On-Time Quality Improvement for Long-Term Care

Case Studies

Digital Pen Technology Results in Better Care and Improves Staff Satisfaction

Country Villa Health Services, Los Angeles, California

Noticing small changes in a resident's habits, such as differences in eating preferences or the time a resident gets up every day, can give health care providers important clues about the resident's overall health. But in many cases, staff do not have immediate access to critical information to intervene before major problems occur.

That's changing at Country Villa, a chain of 49 nursing home facilities in Southern California. Three Country Villa facilities are participating in a new program funded by the Federal Agency for Healthcare Research and Quality (AHRQ) to standardize and streamline daily care documentation and develop weekly reports using information technology. The On-Time Quality Improvement for Long-Term Care Initiative is designed not only to improve care documentation, but to reduce the incidence of in-house pressure ulcers and improve staff satisfaction by better engaging them in the care process. Country Villa is using digital pen technology to accomplish this goal. A fourth facility will begin using the technology this year.

A dietician at Country Villa's Woodman facility was able to use data from the project to determine that a resident at the facility was showing signs of decline and intervene before the resident's health took a serious turn, explains Alan Gibson, director of continuous quality improvement and customer service for Country Villa. "We can see trends and look for risks of developing a pressure ulcer much easier than we can with paper," Gibson says. "We can get immediate feedback and act quickly."

Using digital pens that can recognize handwriting, certified nursing assistants (CNAs) are bringing daily documentation into the information age. Staff can record standardized information on a resident's vital signs, as well as information on activities and other factors that are useful in determining whether a resident is at risk of developing a pressure ulcer. The information is then captured in a Web-accessible database. From there, the facilities can create reports that show resident history, any signs of trouble, and potential risks.

In the first phase of the AHRQ initiative, reports based on resident data were delivered to facilities via fax. That project achieved an average 33 percent reduction in pressure sore prevalence within a year among the 11 participating nursing homes. Not only does the project improve resident safety, but it has improved staff satisfaction. "CNAs are more invested in documentation now because it's easier to get immediate, daily feedback on resident care," Gibson says. This is also the first time front-line staff have been engaged so closely in a quality improvement effort, according to Gibson.

Multidisciplinary clinical teams within the facilities are now working together more closely than ever before. The facilities have implemented weekly stand-up meetings with CNAs, registered nursing assistants, dietary staff, and the director of staff development to discuss the reports. Weekly feedback reports to the facilities show caregivers information on documentation completeness, resident behavior, nutrition, incontinence trends, and whether a resident is at risk of developing a pressure ulcer.

"The systems that have been put in place have improved the communication between the CNAs, treatment nurses, and departments that benefit from the on-time reports generated by the digital pen data," says Doug Tucker, an administrator at the Country Villa Woodman facility.

In addition, the project has helped the facilities prepare to implement another technology that Country Villa will begin using this year–electronic health records. As Gibson explains, the digital pen project helps create a culture of data and provides valuable lessons about how to implement new technology. Starting with a technology that is easy to use has helped Country Villa prepare

for electronic health records, and the digital pens will interface with these new records.

In the meantime, the project has improved clinical workflow, enhanced resident safety, and turned the wealth of information that staff document into valuable data, according to Tucker. "It has guided our care planning and made us more responsive to resident needs."

New Technology Monitors Daily Changes and Health Risks in Nursing Homes

Christian Home and Rehabilitation Center, Waupun, Wisconsin

These days, accountability is critical in health care–and no less so for nursing home care. Becky Wilson, restorative care coordinator at Christian Home and Rehabilitation Center, a 74-bed long-term care facility in Waupun, Wisconsin, says that her organization's accountability and the high level of care it provides are easier to demonstrate since participating in an innovative quality improvement project funded by AHRQ.

Recently, Wilson was visited by a family whose mother had been transferred to Christian Home from another facility. The family was pleased with the care their mother was receiving, but they had some concerns. One question they had was whether their mother had been taking enough fluids. Wilson reports that the family was very impressed when she was able to print out a report detailing their mother's daily fluid intake for the past 2 weeks.

The family members also asked about toileting, wondering how serious their mother's incontinence problems were. Immediately, Wilson generated another report showing how many times each day the woman had been taken to the toilet. "These were hard numbers," Wilson says. "It wasn't just me sitting there talking about numbers that I was just pulling out of the air." She left the meeting feeling exhilarated that she had been able to reassure the family about their mother's care and address all their questions fully and precisely.

The On-Time Quality Improvement for Long-Term Care Initiative in which Christian Home is participating works by standardizing and streamlining daily care documentation and turning it into information that enhances clinical workflow. Although one of the program's primary objectives is the reduction of in-house pressure ulcer rates, in actual practice this process helps to improve care across the board. The key is getting good, resident-specific information quickly.

Donna Graff, R.N., director of nursing at Christian Home, says that, in the past, nursing staff received progress reports about residents on a quarterly basis. Now they're getting those reports on a weekly basis. "We can act right away on, for example, someone who's showing a slow weight loss," Graff says. "We're clued in much faster."

