

California Orthopaedic Association

# Action Plan for Bundled Payments

Evaluating and Successfully Managing the Risk

1246 P Street  
Sacramento, CA 95814

p. 916-454-9884  
f. 916-454-9882

coa1@pacbell.net  
www.coa.org

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**Editors:** Michael Cluck, M.D., Chair, Health Care Delivery Committee

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Basil Besh, M.D.

Nicholas Colyvas, M.D.

Alexandra Page, M.D.

Alexander Sah, M.D.

## Executive Summary

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- Bundled payments is an emerging payment model that is likely to gain significant traction.
- All orthopaedic surgeons will need to be familiar with the concept and many will need to participate or implement these in their practices.
- Participation and implementation involves a complex decision making process that needs particular attention to detail.
- It's likely that those orthopaedic surgeons who do it well will see significant gains in patient care and outcomes as well as reimbursement.

# Development and Rationale of Alternative Payment Models and Bundled Payments

**i** Healthcare inflation has dramatically outpaced general inflation. Why is this? In every other segment of society, technology brings about improvements in performance and decreased price. Yet uniquely in healthcare, new technology brings about increase in price. Smart phones today far outperform the first computers of the early 60s which took up an entire room and cost millions of dollars while continuing to improve year to year as prices continue to decrease.

Before we can implement strategies to bend the cost curve of healthcare, we must carefully understand the origins of the problem. And in order to understand the origins of the problem, we must have a basic understanding of market-related economics as they apply to healthcare.

The sources of economic dysfunction in healthcare, the likes of which are illustrated above, can be traced to two main issues. The first is the **disconnect between the consumer and the payer**. To illustrate this, let us look for a moment at some work from the famous American economist, Milton Friedman, who wrote that there are generally four ways to spend money.

YOU ARE THE SPENDER		
Whose Money	On Whom Spent	
	You	Someone else
Yours	I	II
Someone else's	III	IV

Table 1 - Ways to spend money (according to Milton Friedman)

We see that in Category I, you are spending YOUR money on yourself and will therefore seek to economize (not be wasteful with the money) and, as you will be the end user of the good or service, will seek to get maximum quality/value.

In Category II, you are still spending YOUR money, and will therefore seek to economize, but you are spending it on SOMEONE ELSE and therefore will not be as concerned about maximizing quality/value.

In Category III, you are now spending SOMEONE ELSE'S money and will therefore not be incentivized to economize and will be more likely to be wasteful with the money, but since YOU are the end user of the good or service, will seek to get maximum quality/value.

In Category IV, you are spending SOMEONE ELSE'S money, so you will not seek to economize and you are spending on SOMEONE ELSE, so you will not seek to get maximum quality/value.

The current insurance market in the United States most resembles Category III in that the patient as the consumer is spending someone else's money (that of the insurance company) on goods and services they will use (healthcare). They will seek to maximize the quality and value of the goods and services they consume with no consideration for the cost.

Let us further illustrate in a real world example. A patient twists their knee. They make an appointment with their orthopedic surgeon. After a careful history and physical examination, the orthopedic surgeon determines that it is unlikely to be a meniscus tear and recommends rest, ice, medication, and crutches. He tells the patient that while it is unlikely to be a meniscus tear, the possibility still exists and that the patient should follow-up after four weeks if there is still pain and an MRI will be ordered. The patient responds by insisting that the MRI should be done now. The physician explains that based on the statistical likelihood, an MRI is not warranted at this time. But the patient insists that they want the MRI anyway and besides they have insurance and therefore the MRI is free. We all know that the MRI, while being of no cost to the patient with this kind of insurance, is clearly not free and the more MRIs performed, the more healthcare dollars spent, and the greater the commensurate rise in premiums.

Contrast this situation with a situation in which the patient has a high deductible plan, i.e. more skin in the game. They return limping in four weeks and the doctor recommends an MRI to which they respond, "do I really need this MRI, it will cost me a fortune because I've not yet met my deductible."

This illustrates a simple example where the disconnect between the consumer and the payer leads to an inability, or lack of incentive, to economize and have the market function properly.

The second problem leading to the acceleration of healthcare costs is the **disconnect between prescriber and the payer** and this is where alternative payment models have an opportunity to bend the cost curve. Again using a simple real world example, let's take an orthopedic surgeon who performs joint replacements. He or she will generally pick the implant with little regard for cost as there is no incentive for them to keep costs down. Even if the implant is only marginally more effective it will be chosen with no consideration for cost. This has led to the genesis of models such as gainsharing which attempt to incentivize the physician to help bend the cost curve of healthcare by creating downward pricing pressure on implants without regulatory or legislative fear. Unfortunately, the inherent limitation of gainsharing is that a single baseline reference point is used from which savings are calculated. This reference point is then reset as the data changes and the incentive to save disappears.

We are all generally familiar with bundled payments. When we purchase an automobile, we do not deal directly with thousands of part suppliers, purchasing the wheels from one person and the engine from another. We buy a single car. We negotiate a price as well as benefits such as a warranty, etc. We have the option of negotiating for upgrades, but they are not free. Without knowing it, we are determining the value to us of this complexly engineered machine. The car manufacturer sets the price based on what the market will bear. It is up to them to take into account the cost of labor and supplies to make sure they are not selling the car at a loss. It is important to note that the price of the car is not directly dependent on the cost it took him to produce the car. Instead, it is dependent on competition in the marketplace and value decisions made by the consumer. Furthermore, since the consumer is

making the value decision, there will be an appetite for data, which will be filled by various review and ratings sources.

Can this model be applied to healthcare? Perhaps, but there are hurdles which must be overcome. Let's look now at the main topic of this paper, namely bundled payments as they apply to healthcare. The bundled payment is simply a lump sum paid for an episodic service. It may be paid directly by the patient, as is the case in cosmetic surgery, or may be paid by an insurance company, either private or government related. The episodic service must be defined in advance including not just the nature and extent of the service, but also any associated warranties. **In this paper, will look at the practical applications of bundled payments and attempt to lay out strategies for development and implementation.** While there will be many options regarding how the bundled payments are structured, the underlying thought process will be the same and consistent throughout, namely to **attempt to align incentives towards maximizing value.**

At this point, it is important to look critically at prior analyses of bundled payments. It has been said that bundled payments represent a mechanism for shifting risk from the insurer to the provider and drift away from fee-for-service. This is only partially true. While the term fee-for-service has been demonized recently, it is important to note that incentives for productivity are often a desirable component of payment models. The criticism of fee-for-service is that it potentially incentivizes overutilization. It would be ideal to create a system that simultaneously incentivizes productivity as well as economy and efficiency. With respect to risk, it is important to further stratify risk, as risk due to cost fluctuations versus risk due to cost of untoward medical events. For example, changes in average length of stay after uncomplicated hip or knee surgery would represent risk due to cost fluctuations. However, a postoperative medical complication would represent risk due to the cost of untoward medical events.

