

Will Bundling Work in Rural America? Analysis of the Feasibility and Consequences of Bundled Payments for Rural Health Providers and Patients

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EXECUTIVE SUMMARY

This report assesses how a change in payment structure (i.e. bundling reimbursement payments for acute and post-acute care episodes) may affect existing and emerging relationships between rural and urban-based providers. Under bundled payments, a hospital would receive one payment that would cover inpatient and post-acute care (and, potentially, physician services) for a defined episode of care from admission to a pre-specified number of days post-discharge. Organizational relationships that emerge out of this new reimbursement environment may alter current pathways that rural patients traverse as their recovery progresses. This new environment may also challenge the financial viability of rural providers that deliver post-acute care.

The impact of moving to a bundled payment system will depend upon several factors, including the organizational structure and density of providers, the scale and types of services offered by providers, and the population density. Assessing the implications of such a policy change from the perspective of urban communities at the exclusion of consideration of the rural context raises the risk of unintended negative consequences for rural patients and providers. Therefore, particular attention is given to the bundling model proposed in the national pilot program authorized under the recently passed Patient Protection and Affordable Care Act (PPACA, 2010).

The Patient Protection and Affordable Care Act (ACA) of 2010 authorizes the Center for Medicare and Medicaid Services to develop and implement a National Medicare Bundling Pilot. The purpose of the pilot is to test whether bundling payments for a specified episode of care can improve the coordination, quality, and efficiency of health care services to Medicare beneficiaries. Under the pilot, an episode of care is defined as services provided beginning three days prior to an inpatient admission, plus the inpatient length of stay, plus 30 days following discharge. The pilot will include a set of applicable conditions to be determined by the Secretary (one or more of ten conditions). The pilot is scheduled to begin no later than 2013.

Payment for the services provided during the episode of care will be made as a single payment to one entity – most likely the admitting hospital. That hospital then accepts responsibility for arranging for the array of acute and post-acute care services needed by the patient and for paying the providers that deliver the services (e.g., physicians, hospitals, home health agencies, rehabilitation providers, and skilled nursing homes). The entity receiving the payment under the pilot would retain any difference between the payment and episode costs and would distribute that difference among its partners. Pilot participants would also be responsible for costs that exceed the predetermined episode payment.

Most discussions of the benefits of bundling post-acute care payment focus primarily on the desirable incentive properties of this type of payment reform. There is little doubt that bundled payments will offer incentives for providers to undertake measures that reduce the cost of an inpatient episode without shifting undue insurance risk to providers. However, any health care payment structure creates a set of incentives for providers, and these incentives generally lead to both desirable and undesirable behaviors.

Bundling payments may have other consequences for the health care infrastructure, especially in rural areas. Such consequences have not been well articulated. The conditions under which bundled payments will work best and the potential unintended consequences of moving towards a bundled payment methodology have not been clearly assessed in the existing literature. Therefore, this report:

1. Assesses the financial and quality challenges – and potential unintended consequences for rural providers and patients – of implementing bundled payments for acute and post-acute care episodes.
2. Explores the possible impact on quality of care delivered under a facility-physician bundled payment system, and suggests measurement opportunities to assess the quality of care delivered under a facility-physician bundled payment system.
3. Describes potential modifications to current bundling proposals (plus additional steps CMS could take) that will help address rural-specific issues.

METHODOLOGY

This analysis relies on two sources of information. First, we turn to the economics, quality measurement and organizational literature to understand the theoretical and broad practical issues associated with bundled payments and the implications of those issues in the rural context. We then supplement that information with structured stakeholder interviews, exploring pertinent issues with a select group of ten rural health care leaders, including administrators, agency heads, and physicians.

POTENTIAL CONSEQUENCES OF BUNDLING PAYMENTS AND STRATEGIES TO ADDRESS KEY ISSUES

The effective implementation of a bundled payment system faces several challenges. These challenges include: ensuring that hospitals can form the necessary agreements with other providers on how a single payment will be allocated; measuring quality; implementing quality improvement initiatives; and constructing risk-adjusted payments.

Implementing bundled payments in *rural* settings raises several additional potential consequences that need to be addressed. We identify and discuss four potential consequences that could have particular significance for rural providers and rural patients.

Finding #1: Bundled payments may improve the quality of care in rural areas; however, the impact is likely to be unevenly distributed across geography and care systems.

Bundled payments are likely to work best in integrated health care systems, where it is easier to align incentives across providers. While there are several large integrated health systems in rural areas, much of the rural health care infrastructure is fragmented. Current and past bundled demonstration projects have focused on integrated systems that link predominantly

large, urban-based providers. It is not clear whether the findings of those demonstrations can be generalized to a rural context. Making bundled payments work in non-integrated environments requires addressing these challenges:

- a) Allocating a bundled payment across providers can be a complex and time-consuming negotiation. Allocations can vary according to the bundle of services, the availability of PAC providers, and the service capacity of the admitting hospital.
- b) Urban referral centers may have an incentive either to directly provide PAC services for discharged rural patients or to contract with other urban providers. In this way, urban referral centers would maintain as much control (i.e. financial and legal) as possible over the efficiency and quality of service delivery.
- c) Contracts among rural providers will likely favor physicians and hospitals over other PAC providers because of the greater bargaining power that physicians and hospitals have related to patient flow and referrals. Thus, other rural post-acute care providers (e.g., nursing homes) may see a decline in their net Medicare reimbursements.
- d) Appropriately aligning incentives across providers requires monitoring. The rural environment poses particular challenges for effective monitoring, notably the lack of health information technology (HIT) infrastructure and low levels of competition. Some providers may well have sufficient bargaining power to compromise the efficiency and cost containment goals of bundling payments.

Potential Strategies to Address These Issues

Based on our assessment of challenges, we suggest that CMS consider the following proactive steps:

- Design optimal contractual arrangements that provide rural providers with templates. Such templates would reduce the cost of negotiating contracts across providers and help redress the potential imbalance of provider bargaining power.
- Develop risk- and volume-adjusted performance criteria to facilitate contract monitoring and selection of PAC providers for contracting.
- Provide contract guidance and technical support for small rural providers as they negotiate contracts with larger urban and rural referral centers.
- Design measurement and reporting mechanisms that adapt to both integrated and non-integrated care delivery models (e.g., HIT capacity, inter-platform compatibility, and design/protocol differences).

Finding #2: Bundled payments may lead to increased provider consolidation and fewer provider options in rural markets.

Since bundled payments are well suited for integrated systems, there will be incentives for rural providers to consolidate vertically and horizontally. A number of survey respondents noted that providers are already engaged in this type of strategic activity. For example, a health care system could become owner of a local rural hospital and thus integrate the physicians quickly to create payment and operational efficiencies. In another scenario, a rural hospital could remain independent but have a contractual relationship with a large physician provider group. More of these arrangements are growing now because of the opportunity for provider-based billing.

Potential Strategies to Address These Issues

- Adjust the criteria for monitoring the anti-trust implications of provider mergers and acquisitions (such as the Hart-Scott-Rodino thresholds¹) to increase their sensitivity to scale differences found in rural health care markets.
- Assure that rural providers are fully aware of Department of Justice/ Federal Trade Commission anti-trust enforcement policies regarding service delivery integration.
- Where feasible, require larger hospitals to establish multiple PAC contracts to accommodate consumer choice in health care providers and settings.

Finding #3: Incorporating Critical Access Hospitals (CAHs) into a bundled payment mechanism may not work.

CAH respondents commented that their cost-based reimbursement status has placed them in a position where Prospective Payment System (PPS) hospitals consider them unfair competition. It can be difficult to negotiate a contract, because there is less flexibility to underbid competitors. Many Critical Access Hospitals are freestanding facilities; that status further undermines their strength at the bargaining table.

Potential Strategies to Address This Issue

- Exempt CAHs from the bundled payment methodology.
- Carve out PAC services provided by CAHs for bundled payments under the same methodology used for PPS providers.
- Create a “fixed-bonus” payment to support the continued operation of CAHs and avoid loss of access to needed services in rural communities that have no alternative sources of care. Performance incentives can be incorporated into the bonus payment methodology to encourage service delivery efficiencies and quality.

¹ The Hart-Scott-Rodino Act established the federal pre-merger notification program, which provides the Federal Trade Commission and the Department of Justice with information about mergers and acquisitions before they occur. The reporting process is intended to allow the agencies to determine whether a merger or acquisition would violate anti-trust laws and to seek an injunction in federal court if it does. Only a very small portion of rural health care providers would meet the guidelines for initiating an anti-trust review (e.g., when the assets of the deal are greater than \$63.4 million or when one party has assets totaling \$126.9 million or more). (<http://www.ftc.gov/bc/hsr/index.shtm> accessed July 2011)

Finding #4: Under a bundled payment system, safeguards may need to be implemented to protect rural consumer choice and patient-provider relationships.

There is considerable agreement that integrated delivery systems (IDSs) provide a suitable environment for a bundled payment scenario. Such systems also have several options for patient care. Discharged patients could be kept within the corporate umbrella or local contractual relationship of the tertiary care facility in order to achieve greater control over the level of financial and performance risk.

The potential loss of access to post-acute care providers in a rural patient's own or nearby community threatens consumers' ability to choose their care setting. Without sufficient safeguards, patient choice may be lost, support for patient self-management and treatment compliance may be compromised, and the well-being of rural residents could be jeopardized.

