

TELENURSING THE CAREER FOR THE 21ST CENTURY

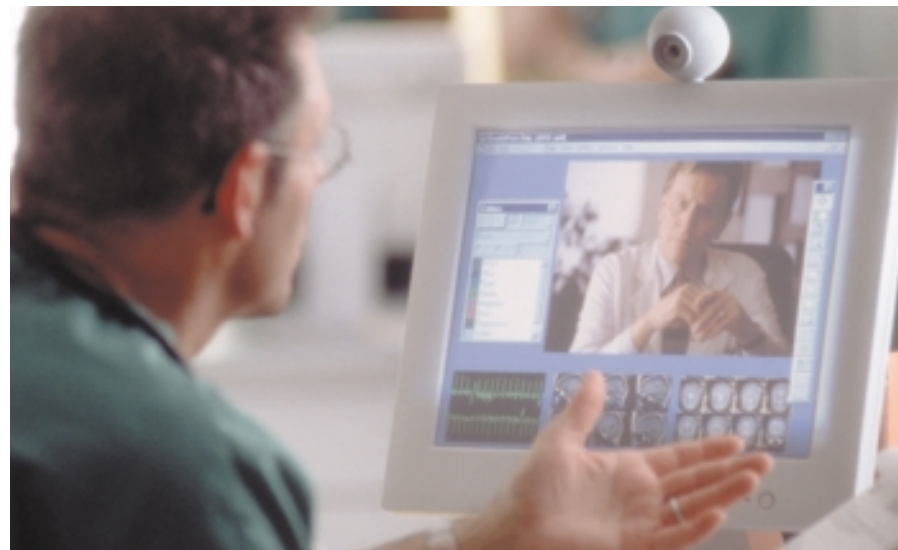
BY NANCY J. SHARP, MSN, FAAN, RN

Telemedicine is the use of telecommunications and information technology to provide health care services to individuals at a distance from the provider. It represents the future of the home health industry, and will revolutionize the quality of patient care as we know it.

According to Bauer and Ringe, "the twentieth century model of medical care – that is, the doctor defining the medical problem and deciding what to do about it – will be replaced by the twenty-first century model where many patients will make these decisions with assistance from a variety of practitioners."¹ In fact, many believe that telemedicine will grow over the next few years to the point where it will be just another patient care tool. It won't be long before videoconferencing is part of everyday care. And it won't be long before patients are equipped with peripheral devices attached to their PC's or televisions that can transmit their vital signs directly from home.

A "Virtual" Visit

Home telemedicine, or "telehomecare," is the electronic delivery of health care services to the home, with the patient as an active participant. One state-of-the-art system for telehomecare is described by Stanley Finkelstein and others.² Their videoconferencing system is designed to conduct virtual visits using a two-way visual and audio interaction between the nurse at a central site and the patient at home. The low-cost



videoconferencing technology operates over a POTS (plain old telephone service) line. A set-top box in the patient's home is connected to the television and a telephone line. A small video camera/microphone sits on top of the box. The nurse initiates the virtual visit by calling the patient, who is seated in front of the television and talks to the nurse before him on the screen. The camera is portable so the patient can move it or point it at a particular location to give the nurse a close-up view. The nurse can obtain excellent still pictures by using the snapshot/freeze-frame function.

The virtual-visit nurse (or telenurse) uses a central station at the home care agency consisting of: (1) a videoconferencing unit connected to a regular telephone line, (2) a VCR for capturing the interaction with the patient, and (3) a

computer workstation for consulting the patient's record. All patient data is stored in a home health care database. The virtual-visit nurse maintains a log of all interactions, noting any problems that have occurred.

Patients receive home monitoring equipment appropriate to their conditions, including automatic blood pressure monitors, a pulse oximeter to measure oxygen saturation and pulse rate, and for COPD patients, an electronic spirometer connected to a palm-top computer to measure lung function. (Training materials have been developed so the home care nurse can teach either the patients or their caregivers how to use the equipment.)

The set-top box also incorporates a web browser that works in conjunction with the internet, and a wireless keyboard is also provided. After connect-

ing to the internet, patients are greeted by name and can browse specific web sites related to their diseases. They also have access to a simple web-based messaging system for communicating with the nursing personnel at their home care agency.

