Creating Interprofessional Opportunities through Clinical Simulations

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Presenter Backgrounds

Financial Disclosures: Simucase
CEO, Inventor, IP, Royalties

Financial Disclosures: No financial disclosures
Learning Objectives

1. Define IPE and IPP and discuss the impact of collaborative practice within your curriculum
2. List the four core competencies for Interprofessional Collaborative Practice and the importance of IPEC
3. Describe three or more advantages to incorporating IPE into your curriculum
4. Identify the simulation models that best integrate with your curriculum goals to achieve best practice regarding interprofessional collaborative practice.
5. Describe Kern’s seven step model for using simulations to target interprofessional collaborative practice – give one specific example for your professional field

Learning Activities

Throughout this session, there are a number of learning activities.

Please download the workbook handout to record your responses.
Test Your Knowledge

What does IPE stand for?
A. International Practice Experiences
B. Interprofessional Practices in Education
C. Interprofessional Education
D. Interactive Professional Education

Interprofessional Education (IPE)

“IPE is an activity that occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve outcomes for individuals and families clinicians serve.”

Interprofessional Practice (IPP)

“IPP occurs when multiple service providers from different professional backgrounds provide comprehensive healthcare or education services by working with individuals and their families, caregivers, and communities to deliver the highest quality of care across settings.”


Importance of Interprofessional Collaborative Practice

CAN IMPROVE...
- Access to and coordination of health services
- Appropriate use of specialists
- Health outcomes for people with chronic diseases
- Patient care and safety

CAN DECREASE...
- Total patient complications
- Length of hospital stay
- Tension and conflict among caregivers
- Medical costs
- Hospital admissions
- Clinical error rates
- Mortality rates (WHO, 2010)

The ‘WHY’ for IPE

Video: https://www.youtube.com/watch?v=Hgug-9t50D5

Video Credit: AHRQ’s TeamSTEPPS® 2.0 medical team training program (https://www.ahrq.gov/teamstepps/index.html). Video used with permission.

Activity 1: Personal Reflection

Think about the breakdowns in communication with both Cal & Pat in terms of their healthcare teams.

Record your response in the workbook.
Activity 1: Personal Reflection

List the types of communication breakdowns you’ve experienced in your own clinical practice.

Record your response in the workbook.

IPEC Core Competencies
IPEC Core Competencies

What are the interprofessional core competencies for collaborative practice?

Interprofessional Competencies for Collaborative Practice

Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles.

Work with other professions to maintain a climate of mutual respect and shared values.

Interprofessional Competencies for Collaborative Practice

Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles.

Communicate in a responsive and responsible manner that supports a team approach.

Work with other professions to maintain a climate of mutual respect and shared values.

Know and understand one’s own role and those of other professions.

Activity 2: IPEC Core Competencies

Review the IPEC Core Competencies and select 3 sub-competencies under each core competency area that you feel are critical to your course and/or program.

Record your responses in the workbook.

Getting Started with an IPE Approach...
Differentiating Learning Outcomes for IPE vs. Profession Specific

Case Study Example:

Bubby is an eight-year-old boy who sustained a non-accidental traumatic brain injury when he was an infant. His family is requesting a follow up evaluation at your outpatient healthcare facility. You are the SLP on the case, but are working on an interdisciplinary care team with an OT, PT, Nurse, Dietician and Audiologist.


<table>
<thead>
<tr>
<th>Domain</th>
<th>Category</th>
<th>Example</th>
<th>Professions Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profession Specific</td>
<td>Speech</td>
<td>Conducting a Functional Communication Profile - AAC</td>
<td>SLP</td>
</tr>
<tr>
<td></td>
<td>Language/Cognition</td>
<td>Administering a Functional Communication Profile – Expressive Language</td>
<td>SLP</td>
</tr>
<tr>
<td></td>
<td>Swallowing</td>
<td>Conducting a Clinical Swallow Assessment</td>
<td>SLP</td>
</tr>
<tr>
<td>Multidisciplinary</td>
<td>Speech</td>
<td>Examining communication abilities</td>
<td>SLP, OT, Neurology, Audiology, Spec Ed Teacher, Dietary, PT</td>
</tr>
<tr>
<td></td>
<td>Language/Cognition</td>
<td>Engaging patient in conversational games and activities</td>
<td>SLP, OT, Spec Ed Teacher, PT</td>
</tr>
<tr>
<td></td>
<td>Swallowing</td>
<td>Observing the patient during meal times</td>
<td>SLP, OT, Dietary</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>Speech</td>
<td>Developing functional communication skills</td>
<td>All individuals involved in the patient care</td>
</tr>
<tr>
<td>Interprofessional</td>
<td>Language/Cognition</td>
<td>Assessing general comprehension when providing instructions</td>
<td>All individuals involved in the patient care</td>
</tr>
<tr>
<td></td>
<td>Swallowing</td>
<td>Taking precautions to prevent aspiration</td>
<td>All individuals involved in the patient care</td>
</tr>
</tbody>
</table>
How to Infuse Interprofessional Collaborative Practice into your Curriculum?

