

Pre-registration midwifery education: adapting infant feeding observed simulated clinical examinations

Digital technology is developing in maternity services across the UK. For example, digital care planning and the use of digitally developed maternity records are a standard part of midwifery practice, and each country of the UK has developed and is continuing to progress digital maternity care systems (The Perinatal Institute, 2020; Scottish Government, 2021; Health and Social Care Northern Ireland, 2022). There are also intended future developments to integrate care provision and access by women to enhance their maternity care experience (NHS Digital, 2020). There are an increasing number of mobile applications that support professional practice (Arbour and Stec, 2018). In relation to infant feeding, Arbour et al (2015) described a virtual demonstration of breastfeeding assessment as an aspect of improving the quality of online midwifery courses in the US.

The use of technology as a tool to provide and enhance healthcare, including maternity care, is growing exponentially (Royal College of Midwifery, 2020). There is a need for a digital strategy that makes better use of data and digital technology and places technology at the core of healthcare (Topol, 2019). The Topol (2019) review identified the need for a healthcare workforce that is digitally confident and competent, and noted that the healthcare education interface is an optimum environment in which digital learning and digital literacy can be achieved. Hall and Way (2018) also claimed that academia often leads innovation in the use of digital media and highlighted that practice can lag behind, arguing that there is a need for collaboration between academia and practice to enhance the relevance of learning.

Background

In Northern Ireland, at the time of the revised changes to observed simulated clinical examinations (OSCEs), undergraduate midwifery education was provided by a higher education institute accredited by UNICEF UK (2019) baby friendly initiative. The two available undergraduate programmes consisted of a 3-year direct entry or a 22-month post-registration programme

Abstract

Digitally developed and virtually provided midwifery education has gathered momentum as a result of the COVID-19 pandemic. Preparing students for professional practice in a virtual environment creates challenges and creative opportunities for midwifery educators. Course designs and structures have been adapted to enable students to gain knowledge and experience of practicing in a virtual environment and approaches to assessment have also required adaptation. This article outlines how observed simulated clinical examinations were modified in conjunction with stakeholders from clinical practice and the breastfeeding community to ensure that they aligned with the local reality of virtual infant feeding support. Collaboration was required to ensure that the reality of student's experiences was captured in the assessment process. Challenges encountered included being sensitive to the fluidity of the clinical setting and ensuring that scenarios were relevant and created a sufficient challenge for students. Mitigating against students' concerns regarding virtual simulated clinical assessment should be incorporated into future adaptations of educational interventions and assessments.

Keywords

Assessment | COVID-19 | Infant feeding | Observed simulated clinical examinations | Pre-registration midwifery education | Virtual

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for adult registered nurses. Breastfeeding education commenced at the beginning of the undergraduate midwifery programmes and scaffolded throughout with increased content in the second half of the programme.

As a new curriculum was being introduced with infant feeding as a discrete module, applying learning from educational initiatives was a timely and strategically important aspect of educational development. In the programmes, a range of teaching strategies were used to support students in their learning about infant feeding and formative OSCEs had been used to assess students' learning. Prior to COVID-19, face-to-face OSCEs used a range of breast and bottlefeeding scenarios, to assess students' learning in relation to problem solving, communication and practical breast and bottlefeeding skills. The OSCEs were offered in the second half of the midwifery programmes to provide students with feedback on their skills and assist students in identifying new learning goals, with the aim of completing all infant feeding competencies prior to graduation.

This article discusses adapting infant feeding OSCEs in the context of a changing clinical and educational environment during the COVID-19 pandemic.

COVID-19 and the changing clinical and educational context

The emergence of COVID-19 (World Health Organization, 2020) and its subsequent spread to the UK by 3 February 2020, and Northern Ireland by 28 February 2020, required healthcare providers, professional organisations and the Department of Health and Social Services in Northern Ireland to react swiftly to adjust maternity healthcare provision (Royal College of Obstetrics and Gynaecology, 2020; Swann, 2020). In Northern Ireland, maternity and infant care was affected with the closure of two standalone midwife-led units to enable the establishment of two COVID-19 units. Simultaneously, the Nursing and Midwifery Council (2020) introduced emergency standards for nursing and midwifery education on 25 March 2020.

