

EHR Implementation Without Meaningful Use Can Lead to Worse Outcomes

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Defying expectations, typical electronic health record (EHR) use in practices belonging to a primary care network has been associated with poorer diabetes care quality and outcomes. Current expansion of primary care EHR implementation must focus on use that improves care.

In 2004, the Bush administration established a goal for all Americans to have care that includes an EHR by 2014. The Health Information Technology for Economic and Clinical Health provisions of the American Recovery and Reinvestment Act of 2009 provided \$19 billion to increase the pace of EHR adoption, and created Regional Extension Centers to help practices adopt and achieve “meaningful use” of this technology. Our observation of primary care practices in New Jersey and Pennsylvania suggests that shifting the focus of support efforts from adoption to truly meaningful use will be challenging.

As part of a quality improvement intervention, the Using Learning Teams for Reflective Adaptation (ULTRA) study, we assessed diabetes care quality in 50 primary care practices. Thirteen practices implemented EHRs before the start of the study, whereas the others used paper records, allowing for statistical examination of the relationship between EHR use and diabetes care quality in typical primary care practice settings at baseline. The odds of patients meeting recommended targets for blood

pressure, lipid, and blood glucose control were 2.68 times greater in practices with paper records than in practices with EHRs (*see accompanying table*).¹ We also found that documentation of care in practices using EHRs was no better than that in practices using paper records.²

Subsequent research in a group of primary care practices attempting to implement electronic prescribing programs found uneven knowledge of information technology capabilities and poor understanding of the importance of work process redesign to accommodate new technologies.³ These results confirm previous observational studies of EHR adoption in this network and provide one potential explanation for the failure to realize quality gains in practices such as these.⁴

These findings suggest that the Regional Extension Centers and other efforts to support primary care practice improvement should focus not only on implementation of health information technologies, but also on effective use for quality improvement. Overcoming the gap between typical and meaningful use will likely require assistance and incentives for work process redesign efforts. Support for practices implementing these technologies will need to be coupled with practical training on how EHRs can be used to support better patient health, especially for those with chronic illnesses such as diabetes mellitus.

The information and opinions contained in research from the Graham Center do not necessarily reflect the views or the policy of the AAFP.

Policy One-Pagers are available from the Graham Center at <http://www.graham-center.org>.

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Table. Comparison of Paper Records and EHRs in Meeting Diabetes Care Outcomes

Target	Adjusted odds ratio*
Two of three outcomes	1.67
All three outcomes	2.68

EHR = electronic health record.

*—Odds that patients with paper records would meet outcomes (i.e., blood pressure, lipid, and blood glucose control) compared with those with EHRs. These odds ratios are statistically significant.

Information from reference 1.

REFERENCES

1. Crosson JC, et al. Electronic medical records and diabetes quality of care. *Ann Fam Med*. 2007;5(3):209-215.
2. Hahn KA, et al. Electronic medical records are not associated with improved documentation in community primary care practices. *Am J Med Qual*. 2011;26(4):272-277.
3. Crosson JC, et al. Variation in electronic prescribing implementation among twelve ambulatory practices. *J Gen Intern Med*. 2008;23(4):364-371.
4. Crosson JC, et al. Implementing an electronic medical record in a family medicine practice. *Ann Fam Med*. 2005;3(4):307-311. ■