

Commentary

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'Hospital at Night' improves outcomes: does the evidence support opinions?

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The Modernization of the National Health Service (N.H.S.) and medical careers have brought over the last 10 years or more growing pressures and demands for radical changes in the way we deliver safe and effective healthcare and train new doctors to fit these changes. At the same time, there has been increasing awareness at a European level that both patients and doctors are exposed to health risks due to excessive working hours of junior doctors. A legislative framework to reduce average working hours to no more than 48 h/week was then introduced in Europe (with the view to be implemented fully on 1 August 2009), which has added to the challenges and has sparked a much heated debate. These proposals have met support and criticisms from several camps, including doctors and their representative organizations, allied professions, N.H.S. managers and, naturally, politicians. The debate has shifted emphasis continuously neglecting a fundamental principle adopted in other areas of health care delivery (public health, medicine and surgery, health technology), that is, that our decisions should be supported by evidence. An example is given by the debate on the effect of implementing the European Working Time Directive (EWTD) on patients' safety. Opinions and views often portrayed as research, say that EWTD would pose risks to patients,^{1–3} yet none of the interested parties considered carrying out a valid study to measure this. Indeed, there have been clear examples in the USA of the effectiveness of reducing working hour of junior doctors in improving patients' and doctors' safety in a variety of medical and surgical

specialties.^{4–8} The recent debate in the pages of the *QJM* on the first study in the UK to suggest that implementing the EWTD does not compromise patients' safety⁹ has been met with some indifference¹⁰ and has not prevented further opinions, presented in the lay press as research, from biasing the debate.^{11,12}

In the present issue of the *QJM*, a further attempt to shift the debate on more rigorous research evidence is made by Beckett and colleagues,¹³ who measured the impact of the implementation of Hospital at Night (H@N) on both system and clinical outcomes. The H@N model provides out-of-hours medical cover by a centralized multidisciplinary team with emphasis on patients' safety, whilst protecting doctor training, to be compatible with a reduction in hours under the EWTD. The authors carried out an observational study during 14 consecutive nights before and 14 consecutive nights after the implementation of H@N within the Royal Infirmary of Edinburgh involving medical, surgical and high-dependency wards. Following an overnight episode of concern, and using standardized methods, they gathered information on response time, seniority of reviewing staff, patient outcomes (including overnight transfers to critical care and cardiac arrests) and the use of Standardized Early Warning Score (SEWS). They compared the results before and after the implementation of H@N. Most importantly, the implementation of H@N was associated with a significant improvement in clinical outcomes in most circumstances. Cardiac arrests and transfers to critical care were significantly

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reduced in the Assessment Unit and in the wards from 17% to 6%, without compromising outcomes within the critical care settings. At the same time, significant inter-speciality differences were abolished (delays in reviewing patients and response time). Finally, patients were more likely to be seen by senior medical staff during H@N. The authors acknowledge the limitations of the study, noticeably that the action taken on patients triggering SEWS > 4 did not improve during H@N.

Why is this study important? Acute care during out-of-hours in hospital can be sub-optimal and contribute to patient adverse outcomes. The research evidence indicating that H@N may improve numerous clinical outcomes is a significant step forward. The study also indicates that a research approach can bring more objective information to guide policy changes within the N.H.S.

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