Title:
Interprofessional Education Emerging from the Pandemic: Lessons Learned and Future Considerations

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Abstract: This article concludes the interprofessional education series published by the CAIPE (Centre for the Advancement of Interprofessional Education) Research Subgroup and considers what lessons can be learned from our experiences of emergency remote teaching during the COVID-19 pandemic. Consideration is given to the practicalities of emergency remote teaching, including preparation, delivery, and proposed outcomes of delivering interprofessional education using online platforms. The article is written as a guide for others to draw on and includes considerations for future delivery and sustainability of interprofessional education in midwifery practice and other fields of health and social care.

Keywords: COVID-19 pandemic, emergency remote teaching, interprofessional education, collaborative practice, online learning

Introduction

The COVID-19 pandemic impacted delivery of interprofessional education across the world; this eighth paper concludes the series published by the United Kingdom (UK) Centre for the Advancement of Interprofessional Education (CAIPE) Research Subgroup, consolidating lessons learned from earlier papers in the series, offering ways to inform future interprofessional education. By considering the practicalities of emergency remote teaching in the series, including preparation, delivery, and proposed outcomes of delivering interprofessional education, the article is written to guide, sustain and inform future provision of interprofessional education in midwifery and other fields of health and social care.

The preceding articles in the IPE series, written by UK and international authors, capture the diverse and shared experiences of adapting and sustaining interprofessional education. Case studies are used to offer a unique and rich data source to explore and advance interprofessional education, highlighting the benefits and challenges of interprofessional learning in lockdown. The series recognises the rapid global movement to fully online interprofessional education whilst adapting to lockdown measures and maintaining learning outcomes. Through sharing insight and authentic experiences of the global impact of the COVID pandemic on interprofessional education provision, and by reporting rich and unique data within case studies, this publication series contributes to the global interprofessional community, offering opportunity to build resilience, capacity, resourcefulness, and readiness for managing the future of interprofessional education and collaborative practice.

Interprofessional Education and the COVID-19 Pandemic

Before COVID-19 pandemic lockdowns were enforced, interprofessional education as part of midwifery education was undertaken primarily utilising face-to-face methods (Luyben et al, 2020; Sy et al, 2022b). The pandemic necessitated the closure of universities due to national lockdowns, leading to rapid and significant changes in education delivery and assessment (Furuta, 2020; McLarnon et al, 2022). The delivery of the curriculum required a rapid pivot to digitalised curricula, underpinned by theoretically informed pedagogical approaches and teaching methods (Sy et al, 2022b, Wetzlmair et al, 2021).

Bromage et al's (2010) treatise on interprofessional e-learning and collaborative work showcased a wide range of UK and international developments, and other papers have discussed the role of technology in enabling interprofessional learning prior to the pandemic (Pulman et al., 2009). Therefore, whilst the use of digital technology in interprofessional education is not new and has been previously advocated by the World Health Organization (2010) as an effective means of delivering interprofessional education, the scale and speed of the move to emergency remote teaching in the pandemic was unprecedented and prompted a global movement.

Drivers for Interprofessional Collaboration in Midwifery Practice

The importance of interprofessional collaboration to improve maternity teamworking and maternal and neonatal outcomes is emphasised in several national reports (Kirkup, 2015; Cumberlege's National Maternity Review, 2016; Ockenden, 2022). The recent Ockenden report identifies failures in leadership, teamwork and not listening to service users (Vize, 2022) as contributory factors in poor midwifery practice; leading to stipulations for interprofessional education and the development of associated professional identity, collaboration, and communication skills, in the drive to enhance patient safety (Sy et al., 2022b). Further theoretically informed research is needed to identify the most appropriate blends of relationally oriented service user involvement and partnership working to achieve optimum outcomes for interprofessional learning and midwifery education. This recommendation is even more pressing in UK midwifery practice, following repeated calls for partnership working and interprofessional learning for training maternity teams. Furthermore, the World Health Organization (2022) recently published a Global Competency and Outcomes Framework for Universal Health Coverage, which identifies collaboration as a core competency, further calling for interprofessional collaboration to improve quality of care.

