

Transforming Payment and Care Models for Total Joint Replacement

Stephen J. Zabinski, MD

Stephen John Zabinski, M.D.

Director of the Division of Orthopaedic Surgery and Total Joint Replacement Services
Shore Medical Center
Somers Point, NJ

President and Director of Joint Replacement Services
Virtua/Jersey Shore Ambulatory Surgical Center
Somers Point, NJ

Consultant
Horizon Health Insurance Of NJ
Total Joint Arthroplasty Episode of Care Program

Consultant
HCI3 : Value Based Orthopedic Payments in TJA

Orthopedic Group/Patient Demographics

- Practice performs approximately 600 TJA annually of which two-thirds are performed by senior author
- Private Practice; In network with all major payors; Limited academic affiliation with no teaching or training responsibilities
- Primary catchment area services two counties with population base of approximately 375,000 spread over 35 mile radius from central office
- Three major hospital systems service area.

Elective Total Joint (Hip and Knee) Replacement Surgery

- **WHY ?**

- **High Cost Elective Surgical Procedures of High and Growing Incidence in USA**
 - **Projected to keep growing thru 2030**
- **Procedures with Well Defined Temporal Episode of Care and Costs**
 - **Typically 30 days Pre-op to 90 days Post-op**
- **Procedures with Well Defined Outcomes and Quality Measures**

How We Got Started: Horizon NJ

- Approached by Horizon Health Care BC/BS of New Jersey in late 2010 to participate in total joint episode of care program as physician advisory board member.

Structure and Timeline of Horizon Project

- Phase 1 (2011 to 2012)
 - Definition of EOC (30 day pre-op to 90 day post-op), quality measures, inclusion criteria, grouper technology , best practices, standards of care and never events
 - Episode Budgets defined based on 2 years retrospective claims data
- Phase 2A (2012 to q1 2013)
 - All Providers still bill and are reimbursed in Fee-for-Service Model
 - PATIENT specific severity adjusted episode budgets
 - **Retrospective** Quarterly NO DOWNSIDE Shared savings payment (Provider receives 50% of savings relative to budget)

Structure and Timeline of Horizon Project

- Phase 2B (q3 2013 to present)
 - All Providers still bill and are reimbursed in Fee-for-Service Model
 - PRACTICE specific budgets for TKR / THR
 - **Retrospective** Quarterly Shared savings payment (Provider receives 50% of savings relative to budget)
 - Outlier Episode (Loss) Protection at 95 %tile of state wide episode costs
- Phase 3 (to be determined)
 - **Prospective** global bundled payment to provider (All related services within episode and all "outlier" episodes/complications covered within this payment)

Practice Goals Upon Entry to Value Based Payment TJA Project

- **DIMINISH OVERALL COST** of TJA episode by decreased complications, improved postoperative patient function allowing earlier discharge and more frequent discharge to home and system improvements
- To **IMPROVE QUALITY AND PATIENT SATISFACTION** while achieving these financial goals
- To **INCREASE SURGEON/PRACTICE REIMBURSEMENT** for TJA through shared saving BPI payment and increased patient referral/volume

Costs Associated with Total Joint Episode

- **Pre-operative**

- Orthopedic Surgical Preop Office Services
- Medical and Medical Subspecialty Physician Clearance Services
- Diagnostic Testing
 - Orthopedic
 - Medical/Laboratory
- Pre-op Physical Rehabilitation
- Pharmacy Costs

Costs Associated with Total Joint Episode

- **Peri-operative**

- Site of Service Cost / Facility Fee
- Implant Cost
- Surgeon's Procedural Fee
- Anesthesia Service Fee
- Periop Medical and Rehabilitation Evaluation and Service Fees

Costs Associated with Total Joint Episode

- **Post-operative**

- Physical Therapy Services
- SNF or In-Patient Rehab Site Fees
- Laboratory and Diagnostic Services
- Pharmacy Costs
- Durable Medical Goods
- Complication Cost
 - includes ALL COSTS of treatment of surgical procedural related complication (BOTH operative and medical complications)

Quality and Outcome Measures for TJR

- **Quality**

- Preoperative Indications
- Surgical Complication Rate (Infection, wound complications, DVT/PE, MI, transfusion, mechanical complications etc.)
- Readmission Data

- **Outcomes**

- Patient Satisfaction Data (HCAHPS; Likelihood to Recommend)
- Functional/QOL (SF-36; Womac)

HOW to BOTH Reduce Cost and Improve Outcome?

