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# Seven day working: why the health secretary's proposal is not as simple as it sounds

Jeremy Hunt's declaration that he wants to see most hospital doctors on "seven day contracts" to enable weekend working provoked the ire of many NHS staff. **Helen Crump** explores the evidence behind the proposal and its financial implications

## What is the health secretary proposing?

The rationale for expanded seven day working set out by Jeremy Hunt was to improve the quality of care at weekends and, in particular, to tackle higher mortality among people admitted on Saturdays and Sundays.<sup>1</sup> It is not clear whether he had in mind emergency or elective procedures, or both, when he made his comments, but he called for speedier diagnostic test results, timely consultant review when a patient is first admitted, consultant directed interventions, ongoing consultant review in high dependency areas, and proper assessment of mental health needs.

## What is the evidence behind increased weekend death rates?

With the important caveat that excess deaths are a contested measure for gauging the quality and safety of services,<sup>3</sup> some studies have identified a relation between the day of the week a patient is admitted or a procedure is carried out and the probability of dying within 30 days. These trends have been found in both elective and emergency patients.

Aylin and colleagues found that the adjusted odds of death (the probability that a patient will die on a particular day, compared with a Monday in this case, adjusted for the influence of identified confounders) for some elective surgical procedures was 44% higher on Fridays and 82% higher at the weekend.<sup>4</sup> However, as the authors point out, without further information on processes, organisation, and staffing, it is unclear whether the estimated risks "can entirely be attributed to differences in quality of care."

For emergency patients, an earlier study found that the odds of death for all emergency admissions were 10% greater for patients admitted at the weekend than for patients admitted on a weekday.<sup>5</sup>

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Of seven surgical groups studied, only patients with aortic, peripheral, and visceral artery aneurysms had significantly higher weekend odds of death, and the authors noted criticism of care arrangements for aortic aneurysm in a 2005 report by the National Confidential Enquiry into Patient Outcome and Death.<sup>6</sup> They also found that eight clinical groups of patients presenting as a medical emergency had a "significantly higher" mortality at the weekend, including those with myocardial infarction, stroke, and selected malignant conditions. They said that the differences could be because of "differing quality of care" but "could also reflect poorer access to community and primary care services at weekends."

Hunt said in his speech that patients are 15% more likely to die if admitted on a Sunday than on a Wednesday. This figure seems to be based on a new analysis published in *The BMJ* by Freemantle and colleagues, which found that the increased risk of death within 30 days was 10% on Saturdays and 15% on Sundays in 2013-14.<sup>7</sup> This compares with 11% for Saturdays and 16% for Sundays in their previous study in 2009-10.<sup>8</sup> Speaking to the Health Select Committee in July, Bruce Keogh, medical director for NHS England and one of the study authors, said the research showed that the proportion of patients in the sickest category was 25% higher on Saturdays and 35% higher on Sundays. The mortality

calculations had taken this into account and it reduced the mortality "a bit" but did not explain it, he added, suggesting another possibility was that "we are seeing sicker people at the weekend and are simply not prepared for it."<sup>9</sup>

## So how many additional people die at weekends?

Some have pointed out that statistics like these are relative risks. The absolute increase in weekend deaths is 0.3 percentage points according to the University of Manchester's calculations.<sup>10</sup> But attempts to estimate the number and type of weekend deaths also present challenges. Hunt said around 6000 people "lose their lives every year because we do not have a proper seven day service in hospitals." Keogh told the health committee that the figure might be as high as 10000, but that this was a statistical excess number, which is not the same as the number of deaths that could have been avoided. He said: "The statistics show that more people will die who are admitted on the weekend than who die on a Wednesday. The statistics tell you that they are sicker. They do not tell you the extent to which those deaths could have been prevented."

## What are the cost implications?

There are some major questions about the cost of seven day working. Research by the Healthcare Financial Management Association (HFMA) for NHS England found that investment in emergency departments and admissions units with supporting diagnostics "can pay for itself in some trusts by reducing unnecessary admissions and shortening length of stay."<sup>11</sup> However, it concluded that investment in seven day services after admission is "unlikely to be cost-neutral in most trusts under the present configuration of services" and put the cost at around 1.5-2% of

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trust income for trusts it analysed. For a trust with a £200m turnover, this would equate to up to £4m and could be enough to push any remaining hospitals just about managing to maintain a surplus into deficit. The HFMA report states that to “sweat the assets” by using expensive equipment more at weekends might make financial sense, but “only where the total workload is growing, or it is concentrated across fewer providers.”

Against this backdrop, the University of Manchester’s analysis, applying weekday death rates to weekend emergency admissions, has found that 4355 to 5353 lives might be saved if it was possible to achieve a weekend death rate that was the same as during the week (assuming methods for establishing excess weekend deaths are robust).<sup>9</sup> But the researchers estimated that even if all these deaths could be avoided, without a commensurate increase in weekday deaths, the cost of implementing seven day working, based on the costings from the seven day forum, would be more than £20 000 per quality adjusted life year. The authors conclude “there is as yet no clear evidence that seven day working will, in isolation, reduce the weekend death rate; that lower weekend mortality rates can be achieved without increasing weekday death rates; or that such reorganisation is cost-effective.”

#### How feasible is it in terms of staffing?

The Chesterfield Royal Hospital NHS Foundation Trust has changed its medical rotas to enable decision making by senior doctors seven days a week,<sup>12</sup> but this required funding from commissioners to recruit extra acute medical consultants. It is unlikely that this would be possible across the country, given existing shortages of consultants.<sup>13</sup>

Furthermore, ramping up services at all at the weekend, whether for elective or emergency patients, will require input from a broader range of staff than just the consultants. More doctors at all levels would be needed at weekends as well as theatre staff and postoperative teams.

And, unless overall staffing levels increase, a member of staff undertaking a newly created weekend shift will leave a gap in the hospital’s weekday rota, with potentially serious consequences across other services—including those where targets and quality standards apply. Hunt has said that individual doctors will not be expected to work longer hours.

#### Where does this leave us?

The relation between the day of the week a procedure is carried out and the odds of dying within 30 days merits further scrutiny,

but explanations for this are still unclear. Regardless of whether additional funds are available to pay for it, pumping more money into the acute sector goes against the grain of other policies aimed at shifting activity away from hospitals. Moreover, this may not be in the best interests of patients, judging by the University of Manchester research. In any case, these efforts will be hampered if support services in the community are not available at the weekend.

Ramping up weekend elective activity makes no sense if the funding is not available to increase total activity. Paying for seven day working by generating efficiencies would require money to be freed up through cutting capacity at unsustainable provider organisations. But this process will remain slow, if not too difficult altogether. There may be benefit in improving processes and streamlining working arrangements at the weekend, but commissioners and providers will want to take a close look at the financial and quality cases for change before signing off extra activity.

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