Throughout the series, reference is made to the centrality of the relationship between higher education institutions and professional statutory regulatory bodies (PSRB) in the delivery of midwifery education. This relationship is key in the determination of standards, expected levels of competence and proficiency in key areas of practice to improve clinical outcomes for service users. Midwives, at the point of registration, are expected to work interprofessionally in pursuit of high-quality care (NMC, 2019) to optimise maternal and neonatal outcomes. The expectation of being interprofessional is mirrored across the range of professional regulators such as the General Medical Council (2014, 2016) and the Health and Care Professions Council (2016, 2017). Therefore, the promotion of a culture of interprofessionalism is clear across the health and social care landscape. However, it should be noted that each profession undertakes different educational programmes aligned to their speciality and finding ways for professions to learn together can be complex to organise. No matter when or how interprofessional education initiatives are delivered, their importance and centrality to contemporary curricula have never been stronger; this was reinforced in the emergency standards for midwifery education published at the beginning of the pandemic when interprofessional education was not removed from midwifery programmes (NMC, 2020).

Park (2022, p.264) notes that interprofessional education aligns PSRB requirements with legislation, workplace demands, educational strategies, research, and evidence-based practice, 'bridging the

liminal space between practice and theory'. Therefore, interprofessional education is recognised as a key educational approach in improving collaboration, teamwork and learning within health and social care practice and the promotion of safe, high-quality, and holistic care. The pandemic has simultaneously emphasised the fundamental need to work and learn effectively with, from and about other colleagues; whilst forcing redesign and evaluation of the educational pedagogies and technologies which facilitate interprofessional education which the IPE series explores.

The IPE Publication Series

The first article in the series considers the historical context of interprofessional education, providing an overview of the impact of the pandemic, considering Edelbring's (2010) threefold framework of learning from, with, and about technology, and the NMC emergency standards introduced to maintain education during the pandemic (Power et al, 2021). The second paper is informed by the application of core learning design principles (the 3Ps: presage, process, product) focusing on the process, design, and delivery of interprofessional education, and the international case studies included suggest that enablers of emergency remote teaching for interprofessional education outweigh the barriers encountered (Wetzlmair et al, 2021). The concepts 'interprofessional education' and 'emergency remote teaching' are explored in the first two papers, comparing online learning with emergency remote teaching in the context of interprofessional education (Power et al, 2021; Wetzlmair et al, 2021). Box 1 provides definitions used throughout the publication series.

Box 1. Definitions

Interprofessional Education (IPE)
Defined by CAIPE, 'interprofessional education are occasions when members or students of two or more professions learn with, from, and about each other to improve collaboration and the quality of care and services" (CAIPE, 2016, p.1).

Emergency Remote Teaching (ERT)
Defined as 'an unexpected, planned move from face-to-face education to online provision, where learning activities designed to be delivered face-to-face are quickly adapted to be delivered in an online environment' (Sy et al, 2022b, p.48).

In addition, the series considers the radical shift in the delivery of interprofessional education and associated opportunities and challenges from the experiences of students (Sy et al, 2022b), academics (Power et al, 2022) and service users as partners in education design and delivery (Coleman et al, 2023). The influence on assessment for interprofessional learning (McLarnon et al, 2022) and practice-based learning (Hutchings et al, 2022) are also explored. Table 1 below summarises key messages from all papers in the series and can be used as a guide to inform future interprofessional education.

Table 1. Series Summary

PAPER	KEY POINTS
Paper 1 Power et al. (2021) Learning in lockdown: exploring the impact of COVID-19 on interprofessional education.	Regulated standards for health professional education mandated that interprofessional learning had to continue throughout the pandemic and this impacted IPE provision.
	Globally, IPE provision was adapted using technology to enable students to learn with, from, and about different professions online.
	Learning with technology promotes students' and academics' interprofessional learning.
Paper 2 Wetzlmair et al. (2021)	The 3P model of teaching and learning - presage, process, and product – can be used to develop IPE and reflect on provision in the pandemic.

