

# GETTING CONNECTED

**Delayed by financial setbacks, the long-term care profession is slowly discovering the power of information technology to improve quality and efficiency.**

## MARLA FERN GOLD

Ten years ago, long-term care heralded the coming of the information superhighway with dreams of remarkable time-saving efficiencies. The ability to quickly swipe bar codes with hand-held “wands” to record supply use, enter patient data and medication administration records into personal digital assistants (PDAs) at bedside, and download information to a master database with the touch of a button would forever revolutionize record keeping procedures.

Purchasing systems would interface with budgets, allowing managers to track expenditures on a real-time basis from a local or remote location. Duplication of information would be eliminated; errors would be reduced; and mounds of paperwork would be transformed into paperless files, charts, and graphs stored on the facility’s hard drive.

The promises of the electronic information age dovetailed with the first inklings of computerization of the minimum data set (MDS) and the integration of computers into the daily lives of many Americans.

Now fast-forward to 2002: In the decade since integrated computer technologies for long-term care were first introduced, the profession has seen a proliferation of electronic data requirements--the MDS, Medicare billing submissions, federal quality

indicators (QIs)--but the profession itself has not fully embraced the integration of those electronic data sources and the data they can produce. “We have a long way to go,” says David Rodman, chief financial officer with Adventist Care Centers, Orlando, Fla.

### Financing Decisions

Much of the delay in computerization can be blamed on finances. “In long-term care, the dollars have not been put aside for technology,” says Donna Maassen, Health Insurance Portability and Accountability Act (HIPAA) compliance manager with Extendicare Health Services, Milwaukee.

“Providers think, ‘Do I use money to improve care, buy more beds, raise salaries, or buy computers?’ I don’t think our industry has done a good job of making those comparisons accurately and showing the value of technology and improvements in process and efficiencies, and how technology allows nurses to do more hands-on care by reducing the burden of documentation,” she says.

Recent surveys reveal that while the health care industry in general spends from 4 percent to 10 percent of its annual operating budget on information technology (IT) systems, more than half of all long-term care organizations spend 2 percent, or less, annually.

Says Maassen, “If you walk through a small nursing facility, or even some big chains, you would be

amazed at how few computers you’ll see. Many administrators do not even have direct access to a computer.”

Though change is coming slowly, the profession is moving beyond the idea of one personal workstation for the accounting office and another for the MDS coordinator. More and more providers have installed the integrated computer networks that allow staff from one department to share essential information with other departments. Networks also enable facilities to access and retrieve best practices, OI data, and other clinical quality information from central sources that link computers in a region, or belonging to one corporation, or subscribing to the same “host” site.

The profession will be fully automated by the time baby boomers enter long-term care, predicts Kenneth Daily, director of quality improvement and part owner of Grafton Oaks Rehabilitation and Nursing Centers. “Automation is critical for our operations,” he says.

### Linking Information

Grafton Oaks, in Dayton, Ohio, has just taken the first steps toward this goal. This spring, the 100-bed skilled nursing facility (SNF) expanded from four stand-alone computer workstations to a local area network (LAN)-based system hosting 17 computers. The new system gives management in every department access to in-house communications and e-mail.

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"All of the data collection is e-mailed to everyone before meetings, so now we can talk about analysis at the meeting rather than reviewing the data," says Daily. Still, the facility is not using much in the way of sophisticated software, and at least one department head remains a computer skeptic and refuses to participate at all, says Daily.

Near the vanguard of network computing--at least where long-term care is concerned--is Adventist Care Centers, an operator of 22 facilities. Adventist moved to centralized network system in 1996 with the launch of electronic MDS submissions. Now, all of the company's facilities are connected through a browser at headquarters, which gives management more control over the data each facility generates. "On a centralized system there is more control, and we can ensure that certain processes such as backing up information take place frequently," says Rodman.

Use of such a system also allows each facility to purchase less-expensive hardware as well as ensuring that a system crash will not decimate a facility's records. On the other hand, says Rodman, as staff at each facility become more technologically savvy, the number of computers has increased dramatically. Now, he says, each facility has between 20 and 25 computer work stations, compared with three or four in the past. "We are trying to get information to line staff, and this is the best way to do that," Rodman says.

