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CORR Insights®: Short-term Complications Have More Effect on Cost-effectiveness of THA than Implant Longevity

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Where Are We Now?

Shearer and colleagues attempt to isolate the areas with the greatest impact on cost and long-term effectiveness of THA. This is a commendable effort. The authors showed that a 10% reduction in periprosthetic joint infections (PJI)

may have a greater net monetary benefit to society than equivalent (10%) improvements in aseptic loosening or hospital readmissions. Reductions in readmissions resulted in lower costs, but ultimately failed to have an impact on quality of life. This supports some concepts that on the surface may cut against the grain, but that we believe

are important: Not all readmissions are bad, and unsophisticated or isolated analyses of readmission as a putative quality benchmark may have more to do with system-level efforts to contain costs than with actual quality. Gordeski et al. [4] showed how mortality may be inversely related to readmissions. We also published a study that

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demonstrated how readmission rates might not be a true reflection of quality [5].

The authors of the current investigation conclude that surgeons and researchers should preferentially engage in strategies focusing on prevention of PJI to improve the value of THA care and noted that implant longevity has been the focus of multiple investigations throughout the years while strategies to improve PJI and unplanned readmissions have received less attention.

Cram et al. [2] showed, for Medicare THA beneficiaries, that between 1991 and 2008 the mean number of comorbid illnesses per patient doubled while mortality and hospital stay decreased. This clearly demonstrates that we have gotten much better at managing some of these comorbid conditions, at performing arthroplasty, and at providing aftercare to arthroplasty patients.

Where Do We Need To Go?

The current study highlights the devastating financial consequences and the deleterious impact that “short-term” complications can have on a patient’s quality of life. Whether we look at the costs of care associated with short-term complications, or their harmful

effects on quality of life, the problem is enormous. Future research should focus on providing a clear definition of the factors associated with these complications and delineate the best practices for their prevention and management. Most of the strategies to prevent these complications are based on little or no scientific foundation and great variation exists among them. Concerning readmissions, the current article highlights its disproportionate impact on costs more than on quality of life. Arthroplasty researchers and practicing clinicians should distinguish avoidable readmissions from “unavoidable or unrelated to the surgeon/ institution” before readmission rates can be used as a quality parameter.

How Do We Get There?

Reducing infections in joint arthroplasty requires the commitment of all participants in the care of THA patients. The first step should be a clearer and more consistent definition of infection. New diagnostic testing, such as alpha defensin [3] may help in this regard. The leukocyte esterase strip test [6] has demonstrated to be an affordable and effective marker of PJI. Once we can identify all patients with infections (and minimize the number

with false-positive and false-negative testing for this important diagnosis), we then can begin to consider approaches to help prevent it, which might include improvements in the adherence to protocols. We encourage orthopaedic researchers to continue the efforts in the identification of affordable and effective markers. Last year’s international consensus meeting on PJI [1] should be periodically repeated to assess the best available evidence and scientifically delineate the best practices aimed at the prevention and treatment of this devastating complication.

Readmissions can be driven by a multitude of factors. While some readmissions are truly unavoidable, others involve patient behavior and the type of practice in which the arthroplasties are done, as opposed to real quality issues. Risk adjustment for patient income, mental health, and type of insurance needs to occur before we start using these rates in health policy decisions. Otherwise, we risk penalizing those who care for the poor and uneducated [5].

The improvement in longevity of implants should not be neglected; the findings of this work do not justify halting development and innovation in the bearing surfaces or surgical techniques to improve longevity. Had we focused on only “short-term compli-

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cations” 35 years ago (readmissions and infections), we would still have implants using exactly the same polyethylene used in the 60s or performing routine greater trochanteric osteotomies. We should continue the research endeavors on new innovative technologies in order to improve the existing bearing surfaces and the techniques to improve the surgical placement of implants. We hope someday to have hip implants that will permit many decades of use, even in patients who enjoy athletic endeavors.

We commend Shearer and colleagues for drawing attention to the importance of short-term outcomes

such as PJI, but caution the orthopaedic world against the “dumping” of innovation for the sake of cutting costs.

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