Online Record Access Failed to Impact Outcomes

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Primary care physicians are more likely to adjust medications for patients with diabetes who are given interactive, online access to their personal health records before an appointment, compared with a control group, according to a randomized trial. However, clinical outcomes at 1 year—including glycemic control, LDL cholesterol levels, and blood pressure—did not differ significantly between the groups.

Dr. Richard W. Grant and his associates randomized 11 primary care practices to different degrees of online access to personal health information for their patients. They hypothesized that patients who take a greater role in managing their diabetes would experience better outcomes.

A total of four practices offered patients interactive access to their personal health record while patients from seven other practices made up the active control group. The practices' 126 patients who had interactive access could edit a list of their prescribed medications, report adverse effects, and answer brief questions about adherence. They also could see previous hemoglobin A_{1c}, blood pressure, and LDL cholesterol lab findings through a link to a centralized electronic medical record system (Arch. Intern. Med. 2008;168:1776-83).

In contrast, the practice's 118 active control patients were permitted only to review and update their family medical history online, as well as view cancer screening and other non–diabetes-related preventive services.

The study was conducted at Partners HealthCare System Inc. practices in eastern Massachusetts. The hospital- and community-based settings had 230 primary care physicians on staff.

Participants in each group had similar health care use and comparable baseline control of HbA_{1c}, blood pressure, and LDL cholesterol. Also, both groups demonstrated similar, moderate improvements in these outcomes during the study. For example, HbA_{1c} levels dropped a mean 0.16% in the interactive group vs. 0.26% in the active control group. A total of 73% of the interactive patients and 68% of the control patients achieved their HbA_{1c} goal at 1 year.

A total of 82 patients in the interactive group and 41 in the control group kept a medication journal. A subanalysis using this information showed that 53% of the interactive group had diabetes-related medication changes during subsequent visits, compared with 15% of control patients. "Our intervention may have worked to improve the process of diabetes mellitus care by reducing barriers to medication change at the clinic visit," the authors wrote.

Less than 15% of patients at any of the practices opted to register for online access, which may partially explain the lack of significant difference in clinical outcomes at 12 months, the researchers noted. Lack of Internet access was not a significant factor—a separate internal survey of type 2 diabetes patients revealed that 52% routinely access general information online.

"Although the low rates of enrollment limit the interpretation of the 'real world' effect of our intervention, our results do clearly demonstrate that many patients with DM chose not to sign up for these services when presented the opportunity to engage in online access to their [primary care physicians]," the authors wrote. "Understanding this lack of enthusiasm becomes a crucial question that must be answered if we are to fully achieve the potential benefit of online patient health records."

There were notable demographic differences between patients who opted to enroll in the study and those who did not. Participants were younger than nonparticipants (mean age, 56 vs. 60 years). A greater proportion were white (89% vs. 67%), had commercial insurance (72% vs. 47%), and were at or below their HbA_{1c} goal (54% vs. 47%). This is "evidence that the digital divide remains an important barrier to the adoption of new health information technologies," the authors wrote.

Patients with poor metabolic control were less likely to enroll, another possible limitation of the study.

Future studies should assess greater numbers of patients, the authors noted. They added that outcomes also might improve if the current clinical practice design were changed to promote the engagement of physicians and patients more effectively in nontraditional health care interactions.

None of the study authors reported any conflicts of interest. ■