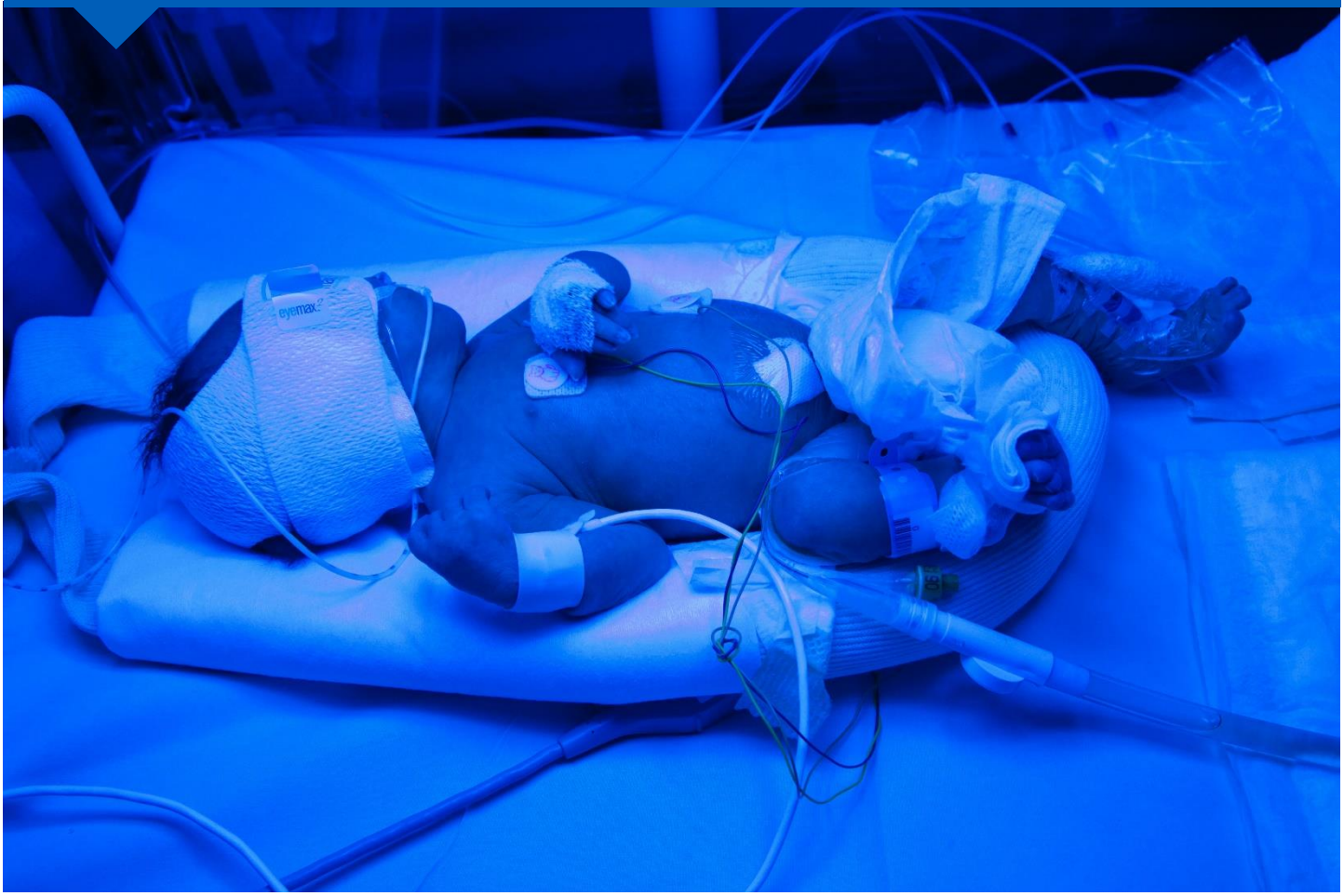
NHS
Health Education England

Neonatal Qualified in Specialty (QIS) Education and Training Review



June 2021

Acknowledgements

This study was carried out for Health Education England (HEE) by RSM UK Consulting LLP (RSM). The RSM project team comprised of Laura Brownlee (Consulting Director) Natasha Reilly (Senior Consultant), Ciara Barry (Analyst), and Abby Reid (Analyst).
The research team is grateful to HEE for their support in conducting the research, as well as to all participants in the Trust data collation, education provider survey, course participant survey, stakeholder interviews, and roundtable discussion.
Special thanks to the project advisors Doreen Crawford and Professor Neil Marlow for their contribution to the outputs of this review, and for facilitating the Roundtable event. The research team is also grateful to the members of the project Delivery Sub-Group for their insight. Members included: James McLean (HEE), Charlotte Hill (HEE), James Hayes (HEE), Linda Hunn (Director/Lead Nurse, East Midlands Neonatal Operational Delivery Network), Claire O'Mara (outgoing Chair of the Neonatal Nurses Association (NNA) and Lead Nurse for the East of England Neonatal Operational Delivery Network), Paru Patel (HEE), Gary Wares (HEE), Kathryn Jones (HEE), and Danielle Upton (HEE).

Acronyms

Acronym	Description
BAPM	British Association of Perinatal Medicine
CPD	Continuing Professional Development
HEE	Health Education England
HEI	Higher Education Institute
LBR	Learning Beyond Registration
LNU	Local Neonatal Unit
NICU	Neonatal Intensive Care Unit
NHSE/I	NHS England and NHS Improvement
NLNG	Neonatal Lead Nurses Group
NMC	Nursing and Midwifery Council
NNA	Neonatal Nursing Association
ODN	Operational Delivery Network
QIS	Qualified in Specialty
RCN	Royal College of Nursing
RSM	RSM UK Consulting LLP
SCBU	Special Care Baby Unit

Contents

Executive summary

Introduction

RSM was commissioned by HEE on the 17th September 2020 to conduct a review of neonatal Qualified in Specialty (QIS) education and training across England, building on evidence already obtained by HEE in order to identify potential workforce training needs, competency gaps, and solutions. This review of QIS training also includes a set of recommendations to inform future neonatal QIS education and provision.

The key lines of enquiry for this work were:

1. Is the current education and training system for neonatal nursing fit for purpose now and to meet anticipated future needs?
2. How is the quality and consistency of training measured and reported?
3. How transferable is the learning across ODNs in England?
4. How accessible and viable is the current system?
5. Are there any alternatives?
6. Are we getting value for money?

This review employed a mixed-methods approach, with both quantitative and qualitative methods used to gather data and information from trusts, education providers, past neonatal QIS course participants, and other strategic stakeholders.

Desk review findings (September – October 2020)

A desk review was undertaken at the outset of this review to provide an overview of the neonatal context, explore the key lines of enquiry and to highlight any areas for further development. The desk review involved 17 key pieces of literature, including national strategy documents, literature on neonatal nursing training and workforce, and QIS education syllabus/content guidelines.

Key findings

- The literature suggests that there is a **lack of standardisation** of QIS skills and knowledge.
- There are several documents that can be used as **guidelines** for education providers to encourage quality and consistency (e.g. British Association of Perinatal Medicine (BAPM) core syllabus, Royal College of Nursing (RCN) career framework).
- The BAPM core syllabus also includes a suggestion of what should be included in a QIS achievement portfolio to **ensure transferability** between units and trusts.
- However, as there is **no professional regulation or monitoring** of content or qualification, the quality, consistency, and transferability of QIS training is not guaranteed.
- There is a challenge for neonatal nurses in **maintaining their skill level** after receiving QIS training.
- There is a common theme of concern over the **time allowed for QIS training** in terms of being able to release nurses from their frontline duties and the length of their placements within external units.

- **Funding** for training is highlighted as a barrier to accessibility, with some Operational Delivery Networks (ODNs) experiencing more difficulties in this area than others.

Demand for neonatal QIS training (November 2020 – January 2021)

To build a further understanding of the demand for QIS education and training, a data return was developed to be completed by trusts with at least one neonatal unit. The data return was based on a range of tools, documents and research pieces including both the CRG tool[1] and the 2016 Neonatal nursing workforce survey[2] to ensure that the required data was available within all trusts.

Please note that the findings below are based on the data returns completed by units (54% of units). If further analysis was required for service planning, additional analysis relating to demand would need to be completed (with data from all units).

Key findings

- In total, **52%** of all trusts completed data returns and **54%** of units completed data returns.
- The percentage of Band 5 nurses with QIS as a proportion of all Band 5 nurses ranged from 7.9% to 74.9% across ODNs.
- The majority of nurses accessed QIS training through education providers **within the same ODN region** as their unit, with an estimated **608 nurses nationally** accessing QIS training from providers over the last three years (based on data returns and a national multiplier).
- Less than half (**43%**) of the units who provided data returns indicated that they had enough resources to **backfill for nurses**, this was the **most commonly reported barrier** to QIS training.
- **88%** of units reported funding QIS places using either Trust or HEE funds. Charitable funds were combined with Trust or HEE monies to fund QIS places by 17% of units.
- It is estimated that approximately **2,002 neonatal QIS places** will be required nationally over the next three years (based on data returns and a national multiplier), however this does not take into account changes in service demand and/or future investment in neonatal services.

Neonatal QIS education provision (December 2020 – January 2021)

A survey of education providers was conducted to build an understanding of the provision of neonatal QIS training. The survey received a 50% response rate, with 14 education providers supplying both qualitative and quantitative information on their neonatal QIS education delivery. There was at least one response for training provision within each of the ten ODNs.

[1] https://improvement.nhs.uk/documents/2974/Appendix_1a_Neonatal_Nurse_calculator._Skill_mix_enabled.xlsx

[2] Patterson, L. Hunn, L. and O'Mara, C. (2020) Neonatal nursing workforce survey – What does the landscape look like in England?, Journal of Neonatal Nursing

Key findings

- It was most common for a neonatal QIS course to: consist of **two modules**; have modules worth **20 credits**; and for modules to be **12 weeks** long.
- The average number of hours required for **different learning formats** (structured, self-directed, practical, placement) **varied greatly** by institution.
- The most common funding method was through **trusts**, but more than half (57%) of education provider respondents indicated that they used a **combination of funding methods**. On average this was 53% Trust funding, 44% HEE funding, and 3% charity funded.
- There was a **large variation in cost per place**, ranging from £720 to £9,250. 75% of institutions charged the **same price** for Level 6 and level 7 courses.
- There are generally fewer applications for neonatal QIS course than places available, meaning that courses are **not oversubscribed**.
- Many education providers regularly request **feedback** from their students and have adjusted their courses as a result of this.

Feedback on education provision (December 2020 – January 2021)

To collect feedback on the provision of QIS education across the country, a survey was designed for those who had completed their QIS training within the last three years. This survey received 171 responses, with views represented across all ten ODNs.

Key findings

- Of those that had completed training during the Covid-19 pandemic, 80% agreed or strongly agreed that it had a **significant impact** on their training.
- The majority of nurses (87%) indicated that they found it **easy to transfer their learning** from the neonatal QIS course to their role.
- **Practical learning** was the learning format that the most respondents (84%) indicated **sufficiently prepared them** for working as a neonatal QIS nurse.
- While 70% of respondents indicated that their employer allowed **sufficient time** for them to complete QIS training, agreement was **lowest for neonatal intensive care unit (NICU) respondents** at 67%, followed by special care baby unity (SCBU) respondents at 75% and local neonatal unit (LNU) respondents at 80%.
- Many respondents (79%) suggested that QIS course places are accessible for neonatal nurses. However, many more 'agreed' (59%) than 'strongly agreed' (20%), suggesting that people are aware that **accessibility is sometimes an issue** even if they have not experienced this directly.
- Aspects highlighted as **working well** within the course included: practical training, the course content, group work, and having external speakers.
- Aspects highlighted as **working less well** within the course included: difficulties in arranging, the length of, placements, the lectures, and studying alongside work or home life.

Stakeholder interviews (January – February 2021)

In February 2021, 31 online interviews were conducted with the following stakeholders in order to explore the key lines of enquiry for this review:

- Lead Nurses (x4)
- Network managers (x1)
- Education providers (x7)
- Regional leads (HEE) (x4)
- Clinical educators (x4)
- Unit managers (x5)
- Neonatal Nursing Association (x2)
- National stakeholders (x4)

Three semi-structured topic guides were developed for Trust, Education and National stakeholders to ensure that each set of questions reflected the roles of individuals.

Key findings

- All stakeholders remarked upon the need for **standardisation in course content, style and assessment**. The current levels of variation mean that it is challenging to measure the knowledge, skills and competencies of QIS trained nurses.
- All interviewees would welcome a **standardised national competency framework** and **assessment framework for QIS.**
- The majority of stakeholders **did not regard Higher Education Institute (HEI) led QIS training as providing particularly good value for money** or were unable to comment (due to variation relating to course length, number of modules, number of credits etc.).
- The majority of interviewees suggested **apprenticeships** as an additional/ alternative form of training, however many cautioned that this could perpetuate the current lack of standardisation.

Roundtable discussion (March 2021)

Following the above evaluation activities, a Roundtable event was held on 9th March to discuss the findings and refine recommendations. This event included representatives from a range of organisations including HEE, NHS England and NHS Improvement (NHSE/I), the ODNs, and bodies that represent neonatal nurses such as the NNA and the Nursing and Midwifery Council (NMC).
The Roundtable was co-facilitated by Professor Neil Marlow and Doreen Crawford, with analysis presented by representatives from RSM. The session included a presentation of evaluation findings, followed by a discussion for each component of the analysis.

Key findings

- The main discussion points relating to the desk review focussed on the **maintenance of skills** post QIS-accreditation and to what level these should be maintained, depending on unit type.
- Key themes discussed during the presentation of the Trust data collation were: **future demand** for neonatal nurses; changes to the **operational delivery model**; the **recruitment** of neonatal nurses; and variation in the **proportion of QIS/non-QIS nurses**.
- The **level to which neonatal QIS training is accredited** was proposed as an area for further research/consideration.
- There was agreement around the need for lecturers and educators to have **clinical credibility** and a **background in neonatal care**, which is not always the case currently within some HEIs.

- Alternative models of QIS training which were considered were: an **apprenticeship model** and a **hybrid model** (where training is delivered by the ODN but accredited by an education provider).

Recommendations

The recommendations were developed based on findings from the analysis outlined above, and in line with the key lines of enquiry. Draft recommendations were presented at the Roundtable event and were subsequently refined. Based on these recommendations, an action plan of next steps was produced for HEE, including areas for future research.

Recommendation 1: One agreed standard across all ODN regions in terms of: course content, educators (in terms of skill/neonatal background), skills and competencies to be developed. This standard should undergo both academic and clinical assessment.

Recommendation 2: More practical experience (and an agreed minimum level of practical experience within QIS courses) structured to consolidate learning and ensure sufficient experience across different levels of unit.

Recommendation 3: To conduct a review of the wider neonatal nursing career pathway both prior to and post QIS, including (but not limited to): recruitment into neonatal, opportunities for career progression (including consideration of banding/ salary post QIS); and an education and capability-based pathway.

Recommendation 4: ODNs to conduct a review of their neonatal nursing staff to inform their understanding of future training needs, including (but not limited to): percentage of neonatal nursing staff that are band 5 QIS; number of nurses expected to retire in the next 3-5 years; ability to backfill for nurses undertaking QIS training; number of nurses expected to require QIS training in the next 3-5 years.

Recommendation 5: Introduction of a formal reporting mechanism (using a nationally agreed training evaluation model and metrics) between trusts / ODNs and education providers to ensure quality and consistency when reviewing and developing future QIS education and training.

Recommendation 6: Introduction of a skills and competency 'toolkit' as a standardised way for neonatal nurses to record their education and training (including QIS and other CPD training activities).

Recommendation 7: Reviewing the number of education providers to improve standardisation, sustainability, and value for money.

Recommendation 8: The introduction of alternative delivery models for QIS could be explored (eg. hybrid model, pre-QIS training or apprenticeship model).

Recommendation 9: Having one representative group (eg. a Board) who could represent all ODNs/trusts to support the commissioning of neonatal QIS training from education providers (based on a standardised core syllabus/competencies) and establishing a commissioning framework of providers who can meet the quality and cost per place requirements.

1. Introduction

1.1 Context

The Better Births[3] report outlined the Five Year Forward View for NHS maternity services in England. The report highlighted that there have been difficulties in neonatal nurse staffing numbers and training provision, and that a dedicated review should be produced to analyse these difficulties.

In response, NHS England commissioned the Neonatal Critical Care Review[4] (NCCR) which recommended three phases comprising of: an evidence review; creation of a specific action plan based on this evidence review; and implementation. Based on the findings of the NCCR, resources have been allocated as part of the NHS Long Term Plan and the Maternity Transformation Programme, with recommendations under the following themes:

- Aligning capacity (Action 1-2)
- Developing the expert neonatal workforce (Action 3-5)
- Enhancing the experience of families (Action 6)
- Making it happen (Action 7-10)

HEE is supporting the workforce elements included in Actions 3-5. One of these deliverables is to review the current neonatal QIS training, including access to programmes, supply and demand of training programmes, quality and consistency of programmes, and evaluation and accreditation of QIS programmes against the BAPM guidelines and RCN core syllabus.

RSM was commissioned by HEE to conduct a review of neonatal QIS education and training across England, building on evidence already obtained by HEE in order to identify potential workforce training needs, competency gaps and solutions. This review provides HEE with an evidence base relating to neonatal nursing educational levels, training, development and deployment of neonatal nurses. This review of QIS training also includes a set of recommendations to inform future discussions about neonatal QIS education, training and provision.

1.2 Research questions

This review includes evidence collation across a range of areas, including: national QIS training coverage; numbers trained; curriculum content; course lengths; delivery methods; cost; quality assurance and monitoring; identification of new and emerging training modules/resources; and key educational issues and resource gaps.

The key lines of enquiry for this review were defined by HEE at the outset, and include:

1. Is the current education and training system for neonatal nursing fit for purpose now and to meet anticipated future needs?
2. How is the quality and consistency of training measured and reported?
3. How transferable is the learning across ODNs in England?

[3] Better Births (2016) Improving outcomes of maternity services in England, A Five Year Forward View for maternity care
[4] NHS England and NHS Improvement (2019) Implementing the Recommendations of the Neonatal Critical Care Transformation Review

4. How accessible and viable is the current system?
5. Are there any alternatives?
6. Are we getting value for money?

1.3 Approach

This review has employed a mixed-methods approach, with both quantitative and qualitative methods used to gather data and information from trusts, education/training providers, past neonatal QIS course participants, and other strategic stakeholders.

The stages and timeframes of the research components comprised:

Desk review: (September – October 2020) Review of key documents to gather existing information and insight into the neonatal QIS context and the research questions.

Trust data collation: (November 2020 – January 2021) Collation of key data from trusts via spreadsheet collation tool.

Education provider data collation: (December 2020 – January 2021) Collation of key data from QIS education providers via online survey.

Course participant survey: (December 2020 – January 2021) Collation of information from previous course participants (completed training in the last three years) via online survey.

