

Interprofessional learning in nursing – a review

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Abstract: Interprofessional learning (IPL) promotes collaboration among healthcare professionals in providing quality healthcare. For the IPL to have a positive influence on inter-professional collaboration, opportunities must be made available for the healthcare students to learn together. Attitudinal factors have been identified as the major factor hindering the implementation of IPL. In Malaysia, little is known about attitudes of healthcare students towards IPL. Students from different health disciplines often have poor conception of each other's roles as a member of the healthcare team. IPL increases this knowledge and gives students an understanding of the interpersonal skills needed for liaison and communication. Students from different disciplines who learn together develop interpersonal and teamwork skills, and gain knowledge of how other professionals work. IPL has been shown to create teams that work together better and improve patient experience. In general, IPL aims to improve patient safety, enhance patient satisfaction, and increase levels of innovation in patient care, and increase staff motivation, well-being and retention. There has been increasing emphasis on the important role that interprofessional education (IPE) must play in educating and developing present and future healthcare professionals. This review aims to examine how learning outcomes are articulated in the field of IPE and includes the benefits, importance, ethical concepts and application of IPL in nursing.

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Introduction

Educational institutions bear the responsibility to the community to educate and prepare individuals to be able to function effectively in the respective services and meet the industrial needs of the country. Nursing,

as part of the healthcare industry is no exception. Nurse educators need to ensure that the learner is prepared to be competent in providing safe and effective quality care for their clients that is focused on positive healthcare outcomes. Nurses in real work environment function in a multidisciplinary healthcare team with the goal to achieve positive outcomes for their clients. How well do we prepare nursing students for this real life work environment? In the university setting (where the writers originate) where courses conducted are all health related programmes, one of the current issues and concern is how we get students from different disciplines of healthcare to understand and work together. This is with the view that we will want the students to appreciate what real working experience will be like and be able to function as effective team players in healthcare for the benefit of the patient and all concerned. It is with this thought in mind that the writers embarked on the endeavours of gathering information regarding interprofessional learning with a particular focus on nursing in the healthcare setting. The article serves as an attempt to explore the concept of interprofessional learning and how it can be applied to nursing education to promote interprofessional learning among all students in the university.

Concept of interprofessional learning and interprofessional education

Australasian Interprofessional Practice and Education Network (AIPPEN) define interprofessional learning (IPL) as the overarching term encompassing interprofessional education, or IPE, and interprofessional practice, or IPP. It is a philosophical stance, embracing lifelong learning, adult learning principles and an on-going, active learning process, between different cultures and health care disciplines. IPL philosophy supports health professionals working collaboratively in a health care setting, through a purposeful interaction with service users and carers, to produce quality patient centred care. It acknowledges both formal and informal methods of learning which progress to develop service delivery.¹

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Interprofessional Education (IPE) - AIPPEN endorses the IPE definitions of the Centre for the Advancement of Interprofessional Education (CAIPE, 2002) whereby 'Interprofessional Education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care'.²

This review aims to examine how learning outcomes are articulated in the field of interprofessional education. While the terms IPL and IPE may relate to differing processes, with IPL focusing more on micro learning processes and IPE being more strongly reflective of an overarching educational framework, they tend to be used interchangeably in existing literature. For this reason they are used interchangeably in this review, reflecting the terminology used by researchers and writers in the field.

IPE is an action that "occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes".³ According to the UK Centre for the Advancement of Interprofessional Education (CAIPE), IPE occurs when members (or students) of two or more professions learn with, from and about one another to improve collaboration and the quality of care.⁴ A key aspect of IPE is that it demands an interactive element in the learning experience for the participants.⁵ In the UK, IPE development has been partly driven by the UK government's endorsement of IPE as a means for promoting collaboration between health and social care professionals.⁶ However, it has also been supported by educationalists who were enthusiastic to encourage healthcare professionals to work more coherently with the ultimate intention of improving the quality of care delivered to patients.⁷

A systematic review by D'Amour *et al.* highlights that one of the key determinants for collaborative practice is mutual respect, implying that healthcare professionals within a team know one another and are aware of contributions that each profession has to offer. Such informal and formal shadowing experiences would

be invaluable components of future IPE placements, allowing students to socialize and develop relationships with their peers as well as witness first-hand the effects that other healthcare professionals have on the lives of patients and families.⁸ Barwell *et al.* stated that IPL increases knowledge, as well as gives students an understanding of the interpersonal skills needed for liaison and communication. IPL has been shown to create teams that work together better and improve patient experience. It has been introduced successfully at the University of East Anglia and other higher education institutions in the United Kingdom.⁹

