Education provision for the newborn infant physical examination as a post-registration module: national survey.

Background

In recent years there has been a gradual move towards qualified midwives undertaking the newborn infant physical examination (NIPE) as part of their extended role. The reasons behind this have been outlined in part A of this report (Yearley et al, 2017). The EMREN study (Townsend et al, 2004), undertaken more than a decade ago, highlighted the acceptability to service users and midwives, as well as the cost-effectiveness to Trusts, of midwives as NIPE practitioners. The study demonstrated how this extended role is in keeping with the midwifery philosophy of continuity of care and carer, which in turn increases maternal satisfaction. Townsend et al (2004) recommended that the NIPE should become part of midwives' standard practice. Eleven years after the EMREN study's proposals, a survey of all maternity units in the UK found that these recommendations were not being met (Rogers et al, 2015) and that only 13% of UK midwives were qualified NIPE practitioners; the reasons for this were not clear. The investigators, therefore, felt it important to establish a national picture of the preparation of midwives for this role. To this end, the same authors undertook a further national survey between autumn 2014 and spring 2015 in which all Nursing and Midwifery Council (NMC) approved education intuitions (AEIs) were invited to report on their provision of education. Part A of this two-part report explored the current provision of and attitudes towards inclusion of NIPE in the preregistration midwifery programme (Yearley et al, 2017). The current paper (part B) focuses on the provision of NIPE training for midwives as part of their post registration professional development.

Objectives

This part of the report has five main aims:

- To determine current NMC AEI provision of NIPE in post-registration midwifery education
- To establish drivers for the provision of NIPE in post registration midwifery education
- To explore the AEI experience of NIPE in post registration midwifery education
- To determine the structure and requirements for midwives undertaking NIPE training
- To seek opinions on similarities and differences around pre- and post-registration preparation requirements.

Methods

An online questionnaire was developed by the investigators, using the Bristol Online Survey (BOS, 2016) tool and was piloted at a single AEI (Yearley et al, 2017). Following minor modifications for clarity, a link to the questionnaire and a covering letter were sent to all

lead midwives for education (LMEs) in the UK in the spring of 2015. LMEs were asked to forward the questionnaire to whichever member of their team was best placed to answer the questions. Responses were received from 40 out of a possible 58 LMEs (68.9%). This high response rate may have been partly since the survey was highlighted to delegates at a national LME meeting immediately prior to its launch. Data were analysed independently by two of the three investigators. Anonymity was maintained throughout.

Findings

Current provision of post-registration NIPE education

Among the responding AEIs, 70% (28/40) had provision to prepare midwives to undertake NIPE at post-registration level (*Table 1*). Of the AEIs that did not provide this, five (12.5%) had plans to so within the next 2–3 years, while the remainder indicated a lack of need, as other local NIPE providers existed. In Scotland, NIPE education and training is provided by the Scottish Multi-professional Maternity Development Programme and known as the Scottish Routine Examination of the Newborn Course (SRENC), which is a non-accredited course (NHS Education for Scotland, 2017). The average length of time in which AEIs had been offering a NIPE preparation programme was 10.6 years (range: 1–24 years). The main drivers for developing a NIPE programme included a reduction in the number of available paediatricians, a desire to provide holistic care and a need for the timely transfer of women from hospital to the community. The following quote illustrates a typical response:

> *'Newborn examinations to be performed in a timely fashion, enabling continuity of care for families, and avoiding beds being blocked on the postnatal wards, and causing unnecessary waiting and stress for families.' (AEI #33)*

Table 1 Post-registration provision		
	n	**%**
Yes	**28**	**70**
No	**12**	**30**
Total	**40**	**100**

Experience of providing a NIPE programme

Comments relating to the AEI's experience of providing a NIPE programme were given by 75% of respondents (*n* = 21). Such comments related mainly to the success and popularity of the programme and concern about midwives' ability to maintain their practice following successful completion.

'Consideration must be given by management to ensure that NIPE practitioners are rostered to work in clinical areas where they regularly use their NIPE skills, otherwise it's a waste of Trust CPD funding resources.' (AEI #11)

Structure and content of the programme

Of the responding institutions that provided NIPE education, 24 answered a question on examination requirements. They all stated that midwives undergoing NIPE training were required to undertake examinations in practice, either self-directed or supervised by another NIPE practitioner. Information on the number of supervised and self-directed examinations that midwives were required to undertake during their preparation varied significantly (range: 0–30 for supervised examinations (*Table 2*) and 0–40 for self-directed examinations) (*Table 3*). The rationale for the numbers of required supervised examinations was not sought. The range of practitioners permitted to verify midwives' supervised examinations also varied considerably (*Table 4*).

