# Chapter 20
# Interprofessional Education in the Health Workplace

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**Abstract** Interprofessional education has served as a long-standing topic of interest in the health professions education community, mainly because of its reported capacity to develop the learner's disposition for team-based practice. This chapter synthesises the findings from the health professional literature and focuses specifically on the impact of interprofessional education on students within clinical placements. The review sets the scene for the reporting of an empirical study conducted by the authors, examining medical students' experiences of an interprofessional education placement. Medical students who rotated through the targeted interprofessional placement were interviewed via focus groups to elicit their experiences of the initiative. Their perspectives on how the context and the activities within the placement influenced their ability to learn 'with, from and about' other professionals were captured and analysed. Only a small percentage of participants reported that the workplace environment adequately supported opportunities for engagement with other professionals. The medical students, while able to voice the advantages of interprofessional practice "once they become" a practitioner, saw the agenda as

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relatively low on their priority list as busy students, subject to regular assessments of their ‘doctoring’ competencies. The results challenge the cheerfully optimistic literature on interprofessional education. It may be useful to acknowledge the resistance learners have in learning about other professions or disciplines when they have a fixed target of professional membership in sight. Undergraduate students seem to make judgements about what is important to learn, and who are the most legitimate models to learn from, very early in their curriculum. Students look to summative assessment as a key device to help differentiate the core from the peripheral within their program of study.

**Keywords** Interprofessional education • Interprofessional practice • Workplace learning • Health professions • Curriculum design

## 20.1 Introduction

### *20.1.1 Overview of the Literature*

Interprofessionalism has increasingly emerged as an educational philosophy over the last 60 years. Outcomes of interprofessional education in the health context have typically focused on the student, and largely at the level of whether students’ enjoyed or reported value in educational initiatives designed to promote interprofessional learning (Barr 2005; Reeves et al. 2008; Reeves 2010). Many of these studies report that educational initiatives, particularly in the pre-clinical context, fail to engage learners. Even for those initiatives perceived as useful, there are few longitudinal studies tracking the impact of these activities on learners’ practices once they hit the authentic workplace (Davidson et al. 2009). The latest literature argues for the importance of positioning the patient at the centre of health professional education, and valuing the patient’s capacity as a teacher. This subtle re-orientation may better enhance health professional teamwork to achieve the best patient outcomes. This section will highlight how interprofessional education emerged, how it is being enacted in health professional education, at both pre-clinical and clinical (workplace-based) interfaces, and what we know about its impact on learners, patients and workplaces.

### *20.1.2 The Emergence of Interprofessional Education*

Abdel-Halim (2006) refers to Arabic documents from over 1,000 years ago that promote the positive impact of teamwork on patient care. The earliest known reference to interprofessional learning in health occurred at the annual session of the American Dental Association held in Cleveland in 1953 where the House of Delegates discussed a paper, Sugar and Teeth. In that session, reference was made to a joint meeting of two medical and dental societies being held 15 years earlier, to

discuss interprofessional problems and the application of the newer knowledge of nutrition in practice (Hartford 1953). A further reference to interprofessional learning occurred in a paper published in a Pharmacy Journal (Illinois 1969), following which the Interprofessional Commission of Ohio, established at Ohio State University in 1973, offered interprofessional courses for graduate students and professionals in education, counseling, law, medicine, nursing, psychology, social work, and theology.

The further history of the development of interprofessional education is comprehensively discussed in Motives & Movements (Barr 2005) where he examines the development of cooperative care within nursing and social work during the 1970s, the rapid growth in medical specialization that led to an ultimately unhelpful separation of medical specialties from a shared engagement with other health professions. Barr (2005) also highlighted the emergence of collaborative care models in general practice, aged care, and psychiatry that acted as a stimulus to develop better shared care models for all patients. Much of the drive to develop better care models followed adverse publicity over a number of cases of poor medical care outcomes that informed Government policy decisions and directives to achieve better quality of care. These changes have contributed to improved accountability and shared care developments over the past two decades, with the key objectives of improving patient care, reducing the dependence on hospitals for much of the provision of care for the increasingly complex patients suffering multiple health issues and the increasing numbers of the elderly. These shared care developments, although well-meaning, have been somewhat fragmented and relatively unproductive (Bywood et al. 2011; Barr 2005).

This observed fragmentation of patient care has led to an exponential growth in the development of interprofessional education within the health professions, designed to promote effective teamwork and communication. This growth has been the subject of much government and university support in many countries with the development of specific societies to promote interprofessional education, such as the Centre for the Advancement of Interprofessional Education (CAIPE), founded in 1987, dedicated to the promotion and development of interprofessional education in the UK and overseas. It has a close association with the *Journal of Interprofessional Care* that commenced publication in 1992.

Parsell (1998) proposed that students need to know about the roles of other professional groups, need to be able to work with other professionals in the context of a team where each member has a clearly defined role, and need to be able to substitute for roles traditionally played by other professionals when circumstances suggest that this would be more effective. It has also been proposed that interprofessional education may afford flexibility in career routes, where individuals can move across discipline boundaries (Finch 2000). CAIPE (2002) subsequently defined interprofessional education as ‘occasions when two or more professions learn with, from and about each other to improve collaboration and quality of care’. The definition attends to three components; firstly, different health professions collaborating in the learning process, secondly, learning which embraces learning with, from and about one another, and thirdly, an outcome intended to improve patient care (CAIPE 2002).

Interprofessional education is underpinned by principles of adult learning and typically leans on interactive, collaborative and group-based learning approaches. There is also a strong flavor of learning about and appreciating the values of each other's professionalism.

Interprofessional approaches to health care are not only seen to improve patient outcomes, but have been linked to increased job satisfaction for health professionals (Barr 2005; Reeves et al. 2008). Although there are no data to demonstrate the next link, it would be a logical assumption that increased job satisfaction might have an impact on recruitment and retention of health professionals. In a health care climate characterized by an aging population and increased incidence of chronic disease, there is an associated marked workforce shortage. With this imperative to strengthen workforce numbers, there is a large amount of investment into searching for mechanisms to improve recruitment, retention and efficient work practices of health professionals.

