



POMERADO HOSPITAL
Poway, Calif.

This mock-up room features an interactive system on the footwall that could provide patients with videoconferencing capabilities, access to medical history, personal e-mail, TV and Internet.



[CHANNELING] WELLNESS

Patient entertainment and education systems

BY AMY EAGLE

The humble television is fast emerging as an important tool for patient care. No longer mere conduits for talk shows and soap operas, televisions are being used in sophisticated education and entertainment systems to promote patient health and safety, increase patient satisfaction and enhance staff efficiency. And they're doing it all in style.

As the television's scope has broadened, its profile has narrowed, with the newer liquid crystal display (LCD) TVs measuring just 3.5 to 4 inches thick, as compared with traditional 19-inch-deep cathode ray tube (CRT) sets. The slimmer sets fit less obtrusively into the design of the patient room, even at larger screen sizes.



EDUCATION IN HD

LG Electronics' Pro:Idiom content security enables authorized viewing of encrypted high-definition programs.



PRESCRIPTIVE VIEWING

LodgeNetRX provides educational programming on demand. Content can be broken down into small clips followed by interactive questions. The system also tracks and records patient comprehension.



HCI ROOMMATE

An Internet protocol TV, RoomMate features rounded corners to prevent injuries.

"One of the nice things about the LCD technology is that in the past, the largest television we could put in a patient room was a 20-inch CRT because of obstruction issues below the TV and how much clearance you needed," says Tim Wright, director of commercial health care for LG Electronics (www.lgcommercial.com), Englewood Cliffs, N.J. The company's newest line of hospital-grade TVs, coming out this fall, features screen sizes ranging from 22 to 42 inches.

These products, as well as the current LG lineup, incorporate many enhanced features designed exclusively for the patient environment and allow seamless integration with LG's interactive system providers. The company's Pro:Idiom content security enables authorized viewing of encrypted high-definition programs. High-definition displays provide the enhanced picture patients will be accustomed to seeing at home after the digital TV transition of February 2009, notes Wright.

The televisions manufactured by HealthCare Information (HCI) (www.hci.com), Loveland, Ohio, include several features designed specifically for health care, including rounded corners to prevent injury and a universal pillow speaker that can be used with any nurse call system. The company's BedMate TV, which is installed on a retractable arm to be viewed at the bedside, can even be operated by disabled patients using a sip-and-puff device.

The BedMate, as well as HCI's wall-mounted RoomMate television, is an Internet protocol TV (IPTV). In addition to television broadcasts, these 15- to 42-inch sets receive FM radio and provide video on demand via Ethernet, USB port or optional hard drive.

For example, movies or health education videos can be played on the television from a server located at the nurses' station or elsewhere in the hospital, explains HCI President Tom Gottlieb. Or, a caregiver can plug a flash drive into one of three USB ports on the set to show a patient information related to his or her condition. Visitors can also use flash drives to access pictures, videos or music for the patient's entertainment. "We call our IPTV, 'everything-on-demand,'" says Gottlieb.

If the hospital wishes, the television system can be integrated with the facility's picture archiving and communications system (PACS), to allow physicians to display images from the patient's medical record at the bedside.

The company's next generation IPTV design—to which the current sets will be fully upgradable—will provide for Internet browsing.

LodgeNet Healthcare (www.lodgenetrx.com), Sioux Falls, S.D., is a division of LodgeNet Interactive Corp., which provides interactive TV systems to 1.9 million hotel rooms worldwide. The company's LodgeNetRX Interactive Patient Television System relies on the same platform

and architecture proven in the lodging industry, says Gary Kolbeck, vice president of business development for LodgeNet Healthcare.

One of the primary functions of LodgeNetRX is to provide information about the hospital. Kolbeck says many hospitals have 150 to 175 screens of information on the system about their facility and its surroundings, as well as photos and short bios of people on the care team. "It's not just a whiteboard with caregivers' names on it," Kolbeck says.

Educational videos can be scheduled on the system or ordered on-demand by patients or caregivers. The system tracks which videos a patient watches, and can quiz the patient on his or her comprehension of the material. This information can be documented to demonstrate a hospital's efforts toward meeting health education mandates. The system can also manage day-to-day tasks like meal ordering. This is not only more efficient than a paper process, but the menu also can be integrated with the hospital's dietary system so the patient is presented only with those meals appropriate to his or her diagnosis. If the diet order changes, a pop-up message will prompt the patient to reorder the meal.

