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Abstract

The most memorable learning occurs during placement: Simulated interprofessional learning is a logical learning opportunity to help healthcare professionals work beyond their professional silos. This qualitative study aimed to investigate the perceived learning of students from 6 health professions (adult nursing, diagnostic radiography, occupational therapy, physiotherapy, dietetics, and pharmacy) from participating in a 45 minute interprofessional ward simulation. Semi-structured focus groups were undertaken and data analysed using framework analysis. Two overarching themes were evident, each of which had subthemes: i) the ward simulation as an IPE opportunity (sub themes - reality of situations and interactions) and ii) the perceived learning achieved (Subthemes – professional roles, priorities, respect, communication, team work, quality of care). The results indicate that a short interprofessional ward simulation, unsupported by additional learning opportunities or directed study, is a useful and engaging interprofessional learning opportunity. Students appear to have learnt important key messages central to the IPE curricula to help develop practitioners who can effectively work together as an interprofessional team and that this learning is partly due to simulation allowing things to go wrong.

Keywords: collaborative working, focus group, interprofessional

learning, simulation, teamwork.

Introduction

To develop the attitudes, skills and knowledge required for effective teamwork it is necessary to remove groups from their professional silos (Institute of Medicine, 2001). In 2010 the World Health Organisation (WHO, 2010) suggested key problems in providing safe and effective patient care stem from poor communication compromising teamwork and collaboration: A message still being repeated (Francis, 2013) despite the implementation of interprofessional education (IPE) in health care education (Barr, 2015). However, it has been suggested that students must see the sense in IPE to be motivated and engaged (Barr *et al.*, 2014). Since Gilligan *et al.* (2014) report the most memorable learning occurs during placement simulated IPE may be a logical opportunity. Dewey's theory of experientialism (Hutching *et al.*, 2013) asserts the meaning of an action is related to its consequences: Accordingly experiencing the consequences of actions during a simulation, a safe environment, could produce learning.

Literature Review

Integration of IPE and simulated learning is a relatively new entity (Palaganas *et al.*, 2014). A review of the literature shows an increase in 'simulation-enhanced interprofessional education' since the turn of the century but many activities have involved only two

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professional groups, for example only medical and nursing students (Bolesta & Chmil 2014; Ohtake *et al.*, 2013; Reese *et al.*, 2010). When more professions have been involved the simulated activity has either been i) single case simulations (Buckley *et al.*, 2012; Titzer *et al.*, 2012), which limits experiences: ii) extended periods of time on a training ward (Hallin & Kiessling, 2016; Lachmann *et al.*, 2013; Ponzer *et al.*, 2004), a challenge with larger student groups or (iii): part of a wider learning activity (Gough *et al.*, 2013).

Despite the variety of activities the majority of studies indicate positive impact on student confidence in: skill performance (Ohtake *et al.*, 2013), self-confidence (Reese *et al.*, 2010) and understanding the role of different professions in the patient journey (Buckley *et al.*, 2012).

An area which has produced conflicting results is interprofessional communication. Senette *et al.*, (2013) reported improved interaction with students from other disciplines while also highlighting an increased awareness of the importance of two-way communication. Gough *et al.*, (2013), Buckley *et al.*, (2012) and Lachman *et al.*, (2013) also found benefits of improved communication skills although this may be due to extensive pre-simulation learning materials rather than the simulation alone (Gough *et al.*, 2013; Buckley *et al.*, 2012) or the prolonged nature

of the learning experience (Lachman *et al.*, 2013). However, two studies (Bolesta & Chmil, 2014; Ohtake *et al.*, 2013) found no significant improvement in communicating with other healthcare professions. Ohtake *et al.*, (2013) involved first year students who may lack sufficient professional knowledge and identity to be confident communicating across professions. Additionally Bolesta and Chmil (2014) included 56 pharmacy students and only 9 nursing students, a limitation to true interprofessional communication.

