



## Practice of Medicine

### Doctor, Patient and Society

- Patient interviewing
- Physical exam/history taking techniques
- Ethics
- Doctor/patient relationships
- Doctor/patient communication

### Problem-Based Learning

- Self-directed learning in small group format
- Integration of basic science and clinical knowledge
- Use of clinical information resources
- Contextual learning and analysis of six cases
- Closely tied to medical informatics curriculum
- Differential diagnosis and decision making

### Clinical Apprenticeship Program

- Observe practice and delivery of care
- Real life community/clinic experience

## Librarian's Role

- Serve as student resource for health, informatics, and technology information
- Teach medical informatics skills
- Evaluate student use of resources
- Attend all PBL sessions; each librarian has two PBL groups
- Informatics integrated into PBL curriculum objectives
- Librarian-created web-based medical informatics textbook
  - Example: Hip Fracture Case (69 y.o. female with osteoporosis)
    - Student evaluation of “good” and “bad” osteoporosis website
      - ➔ Patient brings information from a website that the physician determines is incorrect information. Students critique the website and its information in PBL and each returns the following week with a better website to share.
  - Demonstrate MEDLINE searching competency through graded exercise
    - ➔ Using MEDLINE, find practice guidelines on treating diabetes in general and find a recent review article on diet therapy and insulin - dependent diabetes to share with the attending physician



# Testing Search Skills in a Real-Time, Cased-Based Setting

Patricia Wilson, MIS; Alexandra Gomes, MSLS, MT; Anne Linton, MS  
Himmelfarb Health Sciences Library, The George Washington University

## Setting

- Three computer classrooms in Himmelfarb Library (48 computers)
- Class tested in four groups of 40 using three proctors, one secretary, and one librarian to assist other patrons in adjacent lab
- Students requiring additional time were scheduled in either the first or third sessions
- Web-based exam (Prometheus course management software)
- Special training accounts established in Ovid MEDLINE and MD Consult
- Students saved work to disk
- Files section of Prometheus disabled prior to exam
- Time for exam limited to two hours; strictly enforced
- Questions were both multiple choice and essay



## Exam

### Multiple choice

- Psychosocial questions
- Medical informatics questions on copyright and email communication between physician and patient

### Essay

- Case-based questions
  - Allergic rhinitis and consumer advertisements
  - Ephedra and weight loss

### Resources available to students

- Ovid MEDLINE
- MD Consult
- World Wide Web

### Evaluation

- Tutors graded clinical content of essay
- Librarians evaluated use of information resources
- Multiple choice questions graded by Scantron®

## Exam Evaluation

### Library Lessons Learned

- Enormous time and personnel commitment
- Careful coordination among library, course director, and Education Program office
- Fewer computers available for other patrons at end of semester
- Back-up plans essential
  - Network failure - paper exam
  - Software problems - save frequently to disk
  - Hardware problems - reserve more computers than expected students
- Printing exam at end of session worked better than disk submission for Education Program office

### Student Evaluation

- Overwhelmingly positive on formal evaluation completed in Prometheus
- Concerns expressed about stability of Prometheus, computer networks and access to electronic resources
- Some apprehension about new testing format

### Interim Changes to Real Time Testing

- Moved the testing program to <http://www.blinex.com/> for increased stability
- Began grading entire exam online
  - Changed from paper to online
  - Established grading criteria prior to grading online
  - Once submitted, grades could not be changed
  - More grading lead time was necessary than first estimated
- Test responses highlighted need for more integration of Informatics into PBL for Year 03-04

### The Future

- Integrate PBL exam with DPS exam
- Student conducts exam on simulated patient and takes history (evaluation by clinician)
- Student then accesses computer for treatment information in real time (resource evaluation by librarians)
- Student returns to simulated patient for follow-up and explanation of conditions (evaluation by clinician)