- **Reduce/Eliminate Complications**
 - Optimize Patient Modifiable Risk Factors
 - BMI; Diabetes; Debilitation; Smoking; Anemia
- **Improve Early Post-Operative Function**
 - Optimize Preoperative Patient Function
 - Rapid Recovery Surgical Techniques and Protocols

HOW to Reduce Cost without Impact on Quality

- **Implant Selection/Cost Reduction**
 - Vendor Contracts
 - Demand Matching
- **Elimination of Unnecessary Services**
 - Uniform Evidence Based Best Practices Pathway for ALL Patients
- **Migration of Cases to Lower Cost/Equal Quality Sites of Service**

Barriers in Present Payment/Care System to Reduce Cost/Improve Quality

- **Preoperative Patient Optimization Programs NOT Reimbursed / Approved**
- **Lack of Protocols for Patient Optimization**
- **Poor Preoperative Care Coordination**
- **Lack of Reimbursement for Care Coordination**
- **Failure of Orthopedic Surgeons to Adopt Rapid Recovery Surgical Techniques and Protocols**

Barriers in Present Payment/Care System to Reduce Cost

- Lack of Alignment Between Hospitals/Surgeons
- Lack of Comparative Data re: Surgeon Cost vs Outcome
- Lack of Uniform Best Practice Pathways
- Lack of DATA about Cost Differential between Sites of Service

How the Horizon Episode Of Care Empowered Our Surgeons to Overcome these Barriers

- **Cost Reduction and Quality Improvement**
- **Allowed for Preoperative Patient Optimization Programs to be BOTH Defined and Approved for Payment**

How the Horizon Episode Of Care Empowered Our Surgeons to Overcome these Barriers

- **Cost Reduction and Quality Improvement**
- **Surgeon Practice Receives Value Based Reimbursement for Care Coordination .. Increased Revenue Used for**
 - **Total Joint Coordinator**
 - **Total Joint Education and Companion Programs**

How the Horizon Episode Of Care Empowered Our Surgeons to Overcome these Barriers

- **Cost Reduction and Quality Improvement**
- **Provided Orthopedic Surgeon with Stimulus for Education in and Criteria for Adoption of Rapid Recovery Surgical Techniques and Protocols**

How the Horizon Episode Of Care Our Surgeons to Overcome these Barriers

- **Cost Reduction**
- **Fostered Creation of Hospital/Physician Co-Management Agreements for TJR Care**
 - Surgeon NOW Directly Understand and Negotiate Hospital Vendor Contracts (REDUCED IMPLANT COST)
 - All Total Joint Patients can be Managed in Uniform Evidence Based Best Practice Care Path Plan (STANDARD PATHWAYS)

How the Horizon Episode Of Care Our Surgeons to Overcome these Barriers

- **Cost Reduction**
- **Provided Surgeons with INVALUABLE DATA**
 - **Comparative Cost of Regional Sites of Service**
 - **Comparative Cost of Surgeons**

Summary of Preoperative Practice Modifications

- **Improved Patient Selection** (Health Status, Motivation, Support System)
- **Increased Education and Patient Engagement** (Nurse Navigator, Patient contract, Total Joint Companion)
- **Formal Programs to Improve Modifiable Risk Factors** (BMI, Diabetic Mgte, Smoking, Deconditioning, Anemia)
- **Institution of Comprehensive Medical and Medical Subspecialty Clearance**
- **WOMAC Scores for All Patients**

Summary of Peri-operative Practice Modifications

- **Adoption of Tissue Sparing Surgical Technique**
 - Direct Anterior THR and Quad Spare TKR
- **Improved Periop Anesthesia, Medical and Pain Management**
 - Adductor Canal Blocks
 - Dexamethasone
 - Transexamic Acid
- **Reduced Implants Cost and Patient Implant Deamnd Matching**
 - All Poly Tibia
 - Do You Need the Ceramic Head ?
- **Moved Cases to Lower Cost/Equal Quality Site of Service**
 - Surgical Center and Lower Cost Regional Hospital System