### *20.1.3 Underpinning Educational Principles in Interprofessional Education*

The role of and place for interprofessional education in health has been the focus of many texts and reports over the past decade (Hammick et al. 2007; Delany and Molloy 2009; Reeves 2010). These authors have explored the theoretical basis, the enactment, and the outcomes of over 25 years of interprofessional education endeavour. The results of interprofessional education initiatives were appropriately summarised in Allison's (2007) title, 'Up a river! Interprofessional education and the Canadian healthcare professional of the future', where she posited that while the benefits of an interprofessional approach to patient care were becoming well known, the establishment of interprofessional education in health care programs remained largely in the developmental phase (Allison 2007). She advised that if health professionals do not learn to work together, interprofessional education would continue to go in circles.

Cooper (2010), in appraising the work of Hammick et al. (2009a, b), noted that 'learning how to work interprofessionally is an evolving process grounded in experience, making fieldwork central to interprofessional learning' (p. 435). She pointed to the fact that much of the interprofessional learning research has been predicated on the learner's outcomes (being focused on assessment of interprofessional learning pedagogic practice) rather than taking into consideration improved care that is central to the patient's outcomes. At the core of this educational philosophy lies the re-emergence of the patient; the study of patient experiences as the axis of learning and an understanding of patient values, expressed in the view 'Nothing about me, without me' (Nelson 1998). Stewart (2001) and Slote (2007) also support a model of care based on listening to patient voices rather than as a virtue reflecting on our self. These researchers state that the design and implementation of patient care plans should be the priority, rather than persisting with interprofessional education projects that are centred on the student and their learning outcomes.

CAIPE's interprofessional learning definition embodies the well recognised 'learning with, from and about others', as well as the goal of these activities- improved patient outcomes. Hammick et al. (2009a) has suggested that we reverse the 'with, from and about' to, 'about, from and with' so as to emphasise the transitional change in learning moving from an interdisciplinary process to an interprofessional process. The so-called 'higher' goal of an interprofessional process positions collaboration or learning together as a joint process to achieve improved patient outcomes. Learning about and from does not necessarily translate the learning process into a joint learning enterprise of equality and interprofessionalism.

### *20.1.4 The Goals of Interprofessional Education*

The ultimate goal of interprofessional education is to enable health professionals to undertake their roles as a part of a team in the effective care of patients (D'Eon 2004). Interprofessional education is underpinned by two assumptions (Davidson et al. 2009): first, that interprofessional education initiatives will lead to better interprofessional practice and second, that interprofessional practice will lead to better health outcomes for patients, clients and communities. The key to achieving this goal of better patient care relates to better understandings of the relationships between different professional groups as values and beliefs, collaboration and teamwork as knowledge and skills, roles and responsibilities as what people actually do, and the benefits to patients, professional practice and personal growth being what actually happens (Parsell 1999). Through these understandings, the prejudices existing between professions and the lack of awareness of the functions of each other may be changed, contributing to better teamwork and patient care. Each of these characteristics needs to be taken into consideration in designing an interprofessional education program. A further goal is to involve the patient, the family, the community of health professionals and the hospital or the providing institution in the process of effective participation and the communication of decision-making by each care-team member to the patient and family.

### *20.1.5 The Many Shapes of Interprofessional Education*

Despite an international surge in discourse around the potential advantages of interprofessional education, there is still a lack of clarity about what constitutes effective interprofessional education. Davidson et al. (2009) presented a helpful conceptual framework where they positioned interprofessional learning activities in a table, ranging from low relevance to high relevance, based on mode of learning (passive to active), and degree of contextualization (ranging from away from the workplace setting, to experiential learning within the applied setting). The activities and the scope for interprofessional education are summarized below in Table 20.1.

**Table 20.1** Activities used to promote interprofessional education (Adapted from Davidson et al. 2009, p. 75)

| Learning activity | Evaluation of relevance to interprofessional education |
|---|---|
| **Lectures** | Typically limited scope for interprofessional interaction and collaboration. May be used to achieve content relating to interprofessional education objectives- including orientation to purpose of interprofessional education and interprofessional practice, models of teamwork and communication etc. Learner engagement often constrained due to class size and environment. |
| **Practical or lab-based sessions** | Rich in experiential learning opportunities (including technical and communication skill acquisition). Typically uni-professional but can be structured to accommodate different professions working together to develop targeted skills. |
| **Tutorials** | Vary in terms of experiential learning opportunities. Smaller student numbers cater for interactive learning and feedback opportunities on team work and communication skills (either peer driven or teacher driven). Problem-based learning can be an effective learning format as it is patient-centred by nature and students can see the relevance. |
| **Online learning** | Both individual and group-based learning. Scope for learning and assessment of competencies related to interprofessional education and practice. Student engagement may depend on the degree of authenticity of the virtual environment. |
| **Simulation** | Increasingly used as an educational modality due to its potential to replicate clinical environments and to generate opportunities for team-based care. |
| **e-Clinics** | Provide opportunities for students to observe either recorded or real-time patient-practitioner interactions or team-based communication. The lack of direct involvement of the learner lowers the stakes of the learning activity and allows learners to focus and reflect on the communication and teamwork skills exhibited. Needs a skilled facilitator or well designed prompts to engage the student and shift it from a passive 'watching' experience. |
| **Experiential workplace learning** | High relevance and authenticity. Can range from observational in nature (i.e. shadowing a practitioner) to practice under supervision (depending on the knowledge/experience levels of the learner). High potential for both informal and structured interprofessional learning and practice. |

This chapter focuses on the potential for interprofessional education in the authentic workplace environment, as summarized in the last cell in Table 20.1. Within the clinical workplace environment there is large potential for structured interprofessional education where students 'share' patients and observe practitioners from a range of disciples working together for the patient's benefit. For example, medical, nursing and physiotherapy students may attend the one patient, complete a joint assessment of the patient (history taking and physical examination), engage in a collaborative process of clinical reasoning or problem solving

**Table 20.2** Barr's (2005) modification of Kirkpatrick's Learning Outcomes

| Outcome level | Impact of intervention |
|---|---|
| Level 1 | Reaction-Learners views on the learning experience |
| Level 2a | Modification of attitude/perceptions |
| Level 2b | Modification of knowledge/skills |
| Level 3 | Behavioural change |
| Level 4a | Change in organisational practice |
| Level 4b | Benefits to patients/clients |

where they come to a consensus about the key problems and devise a prioritized management plan. This shared patient model is gaining momentum in health professional education (Anderson et al. 2006; Kent et al. 2012) and has received positive evaluations from students, staff and patients. Other forums such as team meetings and ward rounds also offer rich opportunities for students to engage in interprofessional learning and practice. Students may also observe the practices of other professionals either informally (for example, a nurse inserting a cannula while the medical student is taking a history of a patient) or in a more structured format, where a medical student may shadow a nurse or an occupational therapist for an afternoon on placement.

