

Innovations: Using Telemedicine to Link Nursing Homes to the Emergency Department

The nation's health care system could greatly alleviate burdens on emergency departments by abandoning the old school of thought that it's necessary to touch someone to make a medical decision. According to emergency medicine expert Bruce Janiak, "most of the information comes from the medical history, and a little from symptoms and tests."

This insight, which gave birth to a relationship between the Medical College of Georgia in Augusta and the GA Partnership for Telehealth, an innovative new telemedicine program, has outfitted 10 nursing homes with the equipment necessary for emergency medical consults. Janiak, a professor of emergency medicine at the school, believes the use of these consults can reduce the number of nursing home residents sent to the ED unnecessarily while saving the health care system time and money.

Identifying the Problem

"Typically, a patient in a nursing home will develop what the staff feels is a possible medical emergency — manifested by heart rate or oxygen changes, a fever, or other symptoms — and he or she will call the nursing home physician on call, who will most often suggest the patient be sent to the local ED," Janiak says. "An ambulance takes the patient to the ED where they are evaluated, and in roughly four out of ten cases the patient is discharged, and an ambulance takes them back to the nursing home. During this episode of care, roughly \$2,500 is spent on transportation and ED costs."

"Nationwide, we're seeing several hundred thousand needless transports from nursing homes to local EDs for care that is not needed," Janiak adds. "We could make better decisions about whether those trips are necessary by having an emergency physician evaluate those patients via telemedicine prior to transport."

Using Telemedicine in the ED

Janiak joined the Medical College of Georgia after the GA Partnership had already supplied five nursing homes with telemedical equipment for the purposes of primary care consults, and he expanded the program to include acute condition consults in an additional five facilities. Each nursing home has one room outfitted with a telemedicine transmitting unit comprised of a PC, a camera and a dial-in network through a T1 line, which provides "an excellent image and is reliable," Janiak says. If a nursing home resident develops an acute condition, a member of the nursing home staff can call the communications center at the Medical College of Georgia, which will in turn contact the emergency physician on duty to relay the request for a consult.

If an emergency physician is available to do a consult, says Janiak, “they can go over to the unit in the emergency department and do a visual consult and ask questions. There is equipment that allows us to look in the ears, listen to the chest, and look at the skin with a magnifying lens.”

The emergency physician then determines what, if any, treatment is needed or whether a trip to the ED is warranted.

The Medical College of Georgia is 200 miles from the furthest nursing home in the program and 40 miles from the closest. Because the Centers for Medicare & Medicaid Services will not pay for teleconsults conducted in what it deems urban areas, the Medical College cannot partner with nursing homes in its vicinity, Janiak says. As a result, the Medical College ED sends the residents in the program to EDs close to the facility where they live and does not make a profit from their admission but does receive payment for the consult.

The benefits of the program, says Janiak, are that EDs near the nursing homes are not tied up with avoidable visits, and elderly patients do not needlessly undergo the stress of transport to and from the hospital. There is also a savings of approximately \$2,500 for each ED visit avoided.

In the year since the program has been established, 20 teleconsults have been conducted resulting in only 10 admissions to the ED. Given that the 10 nursing homes in the program send roughly 300-500 patients to the ED annually, Janiak says the potential to save time and resources is great if nursing staff can be persuaded to use teleconsults more frequently. Often they forget to remind the nursing home physician a teleconsult with the ED is available, he says. And some of the residents’ primary care physicians request it not be used, he adds, because of lingering skepticism in the health care arena vis-à-vis telemedicine.

Making the Business Case

“The biggest thing an ED needs when starting this type of telemedical consult arrangement is an advocate who is willing to make it work and who is constantly encouraging people to use the technology,” says Janiak. “Funding and equipment by themselves do nothing.”

It will also be more widely adopted if the ED can identify organizations that will realize a profit by using telemedical consults. The costs are not negligible: each PC is roughly \$20,000, the cost of leasing a T1 line is about \$400 per month, and annual operating costs are roughly \$48,000, but any number of organizations could benefit from the arrangement, says Janiak. And there are also ways to reduce those costs. Janiak says he was recently successful in persuading the GA Partnership to abandon T1 lines for the Internet. The resulting cost savings “will be dramatic,” he says.

Janiak plans to publish a study on the Medical College's use of emergency telemedicine consults in nursing homes when the number of interactions increases to the point they can yield statistically significant data. He is currently gathering data on the number of times the system is used, how many times an ED visit is denied by the emergency physician conducting the consultation, and what the outcome was for those denied a visit. He will compare that to the number of patients transported to the ED when the system was not used and analyze why it wasn't used.

Meanwhile, Janiak says there is ample anecdotal evidence that telemedicine consults are tremendously beneficial to patients.

"We have had requests for psychiatric consults for acute mental status changes in nursing home patients," he says. "It typically takes a nursing home weeks to bring a physician in to provide this type of consult, and we've been able to do it within a couple of hours."

Moreover, he says, "every nursing home nurse I've talked to is thrilled about the fact that their patients are not being abandoned in the corner of an ED for a few hours waiting for a ride back to the nursing home and their patients have not had to leave unnecessarily an environmental where they are mentally comfortable."

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