

Comprehensive Care Joint Replacement: A strategic mandate for providers

After several years of evolutionary changes, the Center for Medicare and Medicaid Services (CMS) announced on January 26, 2015 a timeline of moving from volume to value in Medicare payments; i.e., from 30% of provider payments in 2016 to 50% by 2018.¹ Implementation of the Comprehensive Care Joint Replacement (CJR) initiative signals an intention to mandate, at least for targeted geographic areas, a value-oriented payment system across the entire continuum of care, from surgery and inpatient care, to post-acute care recovery and rehabilitation.

Average hip and knee implant costs represent 25-40% of DRG reimbursement for lower extremity hip and new replacement +/- complications. Given the high cost of implants, and the ability of supply chain personnel to analyze materials management, OR financial data, an opportunity exists to utilize their work-flow and process expertise to facilitate an analysis of provider variation across the entire continuum of care. This would require the integration of electronic medical record (EMR) data and the addition of clinical (nurse) expertise.

In this article, we discuss the CJR, the consistently wide variation in the total cost of care (inclusive of post-acute) for joint replacement within specified U.S. regions, and the critical role of analytics to facilitate efficiency and effectiveness, and by default, competitive advantage. *Future success in a value-oriented payment environment requires participation in a CJR-like effort, whether mandatory or not.*

Comprehensive Care Joint Replacement

The Comprehensive Care Joint Replacement (CJR) initiative for Medicare FFS beneficiaries will become effective April 1, 2016 for 800 hospitals in 67 Metropolitan Statistical Areas (MSAs) including New York, Los Angeles, Miami, Indianapolis, Seattle and elsewhere. CCR applies to diagnosis-related group (DRG) 469 and 470, major lower extremity (hip, knee) joint replacement (LEJR) with and without major complications and/or co-morbidities.

According to CMS, there were 377,450 LEJR Medicare procedures, of which 312,122 (82.7%) were not associated with the disqualifying Bundled Payments for Care Improvement (BPCI) initiative. In the selected MSA's, there were 125,188 LEJR procedures, of which 102,923 (82.2%) were not associated with the Bundled Payments for Care Improvement BPCI initiative.² Total knees are estimated to account for 57% of procedures, followed by total hips (30%) and partial hips (13%).³

Assuming a 2013 Medicare Advantage penetration rate of 28%, another CCJR disqualifier, implies that 74,105 LEJR procedures or 19.6% of total U.S. procedures and 59.2% of target metropolitan statistical area MSA procedures will participate in the Comprehensive Care Joint Replacement initiative.⁴

Medicare beneficiaries would be included in CJR as long as Medicare is the primary payer and the beneficiary is:

- Enrolled in Medicare Part A and Part B throughout the duration of the episode,
- Not eligible for Medicare on the basis of End Stage Renal Disease,
- Not enrolled in a managed care plan (e.g., Medicare Advantage, Health Care Prepayment Plans, cost-based health maintenance organizations), or

• Not covered under a United Mine Worker of America health plan

A few details regarding the CJR initiative, with comments showing how CJR differs from the existing BPCI program:

- Includes all costs related to Medicare Part A (facility) and Part B (physician services, outpatient services, lab, ER visits, specialty drugs, DME, etc.) during a 90-day episode (bundle) starting from date of admission through surgery, hospitalization and recovery, including post-acute care (e.g., skilled nursing facilities, , long-term acute care hospitals, inpatient rehabilitation facilities, home health agencies) and any readmissions. This is a significant change from the CMS BPCI program which allowed participants to choose a 30, 60, or 90-day episode length.
- Phased in over a five-year period; beginning in April 2016 and ending December 2020. BPCI is a three-year commitment with potential for two additional years of extension.
- Program is retrospective in nature with a two-sided risk model and hospitals bearing all financial responsibility for the entire episode of care. Individual providers continue to be paid at Medicare FFS rates and after the year ends, there is a retrospective settlement with CMS comparing actual spending for the entire treatment episode compared to the Medicare episode target price.
- The Medicare episode target price includes a discount over expected episode spending and incorporates a blend of historical hospital-specific spending and regional spending for LEJR episodes, with the regional component increasing over time -Regional Year 1&2: 33%; Year 3&4: 67%; Year 5: 100%. CMS will use 3 years of historical claims data used to set payment thresholds. The target price moves toward a regional average, rather than a discount from historical costs as the CMS BPCI allows. This places much more risk on high cost providers while potentially creating a financial opportunity for lower cost providers.
- Composite quality measures: Complications (National Quality Forum #1550) and patient experience survey (NQF #0166)
- Hospitals are accountable (at-risk) for cost and quality of care, and the administrative costs required to work with potential collaborators in its cost reduction and care redesign strategies.