In clinical practice, COVID-19 related changes occurred that required dynamic and innovative approaches to the provision of support to all women receiving maternity care. Women in the postnatal period required individualised support to manage infant feeding, alongside the uncertainties they were experiencing from living with the impact of COVID-19 (UNICEF, UK 2020a; b). Approaches adopted in clinical practice to contend with these challenges included teleconferencing (Public Health Agency, 2020) and the baby friendly initiative (UNICEF UK, 2020a; b) published several guidance documents to enable clinical staff to support women during this time. As a result, students entering this clinical landscape needed to be prepared and

supported to adapt their learning to support women in this fast-changing clinical environment.

In education, pre-registration midwifery students in the last 18 months of their program (year 2 and 3 students), who would normally be preparing for and undertaking infant feeding OSCEs, were given the choice to be deployed into clinical practice (Department of Health, 2020) or to opt-out of clinical practice in an arrangement that mirrored similar options throughout the rest of the UK. As a result, midwifery educators were required to act quickly to meet the needs of students in relation to their choices under the emergency standards (Nursing and Midwifery Council, 2020), while also ensuring that the integrity of midwifery education was upheld. Actualising educational support for students was further complicated by lockdown measures and social distancing imposed in the university learning environment. Teaching and social communication was immediately directed to online provision in a virtual format. Ensuring that students had the opportunity to consolidate learning from the beginning of the pandemic was complicated, requiring educators to be agile, innovative and creative.

Adapting the provision of breastfeeding education

Considerations

When considering an approach to breastfeeding education during the pandemic, emphasis was placed on enabling students to achieve their learning outcomes, despite the physical and technical challenges. Students were observed by the authors to have demonstrated notable resilience in managing the challenges associated with moving to an online programme and adapting to multiple course changes. However, it was recognised that there could be a limit to this resilience with a potential negative impact on students' mental health. This has been borne out in a recent survey (Hunter et al, 2020), which reported that 57% of midwives found that their mental health was negatively affected by the COVID-19 pandemic. Student midwives reported experiencing, anxiety, fear, confusion and guilt, with concerns about their future and the need for added university and clinical support. It was important that any adaptation in assessment would not add an additional burden but would be meaningful and relevant for the students while also assuring the quality of learning.

Options

Simulation-based learning is being used more often in midwifery education to engage students in realistic practice scenarios in a safe environment (Ruyak et al, 2018). Midwifery educators have reported mixed findings of midwifery students' experiences of OSCEs. Muldoon et al (2014) reported that midwifery students are either neutral or unsure of OSCEs, and have questioned

whether they provide an opportunity to display their practical skills. It was also reported that students recognised the seriousness of the assessment, manifesting nervousness and stress (Muldoon et al, 2014). Killingley and Dyson (2016) found that students experience stress as they approach OSCEs, which negatively affects their performance; however, they can relate stress to enhanced performance. Ruyak et al's (2018) experience was that students evaluated simulated scenarios positively, although they liked to be well prepared for them. It is widely noted that OSCEs are a step away from reality and that students can have difficulty connecting learning to real clinical practice. Killingley and Dyson (2016) recommended moving the OSCE to the clinical environment, but in the educational setting, cues, props and improvisation can assist in creating a degree of realism (Longworth, 2013).

Changing the provision of OSCEs for midwifery students affected by the pandemic had the potential to minimise any negative impact on how students would interact with women virtually as well as enabling an opportunity for lecturer engagement with students. It was thought that the option to provide virtual OSCEs would create a closer link to reality, as a result of the move towards remote conversations with women about infant feeding and the reality of mothers requiring breastfeeding and infant feeding support (Ipsos MORI, 2021) This would require students to manage the challenges of virtual conversations, and a pragmatic option was required because of the limitations placed on face-to-face assessments by the university. It was noted that because students were in placements in five healthcare trusts across Northern Ireland, there was the possibility that some may not have been included in, or witnessed, remote breastfeeding conversational support. Therefore, it was important to enable the student to prepare for such an event.

