DEVELOPING A MODEL FOR INTERPROFESSIONAL EDUCATION DURING CLINICAL PLACEMENTS FOR MEDICAL AND NURSING UNDERGRADUATE STUDENTS
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In health care settings, doctors, nurses and allied health professionals are required to work cooperatively as a multi-disciplinary team to provide comprehensive patient care. While teamwork is essential for good clinical practice, in Australia the clinical preparation of undergraduate health care students is undertaken unprofessionally and seldom includes preparation for working with other health care professionals. Despite the importance of shared communication and collaboration within health care teams, medical and nursing curricula have yet to systematically integrate this into undergraduate students’ clinical learning experiences. Undergraduate learning needs to better reflect optimal clinical practice, namely collaboration between the health disciplines during patient care.

To facilitate this collaboration, students can gain knowledge of other disciplines by learning with them as they communicate with patients. Interprofessional education (IPE) provides the opportunity for health care professionals to learn about the roles of their colleagues within the team. It takes place ‘…when two or more professions learn with, from and about each other to improve collaboration and the quality of patient care’ (Centre for the Advancement of Interprofessional Education 2002). Through IPE, health professionals can acquire knowledge, skills and professional attitudes germane to quality health care that are not readily achieved in any other way (Horsburgh et al. 2001).

The contribution of IPE to improving patient care and quality of life was formally identified in the United Kingdom (UK) in the late 1980s. Further development has occurred as patients’ needs have increased in complexity. Where optimal care has not been provided it is often due to lapses in communication and trust between health professionals. In the UK many of the health disciplines have incorporated IPE into their undergraduate curricula.

The Fellowships awarded by the Australian Learning and Teaching Council provided the opportunity to develop, implement and evaluate an IPE Activity for use during clinical placements in Australian health care settings. The collaboration between the Fellows from the disciplines of medicine and nursing allowed them to combine their experience and knowledge of two of the major disciplines within health care.

The aim of the Activity is to develop students' knowledge of the respective roles of other health professionals by providing a structure incorporating IPE into the clinical education component of health professionals. Its purpose is to promote respect and enhance communication between them thereby optimising patient care.

A literature review was undertaken to gain an understanding of the methods used to introduce IPE into the curricula of health care professionals. This identified several barriers that impeded the incorporation of IPE, including logistic, leadership and attitudinal factors. The Activity was designed using strategies to manage these issues. It is designed to be flexible so that it can be used in busy clinical environments where the provision of patient care takes priority. It complements discipline-specific learning in the clinical environment.

Two Interprofessional Learning Workbooks (IPLW) were prepared to provide direction for both students and facilitators. The student workbook is self-directed and guides the collection of patient information pre-interview, the patient encounter and information about the roles of different professionals caring for the patient. The facilitator guide includes structured questions for the discussion with the students at the end of the activity.

Testing was conducted in three phases

- Phase 1: The pilot study – the IPLWs were trialled and revised in an Emergency Department.
- Phase 2: Trial 1 – testing in an acute care inpatient setting.
- Phase 3: The modified IPLWs were implemented in an inpatient ward environment with an enhanced role for the facilitator.
The tasks in the workbook are structured so that they can be interrupted without losing information that has already been acquired.

Published quantitative surveys were used pre- and post-intervention to investigate attitudes to IPE. Variable and inconsistent changes were noted post-intervention. During the fellowship, a qualitative instrument was designed to collect further data specific to the Activity conducted. These data showed that the students commenced the activity having had little or no prior IPE experience. The results of the qualitative analyses showed overall positive responses to the IPE experience.

The role of the facilitator, educated in IPE and taking a proactive role in the clinical environment, came into focus in this program as an essential component of IPE, and was invaluable for surmounting many of the barriers.

The program identified key barriers to the implementation of IPE, congruent with that reported in the literature, including attitudinal factors, diverse objectives for clinical placements and logistical difficulties such as timetabling. However, the core tenets of IPE were possible when we gained leadership support and when clinicians and students recognised that routine ward activities, such as the ward round or a case conference, and facilitated learning activities such as the fellowship piloted, were valuable interprofessional learning opportunities.

The role of IPE in the development of knowledge, attitudes and skills that are the foundation of effective collaborative clinical practice is articulated in a conceptual model. The model shows the unique contribution of IPE to student learning and acknowledges the overlap with, and influence of, clinical teaching, work-integrated learning, collaboration and teamwork, and safety and quality issues. The unique role for IPE includes the development of knowledge, attitudes and skills that will lay the foundation for effective collaborative practice.

The recommendations of this fellowship for future trials of IPE in the clinical environment are:

1. Engagement of the leadership from both the university and health service, and of the local clinicians, is essential.
2. Identify the logistical and practical barriers to implementing IPE in the clinical setting and develop a plan to overcome them.
3. IPE activities in the clinical setting need to be flexible and able to be completed in short time periods.
4. Acknowledge that students have preconceptions (or attitudes) to other health professions and that they may not be congruent with the requirements for collaborative practice.
5. A trained IPE facilitator is essential. This role may be additional to the clinical teaching role. The facilitator needs to engage with local clinicians and take a proactive role in organising the activity.
6. There are a number of different learning, teaching and supervision models used in the clinical setting by the various health professions and this needs to be considered in planning an IPE activity.
7. Appropriate data analysis methods need to be developed to determine the effectiveness of the activity in changing student attitudes. Results from IPE activities will be very variable between individuals.

The development of the IPE activity through its many variations, as well as the accompanying tools, are readily transferable into a broad range of health professional learning. This fellowship links well with the scoping project (L-TIPP) as it provides a mechanism through which students can engage in interprofessional learning. We envisage that the IPE activity described in this report will be a useful teaching and learning resource in facilitating the development of communication and collaboration, a key aspect of health professional education.
1. LITERATURE REVIEW

In complex and dynamic health care environments it is imperative that effective teamwork occurs in order to maximise patient safety, co-ordinate the members of the health care team and best utilise the skills of each member of the team. Improved teamwork leads to better communication and improved coordination of service delivery, cost effectiveness and more holistic patient care. The development of collaborative skills can also lead to increasing respect for, and understanding of, the roles of other professionals, and greater satisfaction in the workplace. Health professionals work in multiprofessional teams immediately after graduating, yet are mostly educated in uniprofessional courses with little development of collaborative teamwork skills in the curriculum. The role of Interprofessional Education (IPE) as a means of developing the skills that are essential to effective collaborative practice by health professionals is increasingly being recognised.

Interprofessional learning occurs ‘... when two or more professions learn with, from and about each other to improve collaboration and the quality of patient care’ (CAIPE 1997). This differs from multiprofessional learning, where different disciplines may share learning opportunities (e.g. attending lectures together) but do not necessarily interact with each other, nor learn from each other.

This fellowship developed a learning activity, and as a consequence, a model for promoting IPE during the clinical component of medical and nursing undergraduate programs.

1.1 Teamwork

The Australian Commission on Safety and Quality in Healthcare has recognised that many critical incidents that have led to poor patient outcomes are the result of poor communication between health professionals within clinical settings (www.safetyandquality.gov.au). A consistent factor in recent international inquiries into systems where poor practices have been continued for longer than is acceptable, has been poor communication between staff who have not worked together effectively for the interests of their patients (www.bristol-inquiry.org.uk/final_report/index.htm).

Effective teamwork contributes not only to patient safety but also to job satisfaction. In a large cross-sectional study across general practices in Australia, Proudfoot et al. (2007) investigated team climate and job satisfaction across 654 general practitioners and staff and 7505 chronically ill patients in general practices across six states and territories. They showed that job satisfaction ratings and patient satisfaction increased with an increase in team climate inventory scores.

The development of highly functioning teams is dependent on many factors, particularly a culture of good interprofessional relationships that is created by the team. Interprofessional teaching and learning are important considerations in the education of health professionals. Morey et al. (2002) showed in a multi-centre evaluation using a quasi-experimental, untreated control design of 684 physicians, nurses and technicians, that formal teamwork training improved the quality of team interactions, decreased rate of clinical errors and improved staff attitudes to teamwork.

While the benefits of teamwork are clearly justified establishing effective teams within real practice is not without challenges. Professionals’ interactions within teams vary according to personal characteristics and case complexity (Lindgard et al. 2006). There are inequalities in the levels of participation within teams both across and within professions (Atwal & Caldwell 2005). Building effective teams can change the power distribution within the team, leading to tension and dilution of individual professional responsibility for clients. It can be hindered by personality clashes, professional territorialism, rotating team membership and a culture of individualism. Effective teams need to make a long term commitment and move away from focusing on individual competencies to a focus on communication within teams and leadership.
1.2 Developing teamwork and collaborative practice skills in undergraduate programs

Interprofessional teaching and learning are important considerations in the education of health professionals. IPE promotes effective communication and collaboration between health professionals that result in safe and comprehensive care for patients. Through IPE student health professionals acquire knowledge, skills and professional attitudes germane to quality health care that are not able to be effectively acquired in any other way (Horsburgh et al. 2001). Currently, there are very few occasions within undergraduate programs both nationally and internationally where medical and nursing students have an opportunity to interact and learn together about health care and the synergy of their roles in health care (Russell et al. 2006, Hall & Weaver 2001, Ross & Southgate 2000).

There has been a major push for IPE in the United Kingdom (UK) and United States of America (USA):

- In the UK, the Department of Health (DoH) has worked with one of the health authorities to create an interprofessional workforce that addresses issues around the optimum value from the workforce, engagement of patients and improved health outcomes (www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_078592). IPE is mandatory within UK undergraduate health professional programs (Pollard & Miers 2008), however the implementation structures and processes vary considerably between programs.
- In the USA, the Institute of Medicine (IOM) targeted health professional education in one of its quality Chasm series. One of the five competencies that graduates of all health professions must demonstrate is the ability to function effectively in interdisciplinary teams (IOM 2003).

It is well accepted that interprofessional learning, teaching and practice are key factors in good practice and optimal patient outcomes. Accordingly, a group of health leaders across the major disciplines in the Australian Capital Territory has commenced a major ‘push/pull’ strategy: their argument is that further research is not needed specifically about the value of interprofessional activity but rather to develop interventions to ‘make it happen on the ground’ (Braithwaite et al. 2007).

The importance of enabling systems that foster interprofessional teaching, learning and practice is increasingly being recognised at a national and state level. For example a major component of the Australian Nursing Federation’s (ANF) submission to the National Health and Hospital Reform Commission (NHHRC) was the provision of funding to establish interprofessional learning at the undergraduate level (www.anf.org.au/anf_pdf/anf_submissions/Sub_NHHRC.pdf). The Ministerial Taskforce into Clinical Education and Training (2007) established by the Queensland Government identified the benefits of collaborative learning and included in its recommendations (Recommendation 14) that ‘Clinical Training Networks should utilise where appropriate interprofessional learning to maximise the achievement of efficiencies in clinical outcomes that have been evidenced from this [IPE] model’ (Ministerial Taskforce on Clinical Education and Training Final Report 2007, p. 6).

Interprofessional learning and teaching has been established internationally with varying levels of commitment and uptake. In Australia most work has been initiated at a local level, within a school, or across several schools at a university, in collaboration with a number of health service districts. These programs have been most successful in rural and remote areas (McNair et al. 2001). Australian IPE activities tend to focus on content rather than specific IPE objectives. The activities are often initiated by clinicians in the field rather than being policy-driven and are rarely published (Thistlethwaite 2007). As yet, Australia has been slow to respond at a national policy level (Stone 2007). Prior to the introduction of interprofessional teaching, learning and practice, it is important to clarify the aims and expected outcomes of IPE. This informs stakeholders about the expected outcomes of a range of initiatives and allows them to select and implement the most appropriate activities that best meet their specific situation and circumstances.
Attitudes to the value of IPE vary across professions. Curran (2007) found significantly lower mean scores (p<0.05) in attitudes to IPE, interprofessional teams and interprofessional learning in academic settings in medicine faculty members compared to nursing faculty members. They found, however, that medical faculty members who reported previous experience with IPE had significantly higher mean scores than those with no experience.

### 1.3 Aims of interprofessional education and practice

Political agendas and philosophies of local agencies have a major impact on the incorporation into the curricula of health disciplines of IPE activities that promote interprofessional learning, teaching, practice and interaction. These imperatives drive the interprofessional agenda and are responsible for determining the specific nature of the interprofessional learning activities that are selected. Accordingly the aim of an IPE program or activity will depend on the local context.

Rudland and Miers (2005) showed that students enter medical school with already developed perceptions of the characteristics and backgrounds of doctors and nurses and that these perceptions reflected misconceptions in society. They argue for the early introduction of interprofessional learning with the goal of changing or limiting the further development of inappropriate stereotypes.

The aims of interprofessional learning, teaching and practice are broadly focussed on enhancing communication, collaboration and teamwork to improve patient outcomes. More specifically, the aim of interprofessional education is the acquisition of the following knowledge, skills and attitudes (amended from Barr 1998, p.188):

- Describe one’s roles and responsibilities clearly to other professions;
- Recognise and observe the constraints of one’s role, responsibilities and competence, yet perceive needs in a wider framework;
- Recognise and respect the roles, responsibilities and competence of other professions in relation to one’s own;
- Work with other professions to effect change and resolve conflict in the provision of care and treatment;
- Work with others to assess, plan, provide and review care for individual patients;
- Tolerate differences, misunderstandings, and shortcomings in other professions;
- Facilitate interprofessional interactions such as case conferences and team meetings;
- Enter into interdependent relationships with other professions.

These aims can be formulated into the following competencies that form the basis of many interprofessional education activities which are modified for specific contexts:

- Provide patients with good medical care, nursing and rehabilitation;
- Develop your own professional roles;
- Enhance your level of understanding of other professional roles/mutual understanding of roles and recognition of difference/mutual trust and respect;
- Acknowledge the importance of good communication for teamwork and good patient-care/co-operation and assertiveness needed for effective conflict management;
- Be aware of ethical issues (Ponzer et al. 2004).

For these competencies to be achieved, education practices need to be aimed at the following: addressing negative professional perceptions; deepening insights into each other roles; enhancing interprofessional communication; and preparing students for interprofessional work (Reeves & Freeth 2002).
1.4 Theory and interprofessional education

Interprofessional education has been criticised for a lack of conceptual clarity and a theoretical basis (Clark 2006). Barr et al. (2005) created a conceptual framework for IPE based on experiences of interprofessional learning and teaching. The framework diagrammatically represents how the individual, teams and patient outcomes are interrelated through interprofessional activities. While IPE has not generated its own theory, the initiatives that constitute it should be grounded in educational theory (Oandasan & Reeves 2005, Part1). The education theories that have been recommended are those that are largely associated with small group and ‘active’ learning, and include the adult learning theory of Knowles (1980), reflection in practice (Schon 1987), problem based learning (Barrows & Tamblin 1980), and experiential learning (Kolb 1984).

![Image of the conceptual framework for IPE]

Figure 1: Barr et al. (2005), Three Foci of Interprofessional Education

1.5 Effect of IPE on organisational practice

Interprofessional learning and teaching has the potential to improve organisational practice and staff satisfaction. IPE activities that have been effective are often largely ‘simulated cases’ involving a group of health professionals who normally work together in a specialised sphere of practice, for example student midwives, doctors and nurses (Furber et al. 2004); palliative care staff (Wee et al. 2001); community health nursing and social work students (Russell & Hymans 1999); medical students participating in the emergency training with paramedic students (Hallikainen et al. 2007); or mental health practitioners (Reeves 2001). These studies, and especially the review by Reeves (2001), noted that the value of sustained outcomes from these types of studies is uncertain. While they refer to positive changes to organisational practice, in general the data are fairly weak in demonstrating that these changes are maintained over a longer time frame.

1.5.1 Models of IPE

Cook (2005) examined IPE in Canada and identified five potential models that describe different approaches to IPE. These models are:

- No specific IPE (expecting IPE to occur spontaneously as students are required to interact in the health care environment)
- Generic team building exercises only
• Shared instruction in core content areas (ethics, communication skills)
• Shared content but with a deliberate interprofessional focus
• Specific instruction in IPE:
  - Elective programs
  - Intermittent discussion through undergraduate education
  - As a separate course at a particular point in the curriculum
  - During clinical placement

As clinical education is pivotal in shaping students’ attitudes and behaviour, locating IPE activities within the clinical environment is arguably one of the most appropriate means of positively influencing their thinking about, and conduct towards, other professional groups.

1.6 Evidence for the effectiveness of IPE interventions in undergraduate education

Positive outcomes from undergraduate IPE experiences have been documented by Tucker et al. (2003). Where these experiences have included shared learning activities, Horsburgh et al. (2001) noted that undergraduate students have demonstrated positive attitudes to IPE. Studies by Tunstall-Pedoe et al. (2003) and Freeth et al. (2002) reported that changes in attitude and role perception are best effected through learning in small groups, focusing on clinical activities, rather than in large classes and lectures where opportunities for teamwork and focused communication are reduced.

Attempts have been made to determine the effectiveness of IPE. While a number of favourable outcomes have been reported, including improved attitudes towards members of interdisciplinary health care teams, increased knowledge of each others roles, and enhancing teamwork, there has been little formal evaluation.

A major problem with the formal evaluation of IPE using Randomised Controlled Trials (RCTs) that is repeatedly identified in the literature is the complexity of organising the interventions and their evaluation. Cook (2005) noted that while IPE activities often occur they are rarely reported because: (1) those involved in IPE are busy and cannot devote the time to publish work that must be multi-authored and sits outside the traditional organisational unit, (2) the measurement of the desired long-term changes is very difficult to track and (3) much of the evidence collected has been self-reported satisfaction or perceptions of attitude or behaviour change.

Under these circumstances, it is difficult to organise RCTs, therefore systematic reviews of IPE under the auspices of The Cochrane Collaboration have been based on only a small number of studies. Hammick et al. (2007) published a ‘best evidence systematic review of interprofessional education’. Twenty one articles were studied and the review concluded that:

• IPE that facilitates the acquisition of knowledge and skills necessary for collaborative working is generally well received.
• Staff development is a key influence on the effectiveness of IPE.
• All learners bring unique values about themselves and others to IPE initiatives.
• In quality improvement initiatives, IPE is often used as an effective way of enhancing the practice and improving service.
• IPE is less able to positively influence attitudes towards others in the service delivery team.
• Undergraduates have prior perceptions of IPE that are shaped by many factors.

Several authors have examined the measurement of outcomes of IPE. Freeth et al. (2005) devised a typology of outcomes of IPE based on an original schema by Kirkpatrick. In their systematic review of the literature, Hammick et al. (2007) summarised the reported outcomes of IPE studies (Table 1). It should be noted that there are fewer studies reporting data on higher level outcomes (Outcomes 3, 4A & 4B), however four studies do report a positive impact on patient/client care. Evidence at this level is difficult to measure as there are many confounding factors.
Table 1: Outcomes of IPE (Hammick 2007)

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Positive</th>
<th>Neutral</th>
<th>Mixed</th>
<th>Not reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reaction</td>
<td>12</td>
<td>0</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>2A Perceptions and attitudes</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>2B Knowledge and skills</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>3 Behaviour</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>4A Service delivery/ organisational change</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>4B Patient/client care</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>16</td>
</tr>
</tbody>
</table>

Other work in interprofessional learning focuses on the learning for the particular clinical problem: situations have been positively evaluated across professional groups in potentially improving pain management, however the impact of these teaching programs on how teams interrelate after the education sessions has not been monitored (Watt-Watson et al. 2004).

Positive changes around understanding and co-operation in students during planned and facilitated interdisciplinary experiences have been noted in specialised settings, such as aged care mobile service delivery (Hayward et al. 2005), and rural and remote settings (McNair et al. 2001, Dalton et al. 2003). Further, a program designed to expose medical students to the work of health professionals during a community placement has been evaluated as successfully leading to medical students obtaining relevant clinical skills for use upon graduation. It is uncertain whether these experiences make a difference to how the medical student interacts with other health professionals.

Students have mostly rated interprofessional learning positively when participating in a program with lecture-based sessions and to a lesser problem-based group work. While the attitudes toward the interprofessional teaching sessions were positive, the attitudes that the different health professional groups had toward each other did not change but rather negative stereotypical attitudes toward the professional groups actually increased (Tunstall-Pedoe et al. 2003).

