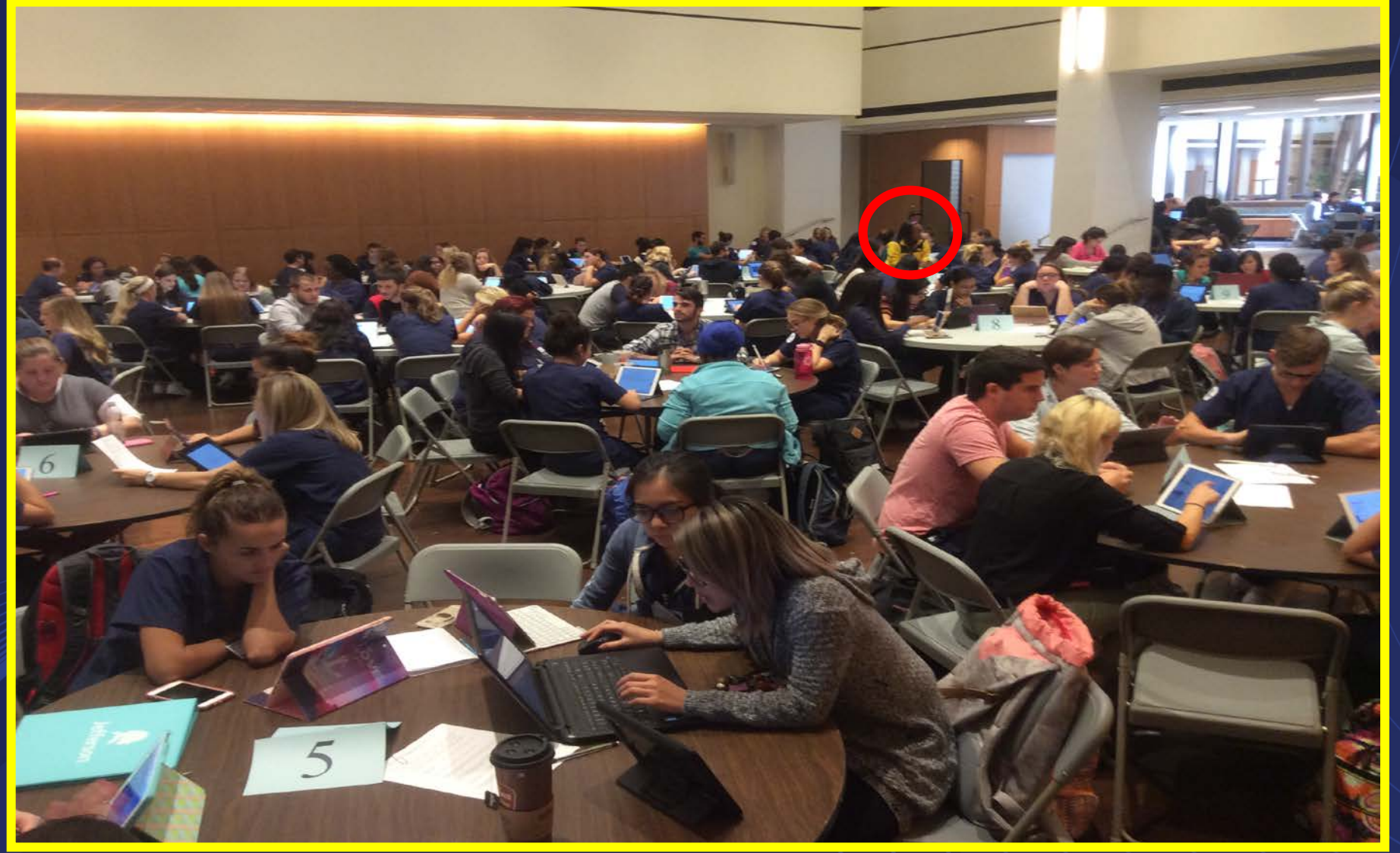
# Development of an Inter-professional Root Cause Analysis Workshop within a Required Medication Safety Course

**Ginah Nightingale, Pharm.D., BCOP**
**Assistant Professor, Department of Pharmacy Practice**
**Jefferson College of Pharmacy, Thomas Jefferson University**
**Philadelphia, Pennsylvania**
**October 29, 2016**

# Faculty Disclosures

- Ginah Nightingale has no conflicts of interest or financial relationships to disclose

# Medication Safety – IPE Workshop!!



# Session Objectives:

At the conclusion of this presentation, the audience will be able to do the following:

1. Describe how a novel, collaborative inter-professional Root Cause Analysis (RCA) Workshop was used to facilitate inter-professional learning.

2. Describe how a RCA Workshop was able to assist students in meeting Inter-professional Education Collaborative (IPEC) Core Competencies.

# Background

- Approximately 400,000 people die annually from preventable medical errors resulting in greater than $30 billion in direct healthcare expenses and indirect losses.