The challenge is to develop meaningful and effective interprofessional learning opportunities that encourage health professions students to put the patient first as advocated by the Francis Report (2013) while also integrating the other guiding concepts for IPE curricula; teamwork and quality care (IPEC, 2016). All of this in a safe and constructive way enabling students to become confident professionals capable of working in a truly interprofessional way.

The United Kingdom Common Learning project (DOH 2006) recommended that IPE should be contextualised in the reality of practice around the needs of real patients, a message reiterated by Derbyshire and Machin in 2011. Simulations can provide the reality of clinical experiences but in a safe, controlled way (Gough *et al.*,

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2013) suggesting that a ward simulation experience may provide a valuable learning opportunity for students.

Aim

This project aimed to investigate the perceptions of students from 6 health professions of a short (45 minute) interprofessional ward simulation as a learning experience.

Method

Design

A short ward simulation had not been undertake with such a large number of professions before: Consequently an exploratory qualitative descriptive study was undertaken using post-simulation semi-structured focus groups. Using a qualitative design, it was hoped to investigate the learning students perceived they achieved from participating in the simulation.

Participants

All students from the following health professions courses were invited to participate in a 45-minute interprofessional ward simulation: Adult nursing (n=105), diagnostic radiography (n=32), dietetics (n=25), occupational therapy (n=31), pharmacy (n=134) and physiotherapy (n=29). Table 1 details information about the student groups involved.

There were no specific inclusion or exclusion criteria. This pragmatic, inclusive approach was taken in the hope that if this activity was perceived as beneficial it could be extended to all students in the relevant year groups.

Table 1: Student Demographics

All students participated in identical classroom based IPE activities, within years 1 and 2 of their studies. However, no simulated IPE activities had been undertaken. Exposure to interprofessional working in practice varied depending on placement experience (Table 1). Engagement in this simulation was voluntary and additional to their course of studies. Invitation emails were sent to student cohorts and staff spoke to student groups directly to invite participation.

Six simulations were planned. Table 2 illustrates planned and actual student participants. Where under recruitment occurred and a profession was not represented those referring patients to the absent profession were advised that there was a delay for the patient to be seen.

Table 2: Simulation participants.

The setting and simulation

The setting was the university simulated ward environment. Details of the simulation, and its development, are provided in appendix 1. The ward simulation was designed to produce specific interprofessional communication opportunities. However, the simulation was allowed to run irrespective of student actions allowing the potential for professional interventions to have a variety of serendipitous interactions.

The aims of the simulation presented to the students were to:

- Practice the practical professional skills required in practice,
- Experience the autonomous patient management skills required for practice as an entry level practitioner (without the clinical supervision provided on clinical placement)
- Engage in interprofessional activity

There was no prior planning of how many patients each student was to treat or how many activities were to be undertaken. Instead student groups were allocated their caseload and they had to plan and prioritise care, replicating practice. Students were advised they were required to work as autonomous professionals during the simulation and that mentors/facilitators were not available.

After the simulation a short debriefing was undertaken to allow students to discuss any challenging aspects. Students were encouraged to reflect on their performance in the simulation and identify their ongoing development needs. While it is recognised that debriefing is a core component of simulation (Levett-Jones & Lapkin, 2014) this aspect was undertaken in a limited format to prevent facilitator views influencing the student's perception of the experience. All students are required by their professional body to be reflective learners so it was considered ethically acceptable to limit this component of the simulation in this instance.

Ethics

Ethical approval was granted by the Robert Gordon University Research Ethics Sub-Committee (Ref: 11/309). Prior to taking part in the simulation students provided written informed consent and were advised that no feedback would be provided to their course team about their performance; the research focus of the simulation was not on the student's actual performance but on their experiences and perceptions of participation. Plans were in place that if any student became distressed during the simulation they would be withdrawn and counselled by a member of the simulation development team.

