CREATING AN INTERPROFESSIONAL STUDENT COMPETITION

Ingrid Lopes, D.O.
Associate Professor
Objectives

• To review the development of a 90-minute case-based interprofessional team competition that focuses on the topic of medical error recognition

• To stimulate interest and confidence in developing a single-event program to introduce or augment IPE at your university
Introduction

• Touro University California has 3 colleges:
  • College of Osteopathic Medicine (COM)
    • First class graduated 2001.
  • College of Pharmacy (COP)
    • First class graduated 2009.
  • College of Education and Health Sciences:
    • Education
    • Physician Assistant/Master of Public Health Program (PA/MPH)
      • First class graduated 2005.
    • Master of Public Health
      • Single track programs
      • Dual degree programs: DO/MPH and PharmD/MPH
Just 16 months ago...

• January 2010
  • A pharmacy colleague, Dr. Karl Meszaros, proposes developing an interprofessional competition based on medical errors.
  • This was my first formal introduction to IPE.

• March 2010
  • It took 9 weeks to develop the project, and the first annual Touro University Interprofessional Teams Clinical Competition, or TIPTCC, occurred 03/09/2010, with 39 students in attendance, representing COM, COP and PA/MPH.

• August 2010
  • The Keystone Club is formed by students from every college with the goal of promoting IPE at Touro University.

• October 2010
  • The interprofessional, student-run free community clinic opens in Vallejo.
Just 16 months ago...

- **November 2010**
  - We have the first meeting of the campus-wide Interprofessional Steering Committee.

- **March 2011**
  - The 2\(^{nd}\) annual **TIPTCC** occurred 03/29/2011, with 207 students in attendance.

- **April 2011**
  - Wow! Have the floodgates opened or what?
  - The challenge now is to guide/develop/construct useful and efficient IPE opportunities for all our students, with the goal of replacing and not just adding onto existing course work.
THE NUTS AND BOLTS →
A competitive event is fast and fun!

- We hoped to provide students, faculty and administrators with a provocative snapshot of IPE.
- We wanted to hold the event in 9 weeks, so we had to keep it simple.
  - Decided to limit participation to osteopathic, pharmacy and physician assistant students and assigning one to each team (13 teams of 39 students)
  - Wanted it to run 90 minutes.
  - Decided to develop 18 problem sets based on 5 fictitious patient cases, using a multiple-choice format.
  - Audience-response polling allowed for quick feedback as well as keeping track of points to determine 1st, 2nd, and 3rd place teams.
- Why the topic of medical errors?
  - Abundance of evidence showing that collaborative healthcare teams improve patient safety.
  - It’s an important topic for all 3 student groups.
Putting the project together

- We began by narrowing the target student groups:
  - 2nd year osteopathic & pharmacy students and 1st year PA students
- We had to review all the academic schedules to find a time when the students didn’t have a class.
  - We found a suitable day and set the time as 4:30-6 pm.
- The medical topics had to be limited to the group with the least background: the 1st year PA students
  - Hematology, orthopedics and rheumatology
- We wanted to be able to challenge but not overwhelm the students.
  - The cases needed to be sufficiently complex and have aspects that would include OMM and pharmacology.
  - We wanted to create situations that emphasized shared leadership and decision-making.
Putting the project together

• We wanted to have additional faculty participation without taxing colleagues who were supportive but unfamiliar with IPE.
  • We asked representatives from several programs to serve during the competition as an expert panel to review the problem sets after the teams voted on each.
  • Pharmacy, OMM, Primary Care
• Getting student volunteers
  • Advertising with fliers and class announcements
  • Refreshments for all and prizes for the top 3 teams
  • We didn’t have a budget for this!
    • Requested and received financial support from the Provost and the Dean of COP.
Putting the project together

• What did we hope to achieve?
  • To create an opportunity for students from the 3 health care professions to meet each other and share ideas
  • To use clinical problems that would give each student the opportunity to share decision-making and leadership in a small, collaborative group
  • To engage the students in thoughtful dialogues that would challenge their clinical thinking and give them the opportunity to learn something new from each other
  • To foster a curiosity about how other health professionals approach clinical problems
  • To provide a model that they might be able to use to achieve optimal patient outcomes in clinical rotations and practice
A sample case