Aims of IPL

The Griffiths report highlighted the importance of collaboration and that if collaboration was to occur there would be a need for joint education programmes to be an essential part of any management plan.¹⁰ However, Beattie viewed the integrated approach as having the distinct advantage of 'transcending the tribalism of health professionals'.¹¹ IPE can also promote creativity in teaching and research and foster interprofessional cooperation.

In addition, legislation and policy requirements over the past decade required health and social care to work together in collaboration.¹² From the perspective of social work and health, O'Neill and Wyness stated that meaningful IPE experiences can better prepare students to encounter the complexities of real-life interprofessional work-based problems.¹³

Watanabe & Koizumi viewed IPE's aim as to nurture students who can work collaboratively upon graduation.¹⁴ IPE in different forms has been used as a method to improve collaboration between professions with the final aim of improving health care.¹⁵ Future doctors, nurses, physiotherapists and other health care professionals are supposed to work efficiently in teams. IPE aims to facilitate effective team working, communication and understanding between professions and promote continuity of care.¹⁶

Importance of IPL in nursing

Students from different health disciplines often have little idea of what each other's roles entail. IPL increases this knowledge, as well as gives students an understanding of the interpersonal skills needed for liaison and communication. It gives students the opportunity to acquire knowledge and practise these skills. IPL has been shown to create teams that work together better and improve patient experience. In the late 1980s, the World Health Organization recognized that multiprofessional learning leads to:

- better interprofessional working
- better teamwork between health professionals improves patient outcomes
- helping students appreciate the importance of personalities and interpersonal skills
- the awareness that institutional hierarchies can hinder communication, which can negatively affect patient care
- recognising the need for research on the effects of IPL learning beyond undergraduate studies

Nursing being an important part of the health care team and with all the reasons and benefits mentioned above, it is vital to introduce and practise IPL in nursing.

Current Scenario of IPL in nursing education

Teaching strategies for nursing students need to be varied to prepare them for their future practice, and to increase their confidence levels in order to ensure that they deliver high quality care to patients. IPL is a way to develop health professional teams in that it facilitates collaboration by having health professional students learn with, from and about each other's roles and responsibilities in the provision of patient care. At present, nurses are unable to learn together with other health professional students during their clinical posting, because of professional barriers. In order to ensure nursing students collaborate with other health

professionals, they must be provided with active educational and learning opportunities to improve their understanding of other health professionals. Currently, nursing students are taught to focus on their specific professional roles and are unable to learn together during their clinical training due to professional boundaries imposed, for example, by scopes of practice, regulation and accreditation. There is a clear need to make innovations in teaching, especially during clinical training, in order to prepare future nurses for collaborative practice with other health professionals. The results of the study conducted by Jalina Karim *et al.* on 'Preparing nursing students for interprofessional learning' suggested that IPL as an educational strategy should be introduced to nursing students in order to extend their understanding of the roles and responsibilities of other health professionals and to provide them with opportunities to work collaboratively with other health professionals.¹⁷

Benefits of IPL

There is much written about the benefits of IPE. Barr *et al.* summarized the four main benefits that IPE as enhanced motivation to collaborate, changed attitudes and perceptions, cultivated interpersonal, group and organizational relations and established common value and knowledge bases.¹⁸

IPL benefits to students

In the summarized four main benefits, McCroskey and Robertson¹² identified that learning and increased use of similar skills recognized the development of interpersonal skills. IPE contributes to this by giving students the opportunity to observe good role models for collaboration with different faculty/departmental members interacting as peers. Experiences help develop a holistic approach to working based on a common knowledge between disciplines and an appreciation of diversity issues. Students also gained knowledge and skills in relation to complex conditions that required multi professional intervention.

IPE can help students to review and recognize the overlapping professional functions or those activities which fall between professional roles. It could initiate a breaking down of professional roles within the socialization process, which could otherwise lead to competition and conflict. IPE also could identify an environment in which students could develop critical awareness of the limitations of professional roles and values. It works to challenge stereotypes, yet allows students to strengthen their own professional identities. O'Neill and Wyness¹³ further mentioned that students in the course gained a greater understanding of other professions' roles and skills and began developing skills in interprofessional teamwork which was illustrated from preliminary evaluations of an interprofessional course.

