



ValidationInstitute

2022 Validation Report

Review for: Connecticut Joint Replacement Institute

Validation Achieved: Outcomes

Valid through: May 2023

Company Profile



Category:	Musculoskeletal Management
Website:	https://www.trinityhealthofne.org/find-a-service-or-specialty/orthopedics/connecticut-joint-replacement-institute/
Public or Private:	Private
Year Established:	2007
Medical Director:	Dr. John Keggi
Company contact:	866-501-2574

Description:

Founded in 2007 by 10 private practice orthopedic surgeons, the **Connecticut Joint Replacement Institute (CJRI)** has become a nationally recognized center-of-excellence for joint replacement surgery. We are a data-driven organization with over 20 clinical protocols that guide our standardized care delivery and have enabled us to continually measure our outcomes. With a laser focus on health outcomes, clinical experience and the true cost of care (the healthcare value equation) we have established a relentless commitment to excellence. Our registry contains outcomes data on nearly 50,000 patients and is our crown jewel. We are proud that over 3000 patients each year have their surgery performed at CJRI and that we are one of the highest volume arthroplasty institutes in the United States. It is an honor to be a validated program under the Validation Institute

Claim Assertion for Validation

CJRI's total hip arthroplasty, total knee arthroplasty, total shoulder replacement, and reverse shoulder replacement patients have lower rates of Emergency Room visits, hospital readmissions, and Periprosthetic joint infection within 30 days of their surgery than rates found in published peer-reviewed literature.

Method / Calculation / Examples

All surgeries for hip, shoulder, and knee arthroplasty during the year 2021 were included in the count. CJRI used data from their own patient registry, their Electronic Medical Record, daily reports received from hospitals about patients' Emergency Department visits and Readmissions, and direct patient response (at their 90-day follow-up visit).

All emergency visits and hospital readmissions were included no matter the reason for the visit (all cause). The emergency visit or hospital readmission was included if it occurred within 30 days of the surgery.

A literature review provided emergency visits, hospital readmission, and periprosthetic joint infection rates in patients for the same joint surgeries.



Findings & Validation

The table below summarizes CJRI's surgeries, 30-day Emergency Room Visits, 30-day hospital readmissions, and periprosthetic joint infections, as well as rates from published literature. Literature citations are included below the table.

CJRI's rates were below those found in published literature, except for periprosthetic joint infection for hip arthroplasty where CJRI's rate was just above the lower end of the range. (Empty cells mark rates that had no published literature for benchmarking.)

	# Pts	30 Day ED visit		30 Day Readmission		30 Day Periprosthetic Joint Infection	
		CJRI	Lit	CJRI	Lit	CJRI	Lit
Total Hip	1104	2.63%	6.50%	2.63%	3.40%	0.72%	0.6% - 1.6%
Total Knee	1469	2.65%	11.50%	2.04%	2.20%	0.54%	0.7% - 1.5%
Reverse Total Shoulder	127					0%	0.5% - 6.7%
Total Shoulder	52			0%	1.3% - 2.9%	0%	1%



Limitations

The demographic traits of CJRI patients were not analyzed to ensure they were comparable to the benchmark populations. It is reasonable to assume they are similar.



Works Cited

THA & TKA ED Visit Rates: Maldonado-Rodriguez N, Ekhtiari S, Khan MM, Ravi B, Gandhi R, Veillette C, Leroux T. Emergency Department Presentation After Total Hip and Knee Arthroplasty: A Systematic Review. *J Arthroplasty*. 2020 Oct;35(10):3038-3045.e1. doi: 10.1016/j.arth.2020.05.022. Epub 2020 May 22. PMID: 32540306.