Interview with Trusts and stakeholders: (January – February 2021) Interviews with trusts and key stakeholders to discuss and gain insight into the key research questions.

Roundtable discussion: (March 2021) Discussion with representatives from a range of stakeholder organisations, focused on emerging findings and developing recommendations.

1.3.1 Quantitative research

Quantitative data collation was undertaken in November and December 2020, with data collected from trusts via an Excel template and education providers via survey. Both data collation tools were piloted with a small sample of trusts/training providers to ensure ease of completion and collect any initial feedback on these tools. Recipients were given four weeks to complete the data requests (which was extended to improve response rates).

Data collected from trusts included:

- actual number of neonatal nurses (budgeted and in post) by unit type and grade;
- whole time equivalent neonatal nurses (budgeted and in post) by unit and grade;
- expected QIS training places required (over the next three years);
- expected QIS nurses retiring (over the next three years)
- barriers to completing QIS training;
- training providers used by the Trust;
- details of funding mechanisms for QIS training; and
- service delivery and workforce information.

This data was collated via a spreadsheet which was disseminated to the Neonatal Lead Nurses Group (NLNG) across units in their area.

Data collected from training providers included:

- levels of accreditation available for neonatal QIS training;
- details of delivery such as number of modules, number of credits, and length of modules;
- teaching methods;
- hours required for different learning formats;
- main funding sources;
- average cost per place;
- number of available places/applications/places awarded for neonatal QIS training per academic year; and
- number of applicants that passed/did not pass neonatal QIS training per academic year.

This data was collated via an online survey which was sent to education providers identified through desk research, previous HEE research, the Trust data collation spreadsheet, and contacts provided by ODN lead nurses.

1.3.2 Qualitative research

A **desk review** was conducted at the outset of the review during September and October 2020 to analyse the existing literature, with 17 documents reviewed in total. These included both local and national strategy documents, literature on neonatal nursing training and the neonatal nursing workforce, and guidelines on syllabus and course content. The desk review provided an overview of existing information, insight into the key line of enquiry and highlighted areas for further research.

An **online survey of neonatal QIS course participants** who had completed their training in the last 3 years was conducted from November 2020 to January 2021. This was administered online, with a covering email and a link directly to the survey. This was disseminated via the NLNG, in order to maximise coverage and response rates. Data collected from QIS course participants included:

- time on a neonatal unit prior to QIS training;
- whether different types of learning prepared participants for working as a neonatal QIS nurse;
- ability to transfer learning to the role;
- accessibility of QIS places;
- barriers experienced;
- what worked well or not so well about their training.

Interviews with trusts and key stakeholders were conducted in January 2021. There were 31 interviews in total, including lead neonatal nurses (from the neonatal networks) and a sample of providers involved in the delivery of QIS courses over the last year. Interviewees also included representatives for the NLNG and also some neonatal unit Managers, along with wider representatives. Topic guides for these interviews were created to cover the key lines of enquiry questions.

Finally, a **roundtable discussion** was held in March 2021. The roundtable discussion was facilitated by RSM, our Strategic Advisors and HEE. This involved 15 representatives from a range of stakeholder organisations and focussed on emerging evaluation findings and developing/refining recommendations. These stakeholder groups included:

- HEE
- NHS England and NHS Improvement
- Operational Delivery Networks
- British Association of Perinatal Medicine
- Royal College of Nursing
- Nursing and Midwifery Council and
- Neonatal Nurses Association.

2. Desk review findings

Key findings

- The literature suggests that there is a **lack of standardisation** of QIS skills and knowledge.
- There are several documents that can be used as **guidelines** for education providers to encourage quality and consistency (e.g. BAPM core syllabus, RCN career framework).
- The BAPM core syllabus also includes a suggestion of what should be included in a QIS achievement portfolio to **ensure transferability** between units and trusts.
- However, as there is **no professional regulation or monitoring** of content or qualification, the quality, consistency, and transferability of QIS training is not guaranteed.
- There is a challenge for neonatal nurses in **maintaining their skill level** after receiving QIS training.
- There is a common theme of concern over the **time allowed for QIS training** in terms of being able to release nurses from their frontline duties and the length of their placements within external units.
- **Funding** for training is highlighted as a barrier to accessibility, with some ODNs experiencing more difficulties in this area than others.

Our initial research involved a desk review of relevant documents to gather the existing information and insight into neonatal QIS training and education. This research was conducted to provide an overview of the neonatal context, the existing exploration of the research questions, and to highlight any areas for further development[5]. The areas we sought to address included:

- strategic context
- is the current education and training system for neonatal nursing fit for purpose now and to meet anticipated future needs?
- how is the quality and consistency of training measured and reported?
- how transferable is the learning across ODNs in England?
- how accessible and viable is the current system?
- are there any alternatives? and
- is there value for money?

The desk review involved 17 key pieces of literature, including national strategy documents, literature on neonatal nursing training and workforce, and QIS education syllabus/content guidelines. See Annex 1 for the bibliography of sources reviewed.

[5] Please note that the inclusion of any documentation within this section does not represent endorsement for use in future QIS education and training.

2.1 Strategic context

It is widely acknowledged in the literature that neonatal services in England are currently facing challenges. The BLISS Baby Report[6] highlighted that in 2015, 64% of neonatal units did not have enough nurses in post. It was estimated that in 2016-17, there were 2,263 fewer neonatal nurses[7] in post than is nationally recommended by BAPM standards. The Neonatal Nursing Workforce Survey[8] showed that all ODNs had vacancies, and the largest number of clinical vacancies were within the Band 5 and Band 6 categories.

The standards outlined by the Department of Health in 2009[9] stated that 70% of staff on a neonatal ward should have achieved QIS status by March 2024. However, in the BLISS Baby Report,[10] 65% of units indicated that they did not have enough QIS neonatal nurses to meet this standard. Findings indicated that the proportion of nurses with an accredited post-registration QIS had in fact fallen by 19% since 2010[11].

Moreover, the nursing workforce is ageing, and "large numbers of highly trained and QIS nurses are expected to retire over the next few years"[12]. These are likely to be replaced by those coming straight from university, who will require training and investment before they become QIS.

2.2 Is the current education and training system for neonatal nursing fit for purpose now and to meet anticipated future needs?

The literature generally suggests that neonatal training could be improved. The BLISS Baby Report[13] suggests that a key factor in the shortage of specialist neonatal nurses is "access to appropriate training" so that they can develop the high-level skills and competencies needed to become QIS. Overall, 72% of units said that they had difficulty with one or more aspects of neonatal nurse training and development in the previous year, and this was particularly the case in NICUs, where more than four out of five said this[14].

A specific concern outlined in the literature is the amount of time made available for QIS training. A quarter of units (23 out of 95)[15] had concerns about the time allowed to complete training, with the reflection that placements are too short for staff to learn the required skills and competencies.

Several key documents also highlighted that there is a challenge for nurses in maintaining their skill level after receiving training. The BLISS Baby Report[16] found that 27% of LNUs and

[6] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[7] NHS England and NHS Improvement (2019) Implementing the Recommendations of the Neonatal Critical Care Transformation Review
[8] Patterson, L., Hunn, L. and O'Mara, C. (2020) Neonatal nursing workforce survey – What does the landscape look like in England?, Journal of Neonatal Nursing
[9] NHS and Department of Health (2009) Toolkit for High-Quality Neonatal Services
[10] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[11] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[12] National Quality Board: Safe, sustainable and productive staffing – an improvement resource for neonatal care (2018)
[13] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[14] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[15] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance
[16] BLISS: for babies born too soon, too small, too sick (2015) BLISS Baby report 2015: Hanging in the Balance

13% of SCBUs said that there is a lack of opportunity for nurses to maintain their skills and competency levels as they do not have enough clinical exposure.

The RCN neonatal nursing career framework[17] outlined the importance of facilitating QIS nurses to sustain their level of practice. It was highlighted that "once qualified in the specialty, registrants will need to continually update", but that this might be more difficult for those working in LNUs and SCBUs. The framework outlined that a revalidation requirement had been incorporated into the NMC Continuing Professional Development (CPD) system. For this, evidence must be provided every three years to ensure that enough hours to support practice are sustained and that there is continued learning and development.

2.3 How is the quality and consistency of training measured and reported?

The validation of post-registration nurse education is the responsibility of individual providers, with no professional regulation or monitoring of content or qualification[18]. As a result, the definition of a neonatal nurse QIS in terms of education, training, and clinical competence has no agreed definition or standard. There have been several efforts to encourage consistency and quality in the training provided to neonatal nurses to become QIS, outlined below.

A key document is the BAPM: Matching knowledge and skills for QIS neonatal nurses[19]. This highlights the lack of standardisation in neonatal nursing QIS training and outlines the essential core syllabus for skills assessment and knowledge content. Six key areas for skills and knowledge are outlined within this document.

Table 1: BAPM Matching knowledge and skills for qualified in specialty (QIS) Neonatal nurses: A core syllabus for clinical competency – summary

Skill/knowledge	Theme
Skill 1:	Fluid, electrolyte, nutrition and elimination management
Knowledge 1:	Fluid, electrolyte, nutrition and elimination management
Skill 2:	Respiratory and cardiovascular management
Knowledge 2:	Respiratory and cardiovascular management
Skill 3:	Neurological, pain and stress management
Knowledge 3:	Neurological, pain and stress management
Skill 4:	Skin, hygiene and infection prevention management
Skill 5:	Management of thermoregulation
Knowledge 4+5:	Thermoregulation, skin, hygiene and infection prevention
Skill 6:	Managing and supporting the family
Knowledge 6:	Managing and supporting the family

[17] Royal College of Nursing (2015) Career, education and competence framework for neonatal nursing in the UK
[18] Health Education England (2015) Shape of Caring Review – Neonatal nurse QIS education and competency project – Audit tool
[19] British Association of Perinatal Medicine (2012) Matching knowledge and skills for qualified in specialty (QIS) Neonatal nurses: A core syllabus for clinical competency

A performance criterion is outlined for each skill, reflecting the key abilities required of a QIS neonatal nurse. This is followed by a framework for each knowledge area, which outlines "anatomy and physiology (structure, function and process)" knowledge requirements, as well as "practice knowledge".

The BAPM document[20] also provides criteria for evidencing the achievement of knowledge and skills, through the development of a portfolio. This guidance should therefore be used to ensure sufficient evidence of the quality and consistency of QIS training and achievement. It is recommended that a portfolio should contain:

- a record of success in completing assessed neonatal theory/practice modules within an accredited qualification, encompassing both knowledge and skills learning outcomes across the range of care;
- assessed performance of skills across the range of care;
    - skills performance assessed by NMC mentor;
    - documentation showing progress of practice development within each skill from 'practicing under direct supervision' to 'independent practice', signed and dated by mentor and student;
    - signature of overall achievement by mentor; and
- written evidence that demonstrates transfer of knowledge to practice.

Another tool encouraging the quality and consistency of neonatal QIS training is the HEE Audit tool for the provision of education leading to the status of QIS neonatal nurse[21]. This tool is designed to enable neonatal ODNs and their provider trusts to monitor the education standards of neonatal nursing QIS training.

It is stated that: "the title 'QIS' will in future only apply to those nurses who have achieved a qualification by completing a programme of study that matches the quality standards of the audit tool" [22]. The tool splits the standards for QIS training into three areas: the programme; practice placement areas; and the network. The document gives examples of suitable evidence for each of the criteria within these sections, making the document a useful premise on which methods to measure and report on the quality of training can be based.

The final key document outlining standards for the quality and consistency of neonatal QIS training is the RCN: Career, education and competence framework for neonatal nursing in the United Kingdom[23]. This framework was created to be used across the UK at practice level and by HEIs to guide the provision of training. This document was updated in 2021[24], however, as the updated version was not publicly available (or used by education providers) over the period of RSM's evaluation it has not been included within this review.

The framework suggested that learning outcomes should be integrated into the competency framework in order to encourage consistency and reduce theory/practice gaps. It outlines the core competencies for each band of neonatal practice and the core clinical skills required at

[20] British Association of Perinatal Medicine (2012) Matching knowledge and skills for qualified in specialty (QIS) Neonatal nurses: A core syllabus for clinical competency
[21] Health Education England (2015) Neonatal Nurse Qualified in Specialty (QIS) - Audit tool for the provision of education leading to the status of Qualified in Specialty Neonatal Nurse
[22] Health Education England (2015) Neonatal Nurse Qualified in Specialty (QIS) - Audit tool for the provision of education leading to the status of Qualified in Specialty Neonatal Nurse
[23] Royal College of Nursing (2015) Career, education and competence framework for neonatal nursing in the UK
[24] Royal College of Nursing (2021) Career, education and competence framework for neonatal nursing in the UK

each level. The document finally suggests a curriculum to support the development of these core clinical skills at each band.

Table 2: RCN – Career, education and competence framework for neonatal nursing in the UK (2015)

Core competencies	Core clinical skills
1. Communication and interpersonal relationships	1. Fluid, electrolyte, nutrition and elimination management
2. Health, safety and security	2. Neurological, developmental care and pain management
3. Service development	3. Respiratory and cardiovascular management
4. Quality	4. Skin, hygiene and infection control management
5. Equality, diversity and rights	5. Infant temperature management
6. Responsibility for patient care	6. Palliative care, end-of-life care and bereavement management
	7. Investigations and procedures
	8. Equipment and monitoring

The core clinical skills outlined in the RCN career framework broadly align with those outlined in the BAPM core syllabus. There is further detail in the RCN framework that covers investigations and procedures, and equipment and monitoring.
Both versions of the RCN framework highlight that there is considerable variation in the educational provision and level of training towards QIS. The updated version highlights that it is a "matter of considerable concern" that there are no nationally agreed educational programmes, and the variation in quality of QIS has "led to uncertainty for the neonatal service".

So, while these guidance documents and audit tools are readily available, there is no national accrediting body to regulate these standards or monitor compliance with them (either by HEIs or QIS nurses). This means that though quality and consistency can be measured and reported against these requirements, this is not standardised or officially measured and is therefore not necessarily guaranteed.

2.4 How transferable is the learning across ODNs in England?

The lack of standardisation of neonatal QIS training suggests that transferability of learning may not always be achieved. In practice, this can mean that a QIS neonatal nurse moving between trusts may experience discrepancies in expectations or learning.
The BAPM Knowledge and Skills framework[25] highlights the importance of evidencing the achievement of QIS and outlines the types of evidence that can be used within a portfolio. Documentation of learning is vital for a QIS qualification to be seen as transferrable between different practice settings.

[25] British Association of Perinatal Medicine: Matching knowledge and skills for qualified in specialty (QIS) Neonatal nurses: A core syllabus for clinical competency (2012)

This document therefore aims to create a standard by outlining a criterion for evidencing the achievement. The aim of this is to create a "standard which can be transferred between units, trusts, and countries". The suggested types of evidence for portfolios include:

- structured reflective account linked to a scenario;
- critical incident analysis;
- annotated bibliography linked to decision making model;
- analysis of learning from multi-disciplinary meetings or formal learning events; and
- record of question and answer session detailing links to evidence-based practice.

More broadly, if widespread adherence to the frameworks and audit tools outlined above was achieved, this would result in better transferability of learning across ODNs in England.

It is worth noting that Scotland overcame the variation between educational providers of the QIS programmes by restricting the number of programmes available. The providers then worked closely together and with NHS Education Scotland to regulate content and standardise assessment and outcomes. The two providers are Edinburgh Napier University and University of the West of Scotland. This standardisation has brought significant value to the provision of Neonatal QIS training in Scotland, however, it should be noted that Scotland has a smaller geographical footprint, which would need to be taken into consideration if following a similar approach to standardisation.

Figure 1: Case Study of Neonatal QIS training provision in Scotland

Scottish Neonatal Nursing QIS Training Provision	
Edinburgh Napier University	University of the West of Scotland
Award: Graduate Certificate Duration: One year, typically part time Requirements: Registered with the NMC and currently employed in neonatal nursing	
2 modules totalling 60 credits at academic level 10	3 modules totalling 60 credits at academic level 10
Blended learning approach with online and face-to-face teaching, learning and group work	Blended learning approach with online and face-to-face teaching and learning activities, and independent study
Expected to build clinical competency skills under the supervision of a clinical practice supervisor	One module focuses on completing a range of clinical competencies supported by a mentor in practice
Each module is assessed via online portfolio with an exam and piece of academic writing, and a work placement	Assessment conducted through oral presentation, case studies, and a quality improvement project

2.5 How accessible and viable is the current system?

As part of the evidence in Implementing the Recommendations of the Neonatal Critical Care Transformation Review[26], it was outlined that "accessing role-essential neonatal specialist training opportunities is challenging".

The literature on neonatal nursing QIS training highlighted concern over the time required for this training and how this may affect whether staff are able to access it. The BLISS Baby Report[27] outlined that the most common problem with neonatal nurse training, reported by 47 out of 96 units, was difficulty in releasing nurses from their frontline duties for training due to an inability to fill these posts while they were away. This means that some units are struggling to cover posts so that staff can complete training, but this lack of training is simultaneously causing issues due to a shortage of qualified nurses.

Funding for training was also highlighted as a barrier to accessibility. The BLISS Baby Report[28] found that 38% of units said that they lacked funding for nurse training and development. Several units discussed the removal of study days and the fact that support had been cut.

The Neonatal Nursing Workforce Survey[29] found that there were many staff waiting to undertake post basic training courses for the year following the survey (2017/18). In total there were 1,523 waiting to undertake QIS modules, advanced neonatal nurse practitioner (ANNP), and enhanced neonatal nurse practitioner (ENNP) training. It was suggested that a reason behind this build-up could be that in some areas the HEIs "no longer provide training locally as the funding streams for this have altered".

The RCN Career Framework[30] states that several neonatal programmes and pathways had been suspended across the UK as they were not considered financially viable. It was noted that this might have "serious implications for the future development of the neonatal service". Some staff may therefore struggle to find modules available in their area with a consistent source of funding.

In the Neonatal Workforce Survey[31], managers identified that 701 QIS modules had been trust funded, 603 modules were funded via another route, and 66 modules were funded from charitable funds. The BLISS Baby Report[32] suggested that going forward, trusts must ensure that there is always protected time and sufficient funding available for nurse training and development.

[26] NHS England and NHS Improvement: Implementing the Recommendations of the Neonatal Critical Care Transformation Review (2019)
[27] BLISS: for babies born too soon, too small, too sick: BLISS Baby report 2015: Hanging in the Balance (2015)
[28] BLISS: for babies born too soon, too small, too sick: BLISS Baby report 2015: Hanging in the Balance (2015)
[29] Journal of Neonatal Nursing: Neonatal nursing workforce survey – What does the landscape look like in England? (2020)
[30] Royal College of Nursing: Career, education and competence framework for neonatal nursing in the UK (2015)
[31] Journal of Neonatal Nursing: Neonatal nursing workforce survey – What does the landscape look like in England? (2020)
[32] BLISS: for babies born too soon, too small, too sick: BLISS Baby report 2015: Hanging in the Balance (2015)

It was also suggested that the accessibility of neonatal training courses can vary. The Neonatal Nursing Workforce Survey[33] highlighted that some ODNs were able to fund many courses and programmes while others could not. It was suggested that this variability can be attributed to the size of the budgets across the ODNs, which is not necessarily equitable, as well as differences in variation in the cost and availability of QIS courses within the ODNs. The survey also found differences in training between types of unit. The greatest amount of QIS training was completed within NICUs, at 52.5%, followed by 42.4% in LNUs, and just 5.4% in SCBUs.

