What Providers Need To Know Before Adopting Bundling Payments

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Abstract

Bundling Payments to healthcare providers is going to be utilized more often as a strategy to curb the cost of healthcare in the United States. Theoretically, adapting to bundled payment schemes reduces the incentive to provide unnecessary care, decreases the variation in cost among payers, and improves quality by systematizing episodes of care. The research applied from administering bundling payment projects provides mixed results. In cases such as knee replacement surgery, when a more standardized approach to treatment can be applied, bundling payment reduces cost of care and improves quality by decreasing potentially avoidable complications. However, agreeing upon which services belong in a bundle is a major reason why
bundling pilot projects such as Prometheus have shown slow progress. The purpose of this paper is to use the research from bundling payment projects to inform healthcare providers of the obstacles to adapting to bundling payment schemes.

Introduction

The Affordable Care Act (ACA) expands health insurance coverage to 32 million Americans by 2014 and addresses the issue of high healthcare costs. Healthcare spending reached $2.6 trillion in 2010, nearly 18% of gross-domestic product, and over ten times the $256 billion spent in 1980 (Centers For Medicare and Medicaid [CMS], 2012). As a result, the ACA seeks to implement changes to the system that will drive down the cost of healthcare and improve quality of care. One cost-control measure of the ACA is for Medicare to begin to adopt a system of bundling payments in order to move away from fee-for-service. This paper will illustrate the effectiveness of bundling payment projects, and clarify factors that hospitals must take into account prior to adopting bundling payments.

What is Bundling Payments?

Bundling payments is a cost-control strategy designed to move healthcare delivery away from fee-for-service. Fee-for-service is attributed to being a major cost-driver because it compensates healthcare providers based on the number of services they provide. By encouraging the delivery of care, tests, and patient visits, fee-for-service implicitly discourages physicians to develop cost saving solutions because they will be at risk of lower compensation. In contrast, bundling services links a number of services together for an episode of care. Based on the episode of care and the appropriate services under the bundle, healthcare providers would be provided an upfront sum to manage the care of a patient. If the providers could manage the
episode of care under the sum provided they could share the savings. As a result, providers are incentivized to coordinate care better and dis-incentivized from providing unnecessary services.

**Medicare’s Models For Bundling**

Centers for Medicare and Medicaid currently reimburses healthcare providers with a fee-for-service payment scheme. However, in 2011, Medicare introduced four models of a bundling payment initiative that healthcare providers could participate in. Of these four models, three rely on a retrospective payment method and one is a prospective payment method. Under a retrospective payment method, providers are reimbursed after they deliver services at fee-for-service rates at a negotiated discount. Under a prospective payment method, providers are allotted a single pre-determined amount to budget and manage an episode of care. The four models of bundling consist of the following:

**Model 1** – The first model provides a bundled payment solely for an inpatient stay for acute care. Under this model, a hospital receives payment from Medicare under a retrospective arrangement. These payments are determined based on fee-for-service historical data, and will include a negotiated discount. In addition, providers can share in the cost-savings if they provide care for less than the negotiated price.

**Model 2** – The second model is also based on a retrospective payment scheme, however “the episode of care will include the inpatient stay in the acute care hospital and all related services during the episode. The episode will end either 30, 60, or 90 days after hospital discharge” (CMS, 2011).

**Model 3** – The third model is a retrospective payment method for post-acute care only. Model 3 is an arrangement between Medicare and a skilled nursing facility, inpatient rehabilitation facility, long-term care hospital or home health agency. The agreement begins with
30 days of discharge from the inpatient stay and ends no sooner than 30 days after the initiation of the episode.

Model 4 – The fourth model Medicare offers is the only one with a prospective payment scheme for inpatient stay. CMS makes a single, prospectively determined bundled payment to the hospital that encompasses all services furnished during the inpatient stay by the hospital, physicians and other practitioners.

