Retrospective audit of the impact of patients pre-alerted by the ambulance service on the Emergency Department in a district general hospital in the UK

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Background:

Emergency Department (ED) capacity is an ongoing and well publicised issue, attributed to multiple factors including increasing attendances, rising acuity, and exit block. Pre-alerts are given by the ambulance service for potentially or actually unstable patients and as such require the rapid availability of appropriate capacity and staff. We reviewed the quantity and timing arrival of pre-alerted patients to our department in order to target resources and inform appropriate workforce planning.

Methods:

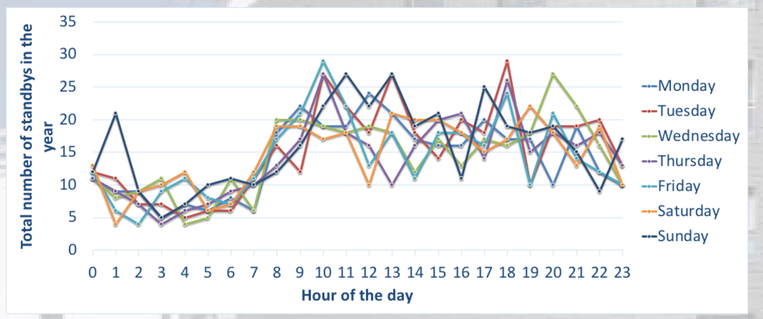
We retrospectively audited all pre-alerted cases presenting to the ED within a United Kingdom (UK) district general hospital from 1st September 2016 to 31st August 2017. Details of attendance time and date; discharge destination and final diagnosis were noted from both pre-hospital and ED documentation, and hospital discharge letters.

Results:

A total of 2468 patients were pre-alerted representing 4% of the overall attendances in this time period (63,334 attendances).

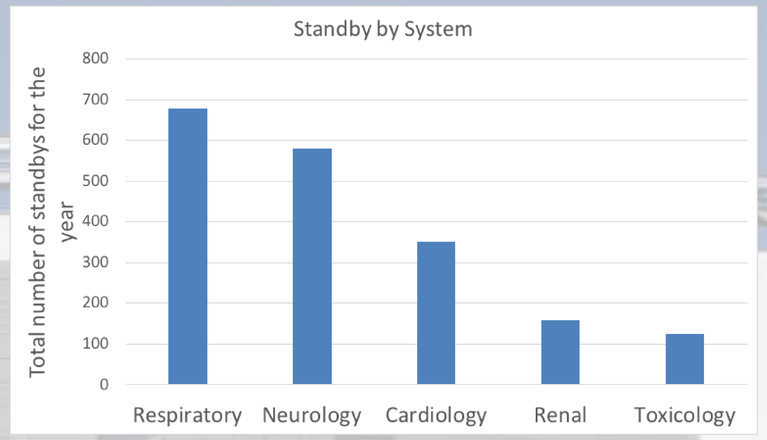
On average, we received 6.76 pre-alerted patients each day, ranging from one day where no patients were pre-alerted to a maximum of 17 patients per day. The busiest day was on Sunday where 7.38 patients were seen on average (Confidence intervals (CI) 0.77), then Tuesday with 7.06 patients (CI 0.80). The quietest day was Thursday with an average of 6.43 patients (CI 0.68).

Patients were pre-alerted throughout the day with peaks at 10 am (6.48% of total pre-alerts, average 0.44/hour CI 0.07) and 6 pm (6% of total pre-alerts, average 0.41/hour CI 0.06). Most days followed a similar pattern; however, it was noted that on Sunday at 1 am double the normal pre-alerts were given. 22.8% of patients presented from 11 pm to 8 am out with routine Emergency Physician consultant hours (563 patients). There were 336 incidences where more than 1 patient was pre-alerted within an hour. This occurred up to 5 times in a day.



The peak month for pre-alerted patients was December (253 patients), which was not unexpected, with the quietest month September (178 patients).

The commonest presentations were for respiratory disease (678 patients); neurology cases including stroke, seizure and head injury (580); cardiology cases (351); renal cases (159) and toxicology cases (124).



A total of 109 patients were admitted to the Intensive Treatment Unit (ITU); 211 to Medical High Dependency Unit (MHDU); 129 to Coronary Care Unit (CCU); 36 to Surgical High Dependency Unit (SHDU); 9 direct to theatre; 4 renal High Dependency Unit (HDU) and 60 transfers to other hospitals including 24 to specialist ITU.

Discussion and Conclusion:

This data shows that there is a constant demand on the ED to assess and manage pre-alerted high acuity patients with peaks predicted at the weekend, and early morning and evenings of each day. There remains a significant demand overnight, highlighting the need for senior staff presence, and at unpredictable times where multiple patients attend within an hour, emphasising the Royal College of Emergency Medicine (RCEM) guidance that staffing should be for surge, not average numbers. Demonstrating this informs workforce planning and supports the case for increasing number and seniority of staff.