Exercises, such as journaling and interviewing team members about "thought-provoking incidents", may enhance students' appreciation and understanding of the roles, responsibilities and professional perspectives, promotes critical thinking and professional growth.^{19, 20} However, MacDonnell C *et al.* noted that positive changes were recognized in pharmacy and nursing student responses related to the perceived ability of the other discipline to provide patient care. Nursing students reported significantly improved perceptions of pharmacists in patient care areas including, monitoring for hypoglycaemia, exercise management, injection technique/counselling, nutritional management. Nursing students also reported that they are more comfortable in seeking assistance from a pharmacist in a patient care setting after participation in the interdisciplinary laboratory. Pharmacy students reported improved perceptions of nurses that reached a level of statistical significance in twelve patient care and practice domains. The areas included, playing a role in community health care, adjusting insulin regimens, use of and education regarding insulin pumps and oral medication management. Pharmacy students reported greater comfort in seeking assistance from a nurse in the patient care setting in the post-laboratory survey.²¹

Educational initiatives have recognized IPE as an important strategy for teaching clinical ethics. Despite the conflicts, students in the mixed groups reported in the feedback session that they enjoyed the discussions and problem solving process with students from the other professions. Nursing students were more capable of learning other perspectives than medical students and nursing students were able to define problems from the perspectives of both professions. The post-course survey on student's ability by self-evaluation questionnaire revealed that most students rated themselves well in all four dimensions including critical thinking, self-directed learning, general performance, as well as interprofessional communication and collaboration. However, only significant differences were found among different groups in students' self-evaluation of their ability and attitude towards 'Interprofessional communication and collaboration' (ICCQ).²²

Teamwork enhances the students' understanding of the professional roles and can contribute to a more holistic approach to patient care. Students from different health disciplines often have little idea of what each other's roles entail.

Quantitative data also showed that IPL had helped the students greatly in the understanding of their own positions. Nursing and social work students reported learning from each other's knowledge emphasizing on the physical and psychosocial dimensions in their care. There is also an optimization of the use of time, which is often limited, for good patient care. Chan *et al.* stated that the students' increased awareness of their professional values and personal judgments in shaping their assessments and decisions is important for their learning about being 'situated' in a meaningful world that is informed, for instance, by our experiences with family, culture, sets of relationships and practice. This critical consciousness of values and beliefs is important to health professionals, since neutrality makes it less likely that implicit norms and assumptions will shape the students' decisions.²³

IPL benefits to faculty members

Feedback from faculty in McCroskey & Robertson's evaluation of the University of California's interprofessional initiative indicated that there were clear benefits for individual staff members such as exposure to new ideas, opportunity to work with different people, increased cultural sensitivity, enhanced flexibility in working with students, improved sense of co-operation and networking between departments and impetus to discover more community resources.

Connor and Rees has examined the benefits of IPL most frequently cited from the literature as increased understanding of the roles and skills of other professionals and improved respect between professional groups, the building of interprofessional networks, more effective liaison person, a wider perspective with improved communication and potentially a 'shared language'. IPL has also taken alliances between professional groups leading to greater influence and greater cost-efficiency in the delivery of education.²⁴

IPL benefits to health outcomes

Readiness is one prerequisite for IPL. Also, attitudes such as values and beliefs that students hold about themselves, their own and other professionals' roles, and about collaboration are considered as important influences to the outcomes of IPL activities.²⁵ Salmon & Jones reported changes to the delivery of care to patients/clients. These studies typically claimed positive changes to clinical outcomes (e.g. infection rates, clinical error rates), patient satisfaction scores and/or length of patient stay. In general, it was found that pre-qualification IPE programmes reported outcomes in relation to changes to attitudes, beliefs, knowledge and collaborative skills while post-qualification studies reported a similar range of learner-oriented changes.

