Using the RCPCH e-portfolio for trainee ANNPs: a three-year evaluative study

This article reflects on the findings of a three-year evaluative project within the School of Nursing and Midwifery, University of Sheffield, on the Royal College of Paediatrics and Child Health (RCPCH) electronic portfolio's functionality as an online assessment tool for trainee advanced neonatal nurse practitioners (ANNPs).

Liz Crathern
DMedSci, MPHEd, BSc (Hons)
MMedSci ANNP Programme Lead, University of Sheffield
l.crathern@sheffield.ac.uk

Simon J. Clark
BM, MSc, MRCP, FRCPCH, MD
Neonatal Consultant (Clinical Lead), Jessop Wing, Sheffield Teaching Hospitals NHS Foundation Trust

Jenny Longden
MSc, BMedSci
MMedSci APNP Programme Lead, University of Sheffield

Tim Styche
MEd
ANNP, Neonatal Unit, Nottingham University Hospital

Key points

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1. Trainee ANNPs require a robust mechanism for clinical assessment.
2. An evaluative study confirms that the RCPCH e-portfolio for specialty registrars can support ANNPs.
3. The RCPCH e-portfolio provides trainee and qualified ANNPs with a resource for evidencing and verifying clinical practice.

Pioneers not guinea pigs

The MMedSci advanced neonatal nurse practitioner (ANNP) programme at the University of Sheffield commenced in January 2014.[1] The course equips neonatal nurses to advance their practice to become future leaders of neonatal nursing by playing a key role in the multidisciplinary neonatal team, making decisions about practice, leadership and management.

Advanced clinical skills acquisition is a key component of the programme and commensurate with the role of an ANNP.[2] A steering and curriculum group agreed on a neonatal skills inventory that could underpin an online electronic portfolio (e-portfolio) integral to the clinical module.[1,3] After a series of discussions between the RCPCH and the University of Sheffield, the School of Nursing and Midwifery signed up to a pilot study. The first seven trainee ANNPs were enrolled onto the RCPCH e-portfolio in January 2014, supported by an academic and clinical team.[1,3] The trainees were excited about their involvement in groundbreaking teaching and learning; they were, without a doubt, pioneers not guinea pigs.

Initial developments and preparation: what was needed?

The key premise for integrating the e-portfolio into the neonatal curriculum was that evidence of knowledge, skills and attitudes must be measurable to ensure safe practice at the ANNP level to protect vulnerable newborn infants and their families. The system would require the following attributes:
- a portfolio that maps and links evidence
- portable and accessible at university, work and home
- accessible by trainee, clinical and academic supervisors
- facilitates learning contracts and personal development plans
- enables case-based discussion
- permits health assessment and diagnostic reasoning
- assesses directly observed procedural skills (DOPS)
- allows contained components, eg testimony, reflection and learning from experience, skills verification, governance, safeguarding, communication.

It was integral to classroom teaching that a process of learning could be developed, both critically and analytically, that encouraged deeper learning from professional conversation as trainees moved from 'the side to the head of the bed.'[4]

Putting into practice: not reinventing the wheel

The teaching staff were initially nervous about the use of an e-portfolio external to the school, however they quickly began to focus on the strengths of the process and a potential system that may work; not reinventing the wheel but adapting it. It was important to keep in mind the demands of the curriculum and steering group that any portfolio must be able to evidence the 'pillars of advanced practice' and the transition towards advanced nurse practitioner level. The learning outcomes in the advanced practice developmental needs assessment tool (APDNAT) were pivotal to this premise. These are arranged within four overarching pillars of advanced practice (leadership; facilitating

learning; research development; and advanced clinical and professional practice) and, importantly, are linked to the development of the underpinning principles of advanced nursing practice:

- autonomous practice
- critical thinking
- decision making
- clinical judgement
- problem solving
- value-based care
- improving practice.[5]

Trainees were also expected to map additional personal development plans that linked to Royal College of Nursing (RCN) standards and role descriptors (adapted for their trainee status), and a bespoke ANNP skills log to the e-portfolio as part of evidencing their transition to advanced neonatal nursing practice[6,7] (**FIGURE 1**). By the end of the clinical module the trainees would be assessed on all key components of the module incorporating the four pillars of advanced practice (**TABLE 1**).

