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If telemedicine's on way in, are doctors' offices on way out?

Dr. Jay Sanders may specialize in the field of telemedicine, but he hates that term. "I wish we could get rid of the word," he said during his keynote speech at the American Medical Informatics Association's (AMIA) annual fall symposium in Nashville, Tenn.

The declaration seemed surprising because it came from a physician who established a statewide telemedicine system in Georgia and currently serves as president of the American Telemedicine Association. However, Sanders explained that the term creates problems because it conjures up images of a unique specialty or discipline when it is nothing of the sort. "Telemedicine is nothing new or different from what we do every day," he said. "It is just another medium for transferring medical information."

In fact, any physician who consults a colleague by phone is practising telemedicine; adding data and synchronous video to the equation is simply the next logical step in the telecommunications revolution.

Current barriers to the expansion of telemedicine include the lack of a

consistent communications infrastructure. Unfortunately, the rural areas that could benefit most from this technology are usually the ones with the most primitive telephone systems. Another problem is the coordination of physicians operating within a telemedicine system. However, Sanders believes that most consultations will be conducted in a "store and forward" mode that will leave specialists free to review cases when they have time. "Think of it as multimedia email," he said.

These issues aside, Sanders considers telemedicine a tremendous tool for patients because it will free them from geographic constraints and bring service to the point of need, in much the same way automatic teller machines bring banks to the place of purchase. He also predicts that the US government will soon have a telemedicine capability on all its naval ships and embassies. One day, he said, many consultations will take place in the patient's home via interactive devices that will be as cheap and plentiful as TV sets. "When we get sick we go to the doctor's office or emergency room," said Sanders. "Soon health care will come to us."

Visions of the future are somewhat clouded by the limitations of the systems available today and the perception that the efforts of specialists in informatics often go unappreciated by more clinically oriented colleagues. "Build it and they might come," quipped one physician.

New telemedicine systems demonstrated during the conference included tele-endoscopy and tele-trauma. With the latter system, a specialist at a tertiary care centre is able to advise doctors at a remote site how to handle seriously injured patients.

Network security remains a major concern, for how do you balance the security issues surrounding unauthorized use against the need for ease of access by legitimate users? We were also warned about the inadvertent downloading of "Trojan horse" programs from the Internet. Although they appear to perform a useful function, another program will be running unperceived in the background and those funds in your bank account may be undergoing an electronic transfer to someone else's account in Europe. Another workshop dealt exclusively with Java-based web robots and ways to prevent the illegal "mining" of medical data.

Other sessions demonstrated successful Internet-based applications of health care, including many large multifacility enterprises that use Internet and Intranet technology to transfer patient data and communicate between colleagues.

Computer technology is running far ahead of policy, which in turn is far ahead of practice. Still, the way ahead seems clear, with many reasoning that telemedicine, informatics and even health care itself will eventually merge into a single, indivisible entity.

The symposium proceedings achieved a new standard by being published in 2 formats: registrants received both a printed version and a CD-ROM. In the electronic format, every word is indexed and all 400 articles are searchable with Adobe Acrobat, which is included on the disk. It appears to be only a matter of time before the symposium, like the ideal computerized medical record, is completely paperless. — Dr. Robert Patterson, general surgeon and fellow in medical informatics, University of Utah.



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