

No 'weekend admission effect' for the elderly sustaining broken hips in the NHS

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A hip x-ray. Credit: University of Bristol

New research has found NHS patients admitted to hospital at the weekend with a hip fracture are at no greater risk of death compared to weekdays. In fact, the risk of death during the hospital stay was lower at the weekend than in the week. Only a delay to surgery; undergoing surgery on a Sunday, when provision for operations in many hospitals is less, being discharged from hospital on a Sunday; or out of hours were associated with an increased risk of death at 30 days.

Using data collected by the National Hip Fracture
Database (NHFD) of England, Wales and Northern
Ireland, researchers from the University of Bristol
and North Bristol NHS Trust, investigated the
chances of dying in a quarter of a million NHS
patients with a broken hip between 2011 and 2014.

Contrary to recent reports of a weekend effect across the NHS, they demonstrate that there is no 'weekend admission effect' for patients with a hip fracture in the NHS. They have highlighted important events in the care pathway of patients including: a delay to surgery of more than 24 hours (associated with a ten per cent increased risk of

mortality); Sunday surgery (associated with a ten per cent increased risk of mortality); discharge from hospital on a Sunday (associated with a 52 per cent increased risk of mortality) and out of hours discharge (associated with a 17 per cent increased risk of mortality) which were associated with an increased risk of dying in the 30 days following a hip fracture.

Mr Tim Chesser, Consultant Trauma and Orthopaedic Surgeon at North Bristol NHS Trust, and clinical lead of the research project, reported: "Despite the previously published suggestions that there is an increased risk of a patient admitted to hospital at the weekend dying when compared to those admitted during the week, there is no increased risk for patients who have suffered from a broken hip. This is reassuring because elderly patients who suffer from a hip fracture are often very frail, with multiple medical problems, so the lack of an increased risk reflects the excellent care they receive under the current structures and medical staffing.

"However, this research illustrates that significant events, such as the timing of surgery and the timing of discharge from the hospital maybe very important events in the treatment of the elderly with broken hips and require further research."

Adrian Sayers, Senior Research Fellow in the Musculoskeletal Research Unit in the School of Clinical Sciences at the University of Bristol and lead author on the paper, added: "The analysis has brought up questions of the importance of timing of surgery, how surgery on a Sunday differs from the rest of the week."

Mr Rob Wakeman, NHFD clinical lead, commented: "We welcome the work of the University of Bristol and North Bristol NHS Trust using national clinical audit data to explore the treatment and outcomes of patients with hip fracture.



"While the <u>weekend effect</u> debate continues, it is important that robust, academic analysis of clinical data remains at the centre of understanding patterns of variation in the quality of care. National audits such as the NHFD provide high-quality data, which is collected by clinical teams in order to drive improvements in quality.

"The NHFD has been instrumental in reporting on outcomes of older patients undergoing hip fracture for ten years and now has more than half a million patient records, providing a wealth of robust information that underpins many recent improvements in medical care.

"Thanks to clinicians capturing comprehensive patient data, we now have a very clear idea of what hospital medical and surgical teams need to do to maximise the recovery and rehabilitation of older hip fracture patients. What we are less clear about is what happens to patients after they have been discharged from an acute hospital and we would encourage colleagues across acute and community care to collaborate to ensure that safe and effective continuity of care occurs throughout every patient's recovery."

More information: Adrian Sayers et al. The association between the day of the week of milestones in the care pathway of patients with hip fracture and 30-day mortality: findings from a prospective national registry – The National Hip Fracture Database of England and Wales, *BMC Medicine* (2017). DOI: 10.1186/s12916-017-0825-5

Provided by University of Bristol

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