### *20.1.6 Evaluations of Interprofessional Education*

While interprofessional education may improve learners' short-term knowledge and attitudes, there has been little evidence of persistent improvement or behavioral change in learners and insufficient evidence to guide the rapid changes in educational models or clinical practice that are developing (Piterman et al. 2010). Piterman recommended the need for prospective controlled trials with objective measurements of short and long-term learner behavior, processes of care and patient-based outcomes.

Many reviews of interprofessional education have been undertaken and have been evaluated using the modified Kirkpatrick Framework (Kirkpatrick 1994), published by Barr (2005). This classification system is useful in that the outcomes of the study are classified in terms of the impact of the intervention, ranging from the learners' views on the effectiveness of the intervention (level 1), to an impact on patients or clients (level 4b) (Table 20.2).

Using such a typology or classification system allows educational researchers and teachers to make meaningful comparisons between studies of interprofessional education. As Davidson et al. (2009) report "one of the challenges in reviewing examples of interprofessional clinical education is the range of evaluation approaches and outcome measures used in the field" (p. 78).

Barr (2005) review of 107 interprofessional education studies found that the majority of studies of interprofessional education in health have limited evidence of significant or sustained outcomes above level 2b. Of the more recent reviews, Hammick's et al. 2007 systematic review of 21 interprofessional education studies examined the effectiveness and contribution of interprofessional education to collaborative practice and better care. The review concluded that interprofessional education was generally well received by learners and that learners reported acquisition of knowledge and skills necessary for collaborative working. However, the review concluded that interprofessional education interventions were less successful in positively influencing attitudes towards others in the team. There was limited evidence to support the proposition that learning together would help practitioners and agencies work better together. The review concluded that staff development has a key influence on the effectiveness of interprofessional education and where such education reflects the authenticity of practice it is more effective (Hammick et al. 2007).

Davidson et al.'s (2008) systematic review specifically examined studies looking at interprofessional education in a fieldwork setting. The authors reviewed 25 studies of interprofessional education in pre-registration programs and found that there was a diverse range of interprofessional education experience durations (2.5 h to 9 weeks, with the most common intervention being 2 weeks). The team size varied markedly also- ranging from two to ten individuals. The review illustrates the wide diversity in how interprofessional education is enacted. And of course this intervention heterogeneity makes it very difficult to compare studies. The most common configuration of the interprofessional team was medicine and nursing students.

Margalit's 2009 study was undertaken by the Institute of Medicine, Nebraska, where they developed an integrated interprofessional education program in health profession curricula to improve health care quality. The program was developed, implemented, and evaluated as a campus wide program, shifting from traditional educational silos to greater collaboration and involving 155 nursing, medicine, public health, allied health, dentistry and pharmacy students and 30 faculty. The evaluation showed an increased understanding of health care quality and interprofessional teamwork principles, and reported positive attitudes toward shared learning (Margalit 2009). A further Cochrane study by Zwarenstein (2009) reviewed randomised controlled trials of practice-based interventions in interprofessional care compared to no intervention or to an alternate intervention. The effect of the interventions on patient satisfaction, the effectiveness and/or efficiency of the health care provided and the degree of interprofessional care achieved were examined. Five studies, four of them published since 2000, met the inclusion criteria. The review suggested that practice-based interprofessional learning can improve healthcare processes and outcomes, but given the small number of studies, the sample sizes and their heterogeneity and problems in measuring learning outcomes, drawing any conclusions about the key elements of interprofessional learning and practice is difficult (Zwarenstein 2009).

### *20.1.7 The Move to Patient-Centred Education*

In Australia there has been a rapid growth in interprofessional education initiatives, particularly involving rural clinical placement programs, new interprofessional clinical educator positions, interprofessional practice professional development, workforce programs and the use of simulation centers. However, these activities occur in pockets across Australia, without co-ordination or communication between the committed educators and professionals driving these programs. There has also been a lack of direction by governments (Thistlethwaite 2007). This collective of individual activities contrasts to the central government approaches which have been in place in the UK, Canada and Sweden for some time (Davidson et al. 2008).

The widespread growth of undergraduate student interprofessional education and the expansion of the activities being undertaken do reveal improvements in understandings of the roles of health professionals, and the importance of teamwork and shared learning. Contemporary literature identifies only a few studies showing evidence of benefits to patient outcomes. More recent patient-centred projects have shown a progression from learner-centred educational objectives that by their nature are limited to level 2 outcomes (Barr 2011), to outcomes arising from direct student-patient dialogue grounded in the patient's experience and discussed in realistic clinical situations such as student clinics, giving benefit to the patient and improving patient outcomes-levels 4 (Anderson et al. 2012; Kent and Keating 2013).

Hudson et al. (2010) argues that the next phase of interprofessional education should embrace the richness of the patient experience, which is so readily and willingly available to students. This can be achieved through further adapting the intent and design of workplace-based learning experiences where students are orientated explicitly to interprofessional practice competencies and are guided towards opportunities to develop these skills. The opportunities or invitations that are most likely to impact on learners are those that are based directly around the patient. As Sir William Osler advised 'In what may be called the natural method of teaching, the student begins with the patient, continues with the patient and ends his study with the patient, using books and lectures as tools, as means to an end. For the junior student … it is a safe rule to have no teaching without a patient for the text, and the best teaching is that taught by the patient himself' (Osler 1903, p. 331).

The next section in this chapter will present a pilot study that sought to better understand the interprofessional learning opportunities available to medical students placed in a sub-acute clinical environment. This case study serves to highlight the interprofessional experiences of students in the workplace-based setting, and in doing so, sheds further light on how we might better design interprofessional education programs to legitimately capture students' attention and build their capacity to work effectively with others.

## 20.2 A Case Study: Medical Students' Experience of a Clinical Placement Program Designed to Develop Interprofessional Learning and Practice

The research team undertook a study to examine the impact of an interprofessional education clinical placement on medical students' knowledge of the roles, responsibilities and functions of nursing and allied health staff, and their perceptions of their own development of skills in interprofessional communication and teamwork.

