Physicians Value Patient Review of their Electronic Health Record Data as a Means to Improve Accuracy of Medication List Documentation

Elizabeth Siteman; Alexandra Businger, Tejal Gandhi, MD, MPH; Richard Grant, MD, MPH; Eric Poon, MD, MPH; Jeffrey Schnipper, MD, MPH; Lynn A. Volk, MHS; Jonathan S. Wald, MD, MPH; Blackford Middleton, MD, MPH, MSc

Information Systems, Partners HealthCare System, Wellesley, MA
Massachusetts General Hospital, Boston, MA
Brigham and Women's Hospital, Boston, MA
Harvard University, Cambridge, MA

Abstract
Providers place great value on their patients as sources of clinical information. Patient access to and review of their medication list from their electronic health record prior to a visit may improve the accuracy of medication documentation.

Background
Increasing patient demands for convenient access to their own health care information has led to the development of “patient portals” that allow for patient access to data from ambulatory electronic health records (EHR). Little is known about clinicians’ attitudes toward this new model of health care and even less is known about clinicians’ reactions to the model after initial implementation. In our study, we collected baseline information about primary care providers’ (PCP) usage of a secure, web-based patient portal linked to the ambulatory EHR, called Patient Gateway (PG). Prior to and one year after implementation of a “medication module” within PG, we then assessed primary care providers’ perceptions of these technologies as facilitators of patient-provider communication and the potential for these tools to improve the accuracy of medication list documentation.

Methods
We conducted a pre- and post-implementation survey of PCPs at 11 practices within an integrated delivery system. The surveys solicited providers’ feedback regarding the impact and value of patients’ ability to review and comment on their EHR data specific to medications, care regimens for diabetic patients, family medical history, and health maintenance. We invited the participating PCPs’ patients, who were enrolled in Patient Gateway, to consent to the study and review and update their information prior to an upcoming visit. A subset of the study’s patient participants were randomized to view their current medication list and submit any changes to their PCPs via the patient portal. The PCPs were then able to evaluate the changes with their patients during the visit and update the medication list in the EHR accordingly.

Results
Prior to implementation, 59% of providers whose patients were randomized to review their medication list via the patient portal responded to the pre-survey. After implementation, 42% of these providers offered their feedback through the post-survey. Among those providers who returned a post-survey, 35% reported that their patients submitted an update to the medication list via the patient portal. PCPs recognized the potential for patient review of their medication record prior to a visit to improve the accuracy of medication list documentation—their responses were consistent after implementation (Table 1). Post-implementation, providers were less concerned about potential negative effects of the intervention.

<table>
<thead>
<tr>
<th>Percentage of PCPs who agreed or strongly agreed</th>
<th>Pre-implementation</th>
<th>Post-implementation</th>
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<tbody>
<tr>
<td>Help to ensure the accuracy of their medication list</td>
<td>96%</td>
<td>100%</td>
</tr>
<tr>
<td>Are more confused about their medications</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>Are more frustrated/angry about the inaccuracy of their current medication list</td>
<td>46%</td>
<td>11%</td>
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Table 1. PCPs’ perceptions of the value of patient review of their medication list prior to a visit.

Conclusion
Results of our survey indicate that the development of patient portals to view selected EHR data would likely result in improved EHR documentation of medications, provided that such tools support an efficient process for clinician review and incorporation of the data into the EHR. The full use of patient portals may also require new ways to compensate physicians for their time.