Potential Strategies to Address This Issue

- Implement contract requirements that encourage patient choice. One approach would be to document that a specific percent of rural residents discharged from referral hospitals can obtain PAC services within a reasonable distance from the resident's home community (e.g., within 30 miles).
- Foster communication to assure care coordination during the transition between hospital discharge and transfer back to the patient's community. Communication would include treatment plans for PAC providers, plus medication reconciliation and care plans sent to the patient's primary care provider. Require transfer communication documentation and reporting.
- Specify a split payment methodology (as with split DRGs) so that each set of providers does not re-create the wheel.

CONCLUSION

Implementation of a bundled payment strategy will drive consolidation and regionalization of services both horizontally (e.g., physician groups) and vertically (e.g., hospitals, nursing homes, and home health care). The degree to which this may evolve will depend on a variety of factors, including supply and demand for services, relative levels of competition, the pre-existence of integrated systems of care, and Medicare Conditions of Participation. There is no doubt that providers that are part of an integrated delivery system will encounter a far different experience under bundled payments than independent providers, since the latter must establish contracts with other providers to successfully pursue the same quality and operational performance goals. Rural hospitals, physicians, and other post-acute care providers may elect to remain independent and seek to establish contractual relationships with other providers in transfer, referral, and treatment efforts, or they may opt for affiliation with or ownership by a larger provider or system.

For rural providers to be meaningful participants in bundled payment strategies, they will need to be fairly reimbursed for the services they provide. “Success” in a bundled payment strategy should not be totally based on financial factors, but should also reward quality outcomes and patient choice, including selection of the best site for the most appropriate inpatient and post-acute care for rural as well as urban patients.

INTRODUCTION

One of the striking features of the U.S. health care system is the large variation in readmission rates and in the cost of post-acute care (PAC) across hospitals. Patients who receive care at hospitals in the highest cost quartile of hospitals use significantly more resources than those who receive care at hospitals in the lowest cost quartile (MedPAC, 2008). Those cost differences are largely due to two factors: 1) higher readmission rates, and 2) greater utilization of post-acute care services.

The Medicare Payment Advisory Commission (MedPAC) and the Centers for Medicare and Medicaid Services (CMS) have long recognized the misalignment of incentives across the payment sectors within Medicare. The idea of bundling reimbursement for acute and post-acute care services for Medicare beneficiaries was first raised in the 1990s (Welch, 1998). Many health policy analysts and organizations now advocate moving CMS towards a bundled payment strategy that re-aligns hospital, physician, and post-acute care provider incentives to better coordinate and improve inpatient and post-acute care, thereby reducing readmission rates, improving patient outcomes and reducing costs (MedPAC, 2007; Pham et al. 2010; Hussey, et al., 2009; Mechanic and Altman, 2009; Fisher et al. 2009). Under this policy a hospital would receive one payment that would cover inpatient and post-acute care (and, potentially, physician services) for a defined episode of care from admission to a pre-specified number of days post-discharge. Bundled payments are also referred to as Global DRG payments and Inpatient Episode-Based Payments. CMS is actively exploring the quality and cost implications of bundled payments through existing demonstration projects.

The Patient Protection and Affordable Care Act (ACA) of 2010 authorizes the Center for Medicare and Medicaid Services to develop and implement a National Medicare Bundling Pilot. The purpose of the pilot is to test whether bundling payments for a specified episode of care can improve the coordination, quality, and efficiency of health care services to Medicare beneficiaries. Under the pilot, an episode of care is defined as services provided beginning three days prior to an inpatient admission, plus the inpatient length of stay, plus 30 days following discharge. The pilot will include a set of applicable conditions to be determined by the Secretary (one or more of ten conditions). The pilot is scheduled to begin no later than 2013.

Payment for the services provided during the episode of care will be made as a single payment to one entity – most likely the admitting hospital. That hospital then accepts responsibility for arranging for the array of acute and post-acute care services needed by the patient and for paying the providers that deliver the services (e.g., physicians, hospitals, home health agencies, rehabilitation providers, and skilled nursing homes). The entity receiving the payment under the pilot would retain any difference between the payment and episode costs and would distribute that difference among its partners. Pilot participants would also be responsible for costs that exceed the predetermined episode payment.

Most discussions of the benefits of bundling PAC payments focus primarily on the desirable incentive properties of this type of payment reform. There is little doubt that bundled payments will offer incentives for providers to undertake measures that reduce the cost of an inpatient episode without shifting undue insurance risk to providers (MedPAC, 2008; Goroll et

al., 2007; Shih et al., 2008). However, bundling payments may have other consequences for the health care infrastructure, especially for rural providers and communities, and those consequences have not been well articulated. The conditions under which bundled payments will work best and the potential unintended consequences of moving towards a bundled payment methodology have not been clearly outlined in the existing literature. By their nature, health care payment structures create a set of incentives for providers and these incentives generally lead to both desirable and undesirable behaviors (Dummit, 2011).² This has proved true with the fee-for-service (FFS) system, which provides little incentive for providers to coordinate care, and with the prospective payment system, in which DRGs create incentives for hospitals to discharge earlier than might be optimal.

Scope

In this report we consider the broad impact of a bundled payment system for inpatient and post-acute care episodes on rural patients and providers, as might be designed following the National Bundling Pilot. We argue that the impact of moving to a bundled payment system will depend upon several factors, including the organizational structure and density of providers, the scale and types of services offered by providers, and the population density. Most advocates of bundled payments have implicitly considered the feasibility or impact of this reform only on metropolitan areas. Similarly, most analyses of the impact of proposed Medicare payment reforms either explicitly or implicitly frame the issue in the urban or suburban setting. However, the rural setting differs in several important ways that will likely impact the efficacy and feasibility of changing the way Medicare reimburses providers.

Our report assesses how a change in payment structure may affect existing and emerging relationships between rural and urban-based providers, including referring and referral hospitals and providers of post-acute care services. Organizational relationships that emerge out of this new reimbursement environment may alter current pathways that rural patients traverse as their recovery progresses. Assessing the implications of such a policy change from the perspective of urban communities at the exclusion of consideration of the rural context raises the risk of unintended negative consequences. The health care infrastructure in rural America is very different than in urban settings. For example, more than 60% of rural community hospitals are reimbursed on a cost-basis for Medicare services as Critical Access Hospitals, and another 25% are reimbursed on a cost-and-PPS blended system as Medicare Dependent Hospitals and Sole Community Hospitals (MedPAC, 2009). Using bundled payments for conditions treated in these hospitals is not straightforward.

This report:

1. Assesses the financial and quality challenges -- and potential unintended consequences for rural providers and patients -- of implementing bundled payments for acute and post-acute care episodes.

² In many circumstances the optimal payment structure combines both fixed payments and a per-service-delivered component. Bundled payments (as well as DRG payments) are, for the most part, fixed payments.

2. Explores the possible impact on quality of care delivered under a facility-physician bundled payment system, and suggests measurement opportunities to assess the quality of care delivered under a facility-physician bundled payment system.
3. Describes potential modifications to current bundling proposals (plus additional steps that CMS could take) that could address rural-specific issues.

Methodology and Organization

This analysis relies on two sources of information. First, we turn to the economics, quality measurement and organizational literature to understand the theoretical and broad practical issues associated with bundled payments and the implications of those issues in the rural context. We then supplement that information with structured stakeholder interviews, exploring pertinent issues with selected health care administrators from a range of institutions and agencies and with selected physicians who practice in rural areas.

The next section of this report provides background on bundling inpatient and post-acute care and describes how bundling might be implemented under different provider organizational structures. The following section focuses on bundling in the rural context; we describe some of the unique challenges of implementing payment structure changes in rural settings, using both literature review and insights from our key stakeholder interviews. The Results section summarizes our policy conclusions regarding the potential consequences of bundling in rural areas and makes recommendations that could help mitigate the potential negative side effects of payment changes. The final section offers concluding remarks.

BACKGROUND ON BUNDLING INPATIENT AND POST-ACUTE CARE SERVICES

Rationale

The rationale behind bundling acute care and PAC payments is straightforward: The structure of provider payments affects incentives for organizing care and also affects the quantity and quality of that care (Town et al., 2004). Currently, inpatient episode payments are fragmented across providers. We define an inpatient episode as the inpatient stay (including both the hospital and physician payments) plus the 30-day period after discharge (the period in which the patient is likely to receive significant post-acute care services). The PAC services include post-op follow-up, rehabilitation services, outpatient care, skilled nursing facility and home health services.³ Most hospitals are paid on a diagnosis-related group (DRG) basis, which is a form of bundling. Inpatient physician (e.g., surgeons) and rehabilitation services are paid on a fee-for-service (FFS) basis. Nursing home care and home health services are paid on a per-diem basis. All of these services are billed separately.

The outcomes and costs of care can be influenced at a variety of points along the continuum by factors associated with:

- care plan communication,

³ Follow-up physician office visits are excluded from the bundled payment in some proposals but, in principle, could be included in the bundle.

- medication information and reconciliation,
- laboratory and imaging information, patient transportation, and
- the availability and effective transmission of advance directives and patient directives (Coleman, 2003; Institute of Medicine, 2001; Gittell et al., 2000).

