

NEWS

Having your elective operation later in the week increases the risk of dying, research suggests

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The later in the week elective surgery takes place, the greater the chance of the patient dying, a study at Imperial College London has found.¹

The research team found marked differences in death rates between days; deaths within 30 days of the operation were 44% higher if it occurred on a Friday rather than on a Monday (odds ratio 1.44, 95% confidence interval 1.39 to 1.50), and 82% higher if it occurred at the weekend (1.82, 1.71 to 1.94). The absolute risk of dying within 30 days was 6.7 per 1000 elective admissions.

The researchers also reviewed deaths after five higher risk operations (excision of colon or rectum, heart bypass grafting, repair of abdominal aneurysm, and excision of lung) and after high volume, low risk procedures such as hip and knee replacement. For these procedures, they found higher death rates later in the week than on Mondays, except for aneurysm repair. In the high volume, low risk group, the risk of death (2.0 per 1000 admissions) rose by 28% for operations on a Friday compared with those on a Monday.

Paul Aylin and colleagues from the Dr Foster Unit, Imperial College London, report in *bmj.com* that this is the first study, to their knowledge, to report a “weekday” effect in addition to

the well known “weekend” effect on mortality. “The reasons behind this remain unknown but we know that serious complications are more likely to occur within the first 48 hours after an operation, and a failure to rescue a patient could be due to well known issues related to reduced locum staffing and poorer availability of services over a weekend,” they add.

The data taken from hospital episode statistics covered three years, 2008-09 to 2010-11, and included all acute and specialist English hospitals. There were 4 133 346 elective admissions and 27 582 deaths within 30 days of the procedure. The results could have been affected by selection bias, but the analysis suggests that patients operated on at the weekend are for lower risk procedures, and would not account for the findings. Aylin said that although the results do suggest a poorer quality of care at the weekend, “it is difficult to draw those kinds of conclusions from routinely collected data.”

1 Aylin P, Alexandrescu R, Jen MH, Mayer EK, Bottle A. Day of week of procedure and 30 day mortality for elective surgery: retrospective analysis of hospital episode statistics. *BMJ* 2013;346:f2424.

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