2.6 Other areas reviewed

The desk review also sought to consider the final two key lines of enquiry questions: whether there are any **alternative education/training options** and whether the current system **gives value for money**. No evidence was available in the documents considered for the desk review and these questions will therefore be examined through other elements of our research.

[33] Journal of Neonatal Nursing: Neonatal nursing workforce survey – What does the landscape look like in England? (2020)

3. Demand for neonatal QIS training

Key findings

- In total, **52%** of all trusts completed data returns and **54%** of units completed data returns.
- The percentage of Band 5 nurses with QIS as a proportion of all Band 5 nurses ranged from 7.9% to 74.9% across ODNs.
- The majority of nurses accessed QIS training through education providers **within the same ODN region** as their unit, with an estimated **608 nurses nationally** accessing QIS training by providers over the last three years (based on data returns and a national multiplier).
- Less than half (**43%**) of the units who provided data returns indicated that they had enough resources to **backfill for nurses**, this was the **most commonly reported barrier** to QIS training.
- **88%** of units reported funding QIS places using either Trust or HEE funds. Charitable funds were combined with Trust or HEE monies to fund QIS places by 17% of units.
- It is estimated that approximately 2,002 **neonatal QIS places** will be required nationally over the next three years (based on a data returns and a national multiplier), however this does not take into account changes in service demand and/or future investment in neonatal services.

3.1 Approach

To build an understanding of the demand for QIS education and training, a data return was developed to be completed by all trusts with a neonatal unit. Data collected within the Trust data return included (please see Annex 2 for full Trust data collation):

- Workforce information (including budgeted and in-post headcount, and WTE);
- The estimated number of nurses needing to complete QIS training in the next three years (to meet service demand) and the estimated number of nurses expected to retire in the next three years;
- Service activity (including number of costs and number of cot days);
- QIS education providers used (including the number of nurses educated at each provider);
- Headcount of QIS staff by prior qualification and grade; and
- Funding mechanisms for nurses undertaking QIS training.

The data return was based on a range of tools, documents and research pieces including both the CRG tool[34] and the Neonatal Nursing Workforce Survey[35] to ensure that the required data was available within all trusts. The data return was disseminated to all trusts via

[34] https://improvement.nhs.uk/documents/2974/Appendix_1a_Neonatal_Nurse_calculator._Skill_mix_enabled.xlsx

[35] Patterson, L. Hunn, L. and O'Mara, C. (2020) Neonatal nursing workforce survey – What does the landscape look like in England?, Journal of Neonatal Nursing

the NLNG on w/c 30th November 2020 with a return date of the 22nd December (extended to 18th January due to Christmas holidays). A reminder email was sent in early January 2021 to all trusts who had outstanding data returns.

3.2 Response Rates

Table 3: Response Rates by ODN Region

ODN Region	Total Trusts	Total Units	Trust Completions*	Unit Completions	Trust Completions (%)	Unit Completions (%)
East Midlands	7	10	2	3	29%	30%
East of England	13	16	9.5	12	73%	75%
Kent, Surrey and Sussex	10	12	3	5	30%	42%
London	19	26	8.8	12	46%	46%
Northern	8	10	6	8	75%	80%
North West	19	22	16	19	84%	86%
South West	12	12	5	5	42%	42%
Thames Valley and Wessex	12	14	5.5	6	46%	43%
West Midlands	13	13	5	5	38%	38%
Yorkshire and Humber	15	19	5	6	33%	32%
Total	**128**	**154**	**66.8**	**83**	**52%**	**54%**

*Where there has been a partial completion from a Trust area, this has been accounted for as the proportion of the Trust which has completed (ie. 0.5 where one unit from a Trust with two units in total has completed a return).

Data returns were provided by 83 units, representing 66.8 trusts*. This corresponds to 54% of all potential units, representing 52% of trusts across 10 ODN regions. The highest response rates were from the North West ODN region where 84% of trusts and 86% of units completed a data return; followed by the Northern ODN region (75% trusts, 80% units) and the East of England ODN region (73% trusts, 75% units). The lowest response rates were received from the East Midlands ODN region (29% trusts, 30% units) and Yorkshire and the Humber ODN region (33% trusts, 32% units).

Please note that nationally estimated measures are based on completed data returns (54% of units) and a national multiplier. Further data collection (from all units) and analysis would be required for service planning.

3.3. Workforce Information

Based on the units who completed the data return, there were **3,689.6 WTE** neonatal nurses between Band 5 and Band 8. **Band 5** had the **highest number of WTE neonatal nurses** across all units. **Band 8** had the **lowest number of WTE neonatal nurses** across all units.

Based on the data provided by trusts, we would estimate that the current national neonatal nursing workforce would be circa 7,966 WTE[36]

In terms of proportion of Band 5 QIS (as a percentage of all Band 5 nurses), not all units were able to disaggregate these staff, however, of those which were able to, the split ranged from **7.9% in London to 77.8% in the North West** (based on the data returns). In terms of the level of neonatal units, the split between Band 5 QIS / non-QIS nurses ranged between **46.1% and 51.4%.**

Table 4: Budgeted WTE of neonatal nurses by unit and grade

Band	NICU (WTE)	LNU (WTE)	SCBU (WTE)
Band 8	57.1	31.2	10.0
Band 7	239.4	128.6	26.0
Band 6	803.4.6	446.1	140.4
Band 5 (QIS)	393.6	253.4	71.2
Band 5 (Non-QIS)	459.9	239.7	70.1
Grade 5 (Combined)[37]	255.8	52.4	11.1
Total	2,209.2	1,151.5	328.9

Table 5: Percentage of neonatal nurses by unit and grade

Budgeted WTE	NICU	LNU	SCBU
Band 8	3%	3%	3%
Band 7	11%	11%	8%
Band 6	36%	39%	43%
Band 5 (QIS)	18%	22%	22%
Band 5 (Non-QIS)	21%	21%	21%
Band 5 (Combined)	12%	5%	3%
Total	100%	100%	100%

3.4 Service demand - Cots and care days

To understand the service demand (and so, need for QIS trained nurses) across different areas of the country, units were asked to provide detail on the number of cots and care days available. A total of 64 units who provided data returns included data on available cots and care days.

[36] National calculations have been determined based on the data provided from individual units within the data returns and a proxy multiplier: number of cots (for units who provided posts **and** cots data) / number of cots (England).

[37] Where units were not able to separate out their Band 5 QIS and non-QIS staff, this has been included in the tables as combined and has not been taken into account in any subsequent QIS vs non-QIS analysis.

Table 6: Number of cots and care days available per ODN

	Number of cots			Number of care days delivered		
	NICU	HDU	SCBU	NICU	HDU	SCBU
East Midlands	3	6	38	723	2,062	10,244
East of England	37	42	115	5,799	9,758	27,702
Kent, Surrey and Sussex	10	12	49	2,651	3,525	7,159
London	39	49	110	8,861	15,760	27,525
Northern	3	4	9	1,115	1,212	2,625
North West	84	100	257	19,033	28,255	63,370
South West	4	6	32	315	862	4,529
Thames Valley and Wessex	16	7	28	2,836	2,920	10,025
West Midlands	13	12	52	3,043	4,385	15,745
Yorkshire and Humber	8	8	44	997	2,662	13,793
Total	**217**	**246**	**734**	**45,355**	**71,339**	**181,762**

Note: the above figures are based on the units/trusts which provided data returns only (not the total cots and care days available across the country) for both metrics (number of cots and number of care days).

Based on our research, we would estimate that there that there are currently circa 3,196 cots in England[38].

3.5 Accessibility of Neonatal QIS education and training

A total of 25 education providers across all ODN regions were accessed by units/trusts within the past three years as identified by data returns. Based on the data provided by units 308 nurses (out of circa 3,700 nurses) had accessed QIS training via these providers over the last three years.

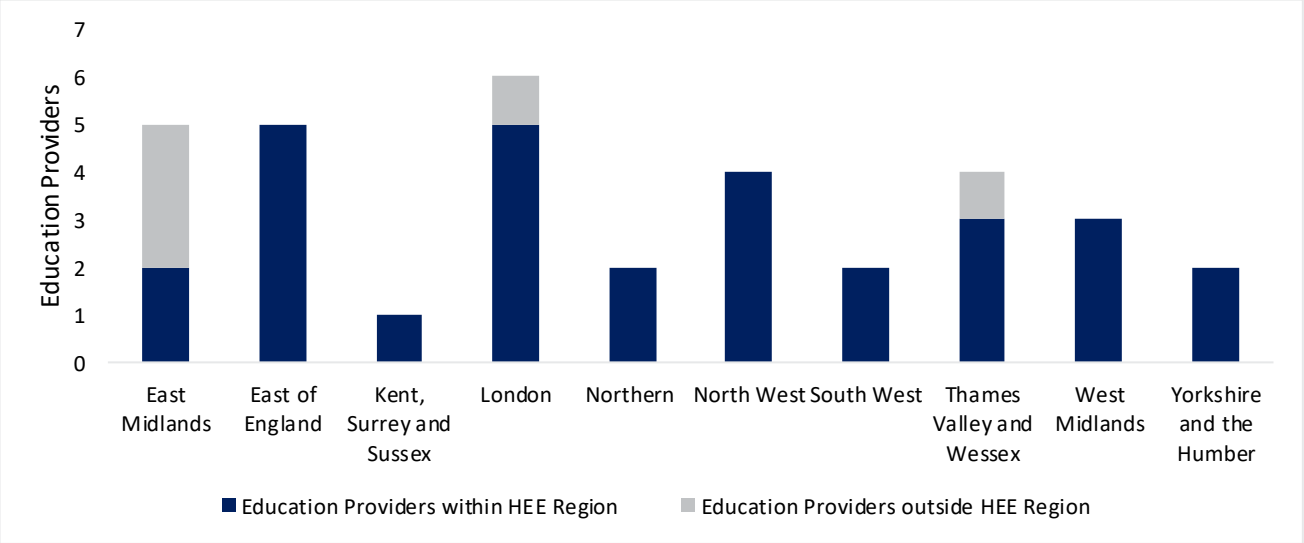
Based on the data provided by trusts, we estimate that nationally the number of nurses who would have complete QIS training in the past three years would be equivalent to 608 nurses[39].

The highest number of education providers used for neonatal QIS training was within the **London ODN area**, where six providers were accessed by units. In contrast, all units in the **Kent, Surrey and Sussex ODN region** accessed one sole provider for neonatal QIS training.

[38] The number of cots has been established through a review of neonatal websites, CQC reports and ODN resources.
[39] National calculations have been determined based on the data provided by trusts, within the data returns and a proxy multiplier was used: number of cots (for units who provided education provider data **and** cots data) / number of cots (England).

Most education providers accessed by units were **within the same ODN region**. In some cases, units accessed education providers outside of the same ODN region. Units in the **East Midlands** accessed a total of three education providers outside of their ODN region, due to the geographical spread of units. Units in **London** had also accessed one education provider outside of their respective ODN regions. In Thames Valley and Wessex, the accreditation of the QIS training was outsourced outside of the ODN region (ie. the training is accredited by Kings College London); however, the training is delivered within the ODN region via the ODN. Where an education provider accepted nurses from outside of the ODN region, a small proportion of nurses were trained by that provider (ie. no more than four per provider).

Figure 2: Number of Education Providers accessed per ODN region



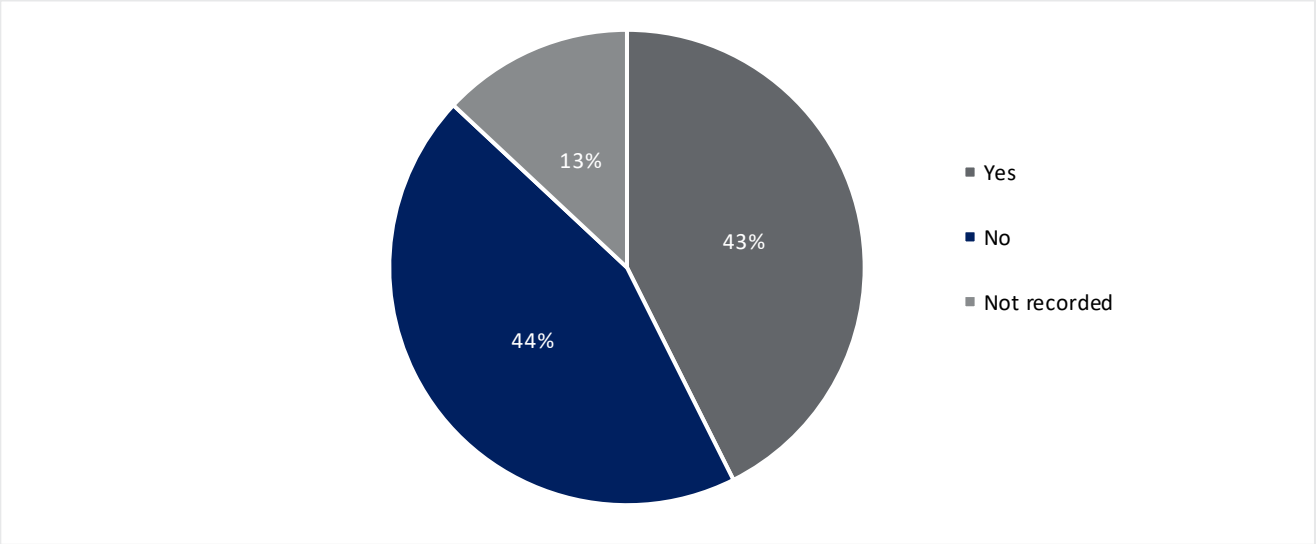
Source: Trust/Unit data returns (N = 81)

A number of barriers for units accessing QIS education and training were identified within data returns. Insufficient resources to backfill nurses on QIS training and placements was the most common barrier to accessing QIS training reported by units:

> "The main barrier has been taking time out from work to complete the training to make sure the service is still staffed adequately".
>
> "We have limitations on the number of nurses we can send on QIS course at any one time as we need to ensure safe staffing on the unit".

Less than half (44%) of the units who provided data returns indicated that they had enough resources to backfill for nurses undertaking QIS training. A significant proportion (13%) of units did not provide information on the resources available to backfill for nurses undertaking QIS training.

Figure 3: Breakdown of responses showing whether units has enough resource to backfill nurses undertaking QIS training



Source: Trust/Unit data returns (N = 66)

Through stakeholder interviews, it was highlighted that sending nurses on QIS training with insufficient resources to backfill placed additional pressure on nurses who remain on the unit. One stakeholder specified that "In units with lots of placements it is challenging for existing staff to support these nurses". A unit manager reinforced "releasing staff to do a placement somewhere else is a challenge". For this reason, many units can only send a specific number of nurses on QIS training courses at any one time. A unit manager described this process as a "balancing act for the ward as they can't send all staff at the same time".
To prevent backfill issues, stakeholder interviews found that a number of units try to "send people off on training straight away". However, the average time for sending staff on QIS training was between six and 12 months after they commenced in their role, some stakeholders felt this was beneficial as it "allowed staff time to prepare" for their QIS training.

3.6 Demand for QIS nurses

To understand the future demand for QIS nurses, units were asked to provide data on the number of neonatal QIS places and number of neonatal nurses expected to retire over the next three years. The total number of neonatal QIS places required, as estimated by units who have submitted data returns, are 350 (2021/22), 316 (2022/23) and 292 (2023/24). This is equivalent to 958 nurses needed to undertake QIS training over the next three years.

Based on the data provided by trusts, we estimate that this would be equivalent to 2,002 places required nationally over the next three years (this does not account for any future changes in demand[40]).

The total number of neonatal nurses estimated to retire in the next three years is 344 (based on units who have submitted data returns). We would assume the majority of these nurses would have their QIS training and would need to be replaced.

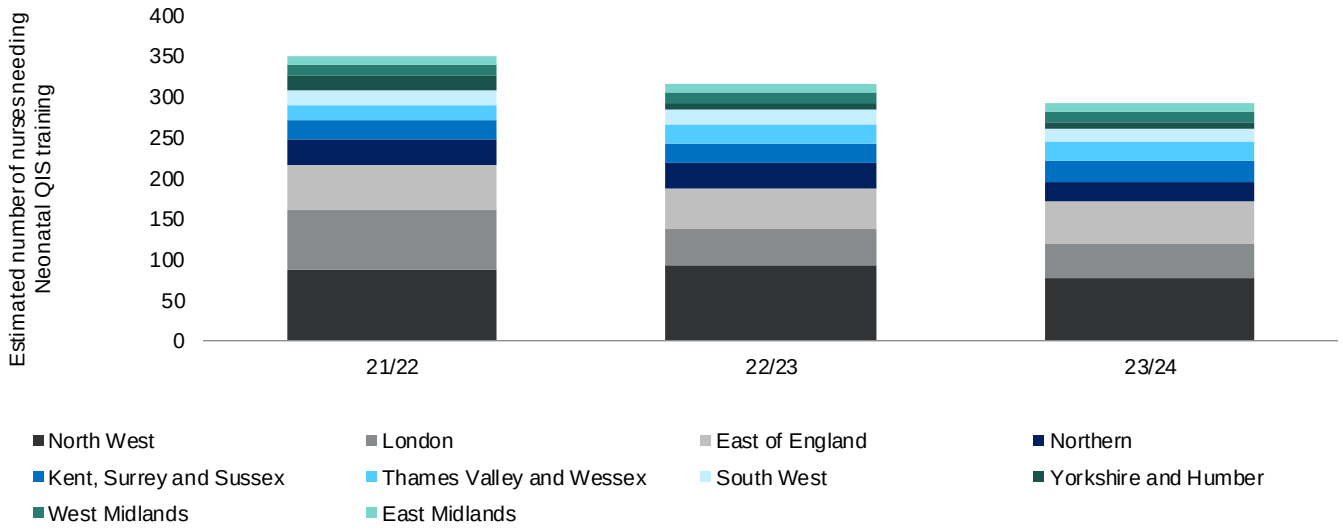
[40] National calculations have been determined based on the data provided within the data returns and based on a proxy multiplier: number of cots (for units who provided future demand data **and** cots data) / number of cots (England).

Based on the data provided by trusts, we estimate that this would be equivalent to 718 nurses nationally, expected to retire within the next three years[41].

These nurses would likely need to be replaced on retirement with nurses who would need to complete their QIS training.

