Providing interprofessional education for pre and post-registration nurses

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Why you should read this article: ● To increase your awareness of interprofessional education ● To assist you in enhancing the quality of patient care through collaborative working ● To enhance your knowledge of the use of simulation to replicate clinical scenarios in a safe educational environment

Any patient receiving care may be seen by a variety of health and social care professionals, irrespective of the specialism in which they are receiving care. A patient admitted to hospital might be cared for collaboratively by various professions at different stages of their inpatient stay, for example nurses, doctors, occupational health staff and/or physiotherapists. Similarly, patients might require provisions such as take-home medicines or mobility equipment to ensure that care continues at home and require ongoing review and support from community teams or specialist services, for example district or tissue viability nurses.

In these scenarios it is important to consider how the various health and social care professions can work together to provide high-quality patient care. However, Olson and Bialocerkowski (2014) identified that patients often described a disjointed experience of healthcare, and of 'falling through the cracks' as a result of inadequate collaboration and communication between the healthcare professionals involved in their care. Collaboration between healthcare professionals is often promoted at universities and other higher education institutions through interprofessional education (IPE). In addition, many preregistration health and social care professionals will have engaged with IPE throughout their university courses, as well as taking part in simulated interprofessional working, a technique intended to embed IPE in their future clinical practice (Whiting et al 2016). IPE is defined as the process by which students from two or more professional disciplines learn with, from and about each other to improve collaboration and the quality of care (Barr and Low 2013).

The concept of IPE emerged a few decades ago when the World Health Organization (WHO) (1988) promoted interprofessional learning as a method of supporting effective interprofessional working and improved competence among healthcare professionals. Later, high-profile cases of neglect and suboptimal practice identified the importance of interprofessional working in improving standards of care (Laming 2003, Francis 2013). There have been subsequent calls for IPE to be delivered in classrooms, simulation environments and clinical settings, with a growing number of policymakers regarding IPE as an approach that can address barriers to staff collaboration (Sundberg et al 2019). Also, interprofessional working is a theme in the standards of proficiency for registered nurses in the UK (Nursing and Midwifery Council 2018). IPE is delivered in pre and post-registration healthcare education globally, although many different approaches are used (Sundberg et al 2019).

Interprofessional Education:

IPE aims to develop an awareness of, and respect for, the roles of other professional groups. Its goal is to prepare healthcare professionals for increased collaboration and communication (Derbyshire and Machin 2011), as opposed to developing a workforce where staff work in isolation (Bennett et al 2011). Collaborative practice is seen as vital to the optimal functioning of healthcare services by reducing adverse incidents and healthcare costs; improving efficiency, patient safety and provider satisfaction; and leading to improved health outcomes (Paradis and Whitehead 2015).

The WHO (2010) identified that effective IPE will enable healthcare professionals to become part of a 'collaborative practice-ready health workforce'. It stated that if learners understand how to work interprofessionally, the resulting collaboration will strengthen the healthcare system and lead to improved healthcare outcomes for patients. Poore et al (2014) found that if healthcare professionals are educated in silos with little interaction with each other, this can lead to role uncertainty and a lack of appreciation of the contribution of other professions. This might mean that patients would be less likely to be referred to specialist services, for example, or that healthcare professionals might not seek advice outside of their immediate team when planning care. This presents a risk that patient care could be compartmentalised rather than viewed holistically.

Drivers of IPE:

One of the primary reasons for introducing IPE is to improve the quality and safety of patient care through improved collaborative working across various professions. This is often undertaken in response to calls from the government (Hammick et all, 2007) and could be referred to as a top down driver. Top-down drivers relate to government policy or organisational, professional or public requirements, for example the need to reduce adverse incidents and improve collaborative working. Conversely, 'bottom-up' drivers refer to work undertaken at a 'grassroots' level to incorporate IPE into staff education. This is often undertaken by champions of individual initiatives; for example, small-scale service improvements involving collaboration with other members of a multidisciplinary team or service users. Reeves et al (2016) stated that IPE continues to develop in the UK, due to ongoing policy drives that aim to improve patient care and services through interprofessional working. Table 1 outlines some of the policy documents that have driven IPE.

Delivering IPE:

During IPE, students engage in activities that assist them in learning about other professional roles and teamwork, as well as the benefits of 'flatter' hierarchies and increased communication. Lapkin et al (2011) found that if collaborative working was only taught in profession specific groups, there was a limit to how well students could be equipped with the knowledge, skills and attitudes required for interprofessional collaboration in a complex workforce. Lapkin et al (2011) emphasised that IPE enables learners to understand each other's roles and responsibilities, but also to value the unique contributions that each profession can make to an individual's care experience.

IPE can be delivered in both pre and post-registration educational settings. However, while IPE forms part of many preregistration healthcare courses across the UK and internationally, studies have found that the concept does not always make the transition to post-registration education (Traynor

et al 2016). This may be because research into the post registration effects of IPE have been limited, which has been identified as an area requiring further investigation (Traynor et al 2016).