However, the current Medicare payment system gives little incentive for providers to coordinate patient transitions from one provider setting to another.

Care coordination takes resources. Physicians, nurses, discharge planners, pharmacists, staffs from rehabilitation centers, skilled-nursing facilities and home health agencies would have to communicate and plan with each other regarding the patient's transition from the inpatient to the PAC setting. Medicare does not pay for these provider coordination efforts. Furthermore, the current payment system provides little direct incentive for providers to prevent hospital readmissions. Variation in hospital readmission rates is an important determinant of the variation in the cost of the inpatient episode; moreover, high readmission rates typically reflect poor patient outcomes (MedPAC, 2007). Under the current payment system, hospitals have an incentive to discharge patients early; by doing so, hospitals shift the burden of care to other modalities.⁴ Finally, the current payment system does not give physicians any direct financial incentive to improve patient outcomes across the whole episode or to help coordinate patient care beyond the services for which they can directly bill.

Opportunity: Incentives for coordination, quality and efficiency

Bundling inpatient and PAC services addresses many of the adverse incentives generated by the current payment system. By placing the provider entity that receives the bundled payment at risk for the entire cost of the episode, bundling creates incentives for providers to coordinate the care and maintain the quality of care across provider modalities. Additional incentives may be available under the National Pilot Program on Payment Bundling through reimbursement for services such as “care coordination, medication reconciliation, discharge planning, transitional care services, and other patient-centered activities as determined appropriate by the Secretary” (PPACA, 2010).

Hospitals and/or physician groups are the most likely organizations to receive the bundled payment (MedPAC, 2007). In this scenario, the provider entity that receives the bundled payment will disperse payments to the other providers responsible for care during the episode. The organization receiving the payment may also be responsible for collecting data and reporting the outcomes of care. In principle, the entity that receives the payment will, in turn, be motivated to construct payment and monitoring mechanisms that foster shared accountability across all providers involved in the episode. This shared accountability for resource use should reduce average utilization and mitigate the disparities in resource use across providers. Bundled payments also provide incentives for organizational investment in approaches offering greater delivery system efficiencies, thus creating opportunities to reduce the resources used to care for an inpatient episode.

⁴ The evidence suggests that upon the implementation of the current DRG system hospitals significantly reduced the length of stay of patients, with some evidence suggesting that the frequency of premature discharge increased.

Concern: Potential misuse by providers

Without the ability to perfectly monitor provider actions, it is extremely difficult to design any payment structure that has no accompanying incentives for undesirable behavior.⁵ This is true under bundled payments. Under a bundled payment system, providers have an incentive to use the most cost-effective treatment settings. Providers would also have a greater incentive to upcode patient diagnoses to a higher paying bundle in order to increase their reimbursement. There also is greater incentive to attract healthier patients and turn away high-cost, sicker patients. Bundling also creates potential incentives to reduce care that may have long-run benefits and/or to postpone care until the episode window has closed. As a result of these opportunities for misuse, many proposals link bundled payments with a pay-for-performance component.

Variations in the Bundled Payment Structure

Several bundling proposals are under consideration – the differences across proposals center on the types of services covered, the time window over which services can be bundled, and the conditions/procedures that are included in a bundled payment.⁶ The most important difference across proposals is the inclusion or exclusion of physician services.⁷

Variation in types of services covered

At one extreme, bundled services could include all physician services, including inpatient (e.g., surgical, anesthesia, ICU, hospitalist care) and outpatient care across the episode window; outpatient care would include standard follow-up care and visits to a primary care physician. As more providers are added to the bundle, it becomes progressively more difficult to a) construct payment distribution mechanisms that best align incentives, and b) monitor and coordinate provider activities to be consistent with a given payment mechanism.

At the other extreme, all physician services could be *excluded* from the set of bundled services. Physicians play a very large role in affecting patient outcomes and, perhaps more importantly, they have significant power to influence both the pattern and coordination of care. Thus, excluding physician payment from the bundle can significantly undermine the influence of bundled payment incentives. At a minimum, bundling should include the services of physicians who have the most direct impact on patient cost outcomes of a particular episode of care (i.e. inpatient and PAC specialists).

Variations in counting readmissions and in time windows

Another key issue is whether all readmissions would count against the bundled payment or whether to count only those readmissions that are associated with the initial hospitalization and are deemed preventable. Clearly, the latter is preferred, but it's unclear to what degree

⁵ MedPAC (2007) and Dummit (2011) discuss many of the undesirable responses that bundling may induce.

⁶ There are also several proposals and demonstrations that explore using bundling to treat a number of conditions that are primarily treated in physician offices or in the outpatient setting. Our focus is only on bundling payments for inpatient and PAC.

⁷ See discussion in Aston (2010) “Will bundling included doctors? Medicare looking for alternative payment plans,” American Medical News. Jan. 4.

preventable readmissions can be identified with sufficient precision to incorporate into a bundled payment mechanism.

Thirty-day and sixty-day post-discharge periods are among the most commonly proposed time windows for which a bundled payment would cover services. In general, a longer time window reduces the opportunity for providers to postpone treatments until the patient is outside of the covered time frame for an episode of care. However, as the time window expands, provider actions also have a smaller marginal impact on total costs: The incentives for greater service delivery efficiencies, as they relate to the inpatient episode, become less compelling.

Consider the following three scenarios, each involving the same patient. A 76-year-old female patient is admitted to a hospital for a hip fracture. She undergoes a successful hip replacement and is discharged to a nursing home for rehabilitation. She stays at the nursing home for two weeks.

Scenario A: After two weeks at the nursing home, she develops swelling on the calf. She is readmitted to the hospital where she is diagnosed with a deep venous thrombosis in her calf. This is a preventable condition from her first admission and could be counted under the bundled payment for the initial hospitalization. In this situation, rehabilitation has been further delayed and may occur outside of the bundled payment time frame. The question then arises: How will the therapy after the second hospitalization be reimbursed?

Scenario B: Although her hip transplant was successful, the patient's rehabilitation has a rocky course, for one or more of several reasons. Rehabilitation may be limited by pre-existing chronic illnesses or cognitive limitations. If rehabilitation or complications occur after the 30 days of the original episode, how will her care be categorized for reimbursement? Will necessary rehabilitation not occur because it would happen outside of the time limitations?

Scenario C: The same patient is readmitted after two weeks at the nursing home because she had a myocardial infarction. In that instance, it would be difficult to consider her new condition as a truly preventable condition from her first admission. Thus including the costs of the second hospitalization with the bundled payment would place an unnecessary burden on the admitting hospital.

Variations in the conditions or procedures included

In principle, any condition that is treated or procedure that is performed in the inpatient setting can be paid on a bundled basis. However, the benefit from bundling services is not uniform across conditions or procedures. Costly conditions for which there are high rates of preventable readmissions and/or which require significant post-acute care treatment are the episodes most likely to yield the largest gains from bundling. Initial proposals focus upon a few medical/surgical admissions: heart failure, chronic obstructive pulmonary disease (COPD), hip fracture, pneumonia, acute myocardial infarction (AMI), coronary artery bypass graft (CABG) and percutaneous transluminal coronary angioplasty (PTCA). Many of these, except for CABG and PTCA, are generally treated in most rural settings.

Implications for rural beneficiaries

This situation highlights an important issue for rural Medicare beneficiaries and providers under a bundled payment system. Rural residents often travel to urban hospitals for their inpatient treatment but typically seek to have their PAC near their home (Probst et al., 2007). The bundled payments framework may discourage urban hospitals from discharging to a rural PAC facility. Rural facilities may be less likely to be part of the urban hospital's integrated network for the bundled service.

If rural residents who are treated in urban hospitals cannot return to their communities for PAC services, the patient, family and rural provider may all suffer:

- First, rural residents may not be able to recuperate near their home and that would increase the burden on them and on their social support network.
- Second, if rural residents return to a PAC service provider near their home but these facilities are not part of the urban hospital's integrated network, the coordination of care that the bundled payment strategy seeks to influence will likely suffer.
- Third, the resulting reduced demand for rural PAC facilities, in turn, may lead to closure and more fragmentation of an already thin network of rural health care providers.

In addition, any diminution of rural provider capacity resulting from closures and increased system fragmentation may place rural providers at a disadvantage even when the list of bundled conditions begins to expand and includes services typically provided in rural settings. The Secretary is required to submit a plan for expanding the Pilot Program by January 2016. Although the legislative language does not define the nature of expansion, the Senate Finance Committee proposal upon which the Pilot design was largely based provided for the eventual expansion of bundled conditions to include all services to Medicare beneficiaries (Senate Finance Committee, 2009).

Disbursing bundled payments through a single entity (hospital) over an episode of care is a significant shift from the current payment methodology. It is difficult to predict if this change will be more likely to create competitive or collaborative facility-physician relationships. Physicians may find themselves facing situations of increasing competition or collaboration, depending on both the nature of their role in the episode and the resources available to support their activities. For example, in the case of increased competition, two entities or two departments within a given entity may attempt to justify their proportion of the reimbursement by exerting greater control over the process and thereby limiting the participation of their collaborating partners in care. On the other hand, it could prove advantageous for some physicians to allow their partners in care to assume more responsibility for care and in doing so limit those physicians' time commitment for post-op care management.