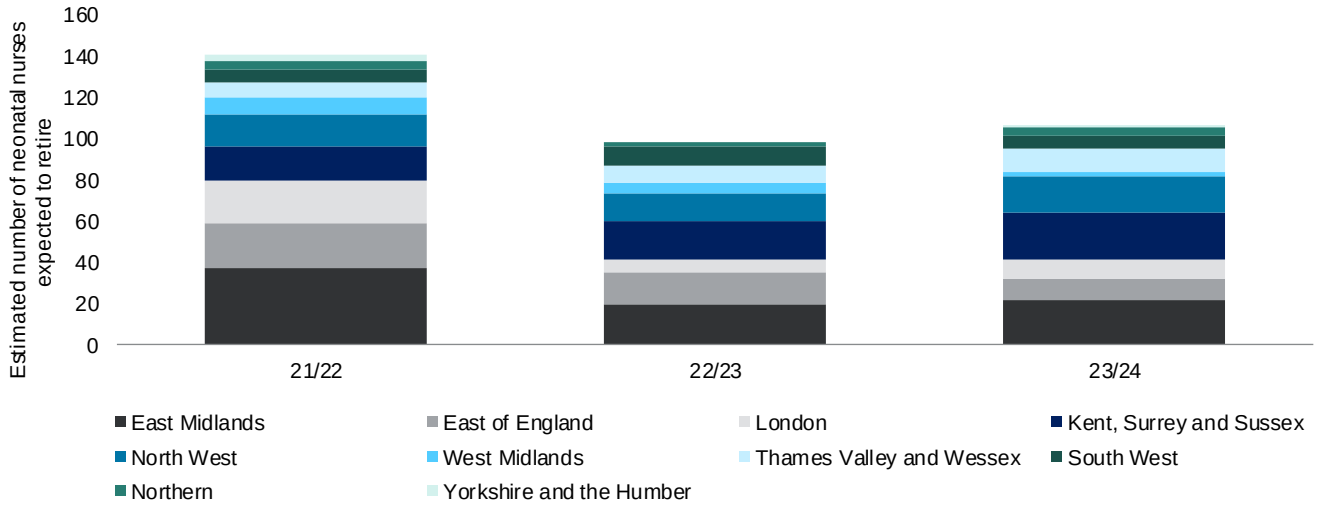
Please note that these are estimated measures based on the data returns completed (54% of units). If further analysis was required for service planning, additional analysis would need relating to demand would need to be completed (with data from all units).

Figure 4: Estimated demand for neonatal QIS nurses over the next three years



Source: Trust/Unit data returns (N = 76)

Figure 5: Estimated number of neonatal QIS nurses expected to retire over the next three years



Source: Trust/Unit data returns (N = 76)

[41] National calculations have been determined based on the data provided within the data returns and based on a proxy multiplier: number of cots (for units who provided retirement **and** cots data) / number of cots (England).

3.7 Funding of QIS places

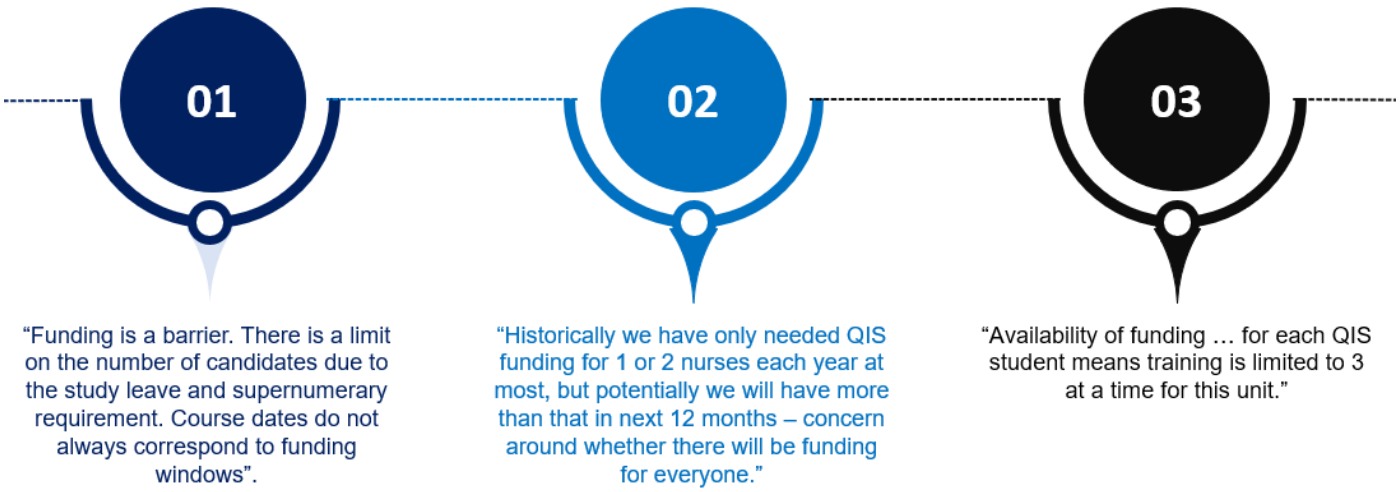
The majority (96%) of unit data returns included information on funding (based on current and past sources accessed). HEE and Trust funding were the most commonly reported methods for funding neonatal nurse QIS education and training. Of the 74 units who provided information on funding, 65 (88%) reported that they had accessed either HEE or Trust monies to fund QIS education and training places for nurses. These methods of funding are not mutually exclusive, five units specifically referenced accessing "a mixture of HEE and trust funding". A number of units (n=4 / 5%) also reported accessing Learning Beyond Registration (LBR) funding specifically.

Charitable Funds were used in combination with HEE or Trust funding by 17% (n =13) of units. One unit indicated that the use of charitable funds in combination with HEE or trust funding enables them to "send more team members on the appropriate courses". Another unit reported that they would struggle to find QIS education and training places if it weren't for charitable funds:

> "If we did not have our charity, funding would be an issue. We unfortunately rely on parent donations to train staff to QIS some years".

Insufficient funding was a commonly reported barrier to increasing the uptake of QIS training and education, as reported by 35% of unit data returns:

Figure 6: Funding as a barrier to QIS training



This was reinforced by stakeholder interviews where funding was consistently referenced as a barrier to the uptake of neonatal QIS training. However, one stakeholder reported that access to funding varies across England: "financing the training...this is something else that is also very different within different areas across the country". As part of the Neonatal Clinical Care Review, QIS training was defined as role essential. If neonatal QIS training is defined as role essential, funding comes from the Trust and is less likely to be a barrier.

4. Neonatal QIS Education provision

Key findings

- It was most common for a neonatal QIS course to: consist of **two modules**; have modules worth **20 credits**; and for modules to be **12 weeks** long.
- The average number of hours required for **different learning formats** (structured, self-directed, practical, placement) **varied greatly** by institution.
- The most common funding method was through **trusts**, but more than half (57%) of education provider respondents indicated that they used a **combination of funding methods**. On average this was 53% Trust funding, 44% HEE funding, and 3% charity funded.
- There was a **large variation in cost per place**, ranging from £720 to £9,250. 75% of institutions charged the **same price** for level 6 and level 7 courses.
- There are generally less applications for neonatal QIS course than place available, meaning that courses are **not oversubscribed**.
- Many education providers regularly request **feedback** from their students and have adjusted their courses as a result of this.

4.1 Approach

RSM conducted an online survey of education providers to build an understanding of the provision of neonatal QIS education. The survey was opened on 14th December 2020 and closed on 10th February 2021. This survey was disseminated via email to providers, with reminders sent to follow-up with those that had not responded in advance of the survey closing. Questions included (please see Annex 3 for full details of the survey questions):

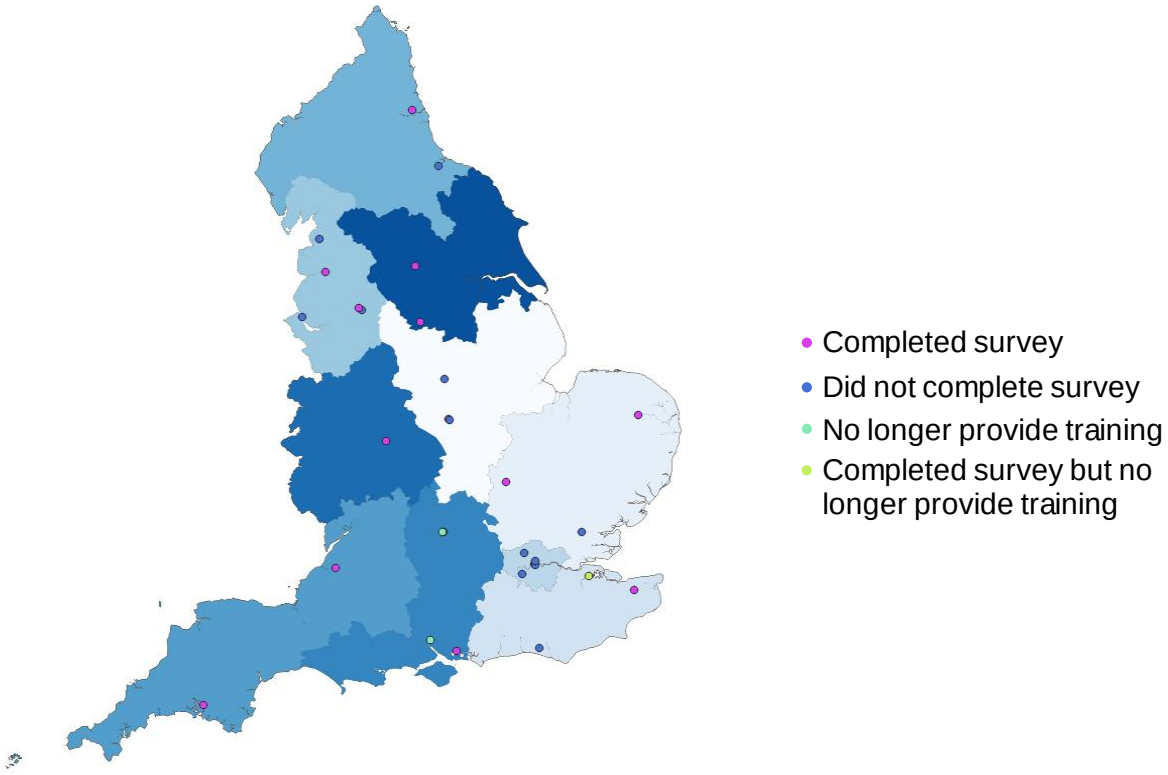
- levels of accreditation available for neonatal QIS training;
- details of delivery such as number of modules, number of credits, and length of modules;
- teaching methods used;
- hours required for different forms of learning;
- main funding sources;
- average cost per place;
- number of available places/applications/places awarded for neonatal QIS training per academic year; and
- number of applicants that passed/did not pass neonatal QIS training per academic year.

4.2 Response rate

This survey was disseminated to 28 neonatal QIS education providers and received 14 responses, a response rate of 50%. Three of the providers that were contacted indicated that they no longer provide QIS training (with one completing the survey). Two of these were within Thames Valley and Wessex and one within London ODN.

There was at least one response from an education provider that supplied each ODN, with two responses from providers for the East of England, North West, South West, and Yorkshire & Humber ODNs.

Figure 7: Map of education providers



Source: Neonatal QIS education provider survey, n=14

4.3 Course delivery and structure

Education providers referenced working with specific trusts, specific units, and their ODNs as partners in the delivery of the QIS training. Teaching is often delivered on university campuses, but teaching facilities of specific hospitals are also used. This is in addition to placements on units, which are required components of these courses.

Of the 14 respondents, 12 (86%) provided both Level 6 and Level 7 QIS courses, with two institutions only providing the course at just Level 6. One institution had only introduced the Level 7 course in September 2021 as a result of feedback from students suggesting a demand for Level 7.

Within the institutions delivering both Level 6 and Level 7 courses, the structure of these were all exactly the same. Both courses had the same number of modules, took place over the same length of time, and accrued the same number of credits.

Table 7: Example University QIS course delivery

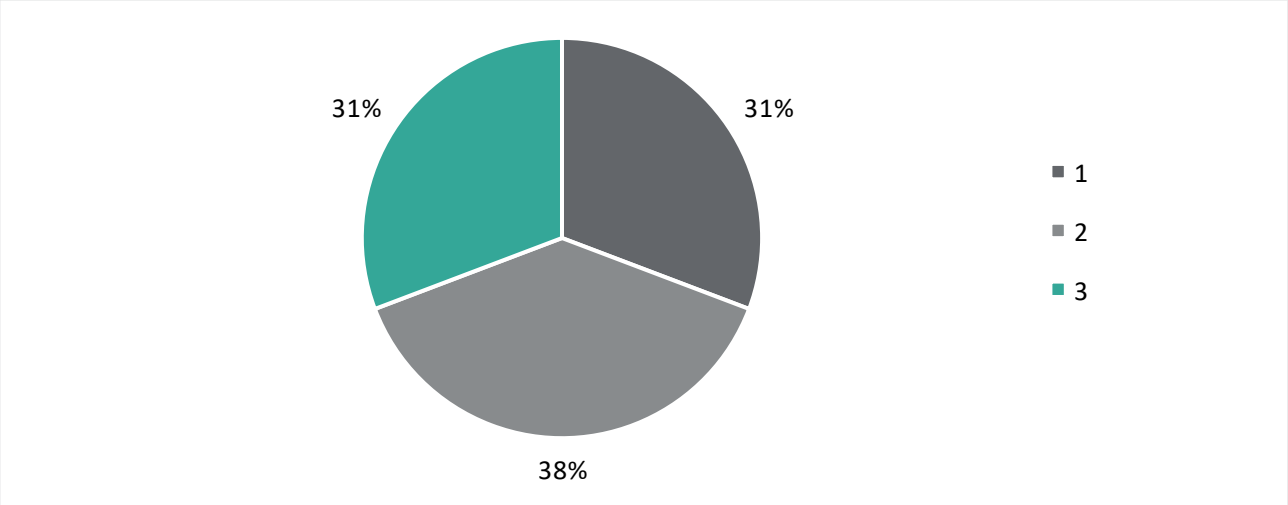
	Number of modules	Length of module	Number of credits
Level 6	2	10 weeks	30
Level 7	2	10 weeks	30

Source: Neonatal QIS education provider survey, n=14

The differences between a Level 6 and Level 7 qualification are seen later, in the assessment of these modules. The Level 7 participants will often be required to produce slightly longer written assignments, for example 3,500 words compared to 3,000 words for Level 6. In some institutions, Level 7 assessments also had a slightly higher pass mark than Level 6 assessment.

Number of modules: Across both the Level 6 and Level 7 courses, it was most common for the QIS training to consist of **two modules** (38%). The number of modules ranged from one to three, with relatively even distribution across the number of modules required for QIS, as shown in the graph to the right.

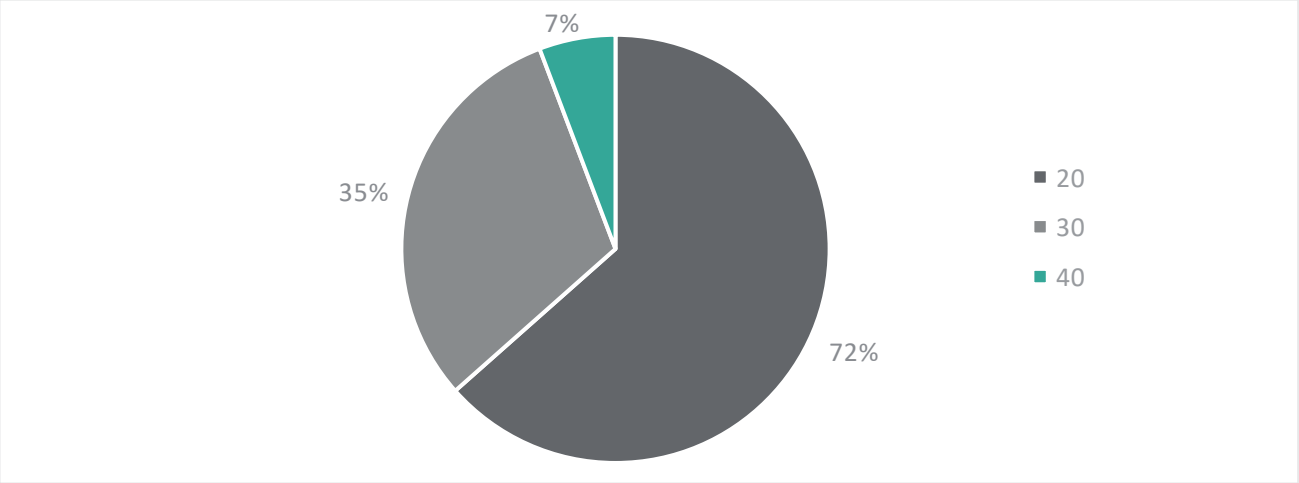
Figure 8: Number of modules per QIS course



Source: Neonatal QIS education provider survey, n=14

Number of credits: The maximum number of credits received for a module was 40, and the minimum was 20 credits. The most common number of credits per module was **20 credits**, with 72% of modules across Level 6 and Level 7 courses worth 20 credits. This was followed by 35% of courses delivering modules worth 30 credits, and just 7% at 40 credits. This is not a sufficient number of credits to receive an award (eg. Masters).

Figure 9: Number of credits per QIS course



Source: Neonatal QIS education provider survey, n=14

Length of modules: There was large variation in the length of modules provided by different institutions. The longest two modules were expected to take nine to 12 months to complete, with the shortest being ten weeks. The most common module length was **12 weeks**. There was no correlation between the length of a module and the number of credits awarded, and no correlation between length of modules being delivered and the cost of the course.

These variations in the number of modules, number of credits, and length of modules reflect that there are large differences in how QIS education is provided between institutions and across the country.

4.4 Learning formats

Education providers were asked about the methods that they use for neonatal QIS training. Common teaching methods for QIS courses included:

Table 8: Common teaching methods for QIS courses

		Teaching method	Number of education providers
	Guided formal teaching	Lectures	12 (86%)
		Seminars/tutorials	8 (57%)
	Guided group learning	Workshops	3 (21%)
		Group work/discussion	8 (57%)
	Practical experience	Simulations	9 (64%)
		Clinical-based scenarios/skills practice	10 (71%)
		Placement	3 (21%)
	Self-guided learning	Self-directed study	4 (29%)
		Online learning	8 (57%)

Source: Neonatal QIS education provider survey, n=14

The numbers in the table above indicate how many respondents mentioned the various teaching methods in their response, however this is indicative as it is based on open-ended responses within the survey, and provision of these methods may be higher in reality. The utilisation of combinations of these different forms of learning were common across all institutions, with all respondents listing several different methods of delivering teaching.

Covid-19 adjustments

As a result of Covid-19, the provision of QIS education had to move largely online to accommodate social distancing and lockdown rules. As such, the guided teaching methods outlined above were moved to virtual delivery as opposed to the traditional face-to-face sessions. Some institutions indicated attempts to make these sessions more interactive, with "breakout rooms for group discussion and group work". One institution indicated that they had employed more directed study activities to "reduce the time spent in online lectures as this is not sustainable for long periods of effective learning". A few institutions outlined that some in-person practical teaching was able to continue, with some essential skills practice continuing face-to-face, and some delivery of simulation training.