In 1982, Medicare developed a new hospital prospective payment system using Diagnosis-Related Groups (DRG). By the mid-1980's, it was felt that the DRG concept was potentially leading to premature discharge to post-acute care (e.g. home health aide, skilled nursing facilities, etc.) as an attempt to save money for the hospitals. Bundling the payment for the hospital stay and the post-acute care has long been suggested but as of 2015, not implemented.

In 2009, Medicare began the Medicare Acute Care Episode (ACE) Demonstration project wherein payments were bundled for certain orthopedic and cardiovascular procedures. The bundles included the physician and hospital fees only, interestingly choosing to omit the post-acute care payments from the bundles. In the project, hospitals would give Medicare a 1% to 6% discount and in return, the programs were marketed to Medicare beneficiaries via a \$250-\$1,157 savings to the patient. The pilot program was limited to five sites in four states and lasted 3 years.

See Attachment A for a summary of other bundled payment projects.

Bundling of payments can be an attractive option in better aligning proper incentives towards increased efficiency and quality with reduced cost and leading to a better functioning market; however, bundled payments have proved to be challenging in their implementation as they represent a significant shift from direct fee-for service to a value based model.

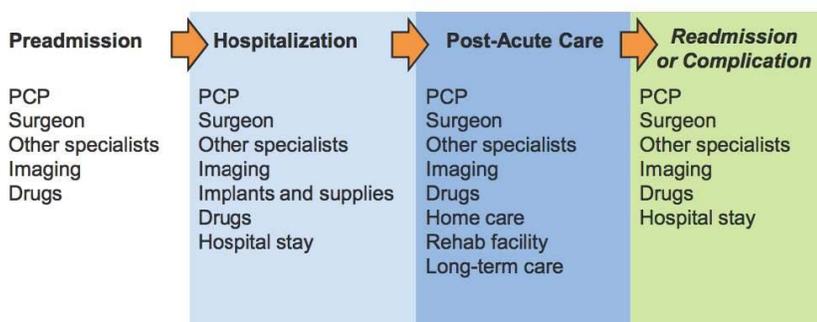
# Definition of Episodes of Care and Bundled Payments

**i** Bundled payments are known as episode-based payment, episode payment, episode-of-care payment, case rate, evidence-based case rate, global bundles payment, global payment, package pricing, or packaged pricing. It is defined as the reimbursement of health care providers (hospitals and/or physicians) on the basis of expected costs for clinically defined episodes of care. It has been described as a middle ground between fee-for-service reimbursement (payments made for each service provided) and capitation (where lump sum payments per patient are provided regardless of number of services received).

Bundled payments are a method to align payer and provider incentives in a way to maximize patient-centric value creation. The goal is to improve care coordination and patient outcomes while reducing costs, redundancies, and unnecessary treatments. This model requires hospital and physicians to work collaboratively to manage costs and processes across the continuum of care from a single pool of resources instead of having each service provider charge independently for the portion of care that they provide. By focusing on value, these programs intend to shift the financial incentives away from the volume of services toward more coordinated, reliable, and value-based results.

Bundled payment programs are being implemented for Medicare and other group health patients. Injured workers under the Workers' Compensation system can also be a model where significant improvement in coordination of care could be realized in bundled payment arrangements.

## What Is an Episode of Care?



**An episode of care includes all related services for a single patient for a given diagnosis or intervention.**

Sources: Center for Healthcare Quality & Payment Reform. Paths to Healthcare Payment Reform: Transitioning to Episode-Based Payment. Center for Healthcare Quality and Payment Reform.

An episode of care includes all related services (facility cost and professional services) for a single patient for a given diagnosis or intervention, which may or may not include a warranty. Episodes can vary in start and finish times, from up to 30 days prior, to up to 90 days or more after discharge, or any variation in between. The starting point, or trigger, can be set as the

acute inpatient stay, the first outpatient visit to a specialty clinic, the clinical diagnosis of a chronic disease, or the transfer to a post-acute care facility. The trigger needs to be a clearly identifiable event.

The duration of the episode is defined in relation to a fixed number of days after the initial discharge from the acute inpatient stay. Extending the episode length increases risk exposure to providers, but may also provide greater opportunity for healthcare management and cost control leading to possible financial savings.

### Potential Areas of Savings

<b>Phase I</b>	<b>Physician/Patient Admission for Surgery Device Manufacturer</b>		<b>Device Costs</b>
<b>Phase II</b>	<b>Hospital Inpatient</b>		<b>Inpatient Costs Anesthesia Length of Stay</b>
<b>Phase III</b>	<b>Post Acute Care</b>		<b>Readmission Costs Intensity of Care SNF Home Health Value Providers Utilization OT/PT DME</b>

Inclusion and exclusion criteria are important to define which patients and which episodes will be included or excluded from the bundle. Patients with multiple medical co-morbidities or complex surgical procedures are often associated with a higher degree of variability in both cost and outcomes, often outside the control of the provider. Scenarios such as these require discussion regarding the applicability of the bundle rate and can also prompt the need for a warranty or stop-loss insurance. Readmissions also need to be defined as what is a “related” readmission or not, since this directly affects episode costs. Some arrangements restrict coverage to readmissions only at the hospital where the surgery took place.

The Bundled Payments for Care Improvement (BPCI) initiative was developed by the Center for Medicare and Medicaid Innovation and was announced on January 31, 2013. This program had four distinct models including:

1. Acute care hospital stay only
2. Retrospective acute care hospital stay plus post-acute care
3. Retrospective post-acute care only, and
4. Prospective acute care hospital stays only.

There are 48 episodes of care in which the participants could choose to participate.

Orthopaedic-related episodes included:

- Amputations
- Cervical spinal fusion
- Complex non-cervical spinal fusion

- Double joint replacement of the lower extremity
- Fractures femur and hip/pelvis
- Hip and femur procedures except major joint
- Lower extremity and humerus procedures except hip, foot and femur
- Major joint replacement of the lower extremity
- Major joint replacement of the upper extremity
- Medical non-infectious orthopedic
- Other knee procedures
- Removal of orthopedic devices
- Revision of the hip or knee, and spinal fusion (non-cervical)

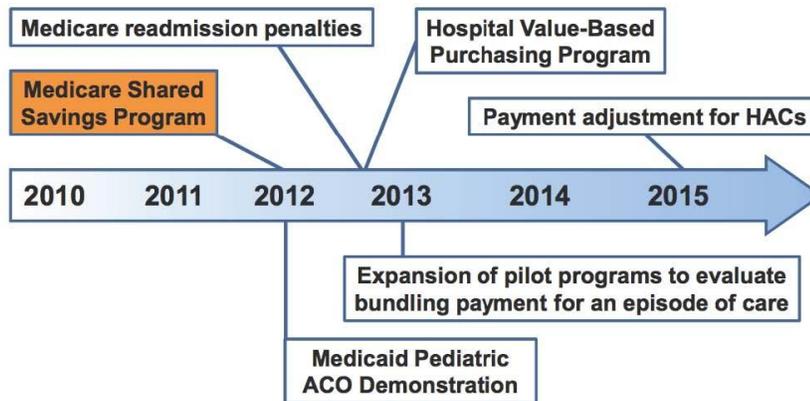
Orthopedic surgical procedures are popular for the bundled payment concept because many procedures have clearly defined episodes of care and similar related usual expenses. The inherent reproducibility of operative procedures and the postoperative aftercare in orthopedic procedures makes standardization seemingly possible.

