



## Medicare's Bundling Pilot: Including Post-Acute Care Services

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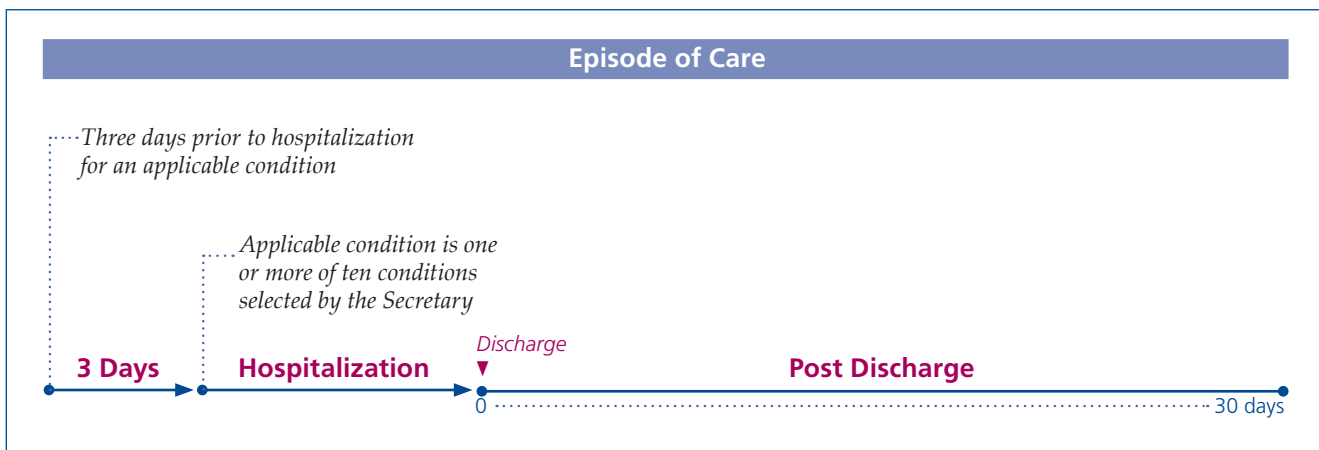
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*OVERVIEW — Fee-for-service Medicare, in which a separate payment is made for each service, rewards health care providers for delivering more services, but not necessarily coordinating those services over time or across settings. To help address these concerns, the Patient Protection and Affordable Care Act of 2010 requires Medicare to experiment with making a bundled payment for a hospitalization plus post-acute care, that is, the recuperative or rehabilitative care following a hospital discharge. This bundled payment approach is intended to promote more efficient care across the acute/post-acute episode because the entity that receives the payment has financial incentives to keep episode costs below the payment. Although the entity is expected to control costs through improved care coordination and efficiency, it could stint on care or avoid expensive patients instead. This issue brief focuses on the unique challenges posed by the inclusion of post-acute care services in a payment bundle and special considerations in implementing and evaluating the episode payment approach.*

The Patient Protection and Affordable Care Act of 2010 (PPACA)<sup>1</sup> includes a Medicare pilot program to test whether bundling the payments for a hospitalization and subsequent post-acute care (PAC) can “improve the coordination, quality, and efficiency of health care services.” The law outlines general parameters of the pilot: for beneficiaries with designated conditions, Medicare would pay an entity for covered services, including inpatient hospital, physician, outpatient therapy, and post-acute care services delivered during an episode of care that is initiated with a hospitalization and continues for 30 days after discharge (Figure 1). The pilot, slated to start by 2013, will be evaluated on whether it improved quality of care, health outcomes, and access, and whether it reduced spending.<sup>2</sup> The stakes are high for this pilot, because if it is successful it could be expanded in the Medicare program without any additional legislative action.

A bundled payment approach aims to improve care coordination and to control the cost of an episode of care by changing providers’ financial incentives. Under fee-for-service payments, providers

**FIGURE 1: National Medicare Bundling Pilot**



Source: Patient Protection and Affordable Care Act of 2010 (PPACA), §3023, National Pilot Program on Payment Bundling, pp. 302–307.

are rewarded for delivering more services, without regard for the need for those services, and no entity is responsible for ensuring the efficient delivery of services across providers. By making a single payment to one entity, bundling makes that entity responsible for all services required for the entire episode. The entity would arrange for the array of acute and post-acute care services to be available and would apportion the bundled payment to providers, including physicians, hospitals, skilled nursing facilities, and home health agencies, involved in the patient's care.

The primary financial incentive under bundling is to reduce the costs of care provided during the episode because the entity receiving the payment would keep any difference between the payment and episode costs; conversely, it would be responsible for any costs above the payment amount. The entity could reduce costs by eliminating unnecessary services delivered during the episode, avoiding hospital readmissions, coordinating services across all providers and facilities to avoid duplication and waste, and delivering the most efficient mix of services for the patient. Alternatively, the entity could reduce costs by stinting on care or avoiding high cost patients. The design of the pilot and the safeguards and oversight incorporated into the program will determine whether the intent of bundling is achieved.

## BACKGROUND

The Secretary of Health and Human Services will specify the requirements of the bundling pilot, including designating the medical conditions that could be subject to the bundled payment (Figure 2, see next page). Entities that want to participate in the pilot by receiving the bundled payment in return for delivering the bundled services will propose the details of their particular approach. It is anticipated that health care or hospital systems will apply to participate in the pilot as entities that receive the bundled payment. Although the law included general descriptions of the services covered under the bundle and the time frame that defines the episode, many factors could differ across pilot projects. The criteria for choosing which entities will participate and the methods for evaluating the pilot remain to be specified. It is not yet known how directive the Secretary will be and how much flexibility entities will have in developing their approaches.

