

Time Required for Planned and Unplanned Episodes of Care in Septic and Aseptic Hip and Knee Revision Surgery

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Background: Surgical reimbursement rates are established by the Centers for Medicare and Medicaid Services (CMS). Studies have indicated that revision hip (rTHA) and knee (rTKA) arthroplasties require significantly more work effort, but are reimbursed less than primary procedures. This study quantified planned and unplanned work performed for revision surgeries by the surgeon and/or the surgeon's team during the episode of care "reimbursement window." Quantification of time was performed separately for aseptic and septic (two-stage) revisions and compared to allowed reimbursement amounts.

Methods: All unilateral rTHA and rTKA procedures performed over a 10-year period by a single surgeon at a single institution were retrospectively reviewed. Time dedicated to *planned* work was calculated over each episode of care, from surgery scheduling to 90 days postoperatively. Impromptu patient inquiries and treatments after discharge, but within the episode of care, involving the surgeon/surgeon team constituted *unplanned* work. Planned and unplanned work minutes were summed and divided by the number of patients reviewed to obtain average minutes of work per patient.

Results: Calculations demonstrated average per patient work for aseptic rTKA exceeded the reimbursable amount by 31 minutes. Calculated average minutes of work per patient required for aseptic rTHA fell within the number of minutes approved for reimbursement. Average per patient work for septic rTKA and rTHA exceeded the reimbursable amounts by 331 and 166 minutes, respectively, equating to 2.8 to 5.5 hours of uncompensated time.

Conclusion: Revision hip and knee procedures are substantially more complex than primary procedures, with many surgeons referring patients to out-of-network care. Financially disincentivizing surgeons to care for these patients reduces patient access to care when high quality care is needed the most, especially infection cases susceptible to high sepsis and mortality rates. Study findings will be applied to advocacy efforts for appropriate legislative reform.