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GUIDE

CJR-X: Comprehensive Care for Joint Replacement – Expanded

An Analysis of CMS's Nationwide Mandatory Bundled Payment Model for Lower Extremity Joint Replacement

Updated August 5, 2026, to reflect the FY 2027 IPPS/LTCH PPS Final Rule (CMS-1849-F), published August 4, 2026. This guide was originally based on the Proposed Rule (CMS-1849-P), published April 14, 2026.

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What Is CJR-X?

CJR-X (Comprehensive Care for Joint Replacement Expanded) is CMS's finalized nationwide mandatory episode-based payment model for lower extremity joint replacement (LEJR) procedures. Beginning January 1, 2028, most acute care hospitals eligible for payment under both IPPS and OPPS will be required to participate, with exclusions including TEAM participants and Maryland hospitals.

The model covers hip and knee replacements performed in inpatient and hospital outpatient settings, as well as inpatient total ankle replacements. It builds on the original CJR Model, which ran from April 2016 through December 2024.

CJR-X holds participating hospitals financially accountable for the total cost and quality of an LEJR episode, beginning with the inpatient admission or outpatient procedure and continuing through 90 days after discharge. Hospitals that keep episode spending below their target price and meet CMS quality requirements may earn reconciliation payments; hospitals that exceed their target price may owe repayments to CMS.

CMS finalized CJR-X in the FY 2027 IPPS/LTCH PPS Final Rule (CMS-1849-F), published August 4, 2026. CMS projects that the model will generate approximately $725 million in net Medicare savings over its first five performance years while maintaining or improving quality of care.

Why Is CMS Doing This?

Three converging factors support the nationwide expansion.

The original CJR Model demonstrated savings while maintaining quality. CMS's Seventh Annual Evaluation Report found that the model generated $112.7 million in net Medicare savings across performance years 6 and 7 while maintaining quality of care. Preliminary results from performance year 8 continued that positive savings trajectory. Based on these findings, the CMS Chief Actuary certified that nationwide expansion is expected to reduce Medicare spending without limiting coverage or benefits.

Joint replacements are among Medicare's most frequent surgeries. THA and TKA remain common inpatient and outpatient procedures for Medicare beneficiaries, with significant variation in cost and outcomes across hospitals. CMS views episode-based accountability as a proven mechanism for reducing that variation.

The shift to outpatient surgery requires an updated model. When the original CJR Model launched in 2016, THA and TKA procedures were performed only in the inpatient setting. By the end of the model, nearly three in four THA and TKA episodes were outpatient. CJR-X updates the original framework for a healthcare environment in which outpatient joint replacement has become the norm.

Who Is Impacted?

Mandatory Participants

Beginning January 1, 2028, CJR-X will be mandatory for eligible acute care hospitals nationwide—including hospitals in all 50 states, the District of Columbia, and U.S. territories—that:

- Are eligible to be paid under both the Inpatient Prospective Payment System (IPPS) and the Outpatient Prospective Payment System (OPPS)

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- Initiate eligible inpatient hip, knee, or total ankle replacement episodes, or outpatient hip or knee replacement episodes.

This represents a significant expansion from the original CJR Model, which was limited to hospitals in selected Metropolitan Statistical Areas (MSAs).

Exclusions

- **TEAM participants**—both mandatory and voluntary TEAM participants are excluded while participating in TEAM. Eligible hospitals may transition to CJR-X when they are no longer TEAM participants.
- **Maryland hospital**s—excluded because Maryland's unique rate-setting system makes the CJR-X regional pricing methodology unsuitable. Maryland is currently participating in the AHEAD Model.
- **Critical Access Hospitals (CAHs)**—not eligible for payment under IPPS
- **Rural Emergency Hospitals**—not eligible for payment under IPPS
- **Indian Health Service and Tribal hospitals**—eligible under IPPS but not OPPS
- **Rural Community Hospital Demonstration participants**—not paid under IPPS

Low-Volume Hospitals

Low-volume hospitals are not automatically excluded from CJR-X. A hospital with fewer than 31 LEJR episodes during the applicable baseline period remains a CJR-X participant but is excluded from financial reconciliation for the corresponding performance year.

Practical Scale

Most acute care hospitals performing covered hip or knee replacements—and inpatient ankle replacements—that are eligible under both IPPS and OPPS and are not participating in TEAM or located in Maryland should prepare for mandatory CJR-X participation beginning January 1, 2028.

This includes large academic medical centers, community hospitals, and health systems nationwide. CMS expects to publish the initial list of CJR-X participants for the 2028 performance year by the end of 2026 and update it quarterly.

