

BUNDLING BETTER

*How Medicare Should Pay for Comprehensive Care
(for Hip and Knee Surgery and Other Healthcare Needs)*

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1. OVERVIEW

Today, if someone needs a new hip or knee, they will be faced with the best and worst aspects of the American healthcare system. They have the opportunity to receive one of the most successful types of surgery ever developed, a procedure that can maintain or improve their ability to walk and engage in physical activities without pain. But they will likely only be able to receive that surgery as part of a poorly coordinated and unnecessarily expensive series of services, with the potential for experiencing serious infections and complications that could have been avoided. Although every individual healthcare provider the patient encounters may be delivering their specific subset of services in the best way they can, no one will be accountable for ensuring the patient achieves the best overall outcomes, and the patient may be forced to use services that are less effective and more expensive than necessary simply because their health insurance pays for those services and doesn't pay for the better alternatives.

The Problems With Current Payment Systems

These problems have been either caused or perpetuated by the way Medicare and other health insurance programs pay physicians, hospitals, and other providers for healthcare services:

- Payments are made to individual providers for very specific services – an office visit with a physician, a surgical procedure, 15 minutes of physical therapy, a day in a skilled nursing facility – rather than a complete package of services designed to achieve the overall result the patient needs. No one is authorized or paid to coordinate all of the providers and services, so patients can easily receive too many of some services and too few of others.
- Some services that could help achieve better results at lower cost are not paid for at all or the payments are not sufficient to cover the costs of the services, forcing both patients and providers to use less efficient or effective services because payment is available for those services.
- Providers will be paid the same amount regardless of whether they deliver a service well or poorly. If a patient experiences an infection or complication that could have been prevented, the provider who caused the problem or who could have prevented it may be paid for treating the complication as well as being paid for the service that caused the problem. Conversely, a provider with a low complication rate may be paid less than what it costs to deliver higher-quality care, even if that care would result in lower total spending.
- Providers who can achieve good results with fewer services will be paid less than providers who use more services, which can force efficient providers out of business and encourage the growth of inefficient approaches to service delivery.
- Payers commonly try to reduce high levels of spending by cutting payment amounts for individual services, but this can force the most efficient providers out of

business or force them to deliver unnecessary services in order to cover their costs, which in turn can result in higher rather than lower total spending.

In every other industry, people buy assembled products that are designed to work effectively and that have a warranty against defects, with a single price for the entire product that can be used to compare the products offered by different manufacturers. In contrast, in healthcare, people buy a collection of product “parts” with no assurance they will work well together, no warranty for defects, and no ability to determine the overall cost in advance or to compare the outcomes and costs of different providers. In every other industry, manufacturers are rewarded for delivering higher-quality products at a lower cost, but in healthcare, providers are rarely rewarded and regularly penalized for doing so.

The problems with current healthcare payment systems affect patients with all kinds of health issues, not just those needing hip and knee surgery. However, because so many people receive hip and knee surgery, and because the kinds of services they receive are relatively expensive, the problems payment systems cause for hip and knee replacement contribute disproportionately to the growth in total healthcare spending, particularly for the Medicare program.

Bundling Badly

In July 2015, the Centers for Medicare and Medicaid Services (CMS) announced a major initiative to pay differently for services associated with hip and knee replacement. The stated intent of the “Comprehensive Care for Joint Replacement” (CCJR) initiative is to promote quality and financial accountability for overall “episodes of care” for hip and knee replacements. Unfortunately, as described in detail in CHQPR’s report *Bundling Badly: The Problems With Medicare’s Proposal for Comprehensive Care for Joint Replacement*, the way CMS has proposed to change payment fails to solve many of the problems with current payment systems and will likely create new problems for both patients and healthcare providers. For example:

- The CMS proposal does not change any of the underlying fee for service payment structures that create the current problems. Instead, it tries to impose an overall budget on the total cost of care after the care has already been delivered.
- The CMS proposal would set the same budget for an episode of care regardless of differences in patient need, which could lead higher-need patients to be underserved or be denied access to surgery.
- The CMS proposal would put hospitals at risk for all of the costs of post-acute care services, even though hospitals do not have direct control over those services today and would not be given any greater control under the proposal. Hospitals would also be held accountable for the management of patients’ chronic conditions after discharge, regardless of whether the physicians who had been managing those conditions prior to the hospital admission were even affiliated with the hospital.

- The CMS proposal would reduce the overall budget for services if fewer services eligible for current payments were delivered, with no consideration for the costs providers had incurred in delivering new or improved services that are not reimbursed under current payment systems.
- Under the CMS proposal, providers who deliver better outcomes would not be rewarded for doing so unless they were able to reduce spending. Conversely, providers who deliver poor outcomes would not be penalized as long as spending remained within target levels.
- The CMS proposal would mandate participation by providers in randomly-selected regions while precluding participation by providers in other regions, which would limit the choices of Medicare beneficiaries in every community.
- The CMS proposal would preclude the ability to implement better approaches to payment for joint replacements in any region for a five year period.

Bundling Better

Fortunately, there is a much better way to design a payment system to support comprehensive care for joint replacement. This report describes in detail how a properly designed payment system for hip and knee replacement could enable physicians, hospitals, and other providers to improve care for patients and reduce costs for the Medicare program without the need for those providers to accept excessive or inappropriate financial risk. This same payment system could be used by private employers, state Medicaid agencies, Medicare Advantage plans, and commercial health insurance plans to enable providers to improve care and reduce costs for their employees and members who have hip and knee problems.

The revised approach to the CCJR program described in this report would have the following significant advantages over both the current payment system and the proposal that CMS issued in July:

- All of the care associated with hip or knee replacements would be delivered by a physician-led team of providers chosen in advance by the patient receiving surgery.
- This CCJR Team would have the ability to deliver the most appropriate services to meet patients' needs, and the providers on the Team would not be restricted to delivering only those services for which payments are made under current Medicare payment systems.
- The CCJR Team would receive an episode payment designed to cover the costs of all of the services their patients need related to the hip or knee surgery, including all post-acute care services and any complications experienced for a 90-day period. This payment would be established based on what providers agreed that evidence and experience indicated was necessary to support good care for patients. The amount of the payment would be known long before care was delivered and it would be stable

over time, so that providers could establish and sustain high-quality patient care services.

- CCJR Teams who treat patients with greater needs would receive larger episode payments to adequately support the larger amount of care those patients need.
- CCJR Teams who deliver better outcomes for their patients would receive higher episode payments.
- Payments to CCJR Teams would flow through provider-owned CCJR Management Organizations, and limits on financial risk would be established to enable physician practices and provider organizations of all sizes to participate in the program.
- Participation in the CCJR program would be voluntary and open to interested providers in all parts of the country, so that all Medicare beneficiaries would have the opportunity to benefit from better care under the program, and also so that no beneficiary would be forced to receive care paid through the program if their physicians did not believe it would enable them to deliver improved care.
- The CCJR program would not preclude providers or CMS from implementing other payment models if better options became available.

There is no one change or “quick fix” that can achieve all these benefits. Multiple changes must be made to current payment systems in a mutually reinforcing way. Each of the sections of this report describes recommendations relative to one component of these multiple changes. The table on pages 4-5 summarizes how the approach recommended in this report differ from the proposal developed by CMS.

Implications for Care Other Than Joint Replacement

This report focuses specifically on hip and knee replacement because that is the focus of the CCJR initiative proposed by CMS. However, the basic approach described in this report could be used to remove the payment barriers that prevent providers from delivering better care in conjunction with other healthcare procedures used to treat other types of health conditions. Moreover, as discussed in a later section, payment reforms can and should be designed to support good non-surgical care for patients with hip and knee problems, not just those who receive surgery, and this “condition-based payment” approach is applicable to an even broader range of patients and healthcare problems.

Indeed, how CMS pays for hip and knee surgery should not be seen as something only of interest to orthopedic surgeons and to the hospitals and post-acute care providers that care for hip and knee surgery patients. It should be seen as the initial design and implementation of a template for an alternative payment model that could be applied to many other procedures and conditions. Getting it right should be everyone's concern.

SUMMARY OF RECOMMENDED CHANGES TO THE CCJR PROGRAM

	CMS PROPOSAL FOR CCJR	RECOMMENDED CHANGES
1	All types of lower joint surgeries that are needed for any cause would be included.	The CCJR program should focus on elective hip and knee replacement surgeries for patients with joint osteoarthritis. (See Section 2 for rationale and details.)
2	All services related to joint surgery and also all services for management of any chronic disease for 90 days after discharge would be included in the CCJR episode.	CCJR episodes should only include services related to joint surgery from the time a decision about surgery is made to 90 days after discharge from the hospital. (See Section 3 for rationale and details.)
3	The hospital where surgery was performed would be held responsible for all of the spending that occurs during the entire episode of care.	Physician-led CCJR Teams of providers should be formed to deliver all services during episodes in a coordinated way and to take accountability for outcomes and cost. (See Section 4 for rationale and details.)
4	Beneficiaries could make choices about providers and services at any point in an episode without knowledge or input by the hospital that is responsible for spending during the episode.	Beneficiaries should agree to use the providers on the CCJR Team when they decide to proceed with surgery. (See Section 5 for rationale and details.)
5	All providers would continue to be paid under current Medicare fee-for-service systems with only limited changes in the restrictions under those payment systems.	Providers on CCJR Teams should have the option of being paid through a new bundled CCJR payment instead of through standard Medicare fee-for-service payments, and they should have full flexibility to use the CCJR payment to support new and different approaches to care delivery. (See Section 6 for rationale and details.)
6	Hospitals would receive any savings and be responsible for any cost overruns after all fee-for-service payments to all providers are tabulated and compared to the CCJR target spending level. Hospitals would have no obligation to share any savings with other providers and would be restricted in the ways they could do so. Other providers would have no obligation to share the	CCJR Teams should form or designate a CCJR Management Organization (CCJR-MO) that is owned by providers to receive CCJR episode payments and allocate them among the providers on the CCJR Team who opt to be paid through that mechanism. CMS would deduct fee-for-service payments made to providers who did not opt to be paid through the new bundled payment. (See Section 7 for rationale and details.)
7	There would be no risk-adjustment of target spending levels other than two different target levels for patients assigned to each of the two hospital MS-DRG categories for joint replacement. Providers would not be accountable for the full amount of spending for very high-cost cases.	A clinical category system should be created based on patient characteristics that affect their need for services during the complete episode, such as functional status and comorbidities. In addition, outlier payments should be paid to CCJR Teams for patients who need unusually expensive services. (See Section 8 for rationale and details.)
8	Providers would continue to be subject to all quality measures associated with existing fee-for-service systems as well as several additional outcome measures. Providers would be encouraged but not required to collect information on functional outcomes.	Providers paid through the CCJR-MO for joint replacement patients would be accountable for outcomes, and they would be required to collect and report information on functional outcomes. (See Section 9 for rationale and details.)
9	Target spending levels would be based on historical costs but with a uniform reduction applied to the targets for all hospitals regardless of whether past episode costs were high or low. Target spending levels would be adjusted downward every 1-2 years to reflect reductions in average fee-for-service spending.	CCJR episode payments to individual CCJR Teams should be based on historical costs within clinical categories for those Teams; initial savings should be based on reducing potentially avoidable spending such as readmissions for complications. Initial payment amounts should be held stable for a three year period, with increases provided to cover the costs of inflation. (See Section 10 for rationale and details.)
10	Hospitals would have no downside risk during the first year, they would be responsible for losses of up to 10% of target spending levels for episodes in the second and third years of the program, and they would be responsible for losses up to 20% of target spending levels in subsequent years.	Risk corridors should be established to protect CCJR Teams against random variation. The thresholds should be based on the revenue flowing to the providers who are paid directly through the bundled payment rather than the total payments to all providers, so it is feasible for smaller providers to participate. CCJR Teams should have no downside risk during the first year, and then should be responsible for small increases in risk over time after they build reserves against random variation. (See Section 11 for rationale and details.)