Home telemedicine is currently available through nearly one hundred programs nationwide. There are hun-

drreds of choices among telecommunications-ready tools on today's market. The key is matching the right equipment with the needs of a particular patient or group of patients. In less than a decade, new technologies have helped transform traditional home care visits from only on-site nursing visits to a mix of on-site visits with virtual visits by video-phones, television, and computer-operated devices.

the way, the physicians and home health agency nurse administrators will make those changes together. One precautionary note: televisits are not substitutes for on-site visits; they need to be scheduled under specific criteria set up by the home health agency.

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Once a diagnosis is made, telenurses visit patients electronically in the home to administer care. Nelson and Schlach-

ta suggest the following qualities for the telenurse: strong clinical expertise and leadership skills; a knowledge of computers and informatics; the ability to collaborate and negotiate; the ability to take risks and venture into new territory. Telenurses should also be independent and comfortable with making decisions.³

Telenurses today are typically program managers, clinical coordinators, or head nurses at telemedicine centers

Legislative Issues

Reimbursement is always a problem with new programs. Senator Jim Jeffords (R-VT) developed the most creative piece of telehealth legislation in the 106th Congress, which ended in December, 2000. His bill, "Telehealth Improvement and Modernization Act of 2000" (S.2505) included several legislative "fixes" for the original telehealth legislation which had been initiated in Balanced Budget Act of 1997. Senator Jeffords' "fixes" were:

- providing direct reimbursement for the physician or practitioner (NP, CNS, or PA) for telehealth services furnished to the eligible Medicare patients,
- establishing a \$20.00 facility fee for the site where the patient is located,
- elimination of the separate person

to present the patient over the videoconferencing system to the consultant,

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- no fee-splitting between referring practitioner and consultant, and
- further clarification on the home health payment. These elements were all included in the final Medicare reform bill (H.R. 5661) which was signed in the last minutes of the 106th Congress by President Clinton on December 21, 2000.

Several nursing groups were active lobbyists on the telehealth legislation. Among the most active were the American College of Nurse Practitioners and the American Nurses Association. These groups also participate in the meetings and briefings organized by the Center for Telemedicine Law and the federal Joint Working Group on Telemedicine.

An issue of major concern to nurses is cross-state nursing practice. The National Council of State Boards of Nursing (NCSBN) has been working diligently on interstate compacts to help telehealth nurses who work in more than one state jurisdiction. You can review their deliberations on the new book, "Telenursing: Nursing Practice in Cyberspace," is an excellent resource in this area.⁵

Crusaders for the Future

One of the key factors to maintaining a successful home telemedicine program is having a "champion" in the agency who believes in telemedicine's great benefit to patients and institutions. This doesn't happen by itself – we need champions for the cause, who believe in telemedicine and will be long-term advocates of these programs. Dan Pesut, author of *Crusaders and Tradition Bearers*, asks if we are crusaders or traditionalists: crusaders are change agents who see problems now and want to improvements for the future; tradition bearers are the preservers of what is best from the past and the present.⁶ In order for home telemedicine to grow as it should, we definitely need some crusaders!

In the spring of 2000, a group of nurses gathered to see if there was enough interest in establishing a nurse consultancy to help spread the word on how to organize home telemedicine programs. A new company, iTeleHealth, Inc., was formed, in Frederick, Mary-

land. iTeleHealth, Inc. has associate status openings for nurses who have experience and knowledge in the areas of telemedicine, software development, web site development and management. Also, the company welcomes nursing students interested in learning more about telemedicine to contact the group for information on internships and telehealth projects.

Today, nurse entrepreneurs are setting up home telemedicine businesses nationwide. This is a growth industry looking for a few good nurses to lead the way!

The author has worked in clinical and political nursing, and is currently involved in the launch of iTelehealth Inc.

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SUGGESTED READING

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TELENURSING RESOURCES

- Association of Telehealth Service Providers <http://www.atasp.org>
- American Telemedicine Association <http://www.americantelemed.org>
- National Council of State Boards of Nursing <http://www.ncsbn.org>
- Office for the Advancement of Telehealth <http://telehealth.hrsa.gov>
- Telemedicine Information Exchange <http://www.tie.org>