When Does It Start? Key Dates and Timeline

Milestone	Date
Proposed rule published	April 14, 2026
Public comment period	Closed June 9, 2026
Final rule published	August 4, 2026
CJR-X Performance Year 1 begins	**January 1, 2028**
PY1 ends	December 31, 2028
PY1 reconciliation	Six months after PY1 ends—approximately mid-2029

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Performance years now align with the calendar year (January–December), rather than the federal fiscal year. CMS changed the proposed timeline to align CJR-X with TEAM.

With PY1 beginning January 1, 2028, hospitals have approximately 17 months from publication of the final rule to prepare—about three months more than under the proposed timeline.

How It Works: The Core Mechanics

Episode Definition

An episode begins when a Medicare beneficiary is admitted for an inpatient LEJR procedure or undergoes an outpatient LEJR procedure at a participating hospital. With limited exclusions, the episode includes related Medicare Part A and Part B items and services through 90 days after discharge from the inpatient stay or completion of the outpatient procedure.

Inpatient Episode Triggers (MS-DRGs)

469 – Major hip and knee joint replacement or reattachment of lower extremity with MCC, or total ankle replacement

470 – Major hip and knee joint replacement or reattachment of lower extremity without MCC

521 – Hip replacement with principal diagnosis of hip fracture, with MCC

522 – Hip replacement with principal diagnosis of hip fracture, without MCC

Outpatient Episode Triggers (HCPCS)

27130 – Total hip arthroplasty

27447 – Total knee arthroplasty

Note:

Outpatient total ankle arthroplasty (TAA) is excluded from CJR-X at this time, though CMS is testing outpatient TAA in TEAM and may add it in future rulemaking.

Target Prices

CMS constructs regional, risk-adjusted target prices for each episode type using a 3-year baseline of standardized spending data. Target prices are calculated at the MS-DRG/HCPCS and region level.

The simplified formula:

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Preliminary Target Price = Benchmark Price × Prospective Trend Factor × Prospective Normalization Factor × Risk Adjustment Multipliers × (1 – Discount Factor)
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Key design elements:

- **Benchmark prices** are based on average standardized regional spending for each episode type, with high-cost outliers capped at the 99th percentile
- **Risk adjustment accounts** for beneficiary-level factors, including age, HCC count, dual-eligibility status, procedure type, disability status, prior post-acute care use and 21 specific HCCs, as well as hospital-level factors based on bed count and the proportion of patients who are dually eligible.
- **Trend factor** projects baseline spending forward to the performance year
- **Normalization factor** ensures risk adjustment does not inflate target prices overall (capped at ±5% adjustment at reconciliation)
- **Discount factor** of 2.0% represents Medicare's share of expected savings (reduced from 3.0% in the original CJR Model, reflecting spending reductions already achieved since 2016)

Reconciliation

After each performance year, CMS compares a hospital's actual episode spending against its target prices. The difference — positive or negative — is adjusted for quality performance to determine the final payment.

- **Actual spending below target price** → hospital may receive a reconciliation payment (subject to quality thresholds)
- **Actual spending above target price** → hospital owes a repayment amount to CMS

Stop-Loss and Stop-Gain Limits

Reconciliation gains and losses are capped:

Hospital Type	Stop-Loss (Downside Cap)	Stop-Gain (Upside Cap)
Most hospitals	20% of aggregate target price	20% of aggregate target price
Rural, MDH, SCH, and safety net hospitals	5% of aggregate target price	20% of aggregate target price

The 5% stop-loss protection for safety net hospitals is new to CJR-X—it was not part of the original CJR Model but responds to evaluation findings that safety net hospitals were disproportionately likely to owe repayments.

These limits apply to episode reconciliation. Repayments associated with unusually high spending during the 30 days following an episode are calculated separately and are not subject to the stop-loss or stop-gain limits.

Low-Volume Hospital Policy

Hospitals with fewer than 31 LEJR episodes during the applicable baseline period are classified as low-volume and excluded from reconciliation for that performance year. They do not receive a target price and face no upside or downside risk. However, their performance-year episodes count toward future baseline periods, allowing the hospital to be included in reconciliation in a future year if its volume increases.

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Quality Measures and the Composite Quality Score

Quality performance directly affects payment. CJR-X uses five quality measures organized into three domains. CMS will use data already available through existing CMS quality-reporting programs; hospitals will not have a separate CJR-X-specific quality-data submission.