SUMMARY OF RECOMMENDED CHANGES TO THE CCJR PROGRAM

	CMS PROPOSAL FOR CCJR	RECOMMENDED CHANGES
11	CMS would keep all savings beyond 20% of target spending levels for CCJR episodes, and it would regularly reduce payments in order to retain all savings generated by providers during episodes of care.	Risk corridors should also be established to provide additional savings to Medicare if providers are able to reduce spending significantly, but providers should be permitted to retain most of the savings generated during the initial years of the program in order to cover the costs they will incur in transforming care and collecting outcome data, to enable them to build reserves against random variation in costs, and as an incentive to encourage early participation in the program. (See Section 12 for rationale and details.)
12	Target spending levels would be transitioned quickly from hospital-specific levels to regional averages. CMS could unilaterally change the structure of the program and all definitions used in it.	There should be a 3-year period of stability in payment categories and payment amounts. Then, CMS and the CCJR Teams should work collaboratively to refine the clinical categories, the payment amounts, the performance standards, and the risk protections in the CCJR program. A transition from provider-specific payment rates to national rates should be made slowly, and only after more accurate data on episode costs are obtained. Payment rates should be updated annually for inflation and revised periodically based on analysis of the actual costs of delivering high-quality care. (See Section 13 for rationale and details.)
13	Patients would be responsible for paying the relevant cost-sharing amounts for each individual service they receive according to standard Medicare rules.	Patients should pay a single, pre-defined cost-sharing amount for an episode of care based on the clinical category to which they are assigned. (See Section 14 for rationale and details.)
14	All IPPS hospitals delivering joint replacement surgery in 75 randomly-selected metropolitan statistical areas would be required to participate for five years. Hospitals and other providers in all other regions would be unable to participate during the five year period so they can be treated as a control group for evaluating the impacts of the payment model.	Participation in the CCJR program should be voluntary and should be available to all providers in all parts of the country. (See Section 15 for rationale and details.)
15	The CCJR program would be implemented in January 2016 and continued for a five-year period. A decision would then be made as to whether and how to continue it.	A revised CCJR program should be designed during 2015 and early 2016 so that initial implementation can occur in January of 2017. The initial 3 years of the program should be treated as a research & development phase in which CMS and CCJR Teams would work collaboratively to refine the program. In late 2018, modifications to the program should be implemented and additional providers should be invited to participate. (See Section 16 for rationale and details.)
16	The CCJR payment system would be limited to patients receiving surgery.	Episode payments should also be established to improve the ability of providers to deliver effective non-surgical care to patients with joint osteoarthritis. Condition-based payments should also be created to enable provider teams to more effectively manage osteoarthritis regardless of what types of treatment are used. (See Section 17 for rationale and details.)
17	CMS would use a complex set of rules to determine whether savings during CCJR episodes should be credited to the CCJR hospital, to an ACO, or to a provider participating in another payment model.	CCJR payments should be designed to complement the efforts of Accountable Care Organizations to manage overall costs, and they should also be used to help ACOs transition to managing risk-adjusted global payments and budgets. (See Section 18 for rationale and details.)

2. FOCUSING ON HIP AND KNEE OSTEOARTHRITIS

A good payment system should be designed to enable healthcare providers to successfully address a patient's health problems at the lowest possible cost rather than merely paying providers for particular kinds of treatment. "Lower joint replacement surgery" is a very broad category that includes patients with ankle, hip, and knee problems resulting from everything from a fracture due to injury or cancer to severe arthritis of the joint. The most appropriate, comprehensive care for these patients will differ significantly even if the surgery itself is similar. When the providers involved and the outcomes expected will differ, the amount and structure of payment may also need to be different. Patient-centered care requires patient-centered payment, not a one-size-fits-all approach.

The Comprehensive Care for Joint Replacement (CCJR) program should focus, at least initially, on patients with osteoarthritis of the hip and knee rather than every type of patient who receives joint replacement surgery. Hip and knee surgeries represent the majority of lower joint replacement surgeries, and osteoarthritis is the most common reason for hip and knee replacement surgery. Commercial bundled payment programs and even the spending and quality measures developed by CMS focus solely on hip and knee replacement surgeries and they exclude patients who have fractures and other problems, so it makes sense for a new Medicare payment program to focus on these patients, too.¹ Additional types of patients could be added later after experience is gained with a narrower focus.

This means that the "trigger" for the CCJR payment cannot be based on the MS-DRG categories Medicare uses to pay hospitals. The current MS-DRGs include patients receiving ankle surgeries as well as surgeries for hips and knees, and the MS-DRGs include both elective procedures for osteoarthritis and surgeries required for injury- or disease-related fractures.² Moreover, as discussed in a later section, payment reforms should also be designed to support alternatives to surgery, and hospital-based surgery DRGs cannot be used for that.

Instead of MS-DRGs, the CCJR payments will need to be based on a new set of condition-based codes specifically designed to identify patients with osteoarthritis and stratify them based on their specific needs. This is discussed in more detail in Section 8. Congress mandated the development of new condition-based payment codes in the Medicare Access and CHIP Reauthorization Act (MACRA), and the CCJR program would be a logical place to start.³

3. DEFINING THE SERVICES IN THE EPISODE

Comprehensive care for a serious condition generally involves more than one service or procedure over a period of time, and the desired outcome generally also occurs after a period of time rather than immediately following completion of a single service or procedure.

This is certainly true for hip and knee osteoarthritis. Patients receiving hip or knee replacement surgery will need proper wound care, pain management, and physical therapy for a period of time after surgery is completed in order to avoid complications and to safely achieve the desired mobility and functioning. Patients will differ in the number and types of services they need and the length of time it takes to complete the services, but there seems to be general agreement that for most patients, the relevant services, complications, and outcomes occur within 90 days after surgery. There is also growing recognition that services delivered before surgery, such as patient education, weight loss, and physical therapy, can improve outcomes⁴ although the length of time during which these services can or should occur is not clear.

Consequently, it makes sense to design payment for CCJR around an "episode of care" that would involve services related to hip and knee replacement that are initiated within 30 days prior to the surgery, during the hospitalization for the surgery, or within 90 days after discharge from the facility where the surgery was performed. The payment should also include a "warranty" for complications associated with surgery and other treatment, i.e., the payment should be sufficient to enable high quality care, and if complications occur, they should be treated at no additional cost to the patient or Medicare. To implement this, the following services should be covered by the CCJR payment:

- All professional services related to the hip or knee surgery, including services occurring between the time the decision to perform surgery is made and when the surgery is actually performed;
- Facility services for the patient's stay at a hospital or other facility where the procedure is performed.
- Any other professional services performed during the patient's stay at the hospital or other facility where the procedure is performed.
- All services delivered by Inpatient Rehabilitation Facilities (IRFs), Skilled Nursing Facilities (SNFs), Long-Term Care Hospitals (LTCHs), or Home Health Agencies (HHAs) if those services are ordered for reasons related to the surgery and begin within 90 days after discharge from the hospital or other facility where the procedure was performed, even if the service extends beyond 90 days.
- Any hospital admissions or outpatient services, including both facility charges and physician services, that are related to the initial joint replacement surgery or to a complication resulting from the surgery or the planned post-acute care services and that occur between discharge from the facility where the procedure is performed and 90 days after discharge.
- Any other physician services delivered within 90 days after discharge that are related to the joint replacement surgery, recovery from the surgery, or a complication of the surgery.

Episode Payment Models Complement Transparency Initiatives

Having a single payment for a full episode of care with a warranty for complications would not only help to control spending, it would also address a fundamental weakness that exists in current efforts to promote transparency about healthcare prices and quality. Because there are multiple, potentially expensive services delivered during an entire episode of care for surgery, knowing only the price of the surgery itself is insufficient and potentially misleading for individuals trying to decide whether and where to have surgery. A surgeon and hospital that charge 5% less for the surgical procedure aren't really delivering lower cost care if they have a readmission rate due to surgical site infections that is 5 percentage points higher or if they achieve savings by discharging patients earlier and sending them to an expensive rehabilitation facility that requires additional payments. Payment amounts that cover all of the services needed during an entire episode allow patients and payers to make true "apples-to-apples" comparisons among healthcare providers.

Risk Adjustment for Other Health Problems, Not a Bigger Payment Bundle

Many patients with hip or knee osteoarthritis will have other health problems that will also require healthcare services during the approximately 4 months of the CCJR episode. Some of these services are planned or predictable (e.g., care for a chronic disease, such as asthma or hypertension) and some will be unpredictable (e.g., treatment of injuries due to a car accident or treatment for a heart attack). If these other health problems or services will have a significant impact on how services for hip and knee replacement should be delivered, then the payment amounts and outcome measures for CCJR should be adjusted or stratified to reflect that impact. This risk adjustment or stratification should be "concurrent," i.e., it should reflect any newly-occurring problems during the CCJR episode that were not caused by the CCJR services, not merely health problems that existed prior to the beginning of the episode. (Stratifying payments based on patient needs is discussed further in Section 8.)

However, the services for these other health problems should not be paid for as part of the CCJR payment nor should the providers managing the care for hip and knee replacement be held accountable for the services their patients receive for unrelated health problems. The providers delivering the services to address these other problems should certainly work to coordinate their services with the providers delivering services for hip or knee osteoarthritis and vice versa. In addition, the providers addressing the other problems should be paid for their services using payments designed to support their ability to deliver good care and good outcomes for those conditions.

If there are specific types of patients for whom the management of joint surgery and the management of other conditions is so intertwined that the providers should not be paid separately, then these patients

should be excluded from the CCJR program and managed under a separate payment and delivery model designed specifically to address their needs, but it is not necessary or appropriate to merge payments for rehabilitation after joint surgery and chronic disease management for all patients with chronic conditions.

The best way to control the total cost of care is not to try and make every individual physician or provider accountable for everything that happens to their patients, but to ask each provider to be accountable for the aspects of costs that they control or influence. If CCJR payment can improve the quality and reduce costs for care directly related of hip and knee problems, it will have a significant impact on the total cost of care.

4. SUPPORTING PHYSICIAN-LED TEAMS

It is difficult to imagine an automobile manufacturer producing a safe car at an affordable price or a construction firm building a safe bridge or office building without the ability to select workers and suppliers who will perform each portion of the project in a high-quality, efficient way, and without having an overall project manager to

ensure that all of the workers and suppliers coordinate their efforts to meet the design specifications and to resolve any problems that occur during the manufacturing or construction process.

A patient receiving major surgery to replace a hip or knee should expect no less. Not only should each of the providers delivering services to the patient be accountable for the quality and cost of the services they *individually* deliver, those providers also should agree to work as a team and be *collectively* accountable for the *overall* cost and outcomes in the episode. Each team should have a clear leader and the team should be organized before the patient even begins the first steps in the care process so that the

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patient as well as each provider knows who all will be involved in the patient's care and who will be accountable for what.

The most appropriate team leader is a physician, since physicians – and only physicians – have the responsibility to determine what kinds of care patients with joint problems need. Physicians evaluate patients to determine a diagnosis, assess whether surgery is appropriate and help patients decide whether to pursue surgery, admit patients to a hospital if the patients choose to have surgery, perform surgeries, order post-acute care services, and treat complications. Physicians are involved throughout the entire episode of care, whereas hospitals are typically involved for only a few days. If they wished to, the physician team leader could delegate management of different subsets of the episode to others (other physicians, the hospital, or post-acute care providers), but the team leader should retain overall accountability to the patient for good outcomes and to the payer for efficiency of service delivery.

Consequently, the Comprehensive Care for Joint Replacement program should be designed to give physicians the ability to assemble and manage a CCJR Team that includes all of the providers needed to deliver the full range of services the patient needs, not merely services to complete the surgery or to be discharged from the hospital, but all of the post-acute care services needed to achieve a good outcome at the lowest feasible cost.

5. ASKING PATIENTS TO CHOOSE TEAMS

Most people prefer to buy professionally assembled products with warranties rather than trying to assemble the products on their own with components purchased from a parts list. Yet in healthcare, patients are routinely forced to search for providers of healthcare services on a piecemeal basis, coordinate those services on their own, and suffer the consequences of complications both physically and financially.

If the CCJR program is going to support “comprehensive care” for joint surgery, then instead of encouraging patients to independently choose each of the providers who will perform each individual service they need, the CCJR program should encourage patients to choose a CCJR Team that will deliver all of those services in a coordinated way.