The bundled payment arrangement can have particular implications for independent primary care physicians treating patients with chronic conditions such as diabetes. As long as the physicians are doing their jobs, patients are not recalcitrant, and nature does not conspire against the patient, there won't be an inpatient admission due to uncontrolled blood sugar. However, once there is an admission, the relationship between the independent practitioner and

hospitalist/specialist could just as easily become competitive. The organizational relationships established prior to implementing a bundling strategy will greatly influence the nature and extent of competition or collaboration.

Integration and the Logistics of Bundling

Much of the discussion of payment reform ignores the organizational context in which care is delivered.⁸ In order for a set of health care providers to implement bundling, that set of providers must develop contractual relationships that specify: payment rates; performance measures (both for the individual provider and team of providers playing important roles in patient care); and mechanisms (e.g., health information technology) for monitoring resource utilization and patient outcomes. In principle, the payment rates would be a function of total episode resource use and potentially a function of individual performance measures that capture the provider's contribution to total utilization and patient outcome.

At its core, bundled payments can only work if a network of providers is assembled *and* care is coordinated across care modalities. Rural areas have significant diversity across locations in the existence of these network relationships. At one extreme are fully integrated delivery systems (IDSs). At the other extreme are sets of fragmented, freestanding providers with loose affiliations based on shared patients and/or shared admitting privileges in specific hospitals.

Poised for implementation: integrated delivery systems

Fully integrated delivery systems are in the best position to implement bundled payments, and demonstrations have focused on these organizations. Fully integrated systems are health care organizations that own hospitals and PAC facilities and employ physicians and other health care providers. The Marshfield Clinic, Geisinger Health System and Intermountain Healthcare are prototypical examples of IDSs serving rural populations. These organizations have contractual (usually ownership and employee) relationships with the key providers in an inpatient episode that enable the aligning of incentives across those providers. In response to a bundled payment mechanism, IDSs would likely have to restructure some of their organizational practices. Reorganizing care structures within a large organization is not simple, but it is much easier to implement this type of change than it is to build new contractual relations across a set of independent providers.

Unlike building new contractual relationships with independent providers, internal reorganization likely avoids or minimizes conflicts of organizational culture, mission, and values that could require negotiation and compromise. Similarly, internal reorganization usually does not involve negotiating differences in procedures, protocols, and the needed infrastructure to monitor and manage the service delivery process. In sum, it can be more complicated, time consuming, duplicative and therefore more expensive (in terms of added costs and loss in autonomy) to manage and implement multiple contractual relationships with independent providers than to reorganize internally.

⁸ A Commonwealth Fund report (2007) is an exception. The report's proposal suggests using different payments schemes as a function of the organization's integration status. However, this approach seems extraordinarily complicated to implement and would likely negate much of the benefit of moving to a bundled payment system.

Needing new relationships and structures: most rural providers

Many of the large and well known IDSs in the U.S. serve rural populations. Nevertheless, on average, health care is less integrated and more fragmented in rural settings (Alexander et al., 1998). For bundled payments to be successful in rural settings, hospitals, physicians and PAC providers need to establish new contractual relationships that specify payments and institute mechanisms that monitor performance. There are a number of ways in which these contracts could be structured. The classic approach to the integration of care is through consolidation into a common ownership structure. It is also possible for providers to form business units along service lines that are bundled. Another possibility is to implement bundled payments through virtual organizations; in this approach providers are linked not by common ownership but rather through a set of business contracts. That is, hospitals can establish gainsharing arrangements with providers that would be tied to bundled services.⁹

CMS is also considering the implementation of a virtual bundling approach that would assign groups of providers to patients. In this arrangement, the generosity of the payment would be based on the patient's cost or outcomes experience. Under virtual bundling, organizations would not need to establish contractual relationships with one another but would nevertheless have an incentive to coordinate care across provider settings.

Implications for rural providers

The important issue in rural areas: For bundled payments to be a successful strategy, increased integration would need to take place in service areas where little provider integration currently exists. There are significant challenges to increased integration in rural areas. In many cases, negotiating provider contracts is likely to be difficult and contentious. In rural settings, negotiations to divide the bundled payment may be particularly difficult as there are fewer providers to potentially include in a coalition of providers. Depending on the nature of the integration, large capital expenditures are likely to be necessary to facilitate integration (Alexander et al., 1998). Larger hospitals and those that are part of a hospital system will be better positioned to integrate, since they have greater access to the necessary capital and have organizational structures in place to manage a multi-site organization (Ibid.).

Care monitoring for quality or cost purposes can be both labor and resource intensive. The use of shared HIT systems can improve the effectiveness and the efficiencies of care monitoring. The available cash reserves for HIT investments in rural hospitals are often modest. Even if rural hospitals can assemble sets of providers to provide integrated care, those hospitals may not be able to afford the necessary infrastructure to best implement integrated care. It seems likely that many rural hospitals will need financial assistance in order to make the investments necessary for them to successfully participate in a bundled payment environment.

⁹Currently, the Inspector General of the Department of Health and Human Services must approve gainsharing arrangements, whereby physician contracted fees are increased commensurate with improvements in performance. To date, very few of these arrangements have been put into place although Medicare is currently conducting a demonstration project to assess their impact.

Evidence on the Impact of Bundling

The evidence on the impact of bundled payments is limited. One piece of direct evidence on the impact of bundling is the Medicare bundled payments demonstration project sponsored by the Health Care Financing Administration from 1991 to 1996; the project focused on hospitalizations for CABG. In this small intervention, hospitals that received global payments for an inpatient episode reduced costs between 12% and 27% (Liu et al., 2001). Clearly the current evidence base on the impact of bundling is limited.¹⁰ Several evaluations now underway should create more information about the likely impact of bundled payments. Medicare is conducting a large demonstration of the impact of bundled payments (the Acute Care Episode Demonstration). In addition, the Robert Wood Johnson Foundation is sponsoring the trial of the PROMETHIUS payment system, which bundles payments for the treatment of a wide variety of conditions, including several that are treated in the inpatient setting. It is important to note that none of these demonstrations explores the impact of bundling in rural areas.

Acute Care Episode (ACE) Demonstration

The current CMS Acute Care Episode (ACE) Demonstration is limited to health care groups, specifically physician-hospital organizations (PHOs), with at least one physician group and at least one hospital that routinely provides at least one of the two main procedures included in the demonstration: hip/knee replacement surgery and/or coronary surgery (e.g., bypass, valve replacement, and pacemaker implementation and/or replacement).¹¹

The ACE Demonstration tests the use of a global payment for an episode of care as an alternative approach to payment for service delivery. In this case, an episode of care is defined as Part A and Part B services provided during an inpatient stay for Medicare fee-for-service (FFS) beneficiaries for selected procedures. As such, this demonstration seeks to align financial incentives within health care groups (i.e. affiliations of hospitals and physicians) to provide quality care according to best practices at a savings to Medicare. Providing financial and other incentives to providers to stimulate improvements in the quality and efficiency with which they deliver care is an example of value-based purchasing (VBP). The ACE Demonstration reflects CMS' ongoing commitment to VBP.

Medicare's Prospective Payment System (PPS)

While we are not aware of other direct analyses of bundling inpatient and PAC services, a similar transformation of incentives occurred when Medicare moved to the prospective payment system. PPS bundles inpatient hospital services into a single payment. Evaluations of the policy indicate that the switch from FFS to PPS significantly reduced length of stay and hospital costs but also increased the number of premature discharges (e.g., Cutler, 1995). Several lessons from the transition to PPS are relevant for the bundling proposals. First, the reform reduced costs and caused some skimping on care. Second, most small rural hospitals have since opted out of the PPS system by converting to Critical Access Hospitals; that widespread conversion suggests that this type of payment structure possesses challenges for smaller facilities.

¹⁰ Hussey (2009) simulated the impact of several policy reforms and finds that a bundled approach results in the largest cost savings.

¹¹ Source: <http://www.cms.hhs.gov/demoprojectsevalrpts>

Implications for rural provider environments: indirect evidence

The explicit goal of bundled payments is to encourage the coordination of care across care modalities. To the degree possible, implementation of bundled payments in rural areas is likely to further consolidate market power in the existing provider environment. Research indicates that increased horizontal market concentration (e.g., reduction in the number of independent provider organizations in a given market through merger and acquisition) leads to increased prices for privately insured patients (Vogt and Town, 2006). Increased hospital concentration is also associated with lower quality of care and higher costs for Medicare patients (Kessler and McClellan, 2000). One of the indirect consequences of bundling may be greater provider horizontal concentration which, in turn, can have negative consequences for both Medicare and non-Medicare patients. Provider concentration fostered in rural areas by bundling would likely have a greater relative impact compared to urban settings with larger numbers of providers. Anti-trust enforcement might serve to mitigate and prevent an unnecessary increase in provider concentration. However, the anti-trust enforcement agencies' recent track record in health care provider merger cases is decidedly mixed.

While horizontal consolidation is a possible side effect of bundled payments, vertical consolidation is a much more likely consequence. The literature on the impact of vertical organizations on the cost and quality of care is limited, and the results are inconclusive. Cuellar and Gertler (2005) find that vertical integration leads to higher prices for inpatient care, while Cilberto and Dranove (2006) do not find a significant price impact of vertically integrated systems on the cost of inpatient care. There is no systematic analysis of the impact of vertical integration in health care on patient outcomes. While the quality of care in a few exemplary organizations has been touted (e.g., Mayo Clinic, Geisinger Health System, Intermountain Healthcare), it is unclear whether the performance in those organizations can be replicated in newly formed rural vertical organizations.