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**FIGURE 2: National Medicare Bundling Pilot**

<p><b>Definition of an Episode (Bundle)</b></p>	<ul style="list-style-type: none"> <li>• Three days prior to a hospitalization for an applicable condition, the hospitalization, through 30 days post-hospital discharge</li> <li>• Applicable condition is one or more of 10 conditions selected by the Secretary</li> <li>• Inpatient hospital services, physician services, outpatient hospital services, home health care, skilled nursing care, inpatient rehabilitation facility services, long-term care hospital services</li> </ul>
<p><b>Payment</b></p>	<ul style="list-style-type: none"> <li>• Comprehensive payment for all applicable services</li> <li>• Made to the entity participating in the pilot program</li> <li>• The Secretary shall develop payment methods, which may include bundled payments or bids from pilot participants</li> </ul>
<p><b>Accountability</b></p>	<ul style="list-style-type: none"> <li>• Quality measures established by the Secretary to include: functional status, avoidable hospital readmissions, community discharge, emergency room use, provider-acquired infections, efficiency, patient-centeredness, patient perception of care, other measures including outcomes as appropriate</li> <li>• Quality measures for episodes of care and for post-acute care</li> <li>• Requirements that the entities participating in the pilot ensure an adequate choice of providers and suppliers</li> </ul>

Source: PPACA §3023, *National Pilot Program on Payment Bundling*, pp. 302–307.

## POST-ACUTE CARE

Post-acute care includes the recuperation, rehabilitation, and nursing services following a hospitalization that are provided in skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs), and by home health agencies (HHAs) and outpatient rehabilitation providers (see text box, next page). Medicare payments have increased rapidly to these providers. The most recent data indicates that spending on post-acute care increased an average of 9 percent per year from 2000 to 2007 and slowed to almost 6 percent per year in 2008 and 2009, which is still considerably higher than the growth in overall health care costs.<sup>3</sup>

### Characteristics of Providers

There is considerable overlap in the types of services provided in the various PAC sites.<sup>4</sup> In general, LTCHs are the most expensive setting and provide care to the most clinically complex patients. IRFs

## Medicare Post-Acute Care Providers: Number, Growth, and Payments

**Long-term care hospitals (LTCHs)** are certified as hospitals, meeting the same minimum staffing requirements, range of services, and life-safety standards. In addition, LTCHs are required to have an average Medicare length of stay of more than 25 days, which is intended to ensure that their patients are medically complex. LTCHs that are located within an acute care hospital—the fastest growing segment of these providers—are subject to additional requirements that limit the share of their patients admitted from the host hospital. The number of LTCHs rose from 278 in 2001 to 432 in 2009, although they are still not available in most areas of the country. In areas with no LTCH, acute care hospitals and SNFs substitute. The number of Medicare fee-for-service (FFS) beneficiaries treated in LTCHs continues to increase, as have average per-case payments, reaching over \$35,000 per stay. Of all post-acute care providers, LTCHs treat the fewest number of Medicare beneficiaries (37.7 per 10,000 FFS beneficiaries in 2008), however, their rapid growth and high cost have raised concerns about their impact on Medicare spending.

**Inpatient rehabilitation facilities (IRFs)** must meet all acute care hospital conditions of participation plus additional criteria related to the ability to provide intensive rehabilitation. The number of patients treated in IRFs grew rapidly between 2002 and 2004 to reach 124.9 FFS beneficiaries per 10,000 after implementation of a prospective, per-case payment method. Medicare patients then fell steadily to 95.6 per 10,000 by 2008, which was expected as a result of enforcement of the 60 percent rule. This rule, or compliance threshold, requires 60 percent of cases at a Medicare-certified IRF to be in 1 of 13 diagnoses specified by Medicare. Patients with these diagnoses typically require the level of rehabilitation provided at IRFs. The average Medicare payment per case reached \$16,649 in 2008.

**Skilled nursing facilities (SNFs)** are the most numerous post-acute care provider, with 15,000 facilities in 2009. The majority of SNFs also are licensed as nursing homes to provide long-term support services, which are not covered by Medicare. SNFs have been providing a higher intensity of rehabilitation services to Medicare patients in recent years. Although this might reflect changes in patient need, many believe it is a consequence of Medicare payment policy changes that reward the provision of more therapy services to patients needing rehabilitation. Medicare admissions per 10,000 FFS beneficiaries were 740 in 2008, up from 670 per 10,000 in 2004.

**Home health agencies (HHAs)** provide the least intensive services and are often used after a patient has been treated in another post-acute care site. Further, approximately half of Medicare patients in HHAs are admitted from the community; that is, they have not had a prior hospital stay that triggered their need for home health services. The number of HHAs has grown rapidly, from 7,061 in 2001 to 10,422 in 2009. Beginning in 2000, home health visits were bundled for a single payment for a 60-day episode of care. This payment change was implemented in response to rapid increases in the number of home health visits and Medicare spending. The growth in home health spending slowed temporarily as a result of Medicare payment changes, but by 2009 it had increased to previous levels, topping 18 percent growth from 2008. At the same time, the number of visits provided to each home health patient dropped by almost one half. In 2008, 9.1 percent of Medicare beneficiaries used home health care, with 37 visits per user and an average payment of \$2,786 per episode.

*Source: Medicare Payment Advisory Commission (MedPAC), A Data Book: Healthcare Spending and the Medicare Program, June 2010, available at [www.medpac.gov/documents/Jun10DataBookEntireReport.pdf](http://www.medpac.gov/documents/Jun10DataBookEntireReport.pdf).*

generally treat patients who need more rehabilitation than patients who are admitted to a SNF, and the IRF patients must be healthy enough to participate in intensive therapy. In aggregate, SNFs provide fewer hours of therapy than IRFs and have a less skilled staffing configuration, with less physician involvement and lower nurse-to-patient ratios.<sup>5</sup> HHAs provide rehabilitation or skilled nursing care in the homes of patients who are unable to leave without assistance. Over half of home health episodes are not initiated after a hospital stay. HHA payments tend to be the lowest among the providers, reflecting their less extensive services.

Although the Medicare program has different coverage criteria, facility requirements, and payment methods for each post-acute care setting (Figure 3), policymakers remain concerned about the lack of clear distinctions in services and expertise across providers, particularly given the significant differences in payment amounts.

