

High-Tech Devices Show Long-Term Potential

New dispensers have features such as voice reminders to cue patients to take their medications.

BY JOANNE KALDY

Some futuristic high-tech products are checking in at nursing facilities and other senior care settings.

Dubbed “Nana” technology by Andrew J. Carle, M.H.S.A., assistant professor at George Mason University, Fairfax, Va., these devices are making life easier for nursing home residents and staff alike. They also have the potential to solve problems that face the long-term care industry today and down the road.

What is Nana Technology?

Mr. Carle, who directs the university’s program in assisted living and senior housing administration, defines Nana technology as “technology designed, intended, or that can otherwise be used, to improve quality of life for seniors.” He divides the items into five product categories: health,

Robots with a wireless component allow people to use the device from any location. They even allow family members to ‘visit’ residents when travel is not possible.

safety, cognition, lifestyle, and whole-house/whole facility.

In long-term care, the most popular products are medication dispensers, according to Mr. Carle. He describes one that is “basically a bubble gum machine for pills. You load it a month in advance. It has voice reminders to cue patients if they don’t take their meds. If they still don’t comply after the prompt, the system will alert a care manager or family member.”

Calling Dr. Robot

While robots may still seem futuris-

tic to many, they already are a part of life in some facilities. For example, Silverado Senior Living Facility in Escondido, Calif., uses a robot to extend the reach of physicians and consultants. “The clinician’s face appears on a screen in the robot’s “head,” and there is a camera on top. Using a joystick, the person can zoom in and out,” said Stephen Winner, M.S., cofounder and chief of culture at Silverado.

The robot can be used to examine problems such as skin tears or to conduct remote interviews. It also enables staff and others to attend meetings and training programs without traveling. The medical director can use the robot to look at patients from home. “We are adding a wireless component so that people can use the robot from anywhere,” said Mr. Winner. He added that the technology can even allow a resident’s family members and others to “visit” their loved one when travel is not possible.

The long-term care facility expected some resistance to the technology from residents and staff, but Mr. Winner said that there have been no complaints. He added that a number of family members appreciate the opportunity to interact with consultants and nurses they otherwise wouldn’t see.

Is Nana Technology the Answer?

InTouch Technologies Inc., the robot’s manufacturer, conducted a survey in which patients indicated that they would rather have a “visit” from their regular physician via



Silverado uses robots to give residents more access to clinicians. Some prefer seeing their regular doctor via robot to seeing a different one in person.

robot than to see a different doctor in person.

According to Mr. Carle, Nana technology has the potential to help solve the staffing shortage crisis facing long-term care. “While the desire by seniors for increased independence and the ability to stay in their homes is the main driver for this technology, its labor enhancement potential is important.” He added, “It doesn’t replace human beings, but it enhances the ability of staff. One nurse aide potentially can do the work of three with the help of a robot.”

Innovations Have Drawbacks

Of course, these innovations are not without their drawbacks. The first, “by a mile,” is cost, said Mr. Carle. “The cost has to come down to make these devices feasible for use on a widespread basis,” he said. “We’ve got to get the technology community to put out products that have fewer bells and whistles and more dollar-value added.”

In the meantime, Mr. Carle observed, some nursing home facilities will figure out a way to finance these high-tech products because “it is the right thing to do.”

Future Shock: What to Expect

Some products are in the developmental stages, and others—currently used by the military—have tremendous potential for application in the long-term care setting. Here are a few products that you can expect to be introduced soon:

► Massachusetts Institute of Technology is working on a type of fabric that would create “smart shirts” for soldiers designed to detect injuries and transmit information to medics so they can perform virtual triage. Sensors in the shirt can detect the person’s level of distress and even apply CPR or a tourniquet.

► The [m]Power, by Dakim Inc., is a cognition assessment product that requires no mouse or keyboard, but uses a touch-screen interface. It was developed specifically for seniors, particularly those with Alzheimer’s disease or other dementia.

The [m]Power uses an array of content-rich exercises that are mentally stimulating and entertaining, including movie clips, photos, and music. The screen walks the user through exercises that measure cognition, collect data, and track and trend mental status over time. It is even capable of reporting changes to facility staff or to a family member.

► Vecna Technologies is testing a robot developed to remove the wounded from battlefields. The product is nicknamed the BEAR, for battlefield extraction and retrieval robot. The manufacturer says it has plans to test this robot in hospitals where it can be used to transfer patients. If successful, the BEAR may be mass produced and used in other settings such as in nursing homes and in assisted-living facilities.

► A magic mirror is in development as part of smart home technology. This device uses face recognition to identify individuals’ medication regimens. It also lets patients know when it is time to take a pill, and it can warn allergy sufferers when the pollen count is high. Other functions of the magic mirror include instructing patients to take their over-the-counter medicine or to take and record their weight and blood pressure.

► Smart walkers are being designed to come when called and to detect obstacles, while leading its users around them. Smart canes also are being designed to work almost as well as guide and service dogs.

Annual Survey

Dear Dr. B from page 2

or two quarters but three last month” usually prompts discussion and a decision as to whether the issue needs to be examined more closely.

If I have done anything in the area of CME or CMD training, I will mention that (and formally thank the facility if they helped pay for the meeting) and give a brief report on things learned or resources obtained that may be helpful to the facility.

Some items come up annually. Review of the annual survey from the perspective of the medical director is often reassur-

ing for staff. Each autumn, plans for resident and staff influenza immunization are reviewed. Influenza status in the community and the facility is reported throughout the flu season. The CDC Web site is very helpful in this regard (www.cdc.gov/flu).

Last, I will let the staff know of any changes that might be occurring in my office. For example, I work in a residency clinic and will report on resident graduations and incoming classes.

Also reported are changes in office personnel or policies that might affect the facility, such as a new fax number or a new person assigned to triage phone calls. I frequently receive useful feedback to take back to my office at this time, and I invite

feedback on my performance. Feedback is seldom received at the meeting, but I will occasionally receive helpful feedback later.

If the facility were to be cited for a quality of care issue and the involvement of the medical director was questioned (a potential F501 citation for the facility), the medical director log and report would provide evidence of medical director involvement.

Medicolegal issues usually come up years after the event in question, when it likely would be difficult to recall details of the role you had at the time. For this reason, it is helpful to keep your logs and medical director reports beyond the time that is specified by your state’s statute of

limitations.

Finally, put the plan into action. Decide which technique you have decided use to keep your log, and after you have a summary of your work as medical director for two or three months, you are ready to write and distribute your first medical director report.

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