

Total knee arthroplasty (TKA) has proven to be a highly successful and reproducible intervention for patients with disabling arthritis of the knee that is refractory to nonoperative management.^{1,2} More than 500 000 TKA procedures are performed annually in the United States, and that number is expected to increase exponentially over the next 2 decades owing to an aging US population and an expansion of the indications for TKA to include younger, more active patients.³ Although the success of TKA has been well documented, concerns about increasing procedure volumes and rising costs per case, in part related to the use of newer, more expensive TKA implant technologies, have led to an increased interest in evaluating the cost-effectiveness of TKA.⁴

A growing body of literature has suggested that TKA outcomes are related to hospital and surgeon procedure volumes,^{5,6} with better patient outcomes and fewer complications reported among high-volume hospitals and surgeons. These findings have prompted some clinicians and policy makers to call for regionalization of TKA.

In their study, Losina et al provide an interesting assessment of the cost-effectiveness of TKA in the United States, stratified by patient risk factors and hospital setting. Using a Markov decision model, they found that for most patients, regardless of the hospital setting, TKA was

associated with a modest increase in lifetime costs and a corresponding increase in quality-adjusted life expectancy, which resulted in a highly favorable incremental cost-effectiveness ratio. Their conclusion was that TKA is a cost-effective procedure in most settings, although TKA in a high-volume hospital appears to be more cost-effective than TKA in a low-volume hospital. Another important finding was that delaying TKA in patients who have reached end-stage osteoarthritis that is severely limiting their function is never efficient because it leads to a lesser value per dollar spent.

When interpreting the results of a cost-effectiveness analysis, it is important to consider the perspective of the analysis. The US Panel on Cost-Effectiveness in Health and Medicine recommends the use of a societal perspective, which takes into consideration both direct medical costs and other nonmedical and social service costs borne by patients, their families, and other stakeholders within the health care system.⁷ Although the analysis by Losina et al incorporates the lifetime direct medical costs associated with TKA, it does not consider other nonmedical costs borne by patients and their families in terms of lost work and productivity, and therefore the perspective of the study would be more accurately described as a health care system or payer perspective rather than a true societal perspective.