**FIGURE 3**  
**Medicare Post-Acute Care Coverage Requirements: Patients, Facilities, and Services**

PROVIDER TYPE	Patient Requirements	Facility Requirements	Services
Home Health Agency (HHA)	Home-bound, need skilled nursing care on a part-time or intermittent basis	N/A	Skilled nursing care; physical, occupational, and speech therapy; medical social work; home health aide
Skilled Nursing Facility (SNF)	Need short-term skilled nursing or rehabilitation services on an inpatient basis after a hospital stay of at least three days	N/A	Skilled nursing care, rehabilitation services
Inpatient Rehabilitation Facility (IRF)	Must need intensive rehabilitation therapy and be able to tolerate and benefit from three hours or more of therapy a day	At least 60 percent of the facility's patients have one of several specific medical conditions that require inpatient therapy	Intensive inpatient physical, occupational, or speech rehabilitation services
Long-Term Care Hospital (LTCH)	Clinically complex problems	Average Medicare length of stay greater than 25 days	Acute care inpatient hospital services

Source: MedPAC, Report to the Congress: Medicare Payment Policy, chapter 3, March 2010, available at [www.medpac.gov/documents/Mar10\\_EntireReport.pdf](http://www.medpac.gov/documents/Mar10_EntireReport.pdf).

According to the Medicare Payment Advisory Commission (MedPAC) “PAC [post-acute care] settings lack clear boundaries around the services furnished and the types of patients treated.... Yet, the setting where a patient is treated has very different cost implications for the program (and for the beneficiary, through the copayments).”<sup>6</sup>

### Use of Post-Acute Care

Post-acute care use varies widely across individuals with similar conditions and can follow numerous patterns. The choice of post-acute setting may be based on ownership or contracting relationships of the discharging hospital. Further, LTCHs and IRFs are not located in all geographic areas, so they are not options for a large number of patients. Decisions may also hinge on the patient’s living situation. A patient who does not have support in the home, for example, may not be able to be discharged from the hospital with home health care.

For some patients, care may proceed from a more intensive to a less intensive site, for example from an IRF to home health care, as treatment progresses. Other patients may be discharged from a hospital to a SNF for recuperative care and then proceed to an IRF for more rehabilitation. Many post-acute care episodes are punctuated by a return to the acute care hospital, which may be one of the most expensive components of an episode.

Based on an examination of post-acute care use conducted for the Assistant Secretary for Planning and Evaluation (ASPE), in 2006, over 14 percent of Medicare fee-for-service (FFS) beneficiaries had an index hospitalization, which was defined as one following 60 days without an inpatient stay or post-acute care services.<sup>7</sup> Of these beneficiaries, just over 35 percent were discharged to

### Readmission Policy Changes

The bundling pilot outlined in PPACA is one of several approaches to slowing spending growth that are being implemented or tested in the Medicare program. Another option focuses on reducing avoidable hospital readmissions of Medicare patients. Beginning in 2012,<sup>\*</sup> Medicare will identify hospitals that have “excess” readmissions for specified conditions or procedures and then penalize them by reducing their Medicare payments. By targeting the hospital payment, the hospital is held responsible for what happens after the patient is discharged. Like a bundled payment approach, this new readmission policy is intended to provide incentives for considering care consequences beyond each institution’s walls. In response to this policy change, hospitals are expected to improve discharge planning or other activities, like coordinating care with physicians and post-acute care providers, which will minimize readmissions.<sup>‡</sup>

<sup>\*</sup> Fiscal years beginning on or after October 1, 2012.

<sup>‡</sup> Deborah Peikes et al., “Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures Among Medicare Beneficiaries: 15 Randomized Trials,” *Journal of the American Medical Association*, 301, no. 6 (2009): pp. 603–618, available at <http://jama.ama-assn.org/content/301/6/603.full>.

post-acute care for further treatment. Most beneficiaries received their post-acute care in SNFs (41.4 percent) or through home health (37.4 percent); the rest were treated in an IRF (10.3 percent) or with hospital outpatient therapy (9.1 percent), and a small share received care in a LTCH (2 percent). The proportions of patients who used post-acute care varied based on the cause of the index hospitalization. The majority (87.3 percent) of patients hospitalized for a major joint procedure,<sup>8</sup> for example, used post-acute services, with considerable variation in the site of care (Figure 4). Moreover, Medicare’s payments for the care of these patients differed as well. Of the patients hospitalized for stroke,<sup>9</sup> 58.1 percent received post-acute care, with about one-third admitted to an IRF, another third to a SNF, and about 20 percent to home health.

Generally, the higher the severity and cost of the index hospitalization, the more expensive the post-acute service use. The mean total payment (the initial admission plus post-acute use until there was a 60-day period without service use) was \$23,985 for post-acute users following a major joint procedure (DRG 544).<sup>10</sup> Payments for beneficiaries who had no comorbid or complicating conditions (one measure

**FIGURE 4: Selected Patterns of Care for Medicare Beneficiaries**

**Patients Hospitalized with Pneumonia, 2006** (DRG 089, Simple Pneumonia and Pleurisy Age > 17 with complication or comorbidity)

Discharged to:

	Home, No Post-Acute Care	Home Health Only	Home Health then Rehospitalized	SNF Only	SNF then Home Health
Percent of Patients	66.4%	7.8%	4.1%	8.8%	2.9%

**Patients Hospitalized with Joint Replacement, 2006** (DRG 544, Major Joint Replacement or Reattachment of Lower Extremity)

Discharged to:

	Home, No Post-Acute Care	Home Health Only	IRF then Home Health	SNF Only	SNF then Home Health
Percent of Patients	12.7%	20.1%	8.9%	7.5%	17.1%

Note: Not all patterns of care following a hospitalization are shown.

Source: Author’s calculations using data from Barbara Gage et al., “Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report,” Report to the Assistant Secretary for Planning and Evaluation (ASPE), Department of Health and Human Services, RTI International, Project Number 0208820.002.001, February 2009, available at <http://aspe.hhs.gov/health/reports/09/pacihs/index.shtml>.

of severity) averaged \$17,724, compared with \$35,319 for those with five or more conditions. For beneficiaries with an index hospitalization for pneumonia (DRG 089), one-third used post-acute care and the average episode payment was \$20,476, but ranged from \$16,096 to \$23,241, depending on level of severity.