For total joint replacement, for example, an episode of care is defined by the admission of an eligible fee-for-service beneficiary to a hospital paid under the Inpatient Prospective Payment System that results in a discharge plan under DRGs such as MS-DRG 469 (major joint replacement or reattachment of lower extremity with major complications or co-morbidities) or MS-DRG 470 (major joint replacement or reattachment of lower extremity without major complications or co-morbidities).

In the Medicare Comprehensive Care for Joint Replacement (CJR) payment model applying to hospitals in 67 selected metropolitan areas including Los Angeles, Long Beach, Anaheim, San Francisco, Oakland, Hayward, and Modesto in California for total joint replacements, while physicians' fees and post-acute payments (skilled nursing facilities) will be included to calculate both the target price and the actual episode expense, only the hospital will be responsible for reconciling actual expenses with the target price. In this CJR model, the bundled payment will cover all of Part A and Part B services beginning with hospital admission through 90 days following discharge (including physician services, inpatient hospital services including readmissions, device costs, anesthesia, inpatient rehabilitation facility services, skilled nursing facility services, outpatient services, clinical laboratory services, durable medical equipment, and Part B drugs). CJR is scheduled to be implemented as on 4/1/2016.

The CJR 5-year demonstration project is a retrospective bundled payment model. CMS will provide each participating hospital with a target price prior to the start of each performance year. Similar to the BPCI initiative, the target price will be set based on expected and historic spending and, to guarantee program savings, Medicare will incorporate a 2 percent discount over expected episode spending. Target prices are based on a blend of regional and hospital expenditure data, with the ratio changing over the years until it is entirely based on regional data. Hospitals will be paid, or have to pay back Medicare, after an annual reconciliation process compares actual episode spending to the target price. Hospitals spending over the target price are responsible for paying Medicare the difference, up to a specific limit. Hospitals spending under the target price receive a reconciliation payment, also with a dollar limited cap and only payable if certain quality performance measures are met. The three quality measures include:

1. Hospital level risk standardized complication rate
2. Hospital level 30 day all cause risks standardized readmission rate after THA/TKA, and
3. Hospital consumer assessment of healthcare providers and systems (HCAPS) survey.



HAC = hospital-acquired condition; ACO = accountable care organization.  
 Sources: The Henry J Kaiser Family Foundation. Health Reform Source: Implementation Timeline.  
[www.kff.org/healthreform/8060.cfm](http://www.kff.org/healthreform/8060.cfm). Accessed May 2010; Hastings D. The timeline for accountable care.

In the CJR model, repayment will not be required the first year of the program (2016). The proposal places caps at both ends (upside and downside), and certain hospitals will have lower caps than others. The final CMS rule applies stop-loss limits of 5% in performance year 2, 10% in performance year 3, and 20% for performance years 4 and 5.

In the BPCI model, or in agreements with commercial payers, the provider can be responsible for a portion of the bundle or the entire bundle. When the provider is in control of the bundle, the incentive for cost savings and subsequent profit is greater, but so also is the risk. Providers may need a warranty or stop-loss insurance policy to protect against episodes that results in complications and high costs. Financial risk can be tempered partially by stop-loss insurance, the ceiling per episode (or across episodes) above which the provider is no longer at financial risk. An episode-specific stop-loss policy may be the historical average cost of an episode plus three standard deviations, for example. An aggregate stop loss for all contracted episodes can be a set dollar amount.

Retrospective payment is the most common approach currently in use as reported in a recent issue brief by HCI3, easing the regulatory and administrative burdens in the early going. It also offers the advantage of developing a reliable financial baseline from which a prospective payment amount can be fairly negotiated. The retrospective bundled payment is a transitional step toward prospective bundled payment.

## Recent Growth of Bundled Payments

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**i** The US spends the most on health care per capita in the world. Yet, as a whole, the US healthcare delivery system delivers poorer outcomes for patients. The system is fragmented and frequently delivers too much or too little healthcare service.

It is attractive to use the bundled payment system as encouragement for hospitals, physicians, and post-acute care providers to work together to improve quality and coordinate care from initial hospitalization through recovery. The model hopes to incentivize more effective and efficient care by removing inefficiency and redundancy or reducing unnecessary care. Another attractive feature is increasing transparency of costs and outcomes because there is now one integrated cycle of care with one point of contract, one set of outcome measures, and one comprehensive price.

The rapid growth of bundled payment models is simply because of the amount of possible savings achievable. Both federal and private payers are moving forward with bundled payment initiatives.

Consumers are also attracted to the idea of a single payment, rather than multiple bills. The increased transparency for consumers by fixing pricing and publishing costs versus outcomes allows potentially improved comparisons for decision-making. However, there may be inherent difficulties for the general public to interpret the information, such as understanding that an institution whose patient population has more co-morbidities or more complex surgical procedures may report inferior outcomes or higher costs. While it is unknown if the public will appreciate these confounding factors, the public's desire to better compare outcomes and costs between institutions is growing.

Large employers such as Lowes and Walmart have developed bundled payment programs which originally started as medical tourism, to a limited number of participating sites in an effort to save on healthcare costs. Often, the employers are partnering with individual destinations to provide an episode of care, even if out of state. These types of agreements can promote competition to provide such services, potentially further drive down the cost of care, but at the same time lower potential incentives.

Commercial payers are also using the bundled payment concept to control healthcare spending through increased provider competition and care coordination across providers. One difference, however, is that commercial programs offer more flexibility for providers than the federal programs. The provider can negotiate with the commercial payer to include or exclude specific services in the bundle or certain patient co-morbidities. New opportunities, such as payers steering patients to a provider to increase provider volume and market share may also be part of the agreement.

In the commercial payor bundled model, the specialist is given the opportunity to drive improvement in efficiency and manage costs of care. This represents an opportunity for the surgeon to manage the entire episode of care. Forward thinking providers are actively engaging in these programs to gain more control and take advantage of the potential benefits. For example, episode of care payment programs may include a physician incentive or gainsharing component that was previously unavailable.