Supporting physician-led CCJR teams would make this easy for patients to do. Instead of merely choosing a physician to perform surgery, the patient would be choosing a physician to plan and manage the entire episode of care for their joint replacement. In return for having a physician who takes accountability for the entire episode, the patient should also agree to use the other providers selected or approved by that physician to deliver all of the services the patient will need during the full episode of care for joint replacement. This includes which hospital or surgery center will be used to perform the surgery and which facilities and agencies

will be used to provide rehabilitation and other post-acute care services. Instead of forcing patients to evaluate the quality and cost of every provider based on the specific services they are permitted to offer, the patient would be choosing a team that is focused on achieving good overall outcomes for the patient at a predictable overall cost. The physician leading the CCJR Team can tell the patient in advance what to expect in terms of services, costs, quality, and outcomes.

Most people prefer to buy professionally assembled products with warranties rather than trying to assemble the products on their own with components purchased from a parts list. Yet in healthcare, patients are routinely forced to search for providers of healthcare services on a piecemeal basis, coordinate those services on their own, and suffer the consequences of complications both physically and financially.

Expanding, Not Restricting, Beneficiary Choice

Asking Medicare beneficiaries to choose well-managed teams that deliver coordinated care is not restricting their choices, but expanding them, since most beneficiaries would likely prefer to receive coordinated care with a warranty for complications, but they typically don't have that option today. If a beneficiary prefers to hand-pick each of the individual providers rather than selecting a physician-organized team, they could still do so, but they would have to forgo the opportunity to receive customized services that are not covered under the current payment system, they would forgo having an overall warranty for preventable complications, and they would forgo a predictable cost-sharing amount for the entire episode.

A physician who organizes and manages a CCJR Team could still offer a patient choices of providers for individual services if the physician felt there were multiple providers who could offer the services the patient needed at equivalent levels of quality and cost. Physicians performing surgeries in regional referral hospitals will likely need to develop relationships with post-acute care providers located in patients' home communities in order to ensure that the post-discharge care for the patients is managed effectively in the most convenient setting. This would be easier to do if there are CCJR Teams in those communities that could partner with the surgeon and hospital in the regional referral hospital to form a multi-community CCJR Team.

6. PROVIDING FLEXIBILITY TO DELIVER THE CARE PATIENTS NEED

We would never have seen the kinds of dramatic improvements in performance we have enjoyed in computers, smartphones, automobiles, and other products if the manufacturers of those products were only allowed to use the same parts that had been used in older models and if they were only allowed to pay their suppliers using a government-defined price list. Similarly, we will not see true innovation in joint replacement care if the providers on the joint replacement team can only deliver the same services Medicare has traditionally paid for and if they can only be paid the same amounts for services that Medicare currently pays with the same complex restrictions that apply today.

What's Wrong With Fee for Service

Paying fees for services isn't necessarily a bad thing. The problem with fee-for-service payment systems is that they don't pay fees at all for some services that could best address a patient's needs, they don't pay adequate fees for many high-value services, and they typically pay

the same fees for a service regardless of the severity or complexity of the patient's needs and regardless of the outcome achieved. The result is that patients get the services that are paid for even if other services might be better at addressing their condition, and patients get a set

We will not see true innovation if providers can only deliver the same services Medicare has traditionally paid for and if they can only be paid the same amounts for services that Medicare currently pays with the same complex restrictions that apply today.

of services where the payment exceeds the providers' costs rather than a combination of services that might have better outcomes and lower overall spending for payers.

Multiple, Complex, Siloed Payment Systems in Medicare

These problems are even greater for Medicare beneficiaries receiving joint replacement, because there isn't just one payment system for the services they receive, there are more than six different payment systems that may be involved during a single episode of care – the Physician Fee Schedule, the Inpatient Prospective Payment System, the Outpatient Prospective Payment System, the Home Health Prospective Payment System, the Skilled Nursing Facility Prospective Payment System, and the Inpatient Rehabilitation Facility Prospective Payment System, as well as special payment systems for Critical Access Hospitals, Sole Community

Hospitals, Long-Term Care Hospitals, Federally Qualified Health Centers, etc. Every one of these payment systems pays for services in completely different ways, even when the services are similar. For example, every one of the Medicare payment systems pays for physical therapy services differently depending on where they are delivered. It's not just the amount of payment that differs among the systems, but the complex rules about whether the services can be paid for, how long they can be paid for, etc.

The Flexibility Available in a True Bundled Payment

If CCJR is to be a true payment *reform*, it needs to solve these problems rather than perpetuating them. In order for the physicians and other providers on the CCJR team to significantly improve outcomes and reduce costs for joint replacement, they will need the flexibility to deliver services in ways that aren't possible under the current Medicare payment systems. This includes:

- **delivering new types of services and delivering existing services in new ways that are not eligible for payment under current Medicare payment system.** For example, some orthopedic surgeons have developed special "prehabilitation" programs to help prepare patients for surgery in ways that reduce complications after surgery, but there is currently no payment or inadequate payment for these services even though they can reduce total episode costs.
- **paying different amounts for services based on the actual costs to deliver those services and the results those services help achieve.** For example, a short-term intensive inpatient or home-based rehabilitation program might be able to achieve better results for a patient but involve higher costs than would be supported by current Medicare payments for Skilled Nursing Facilities or Home Health Agencies. It might be better and less expensive for some patients to stay in the hospital slightly longer for rehabilitation than to be transferred to a separate skilled nursing facility or inpatient rehabilitation facility, but today, the hospital couldn't be paid more for the longer stay under the Inpatient Prospective Payment System, whereas additional payments would be provided for services delivered to the patient in the separate facilities.

If the CCJR program is structured as a true bundled payment, there is no longer the need for restrictions on how many services can be offered, how long they can be offered, and where they can be offered. The total cost of the services during the episode will be controlled by the amount of the bundled payment for the episode, and providers and patients can make choices about the services to use based on which services achieve the best results for the patient within that payment amount, rather than which services can and cannot be billed to Medicare. Medicare restrictions that should be removed with respect to services delivered within the CCJR Episode include:

- CCJR patients should not be required to have a 3-day stay in the hospital in order to receive post-acute care services during the episode.

- CCJR patients should not be required to be home-bound in order to receive home health services.
- Physicians on the CCJR Team should be able to deliver telehealth services and home based services that are related to the joint replacement, not just office visits.

7. ORGANIZATIONAL STRUCTURES TO MANAGE CCJR PAYMENTS

If a physician-led team of multiple providers is delivering existing and new services in return for a single CCJR episode payment, who should actually receive the bundled payment and how would each of the members of the team get paid for what they do?

Methods of Making Bundled Payments

There are two basic approaches to making a single bundled payment for services delivered by two or more providers – “retrospective reconciliation” and “prospective payment.”⁵

- **Retrospective Reconciliation:** A common approach is to treat the amount of the bundled payment as a budget rather than an actual transfer of funds. Each provider continues to bill and be paid for services under existing fee-for-service payment systems; the payer then tabulates all of the billings/payments that are included in the episode; if the total amount is less than the episode budget, the balance is paid to the providers, and if the total amount is greater than the budget, the providers need to refund the difference to the payer.
- **Prospective Payment:** An alternative approach is for the individual providers to stop billing the payer (e.g., Medicare) for individual services under the existing fee-for-service systems. The payer sends one check for the bundled payment to the providers, and then the providers divide that payment among themselves in some fashion.

Both of these approaches to bundled payment have been used in the Medicare program. In the Acute Care Episode Demonstration and Model 4 of the Bundled Payments for Care Improvement (BPCI) Demonstration, Medicare has used the “prospective” payment model, making a single payment to a Physician-Hospital Organization or hospital to cover the costs of both hospital and physician services rather than paying the hospital and physician separately under the Inpatient Prospective Payment System and the Physician Fee Schedule. (However, neither of these programs included a full episode of care for joint replacement.)

In Model 2 of the BPCI Demonstration, CMS is using the “retrospective reconciliation” model – all providers continue to be paid under the standard Medicare payment systems applicable to their provider type, the payments that are determined to be part of the bundle are totaled up and compared to the budget for the bundle, and then one of the providers or an entity designated by the providers either receives a payment from CMS or makes a payment to CMS depending on whether the

spending was higher or lower than the budget. However, under the way Model 2 is currently being implemented by CMS, the providers have only limited flexibility to pay for services that would not ordinarily be covered under traditional fee for service payments and there is not a predictable payment amount they can use to plan for sustainable delivery of alternative types of services, so it fails to provide the flexibility of a true bundled payment.

Differences from Shared Savings and P4P Programs

On the surface, the retrospective reconciliation model may sound the same as the “shared savings” programs that Medicare and other payers have implemented. However, under most shared savings programs, the providers typically do not know who their patients are prior to the delivery of care, they cannot control which providers are involved in the care, and they do not know in advance what the payment “budget” will be. In contrast, in a true bundled payment program, the retrospective reconciliation would be made based on a payment/budget that is known in advance to a group of providers who know in advance that they will be accountable for that budget for patients who they know will be covered by that payment/budget from the very beginning of the episode of care.

Creating a CCJR Management Organization

Contrary to many people’s perceptions, the prospective and retrospective methods both require that one of the providers or some other designated entity take responsibility for allocating at least some portion of the bundled payment among all of the providers. Under retrospective reconciliation, some entity has to be responsible for receiving episode budget surplus payments from the payer and allocating them among the providers and also for collecting and remitting deficits to the payer. Doing this requires the same basic financial capabilities that are needed to pay the providers for all services under a prospective bundle.

Consequently, no matter what payment method is chosen, each CCJR Team will need to designate a CCJR Management Organization (CCJR-MO) to manage at least a portion the funds associated with the episode payment. This could be a newly created organization or an existing organization. For example, the CCJR-MO could be the physician practice of the physician leading the team, it could be an existing or newly-formed Physician Hospital Organization, it could be the hospital or health system where the surgery is performed, or it could be an existing or new corporation owned by one or more of the providers on the CCJR Team. Instead of mandating that a hospital always play this role, as CMS has proposed, the physicians, hospital, and other providers should have the opportunity to design a structure that will work effectively for them. In order to ensure that patient care always comes first and financial considerations come second, any non-provider entity designated as the CCJR-MO should be owned and controlled by some or all of providers on the CCJR Team; this would include, as a minimum, the physician or physicians who are leading the Team.

Hybrid Prospective/Retrospective Payment

When multiple providers will be involved, it isn't necessary to choose prospective payment or retrospective reconciliation as the exclusive method of payment. One or more of the providers could be paid through the prospective bundled payment rather than through fee-for-service billings, and the remaining providers could continue to bill and be paid under existing fee-for-service systems. Any fee-for-service payments to the second set of providers would be deducted by the payer from the bundled payment through a retrospective reconciliation process, and then the first set of providers would receive the balance of the bundled payment and allocate that among themselves to cover the costs of their services.

This hybrid approach would be ideal in the CCJR program, since it would give the physician leader flexibility to include providers on the CCJR Team for specific types of patients without the CCJR Team having to directly pay claims for services from those providers. The payer (i.e., Medicare or a commercial health plan) would pay the claims from the less frequently used providers and deduct them from the CCJR Episode Payment, while core members of the CCJR Team could be paid for their services from the Episode Payment rather than by submitting claims for those services directly to the payer.