Hospitals are the only mandated at-risk party for penalties or incentive payments unless they develop a shared risk program with other providers willing to share the risk. The program does allow for a ramping up of risk in the first three years. In Year 1, there are no penalties or incentives. In Year 2, there is a 10% stop loss limit and a 5% upside limit. In Years 3-5, there is a 20% stop loss limit, with a 10% upside in Year 3 and 20% upside in Years 4-5.

Wide regional episode price variation suggests potential for "winners" and "losers"

CMS has released regional high average and high payment ceiling for DRG 469 and 470 episodes inclusive of surgery, hospitalization and recovery by census region.⁵ Concern has been raised by the Association of American Medical Colleges (AAMC) about the size of the respective census regions; e.g., Mid-Atlantic extends from NYC to Elk County, Pennsylvania. For LEJR patients (+/- major complications and/or co-morbidities), the regional high price represents a multiple of 1.95-2.25 to the average price suggesting that the variation is more than just a function of geography.



REGIONAL HISTORICAL AVERAGE AND HIGH CCJR PAYMENTS BY REGION DRG 469 (WITH/MCC)





Episode cost variation reflects a variety of factors including patient risk (e.g., age, obesity, co-morbidities), physician and institutional proficiency (complications), supply costs, hospital re-admissions and importantly, the site and duration of post-acute care.⁶ Hospital re-admissions, when they do occur, contribute to substantially higher costs.





According to a 2013 Institute of Medicine report, post-acute care costs accounts for 73% of the total variation in Medicare costs.⁷ Episodes where the index hospitalization is a smaller percentage of the total episode payment represents a greater opportunity for clinical intervention through enhanced control of downstream post-acute care spending. As the episode length increases from 7 to 90 days for LEJR, the index hospitalization tends to decrease as a percent of Medicare expenditures.

The Association of American Medical Colleges (AAMC) completed an analysis of teaching hospitals, and their DRG 469 and 470 episode costs based on volume; i.e., greater or less than 100 procedures/annum.⁸ The range of costs were higher with lower volume hospitals (<100 procedures/annum), a not surprising finding given the widespread literature suggesting higher proficiency, fewer complications and lower mortality rates with procedural experience.⁹



RANGE OF TEACHING HOSPITAL EPISODE COSTS BASED ON VOLUME*

Physician preference items as model for expansion of supply chain role to Cost, Quality & Outcome (CQO)

A wide range of implant cost per case exists for total knee (\$1,797-\$12,093) and total hip (\$2,392-12,651) replacement; average Medicare implant costs approximate \$4-5,000. Recent industry consolidation, combined with the introduction of new products and technologies have driven implant costs higher. Average DRG 469 (with MCC) reimbursement is \$18,469, whereas for DRG 470 (without MCC) its \$11,526. Significant variation in implant costs exists "after controlling for patient diagnosis and co-morbidities".¹⁰