In regards to orthopedics, hospital reimbursement for total joint replacement represented the largest DRG payment made by CMS in hospitals in 2008, 4.6% of payments. Subsequently, total joint replacement procedures results in billions of dollars of payments each year. According to CMS, the new CJR model will contribute to the goal of having 50% of all Medicare payments made via alternative payment models by 2018.

Total joint replacement is a seemingly ideal procedure to trial the bundled payment program because it meets the criteria including:

1. High volume
2. Relatively homogenous patient population
3. Predictable clinical presentation
4. Variable costs
5. Quality presently which are amenable to improvement, and
6. Robust outcome measures.

Because of this, there has been a rapid growth of participation in bundled payment programs in orthopedics in both the federal and commercial sectors.

Bundled payments are also disruptive to current payment models. They introduce competition between groups of providers going beyond traditional organizational boundaries. Division between hospitals is inherent to the reporting process, and competition may occur within a single hospital amongst its providers. Furthermore, hospitals may be successful in elective care, but much less so in other disciplines. Providers not part of the successful programs, or in disciplines not amenable to savings, may lose out rapidly. In addition, downstream providers such as at skilled nursing facilities or hospital readmissions are targets for savings.

# Participation and Implementation



**“When you’ve seen one bundle, you’ve seen one bundle.”**

## **Introduction and Definitions**

Bundled Payments Models (BPM) are an alternative payment model (APM) that is likely here to stay. In November, 2014 CMS provided an update on APMs, encouraging all providers to focus on better care, better health, and lower costs for patients and recommending, “Relentless pursuit of improving health outcomes.”

A majority of orthopaedic surgeons will need to consider a method of participating in, or implementing a bundled payment model at some level. Since this is a model where risk is shared to a much greater degree than the standard fee-for-service model (FFS) that predominates at the present time, the details are of great importance. Significant education, infrastructure, data management and caution are needed before considering entering into this type of arrangement. Studies have shown that the current reimbursement for an orthopaedic surgeon for an episode of care in a fee-for-service model is around 6% of the episode/bundle, whereas in a BPM the reimbursement is 17% of the bundle. Therefore the benefit may be significant

## **General Considerations for Bundle Payment Implementation**

In January of 2015 Health and Human Services Secretary Sylvia Burwell announced a three-year timeline to accelerate payment reform. The plan included development of a Learning and Action Network to work more directly with states and private payors on APMs. Specifically, transition of payments through Medicare fee-for-service into APMS would rise from 20% in 2014 to 30% by the end of 2016. The goal is 50% by the end of 2018. The overall percentage of Medicare payments linked to quality and value were targeted to reach 90% by 2018.

### **Medicare Access and CHIP Reauthorization Act (MACRA) - APM Pathway**

The passage of MACRA in April, 2015 addressed the ongoing payment instability physicians faced under the maligned Sustainable Growth Rate (SGR). MACRA established two distinct payment tracks, Merit Based Incentive Payment System (MIPS) and Alternative Payment Models (APMs). MIPS is based on reporting requirements already in place including quality measures (PQRS), resource use via the Value-Based Payment Modifier, and Meaningful Use, with the addition of 15% tied to “Clinical Practice Improvement Activities.” The APM pathway requires progressively higher reimbursement paid through an existing APM which include Accountable Care Organizations, Patient-Centered Medical Homes, and Bundled Payments, with several other less common models.

Comparison of the two tracks reveals the reimbursement plan heavily favors the APM arm, with incentive payments of 5% for 6 years starting in 2019 for providers and practices able to meet the required participation. In contrast, for MIPS incentives are modest and penalties are severe. Increases of 0.5% are provided from 2015- 2019 then stable until 2025 although some MIPS adjustments exist for the highest quality/lowest price providers. Failure to meet all MIPS

reporting requirements is a negative adjustment, -4% in 2019 increasing to -9% by 2022, although there will be a sliding scale giving some credit for partially meeting the measures. After 2026, providers in APMs will continue with a 0.75% annual update; MIPS participants will have 0.25%.

### **What bundles can orthopaedics surgeons participate in?**

There is no specific definition. All types of services, musculoskeletal diseases, and surgeries can be considered as targets for a bundled payment plan. Generally the concept contemplates an “episode of care,” i.e., a defined start and end point. Total knee replacement (primary) provides the most readily used example because it is a relatively standard episode of care from surgery through to recovery, typically most of that occurring within a 90 day period. Therefore, one of the most common bundles is primary knee replacement. But any surgery that is relatively frequently done (e.g., ACL reconstruction), or indeed any condition frequently encountered (e.g. ., osteoarthritis of the hip) could be used as the basis for a bundle.

### **Physician Ownership of Bundles**

Within the BPCI model, the convener of the bundle can be a hospital, a physician/physician group, or a third party. The “owner” of the bundle can be anticipated to be the recipient of payment and will decide (nominally by pre-determined contracts) how proceeds are divided including incentive payments. While the owner of the bundle has the greatest potential gains, this role also bears the greater risk. Since majority of costs including intra-operative/implant, ordering of post-op medications and therapy, and decisions on post-acute care should be physician-driven (and ordered), the physician has the greatest ability to impact these costs regardless of which entity bears the risk. While gainsharing models (more permissive in CJR) encourage hospital-physician alignment, physician ownership of bundles also encourages this alignment.

### **What bundle arrangements are currently available to orthopaedic surgeons?**

#### **1. Bundled Payments for Care Improvement (BPCI)**

Currently this Medicare program, administrated by CMS, is the most established and widespread bundled payment program in orthopaedics. Many orthopaedic surgeons have signed up for this program, either as independent episode initiators or through affiliations with their hospitals or medical systems. It covers multiple specialties but in orthopaedics, total knee surgery and total hip surgery as well as spine fusions, being the most popular categories. Surgeons who signed up for this program were able to examine their historic Medicare cost data for a number of Diagnosis-Related Groups (DRGs) and determine their suitability for bundled payment under that DRG. The decision to proceed with the model for a specific DRG was elective, and many chose not to proceed.

Those physicians already signed up for BPCI also have the advantage of having both the data and the infrastructure in place to consider implementing bundled payment arrangements with other parties such as commercial payors and even Workers’ Compensation insurers.

The BPCI program is currently closed to orthopaedic surgeons as episode initiators. The latest start date for those who elected to proceed with their chosen bundles officially started in July or September of 2015. Orthopaedic surgeons could still participate in the BPCI program if the hospital or medical system they have a relationship with is signed up with the program. In the private practice world, this collaboration and alignment could take a number of indirect forms,

as the hospital truly has ultimate control of the bundles. Co-management, directorships, joint ventures and consultant arrangements may be some of the ways that hospitals and healthcare systems could align with physicians to provide the best care and management needed for bundled payments to be successful, given that it is estimated that 80% of a typical episode of care is under control of the orthopedic surgeon. For employed physicians or those with a committed relationship with their hospital/healthcare system, managing the bundle will generally be expected of them as part of their employment contract and they will likely not see additional revenue.

