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GUIDE

# CJR-X: Comprehensive Care for Joint Replacement - Expanded

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

*Based on the FY 2027 IPPS/LTCH PPS 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 proposed nationwide mandatory bundled payment model for lower extremity joint replacement (LEJR) procedures — hip, knee, and inpatient ankle replacements. It builds on the original CJR Model, which ran from April 2016 through December 2024.

The model holds hospitals financially accountable for the total cost and quality of an LEJR episode, from the point of admission or outpatient procedure through 90 days post-discharge. Hospitals that spend below their target price and meet quality thresholds can earn reconciliation payments. Hospitals that exceed their target price owe repayments to CMS.

CJR-X was proposed in the FY 2027 IPPS/LTCH PPS Proposed Rule (CMS-1849-P), published April 14, 2026. It is grounded in the original CJR Model's evaluation results, which demonstrated reduced Medicare spending while maintaining quality of care among mandatory participants — meeting the statutory threshold for nationwide expansion under Section 1115A of the Social Security Act.

# Why Is CMS Doing This?

Three converging factors drive the expansion.

**The original CJR Model worked.** CMS's seven annual evaluations showed that mandatory CJR participants reduced episode spending while maintaining or improving quality. The CMS Chief Actuary certified the model for nationwide expansion — a high bar that requires demonstrated savings without harm to beneficiaries.

**Joint replacement is Medicare's highest-volume surgical episode.** THA and TKA remain among the most common inpatient and outpatient procedures for Medicare beneficiaries, with significant variation in cost and outcomes across hospitals. CMS sees episode-based accountability as the proven mechanism to reduce that variation.

**The shift to outpatient surgery demands an updated model.** When the original CJR Model launched in 2016, most THA/TKA procedures were performed inpatient. By the end of the CJR Model, nearly three in four episodes were outpatient. The original model's framework — built around inpatient stays — no longer reflects clinical reality. CJR-X is designed from the ground up for a world where outpatient joint replacement is the norm.

# Who Is Impacted?

## Mandatory Participants

CJR-X would be mandatory for all eligible acute care hospitals nationwide — across all 50 states, the District of Columbia, and U.S. Territories — that meet the following criteria:

- Paid under both the Inpatient Prospective Payment System (IPPS) and the Outpatient Prospective Payment System (OPPS)
- Initiate LEJR episodes (inpatient or outpatient hip, knee, or ankle replacement)

This is a dramatic expansion from the original CJR Model, which was limited to hospitals in select Metropolitan Statistical Areas (MSAs).

## Exclusions

- **TEAM participants** — hospitals already participating in the Transforming Episode Accountability Model are excluded from CJR-X for the duration of TEAM (no double-counting of episodes across bundled models)
- **Maryland hospitals** — Maryland operates under the Total Cost of Care Model and is excluded
- **Critical Access Hospitals (CAHs)** — not paid under IPPS
- **Rural Emergency Hospitals** — not paid under IPPS
- **Indian Health Service (IHS) and Tribal hospitals** — paid under IPPS but not OPPS
- **Rural Community Hospital Demonstration participants**

## Practical Scale

Any acute care hospital performing hip or knee replacements that is not already in TEAM should assume it will be in CJR-X. This includes large academic medical centers, community hospitals, and health systems across every market in the country.

# When Does It Start? Key Dates and Timeline

| Milestone | Date |
|---|---|
| Proposed rule published | April 14, 2026 |
| Public comment period | Spring 2026 (deadline in final rule) |
| Final rule expected | Summer 2026 (typically August) |
| **CJR-X Performance Year 1 begins** | **October 1, 2027** |
| PY1 ends | September 30, 2028 |
| PY1 reconciliation | Expected Fall 2028 / early 2029 |

**Performance years align with the federal fiscal year** (October–September), not the calendar year. This is a change from the original CJR Model, which used calendar years, and aligns CJR-X with the IPPS rulemaking cycle.

Hospitals will have approximately 15 months from the expected final rule to prepare for PY1 — more lead time than the original CJR Model provided when it launched in 2016.

# 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. The episode includes all Medicare Part A and Part B items and services from that point through 90 days after discharge or procedure.

