

## Electronic health records shown to improve the quality of patient care

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A new study by Weill Cornell Medical College researchers, published in the *Journal of General Internal Medicine*, provides compelling evidence that electronic health records (EHRs) enhance the quality of patient care in a community-based setting with multiple payers, which is representative of how medicine is generally practiced across the United States.

The use of EHRs is on the rise, in part because the federal government has invested up to \$29 billion in incentives promoting the meaningful use of these systems, with the aim of tracking and improving patient outcomes. Previous studies have provided conflicting evidence about the impact of EHRs, and until now it had been not clear whether they improved the quality of patient care, particularly in typical communities that use commercially available systems.

"The previous studies on the effects of <u>electronic health records</u> in the outpatient setting have been mixed," says the study's lead investigator, Dr. Lisa M. Kern, associate professor of public <u>health</u> and medicine at Weill Cornell Medical College. "This is one of the first studies to find a positive association between the use of EHRs and quality of care in a typical community-based setting, using an off-the-shelf <u>electronic health</u> record that has not been extensively tailored and refined. This increases the generalizability of these findings."

"This study starts to grow the evidence that the use of these systems can systematically improve the quality of care, although their maximum



value likely lies in their ability to support new <u>health care delivery</u> models," says the study's senior investigator Dr. Rainu Kaushal, director of the Center for Healthcare Informatics and Policy and the Frances and John L. Loeb Professor of <u>Medical Informatics</u> at Weill Cornell Medical College. "The findings of this study lend support to the very significant investments in health information technology that are being made by the federal government, states, and <u>health care providers</u>."

This study was conducted with the Health Information Technology Evaluation Collaborative (HITEC)—a multi-institutional effort directed by Drs. Kaushal and Kern and funded by New York State, in order to evaluate and assess the impact of New York's <a href="health information">health information</a> technology strategy. In 2008, the researchers collected data about the quality of patient care across nine measures from nearly 500 physicians and 75,000 patients in ambulatory practices in the Hudson Valley region of New York, where there has been a concerted effort to implement EHRs. They gathered data from five different health plans, including two national commercial plans, two regional commercial plans and one regional Medicaid health maintenance organization.

"This study reflects data from five different health plans, which is another strength of the study and which is critical for understanding the experiences of patients in the community," says Dr. Kern. "If you only have one health plan, then you will not be seeing the whole picture."

The team found that the 56 percent of physicians who used commercially available EHRs provided significantly better quality of care than physicians using paper records for four measures, including hemoglobin A1c testing in diabetes, breast cancer screening, chlamydia screening and colorectal cancer screening. EHRs typically provide reminders about these clinical tests. Moreover, the combined score across all nine measures indicated that EHRs led to better patient care than paper records.



"EHRs may improve the quality of care by making information more accessible to physicians, providing medical decision-making support in real time and allowing patients and providers to communicate regularly and securely," says Dr. Kaushal. "However, the real value of these systems is their ability to organize data and to allow transformative models of health care delivery, such as the patient-centered medical home, to be layered on top."

To follow up on this study, the researchers plan to determine how the effects of EHRs on patient care vary over time and across different locations in New York, to examine the effects EHRs on the cost of patient care and to work on improving ways to measure the quality of patient care.

## Provided by New York- Presbyterian Hospital

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