Few conclusions can be drawn from the literature about the most effective site or pattern of care, or factors that affect the type and amount of service use.<sup>11</sup> Research has been limited by the lack of consistent patient assessment measures across settings, including outcome measures upon discharge. According to MedPAC, “Ideally, a common assessment tool would gather uniform information to help providers make appropriate placement decisions and enable CMS [the Centers for Medicare & Medicaid Services] to evaluate patient outcomes within and across settings.”<sup>12</sup> CMS was directed by law to develop such a tool for use in all post-acute care sites. The Continuity Assessment Record and Evaluation (CARE) instrument was developed to measure clinical and functional status of patients upon hospital discharge and post-acute care admission and discharge.<sup>13</sup> So far, the CARE instrument has been tested by almost 200 providers; an evaluation of the data collected is scheduled for release in 2011.

## RESPONSES TO BUNDLING

Patients who require post-acute care services after a hospitalization are often beneficiaries with complex needs who receive expensive care. Therefore there may be multiple opportunities to better coordinate these services to improve the efficiency of the care over the episode. With the financial flexibility of a bundled payment, the responsible entity will be able to tailor treatment options to fit the specific needs of the patients and to improve transitions among settings. Ostensibly, the bundled payment will encourage physicians and other providers to consider the entire period for which the beneficiary will need care, which may suggest ways to shorten stays in expensive institutions, like LTCHs or IRFs, and promote other trade-offs. The lack of clearly preferable treatment options may represent the ultimate opportunity for innovation in treatment design.

A bundled payment, however, could also reward some undesirable behaviors, such as stinting on care, delaying certain services and treatments so that they would be provided outside of the episode, or avoiding high-cost patients. The entity that receives the payment

would have incentives to reduce services or limit transfers to expensive providers. In this case, the costs of the care covered under the bundled payment would indeed be lowered, but the efficiency of care would not necessarily be improved. Whether these behaviors would have a negative effect on care would be hard to detect because standards of post-acute care and outcomes are poorly measured. To the extent that such responses would just push services outside of the bundle, either by provider or time, they may actually hurt the quality of care and increase, rather than decrease, overall costs.

### UNIQUE CHALLENGES OF BUNDLING POST-ACUTE CARE

The lack of clear clinical indications for post-acute care site or services, the characteristics of the overall health care market, and the complexity of the patient population are challenges that need to be addressed in a bundled payment approach. The addition of post-acute care services to a hospitalization for a bundled payment will complicate efforts to ensure that appropriate services are provided to patients, particularly when strong financial incentives reward minimizing service use.

#### Appropriate Site

There are no widely accepted standards for choice of post-acute care, and there is little systematic evidence to indicate which site of post-acute care or which services are clinically indicated for a patient.<sup>14</sup> Often, the choice of setting is based on availability, proximity, and patient preferences. Although these factors need to be considered, the dearth of clinical and rehabilitation outcome information may result in suboptimal decisions by patients and providers. This information gap can leave the Medicare program vulnerable to paying too much and the beneficiary vulnerable to inappropriate or inadequate care. Because the cost of care across sites varies considerably and the services provided in each setting are the same or similar, when the situation is ambiguous, the entity receiving the bundled payment will favor the site with the lowest net expense.

Ownership or other organizational connections between providers could strongly influence the choice of post-acute care setting or particular provider. Many hospitals own post-acute care providers

and that number could grow under the incentives of bundling. In 2006, close to 13 percent of patients who were discharged to a SNF went to a hospital-based provider, about half of hospital discharges to an IRF were to a hospital-based provider, and almost 21 percent of patients discharged to home health received their care from a hospital-based HHA.<sup>15</sup> If the payment entity, for example, was a hospital that had a SNF unit, it would strongly prefer to send patients needing post-acute care to that SNF. In this way, it would keep more of the payment, have better control of costs and occupancy in both settings, minimize disruptions for the patient, and have more opportunities to ensure continuity of care. Although these incentives exist under the current payment methods, they would be strengthened under a bundled approach. Whether this is always consistent with providing quality care is not known.

Another factor that affects choice and use of post-acute care is that some settings are not widely available. The two most expensive, IRFs and LTCHs, are not located in all states or some larger regions. In 2007, IRF beds per 1,000 Medicare beneficiaries ranged from 1.82 in Arkansas and 2.09 in Louisiana, to 0.19 in Maryland and 0.30 in Oregon.<sup>16</sup> The disparities in the availability of LTCH beds is even greater, ranging from 3.08 beds per 1,000 Medicare beneficiaries in Louisiana and 3.92 in Massachusetts to none in Alaska, Iowa, Maine, Montana, New Hampshire, Oregon, and Vermont. This wide disparity in availability of providers raises questions about the use of post-acute care for beneficiaries in areas without access to IRFs or LTCHs. It may complicate efforts to develop an appropriate bundled payment amount and evaluate the impact of bundling on spending.

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*The lack of widely accepted standards for post-acute care site and service needs will complicate efforts to ensure appropriate care during an episode.*

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### Freedom of Choice

Whether by ownership or through contractual arrangements, entities accepting bundled payments will have to develop affiliations across providers to deliver all required services, manage the episode of care, and determine the distribution of the payment. These arrangements, in effect, will limit patients' freedom of choice of providers, which has been a basic tenet of Medicare fee-for-service. Under Medicare's managed care option (Medicare Advantage) freedom of choice is restricted, but beneficiaries voluntarily enroll in

that program. How beneficiary preference or choice of provider would be considered under a bundled payment option is not clear, nor is it clear whether or how a patient could choose to participate in the pilot.

Just as Medicare beneficiaries have freedom to choose their providers, providers that do not have a contractual arrangement with the entity that receives the bundled payment may argue that they should be able to participate in the bundling pilot. They may say that the entity should take “any willing provider” that accepts the terms and conditions offered. Providers may be especially concerned about exclusive relationships developed to accept a bundled payment if they are excluded and their market share is threatened. This might particularly be the case for smaller or independent providers that are in markets where a dominant system that can provide the range of acute and post-acute services required for the episode receives the bundled payment.