They also reported changes to organizational practice and improvements in the delivery of patient care.²⁶

However, these differences in outcomes may, in many ways, be inevitable, as developing collaborative attitudes, knowledge and skills before students qualify is a timely outcome, than attempting to improve patient care, which is a more normal outcome for qualified practitioners. One of the most successful elements of the IPL programme, according to student feedback was the self-directed in-depth policy analysis of one area of interprofessional working. The findings of the evaluation revealed the complex nature of the IPE process, which needed skilful facilitation based on equity and respect. Particularly, the fact that students believed that the increased policy awareness had helped them to think critically and work collaboratively.

Ethical concepts in IPL

Interprofessional values and related ethics are an important, new part of crafting a professional identity, one that is both professional and interprofessional in nature. These values and ethics are patient centred with a community/population orientation, grounded in a sense of shared purpose to support the common good in health care, and reflect a shared commitment to creating safer, more efficient, and more effective systems of care. Health professions educators typically consider values and ethics content an element of professionalism. Mutual respect and trust are foundational to effective interprofessional working relationships for collaborative care delivery across the health professions.

Based on the report by the Interprofessional Education Collaborative expert panel (Washington, 2011), one of the core competency domains for interprofessional collaborative practice is values/ethics for interprofessional practice.²⁷

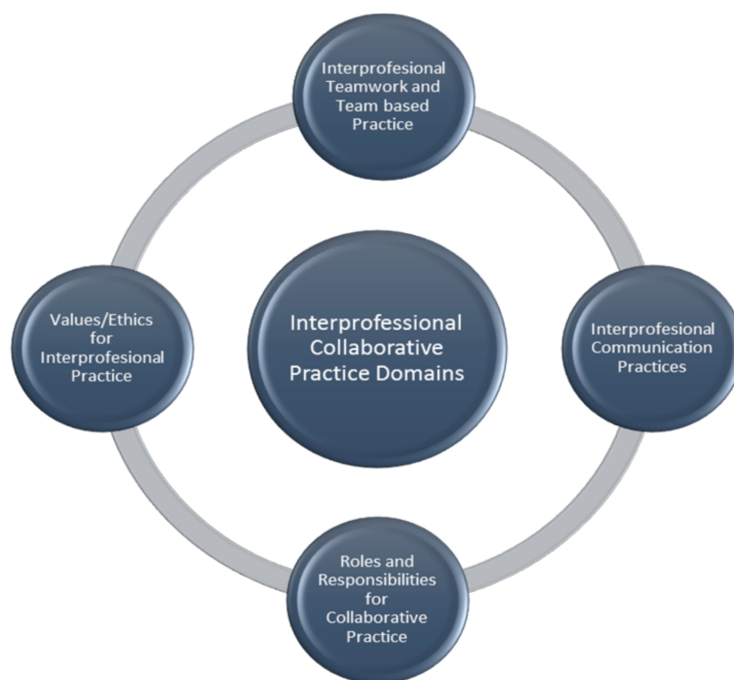


Figure 1: Interprofessional Collaborative Practice Domains

Specific Values/Ethics Competencies are as follows:

- VE1. Place the interests of patients and populations at the centre of interprofessional health care delivery.
- VE2. Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.
- VE3. Embrace the cultural diversity and individual differences that characterize patients, populations, and the health care team.
- VE4. Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions.
- VE5. Work in cooperation with those who receive care, those who provide care, and others

who contribute to or support the delivery of prevention and health services.

- VE6. Develop a trusting relationship with patients, families, and other team members (CIHC, 2010).
- VE7. Demonstrate high standards of ethical conduct and quality of care in one's contributions to team-based care.
- VE8. Manage ethical dilemmas specific to interprofessional patient/ population centred care situations.
- VE9. Act with honesty and integrity in relationships with patients, families, and other team members.
- VE10. Maintain competence in one's own profession appropriate to scope of practice

Application of IPL in a Training Ward

In 2004, St George's Hospital, University of London, Kingston University and Brunel University, following the success of trials in Linköping University, Sweden, identified a training ward as a practice placement in order to enable medical, nursing, occupational therapy and physiotherapy students to work in teams on an elderly person's rehabilitation ward. Wilhelmsson described that the placement allows students to put their teamwork skills into practice, learn about each other's roles and responsibilities and develop communication skills to make a cohesive team. During the placement, students were supervised by a generic facilitator as well as their profession-specific mentors and together the teams were jointly responsible for sharing the care of consenting patients where it was felt that multidisciplinary input would be beneficial. The aim of the project was for the students to acquire team working skills and experiences for proficient interprofessional practice.²⁸