### *20.2.1 Methods in Brief*

The study examined the experiences of a group of medical students in their first clinical year of the program, completing a clinical placement at a palliative and rehabilitative care facility. The clinical placement took place in a sub-acute hospital comprising two rehabilitation wards and a palliative care ward, each with clinical directors, resident staff, specialist nursing and allied health staff. The placement was designed for 3 weeks, and involved three to four students at a time, rotating as singles or pairs within the three wards. Prior to the placement the students were informed by the Clinical Education Director that one of the objectives of the placement was for medical students to work with and learn from other health professionals, in addition to the supervising doctors. It is important to note that no formal interprofessional education activities were mandated, and that no assessment tasks were linked to the interprofessional competencies. Rather, the clinicians carried out 'normal practice' with the knowledge that medical students had opportunities to learn about, and work with other professionals while on the placement.

Participants were recruited from the student cohort undertaking this clinical placement rotation in the academic year 2011 (n = 15). Students were invited to participate in the study via email, and interested participants took part in one of three focus groups after their placement. Students were assured that their attendance was not compulsory, and would not impact their course assessment in any way. The focus group questions are represented in Box 20.1 below.

The audiotaped raw data was transcribed and anonymised after each focus group.

The data were interrogated using Thematic Analysis, starting with coding of the data where sections of data were labelled with a node (Miles and Huberman 1994). Coding was undertaken by three independent researchers (LG, EM, CF) and was facilitated by QSR NVivo2 data management software. The list of nodes was then consolidated through grouping nodes of similar meaning. This resulted in a shorter list of nodes that emerged as the themes in the data set. The themes and illustrative quotes that support these findings are presented in this next Section.

**Box 20.1**

- Please provide a brief summary of the placement – what was the clinical focus?
- Have you completed any other placements this year?
- Would anyone in the group like to comment on the possible benefits and outcomes of their learning in this placement?
- Could you please describe the interactions you had with non-medics?
- Could members of the group please explain whether they feel their perceptions of the roles and responsibilities of the health professionals have altered?
- Could members of the group comment on what they think is the best time to learn with, from and about other health professionals?
- Could members of the group comment on whether shared/interprofessional learning (if you feel you experienced any) assisted the development of communication skills and/or patient care?
- Would anyone in the group like to comment on whether they feel that shared learning helps medical student learning or not?
- Could members of the group please comment on whether they feel that the period of learning at the placement in question has had any influence on the development of the way you might practice as a doctor?
- Do you feel that you modelled your supervisors at all?

### *20.2.2 Key Findings*

The three key findings that emerged from the study were that medical students reported that:

1. Interprofessionalism sits on the margins of medical practice
2. The placement, although intended to promote the development of interprofessionalism, lacked the design qualities needed to achieve these competencies
3. Discipline-based role models are key to orientating learners to what is important in practice

### *20.2.3 Theme 1: Interprofessionalism Sits on the Margins of Medical Practice*

#### 20.2.3.1 It's Important but Not Very Important

It was encouraging to note that almost all of the participants in the study acknowledged that there is a role for interprofessionalism in health care practice and most were

able to articulate the benefits of interprofessional practice in terms of improving the quality of patient care:

> I spent most of my time on the rehab so I saw a lot of mainly physiotherapists. They play quite an important role because they do most assessments of the patients' physical illness, whereas the doctors didn't really have the opportunity to do that. – FG1
>
> So I guess in the doctors' case is the treatment on how the patient is doing and what the physiotherapists feed back to the doctors. They basically work in hand in hand to figure out what's best for the patient. – FG1

The above quotation typified the responses from many of the participants- that practitioners from multiple professions work together to optimise outcomes for patients.

However, despite acknowledging the importance of understanding the different roles of different professionals, and the importance of teamwork to enhance patient outcomes, the bulk of students' statements reflected that interprofessional education and practice in the workplace were seen as peripheral to 'core medicine.' The quotes below illustrate this positioning of interprofessional education and practice at the margins of medical practice.

> It [the placement] has got to be relevant to the medical things – FG3
>
> I think there's less appeal [an interprofessional placement], especially at the early stages where we're just trying to acquire all that medical knowledge – FG1
>
> It was more incidental that you learned something from physiotherapists… definitely more interested in looking out from the medical point of view – FG2
>
> It's definitely valuable but I don't know at this point whether it's a major priority. – FG2
>
> As students we're limited in time and we're always running around. So we don't get into that depth, so I think if you just want to know what's happening with a patient, we just look at the medical issues. – FG2
>
> We [also] have so much other stuff that's more important at this moment – like studying for exams – FG3

Some participants were more overtly suspicious of the value of interprofessional education within the curriculum, and the role of interprofessionalism in the workplace. Their responses betrayed their bias that interprofessional practice is restricted to referral of patients to different services offered by others:

> I don't know what the actual aim of the whole inter-professional aspect to the course is. I know they keep talking about it's well and good but when you go in and sit in the dregs of rehabilitation, it's great to get sort of your head around it. You do a little rehabilitation, you do some exercise movements and things like that. But at the end of the day I'm never going to be confident to be able to do those rehabilitation procedures with a patient for example. At the end of the day that, really, all I should be able to say is, yeah, we're going to send you off to this person who is a specialist in their own field – FG2

#### 20.2.3.2 Why Invest in Structured Learning When the Skills Are Intuitive?

Even the students that were able to articulate the need for an understanding of what other practitioners do in order to refer patients correctly seemed to believe that this knowledge would come to them in time, without purposeful effort or structured learning. A similar sentiment is reported in literature describing student and practitioner attitudes to 'non technical skill' development- encompassing communication, teamwork, leadership and reasoning (Nestel et al. 2011). In short, this parallel

literature presents the tendency for practitioners to think that non-technical skills are not 'technical' by nature, and are therefore skills that people either possess or do not possess- impacted minimally by structured learning experiences.

> It's important for us to know about the different allied health services because we'll probably have to send our own patients there … … I suppose I'm leaving that to time rather than any structured learning – FG2
>
> I can see a lot of people trying to avoid it or miss it [interprofessional education] because they'd be like 'oh well, what am I possibly going to get out of it?' – FG2

#### 20.2.3.3 Challenging Early Expectations About What 'Doctoring' Means

Many students alluded to the hierarchy in health care practice, with doctors positioned as the leaders, and other health professionals supporting the role of the doctor. Some participants were legitimately surprised when practitioners other than doctors took the lead in clinical scenarios or meetings.

