

Can physical therapy before hip or knee replacement surgery improve outcomes?

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Physical therapy after total hip (THR) or total knee replacement (TKR) surgery is standard care for all patients. A new study, appearing in the October 1 issue of the *Journal of Bone & Joint Surgery* (JBJS), also found that physical therapy before joint replacement surgery, or "prehabilitation," can diminish the need for postoperative care by nearly 30 percent, saving an average of \$1,215 per patient in skilled nursing facility, home health agency or other postoperative care.

Approximately 50 million U.S. adults have physician-diagnosed arthritis. As the condition progresses, arthritis patients often require THR and/or TKR to maintain mobility and life quality. The number of THRs is expected to grow by 174 percent (572,000 patients) between 2005 and 2030, and TKRs by 673 percent (3.48 million). In recent years, the length of hospital stay following surgeries has decreased from an average of 9.1 days in 1990 to 3.7 days in 2008, while the cost of post-acute care, primarily in skilled nursing facilities and home health agencies, has "skyrocketed."

Utilizing Medicare claims data, researchers were able to identify both preoperative [physical therapy](#) and postoperative care usage patterns for 4,733 THR and TKR patients. Postoperative, or "post-acute" care, was defined as the use of a skilled nursing facility, home health agency or inpatient rehabilitation center within 90 days after hospital discharge. Home health agency services included skilled nursing care, home health aides, physical therapy, speech therapy, occupational therapy and medical social services.

Approximately 77 percent of patients utilized care services following surgery. After adjusting for demographic characteristics and comorbidities (other conditions), patients receiving preoperative physical therapy showed a 29 percent reduction in postoperative care use. In addition:

- 54.2 percent of the preoperative physical therapy group required postoperative care services, compared to 79.7 percent of the [patients](#) who did not have preoperative therapy.
- The decline in postoperative care services resulted in an adjusted cost reduction of \$1,215 per patient, due largely to lower costs for [skilled nursing](#) facility and [home health](#) agency care.
- Preoperative physical therapy cost an average of \$100 per patient, and was generally limited to one or two sessions.

"This study demonstrated an important opportunity to pre-empt postoperative outcome variances by implementing preoperative physical therapy along with management of comorbidities before and during surgery," said orthopaedic surgeon Ray Wasielewski, MD, co-author of the study.

Provided by American Academy of Orthopaedic Surgeons

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