Alzheimer's Care Center to Carry Out VeriChip Pilot

The Florida facility will implant RFID chips in 200 volunteers this summer to test the VeriMed system's ability to identity patients and their medical histories.

By Claire Swedberg

May 25, 2007—This summer, Alzheimer's Community Care (ACC), a West Palm Beach, Fla., provider of support to Alzheimer's patients and their caretakers, will implant RFID chips in about 200 volunteers who are clients of the organization. The two-year project, says Mary M. Barnes, president and CEO of ACC, will employ VeriChip Corp.'s VeriMed system to help identify patients who arrive at an emergency room in an unresponsive state.

ACC provides support to about 2,000 patients suffering from Alzheimer's disease. That includes a daycare center for some patients, as well as visiting registered nurses, caregiver education programs and support groups. One safety concern, Barnes says, involves the lack of information available to medical personnel when patients unable to speak for themselves are admitted to a hospital during an emergency, unaccompanied by caregivers. In such circumstances, the patients may receive inappropriate treatment because doctors are unaware of any existing medical conditions.

"I really am concerned about the situation with Alzheimer's patients dealing with losing the ability to remember," Barnes says. "This [loss of memory] is so isolating that the effect on the patient and the caregiver is very dramatic. In an acute situation, such as emergency medical services, it can be even worse. There comes a point in a person's illness when you have to look at every safety measure available."

Alzheimer's Community Care considered a multitude of resources to reduce this risk, says Barnes, including MedicAlert wristbands. Such wristbands, however, can be removed or damaged, rendering them useless. Therefore, 10 months ago, Barnes began speaking with Scott Silverman, now chairman and CEO of VeriChip, about an RFID solution. Alzheimer's Community Care has formed a review board to generate the proper paperwork for the participants, as well as other basic protocols, before beginning the project. Once the board finishes its work and the project is launched, hospitals that have VeriChip-trained staff and have implemented the procedures will be able to access the medical histories of the 200 participating patients.

When an unresponsive patient enters the hospital, the staff can use an RFID interrogator to scan that person's arm. If the patient has had a VeriMed chip embedded, the reader will indicate its ID number. That number can then be inputted manually, or directed wirelessly to the VeriMed Web-based database. If the hospital is an approved care provider, it can immediately access the patient's identification and health records.

For the pilot, ACC nurses will be trained by VeriChip physicians to use a syringe to insert passive 134 kHz RFID tags, compliant with the ISO 11784 and 11785 standards, in a patient's right upper arm. Encased in glass, and about the size of a rice grain, the tags have been approved by the U.S. Food and Drug Administration (FDA). Each tag is encoded with a unique 16-digit ID number, associated with the patient's

medical records stored in the VeriChip-hosted database. The project is designed to test the functionality of the RFID implant in real-life scenarios.

Thus far, Silverman says, about 600 U.S. health-care facilities—mostly hospitals, and most on the East Coast—have signed on to the VeriMed network. Once a facility signs up, VeriChip provides the necessary hardware, teaches the staff to use the system and grants access to VeriChip's hosted database. Approximately 130 have already adopted the system so far—that is, they have already completed training and been given access to the VeriMed database and readers to scan unconscious or unresponsive patients. If they choose, hospitals can also use the system on conscious patients to obtain faster access to their records. To date, VeriChip claims, 300 to 400 people in United States have been implanted with the VeriMed chip.

In the three-county area served by Alzheimer's Community Care, Silverman says, about nine hospitals have adopted the VeriMed system.

Alzheimer's patients who volunteer to participate for this pilot, and their families, must first meet with their physicians. If the physician supports the implantation, the patient or doctor provides VeriChip with that person's medical history, as well as a list hospitals authorized to access the patient's records. All medical records are stored in an Internet-based site, hosted by VeriChip. Hospitals unauthorized to access the records would be unable to open the file.

The chip contains no data other than a 16-digit ID number, says Silverman, preventing inappropriate parties from gaining any information, even if they were able to scan the implant. Moreover, he adds, the VeriMed tag can be scanned only by a VeriMed reader because no other RFID systems can currently read tags with 16-digit ID numbers.

The VeriMed handheld interrogator can read an implanted tag from a distance of 6 to 12 inches. After the reader scans the tag, it uses a wired or Bluetooth connection to forward the tag ID number to the VeriMed application running on the hospital's computer. The embedded chip cannot be felt through the skin, though Silverman says a physician might be able to locate it by feeling the implanted area. Silverman himself has had the implant in his right arm for five years, and says it is still functional. Based on research in which the tags are implanted in animals, VeriChip says it expects the life expectancy of the VeriMed to be a minimum of 15 to 20 years.

Privacy groups have voiced a host of concerns about the implant, which Silverman deems a part of the learning process. "We've been dealing with that for five years. VeriChip has been a leader in the RFID industry when it comes to privacy issues," he says, citing educational efforts and security measures taken to ensure that data is not easily accessed. "It's a medical device, and I think what was once being viewed as a privacy invader is now being seen as that—a medical device."

RELATED_ARTICLES Patients normally pay a health-care facility about $200 for the chip and its implantation, though those involved in the ACC pilot will pay nothing. In addition, VeriChip charges each patient $10 a month to maintain the medical records on the VeriMed database. Hospital starter kits, including a reader and 10 chips, cost $1,400 apiece.

If a patient decides to remove the chip, Silverman says, a doctor can carry out the procedure with a scalpel. Several stitches may also be required to close the incision.