Preparation for ANNP trainees, the school and clinical areas

Workshops with Neonatal Consultant Simon Clark and two medics who were using the RCPCH e-portfolio at that time were provided, as were ongoing group tutorials via email, telephone and individual workshops with informal lunchtime trainee sessions. Meetings were held in each clinical area with the ANNP and neonatal consultant supervisors to prepare the area for the assessment process. Although this was about mapping new terrains for nursing, the clinical staff were familiar with the RCPCH e-portfolio for medical trainees so this was less of a hurdle than anticipated. As such, both the medical and nursing assessors embraced the assessment documents.
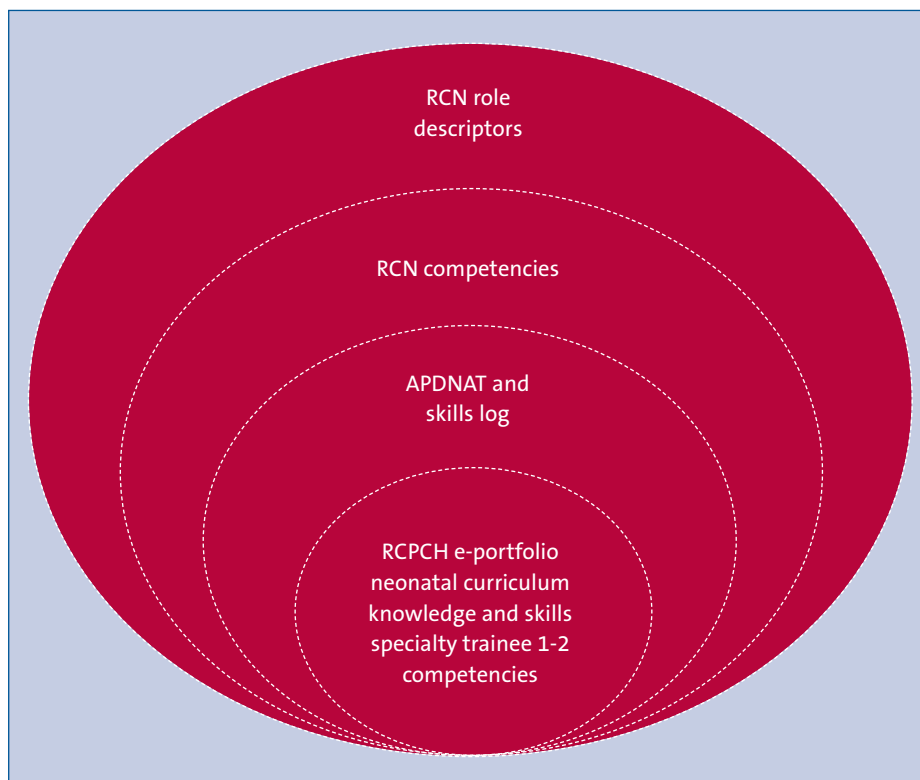

FIGURE 1 The elements of practice assessment documentation; the evidence for transition to advanced neonatal nursing practice.

- Master advanced clinical nursing skills and demonstrate evidence of ability to carry out complex clinical skills independently
- Embrace and critically review leadership and management styles that enable transformational practice across traditional boundaries
- Advocate for neonates and their families in complex situations
- Be accountable for and critically reflect upon personal practice
- Critically evaluate contemporary neonatal research and demonstrate a willingness to share knowledge through individual and group teaching

TABLE 1 The key components of the clinical practice module.

