

# CLAHRC BITE Brokering Innovation Through Evidence

22 A bite-sized summary of a piece of research supported by NIHR CLAHRC West Midlands

Aug 2016



**Weekend specialist intensity and admission mortality in acute hospital trusts in England: a cross-sectional study**

## Mortality risk of emergency admissions at the weekend

### Background

- A key policy for the UK Government and the English NHS is a seven-day health service.
- Previous research has shown a '*weekend-effect*' – an increase in mortality associated with weekend admission.
- This has been widely attributed to low levels of specialist consultants, but without evidence of causation or the extent of the deficit.
- A survey was distributed to hospital trusts to collect data relating to the care of emergency admissions and specialist workload.
- For each trust, the *weekend to weekday admission risk of mortality* was compared with the *Sunday to Wednesday specialist intensity ratio* (these days are associated with the highest and lowest admission mortality risks).

## Findings:

- Data was obtained from 115 hospital trusts and 15,537 clinicians.
- On Sunday, there were substantially fewer specialists providing care to emergency admissions (11%) than on Wednesday (42%).
- Those specialists present on Sunday spent 40% more time caring for emergency patients than those present on Wednesday (5.7 hours vs. 4.0 hours).
- However, on average, emergency admissions on a Sunday collectively receive less than half the input from specialists compared with those admitted on a Wednesday.
- Mortality risk among patients admitted at weekends was significantly higher than among those admitted on weekdays (odds ratio 1.10 (1.08-1.11),  $p < 0.001^*$ ).
- There was no significant association between weekend staffing of hospital specialists (the Sunday to Wednesday specialist intensity ratios) and mortality risk for emergency admissions (the weekend to weekday mortality ratios) ( $p = 0.654^*$ ).

\* *There is a significant difference if the p-value is  $< 0.05$ .*

## Reference

Aldridge C, Bion J, Boyal A, et al. Weekend specialist intensity and admission mortality in acute hospital trusts in England: a cross-sectional study. *Lancet*. 2016. [ePub]. <http://goo.gl/jQzdSN>



## Recommendations for Practice

Policy-makers must exercise caution before attributing the weekend effect to a single component, such as differences in specialist staffing, in a complex system. We cannot assume that more specialists will fix the problem of the weekend-effect.

### What is NIHR CLAHRC West Midlands?

The Collaboration for Leadership in Applied Health Research and Care (CLAHRC) is a partnership between universities (Birmingham, Warwick and Keele) and a number of health and social care organisations in the West Midlands. We are funded by the National Institute for Health Research with a mission to undertake high-quality applied health research focused on the needs of patients to improve health services locally and beyond. For further information, visit:

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The research is funded by the National Institute for Health Research. The views expressed are those of the author and not necessarily those of the NHS, the NIHR or the Department of Health.