MEDICAL AND PHARMACY STUDENTS SHADOWING ADVANCED PRACTICE NURSES (APNs) TO DEVELOP INTERPROFESSIONAL COMPETENCIES

Laura Monahan, DNP, MBA, RN; Linda Chang, PharmD, MPH, Kathleen Sparbel, PhD, FNP-BC; Judie Heinschel, PhD, PMHNP-BC; Kelly Rosenberger, DNP, WHNP-BC, CNM; Kathryn Wirtz Rugen, PhD, FNP-BC, FAANP

Nature and Scope

- Miscommunication among healthcare providers contributes to 80% of serious medical errors¹, resulting in 210,000 deaths² and losses of $12 billion annually³.
- Poor patient satisfaction levels, reduced collaboration, poor teamwork, and increased adverse patient outcomes are related consequences⁴, ⁵.
- Lack of role awareness/responsibilities among health care providers contributes to miscommunication⁶, ⁷, ⁸.

Purpose of project: Implement evidence-based job-shadowing strategy to develop medical and pharmacy students’ interprofessional knowledge about Advanced Practice Nurses (APNs) related to: 1) role awareness and 2) collaboration and 3) communication.

Synthesis of Literature


Job-shadowing improves ICP:
- Increased understanding of team member roles⁵, ⁹.
- Diminished stereotypical thinking about other providers⁶, ¹⁰.
- Promotion of team building¹⁰, ¹¹.
- Potential aversion of future professional conflicts⁴, ⁵.

- Interrelates collaboration & multidirectional communication.
- Strong emphasis on teamwork.

Project Implementation

Participants:
- 40 participants from 93 eligible students:
  - 20 Medical (M2) and 20 Pharmacy (P3) students
  - 73% age 22 – 25 years old
  - 60% White, 23% Asian/PI, 17% Black/AA
  - 55% female, 45% male
- 9 APN mentors

Setting:
- 3 APN clinical sites

Project Process:
- APN mentors were oriented on job-shadowing experience.
- 20 M2 - P3 student dyads completed one 4-hour APN job-shadowing observation & reflective discussion.

Strategies used to increase likelihood of project success:
- Face/face in-class project explanation & recruitment.
- Email and phone reminders to students.
- Meeting with key stakeholders & relationship building.

Evaluation Criteria

Outcome Evaluation:

Quantitative (pre/post IPE experience online survey):
- Student: Knowledge of APN roles
- Student: Knowledge of interprofessional collaborative team practices

Qualitative:
- Student: Reflection of IPE experience
- System: Participating colleges and clinical partners interest in ongoing implementation.

Data analysis:
- Quantitative: Descriptive statistics & paired sample t-tests.
- Qualitative: Thematic Content Analysis.

Outcomes

Mean change in knowledge from pre job-shadowing survey to post job-shadowing survey (paired t-tests, significant at p < 0.001; * p < 0.048).

<table>
<thead>
<tr>
<th>IPE Competency</th>
<th>Question Content</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>APN educational program</td>
<td>1.80</td>
<td>2.80</td>
</tr>
<tr>
<td>Differences between a Nurse and APN</td>
<td>2.18</td>
<td>3.08</td>
<td></td>
</tr>
<tr>
<td>APNs scope of practice</td>
<td>2.03</td>
<td>2.83</td>
<td></td>
</tr>
<tr>
<td>Differences between APN specialities</td>
<td>1.83</td>
<td>2.53</td>
<td></td>
</tr>
<tr>
<td>APN role in health care team</td>
<td>2.28</td>
<td>3.13</td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>Between APN/Physicians</td>
<td>2.13</td>
<td>2.95</td>
</tr>
<tr>
<td>Between APN/Pharmacists</td>
<td>1.80</td>
<td>2.58</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Perception of quality communication between APNs/Pharmacists/MDs</td>
<td>2.53</td>
<td>2.78</td>
</tr>
</tbody>
</table>

Key Attitudes unchanged (post-survey percentages):
- Interprofessional relationship competencies should be developed during pre-clinical and clinical education (91.5% agree/strongly agree).
- Present education prepared them for interprofessional collaboration (43% excellent/somewhat prepared).
- Job-shadowing useful part of curriculum (93% agree/strongly agree).

Student Qualitative Results:

- Opportunity for Interaction:
  - “Observing how APN interacts with patients and physicians...interaction I would otherwise never get to see – we (pharmacy/medical students) barely interact among ourselves”

- Modeling:
  - “Strength of this experience is to see how APNs work.”

System Qualitative Results:

- Logistics/organization well-designed
- Advocate for experience available to future M2 and P3 students
- Noted student professionalism
- Important for medical/pharmacy students interact with APNs
- Valued paired IPE teams

Recommendations

- Develop collaborations to expand opportunities for interprofessional clinical learning between Medicine/Pharmacy/Nursing, e.g. job-shadowing experiences.
- Assess program effectiveness longitudinally for evidence of enhanced IPC competencies with APNs as healthcare team partners.

Acknowledgements

The authors would like to thank these project collaborators:

College of Medicine, University of Illinois at Chicago,
Rockford College of Pharmacy, University of Illinois at Chicago,
Rockford Administration and Advanced Practice Nurses of Rockford Health Physicians,
Mercy Rockford Health System.