Validity of assessment in practice

Assessment of practice is crucial as any portfolio needs to be robust enough to quantifiably determine both academic and clinical know-how. A system with, for example, DOPS, discussion of correspondence (DOC), skills logs and reflections, including three records of supervisor assessment, is ideal. Importantly, the ability to assess the trainee from 'unsatisfactory' to 'above expectation' helps with recognition of capability, not only to identify the outstanding trainee but also those with additional training needs. Crucially it is an objective way to raise concerns, which is important in the clinical assessment of advancing practice and gives robust support when considering failing an unsatisfactory student.

Evaluation of the use of the e-portfolio

To date, three cohorts of trainee ANNPs and one cohort of trainee advanced paediatric nurse practitioners (APNP) on the MMedSci ANNP and MMedSci APNP programmes respectively have used the online learning tool so that they and their supervisors can log their activities and monitor their progress through the curriculum:

- ANNP Cohort 1: seven students (Jan 2014 to Sept 2014)
- ANNP Cohort 2: six students (Sept 2014/15)
- ANNP Cohort 3: 11 students (Sept 2015/16)
- APNP Cohort 1: 12 students (Sept 2015/16)

The trainees initially felt overwhelmed but with some practice they rapidly got to grips with navigating through the e-portfolio.

Each cohort of trainees and their supervisors documented, evaluated and submitted progress with the e-portfolio at a mid- and end-point for year one. This was close to a time in the programme when the completion of scholarly knowledge and skills would be assessed. The following three questions were asked:
1. What went well?
2. What went less well?
3. What would you change?

The engagement of the ANNPs with their consultant supervisors varied across the 10 seconding neonatal units, ranging from excellent to minimal. However, other acceptable practitioners (in terms of level)

were able to verify skills when called upon. Overall, the e-portfolio captured the information needed to assess knowledge, skills and attitude. The additional skills log was invaluable as a source of information for triangulating evidence of skills competency, especially when some supervisors were less engaged with the verification of ongoing assessment.

What went well?

Following a content analysis of feedback from the three cohorts, supervisors and academic team, use of the RCPCH e-portfolio in clinical practice was overwhelmingly positive, the points in **TABLE 2** being noteworthy.

For the first two cohorts, the clinical module was assigned a simulation training fellow who mapped the trainee skills needed on ANNP trainee days and registrar grid trainee days. For each day attended, a certificate of attendance was awarded and this could be uploaded onto the trainee's e-portfolio. Now ANNP trainees are invited onto grid trainee days and human factor days and the scenarios are adapted to include the role of the ANNP. Leadership, governance and management decision-making days with potential for involvement from neonatal staff nurses are also being explored.

What went less well and what would you change?

There were some 'teething troubles' and technical problems, the following points being noteworthy:

- Teething troubles with the clinical assessors gaining access to the e-portfolio for their individual trainee ANNP
- Not having a dedicated route through the system for ANNPs
- Linking of personal development plans for RCN descriptors explicitly to DOPs, clinical evaluation exercises (Mini-CEX) and skills logs
- Trainees created vast amounts of evidence for one skill; they needed to make better use of evidencing links in their personal library
- There were issues with the use of personal libraries and links to content
- Difficulties for the programme lead to actively monitor the process
- It was deemed particularly important that the three educational meetings between trainees and their supervisors (at the beginning, middle and end of the first year) should be verified using the