Those orthopaedic surgeons who have not signed up for BPCI but are associated with hospitals that have, may still be interested in participating through their hospital but will need to determine the following at a minimum:

1. What, if any bundles, the hospital has signed up for under BPCI
2. Under what model of BPCI has the hospital signed up (1 through 4): this will help determine which portion of the episode of care – (acute, post-acute, 30 day, 90 day etc.) is specifically included in the data
3. What historic data is the hospital willing to share regarding the costs and outcomes of all the elements of care for that episode- the more the better. See the section on the anatomy of a bundle.
4. What areas the physician can impact maximally (e.g., implant cost, post hospital care, length of stay, ancillary rehabilitative services, etc.)
5. What method of compensation is the hospital willing to offer for the surgeons' intellectual capital and their time in the use of the management of the episode? These could include co-management, directorships, joint ventures, and consultant arrangements.
6. BPCI can also allow for direct gainsharing under certain circumstances (Medicare waivers) which would allow the surgeon to participate in risk-sharing more directly. Generally these are considered internal cost savings for the hospital.

Hospitals will have varying degrees of interest and willingness to align with private practice surgeons on this program and their level of interest can be only be judged on a local, case-by-case basis. Preexisting relationships in private practice between the hospital and the surgeons may allow for a smoother transition to a more aligned model.

## **2. Comprehensive Care for Joint Replacement (CJR)**

Despite the background of accelerating change anticipated with the passage of MACRA and recognition that the regulatory phase would provide direction, the July 9, 2015 release of the Comprehensive Care for Joint Replacement (CJR) proposed rule from CMS was still surprising. There had been encouraging response to BPCI with over 6,500 providers seeking initial participation. However, those willing to transition to the risk-bearing phase 2 was only 4% as of the July 1, 2015 deadline. Given the intention to increase APM participation, this likely contributed to the mandatory nature of CJR.

The final CMS ruling mandates bundled payment for all hospital admissions identified with a discharge MS-DRG of 469 or 470 and would be implemented in 67 Metropolitan Statistical Areas (MSAs) on April 1, 2016. This includes all lower extremity joint arthroplasty procedures including elective hip and knee arthroplasty procedures (total or partial) caused by

osteoarthritis or similar conditions, ankle arthroplasty, and arthroplasty for fracture repair such as hip hemiarthroplasty or total hip arthroplasty for hip fractures.

The bundle is a retrospective payment, and would include all costs, but all participants would still be paid under traditional fee-for-service. The hospital would carry all risk for meeting financial goals, but limited gainsharing with other involved providers (physicians, post-acute providers) is permitted. Hospitals must meet a threshold on 3 quality measures to be eligible for reconciliation payments. Based on a decision that no adequate risk stratification for TJR exists, the proposed rule does not adjust for patient factors. Some concerns in the final ruling include:

- Encouraging further consolidation in the healthcare industry, specifically encouraging hospitals to acquire orthopaedic practices and post-acute care providers (SNFs)
- Lack of risk adjustment
- Inclusion of surgeries billed under MS-DRG 469/470 but substantially different from the core THA/TKA: THA for hip fracture and total ankle arthroplasty
- Potentially discouraging true innovation in LEJR by proscriptive definition of care (e.g. developing outpatient care models)
- Failing to address the concern of *volume* vs value
- CMS defining care (e.g. proscriptive use of home health, telehealth) rather than giving providers the freedom make these medical decisions
- Model does not reward higher quality, only penalizes failure to meet benchmark on quality measures

With the advent of the CJR the elective nature of participation in a bundled payment model, at least for the hospitals in the 67 designated MSAs, will be eliminated. Many hospitals will be unprepared, and many have engaged consultants or already fast-tracked alignment with orthopaedic surgeons to meet their need for effective implementation and management of the bundle. Many are trying to form alliances with their local orthopaedic surgeons.

Under this program there is no real risk (or reward) sharing for independent orthopaedic surgeons or practices. The hospital will “own” the bundle. But the hospital will be motivated to align with surgeons to manage their risk. Therefore, hospitals without employed or similarly aligned physicians will be looking for ways to work closely with physicians to manage their risk. Many will employ consultants of various types to help, but ultimately they will need significant physician involvement. So, indirectly at least, physicians can participate in the bundle and be reimbursed for their intellectual capital and time. Furthermore, there are possible internal cost saving measures that the surgeons can manage that could, under the appropriate waivers, provide some gain sharing opportunities for the surgeon. These may be of particular interest if, as has been suggested, waivers for Stark and other kickback statutes are made available within this program.

### **3. Business Process Management with Commercial Payors**

The obvious follow through from Medicare sponsored programs such as BPCI and CJR will be the development of commercial bundled payment arrangements. While commercial bundles were originally uncommon, following the early ACE demonstrations these became more popular. Commercial payors, both insurers and self-funded employers, are far more nimble than CMS allowing development of various bundled payment initiatives.

There currently are a number of commercial payors that do have bundled payment initiatives already operational. These have shown varying degrees of success. Many others commercial

payors are interested in the concept and developing programs within the narrow network concept.

Surgeons already participating in a BPM such as BPCI are well positioned to establish a BPM with commercial payor. Much of the infrastructure will be in place and can be leveraged to negotiate a successful bundle. The basic features are similar. The implementation principles outlined below are also applicable to commercial payors.

#### **4. Business Process Management with Outpatient Bundles**

Outpatient bundles can exist either as part of systems of bundled payments which include inpatient bundles, or as exclusively outpatient. The latter are more amenable to physician ownership.

In Arkansas, a mandatory state-wide bundled payment system was established in 2012 including Arkansas BCBS, Arkansas Medicaid, and Qaul Choice. Based on lessons learned from BPCI and inpatient bundled payments, shoulder arthroscopy is being developed as an outpatient bundle, chosen because of variance among surgeons including some still performing the surgery as an inpatient procedure. Early results demonstrated decreased overnight stays and readmissions. Critical learning points included standardization of physical therapy and pain management protocols.

Outpatient bundled payment experience has been reported by Global One Ventures (G1) through a network of Ambulatory Surgery Centers (ASCs) in California. Acting as a Third Party Administrator, G1 has performed over 2000 bundled payment cases in their ASCs since 2009 in collaboration with several private payors including insurers and self-funded employers. They are currently expanding a model of predominantly orthopaedic procedures with Blue Shield of California from 30 active ASCs to a goal of 75 across the state. The most recent data for the first 6 months of 2015 for 225 cases (79% orthopedics and/or spine) in the Monterey County network demonstrated savings over \$2M, dropping the average case price from \$23,103 before bundling to \$13,708 in the bundle.