A study result on IPL done by Ericson *et al.* showed that training significantly increased the students' knowledge of their own professional role as well as their knowledge of the other professions. Training at an emergency department can provide excellent opportunities for interprofessional team training for undergraduate students.²⁹ Student's feedback as similar to student's benefits on experience was positive and the most significant positives recorded were appreciation of importance of personalities and interpersonal skills for liaison and communication, gaining experience of how other members of the team work, improved knowledge of illnesses and greater appreciation of how wards function. In their evaluation, students reported that as the student team had lacked the normal hierarchy, they were able to question, share knowledge and learn together without professional and defensive boundaries.³⁰ A study done by Joseph *et al.* showed that being involved in IPE activity while on clinical placement can effect a positive attitudinal change for students.³¹

Ponzer *et al.* asserts that interprofessional training ward provided the students with good clinical practice in terms of training in their own profession as well as in learning about the other professions. The quality of the supervision and the students' perception of their own professional role were important factors regarding the satisfaction with the course.³² Clarke *et al.* examined the experience of students engaged in face-to-face group learning as part of a pre-qualifying undergraduate curriculum. Data were obtained from 15 groups of health and social care students from two campus sites of a single university in the UK. The data obtained were effective in revealing the complexity of interprofessional student group interactions.³³ Age, gender, ethnicity, previous higher education, prior work experience and knowledge and experience of particular relevance to the 'trigger' scenario all influenced the individual and group interactions. These results indicate the factors that influence group interaction, group roles, tasks and cohesion, and the tendency to avoid conflict, as they varied greatly from student to student and between groups as well. The importance of facilitating respect for diversity during interdisciplinary group work was highlighted by this study.

Experiential learning with IPL at a local setting

With the background information gained about the concept of IPL and how it had been implemented in an overseas university, the writers take this opportunity to share some experiences with IPL at their workplace, the International Medical University (IMU). In an effort to explore the concept of IPL and how it can be applied to nursing education to promote IPL among all students at IMU, several IPL sessions were conducted with positive feedback from students and faculty members. At IMU, the journey of IPL in nursing education began in 2013 with four IPL sessions and another six sessions were conducted in 2014 among nursing students, medical students and Nutrition & Dietetic students at Tuanku Jaa'far Hospital, Seremban.

The following tables provide an overview of IPL implemented at varying levels.

Table 1: Level 1 IPL sessions among Nursing and Medical students, International Medical University (2013)

LEVEL OF IPL	TOPIC	VENUE	STUDENTS INVOLVED	STAFF INVOLVED
One	Identifying self-role and responsibility and other healthcare personnel	Port Dickson Hospital, Negeri Sembilan	IMU Nursing students (semesters 2 and 5 students), Medical students (semesters 1 and 4 students) from Nizhny Novgorod State Medical Academy (NNSMA), Russia and one medical assistant student (semester 2)	IMU Nursing Division Faculty

Table 1 shows the level 1 IPL sessions among nursing and medical students. In this level one IPL, identifying self-role and responsibility and other healthcare personnel, communicating effectively in understanding roles and responsibility of self and other healthcare personnel, participating actively with other health care team in managing cases in future and appreciating the contributions of self and other healthcare personnel towards patient care were the objectives. After discussion, reflection and debate, the students' positive feedback was a surprise. Students reflected and discussed their feelings of nervousness in the beginning, but followed through. They mentioned that it was a great new experience and an "eye opener" to share the most important roles of nurses and doctors in patient care. The students also commented on the need for the healthcare provider to have good cooperation and

communication. An element identified to be common among the healthcare provider is the "heart" to treat patients and to be able to complement each other's role in patient care. Some students, who initially viewed the presence of the healthcare provider as a barrier, later were made aware of self-roles and responsibility and the need to collaborate with other healthcare providers to provide the best care and treatment to patients. All students felt in future, medical staff should instil in themselves, teamwork, a caring heart, love, patience and humbleness and it is very vital for all healthcare providers to communicate and start building up an open relationship. IPL is the best way to improve learning and teaching to train the young generation. The overview of IPL at level 2 among the nursing and medical students is illustrated in Table 2.

