Primary Care Clinician Attitudes Towards Ambulatory Computerized Physician Order Entry

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Abstract
Ambulatory computerized physician order entry (ACPOE) represents one strategy to improve physician ordering practices, compliance with guidelines, and patient safety (1). We surveyed primary care physicians (PCPs) regarding attitudes towards ACPOE and its various features. Most PCPs did not have systems for tracking test results and were concerned about missed tests. However, there was concern that ACPOE might be time consuming, and only one-third of PCPs felt that ACPOE features would be very useful. Speed and workflow issues will be important contributors to the success of ACPOE. In addition, physician buy-in to the utility of its various features will need to be strengthened.

Background
Quality gaps that are particularly relevant to the ambulatory setting include the lack of adherence to established guidelines for preventive care, chronic disease management, and test result follow-up. Ambulatory computerized physician order entry (ACPOE) has been proposed as a potential intervention to address these quality concerns. However, doubts persist regarding the efficacy of ACPOE. In particular, not all physicians may be willing to integrate ACPOE into their routine workflow. We evaluated PCP attitudes towards ACPOE and its various decision support capabilities.

Methods
We surveyed 261 PCPs at 20 Boston-area outpatient clinics (consisting of hospital-based clinics, community health centers, and community practices). The response rate was 55% (n=144). All PCPs used an outpatient electronic medical record developed by Partners Information Systems that included medication prescribing, problem lists, health maintenance items, laboratory results viewing, and notes. However, orders (other than medication prescriptions) were executed using paper forms.

Results
Overall, 52% of PCPs did not currently keep a record of tests ordered for clinic patients, and 62% did not have a system to detect a missed ordered test. Approximately 2/3 of physicians were concerned that patients failed to obtain tests that were ordered. Importantly, 70% of PCPs felt that they spend too much time filling out forms, 58% felt that they don’t spend enough time with each patient, and 43% were concerned that ACPOE would slow them down.

We assessed which features in ACPOE would be most useful to PCPs using a 7-point scale. Ratings of 1-3 signified a rating of very to extremely useful.

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<thead>
<tr>
<th>ACPOE feature</th>
<th>PCP's rating very to extremely useful</th>
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<tr>
<td>Diagnosis code suggestions for lab orders</td>
<td>32%</td>
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<td>Ability to put a summary of orders into visit notes</td>
<td>31%</td>
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<td>Notification of tests missed by patient</td>
<td>30%</td>
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<tr>
<td>Ability to order tests linked to electronic reminders</td>
<td>29%</td>
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<tr>
<td>Ability to print summary of orders for patient</td>
<td>22%</td>
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Conclusion
While ACPOE can address some commonly cited physician concerns such as test tracking and notification of missed tests, PCPs are concerned about its potential impact on workflow and the utility of its features. These concerns will need to be addressed to ensure widespread acceptance of ACPOE.

References
1. Johnston D, Pan E, Walker J, Bates DW, and Middleton B. The Value of Computerized Provider Order Entry in Ambulatory Settings. 2003; Center for Information Technology Leadership, HIMSS.