#### **5. Business Process Management with Workers' Compensation**

In California, following major reforms since 2004, Workers' Compensation have limited the ability of orthopaedic surgeons to provide medically appropriate care to their patients, as well as reduced physician reimbursement significantly. As an attempt to control escalating costs, rigid parameters and micromanagement by claims adjusters has supplanted physician medical decision-making. One potential way to improve care for patients in the Workers' Compensation system is to put the physician back in overall control. This can achieve the goal of cost control while allowing the physician flexibility to make medical decisions in the best interest of the patient.

Bundled payments offer such a mechanism and preliminary work has been described although no published results are available. In some way the Workers' Compensation system with its narrow networks (MPN) and data driven systems is well positioned to operate under a BPM. Overall the Workers' Compensation system is a late adopter of innovations. However some of the more innovative Workers' Compensation insurers are already evaluating bundled payments for a variety of conditions. For example, the University of California has a Workers' Compensation bundled payment model in place for Addiction Medicine and they have been evaluating Workers' Compensation bundles for spine and shoulder surgery.

Orthopaedic surgeons, that have considerable expertise in occupational medicine, should consider developing a bundle that they can present to Workers' Compensation insurers. If they already participate in a bundle for another program, it may be relatively simple to add the occupational medicine piece to this. Given the newness of this model, it is unlikely that they will be approached by the insurers any time soon, but as the concept gains acceptance that is more likely to change. Particularly attractive to Workers' Compensation insurers will be bundles that take on risk for not only medical/surgical outcomes, but also parameters such as return-to-work (physical ability/capacity milestones), permanent and stationary determinations and permanent disability. Orthopaedic surgeons will need to carefully assess their appetite for risk in these parameters

## **Bundled Payment Implementation Basics**

### **Data, data, data**

Bundled payment agreements are driven by data. A prerequisite for entering a bundled payment agreement is the collection of as much data as possible. In all likelihood, the data will come from disparate systems, such as EHRs practice management systems, and clearinghouses. Important and potentially difficult tasks will be to ensure that data coming disparate systems are correctly integrated and linked together.

By way of example for a total joint bundle, the following data over **3 years** is recommended: (From Catalyst of Payment Reform: Total Joint Replacement: Hip and Knee Bundled Payment, 2014)

- Dates of services for the procedure: group claims for not less than 90 days following the end date of service field. Example: discharge date is 1/30/2013. Gather all claims for that patient through 4/30/2013.
- Physician number and name, as well as all professional services tied to that procedure (often aggregated by date of service).
- Hospital or outpatient facility claims, including MS-DRG classification.
- DME claims (v-codes, dates of service, paid amount).
- Skilled nursing claims (dates of service, paid claims).
- Rehabilitation claims (dates of service, diagnosis, and paid claims).
- Home health (dates of service, 90 days following date of the procedure).
- All admissions to hospital for a period of 90 days following the date of the procedure.

This can then further be stratified:

- Total number of unique patients and paid amount per patient by year.
- Number of cases by physician.
- Number of cases by hospital.
- Clustering of claims. Example: by DRG, ICD, CPT, disease, surgery etc. Establish a cluster norm. Understand all aspects of the cluster and understand median, standard deviation within the norm.
- Quality measures: e.g.
  - 30, 60, 90 day re-admission rate
  - Complication profile
  - Length of stay
  - Discharge disposition
  - HCHAPS scores
  - SCIP measures

Ultimately the following costs can be determined:

- Hospital direct cost/case
- Post-acute costs/case
- Surgeon/other provider cost for services
- Cost of complications
- Cost of re-admissions

Value-based reimbursement does not just necessitate data collection and analytics; it also promotes widespread use outside the walls of physician practices. Websites such as CMS Physician Compare which relies upon data from the Medicare Provider Enrollment, Chain and Ownership System (PECOS) as well as PQRS, are readily available for consumers' use as they research patient options. As value-based reimbursement progresses, consumers, payors, and providers will likely increasingly rely on outcomes data per provider to make informed decisions.

Participation in PQRS can provide a framework to collect quality- and outcomes-related data. While analytics and business intelligence technology exist to automate data collection, practices need to collect outcomes-related data supplied through PQRS reporting for demographic groups and diagnoses.

Participating hospitals will gain access to a wealth of Medicare claims data across multiple settings, including acute care, post-acute care, and home care which they have not previously had access. Accessing and analyzing extensive claims data is one of five items on a "short list of" key success factors for CJR from the hospital perspective.

### Key success factors – hospital perspective

- Accessing and analyzing extensive claims data
- Engaging physician leaders as pivotal participants in the design of 90-day episodes of care for hip and knee replacement, which includes pre-operative care, surgery, and acute-hospital stay, post-acute care, and home care
- Establishing post-acute care networks based on quality and cost-control standards
- Enhancing care coordination and care navigation to boost transitions across the care continuum
- Embracing a "leading practices" care philosophy over adoption of best practices because best practices continue to change

These success factors illustrate that hospitals are aware of the importance of working collaborately with their orthopaedic surgeons for their CJR programs to be successful. Orthopaedic surgeons should keep their importance in mind as they negotiate alliances with their hospitals.

### Staffing

Concurrently with data collection, staffing needs to be assessed. Communication and clear role assignment is essential. Staffing teams and essential features of the team could include:

- Coordinator / project lead
- Physician leads
  - Surgeons, Anesthesia, Hospitalist/Internist/PCP
- Careful delineation of roles
- Communication schedule
- Meeting schedules
- Reporting outline and schedule

- MD office management/revenue cycle/contracting
- Hospital Liaison

### **Prospective vs. Retrospective**

A key implementation decision is whether to adopt a prospective versus a retrospective payment model for bundled payment. Prospective payment is well established in California, and stakeholders involved in the pilot felt that a retrospective payment approach (in which fee for service claims would continue to flow and be reconciled later to determine shared savings) would not fully test the impact of bundled payments.

### **Next Steps**

Once the team is built and the data is available, bundle selection can be further defined. Generally high volume procedures with predictable outcomes will be most appropriate. Understanding optimal treatment and the costs associated with providing the most efficient and effective treatments will require collaboration from clinical and revenue cycle leadership to understand, review, and potentially make improvements. Revenue cycle experts can provide leadership regarding cost of care while providers can take steps to refine and standardize care protocols to achieve better outcomes more efficiently.

Further steps then need to be carefully evaluated.