Table 2 Number of required supervised exams

	n	%
11-20	**12**	**50**
21-30	**5**	**20.8**
0-10	**4**	**16.7**
Total	**24**	**100**

Table 3 Number of formative, self-directed NIPE exams

	n	%
11-20	**5**	**21.7**
21-30	**6**	**26.1**
0-10	**1**	**4.3**
31-40	**3**	**13**
Not mandatory	**7**	**30.4**
Other	**1**	**4.3**
Total	**23**	**100**

One respondent did not supply data, hence numbers total 23 rather than 24.

Table 4 Practitioners permitted to verify midwives' supervised examinations		
Job or role	***n***	**%**
Consultant paediatrician	**24**	**100**
Paediatric registrar	**23**	**95.8**
Midwife with NIPE and mentorship qualification	**21**	**97.5**
Midwife with NIPE qualification	**19**	**79.2**
NIPE trained neonatal nurses/advanced practitioners	**16**	**66.7**
GP	**3**	**12.5**
Paediatric F1 and F2 doctors	**2**	**8.3**
Total		**100**

Numbers total > 24, as in most approved education institutions several different practitioners could undertake this role

Assessment and accreditation

Responses in relation to the number of academic credits awarded for NIPE training programmes were received from 22 AEIs. This ranged from 20 to 40 credits (*Table 5*). Of these 22 AEIs, 11 (50.0%) offered the NIPE programme at level 6, eight (36.4%) at either level 6 or 7 depending on the student's academic experience, and three (13.6%) at level 7 only.

Table 5 Number academic credits awarded		
Number of credits	***n***	**%**
20	**6**	**27.3**
30	**10**	**45.5**
40	**6**	**27.3**
Total	**22**	**100**

Assessment strategies

Responses in relation to both theoretical and practical assessment strategies were received from 25 AEIs. All required midwives to undertake a theoretical and practical assessment as part of their NIPE preparation. A range of different theoretical (*Table 6*) and practical (*Table 7*) assessment strategies was reported.

Table 6 Theoretical assessment strategy		
Type of assessment	***n***	**%**
Objective structured clinical examination	**2**	**8.0**
Written examination	**3**	**12.0**
Professional discussion/viva	**5**	**20.0**
Presentation	**6**	**24.0**
Reflective essay/case study	**18**	**72.0**
Portfolio of evidence	**5**	**20**
Total		**100**

Numbers total >25 as in some approved education institutions midwives were required to undertake more than one theoretical assessment component.

Table 7 Practical assessment strategy		
Type of assessment	***n***	**%**
An examination supervised by a paediatric registrar	**2**	**8.0**
An examination supervised by a NIPE qualified clinical mentor (midwife or ANNP)	**6**	**24.0**
An examination supervised by a consultant paediatrician	**4**	**16.0**
Combination of AEI midwifery academics and NIPE practitioners (e.g. NIPE midwife mentors, ANNPs, paediatricians)	**13**	**52.0**
Total	**25**	**100**

AEI = approved education institution; ANNP = advanced neonatal nurse practitioner

One survey question related to how the outcome of the assessments was measured. Of the 25 AEIs that responded to questions on assessment strategy, 72% (*n* = 18) reported that the practice component did not contribute to the academic award, with midwives achieving either a pass/fail grade. In only 28% (*n* = 7) was the practice assessment graded. Opinions in relation to the similarities and differences
between pre- and post-registration NIPE education programmes were sought. While it was recognised that pre- and post-registration students had different experiences, there was a

consensus that NIPE learning outcomes should be the same across all programmes and should reflect national standards (Public Health England (PHE), 2016). It was clearly identified that the only differences which AEIs perceived between existing Nursing and Midwifery Council (NMC, 2009) standards for pre-registration midwifery education relating to the care of the newborn, and qualification as a NIPE practitioner, were the attainment of the specific knowledge and skills in the four key areas identified by UK National Screening Committee standards (PHE, 2016), namely the heart, hips, eyes and testes.