Summary of Postoperative Practice Modifications

- **Discharge Timing and Disposition**
 - Reduced Length of Stay
 - Discharge Home vs Inpatient Center
 - SNF and Rehab “Report Cards”
- **Patient / Physician Communication**
 - Increased Post-Operative “Patient Touches”
 - Improved Educational Programs
- **Physical Therapy / Rehab Protocol**
 - Patient Specific with Emphasis on Transition to Independence
- **Readmission Reduction Protocols**
 - ER MUST speak to Attending Surgeon
- **Post Op Womac / Patient Satisfaction Survey**

RESULTS

Primary Hospital Results (Discharge/Quality/Length of Stay)

	2011	1/2013 - 12/2015
Patient Number	306	1578 (526/yr)
TKR	204	1023(341/yr)
THR	104	555 (185/yr)
Average Length of Stay		
TKR	3.3 days	1.8 days
THR	2.9 days	1.6 days
Discharge to Home	33.7 %	77.83 %
Discharge to In-Patient Rehab/SNF	66.3 %	22.17 %
Transfusion Rate	23.21 %	4.45 %
30 Day Readmission Rate	3.2 %	2.7 %
In Hospital Complication Rate	6.4 %	8.67 %
Deep Infection/Major Wound Complication	?	0.9 %

Primary Hospital (Patient Satisfaction/WOMAC Results)

	2011	1/2014 - 12/2015
HCAHPS (Global)	N/A	82.9 percentile
Likelihood to Recommend Hospital/ Surgeon	N/A	90.7 % / 94.4 %
WOMAC Average % Score Improvement	N/A	75%

Primary Hospital Results (Financial)

	2011	1/2014 - 12/2015
Average Device Cost (DRG 469/470)	\$6,301 pt	\$4,242 pt

Financial Results Orthopedic Group

(Horizon Health Care Patients Only)

4/2012 – 3/2015 Surgeries	TKR (144)	THR (72)	TOTAL
Average Severity Budget for Total EOC	\$25,365 (now 21K)	\$26,580 (now 23k)	
Over Budget	22 (15.3%)	12 (16.6%)	34 of 216(15.7%)
Under Budget	122 (84.7%)	60 (83.4%)	182 of 216 (84.3%)
Total Savings Based Payment to Group	\$ 267,552	\$ 151,704	\$ 419,256
Average VB Payment Per Patient	\$ 1,858 per pt	\$ 2,107 per pt	\$ 1,941 per pt
Average Actual Spend (30 days preop-90 days postop)	\$ 19,597 per pt (\$11061 - \$50940)	\$ 20,636 per pt (\$12300-\$52535)	

Primary Hospital Results (Discharge/Quality/Length of Stay)

	2011	1/2013 - 12/2015
Patient Number	306	1578 (526/yr)
TKR	204	1023(341/yr)
THR	104	555 (185/yr)
Average Length of Stay		
TKR	3.3 days	1.8 days
THR	2.9 days	1.6 days
Discharge to Home	33.7 %	77.83 %
Discharge to In-Patient Rehab/SNF	66.3 %	22.17 %
Transfusion Rate	23.21 %	4.45 %
30 Day Readmission Rate	3.2 %	2.7 %
In Hospital Complication Rate	6.4 %	8.67 %
Deep Infection/Major Wound Complication	?	0.9 %

Primary Hospital (Patient Satisfaction/WOMAC Results)

	2011	1/2014 - 12/2015
HCAHPS (Global)	N/A	82.9 percentile
Likelihood to Recommend Hospital/ Surgeon	N/A	90.7 % / 94.4 %
WOMAC Average % Score Improvement	N/A	75%

Primary Hospital Results (Financial)

	2011	1/2014 - 12/2015
Average Device Cost (DRG 469/470)	\$6,301 pt	\$4,242 pt

Financial Results Orthopedic Group

(Horizon Health Care Patients Only)