BUNDLING IN THE CONTEXT OF THE RURAL HEALTH CARE INFRASTRUCTURE

The health care infrastructure in rural areas differs from the infrastructures found in urban and suburban settings, and these differences are important to understand when considering the implications of a bundled payment. The types of hospitals, the density of services, and the types of services offered by rural providers all differ from urban and suburban counterparts.

Types of Hospitals

Approximately two-thirds of rural hospitals are Critical Access Hospitals. In response to the growing concerns over the availability of rural inpatient and hospital-based outpatient services, Congress authorized the Medicare Rural Hospital Flexibility (Flex) Program in late 1997 (MedPAC, 2001). The "Flex Program" supports the designation and operation of Critical Access Hospitals (CAHs) and provides cost-based reimbursement for inpatient and outpatient services to Medicare beneficiaries (CMS, 2007). Because CAHs are currently paid on a cost basis, folding them into a bundled payment system presents a challenge. In addition to their medical services, rural hospitals occupy a central role in a community's social and economic

fabric. They are frequently the largest or second largest employer in the immediate area (Moscovice and Stensland, 2002). A successful bundling program that included CAHs would need to balance the benefits that the bundled payment system provides with the potential negative financial impact on these hospitals.

Services Offered

Under a bundled payment structure, it is likely that hospitals will need to provide or contract with other providers for a large portion of the services needed to address an episode of care. Currently, rural hospitals are the source of a wide range of PAC services, including outpatient rehabilitation, home health, skilled nursing care, swing bed, and long-term care services (e.g., social services, assisted living, as well as special units for Alzheimer's and psychiatric patients). Hospitals, including CAHs, can provide skilled nursing care either through operation of a distinct part skilled nursing facility (SNF), or through the operation of swing beds. A distinct part SNF is commonly owned by the hospital but is physically and financially distinguishable from the acute care facility of which it is a distinct part. Since the implementation of prospective payment for SNF care, the number of hospital-based SNFs has been declining. However, the decline has been greater for urban than rural facilities (43 percent versus 20 percent respectively) (Dalton, Park, Howard and Slifkin, 2005).

Rural hospitals with fewer than 100 beds may, with Medicare certification, designate a defined number of their staffed beds as "swing beds" that can be used, as needed, to provide either acute or SNF care. Studies of hospital-based SNF care have found that facilities located in some of the more rural counties tend to look more like freestanding nursing homes than like other hospital-based units in terms of their basic operating characteristics (e.g., bed size, Medicare and Medicaid volume, and staffing ratios) (Dalton, Howard, Slifkin et al., 2001; Dalton and Slifkin, 2004).

Post-acute Care Providers: Nursing Home and Home Health Agencies

Forty percent of all nursing homes are located in rural areas and 80 percent of these facilities are Medicare-certified skilled nursing facilities (SNFs) with some level of capacity to deliver PAC services (e.g., physical therapy, occupational therapy, and to a lesser extent, speech language pathology). In addition to providing services for their residents, nursing homes can and do provide services to non-residents. However, studies have found that nursing home use varies significantly across areas by level of rurality (Bolin, Phillips, and Hawes, 2006).

Although rural home health agencies tend to be smaller and more broadly distributed geographically than their urban counterparts, they represent another major source of PAC services for rural communities (e.g., skilled nursing care, physical and occupational therapy, speech therapy and home-aid support). In general, rural areas have a lower supply of traditional PAC providers (apart from swing beds) (Schoenman, 2004). The availability, proximity, and hospital ownership are major determinants of whether patients use post-acute care services and the type of PAC facility they visit for care (Buntin, Garten, Paddock et al., 2004). A physician most often determines the post-acute care rehabilitation setting for elderly patients who require post-acute care following an acute care episode. However, in many cases, patient referrals to a

post-acute care provider (such as a skilled nursing facility, inpatient rehabilitation facility, or home health agency) are made without identifying the best setting for maximizing outcomes.

Comparing PAC Services Provided by Types of Hospitals

Tables 1 and 2 compare the types of PAC services provided by urban and rural hospitals including those with CAH status. In recognition of the diversity in population demographics and health care system capacity, rural data are frequently divided into the two sub-categories of micropolitan statistical areas and non-core based statistical areas (non-CBSAs). Micropolitan areas include counties with a core city of between 10,000 and 50,000 persons. Non-core areas include the remaining counties (Economic Research Service, 2003).

Table 1 depicts the percentages of urban, micropolitan and non-core hospitals that provide each of six PAC services. Table 2 focuses on rural areas and compares the PAC services provided at rural PPS and CAHs in both micropolitan and non-core areas. The data in these tables were obtained from the Medicare Provider of Service files. Non-core hospitals are less likely to offer occupational therapy and speech pathology than urban hospitals. However, non-core hospitals are more likely to provide swing bed services than their micropolitan counterparts, largely because non-core hospitals tend to be smaller and more likely to qualify for swing bed status (i.e. have fewer than 100 beds). CAHs are more likely to have swing beds than PPS hospitals, both because of their smaller size and because swing beds are a natural fit for such small operations. (Swing beds retain the greatest flexibility for bed usage.) CAHs are less likely to offer home health services than PPS hospitals but otherwise are equally likely or more likely to offer the PAC services we examined. The results presented in Table 1 suggest that rural hospitals are on comparable footing with their urban counterparts in terms of PAC service offerings.

TABLE 1
Proportion of Urban and Rural Short-term General (PPS) Hospitals Providing Post-Acute Care Services*

PAC Services Provided	Urban Hospitals (n = 2,485)	Micropolitan Hospitals (n = 625)	Non-Core Hospitals (n = 398)
Occupational Therapy	86%	79%	62%
Physical Therapy	97%	98%	94%
Speech Pathology	87%	84%	67%
Home Health	51%	58%	56%
Outpatient Rehabilitation	13%	13%	13%
Swing Bed	5%	31%	64%

*Source: 2006 Provider of Services File, extracted from Medicare Online Survey Certification and Reporting System (CMS, 2007).

TABLE 2
Proportion of Rural Short-term General (PPS) and Critical Access Hospitals
Providing Post-Acute Care Services*

PAC Services Provided	Micropolitan Hospitals		Non-Core Hospitals	
	Rural PPS (n = 625)	CAH (n = 201)	Rural PPS (n = 398)	CAH (n = 837)
Occupational Therapy	79%	85%	62%	77%
Physical Therapy	98%	97%	94%	96%
Speech Pathology	84%	84%	67%	77%
Home Health	58%	47%	56%	47%
Outpatient Rehabilitation	13%	29%	13%	27%
Swing Bed	31%	82%	64%	91%

*Source: 2006 Provider of Services File, extracted from Medicare Online Survey Certification and Reporting System (CMS, 2007)

CAHs do offer a different mix of services than their PPS counterparts. Although some CAHs reduced their scope of services following conversion, many expanded their scope of services in the areas of specialty clinics, outpatient rehabilitation, and swing bed services (Greg, Moscovice, and Klingner, 2002; Hartley and Loux, 2005; Schoenman and Sutton, 2008). Table 2 shows the breakdown of services in micropolitan and non-core areas by PPS and CAH facilities. CAHs located in micropolitan areas are slightly more likely than their PPS counterparts to provide therapy services. With the exception of home health services, CAHs located in non-core communities are more likely to provide PAC services than their PPS counterparts.

As of January 2011, approximately 65 percent of all rural hospitals are CAHs (n=1,324). The vast majority of CAHs are located in Medically Underserved Areas (MUAs). MUAs are characterized by fewer residents; a disproportionate proportion of people over 65 years of age; and higher rates of unemployment, poverty, and the uninsured. MUAs also have the greatest shortages of providers (Hart, Larson, and Lishner, 2005; MedPAC, 2001; Gregg and Moscovice, 2003; Rosenblatt, 2002; Center on an Aging Society, 2003; Wilson, Lewis, and Murray, 2009; IOM, 2005; Skillman et al., 2007). Thus any payment structure changes that put CAH financial viability at risk could also undermine a CAH’s ability to provide needed services and its key role in the local economy.

FINDINGS FROM STAKEHOLDER INTERVIEWS

Data alone cannot paint a complete picture of the rural health landscape under a bundled payment methodology. To supplement information available in the economic and organizational literature as well as research on rural health care delivery, this report also presents the perspective of a select group of rural stakeholders who are familiar with emerging models of care that share commonalities with a bundled payment approach. We selected ten key stakeholders for in-depth interviews.

Rural post-acute care providers typically include hospitals, nursing homes, and free-standing or facility-based home health providers. We chose these representative stakeholders

based on their experience with post-acute care services, their familiarity with staffing and reimbursement issues that may emerge as rural patients move through the continuum of care, and their knowledge of existing care delivery systems. Information on key stakeholder experiences was collected via structured telephone interviews conducted in late 2009 and early 2010.