The impact of COVID-19 on the delivery of interprofessional education: It's not all bad news.	Enablers of emergency remote teaching for IPE, such as flexible participation for students and facilitators, outweigh the barriers encountered, such as reduced sustainability with virtual encounters.
	If interprofessional education continues to be offered online or as a hybrid model, evaluation and assessments of the attained learning outcomes are warranted.
Paper 3 Sy et al. (2022b) Emergency remote teaching for interprofessional education during COVID-19: student experiences.	In midwifery education interprofessional education remains a constant subject to learn, in-person or online.
	Enablers and barriers of emergency remote teaching and learning must be intentionally recognised to sustain the commitment towards the transformative impact of interprofessional education.
	Considering digital equity amongst students is crucial in ensuring the sustainability and equitability of interprofessional learning across health sciences curricula.
Paper 4 Power et al. (2022) Academics' experiences of online interprofessional education in response to COVID-19.	To meet professional statutory and regulatory body requirements for registration, academics had to quickly adapt to convert interprofessional education to virtual platforms during COVID-19 lockdowns.
	Reflection is a fundamental professional responsibility for all registered professionals, including health and social care academics, to enhance knowledge and skills.
	Online interprofessional education needs robust technical infrastructure, competent confident facilitators, and proactive students with access to technology.
Paper 5 Hutchings et al. (2022) Practice-based-learning and the impacts of COVID-19: doing it for real?	Experiential practice-based learning through team working and collaboration in situated and relational practice contexts, prepares learners for professional roles and interprofessional working in health and social care.
	Technological advances in simulation and virtual platforms provide opportunities for authentic practice facilitating diverse interprofessional practice-based learning encounters within and outside the workplace.
	Providing, expanding, and sustaining placement provision with all its curricular, logistical, and resourcing challenges, calls for critical re-examination of what is, and is not, 'practice-based'.
Paper 6 McLarnon N et al. (2022) Rethinking assessment for interprofessional learning during the COVID-19 era: steering a middle course.	Currently, there is a lack of consensus regarding optimal strategies to guide assessment of interprofessional learning.
	Assessment must be constructively aligned with interprofessional competencies e.g., roles and responsibilities, values, communication, collaboration and co-ordination, collaborative decision making, reflexivity and teamwork.
	Online environments offer opportunities to re-examine & reimagine assessment of interprofessional learning, including assessing higher order thinking and practical skills.
Paper 7 Coleman et al. (2023) Service user and carer involvement in online interprofessional learning during the COVID-19 pandemic.	For interprofessional education to thrive and develop we must involve and listen to the voices of service users, and for midwives this involves listening to women.
	Involving women in the design, delivery, and assessment of interprofessional education within obstetrics and midwifery may promote a compassionate and more effective workforce.
	Working online offers solutions for involving women and their partners but also presents challenges.

Lessons Learned from the Pandemic

As we move forward into the post pandemic era it is essential that educators utilise the insights and knowledge gained from midwifery practice and emergency remote teaching to enhance interprofessional educational provision for future midwives and other healthcare professions.

Lessons Learned from Midwifery Practice

To relate the impact of the COVID-19 pandemic on midwifery education and interprofessional education, midwifery practice must also be considered. A case study is used in Box 2 to provide an example of how maternity services adapted to the social distancing restrictions imposed by the pandemic. When exploring interprofessional education and collaborative practice, service users must be at the centre, and evidence suggests that there is currently a dearth of service user engagement in

education (Sy et al., 2022a); therefore, case studies are useful to consider service users' experiences within education.

Box 2. Case Study from an East Midlands Maternity Unit

The maternity unit reduced face-to-face contacts with women and their families during the pandemic. For example, antenatal physical contacts were reduced with the introduction of telephone booking appointments supplemented with 30-minute face-to-face booking completion appointments to perform height, weight, BMI (Body Mass Index), blood pressure, bloods tests and to send off a mid-stream urine sample. In terms of education, to offer an alternative to 'Preparation for Birth' classes usually delivered by midwives, parents were signposted to an external website offering courses and resources for a fee.

During the pandemic, first day postnatal visits were only conducted at home for 'high risk' service users, with additional measures (such as restricting it to mother and baby in the room, windows open, surgical mask, apron and gloves worn) being implemented to reduce the risk of infection. All other first day appointments were by telephone which had limitations as midwives could not assess the home environment, safe sleeping, or pet safety in person.

Further postnatal care included a telephone contact on Day 3 to assess feeding (which meant the newborn was not weighed as per pre-COVID practices). On Day 5, appointments were given to attend a community clinic for newborn blood spot screening NBSS (only one parent was allowed to attend and asked to wait in the car in the car park to be telephoned to enter the building). If this was the father (some mothers find it difficult to witness the NBSS), this meant the mother missed the opportunity for a face-to-face postnatal examination. From Day 10 onwards, discharges were completed via telephone.