How Providers Should Be Paid for Services Under a CCJR Episode Payment

This hybrid approach would work as follows for the CCJR Program in Medicare:

- the CCJR Team would designate a Management Organization (CCJR-MO) to receive payments.
- the providers on the CCJR Team would have the option of being paid for services they deliver to CCJR patients either through the CCJR-MO or through the standard Medicare payment systems.
 - ◇ In order for a provider to be paid through the CCJR-MO for services delivered to CCJR patients, the provider would agree not to bill Medicare under the applicable fee-for-service payment system for any services that are part of a CCJR Episode for any patient managed by the physician leading the CCJR Team. For example, for any patient eligible for the CCJR program, the hip or knee surgeon would no longer bill Medicare using CPT codes for surgery, but instead would receive payment from the CCJR-MO based on a formula determined jointly by the surgeon and any other providers involved with the CCJR-MO.
 - ◇ If a provider (a physician, hospital, or post-acute care provider) elects to continue being paid through the standard Medicare payment systems, the amount Medicare pays that provider for a service to a CCJR patient (if the service is included in a CCJR Episode) would be deducted from Medicare's CCJR Episode Payment to the CCJR-MO for that patient. Medicare could charge an administrative fee to the CCJR-MO for each claim that it pays directly in order to encourage providers to be paid through the CCJR-MO and to discourage accidental "double-billing."⁶
- when a Medicare beneficiary selects a CCJR Team to perform hip or knee replacement surgery, the physician leading the CCJR Team would submit a CCJR Claim to trigger the Episode Payment and the CCJR-MO for that Team would then be eligible to receive the CCJR Episode Payment in three installments.
 - ◇ The first portion of the CCJR payment would be paid to the CCJR-MO immediately when the physician files the CCJR Claim. This would help to support adequate cash flow for the providers who are being paid through the CCJR-MO rather than through the standard Medicare payment systems.⁷ This portion of the payment would be higher for CCJR Teams where the majority of providers have agreed to be paid through the CCJR-MO rather than continuing to be paid through the standard fee-for-service payment system.
 - ◇ The second portion of the payment would be paid at the end of the 90-day episode. This portion of the payment should also be higher for CCJR Teams where the majority of providers have agreed to be paid through the CCJR-MO.
 - ◇ Finally, the remainder of the CCJR Episode Payment amount would be paid after all other claims are processed and any payments associated with the episode are deducted from the payment. (If this remainder was inadequate to cover all direct claims payments, the CCJR-MO would be responsible for repaying a portion of the initial payments in order to cover the short-fall.)
- Those providers who agree to be paid through the CCJR-MO would be free to allocate the CCJR Episode Payments among themselves in whatever way they collectively decide. These allocations are not "gain-sharing" payments; they will represent the full compensation that these providers will receive for the services they deliver. For example, if the surgeon is being paid through the CCJR-MO, the surgeon would no longer be billing Medicare directly for the surgery and the whole payment would come from the CCJR-MO. The CCJR-MO could pay the surgeon more or less for an individual surgery than Medicare would; for example, unlike in the Medicare program, the surgeon could be paid more for taking additional time during a surgery to avoid complications in a complex patient.
- If appropriate, the CCJR Team could also allocate a portion of the CCJR-MO payments to some of the providers who had elected to continue being paid through standard Medicare FFS payment systems if those providers delivered additional or different services to a patient that are not eligible for payment under the current Medicare payment systems.

8. RISK-ADJUSTING PAYMENTS BASED ON PATIENT NEEDS

The Need to Risk Adjust CCJR Payments

A strength of the current fee-for-service system is that it has a built-in mechanism for “risk adjusting” payment – a patient who needs more services can receive more services and providers can be paid for delivering them. A weakness of fee-for-service payment is that patients who do not need more services can also receive more services and providers will also be paid for those unnecessary services. The CCJR bundled payment will only be an improvement over fee-for-service payment if efforts to reduce the use of unnecessary services within the episode do not also result in under-treatment of patients who have greater needs or if efforts to control spending do not result in payments to physician practices and other healthcare providers that are inadequate to cover the costs of their services.

Since patients receiving hip or knee surgery for osteoarthritis have very different needs, no single bundled payment amount will be appropriate for all patients. Payment amounts will need to differ depending on (1) the specific type of surgery performed, and (2) the characteristics of the patient that affect the type of services they will need before and after surgery to enable a good outcome. These characteristics include the patient’s other health problems, the patient’s functional status, and the type of living arrangements the patient will have during their recovery. The current Medicare payment systems to post-acute care providers all pay different amounts for patients based on functional status, and the CCJR needs to do so, too.

The Weaknesses of Current Risk Adjustment Systems for CCJR Patients

The two MS-DRG categories used by Medicare to pay hospitals for hip and knee surgery are completely inadequate for this purpose. The MS-DRG categories and weights are designed only to reflect differences in the cost of hospital care during an inpatient stay for surgery, not the differences in all of the other services patients will need before and after their inpatient stay. The MS-DRG categories do not differentiate patients who can be discharged to their home vs. patients who will need inpatient rehabilitation and they do not differentiate the length or intensity of rehabilitation the patient will need.

Each of the Medicare payment systems for post-acute care services does use categories based on those types of patient characteristics, but those systems are all designed to adjust for differences in costs within a particular type of post-acute care, not for the reasons why patients might need one type of care setting or another, and the latter will be a key issue in managing outcomes and costs in a full episode of care.

The Hierarchical Condition Category (HCC) risk adjustment system that CMS uses for Medicare Advantage plans and Accountable Care Organizations also falls far short of what is needed to adjust CCJR payments for pa-

tient needs. It fails to adjust for differences in patient functional status that are essential to risk adjustment for episodes that will involve post-acute care, and it also fails to adjust for current acute health problems which could affect the cost of care for joint replacement.⁸

The inescapable conclusion is that an entirely new risk adjustment system is needed that is designed for CCJR. CMS has implicitly acknowledged this by developing a regression-based risk adjustment model specifically for hip and knee replacements as part of a spending measure it plans to use in the its pay for performance systems.⁹ However, it is impossible to develop a good risk adjustment system for CCJR payments using statistical regression analyses on claims data. There are two reasons for this:

- Some of the most important patient characteristics that affect the types of services a patient will need during a full episode of care for joint replacement, such as functional status and severity of chronic conditions, are not currently collected or recorded in claims data for all patients.
- The accuracy of a regression model is judged based on its ability to “fit” or predict current patterns of utilization and spending, but the current patterns of utilization and spending are the very thing the new payment system is intended to change. The better a regression model is at predicting current spending in CCJR episodes, the more likely it is to perpetuate current areas of overuse and undertreatment.¹⁰

Creating CCJR Clinical Categories to Risk Adjust Payments

The most appropriate way to risk adjust CCJR payments (or payments for any type of episode of care) is to create a set of clinical categories. The categories should be defined using patient characteristics in such a way that the patients in each category would require similar total levels of services and spending during the entire episode of care, and patients in different categories would require services involving significantly different amounts of spending. For example, a patient with no chronic conditions or other serious health problems and good self-care capabilities would be assigned to one category and a patient with many chronic conditions with serious functional limitations would be assigned to a different category with a much higher associated payment amount.

These types of clinical categories are used in all of the other Medicare prospective payment systems. Although the clinical categories for CCJR would be conceptually similar to the Diagnosis Related Groups in the MS-DRG system and the Health Insurance Prospective Payment System (HIPPS) categories used in Medicare’s post-acute care payment systems, the CCJR categories would be designed to differentiate patients’ needs for services throughout the *entire* episode of care, not just for the services rendered by a particular provider during a particular period of time as each of Medicare’s current prospective payment systems do.

These CCJR clinical categories should be developed by physicians – the orthopedic surgeons, physiatrists,

primary care physicians, and other physicians who care for joint replacement patients – based on clinical guidelines, research, and professional experience about the different types and amounts of services that will be needed by patients with different characteristics during an episode of care for hip or knee replacement surgery.

It is not clear how many different clinical categories will be needed to adequately differentiate patient needs without creating a system that is too complex. For example, if three different patient characteristics were used (e.g., comorbidities, functional status, and living arrangements) and three different levels were defined for each category, this would result in 27 different payment categories. This is actually far simpler than the current Medicare payment system, where there are literally thousands of payment amounts that could be assigned to an episode of care. (There are 153 different payment categories in the home health payment system, 92 different categories in the inpatient rehabilitation facility payment system, 66 different categories in the skilled nursing facility payment system, and a single patient could receive care in two or more of those systems after discharge from the hospital). In any prospective payment system, there is a tradeoff between having too many categories that are too narrowly defined, which implicitly prescribes exactly how care should be delivered to those patients, and having too few categories, which increases the risk that random variations in the characteristics of patients within a category could lead to excessive losses or windfall profits to the providers receiving the payment. In most of Medicare's other prospective payment systems, the number of categories was expanded over time to better differentiate patients based on the actual experience in caring for the different types of patients.

It will take time and resources to do this work properly. In the past, CMS has invested significant resources in developing the payment categories for every other payment system it has implemented, and it needs to do the same thing for joint replacement and for other episodes yet to come. In developing its other prospective payment systems, CMS and its contractors have convened technical expert panels and recruited volunteer providers willing to collect data needed to establish clinical categories and estimate the costs of care for patients in those categories. If CMS signals its willingness to use this kind of clinical categorical approach and commits resources to help support its development, it is likely that physicians and other providers involved in joint replacement will step forward to develop an appropriate structure.¹¹ The research that has already been done prior to and during the CMS Bundled Payments for Care Initiative will help accelerate this work.¹²

The initial clinical categories should be developed with the understanding and expectation that they will be revised within 2-3 years based on the experience of CCJR Teams in assessing patient needs and delivering care to patients. In each of Medicare's other prospective payment systems, the initial category systems were later revised to better characterize the differences in patient needs. It will be easier to reach agreement on an acceptable initial set of clinical

categories if there is an explicit commitment to revise them within a few years as better information becomes available, and if the program is structured to limit the financial risks resulting from any problems with the categories, as described in Section 8. This will enable the implementation of the CCJR program to be accelerated.

Creating Billing Codes Corresponding to the Clinical Categories

Each CCJR clinical category would have an associated billing code that would be used to determine the payment amount for the episode. These billing codes would be similar to CPT® (Current Procedural Terminology) codes maintained by the American Medical Association and HCPCS (Health Care Common Procedure Coding System) codes maintained by CMS, but they would be based on information about the patient's healthcare needs as well as the procedure performed. This would enable them to easily be used in current provider billing systems and payer claims payment systems. For example, the CCJR codes could look something like this:¹³

- X1001: Total Hip Replacement, No Major Comorbidities, High Functional Status, Lives With Others
- X1102: Total Hip Replacement, Moderate Comorbidities, High Functional Status, Lives Alone
- X1020: Total Hip Replacement, No Major Comorbidities, Low Functional Status, Lives in Nursing Home or Assisted Living Facility
- X1102: Total Hip Replacement, Moderate Comorbidities, High Functional Status, Lives Alone
- X2101: Total Knee Replacement, Moderate Comorbidities, High Functional Status, Lives With Family
- Etc.

The physician leading the CCJR Team would assign the patient to the appropriate category at the very beginning of the episode, before surgery is performed. This would ensure that none of the health problems or functional limitations that would trigger a billing code with a higher payment level could result from complications of the surgery or subsequent treatment.¹⁴ Moreover, in contrast to the MS-DRG system, where the clinical category is typically only assigned after the patient is discharged, assigning the CCJR code at the beginning of the episode would enable the CCJR Team to know the payment budget for the care of that patient in advance, i.e., it would be a truly "prospective" payment system.

Just as MS-DRGs and HIPPS categories have been modified over time to better capture differences in patient needs, the CCJR clinical categories and codes would also need to be modified over time as new evidence developed about how to achieve the best outcomes for different types of patient needs with the more flexible resources and more coordinated approach to care available through CCJR.

Outlier Payments

No set of clinical categories or any other risk adjustment structure can adequately address rare patient characteristics or unique combinations of characteristics that lead to an individual patient needing an unusually large number of services or unusually expensive services. Paying for the extra costs of caring for these patients is one of the fundamental purposes of a health insurance system, and it is inappropriate to turn a CCJR Team into a health insurer by requiring it to cover unusually high costs with the standard payments in a clinical category. The CCJR Team should be able to order or deliver all of the services a patient needs without being conflicted by a concern that ordering or delivering those services would bankrupt the team. Each of Medicare's other prospective payment systems that pays case rates includes a provision for outlier payments, and the CCJR payment system should as well.

An outlier payment provision requires determining three things – (1) how to measure the actual costs of care for an individual patient, (2) the threshold those costs need to reach in order to trigger the additional outlier payment, and (3) the proportion of the costs above the threshold that will be paid as an extra payment to the CCJR Team.