Derbyshire and Machin examined the perceptions of newly qualified nurses who had undertaken IPE during their courses and found that they were more aware of the benefits of IPE after graduating than while studying at university; this was because once qualified they were practising interprofessional working each day and were able to identify the practical applications of their learning.

Methods of delivery:

Barr and Low (2013) suggested that IPE may be introduced pre or post-registration, but advocated a flexible approach rather than providing a precise prescription of how healthcare educators should implement and deliver IPE. Grover et al (2016) supported this and suggested a variety of IPE delivery methods such as didactic teaching, experiential learning, low and high-fidelity simulation, problem-based scenarios, and volunteering and community-based practice. IPE may be delivered in the classroom or in the workplace. Barr and Low (2013) provided recommendations for effective preregistration IPE delivery, which are listed in Box 1. Olson and Bialocerkowski (2014) stated that the characteristics of individual learners – such as their social, economic and cultural backgrounds, as well as their expectations, attitudes and stereotypical views – vary considerably within healthcare and can influence learners' experience of IPE as well as their learning outcomes. Therefore, IPE activities that may be effective in one organisation may not have the same effect in another. However, examples of IPE activities include:

- Low-to-high-fidelity simulated scenarios, where participants simulate their professional role, for example scenarios that demonstrate the care of a complex or deteriorating patient.
- Attendance at multi-professional meetings or conferences.
- Team-building activities.
- Group 'ice-breakers', for example asking learners in a group scenario to name their five favourite items, or five characteristics they all have in common.
- Ethical scenarios that enable learners to discuss their professional values.
- Creative tasks, such as dividing learners into teams and asking them to develop a poster or song about their professional role to present to the group.

IPE activities can be designed to be 'fun' and simple to flatten any hierarchy within a group of learners. Equally, activities can be increasingly practice based, enabling the team to develop an enabling the team to develop an understanding of each other as individuals and collectively as a group of related professionals.

The use of simulation in IPE to replicate clinical scenarios in a safe environment is an effective teaching strategy for improving technical skills such as recording and identifying vital signs, as well as non-technical skills such as team work and communication. Simulation has also been found to improve patient safety and reduce the number of errors (Poore, 2014). One example of low fidelity simulation in IPE is where the facilitator takes the role of a patient and the learners are asked to consider management options; a high fidelity simulation might involve sophisticated technology

such as virtual reality or a manikin used to replicate a patient's vital signs and mimic simple communication (Kirkham 2018).

In their study of a group of newly qualified adult nurses, Derbyshire and Machin (2011) found that the professional mix within any IPE session should be considered because the absence of other professions that learners perceive to be pivotal to their role might lead them to question the relevance of the session. The researchers also found that learners felt it was relevant to include a mix of professions, even including those studying in other educational centres, such as medical students, because this gave the learners a realistic world view. This is important because Derbyshire and Machin's (2011) study also identified that other professions were often present in clinical practice situations but absent from IPE. However, Barr and Low (2013) identified the risk of using 'trial and error' when planning and designing IPE curricula, as this can often lead to doubts as to the meaning or purpose of IPE delivery. Therefore, it is important to consider the learning outcomes of any education programme, because achieving these may not require IPE, but instead could be achieved by teaching a single professional group or via distance learning.

Assessing outcomes:

When delivering IPE, it can be useful to use an assessment tool to measure the effect on learners and to assess whether the desired learning outcomes have been met. There are more than 40 assessment tools available to measure interprofessional collaboration as an outcome of IPE. However, these often focus on one professional group, such as nursing. Also, the variety of approaches can make it challenging to identify a single assessment tool that is suitable for all requirements (Kenaszchuk et al 2010, Shrader et al 2017). The range of approaches can also make it challenging to accurately assess the effect of IPE on patient experience (Orchard et al 2012).

Models that measure outcomes of IPE, such as those designed by Freeth et al (2002), Barr et al (2005) and Graybill et al (2017), have been modified from the fourlevel training evaluation model (Kirkpatrick and Kirkpatrick 2014). This model demonstrates that rather than IPE being an end-goal in itself, the required outcomes of IPE include changes to the learners' attitudes and behaviours that increase collaboration and alter the way in which teams work. The four-level training evaluation model is shown in table 2. This is not a hierarchical model and all outcomes are considered equally valid.

Challenges to implementing IPE:

It is important to consider the challenges to implementing IPE so that educators can manage any potential barriers. Hammick et al (2007) undertook a systematic review of IPE, which has since been updated by Reeves et al (2016). Reeves et al (2016) identified three categories into which barriers to IPE implementation can be classified:

- **Presage:** refers to the context of IPE delivery such as the political climate, drivers, learner numbers, logistics, curriculum demands, management support, and input from stakeholders.

- Process – considers approaches to learning such as facilitation style, the educational theories that underpin delivery, assessment and whether to use uniprofessional, multi-professional, interprofessional or distance learning for each activity.
- Product – refers to learners' collaborative competencies such as knowledge, skills and attitude development, and the effect of these on patient care.

A review of the existing literature focusing on barriers and enablers to IPE was also undertaken by Lawlis et al (2014), who concluded that barriers to implementing IPE may be governmental and professional, institutional or individual. These can include financial resources, organisational changes, limited development initiatives, course logistics such as scheduling, differing degree calendars and course duration, curriculum demands and various assessment values.