- Hospitals and regulatory agencies, such as The Joint Commission, emphasize the relevance and significance of patient safety in healthcare.

- The Institute of Medicine, the Association of American Medical Colleges, the American Association of Colleges of Nursing, and the Accreditation Council for Pharmacy Education all advocate for increased inclusion of patient and medication safety principles and competencies in the academic curricula institutions.

Kohn L, Corrigan J, Donaldson M, eds. To Err is Human: Building a Safer Health System. Washington, DC: National Academy Press; 2000.

# Background

- The 2016 accreditation standards developed for the professional doctor of pharmacy (PharmD) degree underscores medication and patient safety as a critical element of pharmacy education.

- Standard 11 specifically focuses on inter-professional education, stating that the pharmacy curriculum should prepare all students to be contributing members of the inter-professional healthcare team to provide patient centered care in a variety of practice settings.

- A strategic partnership was made to broaden and expand inter-professional collaborative activities between Jefferson College of Pharmacy (JCP) and Jefferson College of Nursing (JCN) – thus creating the Root Cause Analysis Workshop in the Fall 2015.

Accreditation Council for Pharmacy Education. 2016 Accreditation standards and key elements for the professional program in pharmacy leading to the Doctor of Pharmacy degree. Available at https://www. acpe-accredit.org/pdf/Standards2016FINAL.pdf. Accessed July 20, 2016.

# Audience Poll Question

How many of you have created or developed an inter-professional medication safety activity at your institution?

A YES

B NO

# Required Medication Safety Course

- The required, 2-credit Medication Safety course has been part of the JCP curriculum since 2009. The course introduces medication safety principles including the culture of medication safety, error reporting systems, causes of medication errors and the influence of technology on medication errors.

- The course content is delivered through didactic 2 hour, once-weekly classroom lectures and out of class readings, quizzes, group activities and group presentations.

- One key assessment is the team-based root cause analysis.

- This assignment historically has been completed solely by PharmD students (fall 2009-2014) until Fall 2015 when the inaugural inter-professional RCA Workshop commenced.

# IPE Workshop Planning

- Intense planning and coordination among JCP + JCN was required to develop, organize and implement this IPE activity.

- Prior to the workshop, nursing students were provided the Root Cause Analysis lecture handouts and recordings and were instructed by their faculty to review the materials as part of their didactic course.

- Students were assigned to teams (2-3 pharmacy students + 3-4 nursing students). On the day of the workshop, students introduced themselves and received a clinical case involving a medication error. Students assessed the cause(s) of the error and evaluated the 10 key elements (developed by the Institute of Safe Medication Practices) that influence/contributed to the error.

# IPE Workshop Planning

- Workshop objectives: 1) Identify and evaluate the root causes of a medication error according to Institute of Safe Medication Practices system elements; 2) Discuss and reflect upon the importance of inter-professional communication and teamwork when managing medication errors; and 3) Identify and respect the unique knowledge, values, roles/responsibilities and expertise of other healthcare professionals involved in the medication use-process to prevent errors and improve patient safety.

- Objective metrics: Objective #1 was measured by completion and evaluation of the root cause analysis assignment. Objectives #2 and #3 were measured via student completion of an 8-item survey focusing on the IPE core competency domains of inter-professional communication, team member roles and responsibilities and teamwork.

# Root Cause Analysis IPE - Results

- Evaluation of RCA assignment: Overall, performance on the inter-professional root cause analysis assignment was high. Each team accurately identified the medication error present in their assigned case.
  - RCA assignment average Fall 2015 – 90% (18/20 points)
  - RCA assignment average Fall 2016 – 85% (17/20 points)

Fall 2015 (N=191)
Fall 2016 (N=232)

# RCA IPE Survey: Quantitative Data

My inter-professional team members worked together and discussed each question in the case before a final decision was made on determining the team's response(s).
**(N=423, mean = 4.87)**

My inter-professional team environment was one of open communication and shared-decision making.
**(N=423, mean = 4.87)**

My inter-professional team members were cooperative and collaborative.
**(N=423, mean = 4.88)**

**1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree**

Participating in this root cause analysis activity encouraged me to reflect upon the importance of inter-professional teamwork in regards to preventing medication errors.
**(N=423, mean = 4.85)**

I am able to identify the unique knowledge, roles/responsibilities and expertise of other healthcare professionals involved in the medication use-process to prevent errors.
**(N=423, mean = 4.84)**

Participating in this inter-professional activity increased my interest in participating in more inter-professional activities as part of my school's curriculum.
**(N=423, mean = 4.78)**

Fall 2015 (N=191)
Fall 2016 (N=232)

# RCA IPE Survey: Qualitative Data

**What additional health professions would you like to see participate in this activity in the future?**

"Medical, PT / OT, PA -- because it's a matter of inter-professional collaboration so all professional team members are vital."