### Inpatient Episode Triggers (MS-DRGs)

469 – Major joint replacement with MCC

470 – Major joint replacement without MCC

521 – Hip replacement with hip fracture, with MCC

522 – Hip replacement with 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:

```
Preliminary Target Price = Benchmark Price × Prospective Trend Factor × Prospective
Normalization Factor × Risk Adjustment Multipliers × Discount Factor
```

### 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 (age, clinical complexity via HCC count, economic risk, disability status, prior post-acute care use, and 22 binary variables for recent medical history) and hospital-level factors (bed size and safety net status)
- **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

Financial exposure is 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 for safety net hospitals is new — it was not part of the original CJR Model but responds to evaluation findings that safety net hospitals were disproportionately likely to owe repayments.

## Low-Volume Hospital Policy

Hospitals with fewer than 31 LEJR episodes during the baseline period are classified as low-volume and are excluded from reconciliation for that performance year. They do not receive a target price and face no upside or downside risk. However, their episodes during the performance year count toward the threshold for future years, so a hospital can re-enter as volume grows.

# Quality Measures and the Composite Quality Score

Quality performance directly affects payment. CJR-X uses five quality measures organized into three domains.

## 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)

- Inpatient and Outpatient:
  **Hospital-Level THA/TKA PRO-PM** (CMIT #1618) — the risk-standardized improvement rate (RSIR) measuring patient-reported changes in pain, function, and quality of life from before surgery to after recovery

## 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.

## 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 achieves spending below its target price but scores ≤ 6.0 on quality forfeits the entire reconciliation payment — while still owing full repayment if spending exceeds the target. Quality is not optional in CJR-X.

**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 what matters most to patients undergoing joint 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 risk-standardized improvement rate (RSIR). It evaluates whether a hospital's THA/TKA patients achieved a substantial clinical improvement (SCI) in patient-reported outcomes from preoperative baseline to 9–12 months post-operatively, after adjusting for patient risk factors. The PRO instruments include the HOOS-JR / KOOS-JR (joint-specific) and VR-12 or PROMIS Global-10 (general health).

## 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.

**The minimum 25 matched-case threshold — not the IQR capture rate — determines whether a hospital gets a calculated PRO-PM score in CJR-X.** If a hospital has ≥ 25 matched cases, the RSIR flows through regardless of IQR capture rate compliance. If a hospital has < 25 matched cases, it defaults to the 50th percentile — not penalized, but capped at median. Hospitals with strong PRO programs that exceed the 25-case minimum have the opportunity to score above the 50th percentile and earn up to 2.00 points in the PRO domain, which can be the margin between quality categories.

## A Signal of Where CMS Is Heading

CMS was explicit in the proposed rule: it is committed to increased use of PROs whenever possible. The rule also reveals that CMS considered using the Information Transfer PRO-PM (a newer, outpatient-focused PRO measure) in CJR-X but could not because insufficient data existed for actuarial certification. CMS stated it will revisit this through notice-and-comment rulemaking once TEAM evaluation data matures.

**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 elsewhere | Mandatory nationwide (with limited exclusions) |
| **Performance year** | Calendar year (Jan–Dec) | Fiscal year (Oct–Sep) |
| **Start date** | April 1, 2016 | October 1, 2027 |
| **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 | **Mandatory via Hospital IQR** — integrated into CQS scoring |
| **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 → **excluded from reconciliation entirely** (re-enter 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 (considered, rejected; may be added via future rulemaking) |
| **Target price baseline** | 3-year, rolling forward every 2 years | 3-year, trended forward 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.**
  Understand current cost per episode across inpatient and outpatient settings, including post-acute care utilization. Identify where spending sits relative to regional benchmarks.

- **Ensure the THA/TKA PRO-PM program is operating at high capture rates.**
  If a hospital is not already collecting pre-operative and post-operative PRO data at volume sufficient to generate a reliable RSIR, the time to address that is now — not after PY1 begins. Missing the PRO-PM score entirely is a quality scoring risk with direct financial consequences.

- **Understand the quality scoring cliff.**
  A CQS of ≤ 6.0 means forfeiting all upside reconciliation payments. Model likely CQS based on current performance across all five measures.

- **Evaluate post-acute care partnerships.**
  Episode accountability extends 90 days post-discharge. Hospitals that have not built strong relationships with SNFs, HHAs, and outpatient rehab providers will face challenges managing episode costs.

- **Watch for the final rule.**
  The proposed rule is open for public comment. Key provisions — including the discount factor, stop-loss limits, and quality measure weights — could change in the final rule expected later in 2026.

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