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RESEARCH ARTICLE

Achieving the unachievable: the development of a large-scale interprofessional education workshop for first-year health professional students.

Jacqueline Bloomfield[1], Christie van Diggele[2], Astrid Frotjold[1], Carl Schneider[3], Rosa Howard[4], Christopher Roberts[5], Stuart Lane[6*]

[1]The University of Sydney Susan Wakil School of Nursing and Midwifery, Faculty of Medicine and Health, Sydney, Australia.

[2]Faculty of Medicine and Health, The University of Sydney, Sydney, Australia.

[3]The University of Sydney School of Pharmacy, Faculty of, Medicine and Health, Sydney, Australia.

[4]The University of Sydney School of Medicine, Faculty of, Medicine and Health, Sydney, Australia.

[5]Honorary Professor of Medical Education, The University of, Sydney School of Medicine, Faculty of Medicine and Health, Sydney, Australia.

[6]The University of Sydney Medical School, Head of Intensive, Care Medicine, Sydney Medical School, Australia; Senior Staff Specialist, in Intensive Care Medicine, Nepean Hospital.

[*]stuart.lane@sydney.edu.au

ABSTRACT

The need for interprofessional education within healthcare education is widely accepted, yet healthcare educators continue to grapple with the challenges associated with integrating authentic interprofessional learning activities within curricula. Timetabling conflicts, shortage of teaching spaces, geographical separation, the need for educator training, varying assessment needs, lack of organisational commitment, and suboptimal attitude by faculties towards Interprofessional Education, continue to be identified as barriers making it seemingly unachievable by many.

We describe an introductory Interprofessional Education workshop that was successfully delivered to over 2600 first-year health students across 13 health disciplines at an Australian university, demonstrating how as a team of interprofessional educators we achieved the unachievable, successfully overcoming many of the obstacles to IPE. We outline the importance of authentic learning activities constructively aligned to learning outcomes and assessment, and the necessity of student, early facilitator, and faculty engagement, to overcome logistical and practical challenges. Finally, we discuss the changes to the workshop necessitated COVID-19, and future challenges and directions.

Introduction

Interprofessional education (IPE), occurs when students from two or more professions learn about, from and with each other[1], and is the foundation for future collaborative professional practice in healthcare[2]. IPE is recognised as an essential element of pre-qualification curricula across a diversity of health care disciplines[3], and is increasingly becoming mandated within accreditation standards for health professionals across the world[4]. IPE promotes the development of a dual professional and interprofessional identity, which is necessary for effective and cohesive teamwork and collaborative practice among healthcare professionals from diverse disciplines[5]. This is essential for the provision of safe, high-quality care, and improved patient outcomes[6]. Universities have a responsibility to provide a pedagogically and education that adequately prepares students to work in a cofllaborative context. There is an expectation that educators facilitate meaningful opportunities for interprofessional learning for healthcare students through curriculum development, in both classroom and clinical teaching. However, timetabling conflicts, shortage of teaching spaces, geographical separation, the need for educator training, varying assessment needs, lack of organisational commitment, and suboptimal attitude by faculties towards Interprofessional Education (IPE), continue to be identified as barriers[7], making it seemingly unachievable by many.

Skill acquisition and developing interprofessional socialisation and competency requires reinforcement through educationally sound strategies such as scaffolded learning[8], however IPE has been delivered on an ad-hoc basis with minimal consideration as to when or where it should occur or the formation of professional identity. This approach believed that healthcare students must learn about their own profession before learning about that of others, and therefore IPE is better suited to students nearing the end of their studies[9]. This leads to students being educated in discipline-specific silos with minimal interprofessional exposure and socialisation[10]. There is limited evidence about how when best to prepare healthcare students to work together, although we know that IPE is fundamental for the development of interprofessional socialisation[11]. Exposing healthcare students to IPE at an early stage in their education will enable them to learn about the importance of teamwork for patient care as they develop their professional identity, and subsequently apply this to their future clinical practice[12].

We describe an introductory IPE workshop that was successfully delivered to over 2600 first-year health students from 13 health disciplines at an Australian university, demonstrating how as a team of interprofessional educators we successfully overcoming many of the obstacles to IPE. We outline the importance of authentic, learning activities constructively aligned to learning outcomes and assessment that are informed by relevant theory, and designed to engage learners while maintaining pedagogical integrity[13]. We also discuss the importance of both student engagement strategies and early facilitator and faculty engagement to overcome the logistical challenges needed for successful delivery and sustainability, along with the future challenges and directions. We anticipate that discussing pertinent aspects of

the development and implementation of the large-scale workshop will be helpful for educators when designing and delivering their own IPE activities.

