Leveraging Point-of-Care Clinician Feedback to Study Barriers to Guideline Adherence

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Summary

Studies of barriers to guideline adherence have generally surveyed clinicians temporally remote from the clinical scenario in which recommendations were delivered, potentially adversely biasing clinician observations. The user interface of ATHENA DSS, a guideline-based decision support system for hypertension, includes a point-of-care feedback window that accepts clinician-user comments during the display of recommendations. Analysis of this feedback has revealed a number of intriguing patient, provider, and technical barriers to adherence collected during real-time system use.

INTRODUCTION

It is widely recognized that adherence to hypertensive guidelines by clinicians is poor. Surveys are a typical method of investigating barriers to guideline adherence. Delays between the office visit and collection of survey data about that visit may introduce the possibility that clinicians may have difficulty remembering important details during survey completion. Delays in sampling the experience of clinicians with clinical guidelines may introduce cognitive heuristics and biases that can affect the accuracy of such observations.

ATHENA DSS (Assessment and Treatment of Hypertension: Evidence-Based Automation Decision Support System) is a guideline-based decision support system for the treatment of hypertension. ATHENA DSS delivers treatment advisories to clinicians at the point of care via an interface to the VA CPRS system, an EMR in patient care delivery settings nationwide. An important component of the ATHENA DSS user interface is a feedback box that collects free-text comments entered by clinician-users during point-of-care use of the system.

Point-of-care feedback, impressions collected during point-of-care use of the system, offers several distinct advantages to data collection methods such as surveys. Integrated with the presentation of the decision support, a point-of-care feedback interface facilitates real-time submission of clinician feedback, potentially reducing recall biases present in clinician surveys. Importantly, clinician feedback is automatically linked to the specific patient scenario about which the clinician is commenting. A point-of-care feedback interface can also be a useful tool to provide post-fielding surveillance of the clinical decision support system after deployment.

METHODS

As part of a randomized trial to assess the overall effect of ATHENA DSS on choice of drug therapy and blood pressure control, recommendations were generated on a daily basis for 15 months at nine dispersed clinical sites within the VA Durham, Palo Alto, and San Francisco Health Care Systems. 91 primary care providers in the experimental arm received patient recommendations over the 15-month study period. While viewing the ATHENA DSS advisory, clinicians were also able to input feedback about point-of-care use of the system.

Feedback comments submitted by clinician-users were logged into a Microsoft SQL database and monitored by the ATHENA DSS team. Comments were then categorized by two ATHENA DSS team members for intellectual content. The two members compared their classifications for consistency. Any disagreements were resolved by consensus between the two team members and the principal investigator.

RESULTS

A total of 835 comments were submitted by 48% (44 of 91) of clinicians on 735 patients who received ATHENA recommendations (mean = 19 comments/clinician respondent).

Within the 835 feedback comments, there were 1185 distinct intellectual ideas expressed within the comments; 75% (890/1185) of these ideas described a barrier to guideline adherence. 48.7% (577/1185) of these were patient-related barriers, 17.5% (207/1185) provider-related, and 8.9% (106/1185) were technical barriers.

CONCLUSIONS

We have developed an automated, practical approach to collect potential barriers to guideline adherence in point-of-care use of ATHENA DSS. Facilitating point-of-care submission of feedback during real-time use of the decision support system provides additional insight into the barriers that clinicians face when attempting to follow guideline recommendations.