4/2012 – 3/2015 Surgeries	TKR (144)	THR (72)	TOTAL
Average Severity Budget for Total EOC	\$25,365 (now 21K)	\$26,580 (now 23k)	
Over Budget	22 (15.3%)	12 (16.6%)	34 of 216(15.7%)
Under Budget	122 (84.7%)	60 (83.4%)	182 of 216 (84.3%)
Total Savings Based Payment to Group	\$ 267,552	\$ 151,704	\$ 419,256
Average VB Payment Per Patient	\$ 1,858 per pt	\$ 2,107 per pt	\$ 1,941 per pt
Average Actual Spend (30 days preop-90 days postop)	\$ 19,597 per pt (\$11061 - \$50940)	\$ 20,636 per pt (\$12300-\$52535)	

HOSPITAL SITE OF SERVICE COST DIFFERENCES

Shore Patient Level Budget Book

Cost by Type of Service (TOS) and Stage

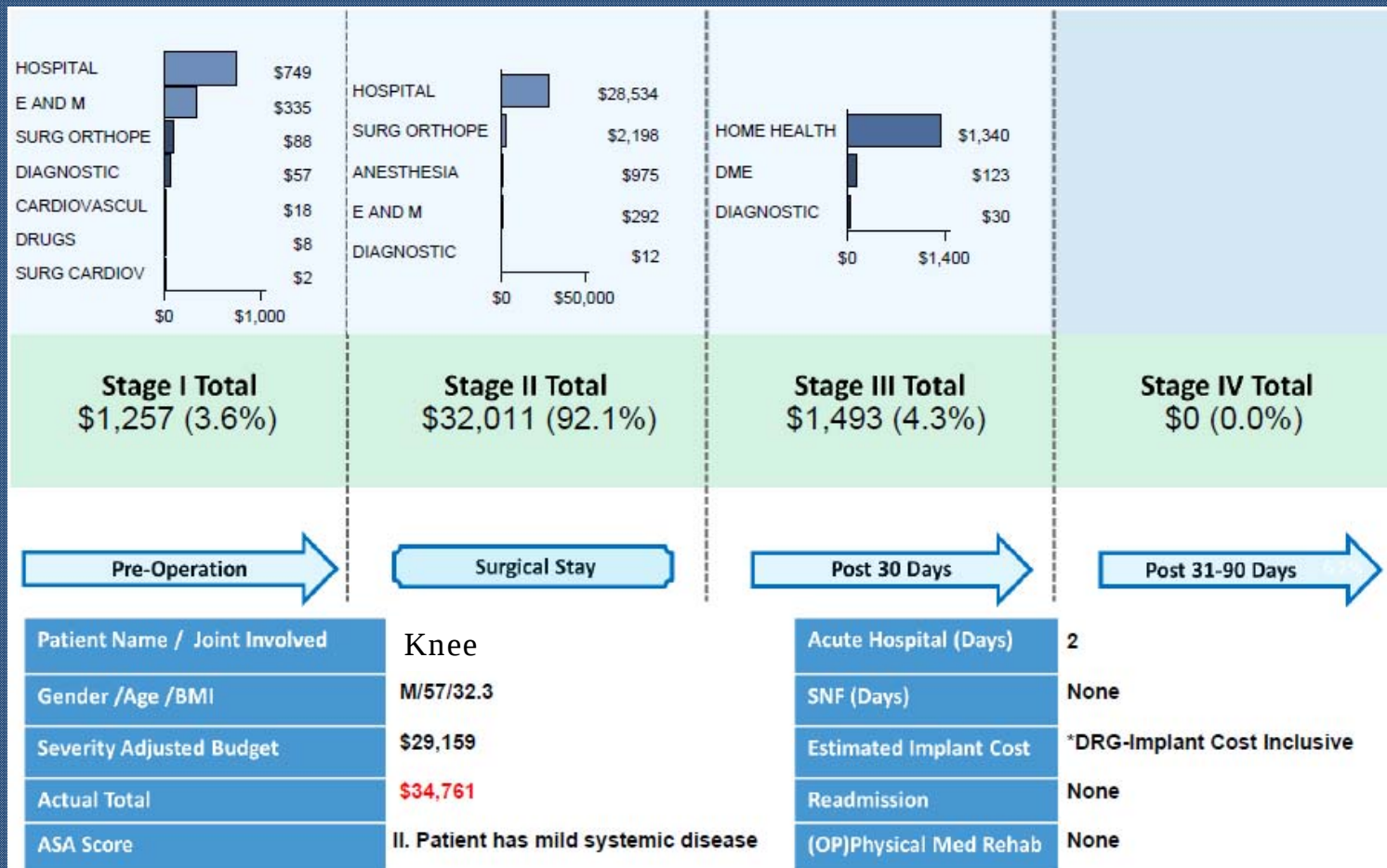
PRELIMINARY
PROPRIETARY



Shore Patient Level Budget Book

Cost by Type of Service (TOS) and Stage

PRELIMINARY
PROPRIETARY



AMBULATORY SURGICAL CENTER TOTAL JOINT REPLACEMENT

Who Is a Candidate for Ambulatory TJR ?

- **Ideal Patient**

- Motivated for rapid recovery
- Physically fit and active
- Lives in modern ranch home in close proximity to your office and physical therapy
- Supportive and equally motivated / fit significant other
- ASA 1 or 2
- Advanced OA but with limited deformity and no prior open surgery
- Commercial non-HMO insurance

Jersey Shore ASC Results (Jan 2014 to Dec 2015)

	ASC	In-Patient Hosp
Patient Number	112	574
TKR/UNI	59	345
THR	53	229
Average Length of Stay		
TKR	3.5 hours	1.8 days
THR	4.7 hours	1.5 days
Discharge to Home	99.1 %	77.83 %
Discharge to In-Patient Rehab/SNF/ Hosp Transfer	0.89 %	22.17 %
Transfusion Rate	0.89 %	3.45 %
30 Day Readmission Rate	1.78 %	2.8 %
In Center /48hr Complication Rate	3.57 %	8.67 %
Deep Infection/Major Wound Complication	0 %	1.1 %

Patient Satisfaction/WOMAC Results (Jan 2014 to Dec 2015)

	ASC	In-patient Hosp
HCAHPS (Global)	N/A	82.9 percentile
Likelihood to Recommend Hospital or ASC/ Surgeon	96.4% / 97.3%	90.7 % / 94.4 %