The Five Measures

Complications Domain (50% weight)

- Inpatient:
  Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary THA/TKA (CMIT #350) — measures rates of mortality, MI, pneumonia, sepsis, PE, bleeding, infection, and mechanical failure post-surgery
- Outpatient:
  Hospital Visits Within 7 Days of HOPD Surgery (CMIT #344, OP-36) — measures unplanned ED visits, observation stays, and inpatient admissions within 7 days of outpatient surgery

Patient Experience Domain (40% weight)

- Inpatient:
  HCAHPS (CMIT #338) — the standard hospital patient experience survey
- Outpatient:
  OAS CAHPS (CMIT #162) — the outpatient/ambulatory surgery patient experience survey

Patient-Reported Outcomes Domain (10% weight)

- Applied to inpatient and outpatient episodes: Hospital-Level THA/TKA PRO-PM (CMIT #1618)—uses the Hospital IQR measure result in both the inpatient and outpatient CJR-X quality sub-composites. The measure evaluates eligible THA/TKA patients; ankle replacement patients are not included in the PRO-PM. The outpatient Hospital OQR version, OP-42, will not be scored in CJR-X at this time.

How the Composite Quality Score Works

Each hospital is scored on the five measures based on its performance percentile relative to the national distribution of IPPS-eligible hospitals. Percentile placement converts to point values within each domain, and the points are summed into an overall Composite Quality Score (CQS), capped at 20 points.

Because outpatient joint replacement now dominates, CJR-X calculates separate inpatient and outpatient sub-composites using the same domain weights (50% / 40% / 10%), then combines them into an overall CQS weighted by each hospital's actual inpatient-to-outpatient episode mix.

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Quality Categories and Payment Impact

The CQS directly determines a hospital's discount factor and reconciliation eligibility:

CQS Range	Category	Effective Discount	Eligible for Reconciliation Payment?
≥ 17.1	**Excellent**	0.0% (full savings retained)	Yes
12.1 – 17.0	**Good**	1.0%	Yes
6.1 – 12.0	**Acceptable**	2.0% (full discount)	Yes
≤ 6.0	**Below Acceptable**	2.0% (full discount)	**No**

The financial cliff at "Below Acceptable" is significant: a hospital that reduces spending below its target price but scores 6.0 or lower forfeits its reconciliation payment. If spending exceeds the target price, the hospital remains responsible for the applicable repayment amount, subject to its stop-loss protections.

Also notable: CJR-X does not include quality improvement points. The original CJR Model awarded bonus points for year-over-year improvement of 2+ deciles. CJR-X scores only on absolute achievement, aligning with TEAM's approach.

How the THA/TKA PRO-PM Ties In

The Hospital-Level THA/TKA PRO-PM (CMIT #1618) is the only measure in CJR-X that directly captures improvements that matter most to patients undergoing hip or knee replacement: whether their pain improved, whether their function improved, and whether their quality of life improved after surgery.

What the Measure Assesses

The THA/TKA PRO-PM is a hospital-level risk-standardized improvement rate (RSIR). It evaluates whether eligible THA/TKA patients achieved a substantial clinical benefit (SCB) in patient-reported pain and function from the preoperative baseline to 300–425 days after surgery, after adjusting for patient risk factors. The PROM instruments include the HOOS, JR. or KOOS, JR. and either the VR-12 or PROMIS Global-10.

How CJR-X Uses It

CJR-X pulls THA/TKA PRO-PM data directly from the Hospital Inpatient Quality Reporting (IQR) Program — hospitals do not submit separate PRO data for CJR-X. CMS uses the inpatient PRO-PM to assess quality for both inpatient and outpatient LEJR episodes under the model, citing the measure as an overall reflection of hospital performance related to LEJR care.

Within the CQS, the PRO-PM sits in the Patient-Reported Outcomes domain at 10% weight. While that percentage appears modest, the PRO-PM can be the difference between quality categories — and therefore the difference between earning a reconciliation payment and forfeiting it entirely.

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For CJR-X scoring, a hospital generally needs at least 25 eligible cases to receive a reportable, hospital-specific PRO-PM result. A hospital without a reportable measure value—including one with fewer than 25 cases—is assigned the 50th-percentile point value for the measure. This CJR-X scoring policy does not replace or reduce the hospital's separate Hospital IQR data-completeness requirements. Hospitals with a reportable PRO-PM result can score above or below the median and earn up to 2.00 points in the Patient-Reported Outcomes domain.