Data Collection

Students were invited to participate in a focus group which occurred within two weeks of the simulation. This provided students with time to reflect on the experience and to ensure the experience was still fresh in their memory. Ten focus group times were identified each for a maximum of 8 students to ensure all students had the opportunity to speak during the session. Students self-selected which focus group they would attend enabling them to plan around their classes and other commitments. Due to the various timetables and student commitments it was impossible to ensure a full mix of professions at all focus groups or to prescribe when students were to attend. Each semi- structured focus group (Box 1) was scheduled for one hour, was digitally recorded and undertaken by the same facilitator who was a physiotherapy lecturer and member of the simulation development team. Table 3 shows the demographics of the students that attended each focus group.

Box 1: Overview of focus group structure

Table 3: Focus group demographics

Data Analysis

All focus groups were transcribed and checked for accuracy. The framework method of analysis, developed in the field of applied social policy research (Ritchie & Spencer, 1994) was used.

Trustworthiness of data analysis

Two researchers familiarised themselves with the transcriptions noting recurrent themes and independently constructing a coding index. The researchers compared and agreed codes to be included in the index before independently coding the data and sorting the data by themes into an analytical framework. Data allocation to the framework was then compared by both researchers and agreement reached through discussion. This minimised bias and enhanced the trustworthiness of the data (Barbour, 2001; Richards, 2005).

Results

Overall 54 of the potential 74 students participated in the focus groups. The framework developed into two overarching themes: i) the ward simulation as an IPE opportunity and ii) the perceived learning achieved. Themes, subthemes and how they appear to interact are shown in Fig 1.

Fig 1: Subthemes and interactions

The ward simulation as an IPE opportunity

Reality of Interactions

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The students were overwhelmingly positive about the ward simulation. They could see how it related to practice, linking how the professions need to interact and work together:

> *"This is, like the first kind of practical example of how it could actually benefit us to know what's going on and who's doing what and how you fit in."* (Physiotherapy student)

> *"… I haven't found the classroom discussions to really be of benefit in a practical way… I don't think [they] helped you understand what it was going to be really like, really working with other professions whereas the ward simulation did that really well."* (Nursing student)

And also that it helped take them out of their professional silos:

> *"Obviously it's like breaking down barriers that we all kind of block ourselves in, this is my profession, that's your profession"* (Diagnostic Radiography student)

Although comments were made that mentioned stereotyping no depth of data was provided about what these stereotypes were or why views changed:

> *"It was more of a natural social situation as well… we could, like, chat to a nurse… and actually realise that*

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they are just the same as us. They're not these

stereotypical people." (Dietetic student)

Reality of Situation

This was facilitated by the reality of the situation and the need to

think about the needs of the patient:

"… it was like a ward because you had all the names

up on the whiteboard and things like that and you had

handovers and things so it was busy. I mean, you

had to sort of prioritise and think about what patients

needed" (Physiotherapy student)

"From the point of view that you have that real

scenario where nobody is watching you, this is now

real and you are responsible…" (Nursing student)

"It's a good like, reflection of what practice will

actually be like because we were all, kind of working

independently…'" (Occupational Therapy student)

Perceived Interprofessional Learning

Roles

Students reported learning relating to each other's professional

roles, team working, priorities, respect and communication (Fig 2).

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This ultimately linked to the need to work together to enhance the quality of care provided for patients:

> *"Was really helpful…to actually be able to see how every professional kind of works to one patient's pathway, how many of us are actually involved for one specific patient"* (Diagnostic Radiography student)

> *"I think it helped to consider a little bit more that all the professions could be involved with the patient…"* (Pharmacy student)

Fig 2: Interconnections to ensure optimal teamwork

One physiotherapy student encapsulated the preference for the ward simulation over other forms of IPE:

> *"you would need to know when and at what times you'd be involved with them [OTs] and it's like you learn that way quicker just doing a ward scenario with them like that than just having a class together."* (Physiotherapy student)

All professions reported learning about the roles of others involved in the simulation. For example the majority of professions reported never having seen a portable chest X-ray being performed:

> "*I've never seen anybody have x-rays on the ward... I didn't know what was going on*" (Nursing student)

Learning also occurred about wider roles:

> "*I personally learnt what other things physios do, because I never knew they cleared chests*"
> (Diagnostic Radiography student)

> "*When I've gone out on mobiles and things I wouldn't even know that a dietician would be out on a ward...*"
> (Diagnostic radiography student)

A pharmacy student put it succinctly stating:

> ''*The ward experience was a really good way to see how our roles were put practically with other professionals and how we actually work on the wards...*'

Priorities

Comments relating to team working highlighted the need to consider patient and professional priorities:

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"I've got to go and see him [my patient] but radiography was already seeing him so I had to take a step back and think well, there's other people to consider." (Pharmacy student)

Data indicated that learning about each other's roles helped with working to other priorities:

"It was quite good to be able to talk to the nurses to find out why we couldn't just do an X-Ray straight away and what obs they needed to do." (Diagnostic radiography student)

They also indicated how this learning could impact on quality of care:

" like me and a physio had the same patient to see but because everything was so chaotic and everybody wanted to see, we did it jointly…we were both observing completely different things but using the time wisely, so we both got the most out of the session. It also meant the patient wasn't becoming tired …" (Occupational Therapy student)

Respect

Students identified the importance of respecting each other's profession and their role:

> "...because the nurses are such a key aspect of every patient's care, they're the ones that are seeing them all the time so they kind of need to be interacting with everybody." (Diagnostic radiography student)

> "you need to be understanding of other pressures as well and you need to know what they need to do and be understanding that theirs is important as well because everybody's important that sees the patient, everyone has a place...you just need to decide who needs to go first, second ..." (Physiotherapy student)

Communication

Through talking about the role of teamwork and respect, an essential component for effective interprofessional working, effective communication, was highlighted.

> "It made me think about how we should word things to professionals without seeming like I'm trying to cause conflict...." (Diagnostic radiography student)

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"What's the worst they're going to say if you ask

them a question? They're going to tell you why…

you know it's only going to inform your practice

better for the future" (Physiotherapy student)

Students gave examples where poor communication influenced the effectiveness of their patient interactions, why it was important and considerations for ensuring communication was effective.

"Because she was so busy, you know, I felt she wasn't

really paying attention anyway [how did you feel?]

Slightly as if I had wasted my time." (Dietetic student)

"We didn't speak to the physio when they first came

in… we didn't ask them to give us a minute just to

take this [CXR] and then they could start on their

patient. If we were to do that again we probably

would ask." [lack of communication resulted in

physio/OT commencing treatment at another bed

space and delaying the CXR] (Diagnostic radiography

student)

Discussion

The results suggest students hold positive views about the ward

simulation as an IPE activity. This related to the reality of the

simulation and the authenticity of the situations. Through this they reported learning about various core aspects important for effective interprofessional working: respect, understanding each other's roles, team working and communication while also highlighting development of core graduate skills. This suggests that a short ward simulation, involving six different professions, can provide similar benefits to activities of longer duration.

IPE must help students develop an understanding of each other's roles, to respect each other's place in the team, to work effectively together as a team for the best patient outcomes and to communicate effectively (Barr *et al.*, 2016; IPEC 2016). However, for IPE to be positively received the authenticity and customisation of activities is essential (Hammick *et al.*, 2007). Gilligan *et al.*, (2014) reported that placement learning was the most memorable as it provides the real context, activities and culture enabling student to interact in a meaningful way (Fry *et al.*, 2009). This may consequently be why simulated IPE activities are being so favourably received (Alinier *et al.*, 2014).