The Evangelical Lutheran Good Samaritan Society, in Sioux Falls, S.D., also uses an organization wide network server at its central office to connect each of its 250 facilities. This serves many functions, according to Carol Doss, Good Samaritan's director of accounts receivable applications.

First, the system reduces the number of technical support personnel needed at each facility. Second, the network is a closed system, which means it is protected

from the introduction of viruses from outside sources. Also, licensing fees for the use of software at each of the provider's facilities would be very expensive. One host server can offer all of the software needs required by all of the facilities at a fraction of the cost, says Doss.

Most important, says Monique Lingle, director of consulting services and team leader of the Accounts Receivable/Clinical Project (ARC) at Good Samaritan, the network allows central office staff to maintain a complete record of each patient and track clinical data from each facility.

Many large facility corporations are switching to such systems, and smaller providers can subscribe to similar networked-based systems that will provide software, Internet use, and system support for a monthly fee.

### **Integrating Knowledge**

The Good Samaritan Society is in the midst of several other IT projects to improve efficiencies and reduce errors as well. One is a multiyear project that seeks to minimize the duplication of information that hounds every nursing facility. Typically, patient information is written by the social worker or admissions staff on paper, and then input into a clinical records database. Often, that same information is then passed on to the accounting department where it is input into another database for billing use. When a piece of patient information changes, such as a switch in the primary insurer, that information may be input into the accounting database but not into the clinical component, possibly leading to major financial consequences after services are provided.

"The program we are developing will have an accounts receivable (AR) component and a clinical component," says Linda Bauer, Good Samaritan's health information management consultant and privacy officer. "The main goal is to have them 'talk' to each other."

One piece of that effort is to integrate the AR side with the

demographic portion of the clinical side, according to Lingle. Demographic information includes the patient's name, address, telephone number, Medicare or private insurance information, social security number, and billing information; the physician's name and telephone number; and other similar data.

To conform to health insurance privacy laws, personnel will need a security clearance to access these records.

Adventist also is writing software to mere demographic information into one system. Rodman says, "We have had frustrations with demographic information--having to enter the same information in about four different systems. A single-entry system will save time and improve accuracy," while reducing staff frustration, he says.

"This area will be one of the biggest workflow opportunities for us," agrees Good Samaritan's Lingle. "Where we have had two very separate systems--and part of it was manual--we will have a fully integrated, single-application system with a single point of entry and real-time information."

### **Benefits For Purchasing**

Clinical applications and accounting are not the only areas that can benefit from computer technology. At Adventist, purchasing is integrated with facility budgets in a real-time basis.

"Maintaining costs in an important aspect of business in long-term care, both from a strictly dollars aspect as well as in dollars per patient day," says Rodman. To track expenditures, all purchasing is done electronically and is tied to a "spend down" process that compares all purchase orders to a facility's budget.

"If the purchase order will put a facility over its budget for the month, a notice will be electronically generated and sent to the administrator, who has to sign off on it before the purchase is made," says Rodman. This application enables regional directors and corporate staff

to have access to each facility's purchasing habits on a real-time basis and to view how closely facilities adhere to budgets. And all this can be accomplished without the use of floppy disks or the U.S. Postal Service, Rodman says.

### **Adding Forms To The File**

Adventist also saves time by computerizing the patient information forms required by surveyors. "We have integrated those with our census [information] so that when surveyors walk in, they do not have to spend the morning trying to find patient information," says Rodman.

"It may take a little more time to put this together, but it helps our staff be more aware of patient needs and conditions and keeps staff ready for the surveyor who happens to walk in at an unusual time." Rodman adds that the forms must be updated at least weekly.

Good Samaritan also is working on building more complete electronic medical records. According to Jennifer Bachman, a project management consultant and ARC project manager, the design will include a wide range of online functions, including activity calendars, physician orders, care plans, incident reporting and investigations, quality improvement modules, and infection-control procedures and reporting.

