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The Impact of Patient Safety Incidents on Patients' Quality of Life for Patients with Hip and Knee Replacements

Abstract:

Background: The burden of patient safety incidents (PSIs) is often characterised by their impact on mortality, morbidity and treatment costs. Few studies have attempted to estimate the impact of PSIs on patients' health-related quality of life (HRQoL) and the studies that have made such estimates primarily focus on a narrow set of incidents. The aim of this paper is to estimate the impact of PSIs on HRQoL of patients undergoing elective hip and knee surgery in England.

Materials and Methods: A unique linked longitudinal data set consisting of Patient Reported Outcome Measures (PROMS) for patients with hip and knee replacements linked to Hospital Episode Statistics (HES) collected between 2013/14 and 2016/17 was examined. Patients with any of nine US Agency for Healthcare Research and Quality (AHRQ) PSI indicators were identified. HRQoL was measured using the general EuroQol five dimensions questionnaire (EQ-5D) before and after surgery. Exploiting the longitudinal structure of the data, exact matching was combined with difference in differences to estimate the impact of experiencing a PSI on HRQoL and its individual dimensions, comparing HRQoL improvements after surgery in similar patients with and without a PSI in a retrospective cohort study. This design compares the change in HQoL before and after surgery in patients who experience a PSI to those who do not.

Results: The sample comprised 190,697 and 204,649 observations for patients undergoing hip replacement and knee replacement respectively. For six out of nine PSIs, patients who experienced a PSI reported improvements in HRQoL that were 14%-23% lower than those who did not experience a PSI during surgery. Those who experienced a PSI were also more likely to report worse health states after surgery than those without a PSI on all five dimensions of HRQoL.

Conclusion: PSIs are associated with a substantial negative impact on patients' HRQoL.

Biography

Associate Professor of Health Economics, School of Public Health, Chongqing Medical University, Master Tutor. Master of Economics from the University of Sussex, UK, and postdoctoral fellow at Imperial College London. He is engaged in teaching and research in the fields of health policy evaluation, health economic evaluation, health and development, etc.