Other logistical issues were identified in a study by Lapkin et al (2011), who reconised that most IPE delivery is classroom based, despite a significant proportion of healthcare education being clinically focused. The researchers recommended that classroom based IPE needs to be consolidated by opportunities for IPE during clinical practice. Derbyshire and Machin (2011) stated that there is ambiguity concerning the optimal strategies for delivering IPE, in particular the most appropriate methodology , the optimal location and ideal timing of delivery.

A study by Barwell et al (2013) found that, although there were many perceived benefits to IPE, some drawbacks had been identified in feedback from learners. These included: increased demands on academic and clinical staff; logistical issues with incorporating IPE into full academic timetables, particularly because these may not be synchronised between professions; challenges in ensuring full group participation; and uncertainty over whether discussion-based learning is the optimal method for all learners.

Reeves et al (2016) concluded that high-quality facilitator support is vital to the effectiveness of IPE delivery because facilitators are able to ensure a non-threatening and safe learning environment that is conducive to learning, as well as ensuring that all learners feel equally valued and empowered. Reeves et al (2016) also noted the importance of training and development for facilitators because this would provide them with the necessary understanding of the educational theories that underpin IPE, as well as knowledge of social learning theory and the development of ethical and reflective practitioners. This knowledge would enable facilitators to support learners to set realistic, achievable goals; motivate learners; manage interactions such as conflict; and support equal participation among groups. Reeves et al (2016) recognised how pre-existing professional stereotypes and hierarchies could influence the effectiveness of IPE delivery. For example, a nurse may have developed a perception of a fellow professional that they had previously worked with, and which might influence their opinion of a whole professional group. While Reeves et al (2016) found that attitudes to other professional groups were generally positive before learners participated in IPE, perceptions of collaboration in practice were sometimes idealistic. While Reeves et al (2016) found little difference in attitudes to IPE between genders, Wilhelmsson et al (2011) found that female medical students tended to have a more positive attitude to IPE than male medical students. Wilhelmsson et al (2011) also found evidence of preexisting stereotypes about other professions among medical students, although it could be argued that neither positive nor negative stereotypes were reinforced by undertaking IPE.

Derbyshire and Machin (2011) found that some newly qualified nurses did not appreciate the relevance of their training until they had gained experience as a registered nurse and acknowledged that it would be useful to undergo post-registration IPE. Participants stated that practice-based IPE might be more likely than classroom-based IPE to improve their learning because they would experience a greater mix of healthcare professionals and be able to draw on this experience when caring for patients as part of an interprofessional team. Derbyshire and Machin's (2011) results indicated a need for healthcare organisations to develop practice-based IPE opportunities and to ensure that IPE materials reflect the reality of the clinical setting. This was supported by Lawlis et al (2014), who found that a lack of understanding of IPE, coupled with the differing learning styles of students, were also potential barriers to the delivery of effective IPE.

Healthcare educators' perceptions of IPE may also affect their students' perceptions. For example, Illingworth and Chelvanayagam (2017) stated that facilitators of IPE sessions required 'drive and passion' to maximise the effectiveness of IPE and ensure that it was relevant to clinical practice. This could be demonstrated through the use of simulation or by undertaking IPE sessions alongside a practice-based interprofessional team.

Bennet et al (2011) conducted a study of healthcare educators in Australia, and found that the implementation of IPE involved administrative, resource, structural, intellectual and cultural challenges, all of which could affect the abilities of academic staff to provide IPE. Bennett et al (2011) also identified a lack of leadership and commitment to the ethos of IPE as a barrier to its effective implementation. This was often due to a reluctance to change clinical education practices or implement IPE within organisations.

Other barriers to the implementation of IPE identified by Bennett et al (2011) included:

- Changes to technology, timing, group sizes and assessment, which all required effective leadership to implement and sustain throughout an organisation. For example, while there may be a willingness to incorporate new technologies such as virtual learning and simulation, timetabling and geography can be a barrier to this, particularly since IPE often involves large numbers of individuals.
- High workloads and time limitations on staff delivering IPE.
- A lack of perceived value of IPE.
- The risk of learners being exposed to negative experiences. This may include conflict or disagreement amongst healthcare professionals who regularly care for the same group of patients. For example, a paramedic and mental health nurse may disagree about how to manage an out of hours acute mental health crisis. This can lead students to have a negative perception of other professions during an IPE session.
- Political tensions and management structures that can restrict collaboration.

Lawlis et al (2014) also found that negative attitudes amonst facilitators, a lack of reward combined with the high workload involved in providing IPE, a limited knowldege of other professions and the concept of IPE, and a lack of respect for other professions could all be considered barriers to IPE delivery.

Conclusion:

IPE is a method of professional education that can contribute to the development of a collaborative, practice-ready workforce by including students and staff from various professions in individual learning sessions. IPE can change learners' attitudes towards interprofessional working and increase their knowledge of the role of other professions in the care of patients. This could lead to improved health outcomes and enhanced quality of care for patients.

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