"Med students because they have valuable input for ensuring quality patient care and to have a physician's perspective."

**What specific recommendations can you provide to improve this inter-professional activity for the future?**

"I would have liked the opportunity to share our opinions and case studies with other groups."

"This should be an assignment that we can upload on our iPads."

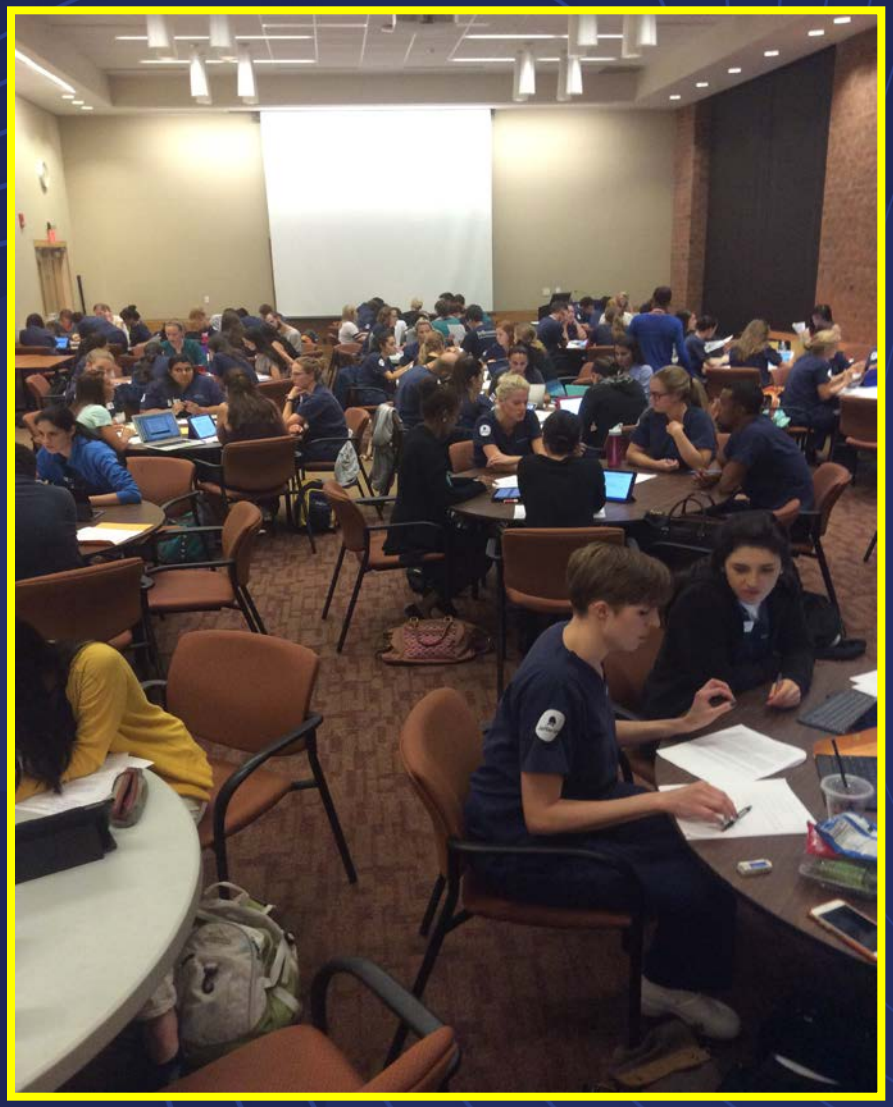
"Snacks and beverages would be excellent."

# Final Points….

- Given the significant roles and responsibilities that pharmacists and nurses have regarding the medication use process, this RCA Workshop was created to mimic a more “real world” medication safety experience. Participation in this workshop enhanced student comprehension and application of medication safety principles and awareness of the roles and contributions of the different health professionals.

- Recommendations for future investigation and/or incorporation into education and/or practice settings: The next goal is to expand the workshop to include additional health professions students (i.e. physician assistant program).

# Medication Safety – IPE Workshop!!



# Acknowledgements

I would like to acknowledge and thank the following faculty members who assisted with developing this activity:

- Elena Umland, PharmD, Associate Dean Academic Affairs, Jefferson College of Pharmacy, Thomas Jefferson University
- Mary-beth Pavlik, RN, MSN, Faculty, Jefferson College of Nursing, Thomas Jefferson University
- Jason Schafer, PharmD, MPH, Faculty, Jefferson College of Pharmacy, Thomas Jefferson University

# Development of an Inter-professional Root Cause Analysis Workshop within a Required Medication Safety Course

**Ginah Nightingale, Pharm.D., BCOP**
**Assistant Professor, Department of Pharmacy Practice**
**Jefferson College of Pharmacy, Thomas Jefferson University**
**Philadelphia, Pennsylvania**
**October 29, 2016**