

# Upper gastrointestinal haemorrhage: Is there a weekend effect? A retrospective analysis from two district general hospitals.

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## Introduction

- Upper gastrointestinal haemorrhage (UGIH) is a common emergency presentation with a mortality reaching 10%.<sup>1</sup>
- A 'weekend effect' has been described for UGIH with increased mortality rates for those admitted over a weekend.<sup>2</sup>
- These studies typically utilise information from national databases to describe this effect whereas this study sought to examine if there was a reproducible 'weekend effect' at two district general hospitals.

## Methods

- Retrospective data was extracted from the endoscopy database for both hospitals in 2014 identifying all patients with an indication suggestive of UGIH.
- The Trust coding database was used to identify all patients with an ICD-10 code suggestive of UGIH.
- These datasets were amalgamated and electronic admission records subsequently analysed to exclude inpatient UGIH.
- Admission and discharge documentation, endoscopy reports, GP records and bereavements records were reviewed to confirm day and time of admission and endoscopy, and survival to 30 days.
- Chi-squared test was used to compare 30 day mortality between groups.

## Conclusions

- This study found no evidence of a 'weekend effect' or 'out of hours' effect for UGIH.
- There was no correlation between day or time of admission and mortality from UGIH suggesting that reduced levels of staffing and endoscopic activity had no significant impact on 30 day mortality.
- This may be explained by appropriate patient selection for endoscopy
- Endoscopic diagnosis and time of endoscopy appeared to be stronger predictors of 30 day mortality.

## References

1. Time to get control. A review of the care received by patients who had a severe gastrointestinal haemorrhage. NCEPOD 2015
2. Shaheen AAM, Kaplan GG, Myers RP. Weekend versus weekday admissions and mortality from gastrointestinal haemorrhage caused by peptic ulcer disease. *Clinical Gastroenterology and Hepatology* 2009;7:303-310

## Results

- 552 acute admissions for UGIH in 2014, of which 518 underwent an emergency inpatient endoscopy.
- 30 day mortality was 11.46%.
- No statistically significant difference in 30 day mortality for those admitted on a weekday (Mon 0000 – Fri 2359) vs a weekend (11.05% CI 7.98-14.79 vs 12.23% CI 7.92-17.79,  $p=0.68$   $\chi^2$ )
- No statistically significant difference in 30 day mortality for those admitted out of hours (1700-0859) compared to in hours (12.60% CI 8.83-17.23 vs 10.39% CI 7.07-14.59  $p=0.43$   $\chi^2$ ).
- Although not statistically significant, there was an increase in 30 day mortality for those requiring an out of hours procedure (1800-0759) compared to day time (23.08% CI 14.89-33.09 vs 8.64% CI 6.16-11.72  $p=0.19$   $\chi^2$ ).
- Aetiology of UGIH was a stronger predictor of 30 day mortality.

30 day survival by endoscopic diagnosis

