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Early Results of Medicare's Bundled Payment Initiative for a 90-Day Total Joint Arthroplasty Episode of Care

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A B S T R A C T

Background: In 2011 Medicare initiated a Bundled Payment for Care Improvement (BPCI) program with the goal of introducing a payment model that would "lead to higher quality, more coordinated care at a lower cost to Medicare."
Methods: A Model 2 bundled payment initiative for Total Joint Replacement (TJR) was implemented at a large, tertiary, urban academic medical center. The episode of care includes all costs through 90 days following discharge. After one year, data on 721 Medicare primary TJR patients were available for analysis.
Results: Average length of stay (LOS) was decreased from 4.27 days to 3.58 days (Median LOS 3 days). Discharges to inpatient facilities decreased from 71% to 44%. Readmissions occurred in 80 patients (11%), which is slightly lower than before implementation. The hospital has seen cost reduction in the inpatient component over baseline.
Conclusion: Early results from the implementation of a Medicare BPCI Model 2 primary TJR program at this medical center demonstrate cost-savings.
Level of Evidence: IV economic and decision analyses—developing an economic or decision model

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The current model of health care delivery in the United States is financially challenged. The traditional fee-for-service method of payment creates incentives to increase volume with few incentives to reduce cost, improve quality, or reimburse for care coordination [1,2]. There are limited methods within the current model to provide better value and more efficient health care rather than increasing volume [2]. Currently, hospitals, physicians, and post–acute care providers have limited incentives for coordinating care across different health care service settings [1].

In 2011, the Centers for Medicare and Medicaid Services (CMS) initiated a new Bundled Payment for Care Improvement (BPCI) initiative with the goal of introducing a payment model that would "lead to higher quality, more coordinated care at a lower cost to Medicare" [3]. For BPCI model 2, Medicare and participating hospitals establish a target price for a defined episode of care using the participants' historical payments. Medicare then retrospectively reconciles payments to determine if the total payments exceed or were less than the target price. If savings were achieved, participating hospitals can share the savings with providers. By participating in Medicare's BPCI initiative at our institution, the goals were to improve efficiency, coordination of care, and value for patients.

The BPCI model 2 is an opportunity for health systems to align the incentives of hospitals, surgeons, and post–acute care providers, while maintaining or improving quality [1,2]. The model 2 episode of care includes services provided 72 hours before hospital admission, the inpatient stay, and 90-day postdischarge (Fig. 1). Total hip arthroplasty (THA) and total knee arthroplasty (TKA) are predictably, clinically successful interventions representing some of the highest CMS expenditures under the diagnosis-related group (DRG) payment system [4]. Our institution is participating in a primary total joint arthroplasty (TJA) model 2 BPCI for Musculoskeletal Diagnosis Related Groups 469 and 470.

Our institution developed and implemented a standardized clinical pathway for each care episode. Healy et al [4] have shown that implementation of a standardized clinical pathway after THA reduced hospital length of stay (LOS) and hospital cost without compromising patient-reported ratings of outcome, satisfaction, or complication rates. The goals of the standardized clinical pathway associated with each episode were to reduce nonessential operating room (OR) and hospital services; readmissions; discharges to inpatient rehabilitation