A Signal of Where CMS Is Heading

CMS reinforced in the final rule its commitment to incorporating patient-reported outcomes where feasible. CMS considered the Information Transfer PRO-PM for CJR-X but did not adopt it because sufficient historical data were not yet available to support the necessary actuarial analysis. CMS may consider the measure in future performance years as more data become available, potentially including data from TEAM evaluations. Any future addition would require notice-and-comment rulemaking.

The trajectory is clear:
PRO-based performance measurement in bundled payment models is expanding, not contracting.

Core Differences: CJR-X vs. Original CJR Model

Element	Original CJR Model	CJR-X
Geographic scope	67 MSAs (reduced to 34)	All 50 states, DC, and U.S. Territories
Participation	Mandatory in selected MSAs; voluntary participation available to certain hospitals in other original CJR MSAs	Mandatory nationwide (with limited exclusions)
Performance year	Calendar year (Jan–Dec)	Calendar year (Jan-Dec)
Start date	April 1, 2016	January 1, 2028
Episode settings	Primarily inpatient	Inpatient and outpatient (reflects ~75% outpatient volume)
Episode duration	Anchor hospitalization + 90 days post-discharge	Anchor hospitalization or outpatient procedure + 90 days post-discharge
Discount factor	3.0%	2.0% (reflects spending reductions already achieved)
Downside risk	Waived in PY1; phased in PY2+	Two-sided risk from PY1
Stop-loss / stop-gain	20% for most; 5% for rural	20% for most; 5% for rural, MDH, SCH, and safety net hospitals
Quality measures	3 (THA/TKA Complications, HCAHPS, voluntary PRO)	5 (adds Hospital Visits Within 7 Days of HOPD Surgery and OAS CAHPS for outpatient)
PRO data	Voluntary – bonus points for submitting	Uses mandatory Hospital IQR PRO-PM data; integrated into CQS scoring for both inpatient and outpatient episodes—no separate CJR-X submission

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Element	Original CJR Model	CJR-X
PRO weighting	10% (bonus only)	10% (weighted in CQS; no longer optional)
Quality improvement points	Yes — bonus for 2+ decile improvement	No — absolute achievement only
Low-volume threshold	<20 episodes → 100% regional target price; later removed	<31 episodes during the applicable baseline period → remains a CJR-X participant but is excluded from reconciliation for that performance year; may be included in future reconciliation as volume grows
Safety net protections	None beyond standard stop-loss	5% stop-loss for safety net hospitals (new)
Risk adjustment	Limited initially; enhanced in 2021 extension	Comprehensive from PY1 (age, HCC count, economic risk, prior PAC use, disability, 22 medical history variables, bed size, safety net)
Pricing methodology	Blend of hospital-specific and regional (shifted to 100% regional in PY4-5)	100% regional from PY1, with comprehensive risk adjustment
ASCs	Not included	Not included; CMS considered but did not propose ASC participation
Target price baseline	3-year, rolling forward every 2 years	3-year rolling baseline, advanced annually, with prospective trend and normalization factors

What Hospitals Should Be Doing Now

For hospitals that expect to be CJR-X participants, the preparation window is open:

- **Assess LEJR episode economics.** Review current episode costs across inpatient and outpatient settings, including post-acute care utilization, and identify where spending sits relative to regional benchmarks. For PY1 target prices, CMS will use a 2024–2026 baseline period.
- **Ensure the THA/TKA PRO-PM program is operating at high capture rates.** The PRO-PM performance period used for CJR-X PY1 begins July 1, 2027—six months before the model starts—and runs through June 30, 2028. Hospitals need sufficient eligible cases to generate a reportable RSIR while continuing to meet separate Hospital IQR data-completeness requirements.
- **Understand the quality scoring cliff.** A CQS of 6.0 or lower makes a hospital ineligible for a reconciliation payment even when spending is below its target price. The hospital remains responsible for any applicable repayment when spending exceeds the target. Model your likely CQS using current performance across all five measures.
- **Evaluate post-acute care partnerships.** Episode accountability extends through 90 days after discharge from an inpatient hospitalization or completion of an outpatient procedure. Hospitals without strong relationships with SNFs, HHAs and outpatient rehabilitation providers may face challenges managing episode costs.
- **Confirm participation and begin implementation planning.** CJR-X begins January 1, 2028. CMS expects to publish the initial participant list by the end of 2026 and update it quarterly. Hospitals should continue monitoring CMS implementation guidance while aligning their finance, quality, orthopedic, data and post-acute care teams.

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(888)-776-2838
hello@codetechnology.com
www.codetechnology.com

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