Simulations
Simulation Models

- Computer based simulations
- Virtual world simulations
- Part task trainer activities
- Standardized/Simulated patients
- Human patient simulators (HPS)
- Hybrid scenarios

IPE Computer Based Simulations

https://www.youtube.com/watch?v=S6K-Zc-P_wps
IPE Virtual World Simulations
https://www.youtube.com/watch?v=Xi_Yb-7xFx4&feature=youtu.be

IPE Human Patient Simulators
Curriculum Development

A stepwise model for simulation-based curriculum development for clinical skills, a modification of the six-step approach

Authors
Rehail N. Khamis, Richard M. Satava, Sami A. Alnassar, David E. Kern

IPE Case Study Example:

Two of your university colleagues from the OT & PT departments have asked you (an SLP) to help develop and participate in an interprofessional education experience with their students. The goal is to conduct a series of patient simulation activities using one or more of the simulation models outlined above targeting speech-language pathology, occupational therapy and physical therapy students.

#1 Problem Identification:

What is the problem?

Need to develop an IPE approach to clinical education that includes a variety of health professions targeting the 4 IPEC core values.
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**What is the problem?**
Need to develop an IPE approach to clinical education that includes a variety of health professions targeting the 4 IPEC core values

**What is the current approach?**
Currently teach professional specific skills related to clinical case studies

**What is the ideal approach?**
Develop a complex IPE case study that will involve SLPs, OTs & PTs and will provide a variety of clinical simulation exercises to highlight best practices for interprofessional collaboration. Ideally students will be placed in IPP teams of 3-6 students representing each of their specific disciplines
#2 What are your Learner Needs?

Specific Methods for Completing Needs Assessments

- Informal discussions
- Formal interviews
- Focus group discussions
- Questionnaires
- Direct Observation
- Tests
- Audits of current performance
- Strategic planning sessions
#3 What are the Goals and Objectives

<table>
<thead>
<tr>
<th>1. Respect the unique cultures, values, roles/ responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Explain the roles and responsibilities of other providers and how the team works together to provide care, promote health, and prevent disease.</td>
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</table>
#3 What are the Goals and Objectives

1. Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes

2. Explain the roles and responsibilities of other providers and how the team works together to provide care, promote health, and prevent disease.

3. Express one's knowledge and opinions to team members involved in patient care and population health improvement with confidence, clarity, and respect, working to ensure common understanding of information, treatment, care decisions, and population health programs and policies.

4. Engage health and other professionals in shared patient-centered and population-focused problem solving.
#3 What are the specific measurable objectives?

**Bloom’s Taxonomy**  
*Levels of Cognitive, Psychomotor and Affective Domain*

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Affective</th>
<th>Psychomotor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remembering</td>
<td>Receiving</td>
<td>Imitation</td>
</tr>
<tr>
<td>Understanding</td>
<td>Responding</td>
<td>Manipulation</td>
</tr>
<tr>
<td>Applying</td>
<td>Valuing</td>
<td>Precision</td>
</tr>
<tr>
<td>Analyzing</td>
<td>Organizing</td>
<td>Articulation</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Characterizing</td>
<td>Naturalization</td>
</tr>
<tr>
<td>Creating</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted by Chapman, A. (2006) *Bloom’s Taxonomy of Learning Domains; Available from:*  
http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm

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#4 Educational Strategies:  
What is the specific content to be addressed?

Doug was referred by his school integration coordinator at an in-patient rehab facility. Doug suffered a severe traumatic brain injury when he was struck in the head by a baseball. As a result of his brain injury, Doug demonstrates significant cognitive, physical, and communication deficits. Doug currently wears a helmet to protect his head since a portion of his skull was removed at the time of injury due to swelling. He will be attending school ½ days and receive outpatient services from a speech-language pathologist, occupational therapist, and a physical therapist.
#4 What are the most appropriate simulation methodologies given the learning objectives?

- **PHASE I** – Use of a mannequin to depict points in time for Doug's early treatment stages while in the hospital recovering

- **PHASE II** – Use of standardized patient scenarios to target various counseling sessions with Doug's family and school personnel to discuss the transition process
#4 What are the most appropriate simulation methodologies given the learning objectives?

- **PHASE I** – Use of a mannequin to depict points in time for Doug’s early treatment stages while in the hospital recovering
- **PHASE II** – Use of standardized patient scenarios to target various counseling sessions with Doug’s family and school personnel to discuss the transition process
- **PHASE III** – Embed various part task training exercises for each professional discipline to work on targeted clinical skills and share outcomes with their collaboration group
- **PHASE IV** - Use of computer based simulation program or review of video scenarios to reinforce aspects of the case throughout the treatment process over time
#4 Educational Strategies: What About Faculty Development?

<table>
<thead>
<tr>
<th>Cognitive (Knowledge)</th>
<th>Affective (Attitudinal)</th>
<th>Psychomotor (Skill/Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific measurable objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Method to achieve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Method to prevent decay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activity 3: Faculty Development

Based on the IPE example provided for ‘Doug,’ what do you feel you would need in terms of faculty development to complete the following simulation models? Where would you get access to those resources? List two people you could contact to help you work through the process.

