Perspectives on interprofessional student learning in a simulated clinical environment

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Objectives

• Appreciate the complexities and challenges involved in designing and delivering an IP curriculum

• Understand the importance and role of simulation in IP learning experiences

• Identify the successful components of an IP curriculum
Interprofessional education

Learn

With

From

About

Each other
River Thame, Oxfordshire, England
Background

• Increased Clinical Training Capacity grant
  • Increase clinical placements
    • medicine, nursing, occupational therapy, pharmacy and physiotherapy
  • Develop and implement an IP Curriculum

• Curriculum group comprising above professions
Outline

• Development of the IP curriculum
• Implementation challenges
• Evaluation of the curriculum
  • Quantitative
  • Qualitative
• Personal perspectives and insights
Why an interprofessional curriculum?

When healthcare is sub-optimal root causes:

- ineffective working relationships
- poor team work
- inadequate sharing of clinical documentation
- inadequate understanding of and respect for the contributions of other clinical professions
Curriculum development - Purpose

Providing students the opportunity to:

• Further develop interpersonal skills,
• Demonstrate their role in the multidisciplinary team and
• Expand their understanding and respect for the contributions of other health professionals
Curriculum Development - Aims

Students will gain understanding and further develop skills in:-

• Communication within teams
• How teams function
• Roles of professional colleagues
• Conflict resolution to reach ‘consensus’ in decision making to ensure safe and effective patient care
Curriculum development - Objectives

• Importance of communication

• Demonstrate
  • skills in effective communication and collaboration
  • skills in building and maintaining relationships
  • respect for the skills, responsibilities and contribution
  • Active participation within a team

• Describe the roles, skills, responsibilities and contributions.

• Demonstrate respect for the skills, responsibilities and contribution

• Develop an understanding of the importance of reflection
Curriculum Activities Developed

- Case Conference
- Ward Round
- Role Play
Case Conferences

• Student group provided with a case history

• Session One - discussion
  • Patients issues from own discipline perspective

• Session Two – discussion/presentation
  • Complete the ICF framework
  • Develop management plan

Functioning and Disability

Body Functions & Structures (Physiological, Psychological and Organs/Limbs)

Activity (Person Level)

Participation (Societal Level / Roles)

Health Condition (Disorder or Disease)

Environmental Factors (Physical, Social Attitudes)

Personal Factors (Age, Gender)

Contextual factors
A Case example – you are the multi-disciplinary team in the oncology out-patients

- George - 72-year-old diagnosed with prostate cancer 12 months ago - 6 month check up
- Heart attack 5 years ago, Hypertension 10 years
- Experienced three Falls at home when going from sitting to standing
- Live with wife and is DIY fanatic – decorates/gardener
- Lost confidence
  - Much less DIY – get in a man (or woman)
  - Used to look after finances at home – drove to shops to pay bills
  - Stopped caravanning used to go once per month
- Ex miner – a mans man.

Body Functions & Structures
Cardiovascular
• Narrowing of arteries & Blood pressure
Genitourinary
• Prostate cancer, Urinary retention
Gastrointestinal (digestive)
• Diarrhoea
Cognition
• Need to assess re decreased participation
Neuromuscular
• Need to assess re fall, decreased participation

Activity (Person Level)
Decorating, handyman around house
Gardening
Managing finances
Driving

Health Condition (Disorder or Disease)
Prostate cancer
Ischemic heart disease (myocardial infarction)
Hypertension

Participation (Societal Level / Roles)
Walking the dog
Caravan trips
Going out in the car to local shops and paying bills

Environmental Factors (Physical, Social Attitudes)
Barriers
• Rugs on floors, house set up,
  Wife worried, Medications
Facilitators
• Medications, remove rugs, support

Personal Factors (Age, Gender)
Barriers
• Age, Gender (role reversal with wife), coping with illness
Facilitators
• Education, previous roles

Contextual factors
## Management Plan

<table>
<thead>
<tr>
<th>Issue identified</th>
<th>Plan for resolution of issue</th>
<th>Profession to coordinate the plan</th>
</tr>
</thead>
</table>
| Falls prevention                     | Home visit to proper assess environment (rugs etc)  
Assess muscle strength/ balance      | OT, PT                                                                                      |
| Orthostatic hypotension              | Review  
Family involvement for holidays, walking club                                            | Nurse, GP, Pharm, PT              |
| Decreased participation              | Need to explore reasons for this – could be related to fall                                  | Social worker, OT, Family         |
| Loss of confidence                   |                                                                                             | PT, GP, Psychologist              |
Case Topics

1. Type 2 DM with below knee amputation
2. Refugee from Sudan who is 30 weeks pregnant
3. Indigenous gentleman with a MI → regional hosp
4. Elderly lady with delirium/confusion-early dementia,
5. Young lady who suffers an ischaemic stroke
Simulation Role Plays

Students given a context and ‘script’

- Reflects flow of interactions in practice environment
- Communication with
  - Patients
  - Other healthcare professionals
- Key knowledge provided
- Feedback (debrief) with facilitator
Simulation Role Play Scenarios

1. Hip replacement – thromboembolism risk
2. Hip replacement – potassium & ADLs
3. Deep vein thrombosis – warfarin and stockings
4. Knee replacement – ADLs and blood glucose levels.
Simulation Ward area
Ward Rounds
Three patients
Information at end of the bed
10 minutes to interview patient
Conduct a ward round with consultant physician – all disciplines

Discuss what going on and
Plans for next 24 hours
Simulation Ward Rounds
Cases

1. Fractured neck of femur day 3 post-op

2. An elderly stroke patient day three

3. A post-take ward round for a lady admitted with de-compensated heart failure who also has rheumatoid arthritis.
Curriculum Activities Timeframe