1. Inclusion/Exclusion criteria. Great care is required on these details. This will include the length of the episode of care. Generally healthier patients should be considered in the early stage of bundled payment arrangement development. As experience and risk profile emerge, inclusion of less healthy patients may be considered, however this should be done with great caution. Certain boundaries may not be crossed. For example few commercial bundles accept TKR patients over a certain BMI for TKR regardless of their other health status.
2. Provider selection criteria. Again data on specific physician performance will guide which of the providers in a group should participate in the bundle. Outcomes, cost, and quality and all need to be considered when making these selections.
3. Negotiating with outside providers. While the orthopaedic surgeon may overall responsibility for the bundle, a host of other providers may be involved in the patients care, particularly in the longer episodes of care. As such alignment and negotiation with these providers is essential. Generally the surgeon is the “driver” of the patients and should be able to guide the best models of care and protocols under these providers.
4. Assign staff to manage claims and payments. Complete transparency and understanding of this data is essential for a successful program.
5. Stop-loss insurance. When evaluating a bundle, outlier risk needs to be determined. Specific criteria that trigger insurance back-up should be carefully determined. The further from the median/norm that these criteria can be set, the less expensive the insurance will be. Higher volumes procedures will allow for more leeway in determining the criteria as the risk is spread over a larger pool group. This must be a largely data driven approach and decision.
6. Target price determination. Again a largely data driven determination. The more precise and granular the data, the better the target price can be determined in a manner that reduces risk and maximizes margin. Ultimately an external factor, namely competition from other groups evaluating and applying for the same bundle, may be a significant modifier of target price determination.

7. Once these steps have been achieved, interested payers should be approached. If interested, then negotiation towards a final contract can begin. This will often be a long and protracted process. The more data available to the orthopaedic group, the better it will be able to navigate this. Previous bundle payment experience such as BPCI involvement may be invaluable in this process.

### **Benefits of bundling payments**

The true benefit of bundling payments derives from reengineering care delivery, not from combining separately paid line items into a single tab. Bundled payment provides the impetus, but the work of care redesign must follow if the promise of bundled payment is to be realized: reductions in unnecessary care, reductions in readmissions, lower risk and complication rates for patients, and improved patient function and outcomes.

This important work can only be successful with strong clinical leadership backed by committed management. This formula was effectively demonstrated by the Hoag Orthopedic Institute, Newport Beach, CA. Hoag was an active participant in the CMS bundled payment demonstration that undertook a major initiative to redesign care for total hip and knee replacement aimed at both improving care and ensuring that bundled payments would cover the costs of these procedures.

Care redesign requires significant attention, and can easily be overwhelmed by the myriad of other administrative details necessary to implement bundled payment. It is with this challenge in mind that, in its own BPCI initiative, CMS has put equal emphasis on the care redesign and administrative aspects of bundled payment.

As value-based reimbursement becomes more widespread, practices can benefit from promoting their outcomes data to consumers, payors, and referring providers. This will enable practices to stay competitive. Payors, providers, and patients will also likely become more reliant on hard metrics to make decisions.

### **Potential obstacles/risks**

As with any new model, there are also many potential obstacles, least of which is the natural resistance to change seen in any system. Among some that consistently arise are the following:

- Risk management and fear of the unknown. Physicians tend to be risk averse. Transitioning from the no/low performance risk model of fee-for-service to a shared risk BPM provides a natural level of concern that may be insurmountable for some orthopaedic surgeons.
- Lack of access to good data: Without relevant and credible cost data, determination of critical features such as reasonable target price make sound financial decision making difficult.
- Buy in from other providers: Many provider, both within a practice and outside (such as post-acute) will need to be brought to the table and placed on the same page. Negotiating with these providers can sometimes be deal breakers.
- Readiness of the market. Despite the considerable interest in BPM relatively few payments in healthcare are currently delivered under this model (under 2% in 2014). There are clear indications that this number will grow but this is in transition as not all parties are ready to accept change.
- Administrative burden: Bundled payment models definitely increase administrative burdens for all parties involved. The extra time, expertise and expense required may

deter certain participants from entering into this market.

### **Executive Summary**

Bundled payments are an emerging payment model that is likely to gain significant traction. All orthopaedic surgeons will need to be familiar with the concept and many will need to participate or implement these in their practices. Participation and implementation involves a complex decision making process that needs particular attention to detail. It's likely that those orthopaedic surgeons who do it well will see significant gains in patient care and outcomes as well as reimbursement.

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# Bundled Payment Examples: Past and Current Programs Successes and Failures

**i** Bundled payment is not a new payment strategy. Bundled payment programs have existed as early as 1984 when the Texas Heart Institute began charging a flat fee for both hospital and physician services. A second program developed shortly thereafter involving a hospital, orthopedic surgeon, and a health maintenance organization (HMO) in Michigan. 111 predetermined orthopedic surgical candidates were referred for arthroscopy over a two-year period. A single bill was sent to cover all related physician and hospital charges as well as any additional services during a two-year warranty period. These older bundled payment methods have not grouped services of multiple providers, but rather have done so for single providers.

The first large scale evaluated pilot of bundled payments that included both professional and facility services was Medicare's Heart Bypass Center Demonstration (1991-1996) in which four hospitals each received a single payment covering both Part A (hospital) and Part B (physician) services for coronary artery bypass graft surgery. CMS did not permit any outlier payments. The amount of the combined payment was negotiated between 10% and 37% below the then-current payment levels. The hospital and physicians were able to decide how to split the combined payment. Physicians were able to identify ways to reduce length of stay and unnecessary hospital costs with up to a 23% savings in three of the four hospitals. While the payments did not incorporate post-discharge care, those costs also decreased likely due to advancements in discharge planning. A subsequent evaluation found that, after controlling for preoperative risk factors and postoperative outcomes, all four hospitals had significant reductions in total direct variable costs (those costs that vary with the number of patients treated) over the entire period of the study. These cost reductions came primarily from the nursing intensive care unit, the routine nursing unit, pharmacy, and the catheter lab. Furthermore, **the study demonstrated that the cost reduction increased over time.**

Medicare also tested bundled payment in the outpatient setting in the Medicare Cataract Alternative Payment Demonstration, but with very limited provider participation.

Medicare is the driver of bundled payment, based on its large enrollment and high utilization rates – particularly in procedures such as joint replacements, a favorite target of bundled payment. Commercial payers often follow Medicare's lead, and strong leadership from CMS is essential to catalyze the investment of commercial payers in large-scale bundled payment implementation.

CMS has clearly indicated that bundled payment is an important element of its value-based purchasing strategy. This much is clear from CMS's implementation of the ACE Demonstration Project and the more recent and larger-scale Bundled Payments for Care Improvement (BPCI). Further evidence of this leadership is the under-the-radar national implementation of bundled payment by CMS for dialysis. This initiative has offered extensive results, both positive (lower costs, decline in heart attacks and strokes) and negative (higher blood transfusions initially at certain locations).

Despite the positive results of the program described above, additional efforts to advance the payment methodology did not occur until several years later with four well-publicized initiatives which brought more widespread attention to the strategy:

**1. PROMETHEUS Payment model**

In 2006 the PROMETHEUS Payment model was launched with the support of the Robert Wood Johnson Foundation through four initial pilots. PROMETHEUS now includes 21 bundles that can potentially impact payment for almost 30 percent of the insured adult population.

