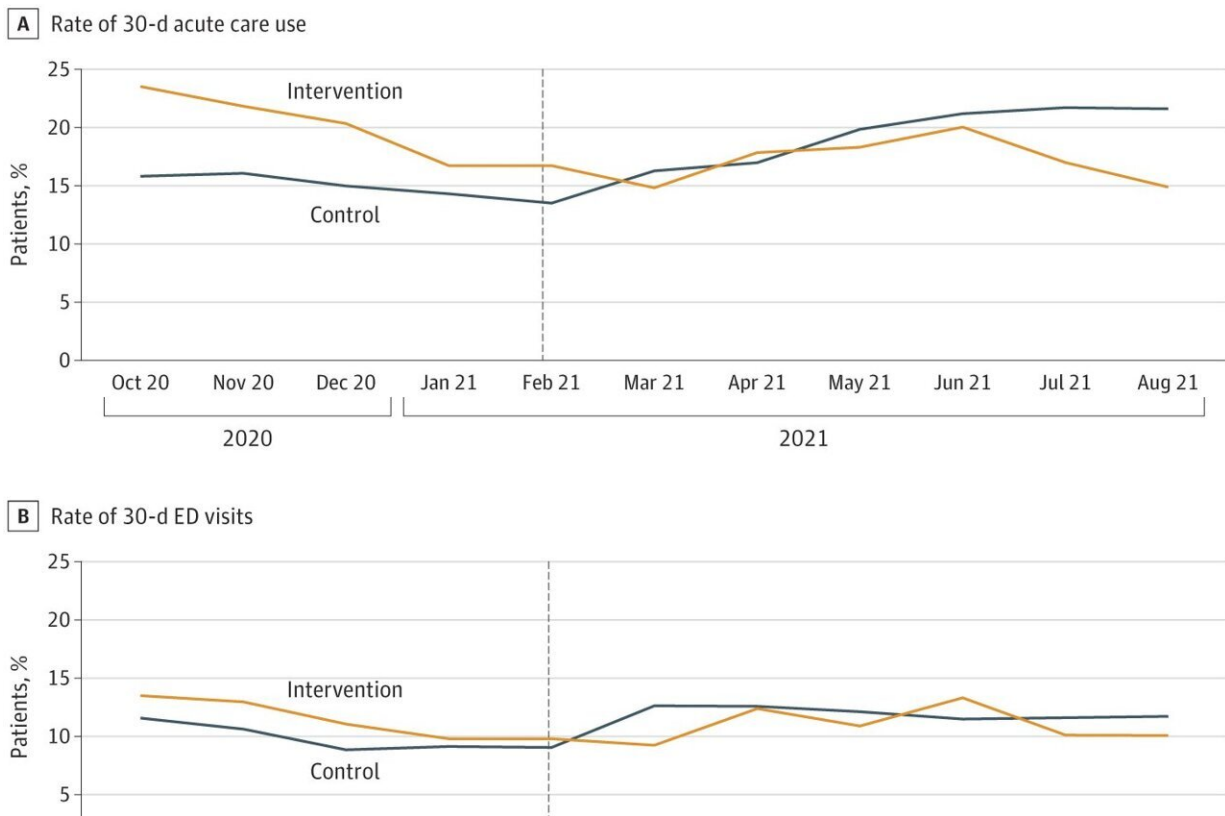# Study finds automated texts decrease odds of rehospitalization

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Trends in rate of 30-day postdischarge use of acute care resources, presented as a rolling 3-month mean by month. The black vertical line indicates the start of the pilot program. ED indicates emergency department. Credit: *JAMA Network Open* (2022). DOI: 10.1001/jamanetworkopen.2022.38293

An occasional, simple "How are you feeling?" text from a primary care

team can make a big difference in patients' health after they are discharged from the hospital, according to a new *JAMA Network Open* study by researchers in the Perelman School of Medicine at the University of Pennsylvania.

After patients were discharged from a hospital following [emergency care](#), researchers saw a significant decrease in [hospital readmission](#) among patients who received automated check-in text messages from their primary care team. Specifically, the researchers found a 55% decline in the likelihood that these patients would need to stay at the hospital again in the next month, and a 41% reduction in the odds that they would need emergency care of any kind over the next 30 days.

"In a fragmented health care landscape, relatively simple applications of technology can help patients feel more connected to their primary care practice," said the study's first author, Eric Bressman, MD, a fellow in the National Clinical Scholars Program at Penn. "This is especially important as patients recover from acute illness, as it reminds them that they have a medical home to which they can turn for support."

As [health systems](#) across the United States seek to improve [public health](#), address capacity concerns, and reduce costs, a special focus has been placed on preventing patients needing readmission to the hospital. Readmissions have been tied to poorer patient outcomes, including things like increased stress and higher mortality rates. One tool in the effort to decrease rehospitalization establishing a strong connection between patients and their primary care providers.

"Contact from a primary care practice can help patients feel more connected and enable them to access care in a timely manner," said the study's senior author Anna U. Morgan, MD, an assistant professor of Internal Medicine at Penn.

Amid the COVID-19 pandemic, Morgan became medical director of a program Penn Medicine established to enable patients who'd been initially hospitalized with the virus to recover at home called COVID Watch. The program used automated text messaging to check in with patients daily after discharge to ensure symptoms weren't worsening. Those who did indicate new or worsening symptoms could be elevated to a hotline of practitioners for additional help.

Bressman and Morgan's study focused on a similar program established for patients who were discharged after emergency care visits. When patients got a standard phone call check-in from their primary care practice two days after discharge, they were given an opportunity to enroll in the text messaging program.

If a patient enrolled, the program automatically sent check-in text messages to the discharged patients at a regular but tapering-off cadence over a month. The program was designed to elevate any concerns conveyed in patients' responses to the patient's primary care practice.

Comparing data of patients who were enrolled (more than 400 people) with patients who did not participate in the program (more than 1,000), Bressman, Morgan, and their fellow researchers found that those in the text messaging program were 41% less likely to need any kind of acute care after discharge compared to those who didn't get the texts. That included patients in the texting program being 55% less likely to need to go back for readmission and 33% less likely to go to the emergency department at all.

"This study adds to a growing body of evidence that connecting with patients through text messaging can help patients achieve better health outcomes and even save lives," said Morgan.

In addition to the study's mortality findings, an evaluation published last

year that showed COVID Watch's messages saved lives weekly during one of the pandemic's worst periods.

"We hope this all will build toward the roll-out of more applications of digital medicine that bridge gaps in care and offer patients easier pathways to connect with their primary care team," said Bressman.

**More information:** Eric Bressman et al, Evaluation of an Automated Text Message–Based Program to Reduce Use of Acute Health Care Resources After Hospital Discharge, *JAMA Network Open* (2022). DOI: 10.1001/jamanetworkopen.2022.38293

Provided by Perelman School of Medicine at the University of Pennsylvania