The value of the type of learning experiences has also been questioned: ward- based teamwork while effective in achieving many of the goals of interprofessional education was not always an accurate model of students future practice (Reeves & Freeth 2002). Possibly associated with these models there is a perception that IPE inadvertently affects the development of skills specific to the discipline. This belief has not been substantiated – a comparison study of six universities in Sweden identified that while just one university integrated IPE in the curriculum and during clinical practice; when compared to the other universities medical students self rated their skills in their discipline the same as the other universities (Faresjö et al. 2007).

There is also debate around the timing of IPE, with one suggestion that IPE is best initiated after students have developed a strong enough basis and understanding of their own discipline (McNair et al. 2001). The timing for this is uncertain – a pilot study, however with only 15 participants, with newly graduated health professional groups reported that many of the these participants believed that negative attitudes had been formed during their undergraduate education and this was through participation in the specific educational groups. Most negative attitudes were formed by nurses and allied health staff towards doctors (Leaviss 2000).
1.7 Rationale for and benefits of introducing interprofessional experiences during the clinical phases of undergraduate education

The literature reports IPE initiatives that have been conducted across all levels of students and practitioners, namely, during undergraduate education or postgraduate and/or post-registration as a health professional. According to Barr et al. (2005), the majority of reported studies that have been undertaken are in the post graduate or post registration area. There are limited studies into prelicense/preregistration areas (Reeves et al. 2005).

Presently, there is a lack of reliable evidence of IPE in pre-licensure education – this does not mean that pre-licensure IPE is ineffective, just that there is little data. This may be because these interventions are difficult to evaluate (Zwarenstein et al. 2005). There is little evidence that shared learning can be transferred into shared practice (Parsell et al. 1998) – however if shared learning is achieved through shared practice then this has much greater potential to shift attitudes.

Zwarenstein et al. (2005) suggest that a consensus be reached about the best approach to IPE – then, a limited number of approaches could be tested on implementability, affordability and acceptability. The provision of a design that could begin to illuminate collaborative processes involved in IPE has been largely overlooked in the literature (Reeves & Freeth 2002). Essentially we therefore need to ‘value-add’ within the existing constraints of student clinical practice to create a design for interprofessional learning and education.

It has been suggested that the emphasis of IPE in pre-qualifying education in future work should explore effective strategies and sustainability for embedding such learning in undergraduate programs (Barr et al. 2005). Thoughtful consideration is needed when designing interprofessional education programs (Curran et al. 2007). Furthermore initiatives need to test the effectiveness of interventions in a number of settings, and also conduct parallel qualitative work (Curran et al. 2007, p.242).

Clinical contexts and activities routinely associated with undergraduate learning need to better reflect good clinical practice, namely, collaboration between the disciplines and interaction with patients, and also prepare graduates for best practice, namely, enhanced ability to communicate and collaborate. In Australia, the clinical preparation of health care students is most often undertaken unilaterally. Interprofessional learning in clinical settings, that develops knowledge of respective roles, enhances mutual regard, communication, and collaboration between doctors and nurses, has potential to improve team functioning.

Of particular significance is that the clinical learning environment is potentially more powerful in shaping future behaviour and practices than formal education. The environment students work in subliminally shape attitudes and behaviours (Russell et al. 2006).

It is important that interprofessional learning should reflect the reality of health care practice (Barr 1996 in Ker, Mole & Bradley 2003). Context is important because lasting effects are unknown but context can reinforce its value (Reeves & Freeth 2002). However, the context needs to be well structured with planned opportunities to develop a climate conducive to teamwork (Ker, Mole & Bradley 2003). This is challenging given that interprofessional learning is a complex activity, and largely unpredictable in practice base settings (Steven et al. 2007). If these hurdles can be overcome then positive practices are more likely to be sustained.

Clinical environments are increasingly stressed by service pressures, but they offer unparalleled opportunities to promote independent self-regulating learners (Gordon et al. 2000). There needs to be better use of clinical environments and resources for learning, for example, drawing patients and also clinicians into the teaching process as they both have an expert body of knowledge (Gordon et al. 2000). Ideally ‘real-world’ approaches can challenge learners to work effectively to address problems within ‘real contexts’, namely, procedural limitations such as difficulties in obtaining information, locating each other, competing demands, interruptions to routines. The challenge is: how does interprofessional learning and practice assist in overcoming these difficulties?
Interprofessional learning and teaching is not undertaken extensively in the acute care context (Oadasan & Reeves 2005). If this learning is to take place in this setting, then the health care team needs to focus on articulating the specific knowledge and skill development that is desired by staff and students and organise how best the education and health care team can work together to assist staff and students toward achieving the desired knowledge and skills (Oadasan & Reeves 2005). Concerns are raised in the literature around the transferability and sustainability of interprofessional learning. If sound and effective interprofessional learning practices can become embedded within routine ward practices, this argument almost becomes obsolete.

The difficulty is that practice-based IPE is complex and unpredictable – content, discussion, and practice arise spontaneously, depending on the situation. The nature of learning is largely dependent on the ‘context’ and the ‘mechanisms’ within the clinical interactions, by this reference is made to the setting and mix of participants, influenced by the way conversations evolved and their content (eg experiential, emotional, factual) (Steven et al. 2007).

1.8 Challenges in clinical IPE

Introducing IPE into the clinical environment poses particular challenges:

(i) **Logistical issues**: practice based educational interventions are not as straightforward as they appear. The logistics of implementation is one of five main barriers to implementation of interprofessional learning in practice settings (Barker et al. 2005). Horsburgh et al. (2001) cite potential barriers to IPE as timetabling, discrepancies in numbers of students from different student groups, and resource difficulties, such as lack of small group space.

(ii) **The educational program and organisation of clinical context**: there are differences in curricula and planning aspects of health professional programs

- Numbers and availability of students
- Organisation in the clinical setting
- Contrasting learning and assessment methods (Horsburgh et al. 2001)
- *Time* (for clinical learning) is a barrier to informing and changing attitudes (Steinart 2005)

(iii) **The different disciplines have different understandings of teamwork**: namely nurses have described collaboration as having input into decision-making; physicians have described it as having their needs anticipated and directions followed (Makary et al. 2006 cited in Barnsteiner et al. 2007).

(iv) **Most health education takes place in silos**: curricula differ across disciplinary education training programs and even when students are learning common skills and content, they usually do so without interaction with peers in other health professional programs (Barnsteiner et al. 2007). A culture of valuing shared learning is needed within the university and needs to be ultimately embedded within curriculum design (Barnsteiner et al. 2007). Furthermore, a lack of commitment and planning are recognised as barriers to effective IPE (Horsburgh et al. 2001).

(v) **Student motivation is poor when the activity is not seen as core to the clinical practicum**: students perceive little value in being involved in an interprofessional education activity: aligning IPE activities/workshops to assessment would increase the perceived value of participation (Anderson et al. 2006). There is also improved motivation when the activity is directly relevant to their current or future practice (McNair et al. 2001).

(vi) **Supervision arrangements for students make the logistics of engagement in an interprofessional activity difficult**: students are supernumerary and mentored by a range of frontline professionals (Anderson et al. 2006). Students are placed throughout the hospital attached to their uni-professional placement co-ordinator and integrated within their respective professional group (Anderson et al. 2006).
Students experiences and attitudes toward IPE: each student has their own experience of IPE that influences their meaning (Freeth et al. 2005). Medical students have been identified as being reluctant to participate as they do not see it as relevant (Reeves & Freeth 2002).

Students have a structural definition of team not a functional definition (Russell et al. 2006) and they may not feel a part of the team (Russell et al. 2006). The challenge, for IPE to be successful, is for medical and nursing students to feel as though they are part of the team because being part of the team is an integral component of student learning (Henderson et al. 2006).

There are difficulties in bringing students together because of a lack of collaborative history and of links between and within universities (McNair et al. 2001). There are different academic levels between students therefore students need to be recruited at similar times of the academic program (Dalton 2003). The selection of students should take account of students’ year of study or comparable training level, and aim for a balance across the group (Anderson et al. 2006).

Staff experiences and attitudes toward IPE: many health professionals did not train in an interprofessional environment and many do not practice in one (Curran et al. 2007). Physicians do not see IPE as relevant as do other health professionals (Russell et al. 2006). Ultimately, power resides in social relations and organisational structures that staff form in the clinical setting (Howe 2006). Potentially, effective principles of interprofessional change management need to be organised prior to student engagement in the clinical setting. Strategies to assist with this: professions need to see interprofessional learning and practice as relevant to getting the job done; and need to witness the benefits of an effective, functioning team. Greater consideration needs to be given to the creation of teams, eg teams with a short life span are often rushed and therefore not as strong as longer life teams (McGrath 1990 in Reeves & Freeth 2002); also Jacques (1995 in Reeves & Freeth 2002).

1.9 Addressing the challenges of IPE

There are many factors that do not facilitate IPE activities across both academic and clinical contexts. The literature indicates three key elements are needed to inspire interprofessional learning: namely: leadership, involvement of clinicians, and relevant interprofessional activities as part of campus activities and furthermore, during clinical practice.

1.9.1 Leadership

Leadership is a key issue for IPE (Steinart 2005). High-level support is needed through policy and this should be reinforced through regulation as part of accreditation standards (Baker, Bosco & Oandasan 2005). Leadership across both the university and the health sector is imperative to plan the curricula and the implementation of the spectrum of activities that need to become synonymous with IPE. This gives the mandate for staff to initiate and engage in interprofessional learning. Institutional planning of curriculum and assessment is needed, that embeds interprofessional learning and practice throughout the program of study.

Organisational infrastructure that enables students to understand, plan and participate in IPE is needed eg clinical placements for medical and nursing students need to be concurrent and within similar geographical locations; Interprofessional activities and assessments need to be mandatory for successful completion of the practicum. This is imperative to maximise the engagement of students and assist in delivering the benefits of IPE to prospective graduates of health disciplines.

1.9.2 Involvement of clinicians

At the local level, focus needs to be given to the linking of academic work and clinical activities and, furthermore, the work of the clinicians and the activities that become the everyday routine need to be examined for their potential for interprofessional learning. Co-support of a university
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

A clinical facilitator is required (Freeth et al. 2005, p.104). A number of activities at the local clinical unit level at the interface between staff and students can assist with the operation of interprofessional learning for example:

- Facilitators work with local teams to get them to examine what interprofessional practices they could implement during routine practice. Highly skilled clinicians are needed to support/guide/facilitate IPE (Freeth et al. 2005, p.103).
- In-service, which is undertaken within the professional groups (medical and nursing students do this separately) could be carefully crafted to engage both nursing and medical students.

Furthermore, facilitators can prepare and optimise the work of clinicians to assist in a commitment to IPE. For example:

- Identification of champions – these are practicing clinicians who have a major role in communicating and role-modelling practice to the rest of the team (Baker et al. 2005).
- Supporting local champions to adopt organisational ownership of IPE activities (McNair et al. 2001).

1.9.3 Relevant Activities

The opportunity to participate and observe the modelling of interprofessional learning and practice is essential for the student to develop good professional practice of their own. While it is recognised that this is not always forthcoming, the benefits of a flexible, self-directed activity can act as a catalyst for the type of learning that is desired in ‘real-world’ interprofessional practice. The types of interprofessional activities that can guide and inform this learning include:

- Case conferences
- Team meetings
- Ward rounds
- Home visits
- Discharge planning (Hilton & Morris 2001).

Leadership, clinician involvement and the identification of appropriate activities are imperative to overcoming the limited engagement of students in IPE activities.

1.10 The use of facilitators in interprofessional learning in the practice setting

The role of a facilitator in IPE is pivotal (Oadasan & Reeves 2005). The literature offers little in empirical approaches to the effectiveness of facilitator, however, this is consistent across all the health professions. There is much descriptive work, but few empirical findings about value and how they work.

The value of funded posts for organising and facilitating IPE has been recognised (Anderson et al. 2006). The role of a facilitator is important, and they need good interpersonal and group work skills. In facilitating IPE, there are often tensions between their own discipline and their relationship with others (Thomas et al. 2007).

There is little research work around the work of facilitators – facilitators (promoting teamwork) suffer from burn out as there is immense work around supporting student learning (Reeves & Freeth 2002). Professional facilitators, when employed to work within the discipline rather than across disciplines, work in parallel and tend not to promote interprofessional collaboration nor do they role-model interprofessional collaboration as part of good practice of their own discipline (Reeves & Freeth 2002). This observation may be indicative of the confidence that they have in the environment where they are employed to facilitate.
Success is more related to the experience and skill of facilitators, rather than a precise method used. When time provided by facilitators is not adequately supported, the facilitators can burn out (Copley et al. 2007).

The role of the facilitator is diverse but includes: contact with staff and students; developing the active learning environment; developing student capability; mentorship; facilitating tutorials; supporting groups; liaising with management.

### 1.11 Measures used to evaluate IPE

Several measures are available for the evaluation of IPE activities and these have most often taken the form of questionnaires. The survey instruments currently available have been described by Freeth et al. (2005) and include the *Readiness for Interprofessional Learning Scale, Interprofessional Attitudes Questionnaire, Role Perception Questionnaire, The Interprofessional Education Perception Scale, Team Climate Inventory, Team Effectiveness Questionnaire*, and the *Interaction Process Analysis Instrument*. Freeth et al. (2005), in their review of these instruments, point out the need to modify them to suit the local environment.

The Student Clinical Learning Culture Survey (SCLCS) is a tool that differentiates the salient features of the clinical learning environment that can be informative to clinical leaders. The first factor is ‘engagement’ (facilitated through interactions with the ward staff). It contains items pertaining to students’ interactions with staff around learning and teaching activities during the clinical placement. This has been consistently raised in the literature as important for student learning (Henderson et al. 2006). The second factor reflects the dimension of student motivation (relating to students seeking out learning opportunities). It pertains to the concept of students being active learners. The two remaining factors measure dissatisfaction and satisfaction.
2. METHODS

2.1 Challenges in clinical IPE that informed the study design

The development of our program was largely in alignment with the aspects of interprofessional education programs that enhance quality and effectiveness as proposed by McNair et al. (2001). These are:

- Clear learning objectives that are valued by and clear to all participants
- Shared goal of improved patient health care outcomes
- Flexibility to target generic content relevant to participants professions, but also allows students to investigate discipline-specific issues and needs
- Explicit focus on learning about demonstrating the dynamics of interprofessional collaboration and teamwork
- Allows specific project planning to be jointly negotiated by students, clinical preceptors, and local community representatives
- Involves participants who have chosen to participate and been actively involved in making arrangements
- Provides multiple opportunities for students to engage in interprofessional education through their training
- Occurs after students have developed a basic sense of professional identity, but not so late that they have been immersed in vocation-specific stereotypes or negative attitudes
- Situated in clinical settings rather than academic decontextualised classes

The intention of this project was to develop a model to facilitate students learning and working together in the clinical environment.

This report presents the development of a learning activity (based in the clinical context) that is flexible and mostly self-directed [with some assistance from a tutor] and that can be undertaken in the clinical environment during medical and nursing students practicum. The development of these scenarios discusses both the findings from the literature, and feedback from and experiences with clinicians, in the acute care contexts, to provide a rationale for the process and content of the learning activities.

The development of the components of the program are explained in detail (appendices include tools used) to facilitate its replication. This is important because research reports of interprofessional learning and teaching activities often do not explain the detailed procedural components that ultimately lead to the success or demise of the activity. For example, Freeth et al. (2002, p.54) ‘… studies do not convincingly demonstrate cause and effect there remains a problem in justifying the value of interprofessional learning’.

The table below (Table 2) shows how the design of our study was influenced by the issues presented in the literature.
Table 2: How the barriers to IPE were addressed in this study

<table>
<thead>
<tr>
<th>Barriers identified in the literature</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of students in different professions</td>
<td>Designed activity to be flexible and students able to pair up according to availability (fewer medical students than nursing students – medical students participated more often)</td>
</tr>
<tr>
<td>Availability of students (time, rostering)</td>
<td>Facilitator was available during early and late shifts (for nursing students)</td>
</tr>
<tr>
<td></td>
<td>Activity flexible to overcome the difficulties with timing and rostering</td>
</tr>
<tr>
<td>Different year levels, academic ability, maturity of students</td>
<td>Activity designed so they were learning about process issues and roles/responsibilities rather than content issues. Process issues are not delineated by year levels and academic ability. Health professionals did not take on formal tutoring roles, that is, health professionals worked as they normally do, however when opportunities arose the facilitator encouraged the students to engage in an interprofessional activity (eg during the ward round the nursing students were encouraged to mention a particular observation about the patient to the medical team).</td>
</tr>
<tr>
<td>Different supervision arrangements</td>
<td>Additional facilitator appointed to locate and match student pairs in geographical locations to overcome the differences in supervisions arrangements.</td>
</tr>
<tr>
<td>Health education takes place in a silo</td>
<td>Activity designed to identify a key situation point where the silos weren’t separate</td>
</tr>
<tr>
<td>University curriculum &amp; assessment structures, scheduling</td>
<td>Project leaders identified common clinical placement times – resulting in a relatively short intervention period.</td>
</tr>
<tr>
<td></td>
<td>Students did not take on workloads in teams – rather they undertook an activity focused on developing communication and understanding of others roles but not workloads. (Taking on workloads does not equate to real world of practice when they graduate.)</td>
</tr>
<tr>
<td>Tension between professional-specific tasks and time for IPE</td>
<td>IPE was designed to augment their discipline–specific tasks and could be implemented flexibly around other commitments.</td>
</tr>
<tr>
<td>Space</td>
<td>Early organisation and booking of room space for medical and nursing students to meet with the facilitator after participating in the activity.</td>
</tr>
<tr>
<td>Facilitator time/workload pressures</td>
<td>Additional facilitator to engage students in further reflection</td>
</tr>
<tr>
<td>Ethos of clinical area</td>
<td>Influenced choice of ward/area; project leaders worked extensively with staff during implementation</td>
</tr>
<tr>
<td>Methodological problems</td>
<td>Pre- and post- measures used ; both quantitative and qualitative methods used.</td>
</tr>
<tr>
<td>Leadership</td>
<td>Engaged with key leaders across medicine and nursing at executive and middle management meetings ; gave in-service presentations</td>
</tr>
<tr>
<td>Student stereotypes</td>
<td>Study design eg targeting students at undergraduate level, and the preparation of students prior to intervention.</td>
</tr>
</tbody>
</table>

2.2 Ethical Approval

The fellowship program received institutional human research ethics committee approval from the three facilities where the program was conducted. The activities were undertaken in accordance with the National Health and Medical Research Council, Australia, guidelines. Students who participated in the interprofessional learning activity were assured anonymity of their responses.
2.3 Preparation for Implementation

In line with successful intervention activities, we identified two hospitals that indicated an interest in participating in this activity that were local to Griffith University. The Queensland Health public hospitals are referred to in this report as Hospital 1 and Hospital 2.

While the hospital executive staff were keen to progress this activity, it is clear from the literature that leadership with local contexts is key to the success of IPE. Therefore the following presentations, meetings, and workshops were organised with key staff, and these are shown in Table 3 below.

