



Total Joint Replacement



“Same Day” Total Joint Replacement

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Total Joint Replacement



Disclosures

Symcel (consultant)
Heraeus (Consultant)
PSI (investor)



About My Practice

1- Primary Hip and Knee Replacement

2- Partial Knee Replacement

3- Anterior approach to hip replacement

4- Complex Hip and Knee Revisions

Recovery

Every individual is different and every treatment plan is different. Estimated Recovery Schedule:

- Same day therapy/walking
- In-hospital Recovery: 1 day
- Significant Functional Improvement:
6 weeks – 3 months



ACL reconstruction:

- Originally many decades ago they were inpatient procedures
- Slowly transitioned to outpatient
- Why can't the same be done for THA/TKA???



Same day surgery:

- Collaboration: Anesthesia, nursing, PT, CM, Admin
- Experienced nursing and PT/OT staff
- Surgery in Am and discharged home early afternoon (3-4pm)

Highlands 5 Main/North



PATIENT RESTROOM



PATIENT ROOM



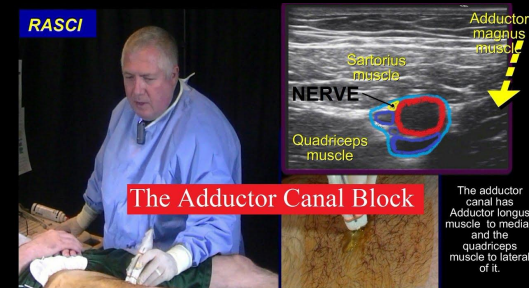
NURSES STATION



NURSES STATION

Anesthesia:

- Dedicated staff
- Continuous dialogue for improvement
- Develop a working relationship (publish together)
- Rely more on spinals and nerve blocks
- Postop. multimodal pain protocols



Same day surgery:

- How can we safely perform same day surgery???
- We didn't want increased readmission or complications
- ***Criteria for selection (medical conditions)***
- Not for everyone!!!



Outpatient Total Knee Arthroplasty Is Associated with Higher Risk of Perioperative Complications

Armin Arshi, MD, Natalie L. Leong, MD, Anthony D'Oro, BS, Christopher Wang, BS, Zorica Buser, PhD, Jeffrey C. Wang, MD, Kristofer I. Jones, MD, Frank A. Petriiliano, MD, and Nelson F. SooHoo, MD

J Bone Joint Surg Am. 2017;99:1978-86



Outpatient surgery TKA outcomes at 1y: *Humana Database*

- Higher infection rate
- Higher rate of mechanical loosening of implants
- Higher DVT rate
- Higher rate of stiffness requiring MUA

Outpatient surgery TKA/THA outcomes at 1y: *NSQIP registry*

- Higher reoperation rate (30 day readmission)
- Infection most common
- Risk Factors
 - BMI ≥ 35
 - IDDM
 - Age ≥ 85



Safe Selection of Outpatient Joint Arthroplasty Patients With Medical Risk Stratification: the “Outpatient Arthroplasty Risk Assessment Score”

R. Michael Meneghini, MD ^{a,b,*}, Mary Ziemba-Davis ^b, Marshall K. Ishmael, BS ^b, Alexander L. Kuzma, MD ^c, Peter Caccavallo, MD, MS ^d

The Journal of Arthroplasty 32 (2017) 2325–2331



Outpatient Arthroplasty Risk Assessment Score:

- OARA score ≥ 60 , not appropriate for “Same day surgery”
- OARA score more predictive of “Same day surgery” than:
 - ASA score
 - Charlson score

- No difference in 30 day readmissions
- Same day discharge had lower 90 day readmission than inpatient discharges
- Institutional care pathways are essential in minimizing complications



■ ARTHROPLASTY

Converting hip and knee arthroplasty cases to same-day surgery due to COVID-19

Bone Jt Open 2021;2-7:545–551.



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ALABAMA AT BIRMINGHAM

Knowledge that will change your world

2020 cohort. There was a significant increase in same day discharges for non-direct anterior approach THAs (two-times increase) and total knee arthroplasty (ten-times increase), with a reciprocal decrease in next day discharges. There were significantly fewer reported superficial wound infections in 2020 (5.6% vs 1.7%) and no significant differences in readmissions or emergency department visits (3.1% vs 3.0%).

The COVID-19 pandemic meant that hospitals and patients were hopeful to minimize the exposure to the wards, and minimize strain on the already taxed inpatient beds. With few positives during the COVID-19 crisis, the pandemic was the catalyst to speed up the outpatient arthroplasty programme that has resulted in our institution being more efficient, and with no increase in readmissions or early complications.

