Accelerated Endocrine-Directed Glycemic Optimization Prior to Total Joint Arthroplasty: Shorter Time to Surgery Without Increased 90-Day Complications

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1. Introduction

- Pre-op HbA1c ≥8.0% often delays total joint arthroplasty (TJA) **3–6 months** awaiting a repeat A1c
- In 2021, the Connecticut Joint Replacement Institute (CJRI) launched an **accelerated pathway:** Pre-Surgical Assessment, Screening and Surveillance (PASS) clinic refers patients without an endocrinologist to an internal Endocrine Center
- Clearance by **2-week glucose log**, not repeat A1c

2. Hypothesis

The Endocrine pathway shortens time to surgery with **no** increase in 90-day complications as compared to the traditional pathway.

3. Methods

Traditional pathway (n = 44)

A1c ≥8.0% → Own endo or PCP → **Repeat A1c <8.0%** → Surgery

PASS Endocrine pathway (n = 37)

A1c ≥8.0% → PASS Endocrine Center → **2-week glucose log** → Surgery

Design: Retrospective single-center cohort (CJRI), Jan 2021 – Feb 2026

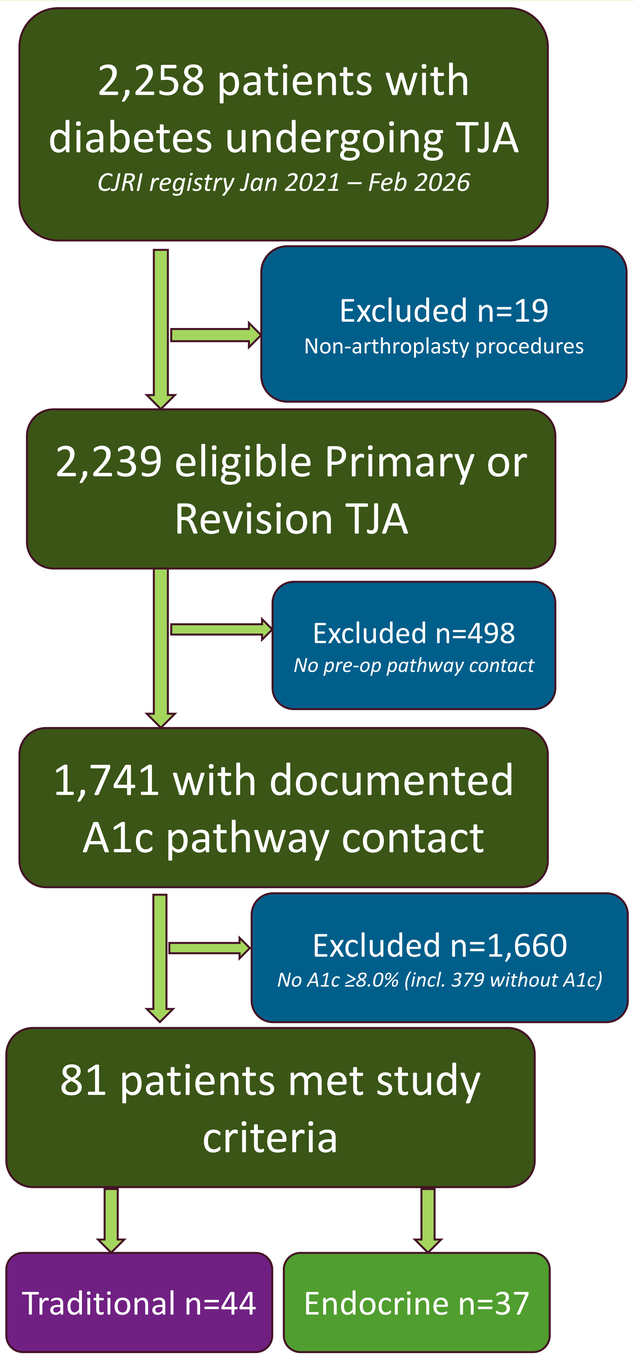
Cohort: Diabetes, primary/revision TJA, qualifying A1c* ≥8.0%

