Piloting Bundled Medicare Payments for Hospital and Post-Hospital Care /
A Study of Two Conditions Raises Key Policy Design Considerations

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Policymakers are exploring many different models for reforming the Medicare payment system with the goal of reducing cost growth through better management and coordination of patient care. These payment models are designed to address what are perceived as weaknesses and limitations in the existing silo-ed nature of the Medicare payment system. Current payment systems emphasize the procedures and interventions provided in each setting and pay poorly or not at all for managing and coordinating care; there is no financial mechanism for coordination across sites of care. Policymakers cite current system failures, such as the one in five Medicare beneficiaries that are readmitted to the hospital within 30-days of discharge, as due, in part, to this lack of coordination.¹

In response, policymakers have turned to alternative payment models in order to drive better care delivery and patient outcomes. One of these models, known as post-acute care bundling, would establish a single, prospective payment rate for all care provided in the hospital and post-hospital care settings. A single entity would be responsible for financial and clinical management of the bundled care. Such a bundled model could have enormous implications, affecting the way that the Medicare program reimburses for over $200 billion of hospital and post-hospital care and potentially transforming the delivery of medical care to the most seriously ill Medicare beneficiaries—including those with chronic illness and disability.²

The current House and Senate health reform bills create a Medicare pilot program that would test the feasibility of bundling payments for hospital and post-hospital care. Before Medicare begins paying on a bundled basis, however, the Centers for Medicare & Medicaid Services (CMS) will have to work out the details of how bundling would work. CMS will have to consider:

- **The clinical perspective**: assessing patients’ care needs, including the length of time it takes to treat the patient;
- **The payment perspective**: identifying efficient payment levels that hold providers accountable for high-quality outcomes and ensuring that the providers with responsibility for the bundle can assume and manage risk;
- **The patient-preference perspective**: factoring in patients’ desired settings of care; and
- **The market perspective**: analyzing the unique set of challenges facing urban and rural providers, as well as large and small providers.

In this self-funded study, Avalere examines one aspect of the clinical perspective: episode length under a bundled payment system for two conditions frequently seen in post-hospital care settings. Episode length – the number of days that are covered under the bundle – is a critical element of any design. An episode length that is too short will provide incentives to skimp on care, whereas one that is too long will not achieve

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² Avalere Health analysis of Medicare program spending.
maximum efficiency. This analysis examines the feasibility of covering only the first 30 days of hospital and post-hospital care in the bundled payment—a proposal that the Senate Finance Committee put forth in its health reform policy briefs in early 2009.\(^3\) Future Avalere analyses will examine other aspects of bundled payment models, such as how a bundled system would work at a market level and what kinds of risk adjustments would be appropriate.

**Methodology**

Avalere analyzed Medicare claims in calendar years 2006 and 2007 for a subset of Medicare patients – major joint replacement and chronic obstructive pulmonary disease (COPD) – representing two common Medicare conditions that are also frequently discharged from a hospital to another setting of care. In this study, major joint replacement patients represent acute conditions and COPD patients represent people with chronic conditions often needing extensive and lengthy treatments.

Avalere combined Medicare claims data for 2006 and 2007 to get an adequate sample size and in order to track patients until they had completed their care. Episodes were measured in two ways. In the first case, hospital stays were linked with a single post-hospitalization provider and also captured any subsequent rehospitalization. Once the patient had left the post-hospital provider or was discharged from the rehospitalization, this stay was considered to have ended. In the second case, the initial hospitalization was linked with all subsequent care, including multiple post-hospitalization providers and multiple rehospitalizations. Episodes were ended only when the patient completed an entire quarter without a Medicare claim. The reason for creating two separate populations with different definitions of an episode was due to the ambiguity around what care policymakers believe a bundle would include; a “simple” bundle (initial hospitalization to first post-hospitalization site) or a “complex” bundle that would follow patients until their care was completed.

Patients with a hospital claim for the two conditions of interest were included in the sample. Avalere measured their length of stay as the number of days starting at admission to the hospital and concluding with discharge from the post-hospital setting of care and/or discharge from the readmission in the first case, and discharge after a quarter without claims in the second case. This analysis included more than 600,000 joint replacement and more than 300,000 COPD patient stays from the 2006-to-2007 time period.

Finding 1: By the 30th day of care, 91 percent of simple episodes of care and 95 percent of spending were completed.