Solution: virtual observed simulated clinical examinations

The proposal was that in the absence of face-to-face meetings with potential mothers, a student contacts a simulated mother for a virtual scenario, and offers the appropriate care and support online while being assessed. The purpose was to move students along the conscious competence continuum and accept that verbalising facilitates better learning than reading online material (Race, 2020). It was proposed that applying knowledge to a situation in a safe, simulated environment would enable students to associate their learning with a practical clinical situation. Therefore, adaptations to face-to-face OSCEs were made so that they would become virtual.

Four stations were used instead of the usual six, to reduce the students' workload. Students and assessors required the equipment and ability to undertake a remote conversation and conduct an assessment. Students

were encouraged to find personal props or tools for use in practice, as factors that negatively affect learning in a simulated situation include the use of unrealistic models and equipment (Longworth, 2013). Students were also given access to online resources in an online repository, in the student virtual learning environment, and some students had already developed their own set of resources for personal learning, which they used. The assessors had consistent expertise, as all involved had received preparation that met the baby friendly initiative standard and included lecturers, breast and infant feeding clinical leads, peer support workers (who were also breastfeeding mothers) and peer support trainers.

In formative infant feeding OSCEs, the priority for assessment format and documentation was for students to learn to support women using virtual conversations, rather than focusing on a grade assessment (Race, 2020). The baby feeding initiative UK documents were incorporated into the assessment proforma, such as 'planning a virtual conversation' (UNICEF UK, 2022). These were reviewed by a lecturer and local trust breastfeeding coordinator to ensure that they matched current local service provision and were aligned with practice.

Providing virtual observed simulated clinical examinations

Preparing the students

Careful preparation mitigates against the stress of assessment (Race and Pickford, 2007). An explanatory document was issued to the students approximately one week in advance to explain the purpose of the virtual OSCEs, the 'needing' to learn (Race, 2020), and to prepare them for the expectations of the OSCEs, the 'doing' to learn (Race, 2020). The information given included a brief summary of each clinical scenario, instructions on how to set up the online conversation with the assessor, an estimate of how long each scenario might take, direction to an online repository of resources and contact details of lecturing staff in case of problems on the day. This was important as while some students were on a day off, others were in practice on the date of the OSCEs.

Preparing the assessors

Assessors received information on the purpose and process of the OSCEs as well as resources for the students. The assessment criteria were set up using Microsoft® forms that enabled assessors to grade students in real time. The assessors were given access to the forms in advance of the event to practice and work through any problems.

Outcome of the virtual observed simulated clinical examinations

All students were able to organise a virtual meeting with their assessor. Any technical issues were resolved before the

Key points

- Midwifery education should be adaptable and flexible to prepare students for contemporary changes to practice.
- Women require virtual support and midwifery practice is adjusting to meet these needs; midwifery education also needs to change and adapt.
- The use of recognised standardised guidelines and assessments can assist students to recognise the relevance of their learning.
- Observed simulated clinical examinations are not without their challenges, but these can be overcome with careful planning and preparation.
- The inclusion of practice partners and service users in midwifery education provides added relevance for students.

OSCEs and assessors verbally stated that technical issues were quickly resolved, the assessment forms were easy to use, and quickly became intuitive, and that they liked that the results were available once the full session was completed. The assessors also reported enjoying the day.

Feedback

The students received immediate feedback from their assessor at the end of their session. This enabled the assessor to open discussion, to estimate the ability of the student to receive feedback and explore learning needs in more detail. Post-OSCEs, a structured report was sent to the student cohort and assessors. This delayed feedback was more detailed and comprehensive, facilitating deeper reflection. This combined approach gave the opportunity for discussion in subsequent lectures and tutorials and for the student to be in a 'state of readiness' to internalise and use feedback (Killingley and Dyson, 2016).