**2. Geisinger Health System**

In 2007 Geisinger Health System began offering a bundled payment rate for cardiac (CABG ) surgery, including preoperative evaluation and work-up, inpatient facility and physician services, routine post-operative care, and any required treatment of complications. The program included strict patient-selection criteria. Geisinger also guaranteed adherence to a set of 40 clinical performance standards specific to the bundle which became known as their ProvenCare Treatment Guidelines. They had 10% reduction in readmissions after coronary artery bypass graft surgery, shorter average length of stay, and reduced hospital charges. Geisinger has subsequently added additional ProvenCare Treatment Guidelines to include modules on Total Hip, Total Knee, Fragility Hip, and Lumbar Spine.

**3. Centers for Medicare and Medicaid Services (CMS)**

Acute Care Episode (ACE) Demonstration.

In 2009, CMS implemented another bundled payment demonstration project, this one titled the Acute Care Episode (ACE) Demonstration. This demonstration expanded upon the Heart Bypass Demonstration by including joint replacement bundles (Total Knee Replacement (TKR), Total Hip Replacement (THR) and five cardiovascular procedure bundles. Five health systems were chosen for participation. The program showed improvement in quality and reduction in overall cost per episode in TKA and THA. Overall costs were reduced between 10-15%. The majority of savings came from implant price reduction, but hospitals were also successful in reducing length of stay.

• Bundled Payments for Care Improvement (BPCI) Initiative

In 2011, CMS launched the BPCI Initiative under the authority of the Affordable Care Act, with implementation in 2012. The initiative utilizes four broadly defined models of care which link payments for the multiple services beneficiaries receive during an episode of care. Under the initiative, organizations enter into payment arrangements that include financial and performance accountability for episodes of care.

In **Model 1**, the episode of care is defined as the inpatient stay in the acute care hospital. Medicare pays the hospital a discounted amount based on the payment rates established under the Inpatient Prospective Payment System used in the original Medicare program. Medicare continues to pay physicians separately for their services under the Medicare Physician Fee Schedule. The first cohort of Awardees in Model 1 began in April 2013.

**Models 2 and Model 3** involve a retrospective bundled payment arrangement where actual expenditures are reconciled against a target price for an episode of care. In Model 2, the episode includes the inpatient stay in an acute care hospital plus the post-acute care and all related services up to 90 days after hospital discharge. In Model 3,

the episode of care is triggered by an acute care hospital stay but begins at initiation of post-acute care services with a skilled nursing facility, inpatient rehabilitation facility, long-term care hospital or home health agency. Under these retrospective payment models, Medicare continues to make fee-for-service (FFS) payments; the total expenditures for the episode is later reconciled against a bundled payment amount (the target price) determined by CMS. A payment or recoupment amount is then made by Medicare reflecting the aggregate expenditures compared to the target price.

In **Model 4**, CMS makes a single, prospectively determined bundled payment to the hospital that encompasses all services furnished by the hospital, physicians, and other practitioners during the episode of care, which lasts the entire inpatient stay. Physicians and other practitioners submit “no-pay” claims to Medicare and are paid by the hospital out of the bundled payment. The first cohorts of Awardees in Models 2, 3, and 4 began in October 2013.

As of July 1, 2015, the BPCI initiative has 2,115 participants in Phase 2 comprised of 360 Awardees and 1,755 Episode Initiators. The breakdown of participants by provider type is as follows: acute care hospitals (423), skilled nursing facilities (1071), physician group practices (441), home health agencies (101), inpatient rehabilitation facilities (9), and long-term care hospitals (1). Some Awardees are not initiating episodes in BPCI and therefore are not included in the breakdown of participants by provider type.

#### **4. Integrated Healthcare Association (IHA)**

Integrated Healthcare Association attempted to develop through a consensus process the methods and means of implementing bundled payments for orthopedic procedures across multiple payers and hospital-physician partners in California.

The initiative was well funded by a three-year grant from the Agency for Health Research and Quality (AHRQ), building on previous feasibility work over four years funded by the Blue Shield of California Foundation and the California HealthCare Foundation.

In the journal *Health Affairs*, M. Susan Ridgely et al described the initiative as being an integrated initiative where the key objective was to implement over 20 payer-provider bundled payment contracts, resulting in completion of more than 500 bundled cases within the first two years of the project. During the third year of the project, researchers were to conduct clinical and economic evaluations to test how bundled payments affect the quality and cost of care, in conjunction with an implementation evaluation to determine the scalability of the approach.

There was a high level of interest and enthusiasm among a core group of providers and health plans that had a prior history of collaboration in a California physician pay for performance program. By the end of the second year of the pilot, only a few contracts had been executed between plans and providers with a small number of bundled cases completed. Since the target for the number of contracts within the grant period would likely not be recognized, AHRQ suggested focusing on the researchers that would conduct the implementation evaluation such that other payers and providers could benefit from the experience and make more rapid progress on their own bundled payment initiatives. The evaluators were set out to identify technical solutions for administering bundled payments and results are described in detail in a white paper by Wesley Kary.

Prospective bundled payment raised numerous concerns for California regulators charged with protecting consumers, including whether providers were assuming insurance risk, how existing copayments and coinsurance would be applied, and whether consumers should be made aware of the payment arrangement.

The pilot did not succeed because of barriers including administrative burden, state regulatory uncertainty, disagreements about bundle definition, and assumption of risk. In spite of the attractiveness and potential of bundled payments, successful implementation remains a challenge.

### Other Bundled Payment Initiatives

While the shift to a value-based world is nowhere near completion, we are well on the way. Many prominent payers, such as UnitedHealth Group, WellPoint, and Aetna, employ a mix of fee-for-service and value-based reimbursement models.

In 2011, Blue Cross and Blue Shield of North Carolina (BCBSNC) saved about 8-10% on per episode cost.

## Bundling a New Knee

Blue Cross Blue Shield of North Carolina has negotiated all-in-one prices for hip and knee replacements at five local hospitals. A typical bundle includes:

<ul style="list-style-type: none"><li>• Hospital admission and 1 to 3 night stay</li><li>• Surgery</li><li>• Anesthesia</li><li>• Doctors' fees</li><li>• Implant device</li><li>• Facility fees</li><li>• Lab tests</li></ul>	<ul style="list-style-type: none"><li>• Care coordinator</li><li>• All post-discharge care for 90 days, including physical therapy, home health-care and skilled nursing care, if needed</li></ul>	Total Bundled price: <b>\$22,000 to \$30,000</b>
		Unbundled price: <b>\$25,000 to \$43,000</b>

Source: BCBS of North Carolina

The Wall Street Journal