FOSTERING INTERPROFESSIONAL EDUCATION (IPE) IN A NON TEACHING COMMUNITY HOSPITAL

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Pharmacist Learning Objectives

• Recognize the importance of interprofessional education and collaboration in the delivery of health care services

• Provide an example of an interprofessional student collaboration between nursing and pharmacy students

• Demonstrate improvement in pharmacy student perception of other health professional roles
Interprofessional Education (IPE)

• **Interprofessional collaboration (IPC):** When *multiple healthcare workers from different professional backgrounds* work together with patients, families, and communities to deliver the highest quality of care.

• **Interprofessional education (IPE):** *Students* from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.
Collaboration Video

• https://m.youtube.com/watch?v=NbqfiFK9CJA
Southwest General (SWG)

- Non-profit community hospital with 350 inpatient beds
- Eight pharmacy preceptors offering a variety of rotations
  - Internal Medicine
  - Critical Care
  - Cardiology
  - Infectious Disease
  - Psychiatry
  - Ambulatory Care
  - Administration
  - Emergency Medicine
  - Transitions of Care
- Student load of 3-6 per month
Baldwin Wallace (BW)

- Private liberal arts college in Berea, Ohio
  - 0.9 miles away from Southwest General
- Accelerated Bachelor of Science in Nursing
  - Second-degree students
- Acceptance rate of 18-36 students per cohort
  - Competitive enrollment
- 15 month program – 2 cohorts
  - 4 week clinical rotation blocks
    - Medical-surgical
    - Maternal-child health
    - Pediatrics
    - Behavioral health
    - Community health
    - Acute care
    - Capstone
Our Students
Goals of IPE

• Prepare nursing and pharmacy students by deliberately working together with the common goal of building a safer and better healthcare system

• Improve team-based training that leads to improved quality and safety in team-based patient care

• Supported by many institutions
  • InterProfessional Education Collaborative (IPEC)
  • Accreditation Council for Pharmacy Education (ACPE)
  • The Institute of Medicine (IOM) - 1972
  • American Association of Colleges of Pharmacy (AACP) - 2016
ACPE Key Elements

**DYNAMICS**
- Values and ethics of IPP
- Communication
- Conflict Resolution

**EDUCATION**
- Opportunities to learn from and with others
- Understanding the abilities, competencies, and scope of practice

**PRACTICE**
- Direct patient care
- Therapeutic decision making
- Face-to-face
Benefits of IPE

- Improved communication and problem solving
- Increased efficiency and learning
- Improved conflict resolution
- Fosters creativity, ideas, and understanding
- Better clinical outcomes, cost-effectiveness, and safety
- Strengthened professional identity
- Facilitated collaborative projects
- Empowered team members
- Enables comprehensive patient care
Barriers to IPE

- Finding clinical rotations to incorporate IPE
- Which professions to include (physicians, nurses, social workers, etc.)
  - Which professions are available at your institution?
  - Ideally, all medical professions should be included (but not required)
- Competent educators
  - Training
- No set criteria for learning objectives
  - Future direction for health professional curriculum?
<table>
<thead>
<tr>
<th>Author, Journal, Year</th>
<th>Summary of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrader S, AJPE 2009</td>
<td>Utilized <strong>human patient simulators</strong> for teams of <strong>pharmacy</strong>, <strong>medical</strong>, and <strong>PA students</strong>. Student attitudes regarding interprofessional teamwork improve and was associated with <strong>high student satisfaction</strong>.</td>
</tr>
<tr>
<td>Buring S, AJPE 2009</td>
<td>Provides background on the definition of IPE, evidence to support IPE, the need for IPE, student competencies and objections, barriers to implementation, and critical elements for implementation.</td>
</tr>
<tr>
<td>Coleman MT, JIEP 2107</td>
<td>Interprofessional students (<strong>medical, physician assistant, social worker, nursing, and pharmacy</strong>) participating in <strong>ambulatory outpatient diabetes</strong> care management program had a <strong>positive impact on patient satisfaction</strong> and learner teamwork skills.</td>
</tr>
<tr>
<td>Grusec JE, Dev. Psychol 1992</td>
<td>An <strong>evaluation of social learning theory</strong>. Self efficacy described as belief in your own capabilities. Considers the <strong>work of two individuals with different approaches</strong>.</td>
</tr>
<tr>
<td>Zorek JA, AJPE 2016</td>
<td><strong>Validated instrument (SPICE-R2)</strong> to examine the construct variables of: T = Interprofessional <strong>Teamwork</strong> and Team-based practice R = <strong>Roles/responsibilities</strong> for collaborative practice O = Patient <strong>Outcomes</strong> for Collaborative Practice.</td>
</tr>
<tr>
<td>El-Awaisi A, JBI Database 2016</td>
<td>First systematic review investigating pharmacy perspectives of IPE <strong>worldwide</strong>.</td>
</tr>
</tbody>
</table>
Planning

