

## Developing Case Studies

Rod Anderson  
Linda Young

Ohio Northern University

## Introductions

- Rod Anderson ([r-anderson@onu.edu](mailto:r-anderson@onu.edu))
  - \* Medical Microbiology
- Linda Young ([l-young@onu.edu](mailto:l-young@onu.edu))
  - \* General Microbiology (w/ Laboratory)
  - \* Nursing Microbiology
  - \* Cell Biology

## Agenda

- \* The many benefits of incorporating case study analysis into your curriculum
- \* Resources for writing your own cases
- \* Tips for implementing case studies into your course(s)

## Case Writing Suggestions

- \* Use Actual Cases
- \* Personalize the Format

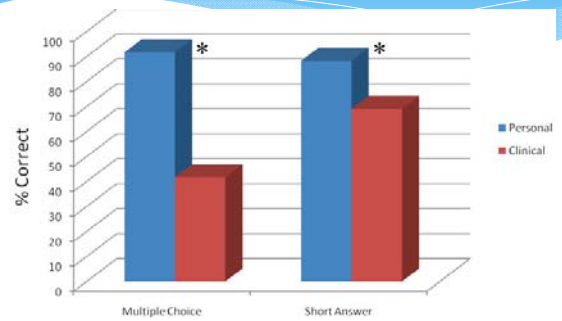
### Why Use Actual Cases...

- You can't make this stuff up
- Students take solving the case more seriously

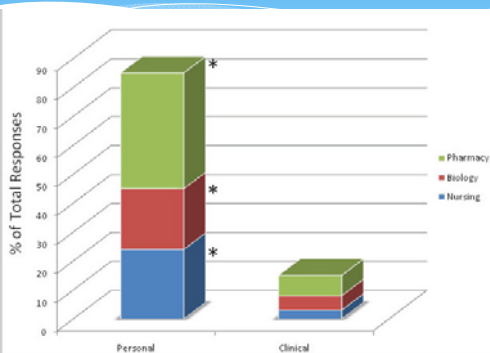
## Why Personalize Format...

- \* Better long-term retention of content
- \* Helps students to empathize with patients
- \* Cultivates transcultural awareness in health care
- \* Encourages development of a more global perspective in health care

## Evaluation of content retention by students at least three weeks after completing case studies



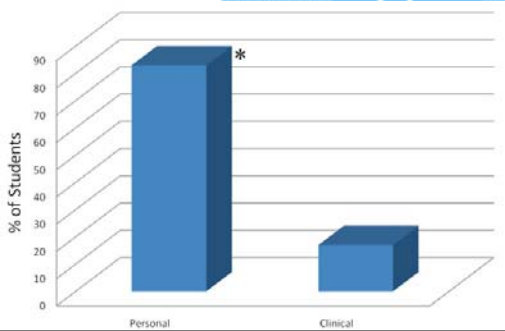
## Student response to case study format survey: "The \_\_\_\_\_ format made it easier for me to empathize with the patient."



## Cultivating Transcultural Awareness

- \* Introduces students to diseases and outbreaks that occur in cultures different than their own
- \* Requires them to solve infectious disease problems but using solutions that work best within the cultural context
- \* Example in "Caída de mollera" case given in handouts

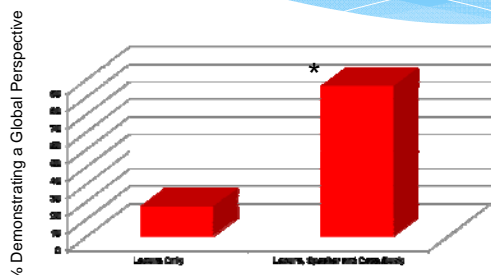
Student response to case study format survey:  
 “The \_\_\_\_\_ format was more effective at increasing understanding of medical care for patients with differing ethnicity.”