Mrs. Green
A 58-year old Caucasian female is admitted to a local hospital with the chief complaint of extreme fatigue and weakness for two months. Her past medical history is significant for rheumatoid arthritis, diagnosed 25 years ago, which affects her hands, feet and neck. She denies other chronic medical conditions. Her past surgical history consists of an appendectomy at age 13. She decided to stop two of her medications a month ago, thinking they might be worsening her fatigue and weakness. Her neck pain is 9/10.

CURRENT MEDS:

1. Vicodin 5/500 mg 2 tabs every 4-6 hours as needed for pain.

PRIOR MEDS:

1. sulindac 150 mg one tab PO BID with food
2. methotrexate 10 mg one tab PO once a week

ALLERGIES: sulfa causes a rash, NKFA, negative latex allergy

Her vitals on admission are: BP 105/58, pulse 98, resp 15, temp 97.8° F, pulse oximetry 96% at room air, wt 120 lbs, ht 5’4” per patient, BMI 20.9.
The admitting resident notes that Mrs. Green is mildly dehydrated and gives the order to start intravenous normal saline at 100 cc/hr. The following actions are also taken by the resident:

1. Change to hydrocodone/APAP 5 mg/325mg 2 tabs every 6 hours as needed for pain
2. Order celecoxib 100 mg one tab PO twice a day
3. Perform soft tissue OMM of the patient’s cervical spine
4. Request the patient’s medical records by faxing an authorization signed by the patient
5. There are no potential medical errors in the actions above.
Two days later, the resident reassesses Mrs. Green, who requests “something else for my constipation.” The chart shows that she has had no bowel movements. The patient has been eating well and continues to deny abdominal pain. She has had no episodes of emesis since her admission. The abdominal exam is unremarkable. The patient says her neck is still hurting and requests additional treatment. The following events occur:

1. Diet orders are revised to include high-fiber meals and to encourage the patient to drink 16 ounces of water per shift.
2. Orders are written to discontinue the intravenous normal saline but to maintain the IV site.
3. The resident discontinues bisacodyl and orders magnesium citrate 240 ml PO one time.
4. The resident uses several osteopathic techniques to treat the cervical spine, including muscle energy, soft tissue, and HVLA.
5. There are no potential medical errors in the events above.
Two days later Mrs. Green requests “something else for my constipation.” She has had no bowel movements. The patient has been eating well and denies abdominal pain. She has had no episodes of emesis since her admission. The abdominal exam is unremarkable. The patient says her neck is still hurting and requests additional treatment. The following events occur:

8% 1. Diet orders are revised to include high-fiber meals and to encourage her to drink 16 ounces of water per shift

31% 2. Orders are written to discontinue the intravenous normal saline but to maintain the IV site.

8% 3. The resident discontinues bisacodyl and orders magnesium citrate 240 ml PO one time

46% 4. The resident uses several osteopathic techniques to treat the cervical spine, including muscle energy, soft tissue, and HVLA