Students clearly commented about the authenticity and realism of situations they encountered in this ward simulation. This suggests it provides the appropriate conditions for situated learning (Fry *et al.*, 2009) and thus is a near replication of the placement learning

situations preferred by students (Gilligan *et al.*, 2014). They also reported a range of learning relevant to the skills required for effective interprofessional working: the need for effective communication skills, knowledge of each other's roles, respect for each other and their roles, the importance of effective team work, the need to work within each other's priorities and the priorities that are going to be most appropriate for the patient. These findings are similar to Senette *et al.*, (2013), Gough *et al.*, (2013), Reese *et al.*, (2010) and Buckely *et al.*, 2012) but only Gough *et al.*, (2013) provided students the opportunity to undertake a ward simulation involving multiple patients and multiple student groups (medical, nursing, physiotherapy and pre-registration pharmacy students).

Unlike Gough *et al.*, (2013), where students undertook 4 days of teaching prior to participating in the simulation, our students had no specific teaching prior to the simulation and no knowledge of the types of patients they would encounter. This was to encourage problem solving and 'thinking on their feet', skills they would require as qualified professionals. As a consequence perfect communication skills and team working were not demonstrated. Importantly however, student's demonstrated reflective learning about the importance of aspects for effective patient care, the consequences when they are not effective and how they, as individuals, can help facilitate effective interactions. Interestingly

students highlighted learning from these imperfect experiences that demonstrates interconnections between understanding each other's roles, the need to respect each other and the importance of communication in effective teamwork. Figure 2 shows an easy way to illustrate these interconnections. What is unknown is whether this learning will translate into their clinical practice.

Allied health professionals work widely with various professionals and interactions may occur with several professions at one time. Thus while activities undertaken by Senette *et al.*, (2013) and Reese *et al.*, (2010) replicate some clinical situations they do not reflect the extensive interactions that may occur in a ward environment. In these situations various different professionals may be involved with a variety of different patients at the same time presenting challenges to each profession as demonstrated here. The results from this short ward simulation suggest that students learnt about the potential conflict between the priorities of different professions and also how actions at one bed space can have wider ramifications on other patients and professions.

From their experience of these situations students recognised the importance of communication, knowledge of each other's roles and respect for those roles and professionals and the benefit this could ultimately have on improving quality of patient care.

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Two specific situations were mentioned in the focus groups. One involving the radiographers taking an urgent chest x-ray on the same patient that required urgent chest physiotherapy. The other involved physiotherapy and occupational therapy students undertaking a shared treatment. The students indicated that these situations, while new to them, made them realise the needs of the patient should be the factor determining the order that professions intervened or the way treatments were integrated for efficiency. These situations also showed how communication, or lack thereof, influenced patient care and staff working.

The variety of interactions meant students learned not only from situations they were directly involved in, but also from the observable consequences the actions of others had and the wider consequences of these actions on the wider simulation. The data collected in the focus groups suggests students were clearly using their reflective learning skills, an attribute essential for life-long learning and required by all professional bodies (General Pharmaceutical Council, 2009; Health and Care Professions Council, 2013a ,b, c, d; Nursing and Midwifery Council, 2015).

Through reflection students identified the need to be adaptable, flexible and objective while having strong interprofessional skills

and considering their own and others priorities: Necessary attributes for effective graduate working (Adam *et al.*, 2013) but skills that students are often unaware they require (Jones *et al.*, 2010) or do not know how to develop (Duphily, 2014). Data from the focus groups also suggests students were successfully drawn out of their professional silos and that the simulation promoted interprofessional and trans-professional education (Frenk *et al.*, 2010). Consequently students identified the opportunity to gain experience of all the attributes which should equip them 1) for graduate employment 2) to work collaboratively for optimal patient outcomes.

During the simulations there were obvious frustrations caused by the portable X-ray activity. Students identified the frustrations but discussed them professionally and, through the discussion during the focus groups, recognised the importance of other's roles and how effective communication may have influenced the various situations that resulted. In essence the focus groups acted as a debriefing with the benefit of time enabling reflective practice to have occurred. Learning may have been further enhanced through incorporation of formal debriefing but this may also have influenced student perceptions of the activity.

