Three years of experience in teaching about medical errors: A problem-based learning approach

Anne Caffee
Shenandoah University
School of Pharmacy

Background

- Health care is asked to monitor, acknowledge and correct errors
  - Ideally, monitoring of past errors will prevent future errors from reaching patients
- As members of the health care team, pharmacists work to prevent and respond to medication errors

Error Analysis Workshop

- Part of a two semester practice based laboratory course in the third professional year
- Requires 2 scheduled lab sessions

Curriculum Introduction

- Discussion of errors and their health impact
- Definitions of terms
- Examples of root cause analysis, and failure modes and effects analysis

Curriculum Continued
Problem based learning (Part One)

- Small groups are assigned an error case and perform a root cause analysis in a simulated “care-team”
  - Each group of 5 to 6 students gets a different case
  - Presentation of findings from each group to the class allows sharing of information

Curriculum Continued
Problem based learning (Part two)

- Simulated patient encounter which focuses on a medication dispensing error with or without harm to the patient
  - Encounters are videotaped for later self-assessment by the student
  - Each student prepares a consult letter to the Primary Care provider addressing the error and recommending or reporting a resolution

Measures of effectiveness

- Faculty assessment of the small group presentations, and additional suggestions for the entire class
- Faculty assessment of consult letter for a student grade
- Student self-assessment of videotaped encounter, (also SP feedback card)
- Student assessment of the workshop experience (Course evaluation)

Evolution

- Much of the introduction was in lecture format the first year
- This is being replaced with a required reading, prepared notes of definitions of terms, and a videotape of professional experiences resulting from errors
- Goal – More time for “Hands On Learning” and small group discussion
- Result – Faculty are still retreating to our comfortable and familiar lecturing format

Evolution *Continued*

- Small group discussion now has specific assigned roles for each team member to promote different perspectives
  - Team recorder - Patient
  - Pharmacist - Prescriber
  - Nurse / administrator
  - Other (if needed for 6 member group)
- Goal – Prevent myopia of pharmacist's perspective
- Result – Less blaming

Evolution *Continued*

- Simulated Encounter has changed each year
- First two years were very successful, with “near miss” cases
- Third year was less successful with error reaching the patient, and pharmacy student fixated on the clinical issues of potential toxicity rather than the issues of communication, and error correction

- Goal – return focus to systems issues and communication

Application to medical education

- Larger classes may require more time allocation
- Simulated encounters require a great deal of equipment and personnel
- Limited the scope of cases to allow emphasis of errors issues over other patient management issues