## OUTCOMES OF CARE

The ability to assess the value of the services is particularly important under a bundled arrangement to protect the welfare of the patient. Patients who use post-acute care often have multiple medical needs, use multiple providers, and have multiple episodes of care during the year.<sup>17</sup> Measures that have been used to assess the effectiveness of post-acute care include return to the community; activities of daily living; instrumental activities of daily living; function related to walking, self-reported health, and satisfaction; rehospitalizations; and mortality.<sup>18</sup> Some of these measures are objective and could be adjusted to account for different propensities across patient types. Others, however, are at least somewhat subjective and reflect social supports as well as the adequacy of rehabilitation or recovery. Further, for some elderly patients with chronic conditions, functional improvements may not be realistic, and maintenance of condition may not be readily achieved either.

In addition, the line between when post-acute care ends and long-term support services begin is not clear in many cases. Long-term support services are oriented to social supports and maintenance rather than rehabilitation and recovery. The ability to shift the line between post-acute care and long-term support services was apparent when Medicare home health coverage rules were relaxed

in 1988 and utilization skyrocketed, which was an indication that Medicare's home health benefit had changed so that it was being used to provide long-term supports to beneficiaries.<sup>19</sup> The distinction between post-acute and long-term support services is particularly important because the Medicare program does not pay for long-term support services, so the entity receiving the bundled payment will have strong incentives to define service needs as long-term support services to minimize its financial responsibility.<sup>20</sup>

## DESIGN FEATURES TO ADDRESS CONCERNS OF BUNDLING

The design of the bundled payment approach will affect whether providers respond with changes that improve the continuity and efficiency of care.<sup>21</sup> The approach needs to incorporate enough flexibility to allow providers to be creative in adopting new delivery models

### Critical Features of a Bundled Payment

**Designation of the entity** — The entity that receives the bundled payment is responsible for ensuring that the appropriate care is delivered, that providers are paid, and that the care is coordinated. This entity should have the relevant clinical expertise, relationships with the necessary providers, and experience managing episodes of care.

**Definition of the bundle** — The bundle of services and providers covered by the payment would need to be carefully delineated to help prevent shifting services and costs out of the bundle. The entity has incentives to lower the costs of treating the patient by moving services out of the time frame of the episode or to determine that services are not needed. While reducing costs to the entity, this could actually increase program costs and may further fragment care.

**Determination of the payment amount and adjustments** — The amount of the bundled payment would need to be high enough to cover the costs of delivering necessary services efficiently, but also lean enough to exert some pressure on the entity to manage the episode. Appropriate adjustments to the payment would be needed to ensure that patients with greater needs continue to have access and to help ensure that any savings are not due to stinting on care or "cherry picking" less expensive patients.

**Measurement of quality and outcomes** — The quality and outcomes of care would need to be carefully assessed because the entity has incentives to minimize costs, which could be achieved by stinting on necessary care or by substituting less expensive treatments that may not be as effective. New measures would need to be developed and tested to ensure that quality and outcomes were not diminished. Current measures often merely count the number and type of services received by the patient and would not be adequate because the bundled payment is intended to change the delivery of care. Particularly challenging will be measures that accurately assess the care to patients who are unlikely to improve.

and to reward improvements in care coordination and efficiency. At the same time, it needs to protect patients from inadequate or inappropriate care and protect the Medicare program and beneficiaries from paying for services that are not beneficial or not delivered. The criteria for designating the payment entity and the bundle definition, payment amount and adjustments, and outcomes and quality measures will determine whether the bundling pilot can promote more coordinated, efficient patterns of care.

### Payment Entity

At a minimum, the entity that receives the bundled payment would need to be large enough to manage the risk that the payment may not cover the costs of care for some patients, to be able to arrange for all of the services required by every patient, and to apportion the payment across providers. Other requirements likely include the ability to manage care, report patient-level data, and ensure the quality of care across the entire episode. In many instances, the entity is likely to be a hospital or provider system, which may own post-acute care facilities or have other established contractual relationships with them. Acute care hospitals would be likelier than a post-acute care provider or physician practice to have the resources and infrastructure to manage this kind of endeavor. An integrated delivery system may also have advantages in accepting a bundled payment. Stricter requirements for entities with respect to these factors may provide better assurances of program success, but would also restrict the number and type of bundling options that could be evaluated.

Recognizing the difficulty of assigning an entity the responsibility of coordinating and monitoring the range of services across multiple providers and the potential of unintended consequences, MedPAC recommended that Medicare pursue bundling in an incremental manner.<sup>22</sup> It recommended beginning with reduced payments to hospitals with high avoidable readmissions, which Medicare is currently implementing. This essentially makes the hospital accountable for the quality of the transition out of the hospital, extending its responsibility through payment incentives beyond the hospital stay. This will allow the Medicare program to assess the use of payment incentives to encourage a more collaborative approach to care transitions, and to evaluate how hospitals respond to these incentives.

## Bundle Definition

Critical aspects of the bundle definition have been specified in the law, but many decisions remain that will affect the payment incentives. Although almost all Medicare-covered services are included in the definition of the bundle, some services could be covered under the bundled payment and others paid separately, depending on the need for the particular service. There could be distinctions, for example, between services for the condition that caused the hospitalization and other services that may be required by the beneficiary during the episode period. The entity could be responsible for all services necessary to treat the designated condition; other necessary services would be paid for separately. A further distinction could be made between services for chronic conditions, such as arthritis or diabetes, and acute conditions like a urinary tract infection or an injury from a fall. Among the acute conditions, some could reasonably be expected to be avoided with appropriate medical care, and others may be unavoidable.

Distinguishing between related and unrelated services may not be straightforward. When a hospitalization is for a planned event, such as a knee replacement, for example, it may be easier to make this distinction than for an unplanned admission, like for treatment of a stroke. Similarly, services associated with an acute event, such as a fall or accident, may be easier to distinguish from services associated with the episode than services related to chronic conditions such as arthritis or diabetes. With any definition, however, the entity that receives the payment has strong incentives to exclude services from the bundle and the payer, in this case Medicare, has incentives to be inclusive with services. The distinctions between the services and treatments related to the acute/post-acute episode and other conditions may have a large effect on the costs under the episode payment and the assignment of the responsibility for managing health care conditions.