The need for early Interprofessional Education in healthcare degree curricula: the development of a dual identity

Health professional education programs aim to prepare students for practice through the acquisition of the necessary knowledge, skills, attitudes, and professional behaviours, with less focus on students' integration into the health care workforce- their becoming a professional and, subsequently being a professional[14]. A healthcare practitioners' professional identity is developed throughout their life and career with three distinct elements: social or group identity, role identity, and personal identity, which all evolve when healthcare students experience IPE. Evidence suggests that the professional identity of students can be well-formed prior to starting work in the healthcare environment, and even prior to the commencement of the healthcare degree[11]. This can impact their sense of belonging within certain groups, and the ability to simultaneously develop the different aspects of their professional identity. It is, therefore, imperative that healthcare students undergo education about themselves as health professionals and their relationships with their future healthcare colleagues early in their learning, to develop an interprofessional identity[15].

A recent scoping review exploring interprofessional identity raised several concerning findings[14]. Firstly, despite widespread recognition of its importance, there is still no universally accepted definition of interprofessional identity. Secondly, there is no clear understanding of the relationship between interprofessional identity and professional identity. Thirdly, there is poor alignment between definitions, conceptualisations, theories, and measures of interprofessional identity. This knowledge gap indicates the need for more research, meaning the design and delivery of IPE will inevitably continue to evolve. In this discussion we take the view of Brooks and Thistlethwaite that interprofessionality is characterised by 'the transformation in practice which may result from combining and blending specialist knowledge and expertise'[16].

Professional socialisation is critical to the education of students in any healthcare discipline, whereby students become acculturated into the work-based values, norms, beliefs, knowledge, skills, and roles, of the specific profession in which they will qualify[17]. Traditionally delivered using a discipline-specific approach[18], this retains discipline specific knowledge and skills, however, may be detrimental in developing opportunities for interprofessional collaboration. Development of a professional identity through discipline-specific education contributes to professional isolation, leading to feelings of mistrust towards those external to the group, and ultimately ineffective communication, and the reinforcement of traditional stereotypes and misconceptions about different health professions[17]. Collectively these factors represent a risk to patient safety[17]. IPE enables students to identify with their own profession as well as creating a safe place to engage with and gain

insight into other professions' competencies, thereby enriching their professional identity and interprofessional identity, strengthening rather than threatening professional identity[19].

The recent emphasis on the importance of collaborative teamwork for safe patient care has further reinforced the need for healthcare students to develop dual professional and interprofessional identities[20]. Khalili and colleagues developed a three-stage framework to conceptualise the interprofessional socialisation process: Stage One: breaking down barriers, Stage Two: interprofessional role learning and collaboration, Stage Three: dual identity development. It is assumed that as students' progress through each of these stages, they will develop the levels of trust and respect required for interprofessional collaboration and teamwork in the clinical setting[13]. Joynes suggests a move beyond dual identity and proposes that healthcare students need to develop an interprofessional responsibility, as previous conceptualisations of professional identity aligned to a whole profession do not relate to the way in which professionals perceive their identities[21].

In asking students to reflect on their professional identity, it is important to describe our team's position and relationship to IPE. Our team comprises experienced clinicians in both hospital and community settings in nursing, pharmacy, and medicine, as well as a scientist and educationalist. We are experienced educational leaders, with expertise in the delivery of IPE and extensive research experience. We engage in collaboration with others and are strong advocates for the early implementation of IPE and recognised the need to develop and implement an IPE activity that would be delivered to students early in their studies.

Development of the interprofessional introductory workshop and underpinning theory *Rationale*

In 2017, we developed the Interprofessional Introductory Workshop. This was aimed at first-year medicine, nursing, and pharmacy students, and delivered during their first semester. Students were randomly allocated into small mixed disciplinary groups and attended a three-hour face-to-face workshop comprising three activities which focused on teamwork, communication skills and professional roles. It aimed to promote interprofessional collaboration and socialisation by reinforcing the importance of trust. To ensure the engagement of students and faculty, it was imperative that we brought a novel and distinct approach to the IPE learning environment. This was achieved by emphasising the importance of interprofessional socialisation at this early stage in their healthcare education. This was challenging as most students had not been exposed to the healthcare environment in the context of their future profession. We focused on three key pedagogical principles using established teamworking and socialisation theories, optimising student engagement, and ensuring clinical relevance and authenticity of the activities.

Interprofessional Education learning activities

Learning activities centred on specific learning objectives (Table 1) that aimed to provide

students with an introductory understanding of: the concept of teamwork and its impact on providing patient care, the different roles of members of the healthcare team, and the importance of communicating effectively in the healthcare environment.

