TODAY'S OBJECTIVES

1. Review the Current Trends in Outpatient Joint Replacement and Why the Shift is Occurring
2. Identify the Challenges, Opportunities and Advantages of Providing Arthroplasty Surgery in an Ambulatory Setting
3. Understand the Planning Process, Patient Selection Criteria and Implementation Steps Required to Successfully Perform Outpatient Arthroplasty of the Hip and Knee
4. Summarize the Pre-op, Perioperative and Post-op Protocols Required to Successfully Manage these Procedures
5. Review the Clinical and Financial Models of Outpatient Joint Replacement
ORTHOPAEDIC DELIVERY SYSTEMS & REIMBURSEMENT MODELS ARE CHANGING

- Procedures Rapidly Moving to the Ambulatory Setting
- High Expectations of Consumers and a Willingness to Travel Significant Distances to Destination COE’s
- New Technology & Pain Control Advancements Promoting Earlier Ambulation
- Co-Management & Bundled Payment Models Continuing to Emerge
Outpatient Joint Replacement Projections
Growth Largely Concentrated in Outpatient Setting
Five-Year Orthopaedic Growth Trajectories

All-Payer Volume Growth Projections 2013-2018
Orthopedic Services  Spine Services

Orthopedic
Services

Spine
Services

Outpatient
Inpatient

15.4%
5.1%
(0.1%)
22.9%

Volume Growth Projections by Key Sub-Service Lines 2013-2018

<table>
<thead>
<tr>
<th>Service Line</th>
<th>2013-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spine Injections &amp; Blocks</td>
<td>15%</td>
</tr>
<tr>
<td>Sports Medicine</td>
<td>13%</td>
</tr>
<tr>
<td>Hand</td>
<td>12%</td>
</tr>
<tr>
<td>Joint Replacement</td>
<td>9%</td>
</tr>
<tr>
<td>Foot</td>
<td>8%</td>
</tr>
<tr>
<td>Fracture/Dislocation Treatment</td>
<td>4%</td>
</tr>
<tr>
<td>Other Surgical Spine</td>
<td>4%</td>
</tr>
<tr>
<td>Fusion</td>
<td>2%</td>
</tr>
<tr>
<td>Orthopedic Trauma</td>
<td>2%</td>
</tr>
<tr>
<td>Sports Medicine</td>
<td>2%</td>
</tr>
<tr>
<td>Medical Spine</td>
<td>-7%</td>
</tr>
</tbody>
</table>

Expected five-year growth of outpatient joint replacements: 157%
Projected volume of outpatient joint replacements in 2018: 169K

Source: Advisory Board Inpatient and Outpatient Market Estimator tools. 2015
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TOTAL JOINT REPLACEMENT TRENDS
AGE DISTRIBUTION

Insights:
✓ Need to provide specialized health care services for individuals with joint replacements, ranging from chronic care of aging implants to the management of revision surgeries and long-term complications from wear debris or other issues.

**Total Knee Replacement (TKR)**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>50-59</td>
<td>1.8%</td>
<td>1.2%</td>
</tr>
<tr>
<td>60-69</td>
<td>5.5%</td>
<td>3.6%</td>
</tr>
<tr>
<td>70-79</td>
<td>10.1%</td>
<td>7.3%</td>
</tr>
<tr>
<td>80-89</td>
<td>11.0%</td>
<td>8.8%</td>
</tr>
<tr>
<td>90+</td>
<td>7.4%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

**Total Hip Replacement (THR)**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>50-59</td>
<td>0.8%</td>
<td>1.0%</td>
</tr>
<tr>
<td>60-69</td>
<td>2.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>70-79</td>
<td>4.4%</td>
<td>3.8%</td>
</tr>
<tr>
<td>80-89</td>
<td>6.3%</td>
<td>4.8%</td>
</tr>
<tr>
<td>90+</td>
<td>6.1%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

- 4.7 million (3.0 million women, 1.7 million men) individuals with total knee replacement in 2010
- 2.5 million (1.4 million women, 1.1 million men) individuals with total hip replacement in 2010

TOTAL JOINT REPLACEMENT SHIFT

• Insurance Companies Steering Patients Toward ASCs
  • Insurance companies actually approached ASC’s with favorable contracts because they want to steer their patient volume to these more cost-effective ASCs rather than keep them in the hospital systems.