Breadth of Key Stakeholder Experience

These ten stakeholders represent provider organizations and systems in all four census regions. Two respondents have extensive experience in the development and operation of large-scale integrated delivery systems, both of which include a sizable rural component. One respondent is a Senior VP of a state medical society and responsible for policy and planning, member services, and physician professional development for the state. The three physicians interviewed included an orthopedic surgeon with a rural group practice, a family practice physician who is also the executive director of a large rural community health clinic network and a medical director of a large rural nursing home, and a family practice physician who is a board member of a quality improvement organization.

Five hospital CEOs were included in the survey; one represents a southern referral hospital, and the remaining four are CEOs of Critical Access Hospitals. Of the four CAHs, one is a designated trauma center that provides extensive outpatient services including occupational therapy, physical therapy, speech therapy, and cardiac rehabilitation. Another CAH, also designated as a trauma center, operates a home health agency that had been named among the top 100 home health agencies in the country in 2006. A third CAH CEO was selected because of his national recognition as a leader and advocate in rural health care. The final CAH represented in the survey is central to a local rural integrated delivery system including a 100-bed nursing home, home health services, assisted living, senior housing, mental health services, four primary care clinics, and a durable medical equipment service.

In general, the stakeholders projected a mixed picture of rural health care in response to bundled payments, largely based on the differences inherent in micropolitan/non-core communities (e.g., provider and population density and the resulting competition for consumers). The higher the provider and population density, the higher the level of competition and the need to rely on more formalized systems of organization such as ownership, system affiliation, and contractual arrangement. (Less competitive environments are seen as more amenable to the use of informal agreements.)

Overall Concerns about Consequences of Bundling

Respondents raised a number of concerns regarding the consequences of bundling payments. Bundled payments may reduce the demand for rural PAC services if urban hospitals send patients to a local PAC facility with which they are integrated and have an established relationship. It is difficult to predict whether bundled payments will lead to any meaningful shift in urban hospital referral patterns to rural PAC facilities. However, the margins of many rural PAC providers are already thin, and a reduction in demand could push those providers into closure, thereby contributing to greater access barriers for rural populations.

The opinion of most of the survey respondents was that the reassessment and renegotiation of referral arrangements will likely be settled in favor of the larger facilities and systems (e.g., giving them a larger proportion of revenue flow and greater say over patient transfers). Past bundling demonstrations have charged the larger IDS entities with determining the nature of the physician/hospital contracts and disbursing the bundled payments to the providers that served each patient.

One CAH administrator operating within a small rural integrated delivery system noted that “we have a good history in our relationship with larger hospitals, but large hospitals have always viewed CAHs as unfair competitors because of our cost-based reimbursement. I can see that bundled payments will require a significant reassessment of referral agreements.”

Impact on Rural Primary Care Physicians

The role of rural primary care physicians in the negotiation of the bundled payment split is expected to be limited by several factors. Respondents noted that solo practice physicians will likely have the least influence in the negotiations and indeed, may not be able to continue serving in rural areas unless they become part of a larger practice. This would suggest that consolidation of physician services will likely be more horizontal, while that of hospitals, because of the large number of CAHs, will likely be more vertical in nature. One physician commented that primary care physicians, by nature, are not aggressive and not as dependent on hospital-based care as are specialty physicians. He could foresee aggressive negotiation between specialists and smaller hospitals. Reflecting on issues with rural ambulatory surgery center payments, a surgeon respondent noted that similar problems could be in store for rural communities unless there is a clear understanding about how to share the bundle. For example, he saw potential for increased emphasis on specialty provider-hospital relationships to the detriment of primary care provider-hospital relationships.

Some physician respondents noted that they were already at a distinct disadvantage when it comes to negotiating transfer and referrals:

“They dictate; we do not negotiate.”

“Having bundled payments would not change a thing.”

“Our agreements essentially govern patients that are referred to the tertiary hospitals, not from them to us.”

Others expressed a concern that “larger facilities will want leverage to obtain a greater portion of the revenue flow, so we will have a weaker bargaining position.”

Opportunities for Successful Collaboration

Respondents did point out examples of integrated delivery systems and hospital systems that are working collaboratively with their smaller, rural counterparts. One IDS stakeholder commented on taking care of transferred rural patients with hip replacement surgery: “We already fixed the hip” ... “we are not interested in post-acute care and would rather they get that in their own community.” By transferring rural patients to their home communities a referral hospital could more effectively maintain capacity for higher margin cases (e.g., avoid filling beds

with PAC patients) and could best utilize the tailored work environments (e.g., facility design and team skill sets) needed to achieve high performance goals.

To the same end, larger hospitals may lease rehabilitation beds from nursing homes if they do not have sufficient space. This could work out especially well for rural patients placed in rural nursing homes following surgical procedures. For example, one respondent pointed out that orthopedic hip fracture procedures have one rate-limiting factor for high volume practices: having a place to discharge the patient. He noted that the reason some surgical facilities shut down on Thursday afternoon is not because surgeons do not want to operate on Fridays and Saturdays but rather because there is no appropriate place to discharge the patients. One solution the respondent's system found was to lease beds from nearby nursing homes that had some slack in volume. The nursing home was paid on a contract basis whether the beds were filled or not, thereby limiting the nursing home's financial risk. This win-win arrangement enabled the larger hospital to expand its service volume and to cut the length of stay for surgical patients, plus it fostered a well-organized and well-managed rehabilitation program that satisfied patients.

Potential Competition from Tertiary Care Hospitals

To manage bundled payments related to PAC, tertiary care hospitals may elect to establish contracts within their local catchment area or with only a few rural providers. If so, fewer referrals could come back to rural providers with rehabilitation and swing beds. Rural hospitals provide skilled nursing care either through operation of a 'distinct part skilled nursing facility (SNF)', or through the operation of 'swing beds.' Loss of hospital-based units can result in the transfer of rural elders out of their communities and away from their social support networks on a permanent basis (Dalton, Park, Howard, and Slifkin, 2005). Additionally, swing beds represent a major revenue stream for CAHs, and their loss would likely be unsustainable for some CAHs. Remote non-core communities would likely be hit the hardest because of their already fragile delivery systems.

Additional Concerns

A number of concerns raised by the survey respondents stemmed from the vague nature of bundling proposals under consideration. For example, one respondent was concerned about what would happen if his hospital treated a patient with AMI, held the patient for 24 hours, and then transferred the patient to a tertiary care facility for CABG surgery. Who would receive payment for the pre-operation services?

Another stakeholder pointed out that the real challenge would involve patients with comorbidities. A simple hip replacement involving a healthy patient would be readily accepted by a tertiary care center. The decision might not be so clear for the patient with complex comorbidities. Such patients are more difficult to treat in smaller hospitals, making it more important to transfer them to a facility able to manage all of their comorbidities. Several of the respondents also noted that it was often difficult to find occupational health, speech and language therapy for discharged patients, either because of the lack of capacity of rural providers or the providers' unwillingness to accept some insurance plans' coverage.

Critical Issues

Survey respondents identified several critical issues that they thought must be recognized and addressed as rural providers transition into a bundled payment environment.

Creating and maintaining trust

Since funding would become an important component of provider relationships in a bundled payment system, respondents said it will be more likely that distrust could taint the provider relationships. When there are difficulties trusting that a potential contractual partner will act in the best interests of all (either with intent or as an unintended consequence), there will be a strong interest to keep a patient as close to local care as possible (i.e., in either rural or urban settings). A shared information infrastructure could minimize opportunities for mistrust to undermine relationships by identifying which practitioner/providers contribute or reduce value. Equitable reimbursement based on the acuity of the care provided is critical and should be an important component of collaborative arrangements in order to be supportive of both larger and smaller providers.

Information technology infrastructure

The availability of information technology infrastructure is critical for making a bundled payment approach work. For example, information is needed not only to monitor operational costs and revenue flow but also to assess the level of incurred liability (i.e. the need to add services to the PAC package due to comorbidities or chronic conditions). The IT infrastructure also needs to incorporate the accounting implications implicit in contractual agreements. And finally, there is a need for a mechanism to monitor the efficiency of providers and to better understand the incentives and educational interventions necessary for organizations to become low cost/high quality providers.

Help for providers outside of IDSs

There was considerable agreement among respondents that the effective implementation of a bundled payment strategy outside of an integrated delivery system will be a challenge. Providers need sufficient payment and patient information to systematically select the procedures that they can perform to meet the quality and cost effectiveness goals of a bundled payment. One respondent suggested,

“If small rural hospitals have immediate electronic consults available in collaboration with a good emergency room, good urgent care, and a stable cadre of primary care physicians, they will be able to provide high quality care for relevant diagnoses and conditions. They would be less likely to refer patients prematurely and would be able to maintain a viable delivery system.”

Summary of Stakeholder Input

In summary, the key stakeholders we interviewed were largely in agreement that bundled payments will work best in IDS environments where information technology and the capital to maintain such infrastructure are more readily available. Particular concern was expressed for CAHs that may be handicapped in negotiations because of their reliance on cost-based

reimbursement. Lacking affiliation with a system, group practice physicians will be in a more favorable position for negotiation than independent practice physicians. Physician specialists are expected to conduct more aggressive negotiations than primary care practitioners.

