managing late preterms (+1.7) and managing babies with underlying conditions (+1.7) (figure 2). Participants ranked the usefulness of the training day as an average of 9.4 (10-point scale) with learning needs met or exceeded for 99%.

To assess retention of benefit, the two earliest groups (n=54) were followed up 1 year after the intervention. 100% of respondents (n=32) reported they had applied the knowledge gained on their course and 97% felt that it had significantly improved the care they deliver. 100% felt such training should be mandatory for all staff looking after babies requiring NTC.

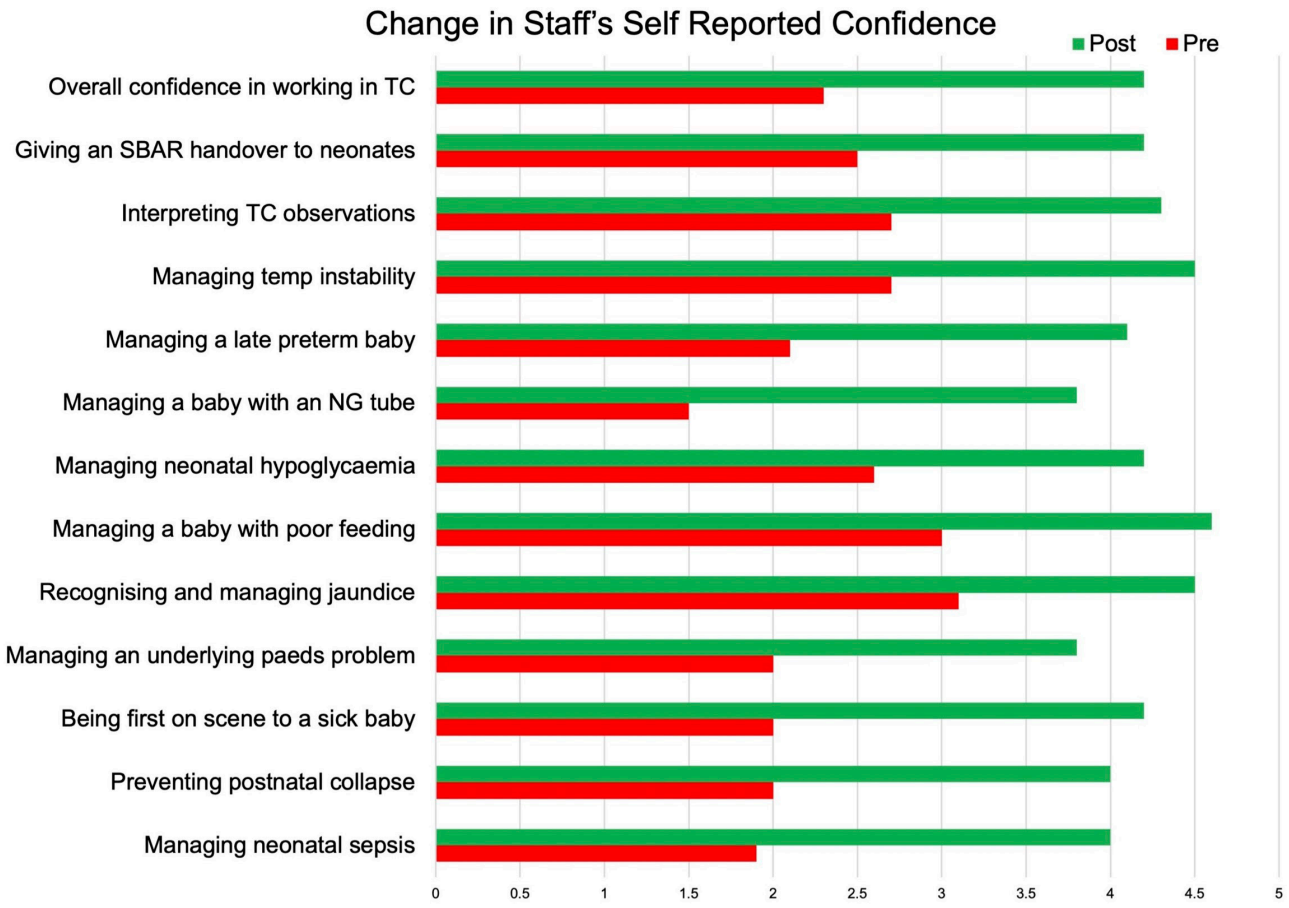

Figure 2 Change in self-reported confidence of course attendees where data from before (n=164) and after (n=198) course surveys were available. NG, nasogastric; TC, Transitional Care; SBAR, Situation Background Assessment Recommendation.

LEARNING AND NEXT STEPS

We strongly believe that training in how to prevent babies deteriorating, especially when known risk factors are present, is if not as important as the well-established mandatory training in neonatal resuscitation. To our knowledge, the NTC training programme described in this paper is the first of its kind nationally. It has proven to be extremely popular, with most courses fully booked in under 24 hours, highlighting the urgent need for this kind of multidisciplinary training.

If the aim is for every baby born in the UK to remain with their mothers unless unavoidable, there is clearly a need for such NTC training to be mandatory for all staff working in postnatal clinical environments. Such a change would also enable further analysis on the impact of effective delivery of NTC widely cited in literature, such as reduced neonatal intensive care unit admissions, reduced length of stays, increased breast feeding rates and reduced readmissions; many of which have been observed in participating trusts but it is too early to attribute these to improved education without every single staff member having been trained.

By developing the training programme to be interactive but still delivered virtually, we hope the education package can more easily be made available to wider audiences. Certifying such a multidisciplinary NTC course and getting support from trusts and national training bodies to deliver this on a national scale is a much-needed next step to support the goal of ensuring all NHS staff working in postnatal clinical environments receive the training required to feel confident in their ability to safely and effectively deliver NTC services.

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