

OC-020

**IS DEPRIVATION ASSOCIATED WITH HOSPITALISATION FOR UPPER GASTROINTESTINAL HAEMORRHAGE? A NATIONWIDE STUDY OF HOSPITAL ADMISSIONS**

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**Introduction** Socioeconomic variation has previously been observed with upper gastrointestinal haemorrhage in a small study in the west of Scotland<sup>1</sup> and this was assumed to be related to *H. pylori* acquisition. However, it is not known whether variceal haemorrhage admissions vary with socioeconomic indicators despite gradients in alcohol intake and body mass index. We therefore studied the national hospitalisation rates of both non variceal and variceal upper gastrointestinal haemorrhage according to socioeconomic status.

**Methods** We used hospital episode statistics which contain all admissions within England, and identified upper gastrointestinal bleeds according to ICD 10 codes between 2001 and 2007. Population denominators were derived from Office of National Statistics mid-year population estimates by lower super output area (approximately 400 homes). Deprivation scores were generated from 1 (least deprived) to 5 (most deprived) according to

quintiles of super output areas ranked by the Index of Multiple Deprivation (2007). Hospitalisation rates per deprivation score were adjusted for age and sex using Poisson regression.

**Results** 237,139 non variceal haemorrhage admissions and 8,291 variceal admissions were identified between 2001 and 2007. Rates of hospitalisation for non variceal haemorrhage were 2-fold greater (incidence rate ratio 2.02, 95% confidence interval 1.99–2.04) among those from the most deprived areas compared to least deprived. The differences for variceal haemorrhage hospitalisation rates were even more pronounced (incidence rate ratio 2.49, 95% Confidence interval 2.32–2.67). These differences were present in every region of the country (figure 1, only non-variceal shown). Adjusting for age and sex increased the disparity between deprived and affluent in each region. 28-day mortality did not have a similar gradient.

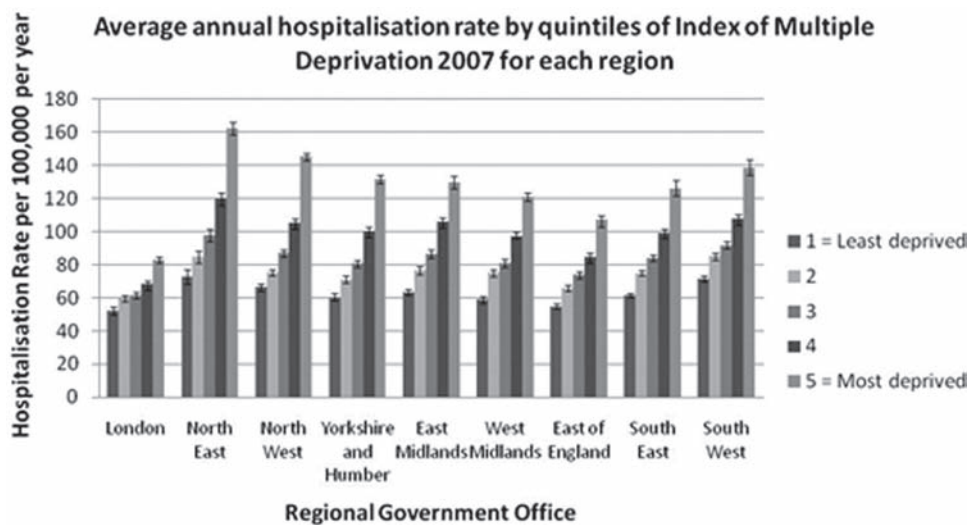
**Conclusion** We found that for both variceal and non-variceal haemorrhage hospitalisation rates vary widely by the socio-economic status of the area of a person's residence. The association was present through all areas of the country and in all age bands and was of greater magnitude than any regional differences. The existence of such a steep gradient suggests that there are opportunities to reduce overall admission rates to those of the least deprived areas and avoid almost 10,000 admissions and over 1000 deaths a year.

**Competing interests** None.

**Keywords** epidemiology, gastrointestinal bleeding, gastrointestinal haemorrhage, hospital episode statistics.

## REFERENCE

1. Blatchford O, Davidson LA, Murray WR, Blatchford M, Pell J. Acute upper gastrointestinal haemorrhage in west of Scotland: case ascertainment study. *BMJ* 1997;315(7107):510-4.



**Figure 1** OC-020