• Initial discussions with BW faculty Spring of 2017 after visits from NEOMED and the University of Toledo experiential program coordinators
  • Pharmacy curriculum goal: Every student to have at least one rotation with IPE and several experiences of IPC by 2019-2020 year
    • IPE will be tracked and a part of mandatory hours by 2018-2019 year
• Monthly “prep” meetings leading up to project launch
  • IRB approval/exempt
    • Students sign waiver recognizing data collection
    • No patient data collected
  • Monthly meetings continued through project experience to discuss areas of improvement and future direction
**PICOT Question**

**P**
- Deficiency of Pharmacy and Nursing student interdisciplinary education

**I**
- Pharmacy/Nursing student educational intervention
- Rounding & case studies

**C**
- Pre and post SPICE-R2 Instrument
- Interprofessional teamwork, roles/responsibilities for collaborative practice, and patient outcomes for collaborative practice

**O**
- Enhanced interdisciplinary communication, consultation, and respect

**T**
- Monthly (New cohort every 4 weeks)
- Phase I: November 2017 – April 2018
Project Objectives

• Evaluate the impact of IPE intervention on:
  • Enhancing student education
  • Understanding of training/education requirements by other healthcare professionals
  • Understanding of how patient-centeredness increases when care is delivered interprofessionally
  • Understanding of how healthcare cost can be reduced through interprofessional collaboration
  • Identifying barriers to IPE
  • Identifying next steps to further develop IPE between pharmacy and nursing discipline
Monthly Overview

Week 1
- Administer PRE SPICE-R2
- Orientation
  - 30 minute presentation and ice-breaker
  - Assign nursing-pharmacy teams

Week 2
- Rounding and group patient discussion

Week 3
- Rounding and group patient discussion
- Case Study

Week 4
- Rounding and group patient discussion
- Administer POST SPICE-R2
SPICE-R Survey

- The Student Perceptions of Interprofessional Clinical Education-Revised (SPICE-R2)
  - Interprofessional teamwork and team-based practice
  - Roles and responsibilities for collaborative practice
  - Patient outcomes from collaborative practice
- 10 questions using a Likert scale
- Administered prior to collaboration and post collaboration
  - Surveys placed in sealed envelope
# SPICE-R Survey

Please be candid as you indicate the extent of your agreement with each of the following statements related to interprofessional teams and the team approach to care.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neutral (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Working with students from another health profession enhances my education</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>My role within an interprofessional healthcare team is clearly defined</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>Health outcomes are improved when patients are treated by a team that consists of individuals from two or more health professions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>Patient satisfaction is improved when patients are treated by a team that consists of individuals from two or more health professions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Participating in educational experiences with students from another health profession enhances my future ability to work on an interprofessional team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>All health professional students should be educated to establish collaborative relationships with members of other health professions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>I understand the roles of other health professionals within an interprofessional team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Clinical rotations are the ideal place within their respective curricula for health professional students to interact</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Health professionals should collaborate on interprofessional teams</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>During their education, health professional students should be involved in teamwork with students from other health professions in order to understand their respective roles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Rounding
Rounding

- Three assigned rounding dates for every four week rotation
- Proposed time:
  - Collaboration: 30-60 minutes on nursing student unit
    - 1:1 or 2:1 nursing:pharmacy student
    - Each nursing student is responsible for 2 patients
  - Guided discussion: 30-60 minutes on nursing student unit
    - Each team presents their patients and interventions
    - Alternate if pharmacy or nursing educator is leading discussion
- Patient assignments given to pharmacy students at daily pharmacy morning huddle
  - Students encouraged to exchange phone numbers/emails
Rounding