> So I saw a MET Call. A lady collapsed at the Rehab Facility, and when we had come there was already a doctor, nurses and physiotherapists around, because it was in the physiotherapy department. You'd expect the doctors to be calling all the shots but I think the nurse there was quite experienced and she obviously had her training as well. So she was asking all the questions and the doctor was obviously asking questions as well but not so much as the primary person in that situation. So I think that nurse played quite an important role in that, to ensure that – she asked a lot of questions, that the patient was okay and that, so obviously she had the doctor there for support but that was an example where the role of the nurse was the leader – you wouldn't expect that. You'd expect the doctors to be – FG1
>
> I mean I guess just seeing how there can be team work and interplay between different health professionals and allied health and that it's not strictly doctor's role's a doctor's role and a nurse's role is a nurse's role and doctor tells nurse what to do – FG1
>
> The atmosphere was very casual and everyone gets a turn to talk, which is a lot different to what I've seen in an acute hospital, because usually it's a consultant talking the whole time and other people are just furiously writing down notes – FG1

Of note are the students' reports that they would expect that the doctor would take the leadership role in any team-based interaction. These three students had only experienced 3 weeks of clinical practice so it is fair to assume that these expectations about the role of different professions are already set before the students reach the clinical interface. These stereotypes may well be established or reinforced within the pre-clinical curriculum (Davidson et al. 2009), or even before enrolment, through the influences of popular media and popular narratives. The attitudes expressed in this data set prompt us to question how early to start interprofessional education initiatives within the curriculum. Indeed there is plenty of heated dialogue in interprofessional education circles about when to introduce interprofessional education activities within a professional program (Davidson et al. 2008; Barr 2005). Advocates for the early introduction of interprofessional education argue that these competencies are framed as part of being a competent practitioner, regardless of the individual profession. Advocates for a later introduction argue that there is merit in learners understanding and relating to their own professional standards and culture, before they are able to decipher differences and similarities between professional groups.

For one third of the sample in our research, this particular placement represented their first ‘hands-on’ exposure to the roles of other practitioners in health care. Their responses suggested that they had already established a frame for the hierarchy and roles of practitioners in the workplace. The responses prompted the focus group facilitator to probe further about their pre-clinical curriculum and the potential impact of formal or informal learning about interprofessionalism:

Interviewer: Had you, in your own opinion in your academic course, had you had formal lectures or people come in to talk about those roles [of practitioners outside medicine]?

Respondent 1: Not really.

Respondent 2: No, not really, I agree with you….We know that they’re there and we were told when we came here to the placement that it was going to be different and that was probably the place we were going to, I guess, appreciate the role of allied health in the health care. – FG2

Interviewer: What about – I’m just thinking in terms of your academic curriculum, the first year when you’ve got case based learning or problem based learning. Was there much sort of inter-professional practice fed into the actual cases? Did you learn about what social workers did in the case or was it medico-centric?

Respondent 3: Everyone was different – every group was different. It depended on your tutor.

Respondent 2: Yeah, you make your own objectives. You read the case and you make your own objectives. So if your tutor or your group didn’t value that sort of stuff you wouldn’t make objectives that related to that. Everyone has slightly different learning.

Respondent 4: But even then, there wasn’t ever written into a case that he goes to see an OT now, or he goes to see a physio now. So it was never really prompted for us to learn. One of my friends was applying for [medicine at another University] and apparently for their first two years they do some classes together, like med students do it with physios and all that. Maybe that would be a good opportunity to [unclear], like a joint class with a doctor and a physio leading it. – FG2

The students acknowledged that the emphasis on interprofessional education in the pre clinical curriculum was dependent on how much they chose to invest in it- that is, whether they saw it as a priority in their case based learning sessions. Notably, the students reported that it was their tutor’s inclination that helped them to navigate and prioritise learning objectives within formal teaching activities. The data is a reminder that the ‘experienced curriculum’ can be indeed very different to the ‘intended curriculum’ (Billett 2006; Molloy and Keating 2011), and that factors including teacher interest, motivation and skill, and student individual interest and motivation can intersect to produce very different learning experiences within the one cohort.

### *20.2.4 Theme 2: Placement Design Properties*

#### 20.2.4.1 Lack of Formal Invitations

Students reported that they were aware of the overarching goal of the placement to learn about and practice with other professionals. Many reported that they did not successfully achieve this objective, namely because of the lack of structure of the placement, and formal activities that aligned to the interprofessional education objective.

| | |
|---|---|
| Interviewer: | Can you comment on the interactions that you had with people that weren't doctors? |
| Respondent 1: | Mine was minimal. |
| Interviewer: | Minimal? |
| Respondent 2: | Minimal. |
| Interviewer: | No Allied health or other practitioners? |
| Respondent 3: | There was more on palliative. They all did ward rounds together with the allied health and the – what was that guy? There was a – he wasn't a social worker – palliative care? |
| Respondent 2: | He's in the pastoral care group. |
| Respondent 3: | Pastoral care. |
| Respondent 3: | I don't know. Anyway, the pastoral care worker was – he took us aside and told us his aspects and I talked to him a little bit. I think I might have had more experience with the allied health there because I used to be a dietician and I knew the dietician there and so I used to sit in the allied health tea room instead of the doctors' tea room. But I think if I hadn't had that I wouldn't have had much experience with the allied health. FG3 |

The students alluded to a lack of legitimate invitations for learning:

> They said we were welcome to join the physios …… I don't know where that offer went missing or whether it was just a failure on our part to initiate it – FG2

In this response above, the student entertained that the lack of engagement with other professionals may have been a function of their lack of initiative in seeking out the experiences. There is ample literature in health professions education describing the challenge of workplace-based learning for students, particularly as they enter the environment for the first time (Molloy and Keating 2011; Delany and Molloy 2009). Not only do students experience a steep learning curve in skill and knowledge acquisition, they also need to read and engage in a new practice environment, often bound by unique culture and rules. Students also report that negotiating the relationship with their supervisor is another significant stressor in their early learning experiences (Molloy 2009). It takes a proactive and highly confident student to approach their own designated supervisor for learning experiences and feedback on their own performance. Approaching another practitioner outside their profession, who may not be receptive to the teaching encounter, may represent a significant challenge to students. This study did not examine the opinions or expectations of health professionals within the clinical environment. The student data alluding to this lack of structured facilitation suggests that it might be important to better understand the readiness and skill levels of practitioners in relation to interprofessional education and practice.