Table 1: Interprofessional Introductory Workshop Learning Outcomes

At the end of this workshop, students will:
(1) Describe the characteristics of an effective team
(2) Reflect on the challenges of establishing an effective team
(3) Understand the role of interprofessional teamwork for collaborative healthcare
(4) Demonstrate an awareness of how to communicate effectively in a healthcare environment

Each activity was aligned with core competencies for IPE developed by the International Educational Collaborative which have been condensed into five broad themes (Table 2). Specific learning outcomes for both the overall workshop and each of the three activities were communicated to participating students.

Table 2: Core Competencies for IPE (International Education Collaborative, 2016)

1. Roles and responsibilities
2. Ethical practice
3. Conflict resolution
4. Communication
5. Collaboration and teamwork

The three workshop activities focused on sentinel aspects of healthcare and were specifically designed to be engaging, incorporating a variety of high-quality educational activities that were constructively aligned with the learning outcomes, and formative assessment. To ensure clinical relevance, each activity addressed an important healthcare issue known to cause significant detriment to patient safety, namely, communication and teamwork, however, they did not require prior clinical knowledge or experience. To ensure authenticity we utilised procedures, frameworks and educational resources currently used for health professionals within the local healthcare system. These included the clinical handover tool ISBAR (Identity, Situation, Background, Recommendation) as a communication framework[22], and the hand-hygiene teaching module from the Australian Commission on Safety and Quality in Health Care, which is currently part of mandatory training for local healthcare clinicians[23].

Pedagogical principles underlying the workshop

To ensure pedagogical rigour, the evidence-based frameworks for establishing effective team dynamics employed in the workshop were: Lencioni's theory of team function[24], and Tuckman's theory of team formation[25]. Students were briefed on the model in the workshop and were asked to reflect on the applicability of the model to the given healthcare scenarios at the conclusion of the workshop. Facilitators provided feedback to the students on the issues raised.

Lencioni identifies the five most important pitfalls of teams, which he presents in a pyramid model designed to motivate people and organisations to work towards the apex of successful and effective teamwork. The pyramid model is divided into five ascending layers: absence of trust, fear of conflict, lack of commitment, avoidance of accountability and inattention to results. Like any pyramid, the underlying layers must be supported before they can be built on further. The bottom layer of any pyramid is the largest and therefore needs to be able to support all the subsequent structures and building, making it pivotal to the whole structure. Translated to a team environment, the bottom level of team function represents trust, and is fundamental to all subsequent levels. We used the model in our workshop in a positive frame to explain how teams' function well, and not become dysfunctional. Common issues students reported were admitting vulnerability before they could trust others and recognising that conflicts of opinion can be resolved healthily.

Students also need to understand different stages of team development, aligning with Tuckman's five subsequential stages of team development: forming, storming, norming, performing, and adjourning Tuckman (Table 3).

Table 3: Tuckman's Five Stages of Team Development

	FORMING	STORMING	NORMING	PERFORMING	ADJOURNING
Characteristics	- Questioning - Socialising - Displaying eagerness - Focusing on group identity and purpose - Sticking to safe topics	- Resistance - Lack of participation - Conflict - Competition - High emotions - Starting to move towards group norms	- Reconciliation - Relief, lowered anxiety - Members are engaged and supportive - Developing cohesion	- Demonstrations of interdependence - Healthy system - Ability to effectively produce a team - - Balance of task and process orientation	- Shift to process orientation - Sadness - Recognition of team and individual efforts
Strategies	- Taking the 'lead' - Providing clear expectations and consistent instructions - Quick response times	- Normalising matters - Encouraging leadership	- Recognising individual and group efforts - Providing learning opportunities and feedback - Monitoring the 'energy' of the group	- Celebrating - 'Guide from the side' (minimal intervention) - Encouraging group decision making and problem solving - Providing opportunities to share learning across teams	- Recognising change - Providing an opportunity for summative team evaluations - Providing an opportunity for acknowledgements

The assessment associated with the workshop used student peer-review of their team members' contribution to the team. This method of self-assessment aligns with Tuckman's framework, providing students with an opportunity to reflect on the stages that their team had moved through as they worked together during the workshop.

Reflection on promoting a culture of collaboration through teamwork principles

When considering Lencioni and Tuckman's frameworks, clear similarities can be identified, such as trust, the healthy resolution of conflict, and the need for collective commitment. The application and role modelling of these theories and principles enabled us to overcome many of the challenges that commonly impact IPE delivery within universities. The establishment of trust and clear communication, not only between us as an IPE leadership team, but also with academic and non-academic colleagues in other schools as well as with the student body, was imperative. We were aware that this would play an essential role in the delivery and facilitation of the workshops, and with logistical and political issues, such as timetabling, embedding IPE activities within multiple units of study, and the coordination of large groups of interdisciplinary students.

