COLLEGE OF NURSING

UIC

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

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Nature and Scope

- Miscommunication among healthcare providers contributes to 80% of serious medical errors[1], resulting in 210,000 deaths[2] and losses of $12 billion annually[3]

- Poor patient satisfaction levels, reduced collaboration, poor teamwork, and increased adverse patient outcomes are related consequences[4, 5]

- Lack of role awareness/responsibilities among health care providers contributes to miscommunication[6, 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 2) collaboration and 3) communication

Synthesis of Literature

Educational strategies for developing interprofessional collaborative practice (ICP) competencies as defined by Interprofessional Education Collaborative (IPEC) analyzed

- Databases: Ovid, PubMed, and CINAHL (2004-2015)

Job-shadowing improves ICP:
- Increased understanding of team member roles[5, 9]
- Diminished stereotypical thinking about other providers[4, 10]
- Promotion of team building[10, 11]
- Potential aversion of future professional conflicts[4, 5]

Theoretical Framework: Complex Adaptive Systems[12]
- 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 $p < 0.001$; * $p < 0.048$)

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

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:

Qualitative Theme	Example
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"

Outcomes (Continued)

Post job-shadowing survey :

IPE Competency	Question Content	Agree/ Strongly Agree
Role	My knowledge of what APNs bring to the health care team has significantly increased	86%
Collaboration	My openness to learning about patient care from APNs has significantly increased	83%
Attitudes	My respect for the knowledge/skills of APNs has significantly increased	81%
Values	Overall, this experience was a valuable part of my education	86%

System Qualitative Results:

Stakeholder	Feedback
Colleges	- Logistics/organization well-designed - Advocate for experience available to future M2 and P3 students
Clinical Partners	- 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

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