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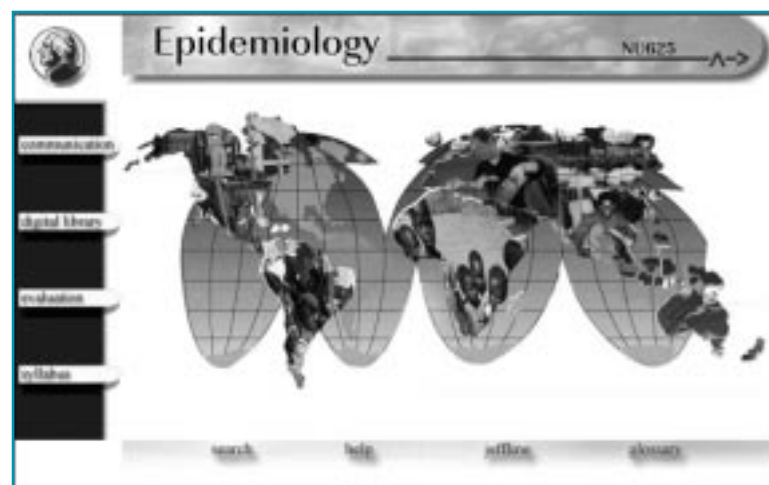
News from Academic Information Services and Research

Tuning Up Education for the New Millenium

Consider this scene in the educational future of two working nurses: Both are enrolled in Nursing 625, Foundations of Epidemiology. Both arrive home from work in the late afternoon and must prepare to attend class. One nurse grabs a quick sandwich, dashes to her car, and drives to Jefferson praying that she will find a convenient parking space near her classroom. She arrives with only minutes to spare and tries to focus on the material the teacher is presenting.

In the meantime, the other nurse enjoys dinner with her family, reads the newspaper, and then decides it is time for her Epidemiology class. But instead of dashing for her car, she turns on her computer, connects to JEFFLINE, and logs onto an on-line course. Except for a few weekend orientation and testing sessions, she can take the whole course from the comfort of her home.

How far into the future do we have to go before this scenario is true? No further than mid-September, 1998, when the Internet version of Nursing 625 makes its debut. For the first



time, Jefferson students will have the choice of taking a class in either the traditional lecture format or in an electronic format delivered over the Internet. Students will be able to “attend” the class in their homes or at work (wherever they have access to a computer with an Internet connection) or in any computer lab at Jefferson if they choose to come to campus.

According to Mary Schaal, R.N., Ph.D., Director of the Graduate Nursing Programs, “Conflict among roles, availability or accessibility of programs, and varying work hours prohibit individuals from enrolling in educational

programs designed in a traditional format.” Dr. Schaal states, “Distance education programs are a promising strategy that will enable nurse educators to extend learning opportunities to individuals who have not been able to meet their educational goals.”

Molly Rose, CRNP, Ph.D., instructor of Nursing 625, agrees that, “Distance learning provides a way to learn closer to home and to decrease hours lost in travel.” She also points out that, increasingly, students need different ways to receive their education. “Besides the time saving, the Epidemiology course addresses the fact that *Continued on page 2*



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Education for the New Millenium

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students have varying learning styles. This course will provide a variety of learning modalities—stories, exercises, group discussion via listservs, reviews of recent studies—to accommodate these varying learning styles of today’s graduate nursing students.”

Anthony J. Frisby, Ph.D., Head of Instructional Design for AISR, agrees that learning opportunities must be made more readily available to meet the changing needs of practicing professionals. He states that, “Life-long learning is now recognized as a necessity to stay current and competitive in nearly every profession. This is a wonderful time to be an information consumer. Though distance education has been around for a very long time, the Internet has made it easier for providers to deliver a variety of learning technologies to a very large audience.”

Dr. Frisby and the rest of the AISR design team worked for several months with Dr. Rose to convert her lecture notes and course material to an on-line format. The team included Michael Hamlin, Ph.D., Director of Education Services and Marketing; Susan Jones, Education Services Librarian; Tom Sommerville, Computer-Based Learning Designer; Chris Braster, Computer-Based Learning Developer; and Inessa Melamed, Oracle Programmer.