**Early Results From Bundling**

Bundling payments has successfully been used as a strategy to lower cost in the past, albeit their scope of services was more limited than the four models recently introduced by Medicare. The Health Care Incentives Improvement Institute (HCI3, 2012) analyzed a population of 19,127 Medicare beneficiaries and 31,949 commercially insured members who underwent knee replacement surgery from January 2008 through June 2010. The study found that when Medicare implemented a bundling payment method the result was a significant cost reduction. Specifically, “The average cost for a 180-day episode of total knee replacement, including the initial hospital stay, all related professional services, readmissions, and post-acute care, was $22,611 for Medicare patients and $25,872 for commercial patients. The average initial stay costs, including the costs of complications during the hospital stay, were $10,870 and $17,292 respectively; and the average professional services costs were $10,058 and $6,568 respectively (HCI3, 2012).” The total cost of treatment was reduced by over $3000 per patient when bundling payments was used versus commercial plans. Moreover, potentially avoidable complications were significantly lower in Medicare patients. As Francois de Brantes, HCI3 executive director notes, “Strategies such as bundling services into an episode of care could help reduce the variation in the different components of the episode” (HCI3, 2012). One of the main
reasons behind the success of this study was the HCI3’s ability to use its evidence-informed case rate to group claims around specific episodes of care and quantify the number, type, and cost of potentially avoidable complications. The evidence-informed case rate allowed them to work with hospitals to minimize the variations of care the patients received. As a result, bundling payments has the capability to lower costs, reduce overpayment, and decrease unnecessary care when variation in care is more standardized.

**Prometheus**

Prometheus is a bundling payment project sponsored by the Robert Wood Johnson Foundation and co-developed by the CommonWealth Fund. Launched in 2006 through four initial pilots, Prometheus now includes 21 bundles. The Prometheus study takes into account two factors that determine variation: probability risk and technical risk. Probability risk is determined by whether or not a random event will occur to a patient as a result of something uncontrollable to the healthcare provider. In contrast, technical risk is something controllable by the provider that happens as a result of their action of treatment. The Prometheus model is designed to transfer financial responsibility for events related to technical risk to providers while insurers maintain responsibility for probability risk.

**Typically Bundled Conditions**

Similar to the four models of bundling Medicare proposed in 2011, Prometheus established four categories of bundles that providers could test. Based on these selections, we are able to identify which episodes of care are more desirable to be bundled for healthcare providers and why. The four categories of bundling proposed were chronic medical conditions, acute medical conditions, inpatient procedures and outpatient procedures.
Inpatient procedures such as knee and hip replacements were the most common episodes subject to bundling payments. Healthcare providers are able to exhibit more control over costs because the costs incurred are during inpatient stay. Moreover, “Interviewees reported that joint replacement is relatively easy to define, as are most procedural bundles (Painter, 2012).” Among the providers, seven of them had chosen to be involved in this form of bundling with an additional three in the observational phase.

In contrast, providers were much less likely to adapt bundling of outpatient procedures. Only one provider reported attempting to establish an outpatient procedure bundle, and it was for percutaneous coronary intervention. Healthcare providers are unwilling to take on the greater amount of risk associated with outpatient bundles because they are in much less control of patient care.

Although bundling chronic medical conditions is more difficult than procedural conditions, this category represents the greatest opportunity for healthcare providers to generate savings. According to the Medicare Payment Advisory Commission, 18% of Medicare patients discharged from the hospital have a readmission within 30 days of discharge, accounting for $15 billion in spending (MedPac, 2007). Being able to reduce re-admissions is an area where providers can save a considerable amount of money. Bundling payments for diabetes is very common and encourages providers to manage the care of the patients properly to prevent readmissions into the hospital.

Finally, acute care bundles were not adopted by any providers in the bundling payment pilot project. Providers cited the amount of payer-specific volume as a major concern that did not make this type of bundling worthwhile for their organizations.
Defining Bundling Criteria

Prior to engaging in a bundling payment, the process of negotiating which services ought to be included in a bundle is of upmost importance. “The definition of a bundle is largely comprised of three components:

1. Service inclusion criteria
2. The episodes time window
3. Patient inclusion and exclusion criteria (Painter, 2012).”

The following section will highlight these conditions and the necessary functions providers must take into prior to administering bundling payments.