Emerging from the pandemic 'Preparation for Birth' classes have resumed in person. Staff members who were required to shield at the height of the pandemic were supported to work from home completing telephone consultation, some of whom continue to work from home to undertake telephone bookings. This has several benefits, one of which being it enables high risk women to be "triaged" sooner. The 30-minute booking completion appointments are still required for this group; however, logistically there is a positive net effect as three women can now been 'seen' in the slot that previously would have been occupied by just one face-to-face booking appointment pre-pandemic.

In terms of postnatal care: all postnatal visits have been reinstated as face-to-face appointments which has been seen as a positive, however, due to the significant loss of staff during and post pandemic this has created challenges to achieve continuity of care and subsequently midwives have not yet regained ownership of their own caseloads. The biggest benefit to arise from new ways of working in the pandemic were leaving GP surgeries and moving to community hubs in line with the Better Births Directive. Within these central community hubs is a great sense of camaraderie, and improved support for colleagues and opportunities to learn from each other.

Acknowledgements: With thanks to Victoria Rixon and Clare Dale for the provision of this case study

Experiences in maternity practice illustrated in the case study (Box 2) resonate with some experiences in academia explored in this series, where face-to-face provision was reduced, the potential of remote learning and working was acknowledged, and increased pressure and challenges were experienced by both the workforce and service users. The case study highlights how midwives were working increasingly remotely, and at times in isolation, during in-person appointments; this was the same for academics adhering to lockdown policies and social distancing rules. Opportunities for

interprofessional learning and collaboration for midwives and their colleagues were therefore greatly reduced during the pandemic within education and practice environments.

The fifth recommendation of Cumberlege's (2016) National Maternity Review, Better Births (referred to within the case study), clearly states that 'those who work together should train together'. This should be core to midwifery and obstetric pre-registration training and continue as standard through continuing professional development. This has been recently reinforced in the Ockenden Report (2022) which recommends practitioners train and learn together in practice.

As indicated in the case study, in the current post-pandemic climate where there is a workforce crisis within healthcare, of principle concern is fewer health professionals available to work collaboratively due to staff shortages. These shortages pose wider implications for education beyond interprofessional education provision and midwifery practice. The conundrum presented for future interprofessional education and collaborative practice is to restore the collaborative practices of midwives, to regenerate and strengthen midwifery teams and to balance the use of technology and interprofessional learning in pre and post registration training, whilst working closely with professionals, mothers, families, and their babies.

Lessons Learned from Emergency Remote Teaching

The nature of the pandemic created a period of disruption and liminality in practice and education, and educators were forced to evaluate and rapidly adapt their approaches to move all educational delivery (including IPE) to emergency remote teaching, which was an unforeseen and exceptional situation (Rapanta et al, 2021). For educational institutions which had not invested in or developed extensive use of learning technologies before the pandemic, there was therefore a rapid increase in innovative instructional approaches. The pandemic acted as a catalyst for change and development - it tested the limits of established learning technology systems but also afforded opportunities for engagement with interprofessional education activities for those that may have been precluded previously, for example, through geographical constraints (Bennie et al, 2022). As a result, higher education institutions offered different mixes of technology-enhanced learning for their interprofessional education provision, and innovations included using virtual learning environments to deliver elements of content, to facilitate online communication, collaboration, and assessment tasks, such as virtual wards, online quizzes, e-portfolios, group blogs and wikis (Park and Holland, 2022; Power et al, 2021; Wetzlmair et al, 2021, McLarnon et al, 2022).

Advantages of Emergency Remote Teaching	Emergency remote teaching and assessment during the COVID-19 pandemic afforded educators the opportunity to further develop student and staff digital capabilities and overcome some of the known logistical challenges of interprofessional education in terms of timetabling and geography (Evans et al, 2019; Power et al, 2022). Furthermore, digital literacy is deemed an essential skill and recent policy highlights the role of digital technologies in enhancing wellbeing and health care provision within health and social care (Topol, 2019; Scottish Government and COSLA, 2021).
Challenges with Emergency Remote Teaching	Nevertheless, challenges regarding technology enhanced learning should be acknowledged. Technical difficulties and lack of student engagement and interaction in asynchronous and synchronous online learning environments (Pulman et al, 2009; Evans et al, 2019; Riskiyana, 2021) can hinder a positive learning experience for both students and educators. Additionally, poor digital capabilities can introduce inequalities in online interprofessional learning environments and negatively impact the delivery of interprofessional education objectives and successful attainment of learning outcomes (Riskiyana, 2021). When considering midwifery education provision during the pandemic, some staff and students struggled with

	online provision due to poor digital capabilities and access to technology (Luyben et al, 2020).