- **Measuring costs of services for patients.** In order to receive an outlier payment for a patient, the CCJR Team will need to document and report the total costs of the services delivered to that patient as part of the episode. For services delivered by CCJR Team members who have opted to continue being paid by CMS through standard Medicare fee-for-service payments, the “cost” would simply be the payment amounts those providers received for the patient in question, but for services delivered by CCJR Team members who are being paid through the CCJR-MO, the Team would need to document the specific services the patient received (some of which would not have been eligible for payment through standard fee-for-service payment systems) and the costs the relevant providers incurred to deliver those services.
- **Setting an outlier threshold.** The outlier threshold would be defined in terms of the difference between the total cost of services for an individual patient and the standard CCJR payment amount for that patient. This could be a fixed dollar difference (i.e., the outlier payment is triggered when the costs exceed the standard payment by that dollar amount) or a relative difference (i.e., the outlier payment is triggered when the costs are more than a certain percentage above the standard payment), but it would be simpler to use a percentage threshold that could be applied to every clinical category/billing code and that would automatically adjust the threshold as payment levels change over time. The appropriate level for this threshold should be determined based on an analysis of the current distribution of per patient costs within episodes.
- **Defining the outlier payment amount.** When a patient's costs exceed the outlier threshold, the CCJR Team should receive an outlier payment equal to a percentage (e.g., 90%) of the “excess” cost. Paying

less than 100% of the excess costs encourages the CCJR Team to control the costs of services for high-cost patients without exposing the CCJR providers to excessive financial risk. A second threshold could be established at which 100% of costs are covered in order to deal with the truly unusual, catastrophically expensive cases.

9. HOLDING TEAMS ACCOUNTABLE FOR OUTCOMES

If the CCJR payment model is structured as described above, CCJR Teams will have significant opportunities to both improve outcomes for patients and reduce spending. The flexibility of a true bundled payment will give physicians and other providers the ability to deliver care that is more directly tailored to all types of patients' needs, to plan and coordinate services during the complete episode of care, and to eliminate the costs of unnecessary services without also losing the profit margins they need to sustain their operations.

In contrast, a pay-for-performance or shared savings program that simply penalizes high spending and rewards low spending but does not change the underlying fee-for-service structure and that does not adequately risk-adjust spending targets could force providers to reduce needed services to patients simply to avoid penalties, could discourage providers from caring for patients with higher needs, and could encourage increased use of surgery on healthier patients. This is a serious risk if what CMS proposed in its July 2015 regulations were implemented.

However, even a well-designed bundled payment program can inappropriately reward providers for delivering less care than a patient needs unless those providers explicitly take accountability for the quality of care they deliver. The approach that is typically being used by Medicare and other payers today to encourage quality care is to create a long list of quality measures and a complex formula for adjusting payments based on a provider's performance on those measures relative to itself and others. Yet because most of the measures assess processes of care, not outcomes, and there are not good measures for all processes of care, this approach fails to measure what matters most to patients and it can also constrain the ability of providers to innovate by tying them to outdated ways of delivering care.¹⁵

There is no need for Medicare or other payers to require submission of dozens of process measures and to create complex pay-for-performance schemes if providers take accountability for outcomes, because the providers themselves will measure what needs to be measured and improve what needs to be improved in order to achieve the best outcomes within the resources available.¹⁶ Accountability for outcomes can be implemented by adjusting the payment amounts based on the outcomes achieved for the patients.

To implement outcome accountability in the CCJR program, CCJR Teams with poor outcomes should receive lower payments, and if those outcomes do not

improve, they should be dropped from the CCJR program. Conversely, CCJR Teams with outcomes that are significantly better than others should receive higher payments, since developing innovative approaches takes time and effort, and encouraging innovation by individual CCJR Teams will help reduce costs and improve outcomes for all patients in the future. CCJR Teams that achieve desirable levels of outcomes should continue to receive the standard payment amounts.

The outcomes of greatest relevance to patients will be improvements in joint function, reduction in pain, and avoidance of adverse health impacts. Measures of all of these outcomes are not currently collected for all joint replacement patients, so CCJR Teams will need to begin collecting and reporting these measures as soon as the program begins. This should not be an optional program as CMS has proposed, but it should be mandatory for all CCJR Teams. However, the CCJR Teams should be compensated for the time and costs of implementing the processes needed to collect the outcome information, and, as CMS has proposed, this compensation can be paid by allowing CCJR Teams to keep more of the savings that are achieved in the program.

Since it will not be possible to adjust payments based on the ideal outcomes measures initially, the CCJR program will need to use the outcome measures that are currently available – complication rates, mortality rates, and readmission rates – in the interim. Once the outcomes data collection process is functioning effectively and baseline performance rates can be determined, the full range of appropriate outcome measures can be incorporated into the payment system. This transition could likely be completed within three years.

10. SETTING APPROPRIATE PAYMENT AMOUNTS

Achieving good outcomes requires adequate payment to support the services each patient needs. After the initial definitions for the clinical categories in the CCJR program are established, initial payment amounts will need to be assigned to each category that are sufficient to support the care needed by patients in that category. Several important issues need to be addressed in determining these payment amounts:

- Whether a single set of national rates or provider-specific rates should be used initially with a process for transitioning to national rates.
- How much, if any, savings the Medicare program should expect to achieve immediately.
- What financial support CCJR Teams will need during the process of transitioning to a new payment system.

Challenges in Establishing National Rates for Multi-Provider Episodes

When each of Medicare's current provider-specific prospective payment systems (for hospitals, home health agencies, inpatient rehabilitation facilities, etc.)

was first implemented, payment rates for individual providers were established based on a set of national payment "weights" for each of the categories of patients defined for that type of provider. The weights were chosen using regression analyses and other statistical tools to determine which weights best predicted average historical levels of costs for the providers. In some cases, the national rates were implemented immediately, and in other cases a transition process was used in which providers were temporarily paid using a blend of national and provider-specific payments.

However, the circumstances in which these prospective payment systems were implemented differ significantly from those in which prospective payments for CCJR episodes are being implemented:

- Each of the existing prospective payment systems replaced a cost-based reimbursement system, which meant that the prospective payment amounts could be based on providers' actual costs. In contrast, all of the services in CCJR episodes are being paid through prospective payment systems that are not directly tied to the costs of those services. The fact that some groups of providers have lower levels of spending than others for joint replacement episodes for similar patients does not necessarily mean that those providers' costs are proportionately lower. Moreover, the providers' costs are driven by all of the types of patients the providers care for, not just the CCJR patients.
- Most of the cost-based reimbursement systems already had some types of limits on per case spending by each provider, so the prospective payments were not the first time those providers had to find ways to control overall costs. In contrast, there are currently no limits on the overall costs for joint replacement episodes.
- The new prospective payments were going to be paid to individual providers that presumably had significant control over the way they delivered services in order to keep costs within the payment amounts. In contrast, the CCJR payments would cover services delivered by several providers. Although creating physician-led CCJR Teams will put someone "in charge" of the entire episode, changes in care delivery and costs will still need to be made by individual providers, and Team leaders will not know exactly how much it will cost to deliver various services at different levels of total volume than today.
- The prospective payments were all designed to be paid to a single type of provider (a hospital, a home health agency, etc.), so all of the providers receiving the payments were basically similar. In contrast, joint replacement patients are receiving care from different combinations of providers in different regions and even within the same region, so the impacts of an episode payment will likely be different in different places. No one knows how long it will take for regions that have been dependent on higher-cost types of care to develop adequate capacity in lower-cost types of care and how long it will take to phase out investments made in extra capacity for the higher-cost types of care without

harming the patients who will still need to receive those types of care.

- The prospective payment system changed payments for *all* of the provider's patients, so payments that were too low for some patient categories would likely be offset by payments that were higher than necessary in other categories. In contrast, the CCJR program would affect only a portion of each provider's patients and services, so underpayments would not be offset elsewhere.

These differences mean that a slower transition to national payment rates will be needed in the CCJR program than in previous prospective payment systems in order to avoid causing harm to patients and providers. The most appropriate approach will be to establish initial CCJR payment rates that are specific to each CCJR Team and then transition to a more uniform set of national rates over a multi-year period.

Improving Care and Controlling Long-Term Costs In Addition to Immediate Savings for Medicare

In all of Medicare's other prospective payment systems, the initial payment amounts were intended to be budget neutral and the payment system was expected to control cost growth over time rather to reduce total spending immediately. In contrast, Medicare is seeking to achieve immediate savings in the CCJR program and it has proposed to do so by "discounting" payment amounts below current spending levels in the first year of the program.

Federal law does not require Medicare to achieve immediate savings with a new payment model. In fact, the section of the Affordable Care Act that establishes the Center for Medicare and Medicaid Innovation (which is the statutory authority CMS is using as the basis for the CCJR program) was explicitly written to authorize implementation of payment reforms that may not even be budget neutral initially. Section 1115A of the Social Security Act states that "The Secretary shall not require, as a condition for testing a model...that the design of such model is budget neutral initially..." Although the statute requires CMS to "focus on models expected to reduce program costs," it does not define when the savings need to occur, and it even authorizes the Secretary to expand models that do not achieve savings if the expansion is expected to "improve the quality of patient care without increasing spending."

Nonetheless, it is clearly a priority to achieve savings for the Medicare program, and moreover, if savings can be achieved immediately, it would certainly be desirable to do so. The tremendous variation in spending in joint replacement episodes both across the country and within individual regions suggests that there are significant opportunities for immediate savings, but because consistent information about patient needs is not collected for all patients, no one knows exactly what proportion of the current variation is due to legitimate differences in patient needs, so it is impossible to determine exactly how much savings is possible without harming patients.

Moreover, if a major reason for variation in spending is differences in avoidable spending, then it is inappropriate to reduce the payments for every CCJR Team by the same amount, since that would penalize CCJR Teams who are already delivering better care more efficiently and reward those Teams that have the highest levels of avoidable spending.¹⁷

A better approach is to set the initial CCJR payment rates in a way designed to capture savings from reducing undesirable and avoidable spending without unintentionally underpaying for necessary services. For example, if historical data showed that a particular CCJR Team has had a high rate of hospital readmissions for complications of surgery, a portion of this spending could be excluded from the average spending used to set the episode payment rate for that Team. In contrast, if the data showed that a particular CCJR Team had below average rates of hospital readmissions for complications, that Team's payment could be based on its average historical spending with no adjustment. This is the approach pioneered by the Health Care Incentive Improvement Institute in the PROMETHEUS payment system. It has a methodology for explicitly separating current spending on "potentially avoidable complications" from spending on other services, and then establishing Evidence Informed Case Rates based on a reduction in spending on the potentially avoidable complications.¹⁸ A similar approach was used by the Geisinger Health System in establishing the episode payment rates in its ProvenCareSM program.

Recognizing the Costs of Transformation and Transition

The fact that an event or service is potentially avoidable does not mean that it costs nothing to put the necessary systems and services in place to avoid it. One of the reasons for creating a new payment system is that the current payment system often fails to provide adequate resources or flexibility to implement services that can reduce avoidable spending. However, once the new payment system is in place, the net savings will generally be lower than what had been spent on the services that are being avoided because of the need to cover the costs of new services.

Moreover, CMS needs to recognize that providers on CCJR Teams will need to incur significant time and costs when they first begin to participate in the CCJR program. These costs will be particularly high for the very first set of participants because they will need to help CMS refine the structure of the program as well as redesign the delivery of care to individual patients.

One way to cover these costs would be for CMS to compensate providers directly for them, but an alternative way is for CMS to allow the initial participants to retain most of the savings they can achieve. The true measure of success in the CCJR program should be implementation of a new payment system that is supported by providers and patients and that controls cost growth over time, rather than achieving immediate savings while discouraging participation and causing problems for patients and providers that could lead to the program's termination.

Setting Initial Rates Based on Team-Specific Historical Spending

In summary, the initial CCJR payment rates should be set so they:

- are adequate for each CCJR Team based on the amount it has spent in the past;
- are designed to achieve initial savings only for services that are known to be avoidable or unnecessary; and
- are designed to cover the costs that initial CCJR Teams will incur in order to participate.