Service Inclusion

Identifying what services are covered in a bundle is critical because it sets the stage for what services are or are not necessary for certain episodes. In the Prometheus pilot project, some payers and providers chose to engage in pre-defined bundles. This was possible because the Health Care Incentives Improvement Institute has defined seven chronic condition bundles, three acute medical bundles, five inpatient procedural bundles, and six outpatient procedural bundles. The criterion used to develop bundling payments in Prometheus was based on evidence informed case rates and historical data. Since rates were a based on a blend of evidence informed case rates and historical data, payers and providers had more flexibility in tailoring costs. For example, rates could be calculated using facility-specific and regional data for a hospital. In contrast, CMS did not define specific episode types; instead they proposed that applicants suggest their own definitions within the four models' parameters. Organizations proposed episode criteria that included inpatient diagnosis-related groups (DRGs), episode time windows,
and lists of services to be excluded from episodes. Additionally, CMS provided detailed Medicare claims data to allow prospective applicants to build episodes and calculate historical prices (Mechanic and Tompkins, 2012). Health care providers must be able to analyze the data of their facility, Prometheus’ bundling payment, and nationwide Medicare claims to distinguish which services are necessary for certain episodes of care from those that are not.

**Episodes Time Window**

After an inclusion criterion is defined, payers and providers must agree to a time period when the bundle begins and ends. In the ongoing cases of the Prometheus pilot and Medicare models, the episode time window varies depending on the type of bundle. The providers in Prometheus and Medicare were able to negotiate reasonable time windows that were specific to the operations of their facility. A negotiable time window allows providers to focus on the overall goal of cutting the rates of spending on Medicare patients.

**Patient Inclusion/Exclusion Criteria**

Determining specific criteria for patient inclusion and exclusion in a bundle is important because providers may not want certain patients included even if they require a bundled procedure. In the Prometheus pilot, providers chose not to include patients with comorbid conditions who required significant services beyond the bundle. A primary case of this was adopting those who had end-stage renal disease into the bundle. Patient inclusion criteria must be taken into account prior to agreeing to bundled payments. It is common for providers to have a high-degree of control over who they want to admit into the bundled payments. Thus, providers can be reluctant to admit patients with comorbid conditions into their bundle, even if they are risk-adjusted, because they are unsure of how they will be compensated.
**Defining Payment Rates**

After agreeing on which services ought to be included in a bundle, payers and providers must negotiate its price. Historical spending, based on fee-for-service claims, is the largest factor in determining the price of a bundle. In order for Prometheus and Medicare to attract providers to their pilot programs, providers must be incentivized to participate. If providers are able to generate savings based on historical rates others will also be enticed to participate. There are two types of rates providers must assess is best for their facility prior to engaging in a bundle; risk-adjusted rates or flat-fee rates.

**Risk-Adjusted Rates**

Risk-adjustment raises or lowers payment to account for differences in patient care that are a result of age, sex, race, and comorbid conditions. Risk adjusted rates offer more flexibility because they allow for healthcare providers to care for sicker patients. Risk adjusted rates are best utilized using a software program such as the one implemented in Prometheus. For example, “Prometheus uses a multivariate regression model based on claims data and takes into account patient age, comorbid conditions and clinical severity. It also factors in regional differences in the use of health care to further refine the budget to the unique circumstances of each patient (HCI3, 2012).” Medicare will also allow providers to risk-adjust bundles according to historical data to ensure higher-risk patients receive a high quality of care. Since bundling payments is still in an early stage of development, providers may have trouble identifying which risk-adjusted patients fit into particular bundles.

**Flat-Fee Rates**
In contrast, since flat-fee rates remain constant for each patient they can be easier to adopt if facilities have already standardized certain episodes of care. By administering flat-fee rates, providers have the ability to limit who is included in the bundle prior to its implementation. This allows providers to treat a relatively homogeneous group of patients and incentivizes them to develop standardized methods of care while maintaining or improving quality. If they are successful they can share in the savings and will be further incentivized to develop bundles for other groups of patients.

**Problems Associated With Prometheus**

An analysis of Prometheus by the RAND Corporation examined the first three years of the pilot project and illustrated bundling payments as being difficult to implement. According to the study,

“As of May 2011, none of the pilot sites had achieved the goal of using Prometheus as a payment method or had executed bundled payment contracts between payers and providers. The participants expressed disappointment at the slow progress, which for some lagged months or years behind their planned milestones (Hussey, 2011).”