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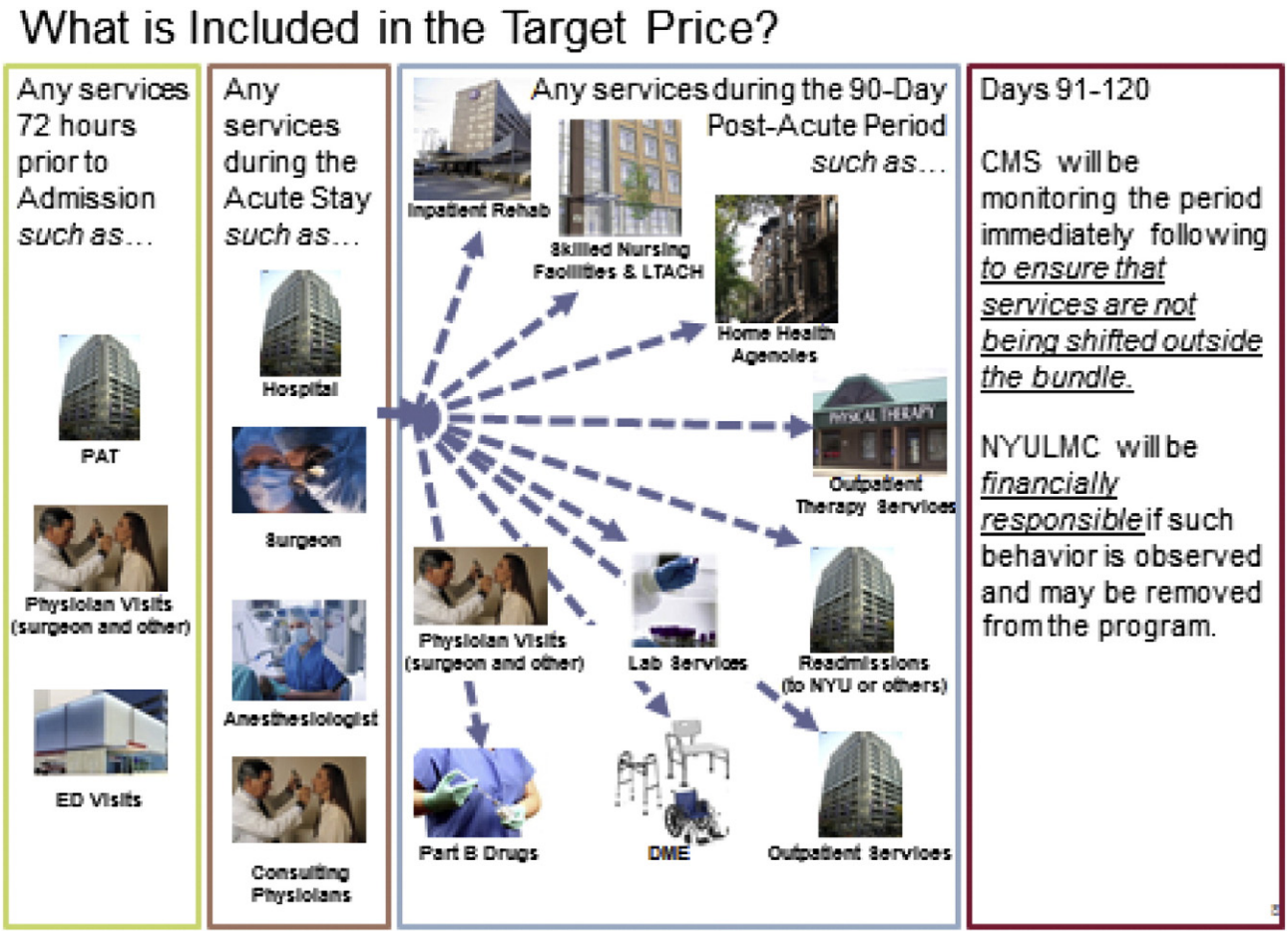

Fig. 1. What is included in the target price?

units; LOS; and implant, supply, and drug costs. The pathways extend beyond the hospital stay where there is opportunity to better coordinate care for TJA patients.

The purpose of this manuscript is to (1) review the early experience of care coordination and clinical pathway implementation at a large, academic, tertiary, urban medical center with a Medicare model 2 BPCI, which covers a 90-day episode of care for TJA, and (2) evaluate the metrics of implementation in regard to LOS, discharge to inpatient rehabilitation facilities, readmissions, and the cost of the 90-day episode of care.

Materials and Methods

On January 1, 2013, our institution established a retrospective bundled payment model, which included a primary, unilateral TJA (DRGs 469 and 470) episode of care consisting of the costs incurred 72 hours before admission and all inpatient and all post–acute care for 90 days after discharge including physicians' services, care by postacute providers, readmissions, laboratory services, durable medical equipment, prosthetics, orthotics, and supplies (Table 1). Data collection and evaluation began on January 1, 2013, for financial and quality performance measurement. The risk phase began on October 1, 2013, and will continue for a 3-year period. We are reporting on the financial data from the CMS reconciliation for the first half of 2013 and the quality measures for the first year of the project. Bundled payment financial results are reconciled quarterly and cannot be reported until after the 90-day episode of care has been completed, and all costs are recorded. Billing can continue to CMS up to 1 year after close of the episode of care, which will result in an increase in cost attributed to that patient. This requires a recalculation of the claims reconciliation up to 1 year after close of the bundle.

All Medicare beneficiaries admitted to our institution under DRGs 469 and 470 were included in the BPCI. Patients were not eligible to receive financial incentives. The episode begins with the preadmission period 72 hours before the procedure and continues for up to 90 days after discharge. The episode of care is defined as all Medicare Part A and Part B services provided by an entity wholly owned or operated by the admitting hospital in the 72 hours before admission, the hospital facility services provided during the hospital stay, and services provided during the 90-day postdischarge period at any location. Included in the 90-day postdischarge period are inpatient hospital readmissions, long-term care hospital services, inpatient rehabilitation facility (IRF) services, skilled nursing facility services, home health agency services, hospital outpatient services, independent outpatient therapy services, clinical laboratory services, durable medical equipment, and Medicare Part B drugs and pharmacy services [3].

Claims to Medicare by the physicians and hospital and CMS payments to the physicians and hospital are made in the standard fashion. All admitting physicians to our institution for DRGs 469 and 470 were required to participate. Retrospectively, claims are reconciled against the target price. If reconciled claim sums are lower than the target price, the hospital receives a check for the difference. If reconciled claim sums are higher than the target price, the awardee repays CMS the difference. The hospital receives Medicare funds for savings, which exceed the agreed upon discount. However, they incur risk for expenditures above this value as well. Physician reimbursement above standard Medicare rates are determined by a gain-sharing formula agreed upon with the hospital. Physician gain-sharing is capped at 50% above the standard Medicare reimbursement rates (Fig. 2).

All unilateral, primary THA and TKA have been included in the BPCI. Bilateral and revision TJAs were not included. MS-DRGs 469 and 470