One student indicated that this difficulty in accessing other professionals might be overcome with formal and mandated opportunities to shadow other practitioners. For example, an opportunity to spend a half day with an allied health practitioner and another half day with a nurse, and to log this experience as part of satisfying the expectations of the placement:

| | |
|---|---|
| Respondent 1: | I think if we spent one day with each different kind of allied health person, like one day with the social worker, one day with the physio, one day with the OT… |
| Interviewer: | Like shadowing? |
| Respondent 1: | Yeah, we'd find out a lot more about their profession than we think we know. – FG2 |

#### 20.2.4.2 Informal Invitations

In contrast to the students who reported little contact with others outside medicine, some students experienced rich unstructured episodes of learning that were initiated by allied health staff. In the example below, the student conveys their productive experience of ward rounds where the physio, positioned at the back of the group with the medical students, took on an informal teaching role, ‘interpreting’ the events occurring between the patient and the consultant in the ward round.

> Just during rotations I found that the older physios who had their own students to teach, they’re far more available to explain what’s going on because the doctors are really involved with the patient. We’re usually standing at the back and that’s also where a lot of the allied healthcare workers stand. So quite a few times the physio used to explain to me what was going on. – FG2
>
> I had that same sort of experience as well with a physio on ward rounds explain things to me – FG2

#### 20.2.4.3 Clinical Context Affording Interprofessional Learning Opportunities

Many participants thought that the greatest strength of the placement in encouraging interprofessional learning, was the nature of the clinical environment itself. The palliative care ward was recognized as a distinctly different way of practicing medicine, where there was focus on the person and their agency, compared to a typical acute ward, where the focus was on fixing pathology. The patient-centred nature of the care was seen to promote more opportunities for practitioners to work together for the patient.

> I guess it’s a different approach to medicine, as much as the doctors there is a strong nursing support and pastoral care and a lot of other services that work together. That was a great place to be exposed to it – FG1
>
> Yeah, so it was really good to see the – I don’t know the aspect of more looking at the human being. Even though the disease is never going to be stopped, they helped a whole person instead of just one condition – FG2

#### 20.2.4.4 Geography Playing a Part in Generating Silos

Although the clinical context itself was seen as a facilitator of interprofessional practice, the physical setting of the placement, including the student common rooms, was viewed as a constraint to student-to-student interprofessional interactions. When asked if medical students interacted with students from outside medicine, one participant stated:

> No, not really. Even in the common room downstairs the physio students go into a different room and the med students hang in a different room and that started to break down because we all watched basketball together. But that’s about the only time we really talked to them – FG2

#### 20.2.4.5 Assessment Creates the Learners We Deserve

Students repeatedly raised the concept that assessment was a strong pointer to what is most important in their learning. This sentiment that assessment drives learning is expressed in the literature on assessment in both higher education and workplace based learning (Ramsden 1992; Boud 2000; Boud and Molloy 2012). Boud's (2000) paper on sustainable assessment argues that teachers' design and implementation of assessment tasks strongly influences the type of learner that is generated. Reeves et al. (2002) and Davidson et al. (2008) have also written about the importance of assessment in driving students to develop interprofessional knowledge and skills.

> At the end of the week you would be like, well, how is this going to help me progress? – FG3
>
> I would probably look at it [interprofessional education] and say, how is this going to help me? You know, looking very short-sighted, how is this going to help me pass my exams? When you're that smashed for time you really want to get down to the nitty gritty – FG3
>
> We had a huge focus [on interprofessional education] in ours [problem based learning tutorials]. It depended on your tutor and our tutor was pretty forceful about what does a social worker do, what does an OT do? It had to be an objective. But whoever got that objective wasn't happy with it. At the time it was not assessed on our exams so no-one wanted to learn about it – FG2

The students alluded to the crowded nature of their curriculum, and the need to prioritise what needs to be learned. They (sensibly) saw summative assessment as a way to help them navigate the educators' priorities. The lack of formal assessment tasks relating to teamwork and knowledge of other professionals' roles served to devalue interprofessionalism within the program. Boud (2000) describes the multiple functions of assessment in learning. As well as its stated aims in evaluating specified learning outcomes, assessment acts to both overtly and covertly communicate what is valued by a profession.

### *20.2.5 Theme 3: Discipline-Based Role Models Are Key to Orientating Learners to What Is Important in Practice*

#### 20.2.5.1 Like Likes Like

Almost all the participants reported that they looked to mentors within their own profession as good models for practice, including interprofessional practice. Intuitively, it makes sense that learners, in seeking to reach membership within a profession look to 'one of their own' as models for practice and as credible sources to provide them with feedback on their own performance in relation to intended standards (Molloy et al. 2013).

> Every time you see a doctor do something good or do something bad, you think oh I want to do that, or I don't want to do that – FG2

> But yeah, you just had to model yourself against the medical rather than the other allied health, I think. But I think you probably could learn from allied health in the way they approach things as well, but I just haven't been exposed to enough allied health to comment on that – FG1
>
> We weren't sort of going in and going let's watch physio and let's try to be physios this week – FG3
>
> The students tend to want to just attach themselves to the doctors and the consultants and learn from them rather than trying to ask a social worker whether they could follow them for the morning – FG3

Rather than educational designers being optimistic about the degree to which students engage in innovations that target interprofessional competencies, it may be important to acknowledge the resistance that learners have in looking outside their profession for clinical role models. In our own case study, the most persuasive players are the doctors themselves- in the way they demonstrate productive teamwork, in the way they talk to other professionals and in the way they talk to students about the role and value of other professionals.

#### 20.2.5.2 Unhelpful Modeling

Students reported picking up on stereotypes and antagonism between the professions during their encounters with practitioners outside medicine. In asking to learn from a nurse, one medical student reported that the nurse agreed to help on the condition that he would not turn into a doctor 'all pushy and stuff' when entering the workforce.

> Interviewer: So how did that go? How did you invite yourself to follow the nurses?
>
> Respondent 1: 'I'm really crap at this, you're obviously better, can you show us how to do it?' We just kind of said 'we're students, we're not very good, can you show us?' The nurses are always like 'oh yeah'. Every time you get to a nurse they're always like 'alright I'll show you this, but remember this when you're a doctor and don't be all pushy and stuff'. Every nurse I ever talked to. They just like to say 'in the future don't be a jerk.'
>
> Interviewer: I'm seeing some heads nodding. Did other people experience that?
>
> Respondent 2: Yeah, I've heard that quite a few times. Because I guess we're in a position now where we don't know much and we're happy to learn from anybody. So when we do the nurses always like to throw that in. But yeah, I guess they want us to be pleasant to work with.