Respondents assumed that implementation of bundled payments would result in widespread reassessment and renegotiation of referral agreements. In addition, most did not expect the advantage in such negotiations to shift from the traditionally favored larger hospital/system entities to small rural hospitals/systems. Without specific provisions put in place by CMS, respondents considered the likelihood of equitable arrangements to be dependent upon relationship/referral history and the leadership and corporate culture of the larger entities that are expected to be charged by CMS with the responsibility of forming and implementing the necessary referral relationships. As one stakeholder noted, “Providers are already establishing equitable referral agreements, and they have clear models for accomplishing such goals. Under bundling they will have strong incentives and will begin using the models if they have not done so already.”

POTENTIAL CONSEQUENCES OF BUNDLING PAYMENTS AND STRATEGIES TO ADDRESS KEY ISSUES

The current proposals outlining a Medicare bundled payment methodology appear to target high-margin services (e.g., hip replacement, CABG surgery) that are less likely to be provided in a CAH. However, it is expected that, as a bundling program matures, additional procedures will be folded into the bundle. A negative ripple effect may occur whereby the lost Medicare revenues experienced during the initial stages of a bundled payment program may make it difficult for CAHs to position themselves to contract for services for conditions that have typically been within the purview of CAHs (e.g., heart failure, community-acquired pneumonia, diabetes, et cetera).

The cumulative impact (i.e. financial, service capacity) of a bundled payment policy on local rural health care delivery systems may be hard to predict and potentially difficult to respond to once those policies are implemented. It is important that proactive steps be taken to address those potential consequences that can be hypothesized from the information available today. Therefore, we offer the following list of potential consequences and possible actions and/or policies to address those consequences.

Finding #1: Bundled payments may improve the quality of care in rural areas; however, the impact is likely to be unevenly distributed across geography and care systems.

Several of the PAC stakeholders we interviewed noted that the consolidation of services from tertiary care centers into rural areas (while presenting a number of challenges for local providers) would also provide opportunities for disseminating cutting-edge information technology (e.g., investment of urban and large rural health system resources into health technologies through ownership and management contracts). Stakeholders also expected health care quality to improve through enhanced care coordination as bundled payments better aligned provider incentives.

The effect of bundled payment mechanisms on care delivery and care quality can be examined using Donabedian's quality framework of process, structure and outcomes (Donabedian 2005). The *process* of care is directed by the physician in conjunction with facility practices. Established care guidelines are readily available for most of the conditions and procedures used in the bundling demonstration. These guidelines represent years of research, collaboration and dissemination. The AHRQ-sponsored National Guideline Clearinghouse (NGC) hosts a website with numerous guidelines for many conditions. Adherence to guidelines is currently used for quality assessment, comparison, benchmarking and pay-for-performance initiatives. However, most guidelines effectively address issues in the acute care setting. Bundled payment structures create the potential to look at maintenance of quality parameters across the entire episode of care and to develop guidelines that address coordination issues. As the bundled payment method is rolled out, continued monitoring of guideline adherence would be an indication of quality of care. Monitoring guideline adherence for providers that are not part of a formal integrated delivery system presents significant challenges. Privacy constraints prohibit a centralized monitoring system. Varying documentation structures add complexity and decrease abstraction efficiency potential.

The *structure* of care is defined by Donabedian (2005) as administrative and related processes that support the provision of good care. In this case we can look at the structure of relationships between providers. How might the bundling of payment impact the relationships between physicians and facilities or the way care is provided? What are the structural variables that could change due to limited financial resources without decreasing adherence to guideline processes? If physician payments were decreased, physician provider groups might look at cost saving or efficiency measures. They may change follow-up care to be provided by mid-level providers or decrease the time they spend with a patient before or after the patient's surgical experience. This decreased involvement may – or may not – decrease the quality of care. The effect of a change in provider treatment strategies can be quantified through monitoring of process and outcome measures.

Outcomes can include mortality, morbidity, independence in ADLs, and patient satisfaction. Some adverse outcomes (such as mortality and re-admissions) for the included procedures have been clearly defined for inpatient care. Other health outcomes can be added that address quality of life and/or independence in self-care. The responsibility for tracking patients thirty days or sixty days post discharge would fall to the provider that receives the bundled payment. However, the provider responsible for post-discharge tracking may easily lose contact with the patient, especially when that provider is not the most recent provider and/or when patients do not return to the facility (or even the area) where they were admitted.

Quality measurement opportunities. Bundled payment strategies also create many quality measurement opportunities, but such opportunities need to be explored and tested to ensure effective use of the bundled services. Measurement opportunities include these categories:

- 1) *Availability of providers.* As discussed before, horizontal and vertical integration of physicians has the potential to provide both needed services to rural areas and the effective transfer of patients to needed services out of the area as appropriate. Provider availability also has to be examined from the standpoint of patient preferences.

Measuring the prevalence of different service providers that are available to satisfy local needs would be important in assessing patient satisfaction.

The availability of PAC providers also requires consideration. Negotiations between systems and PAC providers have the potential of reducing PAC provider availability in rural markets or decreasing the choices of PAC providers available for rural patients. Ongoing measurement of the availability of PAC providers should be assessed in rural areas to ensure that patient choice is available.

- 2) *Outcomes.* As mentioned above, these measures could include mortality, functional status, and readmissions. Outcome measures will need to be compared across systems and regions to determine if vertical integration or other such models (including virtual bundling) has an effect on quality.
- 3) *Patient satisfaction surveys.* While patient satisfaction is one outcome, it is mentioned separately to highlight the importance of the effect that bundling may have on rural patients. The experience that rural patients have in distant urban hospitals or with urban PAC providers should be considered, since vertical integration may lead to the use of more non-local providers.
- 4) *Provider satisfaction surveys.* The hierarchical structure prevalent in medical care plus the potential of bundled payments being routed through hospitals will combine to create ongoing tension in negotiations between these entities and other providers in the various episodes of care. It is important to measure whether all the providers whose services are being bundled are satisfied with both a) results of the negotiations between entities and b) the coordination across entities. While providers' satisfaction with these arrangements might be less of a concern with virtual bundling, monitoring satisfaction is an important way to improve coordination between entities, which should lead to better quality.

Challenges in non-integrated environments. Bundled payments are likely to work best in integrated health care systems, where it is easier to align incentives across providers. While there are several large integrated health systems in rural areas, much of the rural health care infrastructure is fragmented. Current and past bundled demonstration projects have focused on integrated systems that link predominantly large urban-based providers. It is not clear whether the findings of those demonstrations can be generalized to a rural context. Making bundled payments work in non-integrated environments requires addressing these challenges:

- 1) Allocating a bundled payment across providers can be a complex and time-consuming negotiation. Allocations can vary according to the bundle of services, the availability of PAC providers, and the service capacity of the admitting hospital.
- 2) Urban referral centers will have an incentive to provide PAC services for discharged rural patients or to contract with their urban counterparts. In this way, urban referral centers would maintain as much control as possible over the efficiency and quality of service delivery.

- 3) Contracts among rural providers will likely favor physicians and hospitals over other PAC providers because of the greater bargaining power typically held by physicians and hospitals. Thus, rural post-acute care providers may see a decline in their net Medicare reimbursements.
- 4) Appropriately aligning incentives across providers requires monitoring. The rural environment poses particular challenges in monitoring, notably the lack of HIT infrastructure and low levels of competition. Some providers will have sufficient bargaining power to compromise the efficiency and cost-containment goals of bundling payments.

Potential Strategies to Address These Issues

Based on our assessment of challenges, we suggest that CMS consider the following proactive steps:

- Design optimal contractual arrangements that provide rural providers with templates. Such templates would reduce the cost of negotiating contracts across providers and help redress the potential imbalance of provider bargaining power.
- Develop risk- and volume-adjusted performance criteria to facilitate contract monitoring and selection of PAC providers for contracting.
- Provide contract guidance and technical support for small rural providers as they negotiate contracts with larger urban and rural referral centers.
- Design measurement and reporting mechanisms that adapt to both integrated and non-integrated care delivery models (e.g., HIT capacity, inter-platform compatibility, and design/protocol differences.).

Finding #2: Bundled payments may lead to increased provider consolidation and fewer provider options in rural markets.

Since bundled payments are well-suited for integrated systems, there will be incentives for rural providers to consolidate vertically and horizontally. A number of survey respondents noted that providers are already engaged in this type of strategic activity. Examples given included a non-local health care system that first introduced a primary care clinic, followed by the introduction of a specialty service (e.g., orthopedic surgery), which then began referring high-margin cases to a distant tertiary care facility. Respondents also observed that the CAH requirement of a supporting hospital relationship provides the baseline relationship that could expand to share patients and payments.

The respondents described several scenarios that could develop in rural areas. A health care system could become owner of a local rural hospital and integrate the physicians quickly to create payment and operational efficiencies. In another scenario, the rural hospital could remain independent but have a contractual relationship with a large physician provider group. More of these arrangements are growing now because of the opportunity for provider-based billing. The message from the health care system to the local physicians is, “I’m not going to force you to merge with us; we will figure out a contract for services with the hospital as the biller of record

and the physicians as the contracted supplier.” Most respondents agreed that integrated delivery system development makes sense and is the likely scenario should Medicare introduce a bundled payment methodology.