## Encouraging Development of a Global Perspective

- \* Introduces students to diseases and outbreaks that occur in areas without a well developed health care infrastructure
- \* Requires them to prevent spread of disease using available resources
- \* Compels prioritization of resources
- \* Example in “*Outbreak in Rwandan Refugee Camp*” given in handouts

## Developing a Global Perspective



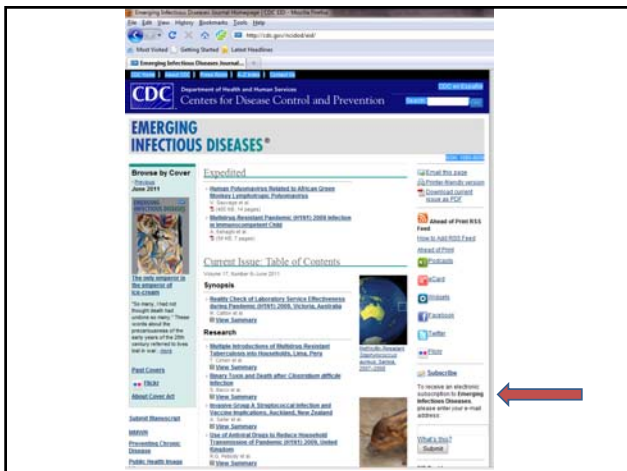
## Resources for Developing Personalized Case Studies

- \* Personal experience
- \* Family members, friends, coaches, etc
- \* Interviews with health care providers
- \* News sources combined with science reports



## Sources for Interesting Diseases and Outbreaks

- \* Morbidity and Mortality Weekly Report
  - \* <http://cdc.gov/mmwr/>
- \* Emerging Infectious Diseases
  - \* <http://cdc.gov/ncidod/eid/>
- \* Drudge Report
  - \* <http://drudgereport.com/>
- \* New York Times Health
  - \* <http://www.nytimes.com/pages/health/index.html>



## Developing a Case Study

- \* Form a group of about 4 people
  - \* Introductions
    - \* Size and Type of Class Taught
- Tell a < 4 minute story
  - “A friend of mine had ...”

## Developing a Case Study

- \* Choose an infectious disease from one of the stories you heard (or use one of your own)
- \* Select a focus for the case
  - \* Diagnostic
    - \* Students need to identify pathogen from clinical picture and lab tests
  - \* Non-diagnostic
    - \* Students given disease/pathogen and must answer other information about the disease (prevention, transmission, treatment, etc.)

## Developing a Case Study

- \* Write questions you would like students to be able to answer
- \* Compose Narrative
  - \* Use personal names
  - \* "Clues" = season, patient age, location, underlying conditions
- \* Intersperse your questions to guide students through case

## Developing a Case Study

- \* Consider adding appropriate photos
- \* **Boldface new terms and define immediately**
- \* **Have fun!**

## How have we successfully used case study analysis in our classrooms...

- \* Large versus small class size
  - \* ~70 students/section
  - \* 20-45 students/section
- \* Laboratory-based versus no laboratory
- \* Variable cohorts (ability level, course preparation, etc)
  - \* Pharmacy
  - \* Pre-professional, allied health, environmental studies
  - \* Nurses

## Team Construction

- \* Instructor Chooses
  - \* One high GPA
  - \* Two average GPA
  - \* One lower GPA
- ❖ Team Leader=Highest GPA
- ❖ Electronically post list of teams

## Practice Case

- \* Case + completion guidelines posted electronically prior to class
- \* Break into assigned groups for in-class work session
- \* Eavesdrop!
- \* Wrap up points (you can never review too much!)

## Practice Case Grading

- Develop key/rubric based upon your expectations for quality of work
- Use lots of comments when marking case
- Include “faux grade” for case
- Fast feedback

## Real Case Analysis

- Analyze in or outside of class as schedule permits
- Expect more as the term progresses
- Determine if case replaces or complements lecture material
- Tailor case assignment to meet specific learning outcomes
- Test case material throughout term and on final exam (include a “mini” case)
- Confidential group collaboration feedback

## Wrap Up

\* Questions??

\* Suggestions??

\* Great Ideas??