According to Dr. Hamlin, “Conversion of course material to an Internet format presents interesting challenges. We had to remember that students will be sitting alone with their computers for the entire semester. Although on-line discussions can enliven

the course, it is important to look for every opportunity to make the material dynamic and interactive.”

Dr. Rose had to make adjustments to her approach to course design as well. According to Rose, “It was important to write the lectures in such a manner that the students feel as if they are reading a lecture rather than reading textbook material reiterated over the Internet.”

According to Dr. Schall, more courses will be in the works. “Initially, the Nursing Department would like to offer the 18 credit core curriculum via a distance format. Ultimately, we should deliver the entire graduate program in that modality, not to

replace a traditional campus-based program, but to provide an additional learning opportunity for students.” ▲

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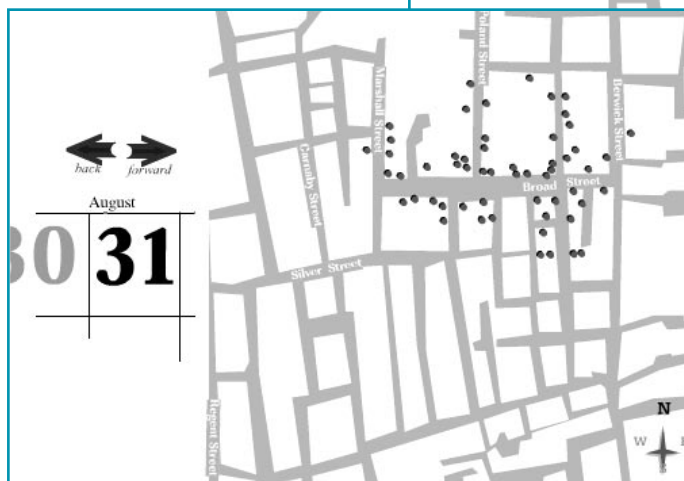
For this exercise, we are going to recreate some of the investigational procedures John Snow followed when trying to identify the source of a cholera outbreak in downtown London.

In September of 1854, 500 people died of cholera within a small section of downtown London known as the Soho. The map on the next screen is similar to the one we suspect John Snow produced to help his investigation.



August

28 29



Using an animated timeline, students can follow an historic outbreak that occurred in London in the mid-1800's.



September

31 1

Distance Learning

Live Distance Learning Via Jefferson Edu

For nearly 175 years, students at Jefferson have been able to learn the art and science of medicine from top Jefferson surgeons and physicians. On the morning of June 9, 1998, video technology opened a window on Jefferson medicine that would enable professionals outside the Jefferson community to learn from our skilled clinicians. Arnold J. Greenspon, M.D., Clinical Professor of Medicine, Associate Director of Cardiology and Director of the Cardiac Electrophysiology Laboratory, teamed up with AISR's Medical Media Services and Drexel University's Arye Rosen, Ph.D., E.E., Research Professor at the Drexel School of Biomedical Engineering, Science and Health Systems, to deliver a live telecast of a cardiac procedure to 1,000 electrical engineers gathered at the Baltimore, Maryland Convention Center for their annual IEEE (Institute for Electrical & Electronic Engineers) conference. Not only was this the Greenspon Cardiac team's first on-camera performance, but it was also the first time a procedure of any kind performed at Jefferson had been transmitted live to a remote site. It also marked the first cooperative effort between Jefferson and Drexel in the area of Biomedical Technology.