To assist with pain management, the system can automatically pose questions to patients about their level of pain and record this information to track pain levels across a patient's stay.

Requests for items like additional pillows or blankets can be made directly through LodgeNetRX, freeing up valuable time for nurses. Other hospital staff, like the chaplain, can be paged via the system. Kolbeck says the company is working on a design to extend full environmental controls to patients, so they will be able, for example, to change the room temperature or lower blinds with the TV system.

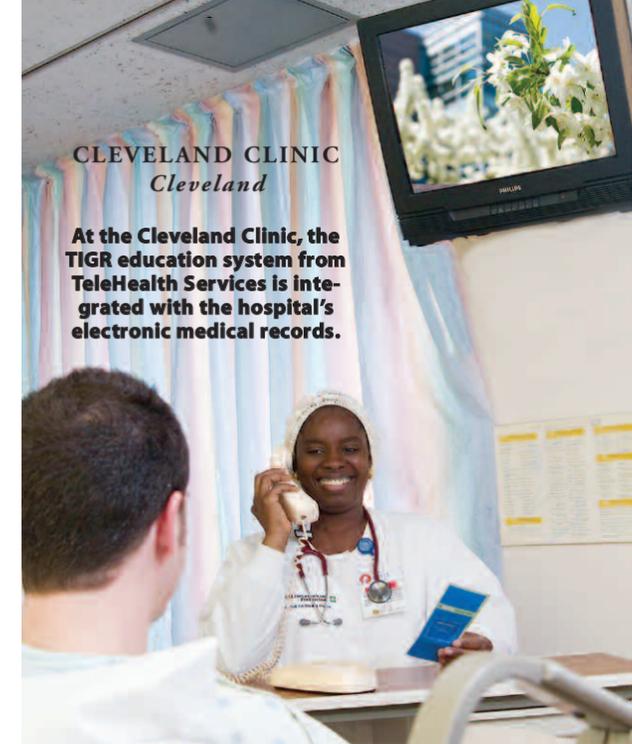
Of course, they can also use it to watch TV or movies, play video games or listen to music. A recent LodgeNet survey showed patient satisfaction was improved by access to the variety of services, information and entertainment options provided by an interactive television system.

Joanna Reid-DeMarco, CHES, health education coordinator at the Cleveland Clinic in Ohio, says caregivers appreciate the convenience of educational videos on demand. Cleveland Clinic uses the TIGR education system from TeleHealth Services (www.telehealth.com), Raleigh, N.C. The system is integrated with the hospital's electronic medical record, so all videos watched—whether prescribed by the nurse or requested by the patient—are automatically recorded in both TIGR's reporting system and the EMR.

Health education videos are a good supplement to bedside teaching, says Reid-DeMarco. The videos provide basic information to the pa-

CLEVELAND CLINIC Cleveland

At the Cleveland Clinic, the TIGR education system from TeleHealth Services is integrated with the hospital's electronic medical records.



tients, allowing the nurses to customize one-on-one teaching to the patients' specific needs. Having this information available on demand "helps nursing staff take advantage of teachable moments," she says. It also allows patients and family members to view the material as often as necessary.

At the more than 1,000-bed hospital, "we have such a large volume of patients and such a large responsibility to the nursing staff, anything that can assist them in delivering the necessary educational messages is truly an asset," says Reid-DeMarco.

TeleHealth also offers the TigrNet education and entertainment system, which contains TIGR's video education features plus access to hospital services and staff, videogames, movies, satisfaction surveys and more, including the Internet and e-mail.

In an essay published last March in *Newsweek*, Rich Thomas of Potomac, Md., described how the e-mail connectivity available through the TV in his wife's room at Johns Hopkins Hospital in Baltimore, which uses the TigrNet system, helped sustain her through her last days. "I believe it could help others in similar predicaments and that many will survive because of it," Thomas wrote.

"The TV becomes the focus of many, many patients," says George Fleming, president of TeleHealth Services. "It's entertainment, it's news—so they can keep up with what's going on in the world; and for a number of hospitals it's a very key educational resource." ■



SIZE MATTERS

LG Electronics' newest line of hospital-grade TVs features screen sizes ranging from 22 to 42 inches.

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