**Table 3: Preparation for Implementation**

<table>
<thead>
<tr>
<th>Identified Problem: Leadership Support</th>
<th>Our resolution strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior management – for access and permission to approach middle management about the project.</td>
<td>A number of meetings were held:</td>
</tr>
<tr>
<td></td>
<td>• Hospital 1 Executive Director of Medical Services/Executive Director of Nursing Services – separately</td>
</tr>
<tr>
<td></td>
<td>• Hospital 1 executive group</td>
</tr>
<tr>
<td></td>
<td>• Hospital 1 nurse educators – senior staff separately</td>
</tr>
<tr>
<td></td>
<td>• Hospital 1 – nursing clinical coordinator in ED</td>
</tr>
<tr>
<td></td>
<td>• Griffith University nursing clinical coordinators</td>
</tr>
<tr>
<td></td>
<td>• Griffith University School of Nursing</td>
</tr>
<tr>
<td></td>
<td>• Griffith University/Hospital 1 – clinical placement coordination committee</td>
</tr>
<tr>
<td></td>
<td>• Griffith University School of Medicine</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 EDMS/EDNS – together</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – DONs for clinical areas</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – Medical Directors – group</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – Head/Senior staff of Surgery</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – Head/Senior staff of Medicine</td>
</tr>
<tr>
<td>Local management – continuous presence to remind and reaffirm the staff who were able to directly influence the participants of the project</td>
<td>Enhanced support through</td>
</tr>
<tr>
<td></td>
<td>Personally introduced ourselves to all local nurse unit managers, team leaders and many of the staff on the shift where and when the nursing and medical students were working. The facilitator introduced medical and nursing students to each other.</td>
</tr>
<tr>
<td></td>
<td>Plenty of information sessions conducted with nursing and medical staff</td>
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<tr>
<td></td>
<td>Facilitator and fellowship team turned up at 8am at the regular ‘handover’ meeting of registrars and residents - distributed sheet of ‘what we expected’.</td>
</tr>
<tr>
<td></td>
<td>While staff still did not engage they were happy for students to engage</td>
</tr>
<tr>
<td>List of staff involved:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hospital 1 ED staff – senior staff (as small group)</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 ED staff – in-service presentation</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – ward staff</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – Medical staff from wards (large group)</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 – Nurse Unit managers – initial and ongoing</td>
</tr>
<tr>
<td></td>
<td>• Hospital 2 Nurse Educators- group</td>
</tr>
</tbody>
</table>
2.4 Measures used

The three studies used the following methods. (Not all measures were used in each study, as described within each.)

- Students completed workbooks throughout the activities and these were thematically analysed.
- IPE facilitators recorded notes from the final interview with students and also recorded a reflective diary through the activities and both were thematically analysed.
- As we were interested to investigate the students’ preparedness for IPE, their reaction and possible discipline differences to the clinical learning environment, the following survey instruments from the published literature were used:
  - Readiness for Interprofessional Learning Scale (RIPLS – Appendix 4)
  - The Student Clinical Learning Culture Survey (SCLCS - Appendix 4)
  - The Health Care Team Scale (HCTS – Appendix 4)

A qualitative survey was designed to capture students’ reactions to the intervention overall. (this survey is shown at Appendix 4.)

2.5 Data analysis

Thematic analysis was used for the qualitative data in this study. The quantitative data were analysed using the SPSS® software package. Details of analyses undertaken are given within each study described below.
3. THE INTERVENTION

3.1 Pilot study

In the preparatory meetings with senior hospital staff, the Hospital 1 Executive requested that the pilot commence in the Emergency Department. This department had a very team-integrated approach and was deemed appropriate due to the potential to role model good team practices. It also had nursing and medical students at the stage of their programs deemed appropriate to participate in the clinical activity.

3.1.1 Aim

The pilot was designed to explore the process issues in the conduct of the IPE activity in a clinical environment.

3.1.2 Subjects

Twenty-six students participated in the pilot study (12 nursing students and 14 medical students. One nursing student undertook the activity three times, with three different medical students). All nursing students were 3rd year students. For the medical students, 13 were 4th year (final year in a graduate entry program) and one was a 3rd year student.

Recruitment

Nursing students were informed of the project prior to their clinical placement. At this time, they were informed that they may be approached during their clinical practicum experience to participate in an IPE activity. They were advised that this would be a voluntary activity to extend their learning opportunities during the practicum period.

Medical students were placed in various rotations spread geographically prior to this project and so the recruitment was conducted via email. The program was outlined and they were invited to participate voluntarily.

Medical and nursing students were then directly approached by the IPE facilitator and the Fellows during their time in the Emergency Department.

Location

The pilot was confined to the Hospital 1 Emergency Department. This department has 39 beds - one resuscitation bay and a further 10 beds in an observation area. As we were piloting this activity it was felt that this geographically confined area would facilitate prompt feedback around the dynamics involved in this activity that would assist in the ongoing changes.

3.1.3 The IPE Activity

The activity was designed to provide a series of structured questions to guide pairs of students through an interview with a patient, a discussion as a student pair and reflection on the processes involved in health care with an IPE facilitator.

An initial Interprofessional Learning Workbook (see Workbook version 1, Appendix 1) was designed and included the following steps:

Step 1: Familiarise yourselves with the patient notes and reason for admission and complete Section 1

Step 2: Interview the patient with your partner, using Section 2 of this workbook as a guide. Each of you should complete an individual workbook.
Step 3: Work through Section 3 of the workbook with your partner. This section asked the students to prioritise the patient’s problem list. List the staff involved in the patient’s journey and to identify barriers in the patient’s progress. They were also asked to describe, compare and contrast each of their health professional roles in the care of the patient. Patient safety issues were also addressed.

Step 4: Talk with the clinician from your discipline who is looking after the patient and fill in Section 4 of the workbook.

Step 5: Discuss your experience with the IPE clinical facilitator. This was guided by a series of structured questions provided to the facilitator who explored differing perceptions of care, patient safety issues and what the students learnt about each other’s roles.

After the first trial use of the workbook, it was clear that the students had focussed on the written tasks and not on communicating with each other and with the patient, which was the initial desired intent of the activity. The workbook was shortened accordingly to be manageable and still provide a stimulus to guide discussion. The revised workbook is shown in Workbook version 2, Appendix 2. All subsequent pairs of students used this revised workbook. The revised workbook included the four of the five steps as listed above, that is, read through the patient’s chart, interview the patient together, discuss the patient’s case as a pair, and then meet with the IPE facilitator. Occasionally, Step 2, interview the patient, was done individually where the students discipline-related tasks meant that they were unable to interview the patient together. In the revised workbook, students were asked just to document a summary of each of these steps. The use of ‘summary’ notes was so that the activity would assist in interaction and communication rather than the student documenting copious statements and recounting these notes verbatim to each other.

3.1.4 Data

The data collected from this pilot study included:

- Completed workbooks: a completed workbook was collected from each student participant
- IPE facilitator notes from debrief: A facilitator’s guide was collected for each student pair who met with the IPE facilitator. (See Appendix 3 for a copy of the facilitator’s guide)
- IPE facilitator reflective diary notes – facilitators were asked to record and discuss with the Fellows the process issues around how the IPE activity was conducted.
- Questionnaire and survey data
  - RIPLS: a pre-intervention RIPLS was conducted for all but one of the students participating. The nursing student who participated three times completed the RIPLS each time as she was undertaking the activity with a different medical student each time.
  - Post-intervention student survey, RIPLS, SCLCS and Health Care Teams Scale: This initial pilot aimed to develop the processes and so did not collect post-intervention data.

3.1.5 Results

Questionnaire and Survey analysis

Pre-intervention RIPLS

Fourteen pairs of students participated in the trial. In three of these pairs, the nursing student was the same person. It was noted that her responses to the RIPLS survey differed each time. As these interventions happened with different medical students and patients, her three RIPLS responses were recorded separately.

Twenty seven of the 28 students who participated in the pilot study completed a pre-intervention RIPLS. The combined results of all 27 responses are shown in Table 4. The majority of students were positive about interprofessional and shared learning. The majority agreed with positively-worded statements and disagreed with statements phrased negatively (eg ‘I don’t want to waste my time learning with other health-care students’). Students were confident about their future roles...
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

with 70.3% of them disagreeing or strongly disagreeing with the statement that ‘I’m not sure what my professional role will be’, although 29.6% of students were neutral or agreed with the statement so some uncertainty still exists. There was a varied response to the final statement about the amount of knowledge and skills to be acquired compared to other health profession students.

**Table 4**: Percentage of students responding to questions on the RIPLS questionnaire (n=27, 1 missing)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning with other students will help me become a more effective member of a health care team</td>
<td>7.4</td>
<td>66.7</td>
<td>25.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Patients would ultimately benefit if health-care students worked together to solve patient problems</td>
<td>11.1</td>
<td>70.4</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Shared learning with other health-care students will increase my ability to understand clinical problems</td>
<td>22.2</td>
<td>59.3</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Learning with health-care students before qualification would improve relationships after qualification</td>
<td>7.4</td>
<td>59.3</td>
<td>33.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Communication skills should be learned with other health-care students</td>
<td>3.7</td>
<td>14.8</td>
<td>51.9</td>
<td>29.6</td>
<td></td>
</tr>
<tr>
<td>6. Shared learning will help me to think positively about other professionals</td>
<td>7.4</td>
<td>18.5</td>
<td>48.1</td>
<td>25.9</td>
<td></td>
</tr>
<tr>
<td>7. For small group learning to work, students need to trust and respect each other</td>
<td>3.7</td>
<td>3.7</td>
<td>55.6</td>
<td>37.0</td>
<td></td>
</tr>
<tr>
<td>8. Team-working skills are essential for all health care students to learn</td>
<td>3.7</td>
<td>7.4</td>
<td>44.4</td>
<td>44.4</td>
<td></td>
</tr>
<tr>
<td>9. Shared learning will help me to understand my own limitations</td>
<td>3.7</td>
<td>11.1</td>
<td>70.4</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>10. I don’t want to waste my time learning with other health-care students</td>
<td>33.3</td>
<td>51.9</td>
<td>14.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. It is not necessary for undergraduate health-care students to learn together</td>
<td>29.6</td>
<td>40.7</td>
<td>14.8</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>12. Clinical problem-solving skills can only be learned with students from my own department</td>
<td>22.2</td>
<td>48.1</td>
<td>22.2</td>
<td>7.4</td>
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</tr>
<tr>
<td>13. Shared learning with other health-care students will help me to communicate better with patients and other professionals</td>
<td>11.1</td>
<td>14.8</td>
<td>66.7</td>
<td>7.4</td>
<td></td>
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<tr>
<td>14. I would welcome the opportunity to work on small-group projects with other health-care students</td>
<td>3.7</td>
<td>22.2</td>
<td>66.7</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>15. Shared learning will help to clarify the nature of patient problems</td>
<td>7.4</td>
<td>25.9</td>
<td>55.6</td>
<td>11.1</td>
<td></td>
</tr>
<tr>
<td>16. Shared learning before qualification will help me become a better teamworker</td>
<td>11.1</td>
<td>7.4</td>
<td>63.0</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>17. The function of nurses and therapists is mainly to provide support for doctors</td>
<td>18.5</td>
<td>40.7</td>
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<tr>
<td>18. I’m not sure what my professional role will be</td>
<td>25.9</td>
<td>44.4</td>
<td>18.5</td>
<td>7.4</td>
<td>3.7</td>
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<tr>
<td>19. I have to acquire much more knowledge and skills than other health-care students</td>
<td>3.7</td>
<td>29.6</td>
<td>29.6</td>
<td>37.0</td>
<td></td>
</tr>
</tbody>
</table>
Qualitative analysis of student and facilitator comments

Observations in ward

There were a number of factors that influenced the degree to which the students engaged in the activities. These related to the local ward or unit contexts and the health related activities that were occurring, how the student perceived what they should be ‘doing’ during their clinical placement, and how students were allocated or how their clinical experience was organised.

Attitudes of the students

The attitudes of the students upon commencing the clinical placement were influential in how the student approached the IPE activity, eg:

- One student nurse was anxious she would ‘miss some learning’ – thereby indicating that IPE was not accorded any importance (the Fellows did disseminate information widely to students before commencing the clinical placement – she was reluctant but agreed to participate.
- Another student nurse appeared to lack confidence in herself – there was a language barrier and a heavy accent.
- A medical student wanted to get most out of the experience in the Emergency Department and was somewhat reluctant to participate and was not talkative. It was, however, the student’s first day in this department.
- Other students, who were also new to the department, were unsure of their roles. They did not have pre-determined ideas and so it seemed that they were happy to oblige early in the placement.

There was an overall sense the IPE was not ‘useful’ learning; however if students were new, then it was a little more successful as they were not encultured into what the nurse or doctor does.

Limited understanding of the perceived contribution of the activity

Students often prioritised other learning activities eg:

- Medical staff conducted a mock arrest for the medical students - Medical students were then called off to the mock arrest
- When a Code was called, that is, a resuscitation emergency (even if it was a practice), students’ participation was interrupted.

Medical and nursing students had not previously interacted prior to being invited to participate in this activity. There was reluctance around engaging in the activity eg:

- The nursing students were trying to learn their own role and it was difficult to convince them of the relevance of the activity
- Both medical and nursing students – ‘seem to want to keep to themselves’ (as recorded in the facilitator’s notes)

Clinical environment and supervision of students

It seemed that if there was no other more interesting learning in the clinical environment then both medical and nursing students were happy enough to engage eg:

- When the department was quiet the students were more willing
- During quiet mornings in the department students were more available
- Often it was difficult for the facilitator to interview as both students could be busy and medical students had other commitments outside of the clinical area.

The context of the ward was important in setting the tone for how the students interacted. In one area:

- ‘Ward rounds were occurring – it was a very welcoming environment, students very friendly to each other, there was equality evident in their communications. Everyone was chatting freely to each other’. (facilitator comment)
Medical and nursing students were supervised differently, and therefore requiring different forms of negotiation with different people:

- Medical students who were attached to a medical unit rather than a particular ward, were able to come and go more freely (The supervision of medical students was variable depending on the circumstances)
- When the nurse facilitator responsible for nursing students was not available, it constrained the organisaton of activities. The nurse facilitator is responsible for students on a daily basis.

**Impediments to the process**

Environment (Space)

As the nature of the IPE activity included a session when the students discussed the patient interaction with a facilitator, then a quiet area was needed. This was not always available. The limitations identified by the facilitator in the clinical area include the following issues:

- There was nowhere to go to sit and discuss/write. Desk areas always occupied and busy/noisy.
- There was no space to write or meet separate from the main unit.
- There was also difficulty in locating patient notes in the confined areas (an impediment when notes were being used to validate observations etc).

**Locating students to participate in the activity**

Locating students was also difficult:

- Medical students were often unavailable as there were a limited number assigned to one area and when they were rostered over three different shifts across a whole week the number in the unit at any one time was small (and sometimes no students were available)
- Nurses generally worked two shifts from early morning to late evening.

**Learnings of students: the unique contribution of the interprofessional activity**

The learnings of the students as identified in the final session with the facilitator, were mixed. A small number stated that they knew all about the other's role, however, many of the students indicated that they did learn more about the other health professional's role. The learning about the roles focused on the 'tasks' that the other health professional performed in relation to the patient. Only a very small number of students indicated an improved understanding of teamwork.

Trends evident in the analysis of the students’ workbooks are as follows: [NOTE: MED= medical student and NRS=nursing student]

**Nothing to learn (knew about existing roles)**

- NRS: Says she is aware of doctors role
- MED: ‘nothing really’ knows who does what from here to ward. ‘straightforward process’.
- MED: nothing new
- MED: student aware of roles and does acknowledge different roles of nurses/doctors. Feels didn’t learn anything new from this activity
- MED: Medical student is aware as he has nurses in the family who ‘remind’ him. Has observed during ward placements.
- NRS: Nothing new learnt
Learnt about roles

- MED: Hadn’t thought what nurses do – how to give IV antibiotic – put drips in but never has to prepare solutions etc.
- NRS: Didn’t realise medical student unaware of how meds given: i.e. actual giving of IV antibiotics.
- NRS: Aware of more physical role of nurses.
- NRS: Doctors order care and drugs and ‘nurses look after everyday things’.
- NRS: thinks medical role ‘more to think about’. The nurse thinks more about what needs to be done for the patient.
- MED: Found (nursing student) more aware of medications than he was.
- MED: Nurse does ECG/monitor. Does not think about how it will happen. Don’t get taught how things are done.
- NRS: Nurses provide comfort, and the medications, as per doctor’s orders.
- MED: Doctors check tests, prescribe antibiotics; liaise with nurses re treatment and care
- MED: Nurse does assessment. Nurses do a lot more of vital needs.
- NRS: Doctors consult with other doctors. That’s why it takes so long.
- MED: Nurses: hands on approach; doctors: more paper work/phone calls

Learnt about teamwork

There was minor reference to enhanced understanding of teams eg:

- MED: the nurse obtained different information from the patient as they had a different questioning style
- NRS: teamwork needs good communication skills
- There was some acknowledgement that communication is important and some acknowledgement about how the two roles interact. One medical student identified that nurses have a ‘closeness with the patient, they attend to the patient’s daily care needs’.
  The nursing student identified that doctors plan the treatment regime which the nurse administers. Documentation is important as need to ensure accuracy.

OVERVIEW: Learning of roles

The findings of this analysis can be summarised as:

(1) The activity largely identified stereotypical roles of medicine and nursing; in particular, that doctors order treatments and that nurses execute the orders.
(2) The activity increased awareness of each others’ roles and contribution to the care of the patient, however there was little evidence of increased commitment to teamwork.
(3) It became apparent that nurses work around executing orders and that their role is largely invisible, that is, it is ‘backstage’ work – what it entails is largely not known or recognised by others (except maybe the patient?).
(4) Students would engage in the activity if it was perceived that there was no other more pressing or more ‘exciting’ learning activity.
Patient Safety Issues

Students were quite adept at identifying the prevalent patient safety issues as identified by the Australian Commission on Safety and Quality in Healthcare. Examples of medical and nursing students comments are as follows.

MOBILITY/FALLS
- Post-surgical home care – needs to watch mobility – old/frail. Also check allergies with IV, AB’s
- Needs help with everything – needs support (psych) when discharged
- Falls risk.

MEDICATIONS
- No safety issues with meds so long as correct dosage and checking are carried out.
- NRS: IV AB’s checked – fill prescription, check allergies
- NRS: Patient comfortable, management straightforward; nurse administers medication – 5rs check – MED: aware of this

PATIENT INFORMATION
- Fear issues – provide correct information re procedure being performed.

PHYSICAL CONDITION/DETERIORATION
- Bleeding issues – observations need to be monitored.

COMMUNICATION
- Communication issues re many health workers involved – errors or misinterpretation.

Usefulness of patient feedback

The intent of this collaborative activity was to encourage the medical and nursing students to interview the patient in order that they may learn from the patient, in particular, about the patient’s perspective of their health condition. While the medical and nursing students voiced usefulness in communicating with each other because they learnt more about each other’s roles they did not voice this same type of learning from the patient to the same degree, that is, there were very few comments that indicated that the medical and nursing students learnt about the patient’s condition from the patient.

The following is one of the few examples where the students learnt from the patient:
- No potential patient safety issues identified – patient well aware of situation – ‘actually gave education to us re stoma and Crohns disease’ – both students agreed. [Patient’s feedback was useful in teaching management of Crohn’s disease.]

IPE Facilitator's reflective diary notes

The facilitators identified that there were some issues pertaining to status and power relationships that influenced how the students interacted:
- a few nursing students automatically assumed that the medical student would lead the discussion and behaved accordingly (ie through deferring to the medical student) during the interaction
- when students are more familiar with the area they tend to take charge and become more knowledgeable – as nursing and medical students move in and out of areas at different times then the relationships (more or less dominant) between the students changed.
- at times, the nursing student had very little to offer the medical student in the interaction
- when medical and nursing students needed to interact around a proposed course of action they were able to reach an agreement
- medical and nursing students often preferred to keep to themselves
3.1.6 Discussion

The pilot study focussed on: developing a suitable model for IPE in the clinical setting and student/facilitator workbooks; refining procedures for recruitment and follow-up of students; and determining strategies to best engage students in the activity.

The influence of the clinical environment on IPE was very evident. The learning opportunities for the students during their time in the Emergency Department were task-focussed and the department characteristically has patients with a very short stay. While the staff acknowledged the importance of IPE, when faced with ‘immediate’ activities they would instinctively perform their required role and bring the student (of their discipline) along with them. The nature of these activities presented challenges as interprofessional learning opportunities could rarely be planned in advance and also there were limited opportunities for continuity. The nature of the IPE activity therefore had to be flexible and able to be interrupted where necessary. Other challenges included the busy state of the department, the lack of space and the difficulty finding students.

This pilot study identified that medical and nursing students, although mostly in the final year of their study, had little, if any, prior interprofessional contact. Initial responses on the RIPLS indicated a general positive attitude to IPE, yet in practice, there was some reluctance to engage with students from other disciplines. Stereotypical views were evident in their comments and varying perceptions of power within interprofessional relationships evident.