Table 2: Level 2 IPL sessions among Nursing and Medical students, International Medical University (2013)

LEVEL OF IPL	TOPIC	VENUE	STUDENTS INVOLVED	STAFF INVOLVED
Two	<ul style="list-style-type: none"> – Post-partum haemorrhage at labour room – Management of a poly trauma patient at accident and emergency in red zone – Management of a patient with tension pneumothorax in red zone and Airway management and simulation management of a status asthmaticus in red zone 	IMU Clinical School, Tuanku Jaa'far Hospital, Seremban	IMU semester 5 Nursing students (14 students), semester 9 Medical students (10 students)	IMU Nursing Division Faculty and IMU Clinical school Medical Faculty

In contrast to level 1, level two IPL was enacted by using a high-end simulated manikin and a scenario was given to the students to perform on. In level 2 IPL, discussions were conducted by the faculty and students after the session to enhance the learning process. There was always a discussion after each simulated scenario and each student had the chance to take part in the scenario. In the discussion, the organizers talked about what they should do, what they should have done and what mistakes they made. The scenario could be very tricky and the students were expected to react, improvise and act fast according to the specified conditions. One student found “the experience challenging and it imitated the real situations. It has given us the opportunity to work with the other healthcare profession, to understand each other’s scopes of practice and has given us the idea of teamwork. It helped me appreciate each of us as a team. Every one of us is vital in the patients’ care and we have our different significant roles to play”. Another student mentioned that through the session, she learned to be more proactive. “As nurses, we are not the doctor’s handmaiden, but we should be knowledgeable, vigilant,

innovative and observant so that we can deliver the best care for the patient. I also learn how to utilize and incorporate what I learn in the class and also during my clinical attachment in the different specialized areas such as accident and emergency unit, operation theatre, intensive care unit and critical care unit.”

This student evaluated herself and IPL as “a nurse, part of a member of health care provider, collaborate and work together as a team is important which will enable to provide a better care for the patient. During the IPL session, every student needs to be actively involved in the activities and contribute in the groups”. One of the student’s feedback also says “It allows me to have critical thinking so that I can perform better and I was also able to reflect on my capabilities, strengths and weaknesses of my own during the simulation activity. The environment was very stimulating. It prompts me to have a better view or a better picture of how I am going to care for my patient in the future.”

Level 3 IPL involves learning in a real clinical practice environment as illustrated in Table 3.

Table 3: Level 3 IPL sessions among Nursing and Nutrition & Dietetics students, International Medical University (2013)

LEVEL OF IPL	TOPIC	VENUE	STUDENTS INVOLVED	STAFF INVOLVED
Three	Nursing care and diet management (physical examination, anthropometric measurements, nursing care, clerking and diet recall)	Tunku Jaa'far Hospital, Seremban	IMU semester 7 Nursing students (4 students), semester 7 Nutrition and Dietetics (15 students). 2 groups	IMU Nursing Division Faculty and Nutrition and Dietetics Faculty

Table 3 shows Level 3 IPL among Nursing and Nutrition & Dietetics students. Level three IPL is direct contact with patients. Two sessions were conducted at Tuanku Jaa'far Hospital, Seremban with Semester 7 Nutrition and Dietetics and nursing students at geriatrics ward. Later the students took time to discuss among themselves and presented the cases. The students were proactive and enjoyed the IPL sessions. The response from all of them was overwhelming as all the students requested for more IPL sessions for other disciplines like medicine and pharmacy. They also reflected how the holistic approach of various professions will help in the better management of patients. The students were asked to write their reflection from this learning.

In order to strengthen IPL and measure the effectiveness of IPL, students' active role is very essential. The feedback will reflect the overall use of IPL as a mode of shared learning, effectiveness of the IPL sessions, the strengths and limitations, which will contribute to the improvement of the programme embedded in the nursing curriculum at IMU. The main focus of the feedback will be to help determine the use of IPL in nursing education, the effectiveness on IPL in relation to the demand for better patient care and indirectly, respect self and other healthcare profession students and services.