• Take Advantage of the Industry Springing up Around Outpatient Orthopaedics
  • More orthopaedic surgeons are training on minimally invasive surgery techniques during their fellowships

SHOULD WE ENTER THE OUTPATIENT JOINT BUSINESS???
ASC ADVANTAGE SURGEON OPPORTUNITY

- Enhanced Patient Experience for Increased Satisfaction
- Improved Productivity and Efficiency
- Lower Costs
- Schedule Predictability
- More Surgeon Controlled Environment
- Convenience and Ease of Practice
- Less Rounding
- Provides Significant Differentiation
- Expanded Service Area
EIGHT KEY OPERATIONAL CONSIDERATIONS

1. Payer Trends
   • ASC reimbursements
   • Bundled Payment Models
   • CMS guidelines

2. Education
   • Patient
   • Referral sources
   • Staff

3. Competition
   • Market Share
   • Marketing

4. Operating Room
   • Efficiency
   • Equipment
   • Staffing

5. Patient Identification and Selection
   • Age
   • Lifestyle
   • Health & Wellness

6. Pain Management
   • Anesthesia protocols
   • Transition of Care

7. Efficiency of Operations
   • Order Sets / Pathway Standardization

8. Outcomes
   • Outcome Collections Across the Episode of Care
   • Benchmarking
   • Care at Home Programs
WHERE DO WE START???
PLANNING FOR JOINTS IN THE ASC

• **Engage the Surgeons and Staff in the Planning Process**
  • Surgeon & Administration Leaders

• **Assess the Current State**
  • Physical Space
  • Instrument & Equipment Needs
  • Staff Competencies
  • Surgeon Commitment Levels & Current Protocols / Variances in Practice
  • Culture

• **Define the Vision and Establish Clear Goals & Work Plans**
  • Determine Start-up Costs & Develop Proforma
  • Finalize Timeline

• **Surgeon Driven Clinical Pathways and Order Sets**

• **Establish Reimbursement Strategy**
  • Carve outs
  • Bundled Payments

• **Ensure 3rd Party Ancillary Services are Prepared**

• **Determine Emergency Plan**

• **Stage Your Launch – May want to start with partials then bring in totals, building volume gradually**
JOINT REPLACEMENT CRITERIA FOR COE

KEY ELEMENTS

- PHYSICAL EXPERTISE & LEADERSHIP
- VOLUME
- OUTCOMES & SAFETY
- COST OF CARE
- EVIDENCED BASED CARE
- STANDARIZED PROTOCOLS & PROCESSES
- DEDICATED FACILITY & STAFF
- PATIENT PREPARATION & EDUCATION

Blue Distinction Center
Hospitals recognized for their expertise in delivering specialty care.

Blue Distinction Center+
Hospitals recognized for their expertise and efficiency in delivering specialty care.

The Joint Commission
National Quality Approval
COMPREHENSIVE INTEGRATION

- Patient/Caregiver
- Primary care physicians
- PT/Homecare
- Surgeon Office
- Surgery Center
  - Clinical Director
  - Scheduling
  - PACU
  - Surgeon
  - Anesthesia
  - Materials Manager
  - OR Staff
- Vendors and Payers
- Community Partnerships & Collaboration
PATIENT SELECTION PROCESS – “GREEN LIGHT”

- Educated and Motivated Patient
- Failed Conservative Treatments
- Appropriate Insurance Coverage
- Functionally Independent
- Help at Home?
- Completed Pre-screen H and P
- Attend Pre-op Class
PATIENT SELECTION PROCESS – “RED LIGHT”

- **Cardiac Conditions** –
  - Previous MI
  - Valve Disease – CHF
  - Arrhythmia

- **Pulmonary Disease such as COPD**

- **BMI > 40**

- **GI such as history of post op ileus**

- **Liver Disease – Cirrhosis**

- **Hematology Issues such as HGB <13**

- **GU** –
  - History of urinary retention
  - Symptomatic BPH
  - Prostate cancer

- **Neurology**
  - History of dementia or post op delirium
  - Prior CVA

- **Organ Transplant**
PRE-OP EDUCATION AND PREP

- Shift Perception of Need for Inpatient Care
- Facility Tour & Staff Introduction
- Review Patient History and Meds – Improves day of efficiency
- Patient Education
- Pre-op PT Evaluation (optional)
  - Gait, walker and exercise instruction
  - Identifies needs at home
  - Home and OP PT
- Improve Patient and Family Preparation for Day of Surgery and Transition to Home Environment
DAY OF SURGERY PROCESS

• Easy and Convenient Intake
• Comfortable Place for Families
• Preoperative Analgesia
• Perioperative Anesthetic
• Safe and Efficient Surgical Environment
• Communication with Family
• Smooth Transition Home
TRANSITION HOME AND FOLLOW-UP CARE

