

Telehealth Moves from the Doctor's Office to the Home

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When many rural communities in the 1990s began to look for options to provide medical care to their area without a physician in residence, telehealth options surfaced and flourished. Patients could visit an office once or twice a week, have a traveling nurse take vitals, and then speak to a physician through a video relay service. For those areas who before had no health care, the programs provided much-needed access to individuals who otherwise may have gone without.

Now telehealth options are expanding into the home and are seen by some as a way to keep the disabled and elderly at home longer and out of nursing home care. The costs of long-term care have increased dramatically in recent years and individuals are no longer willing to accept that nursing home care is the only way to age with the basics of medical attention.

The Center for Telehealth and E-Health Law notes, "the use of home care technology now makes it possible for advanced data collection systems working in conjunction with remote video and non-video communication devices to simplify home care practices for both patients and home care personnel." In other words, remote monitoring is now one of the ways that individuals are choosing to age in place and still keep close tabs with the doctor's office and the changing landscape of healthcare today.

Another benefit of remote monitoring is the reduced amount of hospitalizations or hospital stays that chronically ill patients endure. An independent study of monitored vs. non-monitored patients formed by Strategic Healthcare Programs revealed that patients with chronic obstructive pulmonary disease (COPD) improved in activities of daily living and were more stable. Those patients who received home monitoring reported improvements rates of 80.3 percent vs. 71.8 percent of those who were not monitored. Another study in the Journal of the American College of Cardiology demonstrated reduced hospitalization rates for monitored patients from 3.2 hospitalizations per person to 0.8 hospitalizations per person.

For those who are unfamiliar with telehealth in the home, there are several basic ways services can be provided that can aid the patient and the caregiver with everyday medical decisions. Some physicians may use the term remote monitoring in lieu of telehealth. Basically, the same services can be provided with similar results.

No One-Size-Fits-All Systems

There are many different types of systems on the market that seek to gather data about a person in the home and communicate that information to a caregiver or physician. These systems differ from a personal emergency response system (PERS) in that they allow patients to give a well-rounded view of the activities in the home environment. From a physician's stand-point, having first-hand information of what activities are going on at home allows them to make better diagnoses than simply relying on self-report "snap shots" in the office.

Some people feel that the best way to gather information is through video relay in a person's home. Cameras can be installed at various points throughout the home in order to determine whether or not a patient is able to care for himself, if he is taking medication correctly, or if he is eating and performing other activities of daily living. A downside to video monitoring is that someone has to take time to review the stored video, a time-consuming effort that may not be practical.

Another "twist" on the video relay method is through remote link-ups with patients and nurses at regular scheduled intervals. American TeleCare offers a system like this that allows scheduled visits, as well as on-demand visits when patient's information indicates that a health emergency could exist. The system does not include installing cameras throughout the house; rather, it relies on a monitoring station that patients are taught how to use with little assistance.

Systems like Lifetime Care allow patients to measure weight, temperature, blood pressure, blood sugar, and other vitals and enter them into a system on a daily basis. The information is then transmitted to a central processing center where a nurse reviews the data and decides if any action is needed. Maybe a doctor needs to assess the patient for further review; perhaps no action needs to be taken and the patient is performing as well as can be expected.

QuietCare offers a monitoring alternative that does not take the same bits of data, yet it can paint a portrait of activities of daily living in the home. The QuietCare system places sensors throughout the home that are triggered by motion. When a person enters a bathroom, for example, the sensor records the activity. The system then records how long the person was in the bathroom by noting the time that the sensor was activated again. Repeat trips to the bathroom could be a cause for concern at the doctor's office that a patient may never mention to their physician until more extensive follow-up is needed. Other sensors are placed strategically throughout the home to record nocturnal wakings, whether or not they took their medicine, and if a person left the home or if a visitor dropped by for a few minutes.

Available telehealth systems offer a way for both doctors and caregivers to access the information (provided proper confidentiality waivers are in place) in order to determine if the patient is doing well at home or if they need more assistance. In addition, since these systems are monitored 24 hours/day, if emergency assistance is needed, alarms can be sent to whomever the patient designates.

Caregivers may find that these types of systems provide more than peace of mind. For those patients who are reluctant to reveal details of their overall health for various reasons, home monitoring systems can provide the daily outlook of a patient and notify caregivers and physicians before symptoms become too serious. By avoiding hospital

stays and keeping patients stable in their homes, patients may be more compliant with physician orders and stay on track with their health plans.

Who Pays?

Even though the healthcare industry is evolving with technology, insurers and Medicare are slow to pay for telehealth services. Those organizations that rely on remote monitoring in the patient's home to give a better picture of how a patient may be recovering or performing on a daily basis are also dependent on government grants and private pay in order to provide those services. There is a compelling benefit for insurers and Medicare to begin providing services through telehealth systems.

A study by the University of Tennessee Graduate School of Medicine revealed that for patients with congestive heart failure, medical costs are approximately \$8 billion per year. By using remote monitoring services in the home, those costs are reduced dramatically to \$4.2 billion/year – almost half the cost of traditional medical services. The cost of remote monitoring was included in the lower costs, demonstrating that telehealth is a viable benefit to patients and caregivers in terms of reduced medical costs.

The American Telemedicine Association supports Medicare reform to include the costs of remote monitoring in patient care. In its newly released “Federal Policy Recommendations for Home Telehealth and Remote Monitoring,” the organization notes that “home telehealth (including remote monitoring) should be used as a part of a coordinated, comprehensive care program designed to reduce health care costs (through decreased hospitalizations and hospital days of care) and improve clinical outcomes.”

Caregivers can assist patients by helping to research the types of home monitoring systems that are available and those that are affordable to the patient. If insurance is reluctant to pay, there may be more affordable options available. In addition, organizations that provide services to seniors and the disabled are now actively seeking grant funding to provide services like these in the home because they know that healthy individuals are less of a strain on the social service delivery system in the community. Since there is no “one size fits all” system available, individuals need to be aware of what services are needed and how telehealth companies can meet those needs.