Does Formalized Scoring and Feedback Improve Resident Documentation Skills?

Nauss MD, Jaskulka B, Vajda P, Baliga S, Schultz L/Henry Ford Hospital, Detroit, MI

**Background:** Proper documentation is an important skill. A prior study showed 47% of residents felt they had adequate training on this topic while 95% of attendings identified charting as an important skill.

**Objectives:** To determine if performing an intervention consisting of a lecture, chart review using a novel scoring tool, and individual feedback would improve residents’ charting.

**Methods:** A tool was developed to quantify a chart on its completeness with emphasis on medical decision making. All PGY 2 and 3 EM residents participated in the study.

Baseline scores were calculated without the intervention using charts from the second year of training for the current PGY 3 residents. Charts from that year were scored at a 6 month interval to determine if a resident’s charting improved solely due to residency progression.

**Scoring process:** 3 pre-intervention charts were randomly selected. Residents either had 2 admission and 1 discharge chart reviewed or vise versa.

A chart for review consisted of physician and nursing notes as well as vital signs. Charts were given to 2 staff physicians who used the tool to score the charts. These charts were then given to 4 staff physicians who met with residents to discuss the results.

During the intervention period all residents attended a lecture to review the tool. A charting tip sheet was also placed in the ED. Periodic email reminders of the charting tool and tips were sent to all residents.

After the six month intervention period, the scoring process was repeated.

**Results:** Pre-intervention baseline scores were not significantly different at time 0 and 6 months (64.3 versus 64.4, p=0.96). All residents, PGY 2, and PGY 3 residents improved their scores between 0 and t+6 months, though the differences were not significant (p=0.06).

**Table 1.** Comparing % correct charting for pre and post measurements.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre Mean</th>
<th>Pre S.D.</th>
<th>Post Mean</th>
<th>Post S.D.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All residents (n=27)</td>
<td>69.9</td>
<td>7.9</td>
<td>73.1</td>
<td>7.4</td>
<td>0.06</td>
</tr>
<tr>
<td>Second year residents (n=14)</td>
<td>73.2</td>
<td>7.8</td>
<td>75.1</td>
<td>8.2</td>
<td>0.358</td>
</tr>
<tr>
<td>Third year residents (n=13)</td>
<td>66.4</td>
<td>6.9</td>
<td>70.8</td>
<td>6.1</td>
<td>0.104</td>
</tr>
</tbody>
</table>
HPI
Is the HPI complete and comprehensive enough to adequately determine what the chief complaint is, how long that complaint has been present, exactly where physically it is on the body, and any associated symptoms? Does the HPI contain pertinent information that is complaint specific such as previous intubations and admission for asthma or radiation of pain and exacerbating factors for chest pain (5 points)?
1 point for a clear description of the actual chief complaint
1 point for a delineation of how long the CC has been present
1 point for either the severity of the symptoms/complaint or exacerbating/remitting factors
1 point for pertinent components of the PMHx as they relate to the CC (i.e. previous stents in a patient with chest pain, previous intubations in an asthma pt etc.)
1 point for previous treatment or previous evaluation/diagnosis of similar symptoms (i.e. a patient with abdominal pain has had the same symptoms in the past and was diagnosed with pancreatitis etc.)
Add points together for total on this section.

ROS
Are an "appropriate*" review of systems included either in the HPI or in a standalone ROS section (2 points)?
* An "appropriate" ROS depends on acuity and chief complaint. ROS for abdominal pain should touch on bowel movements, fever, vomiting, nausea, etc. For an ankle sprain, as long as the HPI makes it clear the fall was mechanical in nature, an expansive ROS is not needed.
2 points for a full ROS as described above. 1 point for a semi-complete ROS that contains only the systems that are obviously connected with the CC (i.e. for abdominal pain including nausea and vomiting, diarrhea etc. but not including fever, shortness of breath, dysuria, etc. that may be integral in a full and complete ROS/HPI).
Add points together for total on this section.

Figure 1. Emergency Medicine Chart Review Tool.

Conclusions: A brief intervention incorporating personalized feedback improved resident performance on a chart scoring tool. Further study with a large cohort may be beneficial.