Introduction

- Acute Pulmonary Embolism (PE) accounted for 20,908 acute admissions in the period 2010-11 in the whole of England with a median length of stay of 6 days. According to various studies, a considerable proportion of these patients can be safely managed in an ambulatory setting.
- Such a service would ensure better patient satisfaction, provide economic gain and deliver better efficiency of care by eliminating delays in the conventional management pathway.
- Two validated eligibility criteria are the Pulmonary Embolism Severity Index (PESI) and the Royal Infirmary of Edinburgh (RIE) system.
- The PESI score, developed by Aujesky et al., risk stratifies patients into various ordinal categories. Those deemed ‘low risk’ (scoring <35) become eligible for ambulatory management.
- The RIE system on the other hand contains a set of exclusion criteria. A patient that meets even one criterion is excluded from ambulatory care.
- We intend to apply these criteria at the time of initial assessment to deem eligibility for ambulatory investigation and the time just after diagnostic imaging (to deem eligibility for ambulatory management).

Methods

- Radiology supplied list of all CTPA and V/Q scans from Sept 2010-11. Consecutive randomisation used to select confirmed PE patients.
- Equivocal diagnoses excluded. Relevant patient notes ordered through secretary.
- Clinical details (required for risk calculation) collected using admission and inpatient history.
- RIE and PESI criteria applied to each patient at i) time of initial assessment and ii) time of diagnostic imaging.

Results

- Patients waited a median average of 1 day before they underwent diagnostic imaging. In the period between 1st Feb 2011 and 1st Aug 2011, a total of 465 patients were investigated for a suspected PE at SGH, an average of two per day. This suggests that a considerable demand for investigation exists, and the delay in investigation, dedicated daily slots for suspected PEs which would undoubtedly yield greater efficiency of care. In addition, a nurse-led DVT service already exists, and so the setup cost for a PE service would be minimal.
- Auditing the total length of stay (mean 6.4 days, median 6 days) against national statistics (mean 8.2 days, median 6 days), SGH is on par with the national average.
- The study identified a considerable proportion of patients suitable for ambulatory management after imaging: at least 61.5% based on the PESI system and 30.8% based on the RIE system.
- This heavily supports the possibility of developing an ambulatory pathway, which would undoubtedly yield greater efficiency of care. In addition, a nurse-led DVT service already exists, and so the setup cost for a PE service would be minimal.

Conclusion

- The PESI criteria identified a greater proportion of patients suitable for ambulatory care than the RIE criteria. A few reasons can be proposed for this.
- By nature, it is flexible in that patients can score highly on one condition and lower on another. By contrast, the RIE system excludes anyone who meets even one of its criteria.
- Less stringent criteria sets the RIE system (e.g. oxygen saturations in PEI and >97% in RIE).
- This study has raised broader issues as to junior doctors’ understanding of health economics and policy. Allocation of scarce resources, in an effort to meet the potentially unlimited demands for healthcare, raise questions about productivity – a concept that is rarely given importance in the medical education system.
- In addition, dedicated, hospital-based collaborative environments rarely exist and so junior doctors do not have a local platform on which to share and express their creative ideas for change. In such environments existed, they would inspire a culture of inclusive leadership, empowering junior doctors to re-design services, thereby nurturing a more streamlined NHS.

Recommendation 1
To design a customised ambulatory PE pathway for Stafford General Hospital.

Recommendation 2
To make ‘Health Economics’ a core part of medical school and foundation training.

Recommendation 3
Create hospital-based, collaborative environments that encourage junior doctors to express and share their ideas on service re-design.

References

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