Almost all of the patients in the study sample had concluded their simple episode, initial hospitalization plus first post-hospital setting of care and any subsequent rehospitalization, within 30 days. This finding holds for both joint replacement and COPD patient groups (see Figure 1). The mean episode length was 15 days and the median length was four days. In part, these statistics can be explained by the fact that many patients do not use post-hospital care. That so many episodes are finished after discharge from a hospital or soon after indicates, in fact, that a 30 day bundle may be too long. It appears as if an even shorter bundle would be appropriate for many patients because it would encompass all of the care they are receiving now. Further, if policymakers do not set a shorter bundle time, they may not be signaling to providers to increase care efficiencies.

**FIGURE 1** Distribution of Simple Episode Lengths of Stay, Joint Replacement versus COPD Patients, 2006-2007

Finding 2: If an episode of care is defined as all hospital and post-hospital care until there is a break in care, then only 79 percent of episodes are complete by the 30th day and only 41 percent of days have elapsed.

If the bundle includes all of the care a patient receives after leaving the hospital (until the patient essentially stops receiving care), then current care patterns indicate that fewer patient stays will be completed within 30 days compared to a bundle that includes only the first post-hospitalization setting of care. In this study, under this complex definition of a bundle, only about three-quarters of patient stays were completed within
30 days, meaning a quarter of patients were using services for well after 30 days. In both cases, the “tail” of the distribution curve was quite long, with some patient stays lasting years.

**FIGURE 2** Share of Completed Complex Episodes and Days, Within First 30 Days versus More than 30 Days, 2006-2007

This means that episodes of care for a large minority of patients are quite complex and long lasting and may not be amenable to a bundled system. For example, 11.6 percent of patient days occurred in episodes that lasted for 120 days or longer with a vast majority of those days spent in multiple post-hospitalization settings. For most of these patients, a 30-day bundle would be inadequate to encompassing their course of treatment; there might be a risk that they would have trouble accessing care on the front end and a risk of being released from care before they have fully recovered. For providers, the reimbursement risk that this group demonstrates could be quite large. While the bundle would likely be configured to represent an average patient (and his/her costs) this group’s care needs and costs may be so far outside the average that it would be better to consider bundling alternatives.

**FIGURE 3** Distribution of Complex Episode Days by Duration of Episode, 2006-2007
Policy Considerations

This analysis shows that a 30-day bundle length will capture nearly all of the care provided to joint replacement and COPD patients during an initial hospitalization, first post-hospitalization encounter and any subsequent rehospitalization. Even using this somewhat narrowly defined episode of care, providers could seize many opportunities to improve care transitions, form value-based partnerships and reduce rehospitalizations. Providers could gain efficiencies by sharing responsibility for patient wellbeing at the first hospital discharge to post-hospitalization setting and by implementing clinical and care management techniques to avoid hospital readmissions.

However, the analysis also points to a potential weakness in a one-size-fits-all approach to the bundling of these services. Results indicate that a 30-day bundle would not include the full care experience of a sizable minority of patients whose episodes occur for much longer periods of time and include multiple rehospitalizations and post-hospitalization encounters. A short, 30-day bundle would probably not meet their needs and could lead to access problems for this subpopulation; for them, a longer bundled care period may be more appropriate.

This analysis points to two options for policymakers to explore in considering the bundle’s length:

- **Incremental Path.** Policymakers could target initially a subset of less complex post-acute care patients for whom a 30-day bundle would capture the majority of care. They may even consider a shorter bundled time period for these cases. If the system reduces rehospitalizations and spending for these cases, CMS could modify the bundle or create a second bundle for the longer, more complex cases. The downside of this approach is that it could create incentives in the first phase for some providers to attempt to favorably select cases for the bundle, keeping borderline cases out of the bundle and away from any accountability or management.

- **Aggressive Path.** Policymakers could try bundling for the whole Medicare population. This option would require a sophisticated risk-adjustment methodology to match payments to resource use, and an outlier pool for the longest and most expensive cases. Though this approach is more difficult, providers would be accountable immediately for more complex cases.

Policymakers could also experiment with different approaches in different parts of the country. Though this study does not reflect geographic differences in practice patterns across the United States, policymakers should carefully study geographical diversity as part of bundling implementation, as these differences could further complicate the question of defining the most appropriate length of stay under a bundled payment system.