Boarding and Press Ganey Patient Satisfaction Scores Among Discharged Patients - Quantifying the Relationship

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Long wait times, long length-of-stay, use of hallway beds and physical crowding have all been reported to negatively impact patient satisfaction. There is a need for quantitative assessment of the relationship among patients discharged from the ED.

**Background**

To describe the association between total boarding hours for given calendar days, and mean Press Ganey patient satisfaction raw scores (PGs) on those days. To determine a quantitative coefficient for the relationship.

**Methods**

We measured total hours of boarding (stays greater than two hours after admission decision) for each calendar day in a nine month period. We obtained mean PGs for the same dates (by date of visit). A linear regression analysis was performed.

**Results**

Scatter plots with regression lines are shown in Figure 1. The relationships were statistically significant. See Table 1 for regression data.

Our research supports prior reports that boarding has a negative impact on patient satisfaction. Each 100 hours of daily boarding is associated with a drop of 1.3 raw score points in both PG metrics. These seemingly small drops in raw scores translate into major changes in rankings on Press Ganey national percentile scales (a difference of as much as 10 percentile points). Our institution commonly has hundreds of hours of daily boarding. It is possible that patient-level measurements of boarding impact would show stronger correlation with individual satisfaction scores, as opposed to the daily aggregate measures we describe here. Our research suggests that reducing the burden of boarding on EDs will improve patient satisfaction.

<table>
<thead>
<tr>
<th>Coefficient (PG impact per 100 hours daily boarding)</th>
<th>R-Squared</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Overall Score</td>
<td>-1.3 (-2, -0.6)</td>
<td>0.050</td>
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<tr>
<td>Doctors Overall Score</td>
<td>-1.3 (-2.1, -0.5)</td>
<td>0.036</td>
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