Some providers outlined the benefits of online learning as it reduced the need for participants to travel for their learning, and recorded lectures can be listened back if needed. However, the benefits of group work and student interaction with each other and their tutors has been impacted negatively by the move to online teaching. There can also be difficulties caused by internet connection issues.

It was suggested by some stakeholders that in future, a blended system of some online teaching alongside in-person sessions may be a positive development. In this way students could benefit from some of the positives of learning online while also maintaining the crucial interactions delivered through face-to-face teaching.

4.5 Time required for different learning formats

Education providers were asked about the amount of time required for their modules for the different learning formats, including:

- **structured learning:** either virtual or face-to-face, with a teacher/lecturer in a lecture or seminar style format;
- **self-directed study:** semi-structured learning, through the completion of coursework assignments and independent study;
- **practical learning:** practical training such as role plays and simulations; and
- **placement:** clinical experience within a unit, where trainees can put learning into practice.

The number of hours for each learning format was averaged by institution across all of their modules and then analysed across all respondents. The table below highlights the range of required hours for each learning format, as well as the average across all education providers who responded.

Table 9: Time required for different learning formats

	Structured learning	Self-directed study	Practical learning	Placement	Total
Range	20 hours to 68 hours	65 hours to 300 hours	*0 hours to 15 hours	*0 hours to 920 hours	*0 hours to 920 hours
Average	46 hours	157 hours	8 hours	192 hours	101 hours

Source: Neonatal QIS education provider survey, n=14

***Please note:** For practical learning and placement time, some respondents indicated that zero hours are required for these learning components. This could likely be explained if these aspects of a course are delivered within trusts and therefore are not counted by HEIs as official portions of their course hours or teaching time. Several respondents also indicated that the number of practical learning or placement hours required for a module is variable.

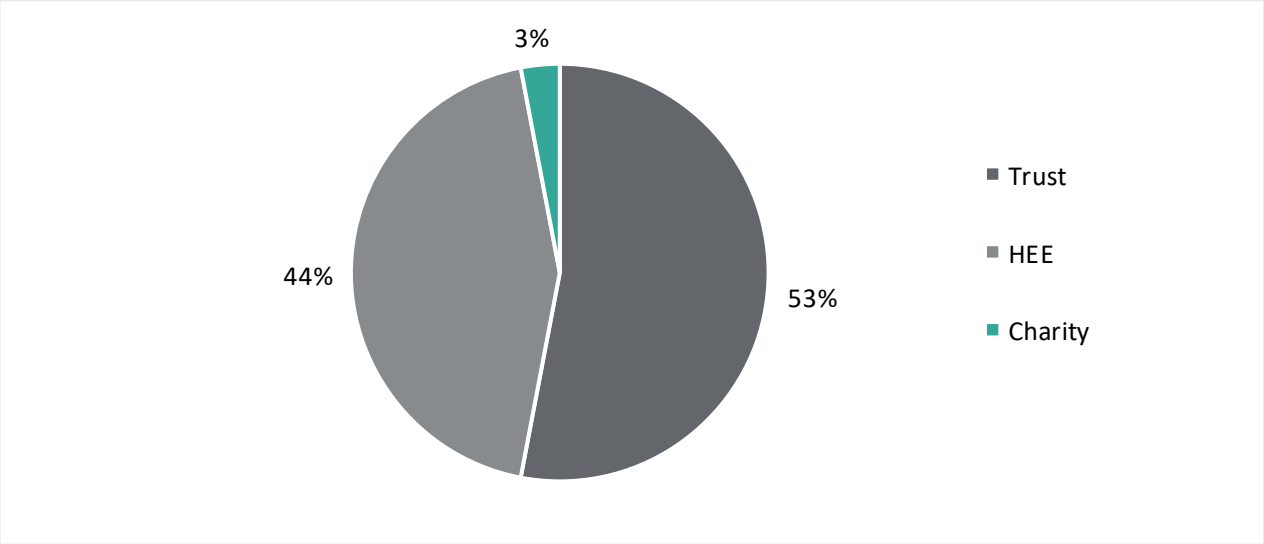
The table above reflects that there are large variations in the time required for different learning formats for modules from different courses. Again, this reflects the lack of standardisation in the delivery of QIS training by different institutions and across the country.

4.6 Funding

Education providers were asked to estimate the percentage of students in each cohort that are funded through different methods.

None of the survey respondents suggested that any of their cohorts at the time of questioning were self-funded.

Figure 10: Average percentage of places by funding method



Source: Neonatal QIS education provider survey, n=14

The most common funding method for neonatal QIS training was through trusts, with an estimated overall average of 53% places funded in this way. This was closely followed by HEE funding at 44%, where yearly some funding is directly transferred by HEE to trusts for workforce transformation and education. A proportion of this is to be used for upskilling, and

some areas choose to use this for neonatal QIS training. These figures align with the Trust data collation, which similarly indicated Trust and HEE funding as the most common methods, with a small number of charitably funded places.

Four institutions suggested that on average 100% of their cohorts are Trust funded. Two providers said that 100% of their cohorts are funded by HEE. The remaining eight institutions (57% of respondents) suggested that they receive a combination of funding methods.

4.7 Cost

The education providers were asked to indicate what the average cost per place is for neonatal QIS training, and responses reflected large variations between institutions. The table below outlines the average cost and range of costs for level 6 and level 7 QIS courses. Across both Level 6 and Level 7 courses, the average cost per place was £2,151.25.

Table 10: Neonatal QIS course cost variation

	Level 6	Level 7
Average	£2,077.30	£2,237.52
Low	£720	£720
High	£6,165 (London) £3,082 (Non-London)	£9,250 (London) £2,993 (Non-London)

Source: Neonatal QIS education provider survey, n=14

This table reflects the large variations in cost of neonatal QIS training, with differences of thousands of pounds for both Level 6 and Level 7 courses. The most expensive courses reflected above were both delivered within London ODN, however even the next most expensive courses were over two thousand pounds more expensive than the least costly option. It is worth noting that the second most expensive Level 6 course is more costly than the next most expensive Level 7 course, which is inconsistent with the overall average cost by qualification level. This is because the £3,082 course is only provided at level 6, as opposed to being because of differences in course prices by level.

On average a level 6 place was £160.22 less expensive than a Level 7 place, but most (75% of those institutions providing both Level 6 and Level 7) charged the same for level 6 and 7 courses. Of the courses that differentiated between Level 6 and Level 7, one was delivered in London, and two were in the North West ODN. The fact that Level 6 and Level 7 courses have the same delivery structure, as outlined above, perhaps explains why the majority of institutions charged the same for these courses.

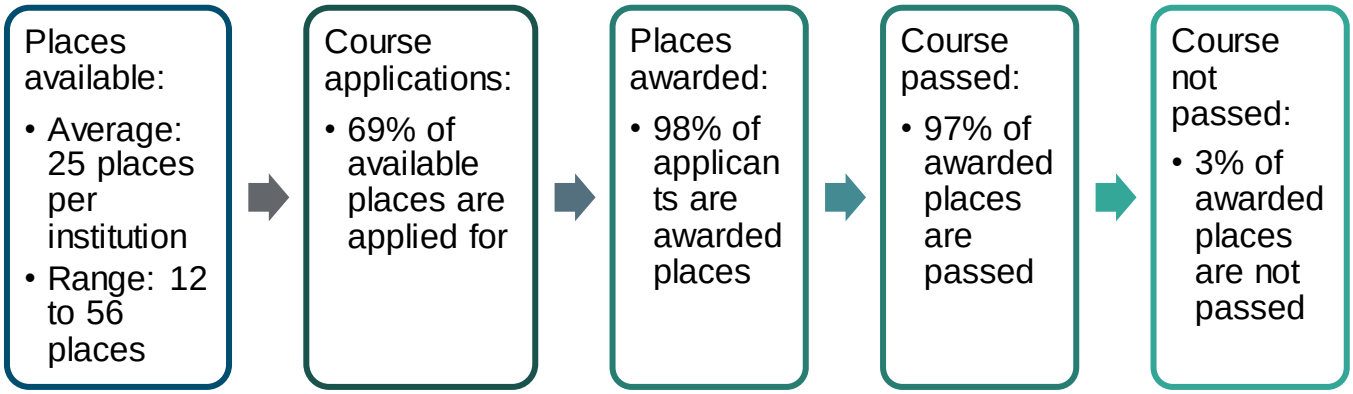
To reflect the vast variation in cost, it was calculated that 11 courses cost less than £1,000 while 12 cost more than £2,500. This even split between low and high-cost highlights that not only is the cost is very variable, but there is even representation at both ends of the spectrum. There were also both Level 6 and Level 7 courses within both costing ranges. The lack of consistency in costing range is difficult to explain and is something that was raised as an issue within stakeholder interviews. It is worth noting again that there was no correlation between factors such as length of modules and cost, or other aspects such as the number of modules or number of credits being provided.

4.8 Course applications and outcomes

Education providers were asked to give details about the number of places available on their course, the number of applications, places awarded, numbers passing the course, and numbers not passing, for the past three academic years.

The diagram below gives an overview of the average flow of places for the academic year of 2018/19. This year was chosen to account for potential disruptions seen in the 2019/20 academic year as a result of the Covid-19 pandemic.

Figure 11: Course applications and outcomes



Source: Neonatal QIS education provider survey, n=14

A key finding from this analysis is the fact that there are generally less applications than there are places available, with only 69% of places being filled.

Only one institution indicated that they were oversubscribed, with fewer places awarded than the applications received in this year. This institution was within the West Midlands ODN and did indicate that they have consistently received more applications than places awarded for the past three academic years. This ranged from two places in 2017/18, four places in 2018/19, and seven places in 2019/20.

It is interesting to note, however, that neonatal QIS courses are usually not oversubscribed and inability to access course places due to their availability at an institution level is generally not a barrier. This observation also relates to the fact that three of the institutions contacted for this survey indicated that they no longer provide neonatal QIS training. Two of these three providers confirmed that the reason for closing their course was due to not enough applications for the course to be viable.

Reasons given by education providers for students not passing or dropping out of the course included: students moving away from neonates as a career, poor health, pregnancy, other personal reasons, and students not feeling ready to take intensive care modules.

4.9 Participant feedback

Overall, 93% of respondents confirmed that they have collected feedback on their neonatal QIS education provision from course participants. Many institutions highlighted that

participant feedback is regularly collected, often at the end of each module. This feedback is collated and reviewed and has been used to inform adjustments to courses in many cases.

Education providers outlined some of the positive feedback that they have received on their course delivery. A few institutions highlighted the positive feedback on more practical training, with one suggesting that "skills training linked to everyday practice takes the students out of their comfort zone but enhances learning and has a huge positive impact on practice". The benefits of group work and sharing learning with those from different units was also highlighted. Positive feedback about external speakers was also highlighted by one institution, which gave examples of consultant neonatologists and Advanced Neonatal Nurse Practitioners (ANNPs) being brought in to teach. All of these positives were themes brought up directly by previous course participants in the survey run for this research, which are discussed further below.

Several providers also outlined that based on the feedback received from course participants, adjustments had been made to delivery. These included:

- changes to assessment formats;
- providing assessment exemplars;
- changes to course format (e.g. number of modules);
- changes to deadlines/hand-in dates;
- changes to the course timetable/number of teaching days;
- additional topics covered; and
- development of a Level 7 course.

These responses highlight that institutions are eager to collate student opinions on the QIS courses and many are willing to adapt delivery in response to this. Based on conversations with stakeholders, this willingness to discuss feedback and adjust neonatal QIS courses could in some cases be expanded to include conversations with trusts and units.

5. Feedback on education provision

Key findings

- Of those that had completed training during the Covid-19 pandemic, 80% agreed or strongly agreed that it had a **significant impact** on their training.
- The majority of nurses (87%) indicated that they found it **easy to transfer their learning** from the neonatal QIS course to their role.
- **Practical learning** was the learning format that the most respondents (84%) indicated **sufficiently prepared them** for working as a neonatal QIS nurse.
- While 70% of respondents indicated that their employer allowed **sufficient time** for them to complete QIS training, agreement was **lowest for NICU respondents** at 67%, followed by SCBU respondents at 75% and LNU respondents at 80%.
- Many respondents (79%) suggested that QIS course places are accessible for neonatal nurses. However, many more 'agreed' (59%) than 'strongly agreed' (20%), suggesting that people are aware that **accessibility is sometimes an issue** even if they have not experienced this directly.
- Aspects highlighted as **working well** within the course included: practical training, the course content, group work, and having external speakers.
- Aspects highlighted as **working less well** within the course included: difficulties in arranging, or the length of, placements, the lectures, and studying alongside work or home life.

5.1 Approach

To collect feedback on the provision of QIS education across the country, a survey was designed for neonatal nurses who had completed their QIS training within the last three years. Questions included (please see Annex 4 for full details of the survey questions):

- impact of Covid-19 on training;
- time on a neonatal unit prior to QIS training;
- ability to transfer learning to the role;
- experience of different learning formats;
- time allocated to complete training;
- whether the course is accessible;
- barriers experienced; and
- what worked well or less well about the training.

The survey of recent course participants was disseminated on the 7th December 2020 and closed on 20th January 2021. The link to the online survey was shared by lead nurses with those who had completed their QIS training in the last three years. Reminders to complete the survey were also sent via lead nurses.

5.2 Response rates

The course participant survey received 171 responses, of which:

Gender: Of these respondents, 95% were female, 3% were male, and 2% preferred not to say.

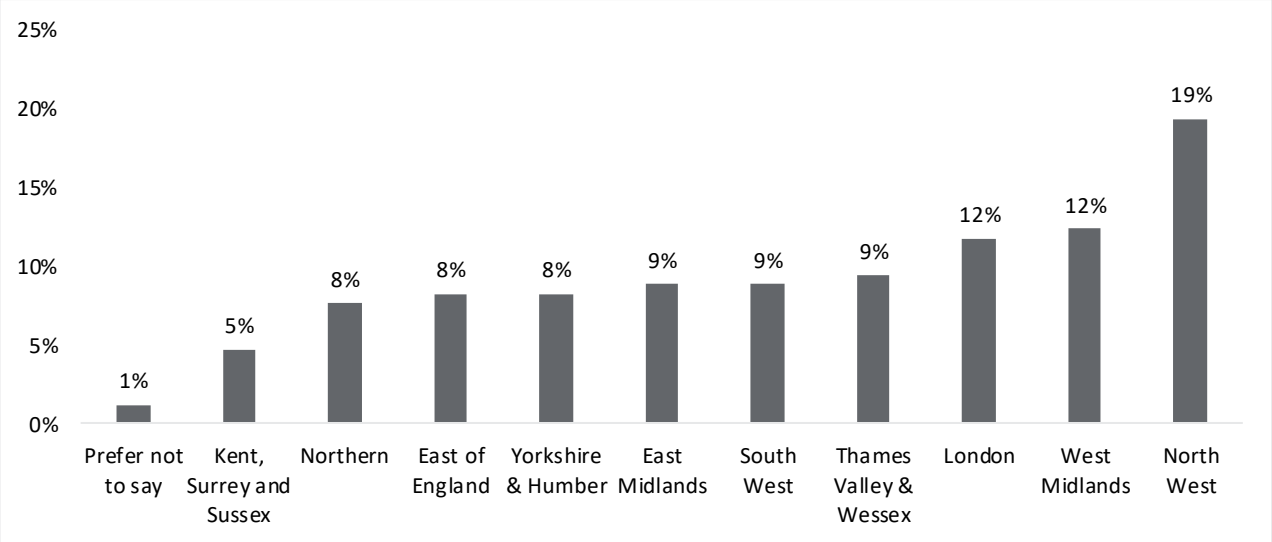
Age: The majority of respondents (58%) were aged 25-34, suggesting that this is the most common age bracket for completing QIS training. The next most common age group was 35-44, with 25% of respondents from this group.

Ethnicity: 75% of respondents were white, 21% were BAME, and 4% preferred not to say.

Qualifications: 46% of respondents had a children's nursing degree prior to starting their QIS qualification, followed by 33% with an adult nursing degree. 5% of respondents had a master's degree and 8% indicated that they had more than one qualification type prior to taking QIS training.

ODN[42]: The survey received a relatively even distribution of respondents from different ODNs, with views represented from all ten ODNs. The North West ODN had the highest response rate, at 19% of responses, and Kent, Surry and Sussex had the lowest at 5%.

Figure 12: ODN distribution of respondents

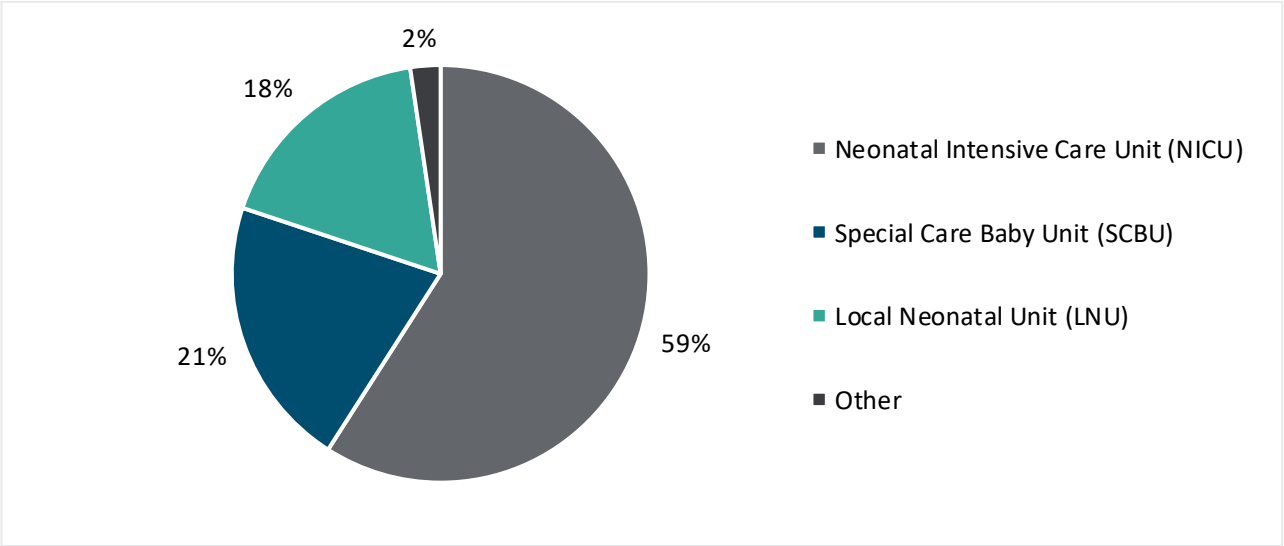


Source: Neonatal QIS course participant survey, n=171

Unit type[42]: The majority of respondents worked within NICUs (59%), followed by similar numbers from SCBUs (21%) and LNUs (18%). The higher response from NICU nurses aligns with the Trust data collation, which indicated that the number of budgeted nurses is highest for NICUs. 'Other' unit types included Neonatal Surgical Units and the Neonatal Transport Service.