The pilot sites determined what services ought to be part of a bundle in large part by using Prometheus software to analyze historical data to measure the costs of care for relevant episode and defining potentially avoidable complications. The pilot sites reported to find errors in which services were classified incorrectly. As a result, ‘correcting these errors slowed down the implementation process substantially.’ Although implementation was held up, providers were skillful in doing due diligence prior to using bundles and their associated case rates as the basis for payment.
**Benefits Associated With Prometheus**

The pilot sites reported they have found value using Prometheus as a measurement tool because it has made them more aware of their ability to change delivery to reduce costs and improve quality. For example,

“One site found that data needed for certain key quality measures were not being collected in a usable way. All three sites have made changes to the way in which electronic health record (EMR) systems are implemented and used based on their experience with the pilot (Hussey, 2011).”

CMS has recognized the importance of a well-integrated electronic medical record system prior to testing bundling payments. Health information technology that is able to electronically exchange patient records with relevant providers makes for a greater likelihood to coordinate care better among relevant providers. So, providers in the Prometheus study became aware of areas where there systems were lacking and have since begun to implement changes in order to re-design more effective care.

**Conclusion**

With the passing of the Patient Protection and Affordable Care Act, providers will be facing increased pressure to provide Medicare beneficiaries with high quality care in a fiscally sustainable manner. Bundling payments represents an opportunity for providers to reduce unnecessary services, improve coordination of care, and lower costs. However, providers must be cognizant of the challenges of adopting a bundling payment system and what to expect upon implementation.
First, providers must be able to identify which episodes of care would be appropriate for their facility to bundle. I recommend providers begin with episodes of care that are highly standardized such as knee-replacement surgeries. This is an area in which we have already seen results and is proven to improve quality of care and reduce costs. In order to reduce risk providers ought to initially limit the inclusion criteria to patients of a certain age without comorbid conditions. Procedural bundles are also a great place to begin for providers who are still becoming adjusted to their EMR systems. Testing an inpatient procedural bundle will allow a provider to correct their mistakes early and implement changes to their EMR that will make future bundles easier to adopt. With increased pressure to reduce hospital readmissions, providers will face increased stress to manage and coordinate the care of a patient more efficiently. EMR systems have the capability to assist in this process, but doctors, nurses, and administrators must be familiar with their language and comfortable in its usage.

Next, providers should do their due diligence prior to agreeing to payment rates. Providers must take into account historical data for episodes of care related to their own facility, facilities nationwide, and facilities which have already tested bundling. This will allow providers to know where they stand relative to treating episodes of care and identify areas for improvement. Providers may also find that their facility treats an episode of care at a lower cost than other facilities in their region or nationwide. As a result, they will be able to negotiate a better rate with CMS. If a providers facility falls below national averages then they must engage in areas where they can redesign patient care. This would be essential to prepare their facility for bundling arrangements in case Medicare chooses to expand bundling payments.

In conclusion, bundling payments aligns incentives for providers to determine what services are unnecessary in an episode of care rather than rewarding volume of services.
Conceptually, bundling payments has the ability to reduce Medicare spending while improving quality of care. A fundamental problem with bundling is that it determines rates based on fee-for-service historical data that did not have bundling payment in mind. As a result, it is difficult to distinguish necessary from unnecessary services. CMS seeks to resolve this issue by distributing providers with a high degree of control relative to defining bundles and rates. In addition, CMS considers a well-integrated EMR system necessary to the success of bundling. This attributed to making bundling compatible with outpatient acute and chronic care episodes rather than just inpatient procedural bundles. CMS has taken the necessary steps in order to incentivize providers to experiment with bundled payments. As a result, after the experimentation phase of the bundle is up, the law grants the ‘secretary’ the power to expand the duration and scope of the pilot. Therefore, providers must be ready to prepare their facilities because bundling could become a major component of Medicare payment.

References

3. Health Care Incentives Improvement Institute. (2012). HCI3 Research Finds Bundling Services Could Reduce Costs For Knee Replacements By 5-10%.