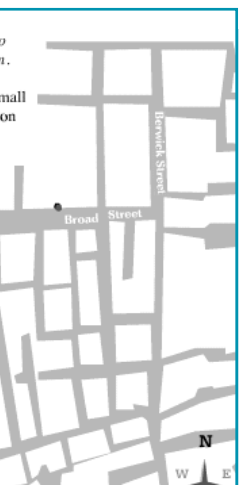
The telecast was part of a keynote address to the conference entitled, "Radio frequency/microwave applications in medicine: RF Ablation." The address started with a brief introduction by Dr. Rosen, during which the audience was shown a series of live video images from the

cardiac catheterization laboratory. As the engineers watched these images in Baltimore, a team of doctors, nurses and technicians at Jefferson were preparing a 25-year-old female patient, suffering from chronic ventricular tachycardia, for a minimally invasive procedure that would resolve her abnormally rapid heart rate.

The cardiac catheterization laboratory, located on the fifth floor of the Gibbon building, was more crowded than usual that morning. Three video cameras were set up within the laboratory, and staff members from Medical Media Services were working in a

nearby conference room, which had been transformed into a satellite transmission control center. They were in contact, via headsets, with a team of engineers inside a satellite transmission truck provided by WHY-TV. The live audio and video signals from the lab were sent through several hundred feet of cable to the truck parked five stories below, which then relayed them to the Baltimore site in real time.

After directing his team in the precise placement of several catheters within the patient's heart, Dr. Greenspon took Dr. Rosen's cue from Baltimore,



Learning Begins at Jefferson With Two Facult

ational Television



turned to the camera, and after briefly greeting the conference attendees, proceeded to explain the details of the delicate operation which was about to take place under his direction.

During Dr. Greenspon's presentation, the audience followed the progress of the RF ablation procedure, which uses radio frequency to "burn" a small area of the heart muscle and subsequently interrupt the electrical current that causes the rapid heart rate. At the end of the procedure, Dr. Rosen and Dr. Greenspon discussed the status of the patient and the successful completion of the procedure. The signal to Baltimore was shut off, the team was off the air, and everyone breathed a sigh of relief!

The Medical Media staff was relieved because they had successfully managed all the complex technology involved in broadcasting Jefferson's first live transmission of a medical procedure. Dr. Greenspon's team was relieved because the ablation procedure had been flawless, and the team's first on-camera performance was over. Dr. Rosen was relieved to see that several months of planning had resulted in a successful presentation. And finally, the electrical engineers in Baltimore must have breathed a sigh of relief too; they had just watched a whole cardiac procedure, and they hadn't seen one drop of blood! ▲

For information on the educational uses of videoconferencing contact:

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JEFFLINE Receives Another "Rave" Review

The *Dow Jones Business Directory* reviewed the TJU Hospital web site and made the following positive comments about JEFFLINE. "...the crowning jewel here is the JEFFLINE area. JEFFLINE, a source for academic, research, and clinically relevant information for Thomas Jefferson University and its affiliates, offers a wealth of health-care information, focused in areas such as research and education, on-line publications and additional medical-reference services such as MEDLINE."

The Dow Jones Reviews include what they call "Key Site Pages." The key pages they cited at Jefferson included the JEFFLINE Home Page:
<http://jeffline.tju.edu/>

ty-AISR Collaborations

Where Does Learning Take Place?

Getting A Handle on Things

Two Committees have been appointed by the Deans and University Counsel to study changes in the way the University conducts business related to distance education.

The Committee on the Economics of Distance Education is studying the financial, marketing, educational support and intellectual property aspects of delivering education to distant learners through technology. Web site at: <http://jeffline.tju.edu/Education/LIP/economics.html>

The Committee on Licenses and Copyright is recommending principles related to the licensing agreements the University signs for resources such as databases and electronic books and journals. It is also developing new guidelines for the use of copyrighted materials by University faculty and students.

If you answered “in a classroom”, please read on. It should be no surprise to anyone that, increasingly, education is taking place in front of a computer screen: at home, in the office, at the public library. The scale of what is taking place in computer-based education, however, might be more surprising. Consider the following:

- The for-profit University of Phoenix had annual revenue of \$282 million and net income of \$30 million in 1997 from its Internet-based education.
- The U.S. Army intends to spend \$840 million over a 13-year period to provide global access to training through distance education.
- Fifty-five percent of all four-year colleges and universities were engaged in distance education in 1997.
- An estimated 1 million students are now connected to distance education programs. That number is estimated to grow to over 3 million by the year 2000.