ESTIMATED HOSPITAL HIP REPLACEMENT PROCEDURE COST DRG469: MAJOR COMPLICATIONS OR CO-MORBIDITIES

Value-based payment reforms, as exemplified by the CJR are based on specific at-risk populations (e.g., LEJR) and the total cost of care (surgery, hospitalization and recovery). Hospital supply chain personnel, historically focused on the lowest price, are beginning to shift their focus to products that potentially are more efficient and effective; i.e., generate the best outcome at the lowest possible price. This requires an analysis of materials management, OR, financial and EMR data to understand product-, physician- and hospital- specific variables such as medical supplies, OR time, surgical intensive care unit (SICU) post-surgical recovery time, length of stay, complication rate, procedure/surgeon volume, and re-admission rate. A few suppliers have used risk-sharing contracts providing rebates if performance goals are not achieved.¹¹

The traditional supply chain function (i.e., contract negotiations, logistics, supplier and formulary management, forecasting, and asset management) is being supplemented by the addition of clinical personnel, primarily nurses to generate input for utilization management and product selection committees led by physicians. It remains somewhat unclear as to the role – potentially leading, secondary or supportive - of supply chain personnel in the overall informatics strategy of an institution.

The integration of aggregate and individual patient Medicare skilled nursing facility, inpatient rehab and home health data remains essential to better understand the total cost of care, as well as post-acute care outcomes and continues to represent an unmet need. Ambulatory EMR data may also not be available on a timely basis.

Effective utilization and case management essential to CJR

Utilization management (UM) represents an evidence-based, clinical support process to assist physicians, other providers and payers in evaluating the use of medical services based on *medical necessity, appropriateness* and *efficiency*.¹² UM may be performed prospectively, concurrently and retrospectively. The emerging, at-risk care delivery system presents an opportunity for an effective utilization management program to benefit providers and patients through enhanced discharge planning, reduced provider variation and continually improved process-of-care.

Case managers have a difficult and multifactorial role focused on prevention, proactive intervention and transitions of care. They facilitate care for complex patients with complex chronic co-morbid conditions and/or psychosocial needs, coordinate care to assure quality outcomes in the most cost-effective manner, reduce avoidable hospital admissions, reduce gaps in care, impact practice quality scores and engender self-management capabilities; i.e., the ability to identify changes in health status and be compliant with a treatment plan.

Data, insights and continuous improvement essential to CJR success

A data infrastructure will be essential to successful CJR participation. Many of the currently available solutions generate dashboards, but are not sufficiently broad or technically capable, inclusive of visualization to meet the needs of the emerging marketplace from the strategic perspective. Analysis, reporting and mining requires access to disparate sets of data.

SUPPLY CHAIN ACCESS TO CONVERGENT DATA



Conclusions:

- CJR is an additional step by Medicare to create a bundle payment system which simplifies reimbursement, while also transferring payment risk to health systems and/or hospitals. Unlike the Bundled Payments for Care Improvement initiative, the CJR program is mandatory for every acute care hospital in the selected metropolitan statistical areas.
- Health systems and/or hospitals will be at-risk for service line and operating deficits for the program. If these institutions are not able to adequately control their total cost of care, especially post-acute costs and outcomes on a relative and regional basis, they will suffer losses and potentially need to write a check to CMS.
- Success in payment bundling programs for high cost and/or high volume DRGs depends on decreasing clinical variation through standardization of supplies and initiation of care pathways.
- CJR increases the importance of retrospective data analyses to educate physicians on the importance of provider variation to service line costs, market share, and potentially, their incomes.
- Health systems and/or hospitals able to effectively manage their total cost of care, inclusive of post-acute care, can potentially use the CJR initiative to create a widening economic gap between themselves and less efficient providers.
- Opportunities for direct contracting with employers based on the total cost of care, as well as "return to work" metrics, may become a possibility for efficient and effective providers.
- Health systems able to effectively implement the CJR initiative will potentially be able to apply the processes and methodologies implemented for joint replacement to other high cost and/or volume surgical and interventional service lines such as back pain management and cardiac care.
- As an aside, the competitive cost and/or quality advantage gained in Medicare could potentially be applied to the commercial segment, especially by provider-payer entities.