The interprofessional focus groups were potentially a limitation as some professions may have felt inhibited in giving their honest views of the other professions. However, they harnessed the principles of interprofessional working with the students demonstrating these attributes through their discussions. This was not attained in focus groups 6 and 7 where only physiotherapy students participated which may have limited interprofessional interactions. As this affected only 2 of 10 focus groups the impact is likely to be reduced. A further limitation may have been the two week delay between the simulation and focus groups: This may have allowed students the opportunity to discuss their experiences with peers, influencing their perceptions. Immediate focus groups would, however, limit the opportunity for reflective learning and could potentially be more detrimental than enabling the opportunity for shared discussion and further learning. The purpose of this study was to investigate student perceptions of the ward simulation. It was therefore deemed ethically appropriate to provide the opportunity for reflective learning without the benefit of debriefing to avoid staff contaminating student perceptions of the activity. Any future simulations would follow normal conventions and include an immediate debrief followed by any appropriate evaluation activities.

A clear limitation is that the simulation was undertaken with students from one Scottish University. It would be interesting therefore for the same ward simulation to be undertaken in other institutions, nationally and internationally, and for results to be compared.

What cannot be established from these focus groups is whether students transferred learning from the simulation to clinical practice. It is hoped they would be more proactive in interprofessional interactions and that teamwork would be enhanced. Differentiating the impact of the simulation, the transference of previous placement learning and the consequences of natural maturation of ideas on the student's clinical performance is a complex challenge that was not integrated into this project.

Conclusions

The results from this study suggest a short, 45 minute interprofessional ward simulation, unsupported by supplemental study opportunities, could be a useful and engaging interprofessional learning activity. Students appear to have learnt important key messages central to the IPE curricula to develop practitioners who can work together as an effective interprofessional team.   A key component may have been the potential for things to go wrong, or not to go to plan, thus enabling

students to experience these diversions without them having direct consequences on patients.

Future activities should increase use of debriefing and investigate the further impact of this on learning. Additionally they should investigate whether the student's actual clinical performance is altered by learning from the ward simulation and whether the same benefits are demonstrated by students in other institutions.

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Box 1: Overview of focus group structure

- Consent for digital recording

- Confirmation of anonymity

- Ground rules

- Tell me about your experiences of the ward simulation.

- Was it as you expected? If not how did it differ?

- What were your experiences of the uni-professional aspects?

- What were your experiences of the inter-professional aspects?

- Aspects that were thought useful, not useful with reasons?

- How did you feel going into the simulation?

- How did you feel after the simulation?

Table 1: Student demographics

Course	Cohort size	Students involved	Year of study	Clinical Placement	Simulation Experience
Adult Nursing	105	20 (21%) (17♀:3♂)	3 of 3	Ongoing since year 1	Uni-professional skills with simulated patients One ward simulation – nursing students only
Diagnostic Radiography (DR)	32	12 (38%) (11♀:1♂)	4 of 4	Ongoing since year 1	Uni-professional skills with simulated patients
Dietetics	25	5 (20%) (5♀)	3 of 4	Ongoing since year 1	No prior experience
Occupational Therapy (OT)	31	10 (32%) (10♀)	4 of 4	Ongoing since year 1	Uni-professional One with PT with simulated patients
Pharmacy	134	5 (4%) (2♀:3♂)	4 of 4	Clinical visits – primarily community	Uni-professional, community pharmacy with simulated patients

Physiotherapy (PT)	29	22 (76%) (20♀:2♂)	4 of 4	Ongoing since year 1	Uni-professional One with OT with simulated patients

♀= female   ♂ = male

Table 2: Simulation Participants

Profession	No per simulation	Total No required	Total achieved	Management of under recruitment
DR	2	12	12	N/A
Dietician	1	6	5	1 simulation no dietician
Nursing	5	30	20	Each simulation ran with 3 or 4 nurses Some nursing students participated in 2 simulations
OT	2	12	10	2 simulations – only 1 OT
Pharmacy	1	6	5	1 simulation – no pharm
PT	4	24	22	2 sims only 3 PT

