Time trends in hospital stay after hip fracture in Canada, 2004-2012

Canadian health authorities aimed to shorten hip fracture hospital stay through changes in bed management protocols and surgery access policy. Some provinces introduced the practice of repatriating hip fracture patients to long term care within 5 days of surgical care. The 48-hour benchmark for surgical treatment after admission with hip fracture was introduced in 2005 as part of a national commitment for timely provision of medical services. Advocates for the policy maintain that this mandated treatment period improves patient survival, reduces complications, and shortens postoperative stay. However, time trends in total, preoperative, and postoperative hospital stay following hip fracture are unknown. We retrieved hospitalization records for 169,595 Canadian patients aged 65 and older admitted to an acute care hospital with hip fracture between 2004 and 2012. Using these records, we determined the length of stay following admission and how often events that end hospital stay, including in-hospital death or discharge after nonoperative management, occurred.

Our results showed that length of hospital stay following hip fracture surgery shortened substantially between 2004 and 2012 in Canada. Patients were 6% more likely to be discharged at day 4 post-surgery, 9% more likely to be discharged at day 21 post-surgery, and 10% more likely to be discharged within 30 days of admission post-surgery in 2012 compared to 2004. This difference remained after accounting for patient characteristics (age, gender), type of fracture, existing co-morbidities, treatment, type and timing of surgery, and access to care. However, we noted no change in the probability of patients undergoing surgery on day of or day after admission during the study time period, suggesting that the increase in probability of discharge to be driven mostly by shorted postoperative stay. We concluded based on these findings that the shortened length of stay reflected changes in bed management rather than access policy.

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