



PROFESSION

Telemonitored patients show no drop in readmissions and ED visits

More research is needed on how to make the best use of the clinical information collected through telemonitoring, experts say.

By KEVIN B. O'REILLY, amednews staff. Posted May 1, 2012.

Daily remote monitoring of patients with chronic conditions appears to be ineffective in reducing rehospitalizations and emergency department visits, according to the most recent randomized controlled trial of the technology.

Researchers compared two groups of Mayo Clinic patients 60 and older with conditions such as heart disease, diabetes and chronic obstructive pulmonary disease who were at high risk of rehospitalization. One group of 102 patients received telemonitoring that had real-time videoconferencing capability and could measure patients' weight, blood glucose and blood pressure for nurse and physician review, while a group of 103 patients received no telehealth services.

Forty-four percent of the usual-care patients were rehospitalized within the following year, while 52% of the telemonitoring patients were admitted to the hospital. Meanwhile, 28% of the usual-care patients visited the ED, compared with 35% of the telemonitored patients. The differences were not statistically significant, meaning the intervention had no effect, according to the study published online April 16 in the *Archives of Internal Medicine* (archinte.ama-assn.org/cgi/content/abstract/archinternmed.2012.256).

"We're trying to change our care model for sick and older people, and we know this technology's been out there, and the question is: Will it help?" said Paul Y. Takahashi, MD, MPH, lead author of the study. "We went into it with the thought that this would provide some assistance. ... It didn't help at all."

The discouraging results come as investments in telemonitoring are growing rapidly at the Veterans Health Administration and elsewhere, given the shortage of physicians in rural areas and rising pressure on hospitals to reduce the rate of readmissions. Hospitals with high readmission rates face up to a 1% cut in Medicare pay starting in October. About 20% of Medicare patients are rehospitalized within 30 days.

Previous study results on telemonitoring have been mixed. An Aug. 4, 2010, systematic review of 25 studies of telemonitoring and phone-based interventions conducted by The Cochrane Collaboration found that they reduced mortality, heart failure readmissions and costs while improving quality of life. But a study in the Dec. 9, 2010, *New England Journal of Medicine* that reported results of a randomized controlled trial of telemonitoring among 1,653 heart failure patients found no difference in rehospitalizations or mortality (ncbi.nlm.nih.gov/pubmed/21080835/).

The lead author of the *NEJM* study, Sarwat I. Chaudhry, MD, said health care organizations should heed the latest findings on telemonitoring.

"This is yet another study that's really demonstrating the need to take pause when adopting these costly and time-burdensome interventions," said Dr. Chaudhry, assistant professor of medicine at Yale University School of Medicine.

Back to drawing board?

A key factor in making telemonitoring work is deciding how best to use all the information that flows in from the patients being monitored, experts said. It may be that the triggers for actions such as adjusting medications, scheduling physician appointments and sending patients to the ED need to be refined. Dr. Chaudhry said the apparent ineffectiveness of telemonitoring should prompt a change in patient-care strategy.

"We should be rethinking our approach to these complex, older patients," she said. "The targets we have for blood pressure, cholesterol or blood sugar, when you go to an 80-year-old patient with five of these conditions, we need to think about different kinds of endpoints. That may be the underlying reason why this telemonitoring system didn't work — it's just a more intensive approach to traditional medical care. We may need a fundamentally different kind of care for these patients."

Despite the negative findings, many physicians are hopeful that telemonitoring interventions can be redesigned to achieve better outcomes for patients.

"I don't think we write it off," said Peter Cram, MD, associate professor of medicine at the University of Iowa Carver College of Medicine, who co-wrote an invited commentary in *Archives* responding to the telemonitoring study (archinte.ama-assn.org/cgi/content/extract/archinternmed.2012.685v1). "We go back to the drawing board and think some more about how to do this."

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