1. Activity (90 mins)
2. Afternoon tea (30 mins)
3. Case conference presentation (45-60 min)

Students participated in all three activities over 4 to 6 weeks
Format

- Session 1 (90 mins)
  - Identification of the issues in the case
- Session Two (90 mins)
  - Put case into ICF framework
  - Develop management plan from ICF framework
- Session 3 (60 mins)
  - Present to larger audience
    - Introduction
    - Present case using ICF framework
    - Case summary and management plan
    - Self-reflection by student group

Interprofessional Education

With

From

About
### Implementation Challenges – Timetabling

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy - 3rd year</td>
<td>Pharmacy - 4th year</td>
<td>OT - 3rd year</td>
<td>OT - final year</td>
<td>Medicine - 3rd year</td>
</tr>
<tr>
<td>Medicine 4th year</td>
<td>Medicine</td>
<td>Occupational Therapy students</td>
<td>Pharmacy students</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>Nursing students</td>
<td>not on site</td>
<td>10 weeks</td>
<td>4 weeks</td>
<td>5 weeks</td>
</tr>
</tbody>
</table>
Implementation Challenges – Timetabling

- Release from placement each Wednesday afternoon
- Presence of all professions every week
- Balance of professions between each group
Implementation and Delivery

• Curriculum implemented four times;

• Evaluation of students using survey
  • Readiness for Interprofessional Learning Scale (RIPLS)

• All students surveyed
  • Start of first session
  • End of last session
RIPLS Subscales

- Teamwork and collaboration
  - Willingness to share knowledge and skills (↑ score)

- Negative professional identity
  - Want to learn with other professions (reverse score - ↑ score)

- Positive professional identity
  - Value working with students from healthcare disciplines (↑ score)

- Roles and responsibilities
  - Clearer picture of own roles and that of others (↓ score)
Results

“It was great!!”
### Student cohort, n=89 (107)

<table>
<thead>
<tr>
<th>Age (mean [SD]) years</th>
<th>24 (±3.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td><strong>n (%)</strong></td>
</tr>
<tr>
<td>Female</td>
<td>65 (73)</td>
</tr>
<tr>
<td>Male</td>
<td>24 (27)</td>
</tr>
<tr>
<td><strong>Discipline</strong></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>31 (35)</td>
</tr>
<tr>
<td>Medicine</td>
<td>20 (22)</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>15(17)</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>13 (15)</td>
</tr>
<tr>
<td>Nursing</td>
<td>10 (11)</td>
</tr>
<tr>
<td>Previous work in Healthcare</td>
<td>28(32)</td>
</tr>
</tbody>
</table>
All Disciplines, RIPLS scores

<table>
<thead>
<tr>
<th></th>
<th>Teamwork (max=45)</th>
<th>Negative professional identity (max=15)</th>
<th>Positive professional identity</th>
<th>Roles and responsibilities (min=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>-4.692</td>
<td>-3.797</td>
<td>-4.312</td>
<td>-3.384</td>
</tr>
<tr>
<td>P value</td>
<td>p&lt;0.005</td>
<td>p&lt;0.005</td>
<td>P&lt;0.005</td>
<td>p=0.001</td>
</tr>
<tr>
<td>r</td>
<td>0.50</td>
<td>0.40</td>
<td>0.46</td>
<td>0.36</td>
</tr>
</tbody>
</table>
Discussion - RIPLS

Positive attitude towards Interprofessional Learning.

• Want to share knowledge and skills

• Learn with other professions

• Value working with students from healthcare disciplines

• Developed a clearer picture of own roles and that of others
Feedback - *What was useful about the integrated case activities and why?*

Learnt about the roles of the other health professionals;

- “Scope and knowledge”
- “Perception”
- “Familiarisation”
- “Contribution of team to patient care”
“Learning about the role of other professions and how to provide holistic care for the patient and working together.”

“Seeing what other professions do by partaking in activities quite different to what we've done in uni.”
What was not so useful about the integrated case activities and why?

How could the integrated case activities be improved?

“Adequate representation from all health discipline groups”
Unsolicited comments

“Really enjoyed being part of IPE... found it incredibly beneficial - felt that I understand other professionals roles much better because of it.”

“Just wanted to say I have really enjoyed participating in IPE and we all think it is of tremendous benefit!! I can't believe how little I knew about the fellow allied health team! So thank you!”

Mellor, Cottrell, Moran. J Interprofessional Care 2013, 1-6
Personal Perceptions and Insights

Change in the students from the first to last session

Week One

Week Two
Personal Perceptions and Insights

• Change in the students from the first to last session

• Level of engagement

• Authentic scenario content and context—they related to practice (Relevance ++++)
Personal Perceptions and Insights

• Clinicians/ academics who were skilled educators

• Risk free environment

• No assessment involved
  • representing own profession

• Simulation rooms
  • enhanced the experience
Personal Perceptions and Insights
Pharmacy students

• Teamwork
  • Appreciation of what they can contribute

• Confidence
  • Realisation of their own knowledge

• Knowledge still to know
  • Realisation that others know about drugs
Conclusion

Successful curriculum

• Finance and faculty backing
• Relevance f activities

Simulation environment

• Simulation of patients
• Room simulation not as critical

Challenges

• Timetabling
Acknowledgements

Curriculum Development Group

- Chair: Dr Neil Cottrell
- Physiotherapy: Dr Susan Waller
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- Nursing: Adam Burston / Robyn Dickie
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- Pharmacy: Dr Michael Barras
- Faculty T&L: A/Prof Michele Groves
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All Tutors / Greenslopes Private Hospital staff involved in the IPE activity