ABSTRACT: The Integrated Healthcare Association is conducting a multi-payer demonstration of bundled episode-of-care payments in California hospitals. This brief outlines the processes of procedure selection and episode definition, and provides an example episode definition for total knee replacement for the commercial PPO population.

INTRODUCTION: IHA'S BUNDLED EPISODE PAYMENT AND GAINSHARING DEMONSTRATION

The Integrated Healthcare Association (IHA) is conducting a multi-payer, multi-facility-physician team demonstration to implement and evaluate the effectiveness of bundled episode of care payments for acute surgical procedures. The primary goals of the demonstration are to encourage financial alignment between hospitals and physicians in order to support process re-engineering and improvements in patient care quality and efficiency; to allow for shared savings among health plans, providers, employers, and patients; and to develop and test solutions to bundled payment implementation issues. The demonstration is funded by the Federal Agency for Healthcare Research and Quality (AHRQ).

Bundled payment — where a single payment is made to cover all fees associated with an episode of care — is becoming more common across the country, with many organizations working to define and implement a variety of bundles for acute procedures and chronic conditions. In an effort to aid others who are developing bundled payment programs, this brief outlines IHA's process for selecting and defining bundles in the commercial PPO population, using total knee replacement (TKR) as an example.

SELECTING PROCEDURES: WHY TKR?

When the program began, the decision was made to select procedures on the basis of four factors:

1. Impact: is there sufficient volume in target populations? What is the total spend on these procedures?
2. The potential for quality improvement: is there variation in procedure volumes despite consensus on care pathways and appropriateness criteria?
3. The potential for efficiency improvement: is there cost variation? What is the potential for savings?
4. Participant engagement: how large is the service line? How motivated and engaged are the physician, hospital, and health plan that would be implicated in the episode?
Based on these factors, IHA identified a set of six potential acute surgical procedures that were compatible with a bundled payment model. A subset of two — TKR and total hip replacement — were chosen for inclusion in the initial phase of the demonstration because of high and variable device costs, high rates of readmissions and complications, and longer and inconsistent lengths of stay.

Data from IHA’s Value Based Purchasing of Medical Devices Project illustrates the potential for cost savings from episode payment for TKR. In 2008, IHA surveyed 45 California hospitals on the costs associated with a set of device-intensive surgical procedures, including total knee replacement, and found that the amounts paid for knee implant devices varied from $3,408 to $10,830, with an average price of $5,840. This represented only half of the variation in knee device prices, as there was also variation within hospitals, even controlling for patient disease severity, complications, and discharge destination. Complication rates ranged from 0% to 33%, and hospitals’ average length of stay ranged from 2.4 to 6 days, with an average of 3.5 days. The total procedure costs varied from $9,089 to $22,311, with an average of $14,036.

Given this wide variation in numerous cost drivers, bundled payments for TKR that include the inpatient stay and the cost of the device have the potential to significantly impact the cost and quality of care delivered.

THE PROCESS OF DEFINING THE EPISODE

Once TKR was selected, the episode was defined jointly by a Bundled Payment Technical Committee, whose members offered content expertise in definition development, and IHA staff working in partnership with a team of coding consultants.

The Technical Committee was co-chaired by health plan and provider representatives, one of whom was a physician. It also included two other clinical representatives, three network/contract management representatives, three informatics/medical economic representatives, and two “at large” members. The Committee was tasked with making decisions on defining the patient population, deciding what co-morbid conditions would exclude patients and how to treat complications, defining the length of the post-discharge ‘warranty period,’ and deciding upon what readmissions would be included under the warranty.

IHA staff and a team of coding consultants worked collaboratively with the Committee to assign codes to the episode definitions, and to model volumes and costs for the index procedure and readmissions within the 90-day warranty period.

Upon completion of the episode definition, an Executive Steering Committee reviewed and approved the definition. IHA then worked again with the coding consultants to supply participating health plans with reports that allowed them to model the historical costs of the defined episodes. The coding consultants also worked directly with the plans to compile historical cost reports for each potential hospital participant in an effort to generate “apples to apples” comparisons between facilities to support the contracting process.

THE TKR EPISODE DEFINITION

In order for a commercial PPO patient to qualify for inclusion, he or she must be covered by a participating health plan on the date of surgery and over the life of the episode; treated by a surgical team at a hospital with a bundled payment contract with his or her health plan. Other requirements include that the patient be over 18 and under 65 and presenting for the index procedure with an American Society of Anesthesiologists (ASA) rating under 3 (or an All-Patient Refined DRG Severity of Illness level of 1 or 2). Patients are excluded when they have active cancer, HIV/AIDS, End-Stage Renal Disease, or a BMI over 40.

As seen in the diagram below, the commercial PPO definition covers all physician and hospital charges incurred during the initial stay, including the implanted device, and physician and hospital charges for complications and readmissions post-discharge for up to ninety days. This includes all inpatient charges (everything that would be included in a Medicare DRG for the facility), and inpatient professional fees (surgeons, anesthesiologists, radiologists, other consultant physicians). If a patient is re-admitted for any of a list of 47 DRGs related to the index procedure (e.g. revision, pulmonary embolism, or complications of treatment), the readmission costs are included in the bundle.

The definition excludes physical therapy, home healthcare, skilled nursing facility services, inpatient rehabilitation, outpatient pharmaceuticals, and durable medical equipment.
CONCLUSION

Implementing bundled payment is a challenging process that includes changing not only payment structures, but also relationships between physicians, hospitals, and health plans, as well as ultimately how care is delivered. After stakeholders have made a decision to move towards bundled payment, one of the first steps in the implementation process is to decide how and what to bundle. Building episode definitions in a multi-stakeholder, collaborative process helps to ensure that they will be accepted by all parties involved, and that there is some uniformity between plans and providers in a defined geographic area.

However, while it is rational to focus on high-volume procedures with significant potential for process and efficiency improvement, this has not led to high volumes of episode procedures in the commercial PPO population. In this population, the volume of procedures is spread across multiple health plans and hospitals, only a small number of whom are participating, which has fueled a “small numbers” problem.

In an effort to tackle this problem, IHA hopes to expand the existing pilot to commercial HMO, Medicare Advantage, and managed Medicaid populations. Independent of the AHRQ-funded demonstration, the organization is also currently working with California hospitals on a proposal under the Center for Medicare and Medicaid Innovation’s Bundled Payments for Care Improvement initiative that would allow hospitals to be paid on a bundled basis for fee-for-service Medicare patients. It is hoped that the inclusion of these beneficiaries will help to counter this “small numbers” problem, and will provide the population size needed to move the dial on the quality and cost of bundled procedures in participating hospitals.

### Notes


2. Ibid.

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**TOTAL KNEE REPLACEMENT EPISODE DEFINITION FOR COMMERCIAL PPO ENROLLEES**

Distribution of contractual allowed amounts — PPO population

<table>
<thead>
<tr>
<th></th>
<th>Pre-surgery</th>
<th>Inpatient stay</th>
<th>Recovery</th>
<th>Follow-up</th>
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<td></td>
<td>9%</td>
<td>74%</td>
<td>6%</td>
<td>11%</td>
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<tr>
<td>Includes pre-admit</td>
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<td>workup charges</td>
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<td>Excludes surgeon</td>
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<td>evaluation</td>
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<tr>
<td>Average Length of</td>
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<td>Stay</td>
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<td>= 3.9 days</td>
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**WARRANTY PERIOD**

90 days

1 Source: Ingenix national claims data = 7,632 complete episodes