

Adoption and Use of an Online Patient Portal for Diabetes (Diabetes-STAR)

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Abstract

Online patient portals, which provide patients with personal information and facilitate electronic doctor-patient communication, can help patients manage chronic diseases. These systems will be most beneficial if they have broad and durable appeal. In a randomized trial, we compared a portal providing generic diabetes self-management information to one providing personalized information (Diabetes-STAR). We assessed (1) the characteristics of patient-users and (2) whether including personalized content promotes sustained use.

Methods

We recruited patients from three primary care practices and one specialty practice at University of Colorado Hospital. Patients with type 2 diabetes were identified using billing data. Patients were recruited by mail and at check-in to clinic visits. Enrolled patients were randomly allocated to the intervention or the control group. Controls received electronic communication functions and generic information about diabetes care. The intervention group also received access to personalized content based on clinical information, and a system that helps patients set goals to improve health and provides automated follow-up. Usage of the respective portals was monitored from March 1 through November 30, 2005. We compared dichotomous outcomes between groups using chi-square. Usage of the system was compared using a maximum likelihood approach.

Results

3,484 patients with type 2 diabetes were identified in the enrollment pool. We enrolled 328 patients (163 intervention, 165 control) into the clinical trial. The enrollee mean age was 59.2; 45% were female and 19% had safety-net insurance (e.g. Medicaid). The study population had a lower proportion of females than the enrollment pool (54%, $p=0.0009$), but the mean age (58.1) and proportion with safety-net insurance (22%) were not significantly different. While the same proportion of the intervention group

(83%) as the control group (84%) logged in at least once, usage was much higher in the intervention group over the course of the study (772 vs. 319 days logged in; $p=0.001$). In the intervention group, 39% set a goal to improve health, 42% reviewed laboratory results and 30% reviewed clinical notes.

Conclusions

In our trial, we enrolled just under 10% of the patients with diabetes from the participating practices. Of those who enrolled, usage of Diabetes-STAR was substantial. Incorporating personalized and interactive content resulted in more sustained use compared with generic content.