Two key challenges for the facilitator were to integrate this IPE activity into two very different approaches to the structure and supervision of work-integrated learning, and two different approaches to clinical learning in medicine and nursing: and to engage students in the activity when discipline-specific learning took priority. Ideally the facilitator could influence team learning however the dynamics of the clinical area and the actual clinical expertise of the facilitator meant that this was not feasible.

The Emergency Department environment also presented challenges in the availability of students and the occurrence of emergency-based learning opportunities reducing the time available for IPE. Therefore in Trial 1, we explored how this activity would work in an inpatient ward environment.

3.2 Trial 1 (Hospital 2)

3.2.1 Aim

This trial was a refinement of the processes used in the pilot study and was designed to explore the process issues in conducting IPE in an inpatient ward environment in Hospital 2, in contrast to the short acute care, less predictable emergency environment. Processes for locating students were trialled, particularly for medical students who are not allocated to a particular ward but are allocated to a medical team that works across the several wards, outpatients and service delivery areas.

3.2.2 Subjects

Fourteen students participated (seven medical and seven nursing students). All nursing students were 3rd year students. The medical students, were 3rd and 4th year (final year in a graduate entry program) students.

Nursing students were informed of the project prior to their clinical placement. At this time, they were informed that they may be approached during their clinical practicum experience to participate in an IPE activity. They were advised that this would be a voluntary activity to extend their learning opportunities during the practicum period.
Medical students were placed in various rotations spread geographically prior to this project and so the recruitment was conducted via email. The program was outlined and they were invited to participate voluntarily.

Medical and nursing students were then directly approached by the IPE facilitator and the fellows during their placement in the Medical and Surgical wards at Hospital 2.

**Location**

Nursing students were located across three medical and three surgical wards at Hospital 2. The Medical students were located with the medical and surgical teams therefore in the medical wards, medical students were attending rounds and were available on the ward for a substantial portion of the day. Those students undertaking their surgical rotation briefly attended rounds in the surgical wards and much of the day was spent in the operating theatres.

### 3.2.3 The IPE Activity

The nature of the activity is as described above in the pilot study (3.1.3). The revised workbook guided a five step IPE activity that concluded with a reflective discussion with the IPE facilitator, using the same structured questions as in the pilot study.

### 3.2.4 Data

The data collected from this study included:

- Completed workbooks: a completed workbook was collected from each student participant
- IPE facilitator notes from debrief: a facilitator’s guide was collected for each student pair who met with the IPE facilitator (see Appendix 3 for a copy of the facilitator’s guide)
- Student qualitative surveys – a survey was conducted following the intervention (see Appendix 4 for a copy of the survey).
- IPE facilitator reflective diary notes: facilitators were asked to record and discuss with the Fellows the process issues around how the IPE activity was conducted.

#### Quantitative Survey Data

- **Pre-intervention RIPLS**: six students (two medical, four nursing) completed the pre-intervention RIPLS.
- **Post-intervention RIPLS**: eight students competed the post-intervention RIPLS (two medical, six nursing).
- **SCLCS**: The SCLCS was completed by 11 students (four medical and seven nursing).
- **Health Care Teams Scale**: nine students completed the survey (two medical and seven nursing).

### 3.2.5 Results

**Questionnaire and Survey analysis**

Although there is a small sample size, the descriptive data is included here to show that there is consistency with the findings of the previous trial. The analysis of changes from pre- to post-intervention will be discussed in section 3.4.

#### Pre-intervention RIPLS

Table 5 shows the responses to the pre-intervention RIPLS (n=6)
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

Table 5: Trial 1 Pre-intervention Responses to RIPLS (n=6)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning with other students will help me become a more effective member of a health care team</td>
<td>50(3)</td>
<td>33.3(2)</td>
<td>16.7(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Patients would ultimately benefit if health-care students worked together to solve patient problems</td>
<td>50(3)</td>
<td>50(3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Shared learning with other health-care students will increase my ability to understand clinical problems</td>
<td>16.7 (1)</td>
<td>16.7 (1)</td>
<td>66.7 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Learning with health-care students before qualification would improve relationships after qualification</td>
<td>33.3(2)</td>
<td>50(3)</td>
<td>16.7(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Communication skills should be learned with other health-care students</td>
<td>33.3(2)</td>
<td>50(3)</td>
<td>16.7(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Shared learning will help me to think positively about other professionals</td>
<td>33.3(2)</td>
<td>33.3(2)</td>
<td>33.3(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. For small group learning to work, students need to trust and respect each other</td>
<td>50(3)</td>
<td>50(3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Team-working skills are essential for all health care students to learn</td>
<td>33.3(2)</td>
<td>66.7(4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Shared learning will help me to understand my own limitations</td>
<td>50(3)</td>
<td>33.3(2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I don't want to waste my time learning with other health-care students</td>
<td>33.3(2)</td>
<td>50(3)</td>
<td>16.7(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. It is not necessary for undergraduate health-care students to learn together</td>
<td>16.7(1)</td>
<td>33.3(2)</td>
<td>33.3(2)</td>
<td>16.7(1)</td>
<td></td>
</tr>
<tr>
<td>12. Clinical problem-solving skills can only be learned with students from my own department</td>
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<tr>
<td>14. I would welcome the opportunity to work on small-group projects with other health-care students</td>
<td>16.7 (1)</td>
<td>83.3(5)</td>
<td></td>
<td></td>
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<td>15. Shared learning will help to clarify the nature of patient problems</td>
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<td>17. The function of nurses and therapists is mainly to provide support for doctors</td>
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<td>19. I have to acquire much more knowledge and skills than other health-care students</td>
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<td>50(3)</td>
<td>33.3(2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although the numbers were very small, the trends seen are very similar to the first pilot. The majority of students responded positively to most of the positively worded statements (66-100% agree or strongly agree) and 50-85% of students disagreed or strongly disagreed with the negatively worded statements. The first, ninth and sixteenth statements differed from this trend, with 50% of respondents giving a neutral response. The numbers are, however, small and these percentages can be noticeably varied by only one student’s responses. While statistical analysis is not possible, the overall trend is similar to the pilot study cohort of students and shows consistency across the cohort of 3rd year nursing students and 3rd and 4th year medical students.
Table 6 shows the post-intervention responses to the RIPLS

**Table 6: Trial 1, Post-intervention RIPLS (n=8)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
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</tr>
</tbody>
</table>

The statements about the positive benefits of shared learning (8 of the 19 statements) were responded to similarly in the pre- and post-intervention questionnaire. For approximately half of the statements, the pattern of responses is very similar. For some of the statements, students’ responses post-intervention were more favourable, while in others, the students demonstrated more uncertainty about their own professional roles and responsibilities in the post-intervention questionnaire. It would seem that participation in the activity may have caused students to reflect
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students on their professional roles. The numbers are too small in this study to test for statistical significance of any changes and this analysis is conducted in a later section of this report, using pooled data.

Table 7 shows the student responses to the SCLCS.

<table>
<thead>
<tr>
<th><strong>Table 7:</strong> Trial 1, responses to SCLCS (n=11)</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This clinical placement is boring</td>
<td>45.5 (5)</td>
<td>45.5(5)</td>
<td>9.1(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. This clinical placement is a waste of time</td>
<td>63.6(7)</td>
<td>27.3(3)</td>
<td>9.1(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. This clinical placement is interesting</td>
<td>18.2(2)</td>
<td>45.5(5)</td>
<td>36.4(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I enjoy coming to this ward</td>
<td>9.1(1)</td>
<td>63.6(7)</td>
<td>27.3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. This is a disorganised clinical placement</td>
<td>9.1(1)</td>
<td>72.7(8)</td>
<td>9.1(1)</td>
<td>9.1(1)</td>
<td></td>
</tr>
<tr>
<td>6. I look forward to coming to this clinical placement</td>
<td>9.1(1)</td>
<td>63.6(7)</td>
<td>27.3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The clinicians are unfriendly towards students</td>
<td>81.8(9)</td>
<td>18.2(2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Staff are punctual</td>
<td>45.5(5)</td>
<td></td>
<td>54.5(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I am dissatisfied with what is done in the ward</td>
<td>9.1(1)</td>
<td>63.6(7)</td>
<td>27.3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. There is little opportunity for me to pursue my particular interest in this ward</td>
<td>36.4(4)</td>
<td>36.4(4)</td>
<td>27.3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Clinicians in this ward tell me how and why they are doing things</td>
<td>45.5(5)</td>
<td>54.5(6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Ward assignments are clear so that I know what to do</td>
<td>9.1(1)</td>
<td>27.3(3)</td>
<td>63.6(7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I have a say in how the shift is spent</td>
<td>10(1)*</td>
<td>50(5)*</td>
<td>40(4)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I have little opportunity to be involved with the process of handing over for next shift</td>
<td>20(2)*</td>
<td>50(5)*</td>
<td>30(3)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. There are opportunities for me to proceed at my own pace</td>
<td>10(1)*</td>
<td>30(3)*</td>
<td>60(6)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. The clinician often thinks of interesting learning activities</td>
<td>40(4)*</td>
<td>60(6)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. No one is interested in my problems</td>
<td>40(4)*</td>
<td>60(6)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. The clinicians working with me go out of their way to help me</td>
<td>36.4(4)</td>
<td>63.6(7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The staff working with me when I am having trouble with the work</td>
<td>9.1(1)</td>
<td>81.8(9)</td>
<td>9.1(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. The clinician working with me considers my feelings</td>
<td>54.5(6)</td>
<td>45.5(5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Workload allocation in this ward is carefully planned</td>
<td>10(1)*</td>
<td>40(4)*</td>
<td>50(5)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I pay attention to what others are saying</td>
<td>63.6 (7)</td>
<td>36.4(4)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. The staff involved in education talk with me as an individual</td>
<td>18.2(2)</td>
<td>81.8(9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I put effort into what I do in the ward</td>
<td>54.5(6)</td>
<td>45.5(5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Getting a certain amount of work done is important in this ward</td>
<td>72.7(8)</td>
<td>27.3(3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. After the shift, I have a sense of satisfaction</td>
<td>10(1)*</td>
<td>80(8)*</td>
<td>10(1)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. The clinicians do not consider students as part of the team</td>
<td>63.6(7)</td>
<td>27.3(3)</td>
<td>9.1(1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1 missing response

Overall, students responded positively about the nature of the placements, enjoying coming to the ward, the organisation of the placement, and their own effort put in and satisfaction gained. They were less positive about the opportunity to pursue their own interests, their interactions with...
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students. The majority were neutral or disagreed with the statement that ‘No one is interested in my problems’. 54.5% responded neutral to the statement ‘The clinician working with me considers my feelings’ and 50% were neutrally or disagreed with the statement ‘workload allocation in this ward is carefully planned’. Differences between the disciplines are investigated using pooled data in section 3.4 of this report.

Table 8 shows the student responses to the Health Care Team Scale.

Table 8: Trial 1, responses to HCTS (n=9)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having to report observations to each other helps the health care team better understand the work of other health professionals</td>
<td>100(8)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The doctor has the ultimate legal responsibility for decisions made by the team</td>
<td>11.1(1)</td>
<td>44.4(4)</td>
<td>44.4(4)</td>
<td></td>
</tr>
<tr>
<td>3. Working in a health care team keeps most health professionals be enthusiastic and interested in their jobs</td>
<td>100(9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Health professionals when working in a team are more responsive than others to emotional and financial needs of patients</td>
<td>44.4(4)</td>
<td>55.6(5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. A team approach to health care makes the delivery of care more efficient</td>
<td>11.1(1)</td>
<td>44.4(4)</td>
<td>44.4(4)</td>
<td></td>
</tr>
<tr>
<td>6. Developing a patient care plan with other health care team members avoids error in delivering care</td>
<td>11.1(1)</td>
<td>66.7(6)</td>
<td>22.2(2)</td>
<td></td>
</tr>
<tr>
<td>7. The give and take among health care team members help them make better patient care decisions</td>
<td>100(9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hospital patients who receive care from the whole health care team are better prepared for discharge than other patients</td>
<td>77.8(7)</td>
<td></td>
<td></td>
<td>22.2(2)</td>
</tr>
<tr>
<td>9. The health care team’s primary purpose is to assist doctors in achieving treatment goals for the patient</td>
<td>55.6(5)</td>
<td>33.3(3)</td>
<td></td>
<td>11.1(1)</td>
</tr>
<tr>
<td>10. Health care team meetings foster communication among team members from different disciplines</td>
<td>11.1(1)</td>
<td>77.8(7)</td>
<td></td>
<td>11.1(1)</td>
</tr>
<tr>
<td>11. Developing an interdisciplinary patient care plan is excessively time consuming</td>
<td>77.8(7)</td>
<td></td>
<td></td>
<td>22.2(2)</td>
</tr>
<tr>
<td>12. Doctors have the right to alter patient care plans developed by the team</td>
<td>22.2(2)</td>
<td></td>
<td></td>
<td>77.8(7)</td>
</tr>
<tr>
<td>13. When developing interdisciplinary patient care plans, much time is wasted translating jargon from different disciplines</td>
<td>44.4(4)</td>
<td></td>
<td></td>
<td>55.6(5)</td>
</tr>
<tr>
<td>14. Working in teams unnecessarily complicates things most of the time</td>
<td>88.9(8)</td>
<td></td>
<td></td>
<td>11.1(1)</td>
</tr>
<tr>
<td>15. A team approach to care delivery improves the quality of care that patients receive</td>
<td>11.1(1)</td>
<td></td>
<td></td>
<td>77.8(7)</td>
</tr>
<tr>
<td>16. The doctor should not always have the final word in decisions made by health care teams</td>
<td>11.1(1)</td>
<td></td>
<td></td>
<td>77.8(7)</td>
</tr>
<tr>
<td>17. The health care team approach assists health professionals to meet the needs of family caregivers as well as patients</td>
<td>22.2(2)</td>
<td></td>
<td></td>
<td>77.8(7)</td>
</tr>
<tr>
<td>18. In most instances, the time required for meetings of the health care team could be better spent in other ways</td>
<td>88.9(8)</td>
<td></td>
<td></td>
<td>11.1(1)</td>
</tr>
<tr>
<td>19. Doctors are natural team leaders</td>
<td>22.2(2)</td>
<td></td>
<td></td>
<td>22.2(2)</td>
</tr>
</tbody>
</table>

Overall, the students are positive about the concept of working in a team and the impact of team-based care on patient safety and outcomes. Their opinions differed markedly about the traditionally
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

held view that the health care team is there to help the doctor and the doctor having ultimate responsibility. The students differed as to whether a team approach contributed to responsiveness to the patient’s needs and whether time was wasted translating jargon from different disciplines when developing patient care plans. The majority (77.8%) disagreed or strongly disagreed that doctors are natural team leaders.

**Qualitative analysis of student and facilitator comments.**

**Attitude to students**

Ward staff were very positive toward students

**Clinical Environment and supervision of students**

Being aware of the activity of the unit was important when organising the times for students to engage:

- Ward busy in the morning when rounds are conducted.
- Unit was quiet to begin with but no rounds and reviews were occurring.
- Unit not as busy in the afternoon.

The context of the ward was important for influencing student engagement in the activity:

- This ward was conducive to study/project.
- This was a really friendly culture/environment.
- Communication seems fairly clear between staff and whose role is what.
- Good communication between both students. Registrar also seeing the patient. Very co-operative students. Mirrored body language.
- Friendliness variable: depends on who you are talking to not as open as one student initially thought.

Facilitator needed to ‘seek’ students:

- Checking the wards, the facilitator found Vanessa (pseudonym) who was willing to participate.
- Needed to organise a time with the medical students.

**Impediments to the process**

**Environment (Space):**

- Limited space/time for student interactions

**Locating students to participate in the activity:**

- There was initial difficulty finding students.
- In order to get students together at least one student has to come from a different case/area.
- Nursing is defined by uniform; physio and wardsmen wear uniforms but medical staff are not clearly distinguished by what they wear. It is difficult to determine designation of staff members in medical roles.
- There was also difficulty finding a suitable patient ie patient familiar to both students.
- Medical students often only had a short window of opportunity.
- Medical students only have a few minutes ‘Have to go to other hosp’.
- Had to wait for patient to have ‘spinal’ collar removed before he could communicate properly (Pt requested us to wait). Had to wait for nurse handover to be completed before nursing staff available. (Busy between 1430–1530 hrs).
- ‘Ward Rounds, patient reviews’ all in progress – ward busy.
- student left RN to do ‘medications’- student felt guilty about ‘not doing work’.
Learnings of students – The unique contribution of the interprofessional activity

The key themes evident in the analysis of the students’ workbooks were divergent, with some students saying they learnt nothing and others expressing insights into the other students’ professional role that they had not previously considered [NOTE: MED= medical student and NRS: = nursing student].

Nothing to learn (knew about existing roles)

- NRS: ‘Doctors sometimes very rude – won’t answer questions’. (Medical student a little defensive with this comment).
- MED: Been doing ward placements for sometime and aware of roles.

Learned about roles

- NRS: We are aware doctors order treatment ‘we do what’s ordered’.
- MED: Thinks communication important – however there was nothing that the student thought was particularly noteworthy in today’s interaction
- MED: Quiet not much input. Aware of: nurse does care; doctors order and ‘do paper work’
- MED: look from medical illness perspective
- Medical student had more knowledge about blood tests.
- Nursing student had more knowledge about the patient’s relationships with family, carers and others.
- Doctor prescribes.
- Other staff – ‘do’.
- Medical referrals for complicated cases.
- Doctor – order diagnostic tests.
- Covered same information but from different perspectives.
- MED: diagnosis and detecting problems which need solving.
- NRS: focus as holistic picture of journey with care.

Perceptions – when existing preconceived ideas challenged

- Nursing student amazed that junior medical staff cleaned/dressed patients’ wounds.

Learned about teamwork

The students shared what they thought would happen. Afterwards the students felt that they had a more complete picture (particularly the medical student as they were not aware of the ‘backstage’ activities undertaken by the nurse).

- MED: emphasised importance of nurses in communicating with patient
- Nursing social history more detailed
- NRS: ward rounds need nurse participation – also more communication eg, nurses need to know if specific tests/procedures need doing so can prepare (otherwise delay in discharge)
- NRS: thinks doctors and nurses have ‘same thought processes as to where patient going and what he needs.’
- MED: was speech therapist (prior to studying medicine) so has had lot to do with NRS: in wards. Feels should be more participation of nurses caring for patients at ward/team meetings.
- MED: patient needs lots of other services, thought about who orders and who organises treatment. Not enough communication at rounds – no nurse present.
- NRS: ‘communication challenging’ Regarding orders and changes, agree with above comments of medical student.
Examples of discussion where students described evidence of teamwork:

First example.

Medical student:
- Nurse was ‘good’.
- MED: asked about medical condition.
- Nurse asked about nursing care.
- MED: ‘How do I deal with this patient?’
- Nurse helped doctor communicate with patient.
- MED: thought the nurse was natural.

Nursing Student:
- Doctor has a different role in interviewing ‘what is wrong?’
- Did not thing doctor would be interested in ‘caring’ for the patient.
- Nurse thinks that doctors do not talk.

Second example: (Joint Medical and Nursing Students' Comments)
- Nurse measured vital signs, provided oxygen support.
- Doctor – overseer, take charge of ‘main issue’ prescribes.
- Need each other to work.
- Doctor orders.
- Nurse organises.
- Pharmacist dispenses, physio – treats.
- Nurses doing the obs, doctor orders them, orders, prescribes, investigations etc.
- Nurses carry out the orders.
- Roles: Medical student David (pseudonym) – filled out form – admission slip/notes. David thought triage did this. Doctor orders x-ray → consultant and CT → radiographer → sent ‘wardy’ to get patient.
- Wardsmen took patient for x-ray.
- Radiologist ok to CT.
- CT → radiographer.

In particular, medical students found it interesting that nurses knew more about patients’ attitudes, feelings and perceptions, eg:
- some patients do not like ward rounds.
- that a patient may not like some of the health care team.

**Patient Safety Issues**

The patient safety issues recognised were those that are largely identified by the Quality and Safety Commission. Comments from students included:

**MOBILITY/FALLS**

Both agree mobility needs monitoring and assistance needs to be provided. (Both raised mobility issues before prompted to consider mobility issues)
MEDICATIONS

If there is a reason – need to check meds.

Need to check 5 ‘R’s’ (right drug, route, dose, patient, time).