WOMAC Average % Score Improvement	78 %	75%

Average Episode of Care Costs 30 days Preop to 90 days Post op (Jan 2014 to March 2015)

	ASC	In-Patient Hosp
THR	\$ 17,254/pt	\$ 19,036/pt
TKR	\$ 14,782/pt	\$ 18,053/pt

Conclusions

- **Successfully Decreased Cost of TJA EOC**
 - Site of Service Migration (to Lower Cost Centers)
 - Decreased Pt Length of Stay
 - Increased Discharge Disposition to home
 - Reduction in Implant Cost (contractual and demand matching)
- **Significant decrease in transfusion rates and LOS without increased readmissions** but overall complications increased (minor .. coding related ?)
- **Migration of appropriate patients to ASC**
- **Patient satisfaction** and likelihood to recommend are **HIGH**
- Both Hospital and Group TJA **volume have increased**
- **Orthopedic Group Revenue has INCREASED**

Conclusions

These goals were achieved through changes at all levels of the TJA episode of care and require **ENGAGEMENT** in the project goals by all health care personnel who are involved with the TJA patient and **COLLABORATION** with hospital system

- Surgeon
- Surgeon's Assistant and Staff
- Internist
- Medical Sub Specialist
- Physical Therapist (at all sites)
- Emergency Department Personnel
- Anesthesia
- Social Services
- Hospital Based Nurse Navigator

Future Considerations

- Expand EOC shared savings model to other commercial payors
- Leveraged professional fee payor contract negotiations (**We have successfully renegotiated with 3 largest commercial payors in our market based on our cost differential from other practices**)
- **Ambulatory Surgical TJA (Now 25 to 30% of our TJA ..episode costs below \$15,000)**
- Direct Self Insured Employer Contracting
- Squeezing too much... Impact on definition of historical average and complications
- **Prospective Bundled Payments** (Structural, Re-insurance and NJ DOJ Issues)

THANK YOU