[42] Differences in response by factors such as region and unit type are only highlighted where there was notable variation in responses.

Figure 13: Unit type distribution of respondents



Source: Neonatal QIS course participant survey, n=171

5.3 Covid-19 impact

The Covid-19 pandemic was referred to throughout the survey responses and has clearly impacted considerably on the training experience for the more recent cohorts of trainees. However, it is worth noting that 59% of respondents completed their QIS training prior to the Covid-19 pandemic and their training was not impacted. Overall, 41% of respondents completed their QIS training during the pandemic (2020/ 2021) and 49% of respondents had taken at least some of their training during the Covid-19 pandemic. Of these respondents who had undertaken at least some of their training, 80% agreed or strongly agreed that it had a significant impact on their training.

When asked for further details about this impact, many respondents referenced the negative impacts of having no face-to-face learning and the difficulties of virtual lectures. For example, some respondents suggested that they found it challenging to follow lectures online, learning more effectively face-to-face, and others found that lecturer's materials and delivery through virtual systems was poor quality.

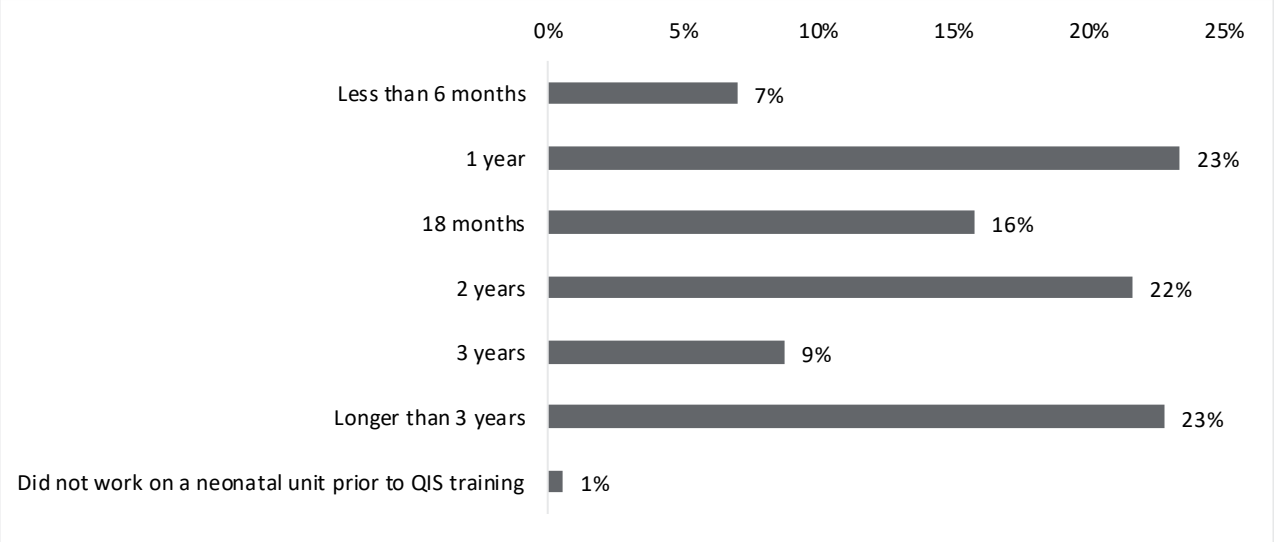
Respondents also highlighted delays or cancellations of practical sessions, study days, modules, and assessments. Some respondents also referenced less staff support resulting from the pandemic, both from their course providers and within their own units to support practical learning.

> "I found it difficult to take in lectures online and not face-to-face."
>
> "Our course was suspended during the first lockdown in March. It was then recommenced in August 2020, online only."
>
> "The hospital unit was busy constantly and there was hardly any time to practice with the machinery or work alongside mentors to learn."

5.4 Time on unit prior to QIS training

The graph below reflects the amount of time that nurses spent working within a neonatal unit before enrolling on QIS training. The variation in response reflects that there is not a standard length of time required for a nurse to work on a neonatal unit before completing their QIS training.

Figure 14: Time working within a neonatal unit before enrolling on QIS training



Source: Neonatal QIS course participant survey, n=171

It is worth noting, however, that the majority of respondents (68%) did begin their QIS training within two years of starting work on a neonatal unit.

There was no strong correlation between time on unit prior to QIS training and a trainee's region or unit type. This suggests that this is more dependent on other factors such as personal preference or a specific unit or Trust's ability to enrol their nurses on the training.

5.5 Transferring learning to role

Overall, 87% of respondents agreed or strongly agreed that they found it easy to transfer their learning from the neonatal QIS course to their role. This agreement was highest within Thames Valley and Wessex ODN at 94%. It is worth noting that this ODN has a unique hybrid model of QIS training, where teaching is delivered directly by trusts and is accredited by a university.

Very few respondents (2%) suggested that they found it difficult to transfer the learning from the course to their role, and there was no strong correlation between this and time on a neonatal unit prior to training.

Several participants highlighted that their course included useful and relevant information, and some cited good support from mentors as a contributing factor to their ability to transfer their learning. While there was not a significant variation in response to this question by unit type, when asked to expand on this topic several respondents referenced differences in the skills, equipment and/or policies for different unit types as a reason for difficulties in transferring learning.

"It was very interesting and informed my practice almost immediately following some of the lectures."

"Whilst working in a level two unit and completing QIS, some learning experiences were limited. For example, caring for the extreme preterm or critically ill… I feel that for some people on my course, who had no level three experience, they struggled to comprehend some parts of the learning."

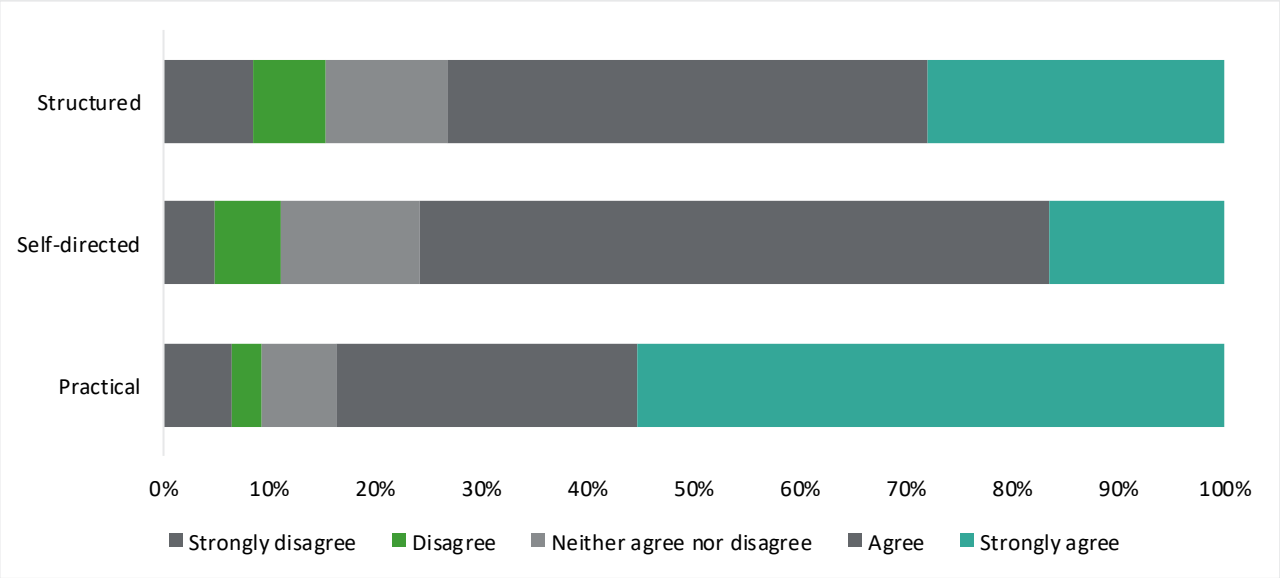
5.6 Learning formats

The survey enquired about the different learning formats used for QIS training and included:

- **structured learning:** either virtual or face-to-face, with a teacher/lecturer in a lecture or seminar format;
- **self-directed study:** semi-structured learning, through the completion of coursework, assignments and independent study; and
- **practical learning:** practical training such as placements, role plays, and simulations.

The graph below reflects that most respondents agreed or strongly agreed that the various teaching methods sufficiently prepared them for their role, with 73% for structured learning, 75% for self-directed study, and 83% for practical learning. However, significantly more 'strongly agreed' that practical teaching prepared them well, at 55% compared to 15% for self-directed

Figure 15: Extent to which different teaching methods sufficiently prepare trainees for working as a neonatal QIS nurse



Source: Neonatal QIS course participant survey, n=164/146/141

Structured learning: 73% of respondents agreed or strongly agreed that structured learning sufficiently prepared them for working as a neonatal QIS nurse. There were some conflicting opinions on the usefulness of the content. Some respondents suggested that the course provided useful knowledge and allowed for consolidation of learning, while others said that

some information was not in-depth or at a high enough level. Several of the responses on structured learning directly referenced the fact that hands-on practical experience is the most useful form of training.

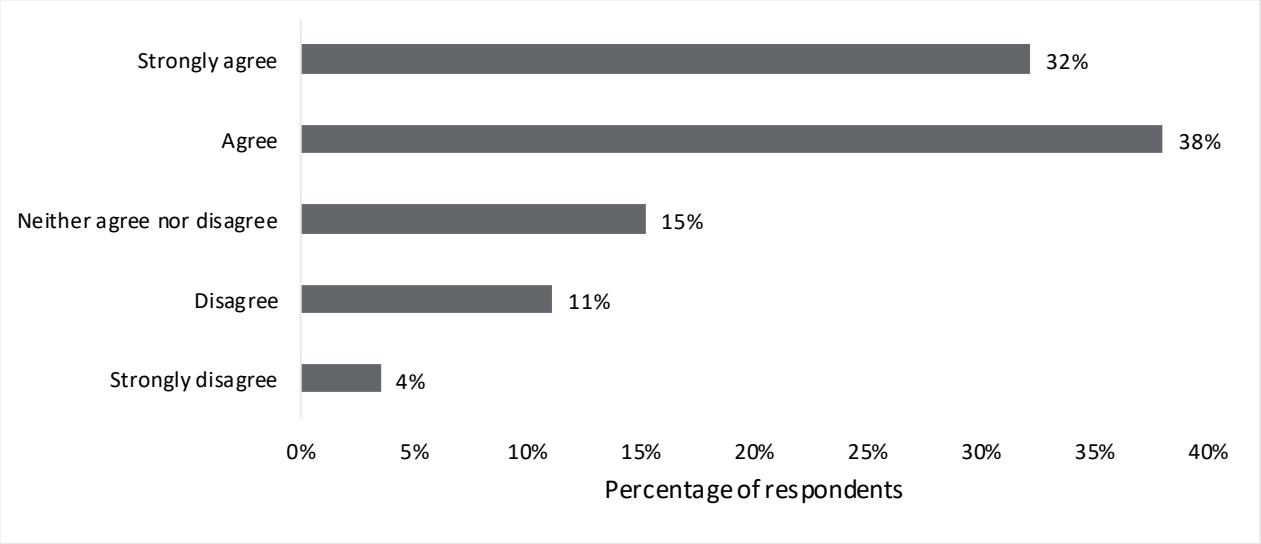
Self-directed study: 75% of respondents agreed or strongly agreed that self-directed study sufficiently prepared them for working as a neonatal QIS nurse. Several respondents suggested that self-directed study gave them an opportunity to expand their knowledge and do extra research in areas of particular interest or challenge.

Practical learning: 84% of respondents agreed or strongly agreed that practical learning sufficiently prepared them for working as a neonatal QIS nurse. Several of the respondents highlighted that this was a key aspect of their learning and that placements provided "invaluable" experience. Some respondents suggested that they would have benefitted from even more practical time.

5.7 Time allocated to complete training

Overall, 70% of respondents either agreed or strongly agreed that their employer had allowed sufficient time for them to complete their QIS training.

Figure 16: Extent to which employers allowed sufficient time to complete QIS training



Source: Neonatal QIS course participant survey, n=171

This agreement was lowest for NICU respondents at 67%, followed by SCBU respondents at 75% and LNU respondents at 80%. It is interesting to note that those looking after the sickest babies indicate that they find it hardest to get sufficient time for training, perhaps suggesting more pressures on the most acute services.

There was also variation by region for this question. Agreement that employers allowed sufficient time to complete QIS training ranged from a low of 38% for Northern ODN and 50% for Yorkshire and Humber, to highs of 87% for East Midlands and 93% for East of England. This suggests differences in ability to release staff for training and experience across the country.

While agreement was overall relatively high, many respondents did suggest that a lot of learning was done in their own time and that there could have been more officially allocated and paid study days to complete self-directed learning and assignments. One participant suggested that "the amount of self-directed study alongside working full time was almost impossible to manage". Completing QIS training alongside working full time was one of the more common themes to emerge when participants were asked about what did not work so well about the training.

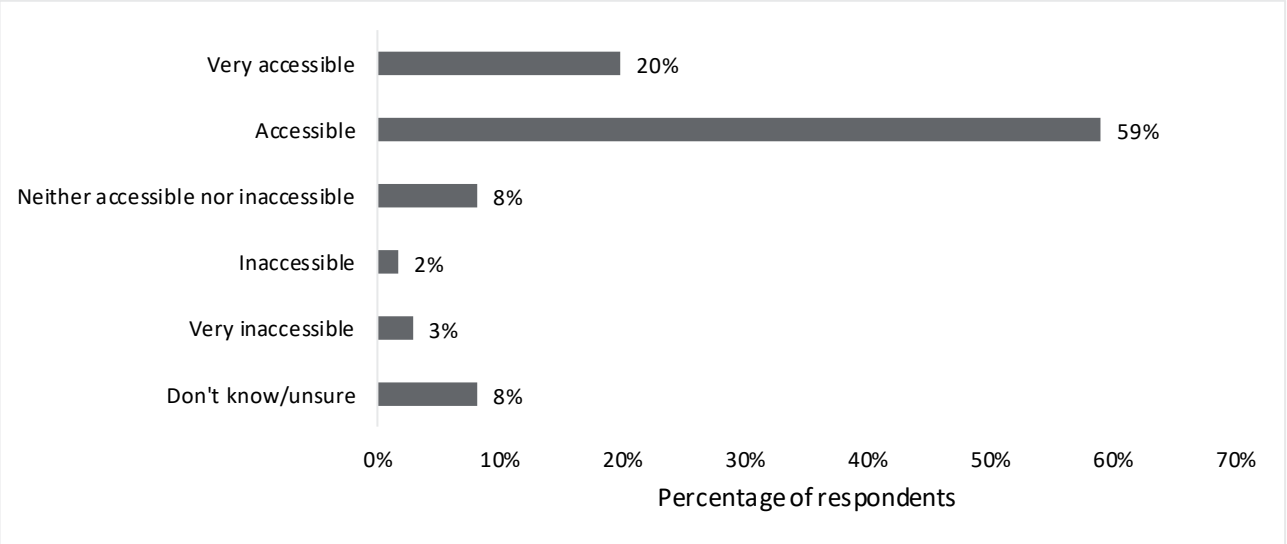
5.8 Accessibility

Overall, 94% of respondents received a place on a neonatal QIS course on their first application. Those that had not been accepted on their first application referenced a lack of funding, lack of places on the course, and needing to gain more experience on their unit as reasons for not being accepted. There was no correlation between ODN region or unit type for those that did not receive a place on their first application.

When asked more broadly about accessibility, 79% of respondents agreed or strongly agreed that course places are accessible for nurses/midwives wishing to become a neonatal QIS nurse.

This varied slightly by unit type, from 77% agreeing or strongly agreeing for those employed in a NICU, to 83% for LNU and SCBUs.

Figure 17: Extent to which QIS training places are accessible for those wishing to qualify



Source: Neonatal QIS course participant survey, n=171

There was also some variation by region. Agreement on overall accessibility ranged from 50% for Kent, Surrey and Sussex and 65% for London, to 93% for East of England and 94% for Thames Valley and Wessex.

As shown in the graph above, there were fewer respondents indicating that they 'strongly agree' that places are accessible. This perhaps reflects that trainees are aware that accessibility is sometimes an issue, even if they have not experienced this directly themselves. For example, several respondents suggested that funding is a factor in

accessibility: "It is very dependent on where you work due to funding for university places". Many similarly indicated that accessibility can differ on a unit by unit basis and is dependent on factors such as unit policy and number of nurses that are able to take the course per year.

5.9 Barriers

Overall, 26% of respondents suggested that they had faced specific barriers that impacted their ability to complete neonatal QIS training. The table below outlines the most common barriers to be raised.

Table 11: Barriers for neonatal QIS course participants

Barrier	Description
Covid-19	Of the respondents that indicated they had faced barriers, 40% referenced Covid-19 in their answer. It impacted the delivery of the course, increased their workload or resulted in redeployment for pandemic response, and affected the level of support from other staff members.
Time management	Some respondents suggested that working full time and completing the training was difficult to manage. One respondent linked these difficulties with home balance to Covid-19, suggesting that it was difficult to find "time to study effectively due to the whole family being at home".
Overseas students	A few respondents said that being an overseas student was a barrier: "the writing style is a bit different from what we used to practice back where I finished my nursing degree". Many of these respondents did suggest, however, that barriers around language and medical terminology became easier over time.
Placements	Some respondents referenced limited placement time as a barrier to their learning across different unit types. Difficulties in arranging the placements in the first place were also referenced, with one respondent suggesting that "placement to a level three unit is a challenge as we can only send one staff at a time".
Lack of support	Several respondents referenced lack of or poor support as a barrier. This was in terms of a "lack of support from placement on completing paperwork", and some references to "lack of proper communication from mentor". When asked whether employers provided any extra support during training (e.g. pastoral support), 44% of respondents said no.

Source: Neonatal QIS course participant survey, n=171

5.10 What worked well

By far the most commonly cited aspect of learning around what worked well was practical training/ placements, with 43% of respondents referencing this when asked. The hands-on experience was described as "essential", giving trainees "good exposure" to certain scenarios, and participants "gained lots of new skills". Several respondents also specifically

discussed the importance and benefits of being able to relate and apply the theory of the course in practice.

Several respondents referenced the content covered by the course as a positive aspect. The material was said by many to be relevant and provided a good knowledge base to be applied to practical skills. Some respondents discussed specific content that was useful, including several references to sessions on ventilation and respiratory conditions.

Many participants referenced the benefits of group work and "meeting a variety of other clinicians who worked across a wide range of units". This opportunity for sharing learning and experience was widely referenced a positive, specifically when mixing with those from different unit types. The benefits of having external speakers was noted by several respondents. Input from those with relevant clinical experience was viewed as positive, and it was good to have exposure to "guest speakers from different units that could share different experiences and knowledge". Respondents suggested that the speakers were knowledgeable but spoke about their topics in accessible language and made the material easy to understand.

