Introduction & Method

Blackpool Victoria Hospital’s Acute Medical Unit (AMU) has 36 beds. In 2017, 18374 unscheduled medical patients were admitted, and 284 (1.5%) died whilst on AMU. We built on work presented at SAM Belfast 2016, exploring differences in the overall mortality of weekend admissions, whilst examining any correlation with total admissions or patient acuity. Our digital patient tracking system was filtered for all 2017 admissions, and the data was analysed using appropriate statistical tests. Data was weighted to correct for unequal incidences of each day in 2017, i.e. 52 Sundays, but 51 Mondays.

Results

Mortality showed an increase for weekend admissions (Table 1) with, on average, fewer admissions (P<0.01, Figure 1). Patient acuity (Figure 2) was lower at the weekend: a shift (1%, P<0.01) was seen from the middle NEWS2 based (RAG) triage priority to the lowest triage priority increased.

Table 1: Weekday / Weekend Comparison

<table>
<thead>
<tr>
<th></th>
<th>Weekdays (total)</th>
<th>Weekends (total)</th>
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</thead>
<tbody>
<tr>
<td>Consultant Sessions</td>
<td>7 per day</td>
<td>6 per day</td>
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<tr>
<td>Admissions</td>
<td>13735</td>
<td>4639</td>
</tr>
<tr>
<td>Deaths on AMU</td>
<td>188 (1.4%)</td>
<td>96 (2.1%)</td>
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</table>

Figure 1: Average Admissions - Day, Weekday & Weekend

Discussion

Whilst an increase was expected, a 50% difference in AMU mortality for patients admitted at the weekend was surprising, despite a significant drop in admissions, and an almost identical, if not lower patient acuity.

Weekend service delivery is centred around maintaining the regularity of senior review, and facilitating efficient patient flow. Time to senior review out of hours is elucidated in other work presented at the conference (poster SO&D20), and variability in staffing is a large difference in this provisioning.

Another potential confounder would be reduced patient flow at weekends: fewer discharges means fewer ward destinations for AMU patients, and thus longer AMU stays. This could result in deaths attributed to AMU that would, in the week, have been attributed to the wards, and removed from this dataset. Perhaps survival to discharge would be a better metric, rather than deaths on AMU.

Figure 2: Average Triage - Day, Weekday & Weekend

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