Online provision of interprofessional education and assessment has been shown to be an effective method of enabling students to learn and demonstrate achievement of interprofessional education related learning outcomes (McLarnon et al, 2022; Power et al, 2022). While the pivot accelerated the advancement of technology enhanced learning, there is still limited evaluation as to its use in the delivery of interprofessional education during the pandemic. The articles in this series highlight some of the opportunities and challenges encountered. It is clear, that while online provision of interprofessional education helps overcome some of the known logistical challenges with delivery, it presents others in terms of equitable access. It is essential going forward, that educators have appropriate training and support in place to develop digital capability to design online curricula. Module teams must consider student digital capabilities and appropriate access to technology to ensure inclusion and fair access for all.

Future Delivery and Sustainability of Interprofessional Education and Collaborative Practice

Now that the emergency nature of remote delivery has abated, this has meant a return to some pre-pandemic interprofessional education practices and approaches in the delivery of interprofessional education, but has also offered opportunities to reflect and capitalise on the learning and innovation gained during this period (Khalili et al. 2022; Park, 2022). We continue to live with COVID-19 whilst concurrently planning for a new post Covid era, and this requires all stakeholders involved in interprofessional education delivery to work creatively and collaboratively to ensure its sustainability. Many of the challenges faced in the ongoing delivery and enhancement of interprofessional education will be centred around the continuing pressures on practice-based learning capacity (Hutchings et al, 2022). Researchers, academic institutions, health and social care organisations, corporations and governments must work together to provide sufficient solutions to the problems created by the global pandemic experience. For policymakers in various nations, including those in Europe and the rest of the world, online learning and emergency remote teaching should continue to be evaluated. Lessons from the pandemic will allow us to identify challenges and solutions for policymakers, so they can address some of the challenges encountered (Ferri et al, 2020).

Co-creating Education and Partnership Working with Mothers and Families

Partnership working is a policy directive for improving care delivery and is fundamental to patient-centred team working (Department of Health and Social Care, 2021). Midwives are expected to develop respectful relationships with mothers, listening to their concerns and considering their preferences. These relationships extend to partners and their families and involve all members of the interprofessional and interdisciplinary team. Learning how to develop and value partnership working starts in training and continues throughout the professional's career; therefore, educators are expected to involve mothers in teaching design and delivery. Shared understandings result in women's care needs being met and service user involvement in education has been shown to develop expansive learning and mother's insights hold the key to advancing high quality interprofessional care (Renfrew et al, 2014). In this way, mothers can share their lived experiences in the hope that new learning results, which has the potential to be translated into shaping high quality care. The aspiration in midwifery education to represent service user experiences to inform curricula development can also be achieved through research on maternity and midwifery care, which can inform the education and training of health care professionals.

Moving forward, it is important that when we innovate or adapt our practices—in teaching, learning, service delivery, research, and policy development—we intentionally involve service users and the people who will benefit directly or indirectly from interprofessional education from the beginning until the end of the co-creation process (Sy et al, 2022a) and in article 7 experiences of service user

involvement in IPE are explored further (Coleman et al, 2023). Additionally, within this paper exploring service user experiences, we co-wrote it with a mother who joined the writing team of health and social care professional academics. Through sharing her story and reflections about joining a carer group online and her experiences about teaching online and face-to-face, this is an example of interprofessional collaboration in action, where a service user provided equal and valuable contributions towards improving health service delivery (Coleman et al, 2023). The mother's experience showed that online teaching methods can be beneficial for mothers with babies as this removes the barriers of travel with small children, and involving service users requires work to develop safe, supportive relationships with women who feel able to share their stories.

Storytelling and Partnership Working with Mothers and Families

Designing opportunities where learners and educators can learn with, from and about service users, mothers, and their families, and witness the lived experiences of patients and carers through authentic interactions is a vital component in interprofessional and midwifery education (Coleman et al., 2023). UK policy drivers have recommended service user involvement as central to increased quality and safety and learning how to improve care delivery in the National Health Service (NHS) (Francis, 2013). Service user involvement through storytelling and partnership working can help to address these policy drivers. However, there remains diversity in the service user role within healthcare education (Towle et al, 2010; Towle and Godolphin, 2011), and Bennett-Weston et al. (2022) emphasise the need for improved clarity about service user partnerships in the academic community.