Application of ethical competencies in all the three levels of IPL

The following ethical competencies were applied while conducting the IPL at all three levels:

- Interest of the patient was placed at the centre of interprofessional health care delivery
- Patient was treated with dignity and privacy provided
- Cultures, values, roles/responsibilities and expertise of other health professions were respected
- Worked in cooperation with those who received care and those who provided care
- Developed a trusting relationship with patients, families, and other team members
- Demonstrated high standards of ethical conduct and quality of care
- Maintained competence in one's own profession appropriate to the scope of practice

Challenges in organizing IPL sessions

While other IPE studies have found similar benefits, many institutions still do not promote this clinical form of shared learning. This may be due to organizational barriers that exist, including differing clinical, schooling schedules and lack of resources to implement change. We experienced similar challenges and problems in our own IPE initiative. Due to the busy school schedules,

it was challenging to find common time to work on IPE projects, such as group presentation and group sessions. The authors also felt that other students would feel discouraged about having to spend additional time in participating in similar IPE projects. In addition, resources had to be made available in implementing this programme (i.e. course materials (high end simulated manikin), time to prepare learning objectives, content, coordinating with students and space to accommodate our small group sessions). While the organizers did not find securing these extra resources to be a large problem, it may pose serious obstacles for larger scaled implementations of IPE.

Recommendations

Currently, professional programmes have placed great emphasis on interprofessional education in their curriculum. Students are taught to focus on their specific roles while content is limited to their scope of practice, thus, the education of health care professionals do not reflect their interdependent roles. In order to help students understand the complexities of working in an interprofessional health care environment, it is important that their education be adapted to include opportunities which will enable them to develop the skills, attitudes and behaviours needed for working in an interprofessional team. These are some of the recommendations:

1. Student-led IPL sessions – Students from nursing and other disciplines could appreciate the ability to compare the assessment and treatment approaches of each other's discipline. The students will be able to report positive outcomes in terms of increasing understanding, co-operation and appreciation of others' roles. IPE creates opportunities to develop collaboration between clinical educators and widens professional development activities across all discipline. Hence the authors strongly feel that the student led sessions can benefit the students from nursing and other disciplines.

2. Clinician-led IPL sessions – The advantage of clinician-led sessions is that students require only less time for organization and planning to conduct the IPL session. Students can easily support a multidisciplinary team approach to care and have evident practical applications to patient care and treatment (e.g., ward rounds). IPE sessions offer continuing professional development (CPD) opportunities for all staff. They are helpful in team building, multi professional teamwork is frequently reinforced and usually there is a clear application to care planning and delivery.
3. Tutor-led IPL sessions – An obvious advantage is that IPL sessions are aimed at students' learning needs and support their clinical skills and knowledge. Students can be focused on care issues and clearly relevant to placement objectives. There is also potential for this form of learning to be truly interprofessional and to support the effective functioning of the multidisciplinary team. The link lecturer/tutor may develop a more generic role in the clinical specialty and could follow up teaching during placements with future classroom sessions.³⁴

Summary

There has been minimal significant change in health professions' education specifically designed to address the issue of IPE. However, there has been increased involvement from the health care community in this direction. Working together to set common patient care goals may be considered a terminal competency for IPE. The ability to identify and achieve a common patient care goal as an interprofessional team of learners could be considered the ultimate goal for IPE and prior to that, the use of IPL in nursing education should be identified as a necessity as IPL puts theory into practice.

REFERENCES

1. <http://www.aippen.net/what-is-ipe-ipl-ipp>
2. Centre for the Advancement of Interprofessional Education (CAIPE). (2002). Defining IPE. Accessed 26 November 2014, from CAIPE website: <http://www.caibe.org.uk/about-us/defining-ipe>

