Avoiding Readmissions

James A. Browne, MD
AAHKS Team Member Course
Disclosure

American Journal of Orthopedics: Editorial or governing board
Biocomposites Ltd: Paid consultant
DJ Orthopaedics: IP royalties; Paid consultant
Journal of Arthroplasty: Editorial or governing board
Radlink: Stock or stock Options
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Saunders/Mosby-Elsevier: Publishing royalties, financial or material support
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Introduction

• Readmissions are a huge target
• Cost Medicare $17.5 billion in 2010
Why Are Patients Readmitted?

- Six risk factors predictive of hospital readmission (Kansagara et al, JAMA 2011)
  - Medical comorbidities
  - Mental health
  - Illness severity
  - Prior medical use
  - Functional status
  - Socioeconomic factors
Risk Factors for Readmission THA

- Mednick et al, JBJS 2014

<table>
<thead>
<tr>
<th>Factors</th>
<th>Description</th>
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<tbody>
<tr>
<td>Demographic</td>
<td>Morbid obesity (≥40 kg/m²)</td>
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<td>Comorbidities</td>
<td>Corticosteroid use preoperatively</td>
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<td>Complications</td>
<td>Surgical site infection</td>
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<td>Pulmonary embolism</td>
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<td>Deep vein thrombosis</td>
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<td>Sepsis</td>
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<td>Laboratory</td>
<td>Low serum albumin level</td>
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Meta-Analysis of Unplanned Readmission

- Ramkumar, Am J Orthop 2015

**Figure 2.** Overall and cause-specific total hip arthroplasty readmission rates at 30-day follow-up. N, number of studies that reported rates.

**Figure 3.** Overall and cause-specific total knee arthroplasty readmission rates at 30-day follow-up. N, number of studies that reported rates.
Modifiable Risk Factors: Obesity

- Obesity consistently linked to complications following TJA
- AAHKS Workgroup: Consider reducing weight if BMI > 40
- Unclear if bariatric surgery will reduce risks

Modifiable Risk Factors: DM

- Uncontrolled DM associated with infection and medical complications following TJA
- Perioperative hyperglycemia correlated with infection – tight glucose control important
- Preoperative optimization of hemoglobin A1c (three month average plasma glucose concentration) controversial
Modifiable Risk Factors: DM

- Cancienne, Werner, Browne, In Press

![Graph showing the relationship between Hemoglobin A1c and procedure for infection at 1 year. The equation for the curve is y = 0.0008x^2 - 0.0102x + 0.04, with R^2 = 0.9375. There is an inflection point between 7 and 8.]
Modifiable Risk Factors: Smoking

• Predictor of wound and cardiopulmonary complications
• Randomized trial of smoking cessation 6 to 8 weeks prior to TJA significantly reduced complications (Moller, Lancet 2002)
• Consider postponing surgery in particularly high risk patients
Modifiable Risk Factors: CV Disease

• Requires careful attention
• TJA places demand on CV system
• Perioperative management with medical specialists to optimize disease
• Discontinuing Plavix individualized
• Beta blockers prior to TKA associated with reduced potential for myocardial ischemia
Modifiable Risk Factors: Neurocognitive and Psychological Problems

- Strong evidence that modifiable risk factors associated with low treatment adherence
- Pain catastrophizing and poorly compensated pain beliefs associated with poor outcomes
- Depression associated with increased risk of complications
- Cognitive behavioral therapy (CBT) improves coping skills prior to TJA
Modifiable Risk Factors: Deconditioning

• Ambulatory status and general mobility is an important predictor of outcome with TJA
• Prehabilitation has been shown to reduce LOS and increase discharge to home
• Discharge to SNFs associated with increased risks of readmission
• Planning for post-discharge needs can prevent social readmissions
Reducing Complications

• Decrease surgical site infection rates
  – Consider best practices including MRSA screening, standardized prophylaxis, etc

• Reduce VTE and bleeding complications
  – Know your own data!

• Manage medical comorbidities postop
  – Dedicated hospitalist service, early outpatient follow-up

• Institute outpatient pathways for work-up and treatment of DVT

Following Discharge

- Communication is critical!
- Maximize discharges to home
- Develop relationships with SNFs
- Consider contracts with your patients
Tips for Success

- Know your own data
- Review every readmission