- Post-op Functioning and Mobility
- Review Discharge Criteria and Precautions
- Confirm Pain Management and Wound Care Instructions
- Ensure Home Environment Prepared
- Proper Equipment is Available
- PT and/or Home Care Plan
- Next day Call from Surgeon or Staff
- Follow-up Appointments Scheduled
HOW DO WE MEASURE SUCCESS???
CREATE TOOLS FOR SUCCESS

- Patient Selection Criteria
- Patient Education Notebook
- Standardized Anesthesia Protocols
- Standardized Pain Protocols
- Standardized Order Sets
- Clinical Pathways for Short Stay
- Transition Plans / Health and Wellness
- Outcomes and Benchmarks
- Comprehensive Marketing Plan
TOP TEN TRAITS OF SUCCESSFUL ASC’S

1. Committed, open minded, forward thinking administration and providers
2. Educated and empowered staff
3. Physicians that are engaged and have effective leadership structure
4. Reimbursement strategy with the right mix of patients and payers
5. Excellent vendor and payer relationships
6. Commitment to providing superior quality and service
7. Accurate financial systems
8. Data shared and communicated across physicians and staff
9. Clear marketing and growth strategy with resources to support
10. Facilities and equipment are current and well maintained
MEASURING SUCCESS

• Evidence Based
• Improved Satisfaction & Consumer Preferred
• Increased Volume & Market Share
• Maximized Operating Room Efficiency
• Decreased Cost per Case
• Increased Contribution Margin/Case
• Market Differentiation
SHOULD WE DO A BUNDLED PAYMENT MODEL???
PUTTING IT ALL TOGETHER - VALUE BASED MODEL FOR TJA CARE

- Inpatient & Outpatient Interventions
- Imaging & Lab Services
- Integrative Modalities
- Standardized efficient care
- Integrative Nurse Navigator
- Skilled Nursing Facilities
- Rehabilitation Facilities
- Long Term Care
- Home Health
- Physical & Occupational Therapy
- Pharmacy
- DME
- Employers
- Wellness Programs / YMCA
- Insurers
- Disease Management Programs
- Prevention Programs

Triple Aim Goals -
1. Population Health
2. Member Experience
3. Total Cost of Care

Community Partnerships & Collaboration

Providers

Inpatient & Outpatient Services

Post Acute Care

Pre-surgical 30 days

90 Days Post

Surgical Event

- Primary Care / Internal Medicine
- Orthopaedic Surgeons
- Spine Surgeons
- Anesthesia Providers
- Physical Medicine & Rehabilitation
- Rheumatologists

- Inpatient & Outpatient Interventions
- Imaging & Lab Services
- Integrative Modalities
- Standardized efficient care
- Integrative Nurse Navigator

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TOP RANKED ORTHOPAEDIC HOSPITALS WITH AN OUTPATIENT SURGERY PROGRAM

- Campbell Clinic (Memphis, TN)
- University of Washington Medical Center (Seattle)
- Texas Spine and Joint Hospital (Tyler, Texas)
- St. Elizabeth Edgewood (Edgewood, Ky.)
- Stanford Hospital and Clinics (Palo Alto, Calif.)
- Munson Medical Center (Traverse City, Mich.)
- Nebraska Orthopaedic Hospital (Omaha, Neb.)
- Mayo Clinic (Rochester, Minn.)
- Kansas City Orthopedic Institute (Leawood, Kan.)
- Foundation Surgical Hospital (Bellaire, Texas)
- St. Francis Hospital & Medical Center (Hartford, Conn.)
- HOAG Orthopaedic Institute
- Baylor Orthopedic and Spine Hospital at Arlington (Texas)
- Mount Carmel New Albany (Ohio)

Abstract:

• Compared outpatient THA with costs of inpatient THA
• 10 patients in each group
• Surgery by the surgeon in the same hospital
• Average hospital bill for outpatients was $4000 less than for the inpatients
• Total average charge including prehospital, intrahospital and posthospital care for the outpatients was $2500 less than for the inpatients.
• Total average reimbursement was $1155 less for the outpatients
• Results of this pilot study show that outpatient THA is financially advantageous.
# OUTPATIENT JOINTS OUTCOMES
## CASE STUDY