Table 3: Focus Group – student demographics

Focus group No.	DR	Dietician	Nursing	OT	Pharm	PT	Age range
1	1♂+1♀				2♂	1♀	20-21
2	2♀	2♀				3♀	20-21
3	2♀		1♀+1♂	4♀	1♀	2♀	19-21
4	2♀				1♀	3♀	20-21
5				2♀	1♂		20-22
6						2♀	20-21
7						5♀	20-21
8		1♀	2♀				20-21
9	3♀			2♀			20-21
10	1♀	1♀	2♀			2♂	21-29

DR = Diagnostic Radiography   OT = Occupational Therapy
Pharm = Pharmacy   PT = Physiotherapy
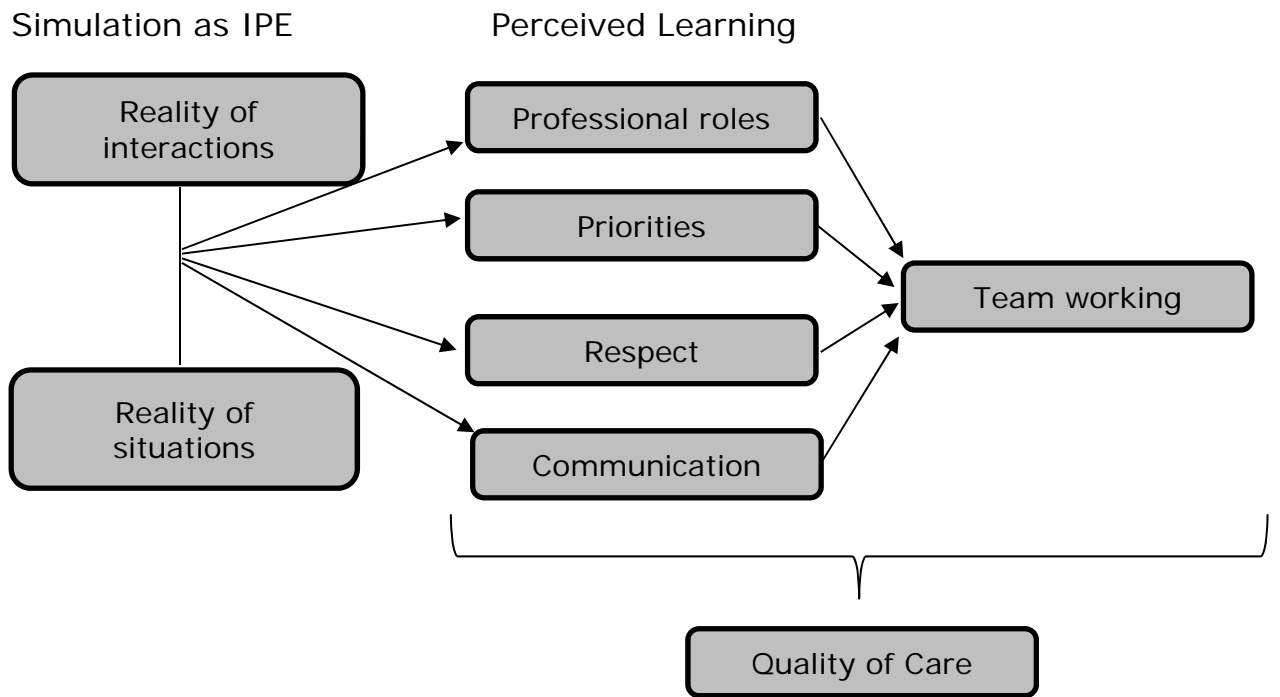♀= Female   ♂ = Male
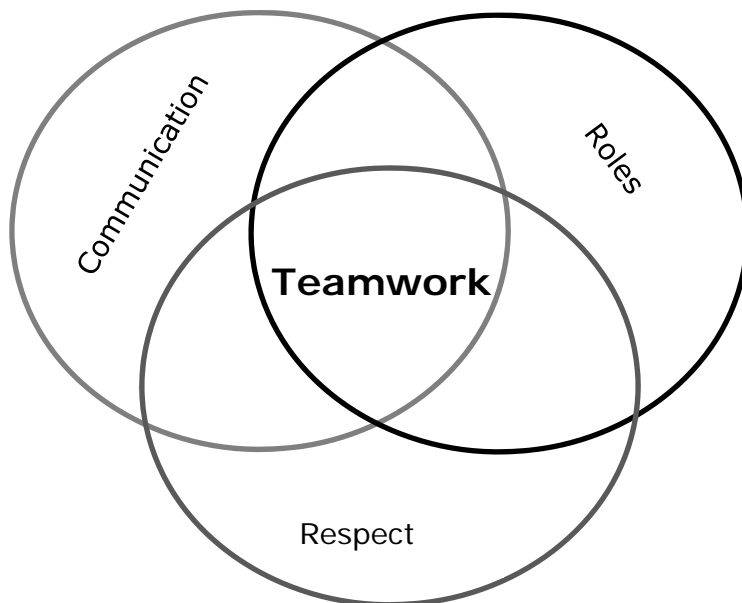
Fig 1: Subthemes and interactions