Says Bauer, "In my mind, the goal of [this project] would be to make the whole process more efficient, to allow staff in the centers to have more time with patients and less time with documentation, and to allow the analysis of our data through a centralized database."

Of course, success of the system is dependent on staff members knowing how to use it. "We have the problem of educating 20,000-plus employees, many of whom have not used computers, many of whom are not all that crazy about learning to use computers, and that's going to be a big effort," Bauer acknowledges. Good Samaritan has offered courses on basic computing from turning on

the computer to getting around the Internet and will continue to offer various courses until turning on the computer is as routine as holding a clipboard.

### **Bedside Charting**

At Grafton Oaks, a look into the future features PDAs with touch screens for certified nurse assistants (CNAs) to record meal points, restorative care, activities of daily living (ADLs), skin sheets, and bathing records for each patient. Yellow blocks will highlight missing information so that no record goes incomplete.

Assessment nurses will use PDAs for bedside assessments and weekly weights. Daily says the system will "improve accuracy and time."

Another thing the system will improve is collection of more behavioral data, says Daily. "Now, as an industry, we do not collect good behavioral data, such as patients who bite, hit, or kick. That information usually shows up at nurses' meetings but not in written records."

Even when some information is written, such as "refusal of meds," the details behind the episode are not included. "I'm hoping we will be more comprehensive about gathering data that's accurate about the patients rather than missing data," says Daily.

While the use of bedside charting is still on the wish list at Grafton Oaks, it's becoming a reality at Good Samaritan, which is pilot-testing the use of hand-held computer modems to assess whether such devices can improve efficiencies, reduce errors and save time for CNAs and activities staff.

For CNAs, the modems would display icons for each of the daily charting responsibilities, with a separate screen for each patient. Rather than writing information on a flow sheet and having it transferred later into a database, the system would allow bedside charting. Developers hope the system will free up CNAs to spend more time with patients and less time doing documentation.

"We're hearing from user groups that many times CNAs are not able to input their information until the end of the shift," says Bauer.

"We're hoping that the handhelds will give them the ability to document as they are doing the tasks and not wait until the end of the shift," she adds.

Similarly, the activities staff would use the modems to collect information about participation as well as the level of participation by each patient at each event. Following the one-month pilot tests this fall, Bauer says staff will analyze whether the new systems save time and improve accuracy as well as how well staff like the modems.

"One of the things we want to look at is whether people will really use the handhelds, or are they one of those things that sounds great now but won't work once people actually try them," says Bauer.

If they work, says Lingle, Good Samaritan may try using the handhelds for assessments, thereby reducing more duplication and paperwork.

Being able to track clinical outcomes has long been touted as one of the greatest benefits of computerized record keeping. And being able to accurately track QIs is essential to prepare for annual surveys, as well as to improve clinical outcomes.

### **Building A Data Trail**

At Grafton Oaks, a simple spreadsheet tracks QIs in areas such as falls and fractures, and the staff use the information like "an ongoing report card," says Daily. "We also use QI information to prepare staff to answer surveyor questions," he adds.

For instance, the facility has a high number of patients on tube feedings but the data show that most have come into the facility already on tube feedings and stay for a long time. "Our numbers may be high, but we know that in advance of the survey and know why," he says.

Extencicare's Maassen says that the ability to track data is crucial to

delivering quality care. For example, she says, “If you have a paper-based system today, and you have a gut feeling that the number of skin wounds is going up, but you have no data to support that, you cannot really do much to change the situation. You would need to sit and count from one sheet to the next, then try to track from month to month.

Still, Maassen says, “you would not have information that may contribute to the indicator, such as comorbidities or hospital records. If you have a system to track clinical data electronically, you can literally hit a button that can give you this information and quickly see trends.”

However, says Daily, “Data only tell half of the story. You still need to be on the floor, you still have to observe, and you still have to talk to patients and staff. Every pressure ulcer is a number, but there is more to it than just counting them. There are people attached, and that’s what we need to focus on. I think it is important to put a human face to the data.”■

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