The more inclusive the bundle definition, the more opportunities there would be to substitute across services to improve care and to tailor treatment to meet specific clinical or personal needs. If the entity was responsible for treating a patient's chronic conditions as well as the condition requiring the hospitalization, it might be more likely to coordinate all of the patient's medications or integrate therapies that would be beneficial for coincident conditions, for example. With the greater opportunities come greater risks, however.

The entity would be at greater financial risk for unexpected or high costs associated with the need for particular services. And the patient would be at greater risk of inadequate or substandard care if an entity tried to avoid providing particular services.

One option for defining the bundle for a single payment is a “building block” approach, in which episode definitions expand as more information becomes available.<sup>23</sup> Initially, for example, the bundle may be the hospital care and the physician services provided during the hospital stay. Medicare is currently testing this narrower definition of an episode. With more information, the bundle could be expanded to include one or more post-acute care services, particularly for conditions that have a more limited and established pattern of care.

### Payment Amounts

The payment amount for the bundle of services needs to be set appropriately to reward entities that deliver an episode of care efficiently and provide incentives for improvement. If the payment is too low, participation may be limited and any entity that does participate will have stronger incentives to stint on services or avoid potentially high-cost patients. If the payment is too high, Medicare and the beneficiaries will be paying too much and the entity will not need to implement the desired efficiencies. The bundle definition and other features of the pilot will affect the appropriate level of the payment amount.

Medicare typically has used national average provider costs as a proxy for the costs of an efficient provider when it sets prospective payment rates. Given the wide variation in costs of care for patients with a similar diagnosis, this proxy, even when adjusted for patient characteristics and geographic cost differences, will significantly overpay for many episodes and severely underpay for the most expensive ones. The average Medicare payment for an episode of care for beneficiaries hospitalized with pneumonia who received post-acute care, for example, was just over \$20,000 in 2006. A payment based on this average, however, would be too high for the two-thirds of those patients who did not receive post-acute care. For the most severely ill pneumonia patients, it could be 20 to 30 percent too low.<sup>24</sup>

Risk-adjustment of payments to account for patient characteristics, such as complications or comorbidities, that reflect their severity and may predict their resource use is the primary method to help ensure payment amounts are appropriate. In the absence of well-developed risk-adjustment methods, other ways to guard against payments that are too high or too low include adjustments that limit the entity's profits or losses for an individual episode or all episodes, such as risk corridors or risk sharing. Outlier payments could protect entities from unexpectedly high costs of certain individuals. These methods could mitigate the potential negative consequences of a bundled approach until more refined payment adjustments and oversight mechanisms are fully developed.

**Risk and Other Adjustments**—Medicare uses different patient classification methods with different underlying data requirements in hospitals and each post-acute care provider type to risk-adjust payments (Figure 5). Typically, patients are grouped on the basis of characteristics that are associated with the services they need or their expected resource use, and the payment for all patients in the same group are adjusted by the same amount. Medicare's hospital payment system

**FIGURE 5**  
**Post-Acute Care Providers: Medicare Payment and Classification Systems**

PROVIDER TYPE	Payment Method	Patient Classification
Home Health Agency (HHA)	Per 60-day episode	HHRGs—home health resource groups, 153 categories based on clinical and functional status and service use
Skilled Nursing Facility (SNF)	Per diem	RUGs—resource utilization groups, 66 categories based on presence of certain diagnoses, therapy, and service use
Inpatient Rehabilitation Facility (IRF)	Per discharge	CMGs—case-mix groups, 100 intensive rehabilitation categories based on primary reason for need for rehabilitation, functional and cognitive impairments and comorbidities
Long-Term Care Hospital (LTCH)	Per discharge	MS LTC-DRGs—Medicare severity–long-term care–diagnosis related groups based on principle reason for admission, complications and comorbidities and severity

Source: *Federal Register*, vol. 75, no. 221, November 17, 2010, <http://edocket.access.gpo.gov/2010/pdf/2010-27778.pdf>; *Federal Register*, vol. 74, no. 153, August 11, 2009, <http://edocket.access.gpo.gov/2009/pdf/E9-18662.pdf>; *Federal Register*, vol. 74, no. 86, May 6, 2009, <http://edocket.access.gpo.gov/2009/E9-10078.htm>; *Federal Register*, vol. 75, no. 157, August 16, 2010, <http://edocket.access.gpo.gov/2010/pdf/2010-19092.pdf>.

uses the Medicare severity-diagnosis related group (MS-DRG) system to group patients based on diagnosis, age, and complicating conditions.

The MS-DRG system will likely be used to identify the conditions that will be included in the pilot and to risk-adjust the bundled payment. The ASPE studies and analyses by MedPAC indicate that higher severity patients (as indicated by higher severity MS-DRGs during the inpatient stay) are likelier to use post-acute care and have higher average post-acute care spending.<sup>25</sup> Whether these distinctions are robust enough to use in adjusting a bundled payment is not clear. There is little reason to believe, however, that any of the existing risk adjustment methods used in post-acute care settings would improve the adjustment for an episode payment.<sup>26</sup> In fact, the risk adjustment systems for SNFs and HHAs in particular have been criticized because they incorporate service use as a measure of severity. This means that the payment is increased for patients who receive more therapy services, which provides incentives for these providers to deliver more services. The SNF and home health risk adjusters have driven up the provision of therapy services and the resulting payments, even though there is no evidence that the patients need or are benefiting from the extra therapy.<sup>27</sup>

CMS is testing the CARE instrument in various post-acute settings to determine if it is adequate for collecting consistent patient assessment information across post-acute settings. It includes information on medical, functional, cognitive impairments, and social/environmental factors that either measure severity differences within medical conditions or predict outcomes. Consistent data across all of the settings could go a long way toward the development of adequate risk adjustment methods. Although these are the types of factors that might be needed to supplement the MS-DRGs, understanding the relationship between these factors, episode costs, and episode outcomes will require considerable analysis and lead time.

