Improving timeliness and quality of discharge summaries through a resident incentive program

Aparna Goel, MD1, Kara Bischoff, MD1, Sumant Ranji, MD2, Michelle Mourad, MD2
1Department of Medicine, 2Division of Hospital Medicine
University of California, San Francisco

The Problem
Prior to the 2010, only 38% of medicine patients had discharge summaries completed on the day of discharge. This was an important area for improvement as timely discharge summaries have multiple advantages including:
- Nurses and the larger healthcare team can utilize the discharge summary to communicate the discharge plan with patients accurately and fully.
- PMDs in the UCSF system have immediate access to the summary in the EMR and outside PMDs can receive the summary rapidly via e-mail or fax.
- Patients can receive a hard copy of their discharge summary, improving communication about hospital course, follow-up plan, and future appointments

Project Goals
- Educate housestaff about the importance of high-quality, timely discharge summaries.
- Support and incentivize internal medicine residents on Moffitt wards rotations to complete electronic discharge summaries on the day of discharge for at least 75% of patients discharged from the hospital.

Project Plan
- An efficient electronic discharge summary (EDS) template that includes all evidence-based elements of a high-quality discharge summary and pulls information directly from the EMR and was created and integrated into UCare.
- To prevent residents from being burdened with redundant work, the EDS substituted for the last hospital day’s progress note.
- The percentage of discharge summaries completed on the day of discharge was calculated weekly to biweekly.
- Performance data was fed back to housestaff by team.
- Housestaff were offered a $300 financial incentive for completing at least 75% of discharge summaries on the day of discharge for at least 3 quarters of the year.

Results / Progress to Date

Figure 1. Completion of discharge summaries on date of discharge. Rate of timely discharge summary completion rose rapidly after implementation of this program and remains above pre-specified goal. Blue line represents percent of discharge summaries completed on the day of discharge. Dotted orange line represents goal set by housestaff.

Figure 2. Quality of electronic discharge summaries compared to dictated discharge summaries. Rate of completion of recommended elements increased significantly following implementation of EDS, thereby improving the quality of discharge summaries.

Key Quality Parameters Pre-EDS Post-EDS p-value

<table>
<thead>
<tr>
<th></th>
<th>Pre-EDS (n=80)</th>
<th>Post-EDS (n=80)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge diagnoses</td>
<td>69 (86%)</td>
<td>80 (100%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Discharge med rec.</td>
<td>8 (10%)</td>
<td>70 (88%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pending tests</td>
<td>27 (34%)</td>
<td>80 (100%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Code status</td>
<td>14 (18%)</td>
<td>80 (100%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Change in functional status/activity</td>
<td>46 (58%)</td>
<td>78 (98%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>EDS provided to patient</td>
<td>0 (0%)</td>
<td>28 (35%)</td>
<td>0.028</td>
</tr>
</tbody>
</table>

Lessons Learned
- Housestaff are an impressionable and responsive group who are integral to care delivery in the academic hospital setting. They are therefore well suited to participate in patient safety and quality improvement initiatives.
- System improvements can promote rapid behavior change. It is critical to consider system changes in concert with education, data feedback, and incentives to maximize recommended changes.
- Frequent, granular data feedback serves as a powerful motivator.

Next Steps
- Survey housestaff and attendings in order to better understand:
  1) How these groups perceive QI incentive goals
  2) What elements of this project were most effective in motivating the behavior change that we observed
  3) Whether this project caused any unforeseen harms
- Continue to encourage housestaff to complete timely discharge summaries after this academic year; we will perform random data analysis and feedback on an ongoing basis.
- Continue analyses of the quality of EDS and revise the EDS template as needed to promote improved quality of summaries. For example, we want to edit the template to encourage more brief discharge summaries without compromising their quality.
- Implement an electronic discharge summary at all three hospitals.
- Publish and present our project results in order to disseminate information about the effects of a templated EDS and the ability of the Housestaff Incentive Program to harness the energy and central role of residents to improve the quality of care delivered in the hospital.