

Research suggests 'weekend effect' may be all in the coding

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Oxford University research has suggested that the 'weekend effect', the suggestion that patients admitted to hospital at the weekend are more likely to die, may in fact be the result of the way medical records are coded for data returns. The study of more than 90,000 stroke patients, by Dr Linxin Li and Professor Peter M Rothwell from the Oxford Vascular



Study, has not yet been published, but has been the subject of media reporting.

Professor Rothwell explained: "Most of the studies of the 'weekend effect' have used hospital administrative data. That is diagnostic information extracted from medical records at some later date by non-clinical clerical staff. These hospital administrative diagnostic coding data are fairly accurate for some things - surgical procedures or clearly specified chronic diseases, such as motor neuron disease - but is much less reliable for acute medical conditions (such as stroke, infection, other vascular events). So, these acute admissions, which have the highest risk of death - and therefore 'drive' apparent weekend effects, are precisely the ones that are most likely to be miscoded."

The researchers says that no previous studies of the weekend effect checked whether there were any differences in the accuracy of the administrative data for weekday compared to weekend admissions, suggesting that is a lack of basic due diligence.

Professor Rothwell said: "If data quality differs between weekday and weekend admissions then that could completely skew any analysis of 'weekend effects' for a whole range of acute conditions. If you were going to re-organise a health service on the basis of the results, you really would want to do at least that single basic data check, but nobody has."

He explained that stroke data were used as a test case – but he and colleague have carried out similar studies on several other acute conditions, finding that the accuracy of the administrative data does differ substantially between weekend and weekday admissions.

One example is that low risk pre-planned weekday admissions were miscoded as acute stroke – and so would be wrongly included in analyses of administrative data. These low risk admissions do not usually happen



at the weekend and so the apparently poorer outcome for weekend admissions was an illusion created by poor quality data.

Provided by University of Oxford

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