Today's ever-changing health care environment is placing new demands on health professionals. In an era of intense competition, health care practitioners must balance costs, quality of care and the need to stay current in their field. Along with the need to locate patient information, in any given day, there might be a need to:

- update knowledge by locating an article, journal or book,
- attend continuing education courses
- seek out a colleague for a consultation, or
- locate patient education resources.

To meet the growing need for patient and administrative data, the JHS (Jefferson Health System) is turning to new computer solutions. HealthLink will provide the capability to follow patients throughout the system. JEFFLINE, from Thomas Jefferson University, will provide a shared set of information and educational resources for JHS staff. HealthLink will ensure quick and easy access to patient information. JEFFLINE will serve to assist JHS members in locating the knowledge-based resources they need to make sound clinical decisions as well as educational resources to keep professional skills current.

Although HealthLink is still in the design stages, JEFFLINE has been used for several years by clinicians, faculty and students. JEFFLINE was developed by library and computer systems professionals to assist clinicians in locating information resources. JEFFLINE will give 24-hour access to:

- the most widely-used medical and health information databases,
- on-line learning and communication tools, and
- the ever-growing body of health information on the Internet.

According to Edward Tawyea, Director of Jefferson’s AISR (Academic Information Services and Research Division), “Our goal with JEFFLINE is to create a shared knowledge and educational environment for the entire JHS. With this service we will deliver quality, peer-reviewed resources for making clinical decisions and conducting research and a mechanism to deliver educational programming for lifelong learning.”

This issue of AISR Connections will provide you with a “road map” of JEFFLINE’s main clinical and educational features. It will also introduce the benefits and educational services you will enjoy with your JEFFLINE connection provided by AISR.
THOMCAT uses World Wide Web technology that allows the same “point and click” interface as other parts of JEFFLINE.

THOMCAT’s new hypertext power and flexibility lets you follow graphical links to all our library materials. There are three modes of searching — keyword, browsing, and exact term. The new system also supports more sophisticated searching, notably boolean searching and truncation.

A special feature allows for easy downloading of information, as well as forwarding results from a THOMCAT search to an e-mail account.

Are you looking for information about allergies, asthma or nursing? Check JEFFLINE’s Library Section and try JEFFSelects.

JEFFSelects shows you how the traditional cataloging and organization skills of librarians can be applied to Internet-based information to help you locate the information you need. Internet information resources included in JEFFSelects reflect the needs and interests of the Jefferson community. All resources are annotated and organized according to broad subject areas.

JEFFSelects is a collection of Internet resources and was created to provide a “virtual library” of on-line information. Containing links to Internet sites from around the world, this module includes resources hosted by Jefferson and those hosted by other institutions.
The new JEFFLINE web-based databases allow you to search a number of health and medical citation indexes using one graphical interface. As quick and easy to use as pointing and clicking a mouse, the new JEFFLINE databases provide a wide variety of search options. Search by keyword, authors, or journals, or combine search options to create powerful search strategies. Print or save your search results to your diskette or even send it via e-mail to yourself or a colleague. Members of Jefferson University and Hospital also have access to a set of full text journals and can view pictures and graphs and save or print the articles.

The JEFFLINE HomePage (http://jeffline.tju.edu) was judged to be excellent in its design, layout, and delivery of information in a design competition with libraries across the country. The Office representation is an example of the power of the World Wide Web for information organization and layout. Click on the Library to view an array of library-related resources, choose Patient Care to view a number of clinically-related information resources or select the Education section to discover a number of on-line learning tools.
JEFFLINE Offers Lifelong Learning Opportunities

JEFFLINE contains a number of sections that should be of interest to health care providers.

The Patient Care Page contains a number of information resources that will interest practitioners, including information related to diagnostic and teaching tools for patient evaluation, a selected subset of full text materials especially chosen for patient care information, patient education material and practice guidelines developed by professional organizations. Clinicians can also participate in JEFFRounds. JEFFRounds is an on-line discussion forum that focuses on a clinical issue of current interest. The first JEFFRounds, held in November 1997, featured a case study related to hepatitis and was moderated by Dr. Steve Herrine of the JHS.

JEFFLINE's Education section contains a number of tutorials that include both text and pictures on topics such as informatics, anatomy and physiology.

The Education Section also includes a growing number of audio lectures on important health-related topics. Audio and text can be heard and viewed on computers in the office or even at home. Listeners can step backward or forward through a presentation by use of a control panel much as they would with a VCR.

