New randomized trial tests e-mail alerts to stop risky opioid prescribing

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Researchers at Columbia University Mailman School of Public Health reported new findings from a clinical trial of email alerts from pharmacists to doctors and other practitioners to reduce risky opioid prescribing. The study, which was conducted in the Military Health System with government and academic researchers, found no detected impact of the alerts on prescribing. The results highlight the value of rigorous testing to ensure policies to make opioid prescribing safer work as intended. The research was published online in *JAMA Health Forum*.

The study focused on interactions between opioids and another class of medications called benzodiazepines. Taking opioid and benzodiazepines together is strongly linked to overdose, but remains common: 3 million adults in the U.S. do so each year. In the trial, investigators tested used *behavioral science* and "nudge" techniques to encourage safer opioid and benzodiazepine prescribing.

"While nudges have successfully promoted many kinds of high-value health care, we lacked evidence on whether they could address common but risky interactions between opioids and benzodiazepines," said Adam Sacarny, Ph.D. of Columbia University Mailman School of Public Health, the study's corresponding author. "Working with clinicians at Walter Reed, we ran a gold-standard randomized trial to address that evidence gap."

Sacarny and collaborators conducted the trial in the National Capital Region of the Military Health System, the area that includes Walter Reed National Military Medical Center. The study enrolled 2,237 patients: 1,187 of these were randomly selected to have e-mail alerts from clinical pharmacists sent to their prescribers and primary care managers. Researchers then tested whether the alerts made patients less likely to receive opioids and benzodiazepines. They also checked if the alerts made clinicians cut back on risky prescribing to their other patients, too.

The study found that patients whose clinicians were e-mailed went on to receive similar amounts of opioids and benzodiazepines as patients whose clinicians were never contacted. Clinicians who were e-mailed also went on to prescribe similar quantities as those who were not. "Strikingly, we didn't find statistically significant evidence that the e-mails made a difference for these patients or their clinicians," said Sacarny.

The study notes that this work was part of a quality improvement effort to make prescribing safer in the Military Health System. However, unlike most quality improvement initiatives, the research team tested their work in a randomized trial. By including a control group that wasn't e-mailed, the researchers were able to show that improvements in prescribing over time likely would have happened even without the alerts. The study points out that this evidence-generating approach could be a model for other health care organizations seeking to continuously improve patient care.
"While we hoped the e-mails would work, our null findings are still important and useful," said Sacarny. "They show that the military's health care resources can be better spent on other avenues, and they save time for clinicians who might otherwise have to read and respond to the messages," he added.

The evaluation team included members of the Office of Evaluation Sciences (OES), a group in the federal government that helps agencies answer priority questions with rigorous evaluation methods and administrative data.


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