• Template
  • Patient introduction
  • Symptoms
  • Labs/Diagnostic tests
  • Medications
  • Plan of treatment
  • Disease process/ pathophysiology
  • Psychosocial needs
  • Educational requirements
  • Discharge/follow up plans

• Helpful hints
  • Make eye contact
  • Address the patient by name
  • Keep positive non-verbal language
  • Explain why you’re there
  • Ask what questions they have
  • Thank them
Rounding

• Golden Rules for Interviewing Patients
  • Avoid close-ended questions
  • Use only the patient’s terminology
  • Denial = positive confirmation
  • Sample history secrets
    • What’s bothering you?
    • What else?
    • Head-to-toe survey
  • Events leading to this episode
  • Expand upon his/her complaint
    • What do you mean by...?
Case Study

• One assigned case study for every four week rotation
• Case provided to students at least one week in advance
• Alternate pharmacy and nursing educator to create case and lead discussion
• Proposed time: 1 hour
• Case presentation topics:
  • Diabetes
  • Bipolar Disorder
  • UTI
  • CAD/MI
  • Acute Kidney Injury
  • Hepatitis
  • Depression
  • Sepsis
  • CHF
## Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-collaboration score</th>
<th>Post-collaboration score</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing students</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Sample size
Student Comments

• “I now realize how much pharmacists know about medications and diseases and are a great resource that I can call any time.”

• “I am so amazed at how well the nurses truly know their patients. It is inspiring to see how they advocate for them always.”

• “We learned about physical assessment in pharmacy school but actually getting to do it side by side with the nurse was so helpful.”

• “I can now relate more to patient requirements for medication administration and how much responsibilities nurses have.”

• “I understand more about patient needs especially related to various tests and procedures like feeding tubes.”
## Project Barriers and Solutions

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline lack of understanding of opposite discipline curriculum</td>
<td>Spend 5 minutes during orientation and have a nursing and pharmacy student each discuss their curriculum</td>
</tr>
<tr>
<td>Knowledge and clinic skill difference between students early in their program versus late/nearing graduation</td>
<td>Take into consideration during group discussion, earlier students may need more guidance in patient scenarios</td>
</tr>
<tr>
<td>Case study topic may have occurred prior to nursing curriculum</td>
<td>Ensure future case topics have already occurred in nursing curriculum</td>
</tr>
</tbody>
</table>
## Project Barriers and Solutions

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<tr>
<th>Barrier</th>
<th>Solution</th>
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<tbody>
<tr>
<td>Schedule adjustment for planned university breaks</td>
<td>Plan dates in advance, keep communication open and frequent</td>
</tr>
<tr>
<td>Handling repeat students</td>
<td>Collect data on first month of participation only. Encourage repeat students to take on more patients.</td>
</tr>
<tr>
<td>“We don’t know what we’re supposed to be doing”</td>
<td>Laminated rounding specific guidelines including talking points for students</td>
</tr>
<tr>
<td>Statistical support</td>
<td>Progressive data entry, still exploring options</td>
</tr>
</tbody>
</table>
Future Goals

- Utilize SIMM Man simulation manikin into case presentations
  - Consistent scenarios
  - Real life model including patient “interactions”
  - Videotape replay to review interactions and improve techniques
- Incorporate other medical disciplines
- Consider a shadow day each month
- IPE ACLS training
- Faculty survey on changed perceptions
- Include a student narrative in post survey
- Award students with IPE certificate upon completion
March IPE Team!
Project Faculty/Staff

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References

• Shrader S., McRae L., King W. et al. A simulated Interprofessional Rounding Experience in a Clinical Assessment Course. *American Journal of Pharmacy Education* 2009; 75(4); Article 61


• El-Awaisi A, Diack L, Joseph S, et al. Perspectives of pharmacy students, pharmacy academic and practicing pharmacists on interprofessional education and collaboratie practice: a comprehensive systemic review protocol. JBI Database of Systematic Reviews and Implementation Reports. 13(12):70–92, DEC 2015