LOW RISK CHEST PAIN: STREAMLINING THE PATIENT EXPERIENCE

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Background:
• Patients presenting with chest pain and an abnormal ECG have a higher probability of cardiac disease than those with a normal ECG who can often be discharged on the same day
• Patients with ‘low risk’ chest pain may experience delays in being clerked due to pressures on the medical take and sometimes stay overnight unnecessarily
• Direct referral to an Ambulatory Care Unit (ACU) with the facility for early exercise testing may be preferable

Ambulatory Care Unit:
• Set up in 2011
• Based on the premise that a proportion of medical ‘emergencies’ can be managed without admission
• NHS Institute for Innovation and Improvement – 1 in 6 emergency admissions can be avoided if managed through ambulatory care pathway

‘Low risk’ chest pain in the ACU
• Low risk chest pain = normal ECG, 2 x normal troponin, low GRACE score
• Access to same-day exercise tolerance testing (or facility to return next day if not in ACU opening hours)

The problem:

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudden-onset chest pain</td>
<td>Sudden-onset chest pain</td>
</tr>
<tr>
<td>Makes urgent GP appt</td>
<td>Makes urgent GP appt</td>
</tr>
<tr>
<td>Arrives in ED Observations ok. Put on Medical list.</td>
<td>Arrives in ED Clerked by ED doctor</td>
</tr>
<tr>
<td>Medical FY1 clerking</td>
<td>ECGs normal, troponin –ve, no risk factors.</td>
</tr>
<tr>
<td>Not seen by Consultant as not fully clerked by time of PTWR</td>
<td>Not seen by Consultant as not fully clerked by time of PTWR</td>
</tr>
<tr>
<td>Seen by Consultant on PTWR</td>
<td>Referred to ACU for exercise tolerance test</td>
</tr>
<tr>
<td>Discharged home after normal exercise tolerance test</td>
<td>Discharged to return to ACU in the morning</td>
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</table>

Conclusions:
• All patients with chest pain to be clerked in ED
• Allowing patients to wait for 6 hour troponin on ACU provided the result would be available in ACU hours (if not, wait in ED/MAU and if 6 hour troponin negative, sent home to return to ACU in the morning)
• Regular education of ED staff about the use of ACU and introduction of daily ACU Consultant/ED Consultant lunchtime “Board Rounds”

The proposed solution:

1. Discharged home after normal exercise tolerance test
2. Sudden-onset chest pain
3. Makes urgent GP appt
4. Arrives in ED Clerked by ED doctor
5. ECGs normal, troponin –ve, no risk factors.
6. Discharged to return to ACU in the morning

Method (follow-up):
• Prospective audit of all patients who met the criteria for low risk chest pain who presented to the Emergency Department over a two week period in July 2014

Post-intervention results:

<table>
<thead>
<tr>
<th>Number of patients (n)</th>
<th>Clerked by ED (n)</th>
<th>Time from presentation to medical clerking (mins)</th>
<th>Suitable for ACU (n)</th>
<th>Number of ACU-suitable patients transferred to ACU (n)</th>
<th>Total bed stays (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>33</td>
<td>94</td>
<td>27</td>
<td>18</td>
<td>14</td>
</tr>
</tbody>
</table>

Overall results:

- Proportion of ACU-eligible patients managed in ACU (%)
- Total bed days

Conclusions:
• A significant number of bed days may be saved through targeted utilisation of ACUs
• Also promotes timely senior assessment, appropriate discharge and reduces workload for the acute medical team