To achieve these goals, the following process should be used to set the initial payment rates for a CCJR Team:

- The Medicare beneficiaries would be identified who would have qualified for the CCJR program (had it been in place) with respect to hip or knee replacement surgery they received in the past year from the physician(s) who are leading or part of the CCJR Team. A period of time longer than a year would be used if necessary to obtain an adequate number of total cases for analysis.
- Each of the Medicare beneficiaries who would have been eligible for the CCJR program would be classified into the clinical categories developed for the CCJR program. Depending on exactly how the clinical categories are defined, the full set of information needed to retrospectively assign patients to categories may not be available in existing records for every patient. However, since information on comorbidities is currently recorded in the physician's and hospital's records and information on patients' functional status is recorded by all of the post-acute care providers, the key information or reasonable proxies will likely be available for most patients. (The correct data that is collected and coded for future patients will be used for refining the payment rates at a later time, as described in Section 13.)
- The services that each of the Medicare beneficiaries received that would have been included in the CCJR episode would be identified and the payments for those services would be determined. The payment amounts would be trended forward using actual and estimated changes in the payment rates for the individual services so they would be comparable to fee-for-service payment amounts in the initial implementation year of the CCJR program.
- The subset of services representing potentially avoidable complications would be identified using definitions similar to those developed by the Health Care Incentives Improvement Institute as part of its Evidence-Informed Case Rates (ECR®). The spending on these services would be tabulated separately from the spending on all other services in the episodes.
- The average spending on potentially avoidable complications per beneficiary would be calculated in each clinical category; if this average exceeded the average spending on avoidable complications for similar patients by all CCJR Teams participating in the program, then the average for the CCJR Team would be replaced by the overall average in that category.

- If the spending for a particular beneficiary on services other than those for potentially avoidable complications exceeded the 99th percentile of such spending for all CCJR Teams participating in the program, that beneficiary would be treated as an "outlier" and the spending for that beneficiary would be adjusted to equal the 99th percentile level and the average would be recalculated.
- The adjusted averages for the two types of spending in each category would be summed to determine the overall average adjusted spending in each category, and these amounts would be set as the initial payment rates to the CCJR Team for future patients in each category. If there were too few cases in a particular category to establish a reliable estimate based solely on the CCJR Team physician's own cases, the average for all CCJR Teams, or a blend of the overall average and the CCJR Team's average, could be used instead.

Under this approach, each CCJR team receives payments for each patient that are comparable, on average, to the spending that similar patients have received in the past, except that payments are reduced for CCJR Teams that have experienced above average rates of potentially avoidable complications. Medicare achieves savings on the initial payment rates, not by applying an arbitrary across-the-board percentage reduction, but by paying less to those CCJR Teams that have had higher spending in the past due to potentially avoidable complications.

11. PROTECTING PROVIDERS AGAINST INAPPROPRIATE RISK

The success of an alternative payment model should not be measured in terms of how much financial risk it shifts from Medicare to providers, but rather in terms of how well it enables providers to improve care for patients and to take accountability for the cost and quality of that care. Instead of creating the CCJR program in a way that creates financial risks so great that only large organizations such as hospitals can manage them, the CCJR program should be explicitly designed to encourage physicians and small providers to participate. To do that, in addition to creating meaningful clinical categories, setting initial payments based on historical spending, and providing for outlier payments, the CCJR program needs to incorporate appropriately-designed *risk corridors* to limit financial risk to manageable levels.

A "risk corridor" is a way of limiting the amount by which a provider's total costs for a group of patients can exceed the payments for those patients. (An outlier payment limits this difference for a particular patient, whereas a risk corridor limits the difference for all of the patients of a particular type.¹⁹) There are two reasons why risk corridors are needed in the CCJR program:

- First, no prospective payment amount is ever exactly "right" for any individual patient, since the payment applies to a category of patients who vary in their

characteristics within the range that defines the category. (This is also true with fee-for-service payments.²⁰) An outlier payment protects the providers when one particular patient requires an unusually large number of services or unusually expensive services, but it does not protect the providers when random variation results in the providers treating more patients during the course of the year who have above-average needs. If this variation is truly random, then it will average out over time, but in any given year, the provider might experience a windfall gain or loss due to this random variation rather than due to any good or bad performance on the provider's part. The smaller the number of patients a CCJR Team manages, the bigger the variation will likely be in any given year relative to the total amount of payments for patients in a category. Risk corridors can protect providers against these random variations and equalize the impacts of variation for providers of different sizes in order to avoid precluding small providers from participating.

- Second, the initial payment amounts in the CCJR system will likely be somewhat “wrong” for several reasons:
 - ◇ The clinical categories will have been established based on incomplete data and understanding about differences in patient needs.
 - ◇ The average payment amounts will have been calculated for patients assigned to categories using incomplete data; and
 - ◇ The patients, services, and spending during the lookback period used to establish the initial rates may not be representative of the patients, services, and costs providers will experience during the initial years of implementation.
 - ◇ The initial implementation phase of the CCJR program should be designed to support a collaborative effort between CMS and CCJR Teams to improve the accuracy of the clinical categories and payment amounts, and appropriately-designed risk corridors will protect providers from mismatches between payments and costs while that collaborative effort is underway.

Risk corridors should be implemented in the CCJR program through the following process:

- In each year, each CCJR Team should calculate the total costs of the services it delivered to all of the patients who qualified for the CCJR program. These costs should be calculated in the same manner described for outlier payments: for services delivered by CCJR Team providers that opt to continue to be paid through standard Medicare fee-for-service payment systems, the “cost” to the CCJR program is the Medicare payment for the service; for services delivered by CCJR Team members who are paid directly by the CCJR-MO, the costs are the actual costs they incur in delivering those services.

- The total cost of services would be compared to the total Medicare CCJR payments for the same group of patients. If the costs exceed the payments, the difference would be referred to as the “excess costs.”
- The portion of the total eligible CCJR payments that was paid to the CCJR-MO after deducting payments to providers who were paid directly through standard Medicare fee-for-service payments would be calculated; this would be referred to as the “prospective portion of total payments.”
- If the excess costs exceeded the prospective portion of total payments by more than a predetermined percentage, Medicare would make an additional payment to the CCJR-MO equal to the excess costs; this would be referred to as the “risk corridor payment.”
- The percentage that triggers a risk corridor payment (the “trigger percentage”) should be small initially and increase over a multi-year period.

The trigger percentage should be based on the ratio of excess costs to the *prospective portion* of payments rather than total payments so that the amount of financial risk for total costs is proportional to the total amount of revenues available to those providers who had put their own revenues at risk. For example, if physicians leading the CCJR Teams agreed to be paid for their services through the CCJR-MO but the hospital where the surgeries were performed did not, the physician practice should not be at risk for the full amount of the payment Medicare would make to the hospital when the hospital had not placed itself at risk. On the other hand, if both the physician and hospital had agreed to be paid through the CCJR-MO, they would have more joint revenues flowing through the CCJR-MO to manage variations in total episode costs, and their risk would be related to their actual costs of delivering care, not their payments under traditional fee-for-service systems.²¹ This approach enables physician practices and other small providers to form CCJR Teams even if larger providers are unwilling to fully commit, while also encouraging larger providers to participate in or-

The success of an alternative payment model should not be measured in terms of how much financial risk it shifts from Medicare to providers, but rather in terms of how well it enables providers to improve care for patients and to take accountability for the cost and quality of that care. Instead of creating the CCJR program in a way that creates financial risks so great that only large organizations such as hospitals can manage them, the CCJR program should be explicitly designed to encourage physicians and small providers to participate.

der to gain the benefits of more predictable payments and greater flexibility in what services would be eligible for payment.

Evolving the Risk Corridor Parameters Over Time

During the first year of the program, the trigger percentage should be zero (i.e., the CCJR Team should receive additional funds from Medicare if costs exceeded payments by any amount) so that there was no downside risk at all for CCJR Teams. (This is what CMS proposed for hospitals in the proposed CCJR regulations.) There would still be a strong incentive for the CCJR Teams to find ways to reduce spending, since there would be some downside risk in subsequent years (depending on how much and how quickly the risk corridor thresholds were increased). There would be no cost to the Medicare program for doing this, since Medicare would have paid for those higher costs anyway if the CCJR program did not exist.

The phase-in of larger risk corridors not only gives CCJR Teams time to gain experience in managing CCJR episodes, it also allows them to build up a financial reserve that enables them to directly manage random variation in spending. In any year in which the CCJR Team generates a net surplus from the CCJR payments over the cost incurred, the CCJR-MO should set aside a portion of that surplus to hold as a reserve for years in which random variation may lead to smaller surpluses or even losses. The increases in the risk corridors provide an incentive to build these reserves, since the CCJR-MO will be responsible for a greater share of random variations in costs over time and it will need a reserve to help it manage that variation.

Implementing the risk corridors will require that the CCJR Teams determine their costs of delivering services and report that to CMS, but this will be necessary in any event in order for CCJR Teams to manage their costs and for both the CCJR Teams and CMS to collaboratively revise the payment amounts and categories to better match patient needs and costs. Risk corridors with low initial trigger percentages provide compensation and incentive to CCJR Teams for the administrative costs they will incur in collecting data on service costs and submitting it to CMS in a common format.

12. ENABLING MEDICARE TO SHARE IN SAVINGS

In addition to the risk corridors to protect CCJR Teams from random increases in costs and from problems with the initial payment rates and categories, there should also be risk corridors that enable Medicare to share in some of the savings that CCJR Teams achieve. If the total cost of services in a particular category is lower than the payments in that category by more than a predefined threshold, then a portion of the difference between costs and payments should be returned to the Medicare program.

However, whereas the trigger percentages for the risk

corridors described in the previous section should be relatively low (so that the CCJR Team receives additional payments if costs exceed payments by a relatively small amount), the trigger percentages for the risk corridors designed to benefit Medicare should be relatively high initially (i.e., Medicare should only receive a share of the savings if the savings are relatively large). This provides a strong incentive for CCJR Teams to aggressively redesign care delivery and gives CCJR Teams the ability to quickly build up an adequate operating reserve so they can better manage variation in costs in future years. In addition, whereas the risk corridor payments to CCJR Teams should be equal to the difference between costs and payment, the risk corridor payments to Medicare should only be a portion of the difference, so that CCJR Teams can receive a portion of any savings that are generated, thereby providing an incentive to pursue the kinds of significant changes in services that could lead to large savings but could also involve significant upfront costs.

13. REVISING PAYMENT CATEGORIES AND AMOUNTS OVER TIME

Stable Payment Rates For Three Years

The first 3 years of the CCJR program should not be viewed as a “test” of the program, but instead as a “research and development” phase. During this phase, CMS should not be evaluating CCJR Teams, but rather collaborating with them to improve care for patients with hip and knee problems and to refine the design of the program so that it can be seen as a win-win-win for patients, providers, and Medicare. Active engagement of the CCJR Teams is necessary for this because they will be collecting data on patient characteristics and their needs, they will be measuring outcomes for the patients, and they will be restructuring care delivery to improve outcomes and reduce costs.

The CCJR Teams should have stable, predictable payments during this 3 year period to allow them adequate time to develop new services for CCJR patients, phase out inefficient and ineffective services, and collect and improve outcome measures while they also work with CMS to refine the clinical categories and other aspects of the program. The ability for CCJR Teams to generate and retain savings during this period will help them to cover their costs and incent them to make as rapid progress as possible in redesigning care to eliminate waste. Trying to recoup initial savings by lowering payment amounts during these initial years would be “penny wise and pound foolish,” since it could discourage participation in the program and discourage participants from making the investments needed to truly redesign care.

Revising Initial Payment Categories and Amounts

By the end of the third year, the following revisions should be made to the program through a collaborative effort of the CCJR Teams and CMS:

- The number of clinical categories and the definitions of those categories should be revised as necessary so that the categories adequately reflect significant differences in patient needs;
- The payment amount for each category should be revised to reflect the costs of efficiently delivering effective services to the patients in that category;
- The outcome measures, performance standards, and payment adjustments should be revised so that CCJR Teams can be held accountable in a feasible and appropriate way;
- The outlier payment thresholds and payments should be revised to appropriately identify patients with unusually expensive needs and cover the costs of their care; and
- The trigger percentages for the risk corridors should be adjusted to provide adequate protection for CCJR Teams on an ongoing basis while maximizing the savings that can be returned to the Medicare program.

Transitioning to National Payment Rates

Since the initial payment amounts for individual CCJR Teams will be based on historical levels of spending for patients cared for by the physicians on those Teams, and because the total spending during episodes of care currently varies significantly both across the country and within individual regions, it will likely be the case that some CCJR Teams will initially receive higher payments than others for the same CCJR billing code. It is impossible to tell in advance how large these differences will be, because no one knows today what proportion of current variations are due to legitimate differences in patient needs and what proportion of the variation is due to providers delivering more or less care than patients need.