Ironically, although this nurse may have been attempting to dissolve professional boundaries, they may have further perpetuated professional divisions through referring to stereotypes.

## 20.3 Pulling the Threads Together: Facilitators of Interprofessional Education

Although there is a compelling rationale for training health professionals to work together, there are few published guidelines on how to enact interprofessional workplace based learning. In most countries, uni-professional clinical education is the staple, and there tends to be a peppering of interprofessional objectives within

**Table 20.3** Curricular components to consider when implementing interprofessional education in programs

| Curricular component | Examples |
|---|---|
| **1. Learners orientated to the purposes of interprofessional education and practice** | Explicit learning outcomes relating to developing interprofessional practice, clear expectations that students will learn with other students and practitioners from professions 'outside their own' and providing early examples of effective team-based patient care. |
| **2. Profession-based role models endorse the importance of interprofessional practice through narrative and action** | Role models talk the talk and walk the walk of IPP. For example, a doctor teaching into the academic curriculum at University will 'tell stories' about the positive impact of IPP on patient outcomes. In the workplace setting, a doctor will communicate with other professionals effectively when caring for a patient, and frame other professionals in a positive light when debriefing with medical students about a case. |
| **3. Practitioners from 'other' professions teach students at knowledge and skill level** | Students are taught by capable others, outside their native profession. For example nurses teach into medical PBL tutorials, physiotherapy academics give anatomy lectures to medical students, an occupational therapist provides a tutorial on hand rehabilitation post tendon trauma in the workplace setting. |
| **4. Learners participate in activities promoting interprofessional education** | Activities to build student engagement and foster interprofessional education including patient cases –what would the paramedic do at arrival on the scene? How would the nurse assess the patient on arrival to the emergency department? etc. |
| | Clinical placements- following or tracking patients and involved in all aspects of their care. Team meetings also feature invitations for interprofessional education. |
| **5. Learner disposition for working with others developed through formative and summative assessment in the workplace** | Identification of IPP-based behaviours on the workplace assessment instrument (for example an item on "Works effectively with other professions and healthcare teams." This explicit item serves to orientate learners to the fact that interprofessional competencies are a core outcome in workplace learning experiences. It also ensures that students receive feedback on how to improve aspects of their interprofessional practice. |
| **6. Incremental challenge of interprofessional tasks that are consumer centred** | Development of tasks that progressively challenge learners to work together for the consumer/patient. Without progression in complexity of required knowledge, skills and attitudes, learners are unlikely to engage with these competencies over time. |

these experiences to encourage learners to observe and respect the practices of 'others' outside their profession.

The case study presented in this chapter illustrates the difficulty in establishing an effective interprofessional education program, embedded within the workplace. Although the case study focuses on the health workplace, the emergent themes may have application to the broader field of interprofessional education. Table 20.3 within this section highlights key curricular features that may encourage students to learn

with, from and about others. Again although these recommendations stem from the study of interprofessional education in the health workplace, it is anticipated that these program features may add value in the broader context of interprofessional education.

In the case study, despite medical students articulating the interprofessional learning aims of the placement (developed by curriculum designers), their reported experience deviated considerably from these aims. Medical students reported lack of legitimate invitations to work alongside 'other' professionals or health professional students, intimidation in asking to be exposed to experiences or knowledge provided by professionals outside medicine (stepping on toes), and conveyed their biases about the perceived importance of interprofessional learning and practice- along the lines of yes, it is important, but not as important as learning the technical skills needed to be a doctor.

These attitudes were expressed by some students at the very start of their clinical placements. This illustrates the potency of the university-based curriculum in shaping attitudes about what professional practice is about, and what is important to know in order to get there. In other words, even though this chapter has focused on initiatives in workplace based (clinical) education to promote interprofessional learning, the success of such initiatives may be influenced by how learners are socialised within their academic curriculum. A study by Reeves et al. (2002) also supports the importance of the pre-clinical curriculum in orientating learners to the importance of interprofessional practice and learning. The data suggest that to further the cause of interprofessional education, we may need to better focus on how activities are sequenced throughout the entire curriculum, rather than focusing on the implementation and evaluation of discrete, once-off pilot interventions.

Many of the focus group participants acknowledged that interprofessional practice is important long-term, but reported that development of these skills was not a key priority for medical students. Their focus was on 'medical knowledge' and technical skill acquisition. This privileging of technical skill development over 'non technical skill development' is reflected in a number of studies examining health professional students' preparation for practice (Molloy and Keating 2011; Chumley et al. 2005; Prince et al. 2005; Small et al. 2008). As one participant noted:

> It's [interprofessional education] definitely valuable but I don't know at this point whether it's a major priority. I know that in our final year, our fifth year, our pre-intern year, we don't have as many tutorials and it's more about what you want to do and learning about that. Maybe it would be more suitable at that sort of session because you should have, I guess, an understanding of the medical side of things – FG1

The students' positioning of interprofessional education and practice outside core 'doctoring' was a feature in the data set. The sentiment expressed in the quote above is that, yes, interprofessional education is valuable, but it is an added set of skills to acquire once you have the nuts and bolts of medicine under your belt. Interestingly, communication and teamwork, key capacities needed for interprofessional practice, also feature under the umbrella of 'non-technical skill' (NTS) development in medical education. There has been a recent shift in the literature on NTS development in the health professions, with a call that even the term 'non-technical' skill is unhelpful in the plight to orientate learners to the pivotal role

of these skills in health professional practice. Nestel et al. (2011) proposed that the term NTS is unproductive and unrepresentative in that it oversimplifies the importance of these skills in professional practice. As an alternative to NTS, they advocate using the term 'human factors' to represent the collection of skills needed to work effectively with others. The authors posit that the 'non technical' implication may lead learners to think that the associated capacities are not specialised and can not be learned as they are linked to personality (you've either got it or you don't mentality). The danger of this 'non-technical' sentiment is that learners may not invest time or energy into developing these capacities, particularly given the packed nature of their curriculum.

