

# Council tax valuation bands and contacts with a GP out-of-hours service

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## ABSTRACT

UK GPs are no longer responsible for the organisation of out-of-hours care for their patients, but resources remains capitation-based. This cross-sectional study tests whether council tax valuation bands can predict the demand for such services. All out-of-hours contacts made by patients in North Wiltshire over 4 months were classified by council tax band; frequencies compared with official population statistics. Council tax band predicts out-of-hours GP workload irrespective of age and sex: the more modest the home, the higher the GP contact rate. It may prove more difficult to sustain out-of-hours services in deprived parts of the UK.

### Keywords

council tax valuation band; health resources; out-of-hours medical care; primary care; socioeconomic factors; workload.

## INTRODUCTION

Primary care trusts/organisations now carry the onus for GP out-of-hours services — a shift of responsibility away from practices that is deemed as unavoidable if UK general practice is to be a more attractive career option. However, the epidemiology of out-of-hours demand in the UK is poorly understood; in particular, how social factors have an impact on demand.<sup>1</sup> This is of profound importance to the trusts, which all differ socioeconomically while funding streams are based on capitation only.<sup>2</sup>

In 1992 the British government introduced the council tax. Homes were allotted an 'open market' value based on size, layout, character, and locality, and placed into one of eight 'valuation bands'. These bands range from A to H (with A signifying the lowest market value and H the highest) and dictate the amount of tax levied. These council tax bands are in the public domain and now available on a website ([www.voa.gov.uk/council\\_tax/bands\\_england\\_wales.htm](http://www.voa.gov.uk/council_tax/bands_england_wales.htm)).

Our study group investigated this new 'ecological' attribute of all patients as an indicator of socioeconomic status and of clinical activity. We have shown that council tax band predicts mortality,<sup>3</sup> face-to-face clinical contacts,<sup>4</sup> and overall general practice workload.<sup>5</sup> In this study we test if out-of-hours demand in UK primary care is also predicted by council tax band. It is postulated that those in smaller homes will be heavier users of out-of-hours services, including between midnight and 07.00. There appear to be no precedents in the literature.

## METHOD

Kennet and North Wiltshire Primary Care Trust reflects the boundaries of the Kennet and North Wiltshire local authorities and manages health and social care for some 200 000 people (29 general practices). From 1 December 2003 it contracted with a national medical call-handling service to receive all out-of-hours telephone calls to GPs in the trust area. There became, then, a central collection point for such calls during out-of-hours periods, defined, as was then standard, as

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between 19.00 and 07.00 on weekdays, on weekends between 12.00 midday on Saturday and 07.00 on Monday, and all bank holidays. Facsimile copies of the recorded entries transferred to the trust headquarters, effectively constitute an archive of all out-of-hours contacts. We used these data for our study.

We retrieved, for January to April 2004 inclusive, all recorded out-of-hours contacts from three distinct communities (demarcated by post code) in North Wiltshire. These were Calne (SN11), Corsham (SN13), and Malmesbury (SN16). The three communities are very similar with regards to local health facilities.

We collected data on call date, call time, patient name, patient sex, patient date of birth and age, residential address or postcode, and patient's registered GP. We then appended the file by linking a council tax band to each address (via the Valuation Office Agency's website) before deleting any patient identifiers. Institutionalised patients were omitted from the study.

We determined the study denominator populations by reference to official statistics for Wiltshire.<sup>6</sup> Analyses of contact rates were performed by dividing contacts per defined group by the analogous (denominator) population at risk. A further analysis was performed for contact rates between midnight and 07.00.

**Statistical analyses**

Contingency tables were analysed by  $\chi^2$  tests. The results were interpreted via appropriate degrees of freedom (df) and published tables.<sup>7</sup>

**RESULTS**

The three study communities share very similar demographic features but Malmesbury has significantly fewer homes in the A and B council tax bands and a higher proportion in the E+ bands (versus Calne and Corsham),  $\chi^2 = 872.2$ ; 4 df,  $P < 0.001$ .