Outcomes: Days to surgery; 90-day complications, readmissions, ED visits

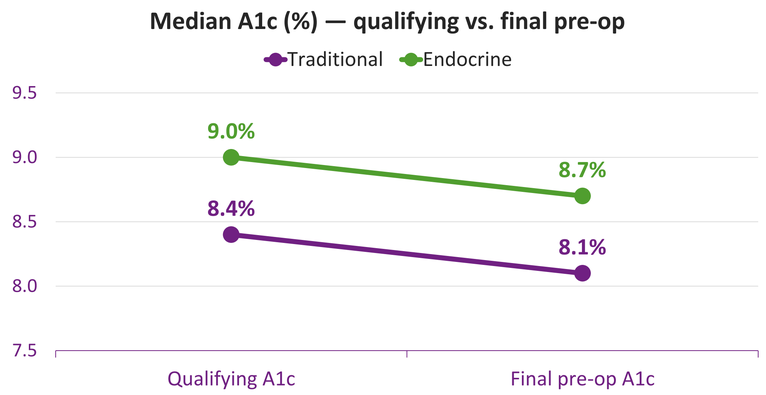
Analysis: Wilcoxon rank-sum; Fisher exact; two-sided α = 0.05

**Earliest documented pre-op A1c ≥8.0%*

4. Study Flow



5. Results: Baseline

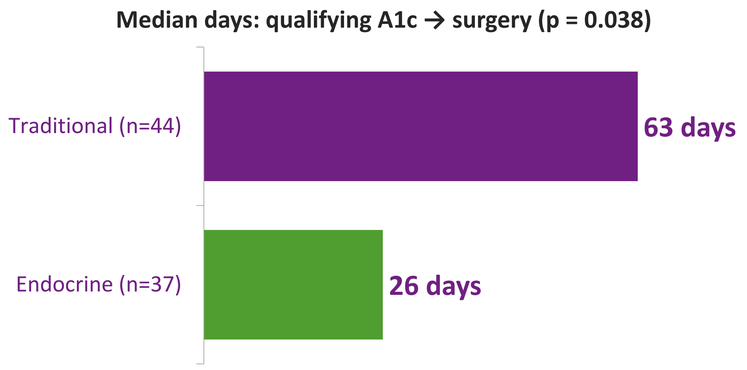


p = 0.014 (qualifying); p < 0.001 (final). Median drop 0.5 vs 0.0 pts (p = 0.004)

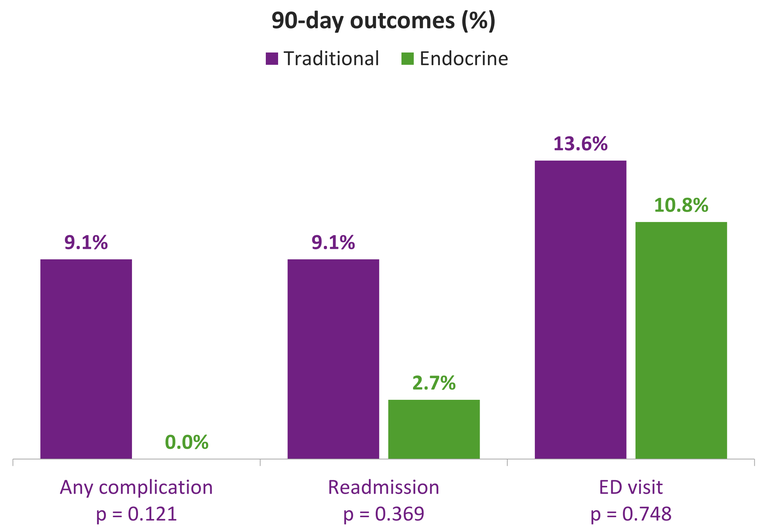
61% vs 38% Coronary artery disease, traditional vs endocrine *(p = 0.046)*

Similar: sex, joint, procedure type, HTN, HF, CKD, COPD

6. Results: Key Outcomes



IQR 20–230 vs 21–50. Sensitivity: Limited to ≤1 yr: 26 vs 26 days (p = 0.68); gap driven by 12 traditional patients waiting >1 yr



0/37 Endocrine complications (exact 95% CI 0–9.5%)

7. Conclusions

- **Glucose-log clearance:** less than half the time to surgery
- **No observed increase** in 90-day complications, readmissions, or ED visits — despite higher A1c
- Glycemic stability may be a viable clearance criterion; encouraging results warrant a larger prospective study

Limitations:

- Retrospective, single-center, non-randomized
- Higher baseline CAD in traditional group
- Small sample size with few events – chart review ongoing for patients with missing data

8. Acknowledgements

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Disclosures: none

Full reference list can be viewed by scanning QR Code