Despite the challenges of partnership working in healthcare education, there is evidence that sharing service user stories have been embraced in healthcare and midwifery education, and that storytelling can be influential in shaping the lifeworld experiences of students (Pulman et al, 2012; Taylor and Hutchings, 2012). Service user involvement and storytelling, when grounded in psychosocial and philosophical perspectives, can contribute to the development of embodied relational understanding for humanising healthcare and improving midwifery practice (Todres, 2008; Johnson, 2015). Within article 7, the story of a mother whose baby needed intensive care and subsequent life-long support was shared and deeper understandings were found when students were with mothers in person (Coleman et al, 2023).

Bennett-Weston et al. (2023) have argued that much of interprofessional education and service user involvement remains a-theoretical. This is an area ripe for further consideration, offering opportunities for midwives to conduct further theoretically underpinned research on the benefits for learning where the education design is focused on working in partnership with mothers.

Underpinning Interprofessional Education with Theory

Online learning can provide students with more flexible access to interprofessional education, enabling opportunities to study and learn remotely using virtual learning environments and video communication platforms, which can be less constrained by space and time. The interprofessional education curriculum can embrace these opportunities by continuing to embed pedagogy with digitalisation, informed by active experiential learning design principles (Dewey, 1938; Kolb, 1984), which seek to demonstrate constructive alignment between learning strategies, learning activities and assessment (Biggs and Tang, 2011; Hutchings et al, 2022; McLarnon et al, 2022).

This series has explored a wide variety of initiatives and experiences for stakeholders to draw on, demonstrating that one size does not fit all, within and beyond the period of disruption created by the pandemic. Prior to the pandemic, strategic change and decision-making, underpinned by a shared vision and interprofessional culture and steered by favourable leadership and sound pedagogic principles were at the heart of securing effective interprofessional education in higher education and

clinical practice settings. The recommendation to design interprofessional learning encounters of varying duration within a framework guided by the 3P model of teaching and learning (presage, process, and product) (Biggs, 1993), applied to the context of interprofessional education by Freeth and Reeves (2004), and demonstrated at work in this series by Wetzlmair et al. (2021), holds true as we emerge from the pandemic.

The 3P model facilitates consideration of the benefits of online and blended approaches for interprofessional education, weighed against barriers to engagement. Presage factors associated with the different contexts for interprofessional education, with its time, space, logistical and resourcing constraints, need to be considered in association with recognition and management of students' and facilitators' characteristics and resources to secure adequate levels of preparedness and digital literacy capabilities for students and educators alike. Education institutions and educators must be cognisant of the training and support infrastructure required to mitigate technical issues and internet connectivity, which can impact student satisfaction and educator confidence and impede progress.

Disseminating Interprofessional Education Knowledge and Research

As we emerge from the pandemic, it is important that knowledge and information continue to be shared in various ways, including through less traditional dissemination. This will give practitioners easier access to the latest evidence-based information about how interprofessional education competencies can be applied across midwifery practice. For instance, the use of podcasts, vlogs, blogs, live streaming, social media, and webinars to disseminate interprofessional education information are sustainable resources that midwives could use to learn more about interprofessional education and apply its principles to their practice. Doing so can allow the integration of reflective practice (Power et al. 2022), which is important for personal and professional growth. Examples of innovative international dissemination from our CAIPE Research Subgroup are available via YouTube (https://www.youtube.com/@interprofessionalglobal611) where two virtual international presentations were delivered at Interprofessional.Global and via the Interprofessional Research.Global website where key findings from the first paper were converted into an IPR.Global Pearl which is an infographic of key points that is shared over social media platforms (https://interprofessionalresearch.global/blog/).

Translating Interprofessional Education Curricula into the Practice Environment

The question of how midwifery educators, practitioners and regulators can address the situatedness of interprofessional education remains a conundrum. The NMC (2022, p.7) confirm in current recovery programme standards that 'practice learning in direct contact with healthy or ill people and communities in audited practice learning placements is considered optimal'. Yet continuing pressures on practice-based learning capacity, together with changes in clinical practice such as telehealth and video consultations (Penny et al., 2018), challenge the locus of practice for achieving optimal levels of clinical practice experience required by professional and regulatory bodies.

