



# Asian Journal of Scientific Research

ISSN 1992-1454

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## Smarter Systems Help Busy Doctors Remember

***Busy doctors can miss important details about a patient's care during an office examination. To prevent that, Northwestern Medicine researchers have created a whip-smart assistant for physicians -- a new system using electronic health records that alerts doctors during an exam when a patient's care is amiss.***

After one year, the software program significantly improved primary care physicians' performance and the health care of patients, with such chronic conditions as diabetes and cardiovascular disease. The program, a new comprehensive approach tied to a doctor's performance review, also boosted preventive care in vaccinations and cancer and osteoporosis screenings.

The study, done with 40 Northwestern Medicine primary care physicians, will be published Dec. 21 online in the journal *Medical Care* and in the February print issue.

"It helps us find needles in the haystack and focus on patients who really have outstanding needs that may have slipped between the cracks," said Lead Author Stephen Persell, M.D., an Assistant Professor of Medicine at Northwestern University Feinberg School of Medicine and a physician at Northwestern Memorial Hospital.

"Quality health care is not just about having good doctors and nurses taking care of you," said Persell, a researcher in the division of general internal medicine. "It's having systems in place that make it easier for them to do their jobs and insure that patients get what they need."

In the new system, an unobtrusive yellow light on the side of a doctor's computer alerts him or her to a message that something is awry with Mr. Jones' care. When the doctor clicks on the light, she may learn Mr. Jones, who has congestive heart failure, hasn't gotten his recommended pneumonia vaccine. Or, perhaps he was taken off his beta-blockers during a recent hospitalization and needs to start them again.

"The pieces of this system aren't new, but putting them together in a comprehensive way is new," Persell noted. "If you put these things together in a smart way, then electronic health records are powerful tools for quality of care."

Electronic health records alone have not been shown to improve quality of care.

"What matters is how you use the electronic health records, so they make your job easier rather than act as a source of constant annoyance and false alarms," Persell said. "By showing only things that appear to be out of order, we are trying not to overwhelm the physician. If doctors get inaccurate alerts saying do this, do that, then they will ignore them."

Essential to the success of the program: it doesn't waste the doctor's time, is tied to performance reviews and isn't annoying.

"You can't shove it in doctors' faces, or they walk away from it," Persell noted. "We used reminders that were not intrusive, but were still effective because doctors had faith that the data was accurate and they could enter data to make it more accurate."

David Baker, M.D., Senior Author and Chief of Northwestern Medicine's general internal medicine division, added, "We wanted physicians to feel ownership of this. For this to work well, they have to view the alerts and reporting system as their personal quality improvement tools."

Doctors' interactions with the reminders were tied to quarterly performance reports based on their treatment of chronic disease and preventive care quality measures. They were willing to use the electronic tools, Persell believes, because they were regularly being reminded of their performance, and the tools were helping them improve it.

To create the program, researchers used existing tools already available in a commercial electronic health records system. They integrated the health records with performance reports and paid close attention to the quality of information fed to physicians.

When a recommended treatment is not the medically right choice for a patient, the doctor is able to enter that information. Thus, he is not needlessly reminded that the patient isn't getting a certain drug and won't be penalized in performance reports for not prescribing it.

Among the improvements: heart disease patients getting cholesterol lowering medication rose from 87 to 93 percent, pneumonia vaccinations from 80 to 90 percent and colon cancer screenings from 57 to 62 percent.

"The gains are modest," Persell said, "but if you are already at 90 percent and go to 94 percent, that's important."

The research was supported by the Agency for Healthcare Research and Quality.

**Story Source:** The above story is reprinted from materials provided by Northwestern University, via EurekAlert!, a service of AAAS.