Accuracy of Clinical Information Entered by Patients through Health Information Kiosks Compared to Patient Charts and Claims Data

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Introduction

- Emphasis on engaging patients in their own healthcare is increasing.
- Use of free-standing health information kiosks is growing rapidly1.
- Studies have shown that accuracy of patient-entered health information at kiosks in a supervised clinical setting about specific diseases can be highly accurate2.
- Little is known about accuracy of unsupervised patient-entered information, especially among patients of lower socioeconomic status.

Methods

- Four survey questions were chosen that would correspond directly to information available via chart audits and in coded claims data.
  - The presence or absence of diabetes
  - The presence or absence of asthma
  - Completed cholesterol screening
  - Completed lead screening.
- Specifically, the questions were selected to represent both adult and pediatric issues.
- Responses were verified by the presence or absence of the corresponding ICD9/CPT codes in claims and of the appropriate documentation in medical records.

Table 1. Data Accuracy Comparing Patient-Entered Data and Claims Data to Information in Medical Records

<table>
<thead>
<tr>
<th></th>
<th>Patient-Entered Data Accuracy</th>
<th>Claims Data Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>89%</td>
<td>92%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>96%</td>
<td>85%</td>
</tr>
<tr>
<td>Cholesterol Check</td>
<td>96%</td>
<td>93%</td>
</tr>
<tr>
<td>Lead Screening</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>Average</td>
<td>72%</td>
<td>81%</td>
</tr>
</tbody>
</table>

Results

We collected data over a period of 3 years from 411 kiosk sessions during which at least one of the 4 questions was answered. The results of these comparisons are shown in Table 1.

Conclusions

As the use of kiosks grows, it is important to measure the accuracy of patient-entered data. Our results show:

- A high level of accuracy for diagnoses (93%).
- A low level of accuracy on reporting past procedures (51%).
- We also found that HIE claims data are reasonably accurate across both diagnoses and procedures (81%).

References


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