Once all CCJR patients are being assessed based on the factors that will legitimately affect their need for care, it will be easier to identify the variation in current spending that is not related to those factors. However, this does not mean that all of that variation is inappropriate; some of the variation will be random and some will be based on legitimate differences in patient needs that are not captured in the clinical categories. Moreover, even if there is no variation within a particular category, that does not mean that there is no opportunity for savings, it may merely mean that the constraints of current payment systems have forced all providers to deliver care in the same inefficient way. The advantage of the episode payment approach is that, unlike in the current fee-for-service system, CCJR Teams will have both the flexibility and the incentive to redesign care to eliminate the avoidable services, since the CCJR Team will be able to pay for different types of services and it will be able to keep the savings if those services deliver equal or better outcomes at higher cost.

Although uniform national payment levels will ultimately be needed, this will likely require a multi-year transition period. In other CMS prospective payment systems, the transition was accomplished by paying providers using a blend of a provider-specific rate and a national rate,

with the proportion of payment coming from the provider-specific rate decreasing each year. CMS proposed using a similar approach in its proposed rule for CCJR. However, this approach cannot be used during the initial years of the CCJR because it will not be possible to determine appropriate national payment rates when the program first begins.

An alternative approach would be to use different annual update percentages for different CCJR Teams that would reduce a portion of the difference in payments each year. A CCJR Team that is receiving a higher payment rate than other CCJR Teams for a particular CCJR billing code could receive a smaller update percentage than the other Teams, and vice versa.²² If it seems feasible to establish national payment rates at the end of the initial three year development phase, then a process of phasing in these rates could be initiated, similar to what was done in other prospective payment systems.

Ongoing Revisions to Payment Rates

After the transition period is completed and the CCJR categories and payment rates have been revised, the rates and categories would need to be regularly updated to ensure they remain adequate to cover the costs of care and enable Medicare to benefit from the savings CCJR Teams can achieve by redesigning care. This can be done using the same three mechanisms that CMS currently uses in its other prospective payment systems:

- Annually updating the payment amounts to account for inflation;
- Periodically assessing the costs of delivering the type of care covered by a particular payment category and adjusting the payment amount for that category if necessary to better match costs; and
- Periodically adjusting the definitions of the types of patients and services included in a particular payment category to avoid paying the same amounts for patients with different needs or services with different costs.

14. CREATING PREDICTABLE COST-SHARING FOR PATIENTS

Today, patients face a confusing array of cost-sharing requirements for the different types of services they could receive as part of their overall care for joint replacement. Services Medicare beneficiaries receive from physician practices and physical therapists on an outpatient basis require 20% co-insurance payments, whereas services delivered in inpatient rehabilitation facilities and skilled nursing facilities have no cost-sharing requirements, creating a counterproductive incentive to use more expensive types of post-acute care if the patient does not have supplemental insurance that covers the co-insurance. Commercially insured patients have even more challenging cost-sharing requirements, particularly if they are on a high-deductible health plan, since they may have to pay 100% of the cost of outpatient services prior to surgery.

The CCJR episode payment enables patients, when they first decide to have surgery, to have a single, predictable cost-sharing payment that is based on their needs rather than based on the types of services they actually receive, and in particular with no higher cost to them if they receive services to treat complications that could have been prevented. A copayment amount should be established for each CCJR billing code that would be equivalent to the lowest total cost-sharing amount patients would have paid for the kinds of services delivered for patients in the clinical category for that code. The patient would pay the copayment to the CCJR-MO, and the CCJR-MO could distribute that among the providers on the CCJR Team. For those providers who continue to bill Medicare directly under the fee-for-service system, if they would ordinarily collect a cost-sharing payment from the beneficiary, they would instead receive that from the CCJR-MO.

Other features of value-based insurance design that are not currently used in the Medicare program could be incorporated into the CCJR program. The CCJR Team could establish a schedule of payments that the CCJR-MO would make to CCJR patients based on the patient's adherence to specific steps in a treatment plan or achievement of specific treatment milestones, and the CCJR-MO should also be able reimburse patients for costs they incur related to desirable activities (e.g., participation in exercise or weight loss programs prior to surgery) or services associated with the CCJR episode, as long as the total out-of-pocket costs for a patient remains above the minimum cost-sharing amount established for the episode.

15. ALLOWING VOLUNTARY PARTICIPATION BY ALL PATIENTS AND PROVIDERS

The CCJR program should be a voluntary option for physicians and other providers. The primary goal of the program should be to enable physicians and other healthcare providers to redesign the way care is delivered in order to lower costs while maintaining or improving the quality of care for patients, so it is essential that the initial participants in the program be physicians and other providers who want to actively engage in that type of redesign process with a commitment to ensure patient care is improved. Mandating participation in the program by providers prevents patients from seeking other options if they feel that CCJR Teams are inappropriately limiting care, and that in turn reduces the pressure on CCJR Teams to deliver better coordinated services and better outcomes as well as lower costs than can be achieved in the current fee-for-service system.

In addition, because CMS will need help from CCJR Teams during the initial years of the program to refine the clinical categories and adjust payment amounts, it is important to have willing participants who can work collaboratively with CMS on these tasks during the initial years of implementation.

By designing the CCJR program to be a win-win-win for patients, providers, and Medicare, rather than designing

it to maximize savings for Medicare, it will likely attract a wide array of providers without the need for a mandate. CMS has already experienced extensive participation in its Bundled Payments for Care Improvement initiative despite the flaws in the way that program has been structured, and by correcting those flaws in the design of the CCJR program, it will likely achieve even greater participation.

Not only should the program be voluntary, it should be available to physicians, hospitals, and other providers in all communities. Since a well-designed CCJR program will improve care for Medicare patients, Medicare patients in all communities should have the opportunity to benefit from that better care if they have physicians and other providers in the community who are willing to participate in the program.

16. ESTABLISHING A FEASIBLE BUT RAPID TIMETABLE FOR IMPLEMENTATION

Although there is an urgent need to reform payment systems and to control health care costs, it is simply not feasible to implement a well-designed CCJR payment model by January 1, 2016 as CMS has proposed. Moreover, rushing to implement a problematic payment model and then requiring that it be used for five years in some communities while precluding any other changes in order to “test” that model will create a major barrier to true innovations in care and payment for joint replacement and it will likely have a chilling effect on innovations in other areas.

However, it should still be possible to make rapid progress if payment reform for joint replacement is pursued as a “research and development” project through a collaborative effort of CMS and the physicians, hospitals, and post-acute care providers who want to create a truly well-designed payment model. A potential timetable is shown on page 22.

17. EXPANDING PAYMENT REFORMS TO NON-SURGICAL CARE OPTIONS AND TO OTHER HEALTH PROBLEMS

The Limitations of Procedure-Based Episodes

Although there are many opportunities to achieve better outcomes and reduce spending for patients who receive joint surgery, a payment model focused on joint surgery fails to address one major area of opportunity – reducing unnecessary joint surgeries. Many patients today pursue surgery for joint replacement because the non-surgical care they have received has failed to address their needs or because of the difficulties and costs they experience in obtaining high-quality, coordinated non-surgical care. Other may choose surgery because they have unrealistic expectations about what surgery can achieve relative to non-surgical care or a lack of understanding of the risks associated with surgery versus other forms of treatment.

These problems are also created and exacerbated by current payment systems. Many of the kinds of services that are needed for effective non-surgical care are either not paid for or receive inadequate reimbursement under current payment systems. For example, studies have shown that when patients engage in a shared decision-making process that explains the benefits and risks of different forms of treatment, they are far less likely to choose surgery.²³ However, the current payment system does not cover the costs of this kind of shared decision-making process, even though it would likely reduce overall spending.

Even the best-designed episode payment system for joint surgery has one major weakness – it does not support or encourage alternatives to surgery, and more importantly, it could actually encourage greater use of surgery. Making surgical care more coordinated and safer with no corresponding improvement in non-surgical care options could well encourage more patients to pursue surgery, and this could offset some or all of the savings generated by reducing the average costs of the individual surgeries.

Condition-Based Payment Reforms

The solution to this is to improve payment and care delivery for non-surgical care options as well as payment and care delivery for surgery. This could be done in two ways:

- **Episode Payments for Non-Surgical Care.** Episode payments could be defined for non-surgical options in a manner similar to the process defined in this report for surgical care. The full set of services needed to deliver good non-surgical care to patients with specific needs would be identified (e.g., testing, physical therapy, medication, a nurse care coordinator, etc.), the costs of delivering those services would be determined, and a bundled payment would be made available to a coordinated team of providers that is adequate to cover those costs. The payment amounts would be stratified by patient need, so that providers would receive higher payments for patients with greater needs, and outcomes would be measured in essentially the same way that outcomes for joint surgery would be measured, so that the non-surgical and surgical care options could be compared. In

TIMETABLE FOR DESIGN AND IMPLEMENTATION OF A REVISED CCJR PROGRAM

Fall 2015:	CMS would announce that instead of the proposal released in July 2015, it intends to develop a true prospective episode payment model for joint replacement using appropriate clinical categories with accountability for outcomes. It would solicit volunteers, particularly physicians who would ultimately be willing to lead CCJR Teams, to participate in an intensive process to design the payment model and to develop initial categories and payment amounts. In addition, CMS would require its administrative contractors to prepare to implement true bundled payments beginning in 2017.
Early 2016:	CMS and the volunteers would use the best information and data available to design the initial parameters of the episode payment model, including the episode and trigger definitions and the initial clinical categories and payment amounts. This would be completed by mid-2016.
Summer 2016:	CMS would distribute information on the initial payment model and issue a call for volunteers willing to form CCJR Teams and CCJR Management Organizations and to be paid under the new model for a three-year period. Participation would be open to any CCJR Teams willing to meet the basic criteria for participation – the ability to coordinate episodes of care, the ability to manage bundled payments, and the willingness to collect and report data on costs and outcomes.
Fall 2016:	CMS would sign participation agreements with all qualified volunteers and prepare to implement the new payment model with them.
January 2017:	CMS would implement the new CCJR payments with the participating providers.
Fall 2017:	CMS and the participating providers would identify any serious initial problems with the implementation of the program and collaborate to develop solutions.
January 2018:	The program would continue with the initial payment structure and any changes jointly agreed to by CMS and the participating providers.
Summer 2018:	CMS and the participating providers would initiate a process to review all aspects of the program and develop any necessary improvements. In particular, data on service delivery, costs, and outcomes would be used to refine the clinical categories and the payment amounts. This process would be completed by the end of 2018.
Winter 2019:	CMS would distribute information on the revised payment model and solicit applicants to participate. The initial participants would have the option of continuing or returning to traditional fee for service structures, and new participants would be able to join.
Spring 2019:	CMS would sign participation agreements with new and continuing CCJR Teams.
Summer 2019:	CMS would implement the revised CCJR payment structure with the new and continuing providers. CMS regulations would allow any physician who was participating in the CCJR program during the second half of 2019 to count that as participation in an Alternative Payment Model under the provisions of the Medicare Access and CHIP Reauthorization Act (MACRA).

contrast to surgical episodes, where the goal would be to have episode payments lower than current average spending, payments for the non-surgical care episodes might be higher than current average spending if necessary in order to provide an effective alternative to surgery. The higher spending on the non-surgical episodes would then be offset by the savings from the reduced number of surgeries.

- **Condition-Based Payments for Osteoarthritis.** Instead of making episode payments for individual types of treatment, provider teams could be paid a “condition-based payment” that provides the flexibility to deliver whatever procedure or set of services is most appropriate to patients with a particular diagnosis and needs. These provider teams would become, in effect, a “Musculoskeletal Medical Home” for the patients, and their payments would be risk-adjusted by their patients’ conditions rather than based on what procedures the patients received. In a condition-based payment model, physicians would help patients understand and choose among the array of treatment options available for their condition without concern about which procedure will generate more revenue. Patients for whom surgery is eventually indicated would understand the steps they need to take prior to surgery to improve post-surgical outcomes. Condition-based payments would also be stratified so that the provider teams would receive higher payments for patients with conditions that are less amenable to non-surgical care options (since surgery would be used at a higher rate for those patients), and the providers would receive lower payments for patients with conditions that are more amenable to non-surgical care.

Episode payments for specific types of care and condition-based payments for the underlying conditions are not conflicting concepts but complementary approaches to payment reform. The physician managing a condition-based payment could contract with individual provider teams to deliver specific types of procedures or services and use episode payments to pay them. For example, a multi-specialty physician practice might contract to manage osteoarthritis in a population of patients and be paid for all of the care using a condition-based payment, and then for those patients who needed knee or hip surgery, the practice would subcontract with teams led by its orthopedic surgeons to deliver that surgery in the best and most efficient way possible, with compensation paid through episode payments.