The need for facilitator engagement and faculty buy-in

The planning and successful implementation of IPE activities requires widespread engagement and commitment by academic, administrative staff, and students[26]. Engaging faculty as facilitators was central to the success of the IPE workshop due to the large number of students involved, and the number of repeat workshops required. Each workshop accommodated approximately 150 students, and organisation and early engagement of both academics and administrative staff was imperative to ensure that each workshop ran smoothly from an administrative and technical perspective.

Engagement of faculty in IPE is challenging, and the literature shows that many IPE facilitators feel unsupported and unprepared[27]. This was addressed in several ways. A facilitator training session was provided for academics as an opportunity to learn about the format and educational aims of the workshops, and the expectations of what would be required by facilitators. Facilitators were re-assured that a 'lead facilitator' (one member of our leadership group) would lead the workshop. Volunteer facilitators were recruited from numerous sources and incentivised with provision of participation certificates. We recruited academics from a range of health disciplines, as well as students who had previously engaged in IPE and clinicians who could attest to the benefits of IPE.

The impact of the Pandemic: Upscaling and online delivery

The COVID-19 pandemic necessitated us having to convert the IPE Introductory Workshop to a fully online delivery mode. While wanting to retain the original aims, learning outcomes, and pedagogical quality of the workshop, we reduced the duration of the workshop to two hours to ensure student

interest and engagement online. An online video conferencing tool was selected as the delivery platform, supporting functions such as screen sharing and break-out rooms enabling large and small group discussions.

Three activity stations were retained, however, the time allocated to each station was decreased with the aim of maintaining student interest and ensuring that each of the activities translated to online delivery, without compromising their educational value. The infection control station required only minimal modification, and the other two stations needed practical reconsideration. The focus of the professional roles' activity was maintained, however, in place of using post-it notes, a digital notice board application was introduced for each of the health professional roles. Likewise, the communication activity that originally required students to 'handover' a scenario using the ISBAR communication framework was modified to become an online 'telephone game' with students utilising the ability to 'mute' and 'unmute' themselves in turn as they 'handed over' a patient care scenario to team members.

Future challenges and directions: How Interprofessional Education can optimise communication and collaboration?

Not all healthcare students will have a beneficial learning experience from early exposure to IPE, and one of the reasons that may contribute to this is a lack of personal effective communication and reflective skills. This raises the question of whether a level of personal learning in these areas is required prior to participation in any type of interprofessional learning. Research has shown that all healthcare education curricula should foster self-awareness and personal growth within students and that developing these attributes should be part of a student's education, and not something that occurs mid-career[28] Therefore, before students can optimally work with others in the interprofessional context, it is imperative that they have a good understanding of themselves and those around them. Healthcare teams are comprised of individuals with varied social and cultural backgrounds and life experiences, and a highly performing group requires individuals to be able to express themselves and interact effectively by understanding their interactions with others. Attaining these skills whilst uncovering their personal biases and prejudices, will enable healthcare students to take the first step in becoming an effective team member, as they continue to develop into compassionate and safe healthcare practitioners.

The type of pre-work that could be proposed for students prior to participating in IPE could include the development of self-awareness skills including self-evaluation, ways to optimise personal communication and collaboration and subsequent self-reflection on the learning exercise. Once students have gained insight into their own skills and those of others, they can better learn how to engage the skills of those colleagues around them. Foundational learning by students prior to IPE that focuses on developing communication skills and learning that promotes reflection on how they communicate and prefer to be communicated with, may lead to early harmony as IPE teams begin to work together. Importantly, these skills will also form the

foundations of future, more complex interprofessional learning activities that scaffold what has been previously taught.

Conclusion

Successfully completing a healthcare degree and effectively transitioning to a career in the healthcare environment requires students to possess the confidence and ability commensurate with being an effective communicator and team collaborator. For every healthcare practitioner, personal awareness and wellbeing are paramount, and contribute to improved patient-centred care and outcomes. In this discussion, we have described from review of the literature, what we believe may be one of the world's largest IPE activities developed specifically for first year healthcare students. Over a six-year period, from 2017-2022 the Introductory Interprofessional Workshop has evolved into a large-scale activity that has now been delivered to cohorts of over 2600 first-year students from 13 health disciplines.

We believe that the workshop is a considerable achievement in terms of its early curricula placement, and large student numbers, from a broad diversity of disciplines. This early intervention breaks down the usual siloed approach to health professions education, and the introductory workshop forms the beginning of an integrated interprofessional curriculum to support renewed accreditation standards, in which interprofessional practice is essential. Importantly, it also provides a model for implementation at other institutions.

We achieved what many may have considered unachievable. We kept our academic design and development true to its pedagogical integrity whilst ensuring that all the appropriate and relevant frameworks and principles were utilised and promoted in delivery of the education. Above all we believe the leadership and role-modelling we demonstrated reflects our personal and collective commitment to the principles of interprofessional collaboration.

Conflict of Interest:

None

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