*Record your responses in the workbook.*

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#5 What Are the BEST Assessment Methods & Feedback Approaches?

<table>
<thead>
<tr>
<th>Evaluation Level</th>
<th>Focus</th>
<th>Measurement Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. REACTION</td>
<td>Participant perceptions of&lt;br&gt;• satisfaction&lt;br&gt;• usefulness&lt;br&gt;• motivation</td>
<td>• rating scales&lt;br&gt;• focus groups&lt;br&gt;• structured interviews&lt;br&gt;• surveys</td>
</tr>
<tr>
<td>2. LEARNING</td>
<td>Acquisition of&lt;br&gt;• knowledge&lt;br&gt;• skills&lt;br&gt;• attitudes</td>
<td>• pre- and post-tests&lt;br&gt;• essay questions&lt;br&gt;• case study analyses&lt;br&gt;• simulations and role playing</td>
</tr>
<tr>
<td>3. TRANSFER</td>
<td>Real life transfer of&lt;br&gt;• knowledge&lt;br&gt;• skills&lt;br&gt;• attitudes&lt;br&gt;• problem-solving</td>
<td>• record reviews and audits&lt;br&gt;• surveys&lt;br&gt;• observations&lt;br&gt;• checklists&lt;br&gt;• critical incident reports</td>
</tr>
<tr>
<td>4. RESULTS</td>
<td>Real world outcomes</td>
<td>• record reviews and audits&lt;br&gt;• surveys&lt;br&gt;• observations&lt;br&gt;• critical incident reports&lt;br&gt;• compliance reviews&lt;br&gt;• program institutionalization</td>
</tr>
</tbody>
</table>

Developed by: Donald Kirkpatrick, Ph.D. "The Four Levels of Evaluation"
Activity 4: Assessment Methods

Based on the IPE example provided for 'Doug,' list the assessment methods you would use for each of the simulation scenarios listed below. What do you think is the best measurement tool(s) for each of Kirkpatrick’s evaluation levels for each phase of the IPE activity?

Record your responses in the workbook.

Feedback Essentials

Feedback is information about how we are doing in our efforts to reach a goal. It’s comprised from a variety of information inputs, which may occur prior to, during and after a learning experience.

- Goal Referenced
- Tangible and Transparent
- Actionable
- User-Friendly
- Timely
- Ongoing
- Consistent

http://www.ascd.org/publications/educational-leadership/2012/10/v70n01/Seven-Keys-to-Effective-Feedback.aspx
Activity 5: Feedback Dice

Create a six-sided feedback die for this IPE activity. List six questions that could be used during this activity or any classroom activity that would provide immediate and timely feedback (i.e. What will you do with the information you learned today).

Record your responses in the workbook.

Structured & Supported Debriefing

<table>
<thead>
<tr>
<th>Phase</th>
<th>Goal</th>
<th>Actions</th>
<th>Sample Questions</th>
<th>Time</th>
</tr>
</thead>
</table>
| Gather  | Actively listen to participants to understand what they think and how they feel about the session | • Request narrative from participant(s)  
• Request clarifying or supplemental information from participant(s) | • How do you feel?  
• How do you think it went?  
• Can you tell me what happened? | 25%  |
| Analyze | Provide feedback on performance  
Facilitate participant(s) reflection on and analysis of their actions  
Investigate basis for performance gaps | • Review accurate record of events  
• Report observations (correct and incorrect steps)  
• Ask questions to reveal participant's thinking process  
• Stimulate reflection and provide redirection | • I noticed ...  
• Tell me more about...  
• What were you thinking when...  
• I understand, however, tell me about“X” | 50%  |
| Summarize | Facilitate identification and review of lessons learned | • Identify positive aspects of session  
• Discuss behaviors that require change  
• Summarize session | • List two actions that you felt were effective or went well  
• Describe two areas that you think you need to work on  
• How will you improve these areas for the future | 25%  |


#6 Don’t Forget to Complete a Program Evaluation

#7 Start Implementing & Overcoming Barriers
Activity 6: Create Your Own IPE Activity

Reference the Khamis et al. (2016) seven step model for using simulations to target IPE and outline your own IPE activity.

Record your responses in the workbook.

In Closing

Reason for teaching students about IPE collaboration

1. People you need to speak with regarding the importance of IPE for students
2. Things you can do to include IPE into your clinical education of students
In Closing


References & Resources


Dudding, C. & Williams, S. Implementing clinical simulations in CSD programs. Invited paper presented at the the Council of Academic Programs for Communication Sciences and Disorders, April, 2018. Austin, Texas


**References & Resources**


Society for Simulation in Healthcare - http://www.ssih.org/


Standards for Best Practice in Simulation - International Nursing Association for Clinical Simulation and Nursing http://www.inacsl.org/i4a/pages/index.cfm?pageid=3407