PATIENT INFORMATION

Wound care education.

Written discharge information?

Functioning – mobility – 4 wheel wheely walker D/C now → needs help with care/dressings. Lives alone. OT claw graspers.

Modifications at home? → needs OT Review.

- Physical activities – advise caution.
- Follow-up with GP re plaster.
- Plaster care- clean and dry, circulation.

PHYSICAL CONDITION/DETERIORATION

Patient has not passed urine. No fast scan done. Patient wants to go home.

Repeat chest X-ray later = follow-up by GP.

- ? broken skull
- CT
- Nurse escort? → IVT

No escort for this patient, no allergies, no meds.

COMMUNICATION

Written Communication

- NRS: Chart mixed up, confusing to many - both agree
- MED: Meds covered – documented by pain team/so not too many errors (All on ward rounds so checked & chartered at this time).

Medical charts inadequate – sometimes illegible – changes made not communicated.

Other communication – Patient may not share some aspects of his condition because of personalities (ie, did not share information with social worker).

Usefulness of patient feedback

Students mostly felt that patient feedback was not very useful. There were just a couple of comments where students recognised that the patient could teach them a little about their health condition.

- Patient as educator/teacher.
- Teacher role – good practice.
Student post intervention survey analysis

Extent of learning from other health professional undergraduate students in any previous clinical placements?

Both medical and nursing students reported limited previous interprofessional experiences. Previous interprofessional experience within the clinical environment was reported by one medical student who had worked with pharmacy students, and a nursing student who had worked with other nursing students and physiotherapy students.

How useful was this experience in understanding other health professional roles and responsibilities?

Overall the experience was found to be useful (partially useful, useful or very useful) by all nine respondents. Those who thought it was useful or very useful also provided comments. A nursing student found the learning experience useful in identifying the need to interact more as a team with other health professionals. Other nursing students felt it was useful in clarifying the roles of both nurses and doctors, and that collaborating with medical students during patient interview provided increased understanding of the doctor’s role and responsibilities.

An observation made by a nursing student was that the shared clinical experience resulted in an increase in knowledge about the medical/disease approach to patient assessment. Additionally, the student realised that although each discipline may approach a patient differently they share the same goal of making “the patient well”.

To what extent has this experience helped you to feel more confident in interacting with a health professional from a different discipline?

One nursing student did believe the experience was helpful owing to individual differences between students across disciplines. However, the majority of students (eight of nine respondents) reported that the experience was at least helpful to some degree in helping them to feel more confident in interacting with a health professional from another discipline. One of the nursing students reported developing a greater understanding of their role as a nurse, specifically in relation to their ability to provide the doctor with information that facilitates patient understanding.

How helpful are interprofessional learning experiences in preparing you for clinical practice after graduation?

All of respondents (nine) believed that interprofessional learning experiences provide benefits in relation to preparing them for future clinical practice. One medical student reported having a clearer understanding of roles and responsibilities.

Nursing students reported experience in the practical aspect of nursing as being helpful while the different experience of others helped them to better understand their own learning skill. Additionally, working together in the clinical setting gave students the opportunity to experience ‘the working interaction’ between nursing and medical students. Finally one nursing student recognised the value of interprofessional learning experiences as an opportunity to develop better patient care through correct diagnosis and correct medication and believed this would lead to good implications for nursing and medical practice.

3.2.6 Discussion

Some of the issues identified in the pilot study were again evident in this trial. The students had had very little interprofessional interaction before this trial. The intervention did alert them to the roles of the other health professional students, built confidence for future interactions and was seen to have potential benefits for patient care. Students entered this part of their learning, mostly in their final year of training, with pre-set views of professional roles, some of which changed after the interaction. The busy state of the ward impacted on how the activity was implemented, the
context of the ward important to its success, and issues of communication between disciplines in the ward were raised.

The demands of discipline-specific duties within the ward limited time for IPE and locating all required students during the day proved difficult. This was in part, owing to the different processes for allocating students during placements. The students responses to the quantitative surveys showed little evidence of any impact of the intervention, whereas the qualitative surveys gave good insights, with most students finding the activity helpful.

The success of IPE was heavily dependent on the role of a facilitator in engaging staff and students in potential learning opportunities. Adopting a passive approach whereby students were facilitated to come together to engage in an activity meant that IPE became a single activity divorced from the students’ other learning. The Fellows identified that a very active facilitation approach is needed to motivate students and engage clinicians to be active in IPE. This facilitator role was further developed in Trial 2 (Hospital 2).

3.3 Trial 2 (Hospital 2)

3.3.1 Aim

The trial was conducted in the relatively stable inpatient ward setting and focussed on significantly enhancing the role of the facilitator so that the IPE activity was pro-actively adopted through:

- increasing participation and follow-up through enhancing the engagement with the clinical staff;
- developing methods to locate and engage students particularly when the medical students were allocated to a team that worked in several wards and outpatient areas across the hospital while nursing students were geographically located in one area; and
- further data collection.

The strategies through which this was achieved are evident in the facilitator’s comments, shown in Table 9.
### Table 9: Strategies for facilitator to assist in shaping the clinical environment to better engage staff and, consequently, students in the interprofessional activity

<table>
<thead>
<tr>
<th>DIFFICULTIES</th>
<th>Facilitators’ Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement of staff/clinicians (Timing and motivation)</td>
<td>Vigilance of facilitator was the key factor that assisted in accommodating for the variation in scheduling:</td>
</tr>
<tr>
<td>Student scheduling, namely the shifts students work and the uneven distribution of medical and nursing students across the clinical areas in acute care facilities.</td>
<td>• Facilitator found that organising a time ahead made it much easier to facilitate the desired outcomes, rather than relying on random meeting occasions, given that the medical students are not required to do ward rounds.</td>
</tr>
<tr>
<td>This was complicated further by:</td>
<td>• Facilitator did not take ‘around lunch time’ for an answer.</td>
</tr>
<tr>
<td>• Nursing and medical students are on different rosters eg a Mon-Fri week compared to a seven day roster</td>
<td>• Facilitator visited the resident/registrar meetings with the list of medical students with their photos and called out their names. [They were a bit nervous] After they looked anxiously at their consultant to see if it was OK (who said that they were happy for them to do the project) their times were organised.</td>
</tr>
<tr>
<td>• Medical students were often available for only short periods of time (ie. were required to go to another hospital or lecture)</td>
<td>• Nursing staff are always on the wards because that is the expectation of their practicum so their participation was easier to organise.</td>
</tr>
<tr>
<td>• The structure of the work of the med students was less clearly defined and more variable. Most clinics and ward rounds are optional whereas nursing students had designated workloads</td>
<td>Timing: Afternoons have been found to be more suitable as this time did not interfere with opportunities for skill development. Our activity was largely determined by the timing of the medical students. For example, medical rounds, surgery or clinic times influenced meeting times – usually late morning or early afternoon – and this also best suited nursing staff (however, overall they had much more flexibility)</td>
</tr>
<tr>
<td>Medical students have been identified as being reluctant to participate (Reeves and Freeth 2002). There was a similar lack of interest in our medical students who commented that they ‘know what nurses do’.</td>
<td>This apathy about participation was addressed by the facilitator who (1) motivated the students to become interested through getting them to explore ‘they do not know what they do not know’ and participate in the project (2) through working in the wards gained credibility with the medical consultants who then directed the students to participate eg “Worked” the three wards today to get buy-in for the project ie, participated in ward rounds and further discussed the project with Dr M, who suggested that BOTH (!) of the medical students could participate and then come back to the ward round.</td>
</tr>
<tr>
<td>Increasing relevance</td>
<td>Facilitator tried to organise placement of students to be looking after patients who are under the medical team that the med students are allocated to. Facilitator chose a patient who was under the medical students’ consultant so that they were familiar with the case. The nursing (RN) students had looked after all of the patients in the ward by the end of the week, as they moved allocation every day, so the RN students were familiar with all of the patients in the ward, making this more relevant and easier to elicit participation.</td>
</tr>
<tr>
<td>Students found interviewing the patient more difficult when they had not previously interviewed them or looked after them</td>
<td></td>
</tr>
</tbody>
</table>
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

DIFFICULTIES

Engagement of staff/clinicians (Timing and motivation)

<table>
<thead>
<tr>
<th>Contribution of facilitator to draw on opportunities inherent in student supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>The nature of the organisation of the work in the clinical units is that health professionals work in silos. Nursing and medical students do not work together because they work with their role models. Staff (medical and nursing) worked independently of each other. Medical students stayed with the doctors while nursing students worked alongside the nurses. Students were focused on learning their own role and found it difficult to discuss cases with another student. Medical students were organised according to the consultant who was supervising them. They were focused on ‘investigating a case’ for their assessment – this included learning as much as possible through participation in ward rounds, case conferences and inservices. Whereas nursing students were organised according to geographical location of patients. They focused on getting through a pre-determined workload. Priorities for nursing students were doing tasks eg showers, injections, wound dressings.</td>
</tr>
<tr>
<td>Facilitators’ Response</td>
</tr>
<tr>
<td>Organising this becomes very complex in that the nursing students don’t know which patients they will be looking after from one day to the next. Also the nursing students are organised by geographic location of the patients’ beds. There is also a different type of organisation for learning. The med students are organised according to consultant. On any one ward there are fewer medical students than nursing students. Because during the week days nurses were more of a ‘constant’ planning the activity revolved around the availability of the medical students. To address these many idiosyncratic situations the facilitator spent most of their time organising appropriate patients that would suit the learning of both medical and nursing students. An excerpt of that diary is as follows: ‘while I was down in (the ward) earlier I identified a patient of Dr. M’s that I thought she and the student could share. So, with this opportunity, I asked her if she remembered this gentleman. After a bit of clarifying discussion, she said she did remember him and that she would definitely be in on Friday [Hopefully, this patient will still be in hospital by Friday] I did discuss him with her and she said that Dr. M had wanted him kept in until his blood sugars were sorted out. I will also get the students and facilitator to keep other patients of Dr. M in mind in case this patient gets discharged before Friday’. ‘I finally organised the first set of students to do the project. The medical student rang me when he was going on his round and I went along on their round to the various patients under their consultant. I encouraged participation of the student nurses in the medical round even though the nurses who were supervising them did not participate in the rounds.</td>
</tr>
</tbody>
</table>

3.3.2 Subjects

Eighteen students participated (nine medical and nine nursing students). All nursing students were 3rd year students. The medical students, were third and fourth year (final year in a graduate entry program) students.

Nursing students were informed of the project prior to their clinical placement. At this time they were informed that they may be approached during their clinical practicum experience to participate in an interprofessional education activity and were advised that this would be a voluntary activity to extend their learning opportunities during the practicum period. Medical students were placed in various rotations spread geographically prior to this project and so the recruitment was conducted via email. The project was outlined and they were invited to voluntarily participate.

Medical and nursing students were then directly approached by the IPE facilitator and the Fellows during their time in the Medical and Surgical wards at Hospital 2. Participation was increased through a short presentation and reminder at the weekly meetings with the residents and registrars and regular contact with the nurse unit managers and local nursing team leaders.

Location

Nursing students were located across three medical and three surgical wards at Hospital 2. The Medical students were located with the medical and surgical teams across wards; students on medical wards were attending rounds and were available on the ward for a substantial portion of the day. Those students undertaking their surgical rotation briefly attended rounds in the surgical wards and much of the day was spent in the operating theatres.
3.3.3 The IPE Activity
The activity is as described above in the pilot study (3.1.3). The revised workbook guided a five step IPE activity that concluded with a reflective discussion with the IPE facilitator.

3.3.4 Data
The data collected from this pilot study included:
- Completed workbooks: a completed workbook was collected from each student participant
- IPE Facilitator notes from debrief: a facilitator’s guide was collected for each student pair who met with the IPE facilitator
- Student qualitative surveys: a survey was conducted following the intervention
- IPE facilitator is reflective diary notes: facilitators were asked to record and discuss with the Fellows the process issues around how the IPE activity was conducted.
- Quantitative Survey Data
  - Pre-intervention RIPLS: 19 students completed the pre-intervention RIPLS.
  - Post-intervention RIPLS: 18 students competed the post-intervention RIPLS
  - SCLCS: the SCLCS was completed by 18 students
  - Health Care Teams Scale: 18 students completed the survey.

3.3.5 Results

Quantitative Survey Data
The quantitative survey results are shown in the tables below.

RIPLS (Pre-intervention)
Table 10: Trial 2, Responses to Pre-intervention RIPLS (n=19)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning with other students will help me become a more effective member of a health care team</td>
<td>5.3(1)</td>
<td>15.8(3)</td>
<td>26.3(5)</td>
<td>52.6(10)</td>
<td></td>
</tr>
<tr>
<td>2. Patients would ultimately benefit if health-care students worked together to solve patient problems</td>
<td>10.5(2)</td>
<td>5.3(1)</td>
<td>42.1(8)</td>
<td>42.1(8)</td>
<td></td>
</tr>
<tr>
<td>3. Shared learning with other health-care students will increase my ability to understand clinical problems</td>
<td>5.3(1)</td>
<td>21.1(4)</td>
<td>26.3(5)</td>
<td>47.4(9)</td>
<td></td>
</tr>
<tr>
<td>4. Learning with health-care students before qualification would improve relationships after qualification</td>
<td>5.3(1)</td>
<td>10.5(2)</td>
<td>52.6(10)</td>
<td>31.6(6)</td>
<td></td>
</tr>
<tr>
<td>5. Communication skills should be learned with other health-care students</td>
<td>15.8(3)</td>
<td>36.8(7)</td>
<td>47.4(9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Shared learning will help me to think positively about other professionals</td>
<td>5.3(1)</td>
<td>5.3(1)</td>
<td>21.1(4)</td>
<td>31.6(6)</td>
<td>36.8(7)</td>
</tr>
<tr>
<td>7. For small group learning to work, students need to trust and respect each other</td>
<td>47.4(9)</td>
<td>52.6(10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Team-working skills are essential for all health care students to learn</td>
<td>36.8(7)</td>
<td>63.2(12)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Shared learning will help me to understand my own limitations</td>
<td>5.3(1)</td>
<td>15.8(3)</td>
<td>52.6(10)</td>
<td>26.3(5)</td>
<td></td>
</tr>
<tr>
<td>10. I don’t want to waste my time learning with other health-care students</td>
<td>44.4(8)</td>
<td>16.7(3)</td>
<td>16.7(3)</td>
<td>22.2(4)</td>
<td></td>
</tr>
<tr>
<td>11. It is not necessary for undergraduate health-care students to learn together</td>
<td>42.1(8)</td>
<td>21.1(4)</td>
<td>15.8(3)</td>
<td>15.8(3)</td>
<td>5.3(1)</td>
</tr>
<tr>
<td>12. Clinical problem-solving skills can only be learned with students from my own department</td>
<td>52.6(10)</td>
<td>21.1(4)</td>
<td>15.8(3)</td>
<td>10.5(2)</td>
<td></td>
</tr>
<tr>
<td>13. Shared learning with other health-care students will help me to communicate better with patients and other professionals</td>
<td>5.3(1)</td>
<td>5.3(1)</td>
<td>15.8(3)</td>
<td>36.8(7)</td>
<td>36.8(7)</td>
</tr>
<tr>
<td>14. I would welcome the opportunity to work on small-group projects with other health-care students</td>
<td>5.3(1)</td>
<td>36.8(7)</td>
<td>26.3(5)</td>
<td>31.6(6)</td>
<td></td>
</tr>
<tr>
<td>15. Shared learning will help to clarify the nature of patient problems</td>
<td>5.3(1)</td>
<td>10.5(2)</td>
<td>52.6(10)</td>
<td>31.6(6)</td>
<td></td>
</tr>
<tr>
<td>16. Shared learning before qualification will help me become a better teamworker</td>
<td>5.3(1)</td>
<td>15.8(3)</td>
<td>47.4(9)</td>
<td>31.6(6)</td>
<td></td>
</tr>
<tr>
<td>17. The function of nurses and therapists is mainly to provide support for doctors</td>
<td>31.6(6)</td>
<td>26.3(5)</td>
<td>31.6(6)</td>
<td>5.3(1)</td>
<td>5.3(1)</td>
</tr>
<tr>
<td>18. I’m not sure what my professional role will be</td>
<td>36.8(7)</td>
<td>31.6(6)</td>
<td>5.3(1)</td>
<td>15.8(3)</td>
<td>10.5(2)</td>
</tr>
<tr>
<td>19. I have to acquire much more knowledge and skills than other health-care students</td>
<td>10.5(2)</td>
<td>21.1(4)</td>
<td>26.3(5)</td>
<td>26.3(5)</td>
<td>15.8(3)</td>
</tr>
</tbody>
</table>

57.9% -100% of students responded positively about IPE to the positively worded statements and 61-73% disagreed or strongly disagreed with the negatively worded statements. 68.4% of students indicated that they were confident about their professional role, yet 26.3% were not confident. There were disparate views of the amount of knowledge and clinical skills they had to acquire compared to other health professional students.
RIPLS (post-intervention)

Table 11: Trial 2, Responses to Post-Intervention RIPLS (n=18)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning with other students will help me become a more effective member of a health care team</td>
<td>11.1(2)</td>
<td>11.1(2)</td>
<td>16.7(3)</td>
<td>33.3(6)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>2. Patients would ultimately benefit if health-care students worked together to solve patient problems</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>3. Shared learning with other health-care students will increase my ability to understand clinical problems</td>
<td>11.1(2)</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
<td>44.4(8)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>4. Learning with health-care students before qualification would improve relationships after qualification</td>
<td>11.1(2)</td>
<td>16.7(3)</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>38.9(7)</td>
</tr>
<tr>
<td>5. Communication skills should be learned with other health-care students</td>
<td>5.6(1)</td>
<td>44.4(8)</td>
<td>27.8(5)</td>
<td>22.2(4)</td>
<td></td>
</tr>
<tr>
<td>6. Shared learning will help me to think positively about other professionals</td>
<td>11.1(2)</td>
<td>16.7(3)</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
<td>22.2(4)</td>
</tr>
<tr>
<td>7. For small group learning to work, students need to trust and respect each other</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>66.7(12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Team-working skills are essential for all health care students to learn</td>
<td>44.4(8)</td>
<td>55.6(10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Shared learning will help me to understand my own limitations</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
<td>11.1(2)</td>
<td>50.0(9)</td>
<td>22.2(4)</td>
</tr>
<tr>
<td>10. I don’t want to waste my time learning with other health-care students</td>
<td>33.3(6)</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td></td>
</tr>
<tr>
<td>11. It is not necessary for undergraduate health-care students to learn together</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>11.1(2)</td>
<td>33.3(6)</td>
<td></td>
</tr>
<tr>
<td>12. Clinical problem-solving skills can only be learned with students from my own department</td>
<td>27.8(5)</td>
<td>61.1(11)</td>
<td>11.1(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Shared learning with other health-care students will help me to communicate better with patients and other professionals</td>
<td>5.6(1)</td>
<td>11.1(2)</td>
<td>27.8(5)</td>
<td>33.3(6)</td>
<td>22.2(4)</td>
</tr>
<tr>
<td>14. I would welcome the opportunity to work on small-group projects with other health-care students</td>
<td>5.6(1)</td>
<td>22.2(4)</td>
<td>33.3(6)</td>
<td>11.1(2)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>15. Shared learning will help to clarify the nature of patient problems</td>
<td>5.6(1)</td>
<td>5.6(1)</td>
<td>11.1(2)</td>
<td>50.0(9)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>16. Shared learning before qualification will help me become a better teamworker</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>5.6(1)</td>
<td>33.3(6)</td>
<td>27.8(5)</td>
</tr>
<tr>
<td>17. The function of nurses and therapists is mainly to provide support for doctors</td>
<td>33.3(6)</td>
<td>27.8(5)</td>
<td>22.2(4)</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>18. I’m not sure what my professional role will be</td>
<td>33.3(6)</td>
<td>33.3(6)</td>
<td>22.2(4)</td>
<td>11.1(2)</td>
<td></td>
</tr>
<tr>
<td>19. I have to acquire much more knowledge and skills than other health-care students</td>
<td>11.1(2)</td>
<td>22.2(4)</td>
<td>16.7(3)</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
</tr>
</tbody>
</table>
The majority of students still responded positively (agreed or strongly agreed) with statements regarding IPE or teamwork. However the percentage of students responding in this way fell compared to the pre-intervention survey. On five statements, an increase in the neutral responses was seen. There was 100% agreement on team-working skills being essential. 66.6% of students remained positive about their own professional roles. From this survey, it would appear that the trend is for students to be less positive about IPE post-intervention, although the numbers are too small to test this statistically. This will be done using pooled data in section 3.4.