These trends reveal a major shift in education. Increasingly, learning will take place outside the traditional classroom and will be provided by corporate entities with a profit motive.

TJU is ready to compete in this environment. This year we roll out our own sleek model of distance education with a graduate-level course in epidemiology. (See p. 1) The core principle for the epidemiology course is “asynchronicity,” that is, learning when you want, where you want.



Edward W. Tawyea,
University Librarian and Director, AISR

At the same time, the University is expanding the infrastructure necessary to support “synchronous” learning (same time, but not necessarily same place). Last year Medical Media Services installed equipment capable of sending and receiving video/audio conferencing via a telephone connection. This integrated system of video cameras, microphones, computers, and computer switching devices allows the University to participate in complex meetings across the globe. (See p. 3 for a related story.)

Some campus lectures which were once available only if you were present to hear them can now be accessed from anywhere via the Web. AISR staff are audio-taping key lectures, synchronizing slide images, and making them available on JEFFLINE. Check out

an excellent lecture by Dr. Robert Perkel entitled “Ten natural substances all physicians should be prescribing” at: <http://jeffline.tju.edu/Education/lectures/>

The world of learning is changing rapidly, and TJU is capitalizing on the evolving technologies to meet the challenge. Whether it’s the Library delivering electronic books to our students in three states, a continuing nursing education module offered to our geographically-dispersed alumni population over the Internet, or a teleconference of grand rounds for the entire Jefferson Health System, the University will continue in its 175-year tradition of providing the highest quality education possible.

I hope you enjoy this current issue of *AISR Connections*. ▲

Elizabeth R. Warner Wins Top Librarian Award

What's New on JEFFLINE?

The Jefferson Office of Health Policy and Clinical Care Outcomes, a leader in health outcomes research, education, and training, has added an information-packed site on JEFFLINE.

Readers can find information about their:

- Mission
- Staff
- History
- Publications

along with other relevant information. Check under the "What's New" section on JEFFLINE or at: jeffline.tju.edu/CWIS/OHP/ohp.html

Many College of Health Professions faculty and numerous classes of CHP students have been instructed in the use of the health science literature by Elizabeth R. Warner, MSLS, AHIP, Coordinator of Information Literacy Programs for AISR Education Services. Betty has been recognized as the campus expert to turn to for instruction on searching and integrating the health literature into education and research.

This May, Ms. Warner was recognized by another group of health professionals when she was named 1998 Librarian of the Year by the Nursing and Allied Health Resources Section (NAHRS) at the 1998 Medical Library Association (MLA) Meeting. The award is given in recognition of outstanding leadership, achievement, and commitment in meeting information needs of nursing and allied health professionals.

Peg Allen, in presenting the award remarked, "I think you will all agree that Betty's career exemplifies commitment to the objectives of our section." A long-time member of MLA, Betty has served NAHRS and the Philadelphia Chapter in many



Elizabeth R. Warner, dressed in victorian style to celebrate MLA's 100th Anniversary, receives her award from previous winners Margaret (Peg) Allen (1994), Library/Information Consultant and Ellen Hall (1997), Charles A. Dana Medical Library, University of Vermont.

roles including NAHRS Secretary/Treasurer from 1991-1993, Editor of the Information Skills column in NAHRS newsletter since 1992, course designer/instructor for several MLA CE courses, and MLA Philadelphia Regional Chapter President 1982-1983. She is a distinguished member of MLA's Academy of Health Information Professionals.

A magna cum laude graduate of Holy Family College, Betty received her MSLS from Villanova

University in 1977. She joined the Jefferson family in 1986 as a Reference Librarian and quickly took on many educational responsibilities. In her current role as Coordinator of Information Literacy Programs in AISR Education Services, Betty designs and teaches credit courses and electronic tutorials and gives lectures on information management. ▲



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