EFFECT OF A CREW RESOURCE MANAGEMENT LECTURE AND ACTIVITY ON STUDENT READINESS FOR INTERPROFESSIONAL LEARNING

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OBJECTIVES
To evaluate baseline readiness and effects of a lecture on team-based decision making using Crew Resource Management on readiness for interprofessional education among pharmacy students.

BACKGROUND
• ACP Standard 11 emphasizes the value and need for schools of pharmacy to provide interprofessional education (IPE) throughout their curriculum.
• One source that was an impetus for this emphasis on teamwork in healthcare was the seminal text To Err is Human, which highlighted collaboration among healthcare disciplines as a means to improve patient safety.
• There are stark similarities between healthcare and commercial aviation regarding safety and collaboration.
• Aviation, in an effort to improve safety and team work has been using Crew Resource Management (CRM) programs since 1979.
• There are several benefits and a noted need for CRM to be taught in healthcare including pharmacy curriculum.
• All in all the concepts and practical applications of CRM emphasize many of the same themes and necessities that would provide a solid foundation for future IPE activities.

METHODS
Third year pharmacy students were given the Readiness for Interprofessional Learning Scale (RIPLS) Survey before and after a one hour lecture and one hour activity. Both the lecture and activity focused on team-based decision making emphasizing principles of Aviation Crew Resource Management and it’s application to healthcare teams. The class activity involved voluntary groups of students acting out scenarios based on actual medical errors from aHR.gov webM&M cases. Upon the conclusion of each scenario the entire class participated in a “who’s fault is it and how can we fix it” discussion focusing on team delivered health care, shared responsibility, and human limitations.

RESULTS
Consenting participants (n=83) completed a Pre- and Post- RIPLS survey to assess the effects of the lecture and activity on student attitude and perception regarding IPE. All statistical analysis were performed with graphpad Prism®.

M&M Case Role Play Example:
- You receive an order for Dapsone 100 mg po TID for PCP pneumonia prophylaxis.
- You look up dapsone in lexicomp to find Dapsone dose should be 100 mg TID (MonWedFri)
- Call the nurse who took the med history and ask if they put in home meds correctly.
- While waiting you tell someone “page the physician who wrote that dapsone order.”
- When you hear back from the nurse you simply say “ok, that’s fine. I still think it’s a dose a little high.”

Nurse
- When called by pharmacist say “YES, I put in what the patient told me, but I’ll verify with family.”
- Go talk to family and get the original prescription
- In response to dosage comment say “well that’s what the prescription from her oncologist says we’ll go with that.”

Resident
- You get a page from the pharmacist downstairs during rounds.
- You’re having a busy day and the last thing you want is them bugging you about some IV to PO conversion or something you find unimportant.
- You call down to the pharmacy and y’all discuss the dapsone dose.
- You tell them “I don’t feel comfortable changing what her oncologist wrote so don’t change it.”

Family Member
- Provide original prescription to nurse, say “we double checked the original prescription, here it is.”

RIPLS Survey Questionnaire
1. Learning with other students/professionals will make me a more effective member of a health and social care team
2. Patients would ultimately benefit if health and social care students/professionals worked together
3. Shared learning with other health and social care students/professionals will increase my ability to understand clinical problems
4. Communications skills should be learned with other health and social care students/professionals
5. Team working skills are vital for all health and social care students/professionals to learn together
6. Shared learning will help me to understand my own professional limitations
7. Learning between health and social care students before qualification and for professionals after qualification would improve working relationships after qualification/collaborative practice
8. Shared learning will help me think positively about other health and social care professionals
9. For small group learning to work, students/professionals need to respect and trust each other
10. I don’t want to waste time learning with other health and social care students/professionals
11. It is not necessary for undergraduate/ postgraduate health and social care students/professionals to learn together
12. Clinical problem solving can only be learnt effectively with students/professionals from my own school/organization
13. Shared learning with other health and social care professionals will help me to communicate better with patients and other professionals
14. I would welcome the opportunity to work on small group projects with other health and social care students/professionals
15. I would welcome the opportunity to share some generic lectures, tutorials or workshops with other health and social care students/professionals
16. Shared learning and practice will help me clarify the nature of patients’/clients’ problems
17. Shared learning before and after qualification will help me become a better team worker
18. I am not sure what my professional role will be/ is
19. I have to acquire much more knowledge and skill than other students/professionals in my own faculty/organization

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<th>RIPLS Subscales</th>
<th>Item Numbers</th>
<th>Range of Possible Points</th>
<th>Pre- Median (range)</th>
<th>Post- Median (range)</th>
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<td>Role &amp; Responsibility</td>
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<td>3-15</td>
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<td>77 (25-92)</td>
<td>85 (57-95)</td>
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* Students respond on a Likert scale from 1- Strongly Disagree to 5 Strongly Agree

CONCLUSIONS
Overall, students demonstrated a relatively high baseline self perception of their level of readiness for interprofessional learning. In addition, a lecture and activity increased student readiness, and may be considered by other institutions as a preparation that could make large scale planned interprofessional education activities more successful.