In addition to helping to ensure that payments are appropriate, categorizing patients according to their expected costs is critical for accurately comparing the performance of the entities that receive the bundled payment.<sup>28</sup> Without this type of risk adjustment, one entity may appear to have lower costs and better outcomes merely because of the mix of patients it treated. Performance comparisons are important for the entities as they set up their network of providers, to payers who want to assess whether they are receiving value for

their payments, and for patients and providers as they make treatment choices. The factors used in risk adjustment for payment and for measuring performance are likely to differ and be based on different data.<sup>29</sup>

**Other Payment Adjustments**—Other adjustments may be incorporated into the bundled payment system. Medicare makes geographic adjustments in all of its payment systems to account for area differences in wages. Medicare also adjusts payments in some situations to account for extra costs associated with operating in a rural area, for example, or an inner city area, when it wants to ensure appropriate patient access. Analyses would be needed to determine if, for example, there are systematic differences in costs between post-acute care episodes provided in rural versus urban areas, or the contribution of wage differences to episode costs. Medicare may also need to consider the maldistribution of certain post-acute care providers in making geographic adjustments to episode payments.

### Quality Assessment and Oversight

Medicare collects a significant number of provider-specific performance measures at each site of care. Many of these measures, however, are of discrete services rather than the full spectrum of services across an episode, and they provide little opportunity to assess joint accountability for care delivered during an episode.<sup>30</sup> Much like the separate classification and risk adjustment systems across providers, how and whether the performance measures can be combined to adequately assess an episode is not known.<sup>31</sup> One analysis of episode payment options concluded, “The separate performance measurement and payment systems for each provider type and setting are not aligned around or reflective of the continuum of care that a beneficiary receives within a given course of treatment or episode of care.”<sup>32</sup>

Incorporating ongoing oversight mechanisms into the design of a bundled payment approach will also be critical. The vulnerability of patients to underservice or poor care increases with the size and extent of an inclusive payment approach. The larger the bundle, the greater the ability of providers to make large sums of money by stinting on care, particularly if the patient classification system does not adequately distinguish among patients based on their level of need. Without a policy design that ensures that care for certain types of

patients is not more profitable than care for other types of patients, the less profitable patients may not have adequate access. Protecting from these potential problems requires continued, and possibly expanded, reporting and evaluation of service-level data across the entire episode. The total number of minutes of therapy, for example, or patient functional status may need to be collected consistently across sites to monitor the level of care patients are receiving and to correlate care with outcomes. Lack of adequate planning for data requirements and oversight would hamper efforts to refine and improve the bundled payment approach, while leaving beneficiaries vulnerable to high costs and inadequate care.

## CONCLUSION

Medicare has implemented bundled payment methods for hospital admissions, physician surgical services, dialysis treatments, and other services, but the bundling option contemplated under PPACA is the first to extend beyond individual sites and providers. Many believe that if providers have the financial incentives to coordinate and manage care as they would under a bundled payment, they would focus on improving the efficiency of care through better coordination of services over time and across settings. They would need to improve information exchange, which in turn could improve quality of care. Rather than delineating the ways to achieve this, a bundled payment turns over the responsibility for developing these improvements to an entity in exchange for financial rewards in meeting these objectives. But the payment method may also reward inadequate care or patient selection without certain safeguards. The entity that receives the payment needs to have the clinical expertise and range of provider capability to be able to ensure that patients receive appropriate care. The bundle of services needs to be adequately defined to ensure that patient care standards are met, that services are not delayed so they are covered under another payment, and to facilitate monitoring. The payment and adjustments need to be appropriate to reward entities for coordinating and managing the care of patients, ensure patient access, and achieve efficiencies for the payer. The performance of the providers should be adequately assessed and monitored in a timely manner so that any problems can be addressed quickly. Although options for constraining the financial risk to entities for accepting a bundled payment also limit their ability to experiment with alternative models of care, given the potential for

unintended consequences of the bundled payments, such risk mitigation may be needed for Medicare to maintain its responsibility to its beneficiaries and program spending.

## ENDNOTES

1. P.L. 111-148, as amended by the Health Care Education Act of 2010 (P.L. 111-152).
2. The Congressional Budget Office (CBO) estimated that this option will reduce federal spending by about \$19 billion from 2010 to 2019. CBO, *Selected CBO Publications Related to Health Care Legislation, 2009-2010*, December 2010, p. 22, available at [www.cbo.gov/ftpdocs/120xx/doc12033/12-23-SelectedHealthcarePublications.pdf](http://www.cbo.gov/ftpdocs/120xx/doc12033/12-23-SelectedHealthcarePublications.pdf).
3. Medicare Payment Advisory Commission (MedPAC), *A Data Book: Healthcare Spending and the Medicare Program*, June 2010, available at [www.medpac.gov/documents/Jun10DataBookEntireReport.pdf](http://www.medpac.gov/documents/Jun10DataBookEntireReport.pdf); and June 2008. Anne Martin *et al.*, "Recession Contributes to Slowest Annual Rate of Increase in Health Spending in Five Decades," *Health Affairs*, 30, no. 1 (January 2011): pp. 11–22, available with subscription at <http://content.healthaffairs.org/content/30/1/11.full.pdf+html>.
4. See MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2010, chapter 3, available at [www.medpac.gov/documents/Mar10\\_EntireReport.pdf](http://www.medpac.gov/documents/Mar10_EntireReport.pdf); MedPAC, *A Data Book: Healthcare Spending and the Medicare Program*, June 2010; and MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2006, chapter 4, available at [www.medpac.gov/publications/congressional\\_reports/Mar06\\_Ch04.pdf](http://www.medpac.gov/publications/congressional_reports/Mar06_Ch04.pdf).
5. M. B. Walsh and J. Herbold, "Outcome Following Rehabilitation for Total Joint Replacement at IRF and SNF: A Case-Controlled Comparison," *American Journal of Physical Medicine and Rehabilitation*, 85, no. 1 (January 2006): pp. 1–5, available with subscription at [http://journals.lww.com/ajpmr/Abstract/2006/01000/Outcome\\_After\\_Rehabilitation\\_for\\_Total\\_Joint.1.aspx](http://journals.lww.com/ajpmr/Abstract/2006/01000/Outcome_After_Rehabilitation_for_Total_Joint.1.aspx).
6. MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2010, p. 166.
7. Barbara Gage *et al.*, "Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report," Report to the Assistant Secretary for Planning and Evaluation (ASPE), Department of Health and Human Services, RTI International, Project Number 0208820.002.001, February 2009, available at <http://aspe.hhs.gov/health/reports/09/pacihs/index.shtml>.
8. Diagnosis related group (DRG) 544, major joint replacement or reattachment of lower extremity.
9. DRG 14, specific cerebrovascular disorders except transient ischemic attack.
10. Please note that this is a longer period than the episode defined for the pilot study.
11. Melinda Beeuwkes Buntin *et al.*, "Medicare Spending and Outcomes After Postacute Care for Stroke and Hip Fracture," *Medical Care*, 48, no. 9 (September 2010): pp. 776–784, available with subscription at [http://journals.lww.com/lww-medical-care/Abstract/2010/09000/Medicare\\_Spending\\_and\\_Outcomes\\_After\\_Postacute.4.aspx](http://journals.lww.com/lww-medical-care/Abstract/2010/09000/Medicare_Spending_and_Outcomes_After_Postacute.4.aspx); and

