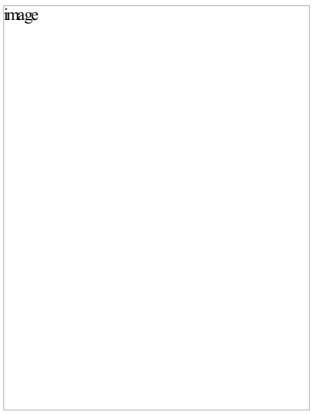

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Introduction

Dr. Peter K. Sculco

First off, I would like to thank Dr. A. Seth Greenwald for the honor and opportunity to serve as the Guest Editor - Knee for the Current Concepts in Joint Replacement - Spring 2017 meeting. Every aspect of care delivery associated with Total Knee Replacement continues to evolve and many essential topics ranging from bundled payments, surgical technique, implant design, and avoidance and management of infection and stiffness are covered in this issue.

Dr. Ryan Nunley provides us with an excellent overview of Bundled payments and emphasizes how hospitals and physicians must work towards greater alignment for both parties to succeed and participate in gain sharing. Overall, the bundled care programs have been a success with high volume centers citing shorter hospital length of stay, fewer readmissions, and substantial cost reduction. Dr. Nunley also discussed the dangers of such cost-sharing and cutting incentives and how patients must not be "steered" away for being too medically complex.

Prevention of early wound complications is key to a successful patient outcome. Dr. Lieberman emphasizes that avoiding wound complications starts preoperatively with patient optimization protocols including management of uncontrolled diabetes, smoking, obesity, and malnutrition. When wound complications do occur, and drainage persists more than 7 days, a return to the operating room is necessary to prevent delayed deep infection. Wound closure techniques and suture options are summarized by Dr. Nunley and he cites current evidence showing that running barbed sutures may decrease arthrotomy leakage and dehiscence and early wound drainage. In addition, closing the wound in flexion led to improved knee flexion up to 1 year and less require physical therapy visits postoperatively.

Periprosthetic joint infections (PJI) are still an issue and can occur in an acute or delayed fashion. From chronic infections, requiring implant removal, Dr. Nunley provides an algorithm on how to decide whether to proceed with a one stage or two stage exchange. A concise overview on categorizing infection as acute (within 4 weeks of index procedure), chronic (> 4 weeks),and acute hematogenous (acute onset with infectious prodrome) is provided in addition to the McPherson criteria for host and limb status graded A to C and 1 to 3, respectively. Compromised soft tissue envelope, systemic sepsis, and culture negative infections are not candidates for single stage exchange and based on these criteria Dr. Nunley states that 65-70% of PJI patients may be candidates for single stage exchange. Meta-analyses comparing one stage vs two stage have not found a difference in PJI failure rates and two randomized controlled trials (RCTs) comparing one stage and two stage are currently ongoing in both the United States and Europe.