8% 5. There are no potential medical errors in the events above.
ASSESSMENT
<table>
<thead>
<tr>
<th>#</th>
<th>Survey Item</th>
<th>Strongly agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
<th>Mean score**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I know the students of other TUCA colleges very well.</td>
<td>8%</td>
<td>8%</td>
<td>15%</td>
<td>62%</td>
<td>8%</td>
<td>2.5</td>
</tr>
<tr>
<td>2.</td>
<td>I frequently study together with students of other TUCA colleges.</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>31%</td>
<td>69%</td>
<td>1.3</td>
</tr>
<tr>
<td>3.</td>
<td>This is the first time that I worked on clinical problems with students of other professions.</td>
<td>69%</td>
<td>15%</td>
<td>0%</td>
<td>15%</td>
<td>0%</td>
<td>4.4</td>
</tr>
<tr>
<td>4.</td>
<td>I am glad that I participated in TIPTCC</td>
<td>75%</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.8</td>
</tr>
<tr>
<td>5.</td>
<td>I enjoyed working with students from other colleges at TIPTCC</td>
<td>85%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.9</td>
</tr>
<tr>
<td>6.</td>
<td>The format of TIPTCC was good</td>
<td>31%</td>
<td>31%</td>
<td>23%</td>
<td>8%</td>
<td>8%</td>
<td>3.7</td>
</tr>
<tr>
<td>7.</td>
<td>I learned something new at TIPTCC</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>5.0</td>
</tr>
<tr>
<td>8.</td>
<td>I am looking forward to work together with colleagues from other professions in my rotations</td>
<td>83%</td>
<td>8%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
<td>4.7</td>
</tr>
<tr>
<td>9.</td>
<td>I heard a lot about interprofessional education before TIPTCC.</td>
<td>0%</td>
<td>0%</td>
<td>31%</td>
<td>31%</td>
<td>38%</td>
<td>1.9</td>
</tr>
<tr>
<td>10.</td>
<td>Interprofessional education is useful.</td>
<td>85%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.9</td>
</tr>
<tr>
<td>11.</td>
<td>Interprofessional education is necessary.</td>
<td>85%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4.9</td>
</tr>
</tbody>
</table>

* The 39 participants responded in groups of 3.
** The mean score was calculated as the average of the choices where “strongly agree” was worth 5 points “agree” 4, etc. Scores greater than 3 indicate agreement with the item statement, scores less than 3 indicate disagreement.
<table>
<thead>
<tr>
<th>Survey of participants 6 months after the Teams Competition (N=24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Do you agree with the following statement?</td>
</tr>
<tr>
<td>“The experience of TIPTCC helped me in my rotations to</td>
</tr>
<tr>
<td>interact and communicate better with health care workers</td>
</tr>
<tr>
<td>from other professions.”</td>
</tr>
<tr>
<td>Responses</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>I strongly agree</td>
</tr>
<tr>
<td>I agree</td>
</tr>
<tr>
<td>Possibly</td>
</tr>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>I don’t know</td>
</tr>
<tr>
<td>I don’t know</td>
</tr>
<tr>
<td>2) Were all the members of your interdisciplinary group</td>
</tr>
<tr>
<td>active and engaged during TIPTCC?</td>
</tr>
<tr>
<td>Responses</td>
</tr>
<tr>
<td>All group members were actively participating</td>
</tr>
<tr>
<td>Only 2 members were active</td>
</tr>
<tr>
<td>Only 1 member was active</td>
</tr>
<tr>
<td>Some members were “tuning out” from time to time</td>
</tr>
<tr>
<td>I don’t remember</td>
</tr>
<tr>
<td>3) Typically, how did your interprofessional group decide</td>
</tr>
<tr>
<td>which answer to “click” for the slides in TIPTCC?</td>
</tr>
<tr>
<td>Responses</td>
</tr>
<tr>
<td>A group leader decided</td>
</tr>
<tr>
<td>By majority vote</td>
</tr>
<tr>
<td>By accepting the opinion of an “expert” (i.e., the COP, COM</td>
</tr>
<tr>
<td>or PA student) knowledgeable about the problem</td>
</tr>
<tr>
<td>By discussion until consensus was reached</td>
</tr>
<tr>
<td>I don’t remember</td>
</tr>
</tbody>
</table>
Summary

- Keep it simple! Decide on a major theme or topic and develop 4-5 cases.
- Consider using audience-response software, even if the event is not a competition.
- Design 2-4 multiple-choice questions per case, creating a plausible series of actions or choices that will generate discussion in the teams.
  - Do designate a best “expert” response, even though the event is not a formal assessment.
  - Open-book format
  - Allow 3-5 minutes per question, depending on the complexity.
It’s time for questions.

- Please contact me with more questions, thoughts, & good ideas: ingrid.lopes@tu.edu