Students showed an excellent level of knowledge and skill across the cohort. This was reassuring as some students had not previously been involved with virtual infant feeding conversations. Verbal feedback from students to assessors indicated that the OSCEs helped to consolidate their knowledge and their clinical skills and provided impetus for revision of infant feeding topics related to feedback received and individual learning goals. Some students also verbally stated that they felt less nervous about the remote OSCEs than the face-to-face ones, but it should be noted that they had previous experience of OSCEs to draw on and were provided with more information than would usually be the case before starting.

Discussion

Social connection was reduced during the pandemic, leading to isolation. For infant feeding support, particularly breastfeeding support, competing demands on mothers' and midwives' concentration presented a new challenge during online support. Patience and persistence were required beyond face-to-face expectations, as comprehensive

breastfeeding assessment and support is difficult if it is not possible to fully visualise the baby feeding at the breast. However, social distancing is not a barrier to providing support in an online environment and women can access midwifery support where this might be constrained. In addition, some women may find online support provides them with more flexibility about when and how they engage with midwives. A recent report found that women in Northern Ireland had highly variable experiences of support while breastfeeding during the pandemic (Ipsos MORI, 2021). All these aspects provide justification for exposing students to addressing virtual infant feeding support during undergraduate education.

Renfrew et al (2020) recommended the use of detailed and consistent guidelines for staff to support women who were feeding their babies during the pandemic. This agreed with Longworth's (2013) study, which reported that students found inconsistencies between theoretical work and practice and/or between practice placements to be frustrating, and liked the opportunity to practice skills that they may have limited exposure to. The baby feeding initiative UK documents were highly valuable in this regard; they are applicable UK wide and based on a wide body of evidence. Having direct access to guidance as soon as it was developed was imperative to being able to provide information to students in a timely manner.

When incorporating unexpected changes to the educational environment, the anxiety this creates can have a negative impact on student learning. Race (2020) highlighted that motivation to learn, what he described as the 'want/ need to learn', is the first major component to successful learning. Life difficulties can negatively affect motivation to learn and the motivation for wanting to learn may well have shifted as a priority, while the need to learn remains. Keller (2010) suggested a structure to enhance motivation in students, which included relevance and confidence building strategies. Aspects of these strategies were evident in the adaptation of the OSCEs, although there would be value in exploring and evaluating this in more detail with other cohorts of students as the transition out of COVID-19 pandemic measures progressed.

Feedback as an integral part of learning should be in an emotionally safe and positive way, since motivation and emotions are intrinsically linked (Race, 2020). This matches Longworth's (2013) study where students liked the opportunity to seek clarification during a practice session and valued them as a 'separate space' for learning. Longworth's (2013) students were also able to relate skills practiced on manikins to those performed on women and babies and integrate their learning beyond the simulated environment. Interestingly, Killingley and Dyson (2016) suggested that OSCEs and feedback should be located in the midwifery clinical setting to enhance the 'legitimacy' of the feedback. While this

was not a planned part, these students were in a real clinical setting undertaking a simulated scenario. Time constraints affected the development of a higher quality feedback and an evaluation study.

Conclusions

Students need time and space to make sense of learning and put it into perspective, a chance to digest and create a sense of ownership of their learning. The virtual OSCE assessment, while being a simulated situation, has a direct association to clinical experiences and challenges that midwives face. The assessment should help students prepare for exposure to similar situations. Providing quality learning experiences during a pandemic, social distancing and lockdown brought new challenges to educationalists that required inventive yet considered approaches to teaching and learning. Further evaluation of virtual midwifery education solutions is required to ensure relevance and student confidence in a clinical environment with virtual components of care. **BJM**

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CPD reflective questions

- In what ways are you engaging in virtual learning that directly relates to your practice?
- What are the challenges when offering virtual infant feeding support and can these be overcome?
- How does virtual learning and assessment relate to a philosophy of contemporary midwifery practice?
- To what extent and how do you think infant feeding support will change as a result of the COVID-19 pandemic?
- Are there other ways to enhance learning while using digital technology?

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