Discussion

In accordance with one of the recommendations of Townsend et al (2004), our findings confirm that programmes of NIPE preparation are well-established in post-registration midwifery education, with most AEIs having successfully offered such programmes for more than a decade. It has been demonstrated that a desire to improve the quality of care, together with the reduction in junior doctors' hours, has provided the impetus for the development and implementation of post-registration NIPE programmes. This is consistent with the findings of part A of this survey, relating to pre-registration NIPE provision (Yearley et al, 2017). The popularity of the NIPE among midwives was highlighted, with many AEIs offering a preparation programme twice a year. It was surprising, however, that despite the widespread provision and popularity of NIPE education, only 13% of UK midwives are currently NIPE-qualified (Rogers et al, 2015). One possible explanation may lie in the concerns expressed by some respondents about midwives subsequently maintaining their skills as NIPE practitioners following qualification. This echoes the findings of Steele (2007), who reported that about one third of NIPE-trained midwives do not continue to practise their skills on completion of the programme. This warrants further exploration in view of the costs of post-registration education for both commissioners and providers, as well as the known benefits of midwives undertaking the NIPE in terms of role satisfaction and benefits to women and babies (Townsend et al, 2004). It is clear from the survey findings that the differences in knowledge and skills of NIPE-trained and non- NIPE-trained midwives relate largely to the additional preparation specific to the PHE (2016) standards, i.e. screening of the heart, hips, eyes and testes. However, the findings highlighted significant variations in programme requirements and standards for the preparation and assessment of midwives, as well as the academic credits awarded. This naturally leads to speculation about whether the structure and variation reported among AEI providers is causing organisational difficulties in getting a sufficient number of midwives through these accredited programmes, many of which are offered over an entire academic year. This length of time may be frustrating for providers of maternity services, who may be concurrently coping with the ongoing demands of staff recruitment and retention. This may go some way to explaining the low number of NIPE-qualified midwives. Another compounding factor may relate to the age profile of the midwifery workforce, with an increasing number of experienced, NIPE-trained midwives now retiring from the profession. Part A of this report discussed the growing interest among AEIs in the inclusion of NIPE

education in the preregistration midwifery curriculum (Yearley et al, 2017). If this initiative develops momentum, the need for post registration NIPE education may, one day, be redundant. However, for this to be realised there is a need for sufficient qualified NIPE mentors to supervise students in the practice environment. A further impediment to Townsend et al's (2004) proposals to increase the number of NIPE-qualified midwives may be the link between NIPE education and academic accreditation. This has resulted in NIPE preparation courses of diverse duration, academic credits and cost across the various AEIs. The training of NIPE qualified midwives involved in the EMREN study consisted of a 15-credit module at either level 2 or level 3 (formerly diploma and degree level), which was completed over one semester (Townsend et al, 2004). However, the present study shows that a huge variation now exists in relation to current preparation of NIPE practitioners. The justification for these differences needs to be questioned, given the associated costs of training and the impact on midwifery practice. While acknowledging the critical contribution of continuing professional development (CPD), it is essential that this is both cost-effective and fit for purpose (Rafferty et al, 2015). Rafferty et al (2015) identified that among nurses, barriers to CPD included workload pressures, difficulty in releasing staff, and funding. It is likely that a similar situation exists in midwifery in relation to NIPE training. However, a question exists about whether the current approach can be justified, given that it is inconsistent and not supported by evidence. There is a question about whether AEIs remain the most appropriate providers of NIPE education, given the wealth of knowledge and experience that midwives already have in relation to the care of the newborn. Although NIPE proficiency requires additional knowledge and skills, alternative training provisions could be considered. For example, Scotland has no AEI education provision for NIPE; this is offered through the Scottish Multi-professional Maternity Development Programme (NHS Education for Scotland, 2017). The cost of this programme is significantly lower than the programmes offered by AEIs in the rest of the UK. Having a standardised programme of preparation, as is the case in Scotland, is also advantageous in providing assurance that the knowledge, skills and competencies are transferable across all maternity providers.

Conclusion

The findings of this study show that programmes of NIPE preparation are firmly embedded in the post-registration curriculum across England, Wales and Northern Ireland, and remain popular with midwives. Despite this, the number of NIPE-qualified midwives remains very low. Numerous impediments have been identified, including the difficulty of maintaining NIPE skills and the diverse provision of NIPE programmes, which may make some less attractive to care providers owing to their cost or duration. This study has highlighted the lack of any clear guidance or standards for the training of NIPE practitioners, resulting in differences in the preparation and experience of midwives at the point of NIPE qualification. These differences may, in part, have compromised the ability to respond on a wide scale to the recommendations of Townsend et al (2004) for universal NIPE training for midwives.

Questions have been raised about whether AEIs remain the most appropriate providers of NIPE education. Furthermore, while the educational content of the NIPE preparation programmes for midwives has increased in recent years, little has changed in relation to the preparation of F1 and F2 paediatricians. What is required in future is a more standardised and cohesive approach to the development of all NIPE practitioners, and particularly of midwives, if the vision of having a fully NIPE-qualified midwifery workforce is to be realised.

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