3. World Health Organization. Learning Together to Work Together for Health (2010). Geneva: WHO.
4. Barr H. Interprofessional Education. London: LTSN for Health Sciences and Practice. 2002.
5. Thistlethwaite J, Nisbet G. Interprofessional education: what's the point and where we're at? *Clin Teach* 2007(4):67-72.
6. Department of Health. The New NHS. London: TSO, 1997.
7. Oandasan I, Reeves S. Key elements of interprofessional education. Part 2: Factors, processes and outcomes. *J Interprof Care* 2005; 1:39-48.
8. D'Amour D, Beaulieu MD, SanMartin Rodriguez L, Ferrada-Videla M. Chapter 3: Key elements of collaborative practice & frameworks: Conceptual basis for interdisciplinary practice. 2004.
9. Barwell J. et al. How interprofessional learning improves care. *Nurs Times* 2013; 109:21, 14-16.
10. HMSO. The Griffiths Report. Community Care Agenda for Action. 1988. HMSO, London.
11. Beattie A. War and Peace Among the Health Tribes, In: Soothi UK, Mackay L, Webb C eds. 1995. *Interprofessional Relations in Health Care*. Edward Arnold, London.
12. McCroskey JJ, Robertson PJ. Challenges and Benefits of Interprofessional Education: Evaluation of the Inter-Professional Initiative at the University of Southern California, *Teach Educ Quart* (Fall) 1999:69-87.
13. O'Neill BJ, Wyness MA. Learning about interprofessional education: Student voices. *J Interprof Care* 2000; 18(2): 198-200.
14. Watanabe H, Koizumi M.(Eds.). *Advanced initiatives in interprofessional education in Japan*. 2010. Tokyo: Springer.
15. Barr H. Interprofessional education – today, yesterday and tomorrow. A review. Revised edition. Working Paper. Higher Education Academy, Health Sciences and Practice 2005. Network, London, UK. Retrieved from <http://www.health.heacademy.ac.uk/publications/occasionalpaper/occp1revised.pdf>.
16. Health Canada. *Interprofessional Education for Collaborative Patient-centred Practice*. 2004. Ottawa.
17. <http://www.eduimed.com/index.php/eimj/article/view/238/178>
18. Barr H, Freeth D, Hammick M, Koppel I, Reeves S. *Evaluations of Interprofessional Education: 2005. A United Kingdom Review of Health and Social Care*. (London, CAIPE and the British Educational Research Association).
19. Drinka TJK, Clark PG. *Health care teamwork: Interdisciplinary practice and teaching*. Westport, CT: 2000. Auburn House.
20. Perkins J. Reflective journals: Suggestions for educators. *J Phys Ther Educ* 1996;10, 8-13.
21. MacDonnell CP, Jackson A, Lavin MD, Cohen L, Cohen SA. Impact of an interdisciplinary practice laboratory on pharmacy and nursing students' perceptions of health care roles. *IJPEP*. ISSN; 1557-1017: Vol 7(1)2011.
22. Yu-CL, Te-FC, Chung-SL, Chi-CC, Fan-HC, Hui-Ju LT. Impact of an interprofessional problem-based learning curriculum of clinical ethics on medical and nursing students' attitudes and ability of interprofessional collaboration: A pilot study Kaohsiung. *J Med Sci* 2013; 29, 505-511.
23. Chan EA, Chi SPM, Ching S, Lam SKS. Interprofessional education: the interface of nursing and social work. *J Clin Nurs* 2010; 19(1-2):168-176.
24. Connor C, Rees S. Ways forward for shared learning between nursing and social work students. *Nurs Educ Today* 1997; 17: 494-501.
25. Parsell G, Bligh J. The development of a questionnaire to assess the readiness of health care students for interprofessional learning (RIPLS). *Med Educ* 1999; 33: 95-100.
26. Salmon D, Jones M. Shaping the interprofessional agenda: a study examining qualified nurses' perceptions of learning with others. *Nurs Educ Today* 2001;18-25.
27. Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, D.C: Interprofessional Education Collaborative.
28. Wilhelmsson N. et al. Twenty years of interprofessional education in Linköping ground breaking and sustainable. *J Interprof Care* 2009; 23 : (2), 121-133.
29. Ericson A, Masiella I, Bolinder G. Interprofessional clinical training for undergraduate students in an emergency department setting. *J Interprof Care* 2010; 26: 319-325.
30. Mackenzie A et al. Interprofessional learning in practice: the student experience. *Br J Occup Ther* 2007; 70: 8, 358-361.
31. Joseph S, Diack L, Garton F, Haxton J. Interprofessional education in practice. University Aberdeen, UK. *Clin Teach* 2012; 9: 27-31.
32. Ponzer S, Hylén U, Kusoffsky A, Lauffs M, Lonka K, Mattiasson AC, Nordstro M G. Interprofessional training in the context of clinical practice: The goals and the students' perceptions on clinical education wards. *Med Educ* 2004; 38:727-736.
33. Clark PG, Cott C, Drinka TJK. *Creating and sustaining meaningful change: Working at the interface between interprofessional education and practice*. Interprofessional education and practice in the United States and Canada, Minneapolis, MN, 2007; 24-26.
34. Stew G. Learning together in practice: A survey of interprofessional education in clinical settings in South-East England. *J Interprof Care* 2005; 19(3), 223 – 235.