Table 12 shows the student responses to the SCLCS.

Table 12: Trial 2, Responses to SCLCS (n=18)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This clinical placement is boring</td>
<td>38.9(7)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
<td>5.6(1)</td>
<td></td>
</tr>
<tr>
<td>2. This clinical placement is a waste of time</td>
<td>55.6(10)</td>
<td>33.3(6)</td>
<td>5.6(1)</td>
<td>5.6(1)</td>
<td></td>
</tr>
<tr>
<td>3. This clinical placement is interesting</td>
<td>5.6(1)</td>
<td>16.7(3)</td>
<td>33.3(6)</td>
<td>44.4(8)</td>
<td></td>
</tr>
<tr>
<td>4. I enjoy coming to this ward</td>
<td>27.8(5)</td>
<td>50.0(9)</td>
<td>22.2(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. This is a disorganised clinical placement</td>
<td>17.6*(3)</td>
<td>41.2*(7)</td>
<td>35.5*(6)</td>
<td>5.9*(1)</td>
<td></td>
</tr>
<tr>
<td>6. I look forward to coming to this clinical placement</td>
<td>38.9(7)</td>
<td>44.4(8)</td>
<td>16.7(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The clinicians are unfriendly towards students</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>8. Staff are punctual</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td>38.9(7)</td>
<td>11.1(2)</td>
</tr>
<tr>
<td>9. I am dissatisfied with what is done in the ward</td>
<td>27.8(5)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>10. There is little opportunity for me to pursue my particular interest in this ward</td>
<td>16.7(3)</td>
<td>33.3(6)</td>
<td>27.8(5)</td>
<td>11.1(2)</td>
<td>11.1(2)</td>
</tr>
<tr>
<td>11. Clinicians in this ward tell me how and why they are doing things</td>
<td>11.1(2)</td>
<td>5.6(1)</td>
<td>33.3(6)</td>
<td>33.3(6)</td>
<td>16.7(3)</td>
</tr>
<tr>
<td>12. Ward assignments are clear so that I know what to do</td>
<td>5.6(1)</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
<td>22.2(4)</td>
<td>22.2(4)</td>
</tr>
<tr>
<td>13. I have a say in how the shift is spent</td>
<td>22.2(4)</td>
<td>16.7(3)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>14. I have little opportunity to be involved with the process of handing over for next shift</td>
<td>16.7(3)</td>
<td>38.9(7)</td>
<td>11.1(2)</td>
<td>22.2(4)</td>
<td>11.1(2)</td>
</tr>
<tr>
<td>15. There are opportunities for me to proceed at my own pace</td>
<td>5.6(1)</td>
<td>16.7(3)</td>
<td>22.2(4)</td>
<td>50.0(9)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>16. The clinician often thinks of interesting learning activities</td>
<td>5.6(1)</td>
<td>33.3(6)</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
</tr>
<tr>
<td>17. No one is interested in my problems</td>
<td>5.6(1)</td>
<td>61.1(11)</td>
<td>27.8(5)</td>
<td>5.6(1)</td>
<td></td>
</tr>
<tr>
<td>18. The clinicians working with me go out of their way to help me</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
<td></td>
</tr>
<tr>
<td>19. The staff working with me help me when I am having trouble with the work</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>44.4(8)</td>
<td>11.1(2)</td>
<td></td>
</tr>
<tr>
<td>20. The clinician working with me considers my feelings</td>
<td>22.2(4)</td>
<td>33.3(6)</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td></td>
</tr>
<tr>
<td>21. Workload allocation in this ward is carefully planned</td>
<td>5.6(1)</td>
<td>22.2(4)</td>
<td>44.4(8)</td>
<td>22.2(4)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>22. I pay attention to what others are saying</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>66.7(12)</td>
<td></td>
</tr>
<tr>
<td>23. The staff involved in education talk with me as an individual</td>
<td>5.6(1)</td>
<td>22.2(4)</td>
<td>38.9(7)</td>
<td>33.3(6)</td>
<td></td>
</tr>
<tr>
<td>24. I put effort into what I do in the ward</td>
<td>5.6(1)</td>
<td>33.3(6)</td>
<td>61.1(11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Getting a certain amount of work done is important in this ward</td>
<td>11.8*(2)</td>
<td>41.2*(7)</td>
<td>47.1*(8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. After the shift, I have a sense of satisfaction</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
<td></td>
</tr>
<tr>
<td>27. The clinicians do not consider students as part of the team</td>
<td>22.2(4)</td>
<td>27.8(5)</td>
<td>27.8(5)</td>
<td>16.7(3)</td>
<td>5.6(1)</td>
</tr>
</tbody>
</table>

* additional missing
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

Students were strongly positive (94%) about their own efforts during the placement. They were positive about the placement overall (questions 1-4 and 6). The majority were positive about the organisation of the placement (58.8%). There were more variable responses to statements about clinicians supervising the students with varied responses about their friendliness and punctuality, and only 45-55% responded positively about statements concerning their interactions with clinicians.

**Health Care Team Survey**

**Table 13:** Trial 2, responses to HCTS (n=18)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having to report observations to each other helps the health care team better understand the work of other health professionals</td>
<td>5.6(1)</td>
<td>5.6(1)</td>
<td>55.6(10)</td>
<td>33.3(6)</td>
</tr>
<tr>
<td>2. The doctor has the ultimate legal responsibility for decisions made by the team</td>
<td>11.1(2)</td>
<td>33.3(6)</td>
<td>16.7(3)</td>
<td>38.9(7)</td>
</tr>
<tr>
<td>3. Working in a health care team keeps most health professionals be enthusiastic and interested in their jobs</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>61.1(11)</td>
<td>5.6(1)</td>
</tr>
<tr>
<td>4. Health professionals when working in a team are more responsive than others to emotional and financial needs of patients</td>
<td>5.6(1)</td>
<td>27.8(5)</td>
<td>55.6(10)</td>
<td>11.1(2)</td>
</tr>
<tr>
<td>5. A team approach to health care makes the delivery of care more efficient</td>
<td>11.1(2)</td>
<td>33.3(6)</td>
<td>55.6(10)</td>
<td></td>
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<tr>
<td>6. Developing a patient care plan with other health care team members avoids error in delivering care</td>
<td>5.6(1)</td>
<td>44.4(8)</td>
<td>50.0(9)</td>
<td></td>
</tr>
<tr>
<td>7. The give and take among health care team members help them make better patient care decisions</td>
<td>22.2(4)</td>
<td>44.4(8)</td>
<td>33.3(6)</td>
<td></td>
</tr>
<tr>
<td>8. Hospital patients who receive care from the whole health care team are better prepared for discharge than other patients</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>55.6(10)</td>
<td></td>
</tr>
<tr>
<td>9. The health care team’s primary purpose is to assist doctors in achieving treatment goals for the patient</td>
<td>11.1(2)</td>
<td>16.7(3)</td>
<td>38.9(7)</td>
<td>33.3(6)</td>
</tr>
<tr>
<td>10. Health care team meetings foster communication among team members from different disciplines</td>
<td>11.1(2)</td>
<td>50.0(9)</td>
<td>38.9(7)</td>
<td></td>
</tr>
<tr>
<td>11. Developing an interdisciplinary patient care plan is excessively time consuming</td>
<td>50.0(9)</td>
<td>44.4(8)</td>
<td>5.6(1)</td>
<td></td>
</tr>
<tr>
<td>12. Doctors have the right to alter patient care plans developed by the team</td>
<td>22.2(4)</td>
<td>44.4(8)</td>
<td>33.3(6)</td>
<td></td>
</tr>
<tr>
<td>13. When developing interdisciplinary patient care plans, much time is wasted translating jargon from different disciplines</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>38.9(7)</td>
<td>16.7(3)</td>
</tr>
<tr>
<td>14. Working in teams unnecessarily complicates things most of the time</td>
<td>11.1(2)</td>
<td>77.8(14)</td>
<td>11.1(2)</td>
<td></td>
</tr>
<tr>
<td>15. A team approach to care delivery improves the quality of care that patients receive</td>
<td>5.6(1)</td>
<td>38.9(7)</td>
<td>55.6(10)</td>
<td></td>
</tr>
<tr>
<td>16. The doctor should not always have the final word in decisions made by health care teams</td>
<td>5.6(1)</td>
<td>72.2(13)</td>
<td>11.1(2)</td>
<td>11.1(2)</td>
</tr>
<tr>
<td>17. The health care team approach assists health professionals to meet the needs of family caregivers as well as patients</td>
<td>5.6(1)</td>
<td>55.6(10)</td>
<td>38.9(7)</td>
<td></td>
</tr>
<tr>
<td>18. In most instances, the time required for meetings of the health care team could be better spent in other ways</td>
<td>11.1(2)</td>
<td>77.8(14)</td>
<td>11.1(2)</td>
<td></td>
</tr>
<tr>
<td>19. Doctors are natural team leaders</td>
<td>33.3(6)</td>
<td>44.4(8)</td>
<td>16.7(3)</td>
<td>5.6(1)</td>
</tr>
</tbody>
</table>

For most statements, the majority of students were positive about teamwork (66.7 - 94.5%). There were some notable differences in these responses compared to the previous study. In these responses, 44.4% of students felt that interdisciplinary care plans are excessively time-consuming; and 77.8% of students indicated that doctors should have the final word in decisions made by the health care team. 77.7% of students disagreed that doctors are natural team leaders. 72.2% of students agreed that the health care team’s primary purpose is to assist the doctor in achieving treatment goals for the patient.
Qualitative analysis of students’ and facilitators’ comments.

(i) Student workbooks - perceptions of the roles of health care team members

Eighteen students provided comments. A thematic analysis was conducted of the comments written by the students. The first question asked students about the roles and responsibilities of staff members caring for the patient interviewed. There were a total of 26 comments made about doctors. Eleven comments referred to taking responsibility/leading (tell, prescribe, direct); six related to ‘finding the problem’, two ‘argue’, one ‘education’, one ‘reviewing’, one ‘helpful’, one ‘do less’, one ‘informs’, and two could not remember. Thirteen comments referred to the role of nursing staff. Thirteen related to doing; two also related to showing compassion. Overall, most related to being directed (do what the doctor says/what the patient says). Seven comments related to physiotherapists, with all referring to ‘doing’ roles, that is, hands-on patient treatment and care, and one to also encouraging the patient. Three comments referred to dietitians and three referred to diabetic educators. These comments described their roles as ‘showing’ ‘giving’ helping. Pharmacists’ roles were described as checking, clarifying.

The students were then asked what has to happen in the patient’s care and who is responsible for organising this. Doctors were described as having responsibility for the care, ordering drugs, other care, or referrals. Nursing staff were described as undertaking the direct patient care (organising, observations, stopping meds, monitoring and reporting, organising the doctor, displaying kindness, undertaking wound care). Other comments included the dietitian explaining the diet, the social worker organising home assistance, and the physiotherapist mobilising the patient.

Finally, the students were asked by what means these actions were communicated. Seventeen students responded. Some students provided more than one comment. Eight comments referred to verbal means (verbal, face to face, by phone); 15 comments referred to the use of written means (chart notes, discharge summaries, giving printed materials, writing referrals); five comments did not include any means of communication but rather referred to who would communicate; four comments referred to ‘doing’; one comment referred to handover and one referred to the use of a patient advocate. Only one comment referred to a team meeting.

(ii) Qualitative comments from facilitators at debrief

As a more pro-active approach was adopted to facilitation many of the ward observations and the impediments to the process were addressed in this trial. For this reason the facilitator’s notes at debrief are focused more particularly on what the medical and nursing students learnt about each other, and also what they learnt about the patient. The more active role of the facilitator assisted in developing the learning from this aspect of the activity more fully than in the pilot and Trial 1.

The following data about what students learnt was collated from the facilitator's notes

Learning that reinforced the doctor has the strongest role in diagnosing, prescribing treatment and directing the team.

- NRS: Doctor makes diagnosis and checks their treatment choices daily. They assess the patient and make decisions about going home, etc.
- MED: Medicine has a physical focus, looks for treatments or other physical conditions.
- NRS: Doctors cure.
- MED: Doctors take info from others and drive the team.
- NRS: Doctors diagnose and give structure for nurses to deliver care.

Facilitator’s observation: Medical student wanted to get ‘the facts’, learnt about patients under the consultant, learnt about structure of learning.

Learning that nurses take a complementary approach by following directions and caring for the patient

- MED: Nurse has more contact, manages progress of patient care, ensures medication compliance, contacts doctor when issues arise
• NRS: Patients think nurses are there to support doctors and also for the general good of the patient, nurses more a caring compassionate role, doctors cure, I think it is a team effort
• MED: Nurses acts as patient advocate ‘cause they know what is going on in the team

Facilitator observation: Nurses attend to activities of daily living and patients ‘vital needs’.

Learning of students – the unique contribution of the interprofessional activity
• NRS: Nurse wants to facilitate, to bring things to doctors' attention, to meet patient's desire to go home to family; repeat anything extremely abnormal.
• NRS: Doctors and Nurses ask similar questions, they are on the same wavelength.
• MED: Medical student found out about community supports and help available for discharge, noticed that the nurse communicated in a more laid back manner and related better, nurse had more knowledge about the patient's direct care.
• MED: Learnt how the patient becomes anxious when team does not communicate, noticed extreme polypharmacy and difficulty in managing medications, doctors write in notes and don’t communicate with the nursing team – then patient anxiety increases. Medical staff not communicating their changes enough.
• NRS: Learnt that pharmacists have valuable information, learnt that oral communication would be good as an adjunct, patient understanding of roles is good.
• NRS: Learnt about problems with communication between teams and this patient, conflicting advice about medications is confusing. Not enough communication, after long term admission patient gets ‘stir crazy’.

What the students learnt about the patient

[The following data about what students learnt about the patient was collated from the facilitator’s notes]

• NRS: ‘valuable to learn that he needs education about diabetes and pain relief regime. Good to have more time to find out more about him’
• MED: ‘not able to adhere to diet/fluid restrictions, has unrealistic ideas about the ‘magic’ of tablets/injections’
• NRS: ‘pt loves to drink and loves fruit unable to understand diet restriction’
• MED: ‘has highlighted the fact that the communication with the patient is not good. He was unsure of what is going on and it causes anxiety’
• NRS: ‘pt unsure a lot, has anxiety about returning to care’
• MED: ‘pt not sure of his knowledge’
• NRS: ‘comes across as an expert in his own care but is confused’
• MED: ‘now I know his attitude to his condition, social skills, what he needs. Needs new insulin as old insulin is not working and he can’t understand’
• MED: ‘pt quite happy for someone to take an interest’
• MED: ‘very useful – a lot more useful than I thought it would be. A perfect case of lack of communication. Handover should be done half an hour before the dr. shift’
• NRS: ‘there is a lack of communication on this ward. I have found many errors in meds. Pt anxiety is increased’
• NRS: ‘improved knowledge of fluid balance charts and importance of these’
• NRS: ‘patient liked content of physiotherapy sessions’
Students’ post-intervention survey analysis

Extent of learning from other health professional undergraduate students in any previous clinical placements?

Eight of the 17 students reported limited previous interprofessional experiences, two reported previous interaction (one through previous work as a health professional) and seven commented on potential benefits.

How useful was this experience in understanding other health professional roles and responsibilities?

Overall the experience was found to be useful (partially useful, useful or very useful) by 12 of the 17 respondents. The students also provided comments. These included comments about a greater understanding of the other’s roles, or commenting on the differences.

‘This has been a fantastic opportunity. Health care students should have this opportunity to help increase their communication and to not be afraid to cross the barrier of doctor/nurse’.

‘notice differences in knowledge, approaches, etc’

One student felt attending multidisciplinary team meeting would be better.

To what extent has this experience helped you to feel more confident in interacting with a health professional from a different discipline?

Eleven of the 17 respondents felt that the experience was helpful (partially helpful, helpful or very helpful). Those who did not find it useful felt that they were already comfortable interacting with other professions. Sample comments from those who found it helpful are:

‘It has made me realise that doctors are human also and very approachable.

‘that as a nurse you also need to be able to verbalise with doctors not just in notes and you need to build that rapport and relationship as a student to be confident when you graduate.’

‘It can seem intimidating at first’

How helpful are interprofessional learning experiences in preparing you for clinical practice after graduation?

Fourteen of the 17 students found interprofessional learning experiences useful (partially useful, useful or very useful) in preparing them for clinical practice after graduation. Sample comments are:

‘Other disciplines have other perspectives and see things from a different view. It’s good to hear it. A good learning experience.’

‘program has brought to light the extent of miscommunication suffered by the patient due to the breakdown in communication between staff and amongst nursing staff and the treating medical team.’

‘clearly doctors, nurses and other team members need to be able to work together and communicate. However I believe that the clinical exposure is already satisfactory. I also believe that the new generation of HCP are developing much better skills in communication and teamwork than the older generation.’

‘only one patient seen so limited experience. More would help prepare for postgrad.’

3.3.6 Discussion

Students entering this trial displayed positive attitudes to IPE pre-intervention, but some uncertainty about their own professional role and disparate views of the amount of knowledge to be gained across professions. After the trial, there was an increase in the neutral responses to the RIPLS.
However, the qualitative comments on the students’ post-intervention survey are at odds with this result, with overall positive responses about the experience. The qualitative data have been valuable in exploring the students’ perceptions and understandings of roles, of communication issues and of the impact of IPE and teamwork on patient care.

There was evidence of strong attitudes to the central and lead role of the doctor in the health care team, both in the survey data and in the qualitative comment, with the nursing role being seen as complementary. Students displayed varied understandings of how information is communicated in a health care team and again noted the varied communication styles of nursing and medical students.

In each of the trials reported, student numbers are too low for meaningful statistical analysis. The following section pools the data from the trials and considers differences in responses between professions.

3.4 Analysis of pooled student data

A series of research questions directed the analysis of the pooled student data. The results of this analysis are shown below. There was a total of 52 students included in this analysis.

3.4.1 Students’ perceptions of teamwork pre-intervention

Fourty two pre-intervention RIPLS were collected throughout the trials. Table 14 below shows the responses to the positively-worded questions. Overall, 69 to 96% of respondents agree or strongly agree that teamwork is positive on commencement of the trials.

Table 14: Responses to pre-intervention RIPLS (n=42)

<table>
<thead>
<tr>
<th>RIPLS-pre intervention</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Percentage agree or strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>18</td>
<td>82.7</td>
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<td>2</td>
<td>30</td>
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<td>4</td>
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<td>11</td>
<td>73.1</td>
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<td>14</td>
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<td>8</td>
<td>69.2</td>
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<td>15</td>
<td>28</td>
<td>10</td>
<td>73.0</td>
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<tr>
<td>16</td>
<td>28</td>
<td>12</td>
<td>76.9</td>
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</table>

3.4.2 Changes in Readiness for Interprofessional Learning

Parsell and Bligh (1999) report a three subscale structure for the RIPLS survey, Teamwork and Collaboration, Professional identity and Roles and Responsibilities. We have been unable to confirm this factor structure in this data set. Therefore, the changes to individual items were considered. Table 15 shows the frequency of positive, negative and no change from pre-
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

intervention to post-intervention, for each of the RIPLS questions. A total of 20 students responded to both the pre- and post-intervention surveys. In the majority of cases, there was no change in the data. When changes did occur, it was greater in the negative direction for 13 statements and greater in the positive direction for six statements.

Table 15: Changes in responses to RIPLS.

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>+ve change</th>
<th>-ve change</th>
<th>No change</th>
<th>Valid % + ve change</th>
<th>Valid % -ve change</th>
<th>Valid % no change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td>50</td>
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<td>11</td>
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<td>15</td>
<td>55</td>
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</tr>
</tbody>
</table>

Individual students, who changed their responses either positively or negatively after the intervention by three or more on a five-point scale, were then considered. This analysis revealed considerable individual variation in the changes after the intervention. It is important to note that these changes can be masked by averaging the results.