Simulation as IPE   Perceived Learning

Fig 2: Interconnections to ensure optimal teamwork

The ward simulation was developed by lecturing staff from the six professions. Accurate patient documentation was produced and scenarios for nine 'patients' developed, bed ten was to be prepared by the nurses for an admission. The cases replicated typical patient presentations encountered on acute medical and surgical wards and were carefully developed to ensure appropriate involvement of different professions across the range of cases. A minority of 'patients' involved only nursing students. This is reflective of a normal ward situation and ensured that nursing students had activities to undertake while other patients were being assessed or treated by the other professions. It also meant that nursing students might not be easily accessible to the other professions, again reflective of real situations.

Table 4: Simulation Scenarios

The simulations were run with 'volunteer patients' from the Volunteer Patient Bank based within the university. The 'patients' were briefed to act their specific scenario and established in their specific bed space within the Health and Social Care Clinical Skills Ward Environment. This facility replicates a life-like ward setting. Equipment was provided as appropriate. Appropriate equipment was attached to the patients to make the simulation as realistic as

possible. Students were not advised about the type of patients they would encounter, only that there would be a range of medical and surgical situations.

Nursing students were given a profession-specific handover, replicating practice, immediately prior to the simulation commencing. Physiotherapy and Occupational Therapy students were advised, in their professional groups, they were covering for their clinical team lead and were given a brief handover of the patients to be seen (excluding the planned in-simulation referral of patient 2). Diagnostic Radiography students were provided with written referrals as per clinical practice while Pharmacy and Dietetics students received telephone referrals once the simulation commenced.

Table 4: Patient Scenarios used in ward simulation

Patient	Diagnosis/Complications	Professions
1	TBI – confusion, open tibial fracture	Nursing
2	Knee arthroscopy, bleeding and now mobility problems	Nursing, pharmacy, physiotherapy
3	Abdominal pain – for investigation	Nursing, pharmacy, diagnostic radiography

Perceptions: Ward Simulation

4	1 Day post abdominal surgery, respiratory complications	Nursing, diagnostic radiography, physiotherapy
5	Asthmatic –potential for discharge	Nursing, pharmacy
6	Post MI	Nursing, dietetics
7	TBI – hemiplegia	Nursing, occupational therapy, physiotherapy
8	Post UTI and confusion – rehabilitation requirements	Nursing, occupational therapy, physiotherapy
9	Appendicectomy	Nursing
10	Empty bed space to be prepared	Nursing

Key: TBI= traumatic brain injury; MI= myocardial infarction: UTI= Urinary tract infection