5.11 What worked less well

While respondents were keen to highlight the importance of practical experience within their training, this was also an area that featured in comments about aspects that worked less well. Several respondents suggested that more time on placement would have been beneficial to consolidate learning and ensure sufficient experience. Some also highlighted "the difficulty of organising" placements and therefore not being able to gain enough practical experience in the different levels of unit. The fact that practical experience is seen as such an important aspect of the training means that any issues or limits to this experience are considered significant by trainees.

Several respondents suggested that they found the lectures to be less useful than other aspects of the course. Some suggested that "often lecturers would just read from the slides" and this was not a very engaging way of learning. It seems likely that this issue has been exacerbated by Covid-19, where lecturers have had to adjust to virtual teaching and potentially find it more difficult to interact with students. However, some respondents suggested that the lectures were less useful due to fact that "it sometimes felt as though [the lecturer] knew little about the topic they were discussing". The importance of having lecturers experienced in neonates was discussed by several stakeholders at interview and at the roundtable discussion.

Several respondents referenced the difficulties of managing their studies alongside working full time and their home life. Many of these referenced "not having set study days to complete self-directed study", or not having enough time allocated to complete this work, making it challenging. Some also highlighted the struggle of studying while balancing childcare. Regardless of the time management factor, self-directed study was highlighted by a few people as the aspect of training that worked least well for them due to not learning well in this way.

6. Stakeholder interviews

Key findings

- All stakeholders remarked upon the need for **standardisation in course content, style and assessment**. The current levels of variation mean that it is challenging to measure the knowledge, skills and competencies of QIS trained nurses.
- All interviewees would welcome a **standardised national competency framework** and **assessment framework for QIS.**
- The majority of stakeholders **did not regard HEI-led QIS training as providing particularly good value for money** or were unable to comment (due variation relating to course length, number of modules, number of credits etc.).
- The majority of interviewees suggested **apprenticeships** as an additional/ alternative form of training, however many cautioned that this could perpetuate the current lack of standardisation.

6.1 Approach

In February 2021, 31 online interviews were conducted with the following stakeholders in order to explore the key lines of enquiry for this review:

- Lead Nurses (x4)
- Network managers (x1)
- Education providers (x7)
- Regional leads (HEE) (x4)
- Clinical educators (x4)
- Unit managers (x5)
- Neonatal Nursing Association (x2)
- National stakeholders (x4)

Three semi structured topic guides were developed for Trust, Education and National stakeholders (see Annex 5) to ensure that each set of questions reflected the roles of individuals.

6.2 Perceptions of the current education and training system

6.2.1 Pre-QIS training

A number of ODNs currently operate some form of pre-QIS training for neonatal staff. This training can vary in duration, delivery style and content between ODNs, and ranges from six-month foundation programmes and preceptorships to ad-hoc trust study days. Trusts considered these pre-QIS training courses to be helpful for:

- **Preparing neonatal nurses for the rigours of QIS** (e.g. some trusts mapped their foundation programme competency frameworks and assessments to QIS), which helped to reduce course drop-outs;
- **Staff retention and making the workforce feel valued** – particularly where training was offered to newly qualified nurses and/or new starters; and
- **Ensuring staff did not develop bad habits when delivering patient care** – particularly around basic skills such as bathing or feeding.

Of the education providers who were interviewed, none noted a discernible difference in the skills and knowledge of neonatal nurses who had undertaken pre-QIS training compared to those who had not or had been unable to comment. Instead, education providers suggested that neonatal nurses' levels of knowledge were more dependent on the breadth of clinical exposure (e.g. those in tertiary units were more likely to have prior awareness of ICU module content than those in level one and two units). In addition, some education providers suggested that this pre-QIS training could be more focused on individual trusts' methods of working than broader clinical knowledge.

6.2.2 Development of QIS training

The majority of education providers who were interviewed had referenced the **BAPM 2012 Core syllabus** and **RCN 2015 Career, education and competence framework** when developing their QIS training. While these were useful documents, some of the HEIs interviewed felt that they were not prescriptive enough for developing module content, and that they were not sufficiently up-to-date to reflect current clinical practices (e.g. prescribing drugs).

Some of the education providers who have been interviewed had worked in conjunction with local trusts to develop module content, however some national stakeholders cautioned against this approach, with concerns expressed that content would be too trust-specific and may focus more heavily on the clinical rather than the academic elements. Some education providers also reviewed and updated course content every academic year (prompted by trust or student feedback, or to reflect changes in clinical practice), while for others this was a more ad-hoc process.

The majority of education providers interviewed considered offering the course at both a level six and seven was appropriate, given the differing needs of neonatal nurses – some nurses were keen to pursue the course at a master's level, while others undertook QIS training at the behest of their unit. Some would welcome different courses for level 1 and level 2 unit nurses and level 3 unit nurses to reflect different levels of knowledge and post-course requirements, whilst others saw this as further perpetuating differences in QIS training.

6.2.3 Monitoring and reporting measures for training

Education provider and Trust stakeholders both **referenced informal measuring and reporting mechanisms** as opposed to formal structures when reviewing QIS content during interview. These included self-reported student satisfaction feedback and informal discussions at ODN Educator meetings. Some unit managers suggested that not being able to formally input into training content was poor value for money:

> "HEIs feel like we're doing them a favour, but we're paying them – we are the stakeholders at the end of the day."

In future, all stakeholders would welcome the introduction of a formal reporting mechanism between trusts and education providers:

"You need the interface between the clinical [staff] and the provider to make sure that the course is being led by workforce needs."

6.2.4 Areas of strength and for development with the current model

A key theme to emerge from the interviews was a **need for greater standardisation across England –** standardisation of training content, training approach (e.g. number of study days and placement duration) and assessment. All stakeholders agreed that the significant variation in training content and approach meant that it is challenging to measure the knowledge, skills and competency of QIS trained nurses. The lack of standardisation can also be a challenge for QIS nurses wishing to transfer between different ODNs, as well as for international nurses to demonstrate the transferability of their qualifications.

All stakeholders interviewed would welcome a standardised national competency framework and assessment framework for QIS. In addition, many expressed that they would prefer to return to the previous English Nursing Board system and a national register of QIS trained nurses, as it would provide a better guarantee of the skillset and experience of individual neonatal nurses.

Stakeholders identified the following as areas of strength and areas for development with the current QIS training model:

Table 22: Areas of strength and development within the current QIS training model

Areas of strength	Areas for development
Current QIS courses provided nurses with a **university accredited qualification** and the opportunity for further study at master's Level.	Many stakeholders suggested that there was **no guarantee of career opportunities /progression** following QIS qualification, unlike their counterparts in midwifery. As one stakeholder noted, "you're working with more challenging babies, it's more emotionally and physically draining, but still on a Band 5 wage".
Unit managers considered **practical assessments and experiences**, such as the use of OSCEs and oral exams are useful components and learning can be applied directly in the workplace.	Although many courses offered some kind of practice, all stakeholders concluded that **more SIM/practical experience** would be beneficial for nurses**.** For example, there should be more opportunities to practice skills such as patient transfer, which happens on adult ICU training courses.
Unit managers welcomed where HEIs **stagger starting dates / had more than one intake per academic year** as this alleviated the challenges with staffing resource and enabled more neonatal nurses to attend QIS training.	**Longer NICU placements are required to embed skills** – on some courses these are not mandatory, and in others, are only two to three weeks. This would be particularly useful for those on level 1 & 2 units.

Modules which **reflect up-to-date clinical practice** and include input from a range of clinicians (e.g. doctors, neonatal nurses and other AHPs) were praised by trusts and national stakeholders.	It can **take time for module updates to be approved** by HEIs – however stakeholders considered it vital that content is current. Clinical educators felt that it was acceptable for some modules to remain unaltered (e.g. anatomy) between academic years, but others (e.g. drugs) must constantly evolve to reflect changes in practice.
A minority of stakeholders suggested that the academic element of QIS training is important for **developing critical thinking skills**, and this critical awareness can be beneficial when staff make clinical decisions in Units.	If a Trust is too aligned to a particularly HEI, there is a concern that the QIS content becomes **too focused on their specific needs and ways of working**, which can impact on nurses wishing to transfer between trusts or ODNs.

6.3 Value for money

The majority of stakeholders **did not regard HEI-led QIS training as providing particularly good value for money** or were unable to comment (due variation relating to course length, number of modules, number of credits etc.). Unit mangers suggested that course costs do not always equate to the number of study days, availability of student support and/or course duration, and that there was no correlation between higher course costs and greater development of knowledge/skills.

Some stakeholders suggested that course design and development were costly processes for HEIs, and that a standardised framework would reduce the costs associated with this course development. Others suggested that Covid-19 and greater use of blended learning may enable trusts to select more economical courses rather than based on geographical proximity to units.

Ultimately, many Trust stakeholders stressed that there are no alternatives to the current QIS provision, and since having QIS staff is a mandatory requirement, they had little option but to pay these training fees.

6.4 Accessibility

Stakeholders suggested the following factors as having an impact on the accessibility of neonatal QIS training:

Table 33: Factors impacting on the accessibility of QIS training

Factor 1: Trusts	
Staffing shortages	The most frequently highlighted factor was the difficulty in releasing staff to attend QIS training due to workforce pressures.
Funding	This was particularly highlighted by stakeholders in larger trusts with numerous staff who were deemed eligible to attend QIS training (e.g. those who had been in positions for over six months and/or who had completed pre-QIS training), and by trusts whose local HEIs had higher course fees.
Priority	One stakeholder suggested that QIS was regarded as a higher priority where neonatal units sat within maternity directorates rather than children's and young people's directorates. Another stakeholder suggested "we're fortunate that safety recommendations mean that we need to have a percentage of QIS within the workforce as some senior staff don't always see need/importance of QIS."
Availability of placements	The limited number of placements (e.g. on ICUs) could have an impact on knowledge and ability for nurses to embed skills.
Factor 2: Neonatal nurses	
Language barriers	Stakeholders suggested that nurses for whom English is not their first language often were apprehensive about the academic elements of QIS training and the assessments. HEIs and Unit Managers interviewed considered this to be more of a perceived barrier on the part of this group than an actual barrier to becoming QIS trained.
Education	Those registered as a nurse when no academic component was required or those who had been out of education for some time could find the academic component challenging.
Interest in becoming QIS qualified	A number of clinical educators suggested that some staff did not wish to become QIS qualified for personal reasons, such as they had concerns that their caseloads would become more challenging, they would not be guaranteed to move to a Band 6 position, and that they were content with their current roles.
Factor 3: HEIs	
Accessibility and travel requirements to HEIs	This was more of a challenge pre-Covid when attendance on campus was required. This was a particular barrier for nurses without access to private transportation.

6.5 Alternative forms of training suggested by stakeholders

The majority of interviewees suggested **apprenticeships** as an additional/ alternative form of training.

Table 44: Advantages and disadvantages of an apprenticeship model

Advantages of an apprenticeship model	Disadvantages of an apprenticeship model
The vast majority of nurses are **already qualified to degree level** so further accreditation is a bonus, rather than a requirement.	Without a national framework, this could **perpetuate the current issue with the lack of standardisation**.
Trusts could take advantage of the **Apprenticeship Levy** to fund QIS, meaning that the training budget could be used for other CPD activities.	Currently there is a wide range of apprenticeships operating within trusts, meaning that QIS **may no longer be regarded as a vital requirement f**or neonatal units.
An apprenticeship could appeal to **staff who prefer to practical** rather than academic training.	There is potential that **more emphasis is placed on clinical competency to the detriment of academic knowledge**, and that critical thinking skills are reduced.
The apprenticeship could be **tailored to local needs/practice**.	Equally, neonatal nurses **may not be exposed to different ways of working if content is too Trust-focused**. Some stakeholders highlighted that one of the key benefits of in-person course attendance is that nurses from different trusts and unit types can discuss and share experiences.
It would negate the **need for travel**.	There was a concern expressed that **study days would not be ring-fenced**, and staff could be called back the ward if the unit was short-staffed, meaning they would lose out on valuable learning.
It could potentially enable staff to **move up a band when completed.**	It may be **more challenging for those on level 1 and 2 units to obtain placements** on tertiary units, and some ODN stakeholders felt that this would be an omission.

In addition to the apprenticeship model referenced by stakeholders, in one interview an additional model for neonatal QIS training that is currently being implemented in Thames Valley and Wessex was referenced. In this model, the training is developed and led by the ODN, with accreditation being outsourced to an HEI (currently Kings College London). While there was limited commentary on this model outside of this one interview, the suggested benefits of this model are addressing the challenges that currently exist within neonatal QIS training.

7. Roundtable discussion

Key findings

- The main discussion points relating to the desk review focussed on the **maintenance of skills** post QIS-accreditation and to what level these should be maintained, depending on unit type.
- Key themes discussed during the presentation of the Trust data collation were: **future demand** for neonatal nurses; changes to the **operational delivery model**; the **recruitment** of neonatal nurses; and variation in the **proportion of QIS/non-QIS nurses**.
- The **level to which neonatal QIS training is accredited** was proposed as an area for further research/consideration.
- There was agreement around the need for lecturers and educators to have **clinical credibility** and a **background in neonatal care**, which is not always the case currently within some HEIs.
- Alternative models of QIS training which were considered were: an **apprenticeship model** and a **hybrid model** (where training is delivered by the ODN but accredited by a HEI).

7.1 Approach

The Roundtable event took place on Tuesday 9th March PM with representatives from across HEE, NHSE/I, the ten ODNs and also unions/bodies that represent neonatal nurses (eg. NNA, NMC etc.). A full list of Roundtable organisations has been included in Annex 6.

The Roundtable to was co-facilitated by Professor Neil Marlow and Doreen Crawford, with the analysis sections of the event being presented by representatives from RSM. The structure of the session included a presentation then discussion section for each component of the analysis (desk review, Trust data collation, education provider survey, survey of recent course participants and stakeholder interviews). The discussion questions posed to attendees were:

- What are the most important points emanating from findings?
- From this, what should be included in the action plan?

7.2 Desk review

A summary of the findings of the desk review (please see Section 2) was presented at the Roundtable event. The keys discussion points focused on the maintenance of skills post QIS accreditation and have been summarised below:

- There was a range of discussion relating to the level of skills which need to be maintained by nurses within different levels of unit, post-QIS accreditation (in particular those skills relating to escalating illness and critical care).
- Although slightly outside of the scope of this current piece of work, it was reflected that it can be a challenge to maintain skills due to high turnover.

- It was suggested that the ongoing maintenance of skills and competence is best done at ODN level, e.g. hospitals to share activity and workload by moving staff around to maintain competence.
- It has also been recognised that while ODNs typically do provide education days to support the maintenance of skills, this has been difficult over the last year and nurses have missed out on practical training that we had offered in the past.

7.3 Trust data collation (Nursing demand for QIS Education and training)

A summary of the findings of the Trust data collation (please see Section 3) was presented at the Roundtable event. The table below summarises the key themes and a brief description coming out of the discussion at this stage.

Table 55: Thematic summary of Roundtable discussion (Trust data collation)

Theme	Summary of discussion points
Future demand for neonatal nurses	• In addition to the additional QIS places needed from the Trust data, there is additional investment about to be made in neonatal. This will increase the number of neonatal nurses, which will also increase the number of QIS places needed (in addition to what has been outlined by units). • Staffing ratios are impacted by the number of nurses sent on QIS training, with backfill an issue for some units.
Changes to the operational delivery model	• It was discussed that there are currently ongoing changes relating to service delivery (eg. increasing the number of transitional care beds). • Demand for neonatal nurses will be impacted, however, they will also be required within transitional care teams, not just within neonatal units. • The work of neonatal staff within units will also become more intensive.
Recruitment of neonatal nurses	• Workforce planning is required over the next decade to offset retirements. Recruitment remains an issue in some hospitals. • Discussion around the wider service (including the recruitment, retention and new staff that will need to be considered alongside the new format of QIS training). • A national marketing push would be beneficial to raise profile of the neonatal training pathways available. Highlighting opportunities for personal development and investment is crucial (Getting It Right First Time (GiRFT) is drafting suggestions for the neonatal pathway). • The neonatal pathway is not currently attractive to midwives as after their preceptorship, they become a Band 6, which neonatal services cannot currently match. It was also highlighted that not all midwives will receive NICU placements during their undergraduate training.
QIS/non-QIS nurses	• The significant variation in the proportion of QIS nurses between ODNs was unexpected to this extent (attendees were aware there was a lot of variation but not seen data on this previously).

	• With some areas having significant gaps to fill in terms of improving the number of neonatal nurses that have QIS, it may feel like an impossible task to release staff in terms of having sufficient capacity to increase numbers of nurses going through QIS. To support capacity within these areas, there may need to be further considerations on how to backfill these roles. • There was also discussion on which point in time is more beneficial to send nurses on QIS training eg. some documents suggest a nurse should be in post about a year before training.

7. 4 Education provider survey (Supply of QIS education provision)

A summary of the findings of the education provider survey (please see Section 4) was presented at the Roundtable event. The key focus of discussion at this stage of the Roundtable related to the neonatal QIS course content and qualification level. The key points have been summarised below:

- It was agreed that whilst regional differences persist, there should be standardisation around the competence, knowledge and learning provided by QIS courses.
- There needs to be greater thought into the level (ie. Level 6 or Level 7) that QIS training is aimed at as not all nurses would want, or be able to, complete a Level 7 course.
- A significant number of nurses who are currently undergoing neonatal QIS training are already qualified to degree-level, therefore there needs to be further exploration as to the level of qualification gained by nurses.
- There was surprise at the lower than expected levels of attrition (as it has previously been evidenced that this figure is circa 30% of nurses do not pass or don't complete QIS training). This is thought to be relating to the academic component of their training.

There was also discussion on the variation in costs across QIS courses, and the range was greater than expected. It was also suggested that some areas may have a lower cost to training where pre-QIS training is delivered. Based on the data received by education providers for this review, there was limited evidence to suggest this, however, there were some anomalies within the data collected.

In terms of models of neonatal QIS training provision, it was also highlighted that the hybrid model (where an ODN runs training and course is university accredited) is being delivered in London. This has seen good attendance and outcomes and would be considered good value for money (with a cost of c. £500).

7.5 Recent course participant survey

A summary of the findings of the course participant survey collation (please see Section 5) was presented at the Roundtable event. The key points of focus were (i) the format of learning and (ii) who was delivering the training.

The discussion re-emphasised the evidence that suggested that nurses preferred hands-on learning (eg. simulations, placements etc.). While practical learning was deemed crucial by attendees, it was also recognised that the length of placements should not be dictated by a

specific timeframe (although there should be a standardised minimum length of time agreed nationally), but rather when a nurse has met the clinical competencies expected. The challenges with accessing placements (which is more of an issue for some units) was also explored. In some areas, it was acknowledged that it can be difficult to get an honorary contract across trusts. There was also a range of discussion on the benefits and drawbacks of blended learning. It was agreed that blended learning could be part of a future solution (however, this needs to be balanced with practical training and groupwork).