JEFFLINE users can also find news of educational opportunities, such as continuing education courses and information management classes offered by the JEFFLINE Education Services instructors.
Jefferson's health care information systems plan is progressing toward its goal of providing a shared patient registration system across a variety of care delivery settings. But current accurate, easy-to-access patient data is only part of a clinician's information requirements. JCAHO and LCCME recognize the need for immediate access to MEDLINE, the key database for the literature of the medical profession. Health data networks of individual patient information, such as HealthLink, need companion networks of knowledge resources. Each individual patient's data and information must be placed into the context of the state of the art of medical knowledge.

Starting this fall, JEFFLINE, the education and health information network of Thomas Jefferson University, is available to all of the Mainline members of the Jefferson Health System. JEFFLINE provides entry to a vast biomedical "knowledgebase" containing searchable citation indexes such as the MEDLINE and CINAHL databases, computer-based teaching programs and the Internet. With new powerful World Wide Web-based software such as the JEFFLINE databases and THOMCAT, the Scott Library catalog, clinicians have access to a virtual on-line library of knowledge that can be searched 24 hours a day.

But to view JEFFLINE solely as an on-line library underrates its power as a communication medium and teaching tool. To succeed in today's competitive health care environment, the Jefferson Health System must be an educational organization, or to use a popular management phrase—"a learning organization." Every care provider and manager must continually upgrade skills and knowledge to keep up with changes in technology and new research findings. JEFFLINE educational resources can provide an electronic learning environment for both Graduate Medical Education and continuing education for health care professionals.

JEFFLINE will give the members of the Jefferson Health System a shared knowledge and education environment where practitioners can explore the use of on-line discussion groups, and tap into an expanding electronic curriculum of education and continuing education offerings. For instance, JEFFLINE will provide on-line educational programs for Graduate Medical Education that will ensure residents can access a wide range of educational materials wherever they are in the JHS. In another instance, physicians and other health care professionals with electronic mail can join together to form an on-line discussion group about current topics in health care. Members of the discussion forum can share or create instructive cases complete with radiographs or other visualization aids. In a sense, this form of electronic forum will provide the possibility for creating new educational formats such as a "virtual" consult or grand rounds.

JEFFLINE has only just begun to respond to the needs of the JHS. As we all use this on-line system more, we will discover its strengths and be able to recommend new and additional features. To assist JHS staff in learning to use this new knowledge resource, the JEFFLINE Education Division of Academic Information Services and Research is providing a range of courses and other educational opportunities.

I am confident that the skilled and creative staff of AISR are prepared to continue to "grow" JEFFLINE as one more way to help integrate our health system and to help us integrate information/knowledge management into Graduate Medical Education and patient care.

Guest Commentary by Thomas J. Nasca, MD

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Jefferson's health care information systems plan is progressing toward its goal of providing a shared patient registration system across a variety of care delivery settings.
To complement the knowledge and information resources which JHS Staff can find on JEFFLINE, the JEFFLINE Education Division will provide orientation sessions or training on database and Internet searching.

According to Dr. Marvin Gozum, Director of Clinical Informatics for AISR, computer literacy training is important for physicians. "My main concern is that physicians receive an adequate conceptual foundation in applied computer literacy, so that they will be ready to adopt new technology when it is introduced," he explains.

As part of the agreement to provide JEFFLINE resources to the JHS, AISR JEFFLINE Education Services and Systems Departments will provide you or your department with:

- information management classes
- departmental or group demonstrations, and
- basic phone assistance for JEFFLINE or database searching problems.

"Although access to the information on JEFFLINE and the Internet is getting easier, many health care professionals find that the most efficient way to become fluent with the new forms of information retrieval is to schedule some time to learn about the clinical uses for JEFFLINE," states Dr. Michael Hamlin, Director of AISR’s JEFFLINE Education Division.

JEFFLINE Education sessions can help you learn how to:

- update your knowledge by locating an article, journal or book reference
- search the Internet
- learn more about on-line communication resources
- locate patient education resources
- use some of the more sophisticated features of our new JEFFLINE web-based databases, and
- improve individual and departmental skills in information management.

The AISR JEFFLINE Education Department will be available— as it is to all staff and faculty of Thomas Jefferson University and Hospital— to help you plan, deliver and evaluate your departmental or individual information needs.

AISR and the JHS have prepared an extended support plan to help members of the JHS with their JEFFLINE connection. If you have problems with JEFFLINE or the JEFFLINE databases, you should contact Les Gundry at Bryn Mawr Hospital Library. If, for some reason you cannot contact Les Gundry, call Barbara Shearer at AISR. For educational opportunities, contact Michael Hamlin or Gail Leone.

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