Moving forward, the experiences and changes wrought by the COVID-19 pandemic call for critical re-examination and further research into what can be recognised as interprofessional practice-based learning. Simulation offers an interprofessional educational opportunity to promote effective collaboration between students, this could include for example experiencing obstetric or neonatal emergencies such as newborn resuscitation or PRactical Obstetric Multi-Professional Training (PROMPT) (Renwick et al., 2021), and simulation may also help to prepare midwives and obstetricians to collaborate, particularly taking into consideration that the two professions may work together infrequently and only within specific clinical contexts. The argument of Jarvis et al (2003) that every experience is "real," even though it may be indirect or mediated, lends credence to the potential for building on the simulation initiatives and adaptations identified in this series (Hutchings et al, 2022); preparing the way for designing and researching further creative and innovative approaches for

interprofessional service user and family-focused case-based practice learning, which can take place outside the clinical setting.

Considering National and International Policy

The call for effective interprofessional education continues to be propelled by failures in team working (Ockenden, 2022). This emphasis for more post-qualified, practice-based interprofessional education cascades into pre-registration learning. Current policy expects higher education institutions to align themselves with practice so that future practitioners emerge ready and prepared to serve the needs of the communities where they will work (World Health Organization, 2022).

CAIPE works to advance interprofessional education and collaborative practice and in so doing seeks to influence health and social care policy. In a recent survey of members and stakeholders a new CAIPE strategy for 2022-2027 confirms the scholarly work required to advance interprofessional education and collaborative practice. The CAIPE strategy is cognisant of changes within the UK NHS systems where integrated care requires effective teamworking and collaborative practice, placing service users at the centre of service design and delivery of care (NHS England, 2020; CAIPE, 2022).

Key Considerations and Recommendations

Throughout the series of articles, through analysis of literature, case studies and shared reflections, our findings can inform future interprofessional education and collaborative practice. Key considerations and recommendations for midwifery from the IPE series are summarised in Box 3 to further advance the field of interprofessional education and collaborative practice.

Box 3. Recommendations for Midwifery Educators, Clinicians, and Researchers.

- Emerging from the pandemic, adapted IPE needs to be evaluated to inform future provision.
- Enablers and barriers of emergency remote teaching and learning must be recognised to sustain the commitment towards the transformative impact of IPE.
- Digital equity amongst students must be ensured with access to technology and digital literacy.
- Case studies can be used as a unique and rich data source to explore and advance IPE.
- Online IPE needs robust technical infrastructure, competent confident facilitators, and proactive students with access to technology: educators require appropriate training and support to develop digital capability to design online curricula.
- Research is needed to explore interprofessional practice-based learning and assessment of interprofessional learning, including assessing higher order thinking and practical skills.
- Further theoretically informed research is needed to identify the most appropriate blends of relationally oriented service user involvement and partnership working to achieve optimum outcomes for interprofessional learning and midwifery education.
- When exploring interprofessional education and collaborative practice, service users must be at the centre and education should be co-created with mothers and families.
- Storytelling can be used to work in partnership with service users and others.
- IPE should be underpinned by theory and pedagogy should be embedded with digitalisation.
- IPE knowledge and research should be disseminated in diverse and accessible ways.
- IPE curricula needs to be translated into practice.
- Simulation should be explored further for its potential as an IPE opportunity to promote effective collaboration between students.
- The health and social care workforce need to train together to be able to effectively work and learn with, from and about each other to provide safe, high-quality care.
- National and international policy should inform and be informed by IPE.

- Researchers, academic institutions, health and social care organisations, corporations and governments must work together to provide sufficient solutions to the problems created by the global pandemic experience.

Conclusion

There is global consensus that the health and social care workforce need to be able to effectively work and learn with, from and about each other to provide safe, high-quality care. Our series has captured the wide-ranging impact of the COVID-19 pandemic on the delivery of interprofessional education, in the pursuit of achieving a collaborative ready workforce. The pandemic has presented an opportunity to reimagine team working and collaborative practice, offering adaptability and creativity for interprofessional education while preparing health and social care students for future technological advances. As we emerge from the pandemic, it is essential that we take stock of the lessons learned during this challenging time and use them to inform future interprofessional education provision and collaborative practice.

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