In addition, unlike prior broad-based CMS initiatives such as value-based purchasing, accountable care organizations and BPCI, CJR is strategically and operationally focused on two DRG's across the acute care, post-acute and ambulatory

continuum for an extended period of time (90 days) with the hospital potentially at risk for non-hospital (post-acute) costs. As a result, health system and hospital C-suite personnel need to get engaged with CJR.

Tactically, the CJR initiative will increase lower extremity joint replacement efficiency and effectiveness by reducing provider variation across the continuum. Near-term challenges include full engagement of orthopedic surgeons and the lack of integrated and interoperable data from potentially disparate acute care, post-acute care and ambulatory providers. Future success in a value-oriented payment environment will benefit from participation in the CJR effort.

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About A&M's Supply Chain Services Practice A&M's Supply Chain Services Team develops leading edge solutions focusing on cost management initiatives within the provider segment. A key foundation of this practice is the linkage of cost, quality and outcomes (CQO) to enable a strategic and operational optimization of the provider supply chain.

About A&M's Healthcare Industry Services Practice

A&M's Healthcare Industry Group applies decades of experience in providing services to both failing and challenged companies to build a comprehensive consulting practice offering high quality consulting services throughout a company's entire lifecycle – from early stage due diligence and strategy services through exit or turnaround advisory services.

¹HHS Press Office. Better, smarter, healthier: In historic announcement, HHS sets clear goals and timeline for shifting Medicare reimbursements from volume to value; January 26, 2015

²<u>http://innovation.cms.gov/initiatives/cjr</u>

³July 14, 2015 Federal register Volume 80 (34) <u>www.gpo.gov/fdsys/pkg/FR-2015-07-14/pdf/2-15-17190.pdf</u>

⁴<u>http://kff.org/report-section/medicare-advantage-2014-spotlight-enrollme...</u>

⁵<u>http://innovation.cms.gov/initiatives/cjr</u>.

⁶Rodriguez-Elizalde S, Jenkinson R, Kreder H, Paterson JM. Provider Volumes and Surgical Outcomes in Total Hip and Knee Replacement. Recent Advances in Arthroplasty; January 2012

http://cdn.intechopen.com/pdfs/26856/InTech-Provider_volumes_and_surgical_outcomes_in_total_hip_and_knee_replacement .pdf; and Relation between surgeon volume and risk of complications after total hip arthroplasty: propensity score matched cohort study. BMJ 348; May 2014 http://www.bmj.com/content/348/bmj.g3284

⁷Institute of Medicine. Variation in healthcare spending: Target decision making, not geography; June 2013

⁸Letter to Andrew Slavitt, Acting Administrator, CMS Re: Comprehensive Care for Joint Replacement Payment Model Proposed Rule, File Code CMS-5516-P; September 4, 2015 <u>http://www.aamc.org/download/442290/data/aamccommentsontheccirproposedrule.pdf</u>

⁹High volume hospitals improve orthopedic outcomes.

<u>http://www.hss.edu/newsroom_high-volume-hospitals-improve-Orthopedic-outcomes.asp;</u> Barclay L. Low hospital surgical volume linked with complications after hip, knee arthroplasty. June 9, 2011 <u>http://www.medscape.org/viewarticle/744288;</u> and <u>http://www.usnews.com/news/articles/2015/05/18/risks-are-high-at-low-volume-hospitals</u>

¹⁰Robinson J, Pozen A, Tseng S, Bozic K. Variability in costs associated with total hip and knee replacement mplants. J Bone Joint Surg Am, 2012 Sep 19; 94 (18): 1693 -1698. <u>http://jbjs.org/content/94/18/1693</u>

¹¹http://www.nexerainc.com/wp-content/uploads/2015/09/AHRMM-SeptOct-2015-0....

¹²Flemmons K, Wyatt P. Utilization Management: CMS Guidelines for Observation and Inpatient Services. Presentation from Vanderbilt University Medical Center; February 2, 2015.

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