Walsh and Herbold, "Outcome Following Rehabilitation for Total Joint Replacement at IRF and SNF."

12. MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2010, p. 167.
13. RTI International, "Overview of the Medicare Post Acute Care Payment Reform Initiative," available at [www.cms.gov/DemoProjectsEvalRpts/downloads/PACPR\\_RTI\\_CMS\\_PAC\\_PRD\\_Overview.pdf](http://www.cms.gov/DemoProjectsEvalRpts/downloads/PACPR_RTI_CMS_PAC_PRD_Overview.pdf).
14. MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2007, pp. 153–162, available at [www.medpac.gov/documents/Mar07\\_EntireReport.pdf](http://www.medpac.gov/documents/Mar07_EntireReport.pdf); and Cheryl L. Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment," Final Report to ASPE, WR-633-ASPE, February 2009, available at <http://aspe.hhs.gov/health/reports/09/mcperform/index.shtml>.
15. In 2007, 7 percent of SNFs were part of a hospital, 82 percent of IRFs were hospital-based, and 17.3 percent of HHAs were hospital-based. Gage *et al.*, "Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report," pp. 3-9.
16. Gage *et al.*, "Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report."
17. Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment."
18. Sung-joon Min, Ron Fish, and Andrew Kramer, "Updates to SNF Quality Measures Risk Adjustment: Final Report," Division of Health Care Policy and Research, University of Colorado, submitted to MedPAC, May 12, 2010, available at [www.medpac.gov/documents/Jun10\\_SNFRiskAdjustment\\_CONTRACTOR\\_CC.pdf](http://www.medpac.gov/documents/Jun10_SNFRiskAdjustment_CONTRACTOR_CC.pdf); Eric A. Coleman *et al.*, "A Comparison of Functional Outcomes after Hip Fracture in Group/Staff HMOs and Fee-for-Service Systems," *Effective Clinical Practice*, 3, no. 5 (September/October 2000): pp. 229–239, available at [www.acponline.org/clinical\\_information/journals\\_publications/ecp/sepoct00/hip.htm](http://www.acponline.org/clinical_information/journals_publications/ecp/sepoct00/hip.htm).
19. MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2006, p. 195; and General Accounting Office (GAO), "Medicare Home Health Care: Prospective Payment System Could Reverse Recent Declines in Spending," GAO/HEHS-00-176, September 2000, available at [www.gao.gov/new.items/he00176.pdf](http://www.gao.gov/new.items/he00176.pdf).
20. This is the opposite of incentives under Medicaid. Medicaid is a major payer of long-term support services, which often comprise the largest share of Medicaid spending. Since the vast majority of Medicaid patients receiving long-term support services are also Medicare beneficiaries, state Medicaid programs have strong incentives to define care received in nursing homes or through home health agencies as post-acute care to maximize Medicare coverage.
21. MedPAC has established as an objective for Medicare to purchase "high-quality care in the least costly post-acute care setting consistent with the care needs of the beneficiary" (*Report to the Congress: Medicare Payment Policy*, p. 153, March 2007), yet clinical outcome measures may not be adequate to distinguish across sites.
22. MedPAC, *A Data Book: Healthcare Spending and the Medicare Program*, June 2008.

23. Peter S. Hussey *et al.*, "Episode-Based Performance Measurement and Payment: Making it a Reality," *Health Affairs*, 28, no. 5 (September/October 2009): pp. 1406–1417, available with subscription at <http://content.healthaffairs.org/content/28/5/1406.full>.
24. See Gage *et al.*, "Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report," pp. 3-26 and 3-30.
25. Gage *et al.*, "Examining Post Acute Care Relationships in an Integrated Hospital System: Final Report"; and Carol Carter, Craig Lisk, and Anne Mutti, "Issues Related to Risk Adjusting Payments for Bundled Services," presentation at October 2010 MedPAC meeting, available at [www.medpac.gov/transcripts/bundling%20Oct%202010.pdf](http://www.medpac.gov/transcripts/bundling%20Oct%202010.pdf).
26. Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment," p. xvii.
27. MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2010.
28. American Hospital Association, Committee on Research, "Bundled Payment: AHA Research Synthesis Report," May 2010, available at [www.hret.org/bundled/index.shtml](http://www.hret.org/bundled/index.shtml).
29. "[W]hen the focus is on cost/resource use, it is appropriate to use adjusters that explain variation in the time and costs of services provided... while in the context of performance measurement for intermediate and long-term outcomes of care, adjusters should focus on differences in severity of illness." (Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment," p. xvi).
30. Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment," p. 50.
31. Thomas Nolan and Donald M. Berwick, "All-or-None Measurement Raises the Bar on Performance," *Journal of the American Medical Association*, 295, no. 10 (March 8, 2006): pp. 1168–1170, available with subscription at <http://jama.ama-assn.org/content/295/10/1168.full.pdf+html>.
32. Damberg *et al.*, "Exploring Episode-Based Approaches for Medicare Performance Measurement, Accountability and Payment," p. i.