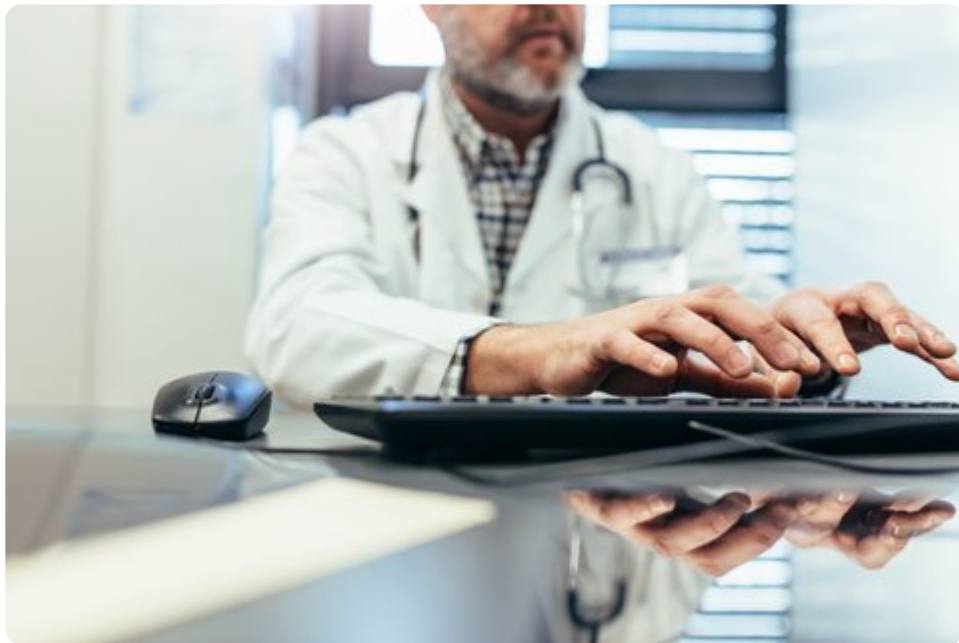# Too many EHR-generated messages contributing to physician burnout: study

By **Heather Landi** · fiercehealthcare.com · 4 min

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Most physicians' EHR inboxes are clogged up with messages generated by EHR algorithms and this is linked to burnout, a study found.

There are ongoing concerns about physician workloads and time spent doing "desktop medicine," such as documenting in electronic health records and sorting through emails.

with system-generated messages—rather than messages from patients or colleagues—a problem linked to greater job dissatisfaction and burnout, according to a new study published in Health Affairs.

Almost half of all weekly in-basket messages came from EHR algorithms, such as emails generated by population health management algorithms that remind physicians to order certain tests, the study found. And physicians that receive an above-average number of these messages also tend to have more burnout symptoms and expressed an intention to reduce their clinical work hours.

There have been numerous studies that show the increasing amount of time physicians spend working in the EHR or doing administrative tasks. Primary care physicians spend more than half of their workday interacting with electronic health records, spending almost six hours on EHRs, both during and after clinic hours, according to a study by the American Medical Association published in 2017.

Despite concerns about the amount of physicians' time spent on EHR in-basket, there is little research looking at sources of in-basket messages and their relative volumes, according to study author Ming Tai-Seale, a professor in the

at the Palo Alto Medical Foundation.

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The researchers used survey data from 900 physicians as well as administrative and EHR data from the Palo Alto Medical Foundation, a multispecialty health care delivery organization in California and an early adopter of EHRs, to study the association between "desktop medicine" and physician wellbeing.

For the study, specialties were grouped into six categories: family medicine, internal medicine, pediatrics, surgical, nonsurgical procedural, and nonprocedural specialties focused on evaluation and management–oriented services.

The average number of weekly in-basket messages was 243, of which 114 (47%) were generated by the EHR system. These included pending orders automatically sent to physicians according to algorithm-driven health maintenance reminders, requests for prior authorization, patient reminders and many more.

members and 31 were from the physicians themselves, for example, reports of laboratory tests they had ordered.

Forty-two percent of physicians received above the average number of messages. System-generated messages stood out as the largest source of messages for all specialties, especially for internal medicine and family medicine, followed by pediatricians.

Notably, 45% of physicians with burnout symptoms received greater-than-average numbers of weekly system-generated in-basket messages, whereas 29% of physicians with burnout symptoms received only average or less-than-average numbers of the messages, according to the study.

Results suggested that receiving an above-average number of system-generated messages was associated with a 40% increase in the probability of burnout and a 38% increase in the probability of intending to reduce clinical work hours, the study authors said.

The results suggested that, at the margin, receiving an above-average number of system-generated messages was associated with a 40% increase in the probability of burnout

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"Using computer algorithms to send messages to physicians may need to be balanced with considerations of what brings joy and which tasks are truly physicians' work," the study authors wrote.

But the amount of time physicians spent in EHR progress notes was not significantly associated with burnout, according to the study.

"When we discussed the absence of a significant relationship between burnout and progress notes work with physicians, we learned that they considered work in progress notes to be work that they perform with more autonomy. They derived professional satisfaction from writing good notes," the study said.

Thirty-six percent of physicians reported burnout symptoms and 29% expressed an intention to reduce their

The study authors also note that family physicians and internists receive disproportionately high numbers of system-generated messages—greater than 2.5 times the volume of surgeons, 4.0 times that of nonprocedural evaluation and management–oriented specialists, and 5.0 times that of nonsurgical proceduralists.

"Keeping up with system-generated messages can be overwhelming, particularly for internists and family physicians. Some of those messages are generated by population health management algorithms that remind physicians to perform work that might have otherwise been overlooked," the study authors said. These messages are in addition to messages coming directly from patients and from other physicians or care team members.

Careful redesign of desktop medicine work, particularly regarding in-basket responsibilities, might help reduce physician burnout, the study authors concluded.

"Health care organizations need to reconsider some of their approaches to improving the quality of care and population health. Physicians might not be the most appropriate

authors said.

At the same time, design engineers also need to reconsider whether system-generated automatic messages are the best way to ensure quality of care.

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"It may be time to examine whether every reminder to order routine chronic disease management lab tests, for example, periodic glycosylated hemoglobin A1c tests, must be signed and placed by a physician."

The study authors also suggest that hospitals, health systems, and medical practices allow messages to reach physicians' in-baskets only during work hours, conveying the message that physicians are so highly valued that the organization wants to protect their private time. To reduce the number of messages reaching physicians' in-baskets, some messages, such as prescription refill requests, may be delegated to nonphysician clinicians, registered nurses or clinical pharmacists on the care team.

their license, the study authors said.