

Delayed and cancelled orthopaedic surgery: causes and consequences

Akademisk avhandling

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av

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Avhandlingen baseras på följande delarbeten:

- I. Caesar U, Karlsson J, Olsson LE, Samuelsson K, Hansson-Olofsson E. (2014) Incidence and root causes of cancellations for elective orthopaedic procedures: a single centre experience of 17,625 consecutive cases. *Patient safety in Surgery* 2014, 8:24.
- II. Caesar U, Hansson-Olofsson E, Olsson L-E, Karlsson J, Lidén E. (2019) A sense of being rejected: patients' lived experiences of cancelled knee or hip replacement surgery *Submitted*
- III. Caesar U, Karlsson J, Hansson-Olofsson E. (2018) Incidence and root causes of delays in emergency orthopaedic procedures: a single-centre experience of 36,017 consecutive cases over seven years. *Patient Safety in Surgery* 2018,12: 2.
- IV. Caesar U, Karlsson L, Senorski Hamrin E, Karlsson J, Hansson-Olofsson E. (2019) Delayed and cancelled orthopaedic surgery; are there solutions to decrease the complex set of problems? A systematic literature review *Manuscript*

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Abstract

Extended waiting times, over-booked waiting lists and delayed or cancelled surgical procedures are realities for some patients treated at orthopaedic clinics in Sweden. This situation affects the prioritisation procedures for both emergency and elective surgery and results in even longer waiting lists, not only for planned patients but also for emergencies. **Methods:** Studies I and III were retrospective, observational, single-centre studies with data collected from the hospital's registers. The aim was to evaluate and describe the number of and reasons for delays and cancellations, as well as waiting times. Study I comprised 17,625 elective patients over a period of five years, while Study III comprised 36,017 emergency patients over seven years. Study II was qualitative and aimed to elucidate the lived experiences of patients cancelled from hip or knee replacement surgery. The interviews were analysed using a phenomenological hermeneutic method. Study IV was a systematic review to seek evidence of factors that might be useful in reducing delays to and cancellations of orthopaedic procedures. The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) and the Cochrane Handbook were used as guidelines. The Grading of Recommendations Assessment, Development and Evaluation (GRADE) was used to assess the quality of evidence in the included studies. **Results:** In Study I, 39% of all patients were given at least one, some several cancellations. The most common reasons (33%) were various patient-related factors. The median waiting time for those cancelled once was 54 days. In Study III, 24% of all patients scheduled for emergency surgeries were delayed and 81% of them were due to organisational reasons. Twenty-one per cent of all delays were rescheduled within 24 hours, while 41% waited more than 24 hours and some up to three days. In Study II, the comprehensive analyses revealed that the participants described their feelings as not being the chosen one and thereby feeling rejected. Moreover, they described the cancellation using words with connotations to physical pain. The relationship between the participant and the health-care provider also appeared to be damaged by the cancellation. The analysis in Study IV indicated that the evidence was ranked from low to very low across the included studies. The main limiting factor, also the reason for a reduction in quality, was related to the study designs. **Conclusion:** In Study I, more than one-third of patients had their surgery cancelled and, in Study III, almost a quarter had their emergency surgery re-scheduled. One possible way of influencing the high rate of the cancellations among elective patients might be to involve them to a greater extent in the overall planning of their care process. In Study III, the results can be interpreted in two ways; first, many organisational reasons are avoidable and the potential for improvement is great and, secondly and most importantly, the delays may negatively affect patient outcomes. The result in Study II is a promising first step towards building a better understanding of patients' experiences of having a surgical procedure cancelled. This novel information offers an opportunity to reflect on, develop and improve care. Study IV revealed items that might be useful in helping to reduce delays and cancellations.

Keywords: Appointments and schedules, Operating rooms/organisation and administration, Waiting lists, Cancellation, Orthopaedic surgery, Delayed surgery, Cancelled surgery, Perioperative nursing, Phenomenology, Hermeneutics, Qualitative method, Social rejection, Shame