The responses of case number 54, a male medical student, to RIPLS item 9:

‘Shared learning will help me to understand my own limitations’, 13 ‘Shared learning with other health care student will help me to communicate...’ and 15 ‘Shared learning will help me to clarify the nature of patient problems’ increased three or more points on the second test. After the intervention his attitude had become more positive for these items.

The responses of case number 45, a female medical student, to RIPLS items 1, 2, 3, 4, 9, 13, 15, and 16 (the text for these questions can be seen in Table 11) decreased three or more points from time 1 (pre-intervention) to time 2 (post-intervention). After the intervention, her attitudes had become more negative for these items. Case 45 is responses to items 10, 11 and 19 had increased three or more points from time 1 to time 2. After the intervention her attitude had become more negative for these items.
The responses of case number 44, a female nursing student, to RIPLS items 18 and 19 decreased three or more points from time 1 to time 2. Lower scores indicate a less negative attitude after the intervention and a more positive appraisal of the items 18 ‘I’m not sure what my professional role will be’ and 19 ‘I have to acquire much more knowledge and skills than other health care students’.

The responses of case numbers 46 and 60, both female nursing students, to RIPLS item 18 decreased at time 2 which indicates less agreement with a negatively worded item. This is positive attitude change after the intervention.

Case 47, a female nursing student, displayed higher agreement with item 12 ‘Clinical problem solving skills can only be learned with students from my own department’ after the intervention.

Case 50, a male medical student, displayed a lower time 2 score on item 6 ‘Shared learning will help me to think positively about other professions’. The level of agreement with that item decreased 3 or more points after the intervention, so this participant’s attitude became more negative at time 2.

These data show that there is considerable individual variation in how students respond to IPE activities and using cohort means from surveys masks these changes.

3.4.3 The change in responses to RIPLS between the discipline groups

The changes in nine medical students scores and 11 nursing student scores were compared using an independent groups t-test. Significant differences were found for the changes in responses to five of the RIPLS questions between time 1 and time 2 (p<0.05). These were items 4, 6, 12, 16 and 18. For questions 4, 6, 12 and 16, medical students displayed less agreement with the statements over time, while the nursing students tended to increase their agreement with the statements. For item 18, medical students had higher agreement than nursing students with the statement ‘I’m not sure what my professional role will be’ after the intervention.

3.4.4 Responses to HCTS and the SCLCS

For trial 2, Hospital 2, the responses to the HCTS and the SCLCS were compared between the disciplines.

Health Care Team Scale

On the HCTS, the responses of nursing students were compared to those of medical students. Eleven medical students and 15 or 16 nursing students (varies between individual questions) responded to this survey which was conducted post-intervention. Table 16 below shows the responses from the two discipline groups. T-Tests for differences in the means across these two groups were not significant for all questions in Table 16.
Table 16: Percentage responses to the HCTS (n=17)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having to report observations to each other helps the health care team better understand the work of other health professionals</td>
<td>Medicine: 0</td>
<td>9.1</td>
<td>81.8</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>Nursing: 6.7</td>
<td>0</td>
<td>60.0</td>
<td>33.3</td>
</tr>
<tr>
<td>2. The doctor has the ultimate legal responsibility for decisions made by the team</td>
<td>Medicine: 9.1</td>
<td>18.2</td>
<td>54.5</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>Nursing: 12.5</td>
<td>50.0</td>
<td>31.3</td>
<td>6.3</td>
</tr>
<tr>
<td>3. Working in a health care team keeps most health professionals be enthusiastic and interested in their jobs</td>
<td>Medicine: 9.1</td>
<td>27.3</td>
<td>63.6</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>12.5</td>
<td>81.3</td>
<td>6.3</td>
</tr>
<tr>
<td>4. Health professionals when working in a team are more responsive than others to emotional and financial needs of patients</td>
<td>Medicine: 9.1</td>
<td>36.4</td>
<td>54.5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>31.3</td>
<td>56.3</td>
<td>12.5</td>
</tr>
<tr>
<td>5. A team approach to health care makes the delivery of care more efficient</td>
<td>Medicine: 0</td>
<td>18.2</td>
<td>45.5</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>6.3</td>
<td>31.3</td>
<td>62.5</td>
</tr>
<tr>
<td>6. Developing a patient care plan with other health care team members avoids error in delivering care</td>
<td>Medicine: 0</td>
<td>9.1</td>
<td>54.5</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>6.3</td>
<td>50.0</td>
<td>43.8</td>
</tr>
<tr>
<td>7. The give and take among health care team members help them make better patient care decisions</td>
<td>Medicine: 0</td>
<td>27.3</td>
<td>63.6</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>6.3</td>
<td>62.5</td>
<td>31.3</td>
</tr>
<tr>
<td>8. Hospital patients who receive care from the whole health care team are better prepared for discharge than other patients</td>
<td>Medicine: 0</td>
<td>0</td>
<td>63.6</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>6.3</td>
<td>43.8</td>
<td>50.0</td>
</tr>
<tr>
<td>9. The health care team’s primary purpose is to assist doctors in achieving treatment goals for the patient</td>
<td>Medicine: 0</td>
<td>36.4</td>
<td>45.5</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>Nursing: 12.5</td>
<td>25.0</td>
<td>31.3</td>
<td>31.3</td>
</tr>
<tr>
<td>10. Health care team meetings foster communication among team members from different disciplines</td>
<td>Medicine: 0</td>
<td>9.1</td>
<td>63.6</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>12.5</td>
<td>56.3</td>
<td>31.3</td>
</tr>
<tr>
<td>11. Developing an interdisciplinary patient care plan is excessively time consuming</td>
<td>Medicine: 0</td>
<td>45.5</td>
<td>54.5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>68.8</td>
<td>25.0</td>
<td>6.3</td>
</tr>
<tr>
<td>12. Doctors have the right to alter patient care plans developed by the team</td>
<td>Medicine: 0</td>
<td>27.3</td>
<td>36.4</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>18.8</td>
<td>68.8</td>
<td>12.5</td>
</tr>
<tr>
<td>13. When developing interdisciplinary patient care plans, much time is wasted translating jargon from different disciplines</td>
<td>Medicine: 9.1</td>
<td>36.4</td>
<td>54.5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>43.8</td>
<td>37.5</td>
<td>18.8</td>
</tr>
<tr>
<td>14. Working in teams unnecessarily complicates things most of the time</td>
<td>Medicine: 0</td>
<td>90.9</td>
<td>9.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 12.5</td>
<td>75.0</td>
<td>12.5</td>
<td>0</td>
</tr>
<tr>
<td>15. A team approach to care delivery improves the quality of care that patients receive</td>
<td>Medicine: 0</td>
<td>9.1</td>
<td>63.6</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>6.3</td>
<td>43.8</td>
<td>50.0</td>
</tr>
<tr>
<td>16. The doctor should not always have the final word in decisions made by health care teams</td>
<td>Medicine: 0</td>
<td>81.8</td>
<td>18.2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 12.5</td>
<td>31.3</td>
<td>43.8</td>
<td>12.5</td>
</tr>
<tr>
<td>17. The health care team approach assists health professionals to meet the needs of family caregivers as well as patients</td>
<td>Medicine: 0</td>
<td>0</td>
<td>81.8</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>Nursing: 0</td>
<td>18.8</td>
<td>50.0</td>
<td>31.3</td>
</tr>
<tr>
<td>18. In most instances, the time required for meetings of the health care team could be better spent in other ways</td>
<td>Medicine: 0</td>
<td>90.9</td>
<td>9.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nursing: 12.5</td>
<td>75.0</td>
<td>12.5</td>
<td>0</td>
</tr>
<tr>
<td>19. Doctors are natural team leaders</td>
<td>Medicine: 36.4</td>
<td>18.2</td>
<td>36.4</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>Nursing: 25.0</td>
<td>68.8</td>
<td>6.3</td>
<td>0</td>
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</table>
On the SCLCS, responses of 13 medical students and 16 nursing students were analysed. The two discipline groups varied significantly on four items:

(i) ‘I have little opportunity to be involved with the process of handing over for the next shift’. Medical students had higher mean responses than nursing students (t = 4.113, p < .01), indicating a more negative attitude reflected by medical students on this item.

(ii) ‘The clinicians working with me go out of their way to help me’, Nursing students had higher mean responses than medical students (t = - 2.57, p = .016).

(iii) ‘The staff working with me help me when I am having trouble with the work’ Nursing students had higher mean responses than medical students (t = -2.981, p < .01).

(iv) ‘Workload allocation in this ward is carefully planned’ Nursing students had higher mean responses than medical students (t = -2.153, p < .05).

To understand the nature of the differences between medical and nursing students, an analysis was made of responses which varied by 15% or more between medical and nursing students.

Item 1. ‘This clinical placement is boring’ 53.8% medical students strongly disagree vs. 31.2 % nursing.

Item 3. ‘This clinical placement is interesting’ 7.7% medical students neutral vs. 25% nursing.

Item 4. ‘I enjoy coming to this ward’ 15.4% medical students strongly agree vs. 31.2% nursing.

Item 5. ‘This is a disorganised clinical placement’ 7.7% medical strongly disagree vs. 20% nursing.

Item 7. ‘The clinicians are unfriendly towards students’ 23.1% medical strongly disagree vs. 6.2% nursing.

Item 9. ‘I am dissatisfied with what is done in the ward’ 53.9% med responded in the negative (either strongly disagree or disagree) vs. 81.2% nursing.

Item 11. ‘Clinicians in this ward tell me how and why they are doing things’ 30.8% medical agree vs 50% nursing.

Item 12. ‘Ward assignments are clear so that I know what to do’ 53.8% medical neutral vs. 6.2% nursing. 15.4% med agree vs. 56.2% nursing.

Item 13. ‘I have a say in how the shift is spent’ 25% medical strongly disagree vs. 6.2% nursing. 50% medical neutral vs. 25% nursing. 16.7% med agree vs. 43.8% nursing.

Item 14. ‘I have little opportunity to be involved with the process of handing over…’ 33.3% medical neutral vs. 6.2% nursing; 41.7% medical respond in the positive vs. 6.2% nursing.

Item 18. ‘The clinicians working with me so out of their way to help me’ 30.8% medical disagree vs. 6.2% nursing.

Item 19. ‘The staff working with me help me when I am having trouble with the work’ 46.2% medical neutral vs. 12.5 % nursing; 46.2% medical responded in the positive vs. 87.6% nursing.

Item 21. ‘Workload allocation in this word is carefully planned’ 33.3% medical disagrees vs. 6.2% nursing. 8.3% medical agree vs. 50% nursing.

Subscales for the SCLCS have been reported and these data were examined for these subscales, and to see if there were any differences between medical and nursing students. Negatively-worded items were re-coded and composite scales were computed by 1) averaging the participants’ responses to the subscale items and 2) summing together the participants’ responses to the subscale items, resulting in composite scores for each subscale of the SCLCS.

The Organisational Engagement subscale had 12 items. Internal reliability (Cronbach’s alpha) for this scale was good, n = 28, α = .737. The Student Motivation subscale had five items. Internal
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

reliability (Cronbach’s alpha) for this scale was good, n = 29, α = .766. The Dissatisfaction subscale had five items. Internal reliability for this scale was acceptable, n = 27, α = .563.

Independent groups t-tests were used to examine whether there were any differences between discipline groups on these three subscales of the SCLCS. There were 13 medical students and 16 nursing students. T-tests were conducted on the averaged composite scores and on the summated composite scores for each of the three subscales.

No significant differences were found between medical and nursing students for the SCLCS subscale scores were found. (all p > .05).

3.4.5 Summary of Analysis of Pooled Data

While 69-96% of students expressed initial positive attitudes to teamwork (as displayed in their responses to the pre-intervention RIPLS), attitudes varied across students after the intervention. This may be related to the varied backgrounds of the students and requires further investigation. Individual students’ changes from pre- to post-intervention were considerable and variable in direction and this was easily masked by the use of averages.

There were significant differences between professions on the RIPLS, with medical students tending to become more negative in their attitude. Students can be uncertain of their future professional roles and for some students the IPE intervention increased this uncertainty.

The survey data do not present a convincing picture of IPE positively influencing student attitudes in this intervention. This is in contrast to the qualitative data where student comments about the intervention and how this might influence future practice, were positive. Although the sample is small, these data indicate a need for further work on appropriate measurement instruments for IPE activities.

The surveys related to the clinical learning environment showed differences between the professions. Significant difference was found between the professions on four items, with nursing students more positive about their experiences. This led the Fellows to consider the influence of the clinical learning environment, the ethos of the clinical team, and the learning experience overall on the students' reactions to IPE and to try to define the unique contribution of IPE to health professional student education. This led to the development of a model suggesting the contribution of IPE to student learning which is presented in the following chapter.
4. SYNTHESIS OF RESULTS AND DISCUSSION

4.1 A model that makes sense of the contribution of our interprofessional clinical learning activity

Interprofessional education is a broad, encompassing term that has many different meanings for many different people, and accordingly, the learnings from interprofessional activities will be diverse, given the personality, experiences and situations of the students. In this activity, we sought for students to gain an understanding of the complexity of health care through the pairing of students from two different disciplines, medicine and nursing, when interacting with a patient in the busy clinical setting. A key component of this activity was the opportunity for students who were from the same university, yet who had never interacted with each other, to learn more about each other’s practice and develop appropriate behaviours for continued interaction upon graduation.

IPE is defined as learning ‘with, from and about each other’ (CAIPE 1997). When applied in a campus-based setting, where traditional learning is uni-professional it is clear to see where IPE initiatives separate from traditional educational experiences. However, in the clinical learning environment the situation is more complex. A student’s experience of any type of teaching or learning in a clinical setting is influenced by their previous experience, the ethos of the clinical environment in which he/she is placed; the nature of the clinical teaching provided; and the structure of the work-integrated learning (WIL) experience overall. Any IPE initiative in a clinical environment will be similarly influenced by these factors. IPE involves learning about other professional roles and lays the foundation for collaborative practice and teamwork. Teamwork is variably evident in different units within the healthcare system. Teamwork is described in the literature as essential for quality and safety within healthcare.

This leads to the question of what is IPE in a clinical setting and does it differ from the fundamental principles of successful WIL, good clinical teaching, fostering good teamwork and safety and quality initiatives? From our reflection of our activity and analysis we have developed a model around strategies to facilitate interprofessional learning.

4.2 Adult learning

When students enter the clinical practice environment, they largely rely on adult learning techniques, that is, their understanding of the practical aspects of what they need to achieve directly influences how they approach their learning. By adult learning we refer to the practical orientated learning that is relevant and meaningful to the student. If students prior to undertaking their clinical placement have had a mostly uni-professional experience then their understanding of what they need to achieve during their clinical placement will generally be based on a uni-professional approach to their practice.

In the case of a predominantly uni-professional experience student’s education maybe focused on the specific contribution of their profession on the patient diagnosis and treatment regime in order to promote patient health and well-being. When education focuses on the specific contribution of the health professional then an understanding of the role and contribution of other health professionals may not be automatically given considered in the adult learner. The adult learning is based on the students understanding of what their profession entails. Arguably it is these perceptions and preconceived ideas that influence student attitudes to understanding, their value and contribution to what interprofessional learning entails.

4.3 Work-integrated learning (Supervision of Students)

The supervision of students during work-integrated learning shapes how students approach their learning and therefore directly impacts on what they learn. In clinical environments students (both medical and nursing) are routinely partnered with an experienced clinician, or a team of clinicians of the same profession. The expert clinician demonstrates and role-models professional practice.
Further to this, the clinician guides and supports the learning of the student, and where appropriate facilitates the student to provide clinical care.

As medical students are partnered with medical practitioners they are therefore involved in assessments of patients, discussions with registrars and consultants about patients’ conditions, and exploration of patients’ histories in conjunction with results of diagnostic tests. For medical students learning is shared during the ward rounds which are lead by the medical professionals. Depending on the particular routines in the clinical areas nurses and allied health professionals maybe included in these rounds. Nurses take responsibility to teach student nurses, however in many situations ‘designated clinical teachers’ are available to assist the nurse or alternatively, directly teach or assess the nursing student on a particular task or skill. Nursing students participate in skills and tasks directly in association with a nurse.

4.4 Clinical Environment/Teamwork

Depending on the clinical area, the structure of work patterns, and the established communication routines, influence whether students observe effective team practices during their clinical placement.

For example, central to medical student learning is their participation in the ward round. This is accompanied by discussions within the medical team about their observations, assessment and proposed treatment regimes for patients. Alternatively, student nurses are situated within a particular area to provide continual care to a group of patients. Learning for student nurses pertains to engagement with how to perform tasks in a safe and effective manner. In the main, unless a particular nursing task needs specific medical information for it to be adapted to the patient’s needs, there is often little contact between the students of these professional groups.

In many situations, students observe professional teamwork within their discipline group instead of across professional groups. The opportunity for students to engage in teamwork is important. In our activity student scores were positive about teamwork before and after the activity [the small scale intervention in relation to numbers and time meant that we were not able to make a significant impact on these scores.] From the observations and students notes, students recorded that they believed communication, an essential part of teamwork, mostly occurred through the written form; generally it was contained within the patient notes rather than the teams verbally communicating within the ward area.

4.5 Quality and Safety

Ideally quality and safety are improved through good ward practices where actions become timely and relevant, reducing potential for unnoticed deterioration. Innovation in teaching and learning that can make a significant contribution to quality and safety is multifaceted. It begins with the student preconceived ideas about what health care entails – in particular recognising the patient contribution and understanding of their condition. Through this activity where students engage with the patient as well as with each other they explore the patient understanding of their condition. Students identified patient limitations around physical aspects of patients’ well-being, such as their mobility, and their limitations around understanding of medications that could potentially lead to further complications.

As students discussed the meaning of particular patient comments with each other, and also shared their experiences with the facilitator they gained insight into how quality and safety could be jeopardised by inadequate information. Further to this, student communication with each other was designed for them to recognise the potential value of identifying and clarifying patients’ needs to improve safety and quality of health care.
Fostering IPE within these existing parameters

It was evident during the planning of this fellowship that how the professions of medicine and nursing worked and approached patient care influenced adult learning, the supervision of students during the clinical placement, the form that teamwork took, and approaches to quality and safety.

The manner in which medicine and nursing perform patient care in many of the clinical areas that were available to us did not lend many opportunities to promote interprofessional learning.

The work-integrated learning offered was therefore within the domain of a students’ activity. The IPE activity offered was ‘an extra learning opportunity’ – in many cases it was not seen as important as the discipline-based activities. Students participated when ‘other’ activities as part of their specific professional domain were completed.

This project therefore employed IPE facilitators to influence adult learning, supervision of students, teamwork and quality and safety during the period that the students were placed in the clinical areas in order to enhance the learning that resulted from the self-directed activity undertaken by the students. Our finding was that this extra role was crucial in assisting the medical and nursing students explore and reflect on the behaviours that they observed during their clinical placement and undertaking the activity.

The contribution of the IPE facilitator in this role was not just facilitating the feedback session with the students. The facilitator was instrumental in choosing patients for the medical and nursing students whom both of them had previously looked after. The supernumerary status of the clinical facilitator meant that she could attend the medical rounds to familiarise herself with the type of learning that was being shared with the medical students, and also attend the nursing handover to understand the issues facing the nursing students. Where possible the facilitator also promoted engagement that could ultimately influence student attitudes through initiating discussions across the professional groups during medical rounds and nursing handovers. Effective communication skills were also being role-modelled. Being cognisant of the situations that both students were immersed deepened engagement between the facilitator and the students.

This particular role was instrumental to the success of the learnings that the students were able to glean from the activity. It is a role, however, that requires specific training to undertake, above and beyond the skills required to be a good clinical teacher within a single discipline. Because of the small scale of the intervention the impact on students as measured by the survey data was not significantly different, however the descriptive feedback indicated that students attitudes shifted, they had an opportunity to observe interactions across professional groups, they learnt about roles, responsibilities and gained an appreciation of the importance of teamwork and how this could impact on quality and safety.

