

Primary Care Clinician Attitudes Towards Electronic Clinical Reminders and Clinical Practice Guidelines

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Abstract

Compliance with outpatient practice guidelines is low and clinical reminders have had variable success in improving adherence rates. We surveyed primary care physicians (PCPs) regarding practice guidelines and the perceived utility of electronic reminders for both routine health maintenance (HM) items and chronic disease management. Most PCPs preferred receiving reminders in an electronic format rather than a paper format. Electronic reminders were felt to be more useful for HM items than for diabetes management. The majority of clinicians felt that electronic reminders significantly improved overall health care quality.

Background

The evidence base and number of practice guidelines in ambulatory medicine continues to expand. However, studies indicate that compliance with guidelines for both preventive services and chronic disease management remains low. Paper-based clinical reminders can improve compliance but their effectiveness is variable¹. We developed a set of patient-specific electronic clinical reminders that are delivered directly through an electronic medical record (EMR) to better integrate clinical decision support and physician workflow. We evaluated PCP attitudes towards compliance with guidelines, barriers to guideline adherence, and the use of electronic clinical reminders for HM and disease specific management recommendations.

Methods

We surveyed 176 PCPs involved in a randomized controlled trial of electronic clinical reminders being conducted at 22 outpatient clinics in the Boston area. PCPs receive patient-specific reminders within an outpatient EMR. Reminders are displayed on the initial patient summary screen, and providers are able to click on the reminders to obtain more information about the content or to turn the reminder off. The reminders are produced using algorithms that draw upon information available within the coded problem list, medication list, and laboratory results system.

All physicians receive reminders for preventive services (breast and cervical cancer screening, adult vaccinations), while the intervention group receives additional reminders for diabetes and coronary artery disease management. Surveys were mailed following exposure to the electronic reminders for three months. The response rate was 68% (n=120).

Results

Overall, 35% of physicians reported lack of knowledge of guideline recommendations as a barrier to adherence, while another 26% of physicians were aware of guideline recommendations but forgot to apply them during an office visit. Clinicians in the intervention group (n=53) were more likely to find reminders for HM items useful than those for diabetes management (58% versus 40%, p=0.02), but there was no difference in usefulness between HM reminders and those for coronary artery disease management (58% versus 45%, p=0.22).

Among all respondents, 75% preferred receiving reminders in an electronic format versus a paper format. 68% of clinicians felt they were receiving just enough reminders, with only 10% reporting too many reminders. Within physicians that notice reminders during a patient visit (30%), approximately 65% report acting on the recommendations. Overall, 76% of physicians felt that electronic clinical reminders significantly improved health care quality.

Conclusion

Reminders can address some commonly cited barriers to guideline adherence, such as forgetting to apply guideline recommendations during a visit. Physicians are accepting of electronic reminders, often act on them, and feel that these reminders can improve overall health care quality.

References

1. Shea S, DuMouchel W, Bahamonde L. A meta-analysis of 16 randomized controlled trials to evaluate computer based clinical reminder systems for preventive care in the ambulatory setting. JAMIA 1996; 3: 399-409.