It is also possible that increased consolidation could lead to increased costs of care and private payer premiums, which could result in an increase in the number of uninsured and underinsured. Rural patient referrals for the types of care likely to be covered in the initial phases of bundled payment implementation will primarily go to urban and larger rural referral centers. These providers may be less likely to transition their patients back to post-acute care settings in or near a discharged rural patient’s community. Such changes in care patterns may lead to a decline in demand for post-acute care facilities in rural areas. The resulting loss of Medicare reimbursement could jeopardize the financial viability of rural PAC providers and, in the case of rural hospitals, undermine their ability to provide lower-margin, safety net services.

Potential Strategies to Address This Issue:

- Adjust the criteria for monitoring the anti-trust implications of provider mergers and acquisitions (such as the Hart-Scott-Rodino thresholds) to increase their sensitivity to scale differences found in rural health care markets.
- Assure that rural providers are fully aware of Department of Justice/ Federal Trade Commission anti-trust enforcement policies regarding service delivery integration.
- Where feasible, require larger hospitals to establish multiple PAC contracts to accommodate consumer choice in health care providers and settings.

Finding #3: Incorporating Critical Access Hospitals into a bundled payment mechanism may not work.

Several CAH respondents commented that their cost-based reimbursement status has placed them in a position where PPS hospitals consider them unfair competitors. It can be difficult to negotiate a contract, because there is less flexibility to underbid competitors. Many Critical Access Hospitals are freestanding facilities; that status further undermines their strength at the bargaining table. One respondent commented,

“Negotiations between systems and freestanding hospitals never go that well for the freestanding facility – even when it only involves collaboration. I have been here 30 years, and in that time I have seen administrative turnovers at larger facilities five times. When leadership changes, so do evaluations of existing arrangements.”

A few respondents believed that CAHs should be exempt from bundled payments because of the CAH’s position as a safety net provider in small communities. One respondent felt that if CAHs were exempt there would be an incentive for PPS hospitals to seek CAH designation to escape from the need to negotiate with multiple providers. This type of exemption could either draw tertiary hospitals to the CAHs as partners or steer them away. Another respondent noted that one way CAHs could be involved would be to keep them on cost-based reimbursement but to reduce payments for CAHs that are not efficient and have high re-

admission rates and to increase payments for CAHs performing substantially above the median.

Almost two-thirds of all rural community hospitals are Critical Access Hospitals (CAHs). The current cost-based reimbursement of CAHs creates a counter-incentive to the goal of bundled payment strategies.

Potential Strategies to Address this Issue:

- Exempt CAHs from the bundled payment methodology.
- Carve out PAC services provided by CAHs for bundled payments under the same methodology used for PPS providers.
- Create a “fixed-bonus” payment to support the continued operation of CAHs and avoid loss of access to needed services in rural communities without alternative sources of care. Performance incentives can be incorporated into the bonus payment methodology to encourage service delivery efficiencies and quality.

Finding #4: Under a bundled payment system, safeguards may need to be implemented to protect rural consumer choice and patient/provider relationships.

There is considerable agreement that integrated delivery systems provide a suitable environment for a bundled payment scenario. IDSs also have several options for patient care. Discharged patients could be kept within the corporate umbrella or local contractual relationship of the tertiary care facility in order to achieve greater control over the level of financial and performance risk. Contractual arrangements could also be established that provide for transfer back to a patient’s community (e.g., between the patient’s primary care physician and the referral facility). Under the current arrangement of capitated payments, there are no financial incentives for patient transfers back to local communities. In order to establish such policies, deliberate steps will need to be taken on the part of each party and/or by the oversight agency for the program.

Effective collaborations need to be based not solely on receiving optimal reimbursement for the services provided but also on selecting the best site for the most appropriate care for the patient. A few IDSs have voluntarily established transfer policies that take local capacity and patient choice into account. One respondent described a health system policy based on the perspective of respecting the needs and mission of member CAHs:

“We do not compete with them for local lab work or procedures, and we take a proactive stance to return local patients back to their home communities. We sit on their boards of directors and discuss issues that arise as a matter of course. This is why we get 40% of our patients from rural communities.”

Bundled payment approaches will create strong incentives to keep the provision of PAC services within the admitting hospitals’ organizational umbrella or under contract with neighboring providers. The potential loss in access to PAC providers in a rural patient’s own or nearby community threatens rural consumers’ ability to choose their care setting. Without sufficient safeguards, patient choice may be lost, support for patient self-management and

treatment compliance may be compromised, and the well-being of rural residents could be jeopardized.

Potential Strategies to Address This Issue:

- Implement contract requirements that encourage patient choice. One approach would be to document that a specific percent of rural residents discharged from referral hospitals can obtain PAC services within a reasonable distance from the resident's home community (e.g., within 30 miles).
- Foster communication to assure care coordination during the transition between hospital discharge and transfer back to the patient's community. Communication would include treatment plans for PAC providers, medication reconciliation and care plans sent to the patient's primary care provider. Require transfer communication documentation and reporting.
- Specify a split payment methodology (as with split DRGs) so that each set of providers does not re-create the wheel.

CONCLUSIONS

The use of a bundled payment strategy to control costs and improve quality of care has grown considerably in recent years in both the private and public sectors. The implementation of the National Pilot Demonstration for Payment Bundling authorized under the Patient Protection and Affordable Care Act is scheduled for no later than January 2013. The Secretary of Health and Human Services has been given broad latitude to ensure that the demonstration will use: a patient assessment process to determine the most clinically appropriate site for care; an adequate choice of providers of services for beneficiaries; site-neutral quality measures; and payment for care coordination, discharge planning, and transitional care services.

The Secretary is also directed to consult with small rural hospitals, including CAHs, on issues related to their participation in the program. This provision for consultation with rural stakeholders has not occurred in past legislation. It represents a significant opportunity for improving rural provider participation.

Accommodating issues related to low-volume services is critical for the evaluation, monitoring, and improvement of quality and operational performance. However, the existing language in the Act does not provide any indication that other issues are recognized as important for program implementation (e.g., CAHs' inability to aggressively negotiate because of cost-based reimbursement). The issues we identify in this report represent other important factors that could impact the ability of rural providers to participate in a bundled payment strategy. Addressing these issues is critical for assuring the continued operation of many rural health delivery systems as the bundled strategy payment strategy is expanded nationwide.¹² At this point, only entities that include a hospital, physician group practice, skilled nursing home, and a home health agency are eligible to participate in the pilot demonstration. It is not clear how rural

¹² The Secretary is required to submit a plan for the implementation of an expansion of the pilot program no later than January 1, 2016.

providers will be part of, or have relationships with, these entities in the post-demonstration environment.

Since participation in the pilot demonstration appears limited to IDS-like entities, it will be difficult to determine the implications of bundling for providers that are not part of such an entity. It would be useful for CMS to develop quality measurement and reporting processes that would be applicable in non-integrated collaboration models as well as in the integrated models that will exist in the demonstration. In this way expansion of the strategy could be facilitated in those areas where formal integration is not possible or desirable. There will also be a high demand for contract guidance and technical support, especially for non-integrated providers. It would be far more effective for CMS to either develop or contract for development of universal contract support that could be readily adapted to multiple market settings. Useful contract support could include decision-making processes, factors important for specifying payment rates, performance measures for individual providers and provider teams, and mechanisms for monitoring resource utilization and patient outcomes.

Implementation of a bundled payment strategy will drive consolidation and regionalization of services both horizontally (e.g., physician groups) and vertically (e.g., hospitals, nursing homes, and home health care). The degree to which this may evolve will depend on a variety of factors, including supply and demand for services, relative levels of competition, the pre-existence of integrated systems of care, and Medicare Conditions of Participation.

There is no doubt that providers that are part of an integrated delivery system will encounter a far different experience under bundled payments than independent providers, since the latter must establish contracts with other providers to successfully pursue the same quality and operational performance goals. Rural hospitals, physicians, and other PAC providers may elect to remain independent and seek to establish contractual relationships with other providers in transfer, referral, and treatment efforts, or they may opt for affiliation with or ownership by a larger provider or system. In earlier discussions we noted the benefits to rural providers of affiliation with or ownership by an integrated delivery system in terms of access to capital, information system infrastructure, workforce resources, et cetera. However, it is unlikely that all rural communities will be attractive to larger hospital/system entities. Nor is it likely that all rural providers will seek to be part of a larger hospital system or IDS.

In rural regions where consolidation does occur, there will be opportunities for the dissemination of cutting-edge technologies either through ownership or management contracts. The expansion of an IDS into rural communities could also provide a strong case for strengthening the local primary care network, because of the potential for a solid referral system. Once in place, a primary care network that fed into an IDS could create a strong argument for increasing primary care physician salaries, because that network would make it more attractive to recruit practitioners and would generate additional revenue for the IDS. However, establishing a provider network will require developing a plan that clearly outlines the rights and roles of each provider and allows those providers assuming the greatest risk to exercise greater managerial control to make those risks acceptable. There are numerous models of rural IDS operations that could be replicated in other rural communities, but not all rural communities will be suitable for

a variety of reasons. The likely reasons include any or all of the following: lack of competition, low population density, workforce shortages, the services bundled and/or the dominance of nearby tertiary care systems.

For rural providers to be meaningful participants in bundled payment strategies, they will need to be fairly reimbursed for the services they provide. "Success" in a bundled payment strategy should not be totally based on financial factors, but should also reward quality outcomes and patient choice, including selection of the best site for the most appropriate inpatient and post-acute care for rural as well as urban patients.

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