We propose a model for IPE that identifies the unique contribution of a skilled facilitator in guiding a student directed learning in the clinical setting. This model acknowledges the influence that a skilled facilitator can have on adult learning, WIL principles, clinical teaching and learning, teamwork and safety and quality that can impact on student knowledge, attitudes and skills. This is shown in the diagram below.
4.7 The specific contribution of our IPE activity

While much of the content and many approaches needed to deliver IPE overlap extensively with elements of successful WIL, positive clinical learning environments and good clinical teaching, collaborative practice and patient safety, there are core elements of IPE not addressed in the other dimensions. These are: (1) knowledge – that is, students’ learning and learning to respect, other’s roles; (2) attitudes – pre-existing stereotypical attitudes are present and specific IPE activities aim to address these, (3) skills – it was evident from the students in this program that they may be practised at communicating with the patient, but not with other professionals, nor were they aware of the additional information that may be gleaned from the patient using different communication styles.

A key finding around the importance of this activity is that students were more informed about other health professionals’ roles. This finding emerged from the written open-ended questions rather than from the analysis of the pre- and post-intervention surveys. The limitation of the survey instruments used is that they were not specifically designed to track the learnings that students described as most pertinent from participating in the activity.
5. RECOMMENDATIONS

The recommendations of this fellowship for future trials of IPE in the clinical environment are:

(1) Engagement of the leadership from both the university and health service, and of the local clinicians, is essential.

(2) Identify the logistical and practical barriers to implementing IPE in the clinical setting and develop a plan to overcome them.

(3) IPE activities in the clinical setting need to be flexible and able to be completed in short time periods.

(4) Acknowledge that students have preconceptions (or attitudes) to other health professions and that they may not be congruent with the requirements for collaborative practice.

(5) A trained IPE facilitator is essential. This role may be additional to the clinical teaching role. The facilitator needs to engage with local clinicians and take a proactive role in organising the activity.

(6) There are a number of different learning, teaching and supervision models used in the clinical setting by the various health professions and this needs to be considered in planning an IPE activity.

(7) Appropriate data analysis methods need to be developed to determine the effectiveness of the activity in changing student attitudes. Results from IPE activities will be very variable between individuals.
6. DISSEMINATION

6.1 Forums

A national forum was organised to facilitate communication around interprofessional learning activities. 31st July 2008. See Appendix 6 for program and attendees.

6.2 Presentations


6.3 Publications


REFERENCES


Barrows, HS & Tamblyn, RM 1980, Problem-Based Learning: An Approach to Medical Education, New York: Springer Publishing Comp


Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students


Institute of medicine 2003, Health Professions Education: A Bridge to Quality, National Academies Press, Washington DC.


Schön, D 1987, Educating the Reflective Practitioner, Jossey-Bass, San Francisco


Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students


APPENDIX 1. Phase 1 initial instrument – Interprofessional Learning Workbook

Guidelines for the patient encounters during this project

*How to use the interprofessional learning workbook*

Students from nursing and medicine are participating in this project. A clinical facilitator for this project will team up students from the different disciplines to work in pairs, as it suits your rosters. We are asking you to:

**Step 1:** Familiarise yourselves with the patient notes and reason for admission and complete Section 1

**Step 2:** Interview the patient with your partner, using Section 2 of this workbook as a guide. Each of you should complete an individual workbook.

**Step 3:** Work through Section 3 of the workbook with your partner.

**Step 4:** Discuss your experience with the IPE clinical facilitator (Section 4)
Section 1

Instructions PRE patient encounter

Familiarise yourself with this patient’s history.

- Consult the **patient notes** (including history of presenting complaint, treatment to date in hospital)
- Retrieve the following information from the patient's notes/chart:

Patient's age range:

\(<25 \square\) 25-35 \(\square\) 35-45 \(\square\) 45-55 \(\square\) 55-65 \(\square\) 65-75 \(\square\) 75-85 \(\square\) >85 \(\square\)

Patient’s gender  Male \(\square\)  Female \(\square\)

Patient’s presenting complaint as written in patient notes:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

History of presenting complaint as written in patient notes

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Patient’s past history as written in patient notes:

______________________________________________________________________________
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Section 2

Instructions for patient encounter

1. Interviewing the patient

(i) Establish rapport with the patient and set the scene

- Welcome the patient and ensure privacy and comfort, introduce yourself and explain why you are speaking with them today. Address the patient by their name. (The clinical facilitator will have already sought permission from the patient for you to speak with them but you should check that you have arrived at a suitable time)

Hello Mr/Mrs/Miss…………… my name is … ……………….I am a medical/nursing student from Griffith University and would like to ask you a few questions today as part of our research programme, is that okay with you?

- Ask them how they are feeling

How are you feeling today?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

- Understand their social situation

How would you describe your situation at home? For example do you live alone?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Ask if the patient uses any support services?

Home help, type__________________________

Meals on wheels yes/no
Lives with carer yes/no
Lives in a nursing home yes/no
Lives in a Hostel yes/no
Lives in a retirement village yes/no
Does this information have any bearing on how you the doctor/nurse interact with the patient ie: planning? (please explain below)

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

(ii) Ask the patient to tell you their current problems, their concerns and the reason for their admission. (In Section 3 you will use this information, together with that obtained from the patient’s chart and your own questioning developed from the patient’s problem list.)

• Learn about their understanding of their hospitalisation

*What is your understanding of why you are in hospital today?*

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

• Their concerns

*What are your main concerns today?*

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
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• Obtain information about the patient’s current treatment with medications.

*Do you usually take any medications prescribed for you by your local doctor?*

If yes, please ask the patient to name them and describe what each medication is for; record these in the patient’s own words.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Do you take any medications that you can buy over the counter from the chemist or the supermarket?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Do you take any herbal supplements or vitamin supplements?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

• Ascertain whether the patient has any allergies

Have you ever had an allergic reaction to anything? Yes/no

If yes, ascertain the type of reaction they had

Can you describe what happened when you had the reaction? (record in patient’s own words)

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Which category does the reaction fit into? (circle one)

Allergic Rash/Allergy  Anaphylaxis  Side effect

(iii) Ask the patient to explain in their own words what they expect to happen next/what they are waiting for.
(iv) Ask the patient to identify the roles of the various staff members who have cared for them. (Do they know who the staff are – health team and other staff? Do they know the role each staff member plays in patient care?)

(v) Ask the patient about their experience of health care, in particular, the experience they have had so far on this presentation.

(vi) Where appropriate, ask the patient about issues of living with their chronic condition.
Section 3

Post Interview

Date Completed: __________________  Time completed: __________________

After interviewing the patient:

(i) Prioritise the patient’s problem list. Identify your role as a registered nurse or intern (i.e. drawing on your specific knowledge base) in assisting with progressing the care of this patient.

____________________________________________________________________________
____________________________________________________________________________
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(ii) What is organised to date in this patient’s journey, whose responsibility is it to organise this, what is their role in following through, what will happen from it?

<table>
<thead>
<tr>
<th>What is organised?</th>
<th>Who is responsible to organise this?</th>
<th>What is their role in follow-through?</th>
<th>What will happen?</th>
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</table>
(iii) If you were the intern/nurse looking after this patient, who would you need to communicate with in the care of this patient? From your analysis of the flow plan above what is the patient’s progress? Do you see any barriers in this progress? Can you reduce any of these barriers in your role?

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(iv) Describe, compare/contrast each of your roles in the care of this patient (as a registered nurse or intern). Identify the importance of your and your partner’s roles in the care of this patient. Discuss the limits (scope of practice) of your and your partner’s role.

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(v) Identify other possible health team members, relatives or other staff that would have a role in the care of this patient. Explain the contribution of their role.

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(vi) Identify the next phase in the patient journey (i.e., diagnosis/treatment/referral/discharge/surgery etc). Identify how and if this has been communicated to the patient and relevant members of the team.

<table>
<thead>
<tr>
<th>What is the next phase in the patient’s journey?</th>
<th>Who communicated this to the patient and how?</th>
<th>Which team member was this communicated to?</th>
<th>How was this communicated to the team member?</th>
</tr>
</thead>
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</tbody>
</table>

(vii) Identify potential patient safety issues in the care of this patient (patient identification/is the patient fully informed about their care/in hospital medication & regimes and knowledge of usual medications and regime/effectiveness of handover between staff)

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Section 4

**Discussion with IPE facilitator**

Reflection of the process and compare and contrast their individual, their combined and their clinician’s perspectives.
APPENDIX 2. Final Student Workbook

The Final Student Workbook is an easy-to-use tool to guide interaction between health professionals. In this study, it was used to guide the interaction between a medical and nursing student, but could be readily adapted for use in other professions. An example of this workbook is enclosed (see inside front cover).

**Interprofessional Clinical Learning Project**

**Student Workbook**

Each of you should complete an individual workbook

<table>
<thead>
<tr>
<th>Student Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Day:</td>
</tr>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

**How to use this workbook**

1. Familiarise yourself with the patient notes and reason for admission and complete Section 1.
2. Interview the patient with your partner, using Section 2 of this workbook as a guide. Each student should complete an individual workbook.
3. Work through Section 3 of the workbook with your partner.
4. Discuss your experience with the IPE clinical facilitator.

Support for this publication has been provided by the Australian Learning and Teaching Council Ltd, an initiative of the Australian Government Department of Education, Employment and Workplace Relations.

The views expressed in this publication do not necessarily reflect the views of the Australian Learning and Teaching Council.
Developing a model for interprofessional education during clinical placements for medical and nursing undergraduate students

APPENDIX 3. Facilitator’s Workbook

The Facilitator’s Workbook provides questions to prompt the discussion between the students. It prompts the facilitator to record their own observations in the ward and the observed impediments to the process; what the students have learned about each other's roles; patient safety issues and what the students have learned from the patient's feedback. An example of this workbook is enclosed (see inside front cover).

Interprofessional Clinical Learning Project
Facilitator Notes
Each of you should complete an individual workbook

Student Code: 
First Name: 
Date: 

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APPENDIX 4. Copies of all measures/surveys used

Readiness for Interprofessional Learning Scale

Please indicate the degree to which you agree or disagree with the statement by drawing a circle around the number of the response that best expresses your feeling.

The scale is as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

| 1. Learning with other students will help me become a more effective member of a health care team | 1 2 3 4 5 |
| 2. Patients would ultimately benefit if health-care students worked together to solve patient problems | 1 2 3 4 5 |
| 3. Shared learning with other health-care students will increase my ability to understand clinical problems | 1 2 3 4 5 |
| 4. Learning with health-care students before qualification would improve relationships after qualification | 1 2 3 4 5 |
| 5. Communication skills should be learned with other health-care students | 1 2 3 4 5 |
| 6. Shared learning will help me to think positively about other professionals | 1 2 3 4 5 |
| 7. For small group learning to work, students need to trust and respect each other | 1 2 3 4 5 |
| 8. Team-working skills are essential for all health care students to learn | 1 2 3 4 5 |
| 9. Shared learning will help me to understand my own limitations | 1 2 3 4 5 |
| 10. I don't want to waste my time learning with other health-care students | 1 2 3 4 5 |
| 11. It is not necessary for undergraduate health-care students to learn together | 1 2 3 4 5 |
| 12. Clinical problem-solving skills can only be learned with students from my own department | 1 2 3 4 5 |
| 13. Shared learning with other health-care students will help me to communicate better with patients and other professionals | 1 2 3 4 5 |
| 14. I would welcome the opportunity to work on small-group projects with other health-care students | 1 2 3 4 5 |
| 15. Shared learning will help to clarify the nature of patient problems | 1 2 3 4 5 |
| 16. Shared learning before qualification will help me become a better teamworker | 1 2 3 4 5 |
| 17. The function of nurses and therapists is mainly to provide support for doctors | 1 2 3 4 5 |
| 18. I'm not sure what my professional role will be | 1 2 3 4 5 |
| 19. I have to acquire much more knowledge and skills than other health-care students | 1 2 3 4 5 |
### Student Clinical Learning Culture Survey (SCLCS)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This clinical placement is boring</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. This clinical placement is a waste of time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. This clinical placement is interesting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I enjoy coming to this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. This is a disorganised clinical placement</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I look forward to coming to this clinical placement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. The clinicians are unfriendly towards students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Staff are punctual</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>9. I am dissatisfied with what is done in the ward</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>10. There is little opportunity for me to pursue my particular interest in this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Clinicians in this ward tell me how and why they are doing things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Ward assignments are clear so that I know what to do</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>13. I have a say in how the shift is spent</td>
<td>1</td>
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<tr>
<td>14. I have little opportunity to be involved with the process of handing over for next shift</td>
<td>1</td>
<td>2</td>
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<tr>
<td>15. There are opportunities for me to proceed at my own pace</td>
<td>1</td>
<td>2</td>
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<tr>
<td>16. The clinician often thinks of interesting learning activities</td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
<tr>
<td>17. No one is interested in my problems</td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
<tr>
<td>18. The clinicians working with me go out of their way to help me</td>
<td>1</td>
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<tr>
<td>19. The staff working with me help me when I am having trouble with the work</td>
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<tr>
<td>20. The clinician working with me considers my feelings</td>
<td>1</td>
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<tr>
<td>21. Workload allocation in this ward is carefully planned</td>
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<tr>
<td>22. I pay attention to what others are saying</td>
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<tr>
<td>23. The staff involved in education talk with me as an individual</td>
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<td>24. I put effort into what I do in the ward</td>
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<tr>
<td>25. Getting a certain amount of work done is important in this ward</td>
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<tr>
<td>26. After the shift, I have a sense of satisfaction</td>
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<tr>
<td>27. The clinicians do not consider students as part of the team</td>
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<td>5</td>
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</table>

* 1 missing response
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<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having to report observations to each other helps the health care team better understand the work of other health professionals</td>
<td>1</td>
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</tr>
<tr>
<td>2. The doctor has the ultimate legal responsibility for decisions made by the team</td>
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</tr>
<tr>
<td>3. Working in a health care team keeps most health professionals be enthusiastic and interested in their jobs</td>
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<td>4</td>
</tr>
<tr>
<td>4. Health professionals when working in a team are more responsive than others to emotional and financial needs of patients</td>
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<tr>
<td>5. A team approach to health care makes the delivery of care more efficient</td>
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<tr>
<td>6. Developing a patient care plan with other health care team members avoids error in delivering care</td>
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</tr>
<tr>
<td>7. The give and take among health care team members help them make better patient care decisions</td>
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<tr>
<td>8. Hospital patients who receive care from the whole health care team are better prepared for discharge than other patients</td>
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<tr>
<td>9. The health care team’s primary purpose is to assist doctors in achieving treatment goals for the patient</td>
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<tr>
<td>10. Health care team meetings foster communication among team members from different disciplines</td>
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<tr>
<td>11. Developing an interdisciplinary patient care plan is excessively time consuming</td>
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</tr>
<tr>
<td>12. Doctors have the right to alter patient care plans developed by the team</td>
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<tr>
<td>13. When developing interdisciplinary patient care plans, much time is wasted translating jargon from different disciplines</td>
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<tr>
<td>14. Working in teams unnecessarily complicates things most of the time</td>
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</tr>
<tr>
<td>15. A team approach to care delivery improves the quality of care that patients receive</td>
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<td>4</td>
</tr>
<tr>
<td>16. The doctor should not always have the final word in decisions made by health care teams</td>
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</tr>
<tr>
<td>17. The health care team approach assists health professionals to meet the needs of family caregivers as well as patients</td>
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</tr>
<tr>
<td>18. In most instances, the time required for meetings of the health care team could be better spent in other ways</td>
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<tr>
<td>19. Doctors are natural team leaders</td>
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Interprofessional Learning Project

POST – INTERVENTION STUDENT SURVEY

(1) To what extent have you learned with, about, or from other health professional undergraduate students in any of your clinical placements before this current placement?

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(2) How useful was this experience in understanding other health professional roles and responsibilities?

Please circle:

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<thead>
<tr>
<th>Not at all useful</th>
<th>partially useful</th>
<th>useful</th>
<th>very useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

Please add any comments:
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(3) To what extent has this experience helped you to feel more confident in interacting within a health professional from a different discipline.

Please circle:

<table>
<thead>
<tr>
<th>Hadn’t helped at all</th>
<th>Partially helpful</th>
<th>quite helpful</th>
<th>very helpful</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Please add any comments:
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______________________________________________________________________________
(4) How helpful are interprofessional learning experiences in preparing you for clinical practice after graduation?

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<thead>
<tr>
<th>Hasn’t helped at all</th>
<th>Partially helpful</th>
<th>quite helpful</th>
<th>very helpful</th>
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Please indicate how these experiences may help:

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______________________________________________________________________________
‘Developing a model for interprofessional learning during clinical placements for medical and nursing undergraduate students’

Professor Amanda Henderson and Dr Heather Alexander

Associate Fellow, Carrick Institute for Learning and Teaching in Higher Education

School of Nursing and Midwifery and Griffith Institute for Higher Education, Griffith University

In health care settings, doctors, nurses and allied professionals work as a multi-disciplinary team to provide comprehensive patient care. Teamwork is mandatory for good clinical practice; however, in Australia, the clinical preparation of health care students is undertaken unilaterally.

Undergraduate learning needs to better reflect actual clinical practice, namely, collaboration between the disciplines of medicine and nursing, and interaction with patients. Interprofessional learning in clinical settings, that develops knowledge of respective roles, enhances mutual regard, communication, and collaboration between doctors and nurses, is proposed. Interprofessional learning requires building capacity of clinicians who supervise students during practice and providing additional structured facilitated student learning sessions.

This project develops, implements and evaluates an educational model that supports interprofessional learning for medical and nursing students during clinical placements. Students collaborate to plan and undertake care. Patients are actively integrated into learning to extend the students’ clinical knowledge and their communication skills.

We will seek volunteers from third year nursing students and third and fourth year medical students to participate in the project. Their participation will not interfere with their timetabled activities whilst in the hospital. We will provide additional clinical facilitators to assist with the interprofessional learning during the clinical placements.

Outcomes

- Development of a model for IPE in the clinical learning environment and testing of this model.
- Development and testing of guidelines for a professional development program for clinicians.
- Resources for the IPE for use by other institutions.
- Opportunities for patients as key stakeholders in the education of health disciplines to contribute to the knowledge informing contemporary practice.
APPENDIX 6. Interprofessional Learning Workshop

Program

Thursday 31 July 2008

10.00–10.15 am  Morning Tea

10.15–10.30 am  Introductions and Objectives of the Workshop

10.30–12.30 pm  Sharing Experiences – short presentations from participants

12.30–1.15 pm  Lunch

1.15–2.00 pm  Participants will be asked to respond to two questions:
(1) What is one key learning from your experience about IPE in clinical education/the clinical environment?
(2) What is your one key recommendation for the future of IPE in clinical education/the clinical environment?

2.00–3.00 pm  Discussion of:
(1) What are the strengths/achievements/aspects that work for IPE in clinical education/the clinical environment?
(2) What are the challenges of IPE in clinical education/the clinical environment?

3.00–3.15 pm  Afternoon tea

3.15–4.00 pm  Collation of ‘Lessons Learnt’/Best Practice Guidelines?
Summary and discussion of paper preparation
Agreement on directions for future work

List of Attendees for IPE Workshop 31st July 2008

(1) Sue McAllister – University of Adelaide
(2) Maree O’Keefe – University of Adelaide
(3) Gillian Nisbet – University of Sydney
(4) Mollie Burley – Monash University
(5) Judy Stone – ACT Health
(6) Jill Thistlethwaite – University of Sydney
(7) Rosalind Bull – University of Tasmania
(8) Louise Young – University of Queensland
(9) Treasure McGuire – University of Queensland
(10) Ieva Stupans – University of South Australia
(11) Bronwyn Davidson – University of Queensland
(12) Peter Vine – University of New South Wales
(13) Monica Moran – University of Queensland
(14) Judith Nance – Queensland Health
DEVELOPING A MODEL FOR INTERPROFESSIONAL EDUCATION DURING CLINICAL PLACEMENTS FOR MEDICAL AND NURSING UNDERGRADUATE STUDENTS

An initiative of the Australian Government Department of Education, Employment and Workplace Relations

PO Box 2375 Strawberry Hills NSW 2012 Australia  Telephone 02 8667 8500  Facimile 02 8667 8515
www.altc.edu.au
ABN 30 109 826 628