There were also concerns raised relating to who was delivering neonatal QIS courses within HEIs. It was suggested that HEIs may not always have the practical experience in neonatology, which can impact on the learning of neonatal nurses. There was agreement around the need for lecturers and educators to have clinical credibility and a background in neonatal care. There were also some group reflections on the need to invest in education roles within trusts/ODNs, such as practice development nurses, as these roles are not within all ODNs and are often fixed term contracts.

7.6 Stakeholder interviews

A summary of the findings of the stakeholder interviews (please see Section 6) was presented at the Roundtable event. There was significant discussion around the alternative models for delivering QIS. A short summary of the models and discussion has been included below:

Table 66: Alternative models of QIS training and discussion points

Alternative model of QIS	Summary of discussion points
Hybrid model (where ODN delivers training and it is accredited by a university)	• Hybrid model has been tested in London was deemed cost effective. • Brings together SMEs and experts and aligns to BAPM and RCN standards. • They found coming together across London to share learning, plus lectures by SMEs, was really beneficial. • This model has also been adopted in Thames Valley and Wessex.
Apprenticeship model	• The development of a nursing apprenticeship model is in progress (however this has been slow) • The apprenticeship model is currently based on generic nursing standards and is meant to cover different specialties • There was discussion that if an apprenticeship model was to be adopted it would need to be more focused and delivered by educators with relevant practical neonatal experience. • There would need to be further consideration to what type of qualification nurses would gain from an apprenticeship model (as most nurses are already educated to a degree-level).

It was also suggested that the focus should not be on the delivery model, but rather standardisation (eg. of professional standards). Standardisation was agreed to be fundamental, with all nurses being QIS trained to the same level. Additionally, the need for flexibility in any model adopted going forward, to ensure sustainability and that the new model could flex to the unique challenges faced by each ODN area was highlighted by attendees.

7.7 Recommendations

A number of draft recommendations were presented at the Roundtable, aligning with the key lines of enquiry for this review (please see Section 8 for recommendations). In response to the draft recommendations, a number of additional considerations were suggested.

Table 77: Summary of Roundtable discussion on Recommendations

Recommendations	Considerations made at the Roundtable
Reducing the number of neonatal QIS education providers to improve standardisation and value for money.	• Balanced with a need to ensure that there is sufficient accessibility / coverage for neonatal nurses to be able to practically attend QIS training (in particular in more rural regions where travel times impact accessibility)
One agreed standard across all ODN regions in terms of: course content, course delivery, placement/practical hours, educators, assessment and skills and competencies to be developed.	• There should be one course / standard for QIS, rather than different courses for different unit types. • Neonatal nurses who currently work on NICUs should also be provided with the opportunity to visit/ have placement on a LNU and/or SCBU.
Introduction of a skills and competency toolkit as a standardised way of recording neonatal nurse education, skills, and training (including QIS and beyond).	• This is something that can be taken from one place to another and support with revalidation. • Could introduce a nursing equivalent to the BAPM portfolio, including a skills list, feedback etc.

7.8 Areas for further research

At the end of the Roundtable event, attendees were asked if they thought there was any additional research that could be undertaken in order to support the agreement and adoption of an updated version neonatal QIS education and training pathway. A short summary of suggested research has been included below:

- Research into the economic and financial feasibility of promotions to Band 6 for neonatal nurses on completion of their QIS training (to support with recruitment and retention);

- Need to understand where neonatal QIS training should be delivered (including the number of education providers needed), to ensure that accessibility of training isn't reduced; and
- Scoping of what qualification (and at what level) a neonatal nurse should receive on completion of their QIS training (for adoption within the new QIS education and training pathway).

8. Recommendations

Key recommendations

1. One agreed standard across all ODN regions in terms of: course content, educators (in terms of skill/neonatal background), skills and competencies to be developed. This standard should undergo both academic and clinical assessment.
2. More practical experience (and an agreed minimum level of practical experience within QIS courses) structured to consolidate learning and ensure sufficient experience across different levels of unit.
3. To conduct a review of the wider neonatal nursing career pathway both prior to and post QIS, including (but not limited to): recruitment into neonatal, opportunities for career progression (including consideration of banding/ salary post QIS); and an education and capability-based pathway.
4. ODNs to conduct a review of their neonatal nursing staff to inform their understanding of future training needs, including (but not limited to): percentage of neonatal nursing staff that are band 5 QIS; number of nurses expected to retire in the next 3-5 years; ability to backfill for nurses undertaking QIS training; number of nurses expected to require QIS training in the next 3-5 years.
5. Introduction of a formal reporting mechanism (using a nationally agreed training evaluation model and metrics) between trusts / ODNs and education providers to ensure quality and consistency when reviewing and developing future QIS education and training.
6. Introduction of a skills and competency 'toolkit' as a standardised way for neonatal nurses to record their education and training (including QIS and other CPD training activities).
7. Reviewing the number of education providers to improve standardisation, sustainability, and value for money.
8. The introduction of an alternative delivery model for QIS could be explored (eg. hybrid model, pre-QIS training or apprenticeship model).
9. Having one representative group (eg. a Board) who could represent all ODNs/trusts to support the commissioning of neonatal QIS training from education providers (based on a standardised core syllabus/competencies) and establishing a commissioning framework of providers who can meet the quality and cost per place requirements.

8.1 Approach

The recommendations for this review have been based on findings from within the analysis sections of the report (please refer to Sections 2 to Section 6 for analysis) and developed in line with the following key lines of enquiry for this review:

1. Is the current education and training system for neonatal nursing fit for purpose now and to meet anticipated future needs?;
2. How is the quality and consistency of training measured and reported?;
3. How transferable is the learning across ODNs in England?;

4. How accessible and viable is the current system?;
5. Are there any alternatives?; and
6. Are we getting value for money?

Draft findings were presented at the Roundtable event on 9th March 2021 (Section 7) for discussion/ comment and have been subsequently further refined. An action plan of next steps based on the recommendations (including areas for future research) has also been included within this chapter.

8.2 Recommendations

8.2.1 Is the current education and training system for neonatal nursing fit for purpose now and to meet future anticipated needs?

At the Roundtable session there was ongoing discussion to support that all neonatal nurses should receive QIS training to the same level (regardless of unit type), meaning that the education and training provided on QIS courses should not be unit specific. For example, neonatal nurses working in SCBUs and LNUs should also have NICU experience to ensure that they can recognise and stabilise a deteriorating baby.

Recommendation 1: One agreed standard across all ODN regions in terms of: course content, educators (in terms of skill/neonatal background), skills and competencies to be developed. This standard should undergo both academic and clinical assessment.

It has been acknowledged that practical experience (including placements, role plays, and simulations) has been invaluable for both past and present neonatal QIS course participants. Neonatal QIS nurses continuously referenced practical experience as a key aspect of their learning and beneficial in preparing them for their role. Unit managers also recognised the importance of practical assessments and experiences in terms of learning which can be applied directly in the workplace.

However, several neonatal nurses indicated that they would have benefitted from more practical experience to consolidate learning and ensure sufficient experience across different levels of unit. All stakeholders interviewed agreed that **more practical experience is needed to embed practice learning** (particularly for NICU experience, where nurse is predominantly based in an LNU or SCBU).

Stakeholders also highlighted the importance of courses being academically and clinically quality assured, as in some areas there were concerns raised about the quality and consistency of the QIS training programmes provided by HEIs. There have also been differences in opinion relating to the level of competency required for certain skills for nurses at different unit levels. There is a need to have one agreed standard (signed off by all ODNs) of what is expected from neonatal nurses (in terms of skills required) in each level of unit and their expected placements. An example framework for placements is included below.

Table 18: Example framework for neonatal QIS placements

Unit level	General placement	ITU/HDU placement
Level 1 (SCBU)	6 weeks	12 weeks
Level 2 (LNU)	6 weeks	12 weeks
Level 3 (NICU)	8 weeks (plus four weeks in a level 1 unit)	

Recommendation 2: More practical experience (and an agreed minimum level of practical experience within QIS courses) structured to consolidate learning and ensure sufficient experience across different levels of unit.

Throughout the Roundtable session, there was also significant discussion relating to a number of factors that are not directly in scope of this review of QIS, however, will have a substantial impact on the success of any future QIS training programme. These include: (i) the progression for neonatal nurses once they have completed their QIS training; (ii) raising the profile of neonatal nursing as a career pathway at an undergraduate level; (iii) supporting the ongoing development of neonatal nurses / the maintenance of neonatal nursing skills through investing in an education career pathway.

Recommendation 3: To conduct a review of the wider neonatal nursing career pathway both prior to and post QIS, including (but not limited to): recruitment into neonatal, opportunities for career progression (including consideration of banding/ salary post QIS); and an education and capability-based pathway.

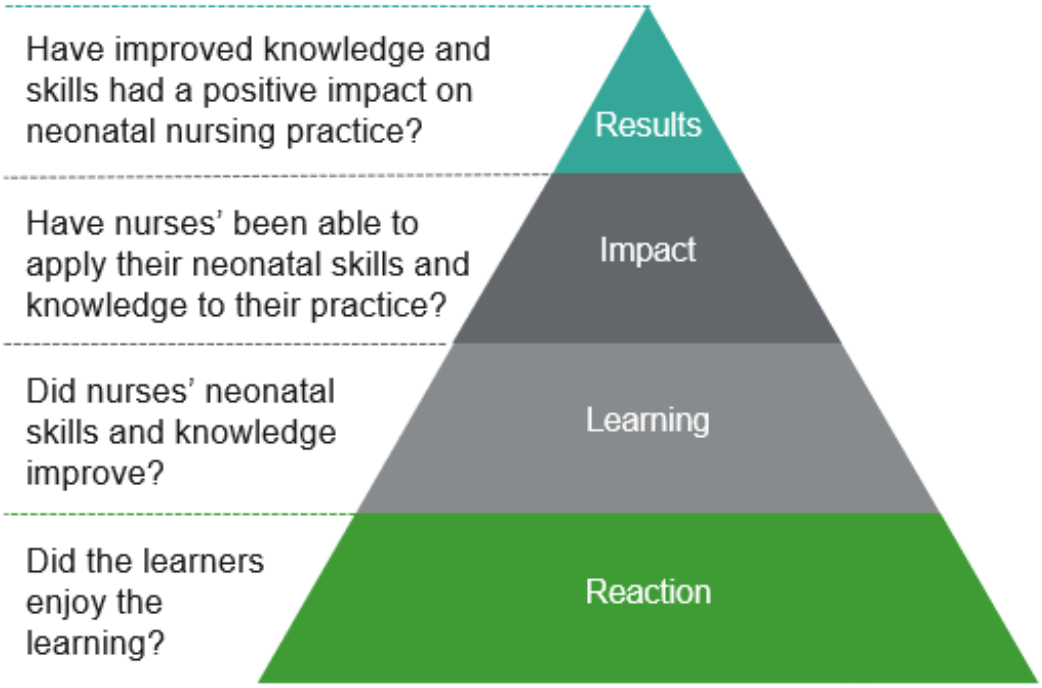
Finally, there was also discussion at the Roundtable event about the future anticipated demand and needs of the neonatal workforce. As part of this review, analysis of Trust data returns (Section 3) was conducted and used to provide estimates of future demand for QIS training places and the numbers of nurses expected to retire in the next three years. Some stakeholders suggested that external factors such as Covid-19 and adjustments to funding structures could impact upon the utility of these figures going forward. Also, while the response rate for this data collection was high given the difficult operational circumstances due to Covid-19, some stakeholders suggested that the 54% response rate could be further improved to inform robust future decisions in this area. As such, it is recommended that ODNs should conduct further research into future demand to ensure that they are aware of the future training needs of their nursing staff. It is likely that internally conducted research with a mandated trust response would produce estimates of demand that individual ODNs could confidently base their future training planning on.

Recommendation 4: ODNs to conduct a review of their neonatal nursing staff to inform their understanding of future training needs, including (but not limited to): percentage of neonatal nursing staff that are band 5 QIS; number of nurses expected to retire in the next 3-5 years; ability to backfill for nurses undertaking QIS training; number of nurses expected to require QIS training in the next 3-5 years.

8.2.2 How is the quality and consistency of training measured and reported?

The quality and consistency of training is not standardised or officially measured; the validation of post-registration nurse education is the responsibility of each individual education provider. Education providers have typically focused on measuring student satisfaction but not deeper levels of impact. Having a greater focus on monitoring the outcomes and impacts of QIS training could provide robust evidence base to support the ongoing development of QIS training. Figure 19 below provides an example of a model that could be adopted (Kirkpatrick's training evaluation model). When training is defined as having improved knowledge and skills, neonatal nursing practice will be improved resulting in a positive impact for both neonatal nurses and babies in their care.

Figure 18: Kirkpatrick training evaluation model



Throughout interviews, stakeholders from both trusts and Higher Education Institutions indicated that when reviewing QIS content, informal measurement and reporting mechanisms (such as self-reported student satisfaction feedback and informal discussions) are utilised, as opposed to formal reporting structures. These informal feedback loops, between trusts and education providers, are not consistent in their approach across all ODN areas. All stakeholders who were involved in interviews reported that they would welcome the **introduction of a formal reporting mechanism** between trusts and education providers to ensure quality and consistency in how feedback is recorded.

Recommendation 5: Introduction of a formal reporting mechanism (using a nationally agreed training evaluation model and metrics) between trusts / ODNs and education providers to ensure quality and consistency when reviewing and developing future QIS education and training.

8.2.3 How transferable is the learning across ODNs in England?

Throughout the analysis, a lack of standardisation has been evidenced across the following areas:

- course content;
- how courses are currently being delivered;
- the number of placement/practical hours;
- who is delivering training; and
- how nurses are being assessed.

Within the desk research, standardisation was cited to be crucial in improving the transferability of learning amongst the neonatal nursing workforce. Limited standardisation poses a challenge for QIS nurses who wish to transfer between ODN regions, and for international nurses in terms of demonstrating the transferability of their skills and qualifications. **One agreed standard is fundamental to the ability for learning to be transferred across ODN regions in England (or potentially beyond).**

In terms of documenting the skills and competencies gained through QIS training, and maintained throughout clinical work, one stakeholder suggested the **use of a skills and competency passport.** This would provide a standardised way of recording any training and capabilities a neonatal nurse has above and beyond their neonatal QIS. At the Roundtable, the use of a skills and competency passport was corroborated by attendees, with the suggestion that this could include a skills and competency list, clinical feedback could be collected and this would support with revalidation across ODNs.

Recommendation 6: Introduction of a skills and competency 'toolkit' as a standardised way for neonatal nurses to record their education and training (including QIS and other CPD training activities).

8.2.4 How accessible and viable is the current system?

Accessing role-essential neonatal specialist training opportunities is challenging. Funding and the ability to backfill staff attending training have been identified throughout the analysis as the main barriers impacting on the accessibility of neonatal QIS courses. The impact of both these factors varies by both region and trust.

This variability can be attributed to differences in budgets between ODNs (where ODNs have a larger budget, they can fund more courses than other regions) and the availability of courses within ODNs. There is a need for QIS training providers to be able to respond to the demand of nurses needing trained. From stakeholder interviews and the education provider survey, evidence of HEIs withdrawing from providing QIS training due to insufficient demand was also noted.

Adopting a standardised model for QIS training (with potentially fewer education providers to promote sustainability) would improve standardisation whilst allowing education providers to have a sufficient number of nurses to viably run courses**. Reviewing the number of education providers** could also have a positive impact on value for money. However, this would need to be balanced with accessibility in some regions, where travel times to training for nurses can impact on accessibility.

Recommendation 7: Reviewing the number of education providers to improve standardisation, sustainability, and value for money.

It was discussed at the Roundtable event that if the number of education providers were to be reduced, there would need to be further consideration into where training would be delivered, to ensure the accessibility of training to neonatal nurses (particularly within more rural areas). The use of blended learning for some course elements was discussed at the roundtable event as an appropriate method of improving accessibility, particularly as travel times and therefore time away from the unit for neonatal nurses would be reduced. This would need to be considered within future research.

8.2.5 Are there any alternatives?

Within the stakeholder interviews, most suggested **apprenticeships as an additional/alternative form of delivering QIS training.** An apprenticeship model would provide multiple benefits, including but not limited to:

- Appealing to staff who prefer practical rather than academic training;
- Would negate the need for travel either within or across ODN regions; and
- May enable nurses to progress to the next band upon completion.

An additional model to be considered more widely is the hybrid model, where training is delivered locally by the ODNs or individual trusts and accredited by an HEI or other relevant body. Currently both Thames Valley and Wessex and London are adopting an ODN-led model, with anecdotal evidence suggesting that this would deliver greater value for money than the traditional HEI delivery.

However, at the roundtable discussion, there was a note of caution that without a national framework, an apprenticeship/ hybrid model could still perpetrate a lack of standardisation and consistency. If either of these models were to be implemented, there would still need to be one agreed standard across ODNs in terms of the core competencies and the level of academic content to be delivered. Accreditation of an apprenticeship programme/ hybrid model could be supported via one education provider, which could potentially deliver improved value money.

Recommendation 8: The introduction of alternative delivery models for QIS could be explored (eg. hybrid model, pre-QIS training or apprenticeship model).

If an apprenticeship model was introduced, there would be an additional QIS funding opportunity via the Apprenticeship Levy. Additional funding would enable some of the existing training budget to be re-directed towards other CPD activities or may support more nurses undertaking QIS courses in units where funding presents a barrier to accessibility.

To address the need for standardisation of training content, training approach and assessment, many stakeholders referenced a preference of returning to the previous English Nursing Board model and have a national index of QIS trained nurses as this would provide a better guarantee of the skillset and experience of individual neonatal nurses. This is an area that could be explored in future research to support standardisation.

8.2.6 Are we getting value for money?

Most stakeholders did not regard HEI-led QIS training as providing particularly good value for money. Although QIS training is more expensive in London than other regions, nationally, there was no detectable correlation between the cost of a QIS training programme with academic credits/length of training. Additionally, there was no correlation between higher course costs and greater development of skills/knowledge.

To improve the ability to compare value for money across education providers, **a single framework for QIS training (adopted by all providers) is required.** If trusts/ODNs **reduced the number of education providers used,** economies of scale could be created, thus improving value for money. This would make it simpler to monitor the quality of training for QIS nurses. A smaller number of education providers would also reduce to variation in the implementation of QIS framework/guidance for course content.

Recommendation 9: Having one representative group (eg. a Board) who could represent all ODNs/trusts to support the commissioning of neonatal QIS training from education providers (based on a standardised core syllabus/competencies) and establishing a commissioning framework of providers who can meet the quality and cost per place requirements.

8.3 Next steps

The recommendations set out above will be reviewed by HEE and system partners. An action plan has been developed, which includes a key list of activities against each recommendation and a list of research areas for further exploration.

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