Graff says that Christian Home has always had a strong interest in quality improvement, and has in fact downsized several times over the years to accommodate the physical needs of its residents and offer private rooms. When approached to participate in the AHRQ project, the facility's leadership saw an opportunity to further improve its services. Front-line staff felt the same way. "The staff were very interested," Graff says. "They wanted their opinions to count."

The heart of the project lies in the daily care documentation conducted by CNAs. The AHRQ project team brought together everyone involved in resident care–CNAs, dieticians, nursing coordinators, and managers–and engaged them in regular discussions about documentation, workflow, and care planning.

Together, they collaborated with more than 10 other nursing home facilities to standardize and streamline charting and produce on-time reports that help staff better assess residents' food intake over the course of the day, their weight stability, and their incontinence and toileting patterns. The reports are helpful in determining which residents need to go to bed early versus those who would sleep better if they participated in an evening activity after supper.

All of this information is pertinent to the development of pressure ulcers–the project's main outcome focus–but it also helps CNAs provide better care for the whole person. Staff members can look at what's happened to a particular resident over the course of an entire week and make care decisions based on that person's immediate and comprehensive needs.

The on-time reports–which initially were supplied via fax to the home–can also help staff provide more cost-effective care. In one case, staffers at Christian Home detected a urinary tract infection in a resident sooner than they would have without the reporting system. Early detection resulted in less discomfort for the resident, as well as reduced cost because less intensive treatment was needed. A pressure ulcer may have been prevented–a big savings to the home and to the patient.

The first phase of the AHRQ initiative–in which on-time reports were delivered to facilities via fax–achieved an

average 33 percent reduction in pressure sore prevalence within a year. Graff says that Christian Home's rates look good; rates have fallen below both State and national averages. What's more, CNAs and other front-line care staff are fully engaged in quality improvement and more satisfied with their work because they feel that they are providing better, more efficient care.

At Christian Home, the project has now entered a new phase, using digital pen technology to document care and generate feedback reports. Graff and Wilson say that CNAs are enthusiastic about the technology, despite a few bumps, and are looking forward to integrating it more fully into their care planning activities. "Once they understood it, it was pretty easy," Graff says.

The new technology reduces the types of forms that the CNAs have to fill out by consolidating them. And the reports provide "a wealth of information that helps guide our care," Wilson says. According to Graff, the business case for better nursing home care is clear. "You want answers soon; you don't want a delay in treatment. Technology is the way to go, with education and support."

Handheld Computers Improve Facilities' Documentation and Care

Vernon Convalescent Hospital, Los Angeles, California

When it comes to resident care, two Los Angeles long-term care facilities are proving that with a dose of technology, information is power. The On-Time Quality Improvement for Long-Term Care Initiative has helped the facilities with improved documentation, resident care, efficiency, and staff satisfaction.

Like many other long-term care settings, Fountain Gardens, a 149-bed facility, and Vernon, a 99-bed facility, struggled with getting their CNAs to collect resident data in a standard, uniform way. The result was incomplete medical records populated with a hodgepodge of information about residents that was often out-of-date.

In an effort to change this fragmented, paper-based method of collecting resident information, Fountain Gardens and Vernon embarked on a project in 2004 to use handheld computers for resident documentation. With the help of funding from AHRQ, the facilities began training CNAs to use handheld devices to record information for the resident's medical record right at the bedside. Using off-the-shelf software templates, the facilities adapted their existing nurse charting flow sheets for handheld devices.

"At first, some nurses feared they would break the equipment and were reluctant to use it," explains Jack Markovitz, owner of Vernon and Fountain Garden. "But after some training, staff began to quickly see the benefits of breaking away from the old, paper methods of charting."

Using handheld computers, the nurses have been able to gather information about the resident in "real time," rather than waiting until the end of the day to complete the resident's chart. Nurses can also complete charts electronically at each nursing station. There is now a uniform collection of data on residents' conditions and documentation processes have been streamlined. At the end of the day, the computer can identify any missing charting before staff have even left the building.

For residents, this means improved care. Staff can view timely information on residents and identify potential problems before they happen. They can also delve into the medical record to monitor specific measurements of quality, such as a resident's eating habits or ability to walk. "We can see right away when a resident's activities of daily living have declined," says Markovitz.

More recently, facilities began using the technology to prevent pressure ulcers in residents. Rather than waiting for a stage 1 pressure ulcer or a rash, electronically recording information helps nurses intervene when a resident first begins to show symptoms. An earlier AHRQ project involving 11 nursing homes helped reduce pressure sore incidence by 33 percent within a year after a project team transmitted weekly feedback reports to clinical care staff.

For staff at Vernon and Fountain Gardens, the use of information technology has eliminated a dangerous cycle of falling behind in completing resident charts. The handheld devices have helped nurses accurately record resident information, which makes compliance with nursing home quality standards more efficient than it was when nurses used paper. Staff also view the opportunity to chart electronically as more than simply complying with a medical records audit. They can get instant feedback about the residents they are caring for and take proactive steps to improve care.

"It's elevating the esteem of our nurses and improving the quality of care for our residents," Markovitz says. "You can't ask for anything more."

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