- The clinical supervisors are already familiar with the RCPCH e-portfolio
- There is 24/7 access to the system at work, home and university
- The evaluative feedback notes comment on how much the trainees are willing to engage in comparison to the doctors using the system
- There are clear links to the ANNP clinical skills log and mapping across to neonatal specialty trainee levels (ST1 and 2)
- Nurse trainees are demonstrating quality and depth of work when evidencing clinical skills and decision making
- Trainees are familiar with evidencing skills in nursing and some have used reflection and case-based study in the past
- Trainees are keen to continue with the e-portfolio once the pilot study comes to an end and some consultant supervisors are seeking additional local funding for this to take place
- The university is keen that this model of clinical assessment should be embedded into the programme, including the newly-developed APNP programme
- External examiner engagement has been highly positive with regards to quality assessment
- Neonatal consultants report that the trainees' use of the system is excellent with comments relating to both quality and quantity of evidence
- The ability to link classroom learning to the e-portfolio is invaluable and enriches the port-folio, eg health assessment and diagnostic reasoning, use of the SBAR (situation, back-ground, assessment, recommendation) handover tool, reflections, critical incidents and classroom student presentations
- Trainees have used their e-portfolio at interview to evidence their advancing role when applying for their first post; it is also ideal for Nursing and Midwifery Council revalidation
- There is a direct link with simulation training

TABLE 2 Positive feedback on use of the RCPCH e-portfolio.

An ANNP fundamental skills day. The simulated skills can be recorded and reflected upon in the e-portfolio.

APDNAT and RCN descriptors and competencies to guide the meeting
- Before the launch of the new RCPCH e-portfolio system in November 2015, supervisors reported that navigation of the system was 'clunky'. The transfer to the new RCPCH

e-portfolio system was initially stressful and frustrating at times but support from the RCPCH team was excellent. The changes to the e-portfolio now support a system that has more structured assessments including handover documentation and pharmacology.

Improvements and future developments

The external use of an e-portfolio assessment was a new venture for the University of Sheffield School of Nursing and Midwifery and as such continues to be developed with changes for current ANNP and APNP cohorts. As experienced users of the RCPCH e-portfolio system for nurses, the university is now well positioned to more actively engage with the RCPCH, RCN and Nursing and Midwifery Council (NMC) on a way forward.

Although the pilot study for the RCPCH e-portfolio reached its three-year conclusion in September 2016, the trainees across years 1-3 are determined to use the e-portfolio for their own continuing personal developments plans and, as a result, they continue to engage with the e-portfolio while completing the non-medical prescribing and online research modules.

The team has negotiated with the RCPCH for trainees to have unrestricted access to all elements of the level 1 RCPCH e-portfolio, neonatal ST1-3. Dependent upon their specialty some trainees have indeed evidenced ST3 specialised practice, leadership and complex family care.

As an academic and clinical team, the authors are keen to move the findings from this evaluative study forward to advance clinical assessment of knowledge, skills and attitudes of the trainee advanced practitioner. Moving forward, it is felt that the e-portfolio could be made more widely applicable by creating an improved system that:

■ enables a range of practitioners caring for neonates and children to navigate and evidence

■ provides a means to embed links to the various practitioners' professional regulators for revalidation events.

A testimony for the e-portfolio course

The following testimony was written by one neonatal consultant tutoring the September 2014 cohort:

"Two ANNP trainees have just completed their course. The course was of a high standard and has prepared our staff well for their role. The teaching and assessment strategy was well thought out and fit for purpose. The clinical components were appropriate and paper work kept to a minimum. The course was taught by a multidisciplinary team with a wide range of experience and the latest techniques in medical and nursing education were utilised (including simulation-based training and technology enhanced learning).

"The ANNPs enjoyed their course and spoke highly of the staff and facilities in Sheffield. I had excellent support and guidance as a medical tutor. The course was one of the first to use e-portfolio, which was an excellent tool for monitoring progress and clinical skills. I would strongly recommend it to nurses interested in becoming a nurse practitioner; we have already registered two more of our staff following the feedback we received from students."

Conclusion

This evaluative study confirms that the RCPCH e-portfolio provides trainee and qualified ANNPs with a robust means of evidencing and verifying clinical practice using the neonatal ST1-2 skills and knowledge competencies. The use of the e-portfolio provides the clinical evidence demanded by the NMC for revalidation purposes.

Acknowledgements

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