THA & TKA PJI Rate: Heo, S.M., Harris, I., Naylor, J. et al. Complications to 6 months following total hip or knee arthroplasty: observations from an Australian clinical outcomes registry. *BMC Musculoskelet Disord* 21, 602 (2020). <https://doi.org/10.1186/s12891-020-03612-8>

RTSA PJI: Contreras ES, Frantz TL, Bishop JY, Cvetanovich GL. Periprosthetic Infection After Reverse Shoulder Arthroplasty: a Review. *Curr Rev Musculoskelet Med*. 2020;13(6):757-768. doi:10.1007/s12178-020-09670-8

TSA PJI: Austin, Daniel C. MD, MS1; Townsley, Sarah H. MD1; Rogers, Thomas H. MD1; Barlow, Jonathan D. MD1; Morrey, Mark E. MD, MS1; Sperling, John W. MD, MBA1; Sanchez-Sotelo, Joaquin MD, PhD1, a Shoulder Periprosthetic Joint Infection and All-Cause Mortality: A Worrisome Association, *JBJS Open Access*: January-March 2022 - Volume 7 - Issue 1 - e21.00118 doi: 10.2106/JBJS.OA.21.00118

THA and TKA Readmissions: Phruetthiphat OA, Otero JE, Zampogna B, Vasta S, Gao Y, Callaghan JJ. Predictors for readmission following primary total hip and total knee arthroplasty. *J Orthop Surg (Hong Kong)*. 2020 Sep-Dec;28(3):2309499020959160. doi: 10.1177/2309499020959160. PMID: 33021145.

TSA Readmissions: Westermann RW, Anthony CA, Duchman KR, Pugely AJ, Gao Y, Hettrich CM. Incidence, Causes and Predictors of 30-Day Readmission After Shoulder Arthroplasty. *Iowa Orthop J*. 2016;36:70-74.

TSA Readmissions: Griffin, Justin W, Basques, Bryce A, MD; Leroux, Timothy S. MD, Frank, Rachel M. MD, Verma, Nikhil N, MD, Romeo, Anothony A. MD. Thirty and ninety-day readmission following total should arthroplasty: a critical analysis of rate, risk and reason for readmission. *Journal of Shoulder and Elbow Surgery* volume 26 Issue 5 E 153- 154 2017 doi: 10.1016/j.jse.2016.12.020

TSA Readmissions: Belmont PJ Jr, Kusnezov NA, Dunn JC, Bader JO, Kilcoyne K, Waterman BR. Predictors of Hospital Readmission After Total Shoulder Arthroplasty. *Orthopedics*. 2017 Jan 1;40(1):e1-e10. doi: 10.3928/01477447-20160915-06. Epub 2016 Sep 21. PMID: 27648576.





Validation and Credibility Guarantee

Connecticut Joint Replacement Institute's Joint Replacement Surgery achieved validation for Outcomes. Validation Institute is willing to provide up to a \$25,000 guarantee as part of their Credibility Guarantee Program. To learn more, visit <https://validationinstitute.com/credibility-guarantee/>

Savings

Can reduce health care spending per case/participant or for the plan/purchaser overall.

Outcomes

Product/solution has measurably moved the needle on an outcome (risk, hba1c, events, employee retention, etc.) of importance.

Metrics

Credible sources and valid assumptions create a reasonable estimate of a program's impact.

Contractual Integrity

Vendor is willing to put a part of their fees "at risk" as a guarantee.





CERTIFICATE OF VALIDATION

Applicant: Connecticut Joint Replacement Institute
1000 Asylum Street, 5th Floor, Hartford, CT 06105,
US

Product: Joint Replacement Surgery

Claim: CJRI's total hip arthroplasty, total knee arthroplasty, total shoulder replacement, and reverse shoulder replacement patients have lower rates of Emergency Room visits, hospital readmissions, and Periprosthetic joint infection within 30 days of their surgery than rates found in published peer-reviewed literature.

Validation Achieved: Validated for Savings

Validation Award Date: June 2022

Linda K. Riddell, MS
VP, Population Health Scientist
Validation Institute

Benny DiCecca
Chief Executive Officer
Validation Institute



About Validation Institute

Validation Institute is a professional community that advocates for organizations and approaches that deliver better health value - stronger health outcomes at lower cost. We connect, train, and certify health care purchasers, and we validate and connect providers delivering superior results. Founded in 2014, the mission of the organization has consistently been to help provide transparency to buyers of health care.

Validation Review Process

Validation Institute has a team of epidemiologists and statisticians who review each program. The team focuses on three components:

- Evidence from published literature that a similar intervention had similar results.
- The reliability and credibility of the data sources.
- The rigor of the approach to calculating results.

To achieve validation, the program has to satisfy each of these components. VI's team then summarizes the review into a report which is publicly available. Details of VI's review are available with the program's permission.