

Internet Offers a Wealth of Information

A video of a baby appears on the computer screen, the sound of its croupy cough spilling from the speakers as the baby's tiny chest contracts with each cough. Accompanying text explains the symptoms and treatment of croup. With a few clicks of the mouse, a video of lung surgery fills the screen as part of a text book on pulmonary diseases.

Welcome to the Iowa Virtual Hospital, a World Wide Web site (<http://vh.radiology.uiowa.edu>) that melds dozens of medical text books with video, photos of three-dimensional cross sections of organs, patient information and numerous other tools.

"Instead of going to the library the library goes to you. That's now important for the health care provider. In the future, I think that will be even more important for patients. In the move to disease prevention and taking charge of our own health, patients will have the same information providers do," said Jeff Galvin, MD, co-director, Iowa Virtual Hospital and professor of radiology and internal medicine at the University of Iowa.

The Virtual Hospital is one of thousands of medical resources now available via the Internet. From perusing the holdings of the US National Library of Medicine to calling up abstracts of medical journals from around the world, the growth of the Internet has made research and communication much easier for the medical professional.

Leonid Malkov, editor of the *Journal of Computer Technologies in Medicine*, published in Moscow, coined the word "internetization" to describe the explosive growth of the Internet. Just as the invention of the telephone transformed communication in the 20th century, the Internet will revolutionize learning and communication in the next century, he said.

"I think the Internet will be like a whole new world opening up to us because of the infinite possibilities. Access to medical journals alone will greatly enhance our work," said Jakov Nakatis, MD, president, of the Medical Center of St. Petersburg in the Name of Sokolov, said after a conference workshop on the Internet.

Partners Put Internet to Work

Many partners have already harnessed some of the Internet's power in their work. For example, when a young man in critical condition was brought to Stavropol Krai Hospital in Russia last summer, Lev Dubovoy, MD, queried Surginet, an on-line mailing list, to find out how best to repair the patient's torn artery leading to his liver. He received more than 20 responses from around the world as well as a manual on ruptured vessels donated by the Boston University Medical Center. Today the patient is doing well.

Elzhan Birtanov, MD, director of the Almaty, Kazakstan Toxicology Center, also used the Internet to help treat patients. Faced with an upswing in the use of the drug Ecstasy by teenagers, he put out a plea for information on warning signs of overdoses and how to treat them. He got five responses--from Jacksonville, Florida to Vienna, Austria.

"By using the Internet, I am able to solve clinical problems I face every day," Birtanov said. "Once you've tried it, there's no going back."

Workshops by AIHA Technology and Information Resources Unit staff have helped information coordinators like Dubovoy and Birtanov at partner hospitals learn both basic and advanced techniques for using the Internet. A week-long workshop prior to the Des Moines conference taught information coordinators how to perform advanced searches for medical information on

the Internet as well as how to create their own Web pages. And recent seminars in Tallinn Estonia and L'viv, Ukraine gave information coordinators intensive training on Internet resources. Information coordinators in all of the partnerships are also working to create learning resource centers where staff can access the Internet.

Stumbling Blocks on the Road to Information

Despite its enormous benefits, the Internet is far from problem-free. Pavel Gulyaev, MD, a physician at the Almaty Institute of Pediatrics, outlined some of his concerns at a conference session. Because most of the information is only in English, there is a language barrier for those in the NIS and CEE. A lack of access to and training on the Internet can also hinder practitioners' use. And the vast resources on the Web can overwhelm busy professionals, he said. To overcome these obstacles, Gulyaev is creating catalogs and indexing the information that he finds on the Internet.

Access to such a gamut of information also raises questions of responsibility for health care practitioners.

"I consider it important to have information of the side effects of the technology," said Zviad Kirtava, MD, PhD, Director of the National Information Learning Center in the Republic of Georgia. "The success of projects like ours and the Iowa Virtual Hospital will rest on how well we understand the details: How will having access to all this information affect choices made by patients? Are you vulnerable to lawsuits from patients? Who is responsible for the advice?"

Still, the positive aspects of the Internet overshadow many potential problems, said Irina Bakhtina, director of the Post-graduate Nursing School, at Sokolov Medical Center. "We can use the computer to find the information we need and not be torn away to search in the library. With our work, it's important to save every minute--and money, too. I think that's the importance and the power of the Internet."