This broader vision of payment reform further demonstrates why it is necessary to have physicians rather than hospitals leading CCJR teams and to trigger CCJR payments based on the patients’ conditions and procedure, rather than based on a hospital payment category.

Broad Applicability Beyond Hip and Knee Problems

These three approaches (episode payments for surgery, episode payments for non-surgical care, and condition-based payments) could be applied to a wide

array of healthcare conditions and procedures. Consequently, the methods and systems used to design and implement these approaches for hip and knee problems would help accelerate the design and implementation of payment reforms for many types of patients and would achieve savings for a larger proportion of spending by Medicare and other payers. Conversely, if a new payment system for hip and knee problems is designed and implemented badly, it could slow progress in other areas.

18. USING CCJR TO COMPLEMENT ACCOUNTABLE CARE ORGANIZATIONS

A properly-designed CCJR program can complement the efforts of an Accountable Care Organization (ACO) to manage the overall cost and quality of care for a population of patients, rather than conflict with it, but this requires understanding the capabilities and limitations of the current payment models used to pay ACOs and working to improve those models in parallel with implement of the CCJR program and other episode payment and condition-based payments.

A major problem facing Accountable Care Organizations that are participating in the shared savings programs available from CMS and other payers is that there is no change in the underlying payment system for the individual physicians, hospitals, post-acute care facilities, and other providers who are delivering care to the patients assigned or attributed to the ACO. Because the many barriers and problems in the current fee-for-service system remain in place, it is difficult, if not impossible, for the providers in the ACO to make any significant changes in the way care is delivered. Under a properly-designed CCJR program, the more flexible payment would help the ACO control overall spending on joint surgery patients while maintaining or improving outcomes.

Another major problem experienced by ACOs in most shared savings programs is that they only find out who their patients are after the care has already been delivered, and moreover, they only know where those patients received care after the fact. Under a properly-designed CCJR program, patients would be choosing CCJR Teams when the patient decides to have surgery, and those Teams would be able to control costs and improve outcomes for patients during the episode of care for that condition.

Until such time as there are broader payment reforms, such as the condition-based payments described in the previous section, the ACO can focus its attention on encouraging the development of good alternatives to surgery and avoiding unnecessary surgeries, and the CCJR program can focus on improving care and reducing costs for those patients who do receive surgery. Both efforts are needed in order to control the total cost of care, and similar efforts are needed for other types of surgery, too.

Unfortunately, as long as ACOs continue to be paid using shared savings arrangements, there will inherently be conflicts over “who gets credit for the savings.” In contrast, if an ACO is paid using a predictable and flexible

risk-adjusted global budget, then CCJR episode payments become an effective tool that the ACO can use to pay CCJR Teams from that overall global budget. The ACO becomes the payer, not Medicare or a health plan, and CCJR becomes the mechanism it uses to enable the physicians, hospitals, and other providers who are part of the ACO to improve outcomes and reduce costs for the portion of the costs related to joint surgery. Moreover, the availability of episode payments such as CCJR would better equip ACOs to move beyond shared savings arrangements and manage global budgets/payments, since the episode payments would give individual physicians, hospitals, and other providers the flexibility they need to improve care and reduce costs for the specific procedures they deliver and the conditions they manage.

ENDNOTES

1. See, for example: Williams T and Robinson J, *Bundled Episode-of-Care Payment for Orthopedic Surgery: The Integrated Healthcare Association Initiative*, Integrated Healthcare Association, September 2013; Froemke CC et al, "Standardizing Care and Improving Quality Under a Bundled Payment Initiative for Total Joint Arthroplasty," *The Journal of Arthroplasty*, 2015; Doran JP and Zabinski SJ, "Bundled Payment Initiatives for Medicare and Non-Medicare Total Joint Arthroplasty Patients at a Community Hospital: Bundles in the Real World," *The Journal of Arthroplasty*, 2015; *Detailed Business Requirements: Total Joint (Hip & Knee) Replacement Episode*, State of Ohio, November 6, 2014; and Kim N et al, *Hospital-Level, Risk-Standardized Payment Associated with a 90-Day Episode of Care for Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty: 2014 Measure Methodology Report*, Yale New Haven Health Services Corporation, December 2014.
2. In addition, some patients who come to the hospital for hip or knee surgery but experience a severe complication during surgery or during their hospitalization will be classified in an MS-DRG associated with the complications rather than the joint surgery. This means that an episode payment triggered by an MS-DRG for joint replacement will exclude some patients who should have been included.
3. The Medicare Access and CHIP Reauthorization Act (MACRA) enacted in 2015 adds subsection (r)(2) to Section 1848 of the Social Security Act to support "Development of Care Episode and Patient Condition Groups and Classification Codes."
4. See, for example, Snow R et al, "Associations Between Preoperative Physical Therapy and Post-Acute Care Utilization Patterns and Cost in Total Joint Replacement," *The Journal of Bone and Joint Surgery*, 2014.
5. Calling one approach retrospective and one approach prospective is somewhat misleading because under both of these payment approaches, all payment(s) to the providers are made after some or all of the services are delivered (i.e., the funds are transferred retrospectively), and under both approaches, the method for determining the payment amount is defined before the services are actually delivered (i.e., the expected payment amount is determined prospectively). All fee-for-service systems are "prospective payments" in the sense that the amount of payment for a service is defined prior to the delivery of the service, but the release of funds for a fee-for-service payment is made retrospectively, i.e., after the services are delivered, after a claim is submitted, and after any adjustments are made based on contracted formulas for doing so (such as pay-for-performance adjustments). What is not prospectively controlled under fee-for-service is the utilization of individual services, and most prospective payment systems do not control total utilization, only the utilization of services within a defined bundle.
6. There is a cost to processing and paying claims for services, so CCJR Management Organizations would save on the cost of making payments for services to CCJR Team providers if the CCJR-MO continued to rely on Medicare contractors to pay some or all of those providers. Conversely, there would be an added cost to CMS to not only pay such claims but to reconcile them against the episode payment. CMS could encourage CCJR-MOs to directly pay as many CCJR Team members as possible by charging a processing fee for those claims. In addition, although CCJR Team members who agreed to be paid through the CCJR-MO would need to modify their billing systems to avoid billing CMS for a service to a CCJR patient, i.e., to avoid double-billing. Fees charged by CMS for identifying and resolving these situations would encourage providers to take steps to avoid having the situations occur.
7. This is similar to the way Medicare makes partial payments to Home Health Agencies during the 60 day episodes of care they deliver.
8. For a more detailed discussion of the problems with the Medicare Hierarchical Condition Category risk adjustment system, see Miller HD, *Measuring and Assigning Accountability for Healthcare Spending*, Center for Healthcare Quality and Payment Reform, August 2014, pp. 17-21.
9. Kim N et al, *Hospital-Level, Risk-Standardized Payment Associated with a 90-Day Episode of Care for Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty: 2014 Measure Methodology Report*, Yale New Haven Health Services Corporation, December 2014.
10. Miller HD, *Measuring and Assigning Accountability for Healthcare Spending*, Center for Healthcare Quality and Payment Reform, August 2014.
11. For example, many medical specialty societies have developed and published appropriate use criteria defining the types of patients who should and should not receive certain types of services as part of the *Choosing Wisely* initiative.
12. See, for example, Buntin MB et al, *Comparison of Medicare Spending and Outcomes for Beneficiaries with Lower Extremity Joint Replacements*, RAND Corporation, 2005; Mahomed NN et al, "Inpatient Compared with Home-Based Rehabilitation Following Primary Unilateral Total Hip or Knee Replacement: A Randomized Controlled Trial," *Journal of Bone and Joint Surgery*, 2008; Lovald ST et al, "Complications, Mortality, and Costs for Outpatient and Short-Stay Total Knee Arthroplasty Patients in Comparison to Standard-Stay Patients," *The Journal of Arthroplasty*, 2014; Li Y et al, "Variation in Medicare Payments for Total Knee Arthroplasty," *Journal of Arthroplasty*, 2013; *Medicare Payment Bundling: Insights from Claims Data and Policy Implications*, Dobson DaVanzo & Associates, LLC, 2012; Fuller RL, Hughes JS, and Goldfield NI, "Adjusting Population Risk for Functional Health Status," *Population Health Management*, forthcoming.
13. This type of coding structure is similar to the HIPPS coding structure used by Medicare in its prospective payment systems for individual types of post-acute care. A HIPPS code is a 5 digit alphanumeric code with specific positions in the code used to record the clinical and functional categories that are assigned based on a patient's characteristics.
14. This is conceptually similar to the use of the "Present on Admission (POA)" flag on Medicare billing forms for hospital admissions in an effort to distinguish which health problems were present before treatment began

from those that could have been caused by the treatment itself.

15. Although the CMS CCJR proposal issued in July 2015 appears to use only a small number of measures to adjust payment, all providers would continue to be paid under existing fee-for-service systems, so they would also continue to be subject to the individual “value-based purchasing” and payment penalty programs that CMS has created as part of each of those programs. For example, under the Medicare Readmission Reduction Program, a hospital’s Medicare payments for joint surgery would be reduced regardless of the outcomes it achieves for joint surgery if its readmission rates for COPD, heart attack, heart failure, and pneumonia were higher than average.
16. For example, when the Geisinger Health System implemented its ProvenCareSM program, which included a warranty for complications and readmissions, it developed detailed process guidelines and measured performance on those guidelines, but it also had the flexibility to modify the guidelines as needed based on the impact they had on outcomes. Casale AS et al, “ProvenCareSM: A Provider-Driven Pay-for-Performance Program for Acute Episodic Cardiac Surgical Care,” *Annals of Surgery*, 2007.
17. In its proposal for the CCJR program, CMS noted that many providers voluntarily participated in the BPCI program with the discount, but it did not report whether these providers were disproportionately those with high costs per episode.
18. An extensive array of information about the definition and uses of Potentially Avoidable Complications and the PROMETHEUS Evidence-Informed Case Rates is available on the Health Care Incentives Improvement Institute website (www.HCI3.org). A broader array of potential savings opportunities called “Potentially Preventable Events” can be identified through software developed by 3M Information Systems. See Goldfield N, Kelly WP, and Patel K, “Potentially Preventable Events: An Actionable Set of Measures for Linking Quality Improvement and Cost Savings,” *Quality Management in Health Care*, 2012.
19. Risk corridors are also sometimes called “aggregate stop loss payments.” See *The Payment Reform Glossary*, available from the Center for Healthcare Quality and Payment Reform.
20. For example, in most cases, a physician receives the same payment for delivering a specific service or procedure to all patients, even though it will take longer or require more costs to deliver the service or procedure to some patients than others.
21. Many people confuse costs and payments in calculating risks to providers under a bundled payment system. The variation that exists today in the *payments* made by payers for a group of patients does not necessarily indicate that the providers receiving those payments are experiencing similar variation in costs. The fact that a provider would receive less revenue from a bundled payment program for a group of patients than it would have received had it continued to bill a payer for those patients under a fee-for-service system does not necessarily mean that the provider has incurred a net loss (or a greater loss) on those patients, since the marginal costs of each extra service will likely be far less than the revenue the provider would have received from an additional fee-for-service payment for that service.

Similarly, the fact that a provider would receive more revenue under a bundled payment system than it would have received had it continued being paid under fee-for-service does not necessarily mean it is making higher profits, since the provider will still have fixed costs it needs to cover when fewer services are delivered. For providers with a high proportion of fixed costs, the predictability of bundled payments can enable them to be paid in a way that better matches their cost structure than if they receive fixed payments for individual services with an unpredictable volume of services. Consequently, there may be less financial risk for a physician, hospital, or post-acute care provider in delivering care to a group of patients if they are paid through the CCJR-MO than if they are paid through the standard fee-for-service system.

22. This type of approach was used by Blue Cross Blue Shield of Massachusetts in implementing its Alternative Quality Contract.
23. Arterburn D et al, “Introducing Decision Aids at Group Health Was Linked to Sharply Lower Hip and Knee Surgery Rates and Costs,” *Health Affairs*, 2012.