In total, 1335 out-of-hours contacts were recorded in the study period. The overall out-of-hours contact rate per thousand patients per annum was 76.7 (95% confidence interval [CI] = 72.6 to 80.8); for children 0–15 years, 134.7 contacts per thousand patients (95% CI = 122.1 to 147.3); for patients aged over 65 years, 130.8 (95% CI = 117.2 to 144.4); for females, 86.0 (95% CI = 79.9 to 92.1); and for males, 67.5 (95% CI = 62.2 to 72.9).

It was possible to attribute a council tax valuation band to 1297 of the patients (retrieval rate 97%). Contact rates were significantly associated with council tax band, and remained so after subdivision of the data by age band (Table 1). As age was not the reason for the differences in out-of-hours activity by council tax band, we then analysed out-of-hours contact rates in the three individual communities separately. There was a significantly lower overall demand in Malmesbury (Table 1) but the council tax band versus contact rates trend remained in all three communities. The results for contacts between midnight and 07.00 are also statistically significant.

**DISCUSSION**

In this study we show a strong association between council tax band and use of out-of-hours services in UK general practice: patients from council tax band A homes contact out-of-hours services twice as often as their counterparts at the other end of the council-tax-band spectrum. Performed, effectively, three times over, the results consistently agree and suggest that they could be nationally representative. The findings also match expectation to factors already known to influence out-of-hours demand such as age and sex.

**Table 1. Out-of-hours contact rates (per thousand patients per annum) in study group and various study subgroups, divided by council tax band.**

	Council tax band					$\chi^2$
	A	B	C	D	E+	
Total study group	113	84	74	47	54	105.0 <sup>a</sup>
Total study group divided by age band						
0–15 years	143	118	126	63	91	23.2 <sup>a</sup>
16–44 years	91	72	53	31	33	55.2 <sup>a</sup>
45–64 years	75	46	43	16	27	27.7 <sup>a</sup>
≥65 years	190	129	102	104	99	19.4 <sup>a</sup>
Study group divided by community						
Calne	118	103	92	64	60	38.1 <sup>a</sup>
Corsham	138	89	95	46	59	52.2 <sup>a</sup>
Malmesbury	103	54	44	39	56	20.2 <sup>a</sup>
Whole study group, contacts 12.00–07.00	18	15	12	8	8	18.6 <sup>a</sup>

<sup>a</sup>4 degrees of freedom,  $P < 0.001$ .

*How this fits in*

Patients from modest homes are more likely to contact GP out-of-hours services. Such services are likely to be more onerous in less affluent communities. As in all our previous studies, the more modest a council tax band in which patients live, the larger the GP workload they generate.

These findings interlock with those from our earlier publications and strengthen our previous proposals that the council tax band could be a valid predictor of clinical demand and a useful epidemiological tool. It is, after all, allotted objectively by an agency outside health and social services and is universal, stable, unambiguous, and accessible. As it is applied at household level, it is far more practicable than census-derived data that are embargoed below small area limits below official census 'output areas' (postcodes in Scotland).

GP out-of-hours accessibility is known to be valued by patients<sup>8</sup> and, thus, likely to be a source of complaint if defaulted: healthcare trusts have taken on a tough responsibility. Those in affluent parts of the country should be able, by our findings, to satisfy out-of-hours need more effectively, facing, with the same resources per capita, less demand than their relatively deprived counterparts. If out-of-hours shifts are found to be much busier in some places than in others, it will be more difficult to recruit and retain staff. Quality may suffer and the service may even break down. This study challenges the current infrastructure of GP out-of-hours work and suggests the need for differential resourcing based on expected demand.

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#### Ethics committee

Ethical approval was granted by Bath Local Ethics Research Committee (03/04)

#### Competing interests

The authors have stated that there are none.

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