One of the barriers to achieving interprofessional learning is the view that learning or practising interprofessionally may hinder professional identity formation (Hall 2005). As reported by Davidson et al. (2009) "there is a great deal of investment by various professions in socialising new inductees into their chosen profession" (p. 84). The participants in our case study also expressed this belief that you have to learn what it means to be a doctor first, before you can take on knowledge about the roles of others in the health system. This is a 'staggered' approach of learning, where students focus on 'what you are' first, and then use this understanding to delineate self from 'others'. The danger of this approach is that it positions interprofessional learning and practice away from a core competency – something that you learn once you become an occupational therapist, or once you have become a nurse. We argue that a more productive framework is to position interprofessional practice as part of being a doctor/physio/ nurse. To achieve this 'core competency status', it is very likely that interprofessional learning and practice needs to be introduced as early as Day 1 in the curriculum, along side knowledge and skills in hand hygiene, anatomy, suturing and communication.

The need to position interprofessionalism as a core set of competencies is also argued convincingly by Davidson et al. (2009). If learners do not see the value in engaging in the learning activities designed to promote these skills, there is very little value in setting up such opportunities within the workplace setting. This peripheral positioning of interprofessional education within a health professional curriculum is not a phenomenon unique to interprofessional learning. Molloy and Keating's (2011) study, examining how physiotherapy students prepare for workplace learning, also highlighted that students, very early within their academic program, make decisions about what is needed to be learned in order to progress and to work as a practitioner. This physiotherapy study did not specifically examine students' regard for interprofessional education, but rather how they viewed reflective practice.

When focussing on students' lack of prioritisation of certain aspects of the curriculum, a number of comparisons can be made between the literature on developing reflective practice and interprofessional practice in students. As reported by Molloy and Keating (2011) "One of the constraints to students' engagement in this learning agenda is their quick judgement of 'peripheral' content – viewed as removed from core business" (p. 79). As discussed in this chapter, thoughtful and deliberate curriculum design, can help navigate students to what it means to be a good practitioner, and what they need to prioritise in their training.

It is also likely that role modelling by staff (both in orientating students to the value of interprofessional education and practice) and the type of teacher (nurses teaching anatomy in the medical curriculum, physios teaching orthopaedic assessment skills) will enhance the message that working with others, and learning with, from and about others are core skills for any practitioner. Medical students repeatedly raised that it was natural for them to look up their medical colleagues and teachers as role models. This suggests that perhaps if we want to orientate learners to productive interprofessional behaviours, it might be best achieved through the efforts of teachers within their own profession.

So what are the curriculum features needed to develop effective interprofessional education in a pre-registration program? The medical students in our 2012 study helped to distil these components through their discussion about what worked and what did not work in their interprofessional education placement. Interestingly, even though our study examined interprofessional education in the workplace learning environment, the data pointed to the importance of setting up interprofessional objectives, activities and assessment throughout the entire curriculum-both pre-clinical and clinical. Table 20.3 above summarises the key components that may be considered at both university and workplace/fieldwork interfaces in order to develop practitioners with dispositions to work effectively with others.

As argued by Davidson et al. (2009) "there is no universal blueprint for how to 'do' interprofessional clinical education" (p. 84). What is apparent is that there are plenty of discreet educational interventions that are being trialed, perhaps with a lack of deliberate consideration for how these initiatives sit within the wider curriculum. The case study presented in this chapter highlights the lack of genuine student engagement in the interprofessional education placement. While students did not explicitly frame their disenchantment as a product of poor curricular design (they are, after all, not necessarily charged with the language of 'constructive alignment' and 'vertical and horizontal integration'), their experiences pointed to a lack of preparation for how to engage in the interprofessional education placement objectives. Very early in their program, they had made decisions that interprofessional practice, including team work and communication, were skills peripheral to the core business of 'doctoring'. The lack of assessment of interprofessional competencies in the academic context, and again the lack of summative assessment of these skills in the workplace setting, served to reinforce to students that they should invest their learning energies elsewhere. The six curricular features presented in Table 20.3 may help educators to reflect on ways of designing the curriculum to better develop students with capacities to work and learn with others in practice.

## 20.4 Summary and Where to Next

In drawing on the literature, and on our own study of an initiative designed to promote interprofessional learning and practice in medical students, it is clear that most people consider interprofessional practice as important for effective patient care.

What our own study brought to light was that acquiring these skills was not seen as an immediate priority for students, compared to the 'hard' knowledge and skills of medicine. A placement experience designed to promote development of these interprofessional capacities needs to be better designed than the somewhat 'hopeful' placement that was available for students in the study. Students reported that the lack of structured activities, the lack of legitimate teaching invitations from other practitioners in the workplace and the lack of summative assessment all contributed to their limited interprofessional experience.

Within the placement, there was no formal assessment that linked to the interprofessional education, or interprofessional practice experience, nor were their learning objectives of observation and interaction with other non-medical health professional students and practitioners promoted or mandated. For these reasons, it was only the confident or proactive medical students who actively sought experiences and informal teaching outside their medical supervisor. For example, one student reported following a "blood nurse" on placement to hone his skills in taking blood, but this was an exception within the participating cohort. Many of the findings related to professional identity formation and the strong impulse to work with and be supervised by doctors because that was who students were aiming to become.

The students alluded to the importance of role models within their own profession. The impact of this intra-professional modelling, both the narratives and the demonstrated behaviours, needs to be examined further. We encourage research designs that seek to answer the following questions about interprofessional education:

- To what extent do educators model interprofessionalism in the academic workplace?
- What can other health professionals teach medical students about interprofessionalism-in both the university and clinical setting?
- How do doctors model interprofessional practice within the workplace?
- Are 'other professionals' prepared to teach medical students in the clinical setting when they are already over-burdened with clinical and teaching responsibilities?
- How can educators better design a clinical placement model with the aim of promoting (and assessing) interprofessional learning and practice? And what is the impact on short and long term learning outcomes?

What is becoming increasingly clear from the mounting reports on interprofessional education initiatives in health, is that learners and practitioners are more likely to see the value of interprofessional communication and teamwork if they understand, and see for themselves, the positive influence of these practices on patient outcomes (Kent and Keating 2013). Studies that focus on patients' experience of effective interprofessional practice, as well as impact on health outcomes and workplace efficiencies, are likely to provide a persuasive rationale as to why these skills are worth developing. Engaging learners in the 'why' of interprofessional practice early in their curriculum is just as important as the exposure to tasks and activities designed to promote these behaviours. The results from our study suggest that when it comes to a persuasive rationale for interprofessionalism, it may need to come from the practitioner native to the student's profession. As one student stated, 'I want to learn to be doctor, so it is only natural that I will watch what they do'.

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