COVID-19 brings safety boost with rise of remote patient monitoring

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Something positive may come out of the havoc that COVID-19 wreaked: A patient safety boost thanks to home monitoring and hospital at-home models.

Studies found the models were showing promise before the pandemic. COVID-19 accelerated the need to monitor patients treated in standard medical units, emergency departments and patients who were at home to increase hospital capacity as beds filled up during the pandemic, patient safety and value champion Peter J. Pronovost, MD, and co-authors wrote in a recent JAMA Viewpoint essay.

“Home monitoring and hospital at-home models offer the potential to transform care and potentially allow a substantial proportion of hospitalized patients to receive care from home. Yet, health systems will need to collaborate with technology companies to accelerate learning and produce greater value for patients, clinicians, and health care organizations,” says the Viewpoint, written by Dr. Pronovost, Melissa D. Cole and Robert M. Hughes, DO.

Dr. Pronovost is chief quality and clinical transformation officer at University Hospitals in Cleveland and wrote the book Safe Patients, Smart Hospitals. Cole is the vice president of integrated delivery operations at University Hospital Health System in Cleveland and Dr. Hughes is an emergency physician at University Hospitals, Cleveland Medical Center.

The AMA Remote Patient Monitoring Implementation Playbook offers a step-by-step process to help guide your practice through the implementation of remote patient monitoring. It is part of the AMA Digital Health Implementation Playbook Series that includes a Telehealth Clinical Education Playbook and a Patient Access Playbook.

Promising data
A study in the *Journal of Patient Safety* based on pre-pandemic data suggested that routinely monitoring hospitalized patients with continuous pulse oximetry and heart rate devices was associated with reduced mortality, the viewpoint notes. But the surveillance system wasn’t broadly adopted.

The pandemic led more health systems to use monitoring and therapy based on patient risk and needs. Yet, though many health systems reported expanding their monitoring use, there is limited evidence on the prevalence, safety and efficacy and types of patients who most benefit from which type of therapy, the *JAMA* Viewpoint authors wrote.

In their essay, they cited some promising research.

For example, a cost-utility analysis of remote pulse-oximetry monitoring of patients with COVID-19 published in Value in Health in 2021 found that daily assessment and three-week follow-up of at-home pulse oximetry monitoring was projected to be potentially associated with a mortality rate of six per 1,000 patients compared with 26 per 1,000 COVID-19 patients without at-home monitoring.

The study also projected remote monitoring could potentially be associated with 87% fewer hospitalizations, 77% fewer deaths, reduced per-patient costs of $11,472 over standard care and gains of 0.013 quality-adjusted life-years.

**Payment is key**

Centers for Medicare & Medicaid Services (CMS) payment reform helped accelerate the move to risk-based monitoring. In December 2020, CMS began requiring two days of monitoring to bill for remote patient monitoring—a drop from the 18 days previously required before.

“Before this change, most home monitoring covered was for remote physiological monitoring,” the Viewpoint notes. “Also, CMS launched the Acute Hospital Care at Home program in which hospitals meeting criteria to provide hospital-level care at home are paid the full in-hospital diagnosis-related group payment.”

Learn more with the AMA about navigating digital medicine coding and payment (PDF).

**More work to be done**

Despite advances, the authors wrote that health systems must overcome five barriers to start taking advantages of the monitoring services. They should:
• Consider implementing continuous pulse oximetry and heart-rate monitoring for all hospitalized and ED patients. Continuous monitoring could improve patient safety and reduce clinician workload at a time when there is lower staffing for most clinical roles.
• Create a service line to coordinate the work and give it a research focus to better understand whether, how, why and in whom these therapies improve quality and value.
• Put together a mechanism for billing to reduce the burden associated with monitoring at-home patients.
• Combine and integrate several technologies—for example, monitoring, telehealth, chat bots, triage and scheduling—to maximize value.
• Establish protocols to select the right patients and enroll them in the right services based on their needs.

Learn how CPT codes set the stage for telehealth’s rise amid the pandemic.