Same day surgery: Exclusion Criteria

- ASA: 3,4
- IDDM
- CRF
- Heart: CAD/MI, stents, CHF, Afib
- Lung: COPD, sleep apnea
- Transplant
- PE/DVT
- BPH / Urinary dysfunction
- Infections previously in other joints

Same day surgery: Exclusion Criteria

- Age ≥ 85
- BMI ≥ 35
- Chronic opioid use
- Patient / family motivation: does not want to participate
- Lack of social support at home
- Lives more than 2h from Highlands

Same day surgery: Discharge Criteria

- Ambulate 150 ft with therapy
- Hemodynamically / medically stable
- Safe for home / Achieve therapy goals
- Voided at least once
- Tolerating PO diet
- Pain controlled
- DME has been setup

Why did they not go home same day??

- 26% failed SDS
- Causes for inpatient stay:
 - Patient preference
 - Urinary retention
 - Nausea / Vomiting
 - Hypotension / Dizzy
 - Failed to clear PT
 - Pain management

Post discharge care:

- Phone calls on POD 1 and 2
- Nurse navigator in the works
- Currently Amy does it all !!!



Amy Boyd: Clinical Coordinator
Nurse line: 205-9752663
Appointments: 205-9308339
Fax: 205-9308575
Email: agboyd@uabmc.edu

- 2.6% readmission rate in 30 days (NSQIP)
 - 65% medical: GI , VTE , UTI , sepsis
 - Surgical: wound problems , uncontrolled pain
-
- Risk Factors
 - COPD
 - Dependent functional status
 - Long OR time

- 3.8% 90 day complication rate
- No difference in outcome between two groups:
 - 90 day complications
 - Revision rates
 - All cause reoperation rates
 - ED visits
 - Readmission rates

Association Between Same-Day Discharge Total Joint Arthroplasty and Risk of 90-Day Adverse Events in Patients with ASA Classification of ≥ 3

Nithin C. Reddy, MD, Heather A. Prentice, PhD, Elizabeth W. Paxton, PhD, Adrian D. Hinman, MD, Abraham G. Lin, MD, and Ronald A. Navarro, MD

J Bone Joint Surg Am. 2021;00:1-13

TABLE III Crude Incidence and Adjusted Risk of 90-Day Adverse Events

	Same-Day*	Inpatient*	HR (95% CI)†	P Value	1-Sided UB‡	Noninferior
THA	1,742	3,508				
Emergency department visit	193 (11.1)	547 (15.6)	0.73 (0.61-0.86)	<0.001	0.84	Yes
Unplanned readmission	57 (3.3)	240 (6.8)	0.47 (0.35-0.64)	<0.001	0.61	Yes
Complication§	115 (6.6)	470 (13.4)	0.63 (0.52-0.78)	<0.001	0.75	Yes
Cardiac event	102 (5.9)	432 (12.3)	0.61 (0.49-0.76)	<0.001	0.73	Yes
Deep infection	13 (0.7)	29 (0.8)	0.82 (0.41-1.61)	0.56	1.45	No
Venous thromboembolism	6 (0.3)	27 (0.8)	0.59 (0.26-1.33)	0.20	1.17	No
Death	5 (0.3)	16 (0.5)	0.84 (0.31-2.32)	0.74	1.97	No
TKA	3,283	6,469				
Emergency department visit	471 (14.3)	1,109 (17.1)	0.79 (0.70-0.89)	<0.001	0.87	Yes
Unplanned readmission	124 (3.8)	336 (5.2)	0.80 (0.65-0.99)	0.036	0.95	Yes
Complication§	257 (7.8)	768 (11.9)	0.72 (0.62-0.84)	<0.001	0.82	Yes
Cardiac event	218 (6.6)	699 (10.8)	0.69 (0.59-0.81)	<0.001	0.79	Yes
Deep infection	13 (0.4)	22 (0.3)	1.02 (0.49-2.14)	0.96	1.90	No
Venous thromboembolism	37 (1.1)	63 (1.0)	1.31 (0.87-1.98)	0.20	1.86	No
Death	5 (0.2)	30 (0.5)	0.53 (0.23-1.18)	0.12	1.03	Yes

- Currently for TKAs and recently started THAs
- THA recently placed on outpatient list
- Perform 1 TJA outpatient a week
- Goal to perform 30% primary THA/TKA SDS
- Discussion of doing SDS in outpatient center (119)

Summary:

- Quality first: DO No harm
- Outcomes: Readmissions, uncontrolled pain
- Evaluation of patient satisfaction/experience
- Team education / reanalyzing
- Team effort
- Joint replacement quality meeting monthly

UAB Experience:

- 3/18/2019 – current
- Single surgeon but two other arthroplasty surgeons have performed some cases
- 76 patients since start: 20% failure rate similar to literature
- Heavy spinal and/or peripheral nerve block: rectified
- Nausea/dizziness/vomiting: working with anesthesia on. COVID set our timeline back
- 1ppfx (4w), 1 MUA, 1 below knee DVT

UAB Experience:

- PT at Highlands keeping track of SDS patients
- Working with anesthesia to rectify N/V issues
- Monthly joint quality meeting dedicated to SDS program



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Thank you.