<table>
<thead>
<tr>
<th>64 Total Knee Patients</th>
<th>Mean length of stay in days (range)</th>
<th>Mean Knee Society Scores in points (range)</th>
<th>Mean Range of Motion in degrees (range)</th>
<th>Mean satisfaction score in points (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Knee Score</td>
<td>Function Score</td>
<td></td>
</tr>
<tr>
<td>Outpatients</td>
<td>0</td>
<td>94 (67-100)</td>
<td>86 (50-100)</td>
<td>123 (100-140)</td>
</tr>
<tr>
<td>Inpatients</td>
<td>3 (2-4)</td>
<td>93 (48-100)</td>
<td>86 (50-100)</td>
<td>121 (105-140)</td>
</tr>
<tr>
<td>P value</td>
<td>&lt;0.001</td>
<td>0.26</td>
<td>0.966</td>
<td>0.289</td>
</tr>
</tbody>
</table>

Published by The Association of Bone and Joint Surgeons 2009
• 232 patients underwent an outpatient TJA by one surgeon.
• Criteria for surgery consisted of Body Mass Index<40 kg/m2, no active cardiopulmonary issues, no sleep apnea, no history of deep venous thrombosis or pulmonary embolus.
• 148 patients were matched using the same outpatient criteria but underwent inpatient (minimum two-day hospital stay) TJA.
• 235 patients (137 outpatient and 98 inpatient) completed a telephone survey related to hospital readmissions, unplanned care and patient satisfaction.
• Study found no statistical difference for readmission, emergency room visits or patient satisfaction in either group.
Results:
• ASI THA performed in an ASC resulted in a significantly shorter length of postoperative stay

<table>
<thead>
<tr>
<th>Post Operative Stay</th>
<th>VAS Scores (3 months post operatively)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC</td>
<td>13.4 Hours</td>
<td>$29,421</td>
</tr>
<tr>
<td>Hospital</td>
<td>38 Hours</td>
<td>$41,858</td>
</tr>
</tbody>
</table>

P < 0.0001
P = 0.03
P < 0.0001

• There were no significant differences between groups regarding operative time, blood loss, or complications.

Conclusions:
The ASC group had a shorter length of stay and less postoperative pain, than the HS cohort with no difference in complications. Cost savings were significant, with the ASC group saving an average of $12,437. Further investigation is needed to evaluate longer-term outcomes and cost effectiveness of ASI THA performed on an outpatient basis.
• "When you look at the data for bundled payments at hospitals or physician-owned ASCs, the care is provided for about 35 percent to 47 percent less at ASCs than at hospitals for the same procedures. These bundles include 60 days to 90 days which defines the entire episode of care."
  
  Dr. Bert

• Monterey County, California
  • Providers: BSC, United Healthcare, A large self-insured group (10,000 covered lives)
  • 60% of 225 cases were orthopaedic
  • Reimbursement Rate for 225 cases: $23,103
  • Average Bundled Fee Rate (ASC, Surgeon, Anesthesiologist) $13,708
  • Total savings to payers (patients, employers & insurance companies): $2,113,875
  • Average savings per case was $9,395 or 41 percent, which is at the high range of average savings generated through the G1 bundle payment network in California.

• Patient satisfaction rates for surgeries in the ASC setting were high. Nearly one-half of all patients completed a satisfaction form, and 98 percent of respondents indicated they would recommend the ASC to family members or friends requiring a similar surgery.


## Are Joints Profitable in the ASC?

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case Volume</strong></td>
<td>175</td>
<td>210</td>
<td>252</td>
</tr>
<tr>
<td><strong>Estimate Payment</strong></td>
<td>$15,500</td>
<td>$15,500</td>
<td>$15,500</td>
</tr>
<tr>
<td><strong>Net Revenue</strong></td>
<td>$2,712,500</td>
<td>$3,255,000</td>
<td>$3,906,000</td>
</tr>
<tr>
<td><strong>Estimated Cost</strong></td>
<td>$8,650</td>
<td>$8,650</td>
<td>$8,650</td>
</tr>
<tr>
<td><strong>Total Profit</strong></td>
<td>$1,198,750</td>
<td>$1,438,500</td>
<td>$1,726,200</td>
</tr>
</tbody>
</table>

*Payment and cost estimates based on actual study of ASCs in Southeast and Northwest.*
SUMMARY – KEYS TO SUCCESS

- Engaged Providers & Leadership
- Make sure Payers will Support the Program
- Design and Implement the Plan that fits your Market
- Engage the Key Stakeholders in the Planning Process
- Provide an Exceptional Patient Experience
- Educate and Train the Delivery Teams
- Have an Emergency Protocol
- Measure and Report Your Results
Thank You!

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